



NORTHERN COLORADO REGIONAL AIRPORT COMMISSION

4900 EARHART ROAD • LOVELAND, CO 80538

NOTICE OF PUBLIC MEETING EVENT

THURSDAY, JULY 18, 2024

3:30PM – 5:30PM

AGENDA ITEMS

STAKEHOLDER APPRECIATION EVENT

LOCATED IN THE FIRE TRUCK BAY OF THE AIRPORT ADMINISTRATION BUILDING, FOOD WILL BE PROVIDED

1. AIRPORT DIRECTOR'S REPORT HIGHLIGHTS
2. TOUR OF AIRPORT TERMINAL BUILDING

PLEASE NOTE THAT THIS TOUR WILL TAKE PLACE ON AN ACTIVE CONSTRUCTION SITE WHICH DOES NOT CURRENTLY MEET ADA REQUIREMENTS. MULTIPLE TOURS WILL BE GIVEN IN SMALL GROUPS.

ANYONE INTERESTED IN ATTENDING THE TOUR MUST COMPLY WITH THE FOLLOWING:

- SIGN A RELEASE OF LIABILITY WAIVER – P.2
- WEAR LONG PANTS
- WEAR CLOSED TOE SHOES
- WEAR A SAFETY VEST, SAFETY GLASSES, AND A HARD HAT (THESE ITEMS WILL BE PROVIDED)

MEETING PLANNING CALENDAR

AUGUST 15	SEPTEMBER 19	OCTOBER 17
<ul style="list-style-type: none">• FINAL REVIEW OF 2025 BUDGET AND FEES• FINAL REVIEW OF 2025 CIP	<ul style="list-style-type: none">• TERMINAL BUDGET AND CONSTRUCTION UPDATE	<ul style="list-style-type: none">• GOVERNANCE MODEL UPDATE

All members of the public are invited to attend this meeting at the address below:
4900 Earhart Rd. Loveland, CO 80538.

No virtual attendance option will be available for this event.

I, _____, understand that by entering the site of the _____, project (the "Project") currently being constructed by Hensel Phelps Construction Co. at _____, I am entering a construction site which has certain unavoidable, inherent hazards.

In consideration for the opportunity to visit the Project site, I, for myself and my successors and assignees, hereby assume the risk of entering the construction site where the Project is located, and release and discharge Hensel Phelps from any liability, costs, or expenses due to any injury sustained by me or any other person or any personal property while visiting the Project site.

DATED this _____ day of _____, 20_____.

Signed: _____

Reason for Visit: (please complete!)



NORTHERN COLORADO REGIONAL AIRPORT

4900 Earhart Rd • Loveland, Colorado 80538

(970) 962-2850 • FAX (970) 962-2855 • TDD (970) 962-2620

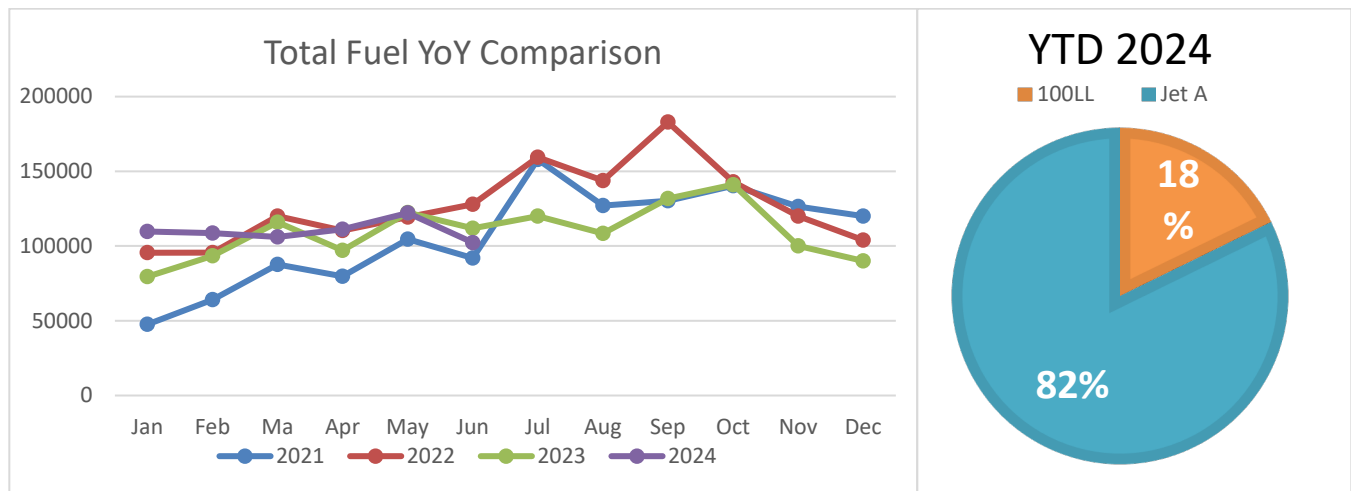
Date: July 16, 2024
To: Northern Colorado Regional Airport Commission
From: Francis Robbins , Acting Airport Director
Re: Airport Report for July 2024

Report Highlights

- On July 11th, Serco-NA notified the airport of the FNL Tower staffing forecast at one controller starting August 12th. In light of these changes, Serco has proposed a new schedule for Tower hours to minimize ATC-Zero time. The proposed changes starting August 12th are:
 - Sunday through Friday: Tower open 0800-1200, closed 1200-1245, reopen 1245-1645
 - Saturday: Tower closedA meeting with Serco has been scheduled for July 23rd for all stakeholders to attend.
- TAXIWAY B&D/HANGAR TAXILANES. The Taxiway B&D rehabilitation is awaiting the release of FAA grant funding. Once the funds are available, the project will be contracted to Coulson Excavating. FNL expects the grant to be routed for signature this month. A preconstruction meeting for the hangar Taxi lanes is expected to take place before the end of the month.
- GOVERNANCE Study. The Governance Board, established by the cities of Fort Collins and Loveland, met on July 8th to begin evaluating governance options. Additional meetings are in the process of being scheduled.
- FCLWD Potable Water Pipeline construction is substantially completed, seeded, and the project has demobilized.
- The Airport Director position will accept applications through July 28th.
- The next FNL Stakeholder meeting will be held on August 6th and will include in-person and on-line options.

Airport Activity Dashboard

- Flight operations for the month of June averaged 264 per day, and the thirteen-month rolling average is 295 operations per day.
- Wholesale fuel ordered on and off airport was 102,333 gallons for the month of June, a decrease of 8.5% compared to the previous June at 111,185 gallons.
 - Total year to date fuel is up 6% year over year.
 - Total fuel flowage through May 2024, is 660,246 gallons compared to 620,235 Gallons YTD in June 2023.
- Business jet activity for June compared to the same month in 2023 was up 27%, going from 407 to 556 operations.



Federal Contract Tower (FCT)

Serco informed FNL that the number of controllers staffed at FNL Tower is anticipated to reduce to 1 controller on August 12. The temporary tower hours will be Sunday through Friday: Tower open 0800-1200, closed 1200-1245, reopen 1245-1645 and Saturday Closed. A phone call with Serco for FNL stakeholders to get updated information and ask questions has been scheduled for Tuesday Sept 23rd at 3:00 pm. An email containing the temporary tower hour information and the meeting invite was sent to stakeholders on Monday, July 15. Individuals who did not receive the information and would like to, should contact airport@cityofloveland.org to be added to the email list.

Terminal

Exterior concrete work is ongoing in the drive lanes in front of the terminal. Interior finishing is progressing with painting, bathroom tile installation, and the placement of equipment, including the baggage claim carousel. The reconstruction of the north portion of the parking lot is scheduled for completion by August 1st. There will then be a 1-week transition to start work on the south half of the terminal parking lot.

The Ditesco construction summary is attached.

Governance

The Governance Board, established by the two Cities, had their first meeting on July 8th. Various governance models were evaluated and the challenges of the current model were discussed, including funding for capital projects and the approval authority of the commission. The date of the next meeting will be communicated to the commission once determined.

Taxiway B&D/Hangar Taxilanes

FNL is completing the contracting process with Coulson Excavating for the local portion of this project and expects to begin the project in July. The Federal portion of the project is still awaiting the grant award, with it possibly arriving this week. Construction dates will be communicated once known.

Aero FNL

Aero FNL hangar located on Stearman Taxiway will obtain occupancy permits this month for buildings 1, 2, and 3. A grand opening event is to be held July 25th from 3-5 pm. All commissioners and FNL stakeholders are invited to attend. When the remainder for the 5 buildings are completed later this fall, the hangar campus will constitute at \$13 million investment in 23 general aviation hangar units.

Airport Scheduled Events

- August Runway Painting Dates TBD
- Sep 14 Aims Aviation Day
- Oct 9 Terminal Target Completion
- Oct 12-18 NIFA SAFECON Event

Attachments

1. Ditesco Progress report
2. CDOT Digital Tower June Report



Northern Colorado Regional Airport Terminal



Exterior flatwork



Departure lounge ceiling drywall



Parking lot demo and site paving

MAJOR MILESTONES

- Drywall installation and finishing is underway.
- Interior finishes and room build out is underway.
- Concrete flatwork installation is underway.
- Roof top HVAC unit placement is complete.
- Automatic entrance door installation is complete.

WORK UPCOMING

- Acoustical ceiling panel installation.
- Baggage handling system installation.
- Electrical fixtures and equipment installation.
- Plumbing fixture installation.
- Site paving.
- Irrigation and landscaping installation.
- Systems testing and building commissioning.
- Project substantial completion.



EXPENDITURE TO DATE

\$11,346,677

CONTRACT VALUE: \$16,693,680

CHANGE ORDER PERCENTAGE

12.31%

TERMINAL BUILDING: 3.27%
ADDED WORK FOR PARKING LOT: 9.04%

DAYS CHARGED TO DATE

349

ORIGINAL CONTRACT: 422 DAYS

LOOK AHEAD SCHEDULE

	JUNE	JULY	AUGUST	SEPTEMBER
Drywall/acoustical ceiling panel installation				
Interior room buildout and finishes				
Baggage handling system installation				
Building commissioning and testing				
Site paving				
Irrigation and landscaping				
Project substantial completion				



Weekly Report

7/12/24

Northern Colorado Regional Airport Terminal (FNL)

Owner: Northern Colorado Regional Airport
Engineer: Dibble
Contractor: Hensel Phelps

Owner's Project No.: AP2004
Engineer's Project No.: 2019-129

Tasks completed/underway 07/08/24 – 07/12/24:

- Interior hard lid ceiling drywall installation and finishing is underway.
- Concrete sidewalk placements are underway.
- Interior painting is underway.
- Parking rough grade subgrade prep (north) is underway.
- Light pole base rough-in is underway.
- Terminal entrance concrete paving is underway.
- Baggage handling equipment installation is underway.

Work scheduled for 07/15/24 - 07/19/24:

- Continued baggage handling equipment installation.
- Parking lot subgrade cement treatment.
- Parking lot subgrade aggregate base course placement
- Continued concrete paving.
- Initial mechanical/electrical systems check out

Upcoming Activity Schedule	7/08/24-7/12/24	7/15/24-7/19/24	7/22/24-7/26/24
Interior Drywall Installation and Finishes			
Baggage Handling System Installation			
Initial Mechanical Systems Startup			
Parking Lot Subgrade Prep			
Parking Lot Asphalt Paving			
Light Pole Base Rough-In			
Terminal Entrance Site Paving (initial)			
Concrete Sidewalk Placements			

Photos attached represent status of work over the last seven days.

Weekly Report Northern Colorado Regional Airport Terminal (FNL)

Photos

Weekly Report

Taken On
07/09/2024

Description
Terminal entrance
formwork and
concrete dowel
placement.



Weekly Report

Taken On
07/12/2024

Description
Terminal entrance
paving placement
and formwork.





June 30, 2024

From: William E. Payne, P.E.

To: Colorado Division of Aeronautics

Section A – Remote Air Traffic Control Contract Progress Report #36

Re: Period: June 1 through June 30, 2024

**Colorado Digital Tower Project
Activity Status**

Activity	Status/Start Date (Projected)	Finish Date (Projected)	Remarks
Digital Tower Implementation			
STARS Operational at FNL	11/25/2022	12/15/2022	Complete
Move STARS Slave Display to Mobile ATCT	8/2/2023	TBD	FAA withholds approval
Digital Tower System			
FNL Non-Binding Letter of Intent to RTX/Frequentis	1/18/2024	2/2/2024	Complete
RTX/Frequentis Letter of Intent to FNL	2/15/2024	2/15/2024	Complete
RTX/Frequentis Digital Tower Proposal	4/18/2024	4/18/2024	Being Reviewed
Response Letter to RTX/Frequentis Proposal	5/1/2024	5/1/2024	Complete
Digital Tower Testing			
RTX/Frequentis Installs Equipment at Tech Center	4/21/2024	TBD	In-Progress
FAA Send Closeout letter and Project Accounting	3/21/2024	3/21/2024	Complete
RTX/Frequentis Begins Testing at Tech Center	5/15/2024	TBD	
RTX/Frequentis Completes System Design Approval	TBD	TBD	
RTX/Frequentis to FNL	TBD	TBD	
FAA Testing at FNL	TBD	TBD	
Digital Tower Receives Op Viability Decision	TBD	TBD	
Digital Tower System and ATCT Commissioned	TBD	TBD	
Functional Acceptance Decision	TBD	TBD	

Remote Tower Project Narrative:

On June 13, 2024 RTX/Frequentis attended a meeting at the Northern Colorado Regional Airport (FNL) to discuss their rough order of magnitude (ROM) proposal of April 18, 2024, and the service provider model. The ROM was considerably more than expected,

considering that the airfield infrastructure and facility are already in place and operational. In preparation for this meeting, we prepared an estimate to design and install the digital tower equipment necessary for FAA site operational testing prior to commissioning. This estimate was provided to RTX/Frequentis prior to the June 13th meeting and included the following (see attached):

A. Capital Cost:

1. Airfield Upgrades:
 - a. Installation of redundant 4K cameras plus spares.
 - b. Installation of pan-tilt-zoom (PTZ) visual and IR cameras.
 - c. Frequentis signal light gun and associated PTZ camera.
 - d. Replacement of the central mast to support the required redundant camera system.
2. Digital tower facility upgrades:
 - a. 4K displays plus spars.
 - b. Frequentis video automation platform.
 - c. Other minor changes to the facility, as needed.
 - d. Updated controller working position consoles.
3. Miscellaneous Federal Contract Tower (FCT) minimum equipment list (MEL) changes.
4. Contingency.

B. Program Cost:

1. System Development.
2. Implementation.
3. Construction/Installation – contractor.
4. Contingency.

This cost estimate was prepared based on discussion with equipment vendors and experience with digital tower systems. It was to be expected that RTX/Frequentis would not fully agree with these costs, as the cameras and displays may be different from those in the estimate. While it included the system development and installation cost, it did not include travel associated with the testing of the system required by FAA. It is reasonable to assume that they wish to recoup some of those costs of development and testing at the Tech Center, which should be considered; however, a substantial portion should be considered sunk costs associated with product development.

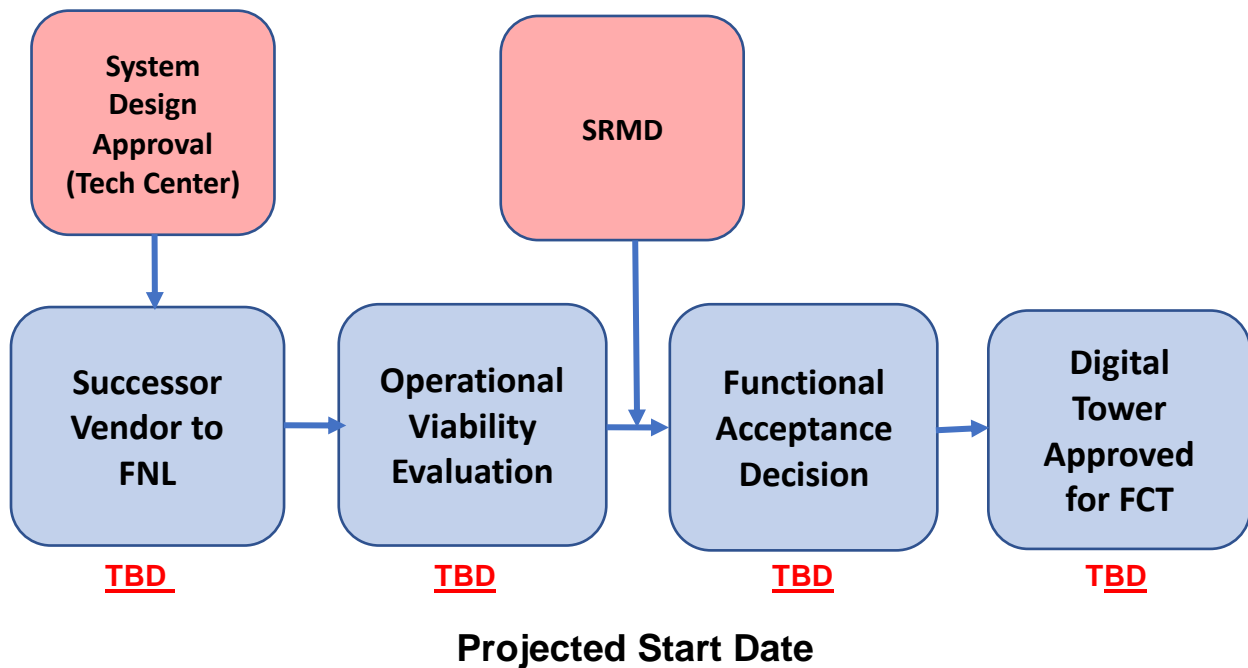
They presented a first cut at a service provider model to allow airports to fund the capital cost and operation and maintenance cost over some specified period of time. This model will need some aggressive refinement, as most small to medium airports would be unable to support their initial cost model.

Both the capital cost at FNL and the service provider model will require further negotiations.

On Monday June 17, 2024, I met with the FAA Airports District Office (ADO) to discuss Airport Improvement Program (AIP) funding opportunities for digital towers. Digital towers

would be eligible for funding under the Small Airport Fund and the Bipartisan Infrastructure Law (BIL) **provided the system was certified by the FAA** which, in the case of digital towers, would require achieving System Design Approval (SDA). The current Program Guidance Letter states that “certified remote towers” would be eligible for AIP and BIL funding. The bottom line is that the digital tower system would have to have been approved by the FAA before AIP or BIL funding would be available.

Proposed Digital Tower Process Moving Forward:



Schedule Note: This status is based on the latest proposed schedule and is dependent upon System Design Approval at the Tech Center.

REMOTE TOWER PROJECT PROGRAM MANAGEMENT

Program Description/Background

The Program Manager for this project, William E. Payne, will serve as a technical subject matter expert to represent the Division’s investment and interest in the Remote Tower and facilitate the project’s forward progress to FAA certification and deployment. The Program Manager will participate in and assist with the development of all evaluation, testing, and certification activities, as well as attend all project meetings, and will serve as the technical representative for the Division of Aeronautics during all phases of the project as enumerated below.

Tasks:

1. Provide Technical Representation and Oversight of the Project

Effort this Period: Completed.

2. Participate in Development of the FAA's Operational Safety Assessment (OSA) Basis for Evaluation of Non-Federal Remote Tower Equipment

Effort this Period: The OSA is still in draft form and is continuing to be developed as the project proceeds toward System Design Approval.

3. Participate in Development of the Operational Visual Requirements (OVR)

Effort this Period: The OVR Version 2.1 has been issued.

4. Participate in Development of the Requirements/Specifications for Non-Federal Tower Equipment

Effort this Period: Participated in the FAA TechOps review and commented on the Remote Tower Requirements Document and prepared comments on OVR 2.1. Completed.

5. Assist with Development of System Configuration

Effort this Period: The system configuration will be modified based on lessons learned 4K cameras and displays for demonstration on March 27, 2023.

6. Modify System Configuration Based on Testing Phase Comments

Effort this Period: Completed by Searidge.

7. Run Periodic Tests of the Remote Air Traffic Control Tower System During Periods of Evaluation/Testing Inactivity

Effort this Period: Complete.

8. Attend System FAA Technical Interchange Meetings (TIM)

Effort this Period: Provided SME representation in the recent FAA discussion of OVR 2.1. Completed.

9. Participate in FAA Configuration Review Board (CRB) Activities

Effort this Period: NextGen has yet to establish the CRB. This effort may be rolled into development of the Remote Tower AC.

10. Evaluate an Air Situation Display in Preparation for Testing Against Standard Terminal Automation Replacement System Radar Equipment (STARS).

Effort this Period: Complete.

11. Collaborate with FAA on Alternate Phase 1 Virtual/Remote Testing

Effort this Period: Complete

12. Work with FAA to develop and Implement Phase 1 Passive Remote Tower Testing

Effort this Period: Complete

13. Work with FAA to Develop and Implement Phase 2 Active Remote Tower Testing

Effort this Period: There has been no activity on this task this period.

14. Work with FAA and FNL on Phase 3 Industry-Led Initial Operational Capability (IOC)

Effort this Period: This task has been renamed Validation & Verification (V&V.) There has been no activity on this task this period. Phase 3 Active Remote Tower Testing will begin after Phase 2 Active Remote Tower testing is complete and the SRMD has been signed.

15. Work with FAA on Phase 4 Remote Tower System Certification and Commissioning

Effort this Period: There has been no activity on this task this period. Phase 4 System Design Approval and Commissioning will begin after the conclusion of Phase 3 V&V and the SRMD has been signed.

16. Participate in Development of the FAA's Advisory Circular (AC) for Remote Tower Systems for Non-Federal Applications

Effort this Period: Continue participation in the FAA TechOps TIM to review and comment on the Remote Tower Advisory Circular.

17. Provision of Regular Written Reports, Presentations and Updates on the Project's Progress to Internal and External Stakeholders

Effort this Period: Preparation of the monthly Program status report.

18. Travel as Needed (In-State and Out of State) for Meetings with FAA, Airport and Division Personnel

Effort this Period: Travel to FNL for meetings with Airport Board and the Cities of Fort Collins and Loveland.

DEVELOPMENT OF POTENTIAL ENHANCED SITUATIONAL AWARENESS TOOLS FOR NON-TOWERED AIRPORTS

Tasks:

- 1. Explore the Potential Development of a System Consisting of Existing and New Surveillance Sources that can be Deployed, Owned and Operated by Non-Towered Airports to Provide Airport Staff with Improved Visibility into the Local Airspace and on the Airport Surface, with the Ultimate Goal of Improving Aviation Safety and System Efficiency.**

Effort this Period: No activity this period.

- 2. Prepare System Requirements to be Used by Airports and/or the Division when Seeking Vendor Proposals to Implement a Situational Awareness System.**

Effort this Period: No activity this period.

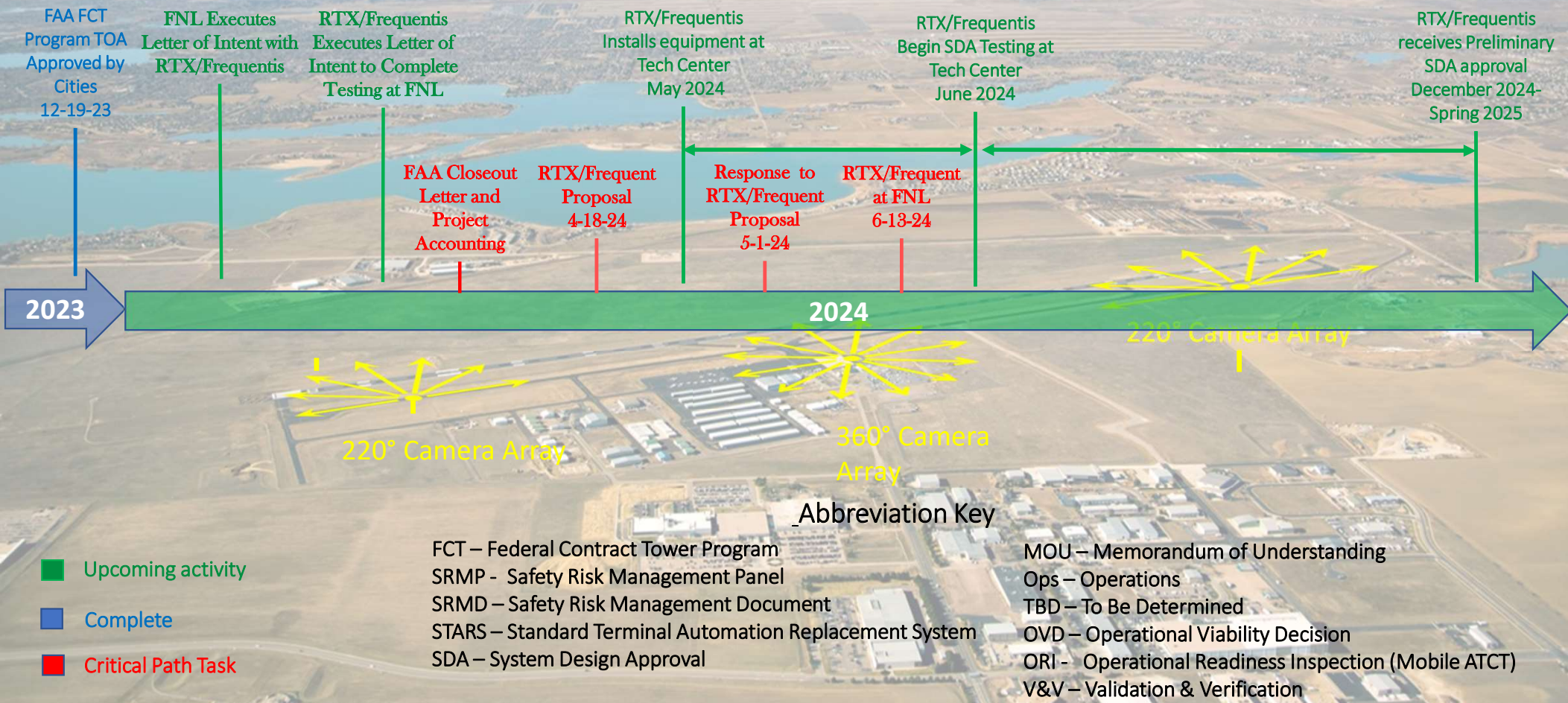
Glossary of Project Technical Acronyms

ADS-B	Automatic Dependent Surveillance – Broadcast
AGL	Above Ground Level
ARTCC	Air Route Traffic Control Center
ASDE-X	Airport Surface Detection Equipment – Model X
ASOS	Automatic Surface Observation System
ASR-9	Airport Surveillance Radar – Model 9
AWOS	Automatic Weather Observation System
ATC	Air Traffic Control
ATIS	Automatic Terminal Information System
AJT	Air Traffic Services
AJI	Safety Technical Training Services
AJV	Mission Support Policies and Procedures
CTAF	Common Traffic Advisory Frequency
ERAM	En Route Automation Modernization
FAA	Federal Aviation Administration
FAT	Factory Acceptance Test (alternately - First Article Test)
FDIO	Flight Data Input/Output
FTI	Federal Communications Infrastructure (Harris Corp.)
GA	General Aviation
HITL	Human In the Loop
HMI	Human Machine Interface
ILS	Instrument Landing System
IOC	Initial Operating Capability
IMC	Instrument Meteorological Condition
LOA	Letter of Agreement
MLAT	Multilateration
MSL	Mean Sea Level (above)
NAS	National Air Space
NATCA	National Air Traffic Controllers Association
NESG	NAS Enterprise Security Gateway
NextGen	Next Generation Air Transportation System
NORDO	No Radio
OSA	Operational Safety Assessment
OTW	Out of the Window
OVD	Operational Viability Decision
RSA	Runway Safety Area
SAT	Site Acceptance Test
SDA	System Design Approval
SMR	Surface Movement Radar
SMS	Safety Management System
SRA	Safety Risk Assessment
SRMD	Safety Risk Management Document
SRMDM	Safety Risk Management Document Memorandum
SRMP	Safety Risk Management Panel
SHA	System Hazard Analysis
SSHA	Sub-System Hazard Analysis
STARS	Standard Terminal Automation Replacement System
SWIM	System Wide Information Management
TAMR	Terminal Automation Modernization and Replacement
TRACON	Terminal Radar Control Facility
UHF	Ultra High Frequency
VFR	Visual Flight Rules
VHF	Very High Frequency
VMC	Visual Meteorological Condition

ATTACHMENTS

1. FNL "Draft Graphic Remote Tower Timeline as of June 30, 2024.
2. FNL Digital Tower Cost Analysis Summary

Colorado Digital Tower Timeline (Draft)



Weekly Report

Taken On
07/16/2024

Description
Return baggage
handling system
installation



Weekly Report

Taken On
07/16/2024

Description
Arrivals/Departure
lounge ceiling paint



Weekly Report

Taken On
07/16/2024

Description
Baggage handling
system control panel
installation.

