

AGS Feasibility Study

PLT Meeting 8
February 13, 2013

Agenda

- ▶ Introduction to the Meeting
- ▶ Public Comment
- ▶ Technology Forum Recap & Next Steps
- ▶ Update on Land Use & Station Criteria Meetings
- ▶ Key Themes/Issues in Developing Alignments
- ▶ Funding & Financial Task Force Update
- ▶ AGS/ICS/Co-Development Project Coordination
- ▶ Conclusion, Final Remarks and Next Steps

Introduction to the Meeting

▶ Meeting Objectives

- Share PLT/Technical Review Team's Opinions & Observations of Technology Providers who Participated in Technology Forum
- Discuss Consultant Team's On-Going Coordination with Technology Providers
- Update on Land Use & Station Criteria
- Discuss Alignment Design Process
- Discuss Funding & Financial Task Force Progress
- 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

Technology Forum Attendees

| Technology Provider | Attended Forum | Presented at Forum |
|---------------------|----------------|--------------------|
| American Maglev | Yes | Yes |
| FlightRail | Yes | No |
| General Atomics | Yes | Yes |
| MagneMotion | No | No |
| MegaRail | Yes | Yes |
| Owen Transit Group | No | No |
| PPRTC | Yes | Yes |
| SkyTran | Yes | No |
| Swift Tram | Yes | No |
| Talgo | Yes | Yes |
| Transrapid | No | No |

Technology Forum Recap

- ▶ What did you learn that you did not know before?



Technology Forum Recap

- ▶ What concerns do you have about the technologies?



Technology Forum Recap

- ▶ How realistic do you think the technologies are?

Technology Forum Recap

- ▶ Should we pare technologies down to ones that have good chance of being deployable?

Technology Forum Recap

- ▶ What more do we need to get from the Technology Providers?

AGS Feasibility Determination

- ✓ Technology Feasible? **Yes**
- Alignment & Land Use Feasible?
- Funding & Governance Feasible?
- Is AGS Feasible?

Technology Forum Next Steps

- ▶ Consultant Team has been working with each Technology Provider to get Additional Information on:
 - Operations
 - Guideway materials/construction
 - Costs
- ▶ Information Collected will be used to Develop:
 - Operating plans
 - Quantities
 - Cost Estimates

Land Use & Station Coordination

1st Round County Meetings: Elements of a Station

- Summit County – September 10, 2012
- Jefferson County – October 12, 2012
- Clear Creek County – October 24, 2012
- Eagle County – October 30, 2012



2nd Round: Working Sessions

Objective: Refine Station Locations by County

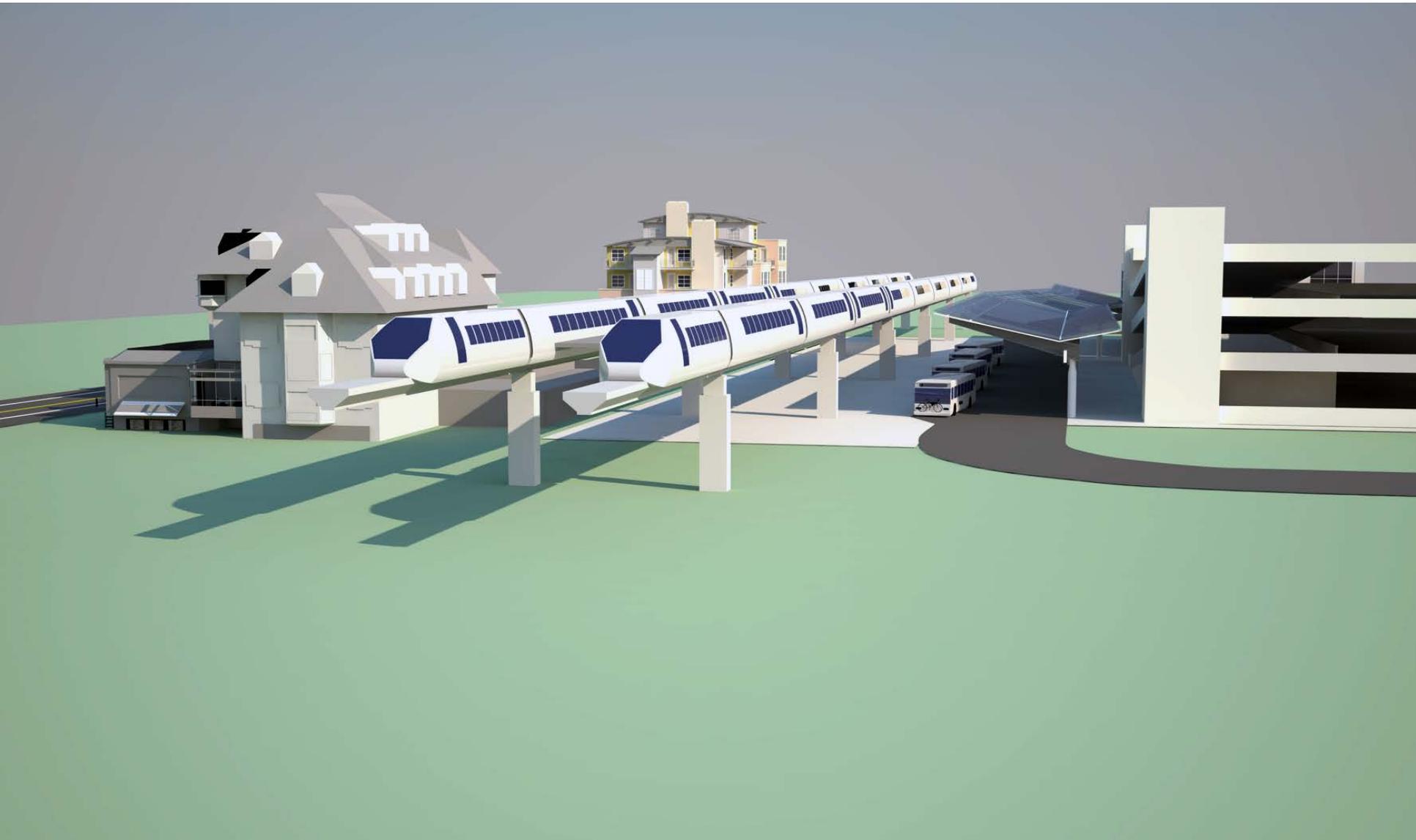
Eagle County: Airport Meeting, Vail Meeting, Avon Council Briefing, County review

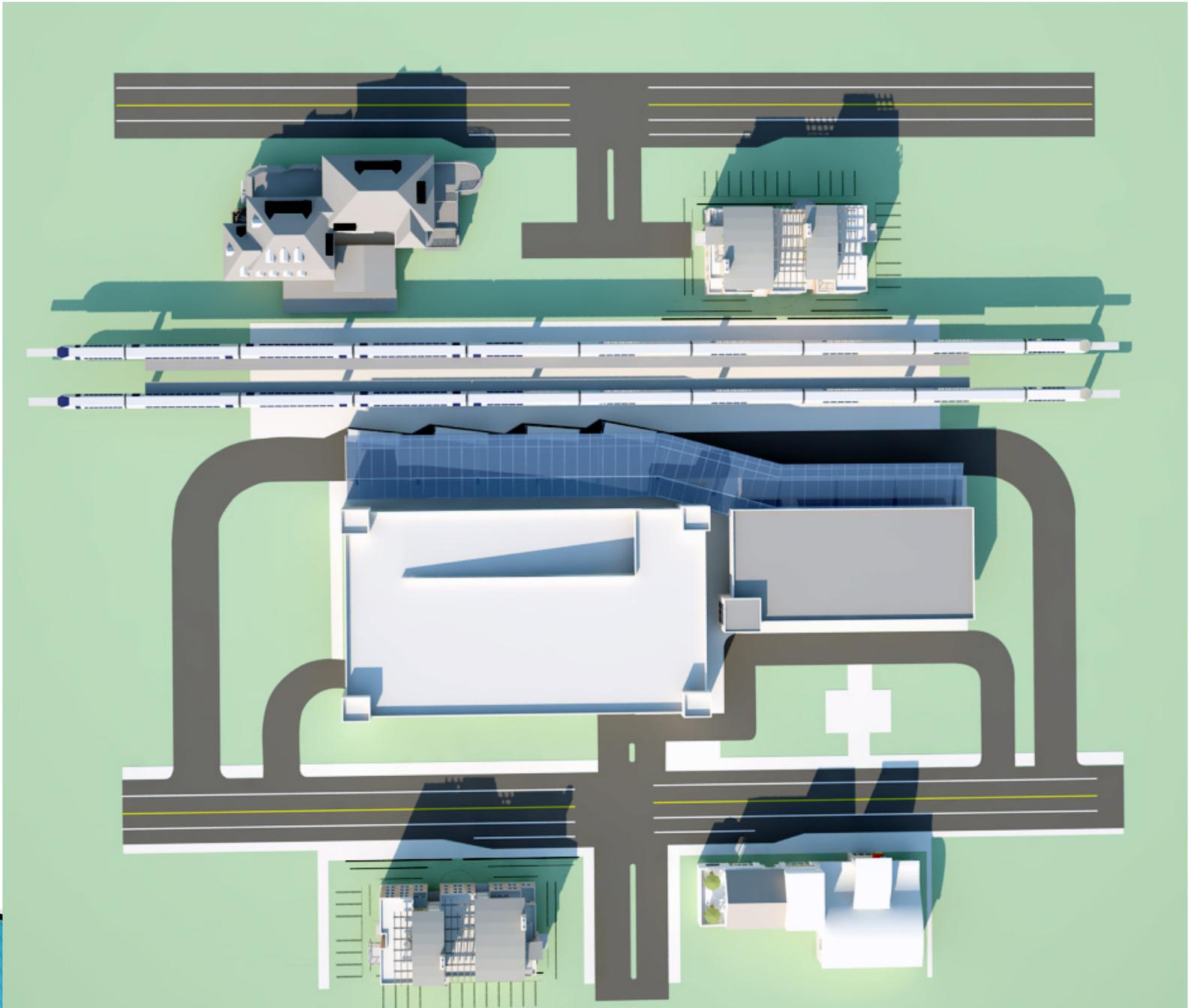
Summit County: Staff Meeting February 18th

Clear Creek County: Organizational Meeting February 11th, County-wide Discussion TBD

Jefferson County: March TBD

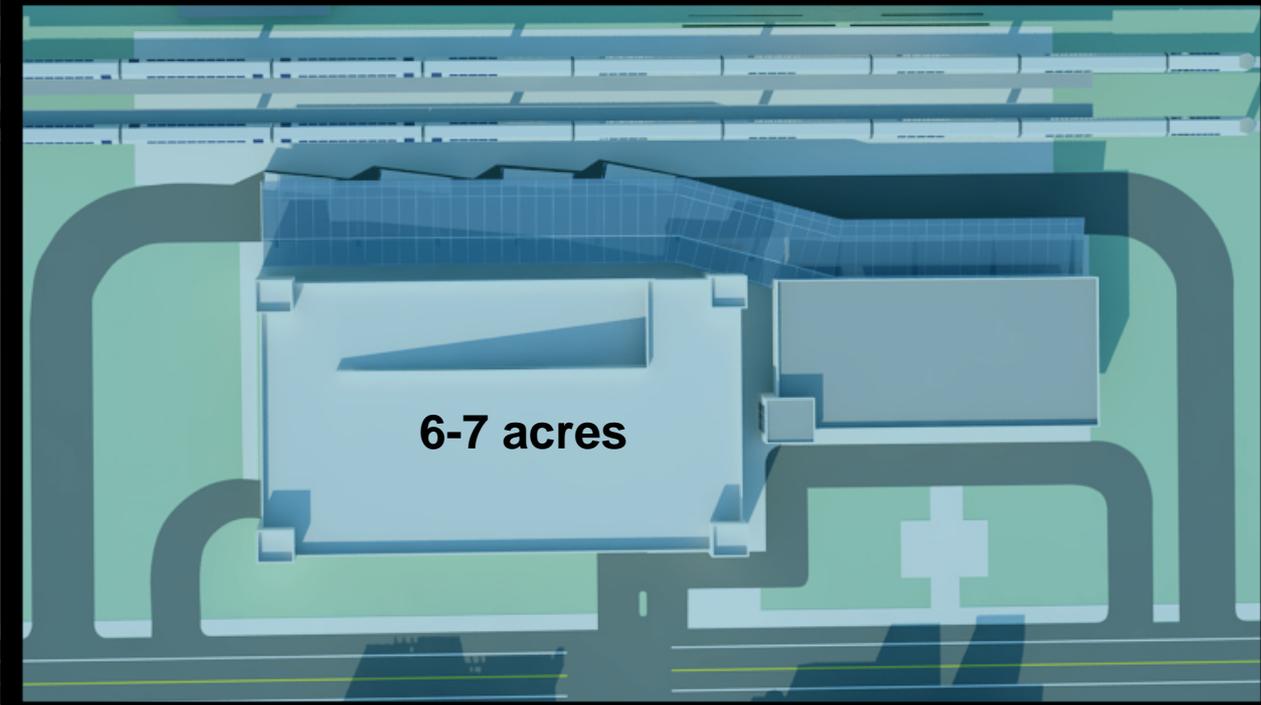
Concept Station



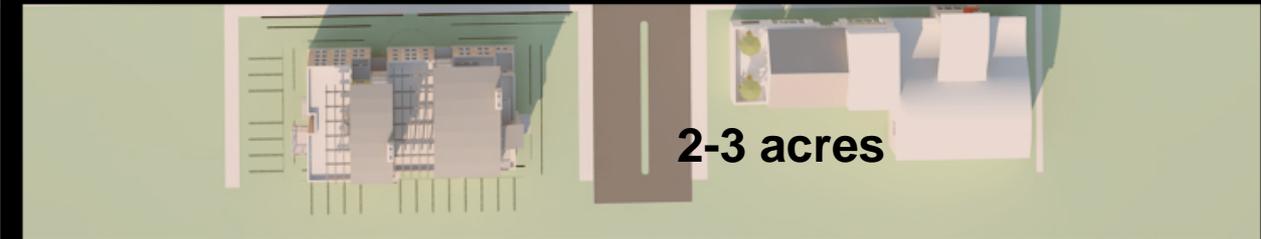




2-4 acres



6-7 acres



2-3 acres

Draft Evaluation Criteria Matrix

| | STATION LOCATION |
|--|------------------|
| Developability | |
| Land availability (station footprint and supporting development) | |
| Infrastructure Capacity | |
| Compatibility with local land use plans | |
| Compatibility with local/mountain/historic character | |
| Transportation access and capacity | |
| Local access and capacity | |
| Regional access | |
| Transit distribution | |
| Travel time to population/activity centers | |
| Operational capacity | |
| Transfer requirements | |
| Community and Regional support for location | |
| Environmental constraints | |
| Ridership capture | |
| Constructability | |

Alignment Design

- ▶ Four Main Alignment Designs Underway
 - Wholly inside I-70 ROW – Low Speed Maglev
 - Greenfield Alignment – High Speed Rail (HSR)
 - Greenfield Alignment – High Speed Maglev
 - Hybrid Alignment – Various Technologies
- ▶ Need to Define Station Locations to Finalize
- ▶ Initial Design Highlights
 - Low Speed Maglev: 7500 feet of tunnel
 - HSR: 42.5 to 63.0 miles of tunnels
 - Must go along Clear Creek Canyon
 - High Speed Maglev: 20.0 to 37.7 miles of tunnels

Alignment Design

▶ Next Steps

- Refine designs
- Develop speed profiles
- Rollout alignments to Technical Committee in early March
- Present alignments to PLT at March 13 Meeting
- Environmental screening of alignments (using PEIS data)
- Finalize alignments (by mid-April)
- Begin cost estimating
- Update ridership based on alignments / speed profiles



Funding \ Financing Workgroup

Workgroup Charge

- ▶ Statewide viewpoint for funding
- ▶ Identify funding sources & financing tools that could support the implementation of AGS alone, or with ICS as part of a statewide high speed transit network
- ▶ Evaluate sources and tools for applicability
- ▶ Guide development of a Request for Information (RFI) to Funding/Financing, Concession, & PPP/P3 sector of Transit Industry

Workgroup Charge – Timeline

- ▶ February – Identify sources of funding
 - ▶ March – Evaluate sources & draft RFI
 - ▶ April – Refine & release RFI
 - ▶ May – Receive & review responses to RFI
 - ▶ June – Funding/finance initial conclusions
-
- ▶ Report out monthly to PLT

Workgroup Representation

- ▶ CDOT Division of Transit & Rail
- ▶ CDOT Office of Finance, Mgmt & Budget
- ▶ CDOT Office of Policy & Gov't Relations
- ▶ High Performance Transportation Enterprise
- ▶ AGS Consulting Team
- ▶ ICS Consulting Team
- ▶ Consultants to OFMB (Ernst & Young) and HPTE (KPMG)

Identification Step

- ▶ Funding/Financing Memo being developed
 - Documents existing revenue streams
 - Documents current uses of those revenues
- ▶ Travel Model Estimating Ridership
 - Basis for fare revenues
- ▶ Project Costs being developed
 - AGS & ICS corridor cost ranges
 - Unit price & contingency inputs

Evaluation Step

- ▶ Financial Effectiveness of Each Funding Source/Mechanism
 - Stability
 - Revenue Potential
 - Growth Potential
- ▶ Financial Efficiency of Each Funding Source/Mechanism
 - Transportation Efficiency
 - Administrative Efficiency
- ▶ Political Acceptability of Each Funding Source/Mechanism
 - Equity
 - Impact on Competitiveness
 - Governance Structure

Funding/Financing RFI

- ▶ Statement of current picture
 - Costs & evaluation of risks
 - Revenue sources & level of political support
- ▶ Phasing
 - Minimum Operating Segment(s)
 - Interim build-out
 - Full build-out
- ▶ P3/Concession Principle: Tolling & transit work together

Funding/Financing RFI – Goals

- ▶ What additional funding/financing options exist?
- ▶ What steps does the P3/Finance sector recommend be taken?
- ▶ Industry opinion on when the project becomes financially feasible

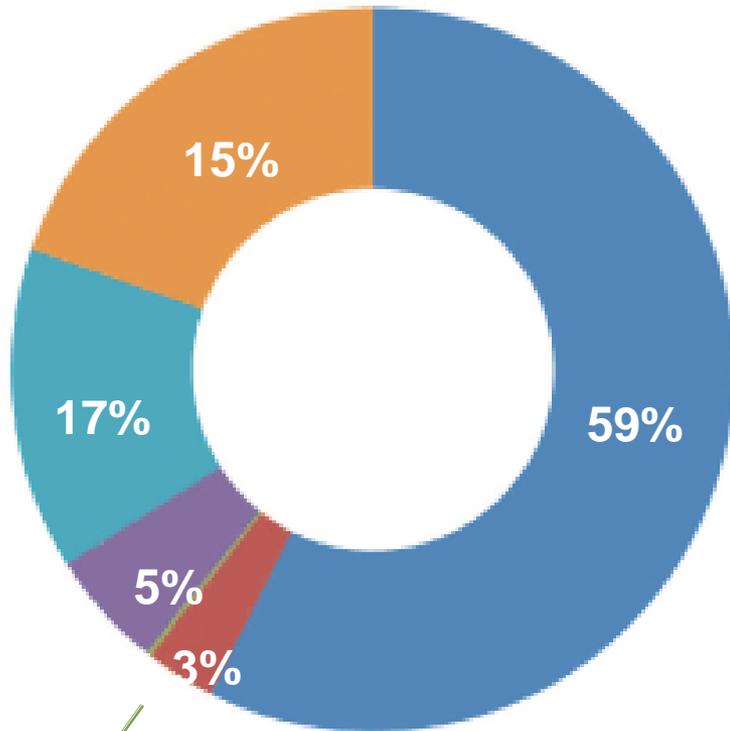
State of Colorado – Expenditures

| Expenditures by Department 2010-2011 (\$ millions) | | | | | |
|---|----------------|-----------------|----------------|-----------------|-----------------|
| | General | Cash | Federal | Transfers | Total |
| Agriculture | \$5 | \$27 | \$6 | -\$2 | \$36 |
| Corrections | \$665 | \$93 | \$3 | -\$12 | \$750 |
| Education | \$2,963 | \$3,535 | \$888 | -\$2,899 | \$4,486 |
| Governor | \$11 | \$183 | \$360 | -\$20 | \$534 |
| Health Care Policy and Planning | \$1,271 | \$1,435 | \$2,804 | -\$689 | \$4,822 |
| Higher Education | \$718 | \$3,208 | \$499 | -\$288 | \$4,137 |
| Human Services | \$627 | \$291 | \$1,537 | -\$24 | \$2,431 |
| Judicial | \$325 | \$270 | \$10 | -\$78 | \$527 |
| Labor and Employment | \$0 | \$910 | \$1,464 | -\$55 | \$2,320 |
| Law | \$9 | \$41 | \$2 | -\$5 | \$47 |
| Legislature | \$32 | \$3 | \$0 | -\$2 | \$33 |
| Local Affairs | \$11 | \$268 | \$86 | -\$102 | \$262 |
| Military and Veteran Affairs | \$8 | \$11 | \$28 | -\$4 | \$43 |
| Natural Resources | \$26 | \$420 | \$41 | -\$176 | \$311 |
| Personnel and Administration | \$8 | \$430 | \$0 | -\$9 | \$430 |
| Public Health and Environment | \$27 | \$193 | \$260 | -\$65 | \$416 |
| Public Safety | \$82 | \$133 | \$38 | -\$10 | \$242 |
| Regulatory Agencies | \$2 | \$72 | \$2 | -\$11 | \$65 |
| Revenue | \$177 | \$752 | \$2 | -\$273 | \$658 |
| State | \$0 | \$19 | \$1 | \$0 | \$20 |
| Transportation | \$1 | \$770 | \$695 | -\$175 | \$1,290 |
| Treasury | \$6 | \$1,669 | \$164 | -\$1,423 | \$416 |
| Transfers Not Appropriated By Dept | \$304 | \$15 | \$0 | -\$319 | \$0 |
| Total | \$7,278 | \$14,746 | \$8,893 | -\$6,641 | \$24,277 |



CDOT Expenditures FY 2012-2013

FY2013 (in millions) \implies \$1.2 billion



- \$701 [59%] MAINTAIN What We Have
- \$186 [15%] Debt Service
- \$209 [17%] Pass-Through Funds Multi-Modal Grants
- \$64 [5%] DELIVERY of Programs & Administration
- \$33 [3%] MAXIMIZE What We Have
- \$2.5 [<1%] EXPAND Capacity

<0%

Sales Tax Example

| County | State Sales Tax FY 2010-2011 | Total Revenues* | With 1% increase |
|----------------------|------------------------------|-------------------------|----------------------|
| Adams | \$160,759,000 | \$5,543,413,793 | \$55,434,138 |
| Arapahoe | \$230,854,000 | \$7,960,482,759 | \$79,604,828 |
| Boulder | \$114,262,000 | \$3,940,068,966 | \$39,400,690 |
| Broomfield | \$29,947,000 | \$1,032,655,172 | \$10,326,552 |
| Clear Creek | \$2,068,000 | \$71,310,345 | \$713,103 |
| Denver | \$326,757,000 | \$11,267,482,759 | \$112,674,828 |
| Douglas | \$107,968,000 | \$3,723,034,483 | \$37,230,345 |
| Eagle | \$35,047,000 | \$1,208,517,241 | \$12,085,172 |
| El Paso | \$199,283,000 | \$6,871,827,586 | \$68,718,276 |
| Gilpin | \$2,288,000 | \$78,896,552 | \$788,966 |
| Jefferson | \$184,036,000 | \$6,346,068,966 | \$63,460,690 |
| Larimer | \$108,058,000 | \$3,726,137,931 | \$37,261,379 |
| Pueblo | \$50,008,000 | \$1,724,413,793 | \$17,244,138 |
| Summit | \$24,245,000 | \$836,034,483 | \$8,360,345 |
| Teller | \$5,289,000 | \$182,379,310 | \$1,823,793 |
| Weld | \$77,775,000 | \$2,681,896,552 | \$26,818,966 |
| County Totals | \$1,658,644,000 | \$57,194,620,690 | \$571,946,207 |



Revenue Sources Summary

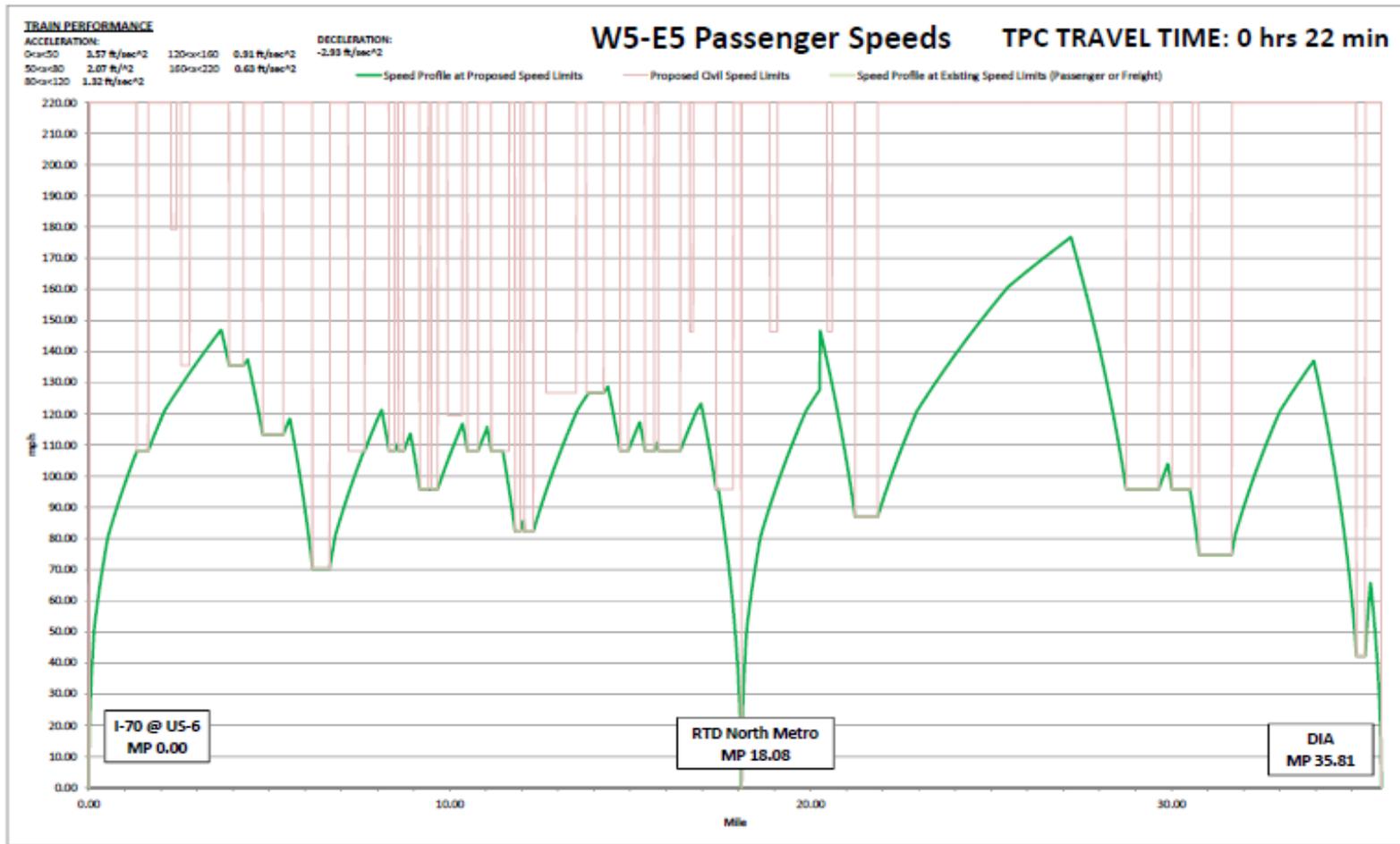
****for discussion only****

| <i>Sources</i> | <i>Increase / Change</i> | <i>Revenues Generated (2011 M\$)</i> | <i>Revenues Generated (2035 Population in M\$)</i> |
|---------------------------------|---|--------------------------------------|--|
| User Fees | | | |
| Farebox Revenues | TBD | TBD | |
| Motor Fuel Purchase Tax | \$.25 per gallon | \$447 | \$715 |
| VMT Fees | \$.01 per mile | \$393 | \$629 |
| Vehicle Registration Fees | \$100 per vehicle | \$391 | \$626 |
| Utility Fees | \$15 per month per household | \$294 | \$470 |
| General Revenues | | | |
| State Sales Tax | 1% | \$572 | \$915 |
| State Property Tax | 4 mills | \$200 | \$320 |
| State Income Tax | 1% | \$1,044 | \$1670 |
| Lodging Tax | 1% of current statewide lodging spending | \$27 | \$43 |
| Lottery Tax Allocation | Reallocation of 10% of lottery program profits | \$11 | 18 |
| Value Capture Mechanisms | | | |
| Development Fee | \$10,000 per residential unit and 1% fee on the value of commercial development | \$169 | \$270 |
| Total | | \$3,548.0 | \$5,676 |

AGS/ICS/Co-Development Coordination

- ▶ ICS Progress
 - Sources of Funding memorandum complete
 - CAPEX Estimates substantially complete
 - Environmental consequences substantially complete
 - Speed profiles are complete
 - Ridership modeling is about 1 month behind
 - Ridership results planned for early April
- ▶ Traffic & Revenue Study RFP being developed

Example Train Performance on the I-76 Alignment



Conclusions, Final Remarks & Next Steps

- ▶ Technical Committee Meeting
 - March 11, 2013 to review/discuss alignments
- ▶ Next PLT meeting
 - March 14, 2013 – Progress meeting to review/discuss alignments