



COLORADO

Department of
Transportation

Statewide Transportation Advisory Committee (STAC)

October 26, 2018

9:00 AM – 12:00 PM

CDOT HQ Auditorium
2829 W. Howard Place
Denver, CO

Agenda

- 9:00-9:05 **Welcome and Introductions** – Vince Rogalski, STAC Chair
- 9:05-9:10 **Approval of September STAC Meeting Minutes** – Vince Rogalski
- 9:10-9:20 **Transportation Commission Report (Informational Update)** – Vince Rogalski
- Summary report of the most recent Transportation Commission meeting.
- 9:20-9:35 **TPR Reports (Informational Update)** – STAC Representatives
- Brief update from STAC members on activities in their TPRs.
- 9:35-9:45 **Federal and State Legislative Report (Informational Update)** – Herman Stockinger & Andy Karsian, CDOT Office of Policy and Government Relations (OPGR)
- Update on recent federal legislative activity.
- 9:45-10:25 **STAC Statewide Plan Subcommittee on Formula Programs (Action)** – Debra Perkins-Smith and Tim Kirby, Division of Transportation Development (DTD)
- Discussions and action on the STAC Statewide Plan Subcommittee on Formula Programs recommendations.
- 10:25-10:35 **Break**
- 10:55- 11:10 **Senate Bill 1 Multimodal Options Fund (Informational Item)** – Debra Perkins-Smith, DTD and David Krutsinger, Division of Transit and Rail (DTR)
- Update on SB 1 Multimodal Options Fund.
- 10:35- 10:55 **FY 20 Budget (Informational Item)** – Jeff Sudmeier, Chief Financial Officer
- Overview of the FY 20 Budget.
- 11:10-11:30 **Mobility Choice Blueprint (Informational Item)** – Debra Perkins-Smith, DTD
- Update on recent activities associated with Mobility Choice Blueprint.
- 11:30-11:45 **Managed Lanes Policy Guidance (Informational Item)** – Lisa Streisfeld, Transportation Systems Management & Operations (TSM&O)
- Overview of CDOT's Managed Lanes Policy
- 11:45-11:50 **Outrider Phase III (Informational Item)** – Mike Timlin, DTR
- Update and overview of Outrider Phase III.
- 11:55-12:00 **Other Business-** Vince Rogalski
- 12:00 **Adjourn**

STAC Conference Call Information: 1-877-820-7831 321805#

STAC Website: <http://www.coloradodot.info/programs/statewide-planning/stac.html>

New CDOT Region 1/ Headquarters Location: 2829 W Howard Place, Denver, CO 80204

**Draft STAC Meeting Minutes
September 28, 2018**

Location: CDOT Headquarters Auditorium
Date/Time: September 28, 2018, 9:00 a.m. - 12:00 p.m.
Chairman: Vince Rogalski, STAC Chair
Attendance:

In Person: Vince Rogalski (GVTPR), Norm Steen (PPACG), Andrew Gunning (PPACG), Thad Noll (IM), Heather Sloop (NW), Jacob Riger (DRCOG), Sean Conway (NFRMPO), Medora Kealy (NFRMPO), Elizabeth Relford (UFR), Gary Beedy (EA), John Liosatos (PPACG), Keith Baker (SLV), Peter Baier (GVMPO).

On the Phone: Amber Blake (SW), Doug McDonald (SUIT), Dean Bressler (GVMPO), Terry Hart (PACOG), Elise Jones (DRCOG).

Agenda Item / Presenter (Affiliation)	Presentation Highlights	Actions
<p>Introductions & August STAC Minutes / Vince Rogalski (STAC Chair)</p>	<ul style="list-style-type: none"> • Review and approval of August STAC Minutes without revisions. 	<p><i>Minutes approved.</i></p>
<p>Transportation Commission Report / Sean Conway (STAC Vice Chair)</p>	<p>Presentation</p> <ul style="list-style-type: none"> • <u>Transportation Commission</u> <ul style="list-style-type: none"> ○ The big item of discussion was the review of projects for Proposition 109, which Deb and Herman will explain in more detail later in the agenda. ○ The FY 20 annual budget workshop focused on revenue projections. <ul style="list-style-type: none"> ▪ The TC asked staff to review a comment on certain figures but no significant changes were identified. ○ The Risk & Resiliency Program provided an update. <ul style="list-style-type: none"> ▪ Discussed the I-70 Risk & Resiliency Pilot project completed in 2017, which builds on work completed by CDOT in the wake of the 2013 floods, defining risk and developing mitigation measures; Risk & Resiliency is a new program within CDOT DTD; the next 	<p>No action taken.</p>

	<p>step is to establish a working group to work on recommendations and begin implementing projects.</p> <ul style="list-style-type: none"> ○ The Statewide Transportation Plan (SWP) Committee discussed membership, and Deb suggested that Vince should be a member of that committee to help develop the 2045 SWP. ○ The Intermodal Committee discussed Colorado Freight Plan, Active Transportation Development Program, plans for Bustang network expansion, and more. ○ On Proposition 109, the TC members considered identifying a list of projects (within the eligible list provided by the proposition language) to be funded in the event of passage. <ul style="list-style-type: none"> ▪ The proposition identifies \$5.6 billion in eligible projects but would only produce \$3.5 billion in funds. ▪ The TC opted to identify a set of principles rather than specific projects, pledging to: <ul style="list-style-type: none"> ❖ Spend funds throughout the state ❖ Spend funds within the 3 year window to maintain tax exemption ❖ Leverage other available funds wherever possible ▪ If the proposition passes then these will be used to identify specific projects. ○ On Proposition 110, the 0.62% sales tax increase, the TC passed a resolution in support. <p>STAC Comments</p> <ul style="list-style-type: none"> • <u>Sean Conway</u>: I believe in that resolution by the TC on Proposition 110 also included language citing the recommendation of STAC, is that right? • <u>Debra Perkins-Smith</u>: Yes, it includes the phrase “with the collaboration of the Statewide Transportation Advisory Committee” in reference to the development of the project list and statewide programs identified under Proposition 110. • <u>Vince Rogalski</u>: During our last Gunnison Valley TPR Meeting, Commissioner Kathy Hall pointed out that Proposition 109 feels a lot like what happened with the “7th Pot” funding in the 1990s – an initial commitment is made to repay bonds, and then over time the burden shifts from the Legislature to CDOT. We just finished paying that debt off last year. 	
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- Jon Cater: As I recall there was also some discussion of the exact definition of “expended” when it comes to the time limit on the funds. Did we get any clarity on that?
- Debra Perkins-Smith: Not really. We’re still looking for that but as you say there’s a question about the difference between planning to spend versus actually paying out.
- Debra Perkins-Smith: One other thing to note. Under Proposition 109, CDOT will lose SB 267 funding, which comes to about \$1.5 billion. So even though you’re bonding for \$3.5 billion, the net is actually only \$2.0 billion once you account for all of the changes.
- Vince Rogalski: Was there any discussion of the point that if we have to spend funds within 3 years then we’d potentially be dumping a lot of money out on the market all at once, resulting in the contractors becoming much more expensive?
- Debra Perkins-Smith: We’re definitely thinking about that, and our Chief Engineer is having his staff start planning how you would spread out projects under both propositions to limit the spike in demand. With Proposition 110 that would be easier because you have more time to spread them out, but the peak would be worse with Proposition 109 given the 3-year window.
- Norm Steen: Does Proposition 109 specify that you can’t issue bonds in tranches? Both of these are statutory propositions, so you could potentially change one or a few words to allow multiple tranches and avoid the cost spike.
- Elizabeth Relford: So have you already identified a list of projects that you think you would build with Proposition 109, even if the TC isn’t formally adopting one?
- Debra Perkins-Smith: Yes, we have narrowed that down. But it could change if the proposition passes and we have to select for real.
- Sean Conway: We talked yesterday at C-470 about how this amount of spending could impact other groups building projects statewide, not just at CDOT. Especially if both of these were to pass.
- Debra Perkins-Smith: Yes, Josh is working on that as well. Our goal is to have consistent demand for labor and materials, not up and down spikes on the industry. Another factor to consider is that if there is a glut of projects, the contractors may prefer to bid on the Front Range ones rather than the rural areas just for convenience. So we need to be wary of that as well.

	<ul style="list-style-type: none"> • <u>Sean Conway</u>: I think it was Josh that made this point last year while discussing funding questions that we don't want to over-promise and under-deliver to the public. This are good issues to have, but we don't want to fall into that trap. • <u>Vince Rogalski</u>: Yes, we've learned from the TRANS Bond experience that the TC should be careful about making defined lists and then disappointing people down the road. • <u>Debra Perkins-Smith</u>: I'll also remind you that on our www.codot.gov website we have current information on the two ballot propositions as well as a project map for the Proposition 110 projects. We don't have a map for Proposition 109 given that the TC hasn't approved a specific project list. • <u>Norm Steen</u>: Are we worried that this information and the resolution by TC may give the impression that CDOT is taking a position on the two measures? • <u>Debra Perkins-Smith</u>: We are very careful to be neutral and informational in our position and Director Mike Lewis spoke again yesterday to the staff of CDOT about the line between information and advocacy. We are very careful about keeping everything above board. The members of the TC are not public employees, therefore they are allowed to take a position while CDOT as a department is not. • <u>Vince Rogalski</u>: CDOT is very happy to educate members of the public and provide information, but not endorse or oppose any propositions. 	
<p>SB 1 Multimodal Options Fund / Debra Perkins-Smith (CDOT Division of Transportation Development)</p>	<p>Presentation</p> <ul style="list-style-type: none"> • SB 1 passed earlier this year and included a Multimodal Options Fund whose distribution would be based on a formula developed by the TC in consultation with the STAC, TRAC, and other pertinent groups. • CDOT staff has suggested that rather than coordinate separately with each of these groups it would be easier to form a single committee with 7-9 members each representing one of these groups. Those representatives will each report back to their groups to assure a broader consensus. • Staff is requesting feedback on whether you would like to go the committee route, and if so, what role and representation the STAC would like to have on that. <p>STAC Comments</p>	<p>No action taken.</p>

	<ul style="list-style-type: none"> • <u>Sean Conway</u>: I think that a committee makes sense, the question is how big it should be and who should be on it. Everyone will want a seat of course, so figuring out how to limit it will be important. In terms of STAC representation, I would suggest that our Chair participate at the least. • <u>Thad Noll</u>: I also agree that a committee makes sense, I think that 7-9 is a good size for that, and we also need to make sure that there is both urban and rural participation in the group. • <u>Vince Rogalski</u>: I think it is also important to make sure that we are representing the different modes – the bike people, the trails people, etc. So we need geographic and modal balance. • <u>Jacob Riger</u>: I also support the idea of a committee, and I would ask CDOT to bring a proposed list of participants to STAC and the other pertinent groups to review, rather than us trying to identify them now. While I agree in principle that 7-9 is a good size, I also recognize that you have a lot of pressure to represent different groups, so 13-15 may be more realistic if we include geographic diversity, different modes, etc. • <u>Debra Perkins-Smith</u>: We also recognize that Proposition 110 includes a similar multimodal funding element, so we will plan to convene this group after the elections given that its task may change at that point. • <u>Norm Steen</u>: Who will the Committee advise? • <u>Debra Perkins-Smith</u>: This group would work with the TC to develop a distribution formula, and the TC members would have the final decision-making authority. 	
<p>Buy America Waiver Update / Debra Perkins-Smith (CDOT Division of Transportation Development)</p>	<p>Presentation</p> <ul style="list-style-type: none"> • FHWA is still assessing the Buy America Waiver process but we have no indication of their status or timeline. • In the meantime, Weld County has a number of vehicle purchase projects that require waivers and are currently stuck in limbo. CDOT is looking at a way to swap non-CMAQ funds for those projects, allowing them to be completed. • For other CMAQ funds without specific projects identified, we are instructing our partners not to select any new projects that would require a waiver. Any such projects selected will not be eligible for future fund swaps. 	<p>No action taken.</p>

STAC Comments

- Sean Conway: I don't want to put Jon from FHWA on the spot, but obviously in Weld County we've had to put a number of projects on hold. We've learned that during that time there were some additional waivers given in other states. Elizabeth, can you clarify that?
- Elizabeth Relford: I believe that those were primarily in California that received waivers. What I'm not understanding on this is that the North Front Range has approved projects up through 2022, so I'm not clear on what year you're willing to do fund swaps for.
- Sean Conway: I guess my point is that we're perplexed about why entities in other states would be receiving waivers and we're not.
- Jon Cater: Just to be clear, we've been given very clear information that there are not going to be any more waivers. If you hear any different than that please let us know.
- Michael King: The waivers that Sean is referring to were approved in mid-2017 and covered about 4 vehicles in California. In April 2018 there was a nationwide waiver that included a number of vehicles in Colorado. That waiver only covered submissions made up to the end of calendar year 2016. The remaining vehicles in Weld County, which total 23, were sent by the MPOs to FHWA Colorado after CY2016, but they were never forwarded from FHWA-Colorado to Washington, DC because by that time the central office was no longer requesting waiver submittals from the states. That's why those waivers are in that middle status.
- Debra Perkins-Smith: We would prefer not to sit on the funds.
- Sean Conway: We would as well.
- Elizabeth Relford: These are not arbitrary funds, we have to show a clear air quality benefit, so it's not easy to just re-allocate those to new projects. How are we supposed to deal with projects that have been selected but that CDOT for which CDOT is not willing to swap funding?
- Debra Perkins-Smith: We are leaving it to the individual MPO processes to determine how best to re-allocate funds. As you know, CDOT is not required to distribute CMAQ funds to the MPOs at all. In some ways it would be less complicated for us to just manage them at the statewide level. However, we like that our partnership with the MPOs allows local

	<p>decision-making, so we're trying to maintain that even in the face of this complication.</p>	
<p>STAC Statewide Plan Subcommittee on Formula Programs / Debra Perkins-Smith and Tim Kirby (CDOT Division of Transportation Development)</p>	<p>Presentation</p> <ul style="list-style-type: none"> • This discussion of Formula Programs is the culmination of a long process that is all leading up to the next Statewide Transportation Plan, which is starting later this year. • We start by working with the Division of Accounting & Finance (DAF) to develop Revenue Projections for the 25-year period of the plan. This step was completed earlier in the year. • That allows us to talk about Program Distribution, i.e. how those dollars get divided among our different fund types. • The STAC Subcommittee on Formula Programs has been working through each of these over the past months and today will be making recommendations to the full STAC. • Once the full STAC has developed its recommendations they will be submitted to the TC for the final decision. • Today we'll talk about a few different fund types: <ul style="list-style-type: none"> ○ Metro Planning Program ○ Surface Transportation - Metro (STP-Metro) ○ Transportation Alternatives Program (TAP) ○ Congestion Mitigation & Air Quality Improvement Program (CMAQ) <p>Presentation: Metro Planning Program</p> <ul style="list-style-type: none"> • \$8.5 million per year to address MPO Planning needs. • Required allocation to the MPOs, with some state discretion. • The STAC Subcommittee recommends keeping the existing formula, raising the "floor" for smaller MPOs, and then revisiting this topic ahead of the 2050 SWP. <ul style="list-style-type: none"> ○ GVMPO's allocation will rise from \$340,000 to \$350,000. ○ PACOG's allocation will rise from \$350,000 to \$360,000. <p>STAC Discussion: Metro Planning Program</p> <ul style="list-style-type: none"> • <u>Norm Steen</u>: What is this funding used for specifically? 	<p><i>The STAC voted to support the Subcommittee's recommendations on Metro Planning, STP-Metro, TAP, and CMAQ.</i></p>

- Jacob Riger: This is for things like staff time, planning activities, etc. It's not actually used for projects like most of the other fund types.
- Norm Steen: Do you think that some MPOs are growing at a faster rate than others and may require a larger portion than what they currently receive?
- Jacob Riger: Well of course that does occur, for instance DRCOG has been growing rapidly, but as a group we felt that it was important to keep everyone whole in this process even apart from the differences between individual MPOs.
- Tim Kirby: I would also point out that even in smaller areas there are pockets of growth that need to be addressed, such as the Colorado Mesa University out in Grand Junction.
- Peter Baier: Yes, I agree with that. We have a small staff to begin with so our goal was to protect them and maintain our momentum.

STAC Action: *Metro Planning Program*

- Motion to approve the STAC Subcommittee's recommended formula for CMAQ.
 - Motion seconded.
 - Motion carries.

Presentation: *Surface Transportation - Metro (STP-Metro)*

- \$54 million per year to address metro area transportation issues.
- Required sub-allocation to MPOs that are TMAs on the basis of population.
- CDOT has no real control of STP-M, which is determined by the federal formula.

STAC Discussion: *Surface Transportation - Metro (STP-Metro)*

- No discussion

STAC Action: *Surface Transportation - Metro (STP-Metro)*

- Motion to approve the STAC Subcommittee's recommended formula for STP-Metro.
 - Motion seconded.

	<ul style="list-style-type: none"> ○ Motion carries. <p>Presentation: <i>Transportation Alternatives Program (TAP)</i></p> <ul style="list-style-type: none"> ● \$12.5 million per year to implement alternative transportation and environmental mitigation projects ● 50% can be spent anywhere in the state <ul style="list-style-type: none"> ○ TC determines allocation of this portion ● 50% is allocated by population <ul style="list-style-type: none"> ○ 50% (25% of total) is allocated to TMAs based on population ○ 50% (25% of total) is that is allocated to CDOT regions based on population ● The STAC Subcommittee recommends keeping the current formula of 45% VMT, 40% Lane Miles, and 15% Truck VMT. <p>STAC Comments: <i>Transportation Alternatives Program (TAP)</i></p> <ul style="list-style-type: none"> ● <u>Norm Steen</u>: How do we know the TMA populations if that isn't a census figure? ● <u>Tim Kirby</u>: Each MPO maintains those individually, I will ask them to explain that. ● <u>John Liosatos</u>: We get our control totals from the State Demographers Office then run them through our model on where we expect that growth to occur using UrbanSIM. ● <u>Jacob Riger</u>: Our system is quite similar, and it's not a black box, we're required to show our process in our MPO plans. ● <u>Vince Rogalski</u>: I would also remind you that this is a competitive process for the funds – it used to be competitive within a given TPR and now it's competitive within a given region. ● <u>John Liosatos</u>: One final comment – between now and the next SWP we might want to look at the possibility of flexing these funds to another program and using an equivalent amount of FASTER for these projects, thereby saving the locals from going through federal requirements. I believe there is language that allows for this with TAP funding. ● <u>Debra Perkins-Smith</u>: We are in agreement with you on that, and right now we are doing a handful of “De-Federalization” projects to assess how much time that saves for people. If the results are promising then we will 	
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	<p>pursue it further. However, if we do that it would likely be by individual project, rather than a whole program.</p> <ul style="list-style-type: none"> • <u>Peter Baier</u>: I would also ask staff to talk with the TC about enhancing that funding, since everyone always wants these types of dollars and I think we could easily use 4 to 5 times as much in this fund type, if it were available. <p>STAC Action: <i>Transportation Alternatives Program (TAP)</i></p> <ul style="list-style-type: none"> • Motion to approve the STAC Subcommittee’s recommended formula for TAP. <ul style="list-style-type: none"> ○ Motion seconded. ○ Motion carries. <p>Presentation: <i>Congestion Mitigation & Air Quality Improvement (CMAQ)</i></p> <ul style="list-style-type: none"> • \$50 million per year to support activities that produce air quality benefits • Required to go to air quality non-attainment or maintenance areas for Ozone, Carbon Monoxide, and PM 10 (with a few exceptions). • Previous SWP allocation was a \$30 million statewide program, then 80% for Ozone non-attainment areas, 15% to CO Maintenance areas, and 5% to PM 10 Maintenance areas. • There is an overall focus on non-attainment areas rather than maintenance areas since they are more serious. <ul style="list-style-type: none"> ○ Ozone & CO pots are distributed 75% based on population and 25% based on VMT. ○ PM-10 divided 50% - 50% between urban and rural areas. • The STAC Subcommittee recommends keeping the current Ozone and CO methodology. <ul style="list-style-type: none"> ○ Also believes that the current minimum allocation of \$200,000 to PM 10 areas is good. ○ Recommends not reducing funding levels in non-attainment areas. • The STAC Subcommittee recommends that as CO Maintenance and PM 10 Maintenance eligibility expires, those funds should be redirected to a new Statewide “Advanced Mobility” project, while DRCOG and NFRMPO CO Maintenance funds should be shifted to their respective Ozone pots. <p>STAC Comments: <i>Congestion Mitigation & Air Quality Improvement (CMAQ)</i></p>	
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- Thad Noll: It seems odd to me that if we're trying to reduce emissions that the formula is based 75% on population versus 25% on VMT. Isn't VMT what actually causes the problem?
- Debra Perkins-Smith: I think the theory is that you're trying to address person-trips, not just vehicle trips. As to the split, I don't recall the exact logic for that.
- Norm Steen: How does this relate to Volkswagen Settlement funding? Was that considered at all as a part of the formula?
- Debra Perkins-Smith: We had the Alt Fuels Colorado Program for the past 4 years, and we haven't had to come back to this group to request more funding because now we have VW Settlement funding available to continue that effort.
- Elizabeth Relford: The Alt Fuels Colorado Program was funded originally with \$30 million in CMAQ funds that we had been holding aside for future non-attainment areas that we anticipated at that time, but that never came to fruition. Back in 2013 we redirected those funds to the statewide pool for Alt Fuels Colorado.
- Debra Perkins-Smith:
- Norm Steen: Was the conclusion that all of the VW Settlement funds would go to the Alt Fuels Colorado Program, or would some of that still be distributed to other purposes statewide.
- Michael King: Because the VW Settlement funding are not federal dollars, they are more flexible than CMAQ. As a result we are spending those dollars statewide, divided into a few different pots that are not limited to the non-attainment and maintenance areas in the way that CMAQ dollars are. So one \$18 million portion of the VW Settlement will go towards a statewide version of Alt Fuels Colorado, another \$18 million tranche will be used for DTR's alternative fuel transit bus program, \$10.3 million will go to electric vehicle charging projects, and the remainder will be used for other projects including DERA, freight switchers, airport ground support equipment, administration, etc. We are also keeping some funds in a flexible reserve so we can add them to whichever of the above pools sees the greatest initial demand. All of those project types are set by the settlement – VW dollars are more flexible in terms of geography but less

	<p>flexible in terms of the project types, since those are defined by the settlement.</p> <ul style="list-style-type: none"> • <u>Norm Steen</u>: But all of those project types would be eligible under CMAQ, correct? • <u>Michael King</u>: No, based on both geography and project type a lot of those projects wouldn't be eligible for CMAQ funding. Our state philosophy is to make VW Settlement funds as widely available as possible, so we're targeting those dollars to the parts of the state where CMAQ funds are not available and using CMAQ funding in the areas where they are. • <u>Andy Pico</u>: That's good to hear, I was wondering about the status of those VW Settlement funds. I would appreciate an update on that in the future. • <u>Michael King</u>: As a very brief update right now I will let you know that we recently had our first round of Alt Fuels Colorado that incorporates VW funds close on September 27th, on October 1st we will open our first round of Charge Ahead Colorado using VW funding, and then on October 15th the Division of Transit & Rail will open their first call for projects using that portion of VW funding. So those dollars are beginning to move out the door and we will bring you future updates on that topic since as I mentioned there are a lot of areas of the state that are eligible for these projects now which weren't under our previous CMAQ funding sources. • <u>Andy Pico</u>: Thank you. On the topic of the Advanced Mobility funds, where and how would those be distributed? • <u>Amy Ford</u>: We would target those inside the existing CMAQ-eligible areas as indicated by the map. We would align these with major corridors within the areas through our Smart Mobility Plan process to make sure we're hitting those key areas. These would be things like adaptive traffic signals that have the capacity to communicate with new vehicles that have that capability (which will be appearing on the market in 2021) in order to create smoother travel based on real-time conditions. This funding would be available starting in 2020, so that would allow us to prepare for those new vehicles before they arrive on our streets. • <u>Heather Sloop</u>: I'm concerned that we would be losing PM 10 funds to invest in this, which is a lower priority for us. 	
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- Marissa Gaughan: That’s a good point of clarification. You would receive your PM 10 funds through the end of your 10-year Maintenance period, and the dollars would only shift afterwards.
- Elizabeth Relford: For those of us who were pulled into the ozone non-attainment boundary, I struggle with the idea that we’re putting funding out of that area. If we’re trying to get into attainment for ozone, why are we putting funds elsewhere? I understand that you’ll still get air quality benefits regardless of where the lines are drawn, but I think we have to think strategically as a region on this.
- Peter Baier: We are not in one of the CMAQ-eligible areas, but it would be helpful for CDOT to keep us up to date on your equipment standards for these new signal technologies so that we can remain in alignment with you.
- Amy Ford: Yes, we are already working on that through our Smart Mobility Plan effort and have also talked about potentially using some of the Proposition 110 funding to establish a local program to help communities prepare for this CAV transition.

Presentation: *Congestion Mitigation & Air Quality Improvement (CMAQ)*

- CDOT TSMO is building a statewide V2X “brain” that will allow us to input, process, and output CAV data – an ecosystem that we can plug new equipment and vehicles into moving forward.
- We’re on Phase 2 of that process.
- Our planning for this includes estimates for fuel use reduction that would result from such a system.
- The FAST Act makes this type of activity eligible under CMAQ, but so far no state has figured out how to estimate the benefits. CDOT is doing that.
 - The full-build of the “Internet of Roadways” in the Denver Metro is estimated at \$18 million.
 - The air quality benefits of CAVs are based on the increased efficiency of the driving and resulting fuel savings.
 - CDOT used a TOPS BC analysis and found an estimated 61-1 benefit-cost ratio from this program (including safety, travel time reliability, air quality, and more).

	<ul style="list-style-type: none"> • I hope that this helps to clarify why we think this project is in clear alignment with the goals of the CMAQ funding. <p>STAC Comments: <i>Congestion Mitigation & Air Quality Improvement (CMAQ)</i></p> <ul style="list-style-type: none"> • <u>Elizabeth Relford</u>: How does this align with the STIC program? Don't they fund things like this advanced technology? • <u>Amy Ford</u>: You're right about that, however I think that in some sense this is not as far ahead technology-wise as what STIC tends to fund. Rather, it's real technology that exists now. Also, STIC grants tend to be in the \$100,000 - \$200,000 range, whereas our scope for this build out is \$18 million, so the scope of the project doesn't really fit well with STIC. • <u>Tim Kirby</u>: This is good conversation, and I want to remind everyone that our key principle throughout this process was to hold existing allocations harmless, so in any case that we're creating something new, like this Advanced Mobility program, we're only doing that once someone moves out of their current CO / PM 10 eligibility. I would ask some of the Committee members to speak to their perspective on that. • <u>John Liosatos</u>: I recall the discussing being that since the overall funding to the state doesn't change, once an area comes into attainment it should be used in a way that provides a benefit to the entire state. All of the areas that are in non-attainment or maintenance will be held constant, whereas other funds that are newly available are used in a way that is good for everyone and gets us ahead of the game in terms of CAV technology coming online. I remember that in our earlier conversations DRCOG had some concerns so we made sure to hold them harmless and this is what we came up with at the end of that discussion. <p>STAC Action: <i>Congestion Mitigation & Air Quality Improvement (CMAQ)</i></p> <ul style="list-style-type: none"> • Motion to approve the STAC Subcommittee's recommended formula for CMAQ. <ul style="list-style-type: none"> ○ Motion seconded. ○ Motion carries. <p>Presentation: <i>Conclusion</i></p>	
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	<ul style="list-style-type: none"> • Staff recommends that we end here for today and continue the discussion of other fund types at our October STAC Meeting. • We will package the decisions made today with those we make in October. • After that, the STAC recommendations will be submitted to the TC for consideration all at once. 	
<p>Other Business / Vince Rogalski (STAC Chair)</p>	<p>Presentation</p> <ul style="list-style-type: none"> • The next meeting of the STAC will be on October 26th from 9:00 AM - 12:00 PM at CDOT Headquarters (2829 W. Howard Place, Denver 80204). 	<p>No action taken.</p>

STAC ADJOURNS

DRAFT

The Transportation Commission Workshops were Wednesday, October 17, 2018 and the regular meeting was Thursday, October 18 2018. Both the workshops and the regular meeting took place at the Colorado Department of Transportation Headquarters at 2829 W. Howard Place, Denver, CO 80204.

Documents are posted at <http://www.coloradodot.info/about/transportation-commission/meeting-agenda.html> no less than 24 hours prior to the meeting. The documents are considered to be in draft form and for information only until final action is taken by the Transportation Commission.

Transportation Commission Workshops

Wednesday, October 17, 2018

1:00 pm to 4:45 pm

Attendance: 10 Commissioners attended the workshops; Commissioner D'Angelo was not in attendance.

[Right of Way Workshop \(Jared Esquibel for Josh Laipply\)](#)

Purpose: The purpose of the workshop was to discuss two right-of-way (ROW) acquisition (negotiations), two for settlement affirmations.

Action: Prepare to act on agreed upon proposed acquisitions and settlement condemnations at the regular Commission meeting.

The two projects with requests for authorization of property acquisitions for October 2018 included:

- Region 2
 - US 50 Pueblo West Pond E, Project Code 22123
- Region 3
 - Replacement of Variable Message Sign No. 9 –Loma, Project Code 20984

The two projects with requests for settlement confirmation for October 2018 included:

- Region 3
 - SH 141 Mesa County – Traffic Signal Installation, Project Code 21193
 - US 34 Bridge over North Fork Colorado River, Project Code 21010

Discussion:

- Jared explained that the Region 4 condemnation project originally in the packet for US 34 & US 36 FLAP Estes Park Couplets was pulled from the consent agenda at the request of the Region.
- No comments were raised by the TC regarding the right-of-way acquisition requests, or the settlement confirmations.

[Budget Workshop \(Jeff Sudmeier\)](#)

Purpose: to discuss with the Transportation Commission (TC) the FY 2019-20 Proposed Annual Budget and FY 2019-20 Narrative Budget.

Action: The TC is being asked to review the FY 2019-20 Proposed Annual Budget (One Sheet) and the FY 2019-20 Proposed Budget Allocation Plan (Narrative Budget), and to provide feedback to the Department in preparation for the approval of the FY 2019-20 Proposed Budget in November 2018. The TC will be asked to adopt the final budget after revenue forecasts are updated in March 2019.

Discussion:

- Jeff highlighted the proposed changes to the FY 20 annual budget, which were primarily branding and nomenclature changes.
- An overview of the FY 2020 annual budget approval process was provided.
 - In November, the TC will approve the FY 20 budget to be submitted to the state.
 - In February 2019 will come back to TC to review further updates resulting from the Work Plan budget process.
 - TC will approve the final budget in March 2019.
- Commissioner Hofmeister expressed concerns over the decrease in the Maintenance Level of Service (MLOS) budget. Jeff explained that the amount for asset management and maintenance is still \$755 million and that an additional \$100 million of FY 19 from SB 1 funds was added in.
- Commissioner Scott noted the increases now are temporary (2 years for SB1), and wants to be sure other plans are being considered.
- Several options where the TC is permitted flexibility to spend and move funds were described. Staff advised the TC to wait on acting on this until February 2019, when more is known about revenues.
- Commissioner Thiebaut supported increasing funds for asset management. Question was whether or not we need to decide on how to spend SB 1 funds now or wait until next year. The answer is the TC may wait until next year.
- Commissioner Hall supported the idea of waiting until next year to decide.
- CDOT Executive Director, Mike Lewis, noted that no decisions are being requested today, just brainstorming with TC on potential options, and how they compare.
- Jeff also discussed a preview for a decision tomorrow that is an item on the agenda for SB 267 with a proposed project list on how to spend the first year of SB 267 funds – this list was vetted previously with the TC. Projects are based on readiness for year one. Changes in allocations since November are shown also.
- Commissioner Thiebaut supported voting for the resolution regardless of the upcoming election. Projects have merit, let's get things going. In terms of allocation of reserve funds, work on a backstop for the worst-case scenario, like the I-25 Gap project, we have to move forward.
- Commissioner Scott noted how the funding for the Gap project is relying on the passing of the propositions – wanted to know if this is common knowledge. Outsiders believe funding is there without propositions passing.
- Herman Stockinger, CDOT Deputy Executive Director, noted that since the Gap project is out there already, there is momentum, and a strong incentive exists to get funding for this project, regardless of what happens.
- Jeff noted that the project list for tomorrow's approval is \$44 million. Will still come back to TC to discuss the spending of the extra funds that were unanticipated.

[TC Program Reserve/Redistribution Allocation Workshop \(Jeff Sudmeier\)](#)

Purpose: To discuss with the TC the Fiscal Year (FY) 2017-18 revenue reconciliation, the resultant TC Program Reserve Fund balance, and options for the allocation of funds.

Action: No action is requested this month. Staff requests TC direction on options relating to the allocation of TC Program Reserve funds, including additional funds resulting from FY 2017-18 revenue reconciliation and FHWA redistribution.

Discussion:

- Jeff discussed ideas and options for distribution of the revenue reconciliation that provides extra dollars to CDOT.
- In summary, the Transportation Commission Contingency Reserve Fund (TCCRF) has \$214 million, normally keep about \$40 million there.
- Jeff provided an overview of existing planned draws from the TCCRF, and existing commitments. Staff suggested TC consider payment of these items first with extra funding.

- A back and forth discussion among the Commissioners occurred. Commissioner Thiebat felt we may or may not have flexibility on how to spend funds with planned draws and existing commitments, but we may want to move in another direction.
- Commissioner Gifford supported the idea of starting with planned draws and existing commitments.
- Commissioner Scott liked the concept of focusing the funding on safety - CDOT's number one focus as noted by Commissioner Thiebat previously.
- Funding of advanced mobility projects could increase safety substantially, but what about now.
- Commissioner Hofmeister strongly expressed to not distribute funds throughout the Department but spend the money on improving the roads. Not comfortable with spending on ITS at this point. For example, \$8 million is needed for a passing lane on SH 40 – we could do this project with this money.
- Jeff pointed out that previous discussions on this topic focused on spending dollars on one-time needs not programs or projects. – but instead pay for things not regularly budgeted.
- Commissioner Peterson noted that some items do not balance, e.g., safety improvements vs. data collection.
- Mike Lewis noted this is the limited funds for a lot of needs scenario; we come back to Policy Directive 14 for all assets, to identify which investments move the needle for performance.
- It was noted that Rest Areas get a lot of public attention when they close and public outcry occurs that CDOT needs to respond to.
- Debra Perkins-Smith reminded the TC that in six months or so staff could be coming back to the TC with an emergency funding request, and this should be considered.
- Commissioner Hofmeister like the idea of considering having funds on reserve for emergencies – take from TCCRF after emergency occurs is better investment of dollars.
- Commissioner Connell stressed the importance of striping improvements along roadways.
- Commissioner Stuart agreed that our customers, via the telephone town halls, expressed major concerns with striping, rest areas, and what we are doing to prepare for the future.
- After much back and forth discussion on whether to move forward on a decision or not, Mike Lewis requested the TC to agree to come together in November to engender further discussion.

[CDOT Safety Programs Primer \(Darrell Lingk, Ryan Rice, Charles Meyer\)](#)

Purpose: Discuss with the TC in more depth a presentation of the CDOT safety programs, via a request during the August 2018 Workshop.

Action: Information only.

Discussion:

- Charles Meyer, CDOT Traffic Safety Manager, provided an overview of key planning efforts pertaining to safety – the Strategic Highway Safety Plan (SHSP), that uses 4-5 years of crash data to assess safety and develop strategies to improve safety.
- A key safety funding program is the Highway Safety Improvement Program that provides \$30 million annually to pay for safety improvement projects. The average cost/benefit ratio for these projects is roughly 2.62.
- Discussion on this new SHSP will be very different from the previous plan; crashes have increased and more distracted driving is a major concern.
- Data has about a two-year lag for consistent and clean data; more current data is available, but it is not accurate. Initially comes for the Department of Revenue.
- Level of Safety Service is one method and measure for comparing similar roadways and identification of the potential crash reductions that may occur along a corridor or an intersection.
- Mike Lewis noted that most causes of crashes are not something that CDOT can influence or move the performance needle on, because most are behaviorally based; however, connected vehicles could provide a leap forward in reducing crashes.
- Darrell Lingk, CDOT Safety Program Manager, provided a description of the safety campaigns that CDOT leads in an effort to change behavior. A Problem Identification Report is published annually that

highlights causes for crashes. CDOT receives \$2.7 million in federal funds and \$1.2 million in state funds for education and enforcement programs to endeavor to increase safety. National Highway Transportation Safety Administration provides federal funds of \$12 million for education campaigns.

- Commissioner Thiebaut requested that any results of recently completed safety plans or other ongoing activities be shared with the TC as soon as possible.
- Commissioner Scott asked Charles if one thing could be done with the most impact now, what would it be. Charles responded that a primary seatbelt law be passed, which CDOT does not have much control over.
- Commissioner Gilliland noted that this was taken to the state legislature last year but it did not pass; need a strategy with legislators to get this through.
- Commissioner Gifford noted that the concern was that this law would provide another rationale for stopping motorists where often civil rights have the potential to be violated.
- Commissioner Stuart asked about bicycle safety data; it was explained that the CDOT Bicycle/Pedestrian unit reports on this.
- Commissioner Scott requested CDOT safety staff to come back to TC with maximum impact strategies for safety.
- Commissioner Hofmeister noted that rumble strips in certain instances cause road deterioration along the joint, especially when standing water covers joints. Please consider finding a solution to this problem.

[Colorado Freight Plan \(Debra Perkins-Smith and Tim Kirby\)](#)

Purpose: To provide the TC with an overview and update on the development of the Colorado Freight Plan (CFP).

Action: Information only.

Discussion:

- Staff to send out a link to the draft plan next week to the TC, when it is available.
- Will potentially discuss in more detail with TC next month, if necessary.

[Mobility Choice Blueprint Update \(Debra Perkins-Smith\)](#)

Purpose: To provide the TC members with an overview and update of the Mobility Choice Blueprint Project.

Action: Information only.

Discussion:

- Debra Perkins-Smith introduced the consultant Project Manager of the Mobility Blue Print project, Rick Pilgrim of HDR.
- Rick provided an overview of the Mobility Choice Blueprint Project, which is a collaborative effort between CDOT, Denver Regional Council of Governments (DRCOG), Regional Transportation District (RTD) and the Denver Metro Chamber. This project group is scheduled to disband (sunset) as of December 31, 2018.
- The unified vision is a partnership of public and private organizations focused on changing how we move, and making the Denver metro area a better place to work and live.
- The purpose is to come together to provide recommendations to encourage the most effective technologies and approaches, maximizing mobility to meet our long-term goals of enhanced quality of life and increased economic vitality across the metropolitan region.
- The hope is that individual entities, working together will implement the plan by leveraging funds, and engaging the private sector.
- This project used a ground up approach to getting input, and compared scenarios for trends, with preliminary and final recommendations to be developed including policies and programs.
- A Draft Mobility Choice Blueprint document is due in November 2018, we will come back to the TC to share and discuss this document in the new year.

- A project website exists with a quiz for stakeholders. Three project deliverables will include a brochure, full document and a 50-page technical report with appendices.
- The looming problem is that as autonomous vehicles (AVs) enter the market, depending on how ownership plays out, major increases in vehicle miles traveled (VMT) could result from additional populations being able to be driven, along with the potential for zero occupancy vehicle trips being generated as vehicles drive to parking/storage destinations. Need to plan ahead to get policies in place to encourage shared AV ownership and discourage zero occupancy trips.

[FHWA Competitive Bridge Grant Program Progress Briefing \(Matt Cirulli & Mike Collins\)](#)

Purpose: To provide the TC information on the Notice of Funding Opportunity (NOFO) released by the FHWA on September 5, 2018 for the FY18 Competitive Highway Bridge Program.

Action: Information only.

Discussion:

- Mike Collins noted that the key ask from the TC next month will be for \$15 million to provide match funds for a Rural Bridge grant application.
- Grant was announced on September 5, 2018.
- FHWA grant criteria are economic vitality, life cycle cost, and project readiness.
- Three project bundles have been identified for submittal:
 - Bundle 1 – Harlan and SH 93 along I-70. Good P3 opportunity with resiliency opportunity. The major safety risk is that the concrete batch is at end of its useful life.
 - Bundle 2 – Region 2 – Timber structures along frontage roads, this is a low cost treatment to replace with culverts – project is scalable and alleviates existing high maintenance costs.
 - Bundle 3 – Eastern Plains – R1 and R4 load restricted bridges.
- If CDOT is selected for a grant it could potentially double the amount of bridges CDOT could address leveraging grant and Bridge Enterprise (BE) funding.
- Mike Lewis noted that we could get \$4 for every \$1 spent on this program; 25 states are eligible and we understand only 15 states are submitting applications. Good chance exists for CDOT to be selected.
- Mike McVaugh, CDOT Region 5 Regional Transportation Director, noted that funding as a result of partnership also ranks higher, so the TC match would help elevate CDOT's submittal.
- Commissioners Connell, Gifford and Hofmeister all expressed support for providing the funds for these grant submittals.

[Managed Lanes Discussion \(Amy Ford and Lisa Streisfeld\)](#)

Purpose: Managed lanes are comprised of a set of operational strategies to improve traffic flow on highways in response to changing conditions. These strategies reduce congestion, improve safety, and improve reliability. Policy Directive number 1603.0, concerning "Managed Lanes," was approved in December 2012 by the Colorado Transportation Commission. As part of Section VII., Implementation Plan, "CDOT staff shall develop guidance to support this Policy Directive." This workshop provides an update to the TC on the preparation of the Colorado Department of Transportation Managed Lanes Guidelines document.

Action: Information only.

Discussion:

- The purpose of the guidance is to comply with the implementation plan outlined in PD 1603.0.
- Guidance will provide information regarding how and when CDOT should consider using managed lanes.
- Managed lanes are more than just toll lanes, they are a number of tools to manage transportation demand in real time. It is a method to enhance roadway capacity.

- Part of the guidance is the creation of a decision toolbox – this check list will help to determine if and when it makes sense for a given project. Also provides a method to document how and why the decision is made to include or not include managed lanes.
- Commissioner Stuart recommended modifying one of the questions on the check list related to existing transit – should include consideration of areas without existing transit that desire it, but don't have it due to lack of funds.
- Guidance will include and refer to data that is obtainable and feed into performance measures.
- Commissioner Scott asked if CDOT is already considering managed lanes in projects, without having the guidance in place.
- Mike Lewis explained that the guidance will make consideration of managed lanes more systemic, but its consideration is incorporated into decisions now.
- Commissioner Thiebaut thanked staff for working on this – usually the public only sees managed lanes as toll lanes – need education materials to dispel this misconception.
- Lisa Streisfeld, CDOT Mobility and Operations Planning Performance and TDM Manager, noted that the intent of the guidance is to provide a proper definition for managed lanes, and the various types that include express toll lanes. An idea is to provide photos of the different types of managed lanes to be more clear.
- Commissioner Thiebaut noted that the managed lane presentation from November 2017 that went to the TLRC is another good resource to consider, although some the managed lane status information may need updating.
- Commissioner Gilliland noted that the guidance will provide consistency in evaluations which is good and important.
- Debra Perkins-Smith also noted that the checklist is helpful, and that the NEPA process will consider managed lanes and is part of the checklist too.
- Commissioner Peterson requested an edit related to the managed lane going to TC for consideration.
- Commissioners noted that for major highway projects, the managed lane evaluations should be presented to the TC.

Technology Committee (Amy Ford and Lisa Streisfeld)

Purpose: Provide the TC an update on several key RoadX initiatives.

Action: Information only.

Discussion:

- Amy Ford, CDOT Advanced Mobility Chief and Communications Director, provided some updates on the RoadX projects. CDOT is moving on an EasyMile AV shuttle second request. The first request was a demonstration of the shuttle back in December 2017. EasyMile is a first and last mile AV shuttle service that is working in partnership with RTD, Panasonic, City and County of Denver, DEN, and a private land developer with a project occurring in the Panasonic campus area. The Mobility Task Force is working on a six-month pilot of phase 1 to begin early November 2018 to run a 1.5 mile loop under an RTD Route 61 AV moniker (with an AV ambassador onboard to monitor movement) between the Pena Station and Park-N-Ride Lot to the Panasonic Building. The second phase would be a shuttle service between Pena Station to a bus stop at Tower Road and 61st Avenue. A private land development is occurring in the vicinity of the phase 2 trip, and EasyMile would be integrated into the private land development plans for this area.
- Mike Lewis noted the idea with this Advanced Mobility Task Force is to help to ensure that community x doesn't have different AV guidelines from community y. This effort will assist in having a consistent approach to moving forward, which is important.
- Peter Kozinski is leaving CDOT, we are figuring out next steps for RoadX over the next three years. Rebecca White is taking Peter's place to lead the RoadX program.

- Lisa Streisfeld provided an overview of a (Rapid Travel) State Benefits and Opportunity Study to determine a framework for how CDOT would support and help with providing opportunities for these technologies to evolve. Working to consider how to plan and implement these new technologies – e.g., Hyperloop, SkyTran, and Arriva.
 - Would need to determine CDOT’s role, and how public private partnerships would participate.
 - Arrivo has test in Las Vegas where cars get on sleds for rapid travel.
 - Elon Musk’s Boring Company is testing underground rapid travel in Chicago.
- Commissioner Stuart noted that US 36 group was contacted by the Boring Company to consider rapid travel under US 36.
- Commissioner Gilliland noted that this is all very exciting, but asked how far should TC and CDOT play in this before the technology occurs.
- Commissioner Scott asked about leveraging efforts with other states to keep costs down for this type of work.
- Mike Lewis explained that through the RoadX program Colorado and CDOT have notified tech companies that we are open for business, to entice testing here. We are setting a framework for when these technologies eventually come along, and determining how to make decisions, identify challenges and opportunities. We are setting the stage to ask questions.
- Amy noted that CDOT is part of a multi-state coalition to talk about this; other states are working on this.
- Commissioner Gilliland noted that she supports what RoadX has brought to us, with this feasibility study and looking at various technologies – as we move forward we need to understand how CDOT continues to play a role in this. Mostly related to next steps.
- Amy noted that the TC will be kept informed and we will continue conversations with the TC on this.
- Commissioner Thiebaut noted that there will be a need to reach out to the state legislature to deal with interstate issues at some point.
- Mike Lewis noted an example of high speed rail in Florida – the Brightline that is a \$3 billion project that is all privately owned. This is an example of a large private industry investment in transportation.

Transportation Commission Regular Meeting Thursday, October 18, 2018, 9:30 am – 11:30 am

Call to Order, Roll Call: Ten Commissioners attended with Commissioner D’Angelo excused.

Comments of Individual Commissioners

- Commissioner Zink noted a thank you from the community of the Town of Silverton, the town was very grateful that the road to their town was kept open during the recent fire and rock fall event. Commissioner Zink held up a yellow diamond-shaped road sign that was presented to Commissioner Zink and CDOT from the town that read – *Thank you CDOT for keeping Silverton open!*
- Commissioner Gilliland mentioned attending several town hall meetings to discuss transportation needs and the Propositions 109 and 110. There is much confusion regarding the differences between the two ballots and any clarifications we can provide is a good thing.
- Commissioner Scott also expressed concerns and disappointment regarding the misunderstanding regarding the Propositions 109 and 110. We will be challenged if at least one passes to get the projects completed, and if not, we don’t get the funding.
- Commissioner Stuart noted the telephone town hall meetings and the variety of stakeholders that attended. Really appreciated hearing from the public and their ideas on how to make improvements. Thanked Mike Lewis for his participation and for taking the hard questions, answering comments by acknowledging what CDOT is doing in response to concerns, and/or providing the rationale for why CDOT can’t take action immediately. There is a major misconception regarding the distinction between what CDOT is responsible for and for what the Regional Transportation District (RTD) is responsible. Thanked CDOT staff and the public for their participation.
- Commissioner Connell recognized Herman for traveling to attend meetings during a blizzard. Press in her area is generally supportive of Proposition 110. There is not much time left to get the word out.

- Commissioner Hall confirmed the confusion between CDOT and RTD responsibilities; attended a meeting in the remote area of Gateway Colorado. Getting the word out about the transportation propositions.
- Commissioner Hofmeister had no report out this month.
- Commissioner Peterson noted that he attended town halls and really enjoyed them. There is a misunderstanding that locals won't get any funding from Proposition 110, which is a concern as this is a broad-based funding mechanism for transportation.
- Commissioner Thiebaut attended a telephone town hall last night with Commissioner Scott and Karen Rowe, CDOT Region 2 Regional Transportation Director. Expressed concern that public sentiment is that they want their transportation issues resolved, but don't want to pay for it – they want something for nothing. Wrote articles on this topic for local papers. Thanked CDOT staff and appreciated their support.
- Commissioner Gifford mentioned attending telephone town halls, helped an employer explain Propositions 109 and 110 to their employees, as they were confused regarding the propositions. Commissioner Gifford also mentioned attending the Transportation Summit held the end of September.

Executive Director's Report (Michael P. Lewis)

- A new Central 70 Project Manager has been hired on at CDOT – Keith Stefanik. Welcomed Keith in his new role at CDOT.
- The American Association of State Highway and Transportation Officials (AASHTO) conducted a policy forum in September. Met to discuss what to propose for the upcoming Federal Authorization bill for transportation in 2020. Eleven topics covered: (1) Autonomous vehicles – CDOT is leader in this arena with the focus of the Advanced Mobility leadership of Amy Ford; (2) Data management and analytics – our Chief Data Officer is taking this on for CDOT; (3) Funding and finance – recognizing the gas tax is no longer a sustainable funding source – looking to road user charges; (4) Operations – CDOT's Mobility and Operations Division (a new name for TSM&O) is on the forefront of this; (5) Performance-based planning; (6) Planning – the Statewide Transportation Advisory Committee (STAC) at CDOT is an example of bottom up stakeholder participation that can serve as a national example; (7) Project delivery/emergency response; (8) Environmental clearance processes; (9) Research and innovation; (10) Safety; (11) Security and resiliency (Mike is chair of this AASHTO committee).
- The Transportation Summit was a great and successful event with over 750 attendees to learn and share ideas on transportation in Colorado. This event focused on the "power of partnerships".
- Attended the Resilience Innovations Summit and Exchange (RISE) event held in early October here in Denver. CDOT is not alone in their interest in this topic; CDOT is a leader for inland states – much work is being done for coastal states. Many CDOT staff gave presentations. Mike thanked staff for their work to make this event a success.

Chief Engineer's Report (Jared Esquibel for Josh Laipply)

- CDOT is preparing for the November 6 election, to get ready to put out projects in a short timeframe. This includes coordinating with the Colorado Contractors Association to make sure they have the staff and materials to fulfill upcoming contracts if one or both the propositions pass.
- CDOT is working on the potential bottlenecks for construction project schedules and how to streamline those processes, particularly the processes related to: environmental clearance, right-of-way acquisition, and contracts. Other work includes evaluating projects for bundling related to interstate projects.
- Recognized the work of the Bridge Enterprise and Staff Bridges on grant applications for a Rural Bridges grant program. Notice of the grant came in on September 5, with a quick turnaround time for submittals. CDOT is submitting three bundles (I-70 from Harlan to SH 93, Frontage Road Timber Bridges, and Eastern Plains load restricted bridges) of projects. Twenty-five states are eligible to submit applications and we hear that only 15 are intending on submitting applications. Hope to have a good chance to be selected for some grant money. Thanked the TC for their support to add matching funds to make the CDOT submittal even more attractive. This elevates our bridge program.

High Performance Transportation Enterprise (HPTE) Report (David Spector)

- Announced that Thad Noll, a member of the STAC and the HPTE Board is retiring and moving to Mexico. The HPTE Board said goodbye to Thad this month. Recognized Thad for all his work and service on the STAC and the HPTE Board.
- Central 70 won two public private partnership (P3) Awards for: Best Financial Structure, and Best Road, Bridge, and Tunnel project.
- A summary of a presentation provided to the Transportation Legislative Review Committee (TLRC) was provided regarding the SB 1801 legislation that requires HPTE to provide a report on the status of Managed Lanes in Colorado to the state legislature. First, Colorado is not the only state engaging in implementing managed lanes – showed a map of other projects within the nation. Colorado has approximately 200 miles of constructed or planned managed lanes. Not all managed lanes are toll lanes. Two in Colorado are not toll lanes. The mechanism to finance managed lane projects include: loans (e.g., TIFIA), leveraging grant funds, and private equity. Approximately \$3 billion of projects have been built in Colorado for 8-9 projects. Without managed lanes, only 1-2 of these projects could have been built. Polling conducted noted that folks originally opposed to managed lanes, after education, and familiarity, tend to support and use the managed lanes. Managed lanes have proven records of decreasing travel times and improving mobility.
- Commissioner Connell requested that a copy of this presentation be distributed to the TC and also the report. David agreed to send the presentation and when the report is available, to send that to the TC also.
- Commissioner Scott noted we need to reach out to individual legislators as this information is easily absorbed and is compelling.
- Commissioner Thiebaut noted that he initially has been against toll lanes as transportation should be equally available to all, but recognized that this is one tool in our toolbox to keep things moving, and increase mobility without raising taxes. However, there is a danger that the public perception may be that there is no need to raise taxes in general, which is a misconception.

FHWA Colorado Division Administrator's Report (John Cater, Division Administrator)

- The RISE Summit had impressive attendance, approximately 40 states were represented there; CDOT is a clear leader in this arena. CDOT staff did a great job presenting on many topics.
- The Transportation and Environmental Resource Committee (TERC) met recently. This is a great forum for state and federal transportation and environmental agencies to come together that does not exist in other states. Discussed how various state and federal agencies can work together if one or both propositions pass to expedite project delivery.
- Mike Lewis noted that the Sierra Club has announced their support of Proposition 110.
- The wildlife process between CDOT and Colorado Parks and Wildlife is an innovative partnership.
- FHWA is revamping its internal risk assessment process that is forthcoming. Also will now use the fiscal year based calendar – which is October 1 through September 31.
- FHWA is going through changes. A new Executive Director has been appointed, Tom Everett. Tom is an engineer with experience similar to CDOT's Chief Engineer. Tom is to serve in his new role soon.

STAC Report (STAC Chair, Vince Rogalski)

- STAC meeting in September was truncated due to STAC members also attending the Transportation Summit on the same day.
- Discussed SB 1 dollars and recommendations on how to spend these dollars. STAC is in the process of developing a report to forward to the TC for consideration.

- Buy America Waivers and the difficulties resulting for transit agencies not being able to purchase buses they need without a waiver. The Congestion Mitigation and Air quality (CMAQ) program has been impacted by this in particular.
- Commissioner Gilliland also expressed that this issue with Buy America Waiver is a real problem in her area and funding is often shuffled between programs as a result.
- STAC also discussed formula program distribution and has recommendations on several programs, but is not quite finished. Still working on final recommendations to submit to the TC.
- Vince noted that he was also appointed to be on the TC Statewide Transportation Plan (SWP) Committee.

Act on Consent Agenda – Approved unanimously on September 20, 2018 – Passed with nine yeases and Commissioner Thiebaut abstaining.

- [Resolution to Approve the Regular Meeting Minutes of Sept. 20, 2018 \(Herman Stockinger\)](#)
- [Policy Directive 4.0 Audit Division Policy \(Frank Spinelli\)](#)
- [Highway 263 Devolution to the City of Greeley \(Johnny Olson\)](#)
- [Approval of Updated Policy Directive 9.0 \(Kyle Lester\)](#)
- [2045 Statewide Plan Kickoff \(Debra Perkins-Smith\)](#)
- [ROW Acquisition Authorization Requests \(Jared Esquibel\)](#)
- [ROW Acquisition Settlement Requests \(Jared Esquibel\)](#)

Discuss and Act on 4th Budget Supplement of FY 2019 (Jeff Sudmeier) - – Passed on October 18, 2018 nine to one with Commissioner Hofmeister opposing.

Discuss and Act on SB267 Year 1 Projects (Jeff Sudmeier) – Passed unanimously on October 18, 2018.

Recognition: The American Road and Transportation Builders Association (ARTBA) 2018 “Women’s Future Industry Spotlight Award was presented to Meagan Brown, a previous CDOT intern, by CDOT Human Resources Director, Susan Rafferty, and Gary Vansuch, CDOT Director of Process Improvement. Gary spoke a few words honoring Meagan’s work, and offered his congratulations to Meagan.



COLORADO

Department of
Transportation

Statewide Transportation Advisory Committee Formula Program Recommendation

October 26, 2018

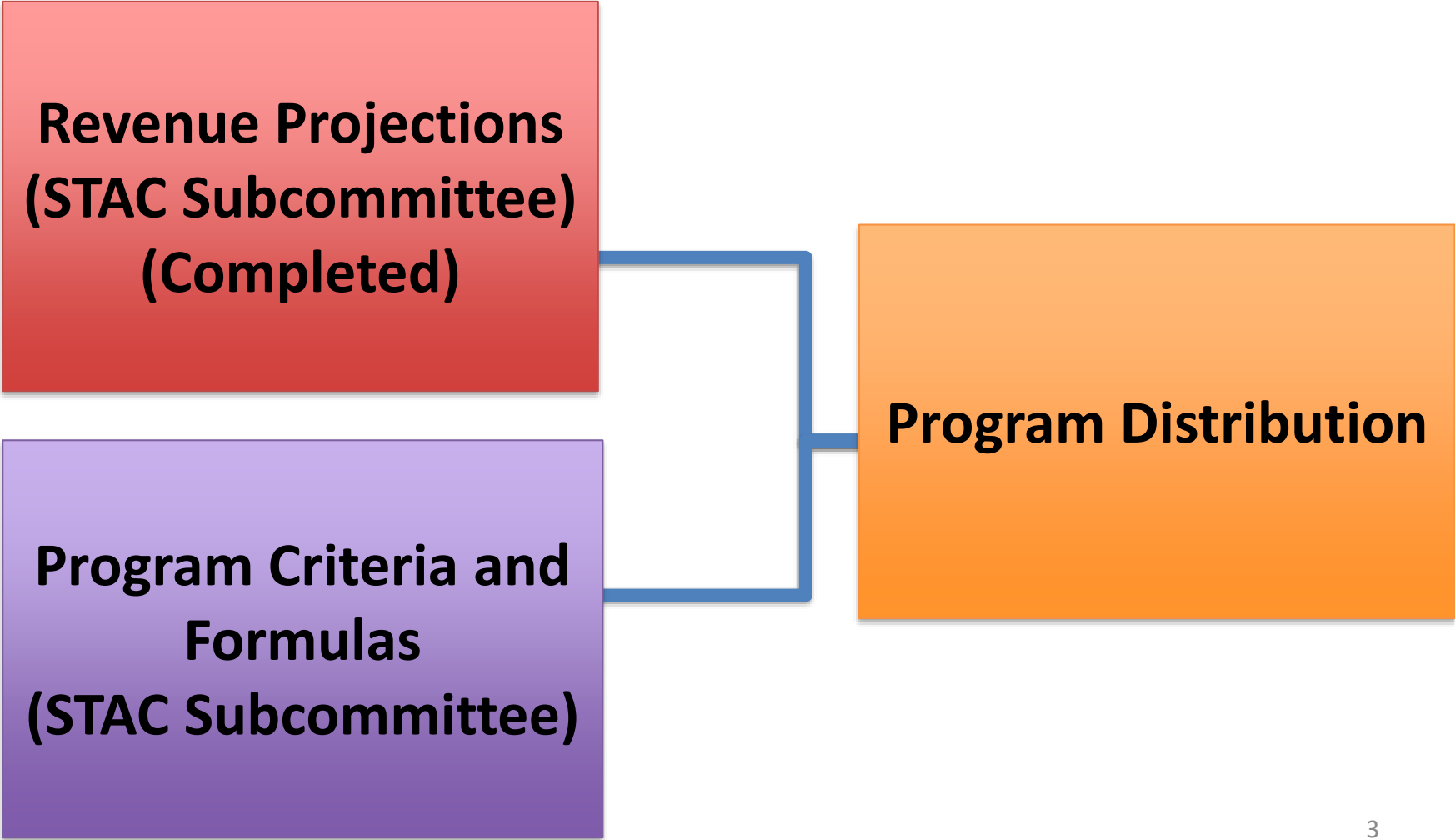


Program Distribution Overview

- Reflection of CDOT investment strategy
- Developed as part of the SWP
- Outlines the assignment of projected revenues to various program areas over the period of the 2045 SWP (2020-2045)
- Planning purposes only
- Final numbers are provided annually
 - Updated revenue estimates and annual budget adoption.



Program Distribution Process





Formula Programs

- Metro Planning (Metro- PL)
- Surface Transportation - Metro (STP-M)
- Transportation Alternatives Program (TAP)
- Congestion Mitigation and Air Quality (CMAQ)
- FASTER Safety
- Regional Priority Program (RPP)



Metro Planning Program



Metro Planning Program

- **STAC Discussion**
 - The STAC Subcommittee recommends keeping the existing formula, raising the “floor” for smaller MPOs, and then revisiting this topic ahead of the 2050 SWP.
 - The full STAC agreed with the subcommittee’s recommendation.

- **Motion Approved**



Surface Transportation – Metro (STP-Metro)



Surface Transportation – Metro (STP-Metro)

- **STAC Discussion**
 - The STAC subcommittee recommended maintaining the federally mandated STP Metro formula.
 - The full STAC agreed with the subcommittee's recommendation.

- **Motion Approved**



Transportation Alternatives Program



Transportation Alternatives Program (TAP)

- **STAC Discussion**
 - The STAC subcommittee recommended maintaining the current methodology for TAP.
 - The full STAC agreed with the subcommittee's recommendation.
- **Motion Approved**



Congestion Mitigation and Air Quality



CMAQ Program

- **STAC Discussion**
 - The STAC subcommittee recommended keeping the current funding methodology for Ozone and CO (75% Population / 25% VMT) with a minimum (200k) allocation to PM 10 areas. Also, the subcommittee recommended establishing a Statewide Program for Advanced Mobility with PM 10 and CO funds rolling into SW program as areas end maintenance period.
 - The full STAC agreed with the subcommittee's recommendation.
- **Motion Approved**



Regional Priority Program (RPP)



Regional Priority Program (RPP)

- Formula Inputs:
 - Metrics representing movement of people, extent of system, and impact to system.
 - ❖ Population/VMT = Congestion
 - ❖ Lane Miles/Center Lane Miles = Safety/Extent of the System
 - ❖ Truck VMT = Economic Vitality



Regional Priority Program (RPP)

- **Program Goal:** Flexible funding for regional priority projects
- **Program Funding:** ~\$50M annually
- **Program Overview**
 - State Discretion
 - ❖ Funded through annual Transportation Commission allocation
 - ❖ Distribution formula agreed upon by MPOs, TPRs, CDOT, FHWA, and FTA
 - Prior Methodology
 - ❖ Distribution based on 50% Population/35% Lane Miles/15% Truck VMT



Regional Priority Program (RPP)

- **Subcommittee Discussion Highlights:**
 - Hard to identify appropriate formula inputs when the goal is program flexibility
 - Explore a new RPP formula
 - Subcommittee like VMT, Population, Lane Miles and Truck VMT as formula inputs
 - Subcommittee split on what the percentage for each formula input should be
 - Urban / rural split on fairness
 - Concern for broader implication of RPP formula usage as a surrogate for fair distribution of funds statewide
- **Subcommittee Recommendation: Undecided**



Formula Summary with RPP

Example - FY 20 RPP									
Recipient	Option A		Option B		Current Formula		Historic Formula		
	25 VMT/ 25 Pop/ 35 LM/ 15 TVMT		25 VMT/20 Pop/40 LM/15 TVMT		50 Pop/35 LM/15 TVMT		45 VMT/40 LM/15 TVMT		
	%	\$	%	\$	%	\$	%	\$	
Region 1	35.0%	\$ 16,913,125	33.2%	\$ 16,055,855	36.3%	\$ 17,576,947	32.1%	\$ 15,524,797	
DRCOG	32.9%	\$ 15,910,313	31.0%	\$ 15,005,676	34.8%	\$ 16,825,563	29.5%	\$ 14,273,476	
Region	2.1%	\$ 1,002,811	2.2%	\$ 1,050,179	1.6%	\$ 751,384	2.6%	\$ 1,251,321	
Region 2	18.8%	\$ 9,102,028	19.0%	\$ 9,185,025	19.5%	\$ 9,441,497	18.4%	\$ 8,913,450	
PPACG	6.9%	\$ 3,317,396	6.4%	\$ 3,084,890	8.1%	\$ 3,906,221	5.4%	\$ 2,613,829	
PACOG	2.0%	\$ 975,806	2.0%	\$ 945,631	2.2%	\$ 1,042,236	1.8%	\$ 892,487	
Region	9.9%	\$ 4,808,827	10.7%	\$ 5,154,505	9.3%	\$ 4,493,041	11.2%	\$ 5,407,134	
Region 3	14.9%	\$ 7,193,815	15.5%	\$ 7,508,565	13.7%	\$ 6,650,000	16.4%	\$ 7,943,617	
GVMPO	1.4%	\$ 685,790	1.4%	\$ 653,672	1.7%	\$ 825,970	1.1%	\$ 541,528	
Region	13.5%	\$ 6,508,024	14.2%	\$ 6,854,893	12.0%	\$ 5,824,030	15.3%	\$ 7,402,089	
Region 4	23.7%	\$ 11,463,919	24.1%	\$ 11,678,077	23.3%	\$ 11,278,596	24.4%	\$ 11,826,336	
DRCOG	4.7%	\$ 2,251,819	4.5%	\$ 2,168,902	4.8%	\$ 2,325,454	4.4%	\$ 2,109,994	
NFRMPO	5.5%	\$ 2,661,963	5.2%	\$ 2,518,378	6.3%	\$ 3,030,994	4.6%	\$ 2,223,153	
Region	13.5%	\$ 6,550,137	14.5%	\$ 6,990,798	12.2%	\$ 5,922,148	15.5%	\$ 7,493,189	
Region 5	7.7%	\$ 3,702,114	8.2%	\$ 3,947,477	7.1%	\$ 3,427,960	8.6%	\$ 4,166,800	
TOTAL	100.0%	\$ 48,375,000	100.0%	\$ 48,375,000	100.0%	\$ 48,375,000	100.0%	\$ 48,375,000	
DRCOG TOTAL	37.5%	\$ 18,162,133	35.5%	\$ 17,174,578	39.6%	\$ 19,151,017	33.9%	\$ 16,383,470	
GVMPO TOTAL	1.4%	\$ 685,790	1.4%	\$ 653,672	1.7%	\$ 825,970	1.1%	\$ 541,528	
NFRMPO TOTAL	5.5%	\$ 2,661,963	5.2%	\$ 2,518,378	6.3%	\$ 3,030,994	4.6%	\$ 2,223,153	
PPACG TOTAL	6.9%	\$ 3,317,396	6.4%	\$ 3,084,890	8.1%	\$ 3,906,221	5.4%	\$ 2,613,829	
PACOG TOTAL	2.0%	\$ 975,806	2.0%	\$ 945,631	2.2%	\$ 1,042,236	1.8%	\$ 892,487	

*RPP funds are not suballocated to MPOs. MPO allocations are based on an assumption of the MPO share of the Region allocation. Option A is 25% VMT, 25% Population, 35% Lane Miles, and 15% Truck VMT. Option B is 25% VMT, 20% Population, 40% Lane Miles, and 15% Truck VMT. Last Program Distribution RPP formula was 50% Population, 35% Lane Miles, and 15% Truck VMT.



Regional Priority Program (RPP)

- **STAC Discussion**
- **Motion to Approve**



Next Steps

- November - Statewide Plan Committee of the Transportation Commission

**Colorado Department of Transportation
Attachment A: FY 2019-20 Proposed Annual Budget**

CDOT	Budget Category		Directed By	FY 2018-19 Budget	FY 2019-20 Budget	Variance	Funding Source	
1	Maintain - Maintaining What We Have							
2		CDOT Performed Work						
3		Roadway Surface	TC	37,487,230	36,511,573	(975,657)	-3%	
4		Roadside Facilities	TC	25,002,562	24,351,835	(650,727)	-3%	
5		Roadside Appearance	TC	10,964,746	10,679,373	(285,373)	-3%	
6		Structure Maintenance	TC	6,311,352	6,147,090	(164,262)	-3%	
7		Tunnel Activities	TC	6,141,692	5,981,845	(159,847)	-3%	
8		Snow and Ice Control	TC	81,365,315	79,247,670	(2,117,645)	-3%	
9		Traffic Services	TC	67,177,234	65,428,853	(1,748,381)	-3%	
10		Planning and Scheduling	TC	17,761,243	17,298,982	(462,261)	-3%	
11		Material, Equipment and Buildings	TC	18,211,358	17,737,382	(473,976)	-3%	
12		Toll Corridor General Purpose Lanes	TC	2,377,268	2,315,396	(61,872)	-3%	
13								
14				272,800,000	265,700,000	(7,100,000)	-3%	
15								
16		Contracted Out Work						
17		Surface Treatment /1	TC	313,682,698	222,000,000	(91,682,698)	-29%	
18		Structures On-System Construction /1	TC	47,589,367	46,620,000	(969,367)	-2%	
19		Structures Inspection and Management /1	TC	9,450,000	10,010,000	560,000	6%	
20		Geohazards Mitigation /1	TC	8,400,000	9,700,000	1,300,000	15%	
21		Highway Safety Improvement Program	FR	43,054,370	43,939,531	885,161	2%	
22		Railway-Highway Crossings Program	FR	3,395,698	3,466,442	70,744	2%	
23		Hot Spots	TC	2,167,154	2,167,154	-	0%	
24		Traffic Signals /1	TC	17,810,758	16,072,823	(1,737,935)	-10%	
25		FASTER - Safety Projects	TC	67,360,121	69,940,120	2,579,999	4%	
26		Permanent Water Quality Mitigation	TC	6,500,000	6,500,000	-	0%	
27								
28				519,410,166	430,416,070	(88,994,096)	-17%	
29								
30		Capital Expenditure						
31		Road Equipment /1	TC	26,800,000	22,100,000	(4,700,000)	-18%	
32		Capitalized Operating Equipment	TC	3,028,000	3,028,000	-	0%	
33		Property /1	TC	20,200,000	17,600,000	(2,600,000)	-13%	
34								
35				50,028,000	42,728,000	(7,300,000)	-15%	
36								
37				Total:	842,238,166	738,844,070	(103,394,096)	-12%
38	Maximize - Safely Making the Most of What We Have							
39		CDOT Performed Work						
40		Mobility Operations: Planning, Performance, and Programs	TC	2,794,487	2,794,487	-	0%	
41		Mobility Operations: Real-Time Operations	TC	10,552,288	10,552,288	-	0%	
42		Mobility Operations: ITS Asset Management	TC	23,500,000	21,200,000	(2,300,000)	-10%	
43								
44				36,846,775	34,546,775	(2,300,000)	-6%	
45		Contracted Out Work						
46		Safety Education	Comb	11,203,720	11,888,720	685,000	6%	
47		Office of Communications		950,000	950,000	-	0%	
48		Office of Transportation Safety		9,543,720	10,008,720	465,000	5%	
49		Mobility Operations		710,000	930,000	220,000	31%	
50								
51		Regional Priority Program	TC	48,677,000	48,375,000	(302,000)	-1%	
52		ROADX	TC	12,096,525	12,096,525	-	0%	
53		ADA Compliance		5,000,000	22,400,000	17,400,000	348%	
54								
55				76,977,245	94,760,245	17,783,000	23%	
56		Capital Expenditure						
57		Mobility Operations: ITS Investments	TC	10,000,000	10,000,000	-	0%	
58								
59				10,000,000	10,000,000	-	0%	
60								
61				Total:	123,824,020	139,307,020	15,483,000	13%
62	Expand - Increasing Capacity							
63		CDOT Performed Work						
64								
65		Contracted Out Work						
66		Strategic Projects	SL	583,500,000	555,000,000	(28,500,000)	-5%	
67		National Freight Program	FR	20,791,883	23,102,092	2,310,209	11%	
68								
69				604,291,883	578,102,092	(26,189,791)	-4%	
70								
71	Deliver - Program Delivery/Administration							
72		Department Operations	TC	32,230,682	23,736,229	(8,494,453)	125%	
73		Maintenance Operations	TC	2,605,000	2,605,000	-	0%	
74		Projects Initiatives	TC	2,605,000	2,605,000	-	0%	
75		DTD Planning and Research - SPR	FR	14,192,374	14,533,590	341,216	2%	
76		Administration (Appropriated)	SL	35,845,120	35,845,120	-	0%	
77		HPTE FEE for Service	TC	5,169,500	5,169,500	-	0%	
78								
79				90,042,676	98,383,892	8,341,216	9%	
80								
81		Pass-Through Funds/Multi-modal Grants						
82		Aeronautics						
83		Division of Aeronautics to Airports	AB	24,235,195	29,483,195	5,248,000	22%	
84		Division of Aeronautics Administration	AB	1,264,805	1,264,805	-	0%	
85								
86				25,500,000	30,748,000	5,248,000	21%	
87		Highway						
88		Recreational Trails	FR	1,591,652	1,591,652	-	0%	
89		Safe Routes to School /2	TC	2,500,000	3,125,000	625,000	25%	
90		Transportation Alternatives Program /2	FR	12,319,571	12,292,436	(27,135)	0%	
91		STP-Metro /2	FR	54,037,405	54,767,363	729,958	1%	
92		Congestion Mitigation/Air Quality /2	FR	50,313,066	50,196,268	(116,798)	0%	
93		Metropolitan Planning /2	FR	8,421,886	8,568,424	146,538	2%	
94		Bridge-Off System - TC Directed /2	TC	3,164,139	3,164,139	-	0%	
95		Bridge-Off System - Federal Program /2	FR	6,245,256	6,245,258	2	0%	
96								
97				138,592,975	139,950,540	1,357,565	1%	
98		Transit						
99		Federal Transit /2	FR	38,924,000	39,266,000	342,000	1%	
100		Strategic Projects - Transit	SL	38,000,000	50,000,000	12,000,000	32%	
101		Multimodal Transportation Options Fund		71,750,000	22,500,000	(49,250,000)	-69%	
102		Southwest Chief and Front Range Rail Commission		2,500,000	-	(2,500,000)	-100%	
103		Transit and Rail Local Grants	SL	5,000,000	5,000,000	-	0%	
104		Transit and Rail Statewide Grants	TC	3,000,000	3,000,000	-	0%	
105		Bustang	TC	5,200,000	5,200,000	-	0%	
106		Outrider Rural Regional Opps	TC	2,500,000	2,500,000	-	0%	
107		Transit Administration and Operations	TC	1,000,000	1,000,000	-	0%	
108								
109				167,874,000	128,466,000	(39,408,000)	-23%	
110		Infrastructure Bank						
111		Infrastructure Bank	TC	400,000	400,000	-	0%	
112								
113				400,000	400,000	-	0%	
114								
115				Total:	332,366,975	299,564,540	(32,802,435)	-10%
116	Transportation Commission Contingency/Debt Service							
117		Permanent Recovery						
118		Permanent Recovery		-	-	-	#DIV/0!	
119								
120		Contingency						
121		TC Contingency	TC	-	15,000,000	15,000,000	#DIV/0!	
122		TC Program Reserve	TC	759,009	11,536,834	10,777,825	1420%	
123		Snow & Ice Reserve	TC	10,000,000	10,000,000	-	0%	
124								
125				10,759,009	36,536,834	25,777,825	240%	
126		Debt Service						
127		Senate Bill 267 - Debt Service	DS	28,500,000	50,000,000	21,500,000	75%	
128		Certificates of Participation - Property	DS	2,361,784	2,361,544	(240)	0%	
129		Certificates of Participation - HQ/R2/R4	DS	9,368,100	9,369,650	1,550	0%	
130		Certificates of Participation - Energy	DS	1,046,627	1,045,263	(1,364)	0%	
131								
132				41,276,511	62,776,457	21,499,946	52%	
133								
134				Total:	52,035,520	99,313,291	47,277,771	91%
				2,044,799,240	1,953,514,905	(91,284,335)	-4%	

Flexible Funds

/1 FASTER Safety funds (\$40.0M) were substituted for flexible funds in appropriate Asset Management Programs.

/2 Includes local match

Key to acronyms:

LOC=Local Matching Funds

SIB=St. Infrastructure Bank Interest

DS=Debt Service Covenants

AB=Aeronautics Board

SH=State Highway funding

FHWA=Federal Highway Administration

SL=State Legislation

SA=State Aviation

Comb=Combination

(0)

**State Bridge Enterprise
Attachment A: FY 2019-20 Proposed Annual Budget**

State Bridge	Budget Category	Program Area	Directed By	FY 2018-19 Budget	FY 2019-20 Budget	Variance	Funding Source
1	Maintain - Maintaining What We Have						
2		CDOT Performed Work					
3							
4		Maintenance	BEB	300,000	300,000	-	09-108
5		Support Services	BEB	350,000	350,000	-	09-108
6		Bridge Preservation		100,000	100,000	-	
7							
8		Contracted Out Work		750,000	750,000	-	
9							
10		Bridge Enterprise Projects	BEB	95,596,000	97,496,000	1,900,000	09-108
11				95,596,000	97,496,000	1,900,000	
12							
				Total:	96,346,000	98,246,000	1,900,000
13	Maximize - Safely Making the Most of What We Have						
14		CDOT Performed Work					
15							
16				-	-	-	
17		Contracted Out Work					
18							
19				-	-	-	
20							
21							
				Total:	-	-	-
22	Expand - Increasing Capacity						
23		CDOT Performed Work					
24							
25				-	-	-	
26		Contracted Out Work					
27				-	-	-	
28							
29							
30							
				Total:	-	-	-
31	Deliver - Program Delivery/Administration						
32							
33		Administration and Legal Fees		1,660,000	1,660,000	-	09-108
34							
35				1,660,000	1,660,000	-	
36							
				Total:	1,660,000	1,660,000	-
38	Pass-Through Funds/Multi-modal Grants						
39		Highway					
40							
41				-	-	-	
42							
				Total:	-	-	-
44	Bridge Enterprise Contingency / Debt Service						
45		Contingency					
46		Contingency	BEB				09-108
47							
48		Debt Service					
49		Debt Service	BEB	18,234,000	18,234,000	-	FHWA/SH
50							
51				18,234,000	18,234,000	-	
52							
				Total:	18,234,000	18,234,000	-
53							
				116,240,000	118,140,000	1,900,000	
				Revenue	116,240,000	118,140,000	1,900,000

Key to acronyms:

BEB= Bridge Enterprise Board

DS= Debt Service Covenants

**High Performance Transportation Enterprise
Attachment A: FY 2019-20 Proposed Annual Budget**

HPTE	Budget Category	Program Area	Directed By	FY 2018-19 Budget	FY 2019-20 Budget	Variance	Funding Source
1	Maintain - Maintaining What We Have						
2		CDOT Performed Work					
3							
4		Contracted Out Work					
5							
6							
7							
				Total:	-	-	
8	Maximize - Safely Making the Most of What We Have						
9		CDOT Performed Work					
10							
11							
12		Contracted Out Work					
13							
14		Property					
15							
				Total:	-	-	
17	Expand - Increasing Capacity						
18		CDOT Performed Work					
19		Maintenance	HPTEB				Tolls/Managed Lanes Revenue
20							
21							
22		Contracted Out Work					
23		Express Lanes Operations	HPTEB	10,942,648	11,342,648	400,000	Tolls/Managed Lanes Revenue
24							
25				10,942,648	11,342,648	400,000	
26							
				Total:	10,942,648	11,342,648	400,000
28	Deliver - Program Delivery/Administration						
29							
30		Administration and Legal Fees		5,194,500	5,194,500	-	Fee for Service
31							
32							
33				5,194,500	5,194,500	-	
34							
				Total:	5,194,500	5,194,500	-
36	Pass-Through Funds/Multi-modal Grants						
37		Highway					
38							
39							
40							
				Total:	-	-	-
41	HPTE Contingency / Debt Service						
42		Contingency					
43							
44		Debt Service					
45							
46							Fee for Service
47							
				Total:	-	-	-
				16,137,148	16,537,148	400,000	
				Revenue	16,137,148	16,537,148	400,000

Key to acronyms:

HPTEB=High Performance Transportation Enterprise Board

HPTE Fee For Service Allocation Adjustment	(5,169,500)	(5,169,500)	-
Total Consolidated Allocations	2,172,006,888	2,083,022,553	(88,984,335)
Total Consolidated Revenue	2,172,006,888	2,083,022,553	(88,984,335)



DATE: October 26, 2018
TO: Statewide Transportation Advisory Committee
FROM: Debra Perkins-Smith, Director, Division of Transportation Development
SUBJECT: Mobility Choice Blueprint Project

Purpose

This memo is intended to provide the STAC members with an overview of the Mobility Choice Blueprint Project.

Action

Informational Item.

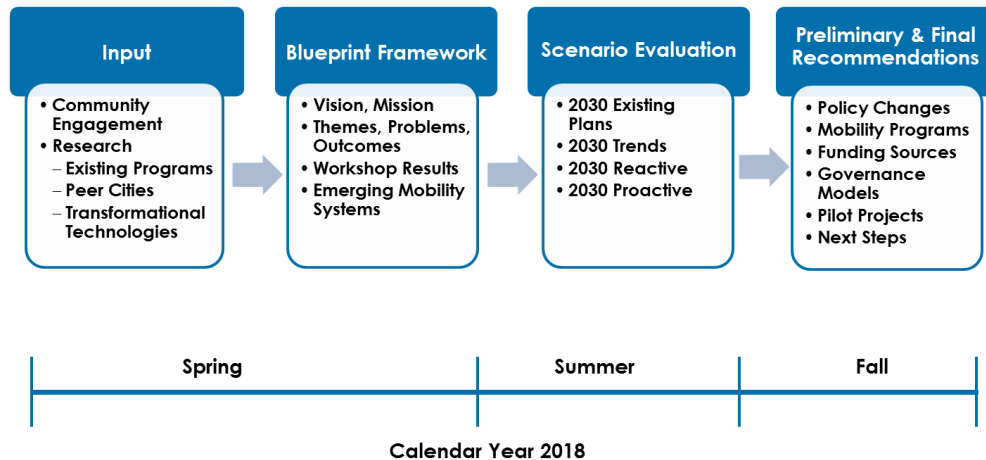
Background

The Mobility Choice Blueprint is a joint planning effort between the Colorado Department of Transportation (CDOT), Denver Regional Council of Governments (DRCOG), Regional Transportation District (RTD), and Mobility Choice (a non-profit initiative of the Denver Metro Area Chamber of Commerce) that seeks to establish a coordinated strategic direction for the evolving mobility of the Denver Metro related to walking, biking, driving, ride-hailing, and transit.

Mobility Choice is governed by a Board of Directors composed of private and public sector members, representatives of DRCOG, RTD and CDOT, former local elected officials and economic development professionals. Michael Lewis represents CDOT on the Board of Directors. In addition to CDOT’s representation on the Board of Directors, Transportation Commissioner Karen Stuart is serving as one of the project’s Metro Ambassadors through her role as Executive Director of Smart Commute Metro North.

Details

In April 2018, the Mobility Choice Blueprint project team came to the STAC and detailed the 12-month process. The project schedule and key milestones are listed below:



At the October 2018 STAC meeting, project staff will share the current status of the project, including recent public engagement results via Metro Ambassador meetings and digital survey tools, as well as identify and discuss some of the mission, vision, initial themes and scenarios, and example strategies and tactical actions.

The final Blueprint will set the vision and contain strategies for local agencies to implement cutting-edge technologies that promote mobility and support livable communities. It will also have recommendations for agency policy and program changes, as well as options for pilot projects that can be funded and tested by agencies in



partnership with the private sector. In doing so, it will complement and enhance existing CDOT efforts including the Statewide Transportation Plan, Smart Mobility Plan, and the RoadX Initiative while supporting future collaboration between CDOT, DRCOG, and RTD moving forward.

Next Steps

- November 2018 - Draft report released by Mobility Choice Blueprint project team
- November 2018 - The draft report will be submitted to CDOT for consideration and the STAC will be given an opportunity to review.
- December 2018 - Final report released by Mobility Choice Blueprint project team

Attachments

- Attachment A: Mobility Choice Blueprint Presentation





MOBILITY CHOICE **BLUEPRINT**

MOBILITY CHOICE: A PUBLIC-PRIVATE PARTNERSHIP FOR NEW MOBILITY

The New Mobility CASE: *Connected-Automated-Shared-Electric*

Mobility Choice: *A partnership of public and private organizations addressing the new future of mobility – and making the Denver metro area a better place to work and live.*





Collaboration of CDOT, RTD,
and DRCOG policies, programs,
and transportation investments

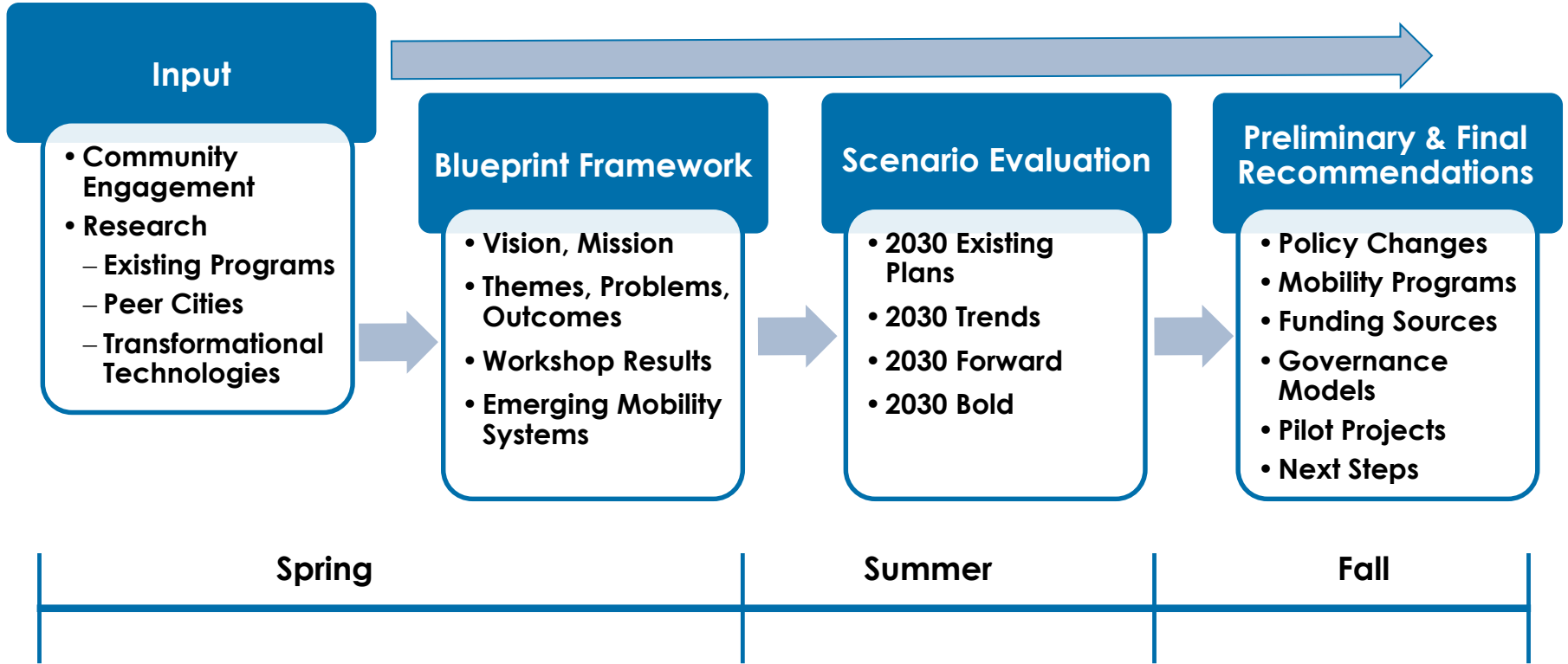


Pilot projects with private sector
partners and continued
participation of the business
community



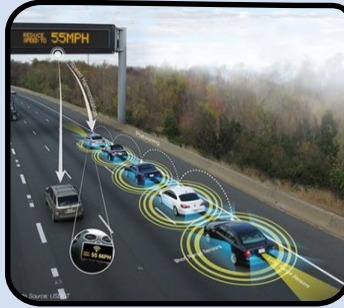
Identifying potential for efficient,
technology-leveraged
investments

MCB PROCESS OVERVIEW



EMERGING MOBILITY SYSTEMS

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On-Demand Mobility

- Ridehailing
- Microtransit
- Car Sharing
- Bike sharing
- Mobility as a Service

Traveler Information and Payment

- Mobile Transit App
- Intermodal Trip Planner App
- Mobile Travel Incentives App

Transportation Systems Optimization

- V2X
- Active Travel Demand Management
- Integrated Corridor Management
- Smart Parking

Freight and Delivery

- Courier Services
- Driverless Delivery
- Drone Delivery
- 3D Printing

Vehicle Technology

- Autonomous Vehicles Levels 1-5
- Electric Drive-train
- Battery Technology

MOBILITY CHOICE BLUEPRINT VISION

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Our metropolitan region employs a full array of flexible technology and services to maximize access to mobility choices connecting people of all ages, incomes and abilities to jobs, recreation, healthcare, amenities and other daily activities, enhancing and protecting our quality of life now and in the future.

MOBILITY CHOICE BLUEPRINT MISSION

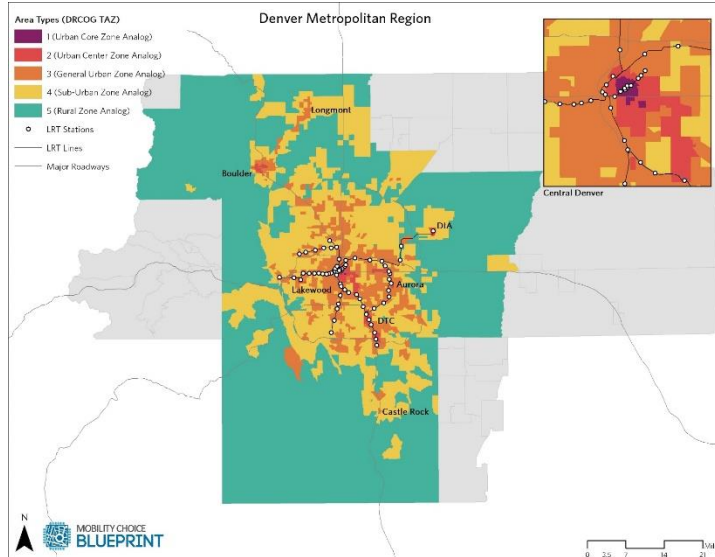
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The metropolitan agencies will collaborate, in partnership with community, nonprofit, and private sector leaders, to carefully consider a range of effective and efficient solutions to the challenges and opportunities presented by emerging mobility technologies. We will provide recommendations to encourage the most effective technologies and approaches, maximizing mobility to meet our long-term goals of enhanced quality of life and increased economic vitality across the metropolitan region.

THEMES

Metro Vision

- **Connected, multimodal region**
- **Safe, reliable, well maintained transportation system**
- **Clean, resilient environment**
- **Healthy, inclusive active community**
- **Economic viability via economic investment**



Mobility Choice

- **Sustainable Mobility**
- **System Efficiency**
- **Safety**
- **Human Experience**
- **Infrastructure**
- **Funding and Finance**
- **Governance**
- **Data**

THEMES, PROBLEMS & OUTCOMES

Theme	Problem Statement	Outcome
Safety	Sanctity of life and safety from personal injury and property damage must remain the primary force for new technology operational designs.	Connected, autonomous, shared and electric mobility operate safely.
Sustainable Mobility	Technology enables a much more diverse set of mobility options for consumers resulting in different kinds of pressures for private-sector and public-sector services, facilities and infrastructure.	Emerging technology transportation options sustain the system long-term.
Infrastructure	New approaches and designs are needed to flexibly and proactively integrate technologies into transportation infrastructure.	New mobility systems integrate with existing and future infrastructure. New mobility systems cost no more than anticipated.

THEMES, PROBLEMS & OUTCOMES

Theme	Problem Statement	Outcome
Human Experience	A disconnect could result between the human experience and transportation technology applications that left unchecked, could further disenfranchise mobility challenged populations and could disrupt our livable spaces.	Mobility systems improve community livability and quality of life.
Governance	A forum is lacking to plan for and implement regional infrastructure that supports technology advances.	Regional transportation agencies, the private sector, and nongovernmental organizations develop policies, programs, and pilot projects to deliver a preferred mobility future for the metropolitan region.

THEMES, PROBLEMS & OUTCOMES

Theme	Problem Statement	Outcome
System Efficiency	The regional network of transportation services and facilities is based on the travel demands and trip-making decisions of a different economic environment that began more than 50 years ago. The existing system must be made more efficient through reasonable and coordinated integration of appropriate technologies.	Technology integration improves reliability, lowers costs and reduces travel times.

THEMES, PROBLEMS & OUTCOMES

Theme	Problem Statement	Outcome
Funding and Finance	Travel options enabled by technology will further increase the gap between needs and available funds.	New funding and financing of mobility systems improves equity and use of public resources.
Data	Definition of the “right data” that can be utilized to optimize system operations and performance is important to all public sector and private sector entities. Management and security of that data, and the ability to share information among suppliers of facilities and services to enhance and optimize transportation system performance is a critical need.	Sources and uses of data that enable, monitor, manage and modify mobility systems are protected, shared and preserved across all modes of travel and throughout all parts of the region and state.

THEMES, STRATEGIES AND ACTIONS

	Themes	Strategies	Actions
Workshop Outputs	7	27	123
Refinement	8	15	34

RECOMMENDED ACTION CATEGORIES

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- *Shared* Mobility Integration
 - Ridehailing (TNCs), Microtransit, Micromobility, Journey Planning/Payment
- *Connected* - Transportation System Management & Operations (TSMO)
- Mobility Data Capture, Sharing and Analytics
- *Mobility Electrification*
- *Driverless AV* Response
- Smart Mobility Institutional Gaps
- Legal/Regulatory
- Funding

EXAMPLE: TACTICAL ACTION #21

• Establish a Mobility Technology Clearinghouse:

- Coordinate Pilot Projects throughout the Region
- Pool funding
- Coordinate Agency staff
- Provide single point of contact
- Coordinate technology in CIP projects
- Employ process to prioritize corridors
- Facilitate partnerships
- Monitor performance and cost tracking

- Type: Program
- Difficulty: Easy
- Investment: < \$0.5 M
- Transects: All/Region
- Time to Implement: < 1 Year

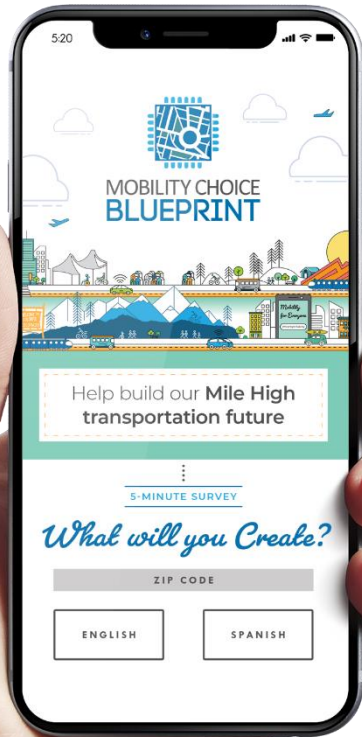
EXAMPLE: TACTICAL ACTION #22

- **Establish a Regional Data Platform that will:**
 - **Consolidate multiagency data into single repository with joint access**
 - **Establish policy standards for data sharing for inter-operability and security**
 - **Create policy(s) to ensure inter-operability of infrastructure and software**
 - **Promote open and well-documented APIs**

- **Type: Program**
- **Difficulty: Medium**
- **Investment: \$ 2 - 5 M**
- **Transects: All/Region**
- **Time to Implement: < 1 Year**

BUILD OUR MILE HIGH TRANSPORTATION FUTURE

Take the second online quiz today to help us shape the future of mobility in the Denver Metro Area



www.mobilitychoiceblueprintquiz.com/quiz2



Thank You

Questions



COLORADO
 Department of Transportation
 Transportation Systems
 Management & Operations

MEMORANDUM

TO: STATEWIDE TRANSPORTATION ADVISORY COMMITTEE (STAC)
FROM: LISA STREISFELD, DIVISION OF TRANSPORTATION SYSTEMS
MANAGEMENT AND OPERATIONS
DATE: OCTOBER 26TH, 2018
SUBJECT: CDOT MANAGED LANES GUIDELINES DOCUMENT

Purpose

Managed lanes are comprised of a set of operational strategies to improve traffic flow on highways in response to changing conditions. These strategies reduce congestion, improve safety, and improve reliability. Policy Directive number 1603.0, concerning “Managed Lanes,” was approved in December 2012 by the Colorado Transportation Commission (See Appendix of Attachment B). As part of Section VII., Implementation Plan, “CDOT staff shall develop guidance to support this Policy Directive.” This memorandum provides an update to the Transportation Commission on the preparation of the *Colorado Department of Transportation Managed Lanes Guidelines* document (Attachment B).

Action

No formal action required.

Background

The Federal Highway Administration (FHWA) defines managed lanes “as a set of lanes where operational strategies are proactively implemented and managed in response to changing conditions¹.” Managed lanes strategies are grouped in the following categories: 1) Active Traffic Management, 2) Transit Management for Express Bus Lanes, 3) Special Use Lanes 4) Express Lanes, 5) High Occupancy Vehicle Lanes, 6) High Occupancy Toll Lanes, 7) Reversible Lanes (also known as Counter-flow Lanes), 8) Shoulder Lanes, and 9) Connected and Autonomous Vehicle Technology. These strategies regulate demand in lanes, separate traffic streams to reduce turbulence, and efficiently utilized available and unused capacity. With limited financial resources to construct new capacity, managed lane strategies can improve travel time reliability, travel mode split, and foster public-private partnerships to invest in infrastructure.

To promote managed lanes strategies, Policy Directive number 1603.0, concerning “Managed Lanes,” was approved in December 2012 by the Transportation Commission (See Appendix in Attachment B). It states: “The use of managed lanes shall be strongly considered during planning and development of capacity improvements on state highway facilities in Colorado. When applicable, the decision to not implement managed lanes shall be formally documented subject to Department guidance.” The purpose of the PD 1603.0 is “to ensure that the use of managed lanes is strongly considered during the planning and development of capacity improvements on state

¹ https://ops.fhwa.dot.gov/publications/managelanes_primer/index.htm



highway facilities within Colorado.” As required in Section VII Implementation Plan of the PD 1603.0, Colorado Department of Transportation (CDOT) staff shall develop guidance to support the directive.

The Division of Transportation Systems Management and Operations (TSMO) lead the effort to develop *Guidelines for Managed Lanes*. TSMO is tasked to improve safety and reliability on highway corridors in Colorado. In order to prepare the draft *Guidelines*, TSMO staff formed two committees, a project Leadership Team and a Technical Working Team. Members included representatives from the High Performance Transportation Enterprise (HPTE), the Division of Transportation Development, the Environmental Programs Branch, the Division of Transit and Rail, TSMO, the Office of Policy and Governmental Relations, the Division of Communications and Advanced Mobility, CDOT Region 1, and CDOT Region 2. Technical assistance was provided by VHB, a consultant with extensive experience in managed lanes strategies. During document scoping and preparation, feedback from all members of the two Teams was solicited and incorporated into the *Guidelines*. Staff then presented the draft *Guidelines* to the following groups for review and feedback: HPTE Board of Directors, the NEPA Practitioners Group, the Statewide Planners, the Statewide/TSMO Traffic Engineers, the Statewide Program Engineers 3 and the Regional Transportation Directors. The goal is to have a final version of the *Guidelines* completed by the end of 2018.

The “*Colorado Department of Transportation Managed Lanes Guidelines (Guidelines)*” provide a framework for determining when managed lanes should be considered during corridor project planning for capacity improvements. Specifically, the *Guidelines*:

- define the purpose of managed lanes,
- define capacity improvements,
- identify strategies to evaluate managed lanes for consideration in capacity projects,
- recognize the overall technical requirements for assessment of managed lanes strategies (define goals, evaluation criteria, performance metrics and compliance factors), and
- explain a process to document a decision when to not implement managed lanes.

This framework is necessary to provide statewide consistency for decision-making for implementing managed lane strategies in highway capacity projects. Additionally, the framework provides corridor-specific flexibility to have evaluation criteria matching distinct corridor needs. For example, on one corridor mode split for transit, high occupancy vehicles, and single occupancy vehicles may be a goal; whereas for another highway, the ability to improve trip time reliability and offer real time congestion pricing may be another goal. By following the framework outlined in the *Guidelines*, CDOT will have a robust process to lead future efforts to deploy managed lanes.

It should also be noted that the HPTE is leading a separate effort to prepare an “HPTE Express Lanes Master Plan.” This effort will take about a year and will create a list of corridors eligible to be future express lanes. The *Guidelines* are meant to be a complementary document to this process.

Next Steps

Staff requested feedback on the *Guidelines for Managed Lanes* from the Transportation Commission at the Commission Workshop in October. They are now available to be reviewed by the Statewide Transportation Advisory Committee (STAC). Final discussion and recommendation will be requested from the Transportation Commission in the November 15th meeting. Following the recommendation from the Transportation Commission, a training will be developed for staff to learn how to implement the *Guidelines*.



Attachments

- Attachment A: Powerpoint Presentation: Update on Managed Lanes Guidelines
- Attachment B: Draft Copy of Managed Lanes Guidelines (version Oct. 10, 2018)



Update on the Managed Lanes Guidelines For the Statewide Transportation Advisory Committee (STAC)

October 26, 2018

Lisa Streisfeld
Mobility Operations



COLORADO
Department of
Transportation

1991



3.3 million



27.7 billion
vehicles miles traveled

\$125.70
spent per person

2015



5.4 million



50.5 billion
vehicle miles traveled

\$68.94
spent per person

2040

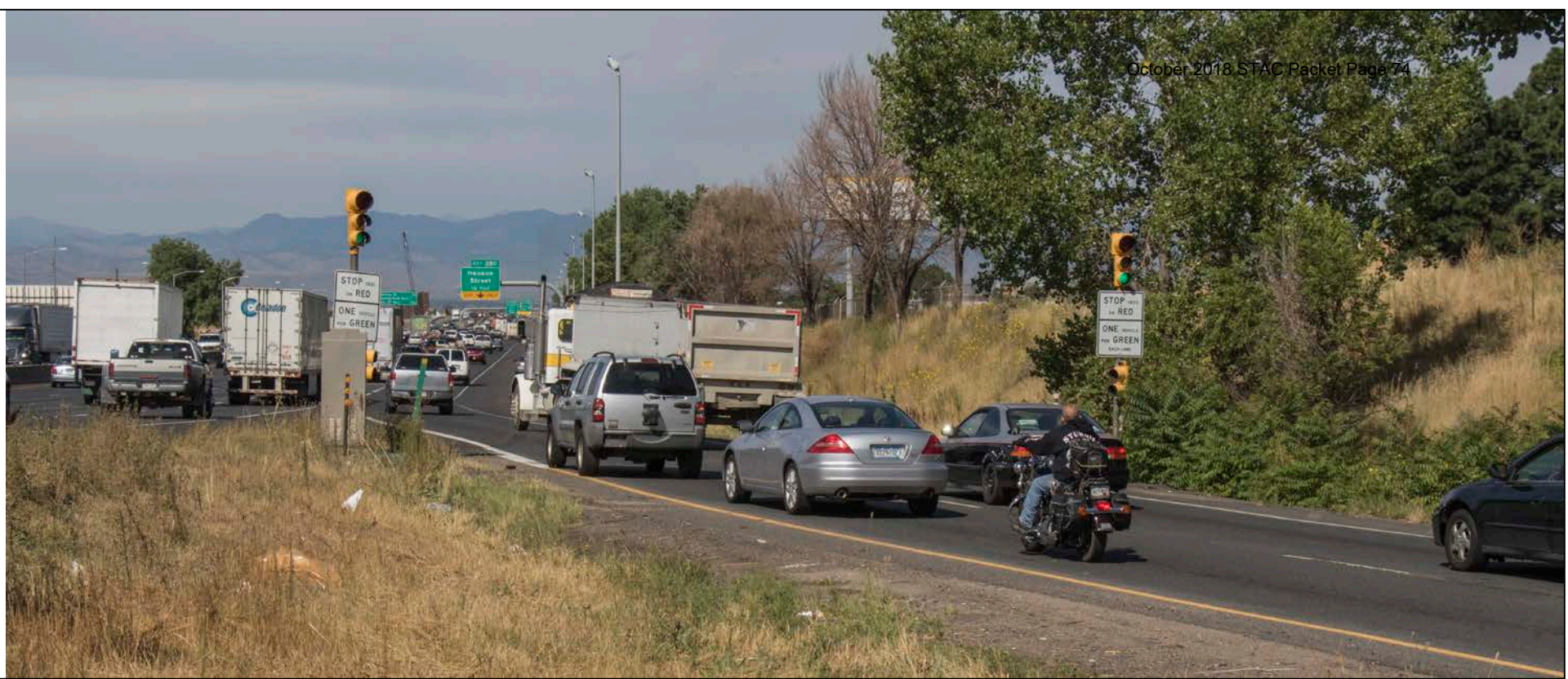


7.8 million



72.3 billion
vehicle miles traveled

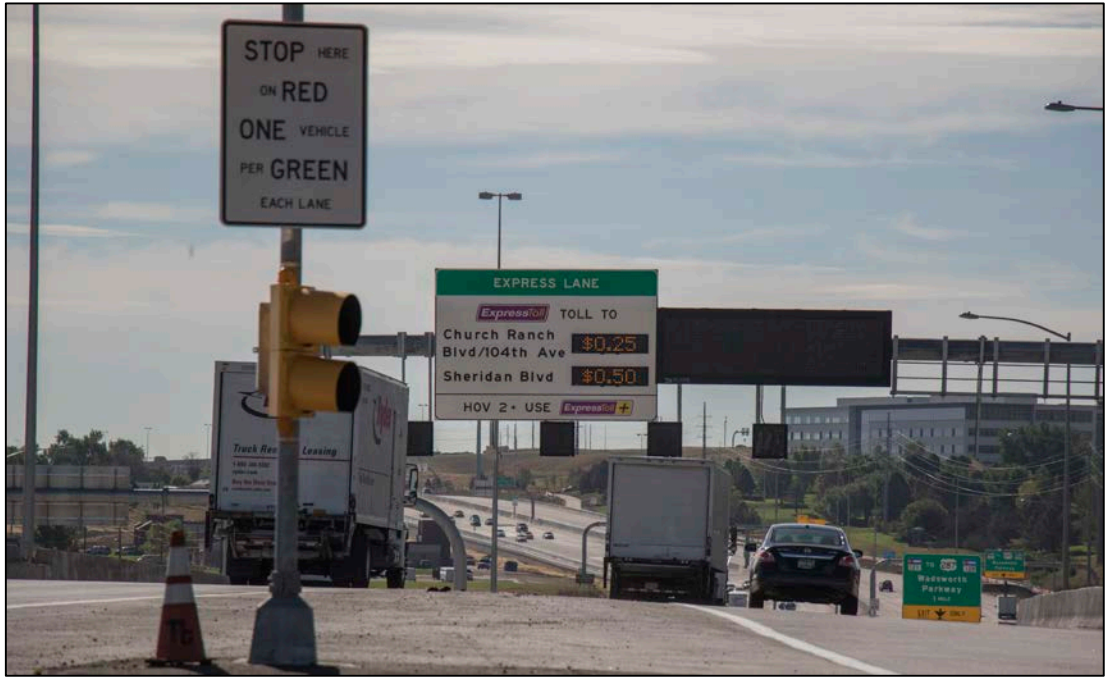
\$41.16
spent per person

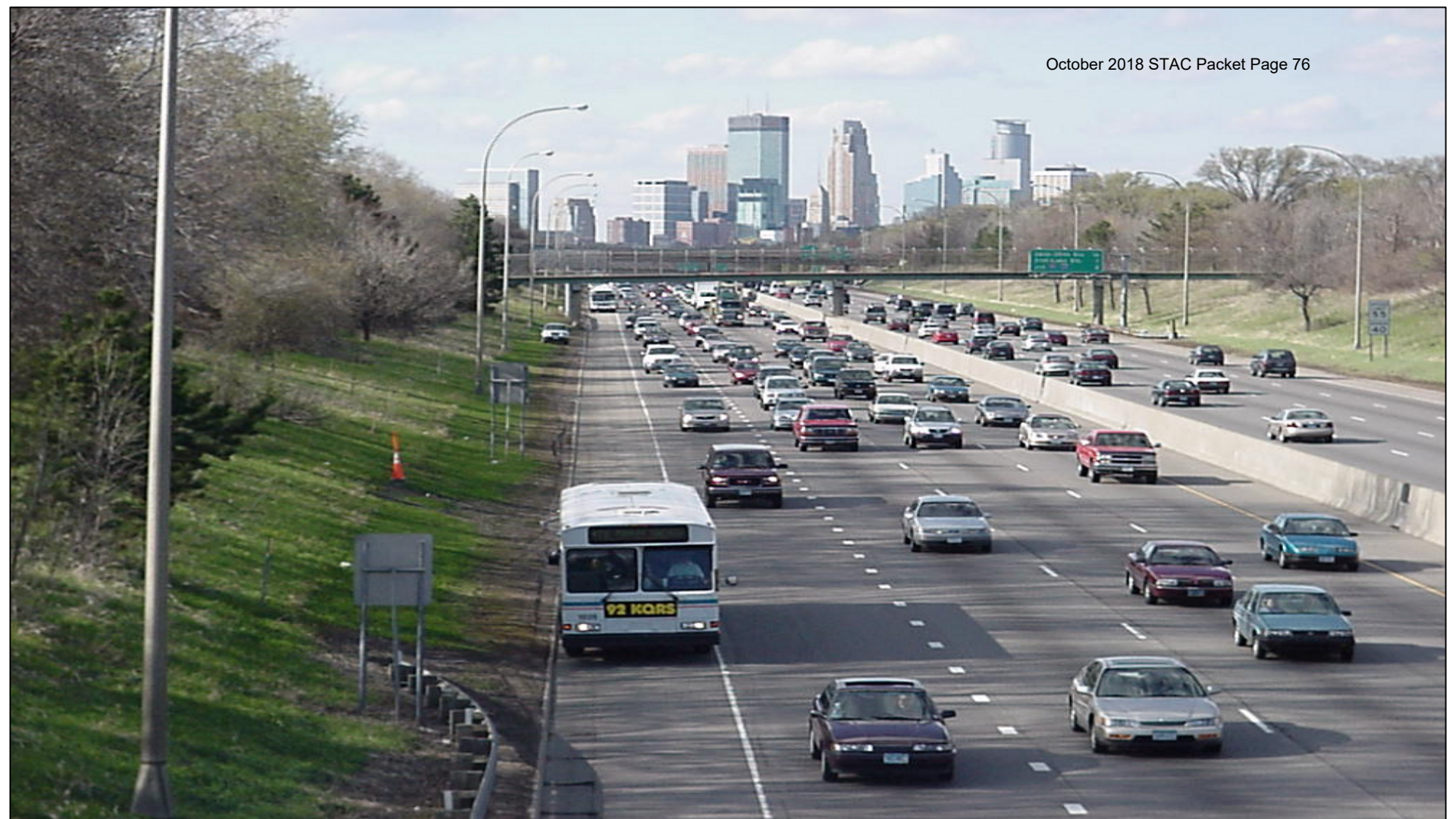


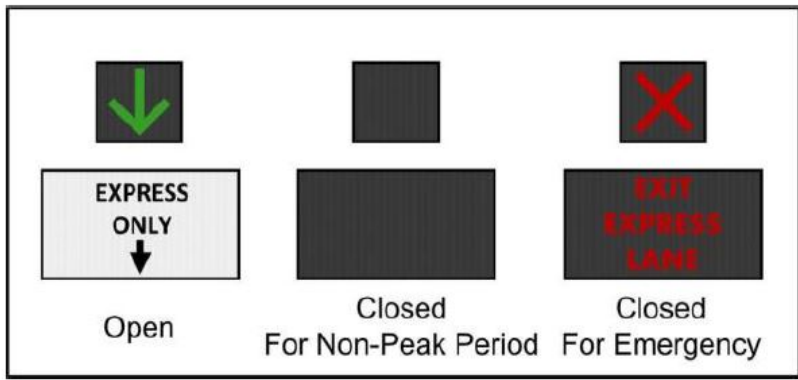
STOP
on RED
ONE vehicle
per GREEN

147' 00"
147' 00"
Mason
Boulevard
147' 00"

STOP
on RED
ONE vehicle
per GREEN



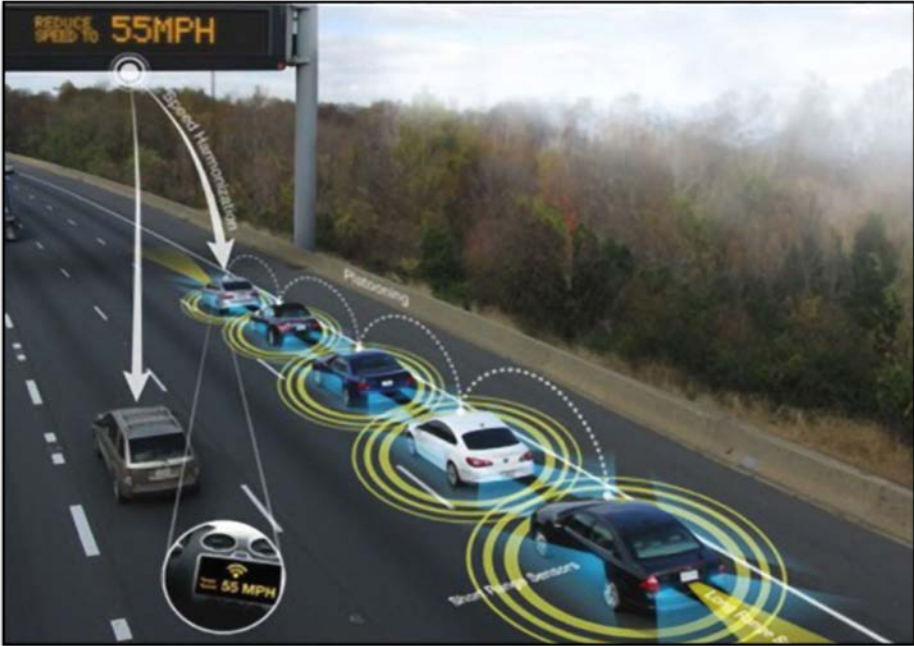




Examples of LUS and ATM VMS







What are Managed Lanes Strategies?

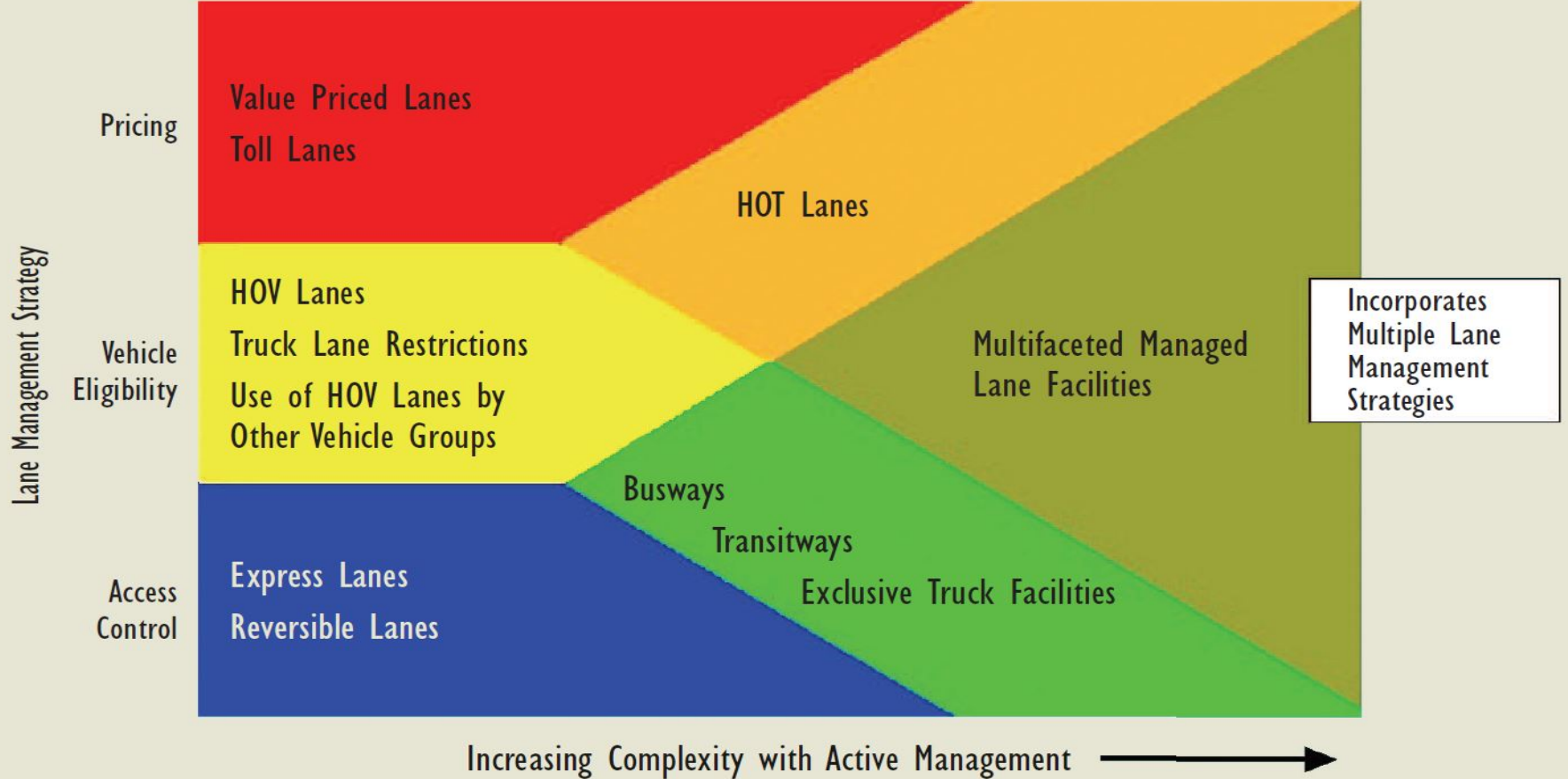
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The strategies to optimize flow of traffic and improve mobility can use price, vehicle eligibility and access control.

- **Lane Management: Active Traffic Management Lanes**
 - Lane Control Signal
 - Value Pricing (a.k.a. congestion pricing)
 - Variable Pricing (a.k.a. time of day pricing)
 - Dynamic Pricing
 - Variable Speed Limits
 - Highway Ramp Metering
 - Managed Arterials
 - Queue Warning
 - Junction Control
 - Incident and Emergency Management
 - Dynamic Re-Routing
 - Traveler Information
 - Variable Lane Width
- **Transit Management: Express Bus Lanes**
- **Special Use Lanes (alternative fueled, connected, platooning, or commercial motor vehicles)**
- **Express Lanes**
- **HOV- High Occupancy Vehicle Lanes**
- **HOT-High Occupancy Toll Lanes**
- **Reversible lanes (a.k.a. Counter flow lanes)**
- **Shoulder Lanes**



Exhibit I. Managed Lane Applications.



COLORADO DEPARTMENT OF TRANSPORTATION		<input checked="" type="checkbox"/> POLICY DIRECTIVE <input type="checkbox"/> PROCEDURAL DIRECTIVE
Subject Managed Lanes		Number 1603.0
Effective 12.28.12	Supersedes N/A	Originating Office Division of Transportation Development

I. PURPOSE

The Colorado Department of Transportation seeks to increase system efficiency and to provide multi-modal options for more reliable movement of people, goods and information in and through the state. The purpose of this Policy Directive is to ensure that the use of managed lanes is strongly considered during the planning and development of capacity improvements on state highway facilities within Colorado.

II. AUTHORITY

Colorado Transportation Commission, § 43-1-106(8)(a), C.R.S.

III. APPLICABILITY

This Policy Directive applies to all divisions, regions, offices and branches of CDOT and other entities intending to build capacity improvements on the state highway system.

IV. DEFINITIONS

"Managed Lanes" are defined as highway facilities or a set of lanes where operational strategies are proactively implemented and managed in response to changing conditions. See (FHWA, "Managed Lanes: A Primer"), Federal Highway Administration, Publication No.: FHWA-HOP-05-031, EDL 14110, HOP/Aug. 2008/QE, available at: www.ops.fhwa.dot.gov.

V. POLICY

The use of managed lanes shall be strongly considered during planning and development of capacity improvements on state highway facilities in Colorado. When applicable, the decision to not implement Managed Lanes shall be formally documented subject to Department guidance.

Managed Lanes provide the ability for the Department to respond to changing traffic conditions and provide operational flexibility and efficient operation of the multi-modal transportation system infrastructure by maximizing the number of vehicles or the number of people traveling in a given corridor. As congestion increases in a corridor, managed lanes can provide greater reliability of travel and also promote alternative travel choices. The challenge for transportation planners and highway engineers is to maximize the operation of transportation infrastructure by considering flexible, cost effective strategies for sustaining or enhancing the movement of people and goods.

Subject Managed Lanes	Number 1603.0
--------------------------	------------------

VI. FISCAL IMPACT

Implementation may have a fiscal impact to the study and analysis required of capacity improvement projects. The fiscal impact is indeterminate and will be project-specific.

VII. IMPLEMENTATION PLAN

1. This Policy is effective immediately upon approval and shall apply to all system or corridor level studies which evaluate alternatives for additional highway capacity through expansion or operational improvements. It shall not apply retroactively to signed decision documents or ongoing NEPA studies beyond the alternative analysis phase.
2. The Division of Transportation Development shall notify all CDOT Program Engineers and Regional Planning Environmental Managers of the Policy Directive within one week of adoption.
3. CDOT staff shall develop guidance to support this Policy Directive.

VIII. REVIEW DATE

This Policy Directive shall be reviewed within five years of the approval date.

Norman J. Stetson III
Transportation Commission Secretary

12-28-12
Date of Approval

"The use of managed lanes shall be strongly considered during planning and development of capacity improvements on state highway facilities in Colorado. When applicable, the decision to not implement Managed Lanes shall be formally documented subject to Department guidance."

Purpose of Managed Lanes Guidance

- *As part of Section VII, Implementation Plan of the Policy Directive 1603.0 (December 28, 2012):
“CDOT staff shall develop guidance to support this Policy Directive.”*
- *Create a documented process and a tool box to decide
whether or not to evaluate managed lanes as an option*



Stakeholders

Leadership Team

- Amy Ford, Div. Adv. Mobility
- Ryan Rice, TSMO
- Debra Perkins-Smith, DTD
- Herman Stockinger, OPGR
- David Spector, HPTE
- Charles Meyer, TSMO
- Lisa Streisfeld, TSMO
- David Krutsinger, DTR
- San Lee, TSMO
- Dave Mulholland (VHB)

Working Group

- Michael Timlin, DTR
- Alazar Tesfaye, R1
- David Singer, EPB
- John Hall, R1/R2
- Michael King, DTD
- Patrick Chavez, TSMO
- Marie Nakagawa, OPGR
- David Swenka, TSMO
- Mark Andrew, R2
- Nick Farber, HPTE
- Piper Frode, HPTE
- Aaron Greco, OPGR
- Leela Rajasekar, R1
- Angie Drumm, R1
- Sharon Terranova, DTR



High Performance Transportation Enterprise

Developing and Express Lanes Master Plan to Identify Candidate Corridors
Project Manager is Nick Farber, Nicholas.Farber@state.co.us, 303-757-9448

Their long term function:

Enhance Lane Efficiency and Utilization

- Expand use of capacity in under utilized lanes
- Efficiently allocate capacity in over utilized lanes

Provide Travel Time Reliability

- Maintain Reliable speeds
- Sustain unimpeded travel for transit

Yield Revenue to offset Lifecycle Costs

- Enhance financial resources for new capacity
- Sustainable compensation for long-term O & M costs



COLORADO
HPTE
PARTNER. INNOVATE. ACCELERATE.

Best Practices and Case Studies

Policy Research

- Identify legislative and policy considerations from federal, state, and local jurisdictions for managed lanes
- Review peer DOT policy elements to successfully implement and establish managed lanes

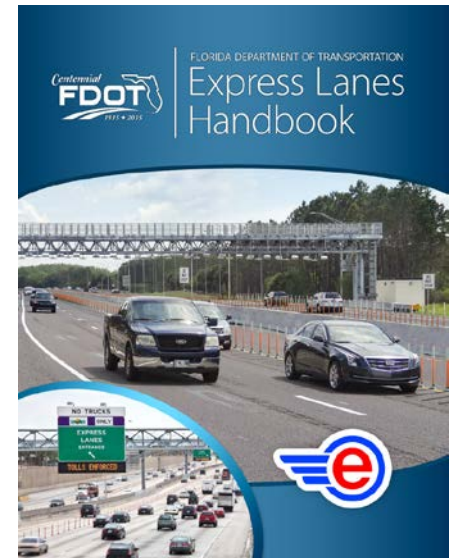
Performance Measures and Applications

- Provides nationally accepted best practices building upon the direction provided by the Federal Highway Administration (FHWA) and peer DOTs.

Peer DOT Implementation Practices

- Identify approaches and implementation procedures / practices for managed lane projects in California, Florida, Georgia, North Carolina, and Texas
- Evaluate prioritization framework based on overarching DOT goals and CDOT's application

<http://floridaexpresslanes.com/wp-content/uploads/2017/04/FDOT-Express-Lanes-Handbook.pdf>



Structure to Develop Managed Lanes Guidance

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Phase 1

- Guidelines to support the existing or revised PD 1603, Section V
- Create a documented process to decide whether or not to evaluate managed lanes as an option
- Framework for consistent assessment of managed lane projects within the state
- Offer goals, objectives, and performance measures to evaluate and/or justify managed lane alternatives
- Provide a toolbox of managed lane strategies to meet study objectives

Phase 2

- Guidelines to develop a concept of operations for managed lanes for the day-to-day operations and maintenance

Phase 3

- Outreach and Training

Managed Lanes Policy & Guidance

Table of Contents for the Guidelines

- Introduction
- Policies for Managed Lanes
- Goals and Objectives
- Managed Applications and Strategies
- Performance Measures for Managed Lanes
- Evaluation of Managed Lanes
- Roles and Responsibilities

Capacity Improvements

Capacity improvements include either the addition new facilities, improvements to existing facilities or multi-modal with transit enhancements. The following provides the minimum criteria for when managed lanes should be considered.

1. Changes in the features of roadway elements which increase the maximum throughput for at least 1 mile, including:

- Constructing a new or additional travel lanes; and/or
- Widening or restriping lanes or shoulders which would allow the operation of an additional travel lane within the cross section

2. Addition of transit facilities / operations (or other rapid speed travel)

Decision-Making Tool

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Project Manager completes form and attaches to a memo to Regional Transportation Director (RTD), Chief Engineer, and HPTE Director to document the decision.

Stage 1: Initial Consideration	Yes No
	<p>A</p> <p><input type="checkbox"/> <input type="checkbox"/> Is the study corridor on an interstate, US highway or state highway?</p> <p><input type="checkbox"/> <input type="checkbox"/> Is the capacity improvement on the study corridor greater than 1-mile?</p> <p>If the answer is "No" to either question, no further consideration is required. If "Yes" to both questions, proceed to Stage 1B</p>
	<p>B</p> <p><input type="checkbox"/> <input type="checkbox"/> Does the study corridor have a high volume in the 20-year horizon (i.e. 4L < 75K AADT, 6L < 115K AADT, 8L < 155K AADT)?</p> <p><input type="checkbox"/> <input type="checkbox"/> Does the study corridor have recurring congestion for more than 2 hours during a peak period?</p> <p><input type="checkbox"/> <input type="checkbox"/> Is the study corridor a limited access facility?</p> <p><input type="checkbox"/> <input type="checkbox"/> Does the study corridor have more than 50 incidents per year?</p> <p><input type="checkbox"/> <input type="checkbox"/> Does the study corridor have existing public transit service?</p> <p><input type="checkbox"/> <input type="checkbox"/> Does the study corridor serve a large amount of freight? (Heavy Vehicle > 10%)</p> <p>If the answer is "No" to all of the questions, Managed Lanes should not be further considered. If "Yes" to any question, proceed to Stage 2</p>



Stage 2: Strongly Considered for Evaluation	Yes No	
	<p><input type="checkbox"/> <input type="checkbox"/> Is the study corridor in the HPTE Express Lanes Master Plan?</p> <p><input type="checkbox"/> <input type="checkbox"/> Will the study corridor be conducting a PEL or planning Feasibility Study?</p> <p><input type="checkbox"/> <input type="checkbox"/> Does the project add capacity and require a CatEx?</p> <p><input type="checkbox"/> <input type="checkbox"/> Does the project require a EA or EIS?</p> <p>If the answer is "Yes" to any of the questions, Managed Lanes should be considered and evaluated</p>	<p style="text-align: center;">Evaluation Level</p> <p>Express Lanes feasible, evaluate Managed Lanes</p> <p>Evaluate during PEL Study / Planning Study</p> <p>Evaluate during CatEx</p> <p>Evaluate during EA or EIS</p>

Goals, Performance Measures and Targets to Evaluate Managed Lanes

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Tier 1 Goals

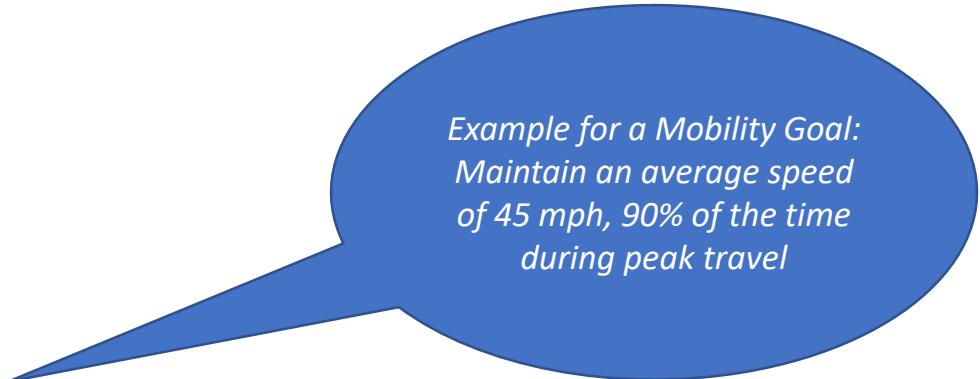
- Mobility
- Reliability
- Safety

Tier 2 Goals

- Environmental Impacts
- System Preservation
- Organizational Efficiency
- Project Financing
- Technology and Innovation

Metrics and Targets

- For each goal, a typical performance measure and a target/threshold are suggested
- Measures were identified based upon criteria for the data to be:
 - Understandable
 - Widely Accepted
 - Readily Available or Efficient to Obtain



*Example for a Mobility Goal:
Maintain an average speed
of 45 mph, 90% of the time
during peak travel*

Goals, Objectives, Strategies

Managed Lane Applications / Strategies

Goal (We Manage for...)	Objective	Active Traffic Management Lanes	Express Bus Lanes	Special-Use Lanes	Express Lanes	High-Occupancy Vehicle	Reversible Lanes	Shoulder Lanes	Connected Vehicle Technology
Tier 1 Planning Goals (All Projects)									
Mobility	Increase throughput	●	●	●	●	●	●	●	○
	Increase mode choice	○	●	●	●	○	○	○	○
	Increase average travel speeds	●	●	●	●	●	●	●	●
	Decrease average travel time	●	●	●	●	●	●	●	●
	Decrease delay	●	●	●	●	●	●	●	●
	Maintain acceptable operating conditions	●	●	●	●	○	●	●	●
Reliability	Decrease travel time variation (ML and GP lanes)	●	●	●	●	●	●	●	●
Safety	Decrease the frequency and severity of crashes	●	○	●	●	○	○	○	●
	Reduce number of primary and secondary crashes	●	○	●	●	○	○	○	●
	Work zone management	●	○	●	●	○	○	○	●
	Enhance incident management activities	●	○	●	●	○	○	●	●
Tier 2 Planning Goals (Additional Benefits)									
Environmental Sustainability <i>Trigger(s): Anticipated Need or Benefit</i>	Decrease fuel consumption	○	●	●	●	●	○	○	●
	Increase air quality / decrease pollutants	○	●	●	●	●	○	○	●
System Preservation <i>Trigger(s): 30-50 year life projects</i>	Implement long-term mobility solutions	○	●	○	●	●	●	●	○
Organizational Efficiency <i>Trigger(s): Funding constraints, high public involvement</i>	Increase customer satisfaction ratings	●	●	●	●	●	●	●	●
	Minimize costs	●	●	●	●	●	●	●	●
Project Financing <i>Trigger(s): Unfunded project</i>	Maximize funding	○	○	○	●	○	●	●	○
Technology & Innovation <i>Trigger(s): CV/AV market penetration, surplus of short-term capacity</i>	Leverage managed lanes to deploy new technologies	●	●	●	○	○	○	●	●
	Design managed lanes to be adaptable for future technologies	○	●	●	●	○	○	●	●

Notes:

- - Managed lane type directly accomplishes objective
- - Managed lane type generally accomplishes objective
- - Managed lane type does not directly address objective

Milestones & Next Steps

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- **Outreach Reviews**

- ✓ Technical Working Group Team and Leadership Team
- ✓ NEPA Practitioners Group
- ✓ Statewide Planners
- ✓ Statewide Traffic Engineers
- Statewide Program Engineers III
- ✓ RTDs
- FHWA
- MPOs
- ✓ HPTE Board of Directors
- STAC
- Transportation Commission (October 17th & November 15th, 2018)

- **Managed Lanes Guidelines Document:**

- Phase 1: October 12, 2018
- Phase 2: Begin January, 2019

- **Rollout of Training Program to CDOT Regions second quarter 2019**



THANK YOU



Lisa Streisfeld
Mobility Operations
Lisa.Streisfeld@state.co.us
(303) 757-9876





COLORADO
Department of Transportation
Division of Transportation Development
2829 West Howard Place,
Denver, CO 80204

DATE: October 16, 2018
TO: Statewide Transportation Advisory Committee
FROM: Michelle Scheuerman, Statewide Planning Section Manager
Aaron Willis, Transportation Planner
SUBJECT: CDOT's Virtual Public Engagement Focus Group: The Voice of Colorado

Purpose

This memo provides an explanation of the Voice of Colorado Virtual Focus Group. CDOT is in the process of developing a virtual focus group for public engagement purposes during the development of the 2045 Statewide Transportation Plan.

Action

Staff is requesting assistance from our planning partners to identify potential participants for the Voice of Colorado group in order to increase participation in areas outside the Front Range.

Background

Following the successful implementation of the 2017 Statewide Customer Experience Survey and the subsequent winter and summer driving experience surveys, CDOT has obtained a list of 50 individuals that are interested in potentially participating in the Voice of Colorado in order to provide detailed opinions to the Department from the traveling public's perspective.

Details

CDOT is in the process of creating an 'on-going' conversation with members of the public through the development of a virtual focus group. Moreover, by cultivating open lines of communication that help address concerns and educated the public, this virtual focus group will continue to help the Department remain consistent with public desires and provide valuable input during the statewide and regional transportation plan development process.

This quick-response public opinion group would serve on an on-call basis and is intended to supplement existing public and social media engagement efforts. CDOT is respectful of the public's time, cares about what the public thinks, and therefore will carefully monitor the frequency of our interactions, so as not to place an undue burden on participants. Potential participants can anticipate two to three multiple choice or open-ended questions per month on topics ranging from quality of life, technology, multimodal travel, educational points and messaging, and more.

Next Steps:

If STAC members have any questions about the Voice of Colorado or know any potential participants, please contact Aaron Willis, CDOT Transportation Planner via email aaron.willis@state.co.us or phone 303-512-4019.