

Monday, September 11, 2023

Federal Aviation Administration
Mr. Jason Garwood
Helena Airports District Office
FAA Building, Suite 2
2725 Skyway Drive
Helena, MT 59601

RE: Bozeman Yellowstone International Airport (BZN), 2020 Master Plan Update - Addendum

Dear Mr. Garwood,

Please accept this as an addendum to the 2020 BZN Master Plan Update amending the projected timelines for the items listed below as presented in Section 7.9 of Chapter 7 *Financial Analysis*.

- Taxiway B
- Taxiway B West Extension
- Taxiway C4 New Construction
- Taxiway G Ultimate North Extension and Hangar Area

These projects have moved from the Beyond Planning Horizon (beyond 20 years) category into the Short Term (2021-2025) and Intermediate Term (2026-2030) schedules for the airport.

Also, this addendum includes adding the below projects to the Environmental Assessment (EA) Titled "EA Runway 11-29 to CIII Standards, North Side and Airport Road Relocation Improvements" also called out in Section 7.9.

- Taxiway B
- Taxiway B West Extension
- Taxiway C Relocation
- Taxiway C West Extension
- Taxiway C4 New Construction
- Taxiway G Ultimate North Extension and Hangar Area
- Northside Apron Phase 2
- VOR Relocation

These items will be added to the EA as per the meeting with the FAA Helena ADO at BZN on April 17, 2023. If you should have any questions regarding this addendum, please do not hesitate to call.

Sincerely,



Mark Maierle, P.E.

Enclosures: Capital Projects (Revised 2023), Figure 1 EA Exhibit
CC: Brian Sprenger, President and CEO, Bozeman Yellowstone International Airport

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Capital Projects (Revised 2023)

To develop a CIP, the facility requirements and concepts identified in previous chapters were refined into discrete fundable projects. These projects were phased according to need, priority and critical path to establish a planning level development schedule. Many large scale planning concepts require multiple related and / or dependent projects to be achieved. Maintenance projects such as pavement rehabilitation and reconstruction are timed according to pavement conditions and cycling identified in the facility requirements chapter. Projects are phased in groups of short term (2021-2025), intermediate term (2026- 2030) and long term (2031-2040). Projects for accomplishing ultimate master plan objectives are also identified beyond the 20 year planning horizon.

The following identifies the phased CIP projects grouped according to the master plan concepts they support and a planning meeting with the FAA Helena ADO on April 17, 2023. These projects were used to update the 20-Year Capital Improvement Program.

Runways & Taxiways

Concept: Ultimately extend Runway 12-30 to 10,828 feet. This is a phased development with an initial extension of 328' to align with 11-29 in short term and accommodate the installation of MALSAR RW 30. The ultimate full length extension to the west would occur beyond the planning horizon. Parallel taxiways are extended to correspond with runway lengthening projects.

Short term

- Localizer upgrade, install MALSAR Runway 30
- Runway 12/30 east extension (328' X 150', 25' shoulders)
- Taxiway C1 S Realignment
- Taxiway A east extension (new A1 connector)

Long Term

- Taxiway A widening to add 17.5' shoulders (standards)
- Runway 12/30 widening to add 12.5' shoulders (standards)

Beyond Planning Horizon

- Runway 12/30 west extension
- Runway 12/30 ultimate extension
- Taxiway A west extension
- Taxiway A ultimate west extension

Concept: Ultimately extend and widen Runway 11-29 to 8,500 feet by 150 feet. Extension would be by 2430' to the west and by 1020' to the east. The separation between Taxiway C and Runway 11-29 is increased to 400 feet to meet future standards. Rerouting of Airport Road and partial removal of Tubb Road are required to accommodate the extended runway and relocated taxiway.

Short term

- EA Runway 11-29 to CIII Standards, North Side and Airport Road Relocation Improvements
 - Review ATC Tower siting
- VOR Relocation
- Airport Road Relocation
 - Fill and grade gravel pit waste area,
 - Review stop light and turn bay improvements on U.S. Hwy 10,
 - Reconstruct/extend Jetway Drive,
 - Realign Dry Creek and culvert improvements,
 - Abandon or culvert Dry Creek lateral,
 - Relocate/extend security fence as development dictates.

Intermediate Term

- Taxiway C West Extension
- Tubb Road Removal (portion of road to be abandoned and removed)
- Taxiway C Relocation
- Runway 11/29 west extension and widening
 - PAPI relocation
 - Lose Turf Runway 11G-29G
 - Relocate effluent irrigation
- Runway 11/29 west extension (2430' X 150', 25' shoulders)
- Taxiway C4 new construction

Long Term

- Runway 11/29 east extension (1020', 25' shoulders)
- Taxiway C east extension
- Taxiway C1 east extension

Beyond Planning Horizon

- ATC Relocation (reviewed during EA)

Concept: Ultimately extend Runway 3-21 to 5,100 feet. Parallel taxiways are extended to correspond with associated runway projects.

Short Term

- TW F relocation and service road
- Taxiway F1 (connection to 3-21)
- Taxiway G1 (connection to 3-21)

Intermediate Term

- Taxiway G ultimate north extension for Hangar Construction

Beyond Planning Horizon

- Runway 3/21 ultimate extension

Taxiways

Concept: Consider addition of bypass taxiways and secondary parallel taxiways to serve the existing runway system.

Short Term

- Taxiway B East
- Taxiway B1
- Taxiway B2

Intermediate Term

- Taxiway B west extension

Concept: Consider addition of high speed exits for capacity improvement and operational efficiency.

Long Term

- High speed exits 1, 2, 3 and 4
- Taxiway A2 Demolition
- Taxiway A4 Demolition

Concept: Increase separation between Taxiway C and Runway 11-29 to 400 feet.

Intermediate Term

- Taxiway C Relocation

Concept: Resolve "hammerhead" taxiway issue at Runway 21 threshold.

Short Term

- Runway 3-21 Extension (to TW C2)
- TW C2 Extension (to RW 3-21)

Runway Approaches

Concept: Pursue improvement to the minimums of Runway 12-30 with designation as a Category II Runway with a Runway Visual Range (RVR) of 1,200 feet (1/4 mile).

Short Term

- Runway Visual Range

Concept: As far as practicable, bring Runway 30 to the same precision approach standards as Runway 12 including the addition of ILS and approach lighting.

Long Term

- Runway 30 relocate localizer install MALSAR

Concept: Pursue GPS approaches to Runway 11-29 in the short term.

Short Term

- Develop/modify approach and departure procedures to Runway 11-29
 - Pursue GPS approaches to Runway 11-29
 - Possible sidestep to Runway 12-30)

Terminal Area

Concept: Provide for automobile parking expansion through construction of parking garages and expansion of parking lots for the general public, employees, and rental car ready and return.

Short Term

- Complete terminal expansion to 12 gates
- Terminal paid parking lot re-stripe
- Rental car wash parking lot expansion

Intermediate Term

- Paid parking garages

Long Term

- Paid parking garages

Beyond Planning Horizon

- Employee parking lot south expansion
- Paid parking lot south expansion (south of car condos)

Concept: Expand the terminal building to accommodate 20 gates.

Short Term

- Passenger boarding bridges (B6 & B7)
- Integrated baggage system (outbound)
- Expand terminal building gates A3, A4 and A5 (design)

Intermediate Term

- Expand terminal building gates A3, A4 and A5 (construction)

Long Term

- Expand terminal apron east
- Terminal expansion gates A6, A7, A8
- New passenger boarding bridges (Gates A6-A8)
- Expand terminal apron west
- Expand Terminal West
- Passenger boarding bridges (B8-B12)

General Aviation

Concept: Add north side general aviation development and accommodate build out in existing GA area.

Short Term

- Land acquisition
- Wings Way realignment (for west GA area development)
- Road to north GA apron
- Northside Apron, Access Road, Service Road – Phase 1
- Northside apron utilities

Intermediate Term

- Northside apron phase 2
 - Close portions of East Baseline Road and Lagoon Road
 - Culvert/relocate/abandon Spain Ferris Ditch lateral
 - Relocate/extend security fence as development dictates
 - Address any radar impacts

Long Term

- Northside Large Hangar Development

Beyond Planning Horizon

- Sande property subdivision loop
- Sande property subdivision utilities

Airport Support

Concept: Expand the Airport's ARFF Building with the acquisition of additional equipment as required.

Short Term

- ARFF Truck
- ARFF Building Expansion

Concept: Addition of new maintenance and snow removal equipment, as required.

Short Term

- Snow Removal Equipment
- Construct Snow Removal Equipment Building

Intermediate Term

- Snow Removal Equipment

Concept: Plan for additional fuel storage facilities.

Short Term

- West Fuel Farm
- East Fuel Farm Expansion

Pavement Maintenance

Concept: Maintain all airfield pavements on a regular cycle.

Short Term

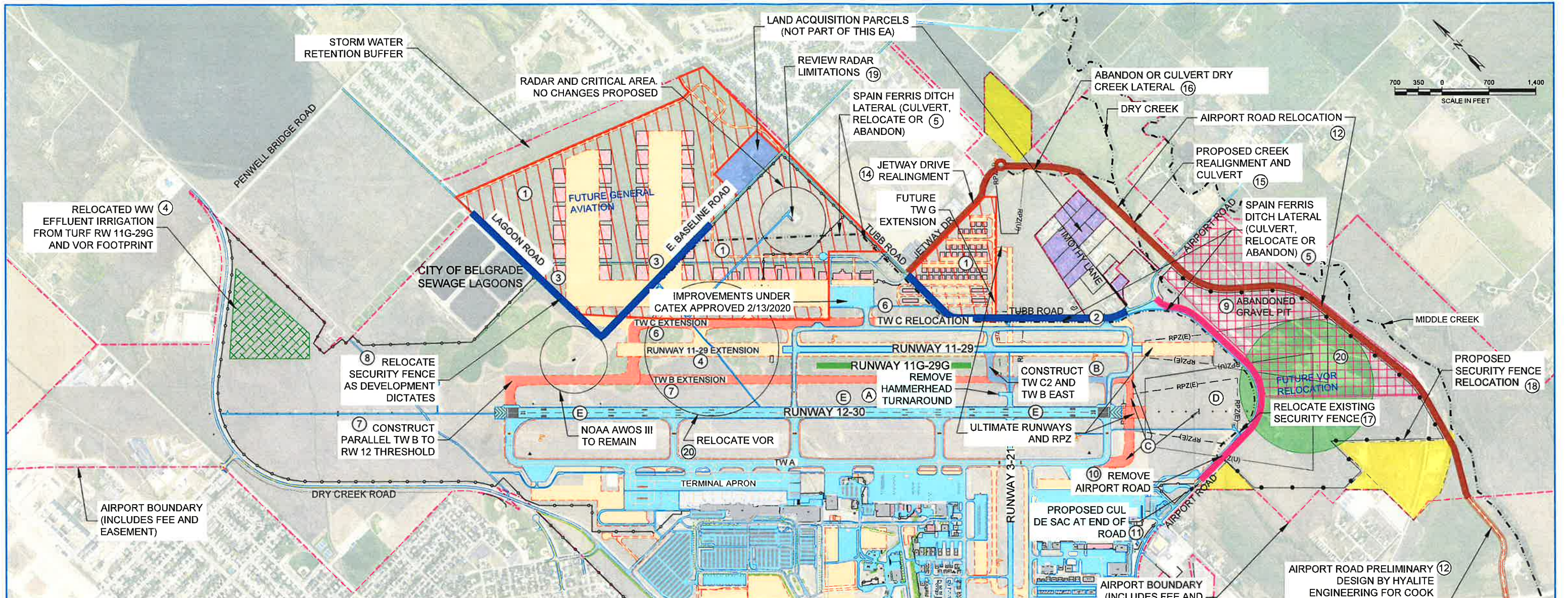
- Terminal Apron Rehabilitation
- East GA Apron Rehabilitation – Overlay
- West GA Apron Rehabilitation
- Tie-Down Rehabilitation and Expansion

Long Term

- Taxiway A Rehabilitation
- Runway 12/30 Rehabilitation

Beyond Planning Horizon

- Apron seal coats
- Taxilane seal coats
- Taxiway C1 Overlay
- Taxiway C3 Overlay



PROPOSED ACTION:

- ① EXPAND APRON/TAXILANE/HANGAR AREA (WATER / SEWER / ROADS / DRAINAGE / UTILITIES)
- ② CLOSE / REMOVE APPROXIMATELY 3,500 LF OF TUBB ROAD
- ③ CLOSE / REMOVE APPROXIMATELY 2,300 LF OF EAST BASELINE ROAD AND 2,650 LF OF LAGOON ROAD
- ④ RW 11-29
 - i. EXTEND RW 11-29 2,430 LF TO THE WEST
 - ii. REVIEW ATC TOWER SITING
 - iii. WIDEN RW 11-29 TO 150' WIDE (AIRCRAFT >100,000 LBS)
 - iv. RELOCATE PAPI
 - v. LOSE TURF RW 11G-29G AND RELOCATION OF EFFLUENT IRRIGATION - REVIEW LOSS OF TURF IN RSA MEETING AND EVALUATE ALTERNATIVE LANDING SURFACE IN RSA
 - vi. APPROACH DEVELOPMENT - SIDESTEP
 - vii. APPROACH / DEPARTURE PROCEDURES
- ⑤ CULVERT/RELOCATE/ABANDON SPAIN FERRIS DITCH LATERAL
- ⑥ RELOCATE / EXTEND TW C ALONG RW 11-29
- ⑦ EXTEND TAXIWAY B TO RUNWAY 12 THRESHOLD AND CONNECTOR TAXIWAY TO RUNWAY 11 THRESHOLD
- ⑧ RELOCATE SECURITY FENCE AS DEVELOPMENT DICTATES
- ⑨ GRAVEL PIT WASTE AREA FILLING AND REGRADING
- ⑩ REMOVE/ABANDON APPROXIMATELY 3,800 LF OF AIRPORT ROAD
- ⑪ CONSTRUCT CUL DE SAC ON EXISTING AIRPORT ROAD CONSTRUCT APPROXIMATELY 11,000 LF TOTAL OF NEW AIRPORT ROAD AND ADJOINING ROAD IMPROVEMENTS/CONTROLS (SEE 13) (APPROXIMATELY 2,500 LF BY HYALITE ENGINEERING)
- ⑫ CONSTRUCT STOP LIGHT AND TURN BAY IMPROVEMENTS ON U.S. HIGHWAY 10 (COORDINATE FOR MDT MEPA)
- ⑬ CONSTRUCT/RECONSTRUCT APPROX. 2,300 LF OF JETWAY DRIVE
- ⑭ REALIGN DRY CREEK AND CULVERT IMPROVEMENTS
- ⑮ ABANDON OR CULVERT DRY CREEK LATERAL
- ⑯ RELOCATE APPROXIMATELY 3,200 LF OF SECURITY FENCE
- ⑰ CONSTRUCTION APPROXIMATELY 10,500 LF OF SECURITY FENCE
- ⑱ REVIEW RADAR IMPACTS
- ⑳ RELOCATE VOR - BY FAA - TIME TBD

ONGOING ACTIONS IN IMMEDIATE AREA:

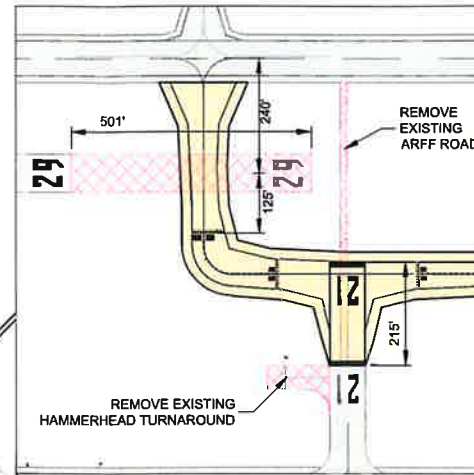
- (A) REMOVE HAMMERHEAD TURNAROUND - CATEX FOR 2024 CONSTRUCTION
- (B) CONSTRUCT TW C2 AND TW B EAST - CATEX FOR 2024 CONSTRUCTION
- (C) EXTEND RW 30 APPROXIMATELY 328 LF, CONSTRUCT NEW EXIT TAXIWAY TO TAXIWAY A AND C1, INSTALL RW 30 MALSR (FAA), EXISTING P-401 REMOVAL, TAXIWAY LIGHTING INSTALL, PAPI RELOCATION, 30 REIL REMOVAL, DISPLACED THRESHOLD TILL MALSR IN PLACE - CATEX FOR 2024 CONSTRUCTION
- (D) RW 12-30 ILS IMPROVEMENTS - TECH OPS TO CATEX
- (E) FIBER OPTIC / RVR IMPROVEMENTS - BY TECH OPS

LEGEND:

- EXISTING PAVEMENT AREAS
- FUTURE PAVEMENT AREAS
- FUTURE NORTH SIDE IMPROVEMENTS (APRON/TAXILANE/HANGAR/WATER/SEWER/DRAINAGE/LIGHTING/FENCING/ROADWAY DEVELOPMENT)
- CLOSE / REMOVE SECTION OF EXISTING ROAD
- PROPOSED TAXIWAY AND RUNWAY PAVEMENTS
- PROPOSED AIRPORT ROAD RELOCATION
- REMOVE SECTION OF EXISTING AIRPORT ROAD
- EXISTING DITCH/CREEK
- AIRPORT PROPERTY BOUNDARY (FEE & EASEMENT)
- LAND IN AIRPORT BOUNDARY BY EASEMENT
- APPROX. LIMITS OF ABANDONED GRAVEL PIT
- TIMOTHY LANE LAND ACQUISITIONS PARCELS
- E. BASELINE ROAD LAND ACQUISITIONS PARCEL

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	<p>BOZEMAN YELLOWSTONE INTERNATIONAL AIRPORT</p> <p>BELGRADE MONTANA</p> <p>RUNWAY 11-29 TO C-III STANDARDS, NORTH SIDE AND AIRPORT ROAD RELOCATION IMPROVEMENTS</p>		<p>PROJECT NO. 0761.156</p> <p>FIGURE NUMBER EA FIG. 1</p>

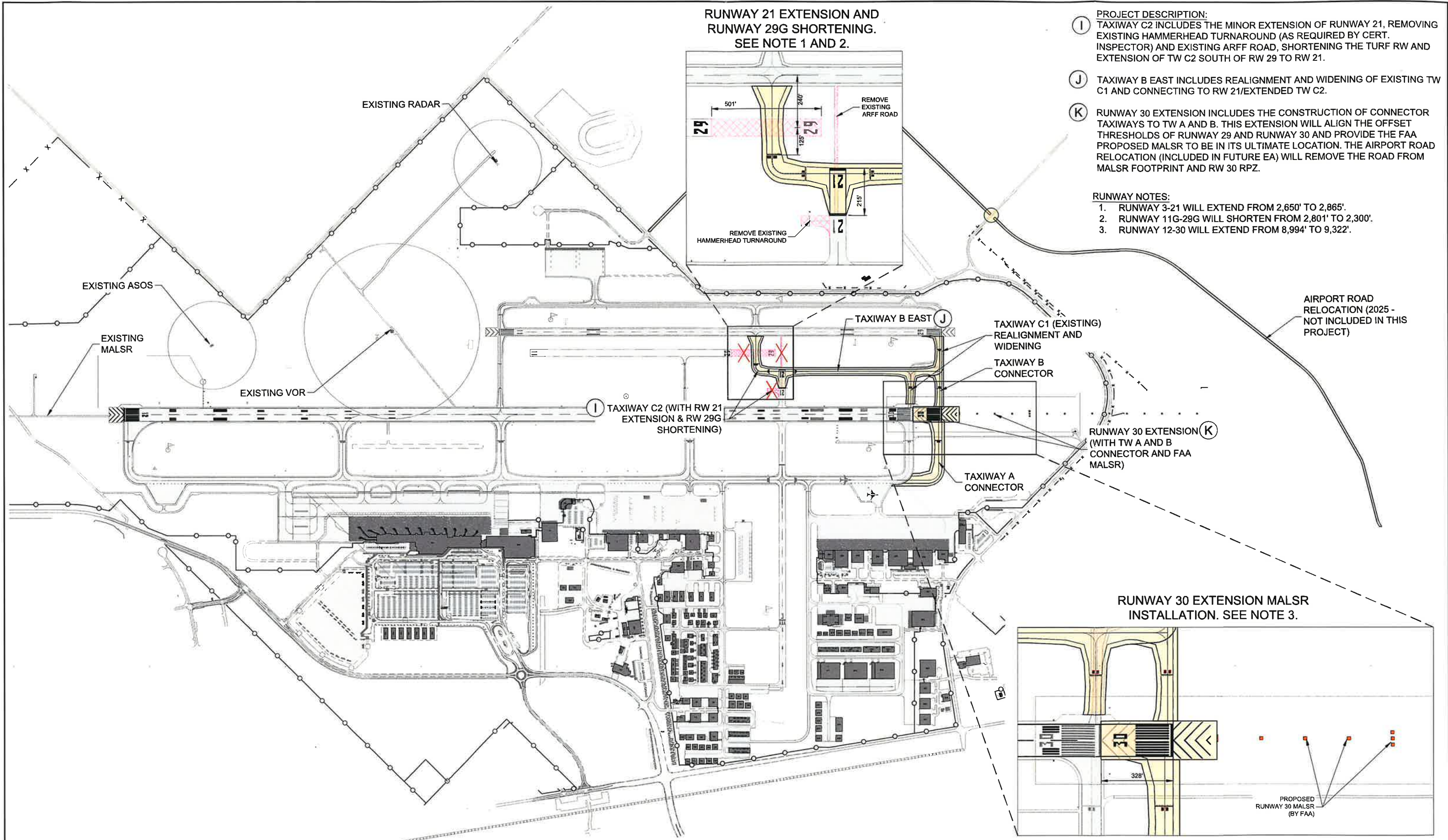
**RUNWAY 21 EXTENSION AND
RUNWAY 29G SHORTENING.
SEE NOTE 1 AND 2.**



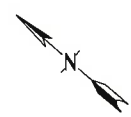
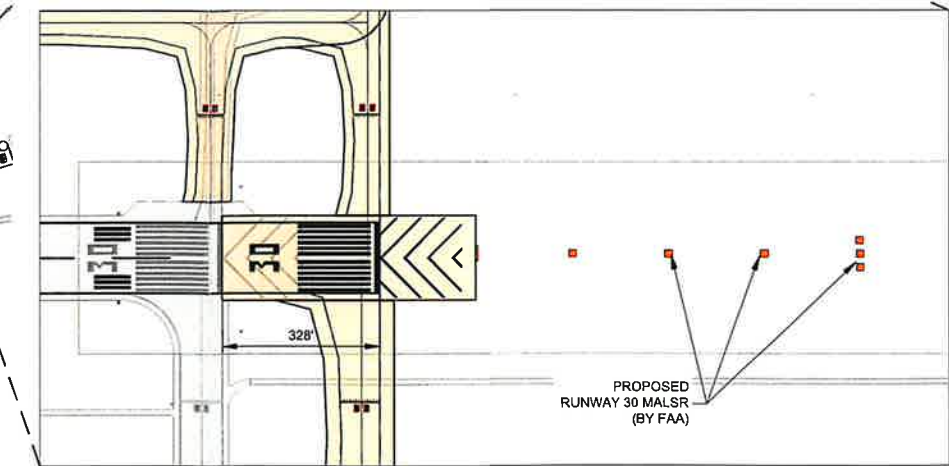
- I** PROJECT DESCRIPTION: TAXIWAY C2 INCLUDES THE MINOR EXTENSION OF RUNWAY 21, REMOVING EXISTING HAMMERHEAD TURNAROUND (AS REQUIRED BY CERT. INSPECTOR) AND EXISTING ARFF ROAD, SHORTENING THE TURF RW AND EXTENSION OF TW C2 SOUTH OF RW 29 TO RW 21.
- J** TAXIWAY B EAST INCLUDES REALIGNMENT AND WIDENING OF EXISTING TW C1 AND CONNECTING TO RW 21/EXTENDED TW C2.
- K** RUNWAY 30 EXTENSION INCLUDES THE CONSTRUCTION OF CONNECTOR TAXIWAYS TO TW A AND B. THIS EXTENSION WILL ALIGN THE OFFSET THRESHOLDS OF RUNWAY 29 AND RUNWAY 30 AND PROVIDE THE FAA PROPOSED MALSR TO BE IN ITS ULTIMATE LOCATION. THE AIRPORT ROAD RELOCATION (INCLUDED IN FUTURE EA) WILL REMOVE THE ROAD FROM MALSR FOOTPRINT AND RW 30 RPZ.


RUNWAY NOTES:

1. RUNWAY 3-21 WILL EXTEND FROM 2,650' TO 2,865'.
2. RUNWAY 11G-29G WILL SHORTEN FROM 2,801' TO 2,300'.
3. RUNWAY 12-30 WILL EXTEND FROM 8,994' TO 9,322'.

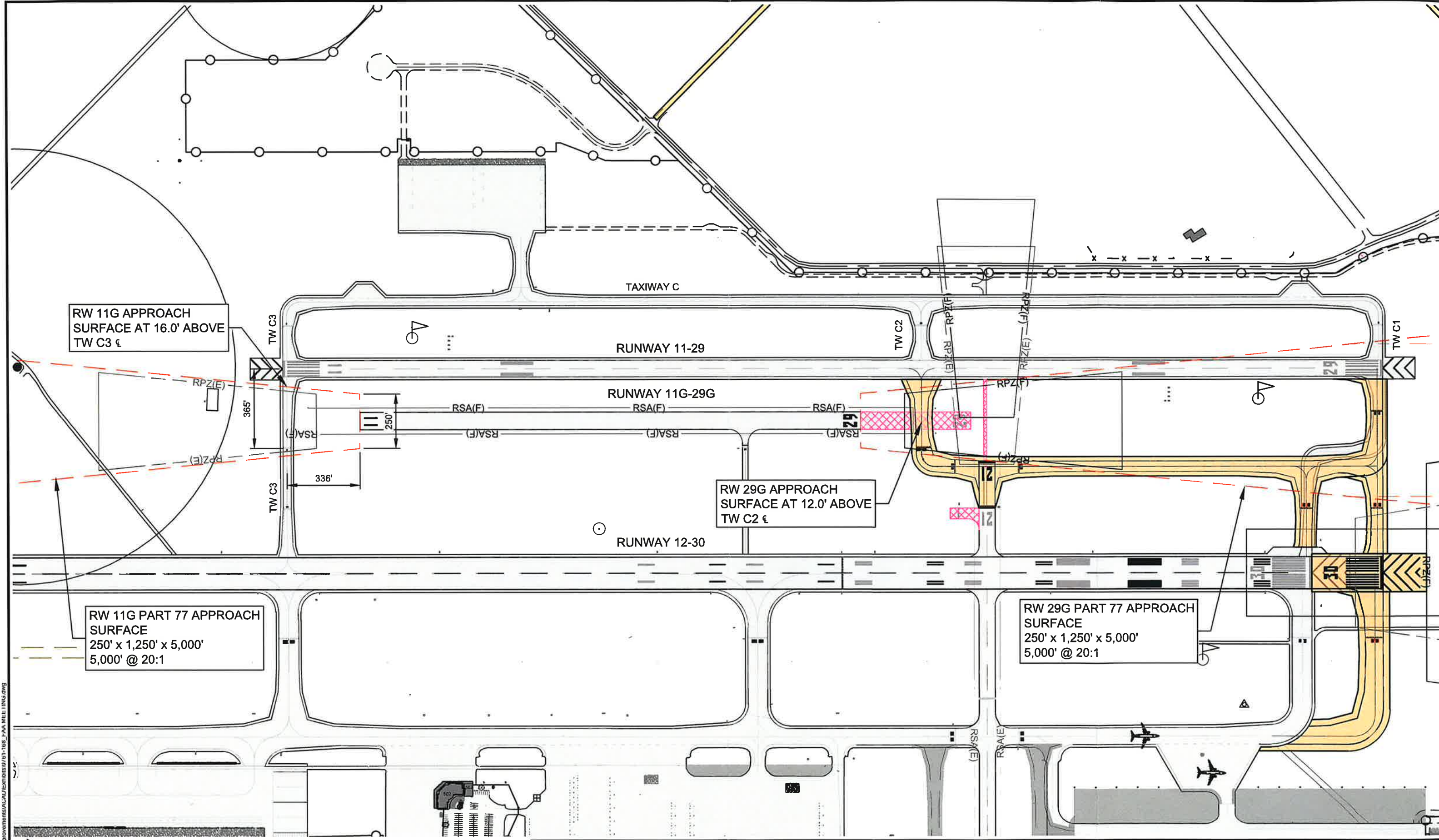


**RUNWAY 30 EXTENSION MALSR
INSTALLATION. SEE NOTE 3.**



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	TAXIWAY A1, B EAST, C1, C2, RUNWAY 30 AND 21 EXTENSION ENVIRONMENTAL CATEX EXHIBIT	FIGURE NUMBER FIG 1	

N:\0761168 - 2023 AIP Improvements\ACAD\Exhibits\0761-168_North Projects - CATEX_2023.dwg Plotted by jonathan lehman on Apr/6/2023



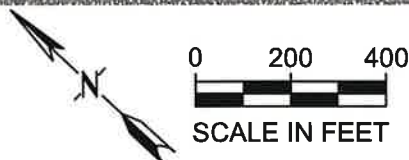
RW 11G APPROACH SURFACE AT 16.0' ABOVE TW C3 ¶

RW 29G APPROACH SURFACE AT 12.0' ABOVE TW C2 ¶

RW 11G PART 77 APPROACH SURFACE
250' x 1,250' x 5,000'
5,000' @ 20:1

RW 29G PART 77 APPROACH SURFACE
250' x 1,250' x 5,000'
5,000' @ 20:1

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NOTE:
APPROACH SURFACE CLEARANCES ARE
BASED ON PLANNING DESIGN AND WILL
VARY WITH FINAL DESIGN.

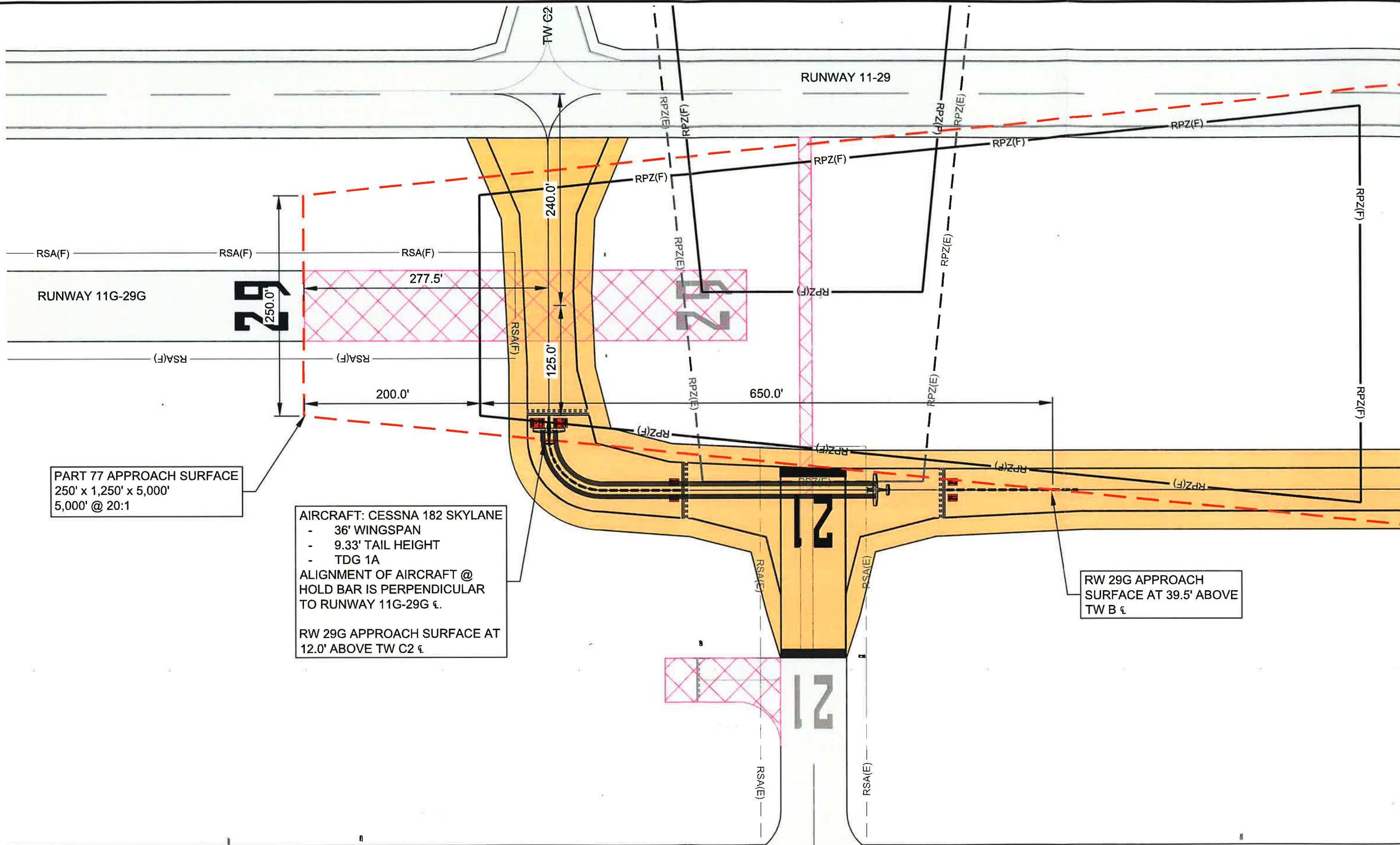
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DATE: 04/2023

BELGRADE	BOZEMAN YELLOWSTONE INTERNATIONAL AIRPORT	PROJECT NO. 0761.168
TAXIWAY A1, B EAST, C1, C2, RUNWAY 30 AND 21 EXTENSION ENVIRONMENTAL CATEX EXHIBIT		MONTANA
		FIGURE NUMBER FIG 2

Plotted by Jonathan Lehman on Apr/6/2023



PART 77 APPROACH SURFACE
250' x 1,250' x 5,000'
5,000' @ 20:1

AIRCRAFT: CESSNA 182 SKYLANE
- 36' WINGSPAN
- 9.33' TAIL HEIGHT
- TDG 1A
ALIGNMENT OF AIRCRAFT @
HOLD BAR IS PERPENDICULAR
TO RUNWAY 11G-29G €.
RW 29G APPROACH SURFACE AT
12.0' ABOVE TW C2 €

RW 29G APPROACH
SURFACE AT 39.5' ABOVE
TW B €



NOTE:
APPROACH SURFACE CLEARANCES ARE
BASED ON PLANNING DESIGN AND WILL
VARY WITH FINAL DESIGN.

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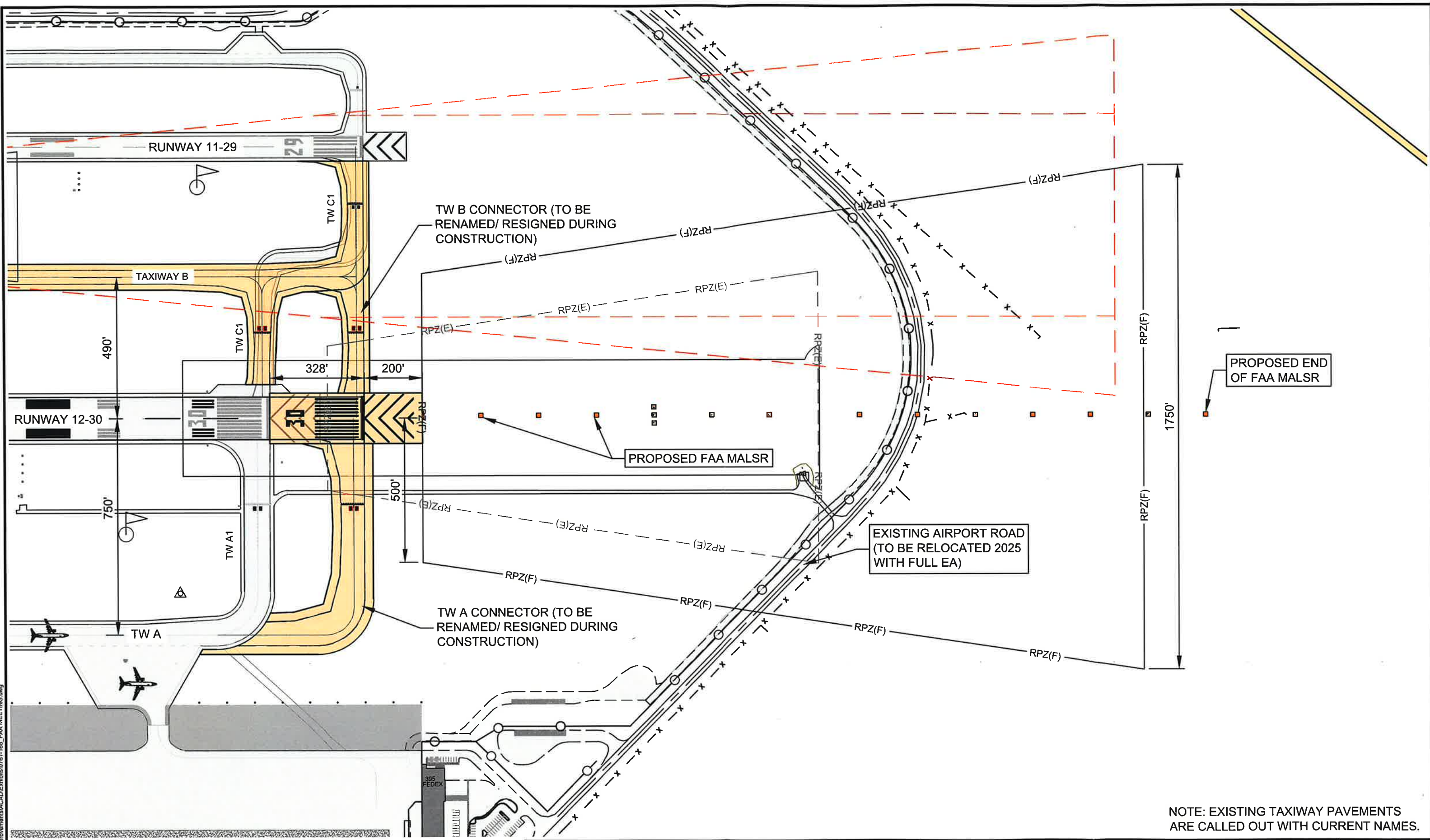
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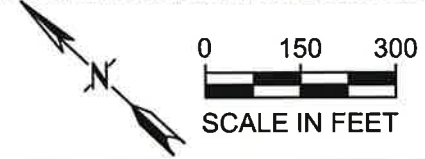
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DATE: 04/2023

BELGRADE BOZEMAN YELLOWSTONE INTERNATIONAL AIRPORT MONTANA
TAXIWAY A1, B EAST, C1, C2, RUNWAY 30 AND 21
EXTENSION ENVIRONMENTAL CATEX EXHIBIT

PROJECT NO.
0761.168
FIGURE NUMBER
FIG 3



NOTE: EXISTING TAXIWAY PAVEMENTS ARE CALLED OUT WITH CURRENT NAMES.



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	<p>BELGRADE</p>	
	<p>BOZEMAN YELLOWSTONE INTERNATIONAL AIRPORT MONTANA</p>	
	<p>TAXIWAY A1, B EAST, C1, C2, RUNWAY 30 AND 21 EXTENSION ENVIRONMENTAL CATEX EXHIBIT</p>	

<p>PROJECT NO. 0761.168</p>
<p>FIGURE NUMBER FIG 4</p>

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