

# MEMORANDUM

## DEPARTMENT OF TRANSPORTATION

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**TO:** TRAC Committee  
**FROM:** Mark Imhoff, Director, Division of Transit & Rail  
**DATE:** August 2013  
**RE:** DTR Update Memo

The purpose of this memo is to give the TRAC Committee a status of current activities on select projects and initiatives.

**Advanced Guideway System (AGS) Feasibility Study** – The AGS study is considering high speed transit options between DIA and Eagle County Regional Airport. Like ICS, it is also evaluating technologies, alignments, and financial funding options. The study is strongly coordinated with the ICS to provide an integrated statewide answer on high speed transit options, statewide.

### Status:

- Capital costs for the AGS have been estimated for various alignment & technology pairs, between Golden and Eagle County Regional Airport, \$11-\$14 Billion for Hybrid Alignment and Maglev Technology.
- Request for Financial Information (RFFI) / Financial Feasibility
  - General P3 industry support for public-private partnership (P3) delivery structure
  - Substantial new public funding source is needed before the rest can be financed.
  - Extremely difficult to obtain more than \$3 Billion in financing for any transportation project, and the I-70 Corridor probably makes \$1 Billion to \$2 Billion in financing more realistic. On a Minimum Operating Segment of \$5.5 Billion to \$7.0 Billion, a “down payment” of at least \$3.5 Billion will be needed.
  - Maglev is perceived by the finance sector to be risky at this time, with few competitors in the marketplace to keep prices down generally and prevent over-pricing by a single technology provider.
  - Finance rates likely 6-7% per year, 30-40 year term.
  - Better project definition, funding commitments, and the establishment of a governance structure are all needed to gain critical participation from the private sector in financing.
- See for additional information:  
<http://www.coloradodot.info/projects/AGSstudy/project-leadership-team-plt.html>
- Next Steps

- September 11<sup>th</sup>, AGS PLT – Clear Creek County Location (TBD) 10 AM – 1 PM. MOS modeling results. Draft Funding/Financing Determination.
- October 9<sup>th</sup>, AGS PLT – Summit County Location (TBD) 10 AM – 1 PM. Draft Report & overall feasibility statement
- October 16<sup>th</sup> or 17<sup>th</sup> – CDOT Transportation Commission Workshop.
- November 13<sup>th</sup>, AGS PLT – Jefferson County Location (TBD) 10 AM – 1 PM. Final Report.
- November 21<sup>st</sup> – CDOT Transportation Commission. Act on final study findings.

Duration: 18 months (April 2012 – September 2013) Extended to November.

**Interregional Connectivity Study (ICS)** – The ICS is evaluating technologies, alignments and financial/funding options for potential high speed rail along the Front Range from Fort Collins to Pueblo, and the “connectivity” with RTD’s FasTracks system in the Denver metro area. This study is working with a Project Leadership Team (PLT) comprised of representatives from CDOT, federal agencies, elected officials and staff from communities along the Front Range, railroads, and select advocacy groups.

Status

- Alignment Evaluation
  - A single north-south alignment has emerged at a high level: north I-25 from Fort Collins to north Denver metro area, E-470 from north Denver metro area via DIA to south Denver metro area, and a combination of south I-25/freight alignment.
  - Three options remain for connecting mountain corridor to the north-south alignment: NW parkway quadrant, I-70/I-76, and C-470 SW quadrant.
- Level 3 Evaluation
  - The full north south scenario will be subjected to both value engineering and cost cutting. Value engineering is defined as those things which will reduce the cost without affecting the operability of the system. Cost cutting further reduces costs and also reduces operability of the system, whether flexibility or speed/travel time. Examples:
    - Single track instead of double track
    - Eliminate some grade separations (i.e. bridges/overpasses)
    - Simplify service plans (i.e. more transfers required in the system initially)
  - The purpose of value engineering and cost cutting is to bring project costs into a range where they are more readily fundable, financeable, and implementable.
  - Technology: crash worthiness by FRA standards can be achieved either by car-body strength (buff strength) or through car-body crumple zone (crash energy management).
- Minimum Operating Segments are in the process of being defined and evaluated by cost, ridership, and operability. An approach was discussed at the August meeting.
- See for additional information:  
<http://www.coloradodot.info/projects/ICS/participate/plt-meeting-materials/plt-meeting-7>
- Next Steps
  - Next PLT meeting is September 17<sup>th</sup>, 9:30 AM – 12 noon, CDOT HQ Auditorium
  - Public meetings proposed late September / early October: Ft. Collins, Denver, Colo Spgs, Pueblo.
  - Final PLT meeting proposed October 15<sup>th</sup>, 9:30 AM – 12 noon, CDOT HQ Auditorium
  - Project Finalization November 2013
  - Project Close-out December 2013

### Duration

18 months (April 2012 – September 2013). Extended to December.

**Northwest Area Mobility Study (NAMS)** – This study is managed by RTD, with HNTB under contract to RTD. The purpose of the study is to consider five aspects of the FasTracks Program: (1) Northwest Rail construction & service phasing options on BNSF track, (2) Extension of the North Metro rail line to Longmont in lieu of the Northwest Rail corridor construction to that location, (3) Evaluation of US 36 Bus Rapid Transit (BRT) completion options, (4) Evaluation of Arterial BRT service & facility options to support US 36 and Northwest Rail, and (5) Evaluation of bi-directional operation of I-25 “Downtown Express” carpool/toll lanes between downtown Denver and the US 36 / I-76 interchange.

### Status

1. NW rail phasing analysis turned to ridership and operating plan questions in August. The current best proposal for operations is 30-minute peak frequency, and 60-minute off peak frequency. Initial 2035 forecasts by RTD and DRCOG using the new FOCUS model show that about 9,300 riders per day would use the NW rail line. Without NW rail, most of those riders would use the US 36 BRT.
2. Options to extend North Metro rail line to Longmont considered five alignments north of 162<sup>nd</sup> Avenue, and the focus is now turning towards an I-25 alignment between WCR 8 and SH 119, either median or west side of I-25. This is consistent with the Interregional Connectivity Study alignment for high(er) speed rail, and near the North I-25 EIS preferred alignment west of I-25.
3. The HNTB study team validated RTD findings that the US 36 BRT program is among the leading BRT projects in the country with exclusive lanes, frequent service, and enhanced stations. The HNTB team will continue to support RTD and the corridor communities through existing efforts to define/choose one or more BRT vehicle(s), develop a branding strategy, determine whether stations should have level boarding, and confirm intelligent transportation system (ITS) elements supporting the other system elements. There is currently a \$114 Million shortfall between FasTracks commitments, and what can be delivered with foreseeable funding.
4. Arterial BRT analysis for the greater Boulder area and northwest metro Denver area has begun. The goal is to use travel forecasting, growth projections, and performance measures to narrow the analysis to 3 or 4 candidate arterial BRT corridors/routes: the best of the best in northwest area bus routes. Then through August and September, analysis will be done to identify BRT infrastructure appropriate to those corridors/routes.
5. Bi-directional operations options have been proposed and “tabled,” based on existing actions being completed in the next two years. Bus-on-shoulder policy development and monitoring of bus delay & bus reliability are recommended for the short term beyond that. More expensive, longer-term options could be given additional consideration when warranted.

See for additional information: [http://www.rtd-fastracks.com/nams\\_1](http://www.rtd-fastracks.com/nams_1)

### Next Steps

- Technical Advisory Committee Meeting #5, Thursday, September 19<sup>th</sup>, 11:30 AM – 3:30 PM, Longmont. Re: Arterial BRT service concepts and ridership forecasts, BNSF response to NW Rail phasing questions, and North Metro Rail ridership results.

- Technical Advisory Committee Meeting #6, Beginning of October (TBD), Re: Expert Rail Panel #2 on NW Rail Phasing and North Metro Rail options.

Duration: 12 months (April 2013 – March 2014)

**SkyTran Along SH 119, aka Longmont Diagonal** –SkyTran has received noticeable press coverage with its proposal promising \$250 Million in private money to develop a test track, then apply to CDOT to run along SH 119. CDOT’s main objective at this time would be to continue protecting the safety of traffic along SH 119. As a form of public transit proposed within the RTD service boundaries, and with stations likely on land under municipal (city, county) jurisdiction, CDOT would require strong support from RTD and local governments before moving forward. That support would need to be evidenced before further action can be taken.

**Colorado Statewide Intercity and Regional Bus Network Study** --The Colorado Statewide Intercity and Regional Bus Network Study began in December, 2012 and will be completed in October, 2013.

This study identifies potential intercity and regional bus routes in the state, the estimated costs and revenues of each route, station and park and ride needs, opportunities for connecting local, regional, and intercity transit, and a preferred network of routes. This study also identifies a service plan and other information for CDOT’s Regional Commuter Bus (RCB) Plan for the I-25 and I-70 Mountain corridors.

Advisory committees for this study were formed to provide input to CDOT and the consultants. One is providing input on statewide needs and has met four times, while the other is providing input specific to the I-70 Mountain corridor and has met three times. Both will conduct a final meeting in late September/early October.

This study will ultimately identify a preferred intercity and regional bus network and the associated operating and capital costs. It is likely that the final package of recommended routes and services will greatly exceed available funding and thus the study will identify funding priorities. The results of this study will then feed into the State Transit Plan (STP) and the 2040 Long Range Transportation Plan, specifically the transit needs within identified corridors.

**Regional Commuter Bus (RCB) Plan**--Utilizing results of the Colorado Statewide Intercity and Regional Bus Network Study, and with significant input from the TRAC Subcommittee on RCB, DTR is formulating a draft RCB Service Plan to be presented to the Transportation Commission in October of November. This RCB Plan will lay out a proposed level of service from Fort Collins to Denver (5 round trips/day, weekdays), from Colorado Springs to Denver (6 round trips/day, weekdays), and from Glenwood Springs to Denver (undetermined at this point). The RCB Plan will then identify the estimated costs and revenues for each of these corridor segments. The Plan will further identify the park and rides to be served, and the recommended improvements and estimated costs for each park and ride.

The TRAC Subcommittee on RCB has been meeting regularly. In the most recent meeting (8/29/13) they provided input as to preferred fare levels and fare collection methods and also formed a bus procurement/specifications working group. It is anticipated that a bus procurement RFP will be ready by the time the TC makes a decision as to move forward on initiating RCB service.

**Statewide Transit Plan--**The Statewide Steering Committee met for the 2nd time on August 7. This committee includes the TRAC transit plan subcommittee. The majority of the meeting focused on finalizing the vision, goals and objectives for transit in Colorado. In developing the vision, the team utilized the transit guiding principles developed by the TRAC as well as the TRAC's values. The team also presented statewide demographic data and an overview of performance-based planning. The next meeting is scheduled for October 30 at HQ from 12:30 to 2:30. At this meeting we will tentatively discuss local plan update status, review of public input from the open houses, discussion of funding scenarios/financial analysis, and set performance measures.

As of August 21, the team completed the first round of Transit Working Group meetings in the rural TPRs. At these meetings, attendees were provided information about the project, discussion of public involvement approaches, key elements of a coordinated plan, regional demographic data, summary of vision and key themes from the 2008 plans, and discussion of regional transit needs, projects and priorities.

Key themes heard at the meetings include:

- Need for additional and more flexible operating funds
- Need for more regional and intercity transit service
- Better connectivity and coordination between services
- Need for additional regional trips for medical and veterans services

The team is in the process of preparing for the second round of transit working group meetings to be held in October. The focus will be on regional goals and objectives, initial needs assessment, and financial analysis. In addition, two public open houses will be held in each TPR following the working group meeting. Additional public open houses will be held in conjunction with the Statewide Transportation Plan effort in spring 2014.

On August 14, surveys were sent out to transit providers and human service agencies around the state to gather information on their operations for use in the transit plans. Responses are due August 28. The information gathered will also be used by CASTA in the update to their Transit Provider Directory and by DTR in the development of a transit capital asset inventory system. The statewide survey to assess the transportation needs of elderly and disabled should be going out in the next few weeks. The survey will be direct mailed to individuals and distributed to state agencies representing elderly and disabled populations to provide the survey to their constituents. The survey will also be available on line in English and Spanish.

The Regional Transit and Human Service Coordination Plans for the rural TPRs will become part of the Regional Transportation Plans as well as the Statewide Transit Plan. The Statewide Transit Plan will also incorporate the transit elements from the urban areas for a statewide perspective. In turn, the Statewide Transit Plan will be integrated into the overall Statewide Transportation Plan.

Please visit the website for more information:

<http://www.coloradodot.info/programs/transitandrail/statewidetransitplan>

- Next Steps: SSC will have a third meeting on 10/30. Distribute elderly and disabled survey. Analyze transit provider and human services survey results for use in development of the plans. Second TWG meetings and public open houses are being scheduled for October.
- Duration: 15 months (April 2013 – June 2014)

**Develop/Implement Transit Grants Module--Background:** The current Transit Grants database/web interface is running on a platform that is no longer supported by IT, and is nearing the end of its usefulness. In an effort to improve the grant award, reimbursement, and reporting processes DTR is undertaking the development of a new web portal on the Salesforce “in the cloud” development platform. This portal will streamline and automate some of the businesses processes that DTR is regularly engaged in, both with external (grantees) and internal stakeholders (business office, contracting, etc.). This project will also develop the database component of the Statewide Transit Capital Inventory.

Objective for the year: Complete Phase I implementation – Agency Profile, Capital Inventory, Reimbursements request form, and grant applications.

Schedule: There have been significant delays as a result of development, refinement and testing issues. Agency profile information is being compiled as part of the Statewide Transit Plan provider survey, and will be migrated into the new database by mid-September. The existing (old) Capital Inventory data has been successfully migrated to the new database as of mid-August. Beta testing of the reimbursement form has been delayed but is now scheduled to begin the first or second week of Sept.

**Asset Management Program Development--Background:** We’ve been working towards a more comprehensive approach with regards to Asset Management for a number of reasons: a) the overall CDOT AM program needs a transit component; b) there is a current need for technical assistance in developing Asset Management programs at the agency level; c) and the new “big” push: TAM requirements in MAP-21.

We have two projects underway that are working towards the broader AM goals. The *Statewide Transit Asset Management Pilot* program is a partner project with RFTA and several smaller agency’s (acting as the pilot group) that endeavors to explore ways that CDOT-DTR can provide technical assistance, in the form of purchasing and implementing an asset management software system, to grantees so that they better be able to develop and undertake an agency level asset management system. The second effort, which will be underway shortly, is the *Statewide Transit Capital Inventory* project. This project will collect information on all transit assets (including vehicles, park and rides, intermodal and support facilities) throughout the state. This inventory will be slightly different than those we’ve developed in the past, particularly in the level of detail we collect, and will ultimately be the backbone of any future Asset Management and mid- and long- range capital activities that DTR undertakes.

MAP-21: Two things we know are coming our way, with the potential for some unknowns by about this time next year. Legislation stipulates that all agency’s are required to develop Transit Asset Management plans that at a minimum, contain an asset inventory as well as a prioritized investment strategy for capital refurbishment or replacement.

Objective(s) for the year: TAM Pilot Project - Complete phase I of the project, which is the roll out of the TAM software at RFTA and begin to scale the project to the other pilot agency's. STCI – complete Phase I and the vehicle and park and ride inventory. The facility portion of the project will require a fair amount of field work and may take the longest to complete. MAP-21 provisions – should be addressed more than adequately by the STCI project (it is my sense that we are well on our way to meeting this requirement).

Schedule: TAM Pilot Project – RFTA has finalized the contract with the selected vendor (Trapeze/Asset Works) and is beginning the work of implementing the system in-house. STCI – RFP's have been received and reviewed, and we will be finalizing the contract with the selected vendor shortly.

**Performance Measures--Background:** Continuing effort with the TRAC to build on the framework exercise we recently completed. MAP-21 FTA deadlines may end up driving some of this work in the long term.

Objective for the year: a) Refinement of Performance Measures, including selecting preferred performance measures and ensuring that the data is available. b) Establish internal/external roles and responsibilities for implementation. This will include answering questions of who will provide data, who will measure and record performance, and thinking about how future additions and changes be incorporated in to the performance measurement program. c) continue to coordinate and integrate data with the broader CDOT performance measures effort. d) work to anticipate any new requirements or regulations that may come about due to MAP-21.

Schedule: TBD, depending on TRAC activities and future business. There is a workshop scheduled in advance of the Fall CASTA conference to develop/refine performance measures (objective “a” above). Attendees will include most of the PM/TAM TRAC sub-committee and invited transit operators. After review and refinement by the full committee (some members cannot attend the workshop) the outcomes of this workshop will be brought to the full TRAC at its next meeting.

**Upcoming FASTER Call for Projects--DTR** expects to release a call for FY2015 and FY2016 FASTER Transit projects by the beginning of October. For the first time CDOT will make one call for capital requests in a single application. It will be a call for capital funding not only from FASTER but from three FTA programs that offer capital funding: Sections 5310, 5311 and 5339. It is cumbersome and time consuming to solicit applications, review, recommend, and award separately for each program. DTR is streamlining (and hoping to improve customer/local entity satisfaction) by having only one capital application per year. By consolidating all capital requests into one application DTR can better manage and most efficiently award capital funds from the most appropriate funding source. DTR can also better serve those who wish to use FASTER funds to match federal funds.

Applicants will be able to submit their capital grant application to CDOT using DTR's new, in-the-cloud grant module—provided all remaining glitches can be resolved. Use of the module will make it easier to track applications from initial entry through all grant phases.

In the case of FASTER funding, only a limited amount of FY 2015 Statewide funding remains available for award, since much of it was preliminarily awarded early this year. Nearly all the FASTER local funds were preliminarily awarded. Therefore, much of the consideration will be for FY 2016 funding.

DTR will be presenting a package of options for how to allocate the FASTER local funds to the Regions in light of the revised Region boundaries, while also considering the Transportation Commission preference to not consider only allocations that merely “spread the peanut butter” around. DTR will be presenting options to the TRAC Performance Measurement Committee, and then make a recommendation to the TRAC and Transportation Commission this fall.