

ERIE MUNICIPAL AIRPORT



***Airport Master Plan Update
Project Phase Two
Working Paper No. 2***

February 2015



Setting the Stage...

- This plan functions (1) as a plan for growth as **Town leadership sees fit**, (2) does not obligate dollars or development, and (3) will identify opportunities and challenges ahead.
- Focus areas: (1) Through-the-Fence; (2) Closed Runway Disposition; (3) Adequacy of Runway Along with Taxiways, Aprons, and Hangars; and (4) Instrument Approach Procedure.
- Relatively complex, inter-related issues, ADG will work to simplify the process of understanding.

Project Workflow



Project Phase 1

Meeting Series No 1
Advisory Group
Town Staff
Town Trustees
Project Introduction to General Public

Working Paper No 1

Project Introduction - Airport and Area History	Airport Inventory	Area Socioeconomics	Forecasts of Aviation Demand
Airport-Related Studies	Area Socioeconomics	Land Use and Zoning	Based Aircraft Forecasts
Airfield and Area Inventory	Airport Design Criteria	Airport Design Criteria	Aircraft Operations Forecasts
Area Airports, Airspace and Navigational Aids	Financial Data	Financial Data	Peak Period Operations Forecasts
Based Aircraft and Operations			Instrument Operations Forecast
			Forecast Summary

Meeting Series No 2
Advisory Group
Town Staff
Town Trustees

Project Phase 2

Action Necessary
FAA Forecast Approval

Working Paper No 2

Project Introduction - Airport and Area History	Airport Inventory	Area Socioeconomics	Forecasts of Aviation Demand	Facility Requirements and Capacity Analysis	Alternatives Analysis
Airport-Related Studies	Area Socioeconomics	Land Use and Zoning	Based Aircraft Forecasts	Airport Role and Service Level	Airside Alternatives
Airfield and Area Inventory	Airport Design Criteria	Airport Design Criteria	Aircraft Operations Forecasts	Local Airspace Capacity	Landside Alternatives
Area Airports, Airspace and Navigational Aids	Financial Data	Financial Data	Peak Period Operations Forecasts	Airfield Requirements	Other Alternatives
Based Aircraft and Operations			Instrument Operations Forecast	Landside Requirements	Alternative Environmental Considerations
			Forecast Summary	Compliance	Recommendation of Preferred Alternative

Meeting Series No 3
Advisory Group
Town Staff
Open House
Town Trustees

Project Phase 3

Action Necessary
Select Preferred Alternative(s)

Draft Erie Municipal Airport Master Plan

Project Introduction - Airport and Area History	Airport Inventory	Area Socioeconomics	Forecasts of Aviation Demand	Facility Requirements and Capacity Analysis	Alternatives Analysis	Phased Development and Cost Estimates	Airport Layout Plan Drawings
Airport-Related Studies	Area Socioeconomics	Land Use and Zoning	Based Aircraft Forecasts	Airport Role and Service Level	Airside Alternatives	Short-Term Improvements (2013-2017) {Capital Improvement Plan}	Airport Layout Plan Cover
Airfield and Area Inventory	Airport Design Criteria	Airport Design Criteria	Aircraft Operations Forecasts	Local Airspace Capacity	Landside Alternatives	Intermediate-Term Improvements (2018-2022)	Airport Layout Plan
Area Airports, Airspace and Navigational Aids	Financial Data	Financial Data	Peak Period Operations Forecasts	Airfield Requirements	Other Alternatives	Long-Term Improvements (2023-2032)	Terminal Area Plans
Based Aircraft and Operations			Instrument Operations Forecast	Landside Requirements	Alternative Environmental Considerations	20-Year Financial Analysis	FAR Part 77
			Forecast Summary	Compliance	Recommendation of Preferred Alternative		Runway Approach
							Runway Departure
							Runway Inner-Approach
							Off-Airport Land Use Plan
							On-Airport Land Use Plan
							Airport Property Map (Exhibit A)

Meeting Series No 4
Advisory Group
Town Staff
Town Trustees

Project Phase 4

Action Necessary
Approve Draft Airport Master Plan

Final Erie Municipal Airport Master Plan

Project Introduction - Airport and Area History	Airport Inventory	Area Socioeconomics	Forecasts of Aviation Demand	Facility Requirements and Capacity Analysis	Alternatives Analysis	Phased Development and Cost Estimates	Airport Layout Plan Drawings
Airport-Related Studies	Area Socioeconomics	Land Use and Zoning	Based Aircraft Forecasts	Airport Role and Service Level	Airside Alternatives	Short-Term Improvements (2013-2017) {Capital Improvement Plan}	Airport Layout Plan Cover
Airfield and Area Inventory	Airport Design Criteria	Airport Design Criteria	Aircraft Operations Forecasts	Local Airspace Capacity	Landside Alternatives	Intermediate-Term Improvements (2018-2022)	Airport Layout Plan
Area Airports, Airspace and Navigational Aids	Financial Data	Financial Data	Peak Period Operations Forecasts	Airfield Requirements	Other Alternatives	Long-Term Improvements (2023-2032)	Terminal Area Plans
Based Aircraft and Operations			Instrument Operations Forecast	Landside Requirements	Alternative Environmental Considerations	20-Year Financial Analysis	FAR Part 77
			Forecast Summary	Compliance	Recommendation of Preferred Alternative		Runway Approach
							Runway Departure
							Runway Inner-Approach
							Off-Airport Land Use Plan
							On-Airport Land Use Plan
							Airport Property Map (Exhibit A)

Project Completion
Advisory Group
Town Trustees
Town Resolution



Setting the Stage...

- This is the beginning of the conversation. In order for larger scale federally-funded improvements to occur they must (1) appear in the master plan, (2) be justified by FAA, (3) be deemed eligible by FAA, (4) be environmentally cleared, and (5) be funded.
- If all the above is A-OK, FAA pays for 90%, CDOT 5% and Enterprise Fund 5%.
- 20 year time period for improvements, everything will most-definitely not be done all at once.



Airport Master Plan



Sections

- 1 Introduction to the Plan
- 2 Inventory
- 3 Forecasts of Aviation Demand
- 4 Facility Requirements
- 5 Alternatives Analysis
- 6 Phased Development and Cost Estimates
- 7 Airport Layout Plan and Drawings



**Airport
Master
Plan**



**Working
Paper
No. 1**



- 1 Introduction to the Plan**
- 2 Inventory**
- 3 Forecasts of Aviation Demand**



Legend

(E)	Existing
---	Existing Property Line
---	Building Restriction Line (BRL)
---	Runway Protection Zone (RPZ)
---	Approach Surface
---	Object Free Area (OFA)
---	Runway Safety Area (RSA)
---	Obstacle Free Zone (OFZ)
---	Section Line
---	Dirt Road
---	Existing Paved Roads
---	Existing Pavement
---	Existing Aviation Easement
---	Threshold Lights
---	Precision Approach Path Indicators (PAPI-2)
---	Segmented Circle With Lighted Wind Cone
---	Rotating Beacon

Airport Data

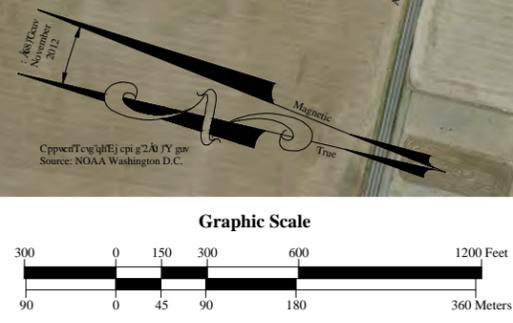
Airport Elevation	Existing 5130.0'
Airport Reference Point (ARP) Coordinates (NAD 83)	P 41° 52' 48.0" N, 104° 22' 28.5" W Y 3274449.5
Mean Daily Max Temperature - Hottest Month	88°F
Magnetic Variation (November, 2012)	11° 08' W
Airport And Terminal Electronic Navigational Aids	Beacon, VOR, DME, Lighted Wind Cone, Segmented Circle
Percent Wind Coverage (10.5 / 13 / 16 / 20 Knots)	85.71 / 89.8 / 94.05 / 97.31
NPAS Service Role	Visual - Utility
Taxiway Lighting	GA
Taxiway Marking	A - Reflectors

Structures List

No.	Description
1	FBO Hangar
2	Movable Hangars
3	Rocky Mountain Propellers - Off Airport
4	Hangar Complex - Off Airport
5	Vacant
6	Schofield Hangar Complex - Off Airport
7	Waste Connection of Colorado - Off Airport
8	Gapier Septic Systems - Off Airport
9	LTS Glass Doors - Off Airport
10	Spirit of Flight Museum - Off Airport
11	Aero Systems - Off Airport
12	Turf Cuts, Trail Ridge Construction - Off Airport
13	Tri-County Heliport - Off Airport
14	?

Runway Data

	Runway 15 / 33
Effective Gradient (In Percent)	Existing 0.95
Percent Wind Coverage (10.5/13/16/20 Knots)	85.71 / 89.8 / 94.05 / 97.31
FAR Part 77 Approach Surfaces (Slope)	(15) 20:1 / (33) 20:1
Instrument Runway	No
Touchdown Zone Elevation (TDZE)	(15) 5095.2' (33) 5116.67'
Runway Lighting	MIRL
Runway Marking	Non-Precision
Electronic Navigational Aids	Beacon, VOR, DME
Visual Approach Aids	(15) PAPI, REIL, MIRL / (33) PAPI
Runway Length	4,700'
Runway Width	60'
Pavement Type	Concrete
Pavement Design Strength (1,000 lbs)	12,500 SWG
Runway Safety Area Length / Width	5,180' / 120'
Runway Object Free Area Length / Width	5,180' / 250'
Runway Obstacle Free Zone Length / Width	5,100' / 250'
Approach Category And Design Group	A - I (Small Only)
Critical Aircraft	Cessna-150
Approach Speed (Approach Category)	Less than 91 Knots (A)
Wingspan (Design Group)	< 49.0' (I)
Weight	12,080 lbs
Length Of Haul (Aircraft Over 60,000 lbs)	500 Miles
Taxiway Width	A - 25'
Taxiway Lighting	A - Reflectors
Approach Visibility Minimums	Circle
Runway Maximum Grade (In Percent)	.93
FAA Line of Sight (Longitudinal)	Met
Runway End Elevation	(15) 5072.7' (33) 5116.7'
Runway High / Low Point Elevation	5116.67' / 5072.7'



No.	Revision	Ckd	Date

Erie Municipal Airport
Town of Erie, CO

ADG DEVELOPMENT GROUP
1776 South Jackson Street, Suite 950
Denver, Colorado 80210-3802
303.782.0882 / 303.782.0842 fax
www.ADGairports.com

Project No.: EKI1398M
Designed By: SMP
Drawn By: MTP
Approved By: SPM
Date: November 2012

Existing Airport Layout

Exhibit: **E**

Airport Design Standards Criterion

EIK Design Based Upon the Most Demanding (500 Annual Take-Offs or Landings) Aircraft (FAA Guideline). Criterion Are Aircraft: (1) Approach Speed (AAC; A-E), (2) Wingspan (ADG; I-VI), (3) Undercarriage Dimensions (TDG; 1-6), and (4) Weight (<12,500lbs.>); Along With EIK's Ability to Land Aircraft During Some Inclement Weather (<Circling> Visibility).

Based Aircraft and Operations

±191 Based Aircraft, Including Nine Multi-Engine and Two Jet. Estimated (2010) 47,000 Take-Offs and Landings, Mostly By Smaller Single-Engine Types.

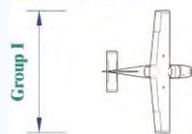
Current EIK Airport Design Standards Criterion

Based Upon the Above EIK is Currently Classified: AAC; B, ADG; I, TDG; 1, Weight; <12,500 lbs.

Visibility: One Mile. **Important Note:**
**FAA Prefers to Fund Improvements
Designed For B, II, 2, ≥12,500 lbs.**

Aircraft Grouped by Wingspan Only

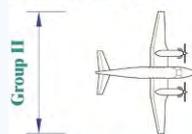
Personal Aircraft



Representative Aircraft

Beechcraft Bonanza 35, 36
Cessna 150, 172, 402, 414
Beechcraft Baron
Beechcraft King Air 90, 200
Cessna 182, 206, 401, 421
Cessna Citation I, CJ1
Piper Navajo-34, Cheyenne-42

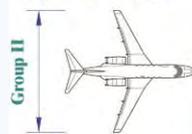
Business Aircraft



Representative Aircraft

DHC Twin Otter
Beechcraft 1900
Cessna Citation II, III, V
Dassault Falcon 50, 200
Embraer 145 RJ; ATR 42, 72
Rockwell Aero Commander 560, 680
DeHavilland Dash-7, 8

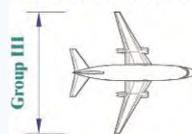
Corporate Aircraft



Representative Aircraft

Gates Lear 24, 25
IAI Westwind 1124
Bombardier 600, 601
Gulfstream III
Starship 1
Cessna Citation X
Gates Lear 35

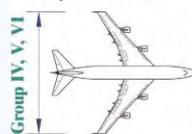
Commercial Aircraft



Representative Aircraft

Airbus 318-321
Boeing 727, 737
McDonnell Douglas DC-9
MD-82; MD-83
Gulfstream II, IV, V

Transport Aircraft



Representative Aircraft

Airbus 300, 310
Boeing 757, 767
Lockheed Hercules C-130
Airbus 330, 340, 380
Boeing 747; Boeing 777
Antonov 124, 225
Lockheed Galaxy C-5

EIK Now

FAA Prefers

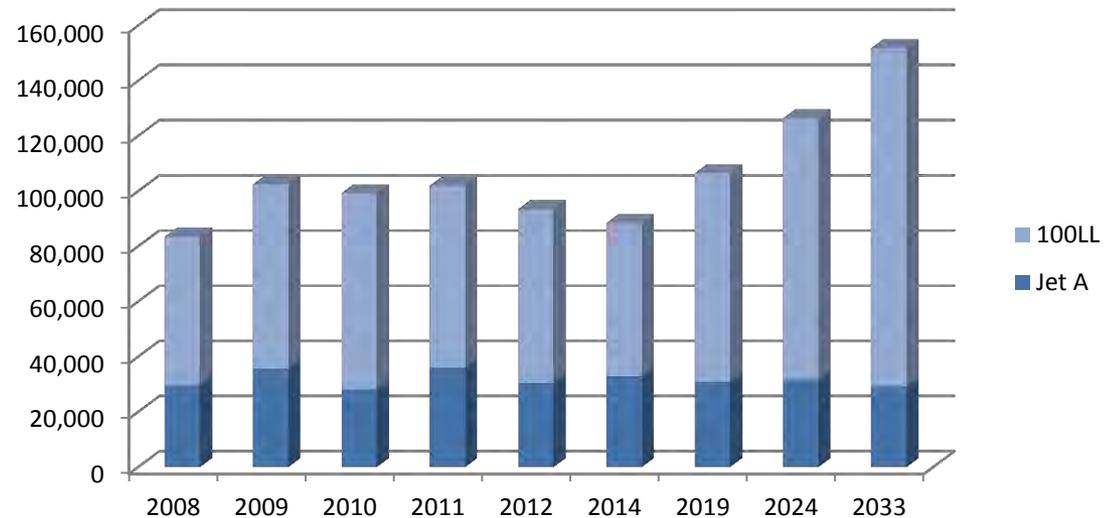
Opportunities

Potential Land Acquisitions for Revenue-Generating Aviation-Related Properties, Future Commercial/Industrial Through-the-Fence, Non-Aviation Uses Which Complement EIK/Town, Hwy 7 Realignment/New EIK Front Door, Reactivation of Former Crosswind or Revenue-Generating Aviation-Related Use Thereon, Northerly Runway Extension

Constraints

Coal Creek, AWOS Critical Area, Proximity of Airpark Residences to Runway 15-33, Anthem and Vista Pointe Noise, and Potential Sierra Vista Concerns, Steep Grades and Rising Terrain South of Runway, Hwy 7/Airport Road Intersection, Environmental, Lack of Developable Aviation-Related Land

Aviation Indications; Aviation Fuel



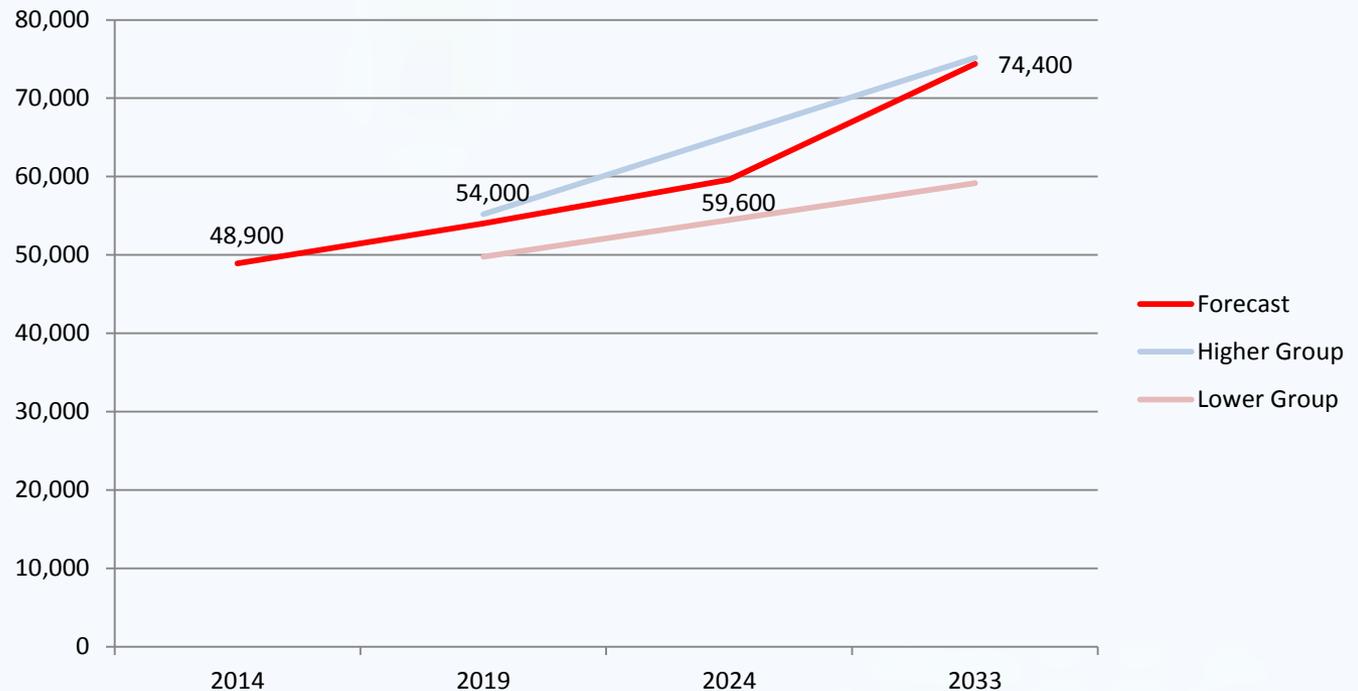
A1 33

Based Aircraft Forecast



Period	AAGR	Overall
2014-2018	1.6%	8.3%
2019-2023	1.6%	8.6%
2024-2033	1.9%	18.4%
<i>2014-2033</i>	<i>1.7%</i>	<i>39.2%</i>

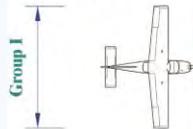
Aircraft Operations Forecast



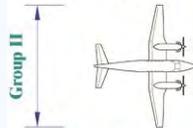
Period	AAGR	Overall
2014-2018	2.0%	10.4%
2019-2023	2.0%	10.4%
2024-2033	2.5%	24.8%
<i>2014-2033</i>	<i>2.2%</i>	<i>52.1%</i>

Critical Aircraft

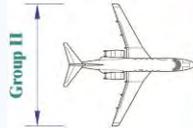
Personal Aircraft



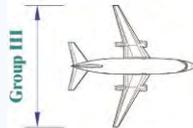
Business Aircraft



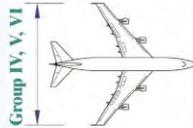
Corporate Aircraft



Commercial Aircraft



Transport Aircraft



Representative Aircraft

Beechcraft Bonanza 35, 36
Cessna 150, 172, 402, 414
Beechcraft Baron
Beechcraft King Air 90, 200
Cessna 182, 206, 401, 421
Cessna Citation I, CJI
Piper Navajo-34, Cheyenne-42



Representative Aircraft

DHC Twin Otter
Beechcraft 1900
Cessna Citation II, III, V
Dassault Falcon 50, 200
Embraer 145 RJ; ATR 42, 72
Rockwell Aero Commander 560, 680
DeHavilland Dash-7, 8



Representative Aircraft

Gates Lear 24, 25
IAI Westwind 1124
Bombardier 600, 601
Gulfstream III
Starship 1
Cessna Citation X
Gates Lear 35



Representative Aircraft

Airbus 318-321
Boeing 727, 737
McDonnell Douglas DC-9
MD-82; MD-83
Gulfstream II, IV, V



Representative Aircraft

Airbus 300, 310
Boeing 757, 767
Lockheed Hercules C-130
Airbus 330, 340, 380
Boeing 747; Boeing 777
Antonov 124, 225
Lockheed Galaxy C-5

Now (-10 Years)

Long-Term
(Beyond 10 Years)



**Airport
Master
Plan**



**Working
Paper
No. 2**



- 1 Introduction to the Plan**
- 2 Inventory**
- 3 Forecasts of Aviation Demand**
- 4 Facility Requirements**
Airport Role and Service Level, Airside Recommendations, Landside Recommendations, and Security, Compliance and Sustainability
- 5 Alternatives Analysis**

Alternatives, Summary





4

Facility Requirements

Role and Service Level

General Aviation Community Airport, perhaps with increasing business aviation use, Not RMMA or Centennial

Airside Recommendations

- B-II (Larger Aircraft) Standards Accommodation
- CDOT Suggests an Additional 100 Feet of Runway, FAA suggests more
- Occasional Preventive Maintenance and Rehabilitations



4

Facility Requirements

Landside Recommendations

- Provide for Apron and Hangar Area to Accommodate Forecast Demand, Either On/Off Airport
- Consider Terminal Building, Auto Parking and Access

Security, Compliance and Sustainability

- Create Security Plan, Implement
- Continuing TTF Compliance
- Update Overlay District Code; Multi-Jurisdiction Effort
- Perhaps Minimum/Development Standards
- Update Rules and Regulations
- Consider Sustainability Plan; CDOT



5

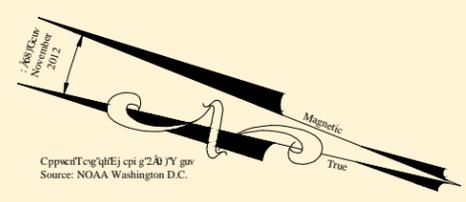
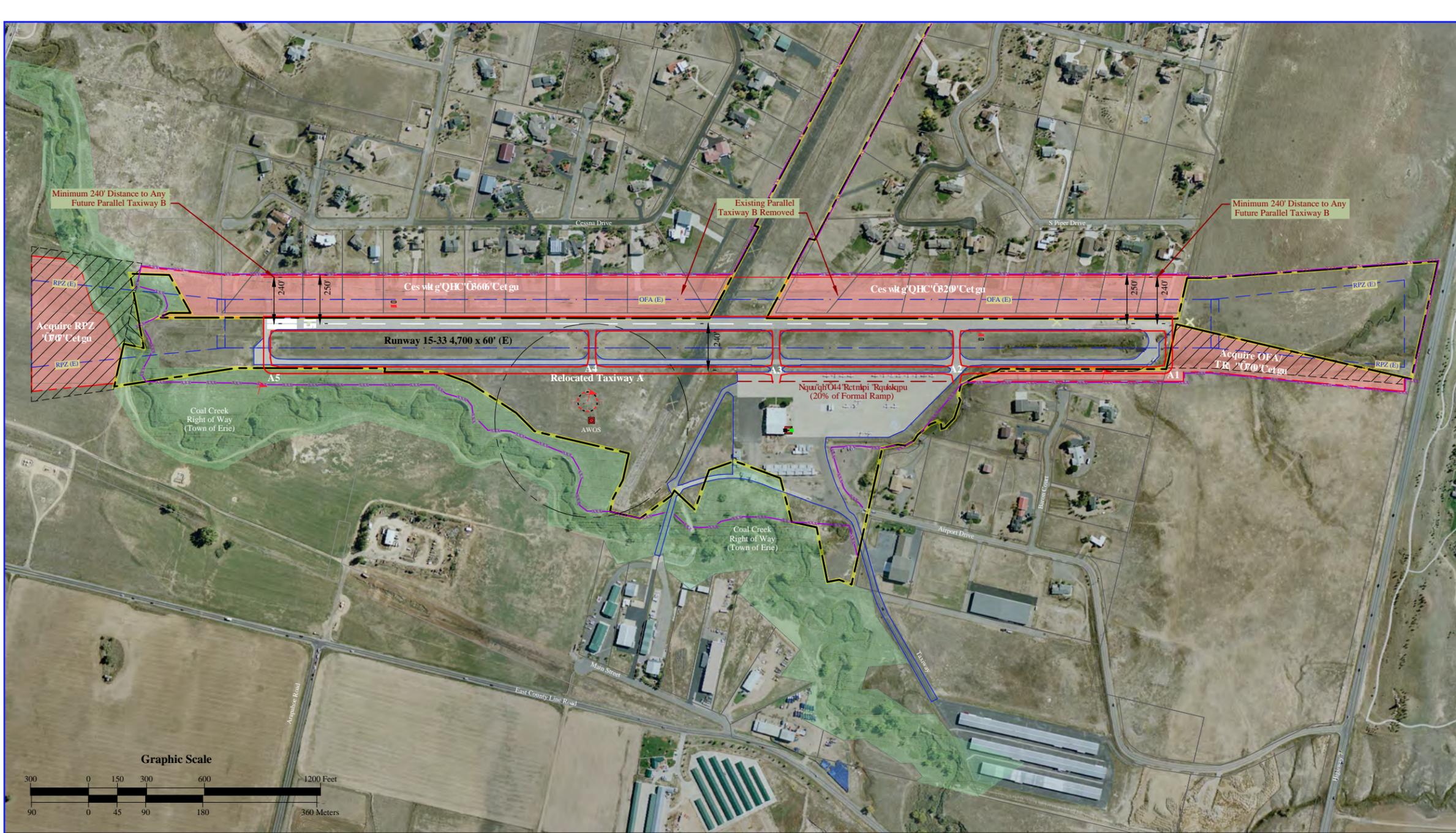
Alternatives Analysis

Alternative No. 1 Current FAA Standards

-This alternative shows needs and improvements should the Town continue to accept FAA \$ pursuant to FAA airport design preferences

Alternative No. 2 Improved All Weather Capability

-This alternative shows needs and improvements to implement an updated three-dimensional path in the sky for aircraft operation



- Legend**
- (E) Existing
 - Existing Property Line
 - Runway Protection Zone (RPZ)
 - Object Free Area (OFA)
 - Existing Pavement
 - Existing Avigation Easement
 - Future Fence
 - Future Improvements
 - Proposed Property Line

Reasons to Say "Yes"

- Standards Compliance

Improvements

- Acquire Land (36 Acres)
- Grade Safety Areas/Structure (Three Locations on South Runway End)
- Widen Runway and Taxiway A
- Relocate Runway and Taxiway A Edge Lights
- Relocate Taxiway A, Hold and Signs
- Install Perimeter Fence
- Consider Additional Apron

Total Estimated Cost \$12,800,000

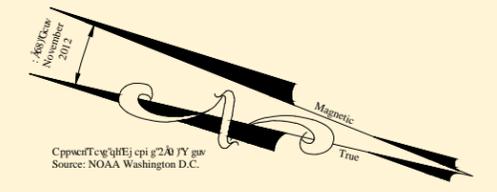
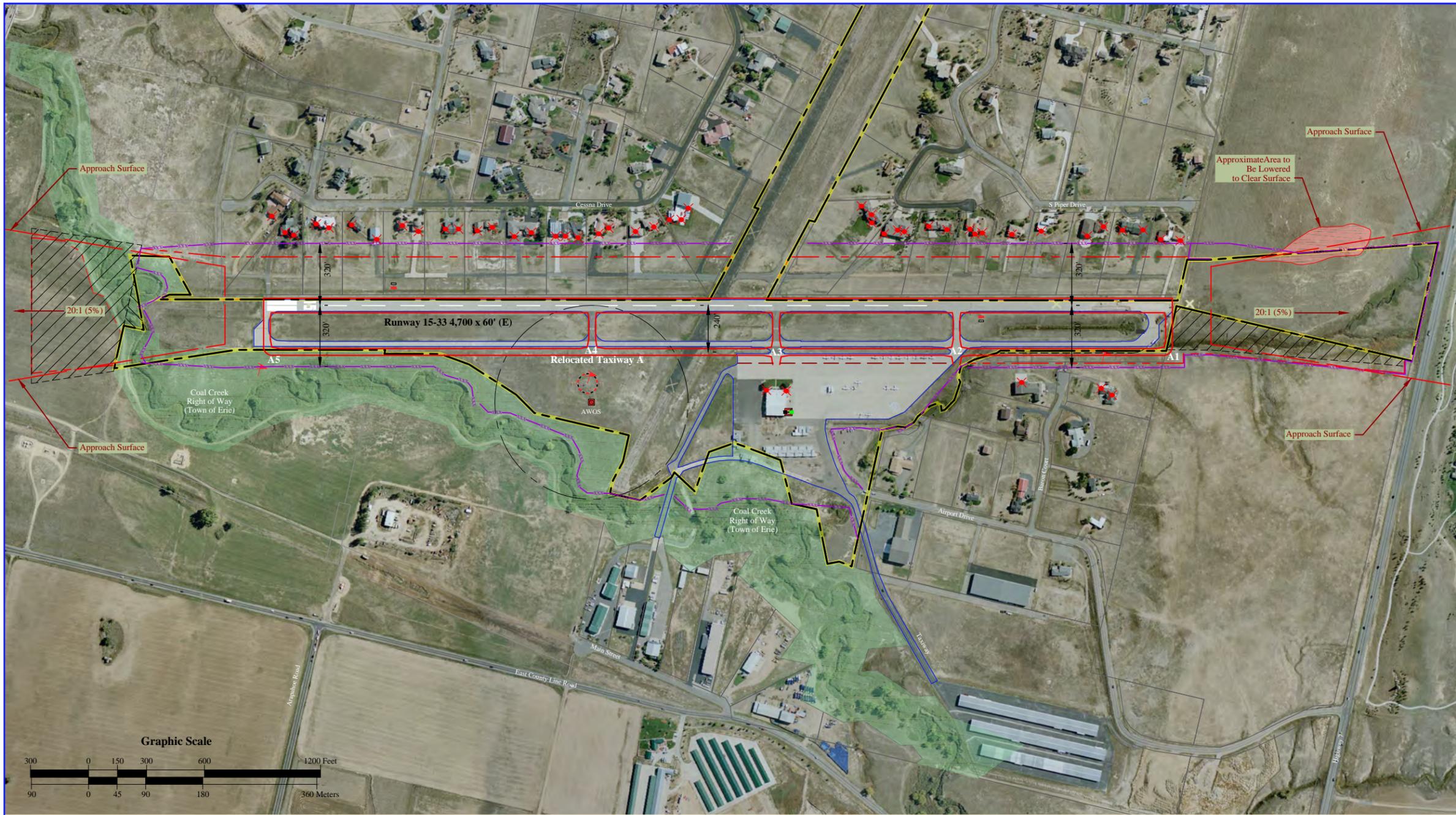
Notes

- FAA Pays for 90% and CDOT 5% if justified, Airport Fund pays for 5%.
- Visual Runway Only Planned
- Assumes Land Can Be Acquired and Obstructions Mitigated/Lighted
- Assumes Coal Creek Disturbance OK
- Assumes Floodplain Permitting
- Assumes Upstream Floodplain Impacts Can Be Mitigated
- Ensure Off-Airport Taxiways Are No Closer than 240 to Runway Centerline
- Ensure Off-Airport Taxiways Are No Closer than 240 to Runway Centerline
- Additional Apron Should Be Planned To Replace That Lost to Standards
- Safety Area Grading for Taxiway A Only
- Limited Obstruction Mitigation, Mostly Lighting and Tree Lowering
- Assumes Access Agreements in Force

Erie Municipal Airport (EIK)

Alternative No. 1: Current FAA Standards





Legend

(E)	Existing
—	Existing Property Line
- - -	Runway Protection Zone (RPZ)
- - -	Object Free Area (OFA)
▭	Existing Pavement
▨	Existing Avigation Easement
---	Future Fence
---	Future Improvements
- - -	Proposed Property Line
✖	Likely Obstruction Light Locations

Some Reasons to Say "Yes"

- More effectively brings dollars and economic development to the Town.
- Responsive to the Aviation Business Community and the local pilot.
- More meaningfully brings EIK into the national airspace system.

Some Reasons to Say "No"

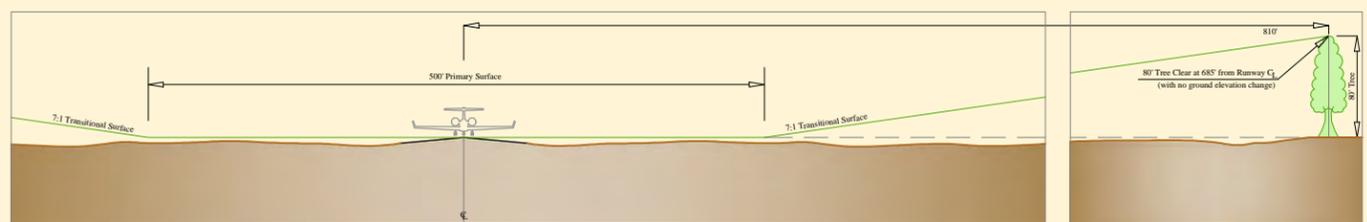
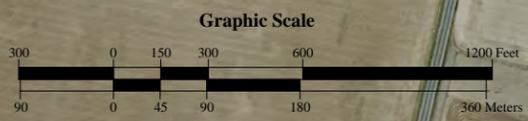
- Potentially much more difficult to site a perimeter fence.
- Requires airpark cooperation.

Improvements

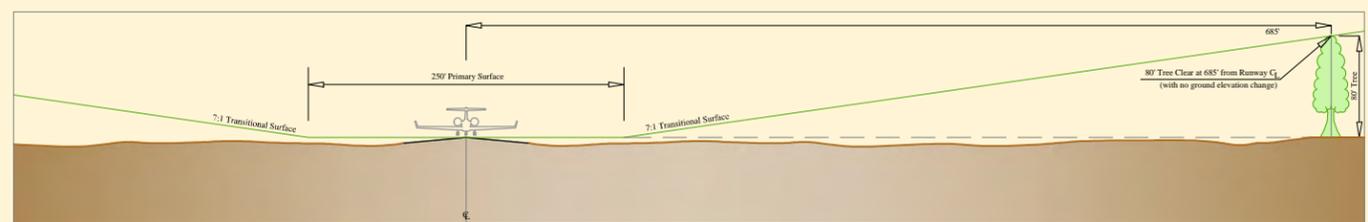
- /kpwcmQdwt wekq'Nli j vlpj 'k072 (Units)
- Lower Terrain near Runway 33

Note: One-Mile Visibility Proposed

Total Estimated Cost \$500,000



***Proposed* Typical Cross-Section View; Transitional Surface Clearances**



***Existing* Typical Cross-Section View; Transitional Surface Clearances**

Alternative No. 2: Improved All-Weather Capability

Erie Municipal Airport (EIK)





5

Alternatives Analysis, Continued

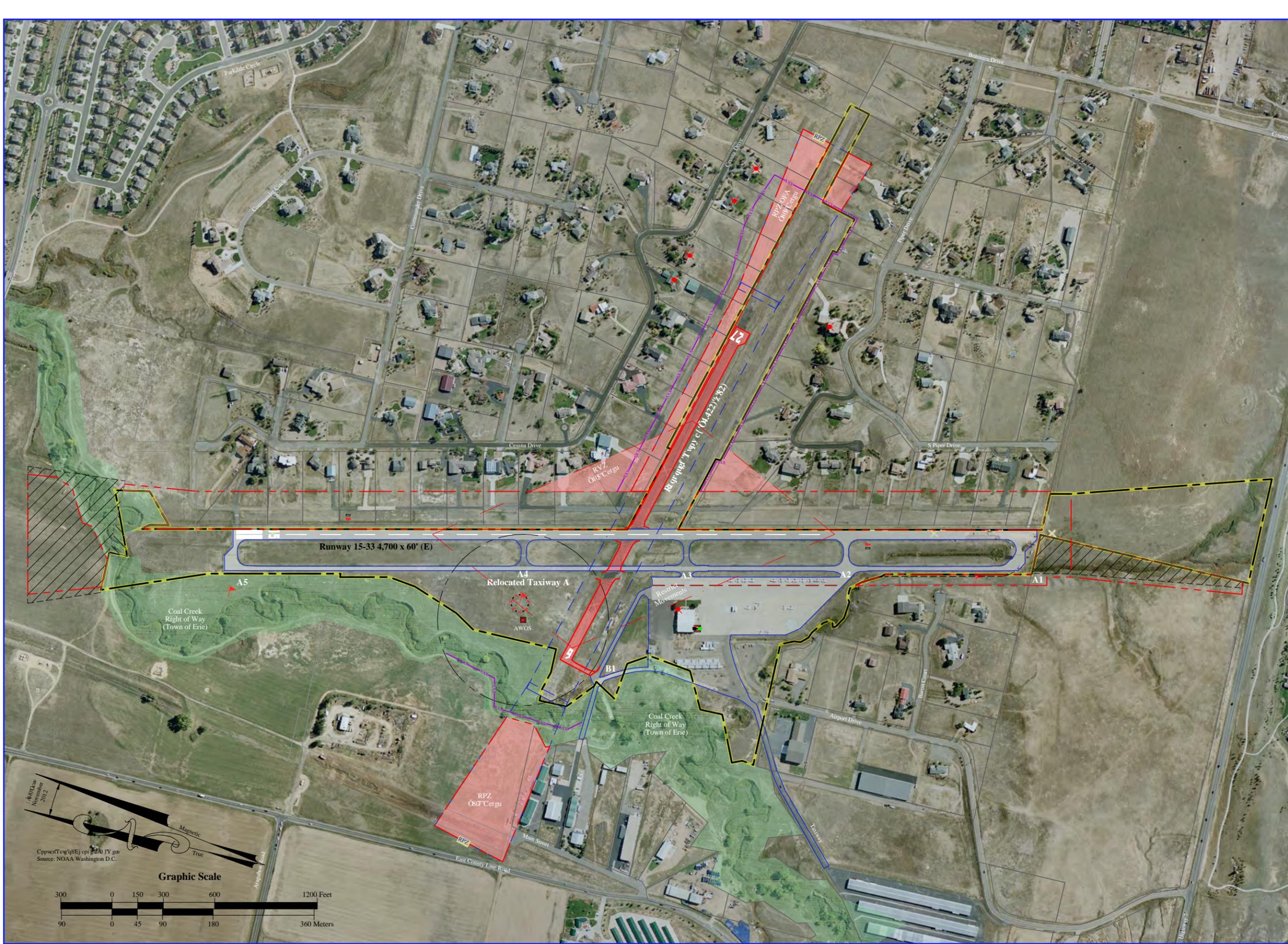
Alternative No. 3A Crosswind Runway

-This alternative shows a 2,200' crosswind runway in design standards compliance

Alternative No. 3B Runway Widening

-This alternative shows main runway to 100' wide as a second option for design standards compliance

***Either 3A or 3B for Design Standards Compliance**



Legend

- (E) Existing
- Existing Property Line
- Runway Protection Zone (RPZ)
- Object Free Area (OFA)
- Existing Pavement
- Existing Avigation Easement
- Future Fence
- Future Improvements
- Obstruction Light

Some Reasons to Say "Yes"

- Responsive to the the pilot during strong westerly wind conditions.
- One option to meet standards.

Some Reasons to Say "No"

- Runway length insufficient for many aircraft and pilots
- Operating environment creates challenges for unfamiliar pilots, briefing and PPR recommended.
- Necessary land envelope may constrain revenue-producing development areas
- No FAA/CDOT funding.
- Areas not experiencing aircraft operations and noise in the recent past will be exposed.

Improvements

- Acquire Land (13.2 Acres)
- Acquire RVZ Easement (3.6 Acres)
- Grade Safety Area, Grade for Clear Runway 27 Approach Surface
- Install Fence
- Light/Remove Likely Obstructions /Rcxg'04.422)'8('82)'y luj 'tppg'eqppgev and mark with signage

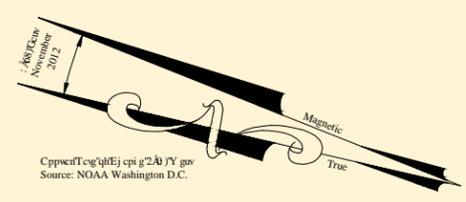
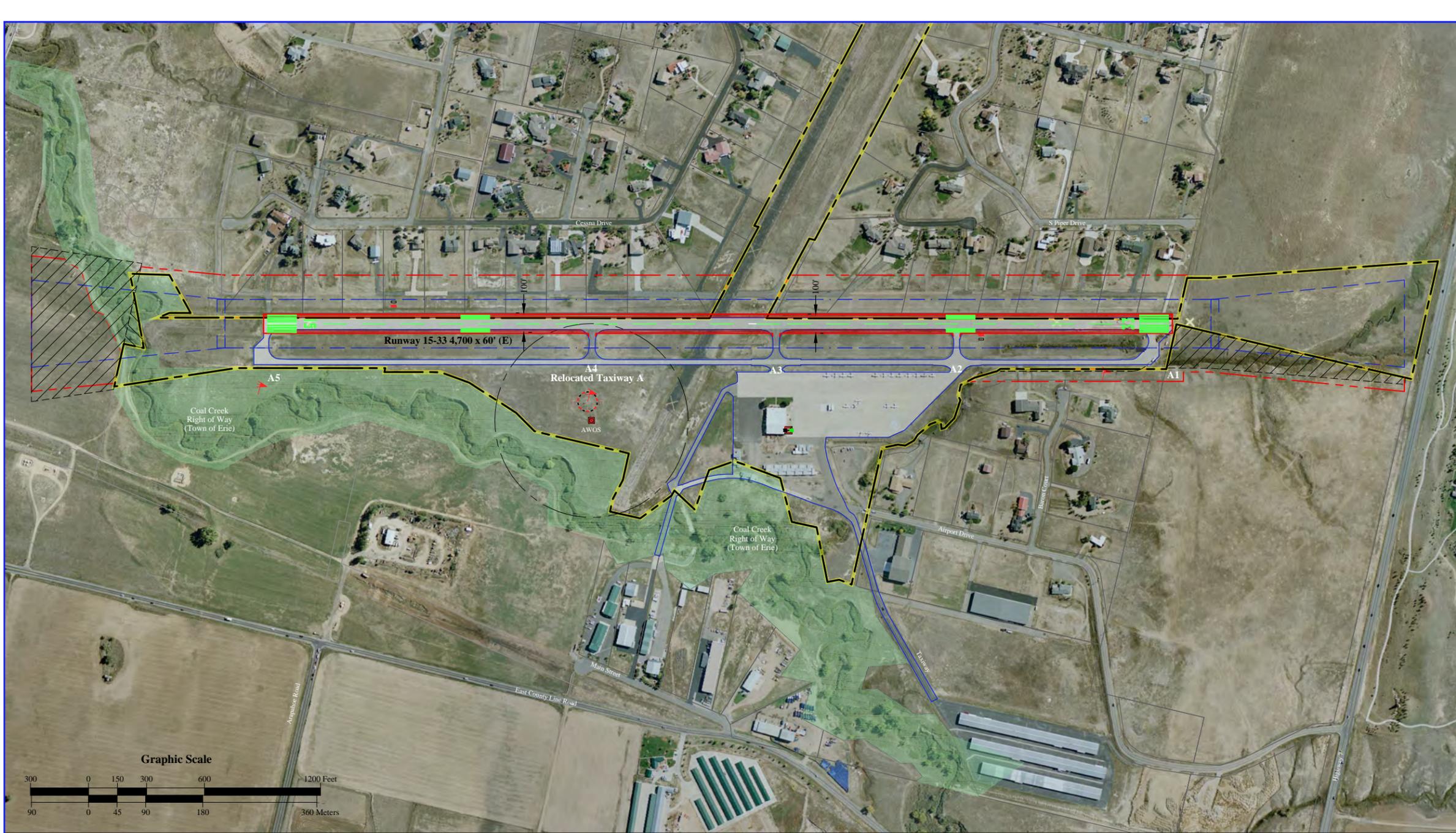
Total Estimated Cost	\$1,100,000
Turf Option:	\$650,000

Notes

- Airport Fund pays for 100%.
- Visual Runway Only Planned
- Assumes Land Can Be Acquired
- Assumes Associated Taxiways are not Improved
- Powerlines along County Line Road Should Be, Best Case, Lowered
- Some Tiedowns Lost, Apron to be Marked Non-Movement
- Operational Challenges Remain and Cannot be Easily Designed Out.

Alternative No. 3A: Accommodate Winds with Crosswind Runway





- Legend**
- (E) Existing
 - Existing Property Line
 - Runway Protection Zone (RPZ)
 - Object Free Area (OFA)
 - Existing Pavement
 - Existing Avigation Easement
 - Future Fence
 - Future Improvements
 - Proposed Property Line

Some Reasons to Say "Yes"

- Responsive to the aviation business community and the general economy.
- Perhaps necessary to attract aviation business to the field.
- One method to meet standards.

Improvements

- Widen Runway
- Relocate Runway Edge Lights

Total Estimated Cost \$835,000

Notes

- FAA Pays for 90% and CDOT 5% if justified, Airport Fund pays for 5%.

Erie Municipal Airport (EIK)

Alternative No. 3B: Accommodate Winds with Runway Widening





5

Alternatives Analysis, Continued

Alternative No. 4A 220-Foot Runway Extension

-This alternative shows a 220' runway and taxiway extension for a total 4,790-foot length

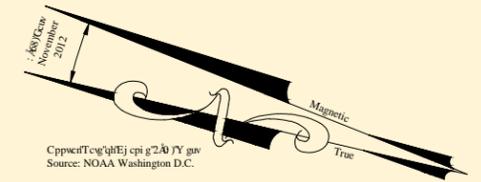
Alternative No. 4B 300-Foot Runway Extension

-This alternative shows a 300-foot runway and taxiway extension for a total 5,000-foot length

Alternative No. 4C 1,700-Foot Runway Extension

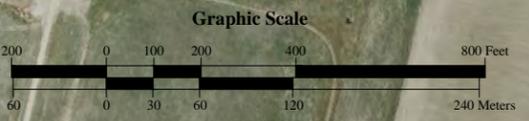
-This alternative shows a 1,700-foot runway and taxiway extension for a total 6,390-foot length

***No extension *required* for Standards Compliance**



Legend

- (E) Existing
- Existing Property Line
- Runway Protection Zone (RPZ)
- Object Free Area (OFA)
- Existing Pavement
- Existing Avigation Easement
- Future Fence
- Future Improvements
- Proposed Property Line



Some Reasons to Say "Yes"

- Responsive to the aviation business community and the general economy.
- Perhaps responsive to attract aviation business to the field, a minimum length.

Some Reasons to Say "No"

- Not supported in state plan.
- Requires justification (operations counts which may not materialize).
- Coal creek environmental impact
- Noise Contour marginally expands
- Cost
- Comprehensive Plan would perhaps require an update

Improvements

- Acquire Land (9 Acres)
- Extend Runway and Taxiway A
- Relocate Landing Aids
- Install Runway/Taxiway Edge Lights
- Install Perimeter Fence
- Relocate Trail

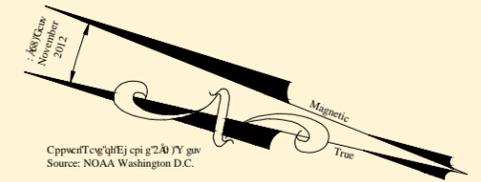
Total Estimated Cost \$975,000

Notes

- FAA Pays for 90% and CDOT 5% if justified, Airport Fund pays for 5%.
- Assumes Land Can Be Acquired

Alternative No. 4A: Extend Runway 15-33 220 feet to 4,920-Feet





Legend

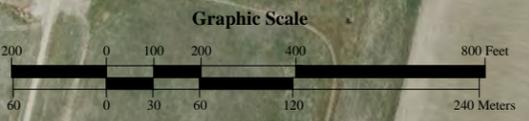
- (E) Existing
- Existing Property Line
- Runway Protection Zone (RPZ)
- Object Free Area (OFA)
- Existing Pavement
- Existing Avigation Easement
- Future Fence
- Future Improvements
- Proposed Property Line

Some Reasons to Say "Yes"

- Responsive to the aviation business community and the general economy.
- Perhaps responsive to attract aviation business to the field.
- More meaningfully meets FAA standard runway length.

Some Reasons to Say "No"

- Not supported in state plan.
- Requires justification (operations counts which may not materialize).
- Coal creek environmental impact
- Noise Contour expands northerly
- Cost
- Comprehensive Plan would perhaps require an update.
- Vista Parkway Relocation Needed; Conceptualized Location, Curve Radii Perhaps Prohibits



Improvements

- Acquire Land (10 Acres)
- Grade RSA/Relocate for Coal Creek
- Extend Runway and Taxiway A
- Relocate Landing Aids
- Install Runway/Taxiway Edge Lights
- Install Perimeter Fence
- Relocate Trail
- Relocate Vista Parkway

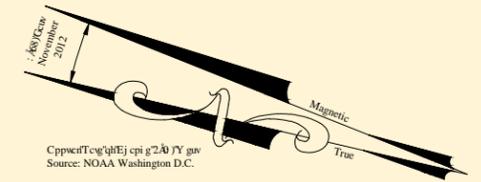
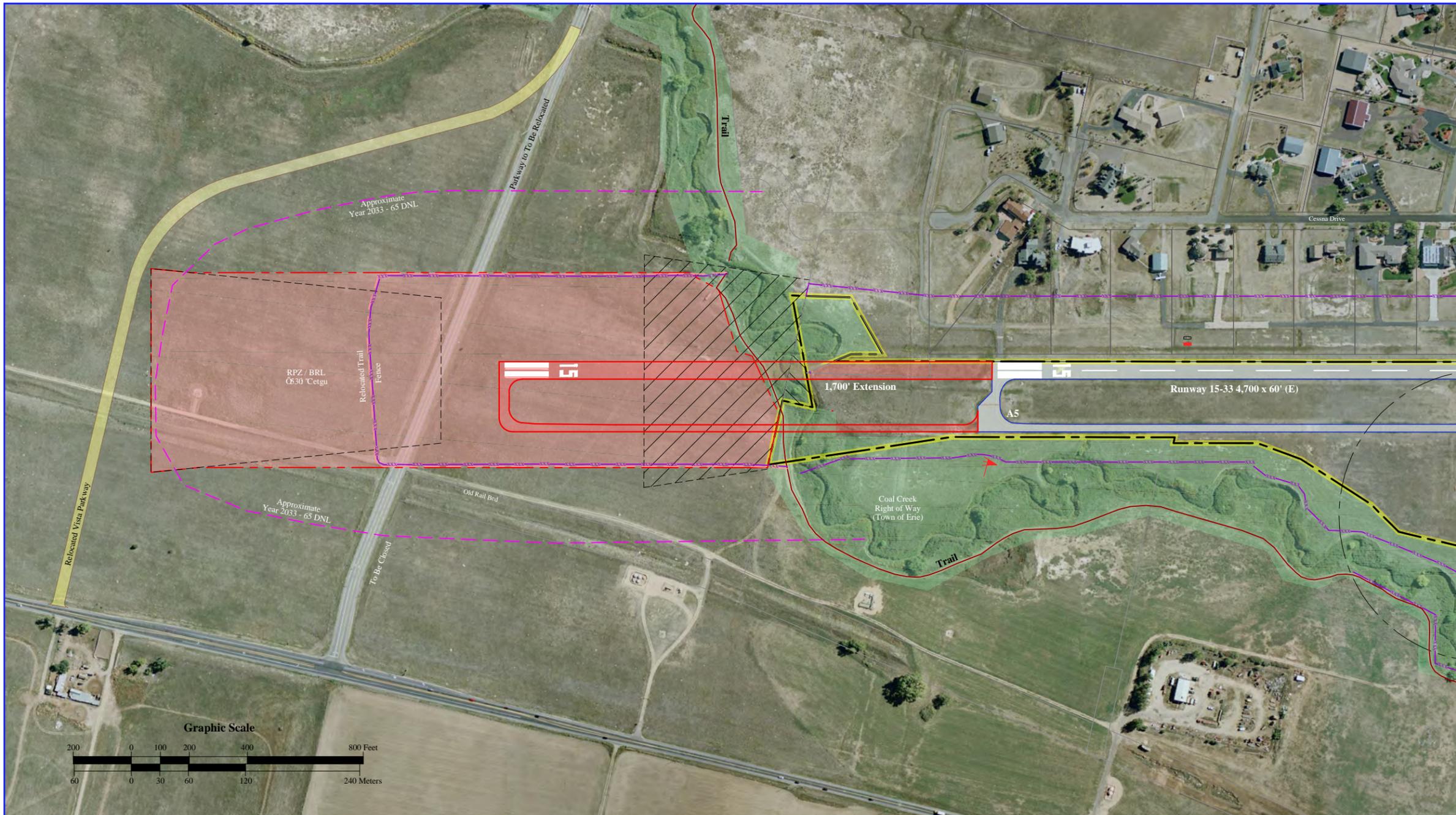
Total Estimated Cost \$1,350,000

Notes

- FAA Pays for 90% and CDOT 5% if justified, Airport Fund pays for 5%.
- Assumes Land Can Be Acquired
- Assumes Coal Creek Disturbance OK
- Assumes Trail Can Be Relocated
- Assumes Floodplain Permitting
- Assumes Upstream Floodplain Impacts Can Be Mitigated

Alternative No. 4B: Extend Runway 15-33 300 feet to 5,000-Feet





- Legend**
- (E) Existing
 - Existing Property Line
 - Runway Protection Zone (RPZ)
 - Object Free Area (OFA)
 - Existing Pavement
 - Existing Avigation Easement
 - Future Fence
 - Future Improvements
 - Proposed Property Line

Some Reasons to Say "Yes"

- Most responsive to the aviation business community and the general economy.
- Perhaps best to attract aviation business to the field.
- Meets FAA *standard* runway length.

Some Reasons to Say "No"

- Not supported in state plan.
- Requires justification (operations counts which may not materialize).
- Coal creek environmental impact
- Noise Contour expands northerly
- Substantial Cost
- Comprehensive Plan would perhaps require an update.
- Vista Parkway Relocation Needed; Conceptualized Location, Curve Radii Perhaps Prohibits

Improvements

- Acquire Land (32 Acres)
- Grade RSA/Structure for Coal Creek
- Extend Runway and Taxiway A
- Relocate Landing Aids
- Install Runway/Taxiway Edge Lights
- Install Perimeter Fence
- Relocate Trail
- Relocate Vista Parkway

Total Estimated Cost \$10,800,000

Notes

- FAA Pays for 90% and CDOT 5% if justified, Airport Fund pays for 5%.
- Vista Parkway Relocation Needed
- Visual Runway Only Planned
- Assumes Land Can Be Acquired
- Assumes Coal Creek Disturbance OK
- Assumes Trail Can be Relocated
- Assumes Floodplain Permitting
- Assumes Upstream Floodplain Impacts Can Be Mitigated

Alternative No. 4C: Extend Runway 15-33 1,700 feet to 6,400-Foot





5

Alternatives Analysis, Continued

Alternative No. 5A Minimal Development

-This alternative shows 'minimal' on and off-airport development

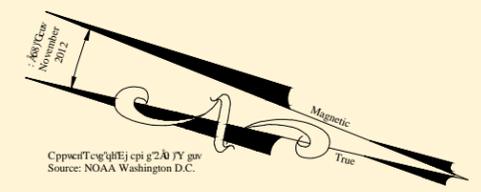
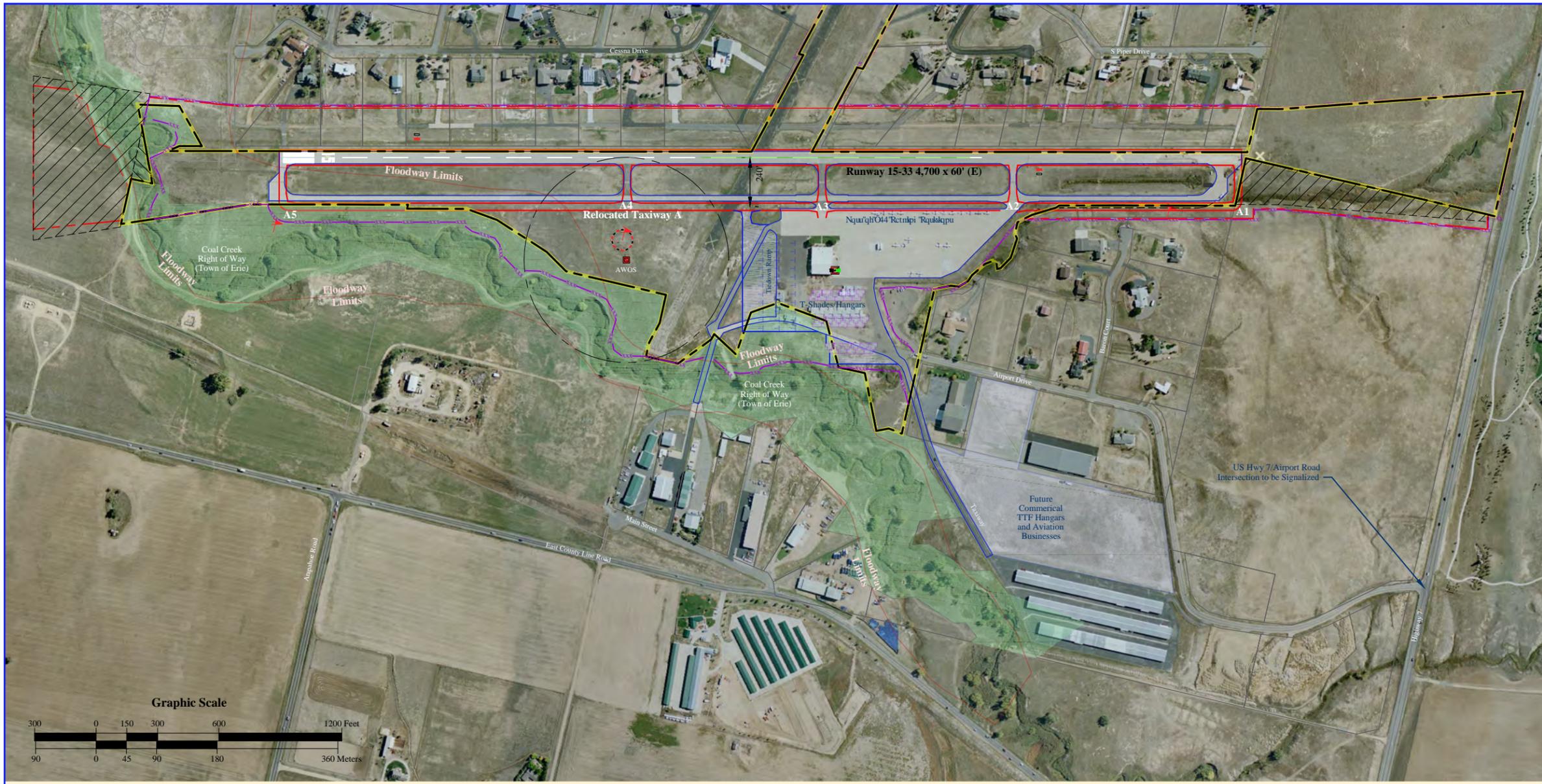
Alternative No. 5B Moderate Development

-This alternative shows 'moderate' on and off-airport development

Alternative No. 5C Robust Development

-This alternative shows 'robust' on and off-airport development

***Standards Compliance suggests accommodation of forecast demand only as identified within 5A**



- Legend**
- (E) Existing
 - Existing Property Line
 - Existing Pavement
 - Existing Avigation Easement
 - Future Fence
 - Future Airside Improvements
 - Future Landside Improvements

Reasons to Say "Yes"

- Relatively Inexpensive
- Accommodates Near-Term Demand

Reasons to Say "No"

- No Meaningful Long-Term or Aviation Business Demand Accommodation
- Auto Parking Remains Separated from Terminal Area
- Sub-Optimal Airport Automobile Access Remains

Improvements

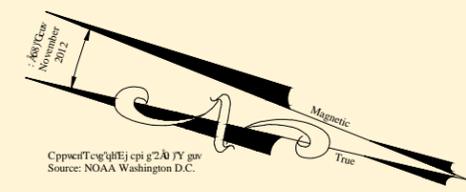
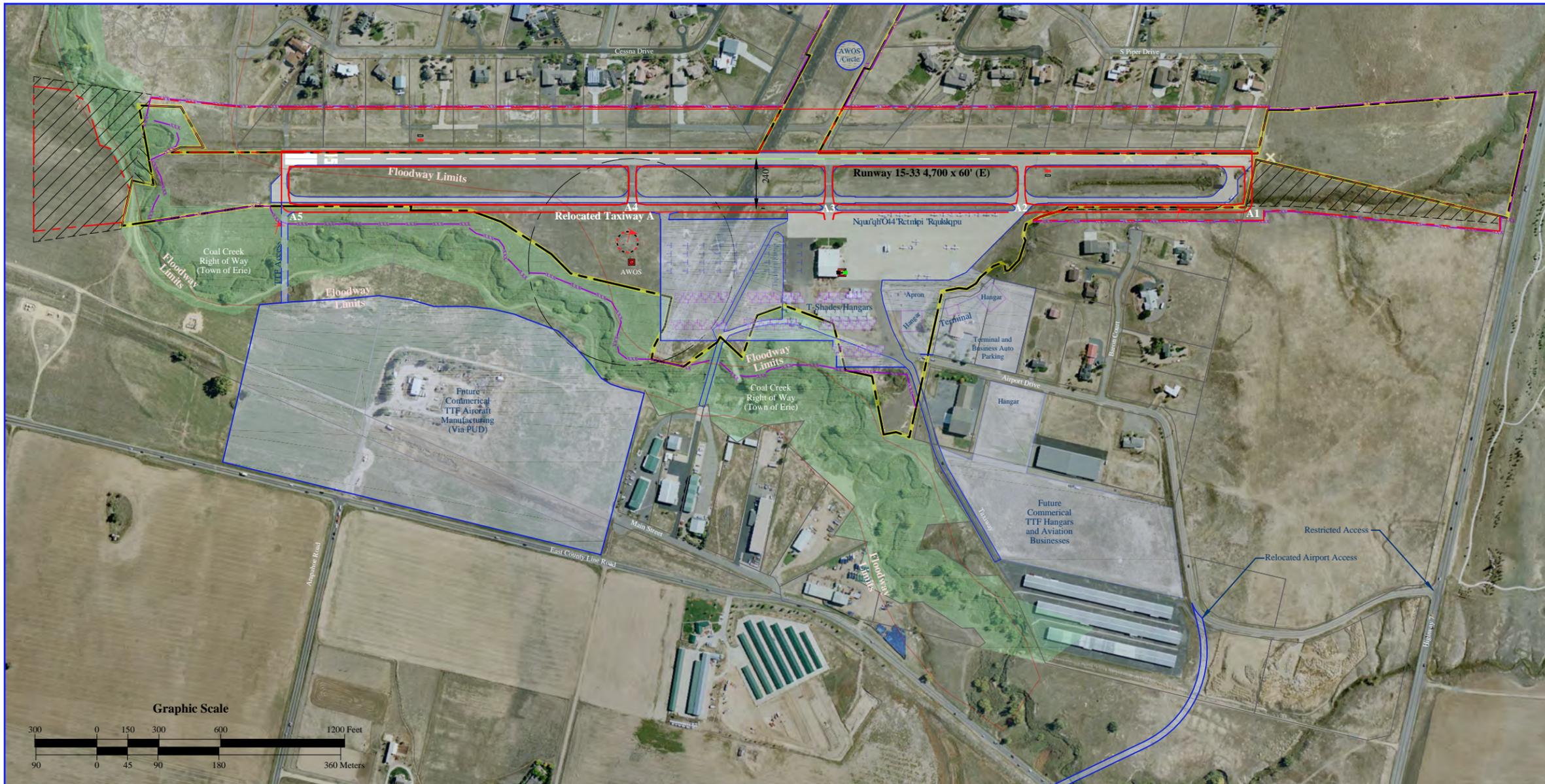
- Relocate Port-A-Ports and Improve Pavements Around
- Install T-Shades (Aircraft Storage) and improve pavements around
- Construct New Tie-Down Ramp

Total Estimated Cost \$1,600,000

Notes

- Alternative No. 1 "As-Is" is shown for for this all other landside alternatives for standards compliance.
- FAA pays for 90% and CDOT 5% if justified, Airport Fund pays for 5%.
- Airport Fund pays for hangars.
- Existing apron will be marked to indicate non-movement area for the eastern apron edge tie-down loss.
- Commercial TTF access agreements perhaps necessary.
- Costs for intersection signal not included.

Alternative No. 5A: Minimal Landside Development



Legend

(E)	Existing
---	Existing Property Line
---	Existing Pavement
---	Existing Avigation Easement
---	Future Fence
---	Future Airside Improvements
---	Future Landside Improvements

Reasons to Say "Yes"

- More responsive to the aviation business environment, aviation economic development generally.
- Accommodates Longer-Term Demand
- Auto Parking No Longer Separated from Terminal Area
- Airport Automobile Access Relocated

Reasons to Say "No"

- Cost. Improvements are beginning to become unworkable under current financial constraints.
- Requires acquisition and relocation.
- AWOS and Segmented Circle must be moved across the runway and historic crosswind runway must remain closed.

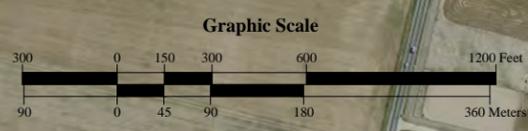
Improvements

- Construct New Terminal Ramp
- Construct New Terminal Building
- Ground Lease New Hangars for Aviation Businesses
- Remove Port-A-Ports
- Install T-Shades (Aircraft Storage) or T-Hangars and improve pavements around
- Construct New Tie-Down Ramp

Total Estimated Cost	\$6,500,000
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Notes

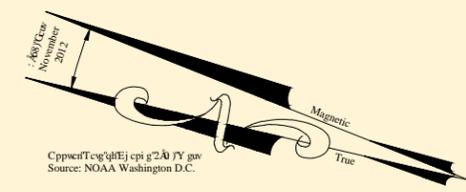
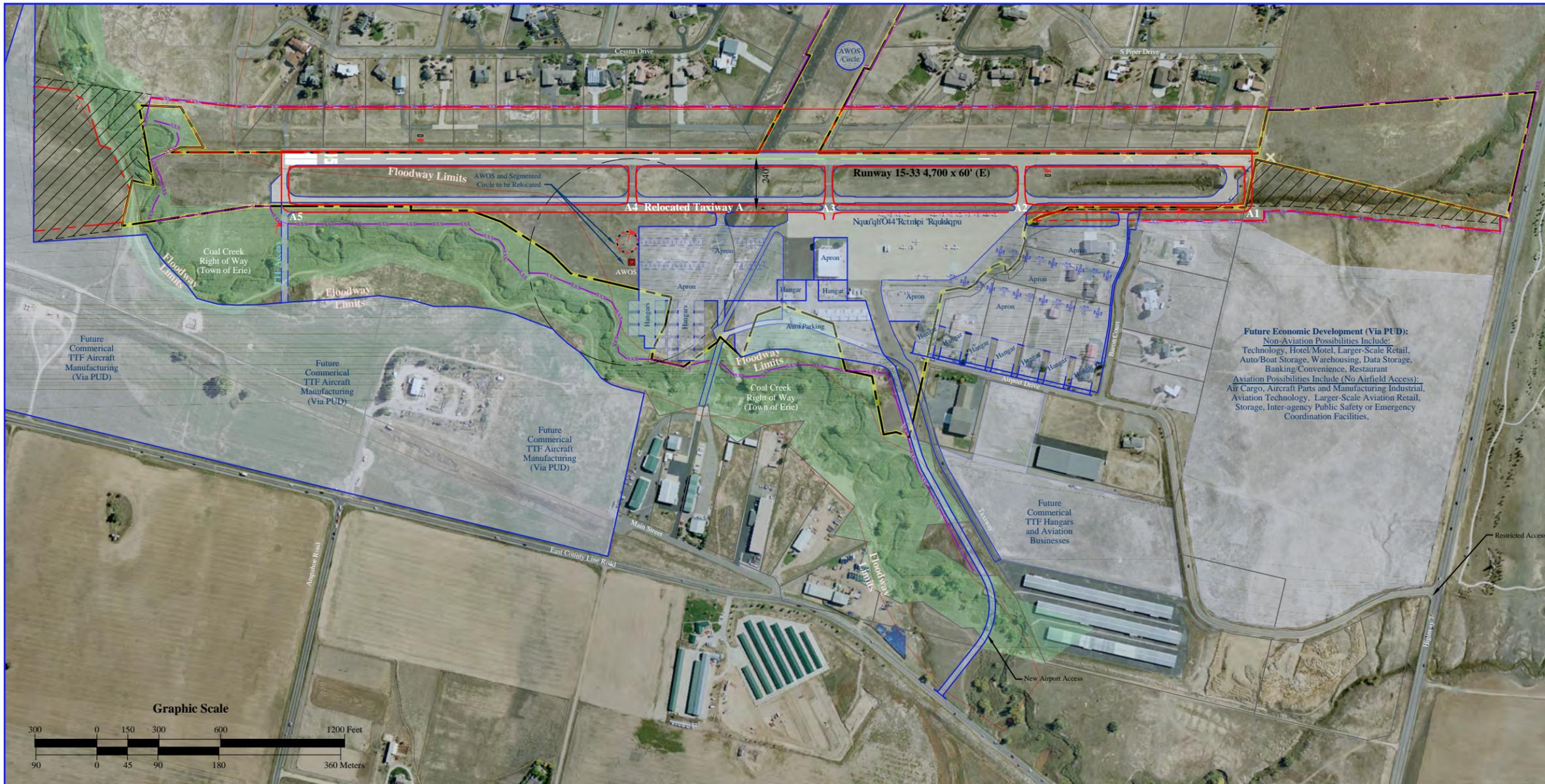
- Alternative No. 1 "As-Is" is shown for for this all other landside alternatives for standards compliance.
- FAA pays for 90% and CDOT 5% if justified, Airport Fund pays for 5%.
- Airport Fund pays for hangars.
- Existing apron will be marked to indicate non-movement area for the eastern apron edge tie-down loss.
- Commercial TTF access agreements perhaps necessary.
- Terminal building could be combined with hangar(s) to make a joint facility.
- Northwest Development Area TTF: Expected to access at County Line/Arapahoe Road and at the end of runway. All improvements and access agreements by others per a PUD.
- Costs for Access Road and ground-leased Executive Hangars not included.



Alternative No. 5B: Moderate Landside Development

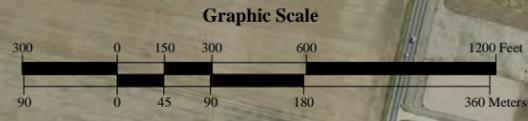


Erie Municipal Airport (EIK)



Legend

- (E) Existing
- Existing Property Line
- Existing Pavement
- Existing Avigation Easement
- Future Fence
- Future Airside Improvements
- Future Landside Improvements



Reasons to Say "Yes"

- Most responsive to the aviation business environment, leverages and maximizes the airfield for the community and the region
- Accommodates longer-term demand and robust demand beyond.
- Auto parking no longer separated from terminal area
- Airport automobile access relocated

Reasons to Say "No"

- Substantial Cost. Improvements are unworkable under current financial constraints without substantial private sector participation.
- Requires more substantial acquisition and relocation, preferably on a volunteer basis.
- AWOS and Segmented Circle must be moved across the runway and historic crosswind runway must remain closed.

Improvements	
-Construct New Terminal Ramps	
-Construct New Terminal/Hangar	
-Ground Lease New Hangars for Aviation Businesses	
-Remove Port-A-Ports	
-Construct New Tie-Down Ramp	
Total Estimated Cost	\$14,200,000

Notes

- Alternative No. 1 "As-Is" is shown for this all other landside alternatives for standards compliance.
- FAA pays for 90% and CDOT 5% if justified, Airport Fund pays for 5%.
- Airport Fund pays for hangars.
- Existing apron will be marked to indicate non-movement area for the eastern apron edge tie-down loss.
- Commercial TTF access agreements perhaps necessary.
- Terminal building could be combined with hangar(s) to make a joined facility.
- Northwest Development Area TTF: Expected to access at County Line/Arapahoe Road intersections at the end of runway. All improvements and access agreements by others per a PUD.
- No airfield access is proposed for economic development area south of Baron Court.
- New Airfield Access crosses Coal Creek and minimally interacts with floodway on the way to the terminal area.
- Costs not included for new access, ground-leased executive hangars.
- Existing FBO Hangar to be Relocated due west of its current site.

Erie Municipal Airport (EIK)

Alternative No. 5C: Robust Landside Development





Next Steps...

- ADG will receive comments from Town Staff*
- ADG will schedule Open House at the Community Center to field alternatives to the general and flying public, solicit and receive comment*
- ADG will summarize comments for Town Staff review*
- ADG will meet with you again to brief this Working Paper No 2 and solicit preferences.*