

MEETING AGENDA THURSDAY JUNE 15, 2023 3:30PM – 5:00PM

CALL TO ORDER ROLL CALL PUBLIC COMMENT CONSENT AGENDA

- 1. MAY 18 MEETING MINUTES P. 2
- CONTRACT AMENDMENT WITH DIBBLE ENGINEERING FOR DESIGN AND BID SERVICES FOR THE RUNWAY 15-33 WIDENING PROJECT – P. 7
- 3. CONTRACT AMENDMENT WITH DIBBLE ENGINEERING FOR CONSTRUCTION PHASE SERVICES FOR THE NEW TERMINAL BUILDING – P. 53
- 4. CDOT AERONAUTICS INTERNSHIP GRANT P. 103

# APPROVAL OF CONSENT AGENDA

## AIRPORT DIRECTOR'S REPORT HIGHLIGHTS

## **REGULAR AGENDA**

- 5. TEMPORARY AIRPORT COMMISSION SECRETARY APPOINTMENT P. 120
- 6. 2022 FINANIAL AUDIT REPORT P. 121
- 7. T-HANGAR FACILITY CONDITION ASSESSMENT REPORTS AND REPAIR COST ESTIMATES – P. 135
- 8. BUSINESS FROM MEMBERS

# PULLED CONSENT AGENDA ITEMS ADJOURN

Meeting Planning Calendar							
July 20 •T-Hangar Proposals •FCLWD Easement •Hangar Lease Agreements	<u>August 17</u> • Preliminary Budget Presentation • Airport Commission Roles and Responsibilities Training • Land Use Plan Draft Presentation	September 21 • Airport Staffing Support Presentation • Budget Recommendation to Councils					



# Meeting Minutes for May 18, 2023

Call to Order:	Chair Overcash called the meeting to order at 3:34 p.m.
Roll Call:	Chair Overcash, Commissioners Adams, Arndt, Burgener, DiMartino, and Stooksbury were present. Vice-Chair Fleming was absent.

**Public Comments: Rick Turley, Hangar Tenant:** Requested the Commission revoke their original motions to vacate the hangars. Also requested that replacement of the T-hangars in the GA area be planned, expedited, and funded. **Mike Fassi, CAP**: Thanked the Airport Staff for providing free hangar space for Civil Air Patrol in one of the C units. **Steve McClintock, Hangar Tenant:** Asked the Airport Commission to reconsider the decision to evict him from one of the T-hangars after being found in violation of multiple hangar lease terms including illegal subletting, hazardous materials storage, non-airworthy aircraft, and modifying the unit without prior permission.

## **Consent Agenda**

Commissioner Arndt moved to approve the Consent Agenda. The motion, seconded by Commissioner Adams passed with one abstention from Commissioner Stooksbury.

Pulled Items	None
Consent Follow up	None
Monthly Report Follow-up:	<ul> <li>Remote Tower is making headway, the 4k testing was completed with preliminary approvals looking positive. Searidge Technologies formally requested the withdrawal of the stop work order issued by the FAA. Letters of support to the FAA for the project are underway from the Governor, Senators, and CDOT.</li> <li>CDOT approved an overmatch grant of \$463k for the Airport's runway widening project.</li> <li>United diversions will be in the sky more frequently as the Director completed preliminary meetings to approve their diversion operations and we are entering storm season.</li> </ul>

Public Comments: None

NORTHERN COLORADO REGIONAL AIRPORT COMMISSION

### **Regular Agenda**

7. STRATEGIC ACTION PLAN ADOPTION & WORKPLAN Strategic plans are a critical tool for policy makers to update and adopt on a regular basis. The purpose of this document is to clearly articulate the strategy for the operation and development of Northern Colorado Regional Airport and to outline the major work priorities for the next two years: 2023-2024. This plan was created by the Planning & Development Subcommittee and Airport Commission in late 2022 and early 2023. This plan is intended to guide the staff, the Planning & Development Subcommittee (PDSC), the Airport Commission, and Airport partners in moving toward our vision for the Airport's future.

Members of the Planning and Development Subcommittee and staff have worked since the January 19 Airport Commission facilitated strategic planning meeting to finalize the plan and create an Action Plan that incorporates discussion and feedback from Airport Commissioners. To reflect recent priority shifts the hangar related goals were shifted and the Gannt chart was also updated. Staff will walk Airport Commissioners through the final plan for adoption, with emphasis on the action plan of the document. This item has been delayed for two months due to other priorities on the agenda.

Commissioner Adams moved approve the Strategic Action Plan with the noted adjustments on the KPI for safety. The motion was seconded by Commissioner DiMartino passed with one abstention from Commissioner Stooksbury.

Public Comments: None

8. NEW TERMINAL PROJECT UPDATE AND CONSTRUCTION MANAGER AT RISK GUARANTEED MAXIMUM PRICE CONTRACT Since the start of the terminal design, inflation, and supply chain issues as a result of the pandemic created instability in the building materials and labor markets resulted in a sharp increase in cost estimates and construction price trends. These unanticipated cost escalations prompted staff to present options for the Airport Commission to consider in early fall of last year to reduce scope and costs. The Airport Commission selected a smaller version of the original design that will provide functionality for a new airport terminal and instructed staff to continue working to find funding sources to align with the estimated budget. Since this time staff have worked to secure \$25 million in total funding for the two phased project, which includes a 4% contribution of \$1 million from each of the Cities. The terminal design team reached the 95% design milestone on Thursday May 4. In anticipation of the finalization of the design, the project team and Airport staff have been working in parallel on the negotiation of a guaranteed maximum price contact with Hensel Phelps, the selected contractor for the project. A comprehensive cost estimating, and reconciliation process has concluded, and the Hensel Phelps team and Airport consultants have arrived at a recommended price of \$14,864,000, or \$766 per square foot and an owner-controlled contingency of \$2,086,894 (includes contractor and owner estimated contingencies).

The design option selected by the Airport Commission incorporates phasing of the terminal by deferring landside improvements for automobile parking, landscaping, access roads, and signage. The Commission also requested that LEED certification level remain at silver for the new terminal, which is included in the contract price. The size of the new terminal is 19,400 square feet, and the price includes all baggage handling equipment and automated exit lane mechanical systems. The total number of calendar days to complete the project is 422 days and is scheduled to begin on Monday July 10, 2023. The estimated completion date according to this schedule would be Wednesday September 4, 2024. The schedule will allow for the full expenditure of the time constrained federal Cares Act funding by the July 2024 deadline.

Commissioner Adams moved to approve the CMaR Guaranteed Maximum Price Contract. The motion, was seconded by Commissioner DiMartino, passed with two no votes from Commissioners Arndt and Stooksbury.

Public Comments:	Caitlin McHugh, Attorney with Lewis Roca, representing Discovery Air claimed that the Cities had an additional 10 months past the July 2024 deadline to spend the majority of the CARES Act Funds and that there would be adequate time to allocate the funds to other non-terminal related projects.
<u>9. EQUIPMENT</u>	The Airport will be receiving a very generous donation of a
DONATION	relatively new piece of snow removal equipment from the Sun
ACCEPTANCE &	Valley Idaho (SUN) Friedman Memorial Airport Authority
TRANSFER OF	(FMAA). Our Airport staff and the FAA's compliance officials
FEDERAL GRANT	have identified a need for a high-speed runway broom truck at
<b>OBLIGATIONS</b>	FNL for the past few years. Within the Airport's approved
	Capital Improvement Plan for 2024 it includes a \$400,000 line
	item for acquiring a new similar unit. The FAA requires that



Airports have adequate equipment to remove snow within a certain amount of time to achieve regulatory standards and safety for airport users. FNL utilizes two high speed runway brooms to achieve these regulatory standards, one is a surplus unit that is 24 years old, and the other was purchased new by the airport and is 16 years old.

The manager of the SUN Airport, Chris Pomeroy, had to shift their airport's strategy for dealing with snow removal as a result of demands from airport users and the installation of a new instrument approach system. SUN Airport elected to transition to another much larger and more expensive combination type of snow removal unit that includes both the plow and broom to keep up with the snowfall they typically experience. The acquisition of the new equipment type made this particular snow removal broom unit no longer necessary for their needs, and because it was acquired using federal funds, another commercially certified airport is required to acquire it through donation or sale due to federal obligations associated with their original grant. Our airport will need to approve the donation, and obtain City Council approval from the City of Loveland for acceptance. It will also require that the federal obligations that were originally assumed by SUN will be transferred to FNL for the remaining service life of the unit.

The acceptance of this equipment will require the City of Loveland's City Council acceptance of the donation. Transportation costs for this are expected to be less than \$10k.

Commissioner Adams moved to accept the donated broom truck with a transfer of its federal grant assurances. The motion, was seconded by Commissioner Arndt carried with all the Commissioners present voting in favor thereof.

Public Comments:	None			
<u>10. BUSINESS FROM</u> MEMBERS	None			
Public Comments:	None			
Adjournment:	Meeting adjourned at 5:05 p.m.			
Respectfully Submitted,				

# May 18, 2023 REGULAR MEETING SIGN IN SHEET Please Print Your:

NAME ORGANIZATION Doradoa Ferre HENSEL PHELPS MATTIEN RAMUSSEW Heusel Philos White David ran VFCA HANCAR TEMANT Sing ISCOVERY sconen KEFASSI 020 ae  $\langle \rangle$ and SOLA FNL jet Centor anny MChiny ( - Future buyer? Thangar Tenant James Aden ng Ar Tene enjor ffort Collins eere tost min Consor Engineers reamed PILLA HShuld Hangar Tenant ICOLF Hah Lovel MOS



# NORTHERN COLORADO REGIONAL AIRPORT 4900 Earhart Rd • Loveland, Colorado 80538 (970) 962-2850 • FAX (970) 962-2855 • TDD (970) 962-2620

ITEM NUMBER:	2
MEETING DATE:	June 15, 2023
PREPARED BY:	Aaron Ehle, Airport Planning & Development Specialist

# <u>TITLE</u>

Contract Amendment with Dibble Engineering for Design and Bid Services for the Runway 15-33 Widening Project

# **RECOMMENDED AIRPORT COMMISSION ACTION**

Make a motion to recommend approval of a contract amendment with Dibble Engineering for Design and Bid Services for the Runway 15-33 Widening Project to the Loveland City Council

# **BUDGET IMPACT**

Negative, the contract amount is \$763,460. \$63,238 will come from Airport reserves. The remainder will come from grant funding.

## **SUMMARY**

This is an administrative item requesting the approval of an amendment to the contract with Dibble Engineering for professional services totaling \$763,460. The Airport currently has an on-call contract with Dibble Engineering as its consultant on record through 2024. The contract was awarded after a thorough qualification-based selection process that included staff from both Cities serving on the selection committee.

This amendment includes design and bid services for the Runway 15-33 Widening project. This important project will enhance safety and help to attract commercial air service. Construction of the runway improvements is scheduled for 2025. The project is also included in the adopted Airport Master Plan and Capital Improvement Plan.

The Federal Aviation Administration (FAA) will provide the Airport with a grant funding amount of \$238,235 for the design phase of this project. This grant requires a local funding match of \$13,238.28 and state match of \$13,238.28 to pay for the additional costs for construction administration and management. Additionally, \$450,000 in funding is being provided by Colorado Department of Transportation (CDOT) Aeronautics, which requires \$50,000 in grant match funding from local resources. These

funds have been budgeted for and appropriated through the two City Councils within the adopted 2023 Airport Budget.

# **ATTACHMENTS**

Runway 15-33 Widening Design and Bid Phase Services Proposal

p 303.872.5756 2696 South Colorado Blvd, Suite 330 f 303.353.4068 Denver, CO 80222 dibblecorp.com

February 3, 2023

Northern Colorado Regional Airport 4900 Earhart Road Loveland, CO 80538

Attention: Mr. Jason Licon Airport Director

RE: ENGINEERING SERVICES PROPOSAL City Project Number: TBD FAA AIP No. 3-08-0023-043-2023 Design and Bid Phase Services **Runway 15-33 Widening** 

We appreciate the opportunity to provide design and bid services for the *Runway 15-33 Widening* project at the Northern CO Regional Airport (FNL). This proposal has been prepared in accordance with the direction provided by the FAA and FNL and with the information discussed during the FAA Project Kick-Off Meeting held on December 5, 2022.

Dibble, as the prime consultant, is proposing to complete the Scope of Work as included in this proposal for as follows:

#### A. Design and Bid Phase Services:

	Subtotal	\$763,460
5.	Utility Locating (Pothole T&M)	\$20,000
4.	CR Engineers (Electrical - DBE)	\$69,112
3.	Terracon (Geotechnical)	\$56,352
2.	NorthStar Engineering and Surveying (Survey)	\$52,800
1.	Dibble (Civil)	\$565,196

Transmitted herewith is our proposed Scope of Work, Fee Summary, Derivation of Fee Proposal, Estimated Manhours matrix, Estimated Direct Costs worksheet, Project Exhibit, Pre-design Construction Cost Estimate, Preliminary Project Schedule, and full subconsultant proposals for your review.

We are very grateful for the opportunity to work with FNL on this exciting important project. If you need additional information or have questions, please do not hesitate to contact us.

Sincerely,

Jared Bass, P.E. Vice President - Sr. Project Manager







# SCOPE OF WORK Northern CO Regional Airport Runway 15-33 Widening FAA AIP No. 3-08-0023-043-2023 February 3, 2023

#### **Introduction**

Dibble (Engineer) has been requested by the Northern CO Regional Airport (FNL or Airport) to provide design and bid phase services for the *Runway 15-33 Widening* project. The existing Runway has a current published length of 8,500-feet and a width of 100-feet. The runway has a published strength of 50,000 lbs (Single Wheel), 65,000 lbs (Double Wheel), and 130,000 lbs (Double Tandem). The existing runway is grooved (trapezoidal) with Precision Approach/Instrument Runway (PIR) pavement markings. Both runway ends have a visual approach (4-box PAPI system), with Runway 33 also having an Instrument Landing System (ILS). The existing runway lights are high-intensity (HIRL - incandescent).

CDOT Aeronautics last performed a surface pavement inspection in 2019 and determined the Runway 15-33 Pavement Condition Index (PCI) to be 92, with a projected PCI of 80 in 2024. Runway 15-33 received a mill and overlay in 2011 and crack seal and seal coat in 2018.

An evaluation of the need to widen Runway 15-33 from 100-feet to 150-feet for existing and future aircraft operations was performed during the development of the 2020 Airport Master Plan. FNL has a history of servicing various commercial service aircraft including Allegiant Airlines (MD-83 and A319/320) until 2012 and Avelo (737-800) in 2021-2022. Furthermore, FNL receives multiple operations annually (i.e. sports charters) from other Design Group C/D-III aircraft as well as larger regional jets that have C- or D- approach speeds and ADG III wingspans. It was determined in the 2020 Master Plan and approved by FAA that the Critical Design Aircraft for FNL and Runway 15-33 is the Airbus A319/320 (Aircraft and Runway Design Code C-III), with a maximum take-off weight in excess of 150,000 lbs. Per FAA Advisory Circular (AC) 150/5300-13B, Table G-9 (including footnote 12), the minimum width required for runways with an aircraft design code (ARC) C-III, with aircraft operations that have a maximum certificated takeoff weight (MTOW) greater than 150,000 lbs, is 150-feet.

There are other airfield design items that were considered and discussed during the Pre-Design Meeting with the FAA and FNL on December 5, 2022 for modifications. These items include runway shoulders, adjustment to existing blast pads, modification of the existing connector taxiway geometrics, etc. However, during the Pre-Design Meeting, the FAA decided that this project is a runway rehabilitation project only and no other adjustments should be made. Reference the list of exclusions in Section 9.

This project includes the effort required to provide design and bid phase services to widen Runway 15-33 from 100-feet to a total width of 150-feet. New structural runway pavement will be constructed adjacent to the existing runway pavement section, with a key-in section, and also include new runway lighting, signage, and stormwater edge drains. The five existing connector taxiways adjacent to the east side of the runway will be modified, as needed, to tie into the new runway edge. The entire runway will then receive a seal coat and new pavement markings will be applied to the runway, blast pads, and connector taxiways (up to the runway holding position markings).

The widening of the runway will also include the following items:

- Remove existing edge drain system (both sides of runway)
- Remove existing runway lighting and signage and associated electrical infrastructure
- Demolition of existing connector taxiway pavement
- Removal and/or relocation of the existing 4-box PAPIs (two sets)
- Installation of new edge drains and associated drainage infrastructure (both sides of runway)
- Installation of new LED HIRL and runway signage, including updating electrical infrastructure and circuitry as needed.

- Reconstruction of connector taxiways with new runway edge (up to runway holding position marking with no geometric or lighting and signage upgrades)
- Installation or relocation of new/existing PAPIs (4-box, two sets)
- Re-grading of the existing infields within the existing and future Runway Safety Area (RSA) to meet current FAA Standards (FAA AC 150/5300-13B
- Seal coat of entire runway
- Pavement markings on entire runway

Any work performed on a runway (design and construction) will also require coordination with multiple FAA departments. Coordination with following groups will be performed during the Design Phase:

- Local FAA Technical Operations (Tech Ops) for modifications to the existing Visual Approach Aids (i.e. PAPIs, ILS, etc.).
- FAA Local ADO (Denver) and Region (Northwest Mountain) for the impacts to the existing FAA AGIS System.
- FAA Local ADO (Denver) and Region (Northwest Mountain) for determination of modifications to standards (i.e. seeding and mulching, grooving, etc.).
- Local Tech Ops, FAA Local ADO (Denver) and Region (Northwest Mountain) for runway/ILS/PAPI closure during construction (construction safety phasing and planning, safety risk management, etc.).

FNL, CDOT, FAA and the Dibble team met to discuss the project specifics, schedule, and funding in December 2022. The design and bid phase will be funded separately from the construction phase. The design and bid phase will be funded with 2023 local, state and federal funds (AIG/AIP). Construction is anticipated to receive federal assistance in either the fall of 2024 or spring/summer of 2025. Regardless of the timing of the construction grant, actual construction is anticipated to start in the late-summer of 2025.

The current estimated construction cost (construction starting 2025) is \$13.4M (as currently projected in 2022 for construction in early 2025).

This proposal (design and bid phase only) is based on a 13-month design phase (March 2023 – April 2024). The bid phase is anticipated to occur April-May 2024 with a bid hold of 120-calendar days (notice of award required by end of September 2024). If federal funds are available, the project may be awarded in September 2024. If the project is not awarded in September 2024, the project will be re-bid in the first quarter of 2025.

The following Dibble staff are expected on this project:

- Project Principal Ken Snyder
- Senior Project Manager Jared Bass
- Senior Engineer Duane Dana
- Project Engineers Nora Sami and Mike Swearingen
- Senior Designers Travis Woodman and Darin Oakeley
- Engineering Technicians Jim Hodge and Kurt Dalton
- QA/QC Principal Reviewers Ken Snyder and Vince Gibbons

The following subconsultants are anticipated on this project (their respective proposals are attached):

- Survey: NorthStar Engineering and Surveying
- Geotechnical: Terracon
- Electrical: CR Engineers (DBE)
- Utility Locating: TBD

#### Design Phase Services (Lump Sum)

#### 1) General Project Management and Pre-Design Tasks:

a) <u>Project Management and Administration</u>: provide and direct all project management and coordination of the design team and will provide coordination between design team members, the Airport, and other interested stakeholders, including the FAA. Administration tasks such as file coordination and miscellaneous project communications throughout the course of the design phase and project printing and packaging at each submittal level will also be included under this task.

- b) <u>Project Meetings</u>: The following are anticipated meetings throughout the design phase and the anticipated staff for each meeting:
  - i. <u>Design Kick-Off Meeting</u>: this meeting will be held at the beginning of the project to coordinate the Survey and Geotechnical efforts with FNL staff (i.e. runway closures). This meeting will also include the discussion of the scope of work, design schedule, design budget, and critical design elements that require coordination with various airport stakeholders.
  - ii. <u>30% Design Review Meeting</u>: this meeting will be held with FNL, FAA, CDOT Aeronautics, and Dibble Team members to review comments received on the 30% design documents and the next critical steps in the process.
  - iii. <u>60% Design Review Meeting</u>: this meeting will be held with FNL, FAA, CDOT Aeronautics, and Dibble Team members to review comments received on the 60% design documents and the next critical steps in the process.
  - iv. <u>90% Design Review Meeting</u>: this meeting will be held with FNL, FAA, CDOT Aeronautics, and Dibble Team members to review comments received on the 90% design documents and the next critical steps to move into the Bid Phase.
  - v. <u>Monthly Coordination Meetings</u>: these meeting will be held on a monthly basis to allow for continual coordination of critical project elements with key stakeholders that may include FAA, CDOT, FNL, airport stakeholders, and the Dibble Team. These meetings will help assure the design is coordinated stakeholders and includes necessary items for a successful delivery.
- c) <u>Preliminary Construction Phase Evaluation</u>: this effort will be conducted in advance of the 30% plan preparation process and will include an analysis of alternative construction phasing of the project. Options will include (not limited to) keeping partial sections of the runway open to certain aircraft traffic while other portions of the runway are closed for construction. The analysis of construction phasing alternatives will be coordinated with FAA, ATCT, and FNL staff. Once approved the chosen construction phasing alternative will be used to develop the design, construction phasing plans, and Construction Safety Phasing Plan (CSPP Report).
- d) <u>Disadvantaged Business Enterprise (DBE) Annual Goal and Program</u>: Dibble will develop and submit the 2023/2024 goal and program for FNL. Additionally, Dibble will monitor and track the DBE participation throughout the course of the project in preparation and submittal of the final, year-end DBE Performance in 2023 and 2024 to the FAA Civil Rights Office (i.e. Sonia Cruz).
- e) <u>Federal Grant Application</u>: Dibble will create the 2023 Design FAA Grant Application required for this project. The grant application with also include effort to help with the coordination and submittal to the FAA, as well as address any review comments from the FAA. The following elements shall be included in the development of the FAA Grant Application (varies for the design and construction applications):
  - Standard 424 Form
  - Project Exhibit
  - Detailed Construction Cost Estimate
  - Exhibit "A" (colored exhibit with AIP identification)
  - Federal Grant Assurances
  - Verification of Sponsor's UEI and SAMS (CCR numbers)
  - Project Approval Information
  - SF 5100-100, Parts II, III and IV
  - CIP Pre-application Data Sheet for Construction Projects
  - Standard DOT Title VI Assurances
  - Certification for Contracts, Grants, Loans, and Cooperative Agreements
  - Title VI Pre-Award Sponsor Checklist

## 2) Design Start-Up and Data Collection:

a) <u>Existing Document Research and Coordination</u>: gather and review all available as-built or record drawings, utility maps, surveys, design plans, studies, reports and miscellaneous projects at the airport, relevant to this project. This item shall also consist of reviewing the existing data available for the current pavement and subsoil conditions. All of this information will be coordinated with the surveyors

and geotechnical engineers so that any specific data important to the design of this project can be identified and obtained during the field activities.

- b) <u>Private and City Utility Coordination</u>: coordinate with the known private and City utilities that are on the airport (Water, Wastewater, Drainage, and Electrical, and Public Works Departments), specifically within or adjacent to the project limits. This item shall also include the coordination with the Private Utility departments for utility locating during the design phase and will submit 30% and 60% plans for their review. Plans shall be modified to include all received information from those departments on the plans. Furthermore, a \$20k time-and-material allowance included to cover the cost of utility locating (as needed).
- c) <u>Survey and Coordination and Review</u>: all survey work shall be conducted in compliance with FAA AC 150-5300-16/17/18. Survey efforts shall include documentation of the survey methodology used for data collection and accuracies thereof, along with use of existing Airport Geodetic Control, Primary and Secondary Airport Control benchmarks, (PACS and SACS). The survey shall utilize a robotic total station, GPS, and differential leveling, collecting topographic features along the project areas, (NAD 83 and NAVD 88, US Survey Feet).

All survey data shall meet or exceed the Level 1A horizontal and vertical minimum requirements for submittal to the OE/AAA website.

The survey will be performed between 7:00 pm - 5:00 am over a 3-day period of runway closures.

- d) <u>FAA AGIS Coordination</u>: create a new survey case on the FAA ADIP system. Coordinate with FAA agencies to develop the required FAA AGIS files and Statement of Work (SOW). The SOW, once reviewed and approved by the FAA, will be submitted to the FAA ADIP system. This item will also include the coordination efforts with FNL and FAA on the various AGIS forms that will be required to be reviewed and developed during the design phase and submitted to the various FAA agencies.
- e) <u>PAPI Siting Analysis</u>: based on available data from the current Airport Layout Plan (ALP), site survey data, and applicable as-builts/record drawings, including runway end monument data and effective gradient, Dibble will perform a siting analysis for each PAPI unit based on the criteria and equations found in AC's 150/5340-30J Design and Installation Details for Airport Visual Aids and 150/5345-28H Precision Approach Path Indicator (PAPI) Systems, as well as FAA Order 6850.2B Visual Guidance Lighting Systems, for the purposes of evaluating the existing PAPI locations and aiming angles. The siting analysis will be provided to CR for use in the electrical plans, ultimately demonstrating the final locations of the new PAPI equipment while meeting the published PAPI data (slope angles and threshold crossing heights).

The following key Federal Aviation Administration (FAA) Advisory Circulars (AC) will be used for design:

- FAA AC No. 150/5300-13B Airport Design
- FAA AC No. 150/5300-18B General Guidance and Specifications for Submission of Aeronautical Surveys to NGS: Field Data Collection and Geographic Information System (GIS) Standards
- FAA AC No. 150/5340-30J Design and Installation Details for Airport Visual Aids
- FAA AC No. 150/5345-28H Precision Approach Path Indicator (PAPI) Systems
- FAA AC No. 150/5345-53D Airport Lighting Equipment Certification Program
- FAA AC No. 150/5370-2G Operational Safety on Airports During Construction
- FAA Engineering Brief No. 95 Additional Siting and Survey Considerations for Precision Approach Path Indicator (PAPI) and Other Visual Glide Slope Indicators (VGSI)
- FAA Order 6850.2B Visual Guidance Lighting Systems
- f) Base Map Development and Coordination: develop multiple CAD basemaps including demolition, geometric layouts, grading and drainage, pavement elevations, and utility infrastructure features collected from the topographic field survey, existing design files, field investigations (pictures and notes), and record drawings. Also included in this item is the setup of all construction plan sheets including

survey, pavement sections, pavement marking details, notes, etc. All work will be consistent with FAA and City standards, as applicable.

g) <u>Geotechnical and Coordination and Review</u>: investigations in the form of drilling test borings will be conducted in accordance with FAA AC 150/5320-6F. Preparatory work will include coordinating access, conducting site reconnaissance of existing conditions and obtaining utility clearances for field borings.

The geotechnical work will be performed between 7:00 pm - 5:00 am over a 3-day period of runway closures.

The geotechnical consultant shall sample eight test borings along the existing runway, eight test borings in the RW widening area, and one test boring at each connector taxiway (five TW connectors) to adequately determine pavement and subsoil conditions and provide samples for laboratory testing. Pavement cores will be cut before digging and patched after completion. Non-shrink grout shall be used to fill the cores. Depth of investigation shall be ten feet below existing ground surface, or auger refusal, whichever comes first.

Eight additional soil samples will be taken along both sides of the runway (i.e. four on each side) to determine the soil conditions where the new runway pavement will be constructed.

In addition to the 21 cores/samples discussed above, it is also proposed to run Ground Penetrating Radar (GPR) tests in addition to the eight cores on the runway to obtain more extensive data of the runway and connector taxiways pavement depths. This additional data will allow for a more accurate PCR calculation FNL can use for the varying aircraft that will want to operate at their airport.

Laboratory Analysis: Conduct sufficient laboratory tests to properly classify soils encountered and provide data for engineering design, including:

- Runway and Taxiway Pavement Depths
- Grain Size Analysis
- Plasticity Index
- Moisture Density Relations
- Existing CBR
- In-place Density
- Moisture Content
- Presence of (%) Soluble Sulfates
- Soil Stabilization tests (includes resulting subgrade CBR values)

Geotechnical Report: Analyze the data obtained from field and laboratory testing and prepare a draft and final report presenting all data obtained, including individual Log of Test Borings, Tabulation of Test Data and recommendations including the following:

- Existing pavement and subgrade conditions, including AC thickness and base.
- Groundwater conditions, if any, to the depths which will influence design and/or construction of the proposed development. Special attention will be placed on identification of soft, wet subsoils that could affect the structural section design.
- Swell potential of in-situ and compacted soils and recommendations for control if highly expansive.
- Suitability of site soils for use as compacted fill and preferred earthwork methods, including clearing, stripping, excavation and construction of engineered fill.
- Local excavation and trenching conditions and stability considerations.
- Discussion of existing CBR's.
- Discussion of proposed CBR's with Stabilization.
- FAA Pavement Designs recommendations.
- Discussion on existing PCR values.

#### 3) 30% Progress Submittal:

- a) <u>30% Design Plans</u>: progress the design of all items as previously identified at the Preliminary level, as well as additional design details of the work. 30% plans shall include the following:
  - Cover Sheet
  - General Construction Notes (FAA and City)
  - Design Legend, Abbreviations, Sheet Index
  - Quantities Sheet
  - Survey Control Sheet (establishment of survey control)
  - Stormwater Pollution Prevention Plan and Details (8 sheets)
  - Airport Site Plan
  - Project Site Plan
  - Construction Phasing and Barricade Plan (3 sheets)
  - Pavement Section and Typical Section Details and Profiles
  - Demolition Plans (12 sheets)
  - Geometric Control Plans (12 sheets)
  - Pavement Elevation Plans (12 sheets)
  - Grading and Drainage Plans (12 sheets)
  - Drainage Details
  - Pavement Marking Plans and Details (14 Sheets)
  - Electrical Plans (40 sheets)
  - Geotechnical Boring Location Map and Boring Logs (6 sheets)

Total Sheet Count estimated at the 30% Submittal = 128 Total sheets

- b) <u>Draft Engineer's Design Report</u>: the draft Engineer's Design Report shall be prepared in accordance with the latest FAA Northwest Region suggested outline. The Draft Report shall provide design criteria and standards anticipated to be used in developing the construction documents (i.e. plans and technical specifications). The Draft Report shall document the upfront investigative results such as runway conditions, geotechnical investigations, design concepts, and drainage evaluations. The report shall cover the following (at a minimum), however, some of the sections below may not be included in the Draft Report but will be covered in the Final Report and are identified below for consistency:
  - Project Background
  - History of Applicable Airport Facilities
  - Project Scope of Work
  - Photographs of the Project Site
  - List of anticipated and applicable Design Standards (FAA AC 150/5300-13B)
  - Discussion of Environmental Actions and Determinations (see CATEX Section 3.e)
  - Geotechnical Investigations (Pavement and Soils Conditions and Site Requirements)
  - Pavement Design and Standards (FAA AC 150/5320-6G)
  - Drainage Design and Standards (150/5320-5D)
  - Recycling (as applicable)
  - Material Availability
  - Pavement Markings (FAA AC 150/5340-1M)
  - Airfield Signage (FAA AC 150/5340)
  - Airfield Lighting (FAA AC 150/5340)
  - FAA Owned Facilities (as applicable)
  - Non-AIP Work (as applicable)
  - Engineer's Cost Estimate (i.e. Total Project and Construction Cost)
  - DBE Participation
  - Construction Safety and Phasing
  - Miscellaneous Work Items
  - Pre-Design Meeting Minutes
  - Reference Documents (i.e. applicable FAA Advisory Circulars)

- c) <u>Drainage Analysis and Draft Memorandum</u>: The Federal Aviation Administration's (FAA) AC 150/5320-5D Airport Drainage Design and the City of Loveland Storm Drainage Criteria shall be used as the basis for analysis and design. The infield areas will be regraded to ensure sufficient capacity is provided. New edge drains will be designed to be included at the edge of each side of the runway. A few key design parameters and criteria are as follows:
  - NOAA Atlas 14 Rainfall values will be used to evaluate the 5- 10-, and 100-year recurrence intervals
  - Peak flows will be based on the Colorado Unit Hydrograph Procedure (CUHP) , following the City of Loveland Stormwater Criteria
  - Culverts shall be designed to convey the 5-year peak discharge without any ponding on the pavement
  - Culverts shall be designed to convey the 10-year peak discharge beneath the crossing without allowing the headwater elevation to reach the center 50 percent (50%) of taxiway
  - Culverts (maximum of 3) shall be designed to have a minimum flushing velocity of 3 feet per second flowing full
  - Edge drains will be designed in accordance with FAA standards
  - Runoff from the project area will be directed through its historic flow paths to existing downstream storage/conveyance facilities.
  - The CUHP and the Urban Drainage Stormwater Management Model (UDSWMM) will be used for detention pond routing analyses. One foot of freeboard is required.

The CUHP/UDSWMM model developed for the 2020 *Airport Basin Master Drainage Plan Amendment* (2020 MDPU), Anderson Consulting Engineers, Inc. will be requested for use. That model will service as the basis for evaluating the effects of additional pavement (imperviousness) from the runway widening. This includes Basins 210, 205, 120, and 105 as defined in the 2020 MDPU. The current model will be updated it to current existing conditions and modified to create a with-project model for the proposed improvements.

Basin 100 currently drains to Louden Ditch along Country Road 30, per the 2006 *Drainage Master Plan Report, Ft. Collins-Loveland Airport*, CH2M Hill. This proposal assumes that any increase in flow rates from Basin 100 to Louden Ditch are hydrologically insignificant and improvements to Louden Ditch are not required. If the with-project modeling indicates that changes in flow rates from Basin 100 are found to be hydrologically significant, Dibble will discuss the results with the City of Loveland and determine if analyses of Louden Ditch are required to meet City standards (e.g., 100-year flow capacity with 1-foot of freeboard). If additional analyses and design services for Louden Ditch are required, a separate proposal will be submitted.

The granularity of the 2020 MDPU modeling does not provide a concentration point at every crosstaxiway culvert that requires evaluating. Therefore, the UD-Rational spreadsheet will be used for culvert analyses unless their capacity depends on headwater storage, in which case the CUHP will need to be used.

The analysis and design of potential improvements will be limited to those required for this project and will not include other drainage improvements suggested in the MDPU or other local and regional master plans.

Local ponds 420 and 605 will be evaluated to confirm the existence of sufficient storage volume to retain (pond 605) or detain (pond 420) the additional runoff. Pond 605 will be evaluated using sub-1-meter Digital Elevation Model (DEM) data which is publicly available from the Unites States Geologic Survey (USGS). Pond 420 will be evaluated using the as-built records from the 2011 Airport Improvements project, A.I.P. Project No. 3-08-0023-29. Design services for potential pond improvements are not included in this scope of services.

This scope of services assumes that improvements downstream of the existing ponds 420 and 605 are not needed. This assumption also applies to the capacity of Louden Ditch to accept with-project flow rates and still meet City requirements. If analysis and/or design improvements to either the ponds and/or their downstream conveyances due to the project improvements are required, a separate proposal will be provided.

If the record information for pond 420 or the USGS DEM data for pond 605 are found to be outdated or insufficient, additional topographic survey efforts may be needed which are outside of this scope of services.

This project does not include evaluating other airport drainage infrastructure such as local swales or channels, culverts, storm drains, and ponds outside of the runway widening area.

This scope of services also assumes no local or state permitting is required for the construction of the drainage improvements.

- d) <u>FAA Categorical Exclusion (CATEX)</u>: A federal CATEX has been developed and approved previously for this project. There will be minor coordination with FAA over the course of the design phase. Dibble will include a discussion on the history of the federal environmental process that took place and the FAA's overall approval. The FAA's determination (CATEX) will be included as an appendix to the overall engineer's design report.
- e) <u>30% Quantities and Engineer's OPCC</u>: based on the 30% construction plans and technical specifications, the Engineer will develop a 30% Opinion of Probable Construction Cost (OPCC). As previously stated, the unit pricing for each line item will be based on recent bid tabulations from comparative projects, locations, materials, and quantities available at that time. The construction costs will also take into account estimated escalation for construction in 2025.
- f) <u>FAA FAARFIELD Pavement Design and Section Alternatives</u>: develop alternative FAA pavement sections using the FAA FAARFIELD pavement design program in accordance with latest, available FAA Advisory Circular (AC) 150/5320-6. The Engineer will develop the required Aircraft Fleet Mix design, with input from FNL, to assure the new pavement sections will be sufficient for the current and anticipated aircraft operations at the airport. Furthermore, the Engineer will coordinate the data from the geotechnical investigations and develop multiple pavements section alternatives for overall constructability and cost comparison. This item shall also include the development and submittal of the FAA 5100-1 form, *Airport Pavement Design*. Preliminary pavement section will be submitted to the FAA prior to the 60% submittal.
- g) <u>Draft Construction Safety and Phasing Plan (CSPP)</u>: a Draft CSPP will be developed to be included in the contract documents as guidance to the contractor on important safety standards and regulations that are typically required on airport construction projects. The CSPP will be prepared in accordance with the latest, available FAA AC 150/5370-2. Guidance will be provided to direct the Contractor awarded the project for standards and safety while performing construction activities on an airport. Construction phasing and barricade plans will also be provided in this report for reference during construction.

This report will be submitted to the FAA for review and any comments received by the FAA will be addressed. Once finalized, the Engineer will submit the report on the FAA airspace review website, *Obstruction Evaluation and Airport Airspace Analysis* (OE/AAA), (after the 30% Submittal).

h) <u>FAA Modifications to Standards (MOS)</u>: the Engineer will identify any potential Modifications to the FAA Standard contract documents, technical specifications, or design standards and coordinate those with the FAA Northwest Region Denver ADO. If determined necessary, a MOS project shall be created on the FAA AGIS database and, in accordance with FAA Order 5100-1G, submit FAA Form 5300.1 and reflect the modifications, as approved and communicated by the FAA.

Potential MOS include the specification for seeding and hydromulching. Additionally, a MOS may be required to not perform grooving on the runway.

i) <u>30% Internal QA/QC Project Review</u>: in addition to the continual quality assurance reviews performed by senior practice staff, Dibble will perform additional quality control reviews prior to each submittal utilizing standardized checking processes by a Senior QC Manager. Each subconsultant will be responsible for their own Quality Control, however, the Senior QC Manager will review all combined project documents for consistency amongst the design elements before each submittal as well. j) <u>30% Plan-In-Hand Site Visit</u>: perform a plans-in-hand site visit to visually compare the plans and survey data to existing field conditions. Design elements will be reviewed and/or confirmed in the field such as utility infrastructure and structures (visible in the field), pavement markings, grades, project limits, drainage conditions, etc. Inconsistencies found during the field investigations (if any) will be corrected on the construction documents.

#### 4) 60% Progress Submittal:

- a) <u>60% Design Plans</u>: 60% plans shall be submitted for review and approval by the FAA and the Airport. All previous comments from FAA and FNL will be addressed. Project plans will be progressed to the 60% design level. Reference plan list above for anticipated sheets.
- b) <u>Draft Contract Documents and Technical Specification</u>: The draft contract documents, and technical specifications will be developed by the Engineer in a manner consistent with the regulations and standards set forth by the funding agencies anticipated for construction, (i.e. FAA and City). Contract documents shall include all bidding requirements, Federal General Provisions that control the work of the Contractor, Federal Assurances specific to this project, Federal Wage Rates, Buy American Provisions, City Special Provisions (if any), and Federal Technical Specifications for the materials with measurement and payment controlled on a unit price basis. The Draft Contract Documents will be submitted to the City for review of legality and then submitted for review by the FAA. The Technical Specifications will be consistent with the latest, available version of FAA AC 150/5370-10. Technical Specifications will include the following (at a minimum):
  - C-100 Contractor Quality Control Program
  - C-102 Temporary Air and Water Pollution, Soil Erosion and Siltation Control
  - C-105 Mobilization
  - C-110 Method of Estimating Percent Within Specification Limits
  - P-101 Preparation/Removal of Existing Pavement
  - P-151 Clearing and Grubbing
  - P-152 Excavation and Embankment
  - P-153 Controlled Low-Strength Material (CLSM)
  - P-154 Subbase Course
  - P-155 Lime-Treated Subgrade
  - P-209 Crushed Aggregate Base Course
  - P-304 Cement-Treated Aggregate Base Course (CTB)
  - P-401 Hot Mix Asphalt (HMA) Pavements
  - P-603 Bituminous Tack Coat
  - P-608 Emulsified Asphalt Seal Coat
  - P-610 Structural Portland Cement Concrete
  - P-620 Airfield Pavement Marking
  - D-701 Pipe for Storm Drains and Culverts
  - D-705 Pipe for Underdrains for Airports
  - D-752 Concrete Culverts, Headwalls, and Miscellaneous Drainage Structures
  - T-901 Seeding
  - T-908 Mulching
  - L-100 Electrical General Requirements
  - L-108 Underground Cable for Airports
  - L-110 Airport Underground Electrical Conduit and Duct
  - L-115 Electrical Manholes and Junction Structures
  - L-125 Installation of Airport Lighting Systems
- c) <u>60% Quantities and Engineer's OPCC</u>: revise the Engineer's OPCC previously developed under the 30% phase, to reflect the updates based on the 60% construction plans and technical specifications on a unit price basis. The unit pricing for each line item will be based on recent bid tabulations from comparative projects, locations, materials, and quantities available at that time. The construction costs will also take into account estimated escalation for construction in 2025.

- d) <u>Final Construction Safety and Phasing Plan (CSPP)</u>: develop the final CSPP, addressing any comments received from FNL and FAA. The CSPP will be prepared in accordance with the latest, available FAA AC 150/5370-2. Guidance will be provided to direct the Contractor awarded the project for standards and safety while performing construction activities on an airport. Construction phasing and barricade plans will also be provided in this report for reference during construction. This report will be submitted to FAA airspace review website, *Obstruction Evaluation and Airport Airspace Analysis* (OE/AAA).
- e) <u>Construction Site Plan Submittal to OE/AAA</u>: prepare a final exhibit that illustrates the Contractor's Staging and Storage Area, Haul Route, anticipated construction equipment heights, location of construction equipment, and survey data meeting the Level 1A survey criteria. This report will be submitted to FAA airspace review website, *Obstruction Evaluation and Airport Airspace Analysis* (OE/AAA).
- f) <u>60% Internal QA/QC Project Review</u>: in addition to the continual quality assurance reviews performed by senior practice staff, the Dibble will perform additional quality control reviews prior to each submittal utilizing standardized checking processes by a Senior QC Manager. Each subconsultant will be responsible for their own Quality Control, however, the Senior QC Manager will review all combined project documents for consistency amongst the design elements before each submittal as well.
- g) <u>Safety Risk Management Meeting (SRM)</u>: Dibble will support FNL in attending and participating at the anticipated SRM meeting. It is expected that FNL will coordinate this meeting with the contract ATCT staff and FAA. Dibble will attend the meeting to provide input on the construction phasing, construction timeline, construction operations, CSPP, and other pertinent items that will be discussed and evaluated at this meeting. It is assumed this will be an all-day meeting.
- h) <u>60% Plans-In-Hand Site Visit</u>: Dibble will perform a plans-in-hand site visit to visually compare the 60% plans and survey data to existing field conditions. Design elements will be reviewed and/or confirmed in the field such as utility infrastructure and structures (visible in the field), pavement markings, grades, project limits, drainage conditions, etc. Inconsistencies found during the field investigations (if any) will be corrected on the construction documents.

#### 5) 90% Pre-final Documents:

- a) <u>90% Pre-final Plans</u>: 90% plans shall have addressed all internal and external review comments from previous submittals. The plans will be prepared for the bidding phase.
- b) <u>Pre-final Contract Documents and Technical Specification</u>: the pre-final bid contract documents and technical specifications shall have all internal and external review comments received by the FNL, City, and FAA incorporated and addressed. The contract documents and technical specifications will be prepared for the bidding phase.
- c) <u>90% Quantities and Engineer's OPCC</u>: based on the 90% construction plans and technical specifications, the Engineer shall provide a final bidding schedule in the contract documents and an OPCC based on a unit price basis, reflecting recent bid tabulations from comparative projects, locations, materials, and quantities available at that time.
- d) <u>FAA Modifications to Standards (MOS)</u>: final coordination with the FAA (as needed). If determined necessary, a MOS project shall be created on the FAA AGIS database and, in accordance with FAA Order 5100-1G, submit FAA Form 5300.1 to reflect the modifications, as approved and communicated by the FAA.

Potential MOS include the specification for seeding and hydromulching. Additionally, a MOS may be required to not perform grooving on the runway.

e) <u>90% Internal QA/QC Project Review</u>: in addition to the continual quality assurance reviews performed by senior practice staff, Dibble will perform additional quality control reviews prior to each submittal utilizing standardized checking processes by a Senior QC Manager. Each subconsultant will be

responsible for their own Quality Control, however, the Senior QC Manager will review all combined project documents for consistency amongst the design elements before each submittal as well.

f) <u>90% Plans-In-Hand Site Visit</u>: Dibble will perform a plans-in-hand site visit to visually compare the 90% plans and survey data to existing field conditions. Design elements will be reviewed and/or confirmed in the field such as utility infrastructure and structures (visible in the field), pavement markings, grades, project limits, drainage conditions, etc. Inconsistencies found during the field investigations (if any) will be corrected on the construction documents.

#### 6) 100% Final Documents (Bid Ready):

- a) <u>100% Final Plans</u>: sealed, 100% plans shall have all internal and external review comments by the Airport and FAA incorporated and addressed. The plans will be prepared for the bidding phase.
- b) <u>Final Contract Documents and Technical Specification</u>: the final bid contract documents and technical specifications shall have all internal and external review comments by the Airport, City, and FAA incorporated and addressed. The contract documents and technical specifications will be prepared for the bidding phase.
- c) <u>100% Quantities and Engineer's OPCC</u>: based on the final construction plans and technical specifications, the Engineer shall provide a final bidding schedule in the contract documents and an OPCC based on a unit price basis, reflecting recent bid tabulations from comparative projects, locations, materials, and quantities available at that time.
- d) <u>Final Engineer's Design Report</u>: The final engineer's design report shall provide all the design criteria and standards used in developing the construction documents (i.e. plans and technical specifications) and document the work and results of investigative efforts. The final report shall also address any review comments received from all internal and external reviews, including the Airport, City, and FAA.
- e) <u>Final Drainage Analysis and Memorandum</u>: finalized the drainage report as described in Section 3.c above, while also addressing comments received from the City of Loveland.
- f) <u>Final Internal QA/QC Project Review</u>: in addition to the continual quality assurance reviews performed by senior practice staff, Dibble will perform additional quality control reviews prior to each submittal utilizing standardized checking processes by a Senior QC Manager. Each subconsultant will be responsible for their own Quality Control, however, the Senior QC Manager will review all combined project documents for consistency amongst the design elements before each submittal as well.

#### Bid Phase Services (Lump Sum)

#### 7) Bid Phase Services:

- a) <u>Bid Phase Management and Administration</u>: Provide all project management and coordination of the design team and the FNL and FAA during the 1-month bidding phase.
- b) <u>Pre-Bid Meeting and Site Visit</u>: Attend the pre-bid meeting and assist the Airport in conducting the meeting. The Engineer, upon the direction of the Airport, will provide a brief overview of the project and contract components, identifying important elements within the documents that the Contractors should be particularly familiar with prior to submitting a bid. The Engineer shall also assist the Airport in developing and submitting the pre-bid meeting minutes to all plan holders.

The Engineer will also assist the Airport with the airfield site visit for all interested parties.

c) <u>Bid Addenda</u>: Pending contractors' reviews, comments, and questions, the Engineer will assist the Airport in developing, issuing any necessary addenda, and notifying all planholders/bidders. Addenda may include revision to construction documents (i.e. plans and technical specifications). It is anticipated that a maximum of two (2) addenda will be issued for this project.

- d) <u>Contractor Questions</u>: The Engineer will coordinate, address, and appropriately respond to all contractor communications and questions during the bidding process. Responses will be submitted through addenda as needed. All communication will be in compliance with the Airport regulations and requirements.
- e) <u>Bid Opening Meeting</u>: The Engineer will attend the bid opening meeting to assist the Airport and City in reviewing and organizing the bidding documents from each contractor.
- f) <u>Bid Tabulation and Letter of Recommendation of Award</u>: The Engineer will evaluate each bid submitted for mathematical/calculative errors and for comparative purposes against the Engineer's OPCC and other bids submitted. The Engineer will provide a bid summary letter stating all inconsistencies and results and a recommendation for the lowest responsible, responsive bidder. Included with this effort will be the review and evaluation support of the other contract components such as the DBE subcontractor evaluation.

The Engineer will further assist the Airport and City with review of the bidder's compliance with the other required contract documents included in the bidding documents.

#### 8) Miscellaneous and Assumptions:

- a) Design Schedule: it is anticipated that Dibble will receive a design Notice To Proceed in March 2023, with a 13-month design phase (March 2023 April 2024). See attached proposed schedule for reference.
- b) Utility Locating: A utility locating company is anticipated to be need to locate known and unknown utilities for conflict design. A \$20k time-and-material allowance is included to cover the cost of potential utility locating (as needed).
- c) All plans are to be prepared in AutoCAD Civil 3D 2021.
- d) This proposal has been prepared to reflect effort to produce plans and specifications for a single bid package, (i.e. no alternates).
  - 1. The preliminary construction cost estimates (2025): \$13.4M
- e) The following number of trips are anticipated by the Project Manager for the Design Phase to cover all the on-site meetings identified in this scope:
  - 1. Design Phase 4 Trips (two staff members each trip):
    - i. Project Kick-Off Meeting
    - ii. 30% Project Review Meeting and Site Visit
    - iii. 60% Project Review Meeting and Site Visit
    - iv. 90% Final Site Visit and Plan Review
  - 2. Bid Phase 2 Trips
    - i. Pre-Bid Meeting
    - ii. Bid Submittal

#### 9) Exclusions To This Scope of Work:

- a) Construction Phase Services.
- b) Landscape, Irrigation, and Environmental Design Services.
- c) Structural Engineering, Mechanical, or Architectural Design Services.
- d) Revisions to the most current offsite watershed hydrology model(s).
- e) FEMA Letters of Map Revision.

- f) Permit-Ready Storm Water Pollution Prevention Plans (SWPPP) (Contractor's Responsibility).
- g) The following design elements:
  - i. Blast Pad rehabilitation and expansion to meet FAA standards
  - ii. Runway shoulder design
  - iii. Full connector taxiway rehabilitation or re-design to meet current FAA geometric standards
- h) Single bid Phase effort (Bid Phase in early 2024)
- i) Running the Safety Risk Management Meeting (SRM) or developing the SRM report.





# Northern Colorado Regionnal Airport Runway 15-33 Widening

# Legend

- Runway 15-33 Widening
- Contractor's Staging & Storage
- Airport Property Line





ID	Task Name	Duration	Start	Finish		Qtr 2, 2023	1	1	Qtr 3, 2023	1	1	Qtr 4, 2023	1	1
1	ENIL DW/45.22 Widening	294 days	Mon 4/3/23	Thu 5/16/24	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	FNL RW 15-33 Widening	u												
2	Notice to Proceed	0 days	Mon 4/3/23	Mon 4/3/23		♦ 4/3				+				
3	Design Phase	271 days	Mon 4/3/23	Mon 4/15/24		•••••		+		+				
4	FAA AGIS Statement of Work	10 days	Mon 4/3/23	Fri 4/14/23	4/3	4/14				+				
5	Geotechnical Investigations	3 days	Mon 4/17/23	Wed 4/19/23		4/17 4/19	9			+				
6	Topo Survey (Field) & Site Visit	3 days	Mon 4/17/23	Wed 4/19/23		4/17 📕 4/19	 9							
7	30% Design (FAA/CDOT/FNL)	76 days	Wed 4/19/23	Wed 8/2/23		4/19				8/2				
8	30% Site Visit (Plans Review)	1 day	Mon 8/7/23	Mon 8/7/23						8/7				
9	FNL/FAA/CDOT 30% Submittal Review	18 days	Thu 8/3/23	Mon 8/28/23					8/3	3	8/28			
10	FNL/FAA/CDOT 30% Review Meeting	1 day	Tue 8/29/23	Tue 8/29/23				+		8/29	8/29			
11	60% Design (FNL)	45 days	Wed 8/30/23	Tue 10/31/23				+		8/30			10/31	
12	FNL 60% Review Meeting	11 days	Wed 11/1/23	Wed 11/15/23				+		+		11/1	11/15	
13	60% Design Review Site Visit	1 day	Wed 11/1/23	Wed 11/1/23						+			11/1	
14	90% Design (FAA/CDOT/FNL Final Review)	50 days	Mon 12/4/23	Fri 2/9/24									12/4	
15	7460 Submittal to OE/AAA	1 day	Mon 2/26/24	Mon 2/26/24										
16	7460 and CSPP Submittal to FAA	1 day	Mon 2/26/24	Mon 2/26/24						+				
17	FNL/FAA/CDOT 90% Submittal Review	11 days	Mon 2/12/24	Mon 2/26/24						+				
18	FNL/FAA/CDOT 90% Review Meeting	1 day	Mon 2/26/24	Mon 2/26/24						+				
19	90% Design Review Site Visit	1 day	Mon 2/26/24	Mon 2/26/24						+				
20	100% Bid Documents	36 days	Tue 2/27/24	Tue 4/16/24										
21	Submit 100% Bid Docs (FAA/CDOT/FNL)	1 day	Mon 4/15/24	Mon 4/15/24	+			+		+		-+		
22	Bidding Phase	23 days	Tue 4/16/24	Thu 5/16/24	+			+		+				
23	30 Calendar Day Bidding Period	20 days	Tue 4/16/24	Mon 5/13/24	+					+				
24	Bids Due	0 days	Mon 5/13/24	Mon 5/13/24	+			+		+				
25	FAA/FNL Bid Review	5 days	Fri 5/10/24	Thu 5/16/24	+			+		+		- +		



Northern CO Regional Airport Runway 15-33 Widening Fri 1/20/23



# DIBBLE

	NORTHERN CO REGIONAL AIRPORT						
	RW 15-33 WIDENING, LIGHTING AND SIGNAGE						
	PRELIMINARY C	OST ES	TIMA	TE			
LINE No.	DESCRIPTION	APPROX. QTY.	UNIT	UNIT PRICE	AMOUNT		
	CIVIL						
1	Mobilization and Contractor's Quality Control	1	LS	\$1,100,000.00	\$1,100,000.00		
2	Airfield Safety and Security	1	LS	\$150,000.00	\$150,000.00		
3	Sawcut (Full Depth)	18,000	LF	\$4.00	\$72,000.00		
4	Milling (4' wide x 3" depth)	8,000	SY	\$10.00	\$80,000.00		
5	Pavement Removal (Full Depth)	2,778	SY	\$12.00	\$33,336.00		
6	Earthwork	15,278	CY	\$22.00	\$336,116.00		
7	Demo Underdrain	17,000	LF	\$10.00	\$170,000.00		
8	Treated Subgrade	55,000	SY	\$22.00	\$1,210,000.00		
9	Aggregate Base	55,000	SY	\$32.00	\$1,760,000.00		
10	Asphalt	26,297	TON	\$160.00	\$4,207,520.00		
11	Temp Pavement Marking	150,000	SF	\$3.00	\$450,000.00		
12	Final Pavement Marking	150,000	SF	\$3.00	\$450,000.00		
13	Seal Coat	300,000	SY	\$3.00	\$900,000.00		
14	Underdrain	18,000	LF	\$32.00	\$576,000.00		
15	Electrical Demo and New (Runway Lights and Signs)	1	LS	\$1,200,000.00	\$1,200,000.00		
				Civil Subtotal	\$12,694,972.00		
			CONSTRU	ICTION SUBTOTAL	\$12,694,972.00		
			Misc & Oth	er Unknown Items	\$650,000.00		
			CON	STRUCTION TOTAL	\$13,344,972.00		
				Engineering			
			C	onstruction Admin	\$500,000.00		
				Airport Admin	\$10,000.00		
				PROJECT TOTAL	\$13,854,972.00		





On-Call Engineering

Project: Runway 15-33 Widening

Design and Bid Phase Services

Northern Colorado Regional Airport

Date: 2/3/2023





Contract Number: TBD Project Number: TBD Task Number: 6 Amendment Number: N/A FAA Number: 3-08-0023-043-2023 CDOT Number: TBD

Summary

Dibble

Subs

## A. Design and Bid Phase Services

		Fee	Туре		
1	Dibble Engineering	\$565,196.00	Lump Sum	\$565,196.00	
2	NorthStar Engineering and Surveying (Survey)	\$52,800.00	Lump Sum		\$52,800.00
3	Terracon (Geotech)	\$56,352.00	Lump Sum		\$56,352.00
4	CR Engineers (Electrical - DBE)	\$69,112.00	Lump Sum		\$69,112.00
5	Utility Locating (Potholing T&M Allowance)	\$20,000.00	Time & Materials		\$20,000.00
	Design and Bid Phase Subtotal	\$763,460.00		\$565,196.00	\$198,264.00

	TOTAL	Dibble	Subconsultants
Total	\$763,460.00	\$565,196.00	\$198,264.00
		DBE % Particip	ation 9.1%

Firm:	Dibble Engineering	Contract Number: TBD
	On-Call Engineering	Project Number: TBD
Project:	Runway 15-33 Widening	Task Number: 6
	Design and Bid Phase Services	Amendment Number: N/A
	Northern Colorado Regional Airport	FAA Number: 3-08-0023-043-2023
Date:	2/3/2023	CDOT Number: TBD

DESIGN PHASE SERVICES SUMMARY					
Classification	Total	Billing	Total		
	Hours	Rates	Costs		
1 Principal	0	\$295.00	\$0.00		
2 Senior Project Manager	546	\$225.01	\$122,855.46		
3 Project Manager	0	\$205.02	\$0.00		
4 Senior Engineer	478	\$205.02	\$97,999.56		
5 QA/QC Manager	120	\$205.02	\$24,602.40		
6 Project Engineer	1,134	\$172.01	\$195,059.34		
7 Senior Designer	768	\$146.99	\$112,888.32		
8 Admin Assistant	44	\$85.01	\$3,740.44		

Totals:	3,090	\$557,146.00

	Type of
Cost	Compensation
\$6,711.00	Direct Cost
\$511.00	Direct Cost
\$828.00	Direct Cost
	Cost \$6,711.00 \$511.00 \$828.00

Sub-Total for Direct Costs.....\$8,050.00

# DESIGN PHASE SERVICES SUBCONSULTANTS

		Type of
Firm	Cost	Compensation
1 NorthStar Engineering and Surveying (Survey)	\$52,800.00	Lump Sum
2 Terracon (Geotech)	\$56,352.00	Lump Sum
3 CR Engineers (Electrical - DBE)	\$69,112.00	Lump Sum
4 Utility Locating (Potholing T&M Allowance)	\$20,000.00	T&M

# **DESIGN PHASE SERVICES TOTAL FEE**

TOTAL FEE (rounded ).....

\$763,460.00

#### Dibble Engineering On-Call Engineering Firm:

Project:

Runway 15-33 Widening Design and Bid Phase Services

Northern Colorado Regional Airport

Date: 2/3/2023

	DESIGN PHA	SE SERVICES	- ESTIMATE	D MANHOL	JRS				
		SENIOR							
TASK	PRINCIPAL	PROJECT MANAGER	PROJECT MANAGER	SENIOR ENGINEER	QA/QC MANAGER	PROJECT ENGINEER	SENIOR	ADMIN ASSISTANT	TOTAL HOURS BY TASK
1 General Project Management and Pre-Design Tasks									
1a Project Management & Administration		120							120
1h Project Meetings		32		32		32	12		108
1c Preliminary Construction Phase Evaluation		32		24		40	40		136
1d Disadvantage Business Enterprise (DBE) Annual Goal and Program		4				12	10	12	28
1e Federal Grant Application		4				12		4	20
2 Design Start-Up and Data Collection									
		2				24	24		54
2a Existing Document Research and Coordination		2		4		24	24	0	54
20 Private and City Othity Coordination		2		2		24	10	0	50
2c Survey and Coordination and Review		4		16		16	16		52
		0		24		24	24		72
26 PART Stulling Alialysis		10		16		32 90	24		90
21 Base Wap Development and Coordination		4		10		16	80		26
		4		10		10			30
3 30% Progress Submittal									
3a 30% Design Plans		40		40		120	160		360
3b Draft Engineer's Design Report		16		24		80	16	2	138
3c Drainage Analysis and Draft Memorandum		32		40		120	24		216
3d FAA Categorical Exclusion (CATEX)		2				2			4
3e 30% Quantities and Engineer's OPCC		4		8		24	16		52
3f FAA FAARFIELD Pavement Design and Section Alternatives		8		16		24			48
3g Draft Construction Safety and Phasing Plan (CSPP)		4		16		32	8	2	62
3h FAA Modifications to Standard (MOS)		4		16		32			52
3i 30% Internal QA/QC Project Review					40				40
3j 30% Plan-In-Hand Site Visit		8				8			16
4 60% Progress Submittal									
4a 60% Design Plans		32		24		40	160		256
4b Draft Contract Documents and Technical Specifications		16		16		24		4	60
4c 60% Quantities and Engineer's OPCC		4		4		8	8		24
4d Final Construction Safety and Phasing Plan (CSPP)		4		16		24	8	2	54
4e Construction Site Plan Submittal to (FAA OE/AAA)		2		4		12	12		30
4f 60% Internal QA/QC Project Review					40				40
4g Safety Risk Management Meeting (SRM)		12		12		12	4		40
4h 60% Plan-In-Hand Site Visit		12				12			24
5 90% Pre-Final Documents									
5a 90% Pre-Final Plans		24		16		40	80		160
5b Pre-final Contract Documents and Technical Specifications		6		8		16		4	34
5c 90% Quantities and Engineer's OPCC		4		4		8	8		24
5d FAA Modifications to Standards (MOS)		4		16		32			52
5e 90% Internal QA/QC Project Review					24				24
5f 90% Plans-In-Hand Site Visit		8				8			16
6 100% Final Documents (Bid Ready)									
6a 100% Final Plans		24		8		16	32		80
6b Final Contract Documents and Technical Specifications		4		4		24		4	36
6c 100% Quantities and Engineer's OPCC		4		4		4	4		16
6d Final Engineer's Design Report		4		4		8	4		20
6e Final Drainage Analysis and Memorandum		4		20		44			68
6f Final Internal QA/QC Project Review					16				16
7 Bid Phase Services									
7a Bid Phase Management and Administration		Δ							4
The Pre-Bid Meeting and Site Visit		ч Д				Д			4
7c Bid Addenda		7				-+ 24	12		0
7d Contractor Questions		6				8			14
7e Bid Opening Meeting		2				5			2
7f Bid Tabulation and Letter of Recommendation of Award		4				12		2	18
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Contract Number: TBD Task Number: 6 Amendment Number: N/A

FAA Number: 3-08-0023-043-2023 CDOT Number: TBD

Project Number: TBD

Contract Number: TBD Project Number: TBD Task Number: 6 Amendment Number: N/A FAA Number: 3-08-0023-043-2023 CDOT Number: TBD

#### DESIGN AND BID PHASE SERVICES DIRECT COSTS

1.	PRI	NTING ( 30%, 60%, 90% and 100%	'Bid Set' Subm	ittals)		
a.	4	Submittals of (2 Copies Full-Size Bond Plans)	128 sheets =	128 Sheets @	\$2.50 /sheet	\$2,560
b.	4	Submittals (4 Copies Scaled 1/2-Size Plans)	128 sheets =	128 Sheets @	\$0.30 /sheet	\$614
c.	4	Plotting	128 sheets =	128 Sheets @	\$1.50 /sheet	\$1,536
d.	4	Submittals for Spec Book (2 copies @ 650 pages each)	@	700 Sheets @ (double-sided)	\$0.10 /sheet	\$560
e.	4	Submittals for Eng. Report (2 copies @ 300 pages each)	@	300 Sheets @ (single-sided)	\$0.60 /sheet	\$1,440

#### 2. Lodging

a. O Day	0 Staff	\$113.00 /Day (2023 Federal Per Diem)	\$0
3. Travel			
a. 6 Trips	130 miles	\$0.655 /mile (2023 Federal Per Diem)	\$511
4. Meals			
a. 6 Days	2 Staff	\$69.00 /Day (2023 Federal Per Diem)	\$828
		DESIGN AND BID PHASE TOTAL	\$8,050



111 E. 5<sup>th</sup> Street Pueblo, CO 81003 (719) 544-6823 (719) 544-6825 Fax

Michael L Cuppy, P.E., P.L.S.

17 015 11 January 30, 2023

Dibble Engineering 2696 South Colorado Boulevard, Suite 585 Denver, CO 80222

- Attn: Jared Bass, Senior Project Manager
- Via: email: <jared.bass@dibblecorp.com>

Re: Loveland FNL Runway 15-33 Widening Surveying Support services.

We are pleased to present this "Work Authorization Agreement" for performing Professional Engineering and Surveying services with regard to the above referenced project. Please find a list below of the services that are to be provided:

#### TASK A: ASBUILT AREAS OF RUNWAY 15-33 SURVEY OF PROPERTY, THE LIMITS OF WHICH ARE DESCRIBED BELOW AND ON EXHIBIT PROVIDED BY DIBBLE INCLUDING:

- 1. All survey work to be executed in compliance with FAA AC 150-5300-16/17/18, documenting the survey methodology used for data collection and accuracies thereof (Pictures and Notes), along with use of existing Airport Geodetic Control, PACS and SACS. The survey shall utilize a robotic total station, GPS, and differential leveling, collecting topographic features along the project areas based on NAD 83 Horizontal coordinates and NAVD 88 vertical datum. Coordinates shall be area ground modified State Plane, Colorado South Zone. The survey shall meet the vertical and horizontal tolerances of a Level 1A survey.
- 2. End of runway 15-33
- 3. Runway and taxiway pavement 50' grid.
- 4. All electrical lighting, signage, and handholds/manholes
- 5. All drainage infrastructure including pipes, inlets, manholes, etc.
- 6. Infield and connector taxiways 250 feet east and west of runway
- 7. All pavement markings
- 8. Locations of soil samples/cores on runway pavement
- 9. Final deliverable: preconstruction "Asbuilt" basemap in AutoCAD 2021 or later format.

TOTAL TASK A: (	(lump sum)	)	\$48,4000.00
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### TASK B: Survey Control Sheet, to include:

- 1. Prepare Survey Control Sheet and update for 4 submittals per FAA criteria and specifications.
- 2. Survey Control sheet to meet all requirements outline in Task A item 1.

TOTAL TASK B: (lump sum)	\$4,200.00
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# THE FOLLOWING ITEMS ARE NOT INCLUDED IN THIS PROPOSAL (A formal Proposal for any of these services can and will be prepared at Client request):

1. Asbuilt survey of any item not specifically listed above.



(719) 544-6823 Fax (719) 544-6825

111 East 5<sup>th</sup> Street

Michael L. Cuppy, P.E., P.L.S.

# SCHEDULE OF STANDARD TIME AND MATERIAL RATES

(January 1, 2023 to January 1, 2024)

#### **OFFICE ENGINEERING AND PLANNING:**

Principal	\$180.00/hr.
Registered Professional Engineer (Project Manager)	\$150.00/hr.
Licensed Land Surveyor (Project Manager).	\$140.00/hr.
Project Engineer (EI)/Surveyor (SI)	\$125.00/hr.
Engineer/Planner	\$110.00/hr.
Designer / GIS	\$ 100.00/hr.
AutoCAD Technician	\$ 90.00/hr.
Accounting	\$ 70.00/hr.
Clerical	\$ 50.00/hr.
Messenger	\$ 35.00/hr.
FIELD ENGINEERING AND SURVEYING:	
3-Man Survey Crew	\$175.00/hr.
Overtime Rate	\$200.00/hr.
2-Man Survey Crew	\$160.00/hr.
Overtime Rate	\$180.00/hr.
1-Man Survey Crew	\$125.00/hr.
Overtime Rate	\$145.00/hr.
Construction Manager	\$130.00/hr.
Construction Inspector	\$115.00/hr.
Survey Crew – Out of Town Drive Time	\$120.00/hr.
GPS Equipment: Standard Survey Crew Rate Plus	\$ 50.00/hr.
REIMBURSABLE RATES:	
Blueline Prints	\$ 0.70/sq.ft.
Mylar Prints	\$ 2.85/sq.ft.
Color Bond	\$ 2.20/sq.ft.
Xerox Copies	\$ 0.20/ea.
Color Copies (8.5x11)	\$ 2.25/ea.
Large Xerox Copies	\$ 2.20/ea.
SUBCONTRACTED EXPENSES AND SPECIAL EQUIPMENT:	
Mileage – Trucks and Autos	\$ 0.60/mile
Direct Costs plus 15%	

**NOTE:** In the event Principals are involved for an extended period on a project, rates charged will be commensurate with work performed.



January 13, 2023

Dibble & Associates Consulting Engineers, Inc. 2696 South Colorado Boulevard, Suite 585 Denver, Colorado 80222

Attn: Jared Bass, P.E.

- P: (303) 972-5756
- E: Jared.bass@dibblecorp.com
- **RE:** Proposal for Pavement Engineering Services, Rev. 1 Northern CO Regional Airport Runway 15-33 Widening 4900 Earhart Rd Loveland, CO Terracon Proposal No. P20235002

Dear Mr. Bass:

We appreciate the opportunity to submit this revised proposal to Dibble & Associates Consulting Engineers, Inc. (Dibble) to provide Pavement Engineering services for the above referenced project. This revision reflects new understanding from the FNL Airport on authorized work hours. The following are exhibits to the attached Agreement for Services.

Exhibit A	Project Understanding
Exhibit B	Scope of Services
Exhibit C	Compensation and Project Schedule
Exhibit D	Site Location and Nearby Geotechnical Data
Exhibit E	Anticipated Exploration Plan

Our base fee to perform the Scope of Services described in this proposal is \$56,352. Exhibit C includes details of our fees and consideration of additional services as well as a general breakdown of our anticipated schedule.

Your authorization for Terracon to proceed in accordance with this proposal can be issued by signing and returning a copy of the attached Agreement for Services to our office, or other mutually agreeable contract.

Sincerely,

Terracon en

Kirk Ø. Jackson, P.E. Project Engineer

Joseph Q. Phillips

Joseph A. Phillips, P.E. (Arizona) Sr. Materials Engineer / Sr. Principal





# Northern Colorado Regionnal Airport Runway 15-33 Widening

# Legend

- Runway 15-33 Widening
- Contractor's Staging & Storage
- Airport Property Line







# **Exhibit A – Project Understanding**

Our Scope of Services is based on our understanding of the project as described by Dibble and the expected subsurface conditions as described below. We have not visited the project site to confirm the information provided. Aspects of the project, undefined or assumed, are highlighted as shown below. We request Dibble and/or the design team verify all information prior to our initiation of field exploration activities.

# Planned Construction

Item	Description
Information Provided	An emailed request for a proposal was received from Dibble on January 3, 2023. The email request included a detailed scope of work prepared by Dibble which forms the basis for the scope of work in this proposal.
Project Description	Runway 15-33 is approximately 8,500 feet long and is constructed of asphalt pavement. The project includes the widening of Runway 15-33 by 25 feet on each side. The pavement at each taxiway connector will be partially demolished to the extents of the runway widening. The existing edge drains will be removed, and new edge drains will be constructed.
Pavements	Flexible and rigid runway widening and taxiway connector pavement thickness design alternatives will be designed in general accordance with AC 150/5320-6G. We assume Dibble will provide the estimated aircraft fleet mix to be used in the FAARFIELD pavement design analysis. We assume the maximum aircraft loading will exceed 100,000 pounds. The pavement design period is 20 years.

# Site Location and Anticipated Conditions

Item	Description
Location	The project is located at the Northern Colorado Regional Airport at 4900 Earhart Rd in Loveland, CO. See Exhibits D and E (Site Location and Anticipated Exploration Plan) for additional site location information.

#### Proposal for Pavement Engineering Services, Rev. 1 Northern CO Regional Airport Runway 15-33 Widening | Loveland, CO January 13, 2023 | Terracon Proposal No. P20235002



Item	Description
Existing Improvements	The site is an existing airport with asphalt surfaced runway, taxiway, and taxiway connectors. The site also includes site features typical of airports such as lighted signage, infield drainage areas, parked aircraft and associated support vehicles such as fuel trucks, tugs and luggage transports.
Current Ground Cover	The existing runway, shoulders, taxiways and taxiway connectors are surfaced with asphalt. The infield drainage areas are vegetated with grass.
Existing Topography	The runway alignment is relatively level.
Site Access	We expect the site, and all exploration locations, are accessible with our truck-mounted drilling equipment and support vehicles.
Expected Subsurface Conditions	Our experience at and near the airport indicates subsurface conditions will consist of lean and fat clays with moderate to high expansion potential and low to moderate sulfate expansion potential. Claystone bedrock is anticipated below the clay soils.


# **Exhibit B - Scope of Services**

Our proposed Scope of Services consists of field exploration, laboratory testing, and engineering/project delivery. These services are described in the following sections.

### **Field Exploration**

Based on Scope of Services provided by Dibble, and our experience with similar projects in the vicinity of the project site, and to be in general conformance with the FAA AC 150/5320-6G, we propose the following field exploration program which is anticipated to be completed with 3 days of on-site activities.

Number of Borings	Planned Boring Depth (feet) <sup>1</sup>	Planned Location <sup>2</sup>
8 <sup>3</sup>	10	Existing Runway 15-33
8	10	Runway 15-33 Widening
5	10	Existing Taxiway Connectors A1 through A5

- 1. Although not anticipated based on the geology in the vicinity of the project site, borings would be terminated at shallower depths if refusal is encountered.
- 2. The planned boring locations are shown on the attached **Anticipated Exploration Plan.**
- 3. Terracon will retain a subcontractor to core through the existing runway with a portable coring machine at the eight borings planned in the existing runway.

**Boring Layout and Elevations:** We will use handheld GPS equipment to locate borings with an estimated horizontal accuracy of +/-20 feet. If available, approximate elevations will be obtained by interpolation from a site specific, surveyed topographic map. We can alternatively coordinate with your Project Surveyor to include locations and surface elevations in project information if so requested.

**Subsurface Exploration Procedures:** Prior to drilling, the asphalt will be cored and the cores will be transported to the Terracon laboratory for thickness measurements and observations. We will advance borings with a truck-mounted drill rig using continuous flight augers (solid stem and/or hollow stem, as necessary, depending on soil conditions). Four samples will be obtained in the upper 10 feet of each boring. Bulk samples of the auger cuttings will also be obtained from each boring for California Bearing Ratio testing. Soil sampling is typically performed using split-barrel sampling procedures. The split-barrel samplers are driven in accordance with the standard penetration test (SPT). The samples will be placed in appropriate containers, taken to our soil laboratory for testing, and classified by a Geotechnical Engineer. In addition, we



will observe and record groundwater levels during drilling and sampling, if groundwater is encountered during drilling. No provisions have been made to obtain delayed groundwater measurements.

One Dynamic Cone Penetrometer (DCP) test will be performed at each boring location in the runway widening areas using a Kessler Dual-Mass or Single-Mass DCP in general accordance with ASTM D 6951 Standard Test method for Use of the Dynamic Cone Penetrometer in Shallow Pavement Applications. The results of the DCP testing will be used to supplement our recommendations for the subgrade support characteristics for the hangar apron pavements.

Our exploration team will prepare field boring logs as part of standard drilling operations including sampling depths, penetration distances, and other relevant sampling information. Field logs include visual classifications of materials observed during drilling and our interpretation of subsurface conditions between samples. Final boring logs, prepared from field logs, represent the Geotechnical Engineer's interpretation and include modifications based on observations and laboratory tests.

Additional Subsurface Exploration - Ground Penetrating Radar: GPR testing was requested in the scope of work to supplement the runway core thickness data and provide more continuous data for use in the Pavement Classification Rating analysis. Terracon will utilize multiple GPR units to achieve the resolution and depth information requested. For the pavement evaluation, Terracon will utilize a vehicle mounted, single channel 1 GHz "air-launched" GPR system. The air-launched antenna is mounted to the back of a standard pickup truck (refer to Image 1) and is able to collect data up to 20 mph. Typical maximum scanning depth is 18 inches but actual depth will not be known until the survey.

For the subgrade evaluation, Terracon will utilize a low frequency ground-coupled antenna. The ground-coupled antenna consists of a person-portable four-wheel cart either towed behind a standard pickup truck or on foot, depending on surface conditions. Typical maximum scanning depth is 3 to 5 ft, but actual depth will not be known until the survey.



Image 1: Air-launched GPR System

The GPR survey will consist of parallel transects along the paved portion of the runway and along either side, if accessible. The transects will attempt intercept pavement core and test boring locations, if possible, to provide physical measurements for calibration of the GPR signal.

These geophysical processes rely on instrument signals to estimate physical conditions in the field. Signal information can be affected by on-site conditions beyond the control



of the operator such as, but not limited to, concrete types, concrete moisture, reinforcing steel spacing, and/or concrete age. Interpretation of those signals is based on a combination of known factors combined with the experience of the operator and geophysical scientist evaluating the results. The geophysical results provide a level of confidence but should not be considered absolute. The report will include the GPR methodology, site diagram of survey area, our interpretation of the geophysical dataset and relevant geophysical data. Our interpretations will include line graphs of pavement and subgrade thicknesses along the GPR survey lines.

**Property Disturbance:** Terracon will take reasonable efforts to reduce damage to the property. However, it should be understood that in the normal course of our work some disturbance could occur.

We will backfill borings with auger cuttings blended with cement upon completion to reduce the risk of the borings settling, however we recommend boreholes to be periodically checked and backfilled, if necessary. Pavements will be patched with nonshrink grout dyed black. Our services do not include repair of the site beyond backfilling our boreholes and patching existing pavements. Excess auger cuttings will be removed from the site and disposed of.

# Safety

The geotechnical exploration is proposed to be conducted on the airside of the fence at an active airport during the authorized work hours of 7 pm to 5 am. We have assumed that coordination efforts with the airport and the FAA will be conducted by Dibble to provide the exploration crews safe access to the runways. We understand the lighted runway closure lighting will be provided by the airport. Terracon will abide by all safety and regulatory requirements prior to and during the exploration. We assume Terracon will be notified of any requirements with reasonable notice to accommodate the requirements into the exploration activities. All drilling rigs and support vehicles will be equipped with flashing yellow beacons. The mast of the drilling rig will be affixed with an orange and white checkered flag to alert approaching aircraft. We assume a specific maximum drill rig mast height is not required. Terracon or our subconsultants will take reasonable measures to prevent the introduction of foreign object debris (FOD) which may damage aircraft.

Terracon is not aware of environmental concerns at this project site that would create health or safety hazards associated with our exploration program; thus, our Scope considers standard OSHA Level D Personal Protection Equipment (PPE) appropriate. Our Scope of Services does not include environmental site assessment services, but identification of unusual or unnatural materials encountered while drilling will be noted on our logs and discussed in our report.



Exploration efforts require borings (and possibly excavations) into the subsurface, therefore Terracon will comply with local regulations to request a utility location service through the Colorado 811 Center. We will consult with the owner/client regarding potential utilities, or other unmarked underground hazards. Based upon the results of this consultation, we will consider the need for alternative subsurface exploration methods, as the safety of our field crew is a priority.

Private utilities should be marked by the owner/client prior to commencement of field exploration. Terracon will not be responsible for damage to private utilities not disclosed to us. If the owner/client is unable to accurately locate private utilities, Terracon can assist the owner/client by coordinating or subcontracting with a private utility locating services. Fees associated with the additional services are not included in our current Scope of Services. The detection of underground utilities is dependent upon the composition and construction of the utility line; some utilities are comprised of nonelectrically conductive materials and may not be readily detected. The use of a private utility locate service would not relieve the owner of their responsibilities in identifying private underground utilities.

**Site Access:** We understand from conversation with you, the authorized work hours are 7 pm to 5 am. Terracon must be granted access to the site by the property owner. Without information to the contrary, we consider acceptance of this proposal as authorization to access the property for conducting field exploration in accordance with the Scope of Services. Our proposed fees do not include time to negotiate and coordinate access with landowners or tenants. Terracon will conduct field services during normal business hours (Monday through Friday between 7:00am and 5:00pm). If our exploration must take place over a weekend or at night, please contact us so we can adjust our schedule and fee.

# Laboratory Testing

The project engineer will review field data and assign laboratory tests to understand the engineering properties of various soil strata. Exact types and number of tests cannot be defined until completion of fieldwork, but we anticipate the following laboratory testing may be performed in general conformance with applicable ASTM or other locally recognized standards:

- Visual observation of asphalt cores
- Asphalt core thickness
- Water content
- Unit dry weight
- Atterberg limits
- Grain size analysis



- One dimensional swell
- Soluble sulfates
- Moisture-density relationship
- California Bearing Ratio (CBR)
- Lime or cement soil stabilization mix design

Our laboratory testing program often includes examination of soil samples by an engineer. Based on the results of our field and laboratory programs, we will describe and classify soil samples in accordance with the Unified Soil Classification System (USCS).

### Engineering and Project Delivery

The results of our field and laboratory programs will be evaluated, and a geotechnical engineering report will be prepared under the supervision of a licensed professional engineer. The geotechnical engineering report will provide the following:

- Boring logs with field and laboratory data
- Stratification based on visual soil classification
- Groundwater levels observed during and after the completion of drilling
- Site Location and Exploration Plans
- Subsurface exploration procedures
- Description of subsurface conditions
- GPR methodology, site diagram of survey area, our interpretation of the geophysical dataset and relevant geophysical data. Our interpretations will include line graphs of pavement and subgrade thicknesses along the GPR survey lines.
- Recommended pavement design alternative thicknesses and design parameters using the FAARFIELD pavement design software in general accordance with the procedures of the AC 150/5320-6G
- Recommendations regarding the Pavement Classification Rating as determined in general accordance with the procedures of the AC 150/5335-5D using the FAARFIELD pavement software
- Recommended soil stabilization lime or cement content
- Recommendations regarding pavement material specifications

In addition to an emailed report, your project will also be delivered using our **Client Portal**. Upon initiation, we provide you and your design team the necessary link and password to access the website (if not previously registered). Each project includes a calendar to track the schedule, an interactive site map, a listing of team members, access to the project documents as they are uploaded to the site, and a collaboration portal. We welcome the opportunity to have project kickoff conversations with the team



to discuss key elements of the project and demonstrate features of the portal. The typical delivery process includes the following:

- Project Planning Proposal information, schedule and anticipated exploration plan
- Site Characterization Findings of the site exploration and laboratory results
- Geotechnical Engineering Report

When services are complete, we upload a printable version of our completed Pavement Engineering report, including the professional engineer's seal and signature, which documents our services. Previous submittals, collaboration, and the report are maintained in our system. This allows future reference and integration into subsequent aspects of our services as the project goes through final design and construction.

# Additional Services

In addition to the services noted above, the following are often associated with geotechnical engineering services. Fees for services noted above do not include the following:

**Review of Plans and Specifications:** Our geotechnical report and associated verbal and written communications will be used by others in the design team to develop plans and specifications for construction. Review of project plans and specifications is a vital part of our geotechnical engineering services. This consists of review of project plans and specifications related to site preparation, foundation, and pavement construction. Our review will include a written statement conveying our opinions relating to the plans and specifications' consistency with our geotechnical engineering recommendations.

**Observation and Testing of Pertinent Construction Materials:** Development of our geotechnical engineering recommendations and report relies on an interpretation of soil conditions. Our assessment is based on widely spaced exploration locations and the assumption that construction methods will be performed in a manner sufficient to meet our expectations and consistent with recommendations made at the time the geotechnical engineering report is issued. We should be retained to conduct construction observations, and perform/document associated materials testing, for site preparation, foundation, and pavement construction. These services allow a more comprehensive understanding of subsurface conditions and necessary documentation of construction to confirm and/or modify (when necessary) the assumptions and recommendations made by our engineers.

**Perform Environmental Assessments:** Our Scope for this project does not include, either specifically or by implication, an environmental assessment of the site intended to identify or quantify potential site contaminants. If the client/owner is concerned about



the potential for such conditions, an environmental site assessment should be conducted. We can provide a proposal for an environmental assessment, if desired.



# **Exhibit C - Compensation and Project Schedule**

# Compensation

Based upon our understanding of the site, the project as summarized in Exhibit A, and our planned Scope of Services outlined in Exhibit B, our base fee is shown in the following table:

Task	Lump Sum Fee <sup>2</sup>
Project Management	\$2,836
Subsurface Exploration <sup>1</sup>	\$28,010
Ground Penetrating Radar	\$6,500
Laboratory Testing	\$11,162
Analysis/Report Writing	\$7,844
Total	\$56,352

- The lump sum fee considers one drill rig mobilization and no unexpected onsite delays. If additional drill rig mobilizations are required, an additional out of scope fee of \$1,250 would be invoiced. An out of scope drill crew standby rate of \$350 per hour would be invoiced for unexpected delays. These fees are applicable to the authorized work hours of 7 pm to 5 am and include fees for work area lighting and generator rental.
- 2. Proposed fees noted above are effective for 90 days from the date of the proposal.

Our Scope of Services does not include services associated with site clearing or wet ground conditions. If such services are desired by the owner/client, we should be notified so we can adjust our Scope of Services.

Unless instructed otherwise, we will submit our invoice(s) to the address shown at the beginning of this proposal. If conditions are encountered that require Scope of Services revisions and/or result in higher fees, we will contact you for approval, prior to initiating services. A supplemental proposal stating the modified Scope of Services as well as its effect on our fee will be prepared. We will not proceed without your authorization.

# **Project Schedule**

We developed a schedule to complete the Scope of Services based upon our existing availability and understanding of your project schedule. However, our schedule does not



account for delays in field exploration beyond our control, such as weather conditions, delays resulting from utility clearance, or lack of permission to access the boring locations. In the event the schedule provided is inconsistent with your needs, please contact us so we may consider alternatives.

Delivery on Client Portal	Schedule <sup>1, 2</sup>
Kickoff Call with Client	2 days after notice to proceed
Site Characterization	15 days after completion of field program
Geotechnical Engineering	10 days after completion of field program

- 1. Upon receipt of your notice to proceed we will activate the schedule component on **Client Portal** with specific, anticipated dates for the delivery points noted above as well as other pertinent events.
- Standard workdays. We will maintain an activities calendar within on Client Portal. The schedule will be updated to maintain a current awareness of our plans for delivery.



# **Exhibit D – Site Location**





# Exhibit E – Anticipated Exploration Plan





January 11, 2023

Dibble Engineering 2696 South Colorado Blvd., Suite 330 Denver, Colorado 80222

Attn.: Mr. Jared Bass, P.E.

Re: Northern CO Regional Airport Runway 15-33 Widening Proposal for Electrical Design and Bid Assistance Services CRE Project No. 22042

Dear Mr. Bass,

We thank you for choosing our firm to work as your engineer for the above project. We are pleased to present our proposal for this project in the listed attachments below.

Scope of Work: See attached Exhibit A.

Fee Proposal: See attached Exhibit B.

This proposal will be valid for the next ninety (90) days, and we reserve the right to renegotiate it if it has not been accepted within that period. Should conditions of the work change so as to materially affect the level of effort or the time required, then equitable adjustments to fee and schedule will be made. Consultant will notify Client when a changed condition becomes apparent. Failure of Client to provide a timely and equitable adjustment is cause for termination by Consultant.

We will bill you for services rendered to date. Payment will be due within thirty (30) days of billing date.

Please do not hesitate to call if you have any questions.

Sincerely yours,

CR ENGINEERS, INC.

atten Run

Catherine Alcorn, P.E. President



# SCOPE OF WORK Northern CO Regional Airport Runway 15-33 Widening Electrical Design and Bid Phase Services

Prepared by CR Engineers, Inc. JANUARY 11, 2023

CR Engineers (CRE) shall prepare electrical designs, plans, specifications, quantities, and estimates, for the electrical and airfield lighting and signage additions and modifications associated with the Runway 15-33 Widening at Northern Colorado Regional Airport. Currently, Runway 15-33 has a length of 8500 feet and width of 100 feet. This project will widen the runway by 150 feet. New structural pavement will be constructed adjacent to the existing pavement section with new runway lighting and signage. The five existing taxiway connectors adjacent to the east side of the runway will be modified to tie into the new runway edge.

The existing high intensity incandescent runway edge lights (HIRLs), threshold lights, and isolation transformers are past their useful life (over 20 years old) and will be removed and replaced with new LED HIRLS in new base cans and edge conduit/cable to accommodate the runway widening. New LED Size 1 airfield signage will also be specified as required.

The existing airport NAVAIDs are listed below:

- RWY 15&33 4-Box PAPIs FAA owned RWY 33 PAPI. Airport owned RWY 15 PAPI.
- RWY 15 REILs
- RWY 15 Localizer
- RWY 33 MALSR
- RWY 33 Glideslope

PAPIs on both ends of RWY 15-33 will likely need to be relocated. Additionally, the power racks for PAPIs/REILs need to be relocated outside the RSA and ROFA if equipment is being relocated.

New taxiway edge lighting systems will be specified as required for the reconstruction to the five existing taxiway connectors to the new runway edge.

The existing L-824, 5KV airfield lighting circuit cable has deteriorated and no longer providing adequate insulation resistance per FAA AC requirements. Construction will include replacement of this cable. A new airfield lighting cable homerun will be installed from the airfield lighting vault to the runway in existing conduit duct banks to Runway 15-33. The existing circuit for Runway 15-33 is powered from a 30KW Crouse Hinds constant current regulator (CCR) in the electrical vault. This CCR will be evaluated based on end of useful life and the reduced load with the new LED HIRLs for possible replacement to a smaller CCR to maximize power efficiency. No modifications to the existing ADB airfield lighting control system will be required unless the existing CCR is deemed in need of replacement.

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The following services will be provided for design phase services:

### 1. Airfield Traffic Analysis/Phasing

CRE will assist in electrical issues related to the construction phasing study and plans for the construction within the runway and taxiway safety areas and runway safety/approach areas.

### 2. FAA/ADOT Documentation

CRE will prepare the electrical portion of the Engineer's report including project scope, design standards used, lighting and signage design and criteria, and estimated costs and quantities.

### 3. Specifications

CRE will prepare electrical Technical Specifications based on current FAA Advisory Circular requirements for all work specified.

### Anticipated Schedule and Submittals: (Based on Design Contract executed in April 2023)

- 30% Design Submittal: September 2023
  - Electrical Plans
    - Draft Engineer's Report
    - Electrical Construction Cost Estimate
- 60% Design Submittal: December 2023
  - Electrical Plans
  - Electrical Technical Specs
  - Electrical Construction Cost Estimate
- 90% Design Submittal: February 2024
  - Electrical Plans
  - Electrical Technical Specs
  - Electrical Construction Cost Estimate
- 100% Design Submittal: April 2024
  - o Electrical Plans
  - Engineer's Report
  - Electrical Technical Specs
  - Electrical Construction Cost Estimate
- Bid Phase April May 2024

### **Meetings:**

CRE will also attend the following meetings: design kick-off meeting and 3 review meetings via teleconference. A NAVAID coordination meeting (virtual) with FAA is also included in this scope.

### <u>Site Visits:</u>

CRE will attend one site visit for pre-design investigation anticipated to be attended by 2 staff members.

The following will be provided for **Bid Phase Services**:

- CRE will attend the pre-bid meeting virtually.
- CRE will respond to Request For Information (RFI) during bidding.

### Fees

See attached Exhibit B for proposed fee schedule and detailed task descriptions.

Page 2

# CR Engineers, Inc. Fee Proposal Summary

Project Name: No Date: 1 CRE Proposal No.:	orthern CO Regional Air 11/11/23 22042	port - Runway 15-33 Widening	
FEES			
Overhead Rate: Profit Margin:	150 % 10 %		
1.0 Design Fees	\$67,240.80		
Total Design Fees	\$67,240.80	-	
Direct Costs			
]	Lodging		
	4.0	\$98.00 /Day (2023 Federal Per Diem)	= \$392
Traval (Milagaa	1800 Miles Doundtrin)		
Traver (mineage.	1800.0	\$0.63 /mile	= \$1,125
	Meals		
	6.0	\$59.00 /Day (2023 Federal Per Diem)	= \$354.00
		Total Direct Costs	\$1,871
		Total Fees \$69,111.	80

# CR Engineers, Inc. **1.0 Design Fee Proposal Worksheet** Project Name: Northern CO Regional Airport - Runway 15-33 Widening

Date: 11/11/23

CRE Proposal No.: 22042

	Task		Senior Electrical	Senior	Senior CADD	Senior	Project	Total
	Description	Quantity	Engineer	Designer	Designer	Inspector	Administrator	Hours
1.1	Meetings & Site Visits		[		1		1	1
1.1.1	Kick-off Meeting (Virtual)	1	2.0	2.0				4.0
1.1.2	Review Meeting(s) (Virtual)	3	5.0	5.0	1			10.0
1.1.3	FAA NAVAID Coordination/Meeting	g	2.0	2.0	1'	2.0		6.0
1.1.4	Site Visit(s)	1		33.0		33.0		66.0
1.2	Utility/Demand							
1.2.2	CCR Calculations		2.0	8.0		2.0		12.0
1.3	Contract Documents							
1.3.1	Electrical Drawing(s)		20.0	72.0	98.0	32.0		222.0
1.3.2	Specifications		4.0	20.0			8.0	32.0
1.3.3	Engineers Report		3.0	10.0				13.0
1.3.4	Cost Estimate		3.0	16.0		24.0		43.0
1.3.5	30% Submittal		8.0	4.0	4.0	2.0	1.0	19.0
1.3.6	60% Submittal		12.0	6.0	8.0	2.0	2.0	30.0
1.3.6	90% Submittal		6.0	4.0	8.0	2.0	2.0	22.0
1.3.7	100% Submittal		4.0	4.0	8.0	2.0	2.0	20.0
1.3.8	Client Coordination	<u> </u>	4.0	4.0	6.0	4.0	2.0	20.0
2.0	Bidding Assistance		I					
2.1	Attend Pre-Bid Meeting Virtually		1			2.0		2.0
2.2	Answer Questions/Prepare Addenda		3.0	6.0	4.0		1.0	14.0
1.0	Totals		78.0	196.0	136.0	107.0	18.0	535.0
	Overhead Rate	150	%					
	Profit Margin	10	%					
	Labor Rates Per Hour:		\$74.50	\$43.75	\$35.40	\$44.80	\$25.40	1
	Direct Labor:	· · · · · ·	\$5,811.00	\$8,575.00	\$4,814.40	\$4,793.60	\$457.20	1
	Overhead:		\$8,716.50	\$12,862.50	\$7,221.60	\$7,190.40	\$685.80	1
	Overhead + Direct Lab:	,	\$14,527.50	\$21,437.50	\$12,036.00	\$11,984.00	\$1,143.00	1
	(OH + Direct) x Profit:	ļ,	\$1,452.75	\$2,143.75	\$1,203.60	\$1,198.40	\$114.30	l
1.0	Total Fees	ļ,	\$15,980.25	\$23,581.25	\$13,239.60	\$13,182.40	\$1,257.30	\$67,240.80



# NORTHERN COLORADO REGIONAL AIRPORT 4900 Earhart Rd • Loveland, Colorado 80538 (970) 962-2850 • FAX (970) 962-2855 • TDD (970) 962-2620

ITEM NUMBER:	3
MEETING DATE:	June 15, 2023
PREPARED BY:	Aaron Ehle, Airport Planning & Development Specialist

# <u>TITLE</u>

Contract Amendment with Dibble Engineering for Design and Bid Services for Construction Phase Services for the New Terminal Building

# **RECOMMENDED AIRPORT COMMISSION ACTION**

Make a motion to recommend approval of a contract amendment with Dibble Engineering for construction phase services for the new terminal building to the Loveland City Council

# **BUDGET IMPACT**

Negative, the contract amount is \$1,160,544.60.

TERMINAL RESOURCES	TERMINAL BUDGET
FEDERAL CARES ACT: \$16,373,135	PROFESSIONAL SERVICES, DESIGN & CONSTRUCTION ADMIN: \$3,751,153
FEDERAL AVIATION ADMINISTRATION: \$1,590,000	PERMITTING & WATER: \$836,088
AIRPORT FUND: \$2,000,000	CONSTRUCTION: \$14,864,000
CITY OF LOVELAND: \$1,000,000	FURNISHINGS: \$425,000
CITY OF FORT COLLINS: \$1,000,000	CONTINGENCY: \$2,086,894
TOTAL: \$21,963,135	TOTAL: \$21,963,135

# **SUMMARY**

This is an administrative item requesting the approval of an amendment to the contract with Dibble Engineering for professional services totaling \$1,160,544.60. The Airport currently has a contract with Dibble Engineering for the new terminal project. This amendment will enable Dibble Engineering and their subcontractors to provide overall project management. Services will include construction phase services, owner representation, post construction & warranty services, federal grant compliance, QA/QC, inspections, and commissioning.

The terminal project is included in the adopted Airport Master Plan and Airport Capital Improvement Plan. It consists of a new 19,400 square foot, multimodal passenger terminal that will replace the existing under-sized and outdated facility. The terminal will accommodate two ground-loaded gates, TSA functions, ticketing, passenger hold areas, baggage claim, and services for airline and ground transportation operators. The building will meet Americans with Disabilities Act (ADA) accessibility standards and will achieve Leadership Energy in Environmental Design (LEED) Level Silver certification.

Funding for this contract amendment has been budgeted for and appropriated through the two City Councils within the adopted 2023 Airport Budget. Since work began on the terminal project in 2020, staff have worked to secure \$25 million in total funding, with \$1 million being contributed by each owner City. In 2021, approximately \$3 million in airside pavement improvements were completed. The budget for the design and construction of the terminal building and landside improvements is approximately \$22 million. On June 6, 2023, the Loveland City Council adopted a resolution approving a guaranteed maximum price contract of \$14,864,000 with Hensel Phelps for construction of the building. Hensel Phelps was selected as the construction manager at risk (CMaR) partner through a competitive solicitation process.

# **ATTACHMENTS**

Construction Phase Services for the New Terminal Building Proposal

dibblecorp.com

p 303.872.5756 2696 South Colorado Blvd, Suite 330 f 303.353.4068 Denver, CO 80222

April 28, 2023 Rev'd June 12, 2023 Northern Colorado Regional Airport 4900 Earhart Road Loveland, CO 80538

Attention: Mr. Jason Licon Airport Director

RE: ENGINEERING SERVICES PROPOSAL City Project Number: TBD FAA AIP No. 3-08-0023-044-2023 Construction Phase Services **New Terminal Building** 

We appreciate the opportunity to provide construction phase services for the *New Terminal Building* project at the Northern CO Regional Airport (FNL). This proposal has been prepared in accordance with the direction provided by the FAA and FNL and with the information discussed during the FAA Project Kick-Off Meeting held in March 2023.

Dibble, as the prime consultant, is proposing to complete the Scope of Work as included in this proposal for as follows:

### A. <u>Construction Phase Services (Time and Materials – Not to Exceed)</u>:

	Subtotal	\$1,160,544.60
5.	Terracon (Quality Assurance Testing)	\$133,404.80
4.	Swanson-Rink (ME&P/Fire/Baggage Handling/TSA)	\$203,700.00
3.	VFLA (Architect/Structural/Land Planning/LEED)	\$222,915.00
2.	Ditesco (Owner's Representative and Inspection)	\$387,722.00
1.	Dibble (Civil Prime and Contract Manager)	\$212,802.80

Transmitted herewith is our proposed Scope of Work, Fee Summary, Derivation of Fee Proposal, Estimated Manhours matrix, Estimated Direct Costs worksheet, VFLA Terminal Site Plan, Hensel Phelps's Construction Schedule, and full subconsultant proposals for your review.

We are very grateful for the opportunity to work with FNL on the construction of the Terminal. If you need additional information or have questions, please do not hesitate to contact us.

Sincerely,

Jared Bass, P.E. Vice President - Sr. Project Manager

Kenth L. Augde

Kenneth L. Snyder, P.E. Vice President - Principal





SCOPE OF WORK Northern CO Regional Airport New Terminal Building Construction Phase Services April 28, 2023



### Introduction

Dibble (Engineer) has been requested by the Northern CO Regional Airport (FNL or Airport) to provide construction phase services for the *New Terminal* project. This project consists of a new single story, 19,306 square foot commercial passenger terminal for the FNL airport in Loveland, Colorado. The terminal will accommodate ground-loaded gates, TSA functions, ticketing, passenger hold area, baggage claim, and services for airline operators. The construction type is to be Type II-B (noncombustible) construction and will be fully fire-sprinkled. This project will also include various civil elements including new asphalt concrete pavement, concrete sidewalks, wet and dry utilities. The goal of the project is to achieve LEED Silver accreditation, reference the scope of work from VFLA for all scope items associated with LEED tracking during construction. See also attached Site Plan Exhibit for reference.

FNL and the City of Loveland is using a Construction Manager at Risk (CMAR) delivery method for the construction, where the CMAR was selected and contracted during the design process to provides design-phase (pre-construction) services, such as cost estimating, value engineering, constructability reviews, phasing recommendations, and subcontractor/vendor pricing and outreach. Hensel Phelps is the selected CMAR for this terminal program. Hensel Phelps will continue as CMAR for the construction phase, and as such will coordinate all construction activities, manage sub-contractors, and construct the new terminal.

It is anticipated that the City of Loveland and Hensel Phelps, will negotiate a Guaranteed Maximum Price (GMP) contract around June 2023 with construction starting in July 2023. Construction completion and a certificate of occupancy (COO) is anticipated by September 2024 (approx. 60 weeks construction phase). Please reference the attached construction schedule. The anticipated construction cost of the complete project (building and site) is \$16.05M.

This scope of work has been prepared in accordance with the scoping meeting held with FAA, FNL, and CDOT Aeronautics in March 2023. The construction phases for this project are anticipated to be funded by a 2023 FAA CARES grant (3-08-0023-044-2023), in addition to a 2024 FAA AIP Grant yet to be issued, and respective CDOT and local matching funds.

This proposal consists of comprehensive construction phase services based on the Construction Documents (Level 4 Design) submitted on 01-17-2023. The tasks that comprise the scope of construction services include the following:

- 1. Construction Phase Services
- 2. Post Construction Phase Services
- 3. Warranty Phase Services

The Dibble Team (identified below) shall advise and consult with FNL and the City of Loveland during the construction phase services. The Dibble Team shall have authority to act on behalf of FNL and the City of Loveland only to the extent provided in this agreement and the executed contract. The Dibble Team shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work, nor shall the Dibble Team be responsible for the contractor's failure to perform the work in accordance with the requirements of the contract documents. The Dibble Team shall not be responsible for acts or omissions of the contractor or of any other persons or entities performing portions of the work.

FNL and the City of Loveland agree, upon approval of this proposal, that the general contractor shall be solely responsible for jobsite safety and warrants that this intent shall be carried out in their contract with the general contractor.

The key Dibble Team members consist of the following:

- Dibble Civil Engineering Construction Management
- Ditesco Construction Management Support
- VFLA Architectural Team
- Swanson Rink MEP/Fire/TSA/Baggage Team
- Terracon QA Testing/Geotechnical Services

# **Construction Phase Services**

#### 1) General Construction Management and Administration:

- a) <u>General Construction Management and Administration</u>: **Dibble** will provide as-needed project management, coordination, support, and administration necessary to monitor the Contractor's operations and deliverables. Dibble will provide the FAA, Airport, and the Contractor with hard copies and electronic files of the conformed set of the final construction documents, (i.e., plans and specifications with all addenda issued). Dibble has estimated a maximum of 2 hours a week over a 60 week period for a total of 120 hours to cover all necessary general construction management and administration tasks, (this is additional miscellaneous effort outside all other tasks identified herein.
- b) <u>Preconstruction Conference</u>: **Dibble and Ditesco** will conduct the Preconstruction Conference and provide support and/or coordination of the construction documents as needed. Ditesco will prepare and provide the meeting agenda and sign-in sheet, facilitate the meeting, and issue meeting minutes. The Preconstruction Conference will be held at the Airport. Dibble's Team will participate (Ditesco, VFLA, Swanson Rink and Terracon).
- c) <u>Construction Management Plan (CMP)</u>: **Dibble** will prepare a CMP in accordance with the FAA AC 150/5370-12B, *Quality Management for Federally Funded Airport Construction Projects*, requirements. At a minimum the CMP shall include project scope of work and description, Engineer's roles and responsibilities, Contractor's responsibilities, Quality Assurance (QA) Testing Standards and frequency for each material, Quality Control (QC) Testing Standards and frequency for each material, and procedures to verify compliance. In addition, the standard test forms per the new Engineering Guideline 620-05 will be included in the CMP.
- d) <u>Preconstruction Conference Submittal Reviews and Coordination</u>: *The Dibble Team* will review project submittals required at the Preconstruction Conference as identified within the contract documents including at a minimum:
  - Contractor's CSPP Compliance Report
  - Overall and 3-Week Construction Schedules
  - Material Submittal Schedule
  - Schedule of Values
  - Contractor's Emergency Contact Information
  - List of Proposed Construction Equipment
  - Barricade Plan
  - Traffic Control Plan
  - Contractor's Quality Control Plan
- e) <u>Construction Equipment Submittal to FAA OE/AAA</u>: **Dibble** will coordinate with the Contractor and FNL in developing and submitting the anticipated construction equipment with associated heights, locations, and timeframes to the FAA Airspace Review OE/AAA website.

Jared Bass, P.E. Keith Meyer, P.E. Chris Aronson, AIA, NCARB, LEED AP Dustin Mahoney, P.E Kirk Jackson, P.E.

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f) <u>Airport Security Badging</u>: *The Dibble Team* members that will be on site frequently and working airside shall attend the airport security and badging class at the Airport, submit the application, and pay the application fee required to obtain the airport security badge. It is anticipated that there will be a minimum of two (2) members of each company that will attend the class.

### 2) <u>Construction Coordination and Inspection Services</u>:

- a) <u>Site Visits and Observations</u>: **Dibble** will provide weekly observations and the **Ditesco** Inspectors will perform part-time construction inspection on the project. **VFLA and Swanson Rink** will perform periodic observations when their respective work is under construction. **Terracon** will perform their Quality Assurance Inspections and Testing as the need arises. Reference the respective subconsultant scopes of work for more information on their anticipated levels of effort. The Dibble Sr. Project Manager will average 4 hours a week (240 hours) and a Sr. Project Engineer will average 4 hours a month (60 hours) over a 60 week period. Furthermore, the hours will be focused during times when there is more civil elements under construction.
- b) <u>Weekly Construction Meetings</u>: **Ditesco** will prepare the weekly construction meeting agendas (over a 60 week period), facilitate the meetings, and issue meeting minutes. The rest of the **Dibble Team** (VFLA, Swanson Rink, and Terracon) will attend these weekly meetings to stay current on the construction activities. The Dibble Sr. Project Manager will average 1 hour a week (60 hours) and a Sr. Project Engineer will average 1 hour every two weeks (30 hours) over a 60 week period. Furthermore, the hours will be focused during times when there is more civil elements under construction.
- c) <u>Pre-Installation Meetings</u>: *Ditesco* will attend meetings as coordinated by Contractor. We will collect meeting minutes provided by Contractor, add any comments as applicable, and include with our monthly project reporting. The rest of the *Dibble Team* (VFLA, Swanson Rink, and Terracon) will only attend the pre-installation meetings that are applicable to them. The following is a sample list of anticipated pre-installation meeting items:
  - Cast-In-Place Concrete
  - Concrete Floor Finishes
  - Finish Carpentry
  - Weather Barriers (will have manufacturer's representative onsite)
  - Thermoplastic Membrane Roofing (will have manufacturer's representative onsite)
  - Glazing
  - Tiling
  - Accent Ceilings
  - Testing, Adjusting, And Balancing for HVAC
  - Direct-Digital Control System for HVAC
- d) <u>Weekly Certified Payrolls and Davis Bacon Review</u>: *Ditesco* will coordinate and review all certified payroll documentation required for this project to be compliant with the contract documents and Federal Davis Bacon Wage Determinations, (Contractor and subcontractors on a weekly basis). Included in this effort is also the submittal and coordination of classifications as needed for positions not specifically identified in the Federal Davis Bacon Wage Determinations.
- e) <u>Contractor Employee Interviews</u>: *Ditesco* will perform these interviews in accordance with the FAA requirements. Forms will be filled out and submitted showing contractor and subcontractor employees are aware of the Federal Davis Bacon Wage Determinations.
- f) <u>Weekly FAA Reports (5370-1)</u>: *Dibble* will develop the weekly FAA 5370-1 Construction progress reports and submit to the FAA.
- g) <u>Monthly Quantity Monitoring</u>: **Ditesco** will monitor and track the construction material progress throughout the course of the construction phase and provide monthly summaries to the Airport and FAA. The Construction Inspector will assist with the monthly progress assessment during part-time inspection services.

- h) <u>Monthly Payment Application Coordination and Review</u>: *Ditesco* will regularly review and track project progress in the field and on the Contractor's As-Builts. Ditesco will coordinate work progress with the contractor prior to the submittal of monthly payment applications. Ditesco will assist the Airport in the regular draw-down of the federal grant for payment on the construction services.
- i) <u>Change Order Review and Coordination</u>: *Ditesco* will review Contractor Change Order Requests (COR), including verification of project quantities as needed. A complete cost analysis will be prepared (as needed) for each change order that may occur. This proposal includes effort for an estimated Five (5) change orders.
- j) <u>Material Shop Drawing Review and Coordination</u>: **The Dibble Team** will review and provide a response to construction material and general project submittals, each handling their respective fields. This proposal includes effort for an estimated 300 material submittals, (this includes the resubmittals additional reviews).
- k) <u>RFI Review and Coordination</u>: *The Dibble Team* will review and provide a response to construction and general project Requests for Information (RFI). This proposal includes effort for an estimated 75 RFI's.
- <u>ESI Review and Coordination</u>: *The Dibble Team* will review and develop necessary Engineering/Architectural Supplemental Information (ESI/ASI) documents, additional details, or sketches as revisions to the construction specifications and/or plans. This proposal includes effort for an estimated 10 ESI's/ASI's.
- m) <u>DBE Compliance and Coordination</u>: *Ditesco* will coordinate and review all DBE efforts and documentation required for this project to be compliant with the contract documents.
- n) <u>QA/QC Testing Coordination and Review</u>: *Dibble and Ditesco* will coordinate and review QA/QC actions including scheduling of testing activities, reporting, review of results, and recommendations. The construction Inspector shall assist in the coordination and management of the QA/QC services.
- o) <u>Substantial Completion Inspections</u>: *Ditesco* will conduct the Substantial Completion Walks.
- p) <u>Final Completion Inspections</u>: *Dibble and Ditesco* will conduct the Final Completion walks for the construction project. The FAA, Airport, Resident Engineer, and Construction Inspectors shall all attend.
- q) <u>Punchlist(s) and Coordination(s)</u>: *Ditesco* will prepare, submit, and re-evaluate punchlists at each substantial completion walk. We anticipate 3 punch lists. (1) building exterior, (1) building interior, (1) site and landscape.
- r) <u>Commissioning</u>: *Ditesco* will coordinate commissioning services to verify the equipment, systems, and facility goals that are identified, documented, achieved, and verified during construction. However, Ditesco will not act as the official commissioning agent. Ditesco will further provide a final narrative summary in the Final Commissioning Report. The commissioning agent will draft the Final Commissioning Report. The commissioning effort may include (at a minimum):
  - Develop the commissioning specification, construction checklists, and functional performance tests for the project.
  - Conduct up to four commissioning meetings on-site to clarify operational and installation questions.
  - Conduct up to four Commissioning Observation site visits and reports to review installation progress and issue resolution.
  - Conduct an additional Controls Integration Meeting prior to functional testing to review programmed control strategies.
  - Witness and verify contractor's functional performance testing of mechanical, service water heating and electrical systems.
  - Assist in scheduling and participate in owner training for electrical, mechanical, and plumbing systems.

- Compose a preliminary Commissioning Report summarizing the commissioning process and results.
- Return to the site after Substantial Completion to conduct a lessons-learned meeting with facilities staff, seasonal testing, and review of warranty documentation.
- Issue a Final Commissioning Report with updates resulting from Seasonal Testing.

### 3) Post Construction Services:

- a) <u>Demobilization and Site Clean-Up</u>: **Dibble and Ditesco** will coordinate between the Airport and Contractor on the demobilization and site clean-up at the completion of the project. Dibble shall perform an Airport site visit to assure the contractor left the project site in satisfactory condition.
- b) <u>Final Payment Application and FAA Grant(s) Closeout</u>: *Dibble and Ditesco* will coordinate the final inspected quantities with the contractor and coordinate prior to the submittal of final payment applications. Dibble will assist the airport in the coordination with FAA on developing the final overall project costs and closing the multiple grants out.
- c) <u>QA and QC Testing Summary Report</u>: *Dibble and Ditesco* will prepare and submit to the Airport and FAA a final QA and QC summary report that includes all testing activities that occurred, all test results, and any corrective measures or actions that were taken for results that fell out of standard. This report shall be submitted to the FAA for review and approval prior to scheduling of the Final Inspection.
- d) <u>Final Construction Report and Coordination</u>: *Dibble and Ditesco* will coordinate, prepare, and submit the Final Construction Report in accordance with the FAA Standard Handout for Final Reports 620-05 and as discussed with FAA at the February 9, 2023 scoping meeting. The final construction report will be formatted to include the applicable sections that are contained in the *Guide for Construction Final Report* contained in 620-05.
- e) <u>Record Drawings</u>: *The Dibble Team* will develop and submit Final Record Drawings based on Contractor redlines and field changes issued during construction, including RFI's/ESI's.
- f) <u>ALP Update</u>: **Dibble** will amend and update the most recent (FAA Approved) ALP set to reflect the modifications made to the airport at the completion of the project, (i.e., New Terminal Building, etc.). The following sheets are anticipated to be updated based on the current 2022 ALP set, at a minimum:
  - Sheet 3 Existing Airport Layout
  - Sheet 4 Future Airport Layout Plan
  - Sheet 16 Terminal Area Plan
  - Sheet 17 Airport Land Use Plan
  - Sheet 18 Exhibit 'A' Airport Property Inventory Map

Once finalized, approved, and signed by the FAA and Airport, electronic and hard copies will be returned to the FAA and Airport as requested.

- g) <u>Airport Diagram Update</u>: **Dibble** will assist the Airport with the update to the Airport Diagram. The update shall include the removal of Taxiway A2 components as well as other past projects that have not yet been updated.
- h) <u>Operation and Maintenance Manuals</u>: **Ditesco** will review Operations and Maintenance manuals provided by the Contractor for completeness for the following systems: airfield lighting, signage, and stormwater treatment and detention systems, building systems and manuals as required by the specifications.

# Warranty Phase Services

#### 4) General Warranty Period Management and Administration:

**The Dibble Team** will provide Warranty Phase services associated with the construction of the new terminal. Note that these are post-construction phase services during the construction contractor's warranty period. No warranty is provided, expressed or implied by the Dibble Team. The warranty period for this facility extends for a period of 12 months past the date of substantial completion (total project).

Throughout the duration of the one-year warranty period, *Ditesco* will facilitate an Open Issues Meeting at intervals necessary to address open items. The Open Issues Meeting will be utilized to monitor progress on open issues as well as to verify that items were completed to the satisfaction of the Sponsor. Consultant will generate an Open Issues Log to be used in conjunction with the Open Issues Meetings to document and track the Contractor's progress in completing any of the open issues.

- a) <u>General Warranty Management and Administration</u>: *Ditesco* will perform the following:
  - Project file setup
  - Set up and monitor project accounting and invoicing
  - Internal correspondence
  - Develop task plans and updates
  - Perform internal team meeting and coordination
  - Perform internal quality control
  - Coordinate Project Phase Closeout
  - Coordinate subconsultants

### Miscellaneous Scope of Work Items

#### 5) Project Deliverables:

- a) <u>Final Construction Report</u>: Electronic copies (PDF) will be provided to the FAA and FNL. The QA/QC Report will be an appendix to this report.
- b) <u>Record Drawings</u>: Electronic copies (PDF) will be provided to the FAA, FNL, and the City of Loveland (full and half-size).
- c) <u>ALP Update</u>: six (6) 24x36 copies will be provided to FAA for signature and then delivered to the stakeholders (i.e., FAA, FNL, etc.). Electronic copies (PDF) of the updated ALP set will be provided to the FAA and FNL.

#### 6) Exclusions To This Scope of Work:

- a) Contractor's jobsite safety and compliance with all OSHA requirements are excluded (Contractor's responsibility).
- b) Construction staking and/or layout services.



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SIGN & LIGHTI



2 ARIAL SOUTH EAST

SITE PLAN - ARCHITECTURAL (1)SCALE: 1" = 40'-0"

62





ŀ	HENSEL PHELPS Plan. Build, Manage.												
							2	023		1	2024		
Line	Activity ID	Name	Duration	Start	Finish	Jan Feb Mar 16 30 13 27 13	Apr May Jun 27, 10, 24, 8, 22, 5, 19,	Jul Aug Sep 3 17 31 14 28 11 25	Oct Nov Dec 5 9 23 6 20 4 18	Jan Feb Mar 1. 15 29 12 26 11 25	Apr May Jun 5 8 22 6 20 3 17	Jul Aug Sep ( 1. 15, 29, 12, 26, 9, 23, 7,	Oct
1				1/18/2022 A	9/12/2024							New FNL Te	Terminal
							-						
2		Precon	10/d	1/1//2023	6/15/2023		Precc	n				i i	
3	PRE 1000	Issue GMP Bid Package		1/17/2023	1/17/2023	Issue GMP Bid Package	<u> </u>					<u>i</u>	
4	PRE 1010	Prepare and Submit GMP Proposal	25d	1/17/2023	2/20/2023	Prepare and	Submit GMP Proposal						
5	PRE 1020	Owner Review and Approval of GMP	44d	2/21/2023	4/21/2023		Owner Review and Approva	of GMP					
6	PRE 1030	Issue Letters of Intent	1d	4/24/2023	4/24/2023		Issue Letters of Intent						
7	PRE 1040	Subcontracting	38d	4/24/2023	6/15/2023		Subc	ontracting					
8		Construction	235d	7/10/2023	9/3/2024					1		Construction	
•		Early Site	2004	7/10/2022	8/17/2022			Fauly City					
9			240	//10/2023	8/17/2023			Edity Site					
10	ES 1000	Mobilize	8d	7/10/2023	7/20/2023			Mobilize					
11	ES 1010	Establish Site Perimeter	8d	7/17/2023	7/27/2023			Establish Site Perimeter					
12	ES 1020	Remove Existing Shade Structure	8d	7/17/2023	7/27/2023			Remove Existing Shade Si	tructure				
13	ES 1030	Over Excavate and Recompact	20d	7/17/2023	8/17/2023			Over Excavate an	nd Recompact				
14		Sitework	202d	8/14/2023	8/8/2024			/	I	I	i	Sitework	
15	SIT 1000	Site Grading	12d	8/14/2023	8/31/2023			Site Gradin	g				
16	SIT 1010	Sanitary Sewer and Storm Drain	12d	9/5/2023	9/25/2023			S	anitary Sewer and Storm Drain				
17	SIT 1020	Water	12d	9/26/2023	10/16/2023				Water				
18	SIT 1030	Electrical	12d	10/17/2023	11/6/2023				Electrical				
19	SIT 1040	Curb & Gutter / Sidewalks	12d	5/1/2024	5/21/2024						Curb & Gutter	/ Sidewalks	
20	SIT 1050	Site Paving	12d	5/22/2024	6/12/2024						Site	Paving	
21	SIT 1060	Set Light Poles	12d	6/6/2024	6/26/2024							Set Light Poles	
22	SIT 1070	Architectural Steel Fence	12d	6/13/2024	7/3/2024		1		1		!	Architectural Steel Fence	
23	SIT 1080	Landscape	12d	6/27/2024	7/18/2024							Landscape	
24	SIT 1090	Exterior Contractor Pre-Punch	4d	7/22/2024	7/25/2024							Exterior Contractor Pre-Punch	
25	SIT 1100	Architect/Owner Punch	4d	7/29/2024	8/1/2024				i		i	Architect/Owner Punch	
26	SIT 1110	O/A/C Final Punch	4d	8/5/2024	8/8/2024							O/A/C Final Punch	
27		Foundations	58d	9/5/2023	12/14/2023			*******	Four	dations	1	! !	
28	FDT 1000	Drilled Piers	16d	9/5/2023	10/2/2023				Drilled Piers				
29	FDT 1010	Pier Caps	16d	9/26/2023	10/23/2023				Pier Caps				
30	FDT 1020	Perimeter Grade Beams & Pilasters	16d	10/10/2023	11/6/2023				Perimeter Grade Bea	ms & Pilasters			
DA RE	TA DAT V. DATE	E: 1/16/2023 E: 1/17/2023 9:45:07 AM			North	hern Colo	JOB #: 3021X PAGE 1 of	al Airport -	- Redesign		VIEV	V: Bar Chart View FILTER: None	

ŀ	<b>P</b>	HENSEL PHE Plan. Build. Manage.	LPS										
Line	Activity ID	Name	Duration	Start	Finish	Jan Feb Mar	Apr May Jun 7, 10, 124, 18, 122, 15, 19,	1023   Jul   Aug   Sep    3   17,  31,  14,  28,  11,  25,	Oct Nov Dec	   Jan   Feb   Mar  1 ,  15,  29,  12,  26,  11,  25	2024 Apr May Jun 18, 122, 16, 120, 13, 117,	Jul Aug Sep	Oct 7 21
31	FDT 1030	Below Grade Rough-In	12d	10/31/2023	11/20/2023				Below Grade Ro	ough-In			
32	FDT 1040	Dampproofing / Foundation Insulation / Backfill	8d	11/14/2023	11/28/2023		1		Dampproofi	ng / Foundation Insulation / Backfill			
33	FDT 1050	Slab on Grade	12d	11/27/2023	12/14/2023				Slab	on Grade			
34		Structure	48d	12/18/2023	3/12/2024		; 		ļ.	Struct	ıre		
35	STR 1000	Erect Floor Area Steel	12d	12/18/2023	1/9/2024		i			Erect Floor Area Steel			i
36	STR 1010	Erect Roof Area Steel	12d	1/10/2024	1/30/2024					Erect Roof Area Steel			
37	STR 1020	Deck and Detail Roof Area	16d	1/31/2024	2/27/2024					Deck and Deck	etail Roof Area		
38	STR 1030	Mechanical Screen Structure	8d	2/28/2024	3/12/2024					Mecha	nical Screen Structure		
39		Mock Up Wall	36d	10/17/2023	12/19/2023				Mo	ck Up Wall			
40	MU 1000	Place Footing	4d	10/17/2023	10/23/2023				Place Footing				
41	MU 1010	Frame Mock Up Wall	4d	10/24/2023	10/30/2023		1		Frame Mock Up Wall				
42	MU 1020	Sheath & Seal	4d	10/31/2023	11/6/2023				Sheath & Seal				1
43	MU 1030	Stone Veneer	4d	11/7/2023	11/13/2023				Stone Veneer				
44	MU 1040	Stucco Veneer	4d	11/14/2023	11/20/2023				Stucco Veneer				
45	MU 1050	Framing and Glazing	4d	11/21/2023	11/28/2023				Framing and	i I Glazing			i
46	MU 1060	Metal Panel	4d	11/29/2023	12/5/2023				Metal Pa	nel			1
47	MU 1070	Contractor Pre-Punch	4d	12/6/2023	12/12/2023		1		Contra	actor Pre-Punch			1
48	MU 1080	O/A/C Review and approve	4d	12/13/2023	12/19/2023				0//	VC Review and approve			
49		Exterior Closure	80d	2/14/2024	7/3/2024					/		Exterior Closure	
50	EXT 1010	Ext. Partitions - Frame, Sheath & Seal	16d	2/14/2024	3/12/2024					Ext. P	rtitions - Frame, Sheath & Seal		
51	EXT 1020	In-Wall M/E/P/F Rough-in	16d	2/28/2024	3/26/2024		į				in-Wall M/E/P/F Rough-in		
52	EXT 1030	Roof	16d	3/13/2024	4/9/2024		ļ.				Roof		
53	EXT 1040	Stone Veneer	16d	3/20/2024	4/16/2024		!				Stone Veneer		
54	EXT 1050	Stucco Veneer	16d	4/3/2024	4/30/2024						Stucco Veneer		
55	EXT 1060	Storefront / Glazing / Sun Shades	16d	4/17/2024	5/14/2024						Storefront / Glazir	g / Sun Shades	
56	EXT 1070	Metal Panel	12d	5/1/2024	5/21/2024						Metal Panel		
57	EXT 1080	Terminate Roof Eaves	8d	5/15/2024	5/29/2024						Terminate I	Roof Eaves	
58	EXT 1090	Gutters & Downspouts	4d	5/30/2024	6/5/2024						Gutters	& Downspouts	
59	EXT 1100	Exterior Signage	4d	6/6/2024	6/12/2024						Exter	or Signage	
60	EXT 1110	Exterior Contractor Pre-Punch	4d	6/13/2024	6/19/2024						Ex	erior Contractor Pre-Punch	
					North	hern Coloi	rado Regior	nal Airport -	Redesign				
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Line	Activity ID	Name	Duration	Start	Finish	2023         1         2024           Jan         Feb         Mar         Apr         May         Jun         Jul         Aug         Sep         Oct         Nov         Dec         Jan         Feb         Mar         Apr         May         Jun         Jul         Aug         Sep         Oct         Nov         Dec         Jan         Feb         Mar         Apr         May         Jun         Jul         Aug         Sep         Oct         Nov         Dec         Jan         Feb         Mar         Apr         May         Jun         Jul         Aug         Sep         Oct         Nov         Dec         Jan         Feb         Mar         Apr         May         Jun         Jul         Aug         Sep         Oct         Nov         Dec         Jan         Feb         Mar         Apr         May         Jun         Jul         Aug         Sep         Jan         Feb         Mar         Apr         May         Jun         Jul         Sep         Oct         Apr         Jul         Jan         Sep         Oct         Sep         Oct         Jan         Sep         Oct         Jan         Sep         Sep         Oct         Jan	Oct					
61	EXT 1120	Architect/Owner Punch	4d	6/20/2024	6/26/2024	Architect/Owner Punch						
62	EXT 1130	O/A/C Final Punch	4d	6/27/2024	7/3/2024	0/A/C Final Punch						
63		Overhead	40d	3/13/2024	5/21/2024	Overhead						
64	OH 1000	Overhead Fire Protection Rough In	16d	3/13/2024	4/9/2024	Coverhead Fire Protection Rough In						
65	OH 1010	Overhead Plumbing Rough In	16d	3/27/2024	4/23/2024	Overhead Plumbing Rough In						
66	OH 1020	OH HVAC Rough In	16d	4/10/2024	5/7/2024	OH HVAC Rough In						
67	OH 1030	OH Electrical / Low Voltage Rough In	16d	4/24/2024	5/21/2024	OH Electrical / Low Voltage Rough In						
68		Partitions	44d	4/3/2024	6/19/2024	Partitions						
69	PRT 1000	Frame All Interior Partitions	16d	4/3/2024	4/30/2024	Frame All Interior Partitions						
70	PRT 1010	In-Wall Rough In	16d	4/10/2024	5/7/2024	In-Wall Rough In						
71	PRT 1020	Drywall	16d	4/24/2024	5/21/2024	Drywall						
72	PRT 1030	Tape & Finish	16d	5/1/2024	5/29/2024	Tape & Finish						
73	PRT 1040	Paint	12d	5/30/2024	6/19/2024	Paint						
74		Electrical / Mechanical Buildout	52d	4/3/2024	7/3/2024	Electrical / Mechanical Buildout						
75		Electrical Rooms	36d	5/1/2024	7/3/2024	Percent Rooms						
76	EMB 1010	Backboards for Panels	4d	5/1/2024	5/7/2024	Backboards for Panels						
77	EMB 1020	Paint	4d	5/8/2024	5/14/2024	Paint Paint						
78	EMB 1030	Room Build-Outs	12d	5/15/2024	6/5/2024	Room Build-Outs						
79	EMB 1040	Set Transformers / Switchgear	4d	5/20/2024	5/23/2024	Set Transformers / Switchgear						
80	EMB 1050	Set Generator & Tie-in	4d	6/27/2024	7/3/2024	Set Generator & Tie-in						
81		Roof Top Equipment	24d	4/3/2024	5/14/2024	Roof Top Equipment						
82	RTE 1010	RTU Curbs	8d	4/3/2024	4/16/2024	RTU Curbs						
83	RTE 1020	RTU Deliver & Set	8d	4/17/2024	4/30/2024	RTU Deliver & Set						
84	RTE 1030	Metal Panel Screen	4d	5/8/2024	5/14/2024	Metal Panel Screen						
85		Water Entry, & Fire Riser Rooms	14d	5/1/2024	5/23/2024	Water Entry, & Fire Riser Rooms						
86	WFR 1010	Backboards & Hangers	4d	5/1/2024	5/7/2024	Backboards & Hangers						
87	WFR 1020	Paint	2d	5/8/2024	5/9/2024	Paint						
88	WFR 1030	Room Build-Outs	8d	5/13/2024	5/23/2024	Room Build-Outs						
89		Finishes	64d 8h	5/1/2024	8/26/2024	Finishes						
90		Arrival / Departure	54d	5/8/2024	8/13/2024	Arrival / Departure						
DA RE	TA DAT	E: 1/16/2023 E: 1/17/2023 9:45:07 AM			North	hern Colorado Regional Airport - Redesign JOB #: 3021XXX PAGE 3 of 7 VIEW: Bar Chart View FILTER: None						

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Line	Activity ID	Name	Duration	Start	Finish	Jan Feb Mar	2 Apr May Jun 1 7 10 24 18 22 15 19	)23 Jul Aug Sep J 3 17 131 14 128 11 125	Oct Nov Dec	Jan Feb Mar 1 15 29 12 26 11 25	2024 Apr May Jun 18 22 6 20 3 17	Jul Aug Sep 1 1 15 29 12 26 9 23	Oct
91	FMC 1000	Drywall Ceiling/Bulkhead/Soffit	12d	5/8/2024	5/29/2024					······································	Drywall Cei	ng/Bulkhead/Soffit	
92	FMC 1010	Lights / Electrical Trim	12d	5/22/2024	6/12/2024						Lights	/ Electrical Trim	
93	FMC 1020	Acoustical Ceiling Panels	8d	5/30/2024	6/12/2024						Acous	tical Ceiling Panels	
94	FMC 1030	Casework	8d	6/13/2024	6/26/2024							Casework	
95	FMC 1040	Carpet	4d	6/27/2024	7/3/2024						l	Carpet	
96	FMC 1050	Wall Treatments	8d	7/8/2024	7/18/2024							Wall Treatments	
97	FMC 1060	Doors & Hardware	4d	7/15/2024	7/18/2024							Doors & Hardware	
98	FMC 1070	Base & Corner Guards	4d	7/17/2024	7/23/2024							Base & Corner Guards	
99	FMC 1080	Signage	4d	7/17/2024	7/23/2024							Signage	
100	FMC 1090	Contractor Pre-Punch	4d	7/24/2024	7/30/2024		i i					Contractor Pre-Punch	
101	FMC 1100	Architect/Owner Punch	4d	7/31/2024	8/6/2024							Architect/Owner Punch	h
102	FMC 1110	O/A/C Final Punch	4d	8/7/2024	8/13/2024							Ø/A/C Final Punch	
103		Restrooms	46d	5/22/2024	8/13/2024						P	Restrooms	
104	FRR 1000	Drywall / Tape & Finish Hardlid Ceiling	8d	5/22/2024	6/5/2024						Drywall ,	Tape & Finish Hardlid Ceiling	
105	FRR 1010	Paint Ceiling	4d	6/6/2024	6/12/2024						Paint	Ceiling	
106	FRR 1020	Tile Bathrooms	12d	6/13/2024	7/3/2024							Tile Bathrooms	
107	FRR 1030	Vanity Caswork	8d	6/27/2024	7/11/2024		!					Vanity Caswork	
108	FRR 1040	Plumbing / Lights / Electrical Trim	8d	7/8/2024	7/18/2024							Plumbing / Lights / Electrical T	Trim
109	FRR 1050	Toilet Partitions	6d	7/10/2024	7/18/2024							Toilet Partitions	
110	FRR 1060	Mirrors / Toilet Accessories	6d	7/15/2024	7/23/2024		i i	i				Mirrors / Toilet Accessories	
111	FRR 1070	Contractor Pre-Punch	4d	7/24/2024	7/30/2024							Contractor Pre-Punch	
112	FRR 1080	Architect/Owner Punch	4d	7/31/2024	8/6/2024							Architect/Owner Punch	h
113	FRR 1090	O/A/C Final Punch	4d	8/7/2024	8/13/2024							0/A/C Final Punch	
114		TSA Spaces	34d	6/20/2024	8/20/2024						P	TSA Spaces	
115	FTS 1000	Drywall Ceiling/Bulkhead/Soffit	12d	6/20/2024	7/11/2024							Drywall Ceiling/Bulkhead/Soffit	
116	FTS 1010	Lights / Electrical Trim	12d	6/27/2024	7/18/2024							Lights / Electrical Trim	
117	FTS 1020	ACT Ceiling Grid	4d	7/15/2024	7/18/2024							ACT Ceiling Grid	
118	FTS 1030	ACT Ceiling	4d	7/22/2024	7/25/2024							ACT Ceiling	
119	FTS 1040	Casework	4d	7/29/2024	8/1/2024							Casework	
120	FTS 1050	Carpet / Flooring	4d	7/31/2024	8/6/2024							Carpet / Flooring	
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Line	Activity ID	Name	Duration	Start	Finish	Jan Feb Mar	2 Apr May Jun 7. 10. 24. 8. 22. 5. 10	023 Jul Aug Sep 3	Oct Nov Dec	Jan Feb Mar	2024 Apr May Jun	Jul Aug Sep Oct	
121	FTS 1060	Doors & Hardware	4d	8/7/2024	8/13/2024	10, 30, 13, 27, 13, 2	7, 10, 24, 0, 22, 0, 19,	3, 17, 31, 14, 20, 11, 20,	9, 23, 0, 20, 4, 10,		0, 22, 0, 20, 3, 11,	Doors & Hardware	
122	FTS 1070	Signage	4d	8/14/2024	8/20/2024							Signage	
123	FTS 1080	BHS Installation and Pre-Testing	12d	6/27/2024	7/18/2024							BHS Installation and Pre-Testing	
124	FTS 1090	TSA Equipment Install and Pre-Testing	12d	6/27/2024	7/18/2024		i				I	TSA Equipment Install and Pre-Testing	
125	FTS 1100	LVSS System Startup	8d	7/8/2024	7/18/2024							LVSS System Startup	
126	FTS 1110	Contractor Pre-Punch	4d	7/15/2024	7/18/2024							Contractor Pre-Punch	
127	FTS 1120	Architect/Owner Punch	4d	7/22/2024	7/25/2024							Architect/Owner Punch	
128	FTS 1130	O/A/C Final Punch	4d	7/29/2024	8/1/2024							Ø/A/C Final Punch	
129		Land Side / Ticketing	64d 8h	5/1/2024	8/26/2024						/	Land Side / Ticketing	
130	FLT 1000	Burnished Concrete / Sealer	16d	5/1/2024	5/22/2024						Burnished Con	crete / Sealer	
131	FLT 1010	Entrance Mats	12d	5/23/2024	6/10/2024		1				Entran	ce Mats	
132	FLT 1020	Drywall Ceiling/Bulkhead/Soffit	8d	6/6/2024	6/19/2024						Dr	wall Ceiling/Bulkhead/Soffit	
133	FLT 1030	Lights / Electrical Trim	8d	6/18/2024	7/1/2024							Lights / Electrical Trim	
134	FLT 1040	Acoustical Ceiling Panels	8d	6/20/2024	7/3/2024						Acoustical Ceiling Panels		
135	FLT 1050	Casework	8d	7/2/2024	7/16/2024							Casework	
136	FLT 1060	Carpet & Base	4d	7/10/2024	7/16/2024							Carpet & Base	
137	FLT 1070	Wall Treatments	8d	7/17/2024	7/30/2024							Wall Treatments	
138	FLT 1080	BHS Installation and Pre-Testing	12d	7/1/2024	7/22/2024							BHS Installation and Pre-Testing	
139	FLT 1090	Doors & Hardware	4d	7/25/2024	7/31/2024							Doors & Hardware	
140	FLT 1100	SS Base & Corner Guards	4d	7/30/2024	8/5/2024		i					SS Base & Corner Guards	
141	FLT 1110	Signage	4d	7/30/2024	8/5/2024							Signage	
142	FLT 1120	Contractor Pre-Punch	4d	8/6/2024	8/12/2024							Contractor Pre-Punch	
143	FLTT 1130	Architect/Owner Punch	4d	8/13/2024	8/19/2024							Architect/Owner Punch	
144	FLT 1140	O/A/C Final Punch	4d	8/20/2024	8/26/2024							0/A/C Final Punch	
145		Rental Car Offices	30d	6/13/2024	8/6/2024		1				/	Rental Car Offices	
146	FRC 1000	ACT Ceiling Grid	4d	6/13/2024	6/19/2024						AC	T Ceiling Grid	
147	FRC 1010	ACT Ceiling	4d	6/20/2024	6/26/2024							ACT Ceiling	
148	FRC 1020	Lights / Electrical Trim	4d	6/25/2024	7/1/2024						I	Lights / Electrical Trim	
149	FRC 1030	Millwork	4d	7/2/2024	7/9/2024							Millwork	
150	FRC 1040	Electrical/Data for Millwork	4d	7/10/2024	7/16/2024							Electrical/Data for Millwork	
D/ RE	Image: Northern Colorado Regional Airport - Redesign       JOB #: 3021XXX       PAGE 5 of 7												

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Line	Activity ID	Name	Duration	Start	Finish	Jan Feb Mar 16 30 13 27 13	Apr May Jun 27, 10, 124, 18, 122, 15, 19,	023 Jul Aug Sep 3. 17. 131. 14. 128. 11. 125	Oct Nov Dec	Jan Feb Mar 1. 15. 29. 12. 26. 11. 25	2024 Apr May Jun 8, 122, 16, 120, 13, 17,	Jul Aug Sep Oct	x 1
151	FRC 1050	Contractor Pre-Punch	4d	7/17/2024	7/23/2024							Contractor Pre-Punch	
152	FRC 1060	Architect/Owner Punch	4d	7/24/2024	7/30/2024							Architect/Owner Punch	
153	FRC 1070	O/A/C Final Punch	4d	7/31/2024	8/6/2024							O/A/C Final Punch	
154		Concessions	34d	6/20/2024	8/20/2024		1				P	Concessions	
155	FCO 1000	ACT Grid / Drywall Bulkhead/Soffit	8d	6/20/2024	7/3/2024		1					ACT Grid / Drywall Bulkhead/Soffit	
156	FCO 1010	Lights / Electrical Trim	4d	6/27/2024	7/3/2024		1					Lights / Electrical Trim	
157	FCO 1020	Paint	2d	7/8/2024	7/9/2024							Paint	
158	FCO 1030	Wall Tile	4d	7/10/2024	7/16/2024							Wall Tile	
159	FCO 1040	FRP Panels	4d	7/17/2024	7/23/2024							FRP Panels	
160	FCO 1050	LVT, Seal Concrete, Base	4d	7/24/2024	7/30/2024		1					LVT, Seal Concrete, Base	
161	FCO 1060	Contractor Pre-Punch	4d	7/31/2024	8/6/2024							Contractor Pre-Punch	
162	FCO 1070	Architect/Owner Punch	4d	8/7/2024	8/13/2024		1					Architect/Owner Punch	
163	FCO 1080	O/A/C Final Punch	4d	8/14/2024	8/20/2024							0/A/C Final Punch	
164		Weather	4d	8/27/2024	9/3/2024							Meather	
165	WTR 1000	Weather	4d	8/27/2024	9/3/2024		i					Weather	
166		Commissioning	55d	6/6/2024	9/12/2024							Commissioning	g
167		Startup / Commissioning	55d	6/6/2024	9/12/2024						-	Startup / Comn	missior
168		Electrical	18d	6/6/2024	7/9/2024						P	Electrical	
169	CXE 1000	Raceway & Conductors Complete	2d	6/6/2024	6/10/2024						Racew	ay & Conductors Complete	
170	CXE 1010	Distrubute Power	4d	6/11/2024	6/17/2024						Dist	rubute Power	
171	CXE 1020	Start Equipment	4d	6/18/2024	6/24/2024							tart Equipment	
172	CXE 1030	Test Emergency Generator	2d	7/8/2024	7/9/2024							Test Emergency Generator	
173		Mechanical - Air/Wet	6d	6/18/2024	6/26/2024						R	Mechanical - Air/Wet	
174	CXM 1000	Start Equipment (2 RTU's)	4d	6/18/2024	6/24/2024							tart Equipment (2 RTU's)	
175	CXM 1010	Start Equipment (XX Pumps)	2d	6/25/2024	6/26/2024							Start Equipment (XX Pumps)	
176		ТАВ	8d	6/27/2024	7/11/2024							ТАВ	
177	CXT 1000	Water Balance	4d	6/27/2024	7/3/2024							Water Balance	
178	CXT 1010	Air Balance	4d	7/8/2024	7/11/2024							Air Balance	
179		BAS	16d	7/15/2024	8/8/2024							BAS	
180	CXB 1000	Raceway & Conductors Complete	4d	7/15/2024	7/18/2024							Raceway & Conductors Complete	
							1				· · · · · · · · · · · · · · · · · · ·	i i	
D/ RE	ATA DATE: 1/16/2023 EV. DATE: 1/17/2023 9:45:07 AM VIEW: Bar Chart View PAGE 6 of 7 FILTER: None												

l	HENSEL PHELPS												
		N	<b>.</b>	<u> </u>				023			2024		
Line	Activity ID	Name	Duration	Start	Finish	Jan Feb Mar 16 30 13 27 13	Apr May Jun 27, 10, 24, 8, 22, 5, 19	Jul Aug Sep  3,  17,  31,  14,  28,  11,  25	Oct Nov Dec 5 9 23 6 20 4 18	Jan Feb Mar 1 15 29 12 26 11 25	Apr May Jun  8,  22,  6,  20,  3,  17,	U Jul Aug Sep 1. 15 29 12 26 9 23	0ct
181	CXB 1010	Dump Programming	4d	7/22/2024	7/25/2024							Dump Programming	
182	CXB 1020	Pre-Testing	4d	7/29/2024	8/1/2024							Pre-Testing	
183	CXB 1030	Functional Testing	4d	8/5/2024	8/8/2024							Functional Testing	
184		Fire / Life Safety	6d	9/4/2024	9/12/2024		i -					Fire /	Life Safety
185	CXF 1000	Fire / Life Safety Pre-Testing	4d	9/4/2024	9/10/2024							📓 Fire / L	ife Safety Pre-T
186	CXF 1010	Final Fire / Life Safety Testing	2d	9/11/2024	9/12/2024							Final	Fire / Life Safet
							1						
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**On-Call Engineering** Project: New Terminal

> **Construction Phase Services** Northern CO Regional Airport

Dibble

Firm:

Date:

4/28/2023





Contract Number: TBD Project Number: N/A Task Number: 7 Amendment Number: N/A FAA Number: 3-08-0023-044-2023 CDOT Number: TBD

	Summary			Dibble	Subs				
A. Construction Phase Services									
		Fee	Туре						
1	Dibble (Civil Prime and Contract Manager)	\$212,802.80	T&M	\$212,802.80					
2	Ditesco (Owner's Representative and Inspection)	\$387,722.00	T&M		\$387,722.00				
3	VFLA (Architect/Structural/Land Planning/LEED)	\$222,915.00	T&M		\$222,915.00				
4	Swanson-Rink (ME&P/Fire/Baggage Handling/TSA)	\$203,700.00	T&M		\$203,700.00				
5	Terracon (Quality Assurance Testing)	\$133 <i>,</i> 404.80	T&M		\$133,404.80				
	—								
		TOTAL		Dibble	Subconsultants				
	Total	\$1,160,544.60		\$212,802.80	\$947,741.80				

Firm:	Dibble	Contract Number: TBD
	On-Call Engineering	Project Number: N/A
Project:	New Terminal	Task Number: 7
	Construction Phase Services	Amendment Number: N/A
	Northern CO Regional Airport	FAA Number: 3-08-0023-044-2023
Date:	4/28/2023	CDOT Number: TBD

CONSTRUCTIO	CONSTRUCTION COORDINATION AND INSPECTION SERVICES SUMMARY									
Classification	Total	Billing	Total							
Classification	Hours	Rate	Cost							
1 Principal	0	\$295.02	\$0.00							
2 Principal Engineer	0	\$245.01	\$0.00							
3 Senior Project Manager	622	\$225.01	\$139,956.22							
4 Construction Res. Eng.	0	\$225.01	\$0.00							
5 Project Manager	0	\$205.02	\$0.00							
6 Senior Engineer	132	\$205.02	\$27,062.64							
7 QA/QC Manager	0	\$205.02	\$0.00							
8 Project Engineer	118	\$172.01	\$20,297.18							
9 Senior Designer	124	\$146.99	\$18,226.76							
10 Admin Assistant	0	\$85.01	\$0.00							

Total:

\$205,542.80

CONSTRUCTION COORDINATION AND INSPECTION SERVICES DIRECT COSTS

996

		Type of
Item	Cost	Compensation
1 Mileage	\$6,290.00	Direct Costs
2 Printing	\$970.00	Direct Costs

### CONSTRUCTION COORDINATION AND INSPECTION SERVICES SUBCONSULTANTS

		Type of
Firm	Cost	Compensation
1 Ditesco (Owner's Representative and Inspection)	\$387,722.00	Time and Materials
2 VFLA (Architect/Structural/Land Planning/LEED)	\$222,915.00	Time and Materials
3 Swanson-Rink (ME&P/Fire/Baggage Handling/TSA)	\$203,700.00	Time and Materials
4 Terracon (Quality Assurance Testing)	\$133,404.80	Time and Materials

 Sub-Total for Subconsultants:
 \$947,741.80

### CONSTRUCTION COORDINATION AND INSPECTION SERVICES TOTAL FEE

TOTAL FEE......\$1,160,544.60

Firm:	Dibble
	On-Call Engineering
Proiect:	New Terminal

**Construction Phase Services** 

1 General Construction Management and Administration

PRINCIPAL

Northern CO Regional Airport

4/28/2023 Date

TASK

Amendment Number: N/A FAA Number: 3-08-0023-044-2023 CDOT Number: TBD CONSTRUCTION COORDINATION AND INSPECTION SERVICES SUMMARY CONSTRUCTION RESIDENT SENIOR PROJECT TOTAL HOURS BY TASK PRINCIPAL ENGINEER QA/QA MANAGER SENIOR PROJECT SENIOR PROJECT ADMIN MANAGER ENGINEER MANAGER ENGINEER ENGINEER DESIGNER ASSISTANT 120 120

1a General Construction Management and Adminstration			120								120
1b Preconstruction Conference			2								2
1c Construction Management Plan (CMP)			4			4		16			24
1d Precon Conference Submittal Reviews and Coordination			6								6
1e Construction Equipment Submittal to FAA OE/AAA			2			2		8			12
1f Airport Security Badging			2			2		2			6
2 Construction Coordination and Inspection Services											
2a Site Visits and Observations (Weekly - 60 Weeks)			240			60					300
2b Weekly Construction Meetings (60 Weeks)			60			30					90
2c Pre-Installation Meetings											0
2d Weekly Certified Payrolls and David Bacon Reviews											0
2e Contractor Employee Interviews											0
2f Weekly FAA Reports (5370-1)			12								12
2g Monthly Quantity Calculations											0
2h Monthly Payment Application Coordination and Review											0
2i Change Order Review and Coordination			24								24
2j Material Shop Drawing Review and Coordination			24								24
2k RFI Review and Coordination			12								12
21 ESI Review and Coordination			12			12			48		72
2m DBE Compliance and Coordination											0
2n QA/QC Testing Coordination and Review			12								12
20 Substantial Completion Inspections			16								16
2p Final Completion Inspections			16								16
2q Punchlist(s) and Coordination(s)											0
2r Commissioning											0
3 Post Construction Services											
3a Demobilization and Site Clean-Up			2								2
3b Final Payment Application and FAA Grant(s) Close Out			12					24			36
3c QA and QC Testing Summary Report			8					12			20
3d Final Construction Report and Coordination			8					24			32
3e Record Drawings			4			8		12	36		60
3f ALP Update			4			8		12	36		60
3g Airport Diagram Update			2			6		8	4		20
3h Operation and Maintenance Manuals											0
4 Warranty Phase Services											
4a General Warranty Period Management and Administration			18								18
TOTAL HOURS BY CLASSIFICATION	0	0	622	0	0	132	0	118	124	0	996

Contract Number: TBD Project Number: N/A Task Number: 7
Contract Number: TBD Project Number: N/A Task Number: 7 Amendment Number: N/A FAA Number: 3-08-0023-044-2023 CDOT Number: TBD

#### CONSTRUCTION COORDINATION AND INSPECTION SERVICES DIRECT COSTS

1. MILEAGE			
a. 60 Trips (Construction Manager) (Mileage includes estimated travel on or arou	160 Miles und the airport during si	@\$0.655/Milete visits(Federal Rate)	\$6,288
b. 0 Trips (Project Engineer) (Mileage includes estimated travel on or arou	160 Miles und the airport during si	@\$0.655/Milete visits(Federal Rate)	\$0
		SUBTOTAL	\$6,290
2. MEALS			
a. 0 Days (Construction Manager)		\$69.00 /Day (Federal Per Diem)	\$0.00
b. 0 Days (Project Engineer)		\$69.00 /Dav	\$0.00
		(Federal Per Diem)	
		SUBTOTAL	\$0
3. LODGING			
a. 0 Nights (Construction Manager)		\$178.00 /Night	\$0.00
		(Federal Rate)	
Nights (Project Engineer)		\$178.00 /Night	\$0.00
		(Federal Rate)	
		SUBTOTAL	\$0
4. PRINTING (ALP Set Only)			
a. 1 Submittals of 18 sheets	= 18 Sheets @	\$6.00 /sheet	\$648.00
(6 Copies Full-Size Bond Plans)	= 18 Sheets @	\$0.50 /sheet	\$0.00
(4 Copies Scaled 1/2-Size Plans)			\$0.00
. 1 Plotting 18 sheets	= 18 Sheets @	\$3.00 /sheet	\$324.00
_	_	_	
d. 0 Submittals for Construction Report @	150 Sheets @	\$0.60 /sheet	\$0.00
(2 copies @ 150 pages each)	(double-sided)		
		SUBTOTAL	\$970
		CONSTRUCTION PHASE TOTAL	\$7.260



Delivery by email to: Jared Bass jared.bass@dibble.corp.com

April 28, 2023

Mr. Jared Bass Vice President – Sr. Project Manager Dibble Engineering 2696 South Colorado Blvd., Suite 330 Denver, CO 80222

RE: Construction Management Scope of Work New Airport Terminal Project

Dear Jared:

This letter and scope of services proposal follows on our meeting held March 30, 2023. At this meeting, we reviewed the details of the remaining phases of the project, schedule, funding and team members to execute on the remaining work. Having this overall project understanding has allowed us to develop the attached proposal. This scope of work proposal spans approximately three calendar years covering the construction, post construction, and warranty phases of an anticipated 14-month construction schedule with a one-year warranty period.

Please let me know if you have any questions or require further information regarding this proposal, I can be reached by phone at 970.988.8605 and email <u>keith.meyer@ditescoservices.com</u>.

Sincerely,

Keith Meyer, P.E.

Enc. Scope of work

Cc: file Scott Granger, Sr. Construction Manager

### Exhibit A City of Loveland Airport Terminal Project Project Management Scope of Work

#### **Project Understanding**

Dibble Engineering is currently contracted with The City of Loveland and Northern Colorado Regional Airport (the City) for the design of a new terminal airport property, and they are now being requested by the City to provide a proposal for construction phase services. The facility is planned to include circulation, administration, ticketing, baggage check-in, screening, lounge areas, car rental, concessions, restrooms and TSA/security offices. Overall, the program will support a 19,306 SF commercial passenger terminal.

The project is currently budgeted at \$16.05 million with Hensel Phelps as the selected Construction Manager at Risk (CMaR) currently coming to terms with the City using a Guaranteed Max Price (GMP) contract. Construction is anticipated to start in July 2023 with expected completion by September 2024 followed by a one-year warranty period for work performed. This proposal consists of the list of services Distesco will provide to Dibble and the City for the construction, post construction and warranty phases of the project.

#### Task 1 – Construction Phase Services

- <u>Project Construction Tasks.</u> Ditesco staff will monitor a majority of the construction-related activities. Our staff will:
  - Act as the CMaR contractor's main point of contact for the City for overall delivery of the project.
  - Coordinate Preconstruction conference and assist with preconstruction submittal review as directed by Dibble.
  - Provide part-time construction inspection services (4 to 6 hrs/day) for all improvements, ensuring quality construction and compliance with Code, Development and City standards, and the project specifications.
  - o Coordinate, attend and manage weekly construction project meetings.
  - Document attendance and keep copies of agendas of pre-installation meetings as coordinated by CMAR contractor and required by FAA.
  - o Perform certified payroll review and Davis Bacon employee reviews and interviews as required.
  - Coordinate and review all DBE efforts and documentation required.
  - Provide monthly reports documenting the contractors' work progress, contract times, and other pertinent information.
  - Verify and recommend approval of all pay applications and change orders.
  - Coordinate and review material shop drawings with the Dibble Team.
  - Generate and coordinate responses to RFIs, as applicable with Dibble.
  - Coordinate and review engineering/architectural supplemental information with the Dibble Team.
  - o Coordinate and review QA/QC actions (scheduling, reporting, and remediation recommendations).
  - Facilitate resolution to construction issues through risk management and mitigation controls. Update and continue to monitor the risk register for the project.
  - Coordinate work between the CMaR and outside agencies (i.e., utility companies, FAA) affected by the project.
  - Conduct substantial completion inspections, final completion inspections, and generate & track punchlist items from these inspections.
  - Coordinate all start-up and commissioning services for equipment, systems, and controls. The commissioning agent that is part of the Dibble Team will be the owner of all requirements for a successful commissioning of the systems and facility. Ditesco will coordinate with all required parties for testing, reporting, installation, and training as requested by the agent.
  - o Assist in coordination and verification of LEED certification.

<u>Deliverables:</u> Throughout the project, our deliverables will include monthly reports, summaries of data collected to ensure performance measure compliance and progress photographs. If nonconforming items are identified, these will be highlighted in a separate report and managed to full resolution for federal compliance.

#### Task 2 – Post Construction Phase Services

- Post Construction Tasks. Ditesco staff will:
  - o Coordinate demobilization and site clean-up with Contractor and the Airport.
  - o Review and verify final quantities with the Contractor for final payment.
  - Provide Dibble with final QA/QC testing results and any corrective actions taken.
  - Provide Dibble with our monthly reports and a summary of those reports as required.
  - Assist with creating a final set of record drawings based on contractor redlines, Ditesco as-built information, and any field changes made during construction.
  - o Provide Dibble our as-built survey information to use as needed for final as-built drawings.
  - Review all operations and maintenance manuals provided by the Contractor for completeness with the specifications for the following systems: airfield lighting, signage, stormwater treatment & detention systems, and building systems.

<u>Deliverables:</u> Dibble and the Airport will receive a reviewed and confirmed final pay request, all QA/QC results recorded during construction, a complete set of our weekly/monthly job status reports, as-built drawings, and reviewed owners operational & maintenance manual for all installed systems as provided by the contractor.

#### Task 3 – Warranty Phase Services

- *Warranty Tasks.* Ditesco staff will perform the following duties during the 12-month warranty period:
  - o Coordinate an Open Issues Meeting on an as needed basis with all required stakeholders.
  - o Own, monitor and verify items on the Open Issues Meeting log are being performed.
  - o Warranty Management
    - a. Project file set up.
      - b. Monitor project accounting & invoicing.
      - c. Internal correspondence, task development and updates
      - d. Internal QC and meetings
      - e. Coordinate Project Phase Closeout

<u>Deliverables</u>: Dibble and the Airport will receive monthly communication on warranty items as applicable and will receive a final Warranty Management Log at the end of the warranty period with all items addressed during the warranty period.

#### **Schedule**

This scope of work provides construction management services from July 2023 through September 2024 (14 months) and post-construction/warranty project management services from September 2024 through October 2026 (12 months).

#### Fee Estimate

We have based our fee estimate on the following assumptions of the project.

- 26-month total project timeframe.
- Plans, specifications, agreements, and permits provided by Dibble.
- All material testing: special inspections provided by the City or CMaR contractor.
- Construction Progress Meeting minutes provided by Ditesco.
- Construction office or trailer location provided by City or CMaR contractor.
- All formal stakeholder engagement activities performed by City staff.

Estimated Fee:	
Construction Phase	\$352,490.00
Post Construction Phase	\$ 12,480.00
Warranty Phase	\$ 16,090.00
Estimated Reimbursable Expenses	<u>\$ 6.662.00</u>
Total:	\$387,722.00

A detailed task breakdown is included. Please find this on page 6 of this scope of work proposal.

The fee shown above is to be billed on a time and material basis, not to exceed basis based on the rates shown in the table on page 5 and 6 of this proposal. All reimbursable expenses will be billed at direct cost.



### Ditesco 2023-2024 Rate Schedule

Principal:	\$158.00 - \$185.00 per hour
Senior Project Manager:	\$123.00 - \$152.00 per hour
Project Manager	\$118.00 - \$135.00 per hour
Project Engineer:	\$115.00 - \$130.00 per hour
Engineer:	\$95.00 - \$122.00 per hour
Senior Construction Manager:	\$120.00 - \$148.00 per hour
Construction Manager/Resident Engineer:	\$97.00 - \$128.00 per hour
Inspector:	\$75.00 - \$124.00 per hour
CAD Design	\$69.00 - \$90.00 per hour
GIS Technician:	\$72.00 - \$118.00 per hour
Administrative:	\$58.00 - \$71.00 per hour
Mileage Reimbursement:	IRS Rate
Daily Truck Rate:	\$105.00 per day
Subconsultant Markup	5% of cost
All other costs at direct expense	
Terms	30 days net

d	itesco
Proje	ct & Construction Services

### City of Loveland NOCO Airport Terminal Project

	Classi	fication				
	Keith Meyer	Scott Granger	Jason Wooldridge or TBD	Leslie Bratner		
Phase/Task Description	Principal	Sr. Project Manager	Assoc. Project Manager	Admin	Task Total	Notes
	(hrs)	(hrs)	(hrs)	(hrs)		
	\$150	\$130	\$125	\$65		
Task 1 - Construction Phase (4-Day Work Week)					\$352,490	
1.02 Meetings						
- Preconstruction Meeting	4	4	4	0	\$1,620	
- Weekly Construction Meetings	0	130	163	0	\$37,213	
- Pre-Installation Meetings	0	9	17	0	\$3,230	
1.07 Reports			400		<b>*</b> 10.050	
- Daily Observation Reports	0	0	130	0	\$16,250	
- Monthly Reports	0	33	23	22	\$3,788 \$22,589	
2.01 Resident Engineering	0		130		φ22,300	
- Daily Site Inspections	48	390	1040	0	\$187 900	
- QA/QC Coordination & Review	0	65	33	0	\$12.513	
2.02 Submittal Review	, i i i i i i i i i i i i i i i i i i i			Ŭ	<i><i><i>ϕ</i>12,010</i></i>	
- Project Submittal Review (Schedule & shop drawings)	0	90	130	0	\$27,950	
2.03 Contract Management						
- Monthly Pay Application Review	0	15	15	0	\$3,825	
- Change Order Review	0	25	6	0	\$4,031	
- Monthly Schedule Review	0	15	4	0	\$2,419	
- RFI/ESI Review	4	70	35	0	\$14,075	
2.06 Startup & Testing	4	40	50	0	\$0	
- Commissioning coordination & observations	4	12	50	0	\$8,410 ¢0	
- Substantial Completion Punchlists and Final Completion Inspections	4	16	32	0	<del>پو</del> 86,680	
		10	52	0	ψ0,000	
Construction Phase Subtotal	64	881	1811	33		
% Job Assignment - Construction Phase	3%	37%	75%	1%		
Task 2 - Post Construction Phase					\$12,480	
2.01 Resident Engineering			40		45.000	
- Demobilization & Site Clean Up	0	0	40	0	\$5,000	
2.07 Ptoject Close Out	0	40	12	12	\$7.490	
- Final Payment Application Review, QA/QC Summary, Final Report	0	40	12	12	φ1,400	
Post Construction Phase Subtotal	0	40	52	12		
% Job Assignment - Post Construction Phase	0%	25%	33%	8%		
Task 3 - Warranty Phase					\$16,090	
2.07 Project Close Out						
- Monitor Warranty, Open Issues, and Monthly Meetings	0	97	24	6	\$16,090	1 meeting per month
Warranty Phase Subtotal	0	97	24	6		
% Job Assignment - Warranty Phase	0%	61%	15%	4%		
Paimhurachlas					¢0,000	
Reimbursables					\$0,002	
Venicies					\$4,750	20 miles Roundtrip for 2 Drivers
					\$1,905	
		46.5	4827		AAA	4
Work Effort Subtotal	64	1018	1887	51	\$381,060	4
Subtotal Reimbursable Items					\$6,662	4
Cost per labor category	\$9,600	\$132,318	\$235,854	\$3,288		1
Effort (days)	8	127	236	6		
Effort (weeks)	2	25	47	1		1
						-

Total Contract Value: \$387,722

Assumptions: - 14 month construction schedule

April 28, 2023



Strength in design. Strength in partnership. Strength in community.

June 9, 2023 Proposal - Rev. 3

Jared Bass Dibble Engineering, Inc. 2696 South Colorado Blvd, #330 Denver, CO 80222

### RE: FNL Terminal Building – Construction Administration Loveland, Colorado

Dear Mr. Bass,

Vaught Frye Larson Aronson Architects, Inc. (VFLA) has prepared this scoping document for design services for the new airport terminal building at the Northern Colorado Regional Airport (NCCR) with call letter of FNL in Loveland, Colorado. **Dibble Engineering, Inc.** shall herein be referred to as the Client.

#### **DESCRIPTION OF PROJECT**

- VFLA currently understands this contract to provide Construction Administration services for the designed FNL airport terminal building. The site is located on the north side of the existing terminal building at 4801 Earhart Road in Loveland, Colorado.
- 2. Site and Civil Engineering services will be provided by Dibble Engineering and contracted directly with the Airport.
- 3. Mechanical and Electrical Engineering is contracted directly to Dibble Engineering and not in VFLA's contract.
- 4. We understand the following assumptions based on the conversations with the Airport Staff to date.

#### Assumptions

- Anticipated Construction Cost \$14 million building only (excludes site work and airside construction)
- Anticipated Schedule 68 weeks (15 months) for Construction
- Building Size:
  - Phase 1: Approximately 19,400 sf based on the Level 4 Design Option
- Building is striving for LEED V4 Silver
- Building Code for Loveland is IBC 2018
- Energy Code for Loveland is IECC 2018

#### SCOPE OF WORK

This scoping document is for Construction Administration Phase only. This scope includes the following design services:

- Architecture VFLA
- Interior Design and Furniture Selection VFLA
- Structural Engineering KL&A
- Land Planning and Landscape Architecture Ripley Design
- LEED Consulting Ambient Energy/Mead & Hunt
- Acoustical Engineering K2 Acoustical

VAUGHT FRYE LARSON ARONSON architects

FNL Terminal Building – Construction Administration June 9, 2023 – Rev 3 Page 2 of 10

#### VFLA Work includes:

#### **Meetings for Architecture**

- (64) OAC meetings. One per week during the construction duration.
- (1) Pre-punch meeting
- (1) Punch walk meeting for exterior items

#### **Meetings for Interior Design**

- (32) OAC meetings. Anticipated for half of the project duration.
- (1) Pre-punch meeting
- (1) Punch walk meeting for interior items

#### **Construction Administration for Architecture and Interior Design**

VFLA will review progress of the project and observe the installation of critical systems or components, review field tests for compliance with the contract documents, respond to RFIs, review shop drawings, and provide field clarification of the plans and specifications when requested. Such visits and observation are not intended to be an exhaustive check or a detailed inspection of the Contractor's work but rather are to allow VFLA, as an experienced professional, to become generally familiar with the Work in progress and to determine, in general, if the Work is proceeding in accordance with the Contract Documents.

If required, VFLA shall review and approve or take other appropriate action on the Contractor submittals, such as shop drawings, product data, samples and other data, which the Contractor is required to submit, but only for the limited purpose of checking for conformance with the design concept and the information shown in the Construction Documents. This review shall not include review of the accuracy or completeness of details, such as quantities, dimensions, weights or gauges, fabrication processes, construction means or methods, coordination of the work with other trades or construction safety precautions, all of which are the sole responsibility of the Contractor. VFLA's review shall be conducted with reasonable promptness while allowing sufficient time in our judgment to permit adequate review. Review of a specific item shall not indicate that VFLA has reviewed the entire assembly of which the item is a component. VFLA shall not be responsible for any deviations from the Construction Documents not brought to the attention of VFLA in writing by the Contractor. VFLA shall not be required to review partial submissions or those for which submissions of correlated items have not been received.

VFLA shall not be responsible for any acts or omissions of the Contractor, subcontractor, any entity performing any portions of the Work, or any agents or employees of any of them. VFLA does not guarantee the performance of the Contractor and shall not be responsible for the Contractor's failure to perform its Work in accordance with the Contract Documents or any applicable laws, codes, rules or regulations.

VFLA does not manage the project's GMP (guaranteed maximum price) budget. This is the requirement of the General Contractor.

The interior design team will review submittals for the following:

- Floor finishes
- Wall finishes
- Ceiling finishes and ceiling tiles
- Door finishes
- Paint colors and draw downs
- Toilet accessories
- Toilet partitions
- Mirrors
- Countertop materials
- Plumbing fixtures for aesthetics
- Light fixtures for aesthetics
- Mechanical diffusers for aesthetics
- Interior stone
- Walk-off matt at vestibules
- Casework that was designed by VFLA

VAUGHT FRYE LARSON ARONSON architects

419 Canyon Ave, Suite 200 ■ Fort Collins, CO ■ 970.224.1191 w w w . v f a . c o m

- Semi-custom wall and ceiling acoustical panels
- Furniture systems that are in VFLA's scope for FFE

The interior design team will provide clarifications to contractor RFI's if they are regarding the interior designer team's scope of design. The interior design team will also provide updates to drawings with ASI's to provide additional clarity to the General Contractor.

The interior design team will provide guidance and review on interior finishes and if they meet the Build America Buy America (BABA) standard. The Construction Documents provide the BABA finishes. We anticipate one finish to require a waiver. VFLA interior design team will provide guidance to the GC for the waiver. We do not anticipate any reselection of products as they have been previously vetted for the BABA standard.

The interior design team will review the interior finishes for LEED compliance during the submittal process.

#### **LEED** Coordination

VFLA will provide coordination between the general contractor and LEED consultant to submit for the LEED online process. VFLA is not managing the LEED online process, but rather, has Ambient Energy providing this service (shown later in this contract). VFLA and Ambient Energy anticipates the LEED process to extend past the construction completion date, but no longer than 6 months past the construction completion date. LEED forms and confirmation occurs post occupancy.

#### **Record Drawings**

VFLA will provide post construction updates to the construction documents to capture changes to the architectural and interior design drawings. VFLA will use the mark-ups from the general contractor or project manager to make these modifications. VFLA will not manage the redlines during construction. VFLA will provide CAD and PDF drawings at the end of construction to the Airport staff once complete.

#### Value Engineering

VFLA has previously provided Value Engineering services during the previous design phases. VFLA does not anticipate any more Value Engineering to occur.

#### Work Not Included

The following services have been excluded from our scope of services. The client may request these services for an additional fee.

- Remodeling the existing terminal building
- Fast Track Design Process
- Value Engineering
- Building Permit Application
- Health Department Application
- Surveying
- Civil engineering
- Traffic engineering
- Geotechnical Engineering
- Asbestos Abatement/remediation
- Commercial kitchen design and equipment purchase
- Restaurant Design
- Security engineering
- Furniture purchase/procurement
- Artwork, display cases and like kind selection
- A/V design and related engineering
- Building Owners and Managers Association calculations (BOMA)
- WELL Building Design
- Permit fees
- Movie style Virtual Fly-thrus
- Solar Panel Design and Detailing

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- Solar Farm Design and Detailing
- Fuel Farm Design
- Fueling System Design
- De-icing System Design
- Security Screening System Design
- Baggage Conveyance selection or design
- Lightning Detection Design
- Stamped and signed Fire Protection Drawings
- Site Wall or Retaining Wall Design and Engineering
- TSA Submittal Processing
- FAA Submittal Processing

#### Scope Changes

VFLA reserves the right to provide additional fees if the scope above changes.

#### End of Architecture and Interior Design Scope

#### Structural Engineering Scope (KL&A)

#### Construction Administration Services

Our original proposal and contract covered concept design through construction documents. This additional service proposal is to cover the construction phase and will include typical RFI and submittal reviews, as well as periodic site visits. This add service is a fee calculated on an hourly basis per our standard rate schedule with a not to exceed limit plus reimbursable expenses as indicated in the table below. Description of inclusions of construction phase services are indicated below.

As part of normal construction phase services the Structural Engineer reviews shop drawings and responds to information requests which may be submitted by the contractor. The Structural Engineer will make every effort to respond to the contractor's schedule whenever possible. However, the Structural Engineer must have the availability of the normal 10 days review time for those submittals where it is required. As construction progresses, the Structural Engineer visits the site at appropriate intervals. In accordance with standard practice, these visits are not intended to be exhaustive or continuous. Specifically, the Structural Engineer's activities during this phase are:

1) Attend Meetings other than site visits (below)

a) Assist in Establishing Communications Procedures.

b) Advise Client and Contractor Which Structural Elements Require Construction Observation by Structural Engineer.

- c) Respond to Building Department Comments.
- 3) Submittal Review
  - a) Review Specified Submittals for Items Designed by Structural Engineer.
  - b) Review Submittals for Pre-Engineered Structural Elements.
- 4) Site Visits
  - a) Make Site Visits at Intervals Appropriate to the Stage of Construction.
  - b) Prepare Site Visit Reports.
- 5) Materials Testing and Inspection
  - a) Review Testing and Inspection Reports. Final structural close-out letter is dependent on the structural engineer of record reviewing the inspection reports.
- 6) Record Drawings based on general contractor redlines. (Estimated 8-12 hours)

#### **Exclusions**

- 1) Preparation of structural steel shop drawings.
- 2) Preparation of concrete reinforcement shop drawings.
- 3) Preparation of light gage framing shop drawings.
- 4) Preparation of shop or fabrication drawings for other pre-fabricated systems such as tilt-up wall panels light gauge

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panels, panelized wood framing, etc.

5) Construction Management, including such services as:

- a) Scheduling.
- b) Procurement.
- c) Budgeting.

6) Services related to Non-Structural Elements and their attachments, such as design of:

- a) Exterior cladding systems.
- b) Interior architectural systems.
- c) Window washing systems, davits and tie downs.
- d) Antennas, flagpoles, light poles and foundations for these elements.
- e) Mechanical, electrical and plumbing equipment, storage tanks, cooling towers and underground vaults.

f) Mechanisms and guide systems for elevators, escalators, other conveyor systems and associated operating equipment.

- g) Ladders, handrails, railings, grills, screens and signs
- 8) Design services related to tenant finish.

9) Special dynamic analyses such as spectrum or time-history response to seismic forces, or floor-response analysis for foot-fall or vibratory equipment.

- 10) Special wind analyses, such as wind-tunnel tests, etc.
- 11) "Seismic Risk" analysis.
- 12) Preparation of demolition documents.
- 13) Field Investigation of existing buildings and structures including surveys of existing construction.
- 14) Studies of various schemes to accommodate special energy requirements.

15) Services connected with the preparation of documents for alternate bids or for segregated contracts for phased or fast-track construction.

16) Continuous and/or detailed observation of construction.

17) Design or field observation of falsework, temporary bracing, safety barriers, temporary enclosures or other temporary construction associated with construction means and methods.

18) Design or field observations of shoring and bracing for excavations and buildings, or underpinning of adjacent structures.

- 19) Design or review related to contractor's construction related equipment, e.g., cranes, hoists, etc.
- 20) Design for future expansion.
- 21) Filing application for and obtaining a building permit.
- 22) Review and determination of structural fire resistance requirements

#### End of Structural Engineering Scope

#### Land Planner and Landscape Architecture Scope (Ripley Design)

Provide construction observation for landscape services:

- Attend up to (4) site visits as needed during construction
- Review landscape RFI's
- Review landscape submittals and substitutions
- One site visit to approve plant locations prior to planting
- Punch walk landscape elements and prepare punch list

Provide construction observation for irrigation services:

- · Respond to irrigation RFI's
- Review up to three (3) irrigation submittals or substitutions
- Conduct a total of two (2) irrigation site visits
  - a. One (1) site visit to be conducted during construction
  - b. Final site visit as operational test
  - c. Each site visit to include a site visit report

#### End of Landscape Architect Scope

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#### LEED Management and Consulting (Ambient Energy)

#### Task 1 LEED Consulting CA (Approximately 120 hours)

Contractor LEED Orientation and LEED Toolkit.

 Review LEED Action Plans, Construction Waste Management Plan, and Indoor Air Quality Management Plan from contractor.

- LEED Coordination and Support (credit research, USGBC & GBCI correspondence, and LEED-Online administration).
- Provide reviews for LEED contractor submittals and/or RFIs (up to 40 hrs).
- Three Contractor LEED Coordination Meetings via web conference.
- Up to two reviews of Construction Phase LEED-Online credits documented by team members and submission to GBCI.
- · Final LEED Scorecard and certification coordination

#### Task 2 Fundamental Commissioning (Approximately 130 hours)

· Conduct the commissioning kick-off meeting with owner, general contractor, and key subcontractors to attend and schedule construction commissioning activities.

- Update Cx plan for construction and distribute to the Cx Team members.
- Review and comment on construction checklists completed by the contractor(s).
- Develop and Maintain Master Issues Log to document findings.
- Provide site visits systems to be commissioned with updated Master Issues Log.

• Develop Test Scripts (Functional Performance Tests Procedures) for the systems to be commissioned. Deliver to the contractor for review and comment.

- Review and comment on TAB report, send comments to Owner.
- Direct, verify and witness functional performance testing.
- Develop systems manual for commissioned systems
- Develop the CFR (Current Facility Requirements) & O&M Plan for the project.
- · Complete final commissioning report, and issue for review.
- Pick-up review comments and issue final commissioning report.

• Upload Systems Manual and required Commissioning Documentation to LEED Online for LEEDv4 Fundamental Commissioning

#### Task 3 Enhanced Commissioning (Approximately 45 hours)

• Provide list of specifications needing to be submitted for review.

• Provide reviews for construction submittals and RFIs related to systems being commissioned (up to 40 hrs). This is in addition to the items in Task 1.

Verify systems manual updates and delivery.

• Facilitate and document that an owner personnel training is conducted. Attend and record the owner personnel training with Operations and Maintenance Staff.

Review equipment Warrantees and O&M Manuals.

• Develop systems manual for commissioned systems including Current Facility Requirements, operations & maintenance plan.

 Conduct a HVAC and Plumbing 10 month walk-thru of the project with Owner and O&M Staff. Document outstanding warranty issues in the Master Issues Log for resolution.

· Conduct an Electrical and Lighting 10 month walk-thru of the project with Owner and O&M Staff. Document outstanding warranty issues in the Master Issues Log for resolution.

- Finalize Final Cx Report and Master Issues Log with Addendum Report.
- · Conduct Seasonal Testing, as applicable for the project.
- Develop an Ongoing Cx Plan.

#### Task 4 Building Envelope Commissioning (Approximately 130 hours)

- · Provide list of specifications needing to be submitted for review.
- Review envelope component submittals.

• Perform construction site visits to observe and document the installation of the envelope components.

- · Review envelope component warrantees.
- Develop Functional Performance Tests Procedures for the envelope components.

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- AAMA 501.2 Hose nozzle water spray test.
- Include envelope components in the systems manual for commissioned systems.
- Include envelope components in the CFR (Current Facility Requirements) & O&M Plan for the project.
- Pick-up review comments and issue final commissioning report.
- Upload LEEDv4 Building Envelope Commissioning online documents.

#### Post Occupancy (Hours in tasks above)

- · Conduct a Building Envelope 10 month walk-thru of the project with Owner and O&M Staff.
- Finalize Final Cx Report and Master Issues Log with Addendum Report.

#### Systems that will be Commissioned

Ambient Energy will apply a sampling rate to repetitive unitary systems such as VAV boxes and fan coil units based on guidance from ASHRAE Standard 202-2013 Commissioning Process for Buildings and Systems. The following systems will be commissioned as part of this project.

- HVAC systems
- · Domestic hot water systems
- Lighting and lighting control systems
- Energy management control systems or Building Automation System (BAS)
- Building Envelope

#### **Schedule**

Construction completion date is anticipated to be September/October, 2024. Our scope of work is anticipated to be completed six months post-construction. If the Project Schedule is extended more than 12 months past the estimated project completion date the services rendered shall be renegotiated.

#### End of Ambient Energy Scope

#### Acoustical Engineering Scope (K2)

Construction Administration services, limited to review and response to the following:

- Relevant contractor submittals,
- Contractor RFI's
- Up to 4 hours related to specific in-field questions and meetings related to acoustics.

#### Exclusions

- Site inspections during construction
- Acoustical Engineering/Design During Construction

End of Acoustical Engineering Scope of Work

#### FEES

			Construction	Administratio	n	
Discipline	Rate	Weeks	Hours/Week	Total Hours	F	ee
VFLA Architects + Interiors						
Principal	\$175	64	1.00	64	\$11,200	
Project Manager	\$115	64	8.00	512	\$58,880	
Project Manager LEED Coord.	\$115	64	2.00	128	\$14,720	
Administration	\$50	64	1.00	64	\$3,200	
Subtotal				704	\$88,000	HOURIVIE
Interior Designer - Project Manager	\$95	48	6.00	288	\$27,360	
Interior Designer II	\$80	48	2.00	96	\$7,680	
Subtotal			2.00		\$35,040	Hourly NTE
Popord Drawings		·	•		#2 E00	Liaush NTE
Sub Total Architecture & Interiors				002	\$3,500	Hourly NTE
Sub Total Architecture & Interiors			1	332	\$120,540	HOUTINTE
Sub Constultants	Rate	Weeks	Hours/Week	Total Hours	Fee	
Structural: KL&A						
Project Manager	\$165	32	1.25	40	\$6,600	
Design Engineer	\$120	32	2.50	80	\$9,600	
Structural Sub Total				120	\$16,200	Hourly NTE
LEED Managing: Ambient Energy/Mead & Hunt						
Task1			L	10	40.500	
Principal	\$250	Hours a	are per task	10	\$2,500	
Senior PM Sustainability Consultant III	\$190	Hours a	are per task	30	\$5,700	
Sustainability Consultant III	\$140	Hours	are per task	40	\$0,000	
Task 2	\$105	Houisa	are per task	40	\$4,200	
Commissioning Leader	\$200	Hours a	are per task	10	\$2,000	
Senior Commissiona Agent	\$175	Hours a	are per task	50	\$8,750	
Commissioning Agent II	\$135	Hours a	are per task	40	\$5,400	
Commissioning Agent I	\$110	Hours a	are per task	35	\$3,850	
Task 3						
Commissioning Leader	\$200	Hours a	are per task	5	\$1,000	
Senior Commissiong Agent	\$175	Hours a	are per task	10	\$1,750	
Commissioning Agent II	\$135	Hours are per task		20	\$2,700	
Commissioning Agent I	\$110	Hours a	are per task	14	\$1,540	
Task 4				10	<b>*</b> 2.400	
Commissioning Leader	\$200	Hours a	are per task	12	\$2,400	
Commissioning Agent	\$1/5 ¢125	Hours a	are per task	30	\$5,250	
Commissioning Agent II	\$135	Hours are per task		50	\$0,750	
Commissioning Agent i	\$110	Hours a	are per task	51	\$5,010	Hourly NITE
				447	\$00,000	HOUTINIE
Landscape and EntitIment: Ripley Design						
Principal	\$160	32	1.50	48	\$7.680	
Designer	\$80	29	1.00	29	\$2,320	
Landscape Sub Total				77	\$10,000	Hourly NTE
Acoustics	Rate	Weeks	Hours/Week	Total Hours	Fee	
Senior Consultant	\$138	4	5.20	20.80	\$2,870	
Acoustics Sub Total					\$2,870	Hourly NTE
Reimbursables					\$2 305	T&M
Neimbul advica					\$ <b>Z</b> ,505	1 OUM
Grand Total					\$222,915	Hourly NTE

NTE = Not to Exceed

T&M = Time and Materials

Chart in Excel - See server to edit

#### VFLA Hourly Rates

•	Principal Architect	\$175.00
•	Associate Principal	\$150.00
•	Principal Interior Designer	\$145.00
•	Associate Principal Interior Design	\$130.00
•	Senior Project Architect	\$125.00
•	Project Architect	\$115.00
•	Project Manager	\$105.00
•	Designer III	\$ 95.00
•	Designer II	\$ 90.00
•	Designer I	\$ 80.00
•	Director of Interior Designer	\$100.00
•	Senior Interior Designer	\$ 95.00
•	Interior Designer II	\$ 90.00
•	Interior Designer I	\$ 80.00
•	Intern	\$ 60.00
•	Administrative	\$ 50.00

#### Hourly Rates for Structural Engineering

- Executive Principal \$220
- Project Principal \$195
- Senior Project Manager \$175
- Project Manager \$165
- Senior Project Engineer \$165
- Project Engineer \$145
- Senior Structural Designer \$130
- Structural Designer \$120
- BIM Technician \$105
- Administrative \$100
- Intern \$90

#### Hourly Rates for LEED/Ambient Energy/Mead and Hunt

•	Senior Client / Project Manager	\$255.00
٠	Building Performance Team Leader / Senior Project Manager	\$225.00
٠	Commissioning Team Leader / Senior Project Manager	\$190.00
٠	Senior Commissioning Agent	\$175.00
•	Commissioning Agent IV / Project Manager	\$150.00
•	Commissioning Agent III / Project Manager	\$140.00
•	Commissioning Agent II	\$130.00
•	Commissioning Agent I	\$110.00
•	Senior Building Performance Engineer	\$175.00
٠	Building Performance Engineer III / Project Manager	\$150.00
٠	Building Performance Engineer II	\$135.00
٠	Building Performance Engineer I	\$105.00
٠	Senior Sustainability Project Manager	\$150.00
٠	Sustainability Consultant / Planner III / Project Manager	\$140.00
٠	Sustainability Consultant / Planner II	\$125.00
٠	Sustainability Consultant / Planner I	\$105.00
٠	Project Assistant	\$100.00
٠	Administrative Assistant	\$90.00
•	Intern	\$80.00

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#### Hourly Rates for Landscape and Entitlement

Princip	oal IV	\$ 170.00
<ul> <li>Princip</li> </ul>	oal III	\$ 160.00
<ul> <li>Princip</li> </ul>	oal II	\$ 150.00
<ul> <li>Princip</li> </ul>	oal I	\$ 140.00
<ul> <li>Senior</li> </ul>	Project Manager IV	\$ 135.00
<ul> <li>Senior</li> </ul>	Project Manager III	\$ 130.00
<ul> <li>Senior</li> </ul>	Project Manager II	\$ 125.00
<ul> <li>Senior</li> </ul>	Project Manager I	\$ 120.00
<ul> <li>Projec</li> </ul>	t Manager IV	\$ 115.00
<ul> <li>Projec</li> </ul>	t Manager III	\$ 110.00
<ul> <li>Projec</li> </ul>	t Manager II	\$ 105.00
<ul> <li>Projec</li> </ul>	t Manager I	\$ 100.00
<ul> <li>Projec</li> </ul>	t Designer IV	\$ 90.00
<ul> <li>Projec</li> </ul>	t Designer III	\$ 85.00
<ul> <li>Projec</li> </ul>	t Designer II	\$ 80.00
<ul> <li>Projec</li> </ul>	t Designer I	\$ 75.00
<ul> <li>Intern</li> </ul>		\$ 55.00
<ul> <li>Admin</li> </ul>	istrative	\$ 50.00
Hourly Rates	for Acoustics	

- Principal Consultant \$185
- Senior Consultant \$154
- Consultant \$138
- Senior Designer \$111
- Designer \$100

#### **Reimbursable Expenses**

In addition to our basic fee we will invoice for reimbursable expenses at cost. VFLA has provided a fee in the fees section. Reimbursable expenses include but are not necessarily limited to expense of reproductions (including bid documents) and mylar/bond/color plots; postage and handling of drawings, specifications and other documents; models, photographs, and marketing materials; expense of transportation and out of town travel; Long-distance communications; and fees paid for securing approval of authorities having jurisdiction over project.

#### Additional Services

While we have made a conscientious effort to make the Scope of Service as complete as possible, changing or unforeseen conditions may necessitate additional work. This work will not be undertaken until we have your written authorization to proceed. Additional services requested by the Client that are not in the Scope of Services will be provided on an hourly basis using VFLA current billing rates. Billing rates may be adjusted annually. Additional services of consultants shall be billed at cost.

Respectfully,

Chris Aronson, AIA, NCARB, LEED AP Principal Architect Vaught Frye Larson Aronson Architects, Inc.

### SWANSON 🧲 RINK

April 25, 2023

Jared Bass, PE Dibble Corp 2696 S. Colorado Blvd., Suite 330 Denver, CO 80222

Reference:Northern Colorado Regional Airport (FNL)<br/>New Terminal Building<br/>Proposal for Construction Administration Services

Dear Jared:

We appreciate this opportunity to provide a proposal for engineering services for the above-referenced project.

#### **SCOPE OF PROJECT**

This project consists of a new single story, 19,306 square foot commercial passenger terminal for the FNL airport in Loveland, Colorado. The terminal will accommodate ground-loaded gates, TSA functions, ticketing, passenger hold area, baggage screening and claim, and services for one-to-one airline operators. The construction type is to be Type II-B (noncombustible) construction and will be fully fire-sprinkled. This project will also include various site element improvements including parking lot lighting and electric vehicle charging infrastructure. The goal of the project is also to achieve LEED Silver accreditation.

#### **SCOPE OF SERVICES**

Our scope of services for this project will include Mechanical, Plumbing, Electrical, Fire Alarm, Fire Protection, Telecommunications/Security, and Baggage Handling engineering services as detailed below.

- 1. Support of the LEED consultant and Commissioning Agent limited to review of the existing design and design intent for the completion of required MEP LEED activities and templates. Population of LEED templates, creation and execution of system tests, and resolution of commissioning issues will be by others.
- 2. Construction Phase Services
  - a. Review of Shop Drawings and submittals.
  - b. Response to contractor/owner questions and RFIs.
  - c. Preparation of Record Drawings based upon field markups of design drawings.

Jared Bass, PE April 25, 2023 Page 2

- d. Site observations consisting of:
  - i) One interim site observation, one initial punch, and one final punch walk for each of the following trades, combined as noted:
    - Fire Alarm
    - Telecom and Security
    - Baggage Handling
  - ii) (10) interim site observations, one initial punch, and one final punch walk for of the following trades, combined as noted:
    - Mechanical, Plumbing, and Fire Protection
    - Electrical
- e. Attendance at regularly scheduled Construction Phase meetings will be by Swanson Rink project management to facilitate coordination of RFIs, submittals and site observations. These meetings are assumed to be conducted virtually.

#### ASSUMPTIONS AND CLARIFICATIONS

- 1. Increased attendance at regularly scheduled meetings can be provided at cost.
- 2. Swanson Rink has provided a design for a minimum code-complaint system with sustainable features within our technical areas of expertise in pursuit of a LEED Silver rating. Swanson Rink does not allude to, imply, or guarantee a rating or certification level for the project.
- 3. Architect's Special Instructions (ASIs) and Bulletins will be issued on a limited basis to summarize any changes as a result of the RFI and Submittal processes. ASIs or Bulletins due to Owner initiated redesign will be provided as an Additional Services.
- 4. The contractor will provide reports for start-up, commissioning, and/or testing of the BHS for engineer's review. A separate trip to observe these activities is not included but may be observed should their schedule coincide with the initial or final punch walks described above.
- 5. This fee proposal is based on the Scope of Services being completed by September 30, 2024 as based on the CMaR's construction schedule dated 1/17/2023. If the Scope of Services is not completed by this date through no fault of Swanson Rink, then the fee will be equitably adjusted.

#### **EXCLUSIONS**

- 1. Any work other than what is defined in the Scope of Services.
- 2. Operation performance testing and final commissioning of the CCTV and access control systems will be by the owner or owner's preferred vendor.
- 3. Owner's network, including switch(es), servers, etc., shall be configured by the owner or owner's preferred vendor.
- 4. Operational performance testing of the paging system will be by others.
- 5. Cost Estimates are not provided as part of our Scope of Services.

Jared Bass, PE April 25, 2023 Page 3

#### FEE BASIS

The fee for the proposed engineering services is *Two Hundred Thousand Seven Hundred Dollars and* 00/100 (\$200,700.00), on a not to exceed "Time-and-Charges" basis in accordance with the attached Schedule of Hourly Charges dated April 2023. Reimbursable expenses <u>are not</u> included in this fee and estimated to be an additional *Three Thousand Dollars and 00/100* (\$3,000.00).

Hours included in this fee are approximately:

Requests for Information	350hrs
Submittal Reviews & Response	353hrs
Site Observations & Punches	224hrs
Commissioning Agent Support	40hrs
LEED Consultant Support	50hrs
Record and Close-out Documents	92hrs
Project Management & Admin. Support	140hrs
Total Effort	1,249hrs

Reimbursable expenses incurred by Swanson Rink in the interest of the project include transportation, subsistence and lodging when traveling in connection with the project, printing and reproduction expenses, delivery fees and postage will be billed at cost.

We look forward to providing our services for this project. If there are any questions, please call.

Sincerely, SWANSON RINK, INC.

Sent Via Email

Dustin Mahoney, PE Project Manger

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Class	Rate	Genera	al Suppport		RFIS	Sub	mittals	Sit	e Visits	Comr	nissioning	LEED	Support	ŏ	se-out	TOT	ALS
		Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees	Hours	Fees
Mech Senior Engineer	\$170.00			44	\$7,480.00	44	\$7,480.00	42	\$7,140.00	15	\$2,550.00	2	\$850.00	3.5	\$595.00	153.5	\$26,095.00
Mech Engineer 2	\$140.00			22	\$3,080.00	20	\$2,800.00			5	\$700.00	15	\$2,100.00			62	\$8,680.00
Wech CAD	\$130.00													3.5	\$455.00	3.5	\$455.00
Elect Engineering Manager	\$185.00			10	\$1,850.00	10	\$1,850.00	42	\$7,770.00	m	\$555.00	m	\$555.00	2	\$370.00	70	\$12,950.00
Elect Engineer 3	\$145.00			70	\$10,150.00	68	\$9,860.00	30	\$4,350.00	12	\$1,740.00	12	\$1,740.00	∞	\$1,160.00	200	\$29,000.00
Elect CAD	\$130.00													10	\$1,300.00	10	\$1,300.00
Jumbing Design Principal/Senior VP	\$225.00							42	\$9,450.00					4	\$900.00	46	\$10,350.00
Jumbing Senior Engineer	\$170.00			56	\$9,520.00	53	\$9,010.00			2	\$850.00	15	\$2,550.00	0	\$0.00	129	\$21,930.00
olumbing CAD	\$130.00													∞	\$1,040.00	Ø	\$1,040.00
<sup>-</sup> PA Design Principal/Senior VP	\$225.00			20	\$4,500.00	22	\$4,950.00							2.5	\$562.50	44.5	\$10,012.50
-PA Senior Designer	\$155.00			20	\$3,100.00	22	\$3,410.00	12	\$1,860.00					3.5	\$542.50	57.5	\$8,912.50
-PA CAD	\$130.00													9	\$780.00	9	\$780.00
TELECOM Senior Designer	\$150.00			∞	\$1,200.00	∞	\$1,200.00	9	\$900.00							22	\$3,300.00
TELECOM Project Designer	\$145.00			50	\$7,250.00	51	\$7,395.00	12	\$1,740.00					m	\$435.00	116	\$16,820.00
TELECOM CAD	\$130.00													ŝ	\$390.00	n	\$390.00
3HS Project Engineer	\$160.00			33	\$5,280.00	35	\$5,600.00	18	\$2,880.00					7.5	\$1,200.00	93.5	\$14,960.00
3HS CAD	\$130.00													7.5	\$975.00	7.5	\$975.00
Project Manager 3	\$165.00	140	\$23,017.50													140	\$23,017.50
Project Coordinator	\$120.00			17	\$2,040.00	20	\$2,400.00	20	\$2,400.00							57	\$6,840.00
31 M Manager	\$145.00													20	\$2,900.00	20	\$2,900.00
		140	\$23.017.50	350	\$55.450.00	353	\$55.955.00	224	\$38.490.00	40	\$6.395.00	50	\$7.795.00	62	\$13.605.00	1.249.00	\$200.700.00
																	(Rounded)
																vnancac	έα πηη πή
															·	otal Fee	\$203.700.00



April 2023

### SCHEDULE OF HOURLY CHARGES

Where the basis of payment for professional services is hourly charges plus expenses, compensation shall include:

Compensation of time for Principals and other personnel devoted directly to the project on the basis of direct personnel expenses plus general overhead plus a profit factor. The following schedule sets forth current billing rates for various classifications of personnel. These rates are subject to adjustment from time to time to reflect changes in salary costs.

PERSONNEL CATEGORIES	HOURLY RATES
Senior Project Executive	\$225.00
Market Segment Director	\$215.00
Market Segment Manager	\$190.00
Engineering Manager/Design Manager	\$190.00
Technical Lead	\$180.00
Senior Engineer	\$170.00
Project Engineer	\$160.00
Engineer 3	\$145.00
Engineer 2	\$140.00
Engineer I	\$135.00
Senior Project Manager	\$180.00
Project Manager 3	\$165.00
Project Manager 2	\$150.00
Project Manager 1	\$135.00
Project Coordinator	\$120.00
Senior Field Project Manager	\$190.00
Field Project Manager 2	\$185.00
Field Project Manager 1	\$165.00
Senior Designer	\$155.00
Project Designer	\$150.00
Designer 3	\$145.00
Designer 2	\$140.00
Designer 1	\$135.00
BIM Manager	\$145.00
BIM Specialist 2	\$130.00
BIM Specialist 1	\$115.00



1901 Sharp Point Dr, Ste. C Fort Collins, Colorado 80525 P (970) 484-0359 Terracon.com

April 27, 2023

Dibble & Associates Consulting Engineers, Inc 2696 South Colorado Boulevard, Suite 585 Denver, CO 80222

Attn: Mr. Jared Bass, P.E. E: jared.bass@dibblecorp.com

Re: Proposal for Materials Testing & Special Inspection Services
 FNL Airport Terminal
 4825 Earhart Road
 Loveland, Colorado 80538
 Terracon Proposal No. P20231026 – Revision 2

Dear Mr. Bass:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal to provide construction materials testing and special inspection services for the FNL Airport Terminal project. Our proposal includes an outline of the project information, our proposed scope of services, estimated quantities, unit rates, and a total estimated fee for our services.

#### **1.0 Project Information**

Our understanding of the required construction materials testing and special inspection services for this project is based upon information provided by your firm, our experience with other projects of this type, and the following information:

- SDP Round 3 Civil Plans by VFLA, dated 3/3/2023;
- 60% Architectural Plans by VFLA dated 1/13/2023;
- 60% Structural Documents by Dibble, VFLA, and KL&A, dated 1/13/2023;
- Construction schedule by Hensel Phelps, dated 1/17/2023;
- 60% Project Manual by Dibble and VFLA, dated 1/13/2023;
- Geotechnical Engineering Report by Terracon (Project No. 20205076), dated 2/25/2021;
- Geotechnical Recommendations for Lime Treated Subgrade Report by Terracon (Project No. 20205076), dated 4/5/2022;
- Geotechnical Engineering Services Remolded Swells Report by Terracon (Project No. 20205076), dated 5/19/2022; and
- Scope of Work meetings on 3/30/2023 and 4/27/2023.

Pertinent project information is summarized below:

Item	Description
Location	North of the existing Northern Colorado Regional Airport terminal located at 4825 Earhart Road in Loveland, Colorado.

Explore with us

#### **Proposal for Materials Testing & Special Inspection Services**

FNL Airport Terminal Loveland, Colorado April 27, 2023 Terracon Proposal No. P20231026 – Revision 2



Item	Description
Project Description	We understand the project will consist of a single-story, 19,306 square foot building constructed on drilled piers with slab-on-grade, and CFS framing. The project will also include over-excavation, asphalt drive lanes, new utilities, and concrete sidewalk.
Geotechnical Investigation	The Geotechnical Engineering Report was prepared by Terracon, dated 2/25/2021 (Project No. 20205076) as well as additional Geotechnical Recommendations regarding Lime Treated Subgrade, dated 4/5/2022 (Project No. 20205076), and Remolded Swells, dated 5/19/2023 (Project No. 20205076). Highly expansive clays and bedrock are present on this site, and soil movement/heave are a geotechnical concern.

### 2.0 Scope of Services

Terracon proposes to provide materials testing and special inspection services as summarized below:

Item	Description			
Over- excavation & Backfill	During over-excavation operations, observations of the excavated material stockpiles and the condition of soils found at the bottom of the excavations will be performed. We will observe moisture conditioning and backfill operations, and perform moisture/density tests on the backfill materials.			
Observation	recommends over-excavation to a depth of at least 8 feet below the bottom of floor slab elevation.			
Earthwork	Terracon will obtain samples for laboratory tests, perform in-place field density testing and perform periodic observations for underground utility trench backfill, foundation backfill, slab subgrade, flatwork subgrade, and pavement subgrade preparation.			
	Terracon will observe construction of drilled piers. Terracon will perform the following:			
Drilled Pier Foundations	<ul> <li>Observe the drilling of the piers to verify conformance with the specifications; such as pier diameter and depth, penetration in to bedrock if required, reinforcing steel, plumbness, and condition of the bottom and sidewall. Other pertinent data can be detailed during the pre-construction meeting, if requested;</li> <li>Document installation techniques (e.g. required casing, shear rings,</li> </ul>			
	<ul> <li>ground water, cleaning and concrete placement); and</li> <li>Notify the contractor's representative of anomalies, or deviations from the specifications.</li> </ul>			

Proposal for Materials Testing & Special Inspection Services FNL Airport Terminal 
Loveland, Colorado April 27, 2023 Terracon Proposal No. P20231026 - Revision 2



Item	Description							
Reinforcing Steel	<ul> <li>Prior to concrete placement reinforcing steel for drilled piers, grade beams, structural floors or slabs-on-grade and other structural elements will be observed by Terracon. Our observations will include the following:         <ul> <li>Reinforcing steel size, grade, spacing, cover, position, splices, condition, and supports; and</li> <li>Installation of embeds (if required).</li> </ul> </li> </ul>							
Concrete	<ul> <li>During concrete placements, observation, sampling and testing will be performed by Terracon for the concrete used for drilled piers, grade beams, structural floors or slab-on-grade construction, and other elements. The concrete will be sampled and tested for slump, air content, unit weight, and temperature at the time of placement. Cylinders will be made and initially cured on site. A technician will return to the site within 2 days to bring the cylinders to our laboratory for final curing and compressive strength testing. Testing will be performed in general accordance with project plans and specifications.</li> <li>Cast-in-place concrete: Cast 1 set of 5 (4-inch by 8-inch) cylinders for each 100 cubic yards or fraction thereof</li> <li>Piers: Cast 1 set of 5 (4-inch by 8-inch) cylinders for every pier, but not</li> </ul>							
	more than one set per truck							
Post-Installed Anchors	Terracon will observe and document the post installation of bolts, rebar, threaded rod, and other anchorage systems including observations of materials, hole depth and diameter, cleaning, epoxy preparation, and embedment depth in accordance with contract drawings and the manufacturer's specifications.							
Structural Steel	Terracon will perform observations as required for field welded connections, high-strength bolting, and decking. Terracon has assumed that the steel fabrication will be performed by an "approved" fabricator. Fabrication shop observations can be provided if requested. Fabrication shop observations are considered an additional scope of service and will be invoiced on a time and materials basis if needed.							
	We understand that there are complete joint penetration (CJP) welds on this project-that will require non-destructive testing using ultrasonic testing (UT) and/or magnetic particle testing (MT).							
	Terracon will observe the cold form steel framing according to the requirements of the specifications:							
Cold Formed Steel Framing	<ul> <li>Documentation of certified welders for joint configuration and welding process;</li> <li>Member size, location and spacing;</li> <li>Bracing and stiffeners;</li> <li>Joint details at connections; and</li> <li>Screwed, bolted, welded and power-actuated fasteners utilized.</li> </ul>							

#### **Proposal for Materials Testing & Special Inspection Services**

FNL Airport Terminal ■ Loveland, Colorado April 27, 2023 ■ Terracon Proposal No. P20231026 – Revision 2



Item	Description
Asphalt Concrete Pavement	Relative field density-compaction testing by nuclear methods will be performed during asphalt concrete paving operations. The density-compaction of the asphalt concrete will be evaluated utilizing information from the paving contractor's asphalt mix design. Asphalt samples will be obtained during asphalt paving and tested for maximum theoretical specific gravity, asphalt content, gradation, and voids.
Project	A project manager will be assigned to the project to review the daily activity and assist in scheduling the work. Field and laboratory tests will be reviewed prior to final submittal. The project manager will be responsible for the project budget, communicating with the contractor regarding schedule, deviations, and documenting the resolution of outstanding deviations.
management	To help create a good working relationship with the contractor and for the contractor to better understand our scope of work for the project, we request that Terracon be invited to preconstruction meetings prior to each phase of construction.

#### **Commitment to Timely Report Turnaround:**

We understand the importance of report turnaround to our clients and we are committed to delivering test results on a timely basis as well as the following reporting standards:

- Failing tests or non-conformance items will be communicated to the designated parties prior to leaving the site and handwritten draft reports are available at the end of each day.
- Final reports with non-conformances (Deviation Reports) will be provided within 24 hours of testing.
- Final reports without non-conformances will be provided within five business days.
- Final laboratory test reports will be provided within two days of test completion.

#### **Terracon Field Representative:**

In addition to the above services, our field personnel will provide the following services during their visit:

- Check in with the project general superintendent upon arrival on-site.
- Confirm that current approved construction documents are available during our visit.
- Notify the general contractor of our field observations and test results prior to leaving the site.
- Submit a draft report to the Terracon project manager for review.
- Our field personnel have the right to decline work if they believe the conditions are not safe.

#### Scheduling of Services:

We understand that the client may not be involved with scheduling our services; this is typically the responsibility of the general contractor. We request that the following information be passed on to whom will be responsible for scheduling our services.

- Scheduling testing services must be requested no later than a full business day (24 hours) in advance.
- For structural steel and other special inspections, we request 48 hours notice.

#### **Proposal for Materials Testing & Special Inspection Services**

Fierracon

FNL Airport Terminal Loveland, Colorado April 27, 2023 Terracon Proposal No. P20231026 – Revision 2

- Scheduling is performed through our dispatcher by calling (970) 658-4405; or emailing <u>nocoscheduling@terracon.com</u>.
- Cancellation of services should be done prior to a Terracon representative mobilizing to the project. Failure to do so will result in a cancellation fee.
- Terracon will not be responsible for tests that are not performed due to a failure to schedule our services on the project.
- Testing and observations will only determine compliance with project specifications at the test locations, at the time our services are performed.

#### 3.0 Compensation

Based on the project information available for our review, estimated budget to perform the proposed scope of services is \$133,404.80. A summary of our unit rates, estimated quantities, and the resulting costs is included on the attached Fee Estimate. Fees for services provided will be based on the unit rates shown in that exhibit. Please note that this is only a budget estimate and any additional out of scope items will be performed in accordance with our current fee schedule.

Many factors, including those out of our control, such as weather and the contractor's schedule including overtime and weekend work, and the need for re-testing will dictate the final fee for our services. We will not exceed our budget without first notifying you and providing a summary of work performed to date and remaining work. We will track the costs of re-testing, stand-by time, and cancellations separately.

For purposes of our proposal, overtime is defined as all hours in excess of 8 hours per day / 40 hours per week and all hours worked on Saturdays & Sundays, Night hours (between 6:00 PM and 7:00 AM), and Terracon recognized Holidays (New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving & Christmas Day). Overtime rates will be 1.5 times the hourly rate quoted. All charges are portal to portal. Minimum of 3 hours will be charged for each site visit.

#### 4.0 Assumptions

- We have been informed that contractors on the site will work a schedule of four 10-hour days per week;
- An out of scope charge at the applicable unit rate will be applied for all stand-by time and/or time spent on activities which are not cancelled with prior notice;
- Staff time, laboratory testing and extra trips required for re-testing and re-inspections will be denoted on the monthly invoices as such and be considered out-of-scope or additional items not included in the above estimated budget.

**Proposal for Materials Testing & Special Inspection Services** FNL Airport Terminal Loveland, Colorado April 27, 2023 Terracon Proposal No. P20231026 – Revision 2



### 5.0 Authorization

This proposal may be accepted by fully executing and returning the attached Agreement for Services. Please be aware that we will be unable to distribute field and laboratory reports until a signed contract is received. This proposal is valid only if authorized within 45 days from the proposal date.

We appreciate the opportunity to provide this proposal and look forward to working with you. Please give us a call if you have any questions or comments regarding this proposal.

Sincerely, Terracon Consultants, Inc.

Sierra James Project Manager

 $\sim$ 

Todd A. Turney Department Manager

Copies to: Addressee (via e-mail)

Enclosures: Fee Estimate Agreement for Services



### FEE ESTIMATE

**Construction Materials Services** 

FNL Airport Terminal Terracon Proposal No. P20231026 - Revision 2

Service	Rate	Quantity	Units	Trips/Events	Total Quantity	Cost
Earthwork / Field Density Testing						
Engineering Technician	\$95.00	3	hours/trip	55	165	\$15,675.00
Standard Proctor Test	\$200.00	3	each		3	\$600.00
Modified Proctor Test	\$240.00	3	each		3	\$720.00
Sieve Analysis	\$160.00	6	each		6	\$960.00
Atterberg Limits	\$120.00	6	each		6	\$720.00
Mileage (Federal Mileage Rate, \$0.655)	\$0.66	20	miles/trip	55	1100	\$720.50
Report Fee	\$40.00	67	each		67	\$2,680.00
	•			•	Subtotal	\$22,075.50
Foundation European						
Geotechnical Engineer	\$165.00	3	hours/trip	3	9	\$1,485.00
Mileage (Federal Mileage Rate, \$0.655)	\$0.66	20	miles/trip	3	60	\$39.30
Report Fee	\$40.00	3	each		3	\$120.00
					Subtotal	\$1,644.30
Drilled Pier Observation						
Engineering Technician - Drilled Piers	\$95.00	11	hours/trip	16	176	\$16,720.00
Engineering Technician - cylinder pick-ups	\$95.00	2	hours/trip	16	32	\$3,040.00
Concrete Cylinders - Compressive Strength	\$30.00	5	cylinders/set	39	195	\$5,850.00
Mileage (Federal Mileage Rate, \$0.655)	\$0.66	20	miles/trip	16	320	\$209.60
Report Fee	\$40.00	11	each		11	\$440.00
	• •				Subtotal	\$26,259.60
Deinferning Check / Deck installed Anabana Observations						
Reinforcing Steel / Post-installed Anchors Observations				10		10,100,00
Engineering Technician	\$95.00	3	hours/trip	12	36	\$3,420.00
Mileage (Federal Mileage Rate, \$0.655)	\$0.66	20	miles/trip	12	240	\$157.20
Report Fee	\$40.00	12	each			\$480.00
					Subtotal	\$4,057.20
Concrete Testing						
Engineering Technician	\$95.00	4	hours/trip	25	100	\$9,500.00
Engineering Technician - cylinder pick-ups	\$95.00	3	hours/trip	25	75	\$7,125.00
Concrete Cylinders - Compressive Strength	\$30.00	5	cylinders/set	25	125	\$3,750.00
Mileage (Federal Mileage Rate, \$0.655)	\$0.66	20	miles/trip	50	1000	\$655.00
Report Fee	\$40.00	25	each		25	\$1,000.00
					Subtotal	\$22,030.00
Structural Steel						
Created Inspector	¢140.00		hours/trin	10	EO	¢7,000,00
Special Inspector	\$140.00	5	hours/trip	10	50	\$7,000.00
Mileage UT (Federal Mileage Date #0.655)	\$140.00	100	miles/trip	2	200	\$1,400.00
Mileage - 01 (Federal Mileage Rate, \$0.655)	\$0.66	200	miles/trip	10	200	\$131.00
Mileage - Special Inspector (Federal Mileage Rate, \$0.655)	\$0.00	200	nines/trip	10	2000	\$1,310.00
Report Fee	\$40.00	12	day	2	12	\$400.00
	\$150.00		uay	2	Subtotal	\$300.00 \$10.621.00
						+,
Asphalt Testing						
Engineering Technician	\$95.00	4	hours/trip	12	48	\$4,560.00
Asphalt Voids (Gyratory Compaction)	\$440.00	1	each	12	12	\$5,280.00
Asphalt Extraction/Gradation	\$355.00	1	each	12	12	\$4,260.00
Maximum Theoretical Density	\$180.00	1	each	12	12	\$2,160.00
Mileage (Federal Mileage Rate, \$0.655)	\$0.66	20	miles/trip	12	240	\$157.20
Report Fee	\$40.00	24	each		24	\$960.00
					Subtotal	\$17,377.20



FEE ESTIMATE

**Construction Materials Services** 

Service

FNL Airport Terminal

Terracon Proposal No. P20231026 - Revision 2

Rate Quantity Units Trips/Events Total Quantity Cost

ect Management / Engineering						
Project Engineer / Department Manager / APR	\$180.00	20	hours		20	\$3,600.00
Project Manager	\$165.00	100	hours		100	\$16,500.00
Project Manager - Virtual Weekly Construction Meetings	\$165.00	1	hours/week	56	56	\$9,240.00
					Subtotal	\$29,340.00

TOTAL \$ 133,404.80



### NORTHERN COLORADO REGIONAL AIRPORT 4900 Earhart Rd • Loveland, Colorado 80538 (970) 962-2850 • FAX (970) 962-2855 • TDD (970) 962-2620

ITEM NUMBER:	4
MEETING DATE:	June 15, 2023
PREPARED BY:	Francis Robbins, Airport Operations & Maintenance Manager

### <u>TITLE</u>

**CDOT** Aeronautics Internship Grant

### **RECOMMENDED AIRPORT COMMISSION ACTION**

Adopt the resolution approving the 2023 Grant agreement with the State of Colorado Division on Aeronautics for the aviation management internship at the Northern Colorado Regional Airport.

### BUDGET IMPACT

Positive: The grant agreement will provide additional financial resources to the Airport

### **SUMMARY**

The grant agreement is for a 12-month internship program. The Airport has benefitted from this program in the past and two of the staff members were previous interns. The grant for the internship program is \$21,840 and pays for up to 50% of the hourly wage for a paid intern employee. The total costs associated with this intern position have been budgeted for.

The Amended and Restated IGA for the Joint Operation of the Airport approved by both City Councils in 2016 allows the Airport Commission the authority to enter into grant agreements to the extent permitted by grantors, so long as such grant agreements:

- i. do not include commitment of Airport revenues and funds for grant matches of more than \$300,000 from appropriated funds included in the approved Airport budget;
- ii. do not involve capital construction projects unless such projects are included in the approved Airport budget; and
- iii. are approved by the City Managers, to the extent the City Managers are authorized by their respective City Councils to do so

### **ATTACHMENTS**

- Resolution # R-06-2023 Approving the 2023 Grant Agreement with the State of Colorado Division of Aeronautics
- CDOT 23-FNL-I01 Internship Grant \$21,840

#### **RESOLUTION # <u>R-06-2023</u>**

#### A RESOLUTION APPROVING THE 2023 GRANT AGREEMENT WITH THE STATE OF COLORADO DIVISION OF AERONAUTICS (CDAG #23-FNL-I01) FOR THE AVIATION MANAGEMENT INTERNSHIP AT THE NORTHERN COLORADO REGIONAL AIRPORT

WHEREAS, the General Assembly of the State of Colorado has declared in Title 43 of the Colorado Revised Statutes, Article 10, 1991 in C.R.S. 43-10-101 ("the Act") that: ". . . there exists a need to promote the safe operation and accessibility of general aviation and intrastate commercial aviation in this state; that improvement of general aviation and intrastate commercial aviation facilities will promote diversified economic development across the state; and that accessibility to airport facilities for residents of this state is crucial in the event of a medical or other type of emergency;" and

WHEREAS, the Act created the Colorado Aeronautical Board ("the Board") to establish policy and procedures for distribution of monies in the Aviation Fund and created the Division of Aeronautics ("the Division") to carry out the directives of the Board, including technical and planning assistance to airports and the administration of the state aviation system grant program. (See C.R.S. §43-10-103, C.R.S. §43-10-105, and C.R.S. §43-10-108.5 of the Act); and

WHEREAS, any eligible entity operating a public-accessible airport in the state may file an application (the "Application") for and be a recipient of a grant to be used solely for aviation purposes. The Division is authorized to assist such airports as request assistance by means of a Resolution passed by the applicant's duly-authorized governing body, which understands that all funds shall be used exclusively for aviation purposes and that it will comply with all grant procedures and requirements as defined in the Division's Program and Procedures Manual ("the Manual") and the Airport Sponsor Assurances for Colorado Discretionary Aviation Grant Funding ("Grant Assurances") attached as "Exhibit C" to the Grant Award Letter ("Grant Agreement"). Such Grant Agreement is attached hereto as "Exhibit A" and incorporated herein; and

WHEREAS, the City of Fort Collins and the City of Loveland ("the Cities") own and operate in the State the Northern Colorado Regional Airport ("the Airport") pursuant to that certain Amended and Restated Intergovernmental Agreement for the Joint Operation of the Fort Collins-Loveland Municipal Airport dated January 22, 2015, as amended ("Airport IGA"); and

WHEREAS, the Cities have applied for grant CDAG #23-FNL-I01 (the "Grant Agreement") from the Division for the purpose of funding the Aviation Management Internship at the Northern Colorado Regional Airport (the "Project"); and

WHEREAS, the Grant Agreement provides to the Airport twenty thousand eight hundred dollars (\$21,840) (the "State Grant"), subject to the Cities providing a fifty percent (50%) local match for the Project in the amount of twenty-one thousand eight hundred forty dollars (\$21,840), for a total Project cost of forty thousand six hundred dollars (\$43,680); and

WHEREAS, a total of twenty-one thousand eight hundred forty dollars (\$21,840) of additional local funding in the Airport Fund will be applied toward this Project, in addition to this State Grant, which additional funding has previously been appropriated and approved by the Northern Colorado Regional Airport Commission and both City Councils through the adoption of the 2023 Airport Budget.

WHEREAS, pursuant to Section 4.J of the Airport IGA, the Commission is authorized to sign grant agreements to the extent permitted by grantors, so long as such grant agreements meet the standards set forth therein, including approval by the City Managers of both Cities to the extent they are authorized by their respective City Councils to do so.

## NOW THEREFORE BE IT RESOLVED BY THE NORTHERN COLORADO REGIONAL AIRPORT COMMISSION AS FOLLOWS:

<u>Section 1.</u> That the Northern Colorado Regional Airport Commission ("the Commission"), pursuant to its authority under the Airport IGA to approve the Grant Agreement, attached hereto as "Exhibit A" and incorporated herein, on behalf of the Cities as the grant applicant, hereby formally requests assistance from the Colorado Aeronautical Board and the Division of Aeronautics in the form of a state aviation system grant. The Commission states that such State Grant shall be used solely for aviation purposes, as determined by the State, and as generally described in the Application.

<u>Section 2.</u> That the Commission, on behalf of the Cities, by approving the Grant Agreement and authorizing the City Managers to sign the Grant Agreement, commits to keep open and accessible for public use all grant-funded facilities, improvements and services for their useful life, as determined by the Division and stated in the Grant Agreement and Grant Assurances.

<u>Section 3.</u> That the Commission, on behalf of the Cities, hereby designates Francis Robbins, Airport Operations Manager, as the Project Director, as described in the Manual, and authorizes the Project Director to act in all matters relating to the work project proposed in the Application on its behalf, and further authorizes the City Managers of the Cities to execute the Grant Agreement with such modifications in form or substance as the City Managers, in consultation with their respective City Attorney's Office, may deem necessary to effectuate the purposes of this Resolution or to protect the interests of the Cities to reflect approval of the City Managers, to the extent that they have been authorized to do so by their respective City Councils.

<u>Section 4.</u> That the Cities have appropriated or will appropriate or otherwise make available in a timely manner their share of all funds that are required to be provided by the Cities under the terms and conditions of the Grant Agreement.

<u>Section 5.</u> That on behalf of the Cities and subject to the foregoing, the Commission hereby accepts all guidelines, procedures, standards, and requirements described in the Manual as applicable to the performance of the grant work and hereby approves the Grant Agreement submitted by the State, including all terms and conditions contained therein.

Section 6. That this Resolution shall be effective as of the date and time of its adoption.

ADOPTED this \_\_\_\_\_ day of June, 2023.

Don Overcash, Chair of the Northern Colorado Regional Airport Commission

ATTEST:

Secretary

APPROVED AS TO FORM:

Senior Assistant City Attorney



### **Colorado Division of Aeronautics** Discretionary Aviation Grant Resolution

#### RESOLUTION

#### WHEREAS:

The General Assembly of the State of Colorado declared in Title 43 of the Colorado Revised Statutes, Article 10, 1991 in CRS §43-10-101 (the Act) "... that there exists a need to promote the safe operations and accessibility of general aviation in this state; that improvements to general aviation transportation facilities will promote diversified economic development across the state; and that accessibility to airport facilities for residents of this state is crucial in the event of a medical or other type of emergency..."

The Act created the Colorado Aeronautical Board ("the Board") to establish policy and procedures for distribution of monies in the Aviation Fund and created the Division of Aeronautics ("the Division") to carry out the directives of the Board, including technical and planning assistance to airports and the administration of the state aviation system grant program. SEE CRS §43-10-103 and C.R.S. §43-10-105 and CRS §43-10-108.5 of the Act.

Any eligible entity operating an FAA-designated public-use airport in the state may file an application for and be recipient of a grant to be used solely for aviation purposes. The Division is authorized to assist such airports and request assistance by means of a Resolution passed by the applicant's duly-authorized governing body, which understands that all funds shall be used exclusively for aviation purposes and that it will comply with all grant procedures, grant assurances and requirements as defined in the Division's Programs and Procedures Manual, ("the Manual") and the Airport Sponsor Assurances for Colorado Discretionary Aviation Grant Funding ("Grant Assurances") attached hereto as **Exhibit B** for the project detailed in the Discretionary Aviation Grant Application ("Application") attached hereto as **Exhibit A** and in conjunction with CDOT's Small Dollar Grant Award Terms and Conditions attached hereto as **Exhibit C**.

#### NOW, THEREFORE, BE IT RESOLVED THAT:

The **Cities of Ft. Collins/Loveland**, as a duly authorized governing body of the grant applicant, hereby formally requests assistance from the Colorado Aeronautical Board and the Division of Aeronautics in the form of a state aviation system grant. The **Cities of Ft. Collins/Loveland** states that such grant shall be used solely for aviation purposes, as determined by the State, and as generally described in the Application.

By signing this Grant Resolution, the applicant commits to keep open and accessible for public use all grant funded facilities, improvements and services for their useful life, as determined by the Division and stated in the Grant Assurances.

#### FURTHER BE IT RESOLVED:

That the **Cities of Ft. Collins/Loveland** hereby designates **Francis Robbins** as the Project Director, as described in the Manual and authorizes the Project Director to act in all matters relating to the work project proposed in the Application, including execution of any amendments.

#### FURTHER:

The **Cities of Ft. Collins/Loveland** has appropriated or will otherwise make available in a timely manner all funds, if any, that are required to be provided by the applicant as shown on the Application.

#### FINALLY:

The **Cities of Ft. Collins/Loveland** hereby accepts all guidelines, procedures, standards, and requirements described in the Manual as applicable to the performance of the grant work and hereby approves this Grant Resloution, including all terms and conditions contained therein.

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

Print Name and Title:

ATTEST	(if needed)
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By:\_\_\_\_\_

Print Name and Title:\_\_\_\_\_

### **EXHIBIT A**



# **Colorado Division of Aeronautics** Discretionary Aviation Grant Application

		API	PLICA	NT INFO	RM	ATION	I		
APPLICANT SPONSOR:				AIRPORT:				Identif	IER:
Cities of Ft. Collin	is/Lovelan	d		Northern	n Col	lorado R	legional	FN	١L
				Airport					
<b>PROJECT DIRECTOR</b>	<b>R:</b> Francis F	Robbin	S		-				
MAILING ADDRESS				EMAIL	frai	francis robbins@cityofloyeland org			
4900 Earhart Roa	ad		1	Address:	ma			veranaior	ъ
Loveland, CO 805	538			PHONE NUMBER:	(97	970) 962-2853			
		GR	ANT N	NAME AN	ND ]	ΓERMS			
						TERMS	5		
23-FNL-I01		Execution Date:			:	Expiration Date:			
					June 30			2025	
			FUND	ING SUN	<b>/M</b>	ARY			
	Funding	Source	e			Fund	ling Amount		
	State Avia	tion Grant:					\$21,840.00		
	h:				\$21,840.0		0		
					\$0.0	0			
Federal Aviation Grant				:			\$0.0	0	
Total Project Funding:							\$43,680.0	0	
		PRO	JECT S	<b>SCHEDU</b>	LE 8	& BUD	GET		
ELEMENT DESCRIPTION	STA	TATE FUNDING LOCAL FU			FUN	NDING FEDERAL FU		NDING	TOTAL
A. 2023 FNL Internshi	<b>p</b> \$21,	840.00	Up to 50.00%	\$21,84	0.00	50.00%	\$0.00	0.00%	\$43,68
<b>FOTALS</b>	840.00		\$21,84	0.00		\$0.00		\$43.68	
### **EXHIBIT B, GRANT ASSURANCES**

### Airport Sponsor Assurances for Colorado Discretionary Aviation Grant Funding

Approved by CAB January 22, 2018

#### I. APPLICABILITY

- a. These assurances shall be complied with by Airport Sponsors in the performance of all projects at airports that receive Colorado Department of Transportation Division of Aeronautics (Division) Colorado Discretionary Aviation Grant (CDAG) funding for projects including but not limited to: master planning, land acquisition, equipment acquisition or capital improvement projects (Project). It is not the intent of these Assurances to expand existing Federal Aviation Administration (FAA) Grant Assurances for airports included in the National Plan of Integrated Airport Systems (NPIAS); as similar assurances already exist for acceptance of FAA funding.
- b. Upon acceptance of this grant agreement these assurances are incorporated in and become a part thereof.

### II. DURATION

a. The terms, conditions and assurances of the grant agreement shall remain in full force and effect throughout the useful life of the Project as defined in Table 1 (Useful Life), or if the airport for which the Project is funded ceases to function as a public airport, for twenty (20) years from the date of Project completion, whichever period is greater. However, there shall be no limit on the duration of the assurances with respect to real property acquired with CDAG Project funds.

#### III. COMPLIANCE

- a. Should an Airport Sponsor be notified to be in non-compliance with any terms of this agreement, they may become ineligible for future Division funding until such non-compliance is cured.
- b. If any Project is not used for aviation purposes during its Useful Life, or if the airport for which the Project is funded ceases to function as a public airport, for twenty (20) years from the date of Project completion or at any time during the estimated useful life of the Project as defined in Table 1, whichever period is greater, the Airport Sponsor may be liable for repayment to the Division of any or all funds contributed by the Division under this agreement. If the airport at which the Project is constructed is abandoned for any reason, the Division may in its discretion discharge the Airport Sponsor from any repayment obligation upon written request by the Airport Sponsor.

#### IV. AIRPORT SPONSOR GRANT ASSURANCES

- 1. **Compatible Land Use.** Compatible land use and planning in and around airports benefits the state aviation system by providing opportunities for safe airport development, preservation of airport and aircraft operations, protection of airport approaches, reduced potential for litigation and compliance with appropriate airport design standards. The airport will take appropriate action, to the extent reasonable, to restrict the use of land adjacent to, in the immediate vicinity of, or on the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft.
- 2. **On-Airport Hazard Removal and Mitigation**. The airport will take appropriate action to protect aircraft operations to/from the airport and ensure paths are adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.
- 3. **Safe, Efficient Use, and Preservation of Navigable Airspace.** The airport shall comply with 14 CFR Part 77 for all future airport development and anytime an existing airport development is altered.
- 4. **Operation and Maintenance.** In regards to Projects that receive Division funding, the airport sponsor certifies that it has the financial or other resources that may be necessary for the preventive maintenance, maintenance, repair and operation of such projects during their Useful Life.

The airport and all facilities which are necessary to serve the aeronautical users of the airport shall be operated at all times in a safe and serviceable condition. The airport will also have in effect arrangements for:

- a. Operating the airport's aeronautical facilities whenever required;
- b. Promptly marking and lighting hazards resulting from airport conditions, including temporary conditions; and
- c. Promptly notifying airmen of any condition affecting aeronautical use of the airport.
- 5. Airport Revenues. All revenues generated by the airport will be expended by it for the capital or operating costs of the airport, the local airport system, or other local facilities owned or operated by the owner or operator of the airport for aviation purposes.
- 6. Airport Layout Plan (ALP). Once accomplished and as otherwise may be required to develop, it will keep up-to-date a minimum of an ALP of the airport showing (1) boundaries of the airport and all proposed additions thereto, together with the boundaries of all offsite areas owned or controlled by the sponsor for airport purposes and proposed additions thereto; (2) the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and roads), including all proposed extensions and reductions of existing airport facilities; and (3) the location of all existing improvements thereon.
- 7. Use for Aviation Purposes. The Airport Sponsor shall not use runways, taxiways, aprons, seeded areas or any other appurtenance or facility constructed, repaired, renovated or maintained under the terms of this Agreement for activities other than aviation purposes unless otherwise exempted by the Division.

Project Type	Useful Life
a. All construction projects (unless listed separately below)	20 years
<b>b.</b> All equipment and vehicles	10 years
c. Pavement rehabilitation (not reconstruction, which is 20 years)	10 years
<b>d.</b> Asphalt seal coat, slurry seal, and joint sealing	3 years
e. Concrete joint replacement	7 years
<b>f.</b> Airfield lighting and signage	10 years
g. Navigational Aids	15 years
h. Buildings	40 years
i. Land	Unlimited

#### TABLE 1

### MODEL SMALL DOLLAR GRANT AWARDS AND CONTENT

This is a State Controller Contract, Grant, and Purchase Order Policy under the State Fiscal Rules. All Small Dollar Grant Awards shall use one of the approved models Small Dollar Grant Award or Grant Agreement forms described in Fiscal Rule 3-4 unless the State Agency or Institution of Higher Education (IHE) has obtained the prior written approval from the Office of the State Controller (OSC).

- **1)** Available Model Small Dollar Grant Awards. The following model Small Dollar Grant Awards may be used by State Agencies and IHEs without additional approval from the OSC:
  - a. Financial System Generated Small Dollar Grant Awards. This model is the system-generated document resulting from a Colorado Operations Resource Engine (CORE) POGG1 encumbrance or through another approved state financial system, which also explicitly references a link to the State of Colorado Small Dollar Grant Award Terms and Conditions that are attached to this policy. This model does not include other documents with a similar or the same appearance as one of these documents that is not generated within the financial system
  - **b.** Other Approved Forms. A State Agency or IHE, at the discretion of the State Agency's or IHE's Procurement Official or State Controller delegate, may request other approved forms from the OSC.
  - **c. Backup Forms.** If CORE or the approved state financial system used by the State Agency or IHE is unavailable for an extended period of time when a Small Dollar Grant Award must be issued, the State Agency or IHE, with the prior approval of the OSC, may use a backup form with the same or substantially similar appearance as one of the documents described in **§1**)a.
- 2) Modifications of Model Small Dollar Grant Awards. A State Agency or Institution of Higher Education issuing a Small Dollar Grant Award may not modify the State of Colorado Small Dollar Grant Award Terms and Conditions attached to this policy, including Addendum 1: Additional Terms & Conditions for Information Technology ("Addendum"), in any way without prior written approval of the OSC.
  - **a. Exception.** The Office of Information Technology (OIT) may modify the provisions of Addendum for the State of Colorado Small Dollar Grant Awards specifically issued by OIT with the prior written approval of the Procurement Official of OIT or authorized delegate, without obtaining additional approval from OSC.
  - **b. Unauthorized Modifications.** Except as described in **§2)a.**, the failure of a State Agency or IHE to obtain approval from the OSC prior to issuing a Small Dollar Grant Award with modified the State of Colorado Small Dollar Grant Award Terms and Conditions shall constitute a violation of Fiscal Rule 3-4, §§ 4.1.7. and 5.1.
- 3) Small Dollar Grant Award Exhibits and References. All Small Dollar Grant Awards shall either include or specifically reference the State of Colorado Small Dollar Grant Award Terms and Conditions by hyperlink or, if modified in accordance with §2), attach the modified State of Colorado Small Dollar Grant Award Terms and Conditions and shall clarify on the Small Dollar Grant Award that the attached modified State of Colorado Small Dollar Grant Award Terms and Conditions and shall clarify on the Small Dollar Grant Award that the attached modified State of Colorado Small Dollar Grant Award Terms and Conditions shall govern the Small Dollar Grant Award in lieu of the State of Colorado Small Dollar Grant Award Terms and Conditions referenced by hyperlink. Small Dollar Grant Awards shall also include any additional exhibits, based on the nature of the work performed under the Small Dollar Grant Award, as required by any other state

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and/or federal agency with authority over that type of work or by any entity providing funding for the Small Dollar Grant Award, including, but not limited to, the following:

- a. Additional information technology provisions required by OIT.
- **b.** Additional provisions required to comply with the Office of Management and Budget Uniform Guidance, or the Federal Funding Accountability and Transparency Act, or any other applicable federal terms and conditions.
- **c.** Any federally required attachments relating to confidential information, such as a Health Information Portability and Accountability Act (HIPAA) Business Associate Addendum or a Federal Tax Information Exhibit.

Robert Jaros

Robert Jaros, CPA, MBA, JD State Controller

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### **State of Colorado Small Dollar Grant Award Terms and Conditions**

1. Offer/Acceptance. This Small Dollar Grant Award, together with these terms and conditions (including, if applicable, Addendum 1: Additional Terms and Conditions for Information Technology below), and any other attachments, exhibits, specifications, or appendices, whether attached or incorporated by reference (collectively the "Agreement") shall represent the entire and exclusive agreement between the State of Colorado, by and through the agency identified on the face of the Small Dollar Grant Award ("State") and the Subrecipient identified on the face of the Small Dollar Grant Award ("Grantee"). If this Agreement refers to Grantee's bid or proposal, this Agreement is an ACCEPTANCE of Grantee's OFFER TO PERFORM in accordance with the terms and conditions of this Agreement. If a bid or proposal is not referenced, this Agreement is an OFFER TO ENTER INTO AGREEMENT, subject to Grantee's acceptance, demonstrated by Grantee's beginning performance or written acceptance of this Agreement. Any COUNTER-OFFER automatically CANCELS this Agreement, unless a change order is issued by the State accepting a counter-offer. Except as provided herein, the State shall not be responsible or liable for any Work performed prior to issuance of this Agreement. The State's financial obligations to the Grantee are limited by the amount of Grant Funds awarded as reflected on the face of the Small Dollar Grant Award.

2. Order of Precedence. In the event of a conflict or inconsistency within this Agreement, such conflict or inconsistency shall be resolved by giving preference to the documents in the following order of priority: (1) the Small dollar Grant Award document; (2) these terms and conditions (including, if applicable, Addendum 1 below); and (3) any attachments, exhibits, specifications, or appendices, whether attached or incorporated by reference. Notwithstanding the above, if this Agreement has been funded, in whole or in part, with a Federal Award, in the event of a conflict between the Federal Grant and this Agreement, the provisions of the Federal Grant shall control. Grantee shall comply with all applicable Federal provisions at all times during the term of this Agreement. Any terms and conditions included on Grantee's forms or invoices not included in this Agreement are void.

3. Changes. Once accepted in accordance with §1, this Agreement shall not be modified, superseded or otherwise altered, except in writing by the State and accepted by Grantee.

4. Definitions. The following terms shall be construed and interpreted as follows: (a) "Award" means an award by a Recipient to a Subrecipient; (b) "Budget" means the budget for the Work described in this Agreement; (c) "Business Day" means any day in which the State is open and conducting business, but shall not include Saturday, Sunday or any day on which the State observes one of the holidays listed in CRS §24-11-101(1); (d) "UCC" means the Uniform Commercial Code in CRS Title 4; (e) "Effective Date" means the date on which this Agreement is issued as shown on the face of the Small Dollar Grant Award; (f) "Federal Award" means an award of federal financial assistance or a cost-reimbursement contract, , by a Federal Awarding Agency to the Recipient. "Federal Award" also means an agreement setting forth the terms and conditions of the Federal Award, which terms and conditions shall flow down to the Award unless such terms and conditions specifically indicate otherwise. The term does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program; (g) "Federal Awarding Agency" means a Federal agency providing a Federal Award to a Recipient; (h) "Grant Funds" means the funds that have been appropriated, designated, encumbered, or otherwise made available for payment by the State under this Agreement; (i) "Matching Funds" mean the funds provided by the Grantee to meet cost sharing requirements described in this Agreement; (j) "Recipient" means the State agency identified on the face of the Small Dollar Grant Award; (k) "Subcontractor" means third parties, if any, engaged by Grantee to aid in performance of the Work; (I) "Subrecipient" means a non-Federal entity that receives a sub-award from a Recipient to carry out part of a program, but does not include an individual that is a beneficiary of such program; (m) "Uniform Guidance" means the Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, identified as the 2 C.F.R. (Code of Federal Regulations) Part 200, commonly known as the "Super Circular," which supersedes requirements from OMB Circulars A-21, A-87, A-110, A-122, A-89, A-102, and A-133, and the guidance in Circular a-50 on Single Audit Act follow-up; and (n) "Work" means the goods delivered or services, or both, performed pursuant to this Agreement and identified as Line Items on the face of the Small Dollar Grant Award.

5. Delivery. Grantee shall furnish the Work in strict accordance with the specifications and price set forth in this Agreement. The State shall have no liability to compensate Grantee for the performance of any Work not specifically set forth in the Agreement.

6. Rights to Materials. [Not Applicable to Agreements issued either in whole in part for Information Technology, as defined in CRS § 24-37.5-102(2); in which case Addendum 1 §2 applies in lieu of this section.] Unless specifically stated otherwise in this Agreement, all materials, including without limitation supplies, equipment, documents, content, information, or other material of any type, whether tangible or intangible (collectively "Materials"), furnished by the State to Grantee or delivered by Grantee to the State in performance of its obligations under this Agreement shall be the exclusive property the State. Grantee shall return or deliver all Materials to the State upon completion or termination of this Agreement.

7 Grantee Records. Grantee shall make, keep, maintain, and allow inspection and monitoring by the State of a complete file of all records, documents, communications, notes and other written materials, electronic media files, and communications, pertaining in any manner to the Work (including, but not limited to the operation of programs) performed under this Agreement (collectively "Grantee Records"). Unless otherwise specified by the State, the Grantee shall retain Grantee Records for a period (the "Record Retention Period") of three years following the date of submission to the State of the final expenditure report, or if this Award is renewed guarterly or annually, from the date of the submission of each quarterly or annual report, respectively. If any litigation, claim, or audit related to this Award starts before expiration of the Record Retention Period, the Record Retention Period shall extend until all litigation, claims or audit finding have been resolved and final action taken by the State or Federal Awarding Agency. The Federal Awarding Agency, a cognizant agency for audit, oversight, or indirect costs, and the State, may notify Grantee in writing that the Record Retention Period shall be extended. For records for real property and equipment, the Record Retention Period shall extend three years following final disposition of such property. Grantee shall permit the State, the federal government, and any other duly authorized agent of a governmental agency to audit, inspect, examine, excerpt, copy and transcribe Grantee Records during the Record Retention Period. Grantee shall make Grantee Records available during normal business hours at Grantee's office or place of business, or at other mutually agreed upon times or locations, upon no fewer than two Business Days' notice from the State, unless the State determines that a shorter period of notice, or no notice, is necessary to protect the interests of the State. The State, in its discretion, may monitor Grantee's performance of its obligations under this Agreement using procedures as determined by the State. The federal government and any other duly authorized agent of a governmental agency, in its discretion, Grantee shall allow the State to perform all monitoring required by the Uniform Guidance, based on the State's risk analysis of Grantee and this Agreement, and the State shall have the right, in its discretion, to change its monitoring procedures and requirements at any time during the term of this Agreement. The State will monitor Grantee's performance in a manner that does not unduly interfere with Grantee's performance of the Work. Grantee shall promptly submit to the State a copy of any final audit report of an audit performed

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on Grantee Records that relates to or affects this Agreement or the Work, whether the audit is conducted by Grantee, a State agency or the State's authorized representative, or a third party. If applicable, the Grantee may be required to perform a single audit under 2 CFR 200.501, *et seq.* Grantee shall submit a copy of the results of that audit to the State within the same timelines as the submission to the federal government.

8. Reporting. If Grantee is served with a pleading or other document in connection with an action before a court or other administrative decision making body, and such pleading or document relates to this Agreement or may affect Grantee's ability to perform its obligations under this Agreement, Grantee shall, within 10 days after being served, notify the State of such action and deliver copies of such pleading or document to the State. Grantee shall disclose, in a timely manner, in writing to the State and the Federal Awarding Agency, all violations of federal or State criminal law involving fraud, bribery, or gratuity violations potentially affecting the Award. The State or the Federal Awarding Agency may impose any penalties for noncompliance allowed under 2 CFR Part 180 and 31 U.S.C. 3321, which may include, without limitation, suspension or debarment.

9. Conflicts of Interest. Grantee acknowledges that with respect to this Agreement, even the appearance of a conflict of interest is harmful to the State's interests. Absent the State's prior written approval, Grantee shall refrain from any practices, activities, or relationships that reasonably may appear to be in conflict with the full performance of Grantee's obligations to the State under this Agreement. If a conflict or appearance of a conflict of interest exists, or if Grantee is uncertain as to such, Grantee shall submit to the State a disclosure statement setting forth the relevant details for the State's consideration. Failure to promptly submit a disclosure statement or to follow the State's direction in regard to the actual or apparent conflict constitutes a breach of this Agreement. Grantee certifies that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Agreement. Grantee has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of Grantee's Services and Grantee shall not employ any person having such known interests.

**10. Taxes.** The State is exempt from federal excise taxes and from State and local sales and use taxes. The State shall not be liable for the payment of any excise, sales, of use taxes imposed on Grantee. A tax exemption certificate will be made available upon Grantee's request. Grantee shall be solely responsible for any exemptions from the collection of excise, sales or use taxes that Grantee may wish to have in place in connection with this Agreement.

**11. Payment.** Payments to Grantee are limited to the unpaid, obligated balance of the Grant Funds. The State shall not pay Grantee any amount under this Agreement that exceeds the Document Total shown on the face of the Small Dollar Grant Award. The State shall pay Grantee in the amounts and in accordance with the schedule and other conditions set forth in this Agreement. Grantee shall initiate payment requests by invoice to the State, in a form and manner approved by the State. The State shall pay Grantee for all amounts due within 45 days after receipt of an Awarding Agency's approved invoicing request, or in instances of reimbursement grant programs a request for reimbursement, compliant with Generally Accepted Accounting Principles (GAAP) and, if applicable Government Accounting Standards Board (GASB) of amount requested. Amounts not paid by the State within 45 days of the State's acceptance of the invoice shall be ar interest on the unpaid balance beginning on the 45th day at the rate set forth in CRS §24-30-202(24) until paid in full. Interest shall not accrue if a good faith dispute exists as to the State's obligation to pay all or a portion of the amount due. Grantee shall invoice the State separately for interest on delinquent amounts due, referencing the delinquent payment, number of day's interest to be paid, and applicable interest rate. The acceptance of an invoice shall not constitute acceptance of any Work performed under this Agreement. Except as specifically agreed in this Agreement, Grantee shall be solely responsible for all costs, expenses, and other charges it incurs in connection with its performance under this Grantee.

**12. Term.** The parties' respective performances under this Agreement shall commence on the "Service From" date identified on the face of the Small Dollar Grant Award, unless otherwise specified, and shall terminate on the "Service To" date identified on the face of the Small Dollar Grant Award unless sooner terminated in accordance with the terms of this Agreement.

**13. Payment Disputes.** If Grantee disputes any calculation, determination or amount of any payment, Grantee shall notify the State in writing of its dispute within 30 days following the earlier to occur of Grantee's receipt of the payment or notification of the determination or calculation of the payment by the State. The State will review the information presented by Grantee and may make changes to its determination based on this review. The calculation, determination or payment amount that results from the State's review shall not be subject to additional dispute under this subsection. No payment subject to a dispute under this subsection shall be due until after the State has concluded its review, and the State shall not pay any interest on any amount during the period it is subject to dispute under this subsection.

14. Matching Funds. Grantee shall provide Matching Funds, if required by this Agreement. If permitted under the terms of the grant and per this Agreement, Grantee may be permitted to provide Matching Funds prior to or during the course of the project or the match will be an in-kind match. Grantee shall report to the State regarding the status of such funds upon request. Grantee's obligation to pay all or any part of any Matching Funds, whether direct or contingent, only extend to funds duly and lawfully appropriated for the purposes of this Agreement by the authorized representatives of Grantee and paid into Grantee's treasury or bank account. Grantee represents to the State that the amount designated "Grantee's Matching Funds" pursuant to this Agreement, has been legally appropriated for the purposes of this Agreement by its authorized representatives and paid into its treasury or bank account. Grantee does not by this Agreement irrevocably pledge present cash reserves for payments in future fiscal years, and this Agreement is not intended to create a multiple-fiscal year debt of Grantee. Grantee shall not pay or be liable for any claimed interest, late charges, fees, taxes or penalties of any nature, except as required by Grantee's laws or policies.

**15.** Reimbursement of Grantee Costs. If applicable, the State shall reimburse Grantee's allowable costs, not exceeding the maximum total amount described in this Agreement for all allowable costs described in the grant except that Grantee may adjust the amounts between each line item of the Budget without formal modification to this Agreement as long as the Grantee provides notice to, and received approval from the State of the change, the change does not modify the total maximum amount of this Agreement, and the change does not modify any requirements of the Work. If applicable, the State shall reimburse Grantee for the properly documented allowable costs related to the Work after review and approval thereof, subject to the provisions of this Agreement. However, any costs incurred by Grantee prior to the Effective Date shall not be reimbursed absent specific allowance of pre-award costs. Grantee's costs for Work performed after the "Service To" date identified on the face of the Small Dollar Grant Award, or after any phase performance period end date for a respective phase of the Work, shall not be reimbursable. The State shall only reimburse allowable costs described in this Agreement and shown in the Budget if those costs are (a) reasonable and necessary to accomplish the Work, and (b) equal to the actual net cost to Grantee (i.e. the price paid minus any items of value received by Grantee that reduce the costs actually incurred).

**16. Close-Out.** Grantee shall close out this Award within 45 days after the "Service To" date identified on the face of the Small Dollar Grant Award, including any modifications. To complete close-out, Grantee shall submit to the State all deliverables (including documentation) as defined

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in this Agreement and Grantee's final reimbursement request or invoice. In accordance with the Agreement, the State may withhold a percentage of allowable costs until all final documentation has been submitted and accepted by the State as substantially complete.

**17. Assignment.** Grantee's rights and obligations under this Agreement may not be transferred or assigned without the prior, written consent of the State and execution of a new agreement. Any attempt at assignment or transfer without such consent and new agreement shall be void. Any assignment or transfer of Grantee's rights and obligations approved by the State shall be subject to the provisions of this Agreement.

**18.** Subcontracts. Grantee shall not enter into any subcontract in connection with its obligations under this Agreement without the prior, written approval of the State. Grantee shall submit to the State a copy of each subcontract upon request by the State. All subcontracts entered into by Grantee in connection with this Agreement shall comply with all applicable federal and state laws and regulations, shall provide that they are governed by the laws of the State of Colorado, and shall be subject to all provisions of this Agreement.

**19. Severability.** The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect, provided that the Parties can continue to perform their obligations in accordance with the intent of the Agreement.

**20.** Survival of Certain Agreement Terms. Any provision of this Agreement that imposes an obligation on a party after termination or expiration of the Agreement shall survive the termination or expiration of the Agreement and shall be enforceable by the other party.

**21.** Third Party Beneficiaries. Except for the parties' respective successors and assigns, this Agreement does not and is not intended to confer any rights or remedies upon any person or entity other than the Parties. Enforcement of this Agreement and all rights and obligations hereunder are reserved solely to the parties. Any services or benefits which third parties receive as a result of this Agreement are incidental to the Agreement, and do not create any rights for such third parties.

22. Waiver. A party's failure or delay in exercising any right, power, or privilege under this Agreement, whether explicit or by lack of enforcement, shall not operate as a waiver, nor shall any single or partial exercise of any right, power, or privilege preclude any other or further exercise of such right, power, or privilege.

23. Indemnification. [Not Applicable to Inter-governmental agreements] Grantee shall indemnify, save, and hold harmless the State, its employees, agents and assignees (the "Indemnified Parties"), against any and all costs, expenses, claims, damages, liabilities, court awards and other amounts (including attorneys' fees and related costs) incurred by any of the Indemnified Parties in relation to any act or omission by Grantee, or its employees, agents, Subcontractors, or assignees in connection with this Agreement. This shall include, without limitation, any and all costs, expenses, claims, damages, liabilities, court awards and other amounts incurred by the Indemnified Parties in relation to any claim that any work infringes a patent, copyright, trademark, trade secret, or any other intellectual property right or any claim for loss or improper disclosure of any confidential information or personally identifiable information. If Grantee is a public agency prohibited by applicable law from indemnifying any party, then this section shall not apply.

24. Notice. All notices given under this Agreement shall be in writing, and shall be delivered to the contacts for each party listed on the face of the Small Dollar Grant Award. Either party may change its contact or contact information by notice submitted in accordance with this section without a formal modification to this Agreement.

**25. Insurance.** Except as otherwise specifically stated in this Agreement or any attachment or exhibit to this Agreement, Grantee shall obtain and maintain insurance as specified in this section at all times during the term of the Agreement: (a) workers' compensation insurance as required by state statute, and employers' liability insurance covering all Grantee employees acting within the course and scope of their employment, (b) Commercial general liability insurance written on an Insurance Services Office occurrence form, covering premises operations, fire damage, independent contractors, products and completed operations, blanket contractual liability, personal injury, and advertising liability with minimum limits as follows: \$1,000,000 each occurrence; \$1,000,000 general aggregate; \$1,000,000 products and completed operations aggregate; and \$50,000 any one fire, and (c) Automobile liability insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of \$1,000,000 each accident combined single limit. If Grantee will or may have access to any protected information, then Grantee shall also obtain and maintain insurance covering loss and disclosure of protected information and claims based on alleged violations of privacy right through improper use and disclosure of protected information with limits of \$1,000,000 each accurrence and \$1,000,000 general aggregate at all times during the term of the Small Dollar Grant Award. Additional insurance may be required as provided elsewhere in this Agreement or any attachment or exhibit to this Agreement. All insurance policies required by this Agreement shall be issued by insurance companies with an AM Best rating of A-VIII or better. If Grantee is a public agency within the meaning of the Colorado Governmental Immunity Act, then this section shall not apply and Grantee shall instead comply with the Colorado Governmental Immunity Act.

**26.** Termination Prior to Grantee Acceptance. If Grantee has not begun performance under this Agreement, the State may cancel this Agreement by providing written notice to the Grantee.

27. Termination for Cause. If Grantee refuses or fails to timely and properly perform any of its obligations under this Agreement with such diligence as will ensure its completion within the time specified in this Agreement, the State may notify Grantee in writing of non-performance and, if not corrected by Grantee within the time specified in the notice, terminate Grantee's right to proceed with the Agreement or such part thereof as to which there has been delay or a failure. Grantee shall continue performance of this Agreement to the extent not terminated. Grantee shall be liable for excess costs incurred by the State in procuring similar Work and the State may withhold such amounts, as the State deems necessary. If after rejection, revocation, or other termination of Grantee's right to proceed under the Colorado Uniform Commercial Code (CUCC) or this clause, the State determines for any reason that Grantee was not in default or the delay was excusable, the rights and obligations of the State and Grantee shall be the same as if the notice of termination had been issued pursuant to termination under §28.

28. Termination in Public Interest. The State is entering into this Agreement for the purpose of carrying out the public interest of the State, as determined by its Governor, General Assembly, Courts, or Federal Awarding Agency. If this Agreement ceases to further the public interest of the State as determined by its Governor, General Assembly, Courts, or Federal Awarding Agency, the State, in its sole discretion, may terminate this Agreement in whole or in part and such termination shall not be deemed to be a breach of the State's obligations hereunder. This section shall not apply to a termination for cause, which shall be governed by **§27**. A determination that this Small Dollar Grant Award should be terminated in the public interest shall not be equivalent to a State right to terminate for convenience. The State shall give written notice of termination, Grantee shall not incur further obligations except as necessary to mitigate costs of performance. The State shall pay the Agreement price or rate for Work performed

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and accepted by State prior to the effective date of the notice of termination. The State's termination liability under this section shall not exceed the total Agreement price.

**29. Termination for Funds Availability.** The State is prohibited by law from making commitments beyond the term of the current State Fiscal Year. Payment to Grantee beyond the current State Fiscal Year is contingent on the appropriation and continuing availability of Grant Funds in any subsequent year (as provided in the Colorado Special Provisions). If federal funds or funds from any other non-State funds constitute all or some of the Grant Funds, the State's obligation to pay Grantee shall be contingent upon such non-State funding continuing to be made available for payment. Payments to be made pursuant to this Agreement shall be made only from Grant Funds, and the State's liability for such payments shall be limited to the amount remaining of such Grant Funds. If State, federal or other funds are not appropriated, or otherwise become unavailable to fund this Agreement, the State may, upon written notice, terminate this Agreement, in whole or in part, without incurring further liability. The State shall, however, remain obligated to pay for Work performed and accepted prior to the effective date of notice of termination, and this termination shall otherwise be treated as if this Agreement were terminated in the public interest as described in **§28**.

**30.** Grantee's Termination Under Federal Requirements. If the Grant Funds include any federal funds, then Grantee may request termination of this Grant by sending notice to the State, or to the Federal Awarding Agency with a copy to the State, which includes the reasons for the termination and the effective date of the termination. If this Grant is terminated in this manner, then Grantee shall return any advanced payments made for Work that will not be performed prior to the effective date of the termination.

**31. Governmental Immunity.** Liability for claims for injuries to persons or property arising from the negligence of the State, its departments, boards, commissions committees, bureaus, offices, employees and officials shall be controlled and limited by the provisions of the Colorado Governmental Immunity Act, CRS §24-10-101, *et seq.*, the Federal Tort Claims Act, 28 U.S.C. Pt. VI, Ch. 171 and 28 U.S.C. 1346(b), and the State's risk management statutes, CRS §§24-30-1501, *et seq.* No term or condition of this Agreement shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, contained in these statutes.

32. Grant Recipient. Grantee shall perform its duties hereunder as a grant recipient and not as an employee. Neither Grantee nor any agent or employee of Grantee shall be deemed to be an agent or employee of the State. Grantee shall not have authorization, express or implied, to bind the State to any agreement, liability or understanding, except as expressly set forth herein. Grantee and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for Grantee or any of its agents or employees. Grantee shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Agreement. Grantee shall (a) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, (b) provide proof thereof when requested by the State, and (c) be solely responsible for its acts and those of its employees and agents.

**33.** Compliance with Law. Grantee shall comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

34. Choice of Law, Jurisdiction and Venue. [Not Applicable to Inter-governmental agreements] Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Agreement. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. All suits or actions related to this Agreement shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver. Any provision incorporated herein by reference which purports to negate this or any other provision in this Agreement in whole or in part shall not be valid or enforceable or available in any action at law, whether by way of complaint, defense, or otherwise. Any provision rendered null and void by the operation of this provision or for any other reason shall not invalidate the remainder of this Agreement, to the extent capable of execution. Grantee shall exhaust administrative remedies in CRS §24-109-106, prior to commencing any judicial action against the State regardless of whether the Colorado Procurement Code applies to this Agreement.

**35.** Prohibited Terms. Nothing in this Agreement shall be construed as a waiver of any provision of CRS §24-106-109. Any term included in this Agreement that requires the State to indemnify or hold Grantee harmless; requires the State to agree to binding arbitration; limits Grantee's liability for damages resulting from death, bodily injury, or damage to tangible property; or that conflicts with that statute in any way shall be void ab initio.

36. Public Contracts for Services. [Not Applicable to offer, issuance, or sale of securities, investment advisory services, fund management services, sponsored projects, intergovernmental grant agreements, or information technology services or products and services] Grantee certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who will perform work under this Agreement and will confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Agreement, through participation in the E-Verify Program or the Department program established pursuant to CRS §8-17.5-102(5)(c), Grantee shall not knowingly employ or contract with an illegal alien to perform work under this Agreement or enter into a contract or agreement with a Subcontractor that fails to certify to Grantee that the Subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement. Grantee shall (a) not use E-Verify Program or Department program procedures to undertake pre- employment screening of job applicants during performance of this Agreement, (b) notify Subcontractor and the State within three days if Grantee has actual knowledge that Subcontractor is employing or contracting with an illegal alien for work under this Agreement, (c) terminate the subcontract if Subcontractor does not stop employing or contracting with the illegal alien within three days of receiving notice, and (d) comply with reasonable requests made in the course of an investigation, undertaken pursuant to CRS §8-17.5-102(5), by the Colorado Department of Labor and Employment. If Grantee participates in the Department program, Grantee shall deliver to the State a written, notarized affirmation that Grantee has examined the legal work status of such employee, and shall comply with all of the other requirements of the Department program. If Grantee fails to comply with any requirement of this provision or CRS §8-17.5-101 et seq., the State may terminate this Agreement for breach and, if so terminated, Grantee shall be liable for damages.

**37.** Public Contracts with Natural Persons. Grantee, if a natural person 18 years of age or older, hereby swears and affirms under penalty of perjury that the person (a) is a citizen or otherwise lawfully present in the United States pursuant to federal law, (b) shall comply with the provisions of CRS §24-76.5-101 et seq., and (c) has produced a form of identification required by CRS §24-76.5-103 prior to the date Grantee begins Work under terms of the Agreement.

### **ADDENDUM 1:**

### **Additional Terms & Conditions for Information Technology**

# IF ANY PART OF THE SUBJECT MATTER OF THIS AGREEMENT IS INFORMATION TECHNOLOGY, AS DEFINED IN CRS § 24-37.5-102 (2), THE FOLLOWING PROVISIONS ALSO APPLY TO THIS AGREEMENT.

Definitions. The following terms shall be construed and interpreted as follows: (a) "CJI" means criminal justice information collected by Α. criminal justice agencies needed for the performance of their authorized functions, including, without limitation, all information defined as criminal justice information by the U.S. Department of Justice, Federal Bureau of Investigation, Criminal Justice Information Services Security Policy, as amended, and all Criminal Justice Records as defined under CRS §24-72-302; (b) "Incident" means any accidental or deliberate event that results in or constitutes an imminent threat of the unauthorized access, loss, disclosure, modification, disruption, or destruction of any communications or information resources of the State, pursuant to CRS §§24-37.5-401 et seq.; (c) "PCI" means payment card information including any data related to credit card holders' names, credit card numbers, or the other credit card information as may be protected by state or federal law; (d) "PHI" means any protected health information, including, without limitation any information whether oral or recorded in any form or medium that relates to the past, present or future physical or mental condition of an individual; the provision of health care to an individual; or the past, present or future payment for the provision of health care to an individual; and that identifies the individual or with respect to which there is a reasonable basis to believe the information can be used to identify the individual including, without limitation, any information defined as Individually Identifiable Health Information by the federal Health Insurance Portability and Accountability Act; (e) "PII" means personally identifiable information including, without limitation, any information maintained by the State about an individual that can be used to distinguish or trace an individual's identity, such as name, social security number, date and place of birth, mother's maiden name, or biometric records, including, without limitation, all information defined as personally identifiable information in CRS §24-72-501; (f) "State Confidential Information" means any and all State Records not subject to disclosure under the Colorado Open Records Act and includes, without limitation, PII, PHI, PCI, Tax Information, CJI, and State personnel records not subject to disclosure under the Colorado Open Records Act, (g) "State Fiscal Rules" means those fiscal rules promulgated by the Colorado State Controller pursuant to CRS §24-30-202(13)(a); (h) "State Fiscal Year" means a 12 month period beginning on July 1 of each calendar year and ending on June 30 of the following calendar year; (i) "State Records" means any and all State data, information, and records, regardless of physical form; (j) "Tax Information" means federal and State of Colorado tax information including, without limitation, federal and State tax returns, return information, and such other tax-related information as may be protected by federal and State law and regulation, including, without limitation all information defined as federal tax information in Internal Revenue Service Publication 1075; and (k) "Work Product" means the tangible and intangible results of the delivery of goods and performance of services, whether finished or unfinished, including drafts. Work Product includes, but is not limited to, documents, text, software (including source code), research, reports, proposals, specifications, plans, notes, studies, data, images, photographs, negatives, pictures, drawings, designs, models, surveys, maps, materials, ideas, concepts, know-how, information, and any other results of the Work, but does not include any material that was developed prior to the Effective Date that is used, without modification, in the performance of the Work.

R Intellectual Property. Except to the extent specifically provided elsewhere in this Agreement, any State information, including without limitation pre-existing State software, research, reports, studies, data, photographs, negatives or other documents, drawings, models, materials; or Work Product prepared by Grantee in the performance of its obligations under this Agreement shall be the exclusive property of the State (collectively, "State Materials"). All State Materials shall be delivered to the State by Grantee upon completion or termination of this Agreement. The State's exclusive rights in any Work Product prepared by Grantee shall include, but not be limited to, the right to copy, publish, display, transfer, and prepare derivative works. Grantee shall not use, willingly allow, cause or permit any State Materials to be used for any purpose other than the performance of Grantee's obligations hereunder without the prior written consent of the State. The State shall maintain complete and accurate records relating to (a) its use of all Grantee and third party software licenses and rights to use any Grantee or third party software granted under this Agreement and its attachments to which the State is a party and (b) all amounts payable to Grantee pursuant to this Agreement and its attachments and the State's obligations under this Agreement or any amounts payable to Grantee in relation to this Agreement, which records shall contain sufficient information to permit Grantee to confirm the State's compliance with the use restrictions and payment obligations under this Agreement or to any third party use restrictions to which the State is a party. Grantee retains the exclusive rights, title and ownership to any and all pre-existing materials owned or licensed to Grantee including, but not limited to all pre-existing software, licensed products, associated source code, machine code, text images, audio, video, and third party materials, delivered by Grantee under the Agreement, whether incorporated in a deliverable or necessary to use a deliverable (collectively, "Grantee Property"). Grantee Property shall be licensed to the State as set forth in a State-approved license agreement (a) entered into as exhibits or attachments to this Agreement, (b) obtained by the State from the applicable third party Grantee, or (c) in the case of open source software, the license terms set forth in the applicable open source license agreement. Notwithstanding anything to the contrary herein, the State shall not be subject to any provision incorporated in any exhibit or attachment attached hereto, any provision incorporated in any terms and conditions appearing on any website, any provision incorporated into any click through or online agreements, or any provision incorporated into any other document or agreement between the parties that (a) requires the State or the State to indemnify Grantee or any other party, (b) is in violation of State laws, regulations, rules, State Fiscal Rules, policies, or other State requirements as deemed solely by the State, or (c) is contrary to this Agreement.

**C.** Information Confidentiality. Grantee shall keep confidential, and cause all Subcontractors to keep confidential, all State Records, unless those State Records are publicly available. Grantee shall not, without prior written approval of the State, use, publish, copy, disclose to any third party, or permit the use by any third party of any State Records, except as otherwise stated in this Agreement, permitted by law, or approved in writing by the State. If Grantee will or may have access to any State Confidential Information or any other protected information, Grantee shall provide for the security of all State Confidential Information in accordance with all applicable laws, rules, policies, publications, and guidelines. Grantee shall comply with all Colorado Office of Information Security ("OIS") policies and procedures which OIS has issued pursuant to CRS §§24-37.5-401 through 406 and 8 CCR §1501-5 and posted at <a href="http://oit.state.co.us/ois">http://oit.state.co.us/ois</a>, all information security and privacy obligations imposed by any federal, state, or local statute or regulation, or by any industry standards or guidelines, as applicable based on the classification of the data relevant to Grantee's performance under this Agreement. Such obligations may arise from: Health Information Portability and Accountability Act (HIPAA); IRS Publication 1075; Payment Card Industry Data Security Standard (PCI-DSS); FBI Criminal Justice Information Service Security Addendum; Centers for Medicare & Medicaid Services (CMS) Minimum Acceptable Risk Standards for Exchanges; and Electronic Information Exchange

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Security Requirements and Procedures for State and Local Agencies Exchanging Electronic Information with The Social Security Administration. Grantee shall immediately forward any request or demand for State Records to the State's principal representative.

**D.** Other Entity Access and Nondisclosure Agreements. Grantee may provide State Records to its agents, employees, assigns and Subcontractors as necessary to perform the work, but shall restrict access to State Confidential Information to those agents, employees, assigns, and Subcontractors who require access to perform their obligations under this Agreement. Grantee shall ensure all such agents, employees, assigns, and Subcontractors sign agreements containing nondisclosure provisions at least as protective as those in this Agreement, and that the nondisclosure provisions are in force at all times the agent, employee, assign, or Subcontractors has access to any State Confidential Information. Grantee shall provide copies of those signed nondisclosure provisions to the State upon execution of the nondisclosure provisions if requested by the State.

E. Use, Security, and Retention. Grantee shall use, hold, and maintain State Confidential Information in compliance with any and all applicable laws and regulations only in facilities located within the United States, and shall maintain a secure environment that ensures confidentiality of all State Confidential Information. Grantee shall provide the State with access, subject to Grantee's reasonable security requirements, for purposes of inspecting and monitoring access and use of State Confidential Information and evaluating security control effectiveness. Upon the expiration or termination of this Agreement, Grantee shall return State Records provided to Grantee or destroy such State Records and certify to the State that it has done so, as directed by the State. If Grantee is prevented by law or regulation from returning or destroying State Confidential Information, Grantee warrants it will guarantee the confidentiality of, and cease to use, such State Confidential Information.

F. Incident Notice and Remediation. If Grantee becomes aware of any Incident, it shall notify the State immediately and cooperate with the State regarding recovery, remediation, and the necessity to involve law enforcement, as determined by the State. Unless Grantee can establish none of Grantee or any of its agents, employees, assigns or Subcontractors are the cause or source of the Incident, Grantee shall be responsible for the cost of notifying each person who may have been impacted by the Incident. After an Incident, Grantee shall take steps to reduce the risk of incurring a similar type of Incident in the future as directed by the State, which may include, but is not limited to, developing and implementing a remediation plan that is approved by the State at no additional cost to the State. The State may adjust or direct modifications to this plan, in its sole discretion and Grantee shall make all modifications as directed by the State. If Grantee cannot produce its analysis and plan within the allotted time, the State, in its sole discretion, may perform such analysis and produce a remediation plan, and Grantee shall reimburse the State for the reasonable actual costs thereof.

**G.** Data Protection and Handling. Grantee shall ensure that all State Records and Work Product in the possession of Grantee or any Subcontractors are protected and handled in accordance with the requirements of this Agreement at all times. Upon request by the State made any time prior to 60 days following the termination of this Agreement for any reason, whether or not this Agreement is expiring or terminating, Grantee shall make available to the State a complete and secure download file of all data that is encrypted and appropriately authenticated. This download file shall be made available to the State within 10 Business Days following the State's request, and shall contain, without limitation, all State Records, Work Product, and any other information belonging to the State. Upon the termination of Grantee's services under this Agreement, Grantee shall, as directed by the State, return all State Records provided by the State to Grantee, and the copies thereof, to the State or destroy all such State Records and certify to the State that it has done so. If legal obligations imposed upon Grantee prevent Grantee from returning or destroying all or part of the State Records provided by the State, Grantee shall guarantee the confidentiality of all State Records in Grantee's possession and will not actively process such data. The State retains the right to use the established operational services to access and retrieve State Records stored on Grantee's infrastructure at its sole discretion and at any time.

**H. Compliance.** If applicable, Grantee shall review, on a semi-annual basis, all OIS policies and procedures which OIS has promulgated pursuant to CRS §§ 24-37.5-401 through 406 and 8 CCR § 1501-5 and posted at <a href="http://oit.state.co.us/ois">http://oit.state.co.us/ois</a>, to ensure compliance with the standards and guidelines published therein. Grantee shall cooperate, and shall cause its Subcontractors to cooperate, with the performance of security audit and penetration tests by OIS or its designee.

I. Safeguarding PII. If Grantee or any of its Subcontractors will or may receive PII under this Agreement, Grantee shall provide for the security of such PII, in a manner and form acceptable to the State, including, without limitation, all State requirements relating to non-disclosure, use of appropriate technology, security practices, computer access security, data access security, data storage encryption, data transmission encryption, security inspections, and audits. Grantee shall take full responsibility for the security of all PII in its possession or in the possession of its Subcontractors, and shall hold the State harmless for any damages or liabilities resulting from the unauthorized disclosure or loss thereof. Grantee shall be a "Third-Party Service Provider" as defined in CRS §24-73-103(1)(i) and shall maintain security procedures and practices consistent with CRS §§24-73-101 *et seq*.

J. Software Piracy Prohibition. The State or other public funds payable under this Agreement shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Grantee hereby certifies and warrants that, during the term of this Agreement and any extensions, Grantee has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that Grantee is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Agreement, including, without limitation, immediate termination of this Agreement and any remedy consistent with federal copyright laws or applicable licensing restrictions.

K. Information Technology. To the extent that Grantee provides physical or logical storage of State Records; Grantee creates, uses, processes, discloses, transmits, or disposes of State Records; or Grantee is otherwise given physical or logical access to State Records in order to perform Grantee's obligations under this Agreement, the following terms shall apply. Grantee shall, and shall cause its Subcontractors, to: Provide physical and logical protection for all hardware, software, applications, and data that meets or exceeds industry standards and the requirements of this Agreement; Maintain network, system, and application security, which includes, but is not limited to, network firewalls, intrusion detection (host and network), annual security testing, and improvements or enhancements consistent with evolving industry standards; Comply with State and federal rules and regulations related to overall security, privacy, confidentiality, integrity, availability, and auditing; Provide that security is not compromised by unauthorized access to workspaces, computers, networks, software, databases, or other physical or electronic environments; Promptly report all Incidents, including Incidents that do not result in unauthorized disclosure or loss of data integrity, to a designated representative of the OIS; Comply with all rules, policies, procedures, and standards issued by the Governor's Office of Information Technology (OIT), including project lifecycle methodology and governance, technical standards, documentation, and other requirements posted at www.oit.state.co.us/about/policies. Grantee shall not allow remote access to State Records from outside the United States, including access by

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Grantee's employees or agents, without the prior express written consent of OIS. Grantee shall communicate any request regarding non-U.S. access to State Records to the State. The State, acting by and through OIS, shall have sole discretion to grant or deny any such request.



### NORTHERN COLORADO REGIONAL AIRPORT 4900 Earhart Rd • Loveland, Colorado 80538 (970) 962-2850 • FAX (970) 962-2855 • TDD (970) 962-2620

ITEM	NUMBER:	5
		•

MEETING DATE: June 15, 2023

PREPARED BY: Francis Robbins, Airport Operations & Maintenance Manager

### <u>TITLE</u>

**Designate Commission Secretary** 

### **RECOMMENDED AIRPORT COMMISSION ACTION**

Make a motion to designate a Secretary for the Airport Commission

### BUDGET IMPACT

Neutral

### **SUMMARY**

The commission is lacking a secretary after the departure of Shawn Battmer from Airport employment. The commission bylaws require the commission to appoint a secretary "who need not be a member of the Commission." in Section 6 paragraph a. Election of Officers. A secretary or temporary secretary needs to be appointment to enable the functions of the Northern Colorado Airport Commission.

### **ATTACHMENTS**

None



### NORTHERN COLORADO REGIONAL AIRPORT 4900 Earhart Rd • Loveland, Colorado 80538 (970) 962-2850 • FAX (970) 962-2855 • TDD (970) 962-2620

ITEM NUMBER: 6 MEETING DATE: June 15, 2023 PREPARED BY: Jason Licon, Airport Director Jeff Miller, Senior Accountant

### <u>TITLE</u>

2022 Financial Audit Presentation

### **RECOMMENDED AIRPORT COMMISSION ACTION**

Make a motion to accept the 2022 audit as presented

### **BUDGET IMPACT**

Neutral

### **SUMMARY**

The City of Loveland's Finance Department contracted with external auditing firm Plante Moran in consultation with Airport Staff to complete an annual audit of the Airport's finances. These audits are required as part of being a public entity. City of Loveland Finance Department staff will be available in person and the consultants from Plante Moran will be calling in to present the 2022 consolidated audited financial statement to the Airport Commission and will be available to answer questions.

### **ATTACHMENTS**

Plante Moran Audit Summary Letter Airport Financial Audit for 2022 Audit Presentation



# Audit Presentation to the Airport Commission– Northern Colorado Regional Airport

122

Year Ended December 31, 2022

1



- Opinion on the Northern Colorado Regional Airport financial statements
- 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
- Communication between auditors and those charged with governance.

# Opinion on Airport financial statements

- Plante Moran has completed our audit of the financial statements of Northern Colorado Regional Airport (the "Airport") for the year ended December 31, 2022. Our audit was conducted 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.
- We issued an unmodified opinion on the financial statements.
- The objective of our audit was to obtain reasonable—<u>not absolute</u> assurance about whether the financial statements are free from material misstatement.
- All records and information requested by us were available for our inspection.
- Management provided support for all items requested and full cooperation and we did not experience any difficulties in performing our audit.

# Opinion on Airport financial statements

We have reviewed the accounting practices, which include policies, estimates, and financial statement disclosures, related to the following areas of focus:

Primary Area of Focus	Procedures and Findings
Revenue Recognition	<ul> <li>Through observation and inquiry, we put together a memo for understanding of the Airport's various revenue streams.</li> <li>Tested a sample of revenue transactions by agreeing to cash receipt documentation and related invoice or agreement as applicable.</li> <li>Analytically tested 2022 revenues as a percentage of various key performance indicators.</li> </ul>
Accounts Receivables and Allowances	<ul> <li>Performed testing on significant AR balances through subsequent cash receipt reviews and ensuring grant receivables were for valid grant expenses</li> <li>Tested the aging to assess the need for an allowance for doubtful accounts.</li> </ul>
Capital Assets	<ul> <li>Obtained a rollforward schedule of capital asset balances from January 1, 2022, through December 31, 2022.</li> <li>Agreed the rollforward schedule of capital assets to supporting detailed schedules.</li> <li>Selected a sample of capital asset additions during the year to vouch to supporting documentation.</li> <li>Tested depreciation expense analytically and through recalculation.</li> </ul>
Accounts Payable and Accrued Expenses	<ul> <li>Tested actual expenditures subsequent to year-end to support year-end accruals.</li> <li>Reviewed other supporting documentation as considered necessary.</li> </ul>

# Adoption of GASB 87, *Leases*

- The Airport adopted GASB 87, *Leases* as of January 1, 2022
- Regulated vs. Non regulated leases
- The Airport only has leases regulated by the Federal Aviation Administration and thus there is no impact on the Net Position of the Airport; footnote disclosures have been updated
- Footnote 8 of the financial statements discloses details on the regulated leases of the Airport.



- Based on the amount of expenditures of the FAA Airport Improvement Grant (AIP), an audit of federal expenditures was required to be performed (Reported on the City of Loveland SEFA)
- In our opinion, the Authority complied, in all material respects, with the requirements of the AIP program for the year ended December 31, 2022.
- We noted no instances of noncompliance nor any questioned costs on this program and have issued an unmodified opinion on this program



Based on the amount of expenditures of the FAA Airport Improvement Grant (AIP), an audit of federal expenditures was required to be performed (Reported on the City of Loveland SEFA):

Primary Area of Focus	Procedures and Findings
Single Audit	<ul> <li>Tested compliance with the requirements of the Federal Aviation Administration grant Airport Improvement Program CFDA #20.106.</li> <li>Testing included focusing on the following compliance areas: Allowable activities, financial and performance reporting, wage rate requirements, and revenue diversion.</li> <li>No duplicate reimbursement requests noted</li> <li>We noted no instances of noncompliance nor any questioned costs on this program and have issued an unmodified opinion on this program</li> </ul>
Revenue Diversion	<ul> <li>The basic requirement for use of airport revenues is that all revenues generated by a public airport must be expended for the capital or operating costs of the airport system and are directly and substantially related to the actual air transportation of passengers or property.</li> <li>We reviewed transactions with related parties (Cities of Loveland and Fort Collins) to ensure they were properly supported and authorized</li> <li>We noted no unsupported or unallowable expenditures that did not relate directly to the airport system</li> <li>We noted no transfers of airport revenues outside of the airport system</li> <li>We reviewed marketing and airline incentive expenses noting expenses are in accordance with FAA guidelines</li> </ul>

# **Report on Internal Controls and** Compliance

Internal Control Over Financial Reporting

In conjunction with our audit of the financial statements of the Airport, we considered the Airport's internal control over financial reporting ("ICFR") as a basis for designing our auditing procedures 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 Airport's ICFR. In addition, our consideration of ICFR was not designed to identify all deficiencies in ICFR that might be significant deficiencies or material weaknesses. Accordingly, we do not express an opinion on the effectiveness of the Airport's ICFR. However, we are required to communicate, in writing, to management and those charged with governance all material weaknesses and significant deficiencies that have been identified during our audit.

Category	Definition			
Material Weakness	A deficiency, or a combination of deficiencies in ICFR, such that there is a reasonable possibility that a material misstatement of the Company's annual or interim financial statements will not be prevented, or detected and corrected, on a timely basis.			
Significant Deficiency	A deficiency, or a combination of deficiencies, in ICFR that is less severe than a material weakness, yet important enough to merit attention by those responsible for oversight of the Airport's financial reporting.			
Control Deficiency	A deficiency in ICFR 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.			
In conjunction with our audit, we did not identify any deficiencies in ICEP that we consider to be material				

In conjunction with our audit, we did not identify any deficiencies in ICFR that we consider to be material weaknesses.

# Report on Internal Controls and Compliance

Report on Compliance with Requirements Applicable to Federal Programs and on Internal Control Over Compliance

### **Opinion on Compliance**

In our opinion, the Airport complied, in all material respects, with the requirements referred to above that could have a direct and material effect for the year ended December 31, 2022.

### Internal Control Over Compliance

Our consideration of internal control over compliance 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.



Professional guidance requires independent auditors to communicate with those charged with governance certain matters in relation to an audit. Following is a summary of those required items along with specific discussion points as they pertain to the Airport:

Requirement	Discussion Points
Auditors' judgment about the quality of the Airport's accounting policies, estimates, and financial statement disclosures	In accordance with applicable accounting standards, we reviewed the quality of the Airport's financial reporting, which includes the Airport's significant accounting practices, estimates, and financial statement disclosures.
Critical accounting policies and practices	The significant accounting policies used by the Airport are described in Note 1 to the financial statements. No new accounting pronouncements adopted in the current year aside from the adoption of GASB 87.
Adoption of a change in accounting principle	GASB 87, <i>Leases</i>
Material corrected misstatements brought to the attention of management by the auditors	There were no material corrected misstatements brought to the attention of management by the auditors.



Professional guidance requires independent auditors to communicate with those charged with governance certain matters in relation to an audit. Following is a summary of those required items along with specific discussion points as they pertain to the Airport:

Requirement	Discussion Points
Unrecorded misstatements, other than those the auditors believe to be trivial	There were no uncorrected misstatements outside of those the auditors believe to be trivial.
Disagreements with management	There were no disagreements with management on financial accounting and/or reporting matters and auditing procedures that, if not satisfactorily resolved, would cause a modification of our auditors' reports.
Consultations with other accountants	We are not aware of any consultations about accounting or auditing matters between management and other independent public accountants. Nor are we aware of opinions obtained by management from other independent public accountants on the application of generally accepted accounting principles.
Major issues discussed with management prior to retention	We generally discuss a variety of matters, including the application of accounting principles and accounting standards, with management prior to acceptance as the Airport's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.



Professional guidance requires independent auditors to communicate with those charged with governance certain matters in relation to an audit. Following is a summary of those required items along with specific discussion points as they pertain to the Airport:

Requirement	Discussion Points
Significant difficulties encountered during the audit	There were no significant difficulties encountered during the audit.
Fraud and potential illegal acts involving senior management and those that cause a material misstatement of the financial statements	During the course of our audit, we did not become aware of any illegal acts or fraud committed by the Airport's management or its employees.
Representations requested from management	We request certain representations from management, which are included in the management representation letter.
Other issues arising from the audit the auditors consider significant and relevant to those charged with governance	There were no other issues arising from the audit that we consider significant and relevant to those charged with governance.
Material alternative accounting treatments discussed with management	There was no discussion with management concerning alternative accounting treatments.



# **Questions?**

# Thank you for the opportunity to serve as auditors for the Northern Colorado Regional Airport

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ITEM NUMBER: 7 MEETING DATE: June 15, 2023 PREPARED BY: Nicole Hahn, Loveland City Engineer

### <u>TITLE</u>

T-Hangar Facility Condition Assessment Reports and Repair Cost Estimates

### **RECOMMENDED AIRPORT COMMISSION ACTION**

Provide direction to staff and T-hangar tenants to prepare proposals for the July 20 meeting.

### BUDGET IMPACT

Unknown

### <u>SUMMARY</u>

On March 2<sup>nd</sup>, the Airport Commission took action to decommission the T-hangar units that are owned by the Cities and are rented to aircraft owners on a month-to-month basis. This difficult decision was made in response to safety and liability concerns that were identified during a structural analysis that was conducted during the recent hangar development request for proposals (RFP) investigation. Details on the decision are as follows:

- May 10 vacation deadline was established for the A and B hangars
- July 10 vacation deadline was set for the C hangars.
- Airport to provide funding for up to 6 months of tie-down funding at the Airport for affected tenants, and rent waived for the final month of occupancy.
- The Commission provided an opportunity for the affected tenants to present information and proposals at the next two Commission meetings to address the safety concerns and potentially delay the decommissioning.

On March 9<sup>th</sup>, a town hall meeting was held at the jetCenter hangar. Tenants and other stakeholders shared thoughts and ideas and Airport staff shared information and answered questions.

Discussion of the T-hangar decommissioning continued at the March 16<sup>th</sup> Commission meeting. Rick Turley, representing the tenants, presented a proposal outline with the goals of:

- Continuing to occupy the C hangars, while reducing the risk/liability to the Cities by conducting a more thorough investigation and mitigating deficiencies.
- Creating a transition plan to migrate the existing A and B hangar tenants to vacant C units.
- Ensuring the timely creation of a new T-Hangar site for future development

The Airport Commission took action to delay the hangar vacation deadlines to allow Airport staff to work with City staff and the tenants to conduct a more thorough structural analysis of the C hangars and develop recommendations to present to the Commission.

Based on commission guidance provided at the March 16<sup>th</sup> and April 20<sup>th</sup> Commission meetings a facility Conditions assessment was completed for Hangers A, B and C to evaluate the condition of the structures, look for signs of any underlying issues, and provide guidance and prioritization of repairs. The International Existing Building Code (IEBC) Chapter 4 "repairs" allows for the restoration of elements to their pre-damaged state if the restoration cost is less than 50% of the market value of the structure before damage occurred.

### Summary of Findings:

### Hangar A:

- Reportedly constructed in 1966
- Contains 8 Individual hangars with two storage areas, constructed in a T shape
- Metal roof deck atop light-gauge beam members spanning to trusses, with isolated instances of damage
- Load-bearing column members on pier foundations, with isolated instances of damage
- Load-bearing system aging and only partially functional
- Significant deflection of the truss members made exterior hangar doors difficult to operate
- Lateral load system was observed to by highly deficient with evidence of historic damage from lateral loads
- Poor anchorage to foundation elements and indications of historic differential movement

**Hangar A Recommendation**: Given the relatively small size of Hangar A, and extent of repairs required to its gravity and lateral load bearing systems, Hangar A has met or exceeded its service life and is not a good candidate for retrofit and repair.

### Hanger B:

- Reportedly constructed 1974
- Contains 10 Individual hangars with two storage areas, constructed in a nested T shape
- Metal roof deck atop light-gauge beam members spanning to I-beam girders
- Exterior walls, including the hangar doors, are supported by a double channel section connected to cantilevered I-beam girders
- Exterior columns do not act as gravity supports for the exterior wall and doors.
- Load-bearing column members on concrete pier foundations
- Gravity, lateral and foundation load-bearing system is in need of repair
- Vertical bracing has been removed in tenant finished areas
- Framing members missing fasteners throughout building

### Hanger B Recommended Repairs:

- No repairs or maintenance are recommended for the rooftop metal deck or rooftop beam members (other than monitoring)
- Gravity system complete installation of a beam and column system parallel with the exterior wall.
  - Addition of upper support beam to support doors and provide roller tracking
  - Hangar doors would likely need to be repaired/reset
- Lateral system repair approximately 40 angle moment frame connections with braced frame connections
- Foundation system repair approximately 8 damaged or detached column anchorages
- Manually reversing approximately 4 out-of-plumb/rotated/deflected columns
- Replacement and tightening of existing bolts and braces throughout the building

### Hangar B Engineer's Opinion of Cost:

_		Materials & Labor	10% OH&P	10% PM/CM	5% Contingency	Total
Hangar B	Repairs	\$91,158	\$9,116	\$10,027	\$5,014	\$115,315
	Replacement	\$225,000	\$0	\$22,500	\$11,250	\$258,750

**Hangar B Recommendation:** The cost to restore Hanger B to its pre damaged state was evaluated with this study and compared to the cost to replace the structure. Given limited number of units in Hanger B our team is not recommending repairs to the B hangars.

### Hangar C:

- Reportedly constructed 1977
- Contains 20 Individual hangars with four storage areas, constructed in a nested T-shape
- Metal roof deck atop light-gauge beam members spanning to I-beam girders
- Exterior walls, including the hangar doors, are supported by a double channel section columns
- Load-bearing column members on pier foundations
- Gravity, lateral and foundation system is in need of repair

### Hangar C Recommended Repairs:

- Tightening of existing bolts and braces. R&R of any bolt/brace not capable of being tightened, or with inadequate thread count above tightening nut.
- Cleaning and inspection of (1) primary girder member to evaluate extent of rust/deterioration damage
- Bringing rotated/out of plumb columns back to straight
- General re-attachment/addition of missing bolts in structural bolted connections where a bolt previously existed.

### Hangar C Engineers Opinion of Cost:

		Materials & Labor	10% OH&P	10% PM/CM	5% Contingency	Total
Hangar C	Repairs	\$70,523	\$7,052	\$7,758	\$3,879	\$89,212

**Hangar C Recommendation:** Staff recommends that completion of repairs to Hangar C be considered if the units continue to be occupied.

### **ATTACHMENT**

Facility Conditions Assessment Hangars "A" and "B" Facility Conditions Assessment Hangar "C" Hangar Assessment Presentation



### **Report of Findings**

Knott Laboratory Project Number: 20939

Northern Colorado Regional Airport "A" and "B" Hangars 4910/4920 Grumman Street Loveland, Colorado 80538

### **Prepared for:**

Michelle Martin Civil Innovations 1635 Foxtail Drive #302 Loveland, Colorado 80538

### Prepared By:

Austin Friday, P.E. Project Engineer Knott Laboratory, LLC 7185 South Tucson Way Centennial, Colorado 80112

June 8, 2023

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VIA EMAIL (Michelle.martin@civilinnovations.com)

Michelle Martin Civil Innovations 1635 Foxtail Drive #302 Loveland, Colorado 80538

### Re: Report of Findings

Property:	Northern Colorado Regional Airport
	"A" and "B" Hangars
Address:	4910/4920 Grumman Street
	Loveland, Colorado 80538

Ms. Martin:

Knott Laboratory, LLC (Knott) inspected the buildings at the above-referenced property. This report provides the findings and conclusions reached as a result of that investigation.

### 1. Background

The subject property consisted of two single-story steel-framed hangar structures: Hangar "A" and Hangar "B." While both hangars were inspected, the construction, age and condition of the structures varied substantially. An aerial photograph showing the location of the different hangars is provided in **Appendix A** as **Figure 1**.

Online records with the Larimer County Assessor's Office were not available for the property. Hangar "A" was described to Knott as approximately 58 years old in its current configuration, and Hangar "B" was described to Knott as approximately 53 years old in its current configuration. As such, the buildings were constructed prior to the first publishing of the International Building Code (IBC), in 2000. The Loveland Building Department, under whose jurisdiction the hangars are located, has currently adopted the 2018 editions of the I-Codes with Loveland Building Code Amendments. This is set to change to the 2021 editions on June 1<sup>st</sup>, 2023.

The property was the subject of a limited previous inspection and corresponding report by ditesco Project & Construction Engineering Services (ditesco), with a reported inspection date of August 18, 2022, and report publishing date of September 20, 2022. The "A" and "B" Hangars were evaluated by ditesco, along with the adjacent "C" Hangers, to provide general conditions of the hanger buildings and inform the owner(s) of the buildings of the current conditions of each hangar, and a summary of conclusions reached. At the time of publishing, that report concluded "all four of the structures were observed to have significant issues with the subgrade, foundation, anchorage, and

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structural members...due to the cumulative effects of the issues observed, there is not an opportunity to implement an isolated repair without addressing the structure[s] in its entirety...there are no recommendations for remediation to safely extend the lifespan of the hangars." ("Northern Colorado Regional Airport T-Hangar Structural Analysis, ditesco, September 20, 2022).

Knott provided a separate evaluation of the "C" Hangars in a report dated April 25, 2023. Please refer to that report for a full discussion of the "C" Hangars.

### 2. Purpose

Knott was retained by Civil Innovations to provide a facility condition assessment of the property. Knott's Facility Condition Assessment (FCA) process is intended to evaluate the condition of the structure as well as look for signs of any underlying issues or deferred maintenance items, and to provide guidance and prioritization of repairs as a result of that evaluation.

In the case of the "A" and "B" hangars, this included a more detailed onsite investigation of the main structural elements visible from the interiors and exteriors of the hangars than was previously completed, and an evaluation of the existing conditions of those structural elements for a full documentation of the building. As the "A" and "B" hangar buildings were constructed before the first edition of the IBC, it is unlikely that the structure, with a complete analysis using modern building codes, would be sufficient. In contrast, a facility condition assessment allows Knott to consider the historical performance of the building, and tailor repair recommendations based off the types of failures observed, the geographic risk factors associated with the building, and an evaluation of the existing failures recorded. Correspondingly, Knott has approached this project using the provisions of Chapter 4 "Repairs" of the 2018 International Existing Building Code's (IEBC) repair provisions regarding "less than substantial structural damage," (Section 405.2.1) which allows for the restoration of elements to their pre-damaged state if restoration of the structure would cost less than 50 percent of the market value of the structure before the damage occurred.

This inspection was to be followed by a report identifying the repairability of the "A" and "B" hangars and discussing areas that require repairs for the purpose of extending the life of the buildings another 3-5 years, at the request of the client.

As such, the contents of this report and repair recommendations are *not* intended to restore the building to a state of full compliance – instead, they are intended to restore life-safety components of the building's gravity, lateral and foundation systems to their

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pre-damaged condition. Knott should be contacted if this limited additional service life window is to be changed.

### 3. Procedure

Knott's Scott B. Hargrove, M.S., P.E. and Austin D. Friday, M.S., P.E conducted an inspection of the "A" and "B" Hangars on May 9, 2023. This inspection included a review of all observable structural elements within each hangar building. On a limited basis, a ladder was used to assist in observations of rooftop structural elements. Francis Robbins of the Northern Colorado Regional Airport was present during the inspection. Knott documented and photographed the available information during the inspection. Due to the nondestructive nature of Knott's investigation, any interior finishes and/or obstructions installed by the tenants of the hangar units (e.g., insulation, gypsum wallboard, furniture) were not removed. As such, these items did occasionally impede Knott's visual inspection (see <u>Section 5.2.4</u> "*Items Not Reviewed*"). The photographs depicted in **Appendix A** are a sample of the photographs taken by Knott, and the remaining may be presented upon request.

### 4. Documents Reviewed

The following documents and materials were reviewed and/or referenced as part of Knott's investigation, and/or contain information pertinent to the discussion and conclusions presented herein:

- 1. Larimer County Assessor's Office online property records, URL: https://www.larimer.gov/assessor/search#/property/.
- 2. Applied Technology Council Hazards by Location tool, URL: https://hazards.atcouncil.org/#/.
- 3. ditesco Project & Construction Engineering Services "*Northern Colorado Regional Airport T-Hangar Structural Analysis*," Dated September 20, 2022

### 5. Findings and Discussion

Knott Laboratory has divided this section of the report into the following subsections for clarity: *"A" and "B" Hangars On-Site Investigation Summary* and *Repair Recommendations*. Photographs referenced in the discussion are provided in **Appendix A**.

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### 5.1. "A" and "B" Hangars On-Site Investigation Summary

The "A" and "B" Hangars differed in age, layout, and structural support conditions. An overview of each hangar is provided as **Figure 2 and 3**. Hangar "A" consists of 8 individual hangar units arranged in a standard "T" configuration – that is, each hangar unit spanned the full width of the building. An exemplar plan of the standard "T" hangar in Hangar "A" is shown as **Figure 4**. Two storage units were nested into the standard "T" hangars on either end. Hangar "B" consists of 10 individual hangar units arranged in a nested "T" configuration – that is, each hangar unit only spans a portion of the full width of the building and is set back against the edge of a mirrored hangar unit. An exemplar plan of the nested "T" hangar in Hangar "B" is shown as **Figure 5**. Two storage units were nested on either end of the hangar. An exemplar plan of the storage unit is provided as **Figure 6**.

Knott was able to access all 8 units and 2 storage units within the "A" Hangar, and all 10 units and 2 storage units in the "B" Hangar. An exemplar overview of the typical standard "T" hangar within the "A" Hangar building is shown as **Figure 7 and 8**. An exemplar overview of the typical nested "T" hangar within the "B" Hangar building is shown as **Figure 9-11**. During the inspection, visible gravity and lateral load-carrying members were examined and their condition noted, with the exception of elements that were obscured (Section 5.2.4 "*Items Not Reviewed*"). For additional clarity, the section below is broken up between Hangars "A" and "B."

### <u>5.1.1. Hangar "A"</u>

The gravity load-bearing system for Hangar "A" was observed to be a metal roof deck atop roughly equally spaced light-gauge beam members. The span lengths of these beam members varied, but extended between tapered truss members that acted as the primary supports for the building. These truss members were arranged perpendicular to the exterior of the hangars and repeated at 20'-0" and 10'-0" intervals along the length of the building to align with hangar bays and exterior wall supports, respectively. The truss members spanned from a single, central welded double-channel column. The exterior wall was supported by the ends of these truss members, with additional exterior column supports at approximately 40'-0" on center. All load-bearing column members were positioned upon pier foundations.

The gravity load-bearing system was generally observed to be aging and only partially functional. The metal deck was largely free of deterioration, but several large penetrations through the roof deck were visible from the limited ground-based inspection Knott performed. Light-gauge rooftop beam members were largely free of deterioration, but isolated instances of compromised beams were documented. Primary truss members

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displayed signs of weathering and aging, but largely appeared undamaged. However, significant deflection of the truss members was apparent from the difficult operation of the exterior hangar doors. Load-bearing column members were observed to be generally intact and functional. However, poor anchorage from the load-bearing column members to the drilled pier foundations below were observed. Knott documented multiple instances of untightened, inadequate, or missing anchorage, and the typical installation of multiple shim plates below a number of columns.

Where present, the lateral system was integrated into the same elements used as the gravity load-bearing system. Perpendicular to the exterior hangar doors, partial-height braced frames were formed by connecting intersecting angle members to the tops of a limited number of columns and spanning to the bottom chord of the of the truss. Lateral bracing was not observed parallel to the exterior hangar doors, suggesting that the structure has resisted lateral loads through bending in the primary truss and column members. Limited bracing members were also observed along the bottom chord of some truss members, similarly formed by connecting intersecting angle members that spanned from the primary support columns to the exterior wall.

The lateral support system for the building was generally observed to be highly deficient. Evidence of historic damage from lateral forces was widespread throughout the building, including severe deflection of the exterior walls and exterior load-bearing column members. Only two bays of partial vertical braced frames were observed throughout the entire structure, suggesting that lateral forces are largely transferred through primary load-bearing members. The poor anchorage to foundation elements, discussed in more detail above, exacerbates concerns about the suitability of Hangar "A" to remain in service.

The foundation system was observed to be pier foundations of unknown depth, with approximately 18" diameter elements beneath interior and exterior columns. The pier foundations supported both the gravity and lateral systems of the building through baseplates and anchorage at the base of column elements.

The exposed top of pier foundations were generally observed to be undamaged, but with highly variable top-of-pier elevations. This, along with the shim plates placed below columns, suggests that long-term foundation movement has been present at the hangar.

Given the relatively small size of Hangar "A" and the extent of repairs required, it is highly likely that the structure would be considered to have suffered "*substantial structural damage*" over its service life under the applicable provisions of the IEBC (i.e., the cost of restoring the hangar to its pre-damaged condition would equal or exceed 50 percent of the market value of the structure before damaged occurred). Therefore, Hangar "A"

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would require repairs to its gravity and lateral load-bearing systems to satisfy the current provisions of the International Building Code, eliminating the ability for Knott to consider historical performance of the structure and requiring adherence to modern design loads that the structure is highly unlikely to satisfy. Ultimately, Knott concurs with the above-stated opinion by ditesco that Hangar "A" has met or exceeded its service life and is not a good candidate for retrofit and repair.

## <u>5.1.2.</u> Hangar "B"

The gravity load-bearing system for Hangar "B" was observed to be a metal roof deck atop roughly equally spaced light-gauge beam members, which spanned approximately 20'-0" to built-up, tapered wide-flange girder members (referred to as "I-beams" within the ditesco report). These girder members were arranged perpendicular to the exterior of the hangars and were located approximately 20'-0" on-center. The girder members spanned from two columns, located approximately 30'-0" from one another, and were cantilevered an additional 15'-0" beyond those columns to the exterior of the building. The exterior wall, including the hangar doors, were supported by a double channel section that spanned from support points at the cantilevered girder system. The load-bearing column members on the interior of the hangar were observed to be standard wide-flange elements. While exterior channel-shaped columns were present, they were observed to be constructed in such a way to resist only out-of-plane lateral loads and did not act as gravity supports for the exterior wall and doors. All load-bearing column members were positioned upon pier foundations.

The gravity load-bearing system was generally observed to be in need of repair. The metal deck was largely free of deterioration and observable penetrations from the limited ground-based inspection Knott performed. Light-gauge rooftop beam members were similarly observed to be largely free of deterioration. Knott does not recommend any repairs or ongoing maintenance to the rooftop metal deck or light-gauge rooftop beam members, other than monitoring for excessive deflection in the upcoming 3-5 years of service life. The wide-flange girder members were generally observed to be free of deterioration and in good condition. However, significant deflection of the girder members was apparent from the difficult operation of the exterior hangar doors and observed interior conditions. In contrast to the exterior beam-and-column system found at the "C" Hangars, Hangar "B" relies solely on the cantilevered girder system to support the exterior walls and hangar doors. A combination of long-term deflection and potential foundation movement (discussed below) necessitates that continued use of Hangar "B" will require a new beam-and-column system to be installed on the exterior of the hangar - see "Repair Recommendations" for more information. Knott also noted an isolated case of a missing bracing element that requires restoration - see "Repair Recommendations" for more information.

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Load-bearing column members were observed to be generally intact and functional, with isolated cases of deformation (visually "twisting"), presumed to be due to brace attachments – see discussion on lateral system below for more information. Knott recommends bringing these elements back to straight – see "*Repair Recommendations*" for more information. The connection from load-bearing column members to the foundation elements below were observed to be generally deteriorated and in need of repair, particularly at the interior supports within the hangar buildings. See "*Repair Recommendations*" for the locations and extents of these repairs.

The lateral system was integrated into the same elements used as the gravity loadbearing system. Hangar "B" exhibited a combination of braced frames, formed by connecting vertical tension rods to the flanges of column members parallel to the exterior of the hangars; and moment frames, formed by connecting double-angle members at each of the corners of column/girder intersections perpendicular to the exterior of the hangars. Diaphragm bracing was also present, formed by connecting horizontal tension rods to perpendicular wide-flange girder members directly below the rooftop metal deck.

Vertical bracing systems were generally observed to be damaged and in need of engineered repair. Missing horizontal braces were recorded which require replacement. Knott noted multiple instances of poor connections between lateral elements and supporting column members. Braces attached at the flanges of supporting columns, which imparted eccentric lateral forces eccentricity ("twisting") into the element, presumed to have resulted in the above-described damage to column sections. Additionally, double-angle moment frame connections were observed to have widespread missing fasteners to their connected member. To remedy these failed connections, and for practicality and likely cost-savings, Knott recommends removing and replacing these double-angle moment frame connections entirely with engineered braced frame connections. See *"Repair Recommendations"* for the locations and extents of these repairs. Horizontal bracing systems were generally observed to be intact and functional.

The foundation system was observed to be pier foundations of unknown depth with approximately 18" diameter elements beneath interior columns; and square, approximately 14" x 14" wide elements beneath exterior columns. The pier foundations supported both the gravity and lateral systems of the building through baseplates and anchorage at the base of column elements.

The foundation system, including baseplates and anchorages, were generally observed to be damaged and in need of engineered repair. Many baseplates were in various stages of deterioration, and Knott recorded multiple instances of missing or detached anchorages. Knott documented multiple instances of untightened, inadequate, or detached anchorage, and instances in which the top of interior pier foundations had

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completely failed. Repair of the foundation system will require a combination of anchorage repair and pier foundation repair – see "*Repair Recommendations*" for more information.

## 5.2. Repair Recommendations

As stated previously, it is Knott's position that Hangar "A" has met or exceeded its service life and is not a good candidate for retrofit and repair. As stated previously, Knott documented evidence of large penetrations through the metal roof deck (**Figure 12**) and failed light-gauge roof beams (**Figure 13**) While truss members appeared largely undamaged, widespread difficult operation of hangar doors suggested significant deflection of truss elements (**Figure 14**). Isolated cases of damaged column sections were observed (**Figure 15**). Widespread damage to column anchorage was found, including inadequate, damaged, and missing anchorage (**Figure 16-19**). The lateral system was observed to be highly deficient, with only two bays of partial-height bracing visible (**Figure 20 and 21**) and evidence of historic wind damage to the exterior of the building (**Figure 22**), suggesting lateral forces are inadequately resisted by cladding and bending in primary support elements. Variable top-of-pier elevations and multiple shim plates placed underneath columns further suggested historic foundation movement within the hangar (**Figure 23-25**). This report does not list any repair recommendations for Hangar "A".

The repair recommendations listed for Hangar "B" should be evaluated by a licensed contractor to provide the Client with an estimated cost of repairs. Please note that the repairs listed assume the usage of the IEBC repair provisions regarding "*less than substantial structural damage*," (Section 405.2.1) which allows for the restoration of elements to their pre-damaged state if restoration of the structure would cost less than 50 percent of the market value of the structure before the damage occurred. Should the evaluated cost exceed 50 percent, Knott would advise against pursuing continued repairs for Hangar "B," for similar reasons as stated previously for Hangar "A."

Due to the nondestructive nature of Knott's investigation, any interior finishes and/or obstructions installed by the tenants of the hangar units (e.g., insulation, gypsum wallboard, furniture) were not removed. See <u>Section 5.2.4</u> for "*Items Not Reviewed*."

Based upon Knott Laboratory's inspection, the available information, and these engineers' education, training, and experience, the following recommendations have been reached within a reasonable degree of engineering certainty:

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# 5.2.1. Engineered Repair Recommendations

The subsequent recommendations are provided as conceptual, general repairs of the items discussed herein. The intent of the following is that all repairs shall be provided in whole. It is Knott's opinion that it is necessary for qualified design professionals to perform additional work to prepare construction documents, details, calculations, and specifications for construction of these repairs:

#### • Gravity System:

- Engineered plan to complete installation of a continuous beam-andcolumn system parallel with Hangar "B"'s current exterior wall, to be integrated with existing exterior wall elements. Each hangar unit would require a minimum W21x44 beam section spanning approximately 40'-0" to minimum HSS6x6x3/8 column sections bearing on minimum 3'-0x3'-0x1'-0 foundations located below frost depth would be required to meet deflection and strength criteria for continued operation of the exterior doors. Note that hangar doors would require detaching, resetting and possible modifications to accommodate the new support configuration (Figure 26 and 27).
  - Importance: High
  - Hangar "B":
    - Unit 1 (1)
    - Unit 2 (1)
    - Unit 3 (1)
    - Unit 4 (1)
    - Unit 5 (1)
    - Unit 6 (1)
    - Unit 7 (1)
    - Unit 8 (1)
    - Unit 9 (1)
    - Unit 10 (1)
- Engineered detail to repair missing/detached angle kickers bracing the bottom flange of the tapered wide-flange girder members. Knott estimates a minimum of *(1)* instance of this repair (**Figure 28**).
  - Importance: Medium

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- Hangar "B":
  - Storage unit adjacent to Unit 1 (1)

### • Lateral System:

- Engineered detail to replace double angle moment frame connections with braced frame connections, and to attach new lateral tension tie plate connections to restore a continuous load path for the building's lateral system. Knott estimates a minimum of (40) instances of this repair (Figures 29-33).
  - Importance: High
  - Hangar "B":
    - Unit 1 (4)
    - Unit 2 (4)
    - Unit 3 (4)
    - Unit 4 (4)
    - Unit 5 (4)
    - Unit 6 (4)
    - Unit 7 (4)
    - Unit 8 (4)
    - Unit 9 (4)
    - Unit 10 (4)

# • Foundation System:

- Engineered detail to repair damaged or detached column anchorages and failed top of piers. Knott estimates a minimum of (8) instances of this repair (Figures 34-36).
  - Importance: High
  - Hangar "B":
    - Unit 4 (1)
    - Unit 5 (1)
    - Unit 6 (1)
    - Unit 7 (1)
    - Unit 8 (2)
    - Unit 9 (2)

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# 5.2.2. Contractor/General Repair Recommendations

The subsequent recommendations are provided as conceptual, general repairs of the items discussed herein. It is Knott's opinion that the following repairs may be undertaken by a qualified contractor without additional construction documents, details, calculations, and specifications from a qualified design professional.

### • Gravity System:

- Manually reversing out-of-plumb/rotated/deflected columns back to straight. Knott estimates a minimum of *(4)* instances of this repair (**Figure 37**).
  - Importance: High
  - Hangar "B":
    - Unit 5 (1)
    - Unit 7 (1)
    - Unit 9 (1)
- Tightening of existing bolts to a snug-tight condition, and replacement of any bolt not capable of being tightened, or with inadequate thread count above tightening nut. A minimum of (2) threads are required to protrude above the tightening nut. This is a common condition throughout the "B" Hangar (Figure 38).

#### • Lateral System:

- Snug hand tightening of existing brace turnbuckles and column connections, and replacement of any brace not capable of being tightened. This is a common condition throughout the "B" Hangar (Figure 39).
  - Importance: Medium
- See "Gravity System" recommendations where applicable to the lateral system.
- Foundation System:
  - o None.

### 5.2.3. Monitoring Recommendations

The subsequent recommendations are provided as conceptual, general repairs of the items discussed herein. It is Knott's opinion that the following items may be monitored

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by qualified maintenance or engineering personnel and are not required to be repaired for continued life-safety of the "B" Hangar in the next 3-5 years.

- Gravity System:
  - Monitor gravity framing for excessive deflection (Figure 40)
    - Importance: General Maintenance
- Lateral System:
  - Monitor diaphragm bracing connections to tapered wide-flange girder members to ensure bracing members and connections are taut (Figure 40).
    - Importance: General Maintenance
- Foundation System:
  - o None.

#### 5.2.4. Items Not Inspected

As stated previously, due to the nondestructive nature of Knott's investigation, any interior finishes and/or obstructions installed by the tenants of the hangar units (e.g., insulation, gypsum wallboard, furniture) were not removed. Additionally, due to the limited intended remaining service period (3-5 years), elements pertaining only to serviceability criteria (e.g., exterior door supports) were not evaluated.

A list of hangar units with intermittent or full wall coverings, or inaccessible units, are listed below. Unknown conditions may exist at the following units that may require additional recommendations or engineered repairs. Knott is available to provide a follow-up investigation if interior finishes are removed in some or all of these units:

#### • Fully Obscured (Unable to Inspect)

- Hangar "A":
  - Storage unit adjacent to Unit 2
- Intermittently Obscured (Partially Inspected)
  - Hangar "A":
    - None
  - Hangar "B":
    - Unit 10

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# <u>6.</u> <u>Closure</u>

The opinions and findings expressed in this report are based upon the information available to these writers as of the date of this report and are the result of limited nondestructive visual inspections of the exposed building components. As such, Knott Laboratory reserves the right to modify the conclusions contained herein upon receipt or discovery of additional information. Due to the limited access and the non-destructive nature of the investigation, Knott Laboratory cannot be held responsible for any hidden defects that may negatively impact the performance of the structure. This report is intended to provide an overview of the existing conditions and should not be used as an indicator of future performance; no expressed or implied warranties or guarantees of any kind are given.

Respectfully submitted,

KNOTT LABORATORY, LLC

Austin D. Friday, M.S., P.E. Project Engineer



Scott B. Hargrove, M.S., P.E. Engineering Manager

Appendix A: Figures

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## Appendix A: Figures

Photographs taken during Knott Laboratory's inspection, which have not been included in this report, have been retained on file and can be made available upon request. Note the brightness and/or contrast of some photographs may have been enhanced for purposes of clarity. Some photographs may be cropped from their original sizes to emphasize a specific item or feature. No significant changes to any photographs were made that would alter factual representations.

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Figure 1 – Aerial overview of subject property (Google Earth). Emphasis added by Knott.

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Figure 2 – Overview of hangar layout in Hangar "A".



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Figure 3 – Overview of hangar layout in Hangar "B".



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Figure 4 – Approximate dimensions of standard "T" hangar configuration in Hangar "A".



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Figure 5 – Approximate dimensions of nested "T" hangar configuration in Hangar "B".







Figure 6 – Approximate dimensions of storage unit configuration in Hangar "B".





Figure 7 – IMG\_7518 – Hangar "A" – Overview of typical standard "T" hangar.







Figure 8 – IMG\_7520 – Hangar "A" – Overview of typical standard "T" hangar.





Figure 9 – IMG\_7421 – Hangar "B" – Overview of typical nested "T" hangar.





Figure 10 – IMG\_7428 – Hangar "B" – Overview of typical nested "T" hangar.



Figure 11 – IMG\_7449 – Hangar "B" – Overview of typical nested "T" hangar.





Figure 12 – IMG\_7529 – Hangar "A" Unit 4 – Large penetrations through roof deck.





Figure 13 – IMG\_7620 – Hangar "A" Storage unit next to Unit 8 – Failed light-gauge roof beams.





Figure 14 – IMG\_7596 – Hangar "A" Unit 3 – Excessive deflection of truss supports allowed only partial operation of hangar door.







Figure 15 – IMG\_7523 – Hangar "A" Unit 2 – Damaged column section.





Figure 16 – IMG\_7570 – Hangar "A" Unit 4 – Exemplar inadequate (undersized) column anchorage. Note shims placed underneath column.





Figure 17 – IMG\_7571 – Hangar "A" Unit 4 – Exemplar damaged column anchorage. Note shims placed underneath column.





Figure 18 – IMG\_7576 – Hangar "A" Unit 5 – Exemplar missing column anchorage.







Figure 19 – IMG\_7584 – Hangar "A" Unit 3 – Exemplar missing column anchorage.





Figure 20 – IMG\_7616 – Hangar "A" Unit 1 – Partial-height braced frame.





Figure 21 – IMG\_7553 – Hangar "A" Unit 8 – Partial-height braced frame.





Figure 22 – IMG\_7628 – Hangar "A" exterior – Historic wind damage to exterior of building.





Figure 23 – IMG\_7538 – Hangar "A" Unit 6 – Low top-of-pier elevation; excessive shims below columns.





Figure 24 – IMG\_7548 – Hangar "A" Unit 8 – Low top-of-pier elevation; excessive shims below columns.





Figure 25 – IMG\_7548 – Hangar "A" Unit 8 – Low top-of-pier elevation; excessive shims below columns.





Figure 26 – IMG\_7470 – Hangar "B" Unit 10 – Exemplar deflection of primary supports allowed only partial operation of hangar doors.



Figure 27 – IMG\_7434 – Hangar "B" Unit 3 – Exemplar overview of exterior wall. Note exterior column attachment (foreground) only provides lateral stability.





Figure 28 – IMG\_7402 – Hangar "B" Storage unit adjacent to Unit 1 – Missing angle kicker to bottom flange of girder.










Figure 30 – IMG\_7420 – Hangar "B" Storage unit adjacent to Unit 1 – Exemplar detail of poor attachment of double-angle moment frame connections.





Figure 31 – IMG\_7468 – Hangar "B" Unit 9 – Exemplar detail of poor attachment of double-angle moment frame connections.



Figure 32 – IMG\_7428 – Hangar "B" Unit 3 – Exemplar missing tension ties.





Figure 33 – IMG\_7440 – Hangar "B" Unit 5 – Exemplar missing tension ties.





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Figure 34 – IMG\_7482 – Hangar "B" Unit 8 – Exemplar damaged column anchorage and top of pier.





Figure 35 – IMG\_7460 – Hangar "B" Unit 9 – Exemplar detached column anchorage.





Figure 36 – IMG\_7493 – Hangar "B" Unit 6 – Exemplar failed top-of-pier condition.





Figure 37 – IMG\_7460 (repeat) – Hangar "B" Unit 9 – Exemplar deflected column requiring manual reversal of column movement.





Figure 38 – IMG\_7475 – Hangar "B" Unit 10 – Exemplar column anchorage requiring tightening.





Figure 39 – IMG\_7449 – Hangar "B" Unit 7 – Exemplar existing brace turnbuckles/column connection requiring tightening.



Figure 40 – IMG\_7504 – Hangar "B" Unit 4 – Exemplar overview of gravity and diaphragm bracing, to be monitored for deflection and/or tautness.



# **Report of Findings**

Knott Laboratory Project Number: 20939

Northern Colorado Regional Airport "C" Hangars 4930/4960 Grumman Street Loveland, Colorado 80538

#### **Prepared for:**

Michelle Martin Civil Innovations 1635 Foxtail Drive #302 Loveland, Colorado 80538

#### **Prepared By:**

Scott B. Hargrove, M.S., P.E. Engineering Manager Knott Laboratory, LLC 7185 South Tucson Way Centennial, Colorado 80112

April 25, 2023



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VIA EMAIL (Michelle.martin@civilinnovations.com)

Michelle Martin Civil Innovations 1635 Foxtail Drive #302 Loveland, Colorado 80538

#### Re: Report of Findings

Property:	Northern Colorado Regional Airport					
	"C" Hangars					
Address:	4930/4960 Grumman Street					
	Loveland, Colorado 80538					

Ms. Martin:

Knott Laboratory, LLC (Knott) inspected the buildings at the above-referenced property. This report provides the findings and conclusions reached as a result of that investigation.

#### 1. Background

The subject property consisted of two single-story steel-framed hangar structures. Online records with the Larimer County Assessor's Office were not available for the property, but the age of the buildings have been described to Knott as approximately 45 years. As such, the buildings were constructed prior to the first publishing of the International Building Code (IBC), in 2000. The Loveland Building Department, under whose jurisdiction the hangars are located, has currently adopted the 2018 editions of the I-Codes with Loveland Building Code Amendments. This is set to change to the 2021 editions on June 1<sup>st</sup>, 2023. Reportedly, in April 2020, the Northern Colorado Regional Airport and the cities of Loveland and Fort Collins gained total ownership of the "C" Hangars. An aerial photograph of the property is provided in **Appendix A** as **Figure 1**.

The property was the subject of a limited previous inspection and corresponding report by ditesco Project & Construction Engineering Services (ditesco), with a reported inspection date of August 18, 2022, and report publishing date of September 20, 2022. The "C" Hangars, as well as the adjoining "A" and "B" Hangars, were evaluated by ditesco to provide general conditions of the hanger buildings and inform the owner(s) of the buildings of the current conditions of each hangar, and a summary of conclusions reached. At the time of publishing, that report concluded "*all four of the structures were observed to have significant issues with the subgrade, foundation, anchorage, and structural members…due to the cumulative effects of the issues observed, there is not an opportunity to implement an isolated repair without addressing the structure*[s] *in its entirety…there are no recommendations for remediation to safely extend the lifespan of the hangars.*" ("Northern Colorado Regional Airport T-Hangar Structural Analysis, ditesco, September 20, 2022).



# 2. Purpose

Knott was retained by Civil Innovations to provide a facility condition assessment of the property. Knott's Facility Condition Assessment (FCA) process is intended to evaluate the condition of the structure as well as look for signs of any underlying issues or deferred maintenance items, and to provide guidance and prioritization of repairs as a result of that evaluation.

In the case of the "C" hangars, this included a more detailed onsite investigation of the main structural elements visible from the interiors and exteriors of the hangars than was previously completed, and an evaluation of the existing conditions of those structural elements for a full documentation of the building. As the "C" hangar buildings were constructed before the first edition of the IBC, it is unlikely that the structure, with a complete analysis using modern building codes, would be sufficient. In contrast, a facility condition assessment allows Knott to consider the historical performance of the building, and tailor repair recommendations based off the types of failures observed, the geographic risk factors associated with the building, and an evaluation of the existing Correspondingly, Knott has approached this project using the failures recorded. provisions of Chapter 4 "Repairs" of the 2018 International Existing Building Code's (IEBC) repair provisions regarding "less than substantial structural damage," (Section 405.2.1) which allows for the restoration of elements to their pre-damaged state if restoration of the structure would cost less than 50 percent of the market value of the structure before the damage occurred.

This inspection was to be followed by a report identifying the repairability of the "C" hangars and discussing areas that require repairs for the purpose of extending the life of the buildings another 3-5 years, at the request of the client.

As such, the contents of this report and repair recommendations are *not* intended to restore the building to a state of full compliance – instead, they are intended to restore life-safety components of the building's gravity, lateral and foundation systems to their pre-damaged condition. Knott should be contacted if this limited additional service life window is to be changed.

# 3. Procedure

Knott's Scott B. Hargrove, M.S., P.E.; Austin D. Friday, M.S., P.E. and Jesse Niethammer, E.I.T. conducted an inspection of the "C" Hangars on April 7, 2023. This inspection included a review of all observable structural elements within each hangar building. On a limited basis, a ladder was used to assist in observations of rooftop structural elements. Francis Robbins of the Northern Colorado Regional Airport and Ken Pavlick of Civil Innovations were present during the inspection. Knott documented and photographed the available information during the inspection. Due to the nondestructive nature of



Knott's investigation, any interior finishes and/or obstructions installed by the tenants of the hangar units (e.g. insulation, gypsum wallboard, furniture) were not removed. As such, these items did occasionally impede Knott's visual inspection (see <u>Section 5.2.5</u> "*Items Not Reviewed*"). The photographs depicted in **Appendix A** are a sample of the photographs taken by Knott, and the remaining may be presented upon request.

## 4. Documents Reviewed

The following documents and materials were reviewed and/or referenced as part of Knott's investigation, and/or contain information pertinent to the discussion and conclusions presented herein:

- 1. Larimer County Assessor's Office online property records, URL: https://www.larimer.gov/assessor/search#/property/.
- 2. Applied Technology Council Hazards by Location tool, URL: https://hazards.atcouncil.org/#/.
- 3. ditesco Project & Construction Engineering Services "*Northern Colorado Regional Airport T-Hangar Structural Analysis*," Dated September 20, 2022

## 5. Findings and Discussion

Knott Laboratory has divided this section of the report into the following subsections for clarity: *"C" Hangar On-Site Investigation Summary* and *Repair Recommendations*. Photographs referenced in the discussion are provided in **Appendix A**.

#### 5.1. <u>"C" Hangar On-Site Investigation Summary</u>

The "C" Hangars were arranged to contain 20 individual hangar units per building, nested alongside one another in a rough "T" shape. An overview of the hangar layout in each building is provided as **Figure 2**. An exemplar plan of a "T" shaped individual hangar unit is provided as **Figure 3**. Each also contained 2 storage units each, similarly nested at opposite ends of the building. An exemplar plan of the storage unit is provided as **Figure 4**.

Knott was able to access all 20 units and 2 storage units within each "C" Hangar building. An exemplar overview of a typical "T" shaped individual hangar unit is provided as **Figure 5-7**, and an exemplar overview of a typical storage unit is presented as **Figure 8 and 9**. During the inspection, visible gravity and lateral load-carrying members were examined and their condition noted, with the exception of elements that were obscured (Section 5.2.4 "*Items Not Reviewed*").

The gravity load-bearing system was observed to be a metal roof deck atop roughly equally spaced light-gauge beam members, which spanned approximately 20'-0" to built-



up, tapered wide-flange girder members (referred to as "I-beams" within the ditesco report). These girder members were arranged perpendicular to the exterior of the hangars and were located approximately 20'-0" on-center. The girder members spanned from two columns, located approximately 30'-0" from one another, and were cantilevered an additional 15'-0" beyond those columns to the exterior of the building. The exterior wall, including the operable hangar doors, were supported by wide-flange beams spanning between load-bearing column members, spaced at the corners of the "T"-shaped units at approximately 40'-0". The load-bearing column members were observed to be comprised of (2) light-gauge channel elements, placed with webs facing one another and intermittently welded together. All load-bearing column members were positioned upon pier foundations.

The gravity load-bearing system was generally observed to be intact and functional. The metal deck was largely free of deterioration and observable penetrations from the limited ground-based inspection Knott performed. Knott does not recommend any repairs or ongoing maintenance to the rooftop metal deck. Light-gauge rooftop beam members were similarly observed to be largely free of deterioration, with isolated elements exhibiting deviations from the vertical (visually "rolling"). While no specific repair recommendations are prescribed for the rooftop beam members, these elements should be monitored for excessive deflection in the upcoming 3-5 years of service life. Isolated cases of deterioration were observed in the supporting wide-flange girder members. In addition to monitoring these elements for excessive deflection, Knott recommends (1) girder element be cleaned and inspected to ensure the connecting welds and section remain undamaged. Additionally, isolated cases of detached and missing bracing elements were observed along the wide-flange girder members that require restoration. See "Repair Recommendations" for more information. Load-bearing column members were observed to be generally intact and functional, with isolated cases of deformation (presumed to be due to impacts) and/or section loss. Knott recommends monitoring these elements for indications of further damage. The connection from load-bearing column members to the foundation elements below were observed to be generally deteriorated and in need of repair, particularly at the exterior wall of the hangar buildings. See "Repair Recommendations" for the locations and extents of these repairs.

The lateral system was integrated into the same elements used as the gravity loadbearing system. Braced frames were formed by connecting vertical tension rods to the tops and bottoms of column members in both primary directions of the building. Diaphragm bracing was also present, similarly formed by connecting horizontal tension rods to perpendicular wide-flange girder members directly below the rooftop metal deck.

Vertical bracing systems were generally observed to be damaged and in need of engineered repair. Knott noted multiple instances of tension elements sagging and/or buckling, as well as the failure of multiple connections from the tension elements to their



supporting load-bearing columns. See "*Repair Recommendations*" for the locations and extents of these repairs. Horizontal bracing systems were generally observed to be intact and functional. Isolated instances of buckled or missing horizontal braces, or poor connections from braces to supporting girders that require repair or monitoring are listed in "*Repair Recommendations*."

The foundation system, observed to be pier foundations of unknown depth, varied between 18" and 24" in diameter. The pier foundations supported both the gravity and lateral systems of the building through baseplates and anchorage at the base of column elements. Knott recorded multiple instances of post-installed repairs or modifications to the baseplates and anchorages throughout both "C" Hangar buildings.

The foundation system, including baseplates and anchorages, were generally observed to be damaged and in need of engineered repair. Many baseplates were in various stages of deterioration, and Knott recorded multiple instances of missing or detached anchorages as stated previously.

## 5.2. Repair Recommendations

As stated previously, due to the nondestructive nature of Knott's investigation, any interior finishes and/or obstructions installed by the tenants of the hangar units (e.g. insulation, gypsum wallboard, furniture) were not removed. See <u>Section 5.2.4</u> for "*Items Not Reviewed*." Additionally, due to the limited intended remaining service period (3-5 years), elements pertaining only to serviceability criteria (e.g. exterior door supports) were not evaluated.

Based upon Knott Laboratory's inspection, the available information, and these engineers' education, training, and experience, the following recommendations have been reached within a reasonable degree of engineering certainty:

#### 5.2.1. Engineered Repair Recommendations

The subsequent recommendations are provided as conceptual, general repairs of the items discussed herein. The intent of the following is that all repairs shall be provided in whole. It is Knott's opinion that it is necessary for qualified design professionals to perform additional work to prepare construction documents, details, calculations, and specifications for construction of these repairs:

#### • Gravity System:

• Engineered detail to repair missing/detached angle kickers bracing the bottom flange of the tapered wide-flange girder members. Knott estimates a minimum of *(10)* instances of this repair (**Figures 10 and 11**).



- Importance: Medium
- Building 1:
  - Unit 17 (1)
  - Unit 19 (2)
  - Unit 20 (1)
- Building 2:
  - Unit 2 (3)
  - Unit 4 (1)
  - Unit 10 (1)
  - Unit 15 (1)
- Lateral System:
  - Engineered detail to repair damaged/detached lateral tension tie plate connection to restore a continuous load path for the building's lateral system. Knott estimates a minimum of (15) instances of this repair (Figures 12-14).
    - Importance: High
    - Building 1:
      - Storage unit adjacent to Unit 1 (1)
      - Storage unit adjacent to Unit 20 (1)
      - Unit 1 (3)
      - Unit 3 (1)
      - Unit 7 (1)
      - Unit 8 (1)
      - Unit 9 (1)
      - Unit 11 (1)
    - Building 2:
      - Storage unit adjacent to Unit 19 (1)
      - Unit 2 (1)
      - Unit 3 (1)
      - Unit 15 (2)
- Foundation System:
  - Engineered detail to repair damaged, detached or missing column anchorages. Knott estimates a minimum of *(24)* instances of this repair (**Figures 15-17**).
    - Importance: High
    - Building 1:



- Unit 2 (1)
- Unit 4 (1)
- Unit 8 (1)
- Unit 12 (1)
- Unit 14 (1)
- Unit 16 (1)
- Unit 18 (2)
- Building 2:
  - Unit 1 (2)
  - Unit 4 (1)
  - Unit 5 (2)
  - Unit 6 (1)
  - Unit 7 (1)
  - Unit 8 (1)
  - Unit 9 (1)
  - Unit 10 (1)
  - Unit 11 (1)
  - Unit 12 (1)
  - Unit 13 (1)
  - Unit 15 (1)
  - Unit 17 (1)
  - Unit 19 (1)

#### 5.2.2. Contractor/General Repair Recommendations

The subsequent recommendations are provided as conceptual, general repairs of the items discussed herein. It is Knott's opinion that the following repairs may be undertaken by a qualified contractor without additional construction documents, details, calculations, and specifications from a qualified design professional.

#### • Gravity System:

- Cleaning and inspection of (1) primary girder member to evaluate extent of rust/deterioration damage. Knott is available to provide an engineering evaluation after cleaning is complete. Knott recommends the following candidates as "worst-case" scenarios that may be used to judge the suitability of the remaining girders (Figures 18 and 19):
  - Importance: Medium
  - Building 1:
    - Unit 8



- Unit 10
- Manually reversing out-of-plumb/rotated columns back to straight. Knott estimates a minimum of *(4)* instances of this repair (**Figures 20 and 21**).
  - Importance: Medium
  - Building 1:
    - Unit 2 (1)
  - Building 2:
    - Unit 9 (1)
    - Unit 13 (1)
    - Unit 20 (1)
- Tightening of existing bolts to a snug-tight condition, and replacement of any bolt not capable of being tightened, or with inadequate thread count above tightening nut. A minimum of (2) threads are required to protrude above the tightening nut. This is a common condition throughout the "C" Hangars (Figure 22 and 23).
- Re-attachment/addition of missing bolts in structural bolted connections where a bolt previously existed. This is a common condition throughout the "C" Hangars (Figure 24 and 25).

#### • Lateral System:

- Replacement of vertical tension rod elements, to match existing, where current brace is missing or buckled. Knott estimates a minimum of *(14)* instances of this repair (**Figure 26 and 27**).
  - Importance: High
  - Building 1:
    - Unit 1 (1)
    - Unit 15 (3)
    - Unit 17 (2)
    - Unit 20 (2)
  - Building 2:
    - Unit 3 (2)
    - Unit 7 (2)
    - Unit 13 (2)



- Replacement of horizontal/diaphragm tension rod elements, to match existing, where current brace is missing or buckled. Knott estimates a minimum of (5) instances of this repair (Figure 28 and 29).
  - Importance: High
  - Building 1:
    - Unit 18 (2)
    - Building 2:
      - Storage unit next to Unit 2 (2)
      - Unit 4 (1)
- Snug hand tightening of existing brace turnbuckles and column connections, and replacement of any brace not capable of being tightened. This is a common condition throughout the "C" Hangars (Figure 30 and 31).
  - Importance: Medium
- See "Gravity System" recommendations where applicable to the lateral system.
- Foundation System:
  - o None.

#### 5.2.3. Monitoring Recommendations

The subsequent recommendations are provided as conceptual, general repairs of the items discussed herein. It is Knott's opinion that the following items may be monitored by qualified maintenance or engineering personnel and are not required to be repaired for continued life-safety of the "C" Hangars in the next 3-5 years.

- Gravity System:
  - Monitor gravity framing for excessive deflection and/or continued "rolling." Monitor gravity column elements with existing section loss and/or deformation for excessive deflection (Figure 32-36)
    - Importance: General Maintenance
- Lateral System:
  - Monitor diaphragm bracing connections to tapered wide-flange girder members to ensure bracing members and connections are taut, particularly where a sharp angle occurs between the bracing connection and the brace line. This is a common condition throughout the "C" Hangars (Figure 37).



- Importance: General Maintenance
- Monitor diaphragm bracing splices to ensure bracing members are taut, where an eccentric welded connection occurs between two tension members. This is a common condition throughout the "C" Hangars (Figure 38).
  - Importance: General Maintenance
- Foundation System:
  - o None.

#### 5.2.4. Items Not Inspected

As stated previously, due to the nondestructive nature of Knott's investigation, any interior finishes and/or obstructions installed by the tenants of the hangar units (e.g. insulation, gypsum wallboard, furniture) were not removed. Additionally, due to the limited intended remaining service period (3-5 years), elements pertaining only to serviceability criteria (e.g. exterior door supports) were not evaluated.

A list of hangar units with intermittent or full wall coverings is listed below. Unknown conditions may exist at the following units that may require additional recommendations or engineered repairs. Knott is available to provide a follow-up investigation if interior finishes are removed in some or all of these units:

#### • Fully Obscured (Unable to Inspect)

- Building 1:
  - None
- Building 2:
  - Unit 11
- General:
  - Foundation elements and connections obscured by concrete/soil. All foundation elements should be uncovered and inspected during repairs.

#### • Intermittently Obscured (Partially Inspected)

- Building 1:
  - Unit 15
  - Unit 17
  - Unit 18
- Building 2:
  - Unit 1
  - Unit 2
  - Unit 8



- Unit 9
- Unit 12
- Unit 20
- Storage Unit adjacent to Unit 19



# <u>6.</u> <u>Closure</u>

The opinions and findings expressed in this report are based upon the information available to these writers as of the date of this report and are the result of limited nondestructive visual inspections of the exposed building components. As such, Knott Laboratory reserves the right to modify the conclusions contained herein upon receipt or discovery of additional information. Due to the limited access and the non-destructive nature of the investigation, Knott Laboratory cannot be held responsible for any hidden defects that may negatively impact the performance of the structure. This report is intended to provide an overview of the existing conditions and should not be used as an indicator of future performance; no expressed or implied warranties or guarantees of any kind are given.

Respectfully submitted,

KNOTT LABORATORY, LLC

Austin D. Friday, M.S., P.E. Project Engineer



Scott B. Hargrove, M.S., P.E. Engineering Manager

Appendix A: Figures



## Appendix A: Figures

Photographs taken during Knott Laboratory's inspection, which have not been included in this report, have been retained on file and can be made available upon request. Note the brightness and/or contrast of some photographs may have been enhanced for purposes of clarity. Some photographs may be cropped from their original sizes to emphasize a specific item or feature. No significant changes to any photographs were made that would alter factual representations.





Figure 1 – Aerial overview of subject property (Google Earth). Emphasis added by Knott.

Corporate Office: 7185 South Tucson Way • Centennial, CO 80112-3987 • p 303.925.1900 • f 303.925.1901 Branch Offices: Colorado Springs, CO • Fort Collins, CO • Grand Junction, CO • Phoenix, AZ • Houston, TX • San Antonio, TX www.knottlab.com Figure 2 – Overview of hangar layout in Buildings 1 and 2.

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Figure 5 – IMG\_5135 – Building 1, Unit 2 – Exemplar overview of "T" hangar.



Figure 6 – IMG\_5136 – Building 1, Unit 2 – Exemplar overview of "T" hangar.





Figure 7 – IMG\_5137 – Building 1, Unit 2 – Exemplar overview of "T" hangar.



Figure 8 – IMG\_5166 – Building 2, Storage unit adjacent to Unit 19 – Exemplar overview of storage unit.





Figure 9 – IMG\_5170 – Building 2, Storage unit adjacent to Unit 19 – Exemplar overview of storage unit.



Figure 10 – IMG\_6620 – Building 1, Unit 20 – Exemplar photograph of detached angle kicker bracing bottom flange of tapered wide-flange girder member.





Figure 11 – IMG\_5236 – Building 2, Unit 10 – Exemplar photograph of missing angle kicker bracing bottom flange of tapered wide-flange girder member.





Figure 12 – IMG\_5167 – Building 2, Storage unit adjacent to Unit 19 – Damaged lateral tension tie connection at column.





Figure 13 – IMG\_6513 – Building 1, Unit 7 – Exemplar photograph of detached lateral brace plate connection to top of supporting column.





Figure 14 – IMG\_6733 – Building 2, Unit 3 – Exemplar photograph of detached lateral brace plate connection to base of supporting column.




Figure 15 – IMG\_6666 – Building 1, Unit 12 – Exemplar condition of damaged anchorage (threads not protruding above nut due to column sitting on shims installed during, or post, construction).





Figure 16 – IMG\_6751 – Building 2, Unit 7 – Exemplar condition of detached anchorage (anchor bolt originally placed too near edge of plate and subject to corrosion).





Figure 17 – IMG\_5163 – Building 2, Unit 7 – Exemplar condition of detached anchorage (anchor connection failed due to corrosion; threads not protruding above nut due to column sitting on shims installed during, or post, construction; or both).





Figure 18 – IMG\_6674 – Building 1, Unit 10 – Example wide-flange girder candidate for cleaning and inspection to evaluate extent of rust/deterioration damage.



Figure 19 – IMG\_6688 – Building 1, Unit 8 – Example wide-flange girder candidate for cleaning and inspection to evaluate extent of rust/deterioration damage.





Figure 20 – IMG\_5129 – Building 1, Unit 2 – Exemplar photograph of out-of-plumb column.





Figure 21 – IMG\_6790 – Building 2, Unit 13 – Exemplar photograph of rotated column.





Figure 22 – IMG\_6465 – Building 1, Storage unit adjacent to Unit 1 – Exemplar photograph of bolts requiring tightening to snug-tight condition.





Figure 23 – IMG\_6461 – Building 1, Storage unit adjacent to Unit 1 – Exemplar photograph of inadequate thread count above tightening nut.





Figure 24 – IMG\_6554 – Building 1, Unit 13 – Exemplar photograph of missing bolts in structural bolted connections.





Figure 25 – IMG\_6654 – Building 1, Unit 14 – Exemplar photograph of missing bolts in structural bolted connections.





Figure 26 – IMG\_6563 – Building 1, Unit 15 – Exemplar photograph of missing vertical tension rod element.





Figure 27 – IMG\_6732 – Building 2, Unit 3 – Exemplar photograph of missing vertical tension rod element.





Figure 28 – IMG\_5288 – Building 2, Storage unit adjacent to Unit 2 – Exemplar photograph of missing diaphragm bracing.





Figure 29 – IMG\_5276 – Building 2, Unit 4 – Exemplar photograph of buckling of diaphragm bracing.





Figure 30 – IMG\_6470 – Building 1, Storage unit adjacent to Unit 1 – Exemplar photograph of turnbuckle requiring snug hand tightening.





Figure 31 – IMG\_6481 – Building 1, Storage unit adjacent to Unit 1 – Exemplar photograph of tension rod column connection requiring tightening.





Figure 32 – IMG\_6456 – Building 1, Storage adjacent to Unit 1 - Isolated roof framing members exhibiting deviations from the vertical ("rolling") -ongoing monitoring required.





Figure 33 – IMG\_6492 – Building 1, Unit 3 – Section loss in structural member - ongoing monitoring required.





Figure 34 – IMG\_5125 – Building 1, Unit 4 – Section loss in structural member - ongoing monitoring required.





Figure 35 – IMG\_6555 – Building 1, Unit 13 – Deformation, presumably due to impact, in structural member - ongoing monitoring required.





Figure 36 – IMG\_6621 – Building 1, Unit 20 – Deformation, presumably due to impact, in structural member - ongoing monitoring required.





Figure 37 – IMG\_5235 – Building 2, Unit 10 – Exemplar photograph of sharp angle created between diaphragm bracing connection and brace line.





Figure 38 – IMG\_6606 – Building 1, Unit 19 – Exemplar photograph of eccentric welded connection between two tension members in diaphragm bracing.



NORTHERN COLORADO REGIONAL AIRPORT

# HANGAR ASSESSMENT







## Approach

**Facility Condition Assessment (FCA)** – Intended to evaluate the condition of the structure as well as look for signs of any underlying issues or deferred maintenance items, and to provide guidance and prioritization of repairs as a result of that evaluation. When used for buildings that were constructed before the IBC (International Building Code), allows us to consider the historical performance of the building and tailor repair recommendations based on the types of failures observed.

**International Existing Building Code (IEBC)** Chapter 4 "repairs" allows for the restoration of elements to their pre-damaged state if the restoration cost is less an 50% of the market value of the structure before damage occurred.

Intended to extend the life by 3-5 years.







HANGAR "A" OVERVIEW PLAN



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## Hangar A – Structure

- Reportedly constructed in 1966
- Contains 8 Individual hangars with two storage areas, constructed in a T shape
- Metal roof deck atop light-gauge beam members spanning to trusses, with isolated instances of damage
- Load-bearing column members on pier foundations, with isolated instances of damage
- Load-bearing system aging and only partially functional
- Significant deflection of the truss members made exterior hangar doors difficult to operate
- Lateral load system was observed to by highly deficient with evidence of historic damage from lateral loads
- Poor anchorage to foundation elements and indications of historic differential movement





### Hangar B



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HANGAR 'B' OVERVIEW PLAN

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## Hangar B – Structure

- Reportedly constructed 1974
- Contains 10 Individual hangars with two storage areas, constructed in a nested T shape
- Metal roof deck atop light-gauge beam members spanning to I-beam girders
- Exterior walls, including the hangar doors, are supported by a double channel section connected to cantilevered I-beam girders
- Exterior columns do not act as gravity supports for the exterior wall and doors.
- Load-bearing column members on concrete pier foundations
- Gravity, lateral and foundation load-bearing system is in need of repair
- Vertical bracing has been removed in tenant finished areas
- Framing members missing fasteners throughout building





## Hangar B

#### Repairs

- No repairs or maintenance are recommended for the rooftop metal deck or rooftop beam members (other than monitoring)
- Gravity system complete installation of a beam and column system parallel with the exterior wall.
  - Addition of upper support beam to support doors and provide roller tracking
  - Hangar doors would likely need to be repaired/reset
- Lateral system repair approximately 40 angle moment frame connections with braced frame connections
- Foundation system repair approximately 8 damaged or detached column anchorages
- Manually reversing approximately 4 out-of-plumb/rotated/deflected columns
- Replacement and tightening of existing bolts and braces throughout the building





## Hangar B – Structure

#### **Repairs Costs**

• Approximate costs at \$115,000

		Materials & Labor	10% OH&P	10% PM/CM	5% Contingency	Total
Hangar B	Repairs	\$91,158	\$9,116	\$10,027	\$5,014	\$115,315
	Replacement	\$225,000	\$0	\$22,500	\$11,250	\$258,750

#### Conclusion

- Approximate cost of replacement for a building of this type is \$260,000. Removal of the existing building is not included in this cost.
- Repairs are approaching the 50% replacement cost outlined in the IEBC. At 50% or higher, the IEBC would not allow repairs to a pre-damaged historic state. Instead, repairs would require adherence to more strict, modern codes.





### Hangar C



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## Hangar C – Structure

- Reportedly constructed 1977
- Contains 20 Individual hangars with four storage areas, constructed in a nested T-shape
- Metal roof deck atop light-gauge beam members spanning to I-beam girders
- Exterior walls, including the hangar doors, are supported by a double channel section columns
- Load-bearing column members on pier foundations
- Gravity, lateral and foundation system is in need of repair





## Hangar C – Structure

#### Repairs

- No repairs or maintenance are recommended for the rooftop metal deck or rooftop beam members (other than monitoring)
- Gravity system repair approximately 10 missing angle kickers
- Lateral system -repair approximately 15 damaged/detached lateral tension tie plate connection
- Install 12 lateral tension rods between vertical members
- Foundation system repair approximately 24 damaged, detached, or missing column anchorages
- Cleaning and inspection of one primary girder member
- Manually reversing approximately 4 out-of-plumb/rotated/deflected columns
- Tightening existing bolts
- Re-attachment/ addition of missing bolts in structural bolted connections





## Hangar C

#### **Repairs Costs**

• Approximate costs at \$90,000

		Materials & Labor	10% OH&P	10% PM/CM	5% Contingency	Total
Hangar C	Repairs	\$70,523	\$7,052	\$7,758	\$3,879	\$89,212

#### Conclusion

- Repairs can be made
- There will be some disruption to the existing tenants



