PLT Meeting No. 5: Level 2 Evaluation Update: Costs, Impacts, Funding

CDOT Interregional Connectivity Study

CH2MHILL

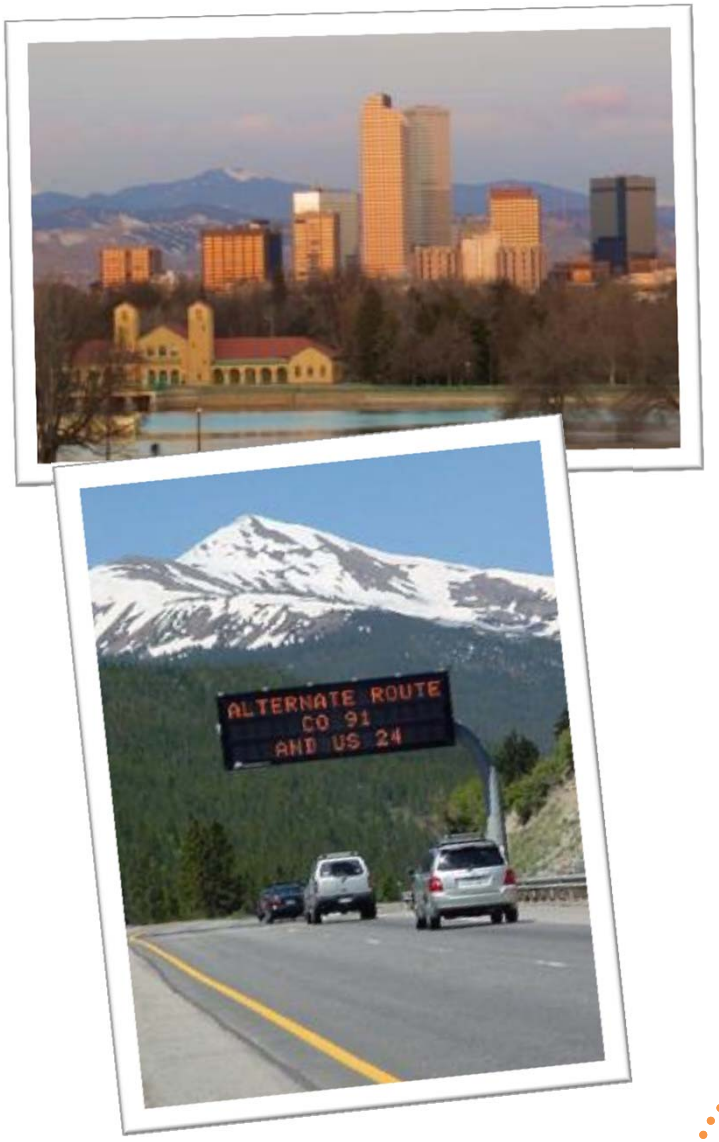
April 2013

Agenda

- Welcome and Introductions
- Intent of the Meeting
- AGS Update
- Calculation of OPEX
- Preliminary Ridership Results
- Comparison of Scenarios – Key Decisions
- Next Steps

ICS Study Sponsors and Purposes

- Sponsors:
  - CDOT with funding from the Federal Railroad Administration
- Purposes:
  - Provide cost-effective recommendations for alignments, technologies and station locations in the Denver Metro Area that maximize ridership between HSIPR/HST and RTD.
  - Suggest method for integrating HSIPR/HST into the statewide multi-modal network.
  - Develop the basis for Next Steps.



Project Update

Where are We in the Process?

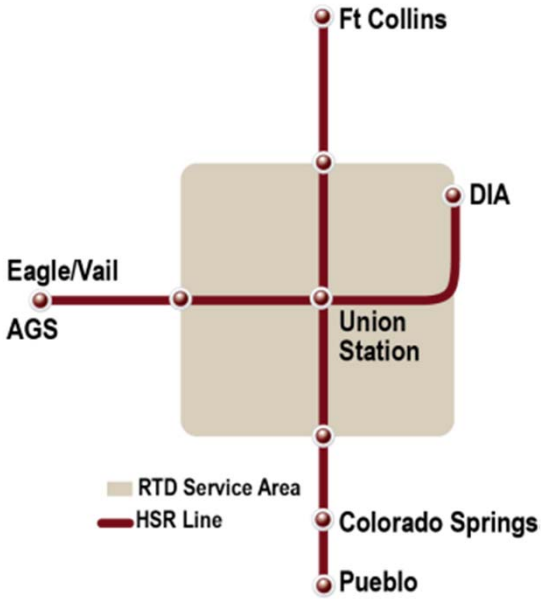
What we have accomplished so far in Level 2

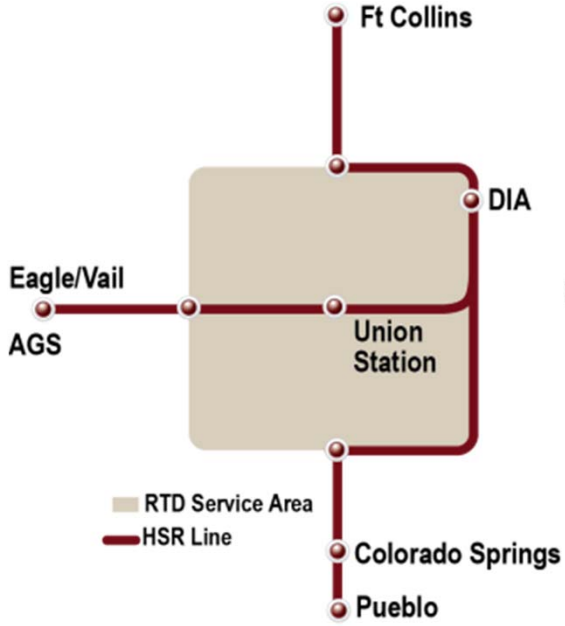
- Conceptual Engineering of Alignments
- High Level Review of Physical Impacts of Alignments
- Cost Estimates for all Scenarios
- Service Planning for each Scenario
- Operating Estimates for each Scenario
- Ridership Estimates for 3 of 5 Scenarios
- Evaluation of Funding Sources
- B/C Early Results

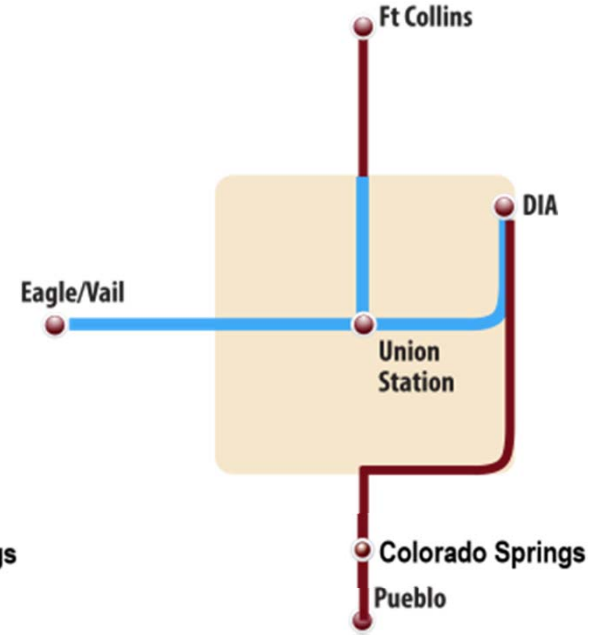
3 of 5 Scenarios Discussed Today

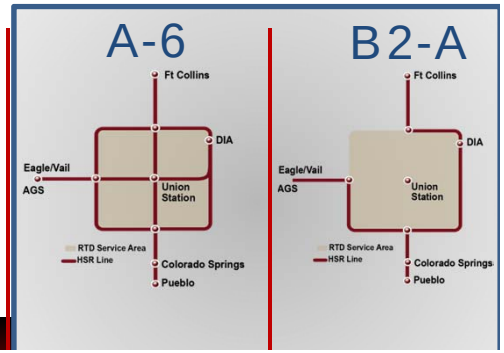
Scenario

A-1	A-5	C-1





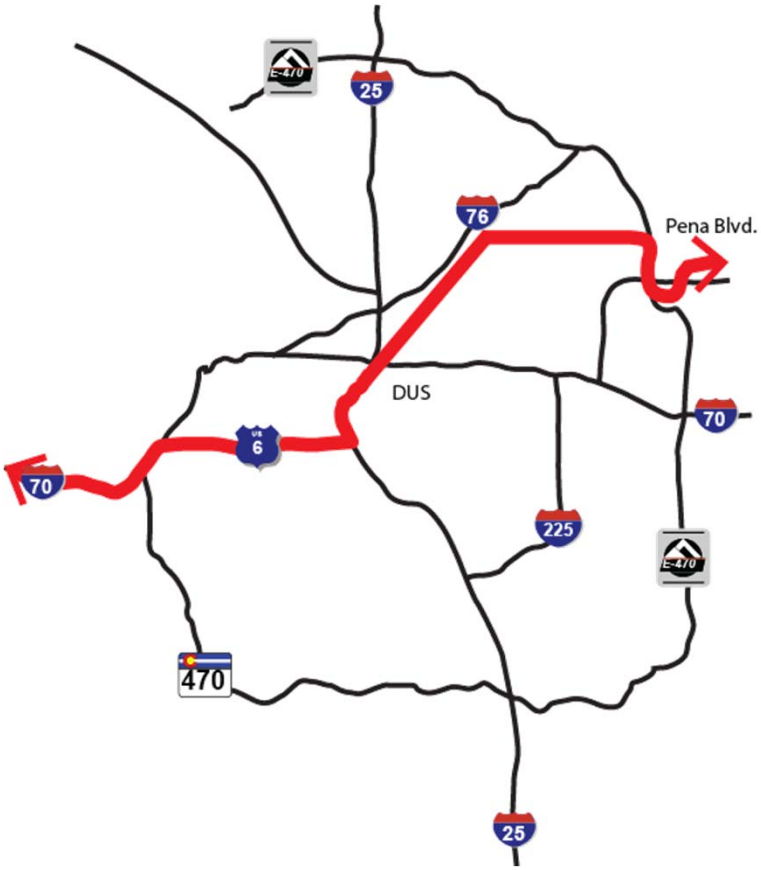




ICS Interregional Connectivity Study

East-West Options

Option a: Use I-76



Option b: Use US 6

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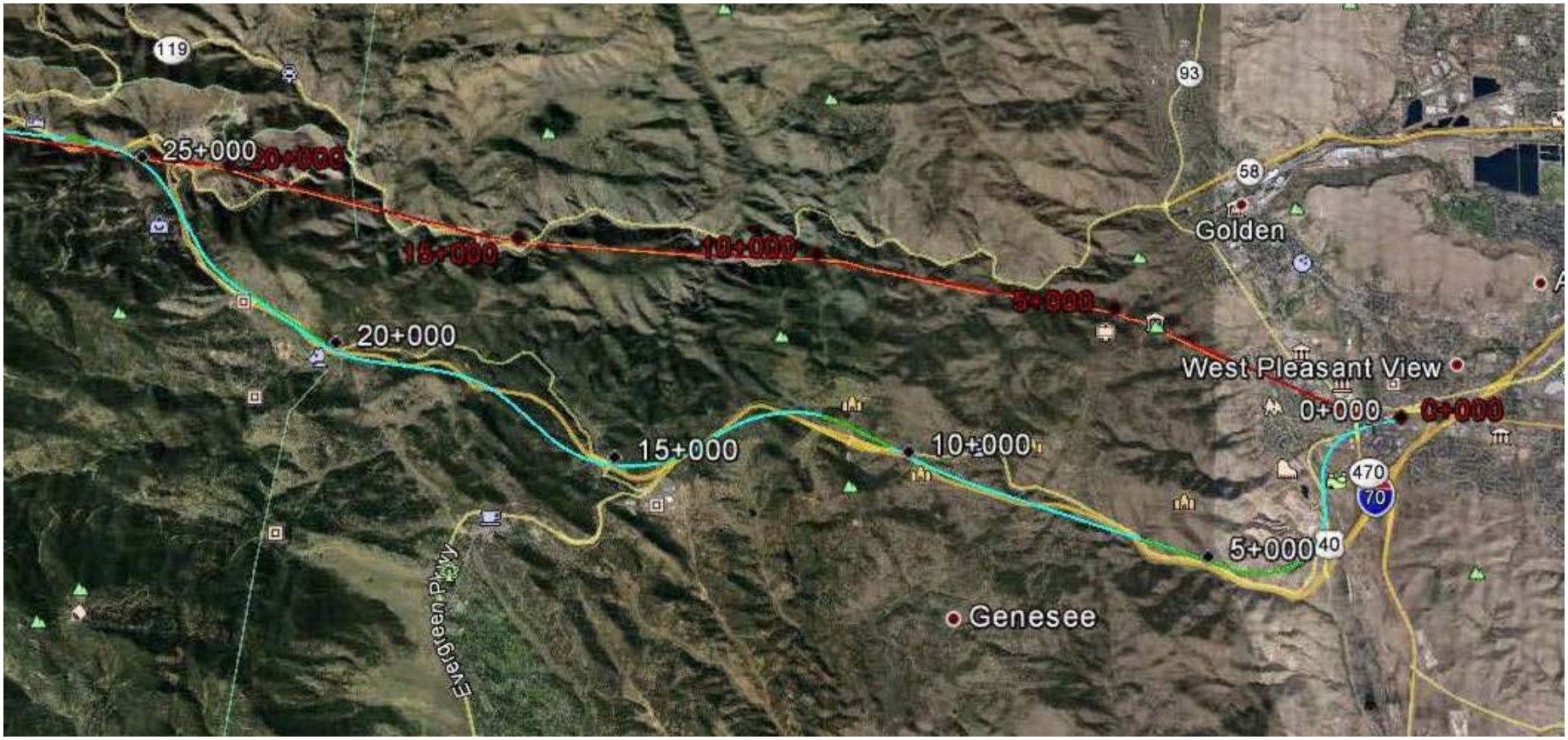
AGS Study Update
Mike Riggs

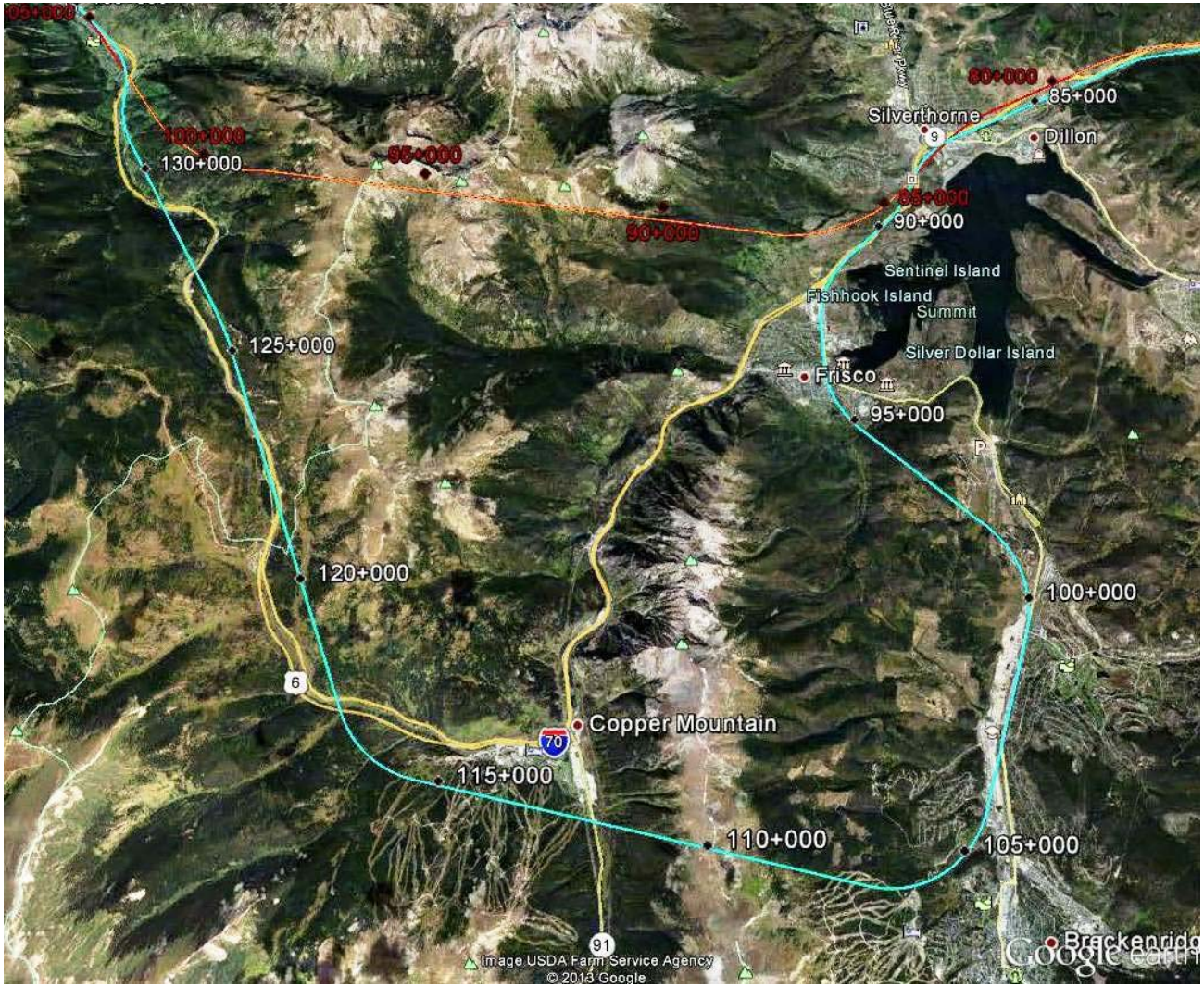
Alignment Evaluation

Alignment	Design Speed	Max Grade	Total Tunnels	Longest Tunnel	Travel Time*
High Speed Maglev	170 mph	7%	40 miles	5 miles	73 to 79 minutes (92 to 96 mph)
High Speed Rail	150 mph	2.3%	65 miles	20 miles	72 minutes (84 mph)
Hybrid Maglev	80 -120 mph	7%	20-40 miles	5 miles	TBD
I-70 Maglev Alignment	60-80 mph	7%	1.5 miles	1.3 miles	TBD
* Travel time is for Golden (Suburban West) to ECRA					

Eastern Alignments



Summit County Alignments



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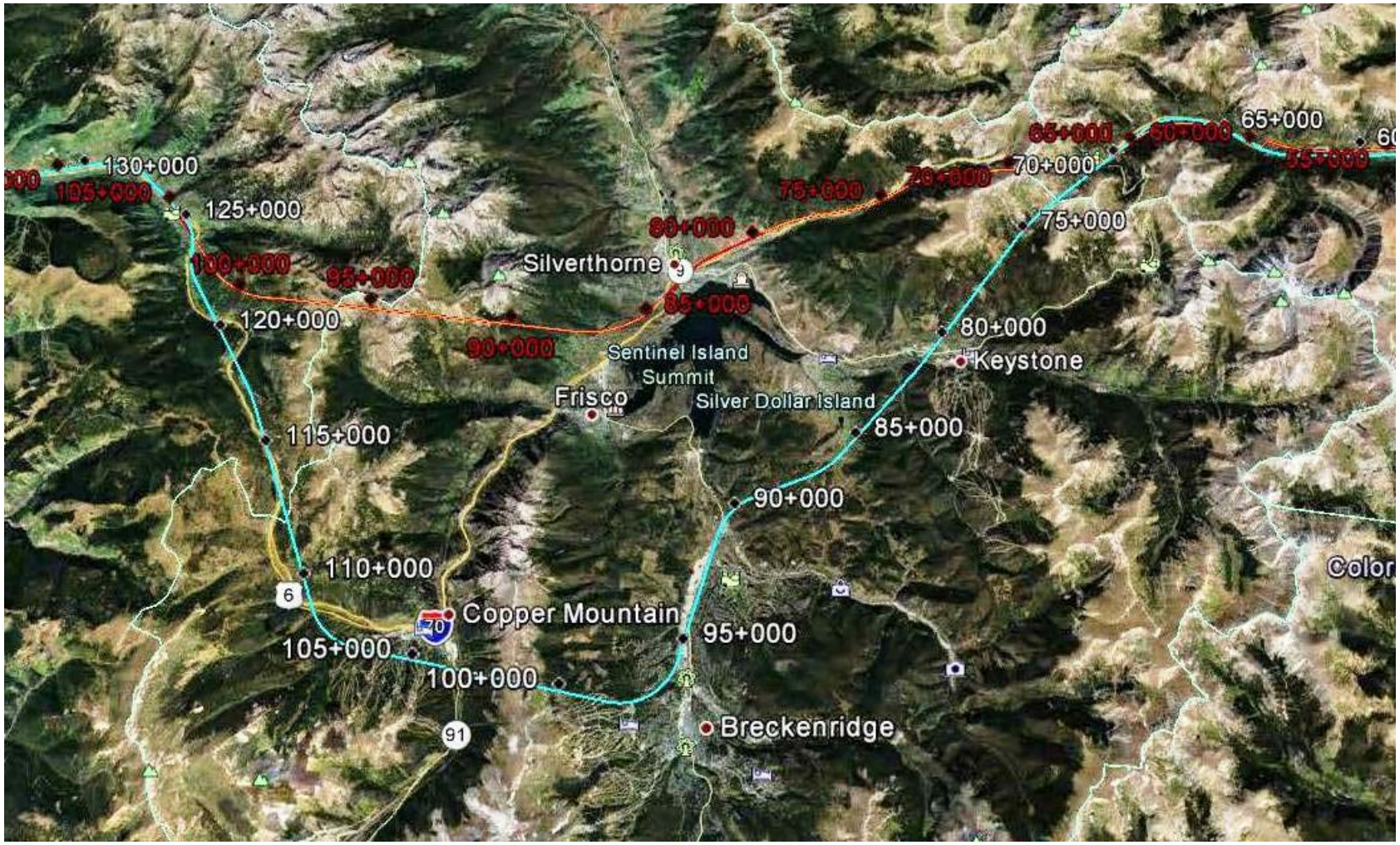

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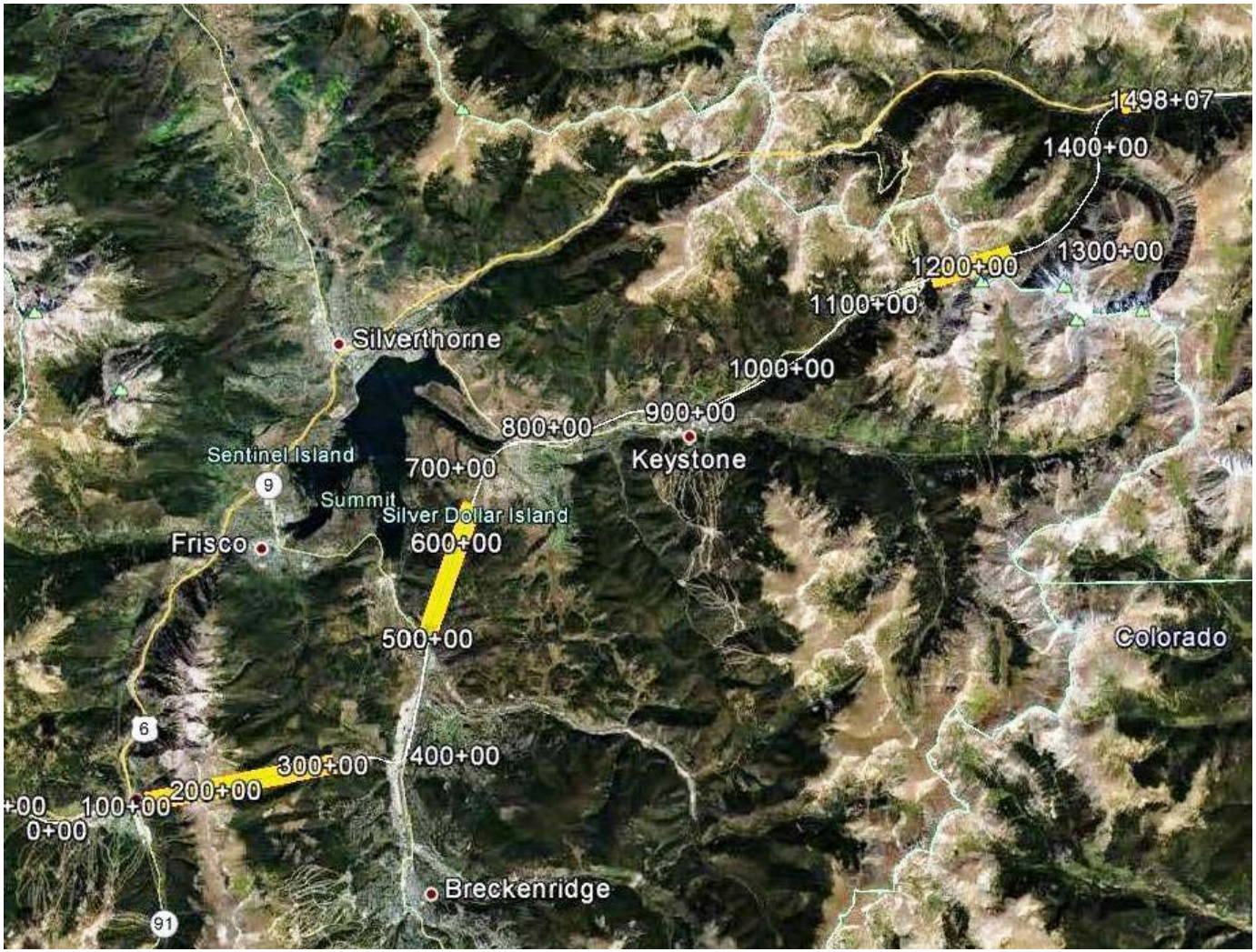


Alignment Evaluation – Next Steps

- Develop speed profiles for each alignment
- Provide speed profiles as ridership model inputs
- Environmental screening/evaluation
- Complete cost estimates
- Continue station location evaluation

Goals for the Request For Financial Information (RFFI)

- I-70 Corridor provide input to RFFI
- Ask the right questions
- Get good feedback from transit industry P3/Concessionaire leaders
- Scenarios may be a way to dialogue with industry leaders…Are there others?

Approach to the RFFI

- Use the best available information on the project…alignments, technology, stations, local support, etc.
- Provide realistic funding expectations
- Keep it straightforward to obtain as much relevant input / feedback as possible

Example RFFI Questions

- Recommendations on governance structure
- Recommended delivery structure: (DBFMO, DBF + M&O separate, other)?
- AGS technology selection preferences?
- Public vs. private sector risk allocation?
- Fare box risk to cover O&M expenses?
- Recommended term for a concession?
- Concession concept preference: AGS alone, AGS with managed lanes, other?

RFFI Preliminary Schedule Overview

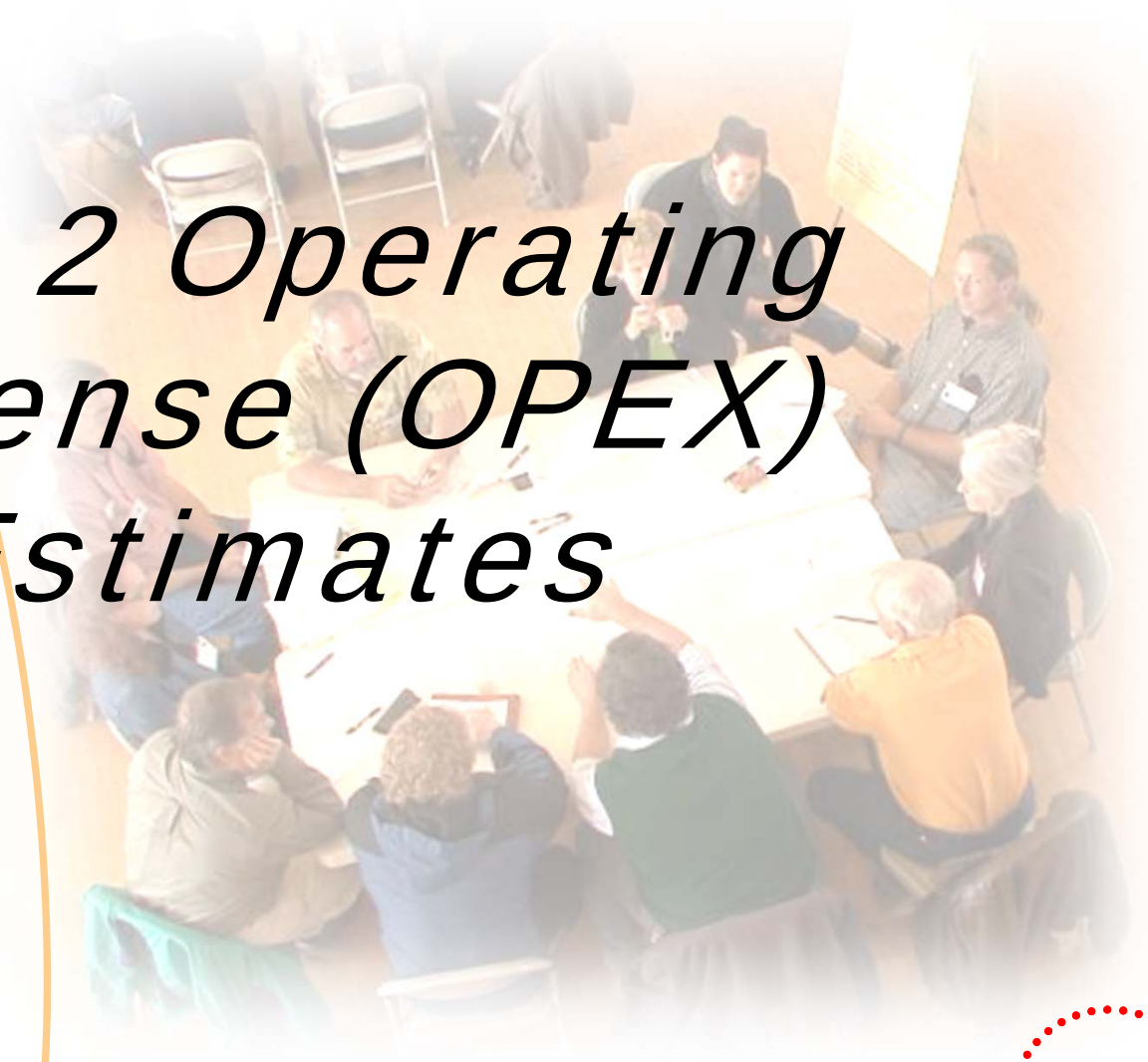
(Dates are approximate and may be adjusted as needed)

- 4/30/13 Cost & ridership added…First Full Draft
- 5/3/13 Comments to Draft Due
- 5/8/13 PLT Final Review
- 5/17/13 Release RFFI
- 5/31/13 Q & A from responding teams complete
- 6/28/13 Responses to RFFI Due

Summary of Next Steps

- May: Balancing of Various Components
  - Capital Costs
  - Operations & Maintenance Costs
  - Ridership Results
  - Release RFFI
- June
  - Receive responses to RFFI & Evaluate
  - Station location & parking assessment
- July – September
  - Feasibility Determination
  - Project Reporting & Finalization

Level 2 Operating Expense (OPEX) Estimates



What are the OPEX Drivers

- Distance of travel (train miles) and frequency of service
- Staffing – For example automation will save costs ($/mile)
- Technology – vehicle maintenance for steel wheel is thought to be more cost for electro-mechanical maintenance ($/mile)

OPEX = (Train miles/ day) x (Days of operation) x ($/mile)

Components of Annual Transit O&M

Cost Category	Cost Driver	Technology Distinction
Equipment Maintenance	Train Miles	Yes
Energy and Fuel	Train Miles	Yes
Train and Engine Crews	Train Miles	No
Onboard Service Crews	Train Miles	No
Insurance	Passenger Miles	No
Sales and Marketing	Fixed Cost, Ridership and Revenue	No
Service Administration	Fixed Cost, Train Miles	No
Track and ROW Maintenance	Track Miles	Yes
Station Costs	Number of Stations	No

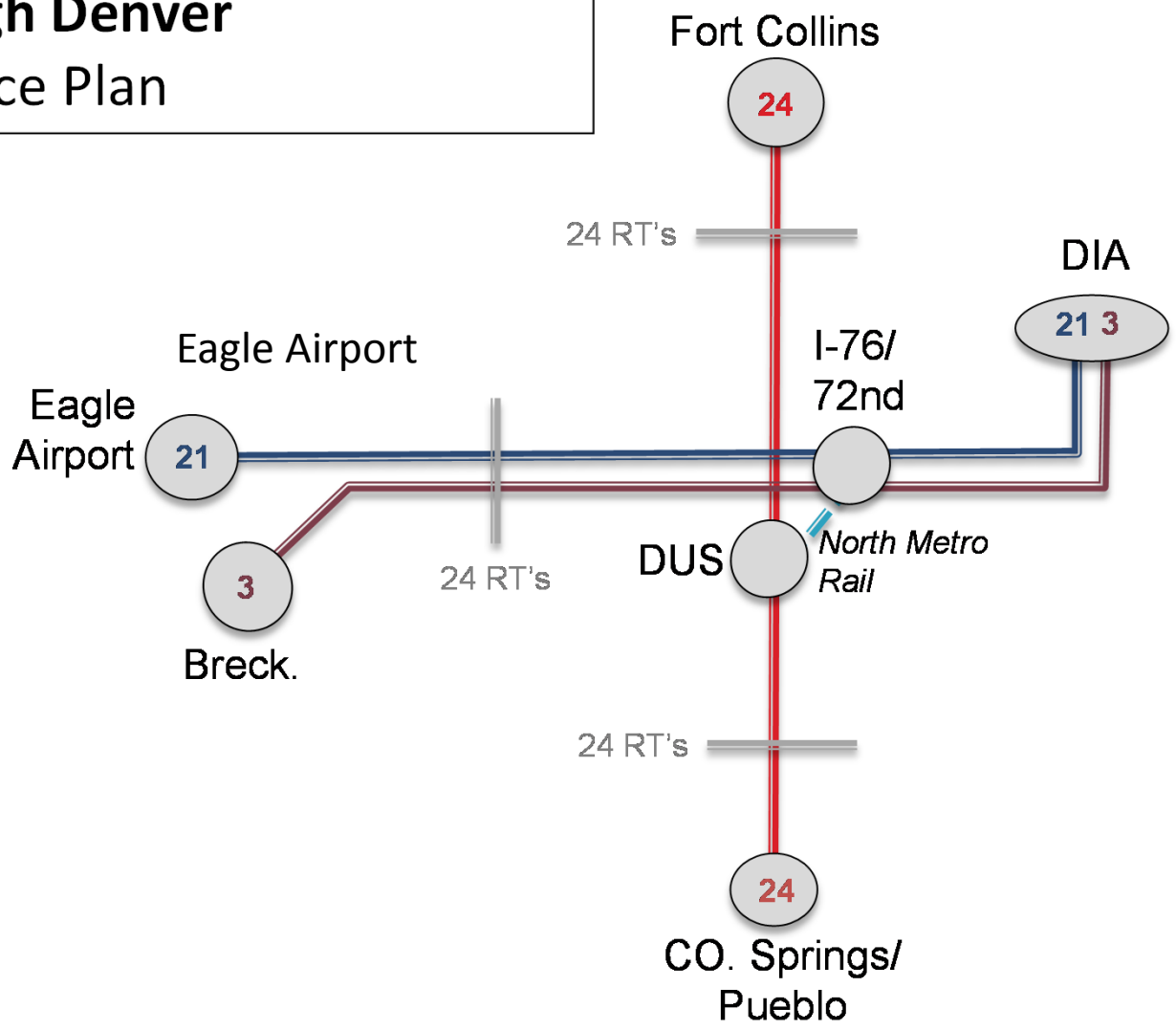
Five Operating Scenarios

- 18 Hour Operation Per Day for each Scenario
- 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)

Scenario A-1 (US 6 or I-76)

Direct Routing Through Denver

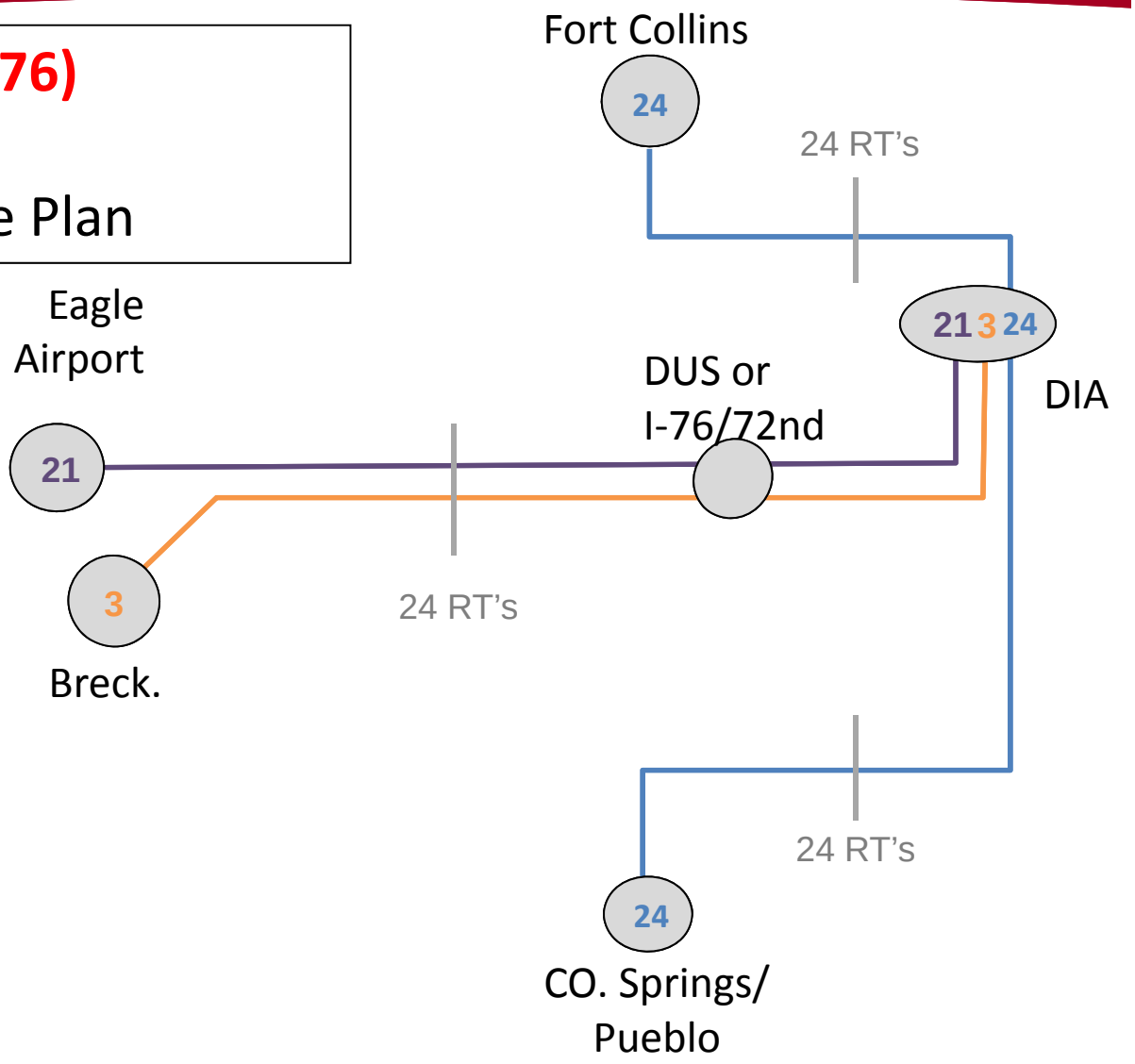
Basic Frequency Service Plan



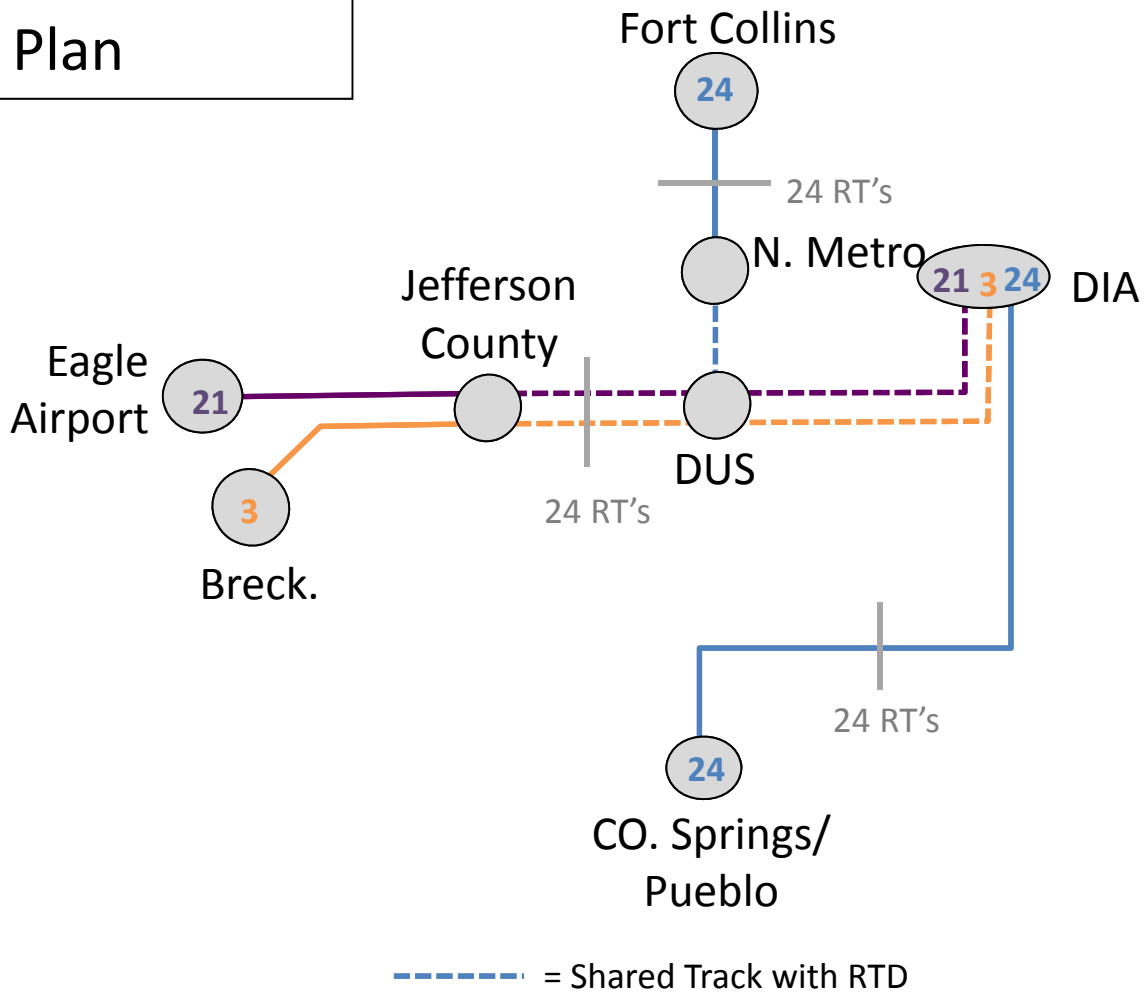
Scenario A-5 (US 6 or I-76)

Eastern Beltway

Basic Frequency Service Plan



Scenario C-1
Shared Track
Basic Frequency Service Plan



OPEX Estimates – Scenario A-1

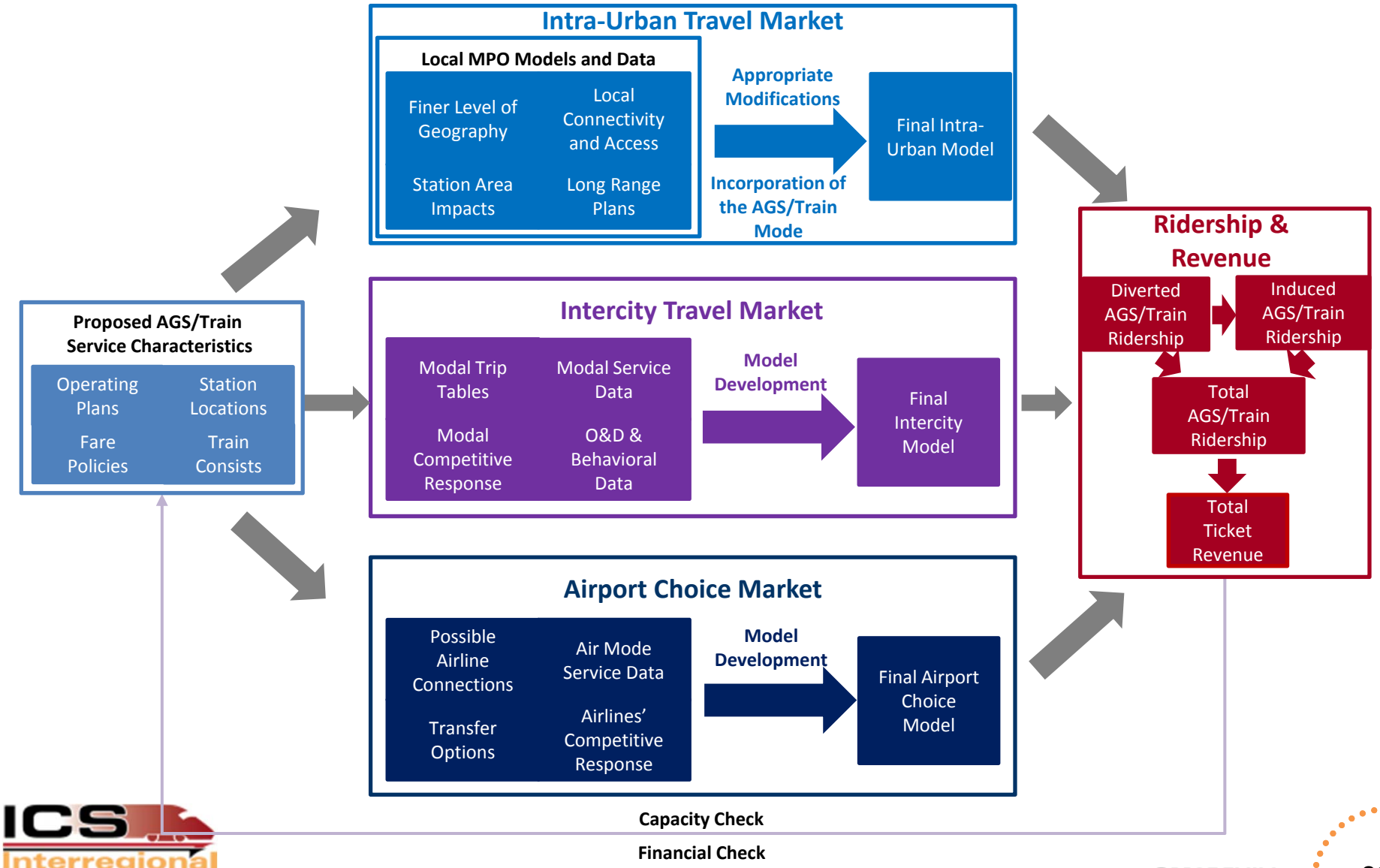
Corridor	Rev. Train Miles	110 mph Rail	125 mph Maglev	220 mph Rail	300 mph Maglev
	$/mi	$54.61	$49.58	$54.73	$41.56
Front Range	**3,038,900**	**$165,951,000**	**$150,672,000**	**$166,316,000**	**$126,311,000**
Percent of Total	59.7%	59.7%	59.7%	59.7%	59.7%
Mountain Corridor	**2,047,400**	**$111,806,000**	**$101,512,000**	**$112,052,000**	**$85,100,000**
Percent of Total	40.3%	40.3%	40.3%	40.3%	40.3%
Total	**5,086,300**	**$277,757,000**	**$252,184,000**	**$278,368,000**	**$211,411,000**

Ridership Results

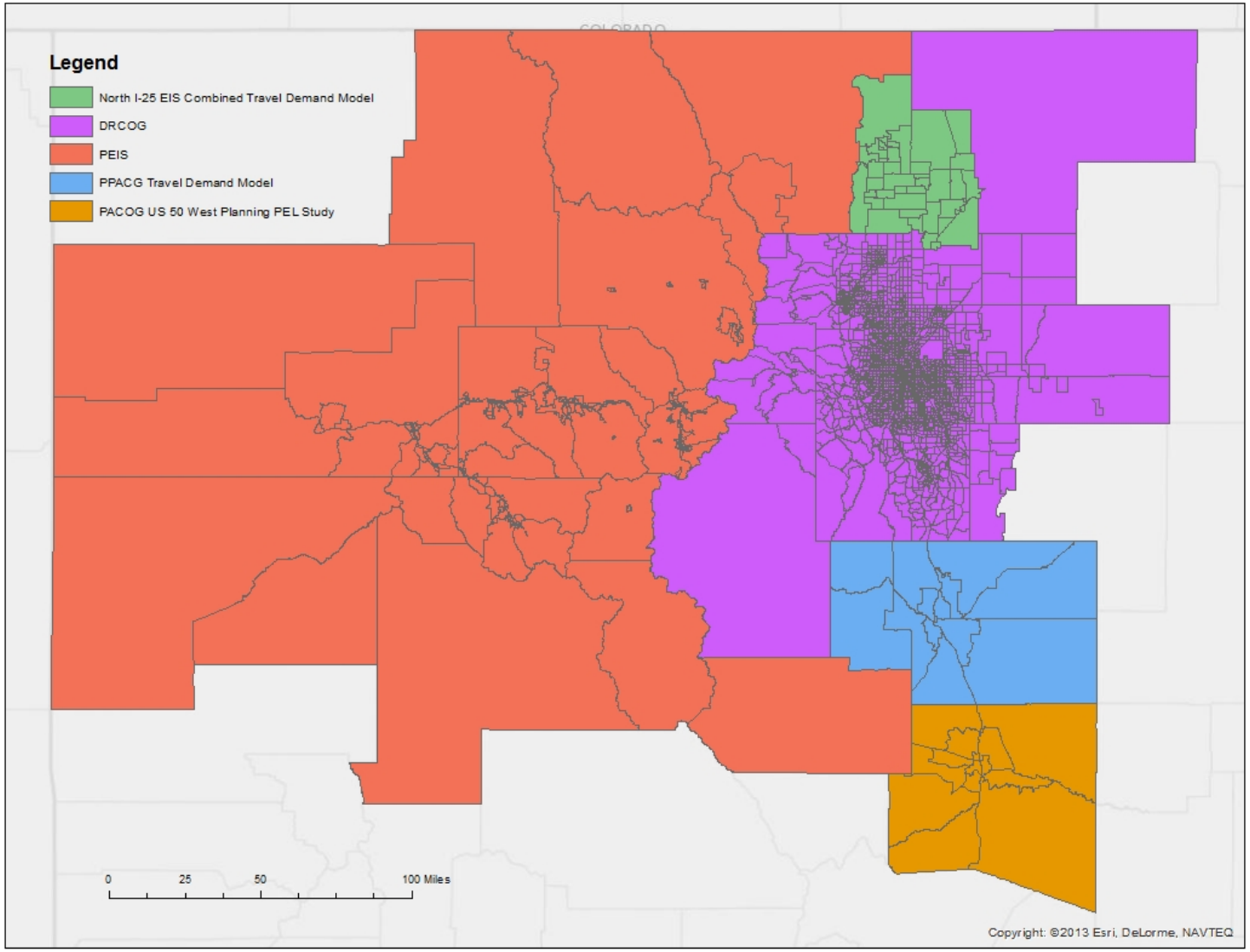
Ridership Forecasting Approach

- Open, non-proprietary forecasting models
- Use of DRCOG and other MPO models and data to represent
  - Connectivity with RTD
  - Socio-economic and transportation characteristics of urban areas
- New local data collection to
  - Address gaps in available data: intercity travel and mode preferences
  - Allow development of models that reflect the study area characteristics
- Information exchange and documentation
  - Interactions with MPOs, stakeholders and modelers
  - Memos/reports on model development and application to come

Demand Forecasting Methodology



Study Area Zone Structure



Intercity Auto Trip Table Validated by Anonymous Cell Phone Movement Data

- No ready source of good data on intercity auto travel
- Anonymous location data from Sprint (processed by AirSage)
  - For 3 monthly periods in 2011
    - February – typical winter
    - July – typical summer
    - October – typical other
  - For 4 day types
    - Mondays-Thursdays
    - Fridays, Saturdays, and Sundays separately
  - For 3 traveler classifications
    - Resident
    - Visitor
    - Through
- Supplemented by CDOT monthly traffic count data

Stated Preference (SP) Survey

- Internet-based SP survey conducted in December 2012
  - Data from local residents
  - About 1000 completed surveys
- Survey respondents recruited using market research firm
- Definition of qualifying trip
  - Made in a personal vehicle or rental car
  - Made within the past 3 months
  - Used part of or all of the relevant portions of I-25 and I-70
  - Took at least 45 minutes in door-to-door travel time OR made trip to DIA in past 6 months and lives in Denver area
- Stated preference alternatives
  - Current auto travel option
  - Auto travel with tolled facility
  - AGS/Train travel

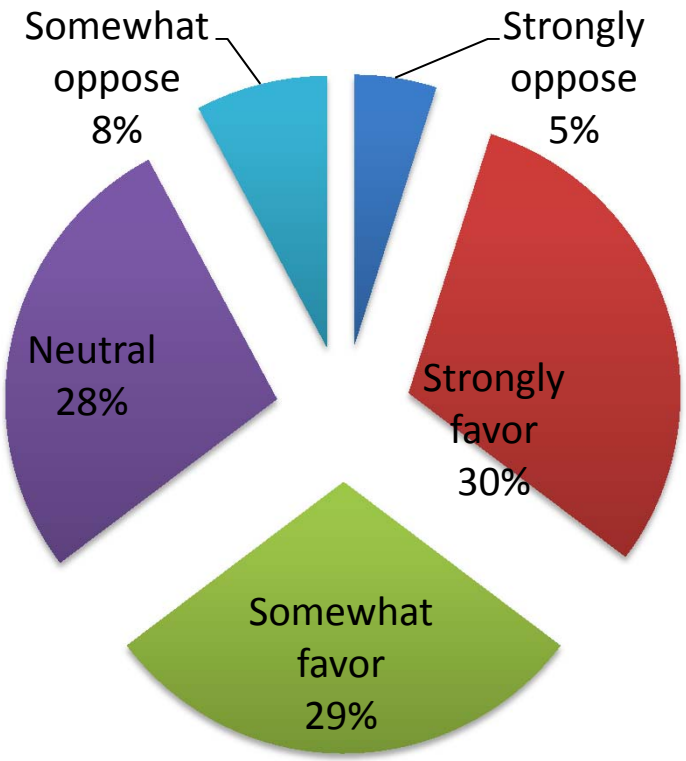
SP Survey Design

- 8 SP situations tested for each respondent
- 3 different options for making the trip described
- The situations forced respondents to make trade-offs
- Travel time and cost values used in the 8 SP situations were generated from the actual (reference) trip the respondent made

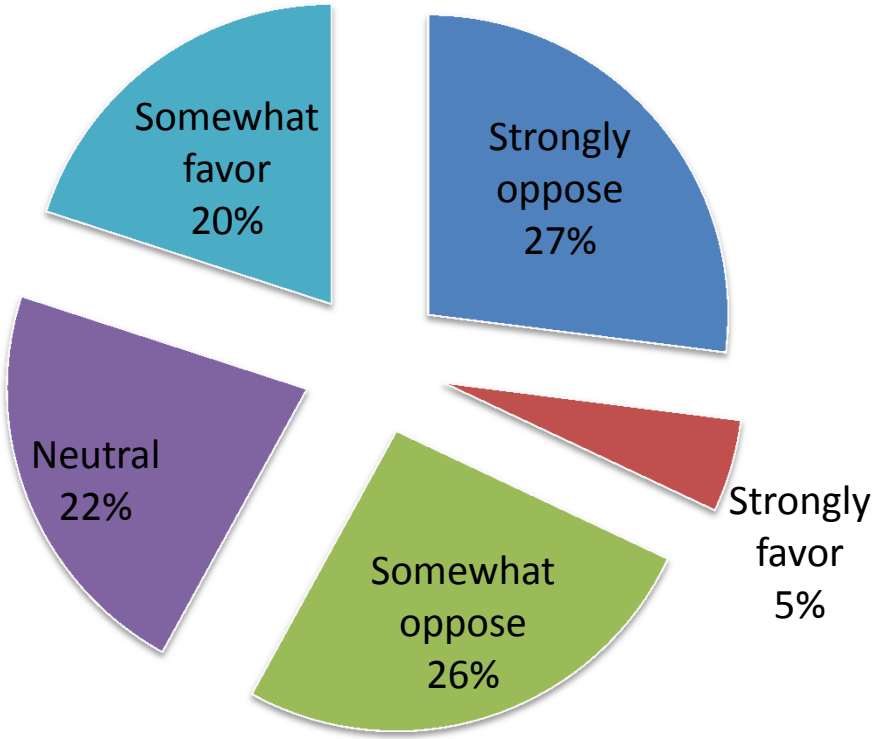
Current Route	New Tolled Route	Travel by AGS/Train
Total travel time: 3h 0m	**Total travel time:** 2h 20m	Time to get to train: 0h 15m On-board train travel time: 1h 42m Time from train to destination: 0h 15m **Total travel time:** 2h 12m Number of transfers: 1
Price of gasoline at time of trip: $4.50 per gallon Toll costs: $3.00 per trip Parking costs: $6.00 per trip	Price of gasoline at time of trip: $4.50 per gallon Toll costs: $11.00 per trip Parking costs: $6.00 per trip	Cost to get to train station and parking: $6.00 Total one-way train fare for your party of 2: $50.00 Cost from train station to destination: $4.00 **Total one-way travel cost:** $60.00
I prefer this option: ()	I prefer this option: ()	I prefer this option: ()

Stated Preference Survey

Opinion: new AGS/Train



Opinion: 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
  - Fares are 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

Definition of the Connect Air Market

- A connect air trip consists of an air leg (or a series of air legs) with one end outside the study corridor, connected on the other end to a rail leg within the corridor
- Connect air trips require a rail station at or near the connecting airport
- Connect air trips should be distinguished from on-corridor air trips or airport access trips

Intra-urban AGS/Train Modeling

- Trips between Denver area AGS/Train stations
- Explicit modeling of connectivity with the RTD system
  - Intra-city AGS/Train competes with RTD transit, but also feeds RTD routes with travelers to/from otherwise unserved markets
  - Inter-city AGS/Train trips may also use RTD modes for access/egress

Ridership Summary

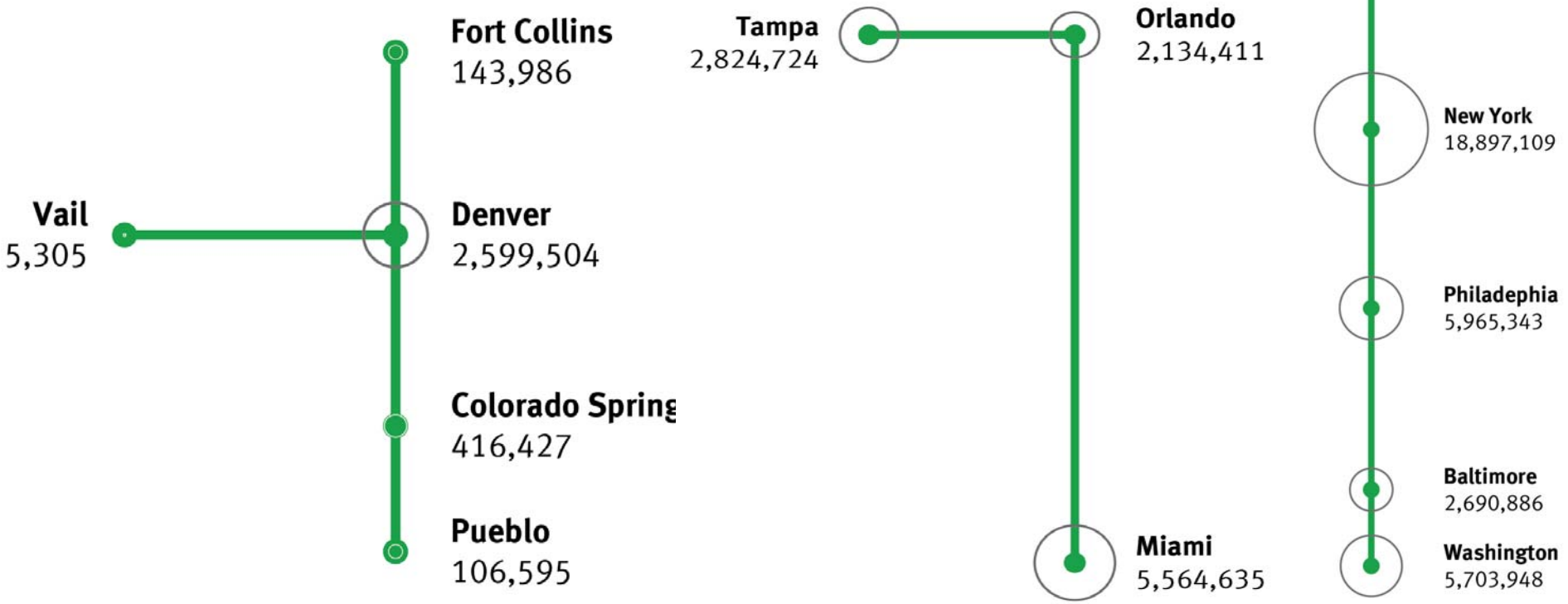
	Trip Type Breakdown			Total Ridership
Scenario	Intercity	Intra-Urban	Connect Air	(millions in 2035)
A-1/I-76	84%	12%	4%	12.17
A-1/US 6	84%	12%	4%	13.12
A-5/I-76	76%	20%	5%	12.99
A-5/US 6	76%	19%	5%	13.13
C-1	78%	16%	6%	10.84

Revenue Summary

	Trip Type Breakdown			Total Revenue
Scenario	Intercity	Intra-Urban	Connect Air	(millions 2013$)
A-1/I-76	90%	4%	6%	$293.8
A-1/US 6	90%	4%	6%	$323.2
A-5/I-76	86%	7%	7%	$305.6
A-5/US 6	86%	7%	7%	$306.8
C-1	85%	7%	8%	$242.7

Ridership Benchmark Against Other HSR Corridors

- Forecasted Colorado AGS/Train 2035 ridership similar to current (2012) NE Amtrak corridor ridership = 11.5 million



Break

Level 2 Results – Scenario Evaluations

Key Considerations in Level 2 Evaluation

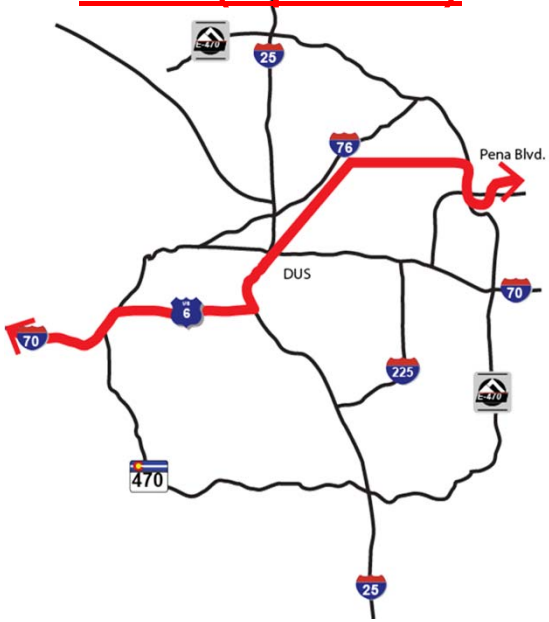
- E-W alignment through the Denver area communities
  - Use I-76 (Option a) or
  - Use US 6 (Option b)
- N-S alignment
  - Through (railroad alignment) or
  - Around the metro area (beltway alignments)
- North of Denver
  - Use I-25 or
  - Use Railroad (EIS commuter rail alignment)
- Decisions based on
  - Environmental/community impacts and benefits versus
  - Performance and costs

East to West – I-76 or US 6?

I-76 (Option a)

1. Travel time: 23 min
2. Corridor Length: 35.8 mi
3. Ave./top speed: 106/165 mph
4. Cost: $2.44 Billion
5. Less community impact
6. No direct connection to DUS; works poorly with A-1, better with A-5

US 6 (Option b)



1. Travel time: 24 min
2. Corridor Length: 36.6 mi
3. Ave/top speed: 115/170 mph
4. Cost: $2.58 Billion
5. Higher community /ROW impact
6. Higher ridership for all markets

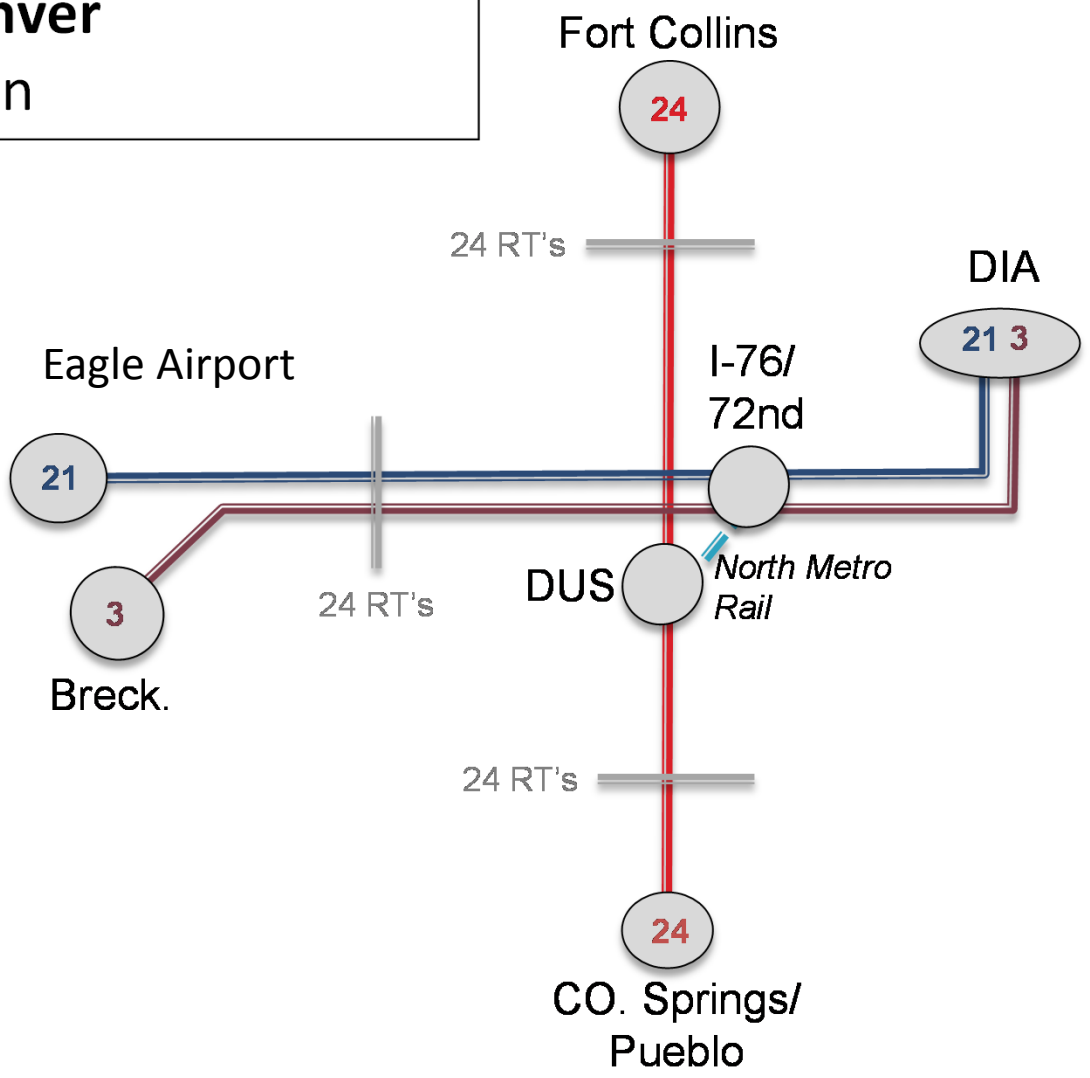
ICS Interregional Connectivity Study

Scenario A-1 (US 6 or I-76)

Direct Routing Through Denver

Basic Frequency Service Plan

Station Pair	Travel Time: I-76	Travel Time: US 6
DIA-Eagle	94	96
Fort Collins-Eagle	174	143
Colorado Springs-Eagle	190	160
Fort Collins-Colorado Springs	93	93
Fort Collins-DIA	102	75
Co. Springs-DIA	119	92

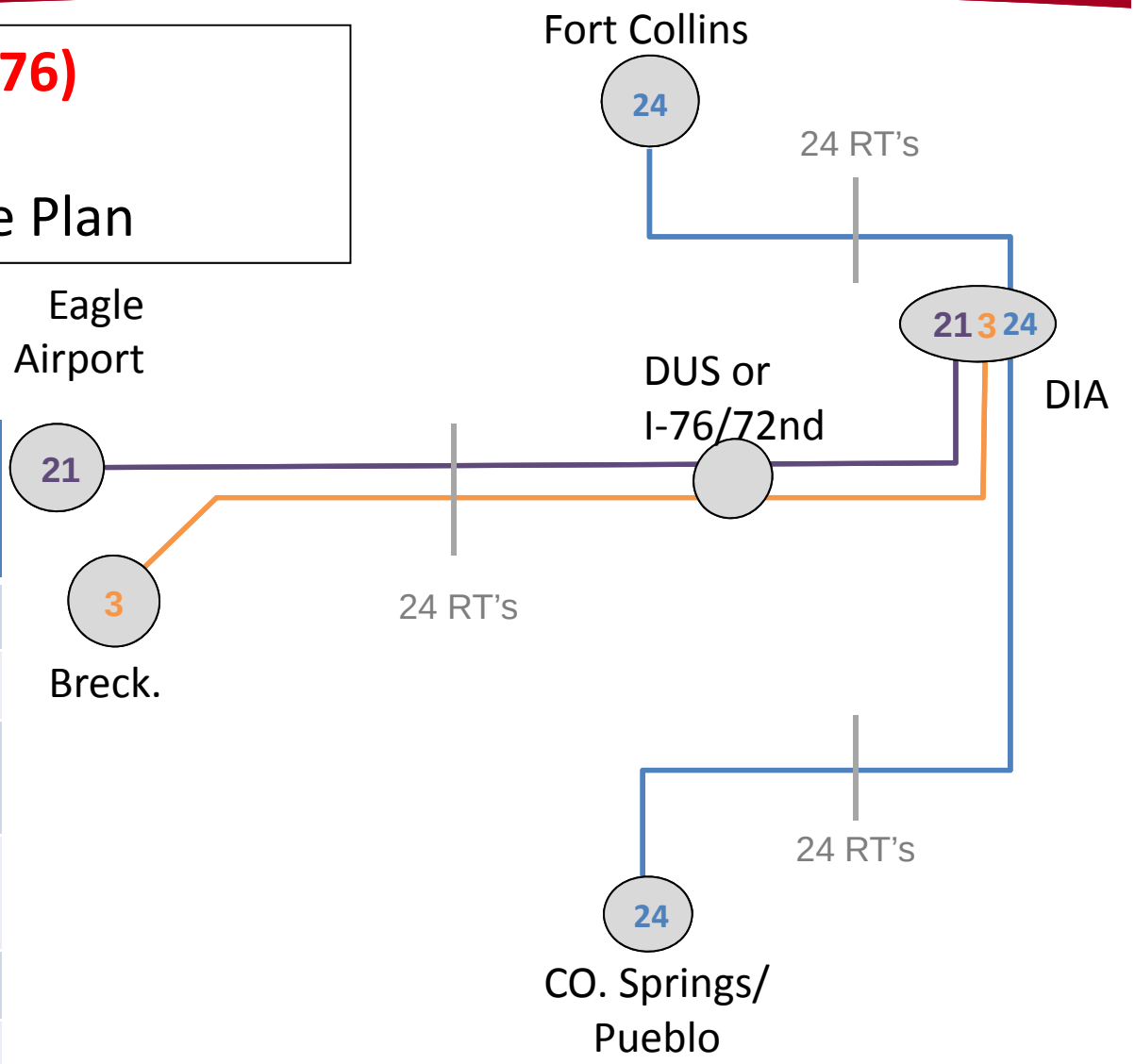


Scenario A-5 (US 6 or I-76)

Eastern Beltway

Basic Frequency Service Plan

Station Pair	Travel Time: I-76	Travel Time: US 6
DIA-Eagle	94	96
Fort Collins-Eagle	155	156
Colorado Springs-Eagle	175	176
Fort Collins-Colorado Springs	94	94
Fort Collins-DIA	37	37
Co. Springs-DIA	57	57



North to South – RR or E-470?

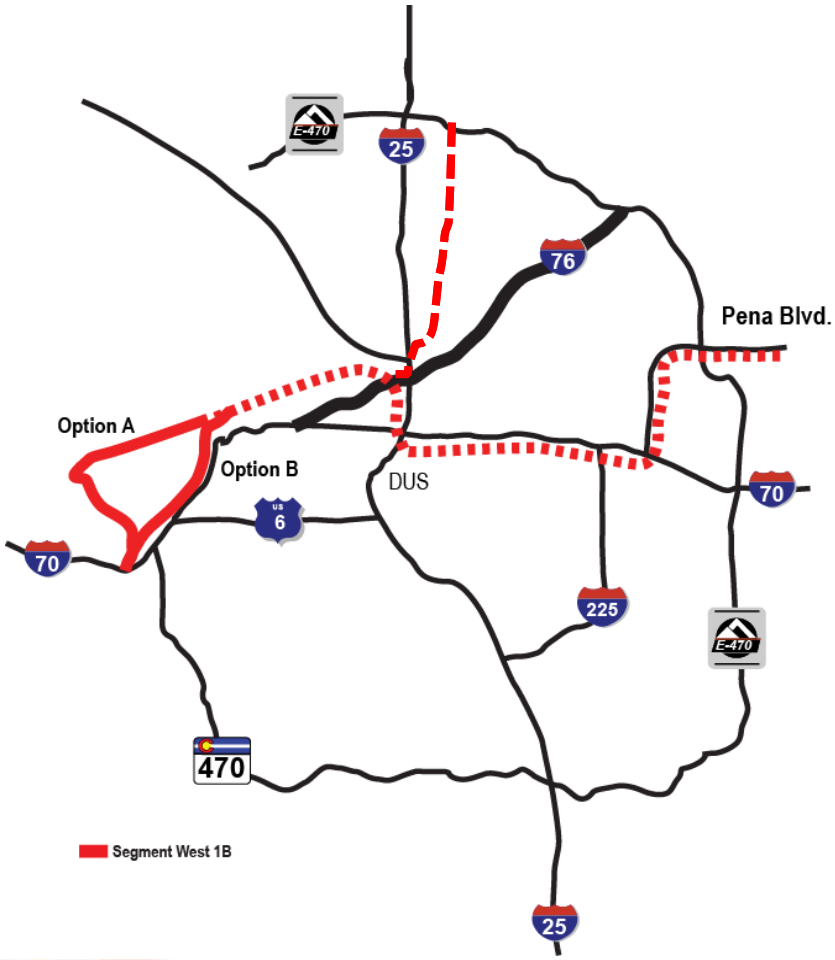
Railroad (N-1/N-2) Segment

1. Travel time: 27 min
2. Corridor Length: 41 mi
3. Ave\top speed: 111/185 mph
4. Cost: $3.36 Billion
5. Higher community/ROW impacts
6. Best DUS Ridership
7. Less DIA ridership (DUS transfer)

E-470 (B2/B3) Segment

1. Travel time: 31 min
2. Corridor Length 50.7 mi
3. Ave/top speed: 110 /160 mph
4. Cost: $2.88 Billion
5. Fewer ROW impacts and costs
6. Best DIA Ridership (no DUS transfer)
7. Longer distances to mountains and downtown Denver

What are the Tradeoffs with C-1 Versus a Full Build Scenario A-1 or A-5?



Advantages:

- Costs less (by $2.8 Billion)
- Reduces many impacts
- Increases the ROI on RTD infrastructure
- Flexibility for system phasing

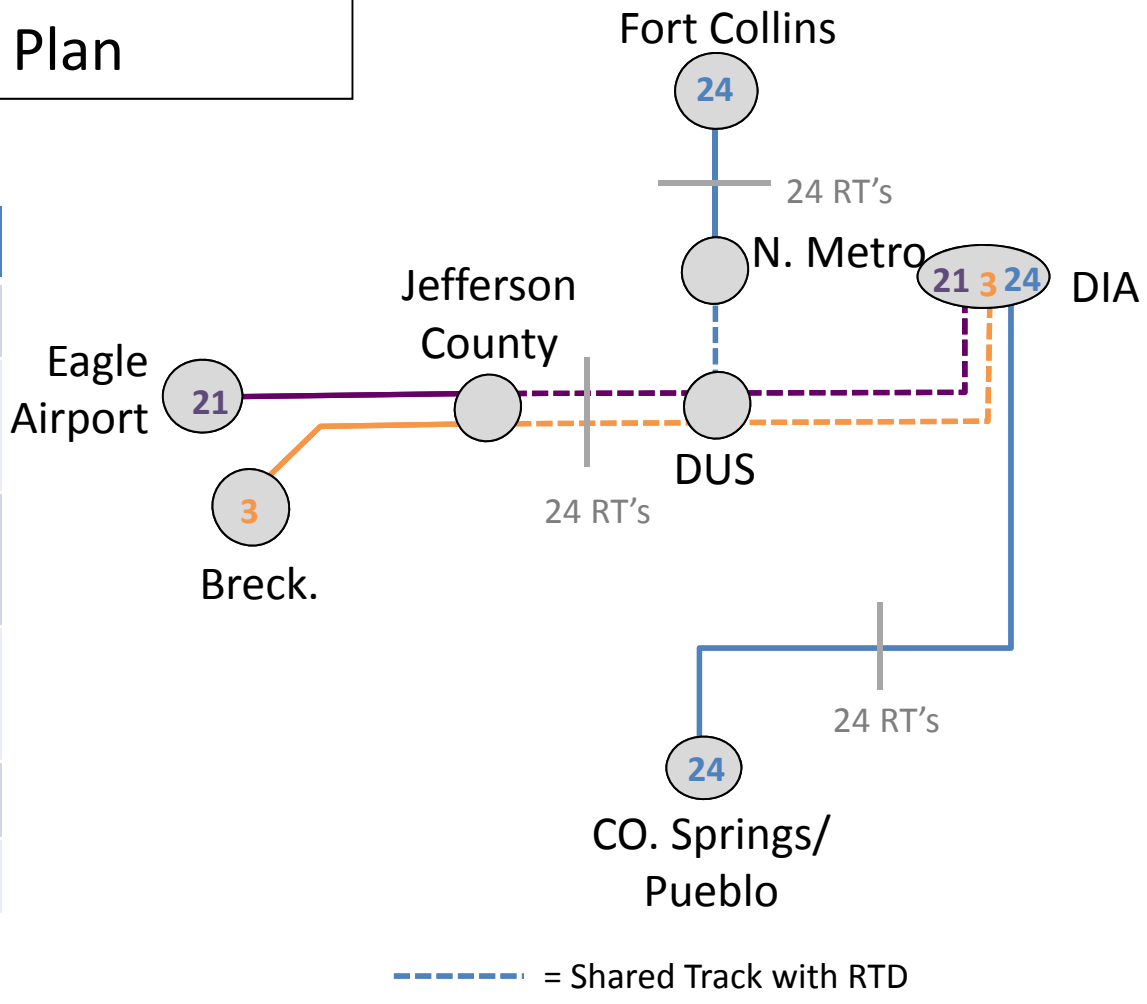
Disadvantages:

- 2.3 M fewer riders – slower ride
- Requires FRA compliant vehicles
- Complicates RTD Eagle operations
- May require additional track

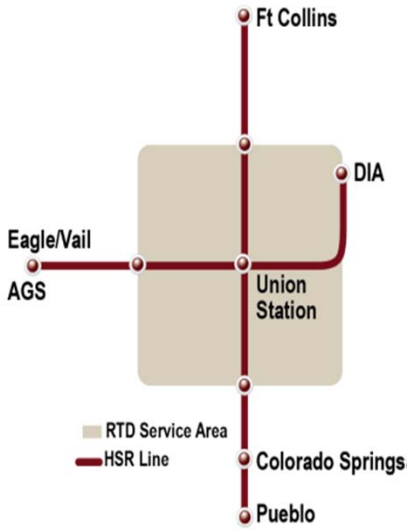
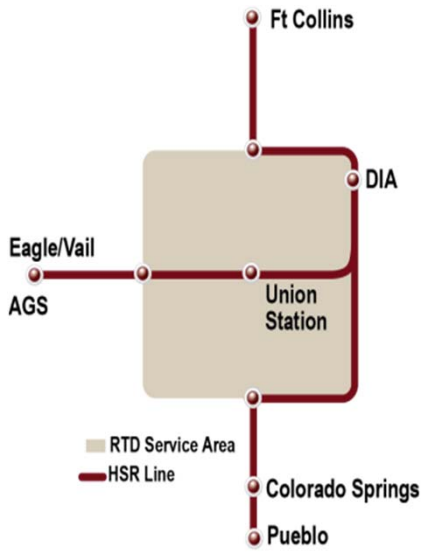
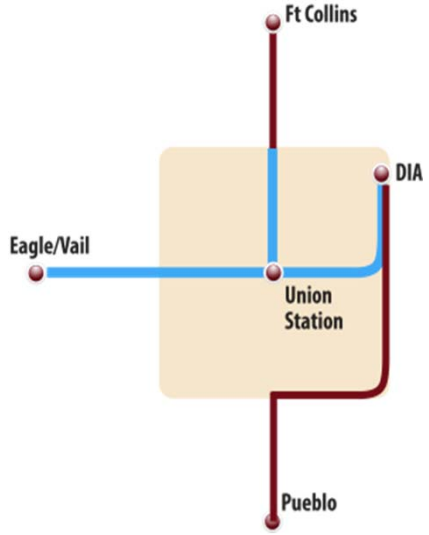
ICS Interregional Connectivity Study

Scenario C-1
Shared Track
Basic Frequency Service Plan

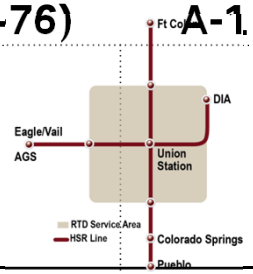
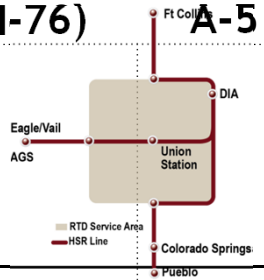
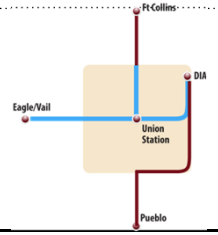
Station Pair	Travel Time
DIA-Eagle	127
Fort Collins-Eagle	171
Colorado Springs-Eagle	206
Fort Collins-Colorado Springs	186
Fort Collins-DIA	101
Co. Springs-DIA	55



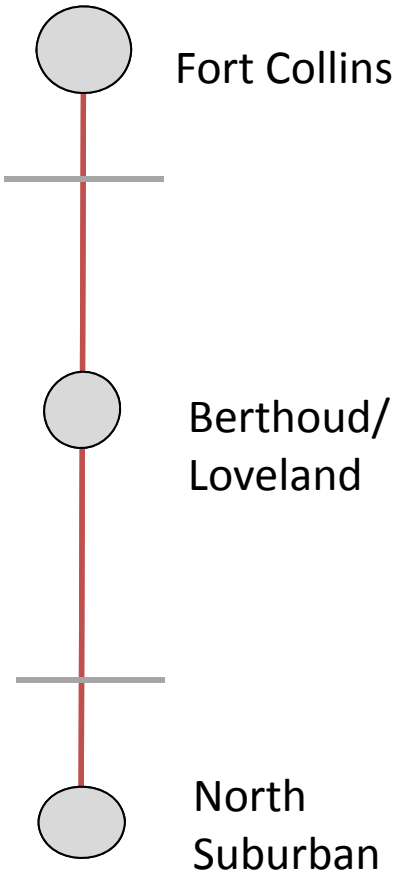
Summary Comparison of Scenarios

	A-1	A-5	C-1
			
CAPEX	$14.9 Billion	$14.3 Billion	$11.5 Billion
OPEX	$158 Million/yr	$161 Million/yr	$165 Million/yr
Ridership	12.1 to 13.1 million/yr	12.9 to 13.1 million/yr	10.8 million/yr
Revenue	$250 Million/yr	$257 Million/yr	$205 Million/yr
Opex Ratio	1.58	1.60	1.24
$/Rider (Capex)	$57.86	$57.84	$61.54

Impact of Scenarios on Stations

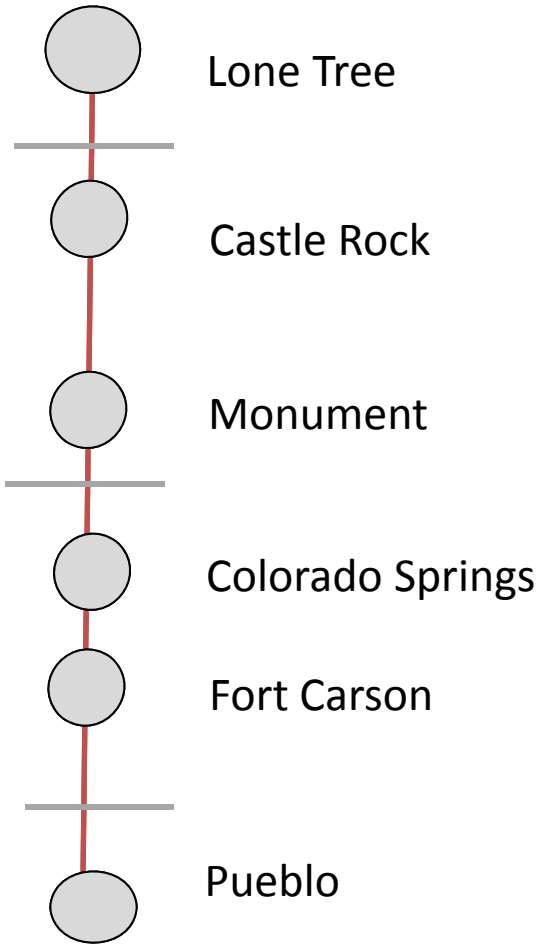
Station	A-1 (I-76)	A-1 (US 6)	A-5 (I-76)	A-5 (US 6)	C-1
					
Berthoud	383,141	**422,349**	353,542	366,126	282,497
Breckenridge	169,141	**185,456**	171,919	164,956	130,262
Castle Rock	945,886	985,272	**1,072,147**	1,062,746	1,014,947
Colorado Springs	1,294,050	**1,357,422**	1,260,815	1,259,533	1,128,475
Denver - I-76/72nd	342,012		589,928		
Denver - Union Station	1,460,379	**1,621,610**		732,198	956,729
DIA	657,763	877,496	2,033,524	**2,133,219**	1,287,745
Eagle Airport	591,377	**654,587**	589,253	560,359	405,094
Fort Carson	475,121	496,857	473,112	474,407	425,272
Fort Collins	1,216,802	**1,370,281**	1,140,535	1,259,077	1,142,896
Georgetown	201,680	**224,483**	190,811	200,514	175,426
Silverthorne	259,096	**303,484**	274,640	268,138	204,453
Lone Tree	1,295,597	1,348,359	**1,415,994**	1,346,603	1,200,321
Monument	677,197	**709,043**	617,278	620,451	512,214
North Suburban	469,699	679,667	832,686	**994,891**	483,687
Pueblo	763,400	**777,723**	745,503	751,246	713,192
West Suburban	579,965	726,573	**811,194**	560,457	502,542
Vail Station	366,835	**422,171**	392,845	382,537	278,553
Total	**12,149,141**	**13,162,833**	**12,965,726**	**13,137,458**	**10,844,306**

Impact of Scenarios on North Ridership



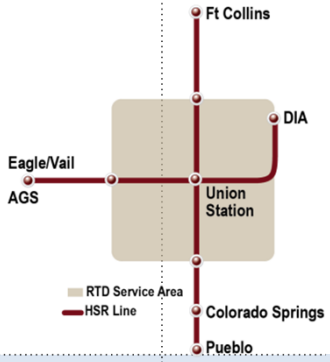
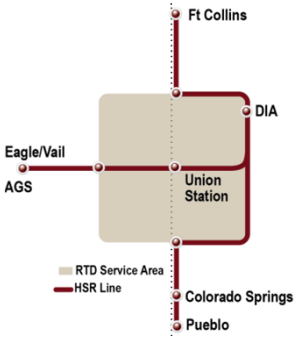
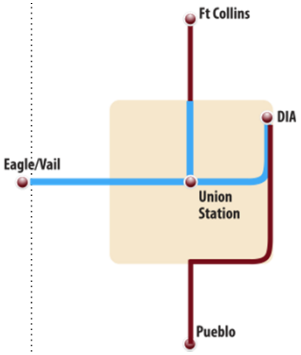
- Denver alignments have direct effect on ridership north of Denver
- Highest ridership with the A1 (direct through Denver), US 6 option
- Lowest ridership on the C-1 shared track alignment
- 17 to 20 percent of ridership comes from northern market

Impact of Scenarios on South Ridership



- Denver alignments have less effect on ridership south of Denver
- Ridership is comparable among A-1 and A-5 scenarios (either US 6 or I-76 options)
- Ridership is lower with the C-1 shared track alignment but less effect than for northern market
- Highest ridership within the system for all scenarios (40 to 46 percent)

Market Share by Scenario

Market	A-1 (I-76)	A-1 (US 6)	A-5 (I-76)	A-5 (US 6)	C-1
					
Mountain to Eagle	2,168,094	2,516,754	2,430,662	2,136,961	1,696,330
Percent of Total	**17.85%**	**19.12%**	**18.75%**	**16.27%**	**15.64%**
North to Fort Collins	2,069,642	2,472,297	2,326,763	2,620,094	1,909,081
Percent of Total	**17.04%**	**18.78%**	**17.95%**	**19.94%**	**17.60%**
South to Pueblo	5,451,251	5,674,676	5,584,849	5,514,986	4,994,421
Percent of Total	**44.87%**	**43.11%**	**43.07%**	**41.98%**	**46.06%**
Denver Intra-urban	2,460,154	2,499,106	2,623,452	2,865,417	2,244,474
Percent of Total	**20.25%**	**18.99%**	**20.23%**	**21.81%**	**20.70%**
	12,149,141	*13,162,833*	*12,965,726*	*13,137,458*	*10,844,306*

Conclusions on Scenarios

- Scenarios A-1 and A-5 are likely most cost effective (CE)
- Scenario A-1/US 6
  - Highest overall ridership (marginally better than A-5) and better service to Denver (through DUS)
  - Does not serve DIA from north or south well due to transfer at DUS and competition from RTD's lower fares and good travel times
- Scenario A-5
  - Serves DIA best with one-seat ride from all markets but requires more out-of-direction travel to mountains, north, and south
  - Works well with either US 6 or I-76 option
- Scenario C-1
  - Saves about $3.3 B, has fewer impacts, but has 2.3 million fewer riders

Level 2 Early B/C Results

Early B/C Results

Assumptions

1. Based on Scenario A-1/US 6
2. ICS portion only (no CAPEX available for AGS)
3. CAPEX @ $14.5 B
4. OPEX @ $157.6 million/yr
5. VMT Reduced @ 320,732,000/yr, valued at $.56/per
6. VHT Reduced @ 999,040 hours/yr @ $16/hour
7. Fatalities at 1.1 per 100 million miles and $3 million/fatality
8. Pollution benefits at $.199/mile
9. $370 million per station area
10. 50 percent of CAPEX is labor discounted for 10 years
11. Construction multiplier at 2.0
12. Indirect at 2/3 the salary of construction jobs
13. 50 of OPEX is labor
14. OPEX multiplier is 1.5
15. Interest at 4% per year and 30 year period

Preliminary B/C Scenario A-1/US 6

B/C Element	Scenario 1b Basic PW Basis	Notes
CAPEX	$ 14,550,000,000	L-2 estimate
Increase in Real Estate Value - one time deal, no PW calc.	$ 4,400,000,000	12 stations
PW of OPEX	$ 2,724,886,710	(PWF = 17.292 @ 4%)
PW Fare Box Revenue	$ 4,525,003,938	(PWF = 17.292 @ 4%)
PW of VMT	$ 3,105,452,612	(PWF = 17.292 @ 4%)
PW of VHT	$ 276,374,426	(PWF = 17.292 @ 4%)
PW of Fatality Avoided	$ 182,999,886	(PWF = 17.292 @ 4%)
PW of pollution benefits	$ 1,103,544,768	(PWF = 17.292 @ 4%)
PW of Operations Jobs	$ 1,362,443,355	(PWF = 17.292 @ 4%)
PW of Non-basic jobs (1.5 mult)	$ 681,221,678	1.5 multiplier per BEA Rims II, Denver Metro Region
Construction Employment (short term)	$ 5,900,025,000	Assume 10 year construction (PWF = 8.111 @ 4%)
Non-basic jobs (2.0) x construction (short term benefit no PW	$ 3,894,016,500	Rims II, BEA for Denver Metro Region
Sum of Benefits Life Cycle	$ 24,327,537,394	
Sum of Costs	$ 17,274,886,710	
B/C Ratio	1.41	
ROI	40.8%	

B/C Conclusions

- Operating ratio and B/C is positive for the ICS system
  - Does not include Mountain Corridor yet
- B/C is driven by:
  - Impact of the interest rate assumed
  - Impact of TOD
  - Impact of construction and spin-off jobs
  - Amount of Federal Funding and multiplier effects (not credited at this point)

Next Steps: Early May

- Ridership and Revenue Estimation for remaining scenarios
- Refinements to the B/C studies
- Possible refinement and combination of scenarios
- More results from the AGS Study
- Schedule for Public Workshops

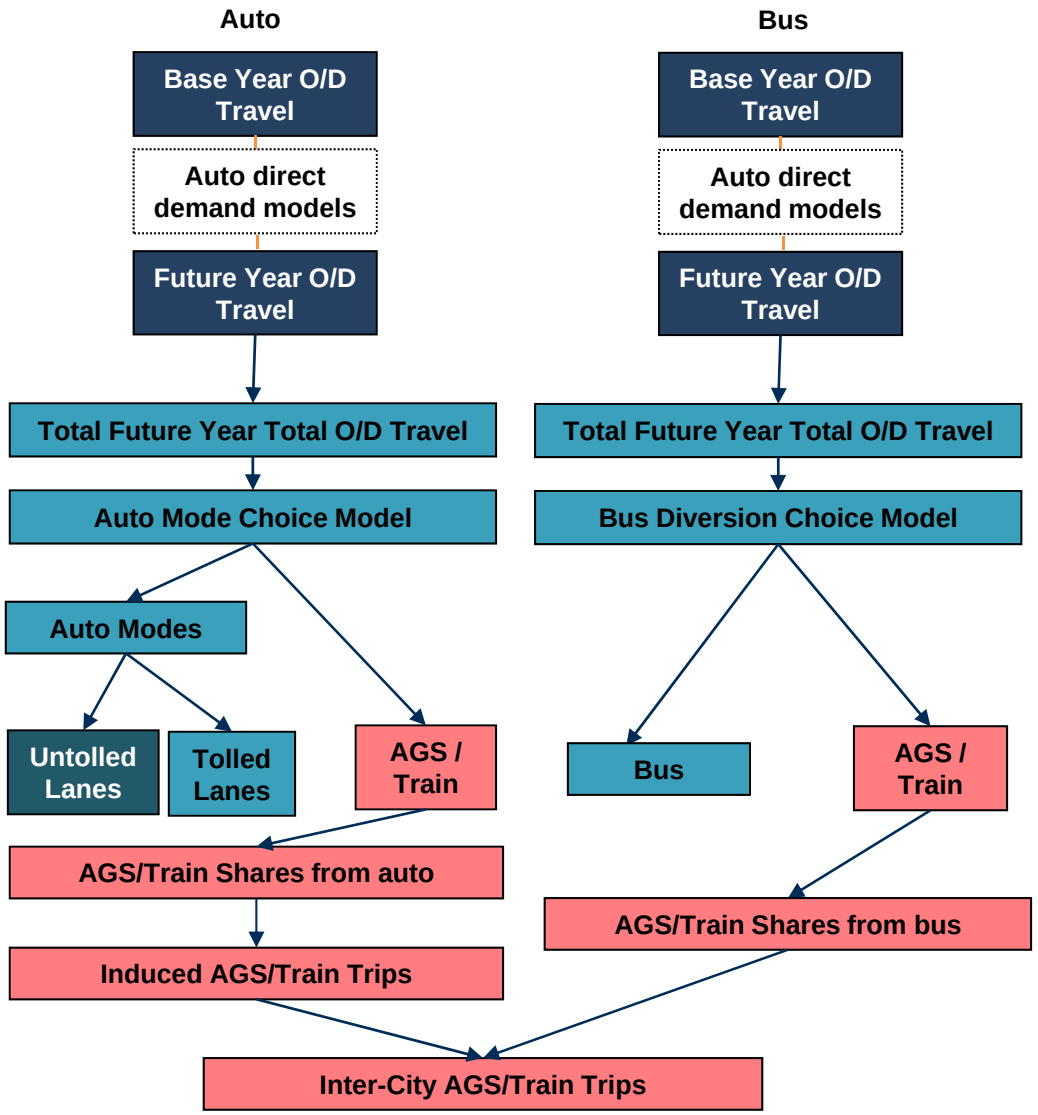
Reference

SDG Intercity Travel Forecasting Process

Stage 1
Growth model

Stage 2
Mode choice model

Stage 3
AGS/Train Ridership Forecasts

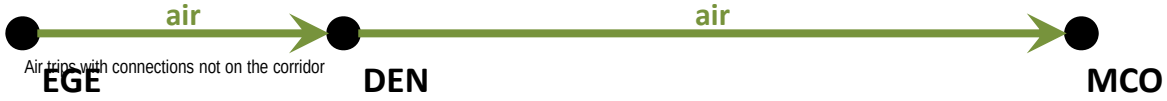


Induced Demand is Calculated Separately

- Induced demand is calculated based on the impact the introduction of the AGS/Train mode has on the transportation system as a whole
- For each intercity zone pair, the total generalized cost (including all travel modes) is calculated before and after the introduction of the AGS/Train mode
- Differences in generalized costs pre- and post-AGS/Train are used to calculate the percent increase in total travel for each intercity OD pair

Sources of Diverted Trips

- Connect air trips can be diverted from:
  - Air trips with connections on the corridor



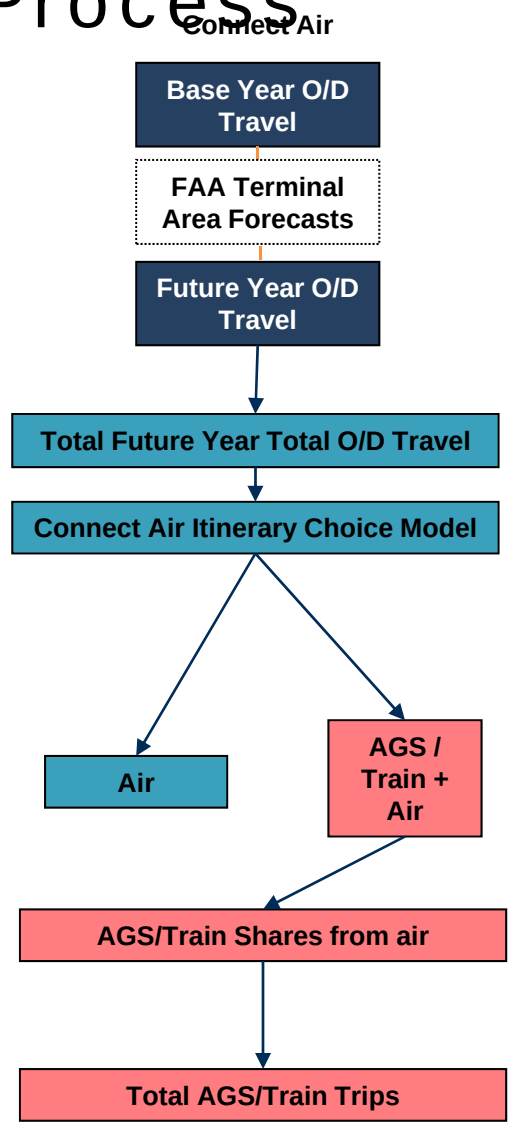
  - Air trips with connections not on the corridor
  - Nonstop air trips

SDG Connect Air Travel Market Forecasting Process

Stage 1
Growth model

Stage 2
Route choice model

Stage 3
AGS/Train ridership forecasts



ICS Interregional Connectivity Study

CH2MHILL

Intra-urban AGS/Train Modeling

- Local (Denver area) AGS/Train trips are forecast using an intra-urban model (inter-city AGS/Train trips are forecast separately)
- The intra-urban model is adapted from the latest DRCOG four-step travel demand model (COMPASS)
- Utilizing the DRCOG model takes advantage of the model's detailed representation of travel options and conditions in the Denver area
- The DRCOG COMPASS model has undergone several validation exercises, so the goal in incorporating urban AGS/Train was to make minimal changes in order to avoid compromising calibration

Market Level Summary 1 of 3

I-70	I-25N
I-70	DEN
I-70	I-25S

Scenario Name	2035 Ridership (in millions)	2035 Revenue (in millions)
A-1a	1.07	$40.2
A-1b	1.15	$43.1
A-5a	1.02	$39.3
A-5b	1.06	$41.0
C-1	0.23	$10.7

I-70	I-25N
I-70	DEN
I-70	I-25S

Scenario Name	2035 Ridership (in millions)	2035 Revenue (in millions)
A-1a	1.49	$33.7
A-1b	1.37	$32.2
A-5a	1.94	$32.9
A-5b	2.11	$37.3
C-1	1.53	$32.8

I-70	I-25N
I-70	DEN
I-70	I-25S

Scenario Name	2035 Ridership (in millions)	2035 Revenue (in millions)
A-1a	2.23	$56.7
A-1b	2.25	$57.1
A-5a	2.26	$56.8
A-5b	2.38	$61.4
C-1	2.36	$60.3

I-70	I-25N
I-70	DEN
I-70	I-25S

Scenario Name	2035 Ridership (in millions)	2035 Revenue (in millions)
A-1a	0.00	$0.0
A-1b	0.07	$0.6
A-5a	0.00	$0.0
A-5b	0.01	$0.0
C-1	0.00	$0.0

Market Level Summary 2 of 3

I-70	I-25N
	DEN
	I-25S

Scenario Name	2035 Ridership (in millions)	2035 Revenue (in millions)
A-1a	0.44	$17.0
A-1b	0.79	$29.4
A-5a	0.55	$22.8
A-5b	0.44	$19.3
C-1	0.42	$18.8

I-70	I-25N
	DEN
	I-25S

Scenario Name	2035 Ridership (in millions)	2035 Revenue (in millions)
A-1a	1.20	$44.2
A-1b	1.23	$43.6
A-5a	1.04	$39.4
A-5b	1.23	$43.6
C-1	0.59	$25.3

I-70	I-25N
	DEN
	I-25S

Scenario Name	2035 Ridership (in millions)	2035 Revenue (in millions)
A-1a	0.41	$16.7
A-1b	0.70	$27.7
A-5a	0.40	$19.2
A-5b	0.29	$14.7
C-1	0.09	$5.5

I-70	I-25N
	DEN
	I-25S

Scenario Name	2035 Ridership (in millions)	2035 Revenue (in millions)
A-1a	1.15	$25.8
A-1b	1.16	$26.0
A-5a	1.44	$33.0
A-5b	1.16	$26.0
C-1	1.15	$25.8

Market Level Summary 3 of 3

I-70	I-25N
	DEN
	I-25S

Scenario Name	2035 Ridership (in millions)	2035 Revenue (in millions)
A-1a	0.58	$8.8
A-1b	0.82	$12.5
A-5a	0.58	$8.8
A-5b	0.82	$12.5
C-1	0.82	$12.5

I-70	I-25N
	DEN
	I-25S

Scenario Name	2035 Ridership (in millions)	2035 Revenue (in millions)
A-1a	3.60	$50.5
A-1b	3.62	$50.9
A-5a	3.75	$52.8
A-5b	3.65	$51.0
C-1	3.65	$51.0