

AGENDA
REGIONAL TRANSPORTATION COMMITTEE
Tuesday, July 19, 2022, 8:30 a.m.
VIDEO/WEB CONFERENCE - via Zoom

1. Call to Order
2. Public Comment
3. June 16, 2022, RTC Meeting Summary
(Attachment A)

ACTION ITEMS

4. FY 2022-2025 Transportation Improvement Program (TIP) Policy Amendments
(Attachment B) Josh Schwenk, Transportation Planner
5. Confirm TAC Special Interest Seats Appointments
(Attachment C) Jacob Riger, Manager, Long Range Transportation Planning

INFORMATIONAL BRIEFINGS

6. 2050 Regional Transportation Plan Greenhouse Gas Analysis Update
(Attachment D) Jacob Riger, Manager, Long Range Transportation Planning

ADMINISTRATIVE ITEMS

7. Member Comment/Other Matters
 - CDOT Report
 - RTD Report
8. Next Meeting – August 16, 2022
9. Adjournment

Attendees can request additional aids or services, such as interpretation or assistive listening devices, by calling 303-480-6701 or emailing ckennedy@drcog.org Please notify DRCOG at least 48 hours in advance so we can coordinate your request.

ATTACH A

ATTACHMENT A

MEETING SUMMARY
REGIONAL TRANSPORTATION COMMITTEE
Tuesday, June 14, 2022
Note: Meeting held virtually via Zoom

MEMBERS PRESENT:

Don Stanton	Colorado Department of Transportation
Yessica Holguin	Colorado Department of Transportation
Rebecca White (Alternate)	Colorado Department of Transportation
Karen Stuart	Colorado Department of Transportation
Randy Weil (Alternate)	Denver Regional Council of Governments
Claire Levy	Denver Regional Council of Governments
Wynne Shaw	Denver Regional Council of Governments
Kevin Flynn (Chair)	Denver Regional Council of Governments
Steve Conklin (Vice-Chair)	Denver Regional Council of Governments
Shelley Cook	Regional Transportation District
Vince Buzek	Regional Transportation District
Kate Williams	Regional Transportation District
Debra Johnson	Regional Transportation District
Jeffery Kullman	Michael Baker International
Mike Silverstein	Regional Air Quality Council

Others Present:

Kathleen Bracke (Alternate)	Colorado Department of Transportation
Jessica Myklebust (Alternate)	Colorado Department of Transportation
Lynn Guissing (Alternate)	Regional Transportation District
Bill Van Meter (Alternate)	Regional Transportation District
Ron Papsdorf (Alternate)	Denver Regional Council of Governments

Public: Allison Cutting, Rachel Hultin, Anita Seitz, Deborah Mulvey, Jacob Kershner, Kathleen Bracke, Michael Davies, Roy Howard, William Johnson, Zeke Lynch

DRCOG Staff: Emily Lindsey, Alvan-Bidal Sanchez, Cam Kennedy, Andy Taylor, Sang Gu Lee, Robert Spotts, Matthew Helfant, Josh Schwenk, Melissa Adamson, Emily Kleinfelter, Steve Cook, Jacob Riger, Todd Cottrell, Ala Alnawaiseh

Call to Order

Chair Kevin Flynn called the meeting to order at 8:30 a.m.

Public Comment

A comment was provided via email by Marie Venner which encouraged RTC to redirect funding towards reducing car dependency and creating a safer, more inclusive transportation network for people of all ages and abilities.

Summary of May 17, 2022 Meeting

The summary was accepted.

ACTION ITEMS

Federal Performance Targets: Traffic Congestion and on-road Mobile Source Emissions Reduction

Alvan-Bidal Sanchez, Transportation Planner, informed the committee that federal law requires State DOTs and MPOs to set targets and report on progress towards achieving the targets for several performance areas in support of a performance-based approach to transportation planning and programming. These areas include safety, infrastructure condition (pavement and bridge), system performance, transit asset management, and transit safety. The traffic congestion

targets, and on-road mobile source emissions targets are two subparts of the broader PM3 - system performance. DRCOG has built on a methodology developed by CDOT to calculate the DRCOG portion of each pollutant and set two-year and four-year targets.

Mr. William Johnson, CDOT Performance and Asset Management Branch Manager within the Division of Transportation Development, presented on CDOT's CATCH Intelligence Model Results regarding Peak Hour Excessive Delay (PHED) since CDOT and DRCOG have a mutual target regarding Denver-Aurora UZA. Current PHED levels are below pre-pandemic levels, but modeling suggests PHED levels will slowly rise back to pre-pandemic levels. Staff recommends using the higher threshold for the 2-year and 4-year targets for this measure.

Ms. Claire Levy inquired about what is determined as an "excessive delay" and what is the consequence of exceeding the PHED target. Mr. Johnson responded the consequence is that CDOT would have to write a report to FHWA explaining why the target was missed and identify action steps to correct the issue. Regarding excessive delay, Mr. Johnson said the definition by FHWA is travel time based on 20 miles per hour or 60% of the posted speed limit, whichever is greater, and is measured in 15-minute intervals between 6 a.m.-10 a.m. and 3 p.m.-7 p.m. in the DRCOG region.

Ms. Kate Williams asked if the PHED Target could be connected to reducing single-occupancy vehicles and air quality. Mr. Johnson responded that this is one performance measure out of many and other performance measures address air quality.

Mr. Mike Silverstein inquired about the PHED Target's data points and if they could have been broken up by month. Mr. Johnson responded that he would coordinate with DRCOG staff and get the information sent out.

Ms. Shaw asked how representative is the Denver-Aurora UZA since Lone Tree and Castle Pines don't seem to be included. Mr. Sanchez explained that the list of communities isn't exhaustive and was meant to indicate the overall geographic area covered by the UZA.

Mr. Silverstein commended the work done by DRCOG and CDOT and mentioned that since the region is still in maintenance status for Carbon Monoxide, a request needs to be submitted to the EPA to redesignate the region as being in attainment.

Ms. Levy inquired about how the targets presented today relate to the motor vehicle emissions targets and Mr. Sanchez confirmed these are the same pollutants in the air quality conformity modeling. Ms. Levy also asked why the 2-year target is so different from the 4-year target. Mr. Sanchez responded the 2-year targets will be the emissions reduction benefits reported for 2022-2023 combined while the 4-year target will be inclusive of all 2022-2025 reported data.

Wynne Shaw MOVED to recommend to the Board of Directors the traffic congestion and on-road mobile source emissions reduction targets for the Denver-Aurora, CO Urbanized Area and the Denver Regional Council of Governments as part of Federal performance-based planning and programming requirements.

INFORMATIONAL BRIEFING

2050 Regional Transportation Plan Greenhouse Gas Update

Jacob Riger, Manager, Long Range Transportation Planning, provided an update to the committee. Based on the analysis conducted so far, staff estimates the 2050 RTP will achieve

approximately 70%-80% of the emission reduction targets in each analysis year. To achieve further reductions, staff has been testing the potential GHG benefits of strategic RTP modifications:

- Refocusing the scope of select roadway capacity projects to emphasize complete streets/safety retrofits.
- Advancing the implementation of select BRT corridors.
- Increasing investments in multimodal improvements to complete more of them and more quickly: regional active transportation network buildout, safety projects, complete streets retrofits, and transit corridors.

However, implementing these important strategies will still leave a GHG reduction gap to close. Accordingly, staff is exploring two additional concepts. The first concept relates to land use forecasts used in the 2050 RTP planning process. The second concept relates to CDOT-defined mitigation measures.

Based on the GHG modeling and technical analysis to date, it is possible the other strategies discussed will not be enough to meet the GHG emission reduction targets without pursuing mitigation measures. The alternative to mitigation measures is accepting restrictions on the use of certain funding sources administered by DRCOG and CDOT 10-Year Plan funds within the DRCOG MPO area to only projects that reduce GHG emissions. This restriction of funds would affect project eligibility for DRCOG's 2024-2027 TIP calls #3 and #4 in late 2022 and early 2023.

Mr. Don Stanton asked if public transportation ridership does not return to normal would we potentially not meet the GHG reduction goals. RTD CEO and General Manager Debra Johnson mentioned ridership has increased but has been slow to do so. Ridership hovers around an estimated 65% of pre-pandemic levels. Mr. Riger commented the plan will continue to be updated and DRCOG will work with our partners to reassess all parts of the RTP since that is the baseline.

Ms. Shelley Cook discussed strategies to reduce GHG and some options including working with partner agencies to extend services and wondered if there is money for communities who wish to operate their own transit services in partnership with RTD. Mr. Riger confirmed the planning process is looking at which strategies are most effective in reducing GHG emissions and DRCOG is also allocating funds to those sorts of initiatives including partnerships.

Ms. Williams inquired if there are financial penalties if the region doesn't reach the GHG reduction targets and if that is the case, is that news getting transmitted out, so everyone is aware. Mr. Riger confirmed financial penalties would happen if GHG reduction goals aren't met. He also stated that DRCOG has been communicating that in our meetings since that needs to be understood by as wide an audience as possible.

Ms. Karen Stuart clarified that the issue isn't financial penalties but the redirection of funds to try to meet the GHG reduction goal. Ms. Rebecca White followed up by stating there is a distinction between taking away funding compared to redirecting funding. If DRCOG and North Front Range MPO don't comply with the GHG standard then multimodal options funds, CMAQ funds, STBG funds and CDOT 10-Year Plan funding can only be spent on projects that reduce GHG emissions. Mr. Stanton also took the chance to remind everyone the Transportation Commission can amend the GHG rule and the policy directives.

Regional Complete Streets Network Prioritization Analysis

Emily Kleinfelter, Safety/Regional Vision Zero Planner, informed the committee that DRCOG developed a Regional Complete Streets Toolkit that provides guidance for local governments and project sponsors to plan, design, and implement roadway improvements. The Infrastructure

Investment and Jobs Act (IJA) requires MPOs to develop a Complete Streets prioritization plan that identifies a specific list of Complete Streets projects to improve the safety, mobility, or accessibility of the transportation system.

DRCOG extended its contract with Toole Design to develop an analysis process to identify priority roadway segments and locations for investments that address safety, mobility, and accessibility. The analysis can assist project sponsors in developing multimodal projects for the 2024-2027 TIP that help implement the 2050 RTP project and program investment priorities and the Metro Vision Plan's outcomes and objectives.

Chair Flynn asked about the criteria for the scores on corridors since there were some gaps shown. Ms. Kleinfelter mentioned that the Toolkit is still being developed but when the Toolkit is fully finished and available to the public, those gaps will be cleaned up.

ADMINISTRATIVE ITEMS

Member Comment/Other Matters

- **CDOT Report**

Ms. Rebecca White informed the committee CDOT is currently focused on their GHG emissions analysis, developing the 10-Year Plan, and applying for grants from FHWA. Ms. Karen Stuart added the I-270 project is continuing and remains a critical development for Denver and Adams Counties, CDOT will also have updates to the GHG policy and mitigation plan throughout the next several meetings. Lastly, Mr. Don Stanton mentioned an ad-hoc committee on environmental management and provided a list of commissioners and staff involved in the meeting.

- **RTD Report**

Ms. Kate Williams reminded TAC that Bike to Work Day is coming up on June 22 and encouraged people to participate. Mr. Vince Buzek mentioned a Reimagine RTD Board Study Session will be occurring tomorrow night and recommendations will come to the Board in July for approval. Topics for the meeting also include the impacts of TABOR on the future budget process and a discussion on debrucing. Next, Mr. Buzek reminded everyone Zero Fare August is coming up for all RTD services and hopes it will encourage people to use public transportation more.

GM and CEO Debra Johnson reiterated that Zero Fare August is fast approaching, and more information will be provided soon. RTD is working with partner organizations around the region to spread the word and promote this major initiative. RTD is also entering into an intergovernmental agreement with the Colorado Energy Office as RTD seeks grant funding from SB22-180. Also, the Fare Study and Equity Analysis, which began early this year has seen massive participation and input from a diverse array of constituencies and materials for the analysis have been provided in multiple languages.

Mr. Bill Van Meter provided more information on the upcoming Reimagine RTD Study Session, mentioning the draft System Optimization Plan through 2027 will be released following tomorrow's meeting and RTD anticipates action on that plan in July. The long-term plan shows a difference between the public and shareholder expectations and the RTD Board will be discussing that as well in the Study Session tomorrow.

Chair Flynn inquired about how travel times are changing and was curious if that is also occurring on the public transit network. GM and CEO Johnson confirmed that and repeated Director Williams statement that it looks like a "camel's hump" with more people taking advantage of transit at

different hours of the day than pre-pandemic. Rush hours are no longer the same and this isn't unique to Colorado but appears to be happening across the country.

Next Meeting – July 19, 2022

Adjournment

The meeting adjourned at 10:15 a.m.

ATTACH B

ATTACHMENT B

To: Chair and Members of the Regional Transportation Committee

From: Josh Schwenk, Planner, Transportation Planning & Operations
jschwenk@drcog.org

Meeting Date	Agenda Category	Agenda Item #
July 19, 2022	Action	4

SUBJECT

FY 2022-2025 Transportation Improvement Program (TIP) Policy Amendments.

PROPOSED ACTION/RECOMMENDATIONS

DRCOG staff recommends approval of the proposed amendments because they comply with the current TIP amendment procedures, as contained within the Board-adopted [2020-2023 TIP Policy](#).

ACTION BY OTHERS

[June 27, 2022](#) – TAC recommended approval

SUMMARY

DRCOG's transportation planning process allows for Board-approved amendments to the current Transportation Improvement Program (TIP) on an as-needed basis. Typically, these amendments involve the addition or deletion of projects, or adjustments to existing projects and do not impact funding for other projects in the TIP.

The TIP projects to be amended are shown below and listed in Attachment 1. The proposed amendments to the [FY 2022-2025 Transportation Improvement Program](#) have been found to conform with the State Implementation Plan for Air Quality.

TIP Amendments

- **2016-055** **I-25: 120th Ave to E-470 Managed Lanes**
Refinance the previous private loan into a federal TIFIA loan to save on interest costs. \$23,630,000 moves into FY23 and increases by \$4,800,000 to purchase tolling equipment.
- **2020-091** **I-70 and Picadilly: New Interchange**
Add \$8,500,000 in state FASTER Safety funding.
- **2022-020** **I-70 Floyd Hill Improvements**
Add parking at El Rancho to project scope. Increase state Legislative funding by \$6,300,000.
- **New Project** **Boulder County Transit Operating Assistance**
Add new project utilizing federal American Recovery Plan Act (ARPA) funding for transit operating assistance in three small urbanized areas (UZAs) in Boulder County.
- **New Project** **Washington St. Improvements: 47th Ave. to 52nd Ave.**
Add new project for RAISE Grant award.

PREVIOUS DISCUSSIONS/ACTIONS

N/A

PROPOSED MOTION

Move to recommend to the Board the attached amendments to the *FY 2022-2025 Transportation Improvement Program* (TIP).

ATTACHMENTS

1. Proposed TIP amendments
2. Boulder County letter to DRCOG, May 24, 2022
3. Boulder County and RTD letter to CDOT, October 26, 2021
4. Boulder County ARPA funds Program of Projects, May 2022

ADDITIONAL INFORMATION

If you need additional information, please contact Josh Schwenk, Planner, Transportation Planning and Operations Division at jschwenk@drcog.org.

2016-055: Refinance previous private loan into a federal TIFIA loan to save on interest. \$23,630,000 moves into FY23 and increases by \$4,800,000 to purchase tolling equipment

Existing

Title: **I-25: 120th Ave to E-470 Managed Lanes**

Project Type: **Roadway Capacity**

TIP-ID: **2016-055**

STIP-ID:

Open to Public: **2020**

Sponsor: **CDOT Region 1**

Project Scope

This project will extend the existing and under construction managed lanes project (TIPID 2012-073), utilizing existing and new ROW. The project will result in one new managed lane in each direction from the current project's northern terminus near 120th Ave to E-470. Project will resurface the entire stretch, add traffic management, sound wall, tolling/ITS equipment and safety, bridge, and drainage improvements.



Affected Municipality(ies)
Broomfield
Thornton
Westminster
Unincorporated

Affected County(ies)
Adams
Broomfield

Performance Measures	
<input checked="" type="checkbox"/>	Bridge Condition
<input checked="" type="checkbox"/>	Congestion
<input checked="" type="checkbox"/>	Freight Reliability
<input checked="" type="checkbox"/>	Pavement Condition
<input checked="" type="checkbox"/>	Safety
<input type="checkbox"/>	Transit Assets
<input type="checkbox"/>	Transit Safety
<input checked="" type="checkbox"/>	Travel Time Reliability

Amounts in \$1,000s	Prior Funding	FY22	FY23	FY24	FY25	Future Funding	Total Funding
Federal		\$0	\$0	\$0	\$0		
State (R P P)		\$0	\$0	\$0	\$0		
Local		\$0	\$0	\$0	\$0		
Total	\$116,677	\$0	\$0	\$0	\$0	\$0	\$116,677

Revised Funding Table

Amounts in \$1,000s	Prior Funding	FY22	FY23	FY24	FY25	Future Funding	Total Funding
Federal		\$0	\$0	\$0	\$0		
Federal (TIFIA)		\$0	\$28,430	\$0	\$0		
State		\$0	\$0	\$0	\$0		
State (R P P)		\$0	\$0	\$0	\$0		
Local		\$0	\$0	\$0	\$0		
Total	\$93,047	\$0	\$28,430	\$0	\$0	\$0	\$121,477

2020-091: Add \$8,500,000 in state FASTER Safety funding

Existing

Title: **I-70 and Picadilly: New Interchange**

Project Type: **Roadway Capacity**

TIP-ID: **2020-091**

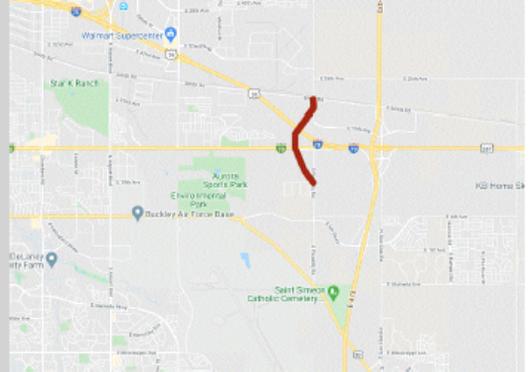
STIP-ID:

Open to Public: **2025**

Sponsor: **Aurora**

Project Scope

This project builds a new diverging diamond interchange at I-70 and Picadilly Rd., just west of E-470, and reconstructs and realigns Picadilly Rd. between 11th Ave. and Smith Rd. This project also adds auxiliary lanes to both eastbound and westbound I-70 between Picadilly Rd. and Tower Rd.



Affected Municipality(ies)

Aurora

Affected County(ies)

Adams

Arapahoe

Performance Measures

- Bridge Condition
- Congestion
- Freight Reliability
- Pavement Condition
- Safety
- Transit Assets
- Transit Safety
- Travel Time Reliability

Amounts in \$1,000s	Prior Funding	FY22	FY23	FY24	FY25	Future Funding	Total Funding
Federal (BUILD)		\$5,000	\$5,000	\$5,000	\$5,000		
State		\$0	\$0	\$0	\$0		
Local		\$3,840	\$3,840	\$3,840	\$3,840		
Total	\$23,355	\$8,840	\$8,840	\$8,840	\$8,840	\$0	\$58,715

Revised Funding Table

Amounts in \$1,000s	Prior Funding	FY22	FY23	FY24	FY25	Future Funding	Total Funding
Federal		\$0	\$0	\$0	\$0		
Federal (BUILD)		\$5,000	\$5,000	\$5,000	\$5,000		
State		\$0	\$0	\$0	\$0		
State (Faster-S)		\$3,760	\$4,740	\$0	\$0		
Local		\$3,840	\$3,840	\$3,840	\$3,840		
Total	\$23,355	\$12,600	\$13,580	\$8,840	\$8,840	\$0	\$67,215

2022-020: Add parking at El Rancho to project scope. Increase state Legislative funding by \$6,300,000

Existing

Title: **I-70 Floyd Hill Improvements**

Project Type: **Roadway Operational Improvements**

TIP-ID: **2022-020**

STIP-ID:

Open to Public: **2024**

Sponsor: **CDOT Region 1**

Project Scope

Construct improvements associated with the portion of the I-70 Floyd Hill project within Jefferson County, including Genesee wildlife crossing, US-40/CR-65 roundabout, and other early action elements.



Affected Municipality(ies)

Unincorporated

Affected County(ies)

Jefferson

Performance Measures

- Bridge Condition
- Congestion
- Freight Reliability
- Pavement Condition
- Safety
- Transit Assets
- Transit Safety
- Travel Time Reliability

Amounts in \$1,000s	Prior Funding	FY22	FY23	FY24	FY25	Future Funding	Total Funding
Federal		\$0	\$0	\$0	\$0		
State (Leg)		\$3,000	\$8,000	\$0	\$0		
Local		\$0	\$0	\$0	\$0		
Total	\$0	\$3,000	\$8,000	\$0	\$0	\$0	\$11,000

Revised Scope and Funding Table

Project Scope

Construct improvements associated with the portion of the I-70 Floyd Hill project within Jefferson County, including Genesee wildlife crossing, US-40/CR-65 roundabout, parking at El Rancho, and other early action elements.

Amounts in \$1,000s	Prior Funding	FY22	FY23	FY24	FY25	Future Funding	Total Funding
Federal		\$0	\$0	\$0	\$0		
State (Leg)		\$3,000	\$14,300		\$0	\$0	
Local		\$0	\$0	\$0	\$0		
Total	\$0	\$3,000	\$14,300	\$0	\$0	\$0	\$17,300

New Project: Add new project utilizing FTA Section 5307 ARPA funding for transit operating assistance in Boulder County small urbanized areas (Boulder, Longmont, and Louisville-Lafayette-Erie UZAs). Project scope includes the program of projects

New Project

Title: **Boulder County Transit Operating Assistance**

Project Type: **Bus Service Projects (Expanded)**

TIP-ID: **Request**

STIP-ID:

Open to Public:

Sponsor: **Boulder County**

Project Scope

Transit operating expenses for restoring transit service operations impacted by the COVID-19 pandemic for the following routes: HOP, Lyons Flyer, JUMP, BOLT, LD, NB, East Boulder County and Gunbarrel on-demand services, and ADA paratransit service. Uses federal ARPA funds for the Boulder, Longmont, and Louisville-Lafayette-Erie small UZAs.



Affected County(ies)
Boulder

Performance Measures	
<input type="checkbox"/>	Bridge Condition
<input type="checkbox"/>	Congestion
<input type="checkbox"/>	Freight Reliability
<input type="checkbox"/>	Pavement Condition
<input type="checkbox"/>	Safety
<input type="checkbox"/>	Transit Assets
<input type="checkbox"/>	Transit Safety
<input type="checkbox"/>	Travel Time Reliability

Amounts in \$1,000s	Prior Funding	FY22	FY23	FY24	FY25	Future Funding	Total Funding
Federal (ARPA-5307)		\$5,707	\$5,707	\$5,707	\$5,707		
State		\$0	\$0	\$0	\$0		
Local		\$0	\$0	\$0	\$0		
Total	\$0	\$5,707	\$5,707	\$5,707	\$5,707	\$11,413	\$34,241

New Project: Add new project funded through a RAISE Grant award

New Project

Title: **Washington St. Improvements: 47th Ave. to 52nd Ave.**

Project Type: **Roadway Reconstruction**

TIP-ID: **Request**

STIP-ID:

Open to Public: **2027**

Sponsor: **Denver**

Project Scope

Modernization of Washington St. from 47th Ave. to 52nd Ave. and the implementation of a more efficient lane configuration, widened sidewalks, bicycle paths, energy-efficient lighting, streetscaping treatments, and improved access to transit.



Affected Municipality(ies)

Denver

Affected County(ies)

Denver

Performance Measures

- Bridge Condition
- Congestion
- Freight Reliability
- Pavement Condition
- Safety
- Transit Assets
- Transit Safety
- Travel Time Reliability

Amounts in \$1,000s	Prior Funding	FY22	FY23	FY24	FY25	Future Funding	Total Funding
Federal (RAISE)		\$0	\$0	\$6,362	\$0		
State		\$0	\$0	\$0	\$0		
Local		\$4,340	\$0	\$2,690	\$0		
Total	\$428	\$4,340	\$0	\$9,052	\$0	\$22,975	\$36,795



Community Planning & Permitting

Transportation Planning Division • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930
Website: www.bouldercounty.org/transportation/multimodal

DATE: May 24, 2022

TO: Doug Rex, Executive Director, Denver Regional Council of Governments
Ron Papsdorf, Deputy Director, Transportation Planning, DRCOG

FROM: Kathleen Bracke, Deputy Director, Community Planning & Permitting –
Transportation Planning, Boulder County

CC: Alex Hyde-Wright, Principal Planner, CP&P – Transportation Planning
Angel Bond, Mobility for All Program Manager, CP&P – Transportation Planning

RE: FTA ARPA Funds for small UZAs within Boulder County

Boulder County, in conjunction with the local jurisdictions of the cities of Boulder, Longmont, Louisville, Lafayette, and the Town of Erie, is providing this letter to the Denver Regional Council of Governments (DRCOG) as part of our ongoing multiagency process to designate Boulder County as the direct recipient of the Federal Transit Administration (FTA) American Rescue Plan Act (ARPA) funding designated for the small Urbanized Areas (UZAs) within the county.

This process is consistent with the joint letter submitted by Boulder County and the Regional Transportation District (RTD) to the Colorado Department of Transportation (CDOT) and FTA in October 2021 (see attachment 1).

Boulder County appreciates DRCOG's assistance to help us with the process to amend the DRCOG Transportation Improvement Program (TIP) and related State Transportation Improvement Program (STIP) to reflect the FTA ARPA funds for the small UZAs within the county. Our understanding is that the TIP amendment process will include presenting this information at the upcoming DRCOG TAC, RTC and Board meetings in June-July. Subsequent to the DRCOG TIP amendment process, there will be process with CDOT to amend the STIP.

As part of this ongoing multiagency process, Boulder County has developed the enclosed Program of Projects (POP) which outlines how the FTA ARPA funding identified for the small UZAs of Boulder, Longmont, and Louisville-Lafayette-Erie is intended to be used for transit activities in accordance with FTA eligibility criteria for the ARPA funding (see attachment 2). The POP is being provided to the public in both English and Spanish. The transit activities listed in the POP include fixed route operating expenses for restoring transit service operations impacted by the pandemic for the following routes: local HOP circulator within the City of Boulder; regional services for Lyons-Boulder recently renamed the "Lyons Flyer" and CO7/JUMP, CO119/BOLT, US287/LD1/2/X, Boulder-Nederland; and on-demand services in Lafayette/East Boulder County communities and Gunbarrel; plus applicable ADA paratransit service. Recognizing that our agencies and communities are continuing to experience on-going pandemic related impacts, there may be additional routes/transit services needed from now through 2027 that could be applicable/eligible for these FTA ARPA funds.

As background, Boulder County began the process to become the designated recipient of FTA ARPA funds for the small UZAs located in Boulder County beginning in October 2021. The FTA

ARPA funds for the small UZAs are outlined in the table below, and this funding will be used for ARPA-eligible transit programs directly serving the communities representing the small UZAs from 2022 through 2027:

Boulder County UZAs	ARPA approximate available funding (2022-27):
	Boulder County
Boulder	\$32,292,525
Longmont	\$ 1,355,722
Louisville-Longmont-Erie	\$ 592,721
Total:	\$34,240,968

The transit service investments using the FTA ARPA funds for the small UZAs within the county are consistent with the Boulder County [Transportation Master Plan](#) (see pages 11-13) for details of the Transit Implementation Action and Vision Network, including map and list of specific transit routes, and the county’s new [Mobility for All Ages & Abilities Coordinated Human Services Plan](#).

In addition, these services are consistent with other transit-related local, regional, and state plans, including the regional [Northwest Area Mobility Study](#) and local, regional and state air quality and climate action plans. The transit services that the FTA ARPA funds will be used for are also consistent with and complement the DRCOG [2050 Metro Vision Regional Transportation Plan Coordinated Transit Plan](#) (appendix J).

The transit service restorations using the FTA ARPA funds have been selected to complement RTD’s current and proposed service levels as proposed in their [System Optimization Plan](#) recognizing that RTD has limited capacity to restore local and regional routes that have been reduced or eliminated since the start of the pandemic and which will likely remain as-is or as-planned through 2027 or beyond.

Please let us know if you have any questions or suggestions for us as we continue our collaboration with DRCOG staff and our other agency partners to advance transit investments using the FTA ARPA funds designated for the small UZAs within Boulder County.

We appreciate your assistance and please let us know the next steps regarding the DRCOG TIP amendment process.

Thank you.

Attachments:

1. Joint Letter from Boulder County and RTD regarding FTA ARPA funds for small UZAs within Boulder County.
2. Boulder County Program of Projects for FTA ARPA funds for small UZAs



Board of County Commissioners

October 26, 2021

Shoshana Lew
Executive Director
Colorado Department of Transportation
2829 W. Howard Place
Denver, CO 80204

Dear Executive Director Lew,

In the spirit of shared goals and multi-agency partnerships, Boulder County and the Regional Transportation District (RTD) are jointly requesting that the approximately \$34 million in American Rescue Plan Act COVID relief funds intended for operating costs of public transit during the public health emergency within specified Boulder County Urbanized Areas (UZAs) be directed to Boulder County. Boulder County will work with local communities as well as with RTD, CDOT, and the Federal Transit Administration (FTA) to develop a program of local and regional transit service delivery strategies. These strategies will be co-developed through a multi-agency collaborative approach. These federal funds will be invested in accordance with all federal funding requirements.

In support of our regional climate, air quality, and social equity goals, Boulder County and RTD and our state and local agency partners have the shared responsibility to encourage and support the use of public transit and other sustainable transportation options. We understand the magnitude of the impacts to RTD and our local communities from the COVID-19 pandemic and recognize that our collective paths forward to restore public health and our vibrant economy will require strong partnerships and collaboration.

RTD and Boulder County are committed to working together with CDOT, FTA, and all our agency partners to provide safe, affordable, equitable and sustainable transit service to our constituents to achieve our shared goals.

We thank our state and federal partners for working together for the betterment of our greater community.

Sincerely,

Matt Jones

Marta Loachamin

Claire Levy

Debra A. Johnson,
RTD General Manager/CEO

cc:

Governor Jared Polis
Cindy Terwilliger, Federal Transit Administration Regional Administrator, FTA Region 8
RTD Board of Directors

Matt Jones County Commissioner **Claire Levy** County Commissioner **Marta Loachamin** County Commissioner

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Community Planning & Permitting

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May 2022

NOTICE:

PROGRAM OF PROJECTS – FEDERAL TRANSIT ADMINISTRATION AMERICAN RESCUE PLAN ACT FUNDS FOR SMALL URBANIZED AREAS WITHIN BOULDER COUNTY

Boulder County has planned the following Program of Projects (POP) for the Federal Transit Administration (FTA) American Rescue Plan Act (ARPA) funding identified for the small Urbanized Areas (UZAs) of Boulder, Longmont, and Louisville-Lafayette-Erie.

Once final apportionments have been announced by the FTA and designated by the Colorado Department of Transportation (CDOT), the final dollar amounts may change, but identified projects will remain the same.

The POP complements the Denver Regional Council of Governments’ (DRCOG) FY2022-2025 Transportation Improvement Program (TIP), CDOT State Transportation Improvement Program (STIP), and the Regional Transportation District’s (RTD) current and proposed service levels as proposed in their System Optimization Plan, and Boulder County’s Transportation Master Plan and other transit-related state, regional and local plans.

In 2021, Boulder County began the process to become the Designated Recipient of FTA ARPA funds for the small UZAs located in Boulder County as outlined below:

Boulder County UZAs	ARPA approximate available funding (2022-27):
	Boulder County
Boulder	\$32,292,525
Longmont	\$ 1,355,722
Louisville-Longmont-Erie	\$ 592,721
Total:	\$34,240,968

As part of this process, and working in collaboration with local community partners, Boulder County has developed the proposed Program of Projects (POP) including:

Fixed Route Operating Expenses for restoring transit service operations impacted by the pandemic for the following routes: local HOP circulator within the City of Boulder; regional services for Lyons-Boulder recently renamed the “Lyons Flyer”, CO7/JUMP, CO119/BOLT, US287/LD1/2/X, Boulder-Nederland; and on-demand services in Lafayette/East Boulder County communities and Gunbarrel; plus applicable ADA paratransit service. Recognizing that our agencies and communities are continuing to experience on-going pandemic related impacts, there may be additional

routes/transit services needed from now through 2027 that could be applicable/eligible for these FTA ARPA funds. \$34,240,968 Federal, Local Match n/a.

Detailed information on the aforementioned projects may be obtained by contacting:

Kathleen Bracke, Deputy Director, Boulder County/Community Planning & Permitting-Transportation Planning, phone: (970) 219-6765 and email: kbracke@bouldercounty.org. Address: 2045 13th Street, Boulder, Colorado 80306

The formal public comment period begins on May 25, 2022 and concludes on June 30, 2022. A public meeting will be held virtually on June 8th from 6:00 – 7:00 p.m. to allow for questions and comments.

To register for the virtual public meeting, please visit the Boulder County [transit planning website](#). All members of the public are encouraged to attend and provide comment at this open public hearing. Comments can also be submitted via the Boulder County Transit website: <https://www.bouldercounty.org/transportation/multimodal/transit-planning/> under Program of Projects or in writing to the Boulder County Community Planning & Permitting Office: 2045 13th Street, Boulder, Colorado 80306

Public comment is encouraged and if warranted, the Program of Projects may be amended prior to publication of the final Program of Projects. The public is invited to comment on the POP to Boulder County as well as through the Denver Regional Council of Governments (DRCOG) Transportation Improvement Program (TIP) process. Pending no amendments after the public hearing, this proposed FFY2022 Program of Projects will be considered the final Program of Projects and will be forwarded to the DRCOG Transportation Advisory Committee and Council for review and consideration for approval. This public notice and time established for public review and comments on the TIP will satisfy the FTA Program of Projects requirements for the Urbanized Area Formula Program. This notice will serve as the final POP unless projects contained within are amended.

ATTACH C

ATTACHMENT C

To: Chair and Members of the Regional Transportation Committee

From: Jacob Riger, Manager, Long Range Transportation Planning
303-480-6751 or jriger@drcog.org

Meeting Date	Agenda Category	Agenda Item #
July 19, 2022	Action	5

SUBJECT

Confirming the special interest seats on the Transportation Advisory Committee (TAC) nominated by Board Chair Kevin Flynn as part of the annual review of TAC membership.

PROPOSED ACTION/RECOMMENDATIONS

Staff recommends confirming the seven TAC special interest seat nominations made by DRCOG Board Chair Kevin Flynn.

ACTION BY OTHERS

N/A

SUMMARY

The DRCOG Board of Directors adopted the TAC committee description, composition, and operating procedures documented in the [Transportation Planning in the Denver Region](#). The TAC assists the Board of Directors and the Regional Transportation Committee (RTC) by reviewing the work of the transportation planning process, advising on methods of planning and implementation, and working with staff to develop policy options and, as appropriate, recommendations to the RTC.

The seven special interest seat members (*Environment, Freight, Transportation Demand Management/Non-Motorized, Aviation, Business/Economic Development, Non-RTD Transit and Senior Interests*) are annually reviewed and nominated by the DRCOG Board Chair and confirmed by the RTC. Board Chair Kevin Flynn is proposing to reappoint six (6) members and appoint one (1) new member (highlighted in yellow) to fill the vacant Aviation seat, as shown in Attachment 1. The appointments will become effective with the first TAC meeting following RTC's confirmation.

PREVIOUS DISCUSSIONS/ACTIONS

N/A

PROPOSED MOTION

Move to confirm the membership recommendations for the seven special interest seats on the Transportation Advisory Committee.

ATTACHMENT

1. TAC special interest seats membership nominations

ADDITIONAL INFORMATION

If you need additional information, please contact Jacob Riger, Manager, Long Range Transportation Planning, at 303-480-6751 or jriger@drcog.org.

Attachment 1

Transportation Advisory Committee Membership Nominations – 2022

SPECIAL INTEREST SEATS

AVIATION

Member: D. George Hohlacov
Director of Airport Planning, Denver International Airport

FREIGHT

Member: Walter Weart
Retired freight and logistics transportation professional

TDM/NON-MOTORIZED

Member: Carson Priest
Program Manager, Smart Commute Metro North

BUSINESS/ECONOMIC DEVELOPMENT

Member: Frank Gray
President/CEO, Castle Rock Economic Development Council

ENVIRONMENT

Member: Rick Pilgrim
Vice President, HDR Engineering

SENIORS

Member: Hilary Simmons
Executive Director, A Little Help

NON-RTD TRANSIT

Member: Frank Bruno
CEO, Via Mobility Services

ATTACH D

ATTACHMENT D

To: Chair and Members of the Regional Transportation Committee

From: Jacob Riger, Manager, Long Range Transportation Planning

Meeting Date	Agenda Category	Agenda Item #
July 19, 2022	Informational Briefing	6

SUBJECT

2050 Regional Transportation Plan (2050 RTP) greenhouse gas (GHG) analysis update.

PROPOSED ACTION/RECOMMENDATIONS

N/A

ACTION BY OTHERS

N/A

SUMMARY

As discussed at previous meetings, DRCOG staff have been testing several strategies and concepts to meet the state GHG Rule's required emission reduction targets, including:

- a) Representing programmatic (non-project specific) 2050 RTP investments in the Focus model for the plan as adopted (April 2021)
- b) Calculating additional programmatic investment in the 2050 RTP representing traffic signal re-timing/corridor optimization, complete streets and multimodal investments, and related strategies
- c) Strategic changes to the 2050 RTP project investment mix and additional fiscally constrained programmatic investments (especially by 2030)
- d) Near-term land use forecast adjustments based on observed residential density increases between 2019-2025
- e) Telework rate adjustments in the Focus travel model based on observed post-pandemic telework patterns
- f) Several potential mitigation measures relating to rezoning, parking management, development/redevelopment, and complete streets standards/implementation

Based on the technical analysis conducted for a) through e), staff estimates progress towards meeting the reduction targets as compared to the baseline for the 2030, 2040, and 2050 analysis years (before mitigation measures are included) as shown in Table 1. Note these values are draft and will continue to be refined.

Table 1: Draft Progress Towards Achieving GHG Rule Reduction Targets

GHG Emission Results (MMT per year)	2025	2030	2040	2050
GHG Baseline Plan Model: 2050 RTP, Adopted 2021	10.50	9.23	6.22	3.7
GHG Updated Plan Model: 2050 RTP, 2022 Update	9.82	8.55	5.65	3.35
Modeled Reduction from Baseline	0.68	0.68	0.57	0.35
Off-Model Reductions	0.06	0.05	0.03	0.02
Reductions through Mitigation Action Plan	N/A	0.10	0.12	0.08
Total GHG Reductions from Baseline	0.74	0.83	0.72	0.46
Reduction Requirement from GHG Rule Table 1	0.27	0.82	0.63	0.37

Additionally, staff have prepared documentation (Attachment 1) on the Focus travel model assumptions and GHG technical analysis.

2050 RTP Project Investment Mix and Fiscal Constraint Changes

In addition to the technical analysis summarized above and in Attachment 1, staff have briefed TAC and the DRCOG Board of Directors on the concept of proposed strategic changes to the 2050 RTP’s project investment mix and fiscal constraint. The proposed changes also incorporate the changes to specific projects in the fiscally constrained 2050 RTP requested by project sponsors during the 2050 RTP “cycle amendments” process earlier this year.

DRCOG staff have been discussing with CDOT and other project stakeholders the following proposed modifications to 2050 RTP projects (CDOT-directed funds and DRCOG-directed funds) from the lens of the GHG rule:

- Freeway managed lane projects: modify C-470 and Central I-25 projects to refocus on safety, operational, transit, and other multimodal project elements with associated GHG benefits; redirect CDOT funds to advance BRT corridors (see below) and fund additional regional multimodal programmatic investments (see below); process CDOT-requested project amendments (advance I-70 Floyd Hill and I-270 projects).
- DRCOG-directed funded roadway projects: modify the scope of several projects to remove “6 laning” components to re-focus these projects on multimodal, safety, and complete streets investments.
- Bus Rapid Transit (BRT) network: advance several BRT corridors and complete four BRT corridors by 2030: East Colfax, SH-119, Federal, and Colorado; advance Broadway/Lincoln BRT corridor from 2040-2050 to 2030-2039; advance East Colfax Extension BRT corridor.
- Additional Multimodal programmatic investments: Through the project-specific changes described above, re-allocate and finance \$900 million in additional

multimodal programmatic investments (\$500 million by 2030, \$200 million more by 2040, \$200 million more by 2050).

Attachment 2 shows the proposed project-specific changes to the regionally funded projects in the 2050 RTP.

Mitigation Measures

At the regular June Board meeting, staff described the mitigation measures concepts currently being analyzed for feasibility. The GHG rule provides for using mitigation measures to further reduce GHG emissions that are separate from emission reduction strategies reflected in DRCOG's Focus model. Mitigation measures must be specific, measurable, and effective in reducing GHG emissions, and able to be tracked over time. The process of using mitigation measures within the GHG rule, which CDOT codified within [Policy Directive 1610](#) (PD1610), requires the DRCOG Board to adopt a Mitigation Action Plan as part of the revised 2050 RTP committing the region to implement and then report annually on the status of the specific mitigation measures at the regional level (not by individual jurisdiction).

Attachment 3 shows the specific proposed mitigation measures to include in a Mitigation Action Plan, and the estimated GHG emission reduction associated with each measure.

The mitigation measures are proposed to be limited to specific strategic geographies (station areas, BRT corridors, urban centers, and pedestrian focus areas) where the measures are most appropriate to be applied and where they are most likely to be successful. Staff have prepared an [interactive webmap](#) to illustrate the locations of these specific geographies throughout DRCOG's MPO area. Staff estimates that less than 20% of all undeveloped or redevelopable areas within those geographies would need to be rezoned and have parking standards adjusted in order to achieve sufficient additional emission reductions to comply with the Rule.

Non-Compliance: Funds Restrictions

As staff has previously indicated, if the 2050 RTP cannot meet the GHG rule's emission reduction targets, certain funds (STBG, CMAQ and MMOF) administered by DRCOG and CDOT would be restricted within the DRCOG MPO area. Specifically, the MPO shall award STBG and CMAQ funds, and CDOT shall award 10-Year Plan funds, on projects or approved GHG Mitigation Measures that reduce GHG emissions as necessary to achieve the GHG Reduction Levels in MMT of CO₂e for each compliance year. This restriction of federal funds would affect project eligibility for DRCOG's 2024-2027 TIP calls #3 and #4 in late 2022 and early 2023.

MPOs may request a waiver for specific projects and the Transportation Commission may waive the restrictions when there is a demonstration that significant effort and priority has been placed, in total, on projects and GHG Mitigation Measures that reduce GHG emissions. But in no case shall a waiver be granted if such waiver results in a substantial increase in GHG emissions when compared to the required GHG Reduction Levels in the Rule.

PREVIOUS DISCUSSIONS/ACTIONS

N/A

PROPOSED MOTION

N/A

ATTACHMENTS

1. Focus travel model GHG analysis
2. 2050 RTP proposed project changes
3. Draft mitigation measures and GHG emission reductions
4. DRCOG staff presentation

ADDITIONAL INFORMATION

If you need additional information, please contact Jacob Riger, Manager, Long Range Transportation Planning, at 303-480-6751 or jriger@drcog.org

Attachment 1: DRCOG Focus Travel Model: Reflecting Programmatic Funding for 2050 Regional Transportation Plan GHG Analysis

Draft: June 23, 2022

Summary

In a typical RTP update, there are network changes to regionally significant projects. These are reflected in the DRCOG Focus Model for each staging year. This year staff is also proposing to make further updates to model inputs and factors to better reflect observed real-world changes and future categories of “programmatic investments” included in the Draft 2022 Update to the 2050 RTP.

As adopted in April 2021, DRCOG’s fiscally constrained 2050 MVRTP contains over \$15 billion in programmatic funding. These programmatic investments are shown as a lump sum and individual projects are not yet identified in these programs. Specific projects within these programmatic investments will be determined through the Transportation Improvement Program process as regional and local priorities evolve over the 30-year life of the plan.

Programmatic funding categories include transit investments, active transportation, safety/Vision Zero, transportation demand management, and ITS investments, all of which are key strategic investments in improving the region’s multimodal transportation system while also reducing emissions. Despite representing a significant portion of the total investments in the fiscally constrained RTP, DRCOG has not historically reflected how the programmatic funding may influence future travel behavior in the Focus travel model.

In the context of the state of Colorado’s greenhouse gas rulemaking to regulate transportation planning processes, DRCOG is now evaluating methodologies to represent these programmatic funds in the travel model in coordination with the North Front Range MPO and CDOT. Through this coordinated effort, we hope to achieve a transparent and consistent methodology to reflect the effects these types of investments could make in future travel within the DRCOG region. DRCOG believes that reflecting these programmatic funds in the modeling will result in a more complete and accurate depiction of the total investments included in the RTP.

The details of model outputs, such as bicycle and pedestrian trips at localized and regional levels, better reflect future increased investments supporting those travel modes in relation to recent observed land use changes. This document details the methodology used to estimate available funding, the specific adjustments made to the model, and the reasoning behind those adjustments.

Methodology

DRCOG staff evaluated the categorical and programmatic RTP funding and estimated the approximate percentage of total funds in each pool associated with *additional* projects and investments not yet reflected in the travel model. The results are shown in Table 1, which has been reviewed by DRCOG’s TAC, RTC, and Board Workshop committees.

The percentage of the total funds, by category, was estimated by evaluating historic and intended uses of funding for infrastructure and services with the potential to reduce GHG emissions. The intention was to determine funding and/or enhancements in the use of funds for new infrastructure investments, services, or components of projects that were not reflected in the previous RTP model, such as bike/ped infrastructure supporting a BRT corridor.

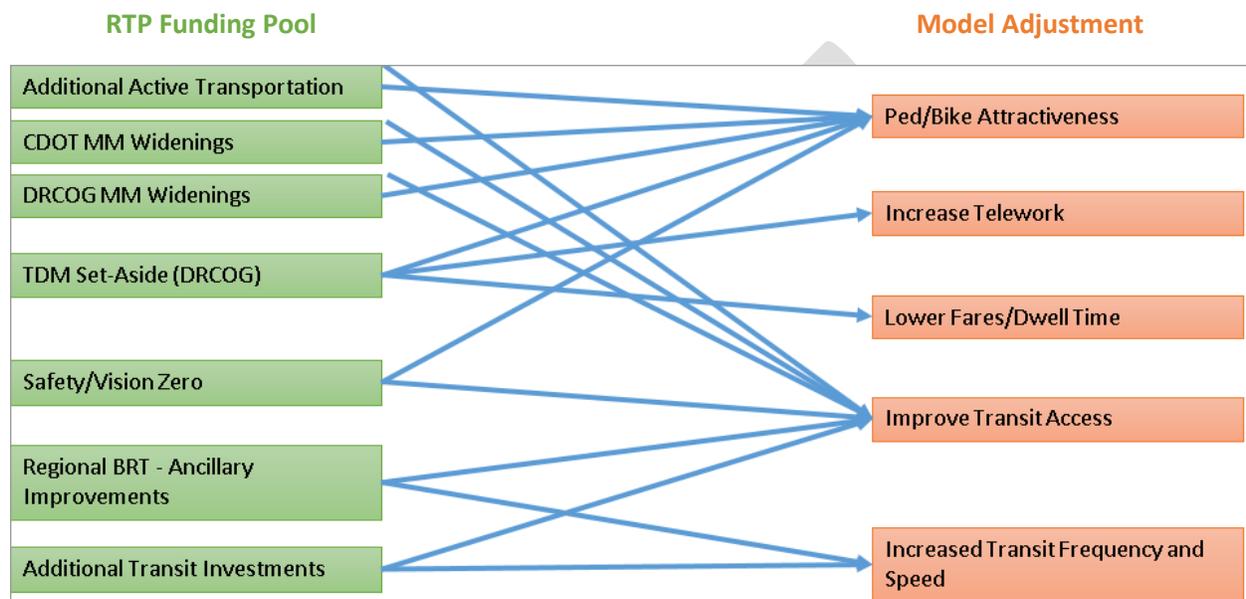
The resulting funding estimates will be used along with an estimated cost per unit to approximate the quantity of infrastructure (i.e., new multi-use paths) or service levels (i.e., increased transit service) to be reflected or mimicked in the travel model.

Table 1- 2050 RTP Funding Associated with Additional GHG Reduction

2050 RTP Investment Categories - GHG Reduction	2021-2030	2031-2040	2041-2050	RTP Total Funds	Investment (2020 Dollars)			Estimated % of total funds	GHG Associated Total Funds
					2021-2030	2031-2040	2041-2050		
Additional Transit Investments	\$58,720,014	\$59,095,014	\$59,470,014	\$702,358,000	\$52,848,013	\$53,185,513	\$53,523,013	90%	\$632,122,000
	\$3,500,000	\$320,000,000	\$201,573,077		\$3,150,000	\$288,000,000	\$181,415,769		
Regional BRT - Ancillary Improvements	\$629,000,000	\$256,000,000	\$298,000,000	\$1,183,000,000	\$31,450,000	\$12,800,000	\$14,900,000	5%	\$59,150,000
Additional Active Transportation	\$10,178,872	\$10,566,307	\$10,853,343	\$179,799,000	\$10,178,872	\$10,566,307	\$10,853,343	100%	\$179,799,000
	\$42,000,000	\$25,000,000	\$81,200,000		\$42,000,000	\$25,000,000	\$81,200,000		
Safety/Vision Zero	\$48,858,583	\$50,718,274	\$52,096,044	\$465,348,000	\$19,543,433	\$20,287,310	\$20,838,418	40%	\$186,139,000
	\$228,712,500	\$65,200,000	\$19,762,500		\$91,485,000	\$26,080,000	\$7,905,000		
Multimodal components of DRCOG Funded Widening Projects	\$221,200,000	\$748,000,000	\$630,000,000	\$1,599,200,000	\$22,120,000	\$74,800,000	\$63,000,000	10%	\$159,920,000
Multimodal components of CDOT Funded Widening Projects	\$3,144,400,000	\$1,360,000,000	\$1,550,000,000	\$6,054,400,000	\$157,220,000	\$68,000,000	\$77,500,000	5%	\$302,720,000
TDM Set-Aside (DRCOG)	\$34,000,000	\$34,000,000	\$34,000,000	\$102,000,000	\$3,400,000	\$3,400,000	\$3,400,000	10%	\$10,200,000
RTO&T Set-Aside (DRCOG)	\$50,000,000	\$50,000,000	\$50,000,000	\$150,000,000	\$5,000,000	\$5,000,000	\$5,000,000	10%	\$15,000,000
Operational and Safety Improvements (CDOT)	\$564,769,706	\$665,097,708	\$778,967,356	\$2,008,835,000	\$28,238,485	\$33,254,885	\$38,948,368	5%	\$100,442,000
Signal and Equipment Upgrades (CDOT)	\$872,784,945	\$877,942,269	\$881,779,868	\$2,632,507,000	\$43,639,247	\$43,897,113	\$44,088,993	5%	\$131,625,000
TOTAL:	\$5,908,124,621	\$4,521,619,573	\$4,647,702,203	\$15,077,447,000	\$510,273,050	\$664,271,129	\$602,572,904		\$1,777,117,000

Next, DRCOG staff evaluated how to represent these pools of funds, either in the Focus travel model, or through an off-model evaluation. DRCOG staff leaned heavily on the methodologies used during a scenario planning exercise from early 2020, as well as methodologies used by CDOT in defining the GHG targets. DRCOG staff linked each type of RTP categorical funding with the types of model factors that could be adjusted based on the intended use of the funds. Figure 1 shows how several of the RTP funding pools are associated with various adjustments in the model.

Figure 1- Model Adjustments Associated with Programmatic Funding Pools



For funding pools that are associated with multiple types of model adjustments, total funds were divided evenly between model adjustment categories.

Two categories of RTP funding pools are not able to be adequately represented in the Focus travel model: Increasing operational efficiency and Complete Street investments.

- Increasing operational efficiency above and beyond what is represented in the base model represents enhancements to incident management, signal timing, and other innovative methods of efficient operation of the existing roadway network.
- Complete streets balance the use of the public right of way for all modes of travel, thus encouraging additional travel by transit, bicycle, and pedestrian modes. They may involve speed reductions and/or street calming methods to improve safety.

DRCOG is proposing to represent both above funding pools by using PD1610's formulas off-model. The specific process and methodology will be documented in the final transportation GHG report.

The total funding available, by model adjustment category, by staging year, is shown in Table 2.

Table 2- Total Programmatic Funding Available by Model or Off-Model Category

Model Adjustment	2021-2030 Funds	2031-2040 Funds	2041-2050 Funds	Total Funds
Ped/Bike Attractiveness	\$ 153,521,000	\$ 105,606,000	\$ 126,884,000	\$ 386,011,000
Increase Telework	\$ 1,122,000	\$ 1,122,000	\$ 1,122,000	\$ 3,366,000
Lower Fares/ Reduced Dwell Time	\$ 1,156,000	\$ 1,156,000	\$ 1,156,000	\$ 3,468,000
Improve Transit Access	\$ 197,233,000	\$ 281,941,000	\$ 250,969,000	\$ 730,143,000
Increased Transit Frequency and Speed	\$ 43,724,000	\$ 176,993,000	\$ 124,919,000	\$ 345,636,000
Increase Operational Efficiency	\$ 76,878,000	\$ 82,152,000	\$ 88,037,000	\$ 247,067,000
Complete Streets Implementation	\$ 36,639,000	\$ 15,301,000	\$ 9,485,000	\$ 61,426,000
Grand Total	\$ 510,273,000	\$ 664,271,000	\$ 602,573,000	\$ 1,777,117,000

In-model representation
Off-model representation

DRCOG staff then estimated the level of adjustment to each model component, based on the funding available, scaled in proportion to estimates used in DRCOG’s Scenario costing work as well as the methodologies used in CDOT’s cost benefit document developed in relation to the state’s GHG rulemaking.

Proposed Adjustments

The proposed adjustments, reasoning, and funding summaries that support the adjustments are documented below. DRCOG staff will continue to perform research and monitor travel trends to ensure the model adjustments reflect real world conditions into the future.

Share of Work at Home

Table 3

Increase Telework	2030	2040	2050
Work at home rate for workers	25%	25%	25%
Millions of Dollars Invested per staging period	\$1.1	\$1.1	\$1.1

- Multiple factors influence work location choice and work trips. Previously, DRCOG targeted 20% of workers working at home on a given day. Current conditions lead DRCOG staff to believe 20% is now an underestimate. An increase to 25% is warranted because of the new way of work we are seeing in the world changed by the pandemic along with increased efforts in travel demand management programs and interest in policies to encourage more working from home at the state and local level.
- It is important to know what “work at home” encompasses. It does not just include telework, or office workers working remotely. Work from home also includes part time workers, self-employed small businesses, home offices, flexible/hybrid working schedules, and people who work alternative schedules such as three 12 hour shifts a week, could be doing on a sample day.
- It is also important to note that people that work from home may still take trips, whether it’s for personal business or work-related.

- Post-pandemic there has been an increase in businesses, schools, agencies, or other communities turning towards a four day a week compressed work week model.
- Before the pandemic, observed data demonstrated a significant increase in people working from home in the Denver region. Post-pandemic we continue to observe elevated levels of remote working or working at home some days of the week.

Bicycle and Pedestrian Attractiveness

The regional travel model does not have a bicycle and pedestrian network and, thus, specific identified projects cannot be coded. To reflect the programmatic investments in the model, bicycle and pedestrian attractiveness factors are used to represent the additional investments.

Table 4

Bike and Pedestrian Attractiveness	2030	2040	2050
Increase sidewalk density by the following factor	8%	16%	25%
Increase walk and bicycle operating speeds	4mph/ 11mph	5mph/ 12mph	5mph/ 12mph
Modify person-specific penalties	Remove penalties for gender and age 11-75	Remove penalties for gender and age 11-75	Remove penalties for gender and age 11-75
Millions of Dollars Invested per staging period	\$173	\$113	\$132

Increase sidewalk density

- One of many factors correlated with the attractiveness of active transportation modes is “sidewalk density”. As a preprocess to running the travel model, each transportation analysis zone is assigned a sidewalk density value based on the quantity of sidewalks and shared use paths within that zone, divided by the area. Sidewalk density is one factor which represents the ease and comfort of active transportation modes in specific geographic areas.
- To reflect the funds dedicated to active transportation infrastructure in each staging period, DRCOG is proposing to incrementally increase the sidewalk density values for urban and suburban area types over the life of the plan.
- The increased values do not represent an absolute increase in sidewalks, but rather represents select, strategic projects effectively increasing the density by focusing on key gaps and missing links. Through planimetric data and local government data collection and sharing efforts, we can optimize the addition of new sidewalk mileage to create more complete, connected networks.
- The value increases over the staging period because these infrastructure investments are additive over the years.

Increase walk speed and bicycle operating speed

- When the walk or bike modes are assigned in the model, they are given an operational travel speed which reflects the average speed for the trip, including, for example, wait time at intersections. Walk speeds were 3mph and bike speeds 8mph.

- DRCOG is proposing to increase walk and bicycle speeds incrementally in future staging years, as described in the table above.
- The increase in speed for walk and bicycle modes represent:
 1. The electrification of active modes through the adoption of e-bikesⁱ and e-scootersⁱⁱ. Not only does electrification increase the speed of these modes, but it may make the mode more attractive.
 2. The speed increase also represents additional priority being provided to active modes through legislation and infrastructure such as: cyclists given their own right of way and priority signal treatments; legal permissions for traversing intersections; improved sidewalk conditions; new key connections completed; and the perception of faster travel time that occurs when a walking journey is comfortable and on a well-connected network.

Modify person-specific negative attractiveness factors for bike (and ped) mode choice

- In both real life and in the model, an individual’s propensity to walk or bike is influenced by their age and their gender. Based on travel survey data from 2010, the model was calibrated to make walking and bicycling less attractive for women and older adults to reflect the observed data.
- To reflect the buildout of and enhancements to our active transportation system, observed cultural changes, and electrification providing additional mobility to older adults, we removed the negative factors applied to individuals in the model based on gender and adjusted the age where negative factors as described in the table above.
- This is motivated by the belief that the enhanced multimodal facilities will reduce some barriers for cycling for older people and women.
- Examples of enhancements that might affect the attractiveness of biking and walking include lighting on paths, safe crossings with appropriate time to cross, all new paths having appropriate widths – and added space at potential conflict points. We also know our local governments are working to build bike facilities based on comfort for all ages and abilities and targeting key connections to make high comfort complete routes.
- There is research¹ to show the perception of increased safety in numbers. For example, knowing other cyclists and walkers will be on a path can help it feel safer for some users or knowing drivers are used to seeing cyclists aids in comfort and sense of safety.

Transit

Table 5

Transit	2030	2040	2050
Reduce Fares	20%	20%	20%
Reduce Dwell Time	20%	20%	20%
Reduce Headways	5%	5%	5%

¹<https://www.sciencedirect.com/journal/safety-science/vol/92/suppl/C> ; <https://www.normalizecycling.com/safety-in-numbers/#:~:text=There%20is%20strong%20evidence%20of%20an%20association%20between.causes%20%28confounding%20factors%29%20that%20are%20not%20being%20measured>

Cap on Waiting Time	max 15 minutes	max 15 minutes	max 15 minutes
Reduce transit walk-access time	Remove penalties	Remove penalties	Remove penalties
Increase speed on transit walk links	100%	100%	100%
Transit Access Improvements: Funding (in millions)	\$197	\$282	\$251
Improve Transit Frequency and Speed: Funding (in millions)	\$44	\$177	\$125
Total Additional Transit Funding (in millions)	\$259	\$466	\$380

Reduce transit fares

- In the travel model, the cost of a trip influences people’s mode choice, as it does in real life. In the model, the cost of transit fare is a single value that represents what, in reality, is a complex pricing system including people with EcoPasses, discounted fares, monthly passes, fare zones, and more.
- DRCOG is proposing to reduce this value by 20% for all staging years. This is not suggesting there will be a blanket reduction of 20% in fares, hitting RTD revenues in the fare box, but rather it is intended to reflect the experience of users having a perception of lower fare through programmatic investments and strategic partnership, including:
 - Through TDM efforts, more people in the region will be able to use transit at a free or reduced cost, through commuter benefits like EcoPass or other programs.
 - Ongoing efforts to increase eligibility for discounted fares, and this is intended to reflect that.
 - RTD’s fare-revenue study is reviewing how to simplify the fare structure, which could reduce fares for some trips or psychologically reduce the cost for people by reducing confusion. ²
 - SB22-180³ will pilot free transit for one month a year, which could influence future transit fare decisions.

Reduce transit dwell time

- In the travel model, transit buses have a dwell time based on the type of route. To reflect some of the ancillary benefits of enhanced transit investments, the dwell time was reduced by 20%.
- In general, this change is to reflect transit investments that enhance the travel time competitiveness of transit. The primary reason for this change is streamlined payment and faster boardings.

² <https://www.rtd-denver.com/faresstudy>

³ <https://leg.colorado.gov/bills/sb22-180>

- It also reflects investment in transit signal prioritization equipment, that allows for a bus to travel through an intersection before or after a stop or more quickly re-enter the flow of traffic, which users can experience as additional dwell time.

Reduce headways

- The frequency of each transit route is included in the model. The time between buses or trains at a particular stop is considered the headway.
- The proposed 5% decrease in headway for all staging years is to reflect an increase in vehicle revenue miles across the region. Because these model adjustments represent programmatic investments, we cannot model specific route changes because this is adaptable based on future needs of the region.

Cap waiting time for longer headway routes

- In the travel model, travelers are assigned a “wait time” equal to half of the transit route’s headway for that time period. For all routes, the total wait time was capped at 15 minutes.
- Previously, the model assumed some people would arrive 30 minutes before their bus arrived. This significantly increased the travel time for some transit trips and did not reflect how most people use transit for long headway routes. This adjustment accounts for how smart phones and the investment in real time transit service information have changed how people will plan for their transit trip. Bus tracking specifically also allows people to plan to reduce wait time.

Reduce transit walk-access time

- The model includes information on how people get to transit. For trips where people access transit through active transportation modes the access time penalties were removed.
- This reflects the significant investment being made in active transportation access across the region and DRCOG’s prioritization of pedestrian projects near transit. More direct walk routes and pedestrian infrastructure improvements increase the ease of accessing transit.

Increase speed on transit walk links

- The specific pedestrian links that have a distinct connection to transit have a defined user travel speed. Because of the investments in active transportation and the pedestrian environment near transit, this speed needed to be readjusted. The speed was doubled for these short links to reflect the enhancements in infrastructure, including things like sidewalks, lighting, and more.
- The idea is that more comfortable and direct infrastructure, such as pedestrian bridges over high volume roadways, allows people to travel faster and also has a psychological impact on how people experience the length of a journey.

ⁱ <https://denverite.com/2022/05/06/denvers-e-bike-rebates-are-already-gaining-traction-with-residents/>

ⁱⁱ <https://www.9news.com/article/news/local/next/scooter-bike-share-denver-released-public/73-1d0e03e1-43fa-4ea7-bc3c-f024ec8db6b4>

Attachment 2
DRCOG 2050 Regional Transportation Plan
Proposed Project Modifications: Cycle Amendments & GHG Analysis

Last Revised: June 28, 2022

Project Name/Corridor	Location/Limits	Current 2050 RTP Project Description	Proposed Project Change/Description
I-70 Floyd Hill Eastbound	Floyd Hill to Veterans Memorial Tunnel	Eastbound interchange improvements with frontage road extension from Hidden Valley interchange to US 6 interchange	Process requested amendment. Move from 2030-2039 stage to 2020-2029 stage
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	U.S. Route 285/Morrison/Quincy	Interchange complex reconstruction	
I-25 Central Buildout	Colfax Ave. to 20th St.	Ultimate buildout of corridor improvements	Re-scope corridor to focus on transit network improvements, safety, operations, multimodal mobility; community re-connections; advance I-25/Speer/23rd Ave. safety/operational improvements; advance safety & operations improvements, Santa Fe to Colfax
I-25 Valley Highway/Burnham Yard	Santa Fe Blvd. to Colfax Ave.	Managed lanes, includes right-of-way, Burnham Yard, Central Main Line relocation	
Broncos Pkwy./Easter/Dry Creek Corridor	Parker Rd. to Havana	Widening to 6 lanes, bridge widening and intersection improvements	Widen to 4 lanes; bridge, multimodal corridor and intersection improvements
Gun Club Rd.	State Hwy. 30 to 6th Ave.	Widen from 2 to 4/6 lanes, includes stream crossing upgrade at Coal Creek	Widen from 2 to 4 lanes, includes stream crossing upgrade at Coal Creek, multimodal corridor improvements; advance stage period
Gun Club Rd.	Quincy to Aurora Pkwy.	Widen from 2 to 6 lanes	Widen from 2 to 4 lanes, multimodal corridor improvements
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Colfax Ave. Ext. BRT	I-225 to E-470	Bus rapid transit service and supporting safety/multimodal improvements	Potentially advance stage period (currently 2040-2050 stage period)

Attachment 3

GHG Emission Reduction Summary - All Mitigation Measures

Measure	Description	GHG Reduction - Metric Tons			
		2025	2030	2040	2050
Increase Residential Density from <10 units / acre to at least 15 to 25 units / acre	1,759 acres in Urban Centers/Pedestrian Focus Areas (43%) and rail/BRT Station Areas (57%)	-	13,548	16,011	10,557
Increase Job Density from <0.5 FAR to at least 1.0 FAR	367 acres in UC/Pedestrian Focus Areas (43%) and rail/BRT Station Areas (57%)	-	2,309	2,822	1,833
Mixed-Use TOD-higher intensity: Area rezoned for mixed-use TOD at least 25 units / acre and 150 jobs / acre	501 acres in UC/Pedestrian Focus Areas (25%) and rail/BRT Station Areas (75%)	-	8,588	9,814	6,510
Mixed-Use TOD-moderate intensity: Area rezoned for mixed-use TOD at least 15 units / acre and 100 jobs / acre	1,314 acres in UC/Pedestrian Focus Areas (24%) and rail/BRT Station Areas (76%)	-	18,397	21,157	14,455
Reduce or eliminate minimum requirements and set low maximum levels (residential)	Maximums: no more than 0.75 per 1 bed/studio/efficiency; 1.0 per 2 bed; and 1.25 per 3+ bed 1,718 acres in UC/Pedestrian Focus Areas (15%) and rail/BRT station areas (85%)	-	37,750	43,795	29,573
Reduce or eliminate minimum requirements and set moderate maximum levels (residential)	Maximums: no more than 1.0 space per 1 bed/studio/efficiency; 1.5 per 2 bed; and 1.75 per 3+ bed 2,481 acres in UC/Pedestrian Focus Areas (56%) and rail/BRT Station Areas (44%)	-	18,332	21,281	14,347
Reduce or eliminate minimum requirements and set maximum levels (commercial office)	Maximums: 2.0 to 2.5 per 1,000 sf non-CBD; 1.0 to 1.5 per 1,000 sf CBD 217 acres in UC/Pedestrian Focus Areas (20%) and rail/BRT Station Areas (80%)	-	4,373	3,940	3,511
Adopt local complete streets standards and apply to "locally funded" RTP projects	Additional benefits above and beyond regional investments in Complete Streets	-	369	243	44
Grand Total		-	103,666	119,063	80,829

Vacant and Redevelopable Parcels by Geography

Improvement to Land Value Ratio	Category	w/in 1/4 mile of bus rapid transit (non-rail station area)		Total Station/BRT Areas	w/in existing urban center (non-station area)	w/in pedestrian focus areas (non-station, nor urban center)	Total UC/Ped Focus Areas	Total All Areas
		w/in 1/2 mile of rail station	station area					
0	vacant	3,463	1,135	4,598	697	2,056	2,753	7,351
0-1	redevelopable	3,483	2,388	5,871	1,019	1,337	2,356	8,227
1-2		2,132	1,232	3,364	755	1,205	1,960	5,324
Subtotal vacant/redevelopable		9,078	4,755	13,833	2,471	4,598	7,069	20,902
2-3	developed	1,446	921	2,367	569	1,174	1,743	4,110
3+		12,863	7,614	20,477	7,683	19,411	27,094	47,571

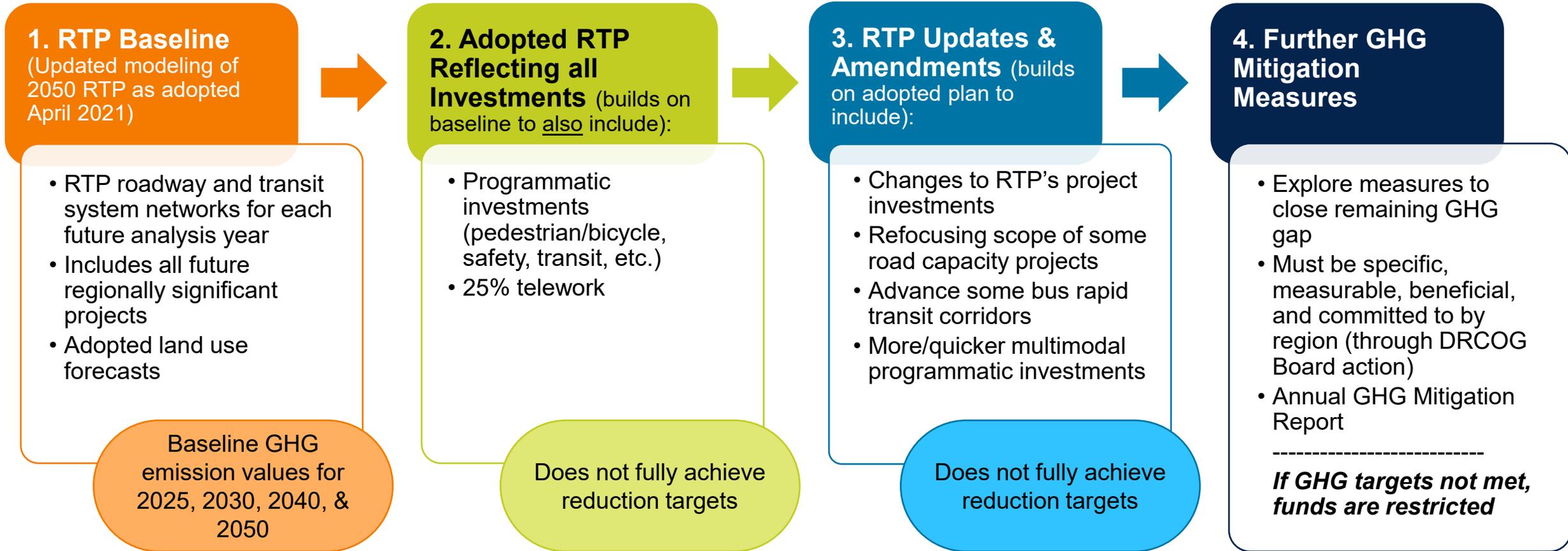
Note: Includes parcels in areas below 10 households per acre in 2020; excludes parcels in areas 15 households per acre or more in 2050

2050 MVRTP GHG Analysis Draft Compliance Framework

Regional Transportation Committee
July 19, 2022

Jacob Riger, AICP
Manager, Long Range Transportation Planning

Process to meet GHG reduction levels



- **Representing programmatic (non-project specific) 2050 RTP investments** in the Focus model
- **Strategic changes to the 2050 RTP's project investment mix** and additional fiscally constrained programmatic investments & signal re-timing/optimization (especially by 2030)
- **Near-term land use forecast adjustments** based on observed residential density increases between 2019-2025
- **Telework rate adjustments** in the Focus travel model
- **Several potential mitigation measures** relating to re-zoning, parking management, development/redevelopment, and complete streets standards/implementation



Table 1: Draft progress towards achieving GHG rule reduction targets

GHG Emission Results (MMT per year)	2025	2030	2040	2050
GHG Baseline Plan Model: 2050 RTP, Adopted 2021	10.50	9.23	6.22	3.7
GHG Updated Plan Model: 2050 RTP, 2022 Update	9.82	8.55	5.65	3.35
Modeled Reduction from Baseline	0.68	0.68	0.57	0.35
Off-Model Reductions	0.06	0.05	0.03	0.02
Reductions through Mitigation Action Plan	N/A	0.10	0.12	0.08
Total GHG Reductions from Baseline	0.74	0.83	0.72	0.46
Reduction Requirement from GHG Rule Table 1 (2 CCR 601-22, Section 8.02.6)	0.27	0.82	0.63	0.37

- **Overall strategy** – Strategic modifications for GHG benefits and additional programmatic investments
 - **Modify freeway managed lane projects** to focus on safety, operational, transit, and other multimodal aspects and associated GHG benefits. Process CDOT-requested project amendments
 - Modify scope of several DRCOG-administered roadway projects to **remove “6-laning” components** to re-focus these projects on multimodal, safety, and complete streets investments
 - **Complete four BRT corridors by 2030**: East Colfax, SH-119, Federal, and Colorado; **advance Broadway/Lincoln BRT corridor** from 2040-2050 to 2030-2039; **advance East Colfax Extension BRT corridor**
 - Additional multimodal programmatic investments by **re-allocating and financing \$900 million** (\$500 million by 2030, \$200 million more by 2040, \$200 million more by 2050)

Attachment 2: Proposed project modifications – cycle amendments & GHG analysis

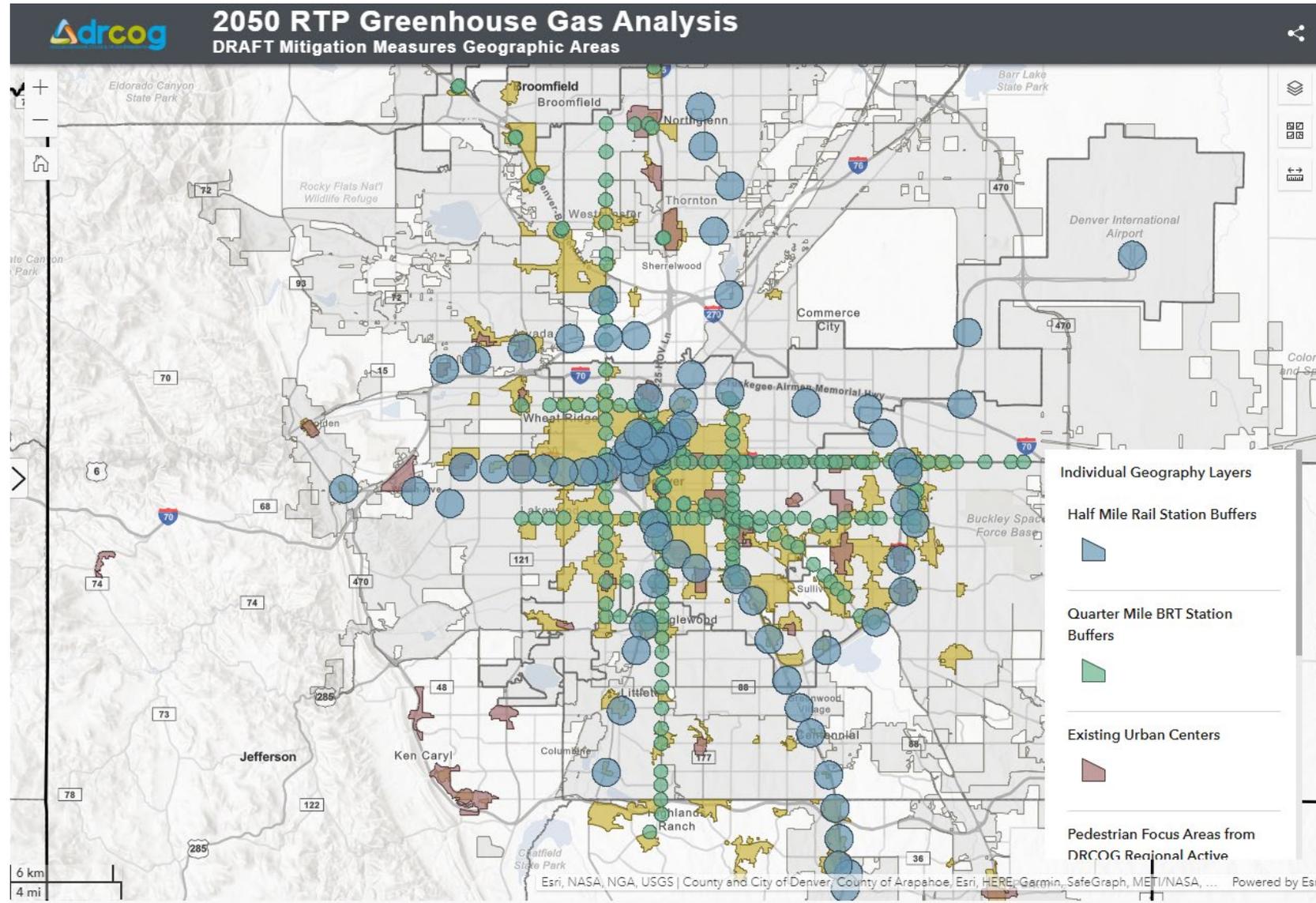
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Proposed mitigation measures

- **Mitigation measures will be needed** to achieve the GHG targets
- Staff has **analyzed the feasibility & applicability** of measures from PD1610 and proposes:
 - Increase residential density; increase job density; rezone for mixed-use TOD; reduce/eliminate minimum parking requirements; adopt local complete streets standards
- **Attachment 3 shows the estimated GHG emission reduction** associated with each measure
- Staff has **prepared an interactive webmap** to illustrate the locations of specific geographies associated with most of the proposed mitigation measures



Interactive webmap



Non-compliance: funds restriction

- MPO shall award STBG and CMAQ funds, and CDOT shall award 10-Year Plan funds, on **projects or approved GHG Mitigation Measures that reduce GHG emissions** as necessary to achieve the GHG Reduction Levels in MMT of CO₂e for each compliance year
- Project eligibility for DRCOG's 2023-27 TIP **Calls for Projects #3 and #4 would be impacted**
- Memo cites GHG rule's specific language on **fund restrictions and waiver process**



THANK YOU!
QUESTIONS?

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