

Project Leadership Team (PLT) Meeting #2 CDOT Interregional Connectivity Study

DRAFT SUBJECT
TO CHANGE

AGS



ICS

Welcome & Introductions

Welcome remarks

- CDOT Management Team
- Interregional Connectivity Study (ICS) & Advanced Guideway System (AGS) teams

Introductions

- Phone participants
- PLT member & visitors
- Name & organization (brief)

Meeting Logistics

- Restrooms
- Emergencies
- Cell phones

PLT Agenda Review

- ▶ Welcome & introductions
- ▶ Recap PLT meeting #1
- ▶ Details of upcoming public meetings
- ▶ Milestone #1 results
- ▶ Next steps & concluding comments

Meeting Ground Rules

▶ Role of the Facilitator

- Keep team on schedule
- Keep the team focused
- Parking lot

▶ Role of All Active Participants

- Treat each other with respect
- Listen when others are speaking
- Be mindful of time limits
- Leave personal agendas at door
- Keep an open mind
- Surface concerns
- Focus on the meeting purpose

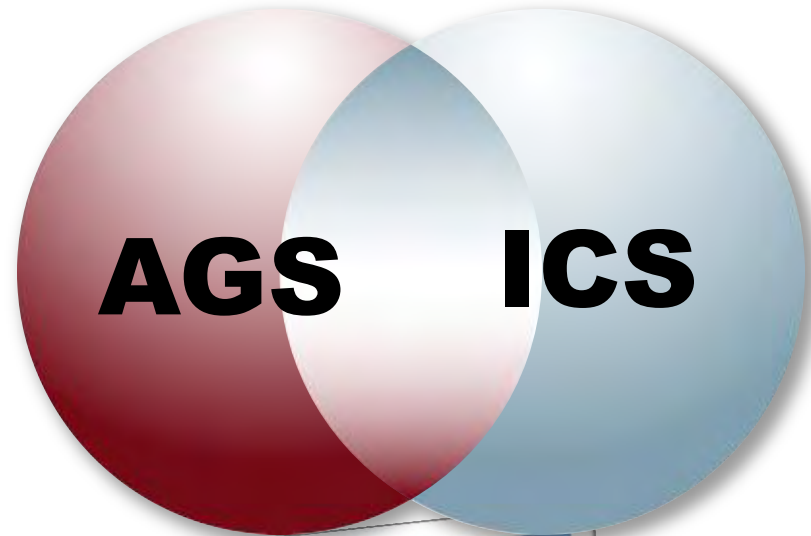


Recap PLT Meeting #1



Key Accomplishments

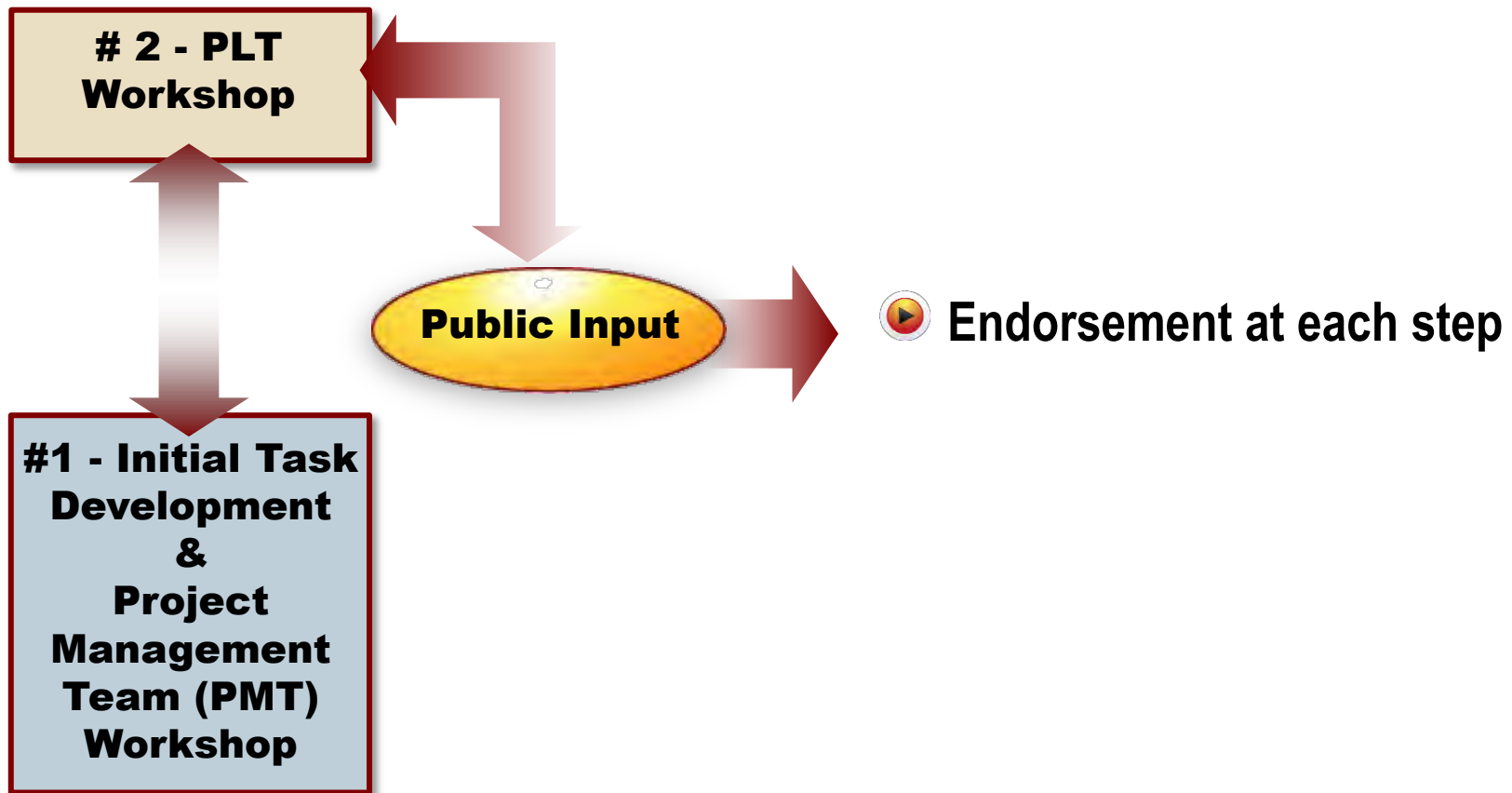
- ▶ Reviewed relationship between ICS and AGS studies
- ▶ Confirmed Project Vision based on State Rail Plan
- ▶ Group discussion of:
 - Project goals
 - Project risks
 - Avoidance & mitigation of risks
- ▶ Reviewed draft fatal flaw criteria
- ▶ Discussed initial Purpose and Need



Upcoming Public Open Houses



Each Screening Step Is Endorsed By Three Levels Of Governance...



Meetings In Your Area

Colorado Springs Area

July 16, 2012

4:00pm to 7:00pm

Pikes Peak Area Council of Governments - 15 South Seventh Street, Colorado Springs, CO

Fort Collins Area

July 18, 2012

4:00pm to 7:00pm

Windsor Recreation Center - 250 North 11th Street, Windsor, CO

Pueblo Area

July 17, 2012

4:00pm to 7:00pm

Pueblo Convention Center - 320 Central Main St., Pueblo, CO

Denver Metropolitan Area

July 19, 2012

4:00pm to 7:00pm

CDOT Region 1 Offices - Trail Ridge Room - 425 C Corporate Circle, Golden, CO

Public Workshop Opportunities For Input

- ▶ Presentation
- ▶ Informational boards
- ▶ Alignment maps – sticky notes
- ▶ Electronic map stations
- ▶ Electronic comment stations
- ▶ Comment forms
- ▶ Engage with project staff



Public Workshop No.1: Goals, Criteria & Initial Alternatives CDOT Interregional Connectivity Study



CH2MHILL.

July 2012

CH2MHILL.

Successful Alternatives Fulfill The Purpose & Need

Purpose:

- The purpose of the ICS project is provide Colorado with a well supported modal option for the State's transportation network that connects communities and destinations for interregional business and tourism travel; builds on and strengthens Colorado's existing transportation infrastructure; supports the State's Vision, as articulated in the 'State Rail Plan'; and offers statewide social, environmental, and economic benefits that are greater than the capital and operating costs of its implementation.

Needs:

- Address the mobility demands of future population growth.
- Improve mobility through provision of a travel option.
- Enhance economic development through improved connectivity.
- Improve the State's environmental quality and energy efficiency.
- Provide economic benefits sufficient to receive new funding sources.

The Range of Alternatives Tests Performance



Developing Alternatives

1

- Based off of the Purpose & Need

2

- **Built from past studies**
 - Rocky Mountain Rail Authority Study (RMRA)
 - State Rail Plan
 - RTD System
 - I-70 Mountain EIS
 - North I-25 EIS
 - East Corridor EIS

3

- **Federal Railroad Administration guidance**
 - Speed requirements
 - Operational requirements
 - Safety requirements
 - Stations & station spacing
 - Alternatives analysis evaluation criteria

Logic For Configuring Scenarios

1

- **Start with connections to the airport and Denver Union Station**
 - Identify alignments through Denver
 - Identify alignments traveling outside of the Denver metro area

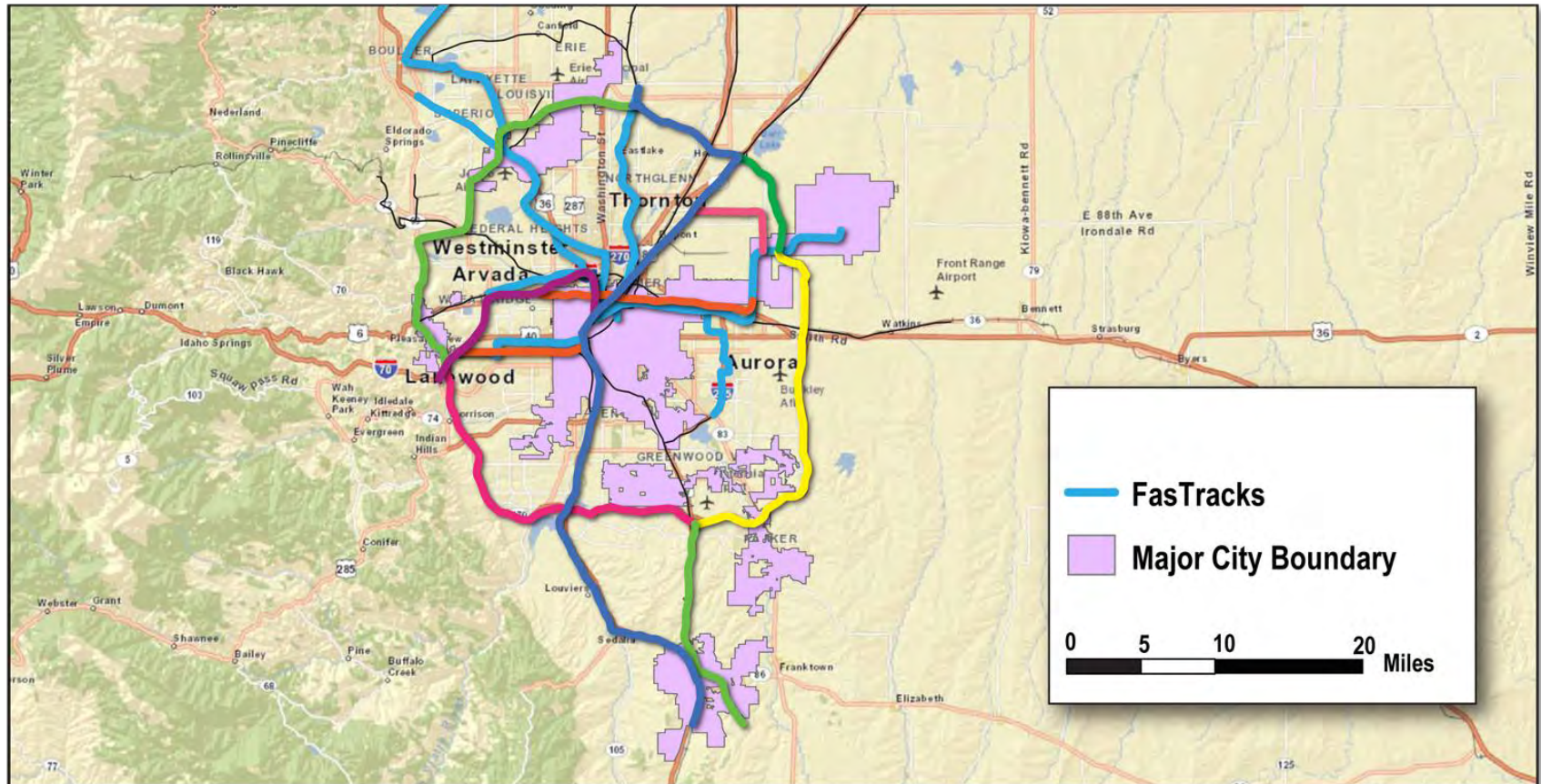
2

- **Test a reasonable range of options**
 - 14 stations assumed
 - Alignments outside of Denver based on past studies
 - Modeling two alignments for the AGS study

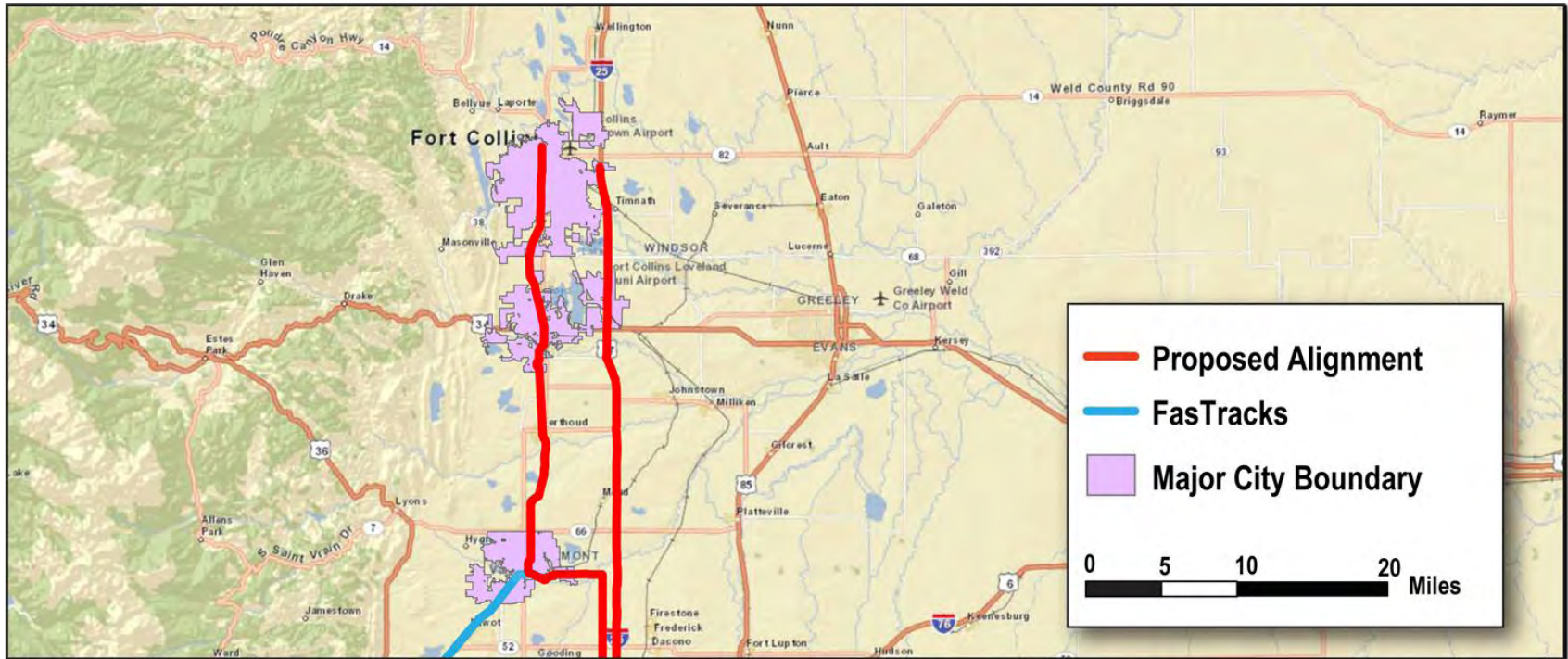
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- **Refine Alternatives**
 - Based on ridership, environmental and engineering studies

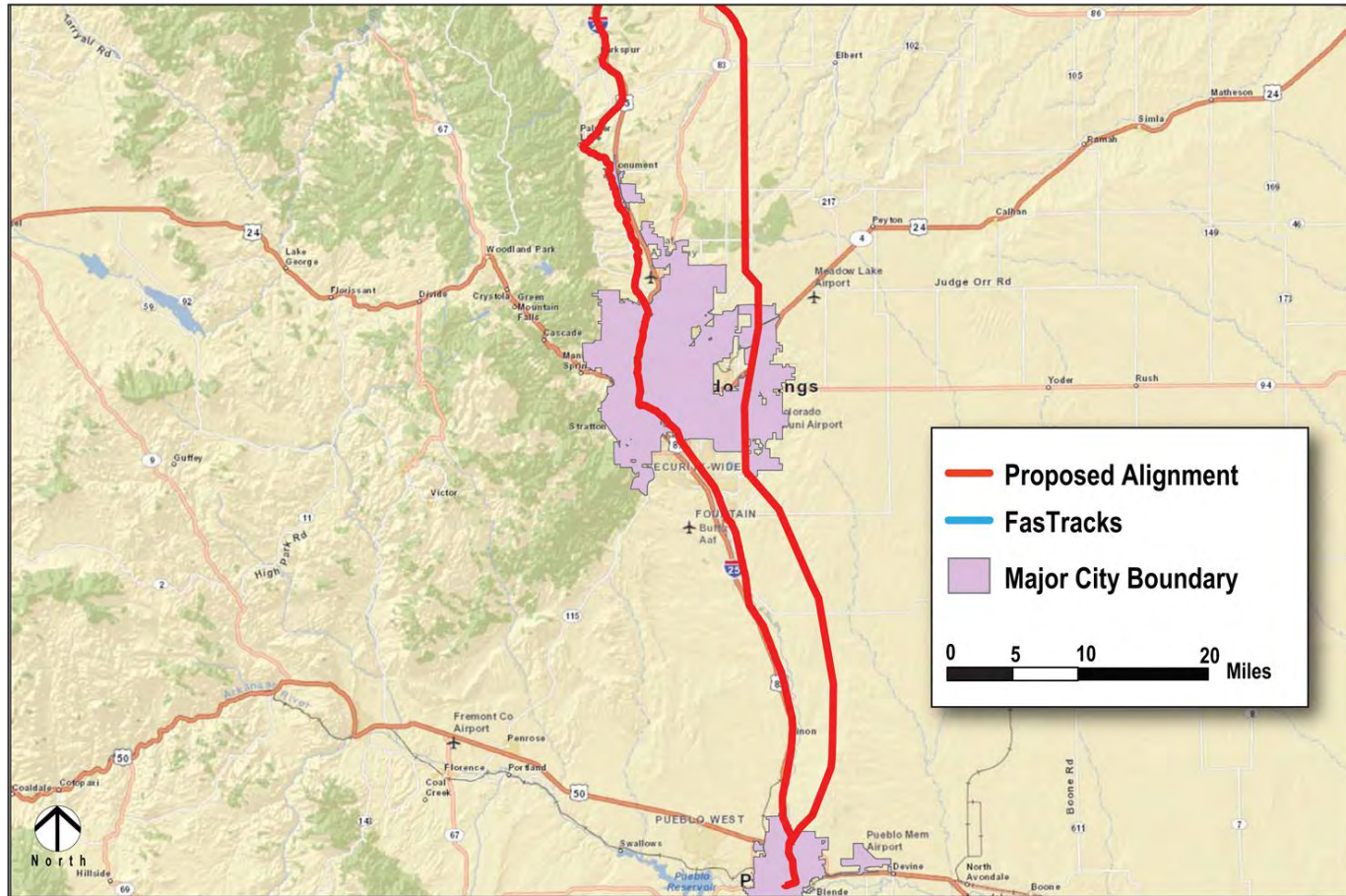
Alignments Being Studied In The Denver Metro Area



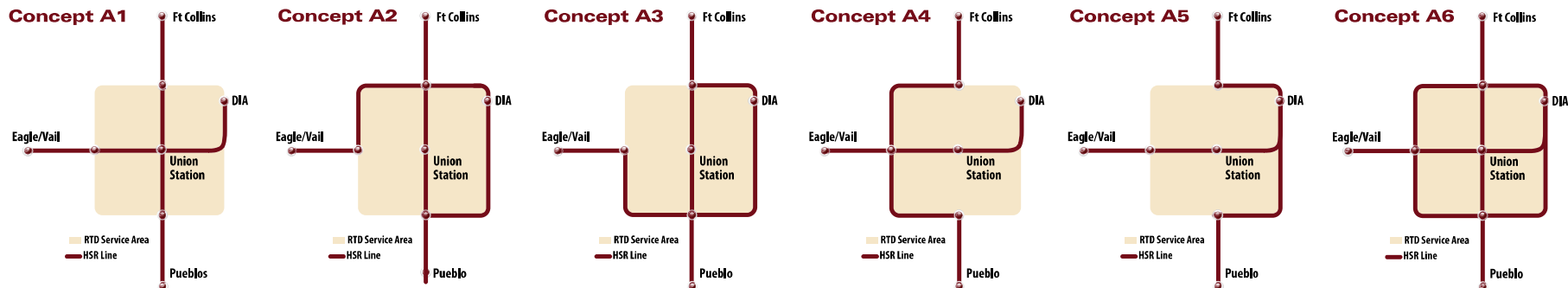
Initial Alignments To Fort Collins



Alignments Being Studied To Colorado Springs & Pueblo



Group A: Does Not Utilize The RTD System In The Denver Metro Area (One Seat Ride)



Advantages

- Generally shorter
- Probably faster
- One seat ride to DUS & DIA

Disadvantages

- High cost per mile
- Requires aerial structure
- Higher community impacts
- May compete with RTD

Group B: Utilizes RTD System To Travel Within The Denver Metro Area



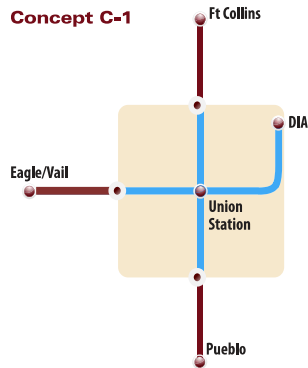
Advantages

- Generally lower cost
- Less construction impacts
- Potentially easier to implement
- Uses RTD infrastructure

Disadvantages

- Not as fast inside Denver
- Probably lower ridership
- No one seat ride to DUS
- Fewer economic benefits

Group C: Utilizes RTD Track For High Speed Rail Through The Denver Metro Area



Advantages

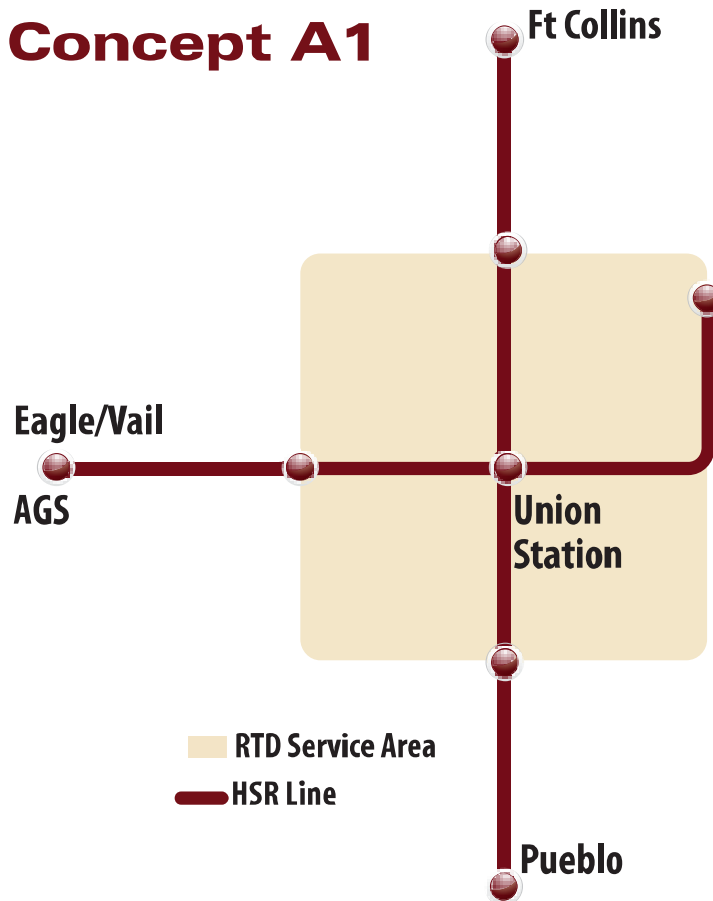
- One seat ride to DUS & DIA
- Less construction impacts
- Potentially easier to implement
- Uses RTD track

Disadvantages

- Not as fast inside Denver
- Operational challenges working on RTD track
- Fewer economic benefits

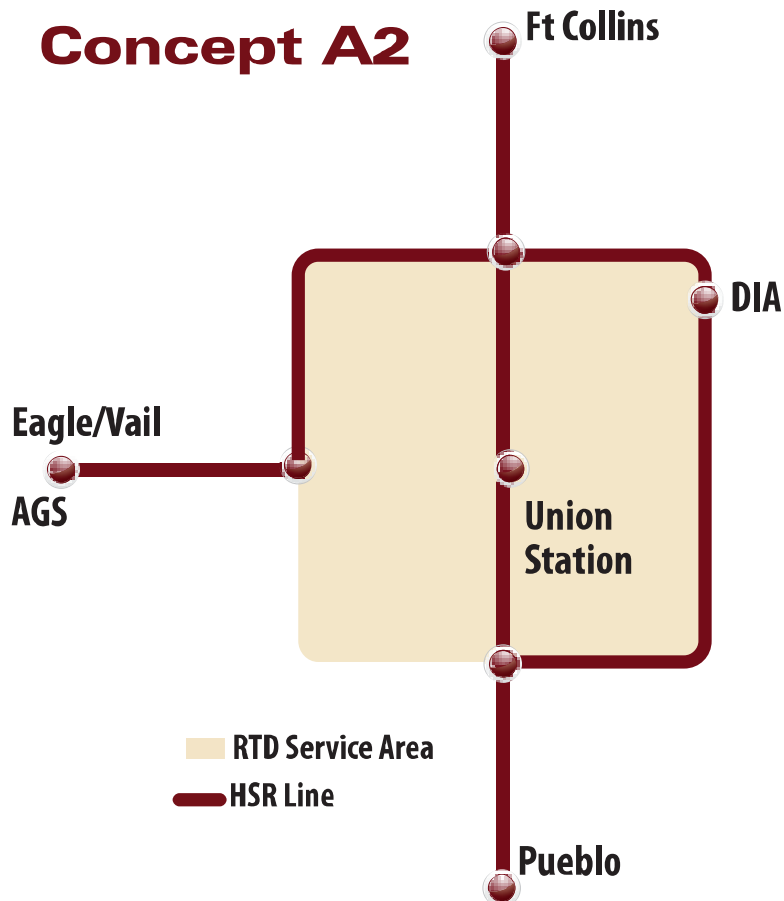
A-1: Direct Routing Through Denver

Concept A1



- **Advantages**
 - Shortest and possibly fastest
 - Could use DUS or an alternative central station
- **Disadvantages**
 - High community impact
 - High per mile cost
- **Recommendation**
 - Model this alternative as a comparison to the beltway alignments

A-2: Beltway Excluding SW Quadrant



- **Advantages**

- Avoids difficult construction and impacts through Denver
- Provides a one seat ride to DIA

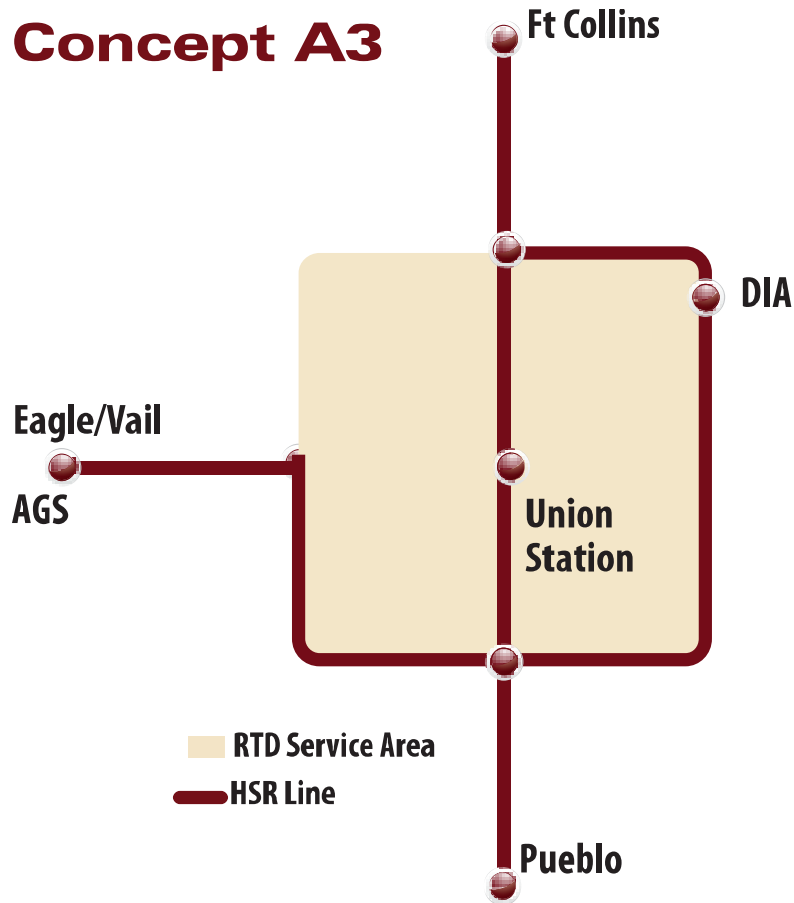
- **Disadvantages**

- NW Quadrant challenges
- Longer and probably slower trip to DIA from the west

- **Recommendation**

- **Second priority due to NW Quadrant challenges**

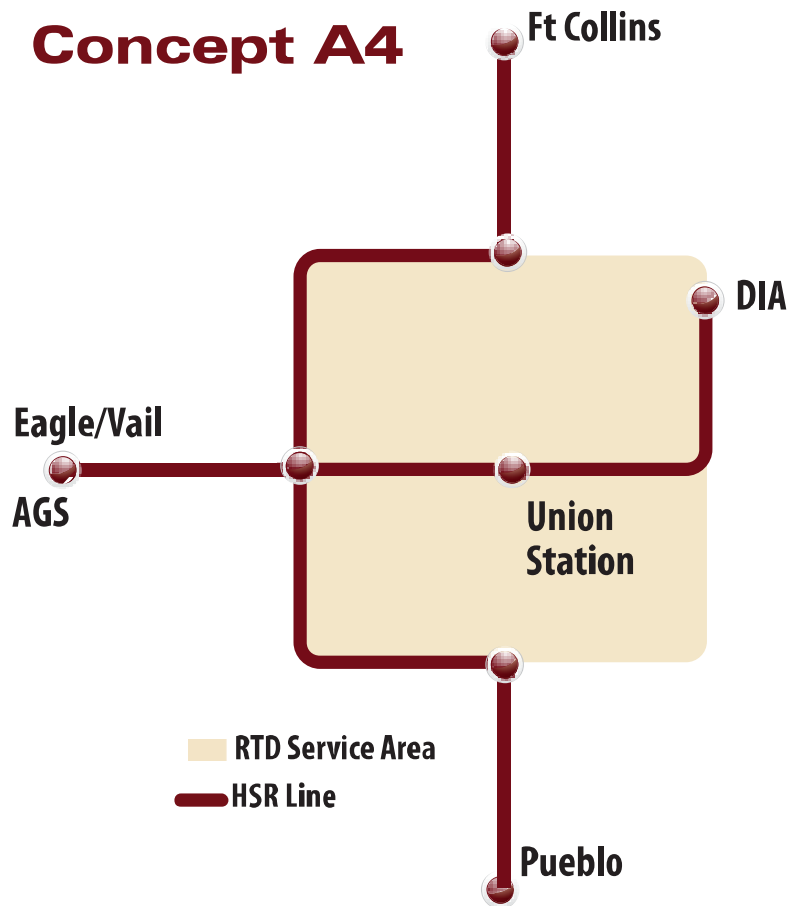
A-3: Beltway Excluding The NW Quadrant



- **Advantages**
 - Avoids controversial NW Quadrant
 - Avoids high cost E-W construction through Denver
- **Disadvantages**
 - Complicated connection at west Denver
 - Long trip to DIA for mountain communities
- **Recommendation**
 - **Second priority due to long trip from mountains**

A-4: Western Beltway

Concept A4



- **Advantages**

- Avoids the N-S alignment through Denver
- Anticipated to be a lower cost alternative compared to other A series alternatives

- **Disadvantages**

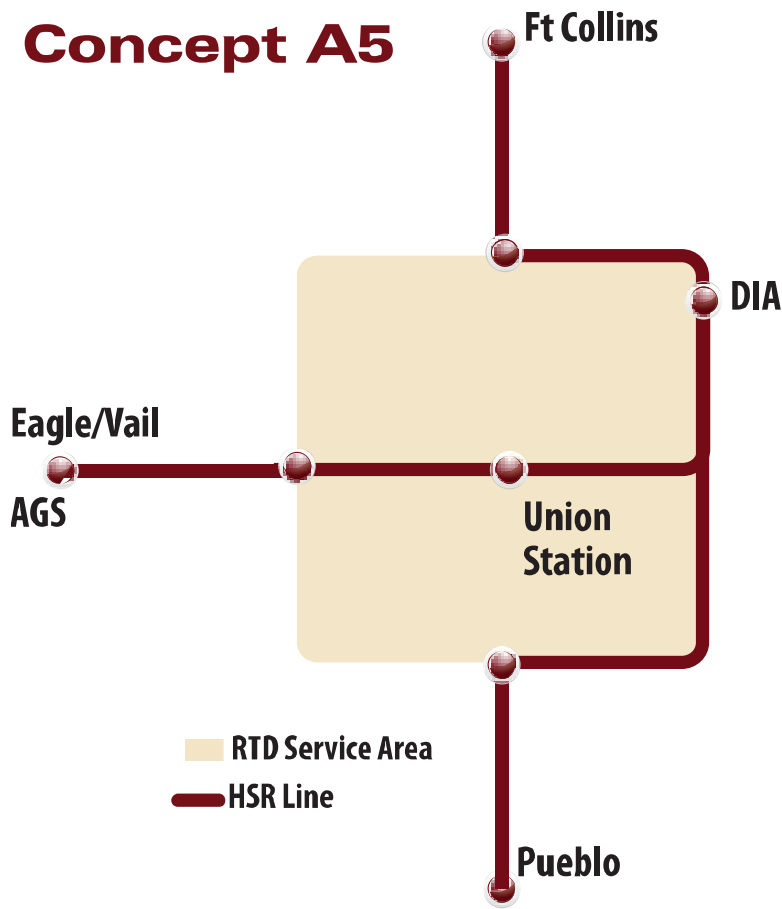
- Poor access to DIA from the north and south
- NW Quadrant controversy
- High costs and impacts for the E-W alignment

- **Recommendation**

- **Second priority due to environmental issues and poor access to DIA from north and south**

A-5: Eastern Beltway

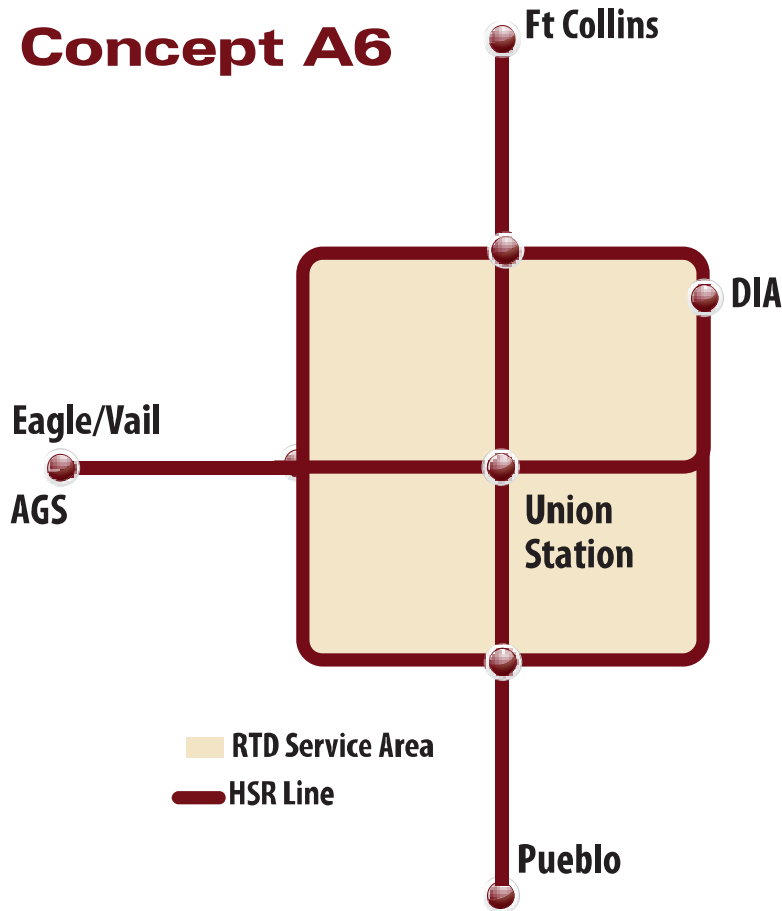
Concept A5



- **Advantages**
 - Lowest cost A series alternatives
 - Avoids the NW Quadrant controversy
 - Good access to DIA
- **Disadvantages**
 - Poor access to the mountains from the north and south
 - High impact E-W alignment
- **Recommendation**
 - Recommended for modeling due to low cost and mobility advantages

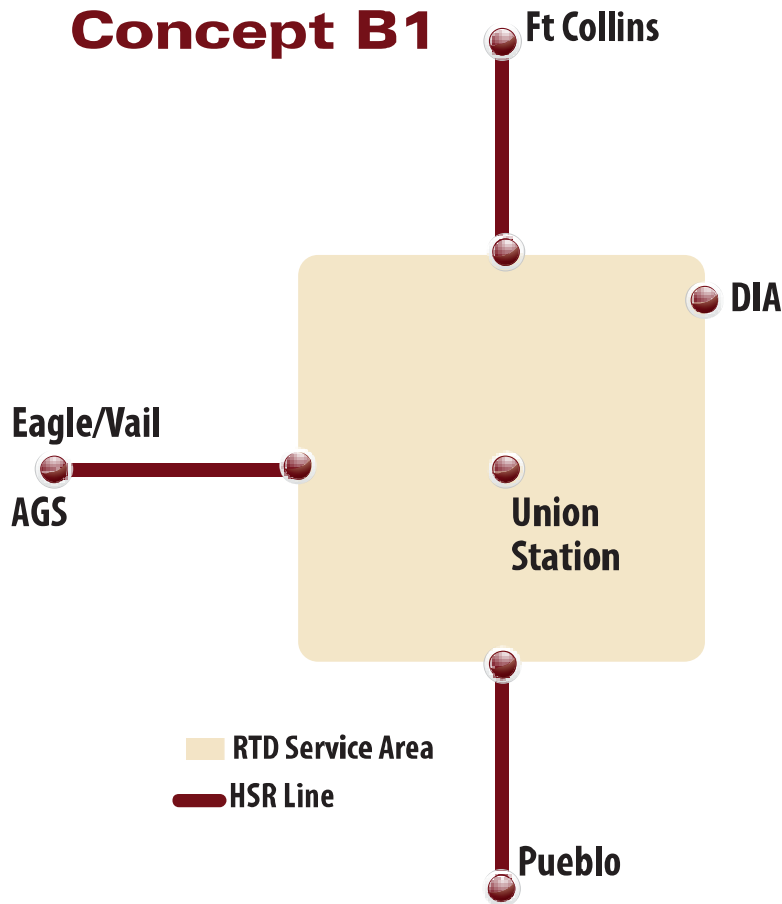
A-6: Complete Beltway

Concept A6



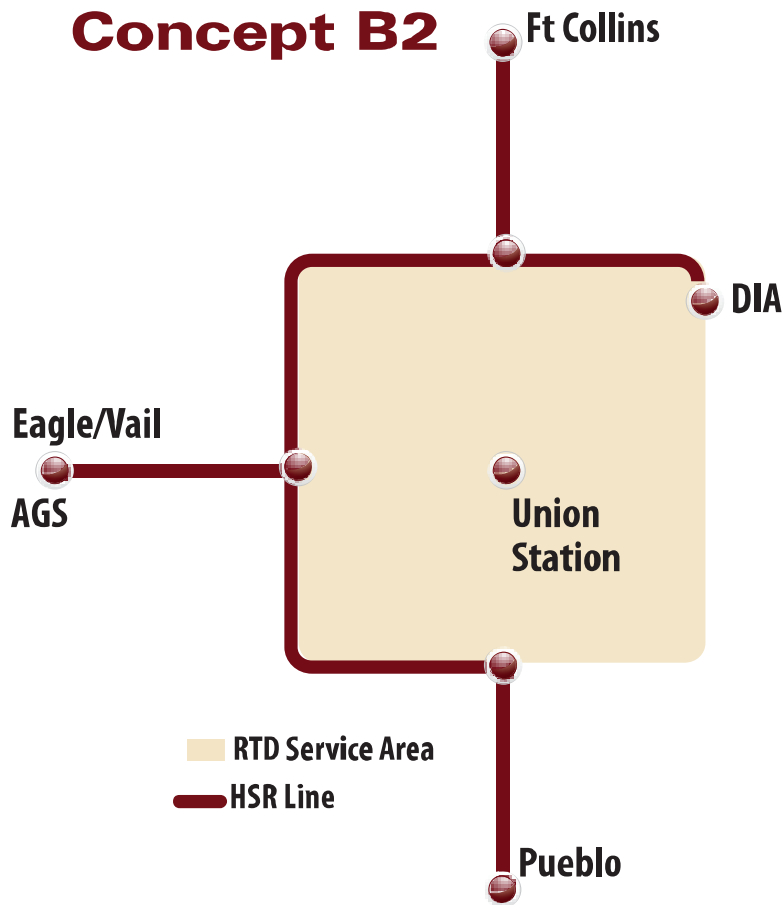
- **Advantages**
 - Provides highest mobility options
 - Possible highest ridership
- **Disadvantages**
 - Highest cost
 - Highest environmental impact
 - NW Quadrant controversy
- **Recommendation**
 - **Recommended for modeling as it provides a test case for the highest ridership**

Alternative B-1: Utilize RTD System



- **Advantages**
 - Low cost
 - No impacts
 - Uses RTD infrastructure for collection/distribution
- **Disadvantages**
 - No “one-seat ride” in any direction
 - Slow travel time
- **Recommendation**
 - **Second priority - model C-1 as a better example of use of RTD’s system**

B2: Utilize RTD System : Excluding The Southeast Quadrant



- **Advantages**

- Good connection to DIA from the north and west
- Good connection to the mountains from the south and north

- **Disadvantages**

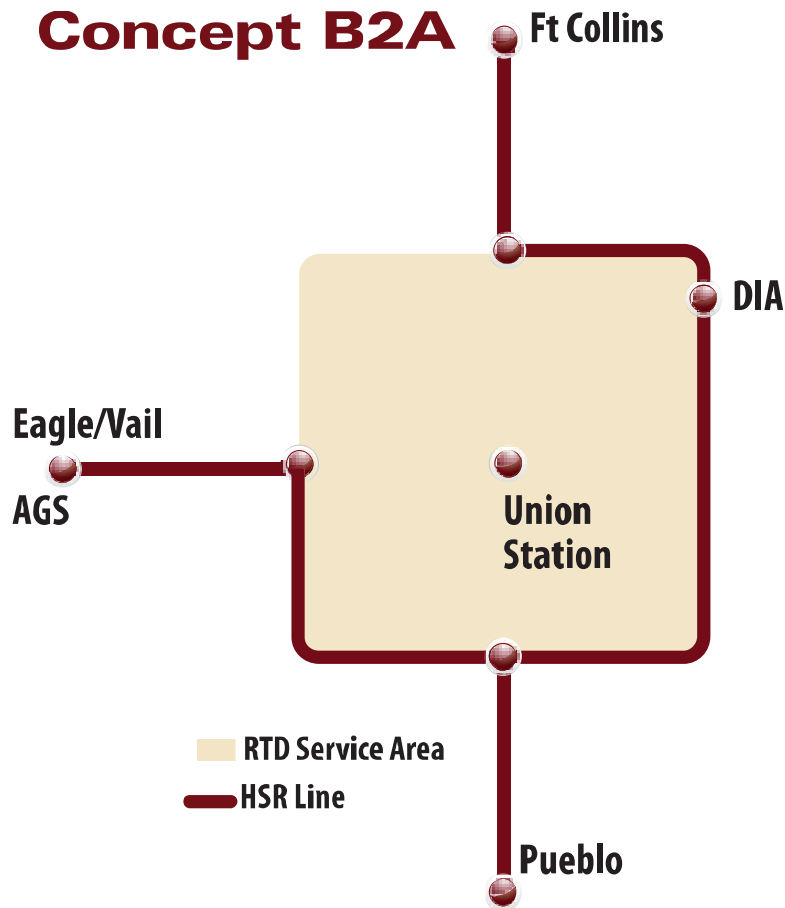
- NW Quadrant environmental issues
- Poor connection to DIA from the south

- **Recommendation**

- **Secondary priority - high environmental challenges are anticipated**
- **Poor connection to DIA from the south**

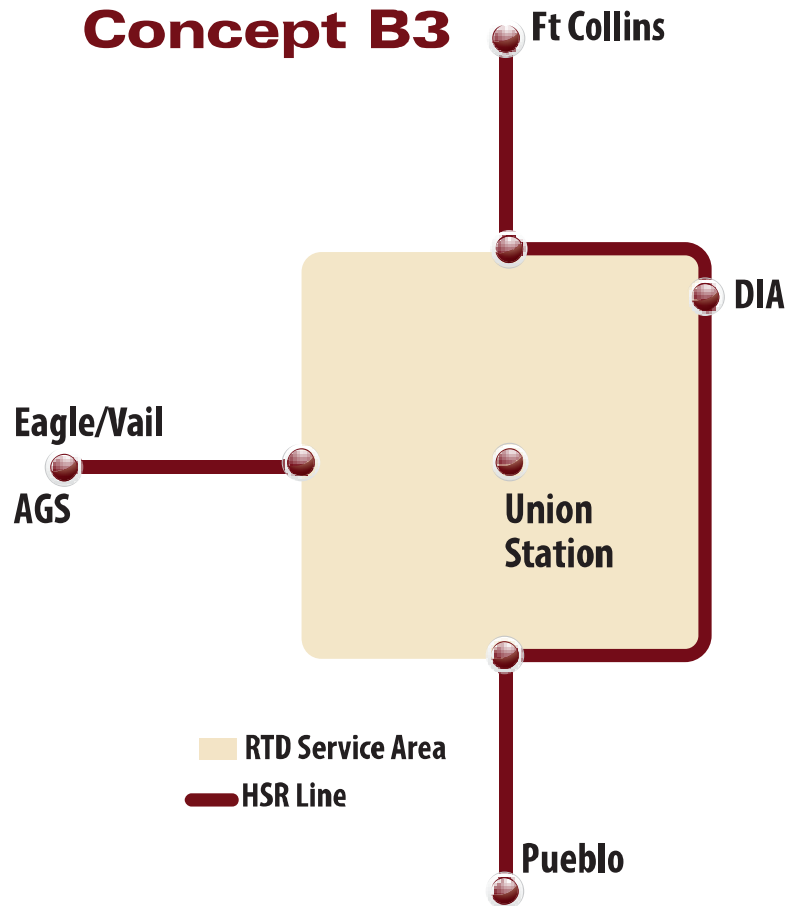
B2A: Utilize RTD System: Excluding The NW Quadrant

Concept B2A



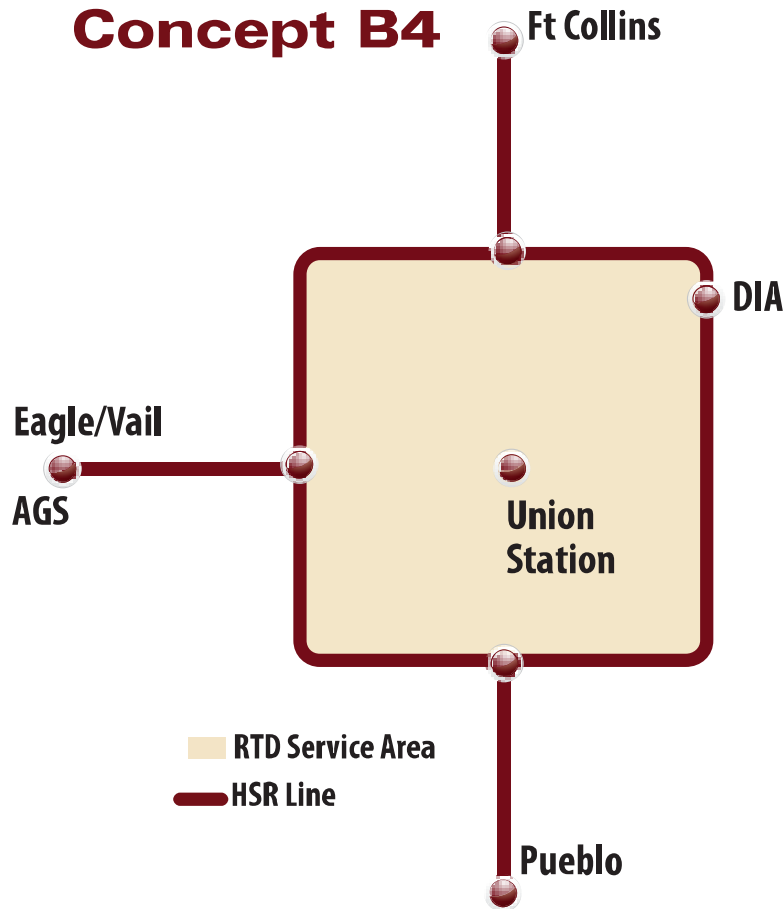
- **Advantages**
 - Good connection to DIA from the north and south
 - Avoids the NW Quadrant controversy
- **Disadvantages**
 - Access to DIA from the mountains may be slower
- **Recommendation**
 - Recommended for modeling
 - Provides good access to DIA (north and south population centers)
 - Avoids the challenging NW quadrant

B-3: Utilize RTD System: Eastern Boundary



- **Advantages**
 - Good access to DIA from north and south
 - Lower cost than B-2 or B-2A
 - Avoids the NW Quadrant
- **Disadvantages**
 - Poor access from the mountains to the DIA
- **Recommendation**
 - **Second priority - essentially no connection to Denver metro area and DIA from the west.**

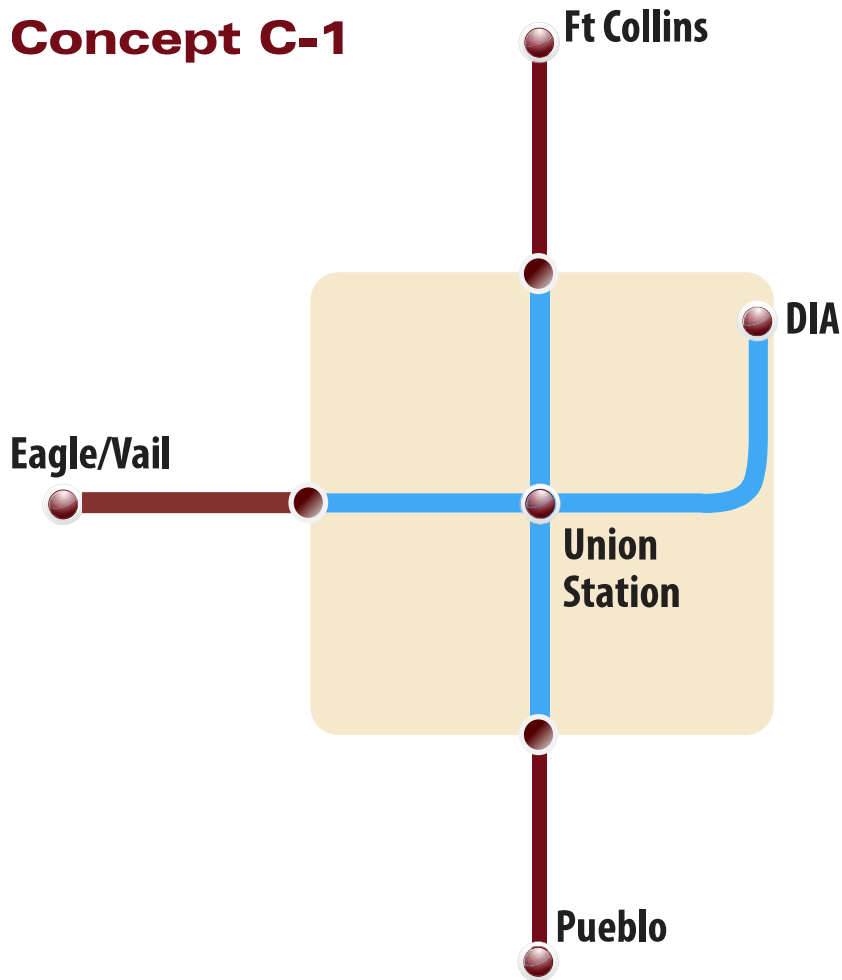
B-4: Utilize RTD System: Complete Beltway



- **Advantages**
 - Best use of RTD system
 - Provides high mobility options
- **Disadvantages**
 - Highest cost of the B series alternatives
 - NW Quadrant controversy
- **Recommendation**
 - **Secondary priority - A-6 provides the best test for a maximum mobility scenario.**

C-1: RTD Shared Track

Concept C-1



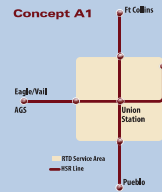
- **Advantages**
 - Shares track with RTD
 - One seat ride to DIA
 - Capitalizes on existing infrastructure
- **Disadvantages**
 - Complicates operations
 - Issues with technology
- **Recommendation**
 - **Recommended for modeling - is one of the lowest cost alternatives and allows the use of RTD infrastructure with a one seat ride.**

Based On The Fatal Flaw Studies We Have:

- ▶ An understanding of the pros/cons of the alignments
- ▶ 5 of 11 possible scenarios to be modeled
- ▶ 2 scenarios to be modeled for the AGS study
- ▶ Found that:
 - Any alignment through Denver has many impacts
 - Alignments outside of Denver have comparatively fewer impacts
 - Acceptance of any of the candidate alignments is unknown
- ▶ No technologies have been eliminated from the Greenfield alignments
- ▶ Using railroad right of way will limit technology options

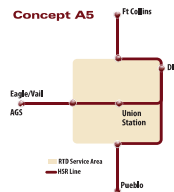
Best Performing Options Summary

A-1: Direct through Denver



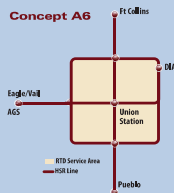
- Shortest, possibly fastest alternative
- One seat ride
- Provides contrast to the beltway options

A-5: Eastern Beltway



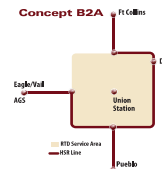
- Least cost of the A-series alternatives
- Still provides one seat ride

A-6: Complete Beltway



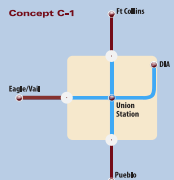
- Probable highest ridership alternative
- Test as a comparison to all others

B-2A: RTD Excluding NW Quadrant



- Thought to be the best performing of the B-series scenarios
- Avoids the controversial NW Quadrant

C-1: RTD – Shared Use



- Tests the impact of sharing RTD track
- Second lowest cost alternative
- Theoretical one-seat ride

**The Best Alternative Cannot
Be Developed Without Your Input:
Clarifying Questions & Answers**



Seeking Input From The Public On...

- ▶ Project purpose and need
- ▶ Goals & evaluation criteria
- ▶ Reasonable range of alternatives
- ▶ Other comments or concerns
- ▶ How we can be more effective



Next Steps



ICS & AGS Next Steps – 3 Month Outlook

ICS:

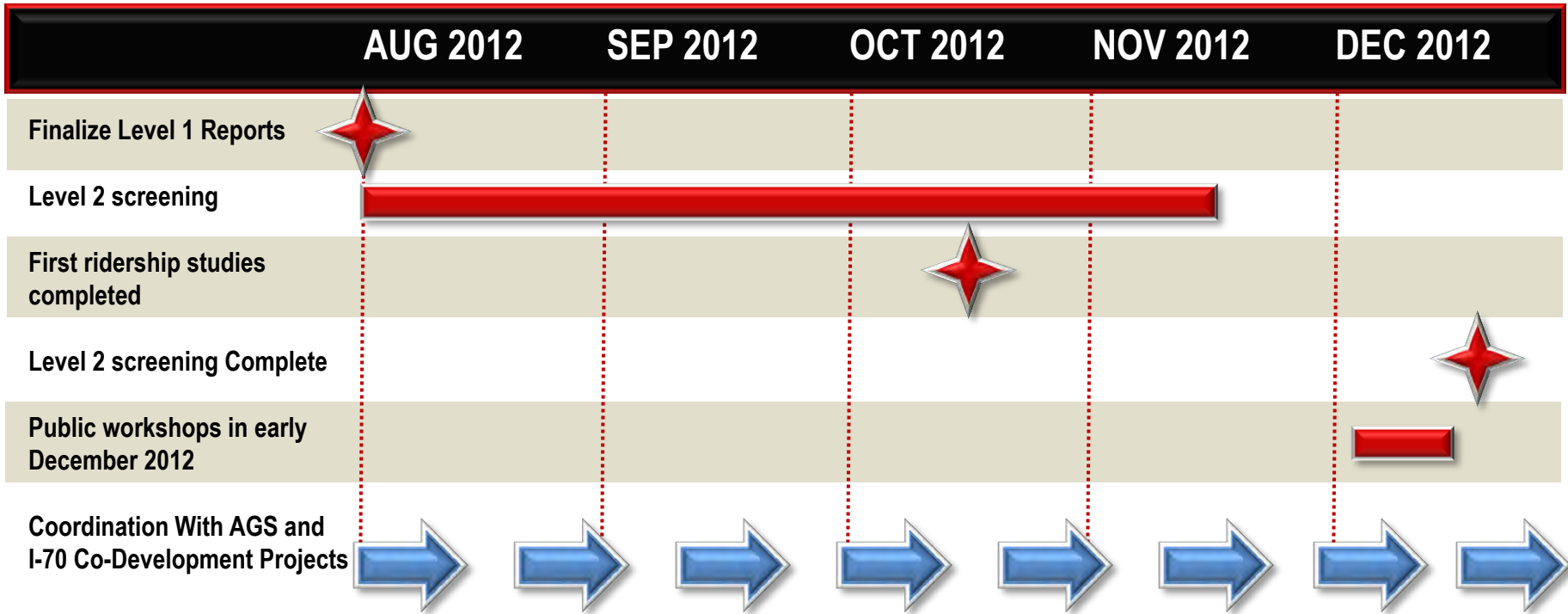
- ▶ Define approach to ridership
- ▶ Finalize fatal flaw alignment & evaluation scenarios
- ▶ Public meetings - July 16 to 19, 2012
- ▶ Advance level 2 screening
- ▶ Ongoing PLT/PMT coordination

AGS:

- ▶ Finalize performance and operation criteria
- ▶ Define approach to ridership
- ▶ Industry forum/webinar follow-up
- ▶ Development of RFQ
- ▶ Ongoing PLT/PMT coordination

Next Steps

Continued Coordination with the AGS Study



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Closing

- ▶ Two week review of:
 - Fatal flaw analysis (matrixes & graphics)
- ▶ Comment format will be emailed
- ▶ Comments due *two weeks from distribution*
- ▶ Next PLT meeting schedule *TBD (Fall 2012)*
- ▶ Thank you & closing comments

Thank You!

