

# AGS Feasibility Study

PLT Meeting 10  
April 10, 2013

# Agenda

- ▶ Introduction to the Meeting
- ▶ Public Comment
- ▶ Preliminary Modeling Review
- ▶ Operating Scenarios
- ▶ Request for Financial Information (RFFI) & Report Out from Workgroup/Technical Meeting
- ▶ Land Use/Station Meeting Summary & Conclusions
- ▶ AGS/ICS/Co-Development Project Coordination
- ▶ Conclusion, Final Remarks and Next Steps

# Introduction to the Meeting

## ▶ Meeting Objectives

- Review Ridership Modeling Methodology
- Review Operating Scenarios
- Discuss Request for Financial Information (RFFI)
- Discuss Funding
- Update on Stations / Land Use Meetings
- Update on AGS / ICS / Co-Development Project Coordination

# Introduction to the Meeting

- ▶ Review and Approve Meeting Minutes from Last Meeting
- ▶ Review Action Items from Last Meeting
- ▶ Website Update
- ▶ Media Outreach

# Public Comment

- ▶ The public is invited to make brief comments

# Preliminary Modeling Review

## ICS and AGS Technical Modeling

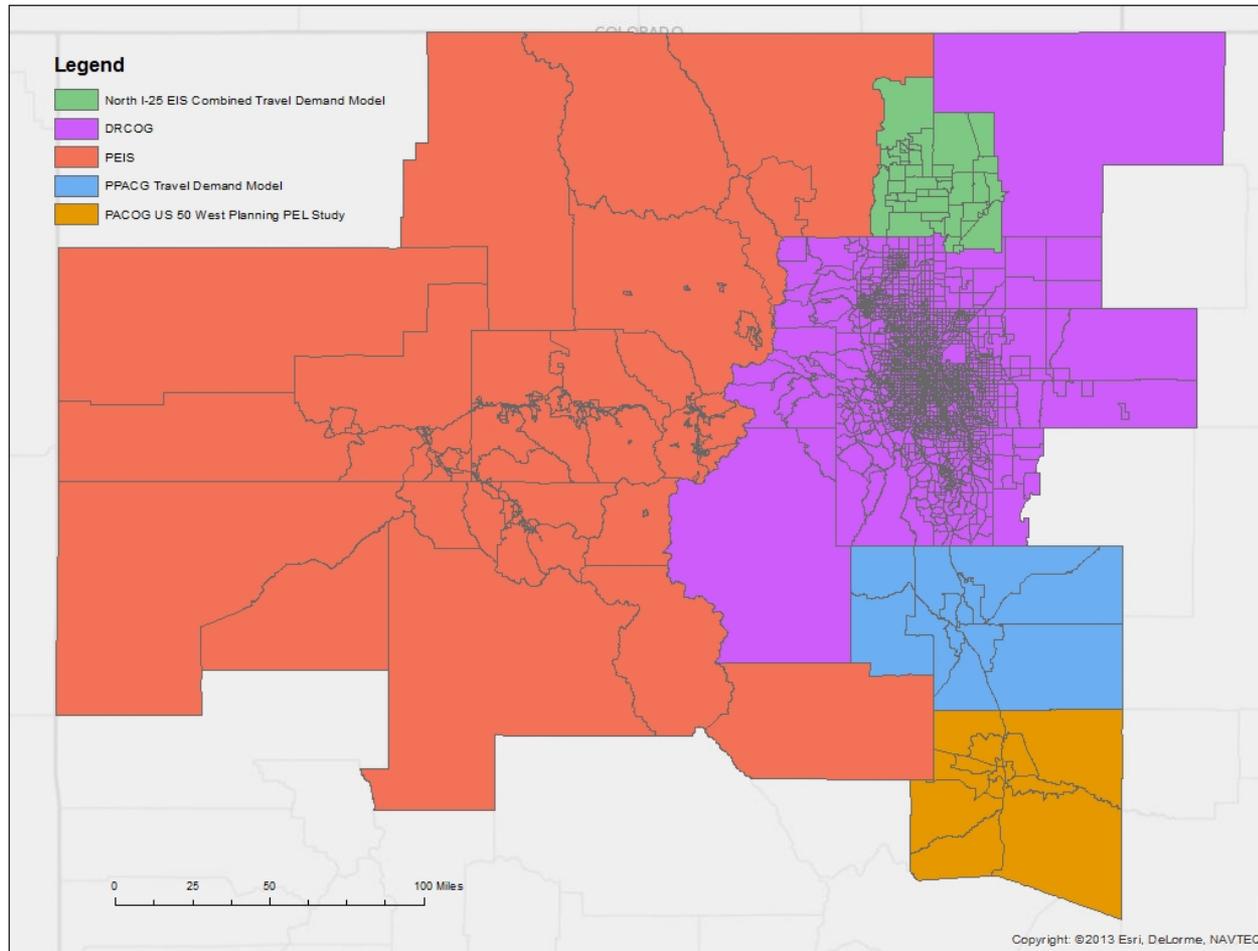
March 20, 2013

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# Study Area Zone Structure



# Auto Operating Costs

- ▶ Essentially Unchanged in Future Years
- ▶ Increase in fuel efficiency negates the increase in fuel price

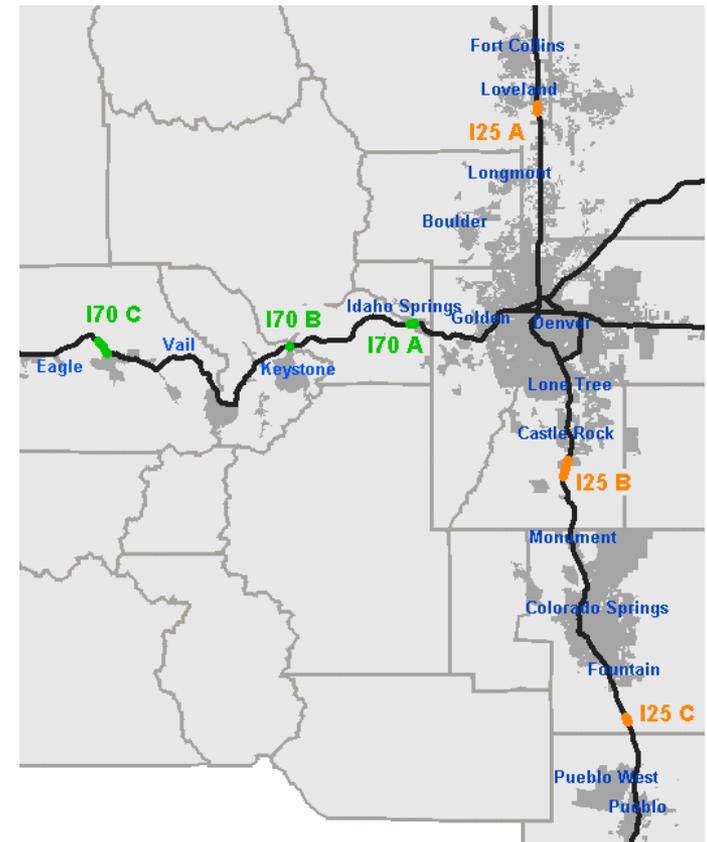
Year	Efficiency (miles/gallon)	Cost (\$/gallon)	Fuel Cost per Mile
2025	25.6	4.08	.1592
2035	28.2	4.26	.1509

Source: U.S. Energy Information Administration, Annual Energy Outlook 2012, values in 2012\$

# Validation to Existing Volumes

- ▶ The assigned vehicle trips were within 7% of CDOT AADTs at all locations considered (shown)
- ▶ Possible future validation against FRTS long distance data

Count Location	CDOT AADT	AirSage AADT	Percent Diff.
I70 A	43,000	45,048	4.8%
I70 B	29,000	30,952	6.7%
I70 C	22,000	20,519	-6.7%
I25 A	68,000	63,688	-6.3%
I25 B	60,000	61,299	2.2%
I25 C	31,000	31,722	2.3%



# Value of Time

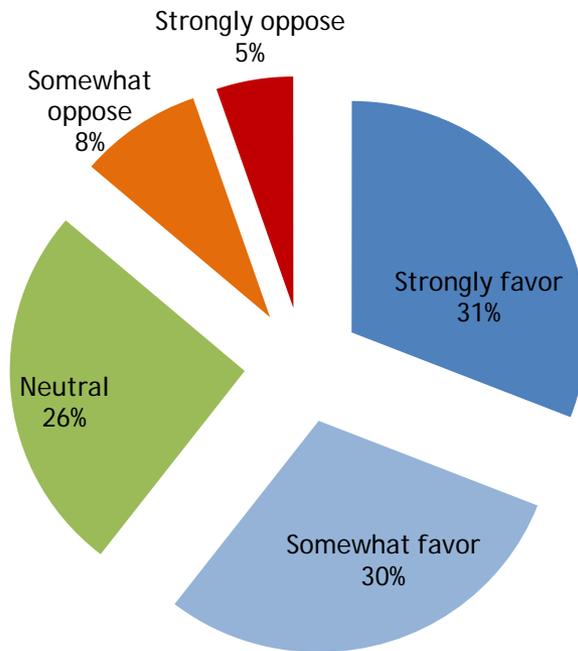
- ▶ Values of Time Vary by Household Annual Income

Household Income	Local Non-Work	Local Work	Local Airport Access	Visitors
\$125,000	\$11	\$16	\$25	\$17
\$100,000	\$10	\$16	\$24	\$16
\$75,000	\$9	\$15	\$23	\$15
\$50,000	\$9	\$13	\$21	\$14
\$40,000	\$8	\$13	\$19	\$13

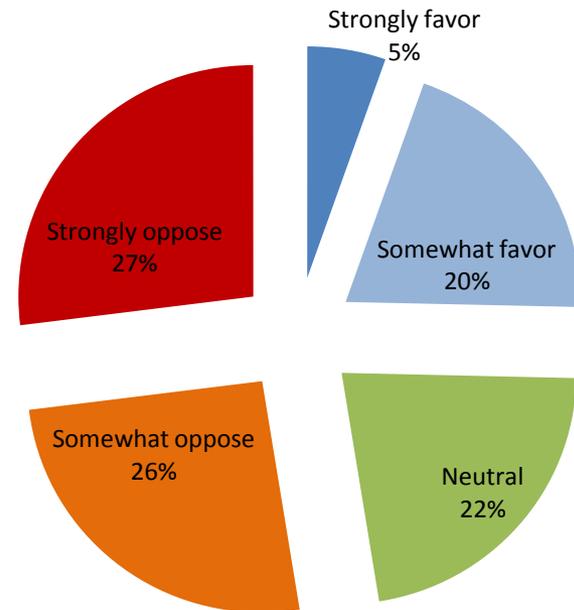
All monetary values in 2012\$

# Stated Preference Survey

## Opinion of a new AGS/Train



## Opinion of adding tolls on I-25 and I-70



# Summary of Stated Preference Results

- ▶ Primary reasons the AGS/Train option was selected
  - Time savings (30%)
  - I support the construction of an AGS/Train system (12%)
  - An AGS/Train is more environmentally friendly than driving (12%)
  - Don't like to drive in congested traffic (11%)
- ▶ Primary reasons the AGS/Train option was not selected
  - Cost is too high (60%)
  - Need car at destination (15%)
  - Too difficult to get from AGS/Train to destination (4%)
  - Don't want to ride AGS/Train (4%)
- ▶ 24% of respondents were non-traders who always picked their current travel option as their preferred mode

# I-70 Transit Ridership History

Source	Annual Riders	Annual Fares	Fare per Ride	Annual O&M Cost	Farebox Recovery
2000 MIS (2020 Horizon)	1.74 M (DIA-Glenwood) <sup>1</sup>		(20¢/mi + \$15 DIA charge, 1998\$)	\$162 M (1998\$)	
2001 CIFGA				\$47 M	
2004 Draft PEIS (AGS)		\$85 M		\$180 M	48 %
2004 Draft PEIS (Rail)		\$83 M		\$135 M	61 %
2010 RMRA 125mph Maglev			\$19.65 <sup>2</sup> (35¢/mi, 2010\$)		145 % <sup>2</sup>
2010 RMRA 150 mph Rail			\$20.84 <sup>2</sup> (35¢/mi, 2010\$)		127 % <sup>2</sup>

Notes: <sup>1</sup>Includes 400,000 Vail-Glenwood, <sup>2</sup>With both I-25 and I-70 high-speed transit in place.

# Modeling Next Steps

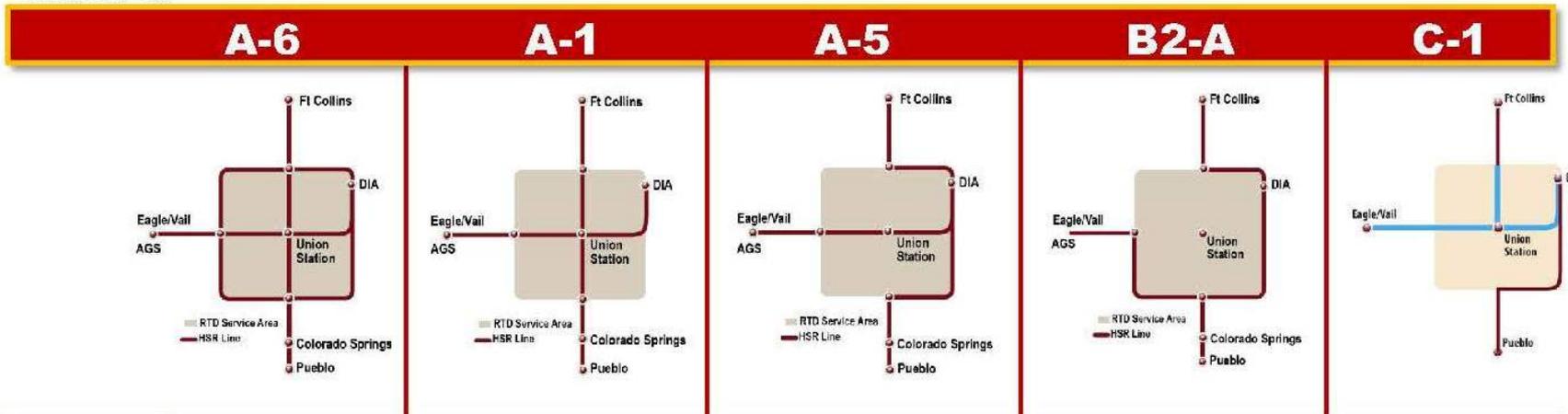
- ▶ Technical Committee Review of Model Outputs
- ▶ Discussion of Operating Plans for Forthcoming Model Runs
- ▶ Ridership Results for various AGS scenarios

# Operating Scenarios

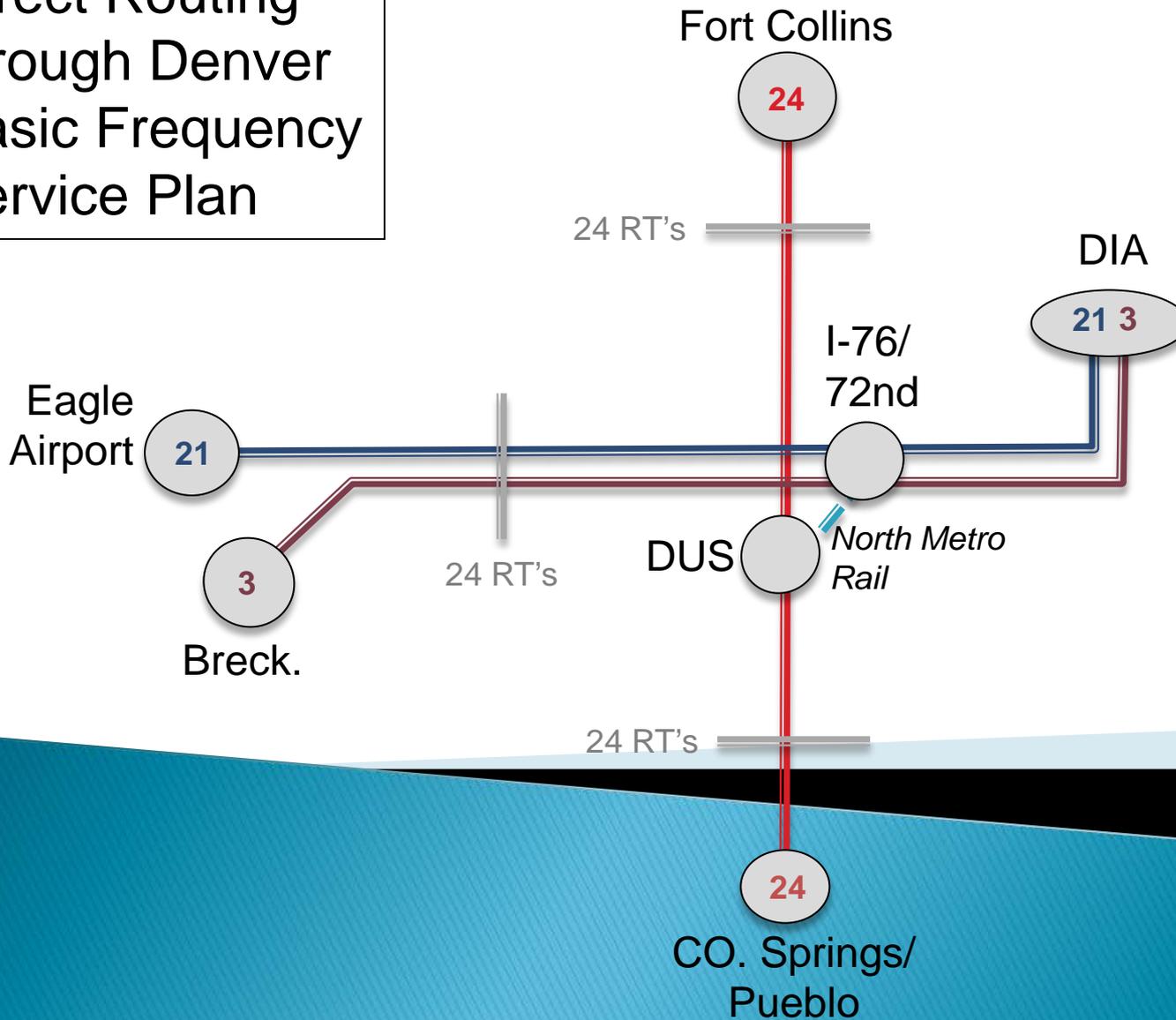
- ▶ 18 Hour Operation Per Day
- ▶ Six Scenarios Developed
- ▶ In Each Scenario, Two Options:
  - Basic Frequency Service Plan
    - 12 hours @ 1 hr. frequency + 6 hrs. @ 30 min frequency = 24 trains/day
  - Capacity-Based Frequency Service Plan
    - 12 hours @ 1 hr. frequency + 6 hrs. @ 15 min frequency = 36 trains/day (4,900 peak hour passengers)
- ▶ Each Scenario has Different Connectivity Assumptions

# Operating Scenarios

## Scenario



**Scenario A1a**  
Direct Routing  
through Denver  
Basic Frequency  
Service Plan



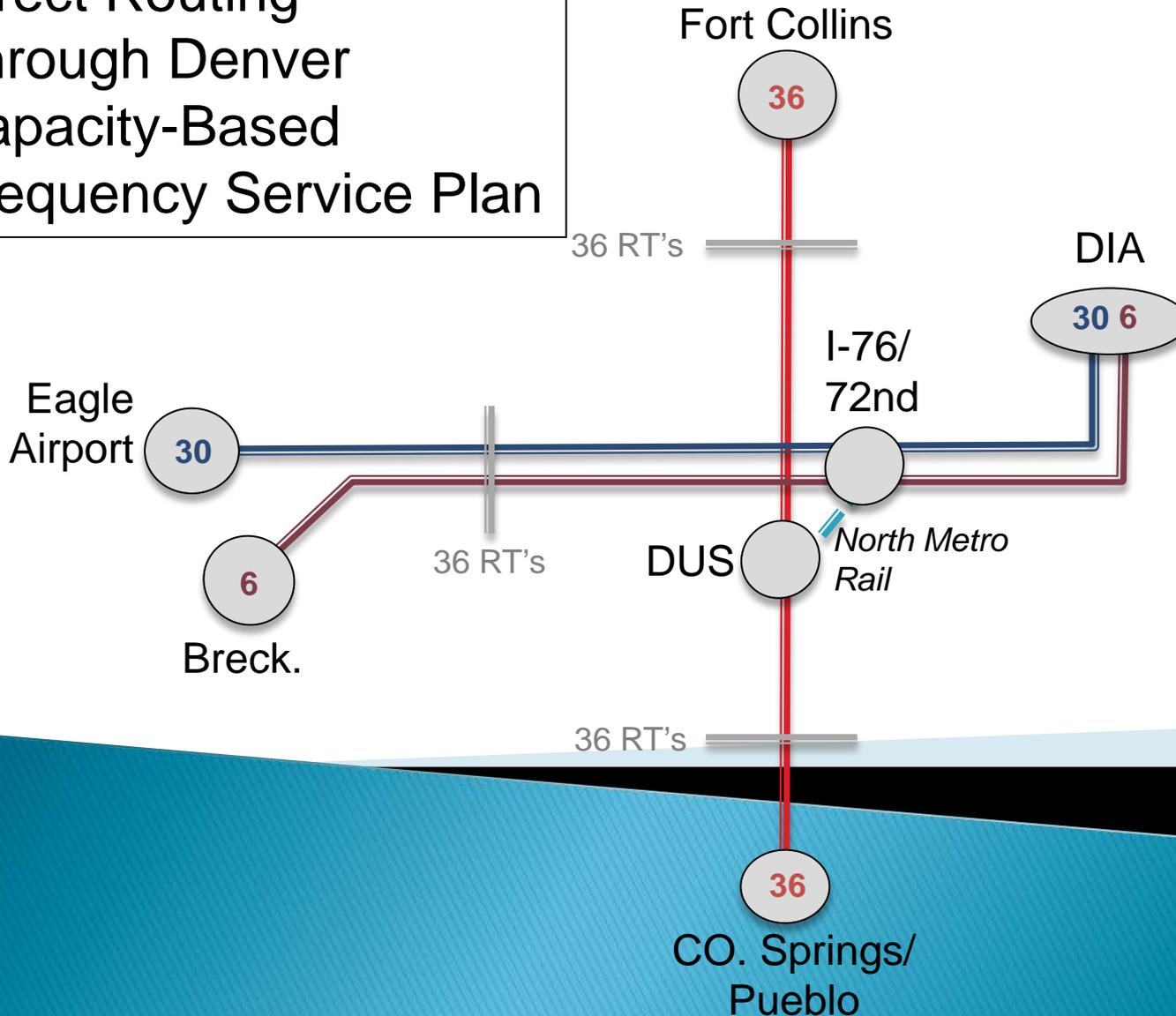
# Scenario A1a

Direct Routing

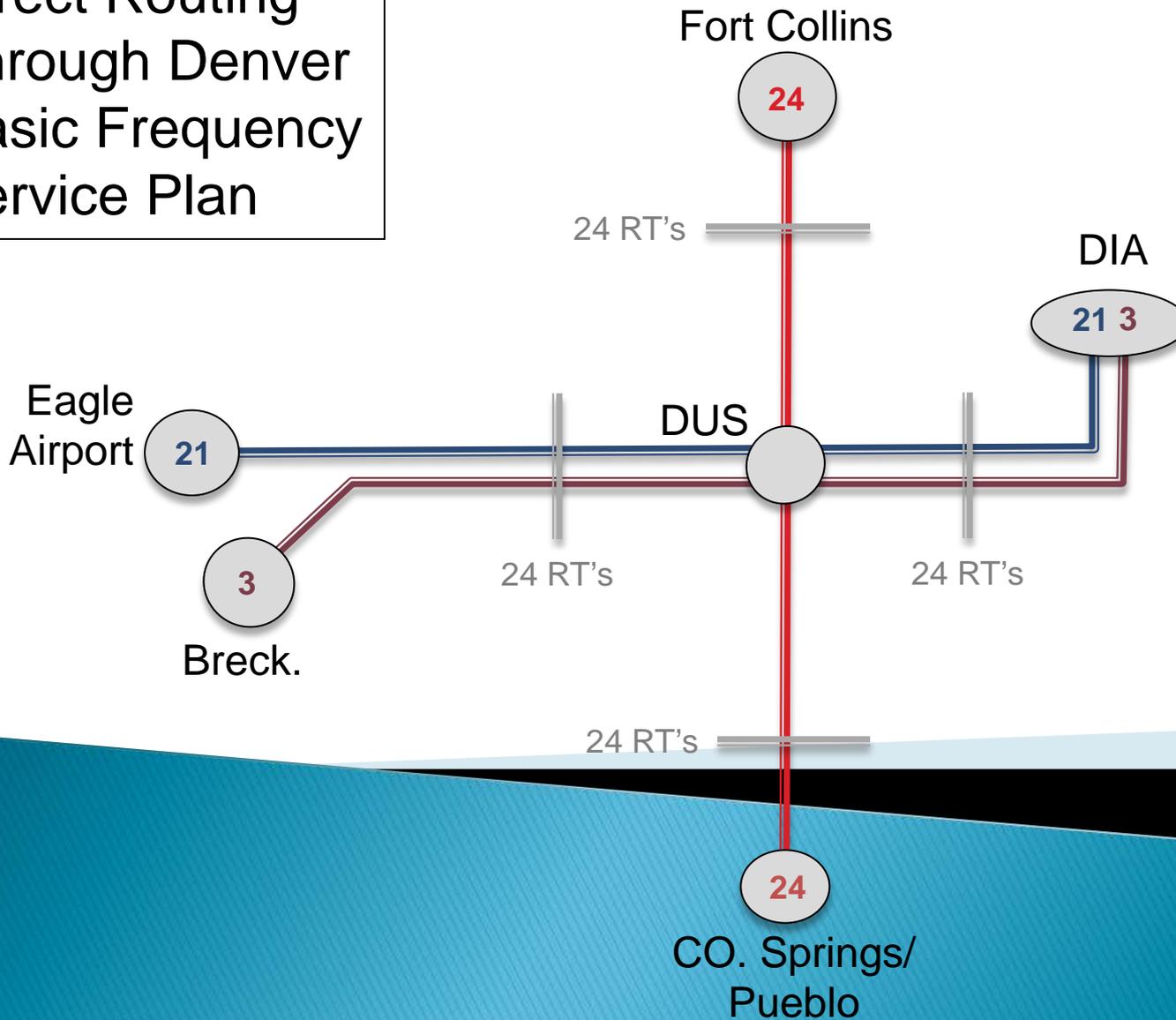
Through Denver

Capacity-Based

Frequency Service Plan

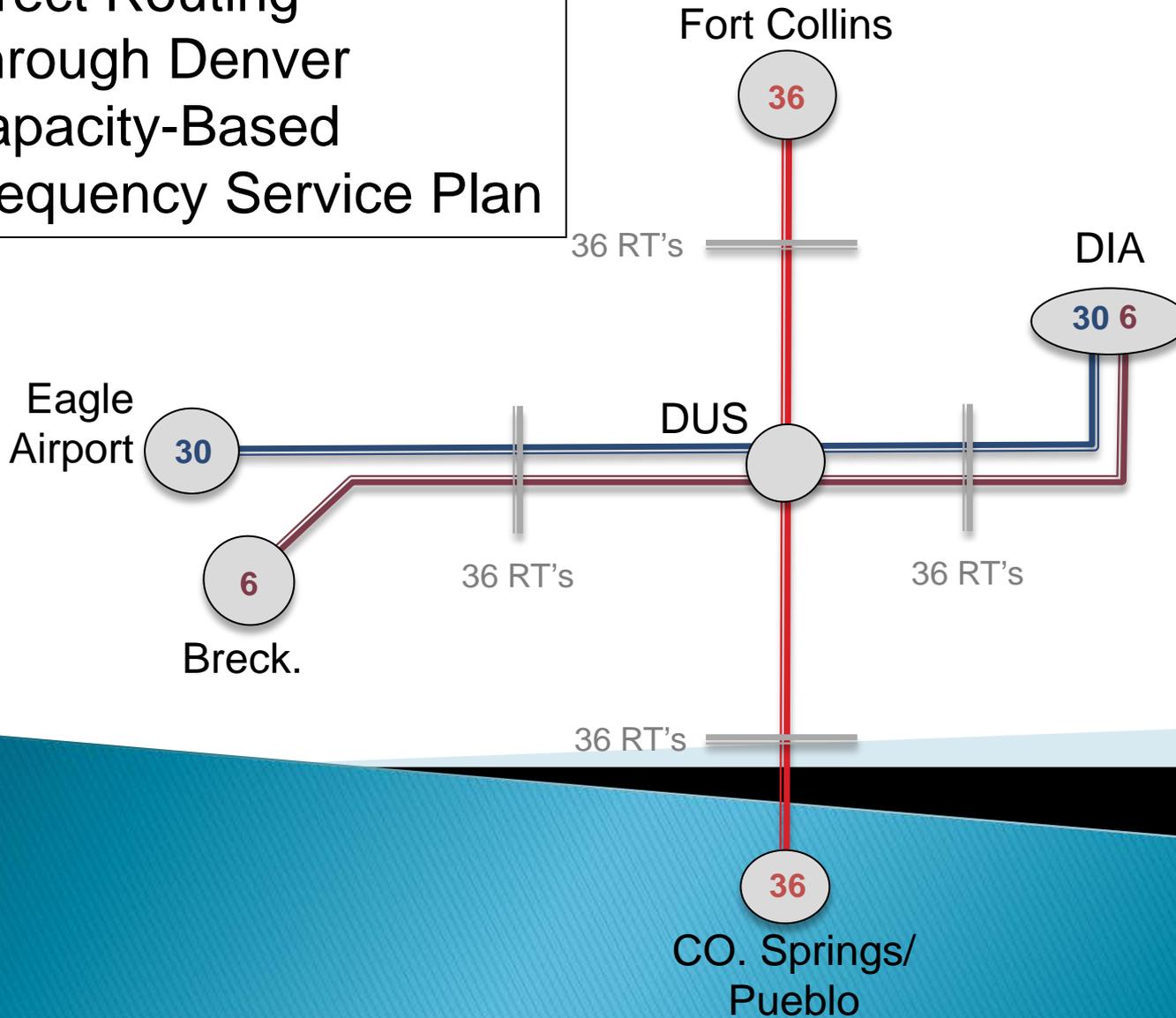


**Scenario A1b**  
Direct Routing  
Through Denver  
Basic Frequency  
Service Plan

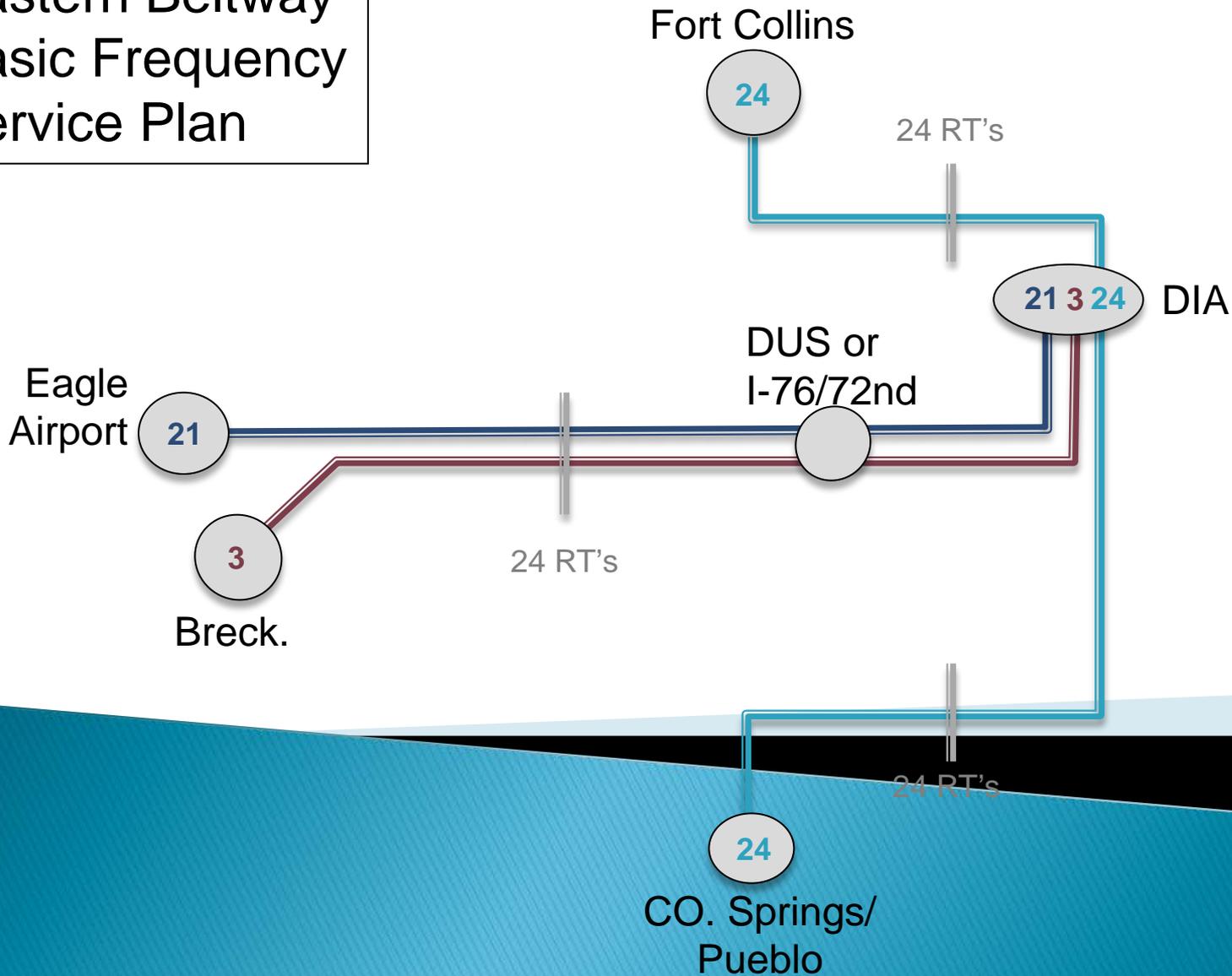


# Scenario A1b

Direct Routing  
Through Denver  
Capacity-Based  
Frequency Service Plan



# Scenario A5 Eastern Beltway Basic Frequency Service Plan



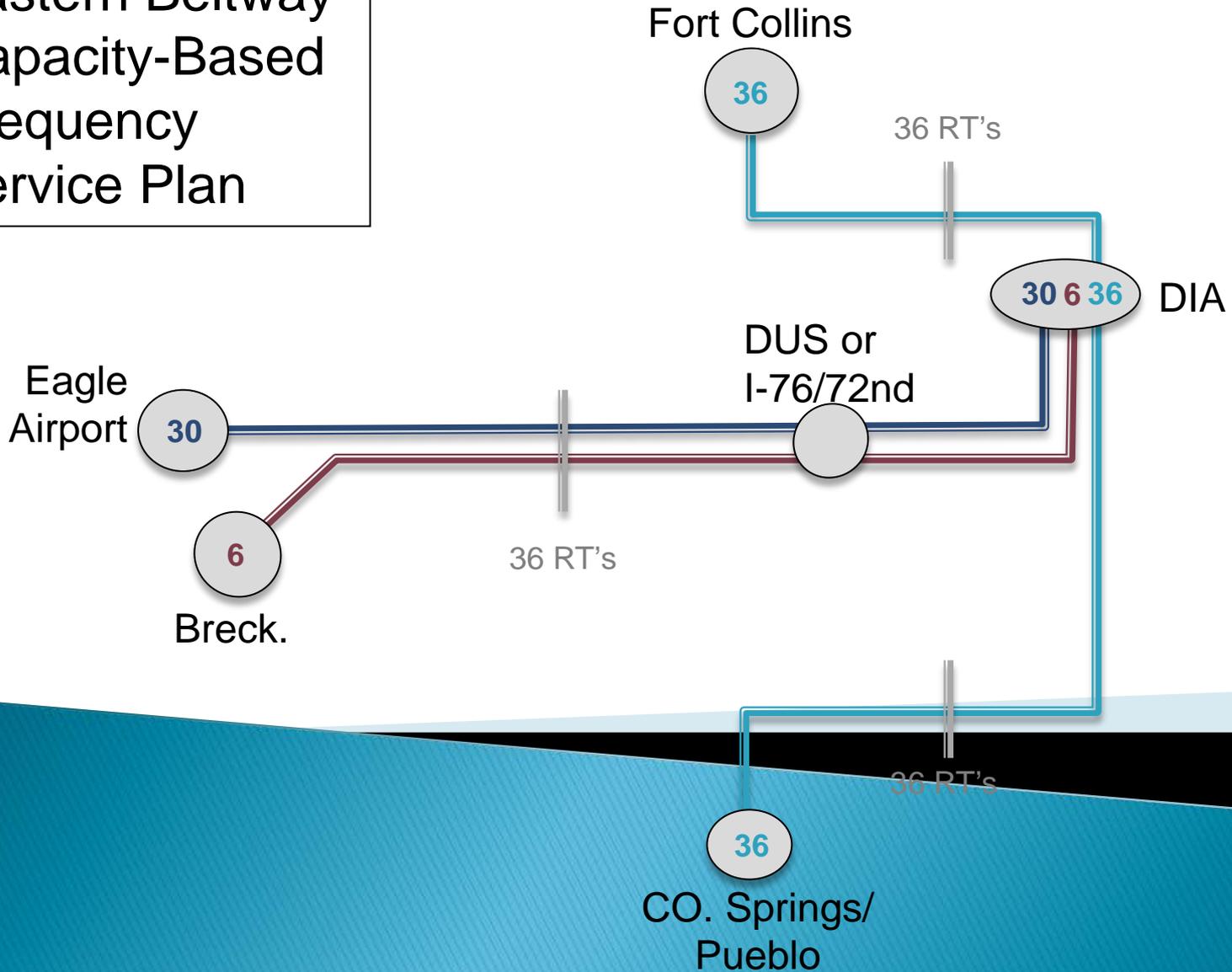
# Scenario A5

## Eastern Beltway

### Capacity-Based

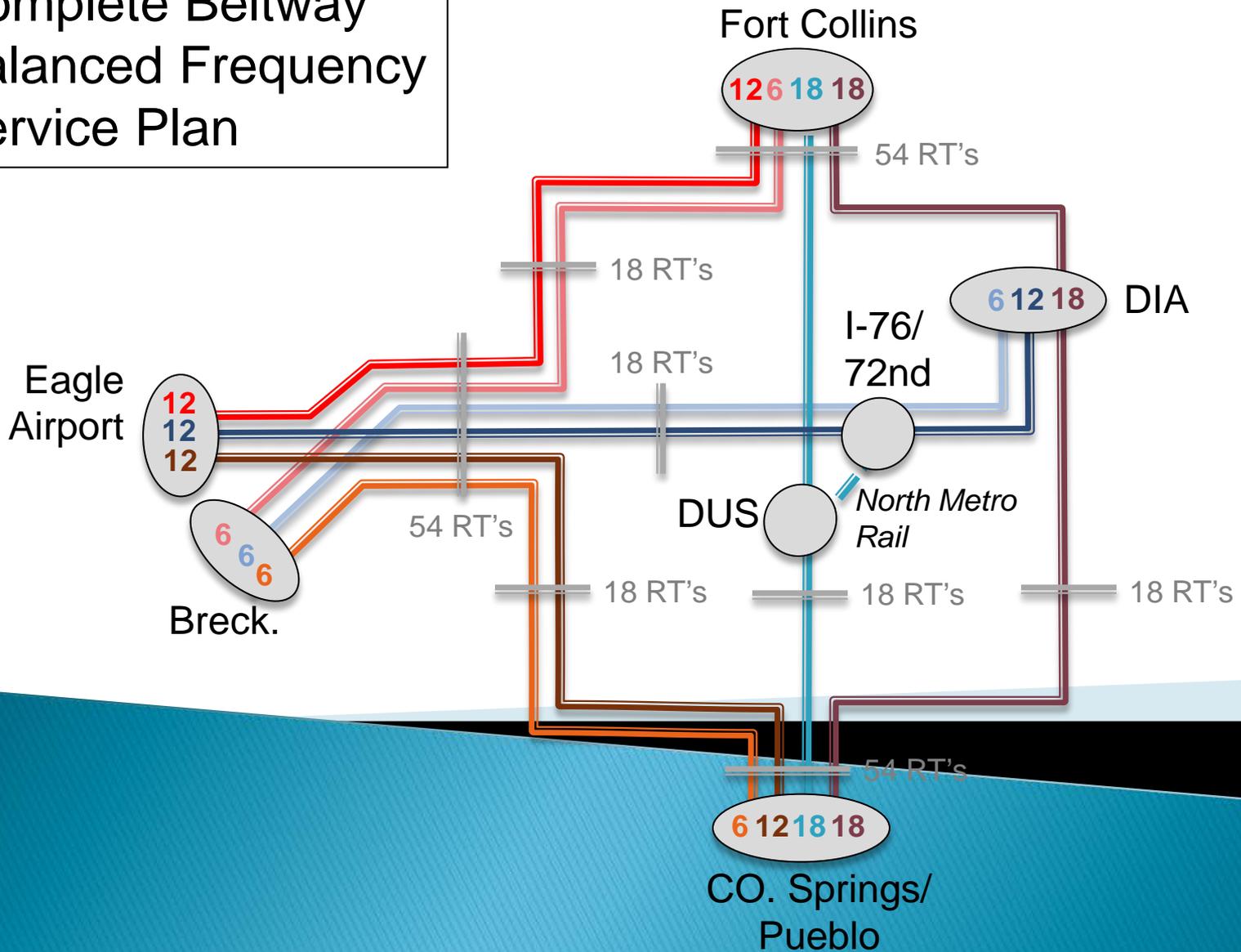
### Frequency

### Service Plan



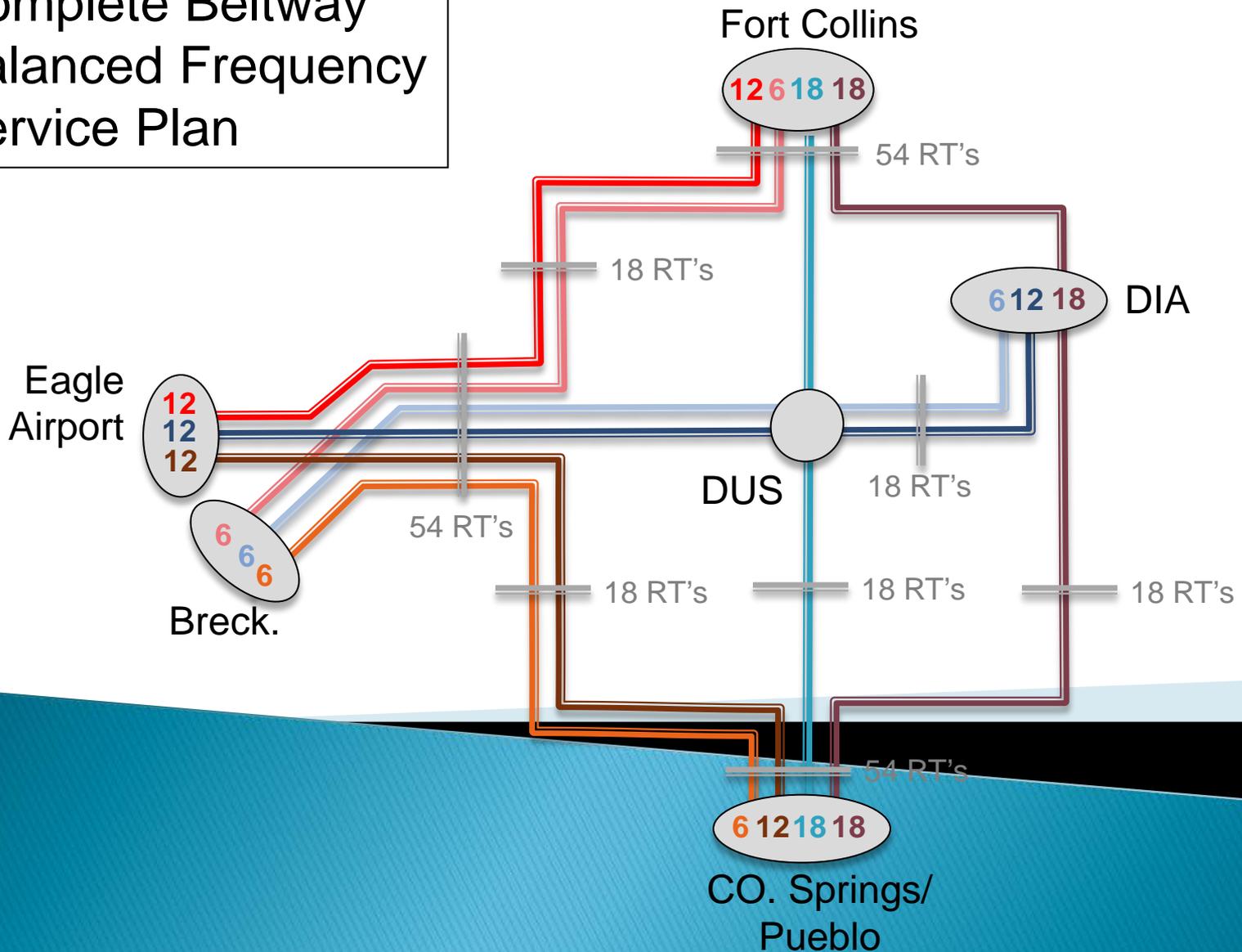
# Scenario A6

## Complete Beltway Balanced Frequency Service Plan



# Scenario A6

## Complete Beltway Balanced Frequency Service Plan

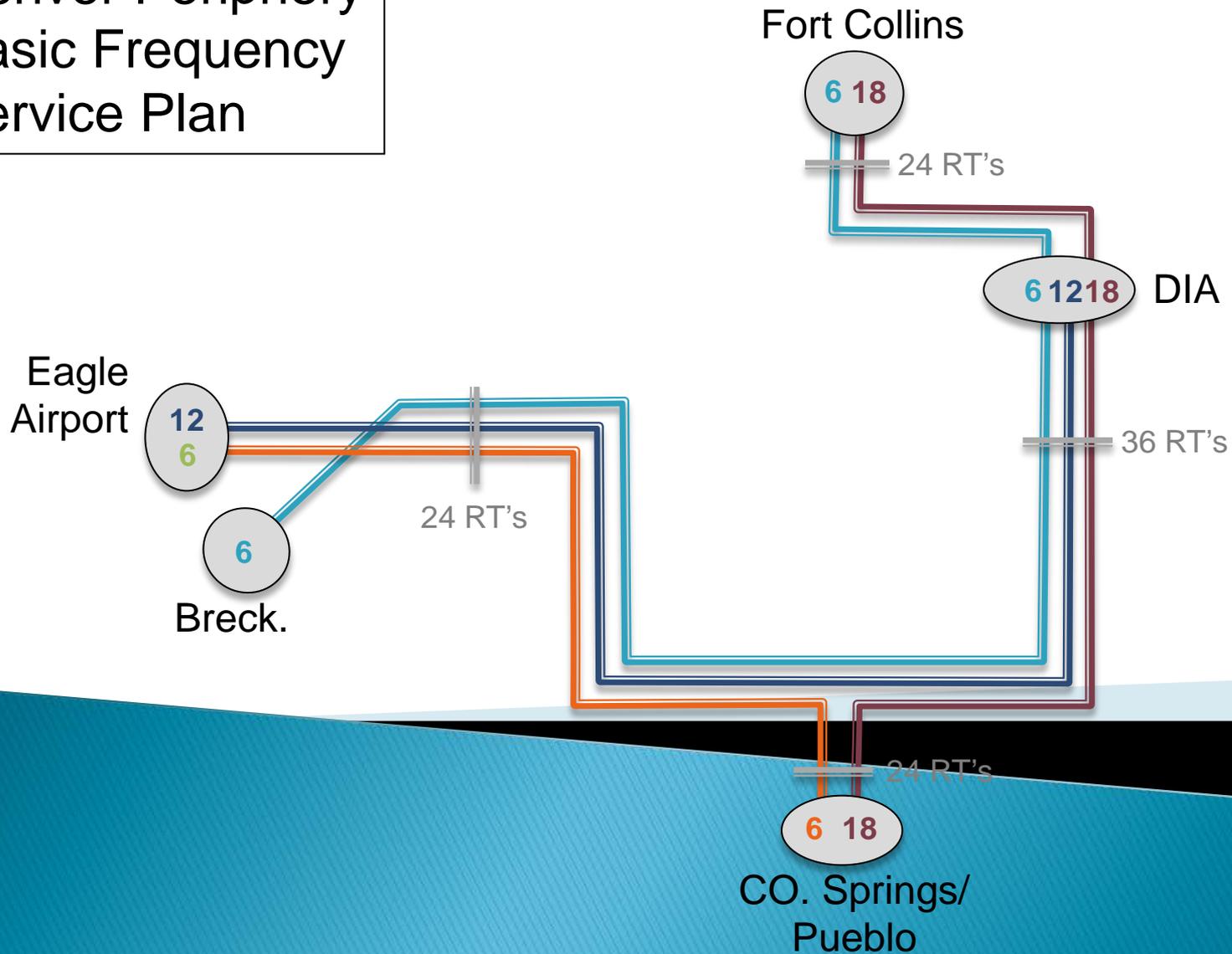


# Scenario B2-A

## Denver Periphery

### Basic Frequency

### Service Plan



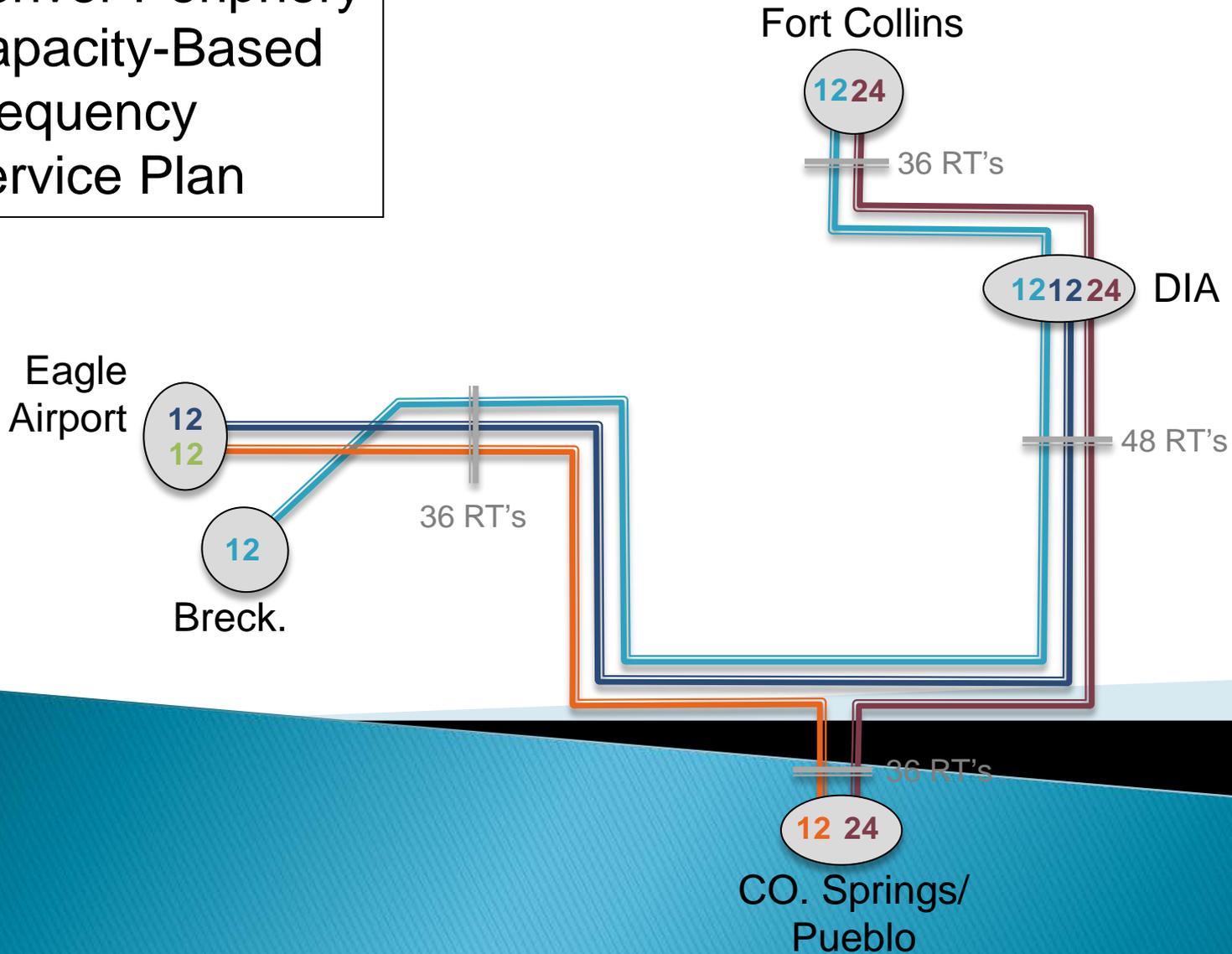
# Scenario B-2A

## Denver Periphery

### Capacity-Based

### Frequency

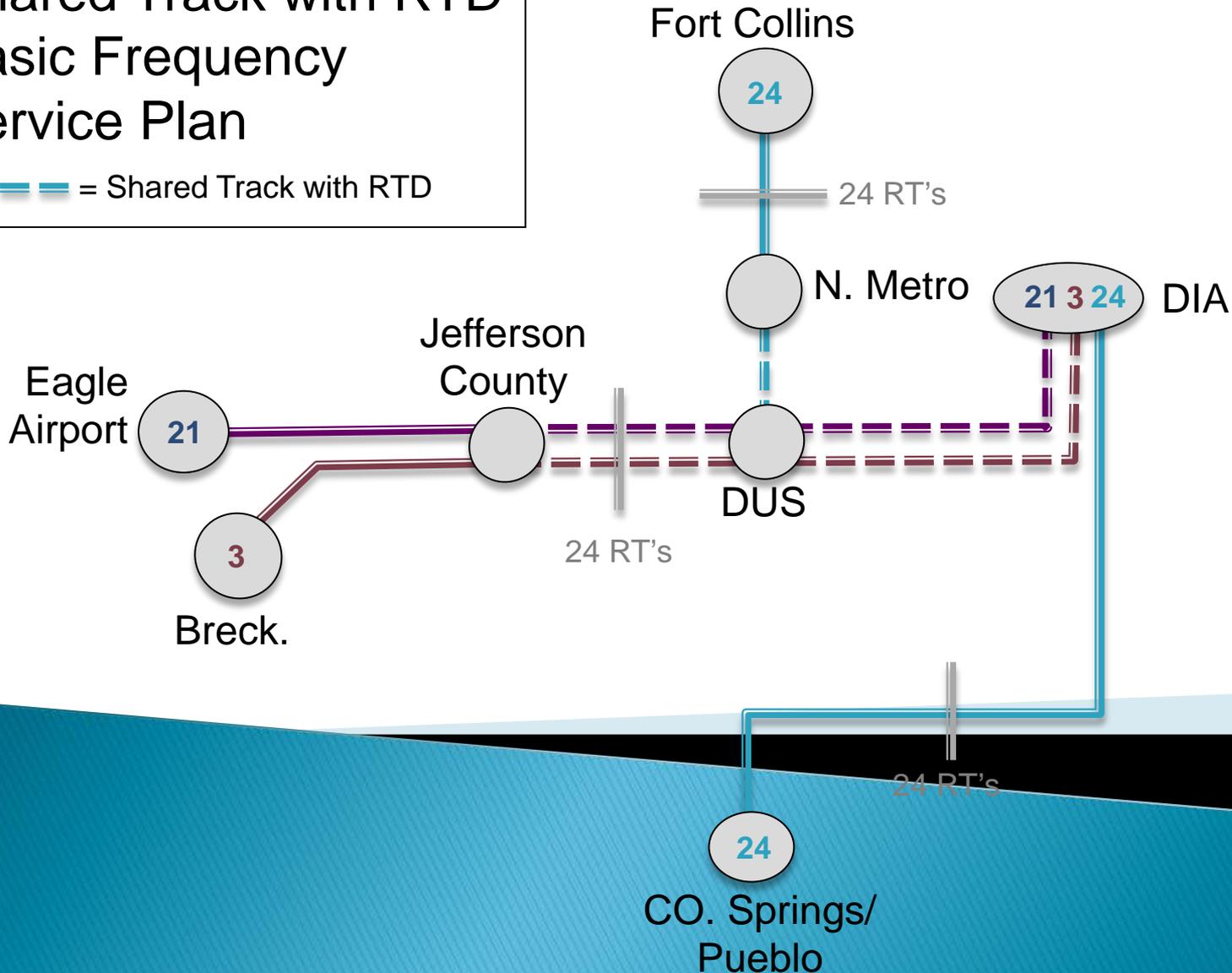
### Service Plan



# Scenario C1

## Shared Track with RTD Basic Frequency Service Plan

== = Shared Track with RTD

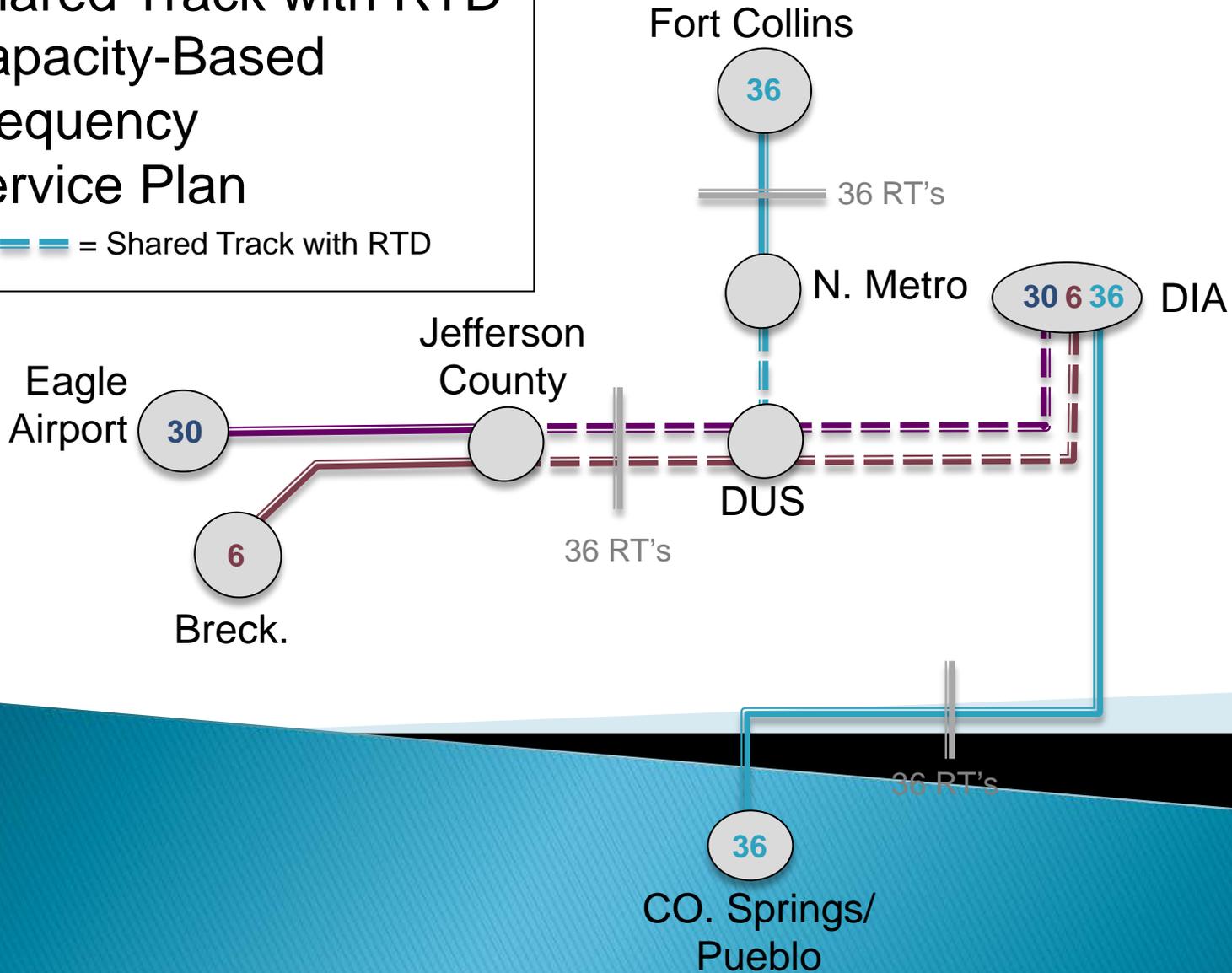


# Scenario C1

## Shared Track with RTD

### Capacity-Based Frequency Service Plan

--- = Shared Track with RTD



# Operating Scenarios

- ▶ Additional Operating Scenarios Will Be Developed For AGS Portion of System:
  - High Speed Maglev
  - Medium Speed Maglev in I-70 ROW
  - Medium Speed Maglev Hybrid Alignment
- ▶ Scenarios Will Also Consider Standalone AGS + DIA Connection

# RFFI Development & Funding & Financial Workgroup Report Out

- ▶ Meeting #3 held April 8, 2013
- ▶ Agenda included:
  - Development of AGS Request for Financial Information (RFFI)
  - Discussion of AGS Funding Scenarios

# AGS Request for Financial Information (RFFI)

## ▶ GOALS

- Use the best available information on the project
- Provide realistic expectations
- Keep it straightforward to obtain as much relevant input / feedback as possible

# AGS Request for Financial Information (RFFI)

- ▶ **Preliminary Schedule for Discussion**
  - Input from Funding/Financing Task Force 4/8/13
  - Brief PLT and obtain input 4/10/13
  - Advance notification of financial community 4/19/13
  - First Draft of RFFI 4/19/13 (missing certain key elements such as cost and ridership information)
  - Comments 4/25/13
  - Second Draft of RFFI 4/30/13 (if certain key elements such as cost and ridership information are available)

# AGS Request for Financial Information (RFFI)

- ▶ Preliminary Schedule for Discussion (continued)
  - Comments due on 2<sup>nd</sup> Draft – 5/6/13
  - Briefing of PLT 5/8/13
  - Final Draft of RFFI – 5/10/13
  - Conference Call for Final Draft Review by AGS Team – 5/14/13
  - Final RFFI – 5/15/13
  - Sign-off by CDOT DTR – 5/16/13
  - Release RFFI – 5/17/13

# AGS Request for Financial Information (RFFI)

- ▶ Background information to be provided:
  - Base project information (MOS)
  - Ridership results & ridership risk/variation
  - AGS Team to provide alignments, cost estimates
  - Preliminary funding assumptions & recommendations from Task Force
  - Level of local government support
  - Level of recreational industry and business support

# AGS Request for Financial Information (RFFI)

- ▶ Possible RFFI questions to ask:
  - Recommendations on governance structure
  - Recommended delivery structure: (DBFMO, DBF + M&O separate, other?)
  - Considerations associated with AGS technology selection
  - Views on appropriate risk allocations between public and private sector
  - Conditions under which they would take farebox risk to cover O&M expenses

# AGS Request for Financial Information (RFFI)

- ▶ Possible RFFI questions to ask:
  - Expectation on certainty and characteristics of funding streams for the project
  - What additional types/level of revenue could be generated to fund the project?
  - If availability payments, recommended structure
  - Recommended term for a concession
  - Generally what contract/financing terms would be necessary to create private participation interest?

# AGS Request for Financial Information (RFFI)

- ▶ Possible RFFI questions to ask:
  - Single concession concept: highway tolling and transit fares together OR AGS only, which is better?
  - Opinion about joint investment in AGS/I-70 and ICS/Front Range High Speed Transit?
  - Other major risk factors that must be addressed to ensure sufficient competition

# Statewide Funding

- ▶ Like Federal gas tax, State gas tax revenues are also shrinking
- ▶ MPACT64 Discussions
  - Progressive 15, Action 22, Club 20, Denver Metro Chamber (7)
  - 7/10ths of 1% sales tax increase
  - 10–15 year horizon
  - Potentially “buys time” for gas tax to be replaced by mileage–based user fee (MBUF), vehicle miles traveled tax (VMT tax), or another funding strategy

# Discussion on New Statewide Transportation Funding

- ▶ \$600 Million / year (\$6 B / 10 yrs.)
  - 2 / 3rds to roads = \$400 Million/year
    - 60% state = \$240 Million/year
    - 40% local = \$160 Million / year
    - Same share as current gas tax
  - 1 / 3<sup>rd</sup> to transit = \$200 Million / year
    - 60 % to RTD = \$120 Million/year
    - 40% to CDOT & all other transit agencies = \$80 Million / year

# Discussion on New Statewide Transportation Funding

- ▶ \$80 M / year for transit
  - Needs are statewide
  - AGS is a large project
  - AGS financing needs in the range of \$300 to \$400 million per year for 30 years to pay debt
  
- ▶ Sunset in 10–15 years
  - Insufficient funding for AGS project
  - Incompatible with debt repayment if AGS financed over longer period

# AGS Local Funding Expectation

- ▶ Can the AGS project expect a 10% commitment toward Project Costs from 3 counties as primary beneficiaries of AGS?
  - Summit, Clear Creek, & Jefferson
    - M.O.S. does not reach Eagle County
  - \$500 Million if \$5 Billion Project (unescalated)
  - Over what time period is this likely?
  - What commitments are local communities willing to support?
  - How do commitments affect economic competitiveness within the state and nationally?

# ICS PLT Input Relevant to AGS

- ▶ Metro Denver Counties
  - FasTracks must be completed first
  - Mixed opinions about value capture / local taxes
    - If new development creates \$\$\$ – sharing is possible
    - Otherwise conflicts with local control decisions like schools, local streets, local economic development efforts
  
- ▶ Metro Denver Counties Are Key
  - 8 metro Denver counties & 50+ cities within them are needed to create enough revenue stream to fund any high-speed transit project

# Land Use/Station Meeting Update



# County Workshops

Summit County – Monday, March 11<sup>th</sup>

Jefferson County – Tuesday, March 12<sup>th</sup>

Clear Creek County – Thursday, March 14<sup>th</sup>

Eagle County – Monday, March 25<sup>th</sup>

# Evaluation Criteria

- ▶ Land Use Developability
  - Land availability, infrastructure capacity, compatibility with local plans and character, serves population center
- ▶ Transportation Access and Capacity
- ▶ Transit Distribution
- ▶ Community Regional Support
- ▶ Environmental Constraints
- ▶ Ridership Capture

# Station Locations under Evaluation

## ▶ Jefferson County

- Golden (US 6/C470/I-70 – Home Depot area)
- Colorado Mills
- Morrison development site
- Hwy 58/I-70 (alignment alternative)

## ▶ Clear Creek County

- Idaho Springs
- Empire Junction
- Georgetown

# Station Locations under Evaluation

## ▶ Summit County

- Silverthorne
- Lake Hill
- Frisco
- *Keystone*
- *Breckenridge*
- *Copper Mountain*



# Station Locations under Evaluation

- ▶ Eagle County
  - Vail
  - Avon
  - Eagle County
  - Regional Airport



# Land Use/Stations Next Steps

- ▶ Compare station locations to ridership estimates
- ▶ Estimate parking needs at stations
- ▶ Round 3 County meetings in June

# AGS/ICS/Co-Development Coordination

- ▶ ICS Progress
  - PLT Meeting #5 scheduled for April 17, 2013
  - Service plans completed
  - Operations & maintenance costs determined
  - Initial modeling runs for ICS scenarios complete
  - AGS modeler's have reviewed ICS modeling and have prepared comments
- ▶ Traffic & Revenue Study RFP proposals submitted April 5, 2013
- ▶ I-70 Peak Period Shoulder Lane (Empire Junction to Twin Tunnels). Proposals due April 11, 2013

# Conclusions, Final Remarks & Next Steps

- ▶ Next PLT meeting
  - May 8, 2012 – Eagle, CO.
- ▶ Next Funding & Finance Workgroup meeting
  - May 2, 2013