LESSONS LEARNED REPORT

July 28, 2016
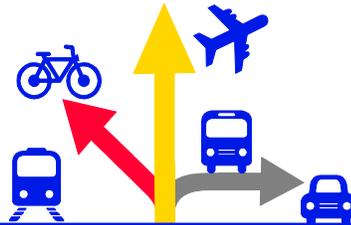
CDOT | COLORADO Department of Transportation

1.0 Introduction and Purpose of the Lessons Learned Exercise

The Division of Transportation Development (DTD) at the Colorado Department of Transportation (CDOT) is consistently looking for improvements to the overall planning process. CDOT is particularly looking to improve upon the development of the 2040 Statewide Transportation Plan (SWP) and ten rural Regional Transportation Plans (RTPs), in conjunction with its Planning Partners. As a result, DTD initiated a full review and documentation of the lessons learned from the development of the SWP and RTPs adopted in March 2015. DTD conducted a debrief exercise of the 2035 SWP, which was helpful in developing the 2040 SWP, but wanted to complete a more rigorous analysis, with greater input from diverse plan participants, for the current plan.

The purpose of the Lessons Learned Exercise was to:

- Understand lessons learned from Statewide Plan development process.

- Identify what went well, what could be built upon.

- Identify what could be enhanced, improved, or done differently.

- Improve the overall CDOT planning process and inform a continuous planning process.

2.0 Methodology and Participants

The Lessons Learned Exercise was conducted using a variety of techniques, which were designed to obtain the best feedback from a host of plan stakeholders. Highlights of the methodology include:

- Use of plan consultants to conduct the Lessons Learned Exercise, allowing CDOT Statewide Planning staff to fully provide their input and allowing plan stakeholders to have a more open discussion in providing their input.

- Development of six question modules in advance. Depending on their role in the plan, different stakeholders were asked different sets of questions. Copies of the questions are included in **Appendix A.**

- 34 direct interviews with plan participants and stakeholders in groups of one or two individuals. These interviews were broken down as follows:

  - 5 interviews with CDOT Administrators including Statewide Plan Committee Chairs and Senior Management regularly involved in the plan and planning process.

  - 9 interviews with DTD Planning staff involved in preparing the SWP.

  - 10 interviews with other CDOT Plan Owners – those in charge of plans for safety, bicycle/pedestrians, transit, freight, asset management etc. along with FHWA.

  - 5 interviews with CDOT Region staff who participated in the process.

- 5 interviews with SWP consultants.

- A discussion at a Statewide MPO meeting attended by 6 MPO representatives.

- A workshop on Lessons Learned and Next Steps attended by 14 Statewide Transportation Advisory Committee (STAC) representatives and alternates.

- Individual discussions at 9 Transportation Planning Regions (TPRs).

- A written and on-line survey that was provided to TPR members to fill out on their own. A total of 8 surveys were completed.

- Updates at STAC meetings throughout the process, including opportunities to provide input on the questions being asked of participants.

Approximately 140 planning partners and participants took part in the overall Lessons Learned Process from January to May 2016.

3.0 Top Synthesized Lessons Learned

The following highlights the top, synthesized overall Lessons Learned results, accounting for all of the input. These were the items most commonly cited and discussed through Lessons Learned interviews, surveys and meetings.

3.1 Top Items to Build on for the Next Plan

- The SWP and RTPs generally had the right amount of content and people generally liked the ability to find more information on the Colorado Transportation Matters Website by drilling down to find the content that they needed. By the time of the release of the final plan, it became more difficult to find needed information because of the large amount of content that was presented on the Website. A guide to the Web-based plan would help, if placed at the front of the Executive Summary document and top of the Website homepage.

- The level of detail and communication of the needs and gap analysis was a big step forward from prior plans. This can be further refined in the next plan, including greater input from the modal plans and MPO plans. Specifically, CDOT should meet with the MPOs ahead of preparing the next needs and gap analysis and agree on a methodology and approach for integrating MPO needs as well as the assumptions and schedule. Greater explanation of some of the multimodal needs (transit, bicycle/pedestrian) and refinements of their specific funding gaps could be added. Maps showing needs on corridors and how the plan proposes to address them could also be added.

- The cascading of plan information via the Website was good. Next time, CDOT should look at ways to make this more interactive and crowdsource more information throughout the process.

- The most commonly cited best products or parts of the plan process were:

  - Telephone Town Halls – not just because of the number of people reached, which was phenomenal, but because of the way they brought people together on a common effort: Transportation Commissioners, Region Transportation Directors, Region staff, DTD staff, TPR leaders, modal specialists etc.

  - Videos – including the Colorado Transportation Story Video and the Executive Summary video were beneficial because of their ability to reach a more varied audience and provided content that was usable (in total or in part) at different events and meetings.

  - Infographics – particularly for their continued use beyond the plan in presentations and documents.

- The length and balance of content in the RTPs was good.   They have become strong reference documents for further discussions at TPR meetings including identification of future projects, use in the Project Priority Programming Process (4P), and have also been used to assist grant writing.

- The use of a Statewide Plan Committee of the Transportation Commission was advantageous to the plan's development, and the material brought to the committee was at the right level. The Transportation Commissioners enjoyed being able to provide regular feedback on the plan, ensuring it was consistent with commission policy and direction.

3.2 Top Items to Improve for the Next Plan

- The plan team should look for ways to make the plan even more public-friendly, including providing shorter documents and summaries. A one- or two-page summary of the plan is needed and is currently under development. Parts of the plan's content could be more related to the daily lives of transportation system users through analogies and stories of how transportation is important to their everyday activities

- There were many ideas for more content or data in SWP and RTPs including:

  - Asset management and the process of determining these needs. Specific ideas included: a better description of what asset management is and how decisions are made, more information on pavement life, and the tools that CDOT now has for asset management.

  - Autonomous and connected vehicles and other new technology. Specific ideas included discussion of how technology will affect safety, mobility, and economic development opportunities.

  - Freight data (this was a timing issue for this plan). Additional content could include more regional freight movement and key corridor freight data.

- Trends and usage of Big Data. Specific ideas included how Big Data may change performance metrics from volume to capacity ratios to reliability measures and how changing demographics may affect transportation. For example, an overlay map of transit service and intermodal connections with the population under 25 years old could be provided.

- Effect of the transportation system on minority and low income populations. Specific ideas included conducting a needs analysis for minority and low income communities and the effects of the choices of which projects are constructed on these communities.

- Multimodal information – the current plan took steps forward but there will be more information available for the next plan. Specific ideas included integration of additional bicycle and pedestrian data (which will be available at the time of the next plan) and some form of transit level-of-service information.

- Planning and environmental linkages/environmental analysis and programs. Specific ideas included more robust agency coordination in the area of wildlife migration, more discussion of the planning and environmental linkage process and how the statewide plan fits, more environmental features maps as part of the on-line information (data from C-Plan could be put into PDFs or Prezi), locations of CNG fueling stations, water quality masterplan information, and soon to-be-completed state highway historic information.

- Project level detail and performance measurement (particularly in the RTPs). Specific ideas included better information on the data used to set performance targets (for example, what does a B+ mean for asset management), past trends information for performance measures for key corridors, and more information on reliability indices.

- Economic vitality and impacts specifically related to projects. Specific ideas included export statistics for each county or Region, regional data on energy development, and project related benefit-cost data.

- Safety. Specific ideas included emergency management data, fire districts, ambulance districts and evacuation routes, and overall operations and safety data that will be developed as the Statewide Operations Plan is implemented.

- Mobility/capacity/vehicle miles traveled (VMT) and reliability (planning time index). Specific ideas included differences in how level-of-service (LOS) is used and perceived in urban and rural areas, VMT data for specific regions and corridors, capacity study data for key corridors, and future volumes, capacity, reliability, employment, and household data from the new statewide model as well as more information on planning time indices.

- CDOT should conduct earlier and more proactive outreach and education with stakeholders (particularly TPRs) on the planning process and basic planning topics. This will lead to less confusion and better input. Educational efforts with schools were also a prominent suggestion.

- DTD should hold more workshops and working sessions with STAC, TPRs, FHWA, other stakeholders, and Region staff. These should be held earlier in the process, held more often and used to obtain more partner input.

- CDOT should consider developing periodic updates to the SWP, as part of a more continuous planning cycle, instead of one complete update near the end of the plan development process. These updates should focus on information needed for future decision making and communicating key issues with the public and stakeholders. Potential updates could include interim updates on the needs and gap analysis, integration of information from modal/topical (Freight, Rail) and MPO plans adopted after the SWP, performance measures based on PD-14 updates, and updates to key infographics and TPR profile sheets.

- There needs to be greater integration and roll-up of RTPs and MPO plans into the Statewide Plan and more discussions of how the RTPs fit with the Statewide Plan at the regional level with MPO plans. Greater early coordination on data and performance measures will assist this effort. This could be achieved through early meetings with MPOs to agree upon the datasets to be used in the Statewide and MPO plans, and potentially agreeing upon an update cycle that accelerates the next update of MPO plans and delays the adoption of the SWP. This would help ensure that MPO plans are completed before the SWP. The coordination between CDOT and the MPOs required under the new final rule on Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning (23 CFR Parts 450 and 771; 49 CFR Part 613) may assist this integration process.

- CDOT needs to take a stronger position on funding needs and the SWP and RTPs should prepare and position for this. More precise funding ideas should be provided and the investment strategy should be more robust and a catalyst for action.

4.0 Lessons Learned by Topic Area – Strengths (which may be enhanced) and Items to Improve

The lessons learned interviews and surveys were divided into six modules, each covering a topic area:

- Plan Media and the Colorado Transportation Matters Website

- Plan Content and Data

- Planning Process

- Plan Communication

- Plan Meetings

- Regional Transportation Plans

The following is a compilation of most frequently cited items that were noted as strengths, which may be enhanced for the next plan, and the items that could be improved upon. These are

organized by the six topic areas. Within each topic area they are ordered by theme (e.g. Executive Summary, Website, Plan Integration etc.)

4.1 Plan Media

Strengths (which may be enhanced):

- The Web-based plan approach received an invite to present to TRB and won the 2014 AASHTO Transcomm Website Award. The Colorado Transportation Matters Website framework and approach can be a model for maintaining and updating the plan going forward by allowing for easier interim updates of certain plan products and infographics. It can also be enhanced with additional tools for the public to interact and comment on future plan material. (Website)

- Most respondents liked the variety of media used for the SWP and thought the media were used appropriately. They generally liked the ability to find more information on the Colorado Transportation Matters Website by drilling down to find the content they needed. By the time of the release of the final plan, it became more difficult to find needed information because of the large amount of content that was presented on the Website. The location of the Website guide was not ideal and better suited for the website Homepage. (Website)

- The Prezis were generally liked by internal CDOT staff, but they were not sure how much use they got outside of the department. In cases where the Prezis were meant to replace technical reports (e.g. safety, mobility, economic vitality) some respondents thought there would still be some value in developing full reports. (Website – Prezi)

- The Website provided the best on-line presence developed to date for the Statewide Plan and won the 2014 AASHTO Transcomm Website award. CDOT should look at ways to make this more interactive and crowdsource more information throughout the process. For example, the Website could have more "consider this content and comment" type survey questions. The Website had value beyond the plan and should be built upon as a framework for ongoing updates, leading to the next plan. (Website – Interaction)

- The Executive Summary was the most reader-friendly CDOT has developed to date. It could still be shorter. This version served more as a full plan documentation.   A one-or two-page summary of the Executive Summary is needed and is under development. For the next plan documents, CDOT should ensure that data sources are consistently cited and potentially include a bibliography. Provide more space between graphics in the executive summary so the reader can follow them more clearly. (Executive Summary)

Items to Improve:

- Several TPR members and Region staff suggested there could be specific web pages and social media accounts related to the TPR plans. Information, a brochure, or a newsletter that better linked the SWP and RTPs were also suggested. (RTP Communication)

- There are stakeholders and TPR members who want hard copies of plan material available beyond the Executive Summary. CDOT should consider having some more information in

technical memorandum format for in-house and stakeholder use, particularly data and condition information. (Plan Products)

- The Website still had a lot of text and towards the end had to manage a lot of material. CDOT should look for ways to reduce the amount that people have to dig for certain information. (Website)

4.2 Plan Content and Data

Strengths (which may be enhanced):

- Most respondents thought the plan had generally the right amount of content and was thorough. Some felt that certain themes and messages may have been repeated too often including messages around lack of funding, the statewide plan process, and transportation matters-related messaging. (Plan Content)

- CDOT should consider more surveying of the public on anticipated plan content or using a public focus group to comment on what is proposed for inclusion in the final plan. (Plan Content)

- The plan was viewed as making positive steps for the integration of available modal and topical plan information and multimodal data. It was better than past plans, as the other plan owners could clearly see modal data and strategy related content in the SWP and were involved in the process. The Telephone Town Halls included discussion on transit, rail, safety, freight, and bicycle/pedestrian issues. CDOT can continue to improve in this area by using TPR meetings in a more integrated manner to discuss modal/topical and SWP topics, by leveraging future available data on safety, operations, asset management, freight, transit level-of-service, and bicycle-pedestrian facilities not available for this plan, and by coordinating plan update timeframes so that modal/topical plans are done earlier, where possible (e.g. Freight). (Plan Integration)

- The infographics developed to present plan data and information were frequently cited as a positive, particularly for their continued use beyond the plan in presentations, in brochures or information pieces for the 4P process, and as part of discussions with planning partners. Some of these now need to be updated. (Infographics)

- The needs and gap analysis was a big move forward from the last plan including how it was communicated. This needs and gap analysis was driven by vetted project needs, input from other topical/modal plans, and engagement with Region staff. As a result, it better reflected reasonable transportation needs for the state and was not a wish list. The analysis for the next plan could be linked to scenario planning (e.g. explore different financial scenarios for addressing the gap) and include public facing mapping tools that show where the needs are and how they are addressed over time. The MPOs could also have greater involvement in the needs and gap analysis through early coordination on the methodology for assessing the needs and gaps, streamlined use of the same financial assumptions and needs criteria, and completion of assessments of MPO needs earlier, for incorporation into overall statewide transportation needs. (needs and gap analysis)

Items to Improve:

- There were many ideas for more content or data in SWP and RTPs including:

  - Asset management and the process of determining these needs. Specific ideas included a better description of what asset management is and how decisions are made, more information on pavement life, and the tools that CDOT now has for asset management.

  - Autonomous and connected vehicles and other new technology. Specific ideas included discussion of how technology will affect safety, mobility, and economic development opportunities.

  - Freight data (this was a timing issue for this plan). Additional content could include more regional freight movement and key corridor freight data.

  - Trends and usage of Big Data. Specific ideas included how Big Data may change performance metrics from volume to capacity ratios to reliability measures, and how changing demographics may affect transportation. For example, an overlay map of transit service and intermodal connections with the population under 25 years old could be provided.

  - Effects of the transportation system on minority and low income population. Specific ideas included conducting a needs analysis for low income and minority communities and the effects of the choices of which projects are constructed on these communities.

  - Multimodal information – the current plan took steps forward but there will be more information available for the next plan. Specific ideas included integration of additional bicycle and pedestrian data (which will be available at the time of the next plan) and some form of transit level-of-service information.

  - Planning and environmental linkages/environmental analysis and programs. Specific ideas included: more robust agency coordination in the area of wildlife migration, more discussion of the planning and environmental linkage process and how the statewide plan fits, more environmental features maps as part of the on-line information (data from C-Plan could be put into PDFs or Prezi), locations of CNG fueling stations, water quality masterplan information, and soon to-be-completed state highway historic information.

  - Project level detail and performance measurement (particularly in the RTPs). Specific ideas included better information on the data used to set performance targets (for example, what does a B+ mean for asset management), past trends information for performance measures for key corridors, and more information on reliability indices.

  - Economic vitality and impacts specifically related to projects. Specific ideas included export statistics for each county or Region, regional data on energy development, and project-related benefit-cost data.

- Safety. Specific ideas included emergency management data, fire districts, ambulance districts and evacuation routes, and overall operations and safety data that will be developed as the Statewide Operations Plan is implemented.

- Mobility/capacity/vehicle miles traveled (VMT) and reliability (planning time index). Specific ideas included differences in how level-of-service (LOS) is used and perceived in urban and rural areas, VMT data for specific regions and corridors, capacity study data for key corridors, and future volumes, capacity, reliability, employment, and household data from the new statewide model as well as more information on planning time indices.

- There were several suggestions that CDOT engage in earlier and more continuous data analysis, with better explanations on how data was used to make decisions. CDOT should coordinate with the MPOs and TPRs on data usage and analysis methods. Earlier on in the planning process, these partners should do the data gap analysis, including analysis of how Big Data fits with the next plan. (Data Analysis)

- The SWP needs to better connect the data analysis to decisions made on goals, policies, and strategies. It needs to tell the stories of those linkages. (Data Analysis)

- The SWP should cite data more consistently and be clear about the distinctions between the on-system and the off-system NHS and the State Highway system. (Data Analysis)

- Several participants indicated CDOT should take an even stronger position on funding and funding needs. The plan should prepare the case for more funding and include more precise funding ideas. The plan should also provide more robust guidance in the investment strategy that the department will use. The SWP and RTPs should better communicate the give-and-take in funding and changes in distribution of funding. The SWP should provide the basis for funding decisions. (Funding)

- Several respondents want to see projects discussed in the SWP and a transition to a greater focus on projects in the RTPs. This was not a universal opinion. Respondents want to see greater use of data in project prioritization and explanation of how data is used in project selection. The plan should show better linkages to the STIP and how projects are prioritized. (Projects)

- Participants would like to see an enhancement of Policy Directive 14 (on Performance Measures) and how it is explained in the plan. They would like to see more dashboard performance reporting and more performance reporting and mapping at the corridor level. (Performance Measures)

- The plan could have provided a little more detail on the strategic actions, particularly those related to the multimodal plans. This detail could include their relationship with specific modal plans in terms of implementation (i.e. how they will be implemented). There could also be a clearer link between the strategic actions and other plan findings in terms of trends (mobility, safety, demographic etc.) and plan performance measures. (Strategic Actions)

- Some participants would like to see more detail on corridor visions, costs, treatments, and discussion of multimodal corridor issues. The SWP should be synchronized with the annual

CDOT Transportation Deficit Report corridor vision information. Corridor vision input is required as part of the Deficit Report by law, and the SWP can help feed this including information on land use, travel patterns, and demand management. The messaging on corridors could then be better synchronized between the SWP and the Deficit Report. (Priority Corridors)

4.3 Planning Process

Strengths (which may be enhanced):

- CDOT is working towards a more continuous planning process. The Web-based plan elements laid a foundation for this by providing plan content that was more accessible and easier to update in stages. For example, data and infographics can be updated as more information becomes available. Addendums and new plan information updates can easily be added to the Website. Now, CDOT needs to keep the conversation going. This will ensure more continuity from one plan to the next. (Website)

- The cascade of plan information via the Website was generally viewed positively, and enhanced transparency. There are opportunities to better engage people along the way and have them provide more input. For example, more "consider this and comment" type survey questions. The Website should employ more crowdsourcing techniques. (Website)

- The Website made it easier to find other CDOT modal and topical plans than before and gave other plans more attention during the process. (Website)

- The PIN tool was a good start for enhancing environmental coordination. Next time CDOT should provide more guidance early on to agencies on how to comment. The environmental webinar went well (aside from brief technical difficulties); it was convenient for the agencies, particularly in conjunction with the PIN tool, which allowed for comments after the initial webinar by geographic location. (Environmental Consultation)

- The collaboration between Office of Communications and Statewide Planning Section was "incredible". Outside consultants observed this as an asset for CDOT and recommended similar steps on other plans in other states. (Collaboration)

- The use of a Statewide Plan Committee of the Transportation Commission was advantageous to the plan's development, and the material brought to the committee was at the right level. The commissioners enjoyed being able to provide regular feedback on the plan, ensuring it was consistent with Commission policy and direction. A similar subcommittee of STAC could be considered for the next plan. (Collaboration)

Items to Improve:

- CDOT should consider developing periodic updates to the SWP, as part of a more continuous planning cycle instead of one complete update near the end of the plan development process. These updates should focus on information needed for future decision making and communicating key issues with the public and stakeholders. Potential updates could include interim updates on the needs and gap analysis, integration of

information from modal/topical (Freight, Rail) and MPO plans adopted after the SWP, performance measures based on PD-14 updates, and updates to key infographics and TPR profile sheets. (Plan Updates)

- A few items should be identified and finalized earlier (Plan Updates):

    - Data gap analysis and data to be used. CDOT should work internally and with its planning partners to identify and agree on the data sets to be used for the plan, any data that may require further development, and identification of new data sources (including Big Data). A data gap analysis was conducted for the current plan, but the next plan cycle should complete this earlier and with greater planning partner coordination.

    - Needs and gap analysis. CDOT should develop an initial needs and gap analysis earlier in the planning cycle. CDOT should obtain agreement on a needs and gap methodology with its planning partners and conduct a preliminary analysis prior to final SWP development.

    - PD-14 and performance data. In accordance with new federal rulemaking, CDOT should conduct immediate updates to PD-14 in consultation with the MPOs and other planning partners. This should include a public information and comment opportunity on the suggested performance measures and performance targets chosen.

- CDOT needs to continue efforts to make the planning process more engaging and relevant for those who don't know transportation issues, and make plan information directly relevant to transportation system users' daily lives. An example would be to use material similar to those prepared by CDOT Government Relations as part of the Transportation Matters conversations, which included discussion of the amount of money people spent on transportation compared to other activities and how they interact with the transportation system on a daily basis. (Public Involvement)

- CDOT should conduct earlier and more proactive outreach and education with stakeholders (particularly TPRs) on the planning process and planning basics. This will lead to less confusion and better input. Educational efforts with schools were also a prominent suggestion. (Public Involvement)

- CDOT should clearly lay out the planning process in advance for stakeholders and the Regions, including when their assistance and input is needed to produce plan products and how their input fits. CDOT should work to shorten the process for final plan development to keep stakeholder interest and maintain momentum. (Collaboration)

- CDOT should hold more workshops and working sessions with STAC, TPRs, FHWA, other stakeholders, and Region staff. These should be held earlier in the process, held more often, and used to obtain partner input. CDOT could hold a quarterly meeting with TPR chairs, similar to SWMPO meetings, to discuss key topics in plan development and coordination between the SWP and RTPs. (Collaboration)

- Some of the outreach and communications materials were overly vetted. CDOT should look internally to streamline their review process and the different levels of review.

Examples included the FAQs for the Telephone Town Halls and the PowerPoint presentations for TPR meetings. The reviews became a little too iterative at times. Management is going to comment on materials if asked, but may not really want to provide input into all interim products. (Collaboration)

▪ CDOT should not disrupt the plan development process by focusing on project list development too early. The timing of the project lists (A and B lists) for the Ballot Initiative was disruptive, confusing to many, and created expectations of potential for new projects that were not fulfilled at the TPR level. The Development Program should help avoid this in the future. The Responsible Acceleration of Maintenance and Partnerships (RAMP) program evaluation of projects also disrupted some TPR plan development efforts. (Projects)

▪ The planning process needs to be enhanced around integration for different plans – SWP, RTPs, Transit, and Freight were given examples. Timing of the various plans should be more streamlined to synchronize their processes with the SWP as much as possible. All of these plans need to be able to feed into the SWP and vice-versa. (Plan Integration)

▪ The next plan should include scenario planning. CDOT should ask questions such as: "what are the potential disruptors for the transportation system that experts are aware of or even what are those that CDOT might miss?" CDOT should develop scenarios early on so they can be integrated into the plan analysis and strategies. (Scenario Planning)

4.4 Plan Communication

Strengths (which may be enhanced):

▪ The Telephone Town Halls were almost universally cited as a success – not just because of the number of people reached, which was phenomenal, but because of the way they brought people together on a common effort: Commissioners, Region Transportation Directors, Region staff, DTD staff, TPR leaders, modal specialists etc. (Public Involvement)

▪ The use of Web surveys, particularly customized at the TPR level, was highlighted several times. Customization allowed survey results to provide Region-specific information for the RTPs and broader input for the SWP. Surveys customized to the region were easier for the public to relate to. (Public Involvement)

▪ Several TPR members appreciated CDOT's education efforts and responsiveness to data requests. At the same time, several CDOT staff members were concerned about the plan process being not well defined. They were concerned that the TPRs and TPR members were overwhelmed by the amount of information provided and by the pace of meetings. Often, presenters had to circle back to past meeting materials. Yet in the end, TPR members commented that the vast majority of meeting were well facilitated, CDOT staff were excellent, and CDOT was very attentive throughout the process and responsive, even if the pace of plan development seemed quick. (Collaboration)

Items to Improve:

- As highlighted under plan process above, many participants would like CDOT to conduct enhanced education on planning for TPR members and for the public, including high school and college students, chambers of commerce, and social and community organizations. (Public Involvement)

- There needs to be better understanding of who is responsible for what part of the coordination process with the TPRs and local stakeholders, either DTD or Region staff. DTD should involve the Region staff more in the early planning process and let them see the whole picture and schedule up front. Specific roles and responsibilities should be identified for Region staff and other plan owners. Region staff should have more and earlier input on items such as data needs (particularly for RTPs), the TPR meeting planning process, and content for RTPs, particularly if more project information will be included in future RTPs. (Collaboration)

- CDOT should not just rely on STAC/SWMPO meetings for coordination with MPOs on the SWP, and should conduct plan update presentations at MPO Technical Advisory Committees (TACs) and Policy Boards. (Collaboration)

- DTD should maintain an internal plan development status website with a list of key plan components, completed tasks, task tracking, and issue tracking. (Plan Tracking)

4.5 Plan Meetings

Strengths (which may be enhanced):

- Face-to-face meetings and table group exercises worked well for TPRs. CDOT should continue find ways to make TPR meetings more visual and interactive. (Collaboration)

- CDOT should continue to maintain and enhance the involvement of Tribal stakeholders. Tribal stakeholders indicated the level of collaboration was excellent. (Collaboration)

- Face-to-face meetings were also preferred internally when decisions needed to be made. However, meeting organizers should still be careful about having too many attendees and getting the right people to meetings in advance and not at the last minute. Meeting organizers should ensure that decision makers are in the room, which was accomplished in many but not all cases. (Collaboration)

- Participants thought e-mail updates worked best when it was just informational, with the added benefit of being able to search for things later. E-mail was also good for review of items like presentations. There were recommendations to keep e-mails as short as possible. (Collaboration)

- Overall, respondents thought the plan was developed with an open and collaborative process. (Collaboration)

- Internally, the plan weekly meetings, with a schedule of who was needed and when to participate, was the best approach for internal planning team coordination. (Meeting Management)

- Across the board it was commented that meetings were facilitated well and encouraged participation. There were some comments that the team needed to stick to agendas a little more aggressively and move off-track items into a "parking lot" for future discussion. (Meeting Management)

Items to Improve:

- Several participants felt the process was rushed at points in terms of preparing for and holding meetings, particularly TPR meetings. At some points, staff had to turn around preparation for certain TPR meetings in 24 hours or less. Some TPR meetings felt rushed for the other plan owners, who struggled for time to get their content discussed, and the TPR meetings could have better integrated the modal plan discussions with the SWP/RTP discussions. (Meeting Management)

- Some people developed meeting fatigue at the Region/TPR level, particularly with the additional transit plan meetings. There was a suggestion to have more "Zoom" type meetings and fewer PowerPoint presentations. For each meeting it is important for all participants to better understand the desired end product and decisions from the meetings and the answers the meeting organizers are trying to get. (Meeting Management)

- A suggestion from Region staff was to have a multiple-day workshop with Regions and TPRs to work through strategies, corridors, funding etc., rather than a string of meetings over many months. (Meeting Management)

- More respondents suggested that CDOT hold more frequent TPR meetings (every two months) than suggested the TPRs met too often. But, there were responses on both sides of this issue. (Schedule)

4.6 Regional Transportation Plans

Strengths (which may be enhanced):

- Most participants agreed that the data used in the TPR plans was informative. Plan decisions could be even more data driven in next cycle, as there will be additional tools, such as the statewide travel model and more extensive demographic data. Some participants would like to have an explanation for how data is obtained, summarized, interpreted, etc. (Data)

- The RTPs have been effectively used for grant writing. Future plans should be configured to and provide information to support this further. (Plan Content)

- Overall, respondents generally thought there was the right level of information in TPR plans. (Plan Content)

- Several respondents liked the streamlined plans. The end result was compact and easy to use, including the two-page spread showing corridors. Others would still like more customization in the plans, with suggestions that all RTPs agree upon common elements with some additional space to customize. (Plan Content)

- Several respondents indicated the TPR plans were effective at screening and identifying project and priorities. (Projects)

- RTPs with projects in them are being referred to at most TPR meetings. Those TPRs are either updating their list or discussing them with Region staff in the context of future project implementation. Other TPRs have reviewed implementation actions. The greatest values of the RTPs are seen as the priority corridors and project priorities, depending on the plan. (Projects)

- There were suggestions to build on the use of the Website for RTPs with more regional plan content. Interactive region maps showing RTP project status (a project tracker for projects proposed in the RTPs) could be built out of C-Plan. (Website)

- Some TPR plans looked effectively beyond their own boundaries in terms of corridor priorities. Others would like to see more of this in the next plan. (Collaboration)

Items to Improve:

- Similar to the SWP, respondents would like to see more types of data in the RTPs. Suggestions include freight, technology, safety, economic, energy development, and emergency management. This data should be used to inform project selection. (Data)

- There needs to be agreement on when data will be updated. There were issues with maintaining and using the latest data in developing the RTPs as the plans progressed. (Data)

- Several respondents suggested using the prior RTP as a base to begin future RTP updates. There were several suggestions to evaluate past RTP progress, including project implementation (for those that have projects), performance measurement, and implementation of activities on priority corridors before updating the RTP. (Plan Content)

- CDOT should consider conducting cost-benefit analysis of past projects included in RTPs after they have been implemented. (Projects)

- Future RTPs should have clearer project selection tools and criteria. To assist with this the TPRs need earlier guidance and policy from the SWP and Transportation Commission. The decisions on PD-14 and project selection criteria at the statewide level need to be done earlier. (Projects)

- CDOT should consider whether the RTPs could prioritize more items. To do this there would need to be greater discussion and understanding of the intent of certain funding programs (particularly Asset Management and the Funding Advancements for Surface Transportation and Economic Recovery (FASTER) program for safety, bridges, and transit). Plan content could better communicate priorities based on different color of money

(funding envelopes) and different funding program goals. Many RTP stakeholders feel it is inadequate to only prioritize Regional Priority Program (RPP) projects in the RTPs. They would like the RTPs to speak to priorities for all sources of funding including asset management. (Prioritization)

- There should be better integration between the RTP plan process and the process for Regional Transit Plans, as well as regional input into Statewide Freight Plan. (Plan Integration)

- The linkages between the RTPs and the SWP should be more directly discussed and shown in both plans. There should also be better integration between RTPs and MPO plans in the same CDOT Region. (Plan Integration)

- CDOT should hold an early workshop or conduct a survey on how the RTPs should be structured and communicate the plan for RTP meetings ahead of time, allowing TPR members to better prepare. (Plan Process)

- Several TPR members indicated that they liked the ability to select the consultant for their prior 2035 plans. (Plan Process)

- At the regional level, more robust agency coordination and environmental mitigation was suggested. (Collaboration)

5.0 Highlight Lessons Learned by Type of Plan Participant

The following sections briefly discuss a few focus areas specific to the different groups that participated. To avoid duplicating the lists of information in previous sections, only brief highlights are provided.

CDOT Administrators: This group focused most on the benefits of the Web-based plan and the associated plan media, the positive role that the Statewide Plan Committee of the Transportation Commission played in plan development, finding ways to better tell the story of the linkages between data and plan strategies and conclusions, and finding ways to enhance communication with stakeholders and the public.

DTD Planning Staff and Consultants: This group focused most on ways to improve the planning process, including items to do earlier which would enhance coordination with CDOT Regions and planning partners. This foundational work would be used as for future SWP and RTP development. For the most part they were proud of the final plan products but suggested ways to enhance public and stakeholder input. This included greater use of crowdsourcing opportunities and on-line surveys to allow the public to react to specific plan content and more interactions with chambers of commerce and community groups. They also provided several ideas for additional data and analyses to include in future plan updates.

Other CDOT Plan Owners and FHWA: This group comment most on plan integration and plan development processes. They cited improved communication between SWP Staff and other plan owners and could clearly see several locations in the SWP where modal/topical plan information was incorporated. They suggested areas where there could be better coordination and

consultation in future plan processes, (e.g. data analysis, corridor visions, performance measures, policies, and public and stakeholder involvement.) Details of these potential improvements are discussed in the earlier section.

CDOT Regions: This group focused most on the RTP development process and the role of Region Staff. They would like to better understand their role in the overall process and the expectations on who leads which aspects of the process. Providing TPR meeting talking points and briefings were good steps, but they would have liked more time in advance with meeting materials, a clearer indication on what outcomes were needed from TPR meetings, and a clearer definition of their role in achieving these.   They also suggested several ways data could have a greater role in plan development and allowing more customization of the RTPs.

MPO Partners: This group was most focused on plan integration and ways to more fully integrate the SWP with the MPO plans and RTPs. The timing of completion of several of the MPO plans after SWP adoption made full integration of MPO plan information, including data and priorities, a challenge.   They would like to see earlier and enhanced coordination and an aligned approach on data to be used in both the SWP and MPO plans. They would also like to see clear links between the needs and gap analysis and what projects and types of projects CDOT will not be able to fund. They had several suggestions for making plan products more public-friendly.

TPR Partners: This group responded via both meetings and surveys and focused most on RTP development. They identified grant writing as a key use of the RTPs and overall were satisfied with plan content, while having several suggestions for new data to include. Many would like to see the RTPs prioritize more items, including projects and asset management. The RTPs are used at 4P meetings and thus greater prioritization in the plans would assist the 4P process. They would like more ability to customize their plans and to see greater integration with modal plans such as transit and freight.

STAC Workshop Results: Results from STAC workshop, including results from workshop critique sheets are included in **Appendix B**.

6.0 Individual Suggestions – Top Ideas Mentioned By One or a Few Participants

The lists of items to build and improve upon contained in **Section 4** represent common elements heard from several participants in the Lessons Learned activities. There were also a series of ideas mentioned by only one or two participants that, in the author's judgement, should be mentioned for consideration. These are ordered by categories, which are bracketed at the end of each item.

- Plan leadership could do more internal surveys in advance of key RTP meetings in place of some preparation meetings. (Collaboration)

- The RTP meeting calendar developed was good and should have been used from beginning and more widely distributed. (Collaboration)

- Circulate a chart or list of Region and DTD roles and responsibilities more widely to the planning team, including liaison points between DTD, Regions and other plan owners. (Collaboration and Communication)

- Annually update the TPR profile sheets and post these online. (Data Analysis)

- Very early on in the plan process, hold a creative brainstorming workshop with planning staff and data management staff to develop a list of data CDOT wants for the plan so that there is a long lead time to develop that data. Have regular data working sessions with the internal data management staff. (Data Analysis)

- Enhance the Citizens Guide to Transportation Planning. (Public Involvement)

- Hold a Spanish Telephone Town Hall. (Public Involvement)

- Use a public focus group next time to evaluate how the final plan document should be presented. (Public Involvement)

- CDOT could use the Transportation Matters Ambassadors concept to communicate throughout the process and keep conversations going. (Public Involvement)

- Watch colorblindness in the selection of red and green colors for plan maps. (Public Involvement)

- Find a way to get the final SWP on legislators' desks (not just staff) and final RTPs on County Commissioners' desks. (Stakeholder Coordination)

- The SWP Website provided links to the other modal/topical plans, illustrating how those plans fit together and providing a single point of access to information for the public. Similarly, a link to the SWP Website should be placed on the CDOT Transportation System Management & Operations (TSM&O), Transit, and Safety Websites. (Website)

- Put a link to plan updates and progress made on the SWP on the main CDOT Website and be consistent in presenting SWP and other CDOT performance information. (Website)

- CDOT could use an Instagram account next time for the take a picture and comment features. Social media notifications get lost in road closure tweets. Should the plan have its own social media? (Website)

7.0 Future Plan Preparation and Sequencing

Several ideas resulting from the Lessons Learned discussions suggest that CDOT should consider changing the timing or sequencing of specific items in the plan development process, which will lead to the next SWP and set of RTPs. Implementing these suggestions will help CDOT achieve a continual planning process and make the SWP more of a living document. These include:

Overall schedule, process changes and achieving greater plan integration: The recommendations from the lessons learned suggest CDOT should attempt to streamline the plan integration process for MPO Plans, RTPs, and CDOT Modal Plans. Although the integration of the plans needs to be iterative, with the SWP process informing MPO, RTP, and Modal Plan processes, ultimately this will function better if the SWP is adopted after the other plans. The following recommendations should be considered:

- CDOT should decide in 2016 if the next plan update will be a full plan update or an amendment to the existing plan. An amendment to the existing plan would allow CDOT to best maintain the current Web-based format while focusing on updates to items such as needs and gap analysis, data and infographics, MPO plan integration, and additional topics such as technology and resiliency.

- If CDOT chooses to do a full plan update, CDOT should consider pushing the adoption date out as long as possible to allow for more completion of other plans. With the 2040 time horizon, CDOT could conceivably not adopt a new SWP until December of 2020. For the next plan, CDOT should consider a 2050 time horizon to enhance update flexibility, making it easier to maintain a plan horizon of greater than 20 years. Historically CDOT has wanted the SWP updated in time for the development of the new Statewide Transportation Improvement Program (STIP). However, the new Development Program may make this less essential and create more flexibility for the SWP update. The Development Program will have a longer list projects identified for movement to the STIP, meaning that the SWP will be less critical to immediately guiding the selection of new projects for the STIP update.

- To assist with future integration of topical/modal/regional/MPO plans, CDOT should work with its planning partners to identify which plans will be updated ahead of the SWP update. By developing the approach to plan integration through collaboration with planning partners, CDOT will better achieve buy-in on how the other plans' priorities and data will be represented and included in the SWP.

- CDOT should identify plans that will be updated at least partly in parallel and opportunities to coordinate specifically on data, performance measures, needs, and public involvement. This likely will include MPO plans, Statewide Freight Plan, Statewide Transit Plan, and Strategic Highway Safety Plan.

Potential "early updates" as part of a continuous planning process: CDOT should consider making some interim updates to the SWP to better reflect developments that have occurred since adoption. This could be accomplished by plan addenda or brief material added as part of the Web-based plan (e.g. a plan update summary and presentation.) The following early updates should be considered:

- CDOT should integrate greater MPO plan content from MPO plans that have been adopted since the SWP was adopted. These updates could include key data findings, needs and gap analysis (adding in more MPO context), priority corridors, and multimodal discussion from the MPO level. This will allow a SWP reader to better understand the broader picture of transportation needs and priorities across the state at both the statewide and regional level.

- As targets are refined for PD-14, CDOT could add this content to the SWP along with discussion of MPO performance measures. This is important guidance for the development of project selection criteria and budget setting at both the State and MPO levels.

- CDOT should add more information to the SWP on the potential effects of disruptive technology and CDOT's ROADX program. CDOT is currently investing in initiatives in these areas and they need to be represented in the SWP as important priorities.

- CDOT should add information from the Multimodal Freight Plan and State Freight and Passenger Rail Plan updates and further phases of Bicycle and Pedestrian Plan updates. This will provide greater context and refinement for the multimodal strategic actions contained in the SWP.

- CDOT and the TPRs should produce updated, online TPR profile sheets. These will help with future project discussions at the regional and TPR level.

- CDOT should update the core (most frequently used) plan infographics, providing fresher and more current information for use in presentations, brochures and other informational items.

Items to accomplish in the next eighteen months (earlier in the planning process): The lessons learned identified several items that should be accomplished earlier to better facilitate plan development and feedback from partners and stakeholders.

- CDOT should develop information and educational programs about the planning process and other key topics with TPR members, other stakeholders and members of the public. These programs will provide all stakeholders with a baseline of information. This will reduce the amount of planning education that needs to be done while core plan decisions on policies, strategies, corridors, and projects are being made. A list of suggested topics was developed at the STAC workshop and is shown in **Appendix B**. This list will be refined before actual educational outreach occurs.

- DTD staff should hold a data brainstorm workshop with CDOT Information Management and the MPOs to agree on the data wanted for the next plan, how it will be analyzed, and data gaps. This will help achieve buy-in from stakeholders and allow for new datasets to be developed in time for the plan. CDOT should also begin data collection during this time period.

- CDOT should develop an initial needs and gap analysis earlier in the planning cycle. CDOT should obtain agreement on a needs and gap analysis methodology with its planning partners and conduct a preliminary analysis prior to final SWP development. This will result in enhanced streamlining in needs and gap analysis with the MPO plans and a broader picture of overall transportation needs for the state, which can be shared during the plan development process.

- CDOT should update PD-14 and associated performance measures and targets in partnership with planning stakeholders and to reflect the roll-out of the national performance measures. This will ensure that CDOT is in compliance with the FAST Act and that investment strategies proposed through the planning process are consistent with performance management.

- CDOT should conduct early public involvement as part of a continuous planning feedback process. This will maintain and enhance public awareness of the planning process and allow plan updates to better reflect public input.

- DTD should develop a clear plan process flow, schedule and roles guidance as part of a workshop with CDOT Region staff and STAC. This will help ensure internal support for SWP and RTP development activities and a consistent message to plan stakeholders.

Focused activities during core plan development (after eighteen months): With the early updates and activities completed above, the core development period for the SWP and RTPs could potentially be streamlined and shortened, maintaining momentum in the process. These activities would focus on:

- Data analysis (based on earlier agreed upon data collection and analysis activities)

- Multimodal plan integration

- RTP and MPO plan development and integration

- Policies and strategies update

- Priorities update – corridors and projects

- Needs and gap analysis refinement (due to changes in the financial picture)

- Performance reporting update (on previously agreed upon measures)

- Public and stakeholder coordination

8.0 Conclusion: A Phased Approach to Addressing Lessons Learned

To enable CDOT to effectively implement the outcomes from the Lessons Learned Process, this memorandum was deliberately kept relatively short and focused on bullet points and action items. It is aimed at helping CDOT enhance a continual planning process and ensure the SWP is a living document. The Lessons Learned Process included many planning partners and stakeholders, resulting in a large number of recommendations and ideas. DTD should focus most on implementing the top recommendations included in **Section 3** along with the future plan preparation and sequencing ideas included in **Section 7**. Other ideas will be helpful in updating particular parts of the plan and should be reviewed regularly. DTD is already working on a matrix of options for updating the SWP and RTPs. Plan staff should consider a review of this document as part of developing that matrix and a review of this document every three to six months over the next two years as the updated planning process comes together.

Appendix A: Lessons Learned Questions Modules

CDOT Lessons Learned Question Modules

List of Potential Participants Divided into Groups

Group	Question Modules (See Below for Questions)
Senior Management Team Members	1 (third question only), 2,3, 4
Region Staff (Planners, RPEM)	1, 2, 3, 4, 6, 7
DTD Staff	1, 2, 3, 4, 6
Consultant Input	2, 3, 4, 6
Other CDOT Plan Owners and Information Providers	1, 2, 3, 4
FHWA	1, 2, 3, 5
Statewide Plan Committee Chairs	2, 3, 4
TPR Chairs/Members	1, 2,3, 5, 6
MPO Representatives	1, 2, 3, 5

Introduction Module:

- Interviewer explains the purpose of the survey: To gain a better understanding of the lessons learned, what went well, what we might want to build upon or enhance, or do differently in reflecting on the preparation of the last Statewide Plan and/or Regional Transportation Plan.
- Additionally, in some cases (external): To better understand how the overall planning process at CDOT could be improved to better serve stakeholders going forward.

Question Module 1: Overall General Questions

- o How much of the Statewide Plan have you looked at? Mark all that apply
    - Executive Summary
    - Plan Website
    - Plan Video(s)
    - Plan Prezi(s)
    - Technical Documentation
    - C-Plan and/or other technical data
- o Have you looked at one or more of the Regional Transportation Plans?
- o What did you like and dislike about the different media used for the plan? Were the media used appropriately?
    - Executive Summary
    - Plan Website
    - Plan Video(s)
    - Plan Prezi(s)
    - Technical Documentation

Question Module 2: Statewide Plan Content and Data Used and Analyzed

- o Did the Statewide Plan provide right amount of content? Were there areas of too much or too little detail?

- o Did the Statewide Plan lack content you wish was included?
- o Does the Statewide Plan provide the guidance/value it should? Why or why not?
- o Was adequate data used and analyzed to make the Statewide Plan informative? Used in making to make decisions?
- o Is there other data you would have liked to have available? How might it inform decision-making?
- o Have you used/do you think you will use the Statewide Plan or any specific components in the coming months since its adoption? Give me an example of how you may use it?
- o For Senior Management/Amy Ford only – What content/material was of greatest benefit in working with the media? Was there content the media was looking for that we did not provide?

Question Module 3: Statewide Plan Development

- o How did you find the Statewide Plan web-based plan development process? Was it useful to use the web site as a plan development tool and roll-out plan information as it was developed?
- o What part of the Statewide Plan development process or Plan elements/topics do you think worked the best?
- o If you could make three changes that could improve the outcome of the Statewide Plan for next time, what would they be?
- o What were the most significant events that happened during the Statewide Plan process that were unanticipated? Were these addressed appropriately?

Question Module 4: Communication and Involvement – Internal

- o Do you feel there was too frequent, not enough, or just the right amount of communication between you and the Statewide Plan staff? How could communication have been improved? Were the messages received during the planning process quality and consistent? Ask about key points in process – e.g. ballot initiative.
- o What was your preferred method of communication used during the plan – email, meetings, conference calls, individual calls, working sessions? Why?
- o Would you like to have been more involved in developing the plan? What level of involvement would be appropriate?
  - ▪ Weekly, monthly, other timeframe meetings?
- o Were meetings facilitated to assure everyone had adequate opportunity to voice their opinion or present ideas?
- o How could meetings have been better facilitated or improved?
- o Did the Plan meetings allow for enough time to adequately address the agenda? Were the meeting lengths just right, too long, or too short? How could this be improved?
- o Did the Plan meetings occur frequently enough during the plan development process? If not, did the plan development process feel rushed or too slow? How could this be improved?
- o Did meeting materials arrive with enough time to review ahead of the meetings? How could this be improved?

Question Module 5: Communication and Involvement - External

- o   What was your preferred method of communication used during the plan – email/e-blasts, twitter, meetings, conference calls, individual phone calls, mail/post cards? Why?
- o   Were TPR meetings facilitated to assure everyone had adequate opportunity to voice their opinion?
- o   How could meetings have been better facilitated or improved?
- o   Did the Plan meetings allow for enough time to adequately address the agenda? Were the meeting lengths just right, too long, or too short? How could this be improved?
- o   Did the Plan meetings occur frequently enough during the plan development process? If not, did the plan development process feel rushed or too slow? How could this be improved?
- o   Did meeting materials arrive with enough time to review ahead of the meetings? How could this be improved?

Question Module 6: RTP Development

- o   Did the Regional Transportation Plan provide right amount of content? Were there areas of too much or too little detail?
- o   Did the Regional Transportation Plan lack content you wish was included?
- o   Does the Regional Transportation Plan provide the guidance/value it should? Why or why not?
- o   Was adequate data used and analyzed to be informative? Used to make decisions?
- o   Is there other data you would have liked to have available through the Regional Transportation Plan?
- o   Have you used/do you think you will use the Regional Transportation Plan in the coming months since adoption? Give me an example of how you may use it?
- o   Did CDOT provide TPR with sufficient opportunities to drive the planning process? Explain?
- o   What part of the Regional Transportation Plan development process do you think worked the best?
- o   If you could make three changes that could improve the outcome of the Regional Transportation Plan for next time, what would they be?
- o   What type of public outreach worked best in your region?
- o   Were there events that happened during the Regional Transportation Plan process that were unanticipated? Were these addressed appropriately?

Question Module 7: Next Steps in the Planning Process

- o   When we say the words "CDOT Planning Process" what does that mean to you? How would you describe the "CDOT Planning Process?"
- o   What should the CDOT Planning Process accomplish?
- o   What should be the focus of planning activities?

- Priorities for corridors
- Prioritizing projects
- Policy development
- Planning for different scenarios – e.g. Effects of Extreme Weather, Effect of Autonomous Vehicles
- Others
  - o Do you have any ideas for techniques that would enhance the CDOT Planning Process?
  - o Are there ideas that the Planning Process could better communicate? E.G.
    - Technology
    - How CDOT works as an organization
    - Information in plans
    - Others
  - o What items/topics would you like information on or a discussion of to inform the development of the next SWP or Regional Transportation Plan?
  - o What other suggestions do you have to improve the CDOT Planning Process?

Appendix B: STAC Workshop Summary

Notes Based on Agenda
STAC Workshop
2040 Statewide Transportation Plan Lessons Learned
April 29, 2016

10:30 – 10:32	*Welcome and Thank you (2 minutes) – Debra Perkins-Smith*

10:32 – 10:35	*Workshop Purpose and Intent (3 minutes) – Julie Lorenz:*
	    a. Workshop Purpose – Why are You Here?
	    b. Two Topics to be Discussed Based on Your Feedback
	    c. Workshop Format and Guiding the Discussion with You

10:35 – 10:55	*Reflection: STAC Member Reports on Lessons Learned Discussions with TPRs. (20 minutes) – Julie Lorenz* **Lessons Learned Lightening Round – Chart Paper Notes** • Telephone Town Halls went well. • Timing could have been better between the development of the Statewide Plan (SWP) and MPO Plans. • Need to better align SWP and MPO Plan development timelines. • SWP was more concise than prior efforts. Need to identify opportunities for greater conciseness for the next SWP and RTP development cycle. • Consider having the Transportation Planning Regions (TPRs) select their own plan consultant in the future. • Additional traffic and freight data to analyze corridors would be beneficial. • Look at enhancing the connection between RTPs and SWP. • Consider more public and planning partner vetting of Policy Directive 14. • Discuss project completion from one RTP to the next along. In identifying projects include information on process and criteria used. • Consider including a list of projects in next SWP. • CDOT Regions should assist the TPRs when identifying projects in their respective plans. • Use of technology was a plus. • Availability of SWP and RTP documents on-line was good. • Integrate the various TPR plans with each other as related to corridors. • Though RAMP was a good initiative, it added complexity to the planning process in developing the RTPs.
10:55 - 11:15	*Topic 1 Discussion: Recommending topics for further enrichment for STAC and TPR Members, to be better prepared for the development of the next Statewide Plan and Regional Plan Development. (20 minutes):*

	a. Table Group Brainstorm Discussion b. Your Report Out and Collective Group Discussion c. Prioritization Exercise **Topics for Future Discussion Identified (in Priority Order from Voting)** • Greater coordination with TPRs and MPOs on data used and how it is analyzed • Safety data on all routes – not just state • Technology and its effects on transportation • How to achieve stakeholder consensus on what projects to include in the RTP. • Program Distribution & early estimates • Knowledge base of funding and programming • PD 14 impacts (outcome of State criteria), goals and alignment of targets including MPO input and potential tiered goals (specific to an area) • Schedule Challenges – cross pollination between plans and iterative loops • Asset Management data collection and analysis • Statewide travel modeling and scenario planning • Freight
11:15– 11:50	*Topic 2 Discussion: Improving Plan Integration in the Statewide Plan. (35 minutes) – Julie Lorenz:* a. Initial Discussion – What does Plan Integration Mean to You? **Definition of Plan Integration Discussion** • A convergence of plans. • Integrating of all plan elements into the SWP including all modes and all stakeholders • Alignment of purpose of the plans – so that they achieve certain things, e.g. goals, objectives, performance measures. • Integration of Region priorities into the SWP. • Need convergence with economic development plans and land use plans. • Data and how data is used can be the glue for plan integration. • Challenge – integrating all of the government levels – e.g. funding, zoning, transportation. • Integrating all modes in the SWP. b. Table Group Discussion – What Do You Think Are the Important Elements of Plan Integration? c. Whole Group Discussion – Your thoughts and Suggestions on How to Overcome Plan Integration Challenges. **Plan Integration Challenges and Solving Them (Notes from Sticky Notes and**

	Chart Paper) • Better describe Asset Management and how CDOT makes those decisions. • Provide better explanation the FASTER safety & transit program. • Ability to explain expenditures. • Project selection that meets funding criteria. Align project selection criteria to funding sources. • Planning input as a part of informed decision making. • Greater coordination between highway/transit/human services. • Broadened public engagement. • Leveraging corridor improvements for safety etc. • MPO/TPR priorities and projects. • Agreed-upon formulas. • Improved communications. MPO/CDOT technical committee updates. Have it as a standard agenda item with CDOT liaison reports. Updates on all modes. • Develop common definitions and understanding of issues (e.g. definition of congestion). • Consider one contract for all data collection. • Collaboration on data. • Geo-coding of crash data. • Schedule – develop an iterative process between levels of planning – TPR-State-MPO – a continuous loop. • Finish TPR Plans before Statewide Plan completion so TPR plans can be better integrated into SWP. • Consider schedule and timing of next SWP to incorporate local plans. • Understand how other plans, such as Economic Development Plans, affect transportation. • Consider ROW preservation for other modes. • Regional Property Project discussions should be led by the Regions. Joint MPO/TPR meetings work well. .
11:50 – 11:55	*Next Steps (5 minutes) – Michelle Scheuerman* **Items in the Parking Lot** • Public Engagement • RPP Future Discussions
11:55 – 12:00	*Wrap-Up (5 minutes) – Julie Lorenz*
12:00 – 12:05	*Workshop Critique – Please Complete*

STAC WORKSHOP CRITIQUE
   29-Apr-16

1 How effective was the room set up and table arrangement for the workshop? Did it foster engagement and collaboration?
   a. Good   10   Considering the limited participation (weather).
                                      Needed better attendance.
   b. Fair
   c. Poor

2 Did the facilitating work well in terms of soliciting input, and maintain participant interest?
   a. Yes   10
   b. No
   c. Other

3 Was the STAC provided an adequate level of context and background information before and during the workshop to prompt meaningful discussion and input?
   a. Yes   5
   b. No   2
   c. Other   3   With all but for the keypoint voting; Some context was provided but more guidance would help.
                                     Good information at the workshop but info coming is was a bit lacking.

4 Do you feel today's breakout sessions were productive? Were they a good mechanism for diving deeper into key issues?
   a. Yes   8
   b. No
   c. Other   1   Time will tell?
   Blank   In the future?

5 Was the use of a "parking lot" list for future topics a good approach for tracking STAC agenda requests?
   a. Yes   9   High level prioritized list helpful for survey.
   b. No
   c. Other
   blank   Not really used.

6 What method would be your preference for documenting and conveying results of this workshop?
      Several multi-selection answers.
   a. Yes   5
   b. No   9
   c. Other   1   Reports to MPO and TPR meetings.

7 Any additional feedback you would like to provide?

    Overall I thought the workshop was run very well.

    Good start.

    Have these meetings throughout the process. Continuous discussion.

COLORADO
Department of
Transportation

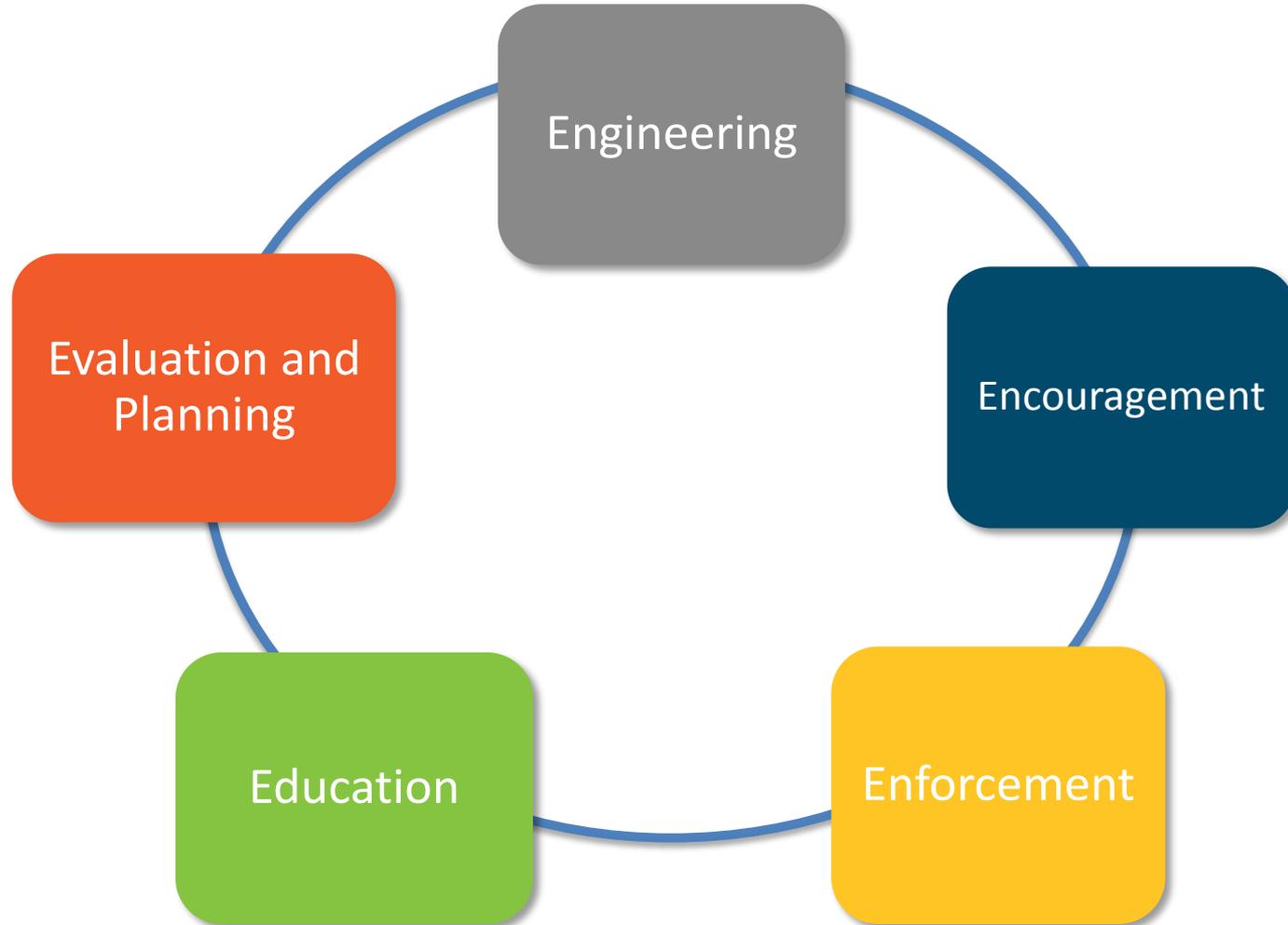# Bicycle/Pedestrian Programs

Presentation to STAC July 29, 2016

Bicycle and Pedestrian Policy 1602

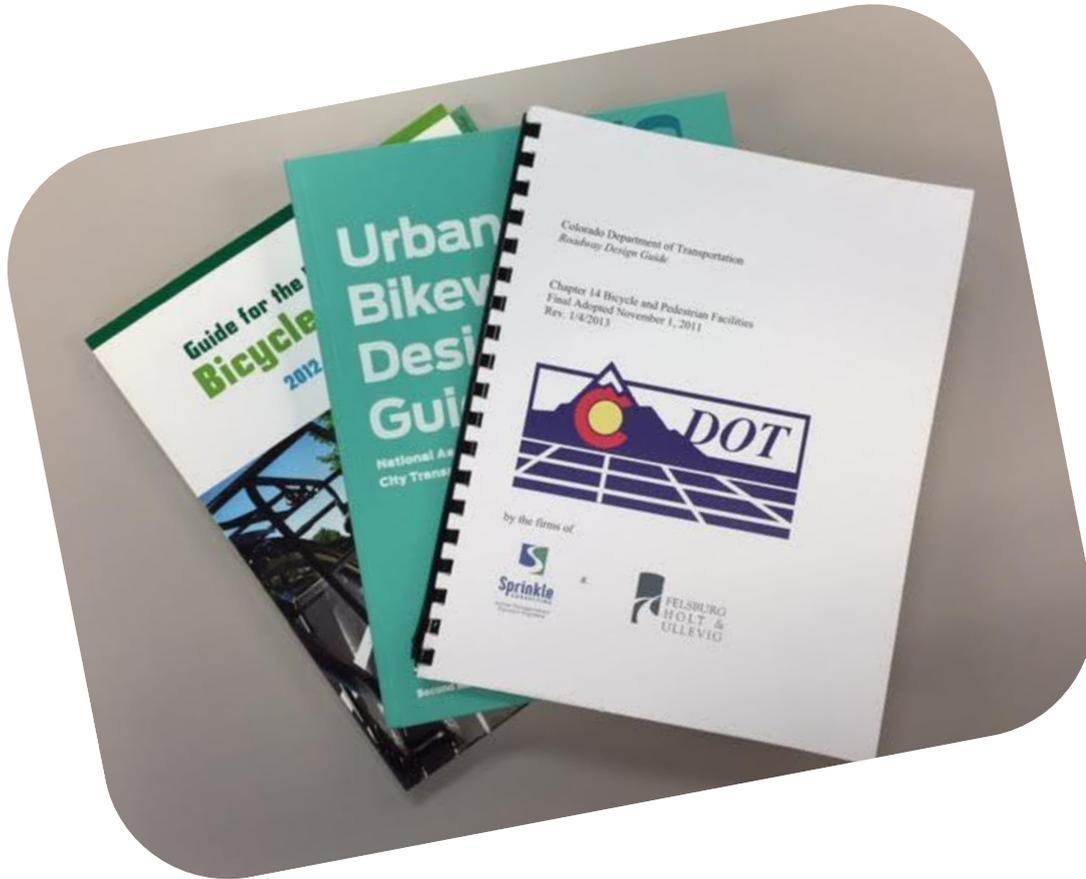## *"Elevating Bicycle and Pedestrian Opportunities in Colorado."*

CRS 14-1-120
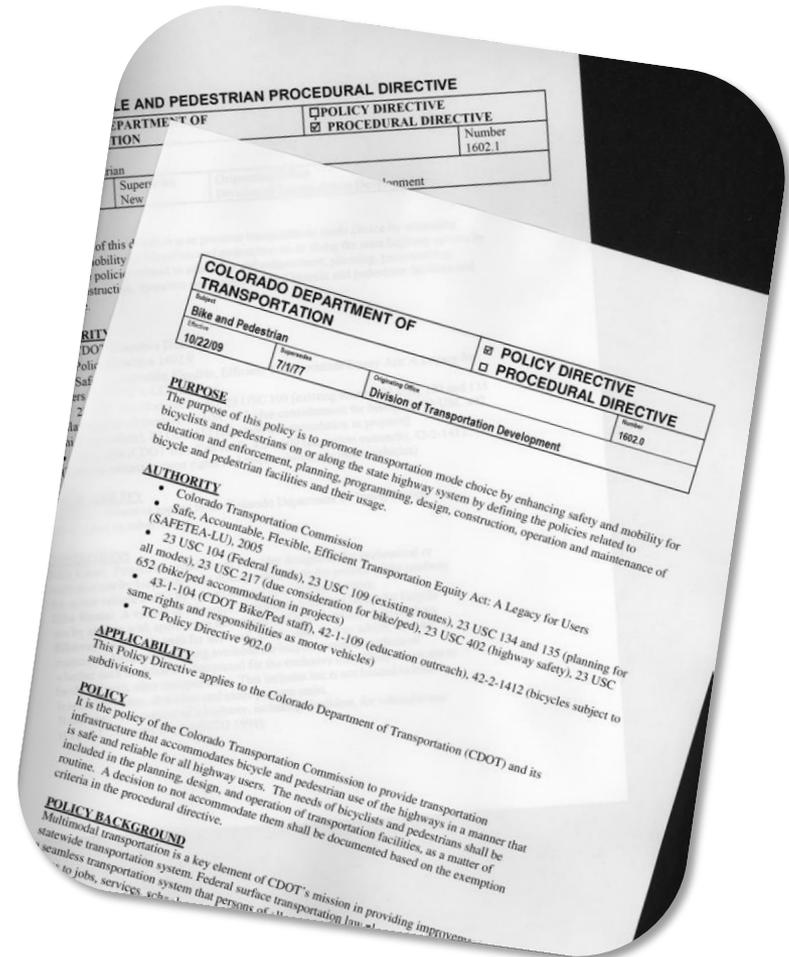
Engineering

Guidance and Technical Support

Engineering

Facility Design Courses

Nearly 1000 engineers and planners have attended

Education

Share the Road

Brings together community members to educate and encourage bicyclists and motorists to share the road courteously and safely

Education

- Reached
  - 1,092 schools
  - 437,000 students

- Increased rate of walking and biking to school in 95% of schools receiving funding

Enforcement

Partnership with State Patrol

Events and Materials

Encouragement

- Bike Month and Bike to Work Day
- Walk a Child To School Day
- Bike a Child to School Day

Encouragement/Education

Statewide Bicycle and Byways Map
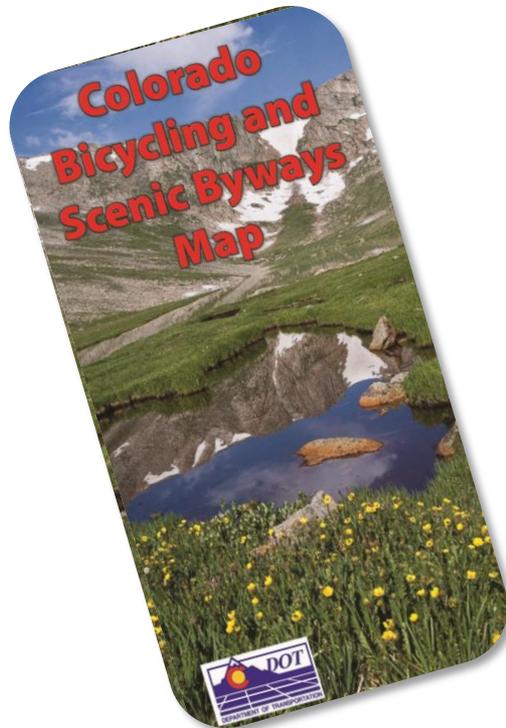
Evaluation and Planning

Statewide Bicycle and Pedestrian Plan

Adopted December 2012
Amended June, 2015

Evaluation and Planning
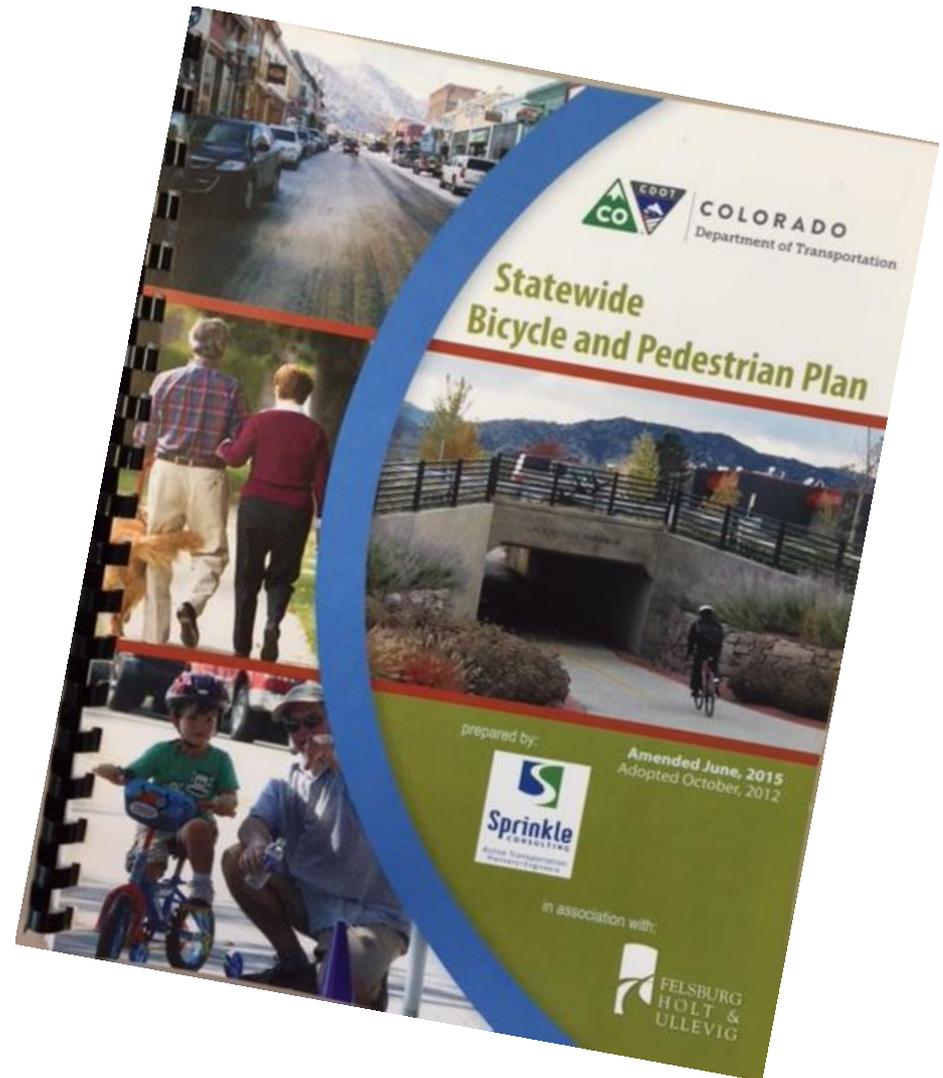
Bicycle and Pedestrian Data Collection
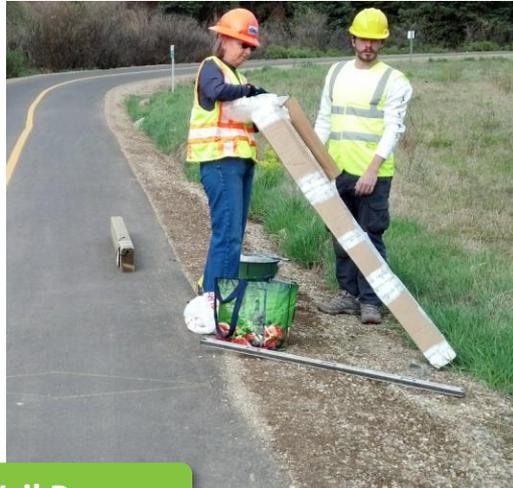
Cherry Creek Trail

Vail Pass
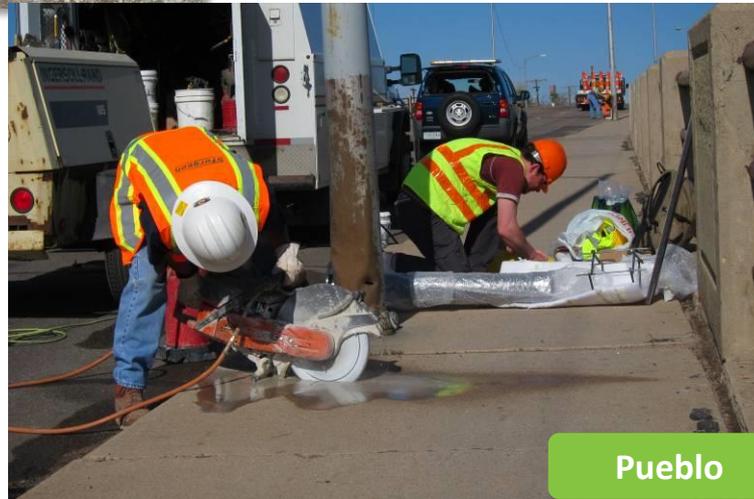
Pueblo

Evaluation and Planning

Facility Inventory

Statewide Initiatives

Colorado Pedals Project

- Complete Streets Summit
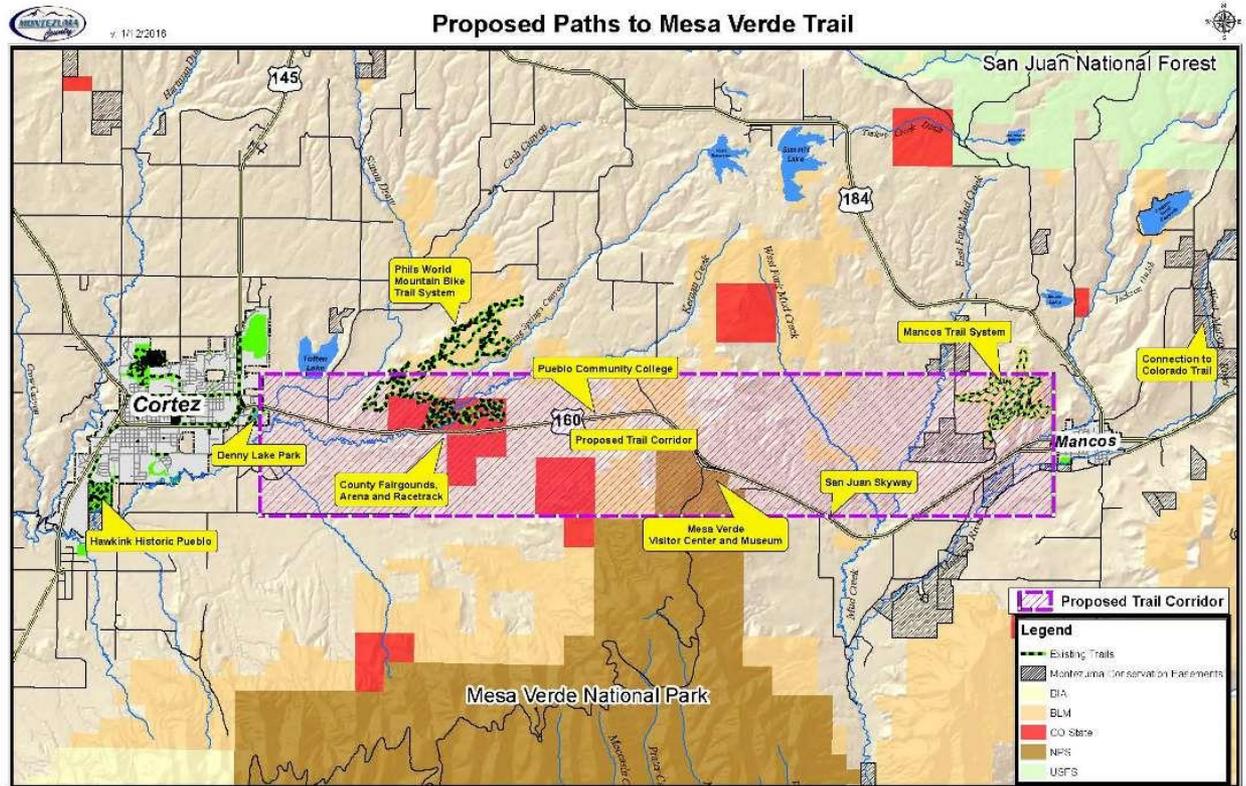- Economic Impact Study
- Bike/Ped Engineer in each Region
- Facility Tours
- Project Tracking

Statewide Initiatives

Colorado Beautiful

16 in 2016 Trails

Proposed Paths to Mesa Verde Trail

Education/Encouragement/Engineering

Main Streets Guide

Betsy Jacobsen

Bicycle/Pedestrian/Scenic Byways Section Manager

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FHWA Alternative Fuel Corridors

Statewide Transportation Advisory Committee (STAC)

Friday, July 29, 2016

COLORADO
Energy Office

FAST Act – Alternative Fuel Corridors

Background

- On July 22nd, FHWA released a notice soliciting nominations for national Alternative Fuel Corridors as stipulated under the FAST Act.

  o For the purposes of this effort, FHWA defines alternative fuel infrastructure as electric, propane, hydrogen, or natural gas facilities.

- Corridor nominations from state and local agencies are due by August 22nd.

- Using this information, FHWA will make final designations by December 1st.

- FHWA will also establish a process for updating the designations on a rolling basis at least every 5 years.

- At present there is no dedicated funding source attached to the Alternative Fuel Corridor designations.

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Source:
https://www.federalregister.gov/articles/2016/07/22/2016-17132/fixing-americas-surface-transportation-act-designation-of-alternative-fuel-corridors

FAST Act – Alternative Fuel Corridors

Nomination Requirements

- Nominations for Alternative Fuel Corridors are limited to 20-pages total and must include the following information:

  o Corridor name and limits (must be on NHS)

  o Corridor area profile (population, demographics, economics)

  o Current and projected usage (VMT, congestion, freight movement)

  o Current and projected alternative fueling infrastructure

  o Goals for increasing the use of alternative fuels via strategic deployment of alternative fuels infrastructure in the short and long term

  o Demonstrated interest and support from local stakeholders

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Source:
https://www.federalregister.gov/articles/2016/07/22/2016-17132/fixing-americas-surface-transportation-act-designation-of-alternative-fuel-corridors

FAST Act – Alternative Fuel Corridors

Selection Criteria

- FHWA will make final Alternative Fuel Corridor designations using the following criteria (<u>in priority order</u>):

  1. Alternative Fuel Facilities
     - *Existing alternative fueling infrastructure*
     - *Planned alternative fueling infrastructure*
     - *Demonstration of past infrastructure development success*
  2. Corridor Scale / Impact
     - *NHS connectivity*
     - *Metro area connectivity*
     - *Intermodal connectivity*
  3. Emission Reduction
     - *Estimated GHG and criteria pollutant reduction based on current and projected alternative fueling infrastructure*
  4. Team Development / Collaboration
     - *Degree of public and private sector collaboration on alternative fuel vehicle and infrastructure deployment*

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Source:
https://www.federalregister.gov/articles/2016/07/22/2016-17132/fixing-americas-surface-transportation-act-designation-of-alternative-fuel-corridors

A Network Approach to Alternative Fuels

Next Steps...
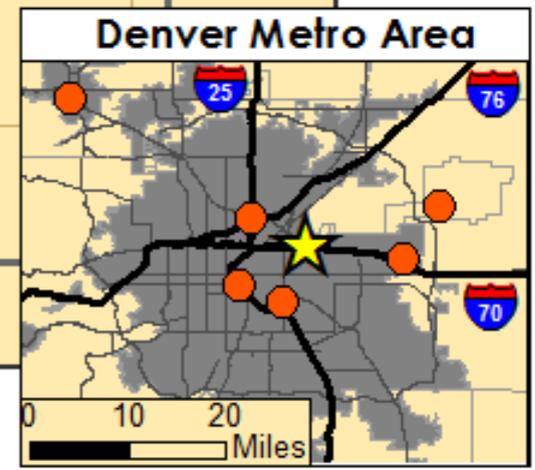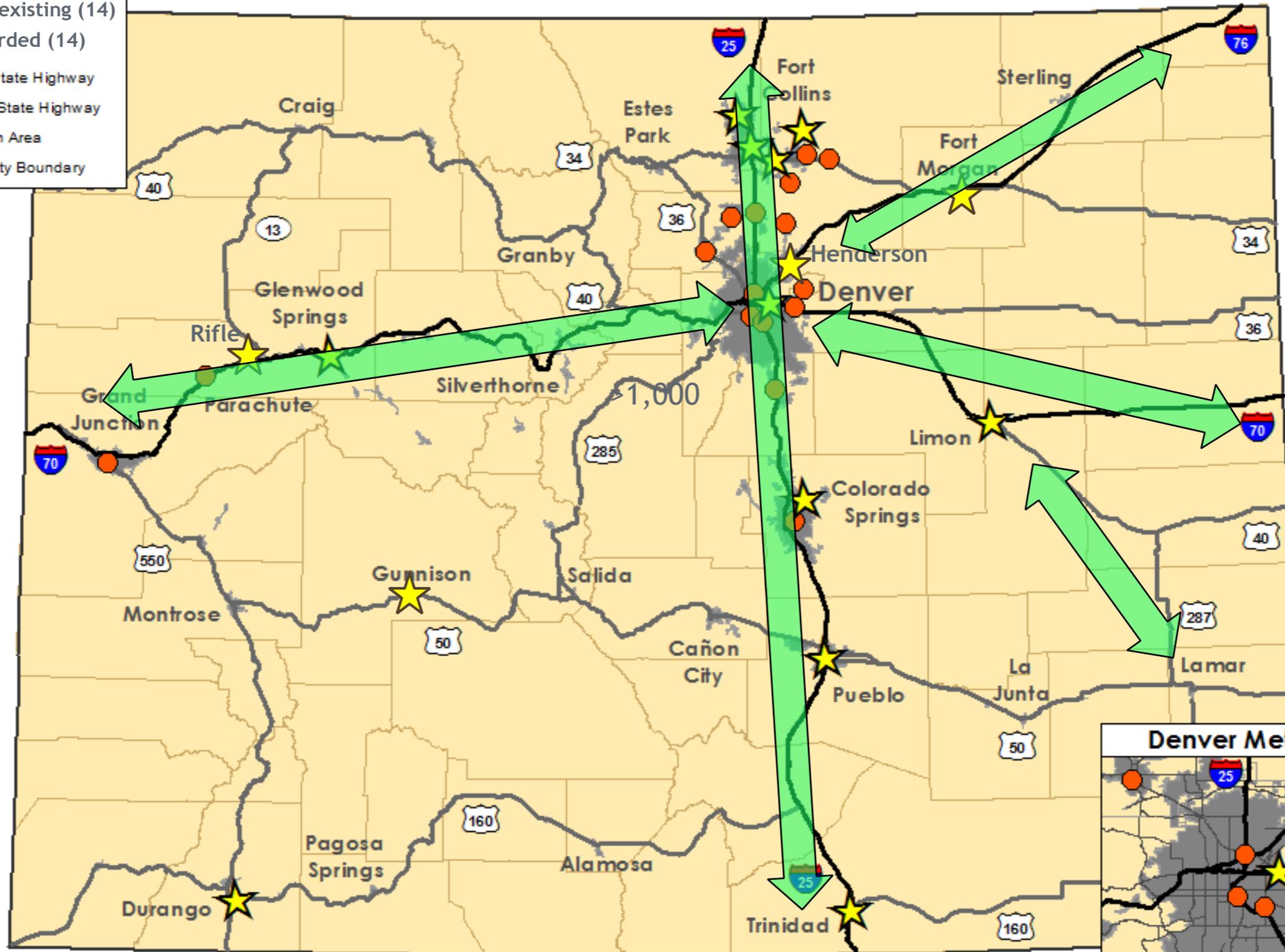
Tier I

Highest priority

>1,000 trucks per day

Next Steps...

Publicly Accessible, Fast-fill CNG Stations
- Pre-existing (14)
- Awarded (14)
- Interstate Highway
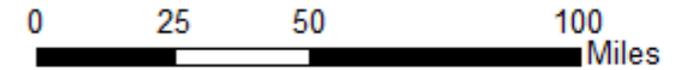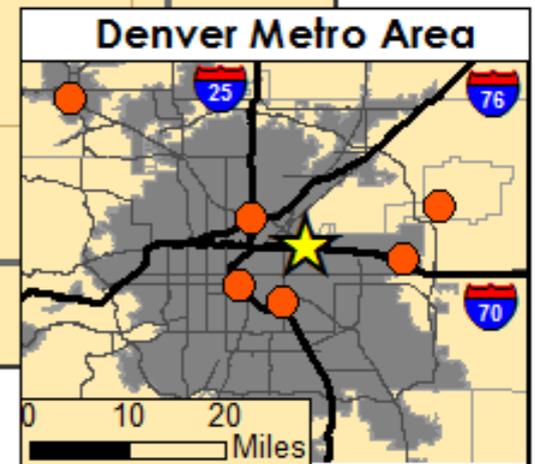- US / State Highway
- Urban Area
- County Boundary

Tier I

Highest priority

>1,000 trucks per day

Tier II

Secondary priority

>250 trucks per day

Wes Maurer
Email: Wes.Maurer@state.co.us
## *Phone: 303.866.2064*


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National Multimodal Freight Network
STAC
July 2016

1

National Multimodal Freight Network (NMFN)

- Established by the FAST Act

- Interim NMFN includes:

    - National Highway Freight Network (NHFN)

    - Class I Railroads

    - Significant public ports and waterways

    - 50 airports with highest annual landed weight

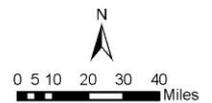   - Other strategic freight assets

Interim National Multimodal Freight Network - Highways
Map 1

Rail On Interim Multimodal Freight Network
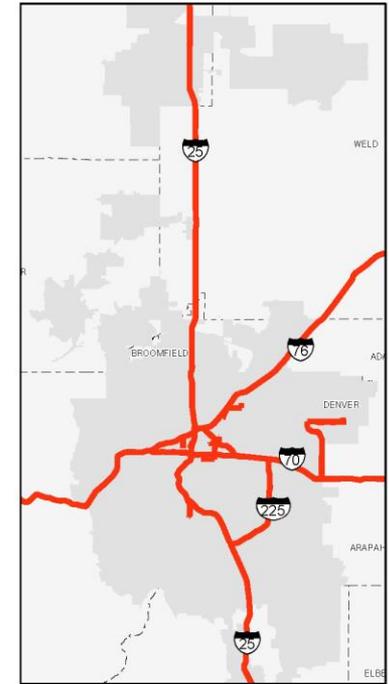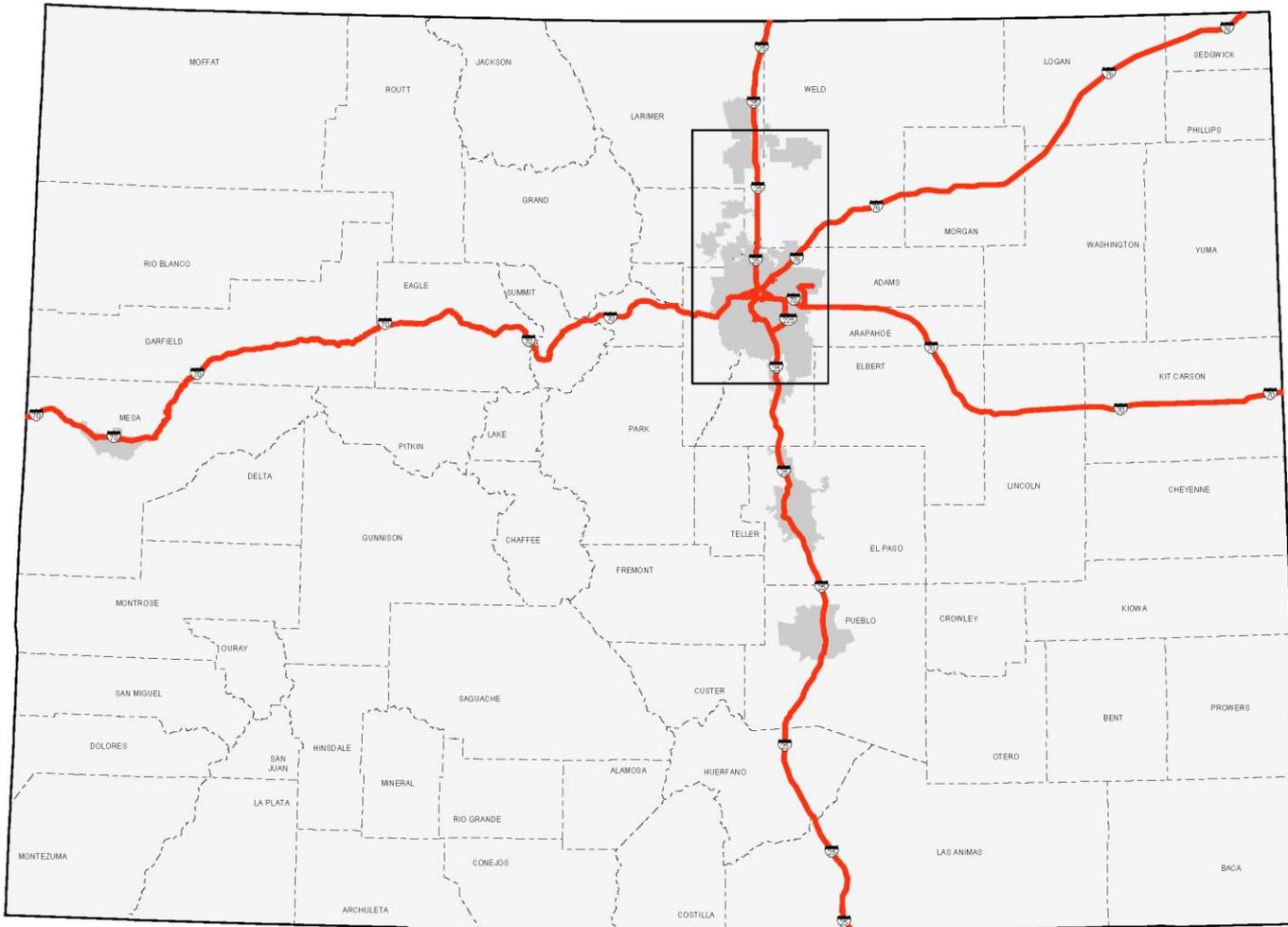
Denver International Airport

Counties

Urban Areas (Pop. > 50,000)

Interim National Multimodal Freight Network - Rail and Aviation
Map 2

CDOT
COLORADO
Department of Transportation

N

0 5 10 20 30 40
Miles

**Interim National Multimodal Freight Network -
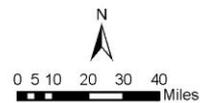Highways, Rail, and Aviation**
Map 3

Legend:
- Highways On Interim Multimodal Freight Network
- Rail On Interim Multimodal Freight Network
- Denver International Airport
- Counties
- Urban Areas (Pop. > 50,000)

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Department of Transportation

0 5 10 20 30 40 Miles

National Multimodal Freight Network (NMFN)

- States have opportunity to submit additional proposed designations to NMFN to USDOT *by September 6, 2016.*

- Additional designations limited to 20% of total mileage of modal routes included in the Interim NMFN (~600 miles)

- Additional designations limited to corridors outside of urbanized areas > 50,000

- Additional designations may be highway or rail

- Separate process and designation from Critical Rural and Urban Freight Corridors

- Designations are not tied to funding eligibility

National Multimodal Freight Network (NMFN)

- Additional designations represent significance to freight rather than need for investment

- Highway routes identified for consideration on basis of:

  - Truck AADT > 500

  - % Truck > 10%

  - Connectivity
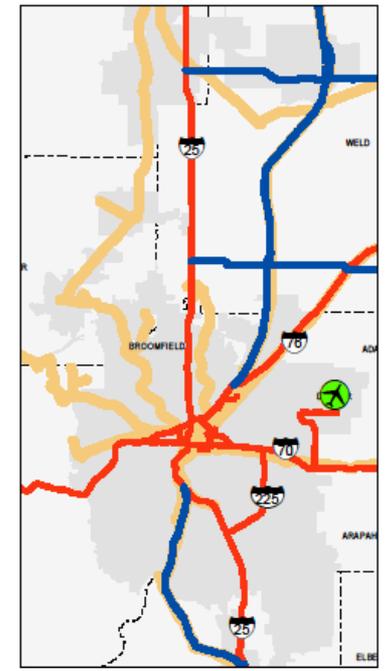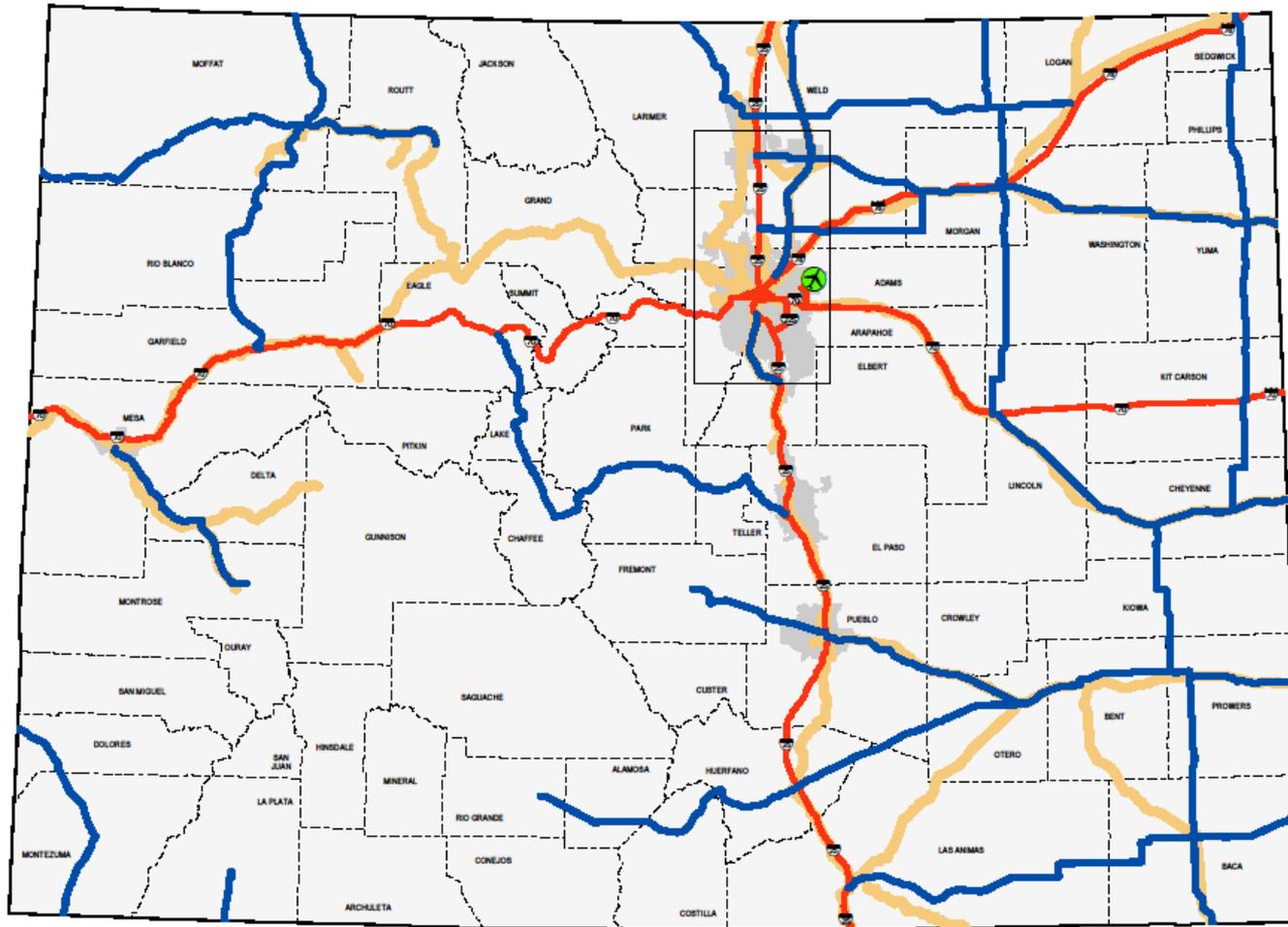
Interim National Multimodal Freight Network - Highways, Rail, Aviation, and Corridor Options

Map 4

Legend:
- Highways On Interim Multimodal Freight Network
- Rail On Interim Multimodal Freight Network
- Denver International Airport
- Corridors of Interest
- Counties
- Urban Areas (Pop. > 50,000)

COLORADO Department of Transportation
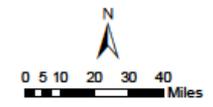
National Multimodal Freight Network (NMFN)

Corridor	Weighted AADTT	Weighted Percent Truck	> 500 AADTT	> 15% Truck	Multi-State Connectivity	Connects to Interim NMFN	Congressional Designation
US 287, OK Border to Limon	1,575	45%	Yes	Yes	Yes	Yes	Yes
US 50, Pueblo to KS Border	1,121	11%	Yes	No	Yes	Yes	Yes
SH 71, Limon to NE Border	263	21%	No	Yes	Yes	Yes	Yes
US 85, WY Border to I-76	1,591	10%	Yes	No	Yes	Yes	No
US 385, I-76 to US 40	222	18%	No	Yes	Yes	Yes	No
US 287/SH 14 WY Border to I-25	839	11%	Yes	No	Yes	Yes	No
US 34, I-25 to NE Border	874	14%	Yes	No	Yes	Yes	No
SH 14, I-25 to I-76	581	18%	Yes	Yes	No	Yes	No
US 160, KS Border to Trinidad	89	17%	No	Yes	Yes	Yes	No
US 160, Monte Vista to Walsenburg	629	10%	Yes	No	No	Yes	No
SH 13, Rifle to WY Border	323	11%	No	No	Yes	Yes	No
US 50, Pueblo SH 9	893	4%	Yes	No	No	Yes	No
US 85, I-25 to Titon Road	1,881	2%	Yes	No	No	Yes	No
US 85, Titon Road to Castle Rock	1,349	2%	Yes	No	No	Yes	No
US 550, Durango to NM Border	577	5%	Yes	No	Yes	No	No
SH 52, I-25 to I-76	782	4%	Yes	No	No	Yes	No
US 491, (160) NM Border to UT Border	758	14%	Yes	No	Yes	No	No
SH 10, US 50 to I-25	99	17%	No	Yes	No	Yes	No
US 24, I-70 to I-25	550	7%	Yes	No	No	Yes	No
US 40, Steamboat Springs to UT Border	304	12%	No	No	Yes	No	No
US 50, Grand Junction to Montrose	729	4%	Yes	No	No	No	No

National Multimodal Freight Network (NMFN)

- Next Steps

  - Solicit STAC, TRAC, and FAC Input

  - Develop recommendations for "additional proposed designations"

  - Review recommendations at August STAC

  - Include recommendations in CDOT comments to USDOT on Interim NMFN, due September 6

Primary Highway Freight System (PHFS)

Route No	Start Point	End Point	Miles
I-225	I-25	I-70	12.13
I-25	NM/CO Line	CO/WY Line	299
I-270	I-76	I-70	4.95
I-70	UT/CO Line	CO/KS Line	451.46
I-76	I-70	CO/NE Line	12.38
SH 2	CO12R	I-70	0.28
E-470	CO22A	I-70	7.33
US 6	CO11L	I-270	0.33
US 85	I25	2.08 Miles South of I-25	2.08
TOTAL			**789.94**

Non PHFS Interstate

Route No	Start Point	End Point	Miles
I-270	I-25	I-76	1.08
I-76	US 85	CO/NE Line	171.59
TOTAL			172.67

Colorado National Highway Freight Network

- Total: 1,217.17 miles
  - PHFS: 789.94
  - PHFS Intermodal Connectors: 13.52
  - Non-PHFS Interstates: 172.67
  - CRFC: 160.69
  - CUFC: 80.35

PHFS Intermodal Connectors

Facility ID	Facility Name	Facility Description	Miles
CO10R	Burlington Northern RR Transfer Facility	53rd Pl. to Broadway to 58th Ave (S.H. 53) to I-25	0.98
CO11L	Conoco Pipeline Transfer	From U.S. 6: W 0.8 mi on 56th Avenue to Terminal Entrance at Brighton Blvd (S.H. 265)	0.83
CO12R	Union Pacific RR Transfer Facility	From S.H. 2 (Colorado Blvd): W 1.4 mi on 40th Ave to terminal entrance at Williams Street	1.45
CO22A	Denver International Airport	Pena Blvd (E 470 interchange E 0.7mi)	5.1
CO6R	Union Pacific RR Auto Transfer	From I-76: E 0.1 mi on 96th Ave, N 1.0 mi on I-76 Frontage Road to Terminal Entrance	0.48
CO7R	Burlington Northern RR Auto Transfer	From I-76: E 1.7 mi on 88th Ave, N 0.2 mi on Yosemite Ave to terminal entrance	1.66
CO8L	Kaneb Pipeline Transfer	From I-76: E 0.1 mi on 88th Ave, S 1.2 mi on Brighton Rd, E 0.3 mi on 80th St to entr at Krameria St.	1.91
CO9R	Southern Pacific RR Transfer Facility	From I-76: South on Pecos Street to Terminal Entrance at 56th Avenue	1.09
TOTAL			**13.52**

STATEWIDE RURAL REGIONAL BUS NETWORK DEVELOPMENT and SB228 RECOMMENDATIONS

STAC – July 29, 2016
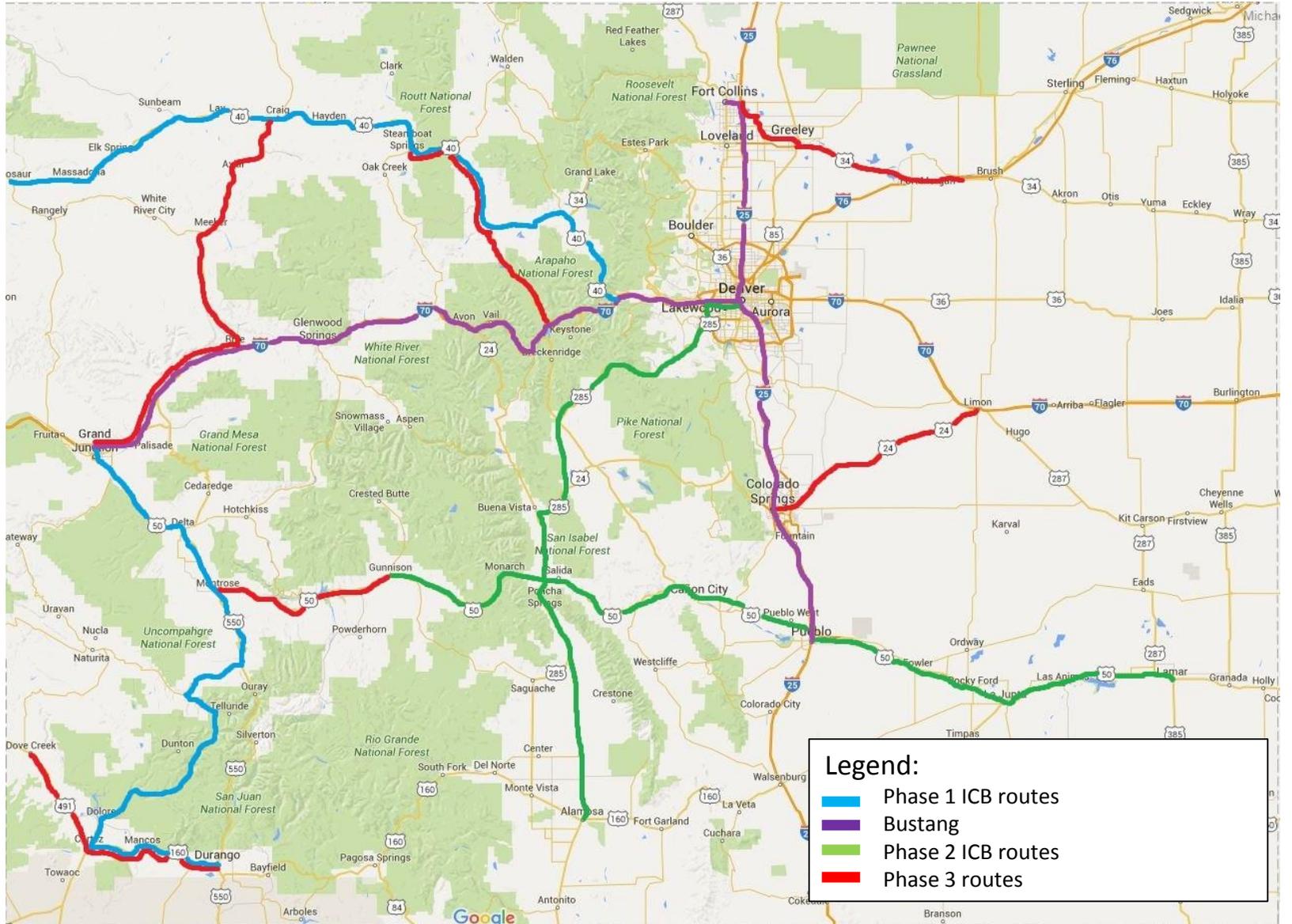
STAC Addendum Packet July 2016 Page 71

Purpose

- **Purpose of todays presentation:**

  o Review Rural Regional Operations & associated SB 228 capital investments.

  o Seek STAC recommendation for Transportation Commission Action

Phase 1, 2 & 3 combined

Legend:
- Phase 1 ICB routes
- Bustang
- Phase 2 ICB routes
- Phase 3 routes

Phase 1 SB 228 Projects

Cost	Project Description
$2.0 M	Program & Construction Management of Phase1 Projects below
$1.5 M	Winter Park Express Platform (approved Apr. 2016)
$2.5 M	Six branded over-the-road coaches, 30-35 foot
$5.0 M	Kendall Parkway replacement / expansion of existing Loveland park-and-ride at US 34 / I-25 TIGER 8 Award to N I-25 Project – July 2016
$3.0 M	Woodmen Road park-and-ride replacement / expansion in Colorado Springs
$1.5 M	Lawson / Telluride / San Miguel County park-and-ride
$2.5 M	Frisco Transit Center Expansion
$2.0 M	Rifle Park & Ride Relocation
$20.0 M	TOTAL

Phase 2 SB 228 Projects

Cost	Project Description
$1.5 M	Program & Construction Management of Phase 2 Projects
$4.0 M	Up to 10 branded over-the-Road Coaches, 30-35 foot
$10.0 M	Up to this amount across the following potential projects: • Idaho Springs park-and-ride • Castle Rock park-and-ride • Southwest Weld County park-and-ride • Denver Tech Center stop
$15.5 M	TOTAL

Phase 3 SB 228 Projects if Funds Remain*

Cost	Project Description
$4.0 M	Pueblo park & ride for Bustang service extension
$2.0 M	Brush Creek Park and Ride Expansion
$3.0 M	Glenwood Maint. Facility re: RFTA, Bustang & USFS Hanging Lake Shuttle
$2.5 M	Harmony Road park-and-ride expansion
$2.0 M	Tejon park-and-ride expansion
$4.0 M	Monument park-and-ride access improvements, saving Bustang 10 minutes per trip, each direction
$17.5 M	Phase 3 Subtotal

*Projects will also be listed on the CDOT 10-Year Development Program, with other funding sources considered and funding opportunities pursued to complete them

Purpose

- ## TC Options...and would like a STAC Recommendation on one of the policy options below (or modify):

- Approve the above SB228 program of projects, and recommend the full Commission to approve at the August TC meeting. This is the staff recommended action.
- Approve a sub-set of the above SB228 program of projects, such Phase I for approval. This would give the Commission the opportunity to seek further clarification on Phase 2 or Phase 3 projects before making a commitment.
- Reject selected projects, and approve the remainder of the program of projects. This is not recommended it could dilute the effort to create an integrated statewide system.
- Reject the above SB228 program of projects. This is not recommended as it would not be responsive to the transit stakeholders around the state, and would not advance CDOT in providing a statewide integrated system.

Rural-Regional Bus Network Development and SB 228 Supporting Capital

NEXT STEPS

- July 2016: Additional review by STAC, TRAC, and T&I

- August 2016: Seek Transportation Commission approval

- Late Summer/Early Fall 2016: develop a bus specification

- Fall 2016 / Winter 2017: procure the fleet of OTR small coaches with SB-228 funds

- Calendar Year 2017: Develop Service Contracts

- Calendar Year 2018: Implement the Rural Regional Network