AGENDA

RTD Accountability Committee
Finance Subcommittee
Wednesday, May 5, 2021
11:00 a.m. - 12:30 p.m.
VIDEO/WEB CONFERENCE
Denver, CO

1. Call to Order

2. April 21, 2021 Finance Subcommittee Meeting Summary (5 minutes)
   (Attachment A)

3. RTD Dashboard Draft Recommendation - Financial Information (25 minutes)
   (Attachment B) Ron Papsdorf

4. NW Rail Discussion – Draft Recommendation (40 minutes)
   (Attachment C) Rutt Bridges

5. Finance Subcommittee Work Plan Review (10 minutes)
   (Attachment D) Rutt Bridges

6. Member Comment/Other Matters (10 minutes)

7. Next Meeting: May 19, 2021

8. Adjournment
Call to Order
Rutt Bridges called the meeting to order at 11:00 a.m.

April 21, 2021 Meeting Summary
The meeting summary was accepted, noting a couple of minor corrections.

RTD Financial Information
Ron Papsdorf provided a brief introduction of the financial information summary that Natalie Shishido has prepared and was attached in the agenda packet. The subcommittee generally felt like the level of detail seems appropriate for the final report.

Rebecca White asked about the federal stimulus funding that RTD has or is receiving through the CARES Act, CRSSA, and the American Recovery Plan Act (ARPA) and at what point are the funds adequate for RTD’s response to the COVID-19 crisis so that RTD can look at using funds to achieve other goals.

Debra Johnson replied that RTD is still waiting for final FTA guidance for the use of ARPA funds. Service equity analysis is due when service changes by 25% or more.

Ms. Johnson was asked about RTD’s flexibility to adjust service levels outside its three formal run boards per year given the dynamic situation of the pandemic.

Ms. Johnson replied that much of it relates to having adequate staff to bring back services and continuing vehicle capacity limitation because of COVID. The June service change will increase vehicle capacity to 50% and RTD will assess the situation again for the September run board.

Elise Jones states that the Accountability Committee’s report will be finished by the beginning of July but read in the context of the pandemic. The Committee should also focus on what comes next—restore from COVID and think beyond it.
Dan Blankenship noted that RTD will probably have some flexibility in the next few months relative to masks, capacity, etc. and asked how many RTD employees have been vaccinated.

Ms. Johnson replied that public health agency coordination is key to continued flexibility. RTD has provided incentives for employees to be vaccinated and so far about 50% have been.

Rebecca White noted that she felt it was important to focus recommendations on the post-pandemic future of RTD.

RTD Dashboard Draft Recommendation – Financial Information
Ron Papsdorf referred the subcommittee to the attachment in the agenda packet noting that it was just a starting point for recommendations and hoping for input from the subcommittee to build on it.

Rutt Bridges stated that in addition to a one-page budget, there needed to be context or a primer for the public and stakeholders to be able to understand the budget. The dashboard should also reference RTD’s Service Performance reports.

Rebecca White stated that she would work to build on the draft recommendation for the next meeting.

RTD Presentation: NW Rail Corridor
Henry Stopplecamp provided a presentation on RTD’s recent discussions about how to address the NW Corridor and its work with stakeholders and communities.

Debra Johnson stated that RTD really wants a common set of facts in order to appropriately engage partners and address the corridor.

Rutt Bridges stated that he is skeptical of the peak service plan due its high cost for fairly low ridership. He also noted a sense of ambiguity around the project issues.

There was a discussion about the different operating scenarios and how they relate to each other and the work RTD is proposing. Bill Van Meter noted that RTD’s intent is to look at the whole corridor, including the full-service plan for NW Rail.

Elise Jones noted that folks have always seen peak service as “starter service” – a step toward full service. She feels RTD should investigate all of NW Rail in order for the effort to be useful. She also asked if all of this work is complimentary to Front Range Passenger Rail so that any duplication is minimized.

Mr. Stopplecamp replied that is the goal.

Mr. Van Meter also noted that the effort should not be duplicative and that an MOU was being developed between Front Range Passenger Rail, CDOT and RTD.

Lynn Guissinger stated that from a Board/RTD perspective, the moment is here. Amtrak funding is being proposed and Front Range Passenger Rail is a growing priority for many so there may be a unique opportunity to leverage investments for NW Rail.

There was a discussion of track sharing issues with BNSF Railroad.

Chris Frampton stated that costs don’t go down for these projects; if NW Rail had been done a long time ago, it would have been much more feasible.
NW Rail Discussion – Draft Recommendation
Given the time, this item was held over to the next meeting.

Finance Subcommittee Work Plan Review
Given the time, this item was held over to the next meeting.

Member Comment/Other Matters
Ron Papsdorf asked the subcommittee members to review the draft NW Rail recommendations for discussion at the next meeting.

The next meeting will take place on May 5, 2021.

The meeting adjourned at 12:32 p.m.
To: Members of the RTD Accountability Committee Finance Subcommittee  
From: Ron Papsdorf, Director, Transportation Planning and Operations  
(303) 480-6747 or rpapsdorf@drcog.org

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SUBJECT
RTD Dashboard Draft Recommendation – Financial Information

PROPOSED ACTION/RECOMMENDATIONS
N/A

ACTION BY OTHERS
N/A

SUMMARY
Based on previous discussions by the Finance Subcommittee, staff has prepared a draft list of financial information to include in the recommendation. Staff seeks specific feedback and direction from the subcommittee on refinements in order to complete this task.

PREVIOUS DISCUSSIONS/ACTIONS
April 7, 2021 – Finance Subcommittee discussed the RTD dashboard

PROPOSED MOTION
N/A

ATTACHMENTS
Draft Financial Dashboard Recommendation

ADDITIONAL INFORMATION
If you need additional information, please contact Ron Papsdorf, Director, Transportation Planning and Operations, at 303-480-6747 or rpapsdorf@drcog.org.
The RTD Accountability Committee recommends that RTD implement a “dashboard” that is prominent and easily accessible on RTD’s web site to provide summarized financial and performance information for the public, stakeholders, partners, and elected officials.

Financial Information

- Revenues and Expenses by category, at least quarterly, and in relation to the current adopted budget
- A one-page budget document
- Quarterly reports on the specific use of federal stimulus funds
- Up to date financial information on FasTracks
- Capital project schedule and expenditure information, updated at least quarterly
To: Members of the RTD Accountability Committee Finance Subcommittee

From: Ron Papsdorf, Director, Transportation Planning and Operations
(303) 480-6747 or rpapsdorf@drcog.org

Meeting Date
May 5, 2021

Agenda Category
Discussion

Agenda Item #
4

SUBJECT
NW Rail Discussion – Draft Recommendation

PROPOSED ACTION/RECOMMENDATIONS
N/A

ACTION BY OTHERS
N/A

SUMMARY
FasTracks is RTD’s voter-approved transit expansion program. Since 2004, RTD has
built 25.1 miles of light rail track and 53 miles of commuter rail track, launched the
Flatiron Flyer bus rapid transit service, and opened an intermodal hub at Union Station
in downtown Denver. Those investments and projects represent over 75% of the
FasTracks program. There are four (4) unfinished corridors in the approved FasTracks
program.

Snapshot of Unfinished Corridors

<table>
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<tr>
<th>Corridor</th>
<th>Description</th>
<th>Daily Ridership</th>
<th>Capital Cost (2018 millions)</th>
<th>Annual O&amp;M (2018 millions)</th>
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<tr>
<td>Central Rail Extension</td>
<td>30th &amp; Downing to 38th &amp; Blake</td>
<td>3,200</td>
<td>$140.0</td>
<td>$2.6</td>
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<tr>
<td>North metro Completion</td>
<td>124th Ave to SH7</td>
<td>3,100</td>
<td>$280.0</td>
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<tr>
<td>Northwest Rail, Westminster to Longmont</td>
<td>Peak Service Plan</td>
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<td>$708.2</td>
<td>$14.0</td>
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<tr>
<td></td>
<td>Full Service</td>
<td>4,100</td>
<td>$1,500.0</td>
<td>$20.6</td>
</tr>
<tr>
<td>Southwest Extension</td>
<td>Mineral Ave. to C-470 &amp; Lucent Blvd</td>
<td>3,700</td>
<td>$170.0</td>
<td>$3.2</td>
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Rutt Bridges has prepared and will present an analysis of NW Rail for discussion by the
Finance Subcommittee for further input.

Finishing the FasTracks corridors is a significant challenge for RTD. As discussed
previously, revenues have not kept pace with increasing costs and RTD is now
expending about 70% of its FasTracks sales and use tax revenues on debt service –
although RTD has recently completed a new round of debt refinancing that will provide
some near-term relief. In addition, the NW Rail project does not appear to be highly
competitive for federal Capital Improvement Grants. Finally, since RTD sales and use
tax revenues continue to lag behind increasing operating costs, the operating burden of
additional FasTracks corridors could create a further drag on RTD’s finances.
At the same time, each of these FasTracks corridors were “promised” to the voters when they approved Referendum 4A and there are significant constituencies for each of these unfinished corridors. NW Rail has also been identified as a strategy in the Colorado Greenhouse Gas Pollution Reduction Roadmap. There may be opportunities to leverage new partnerships to reduce costs, increase ridership, and/or increase additional resources for these projects through strategic partnerships.

At the April 7, 2021 meeting, the Finance Subcommittee asked DRCOG to develop a draft recommendation based on previous analysis and subcommittee discussions.

Draft Recommendation for feedback

- The RTD Accountability Committee supports the NW Rail alignment for the Front Range Passenger Rail (FRPR) corridor and recommends RTD pursue all reasonable partnership opportunities with the FRPR project. This route not only appears to provide significant benefits for the FRPR project but also offers an opportunity to leverage investments and services to support NW Rail.
- Work with local jurisdictions and DRCOG to explore opportunities for transit-oriented development and other strategies to increase projected ridership on the unfinished corridors.
- Investigate opportunities for local cost sharing, tax increment financing, or public-private partnerships to increase non-RTD resources for stations.
- Complete a comprehensive analysis of the NW Rail project to establish a common set of assumptions and engage in a regional discussion about opportunities and alternatives, both near-term and long-term, for the corridor.
- Work with CDOT and DRCOG to implement Bus Rapid Transit (BRT) projects in the northwest region as identified in the DRCOG 2050 Regional Transportation Plan.

PREVIOUS DISCUSSIONS/ACTIONS

March 3, 2021 – Finance Subcommittee discussed unfinished FasTracks Corridor/NW Rail
April 7, 2021 – Finance Subcommittee discussed the NW Rail project

PROPOSED MOTION

N/A

ATTACHMENTS

BRT Service Expansion Recommendation (Bridges)

ADDITIONAL INFORMATION

If you need additional information, please contact Ron Papsdorf, Director, Transportation Planning and Operations, at 303-480-6747 or rpapsdorf@drcog.org.
Recommendation: RTD should consider a rapid BRT service expansion while pursuing developments on NW Rail.

There are encouraging signs that NW Rail may benefit from a partnership with Front Range Passenger Rail (FRPR). FRPR hopes to obtain a significant part of the project cost from US DOT/Amtrak for a train service from Trinidad to Fort Collins and beyond. A bill in the Legislature is also seeking to create a special taxing district along the planned path of FRPR from which to seek funding through a ballot initiative—a process similar to FasTracks. The goal is a 100+ mph train at a cost of $8 to $14 billion dollars, though it is likely to begin with a smaller scale project—hopefully Denver-Boulder-Longmont. This could accelerate delivery of NW Rail. The BNSF (Burlington Northern Santa Fe) right-of-way would be used, with BNSF building the rail at a cost yet to be determined.

If it is built, it will likely follow a path along the planned route of NW Rail. If so, RTD might partner with FRPR and Amtrak to use the same tracks for NW Rail. However, FRPR would only stop at Union Station, Boulder and Longmont. RTD would need to pay for railroad sidings at five other stations along the way: Westminster, Church Ranch, Flatiron, Louisville, and Gunbarrel.

As an interim step in the process, the RTD Board has approved an $8M study of a rush-hour only service (see Appendix A1). The study is scheduled to begin at the end of 2021 and be completed by 2024. This would need to be followed by a full Environmental Impact Statement before final construction design, leasing, and planning. This would be a partnership among FRPR, BNSF, CDOT, Amtrak, RTD, Army Corps of Engineers, Federal Railroad Administration, Federal Transit Administration, and Northwest Corridor communities.

Given the operational, political, economic and other risks inherent to a complex project such as this, it is difficult to estimate the date at which service might begin. Given the time frame, it seems prudent to at least consider and evaluate the alternative option of expanding and adding to existing Bus Rapid Transit (BRT) services while pursuing developments on NW Rail. Note that the recommended BRT solutions are based on the Northwest Area Mobility Study and the work of subsequent groups such as Commuting Solutions and the Northwest Mayors and Commissioners Coalition.

We request that RTD specifically respond to each of the following claims. If enough have merit, the RTD Board, in partnership with the Governor, CDOT, and various communities and organizations representing the Northwest Corridor, can decide whether to rapidly pursue the BRT solution.

Here are the six claims, followed by the supporting documentation for each:

1. A BRT solution is able to deliver services a decade or more sooner than NW Rail.
2. A BRT solution can better accommodate future growth than NW Rail.
3. A BRT solution is far less expensive to implement than NW Rail.
4. A BRT solution is far less expensive to maintain than NW Rail.
5. A BRT solution is far less expensive per boarding than commuter rail lines like NW Rail.
6. A BRT solution is far less of a threat to the future financial sustainability of RTD than NW Rail.

Of course, if everything goes smoothly with FRPR, NW Rail might also be available within a decade or so. But BRT is now, and is low risk.

The following provides the justification for each of these claims.
1. A BRT solution is able to deliver services a decade or more sooner than NW Rail.

Claim: Already done, since RTD’s Flatiron Flyer BRT (FF BRT) began operations January 3, 2016, and has already served millions of riders a year.

In 2019, the FF BRT provided 3.366 million rides, which is twice RTD’s projected 2035 NW Rail ridership. Before the pandemic, FF BRT offered seven Boulder-Denver routes. In addition to express buses, some provided stops serving Table Mesa, McCaslin, Flatiron, Broomfield, Church Ranch, and Sheridan. Service intervals ranged from 10 to 30 minutes depending on the route and time of day. However, since the 2020 pandemic, four of the routes were suspended and only three of the seven routes are still operating.

2. A BRT solution can better accommodate future growth than NW Rail.

Claim: The FF BRT configuration could easily expand to accommodate twice the total projected 2035 NW Rail ridership.

Using the CARES funding, RTD has already brought back many of the bus operators and maintenance and support personnel that would be needed to restore Flatiron Flyer service to pre-pandemic levels. There are also buses in storage from when services were cut in 2020. Given the popularity of the Flatiron Flyer buses—as demonstrated by it’s past high ridership—RTD should prioritize rapid restoration of all seven routes to 2019 schedules. As the economy continues to recover, RTD could selectively expand services on popular routes. For example, if a bus pulls out of the station and averages 60 mph, and the next one leaves ten minutes later, the first one is already ten miles down the road.

Doubling the bus frequency to every five minutes would have a negligible impact on US 36 traffic, but would add twice the capacity needed to serve all of RTD’s projected 2035 NW Rail riders. In fact, since these buses would be carrying far more passengers than the average vehicle, they would significantly reduce rather than add to congestion. And though the capacity of stations would also need to be expanded as BRT ridership grew, expansion could be gradual and demand-driven.

Growth by rail: RTD’s planned schedule for Line B/NW Rail is “30 minutes peak (6-9am, 3-6pm) / 60 minutes off-peak service.” That implies $7 + 5 + 7 + 4 = 23$ round trips, or a weekday extra 46 trains on the tracks. BNSF, who owns the rails and right-of-way, currently runs 10 to 17 freight trains per day over this route. With NW Rail, that’s about four times as many trains, each of which stops traffic both ways. This annoys the folks stalled at RR crossings, worried about being late for work, while commuters’ idling cars the diesel trains kick up our ozone levels. And that’s before Amtrak/FRPR add their rolling stock.

Are we certain that this expansion will not be an issue for BNSF’s freight operations? Whoever writes the rail lease contracts needs to ensure that more trains can be added at a reasonable cost. According to CDOT, Colorado’s population may grow by 1.69 million over the next 20 years, mostly along the Front Range.
3. A BRT solution is far less expensive to implement than NW Rail.

Claim: The US 36 FF BRT managed lanes and transit stations are already in place, and the Boulder-Longmont SH 119 BRT is planned, could begin construction within a year, and be completed within three years.

While an additional $135 million in funding and a high implementation priority is needed for this project, $115 million has already been committed by RTD, DRCOG, CDOT, Boulder and Longmont. This was a key priority of the 2014 Northwest Area Mobility Study (NAMS) group and has broad support within the NW Corridor, including the Northwest Mayors and Commissioners Coalition. Compared to the $1.579 billion (2018 dollars, 2019 estimate) for NW Rail, this is a modest investment. It is estimated to reduce RTD’s BOLT line Boulder-Longmont travel time from 66 minutes to 38 minutes. Given the number of Longmont residents that can’t afford Boulder housing costs, this route is critical to both local economies. The extra lanes, including turn lanes, inside managed lanes, and cycle paths, should ensure free-flowing traffic for personal autos, heavy trucks, transit customers, and cyclists for years to come.

4. A BRT solution is far less expensive to maintain than NW Rail.

Claim: The “tracks” of BRT are managed lanes, which are built and maintained by CDOT. Maintaining buses is something at which RTD excels. RTD has people with long experience and skills in this discipline.

Unlike trains, BRT buses are operated on public highways. There is no repair and maintenance as there would be with rails, railroad switches and crossings.

RTD is very knowledgeable with regard to maintenance and repair of buses. However, if electric buses are chosen, there will be some significant upfront costs in retraining technicians. But since there are so few moving parts in electric vehicle drivetrains, over the long term the maintenance costs will be much lower.

Why fewer moving parts? Conventional buses have internal combustion engines and complex transmissions, both with thousands of moving parts. Electric motors often have fewer than thirty moving parts—though there will typically be multiple drive motors. They also have no transmissions: more current and the bus goes faster, less current and it goes slower, no current and regenerative braking occurs to slow the bus. Reverse the current polarity and the bus backs. Most electric vehicles also do not require conventional lubrication or oil changes. However, they cost more to purchase, though over time those costs are recovered by very long useful lives (Tesla claims a million miles) with less maintenance.
5. A BRT solution is far less expensive per boarding than commuter rail lines like NW Rail

**Claim: RTD’s experience with the Flatiron Flyer is proof that BRT is about a quarter the cost per rider compared to RTD’s commuter rail lines.**

CDOT didn’t build US 36 managed lanes just for the occasional RTD bus. The managed lanes are tolled, or free for HOV3+. But they’re also free for BRTs since BRTs reduce congestion by transporting lots of passengers—especially during busy peak hours. That’s why CDOT pays for all of the construction and maintenance costs for managed lanes. It’s a classic win-win deal!

Compare this to RTD’s rail lines like NW Rail. RTD must pay all the engineering, design, environmental impact studies, right-of-way costs, construction costs, locomotive and train carriages purchase cost, and then the interest on the loans for all this—with our sales and use taxes pledged against default. With BRTs, while RTD must pay for the buses, stations, and operating costs, BRTs pay nothing for access. That’s why their cost per boarding is a small fraction of commuter rail costs.

How significant is this savings?

The 2019 average net cost per boarding (after credit for fare revenues) for the Flatiron Flyer was $4.94 ([RTD Service Performance 2019, Page 19, Route FF](#)). RTD’s current three commuter rail lines’ 2019 average net cost per boarding (after credits for fare revenues, see [RTD Service Performance 2019, Page 20](#)) were: Line A—$17.86, Line B—$17.64, and Line G—$18.46. That’s an average of $17.99 per boarding. That’s close to four times as much as the Flatiron Flyer’s $4.94 per boarding.

In 2019, RTD’s Net Subsidy (loss) for operating the FF BRT service was $16,617,183. If the FF BRT service had cost as much per boarding as the average commuter rail line, that loss for 2019’s 3,366,474 BRT boardings would have been $60,562,867. The net annual savings on that one BRT line versus commuter rail, which is what is planned for NW Rail, would have been almost $44 million a year.

6. A BRT solution is far less of a threat to the future financial sustainability of RTD than NW Rail.

**Claim: Unless most all of the capital costs of NW Rail are provided by federal grants or by FRPR, RTD will not be capable of supporting the added NW Rail debt and still support the deficits under which their existing rail and bus lines operate.**

RTD’s B-Line/NW Rail from Union Station through Boulder to Longmont will be 41 miles long when, and if, the 35-mile extension is completed. The 23-mile long Union Station to Denver Airport A-Line is a distant second. The extension’s cost, recently estimated to be about $1.5 billion (2018$), has grown dramatically from the 2004 estimate of $565 million for the entire B-line. The actual cost may increase even more by the time it is finished.

RTD estimates annual operating and maintenance cost at $20.6 million. Using these numbers, with 2% financing and a 30 year bond, and using their 5,400 weekday boardings estimate for 2035, and adjusting for estimated fare revenue, the NW Rail boarding cost is $57.63 ([see Appendix A1](#)). That seems irrationally high compared to $4.94 for the Flatiron Flyer BRT, but everybody seems to be set on a train.
Unfortunately, that train will cost $100.6 million every year. Given that FasTracks share of sales and use taxes for 2020 amounted to $200.382 million, it is hard to imagine how RTD will keep up with its FasTracks Project debt payments that totaled $152.217 million for 2020.

To verify these numbers, see RTD’s Board of Directors Report, Approval of Amended Budget, 2020 Amended Budget, Page 4, FASTRACKS PROJECT Sales Use Tax, FASTRACKS OPERATIONS Sales/Use Tax, and Page 2, FASTRACKS PROJECT Interest Expense. The substantial federal CARES and CRRSSA grants cannot be counted on to continue forever.

_It will be many years before RTD can pay off the debt it has incurred by building rail projects. Until then, RTD cannot afford to build NW Rail while also supporting the operating losses of the current rail lines. Bus Rapid Transit seems to be the only rational choice to meet the needs of the Northwest Corridor while RTD struggles for financial sustainability._

**Closing notes**

While financial and operational analyses don’t make for great reading, their understanding is essential to RTD’s ability to deliver the transit services Colorado needs to grow and thrive. Budgets are moral documents, and unless RTD is financially sustainable, many Colorodans who live paycheck to paycheck will lose those paychecks. Families will suffer, and small and large businesses dependent on a stable workforce will either fail or leave our state.

Those who can afford it will often resort to single occupancy commuting in used vehicles chosen for low price rather than efficiency, further clogging our highways and adding to a growing brown cloud and a warming planet. We need transit solutions that move as many folks as possible out of these single-occupancy gasoline vehicles and into efficient, safe, and affordable transit—and renewably-powered electric buses, not diesel locomotive trains.

The time has come to find solutions that meet the needs of all the people of the Northwest Corridor—not just Boulder and Denver but with additional BRT or bus connections among Longmont, Louisville, Lafayette, Broomfield, and the smaller communities in the Corridor. Bus Rapid Transit is a practical and cost-effective way to meet those needs without waiting for decades. And by avoiding the high cost of NW Rail, there will be more resources available to address the remaining unfinished FasTracks routes. All have paid their taxes, and it is time to deliver on FasTracks’ 2004 transit promises.

In advance of any final recommendations, we welcome ideas and suggestions from all sources. We would also sincerely appreciate hearing about any errors you see in this analysis or any challenges to this approach regarding proposed concepts or accounting for the costs.

Comments/Suggestions? Please contact: Rutt Bridges
Chair, Finance Subcommittee of the RTD Accountability Committee: ruttt@bridgesfamily.net, (720) 840-1680 (mobile)
Appendix A1: Economic Viability of Proposed NW Rail Solutions

Seventeen years ago, Colorado voters approved a 0.4% sales tax increase to fund FasTracks, a visionary rail transit network for the greater Metro Denver Region. Future projections for sales tax growth were to help fulfill those promises. RTD pressed ahead, using future sales tax revenue as a guarantee against which to bond and borrow money.

The 2008 Great Recession soon stalled that vision. By 2021, RTD rail projects’ growing debt burden is expected to consume about two-thirds of annual FasTracks sales tax revenues. More recently, the pandemic drove rail ridership down to a third of what it was in 2019. Lower fare revenue and crushing debt now strangle RTD’s budget, and with the pandemic, ridership recovery may take some time. Everyone wants to make sure the shark is dead before they get back in the water.

In 2020, RTD paid over six times as much for FasTracks interest as for principal reduction. According to RTD’s 2020 Amended Budget (pages 3 and 4), FasTracks fares—$28M—covered less than a sixth of rail’s operating expense of $180M. And those operating costs don’t even include the interest expense. Today, RTD is in a severe financial crisis.

Before her departure last November, CFO Heather McKillop noted that to keep up with the maintenance and operations of the six train lines RTD opened since 2013, costly repairs will be needed starting in about six years. “We have a systematic problem that we have to fix in FasTracks,” she said. “Because after 2026, it only gets worse.”

RTD also has four major unfinished FasTracks projects: the North Metro ($290M), SW Corridor ($180M), Central Rail ($150M), and the Line B extension/NW Rail ($1,600 million). All four deserve attention and resources. However, the toughest, most expensive, least finished, and most politically sensitive is NW Rail. This analysis is limited to a search for solutions to that problem, though hopefully some of the ideas may apply to the other three unfinished projects. And if an equitable and financially advantageous solution to NW Rail can be found, RTD may have the resources to address the needs of the remaining unfinished projects. This is particularly important since the Governor has recently made it clear that the state does not intend to provide additional funds directly to RTD.

Since promises were first made in 2004, NW Rail’s original cost estimates have tripled to about $1.5 billion (2018$) due to 1) construction materials price inflation (page 12), 2) unexpectedly high costs for BNSF right-of-way use, and 3) the resulting federal requirement for commuter rail. The final cost of NW Rail will be even higher by RTD’s proposed date of 2042—a date Governor Polis has made clear is not a “legitimate date for discussion.”

From Broomfield to Boulder to Longmont, taxpayers are justifiably upset that the train promised for 2017 isn’t scheduled to arrive until 2042—two decades into an uncertain future. Some communities have even begun planning for development near proposed NW Rail stations. Action is being demanded from an agency that was recently financially forced to cut its transit services by 40%.

This is an analysis of the three NW corridor rail alternatives currently under consideration by RTD:

1. **RTD collaboration with Front Range Passenger Rail (FRPR)/Amtrak:** President Biden recently announced details of his new new $2 trillion American Jobs Plan, which proposes $80 billion in new Amtrak funding spread over the next ten years. While it is always difficult to predict Congressional action, at an April 12th press conference on Amtrak’s Front Range Corridor Vision, CEO Bill Flynn was
Amtrak President Stephen Gardner reportedly said that the state’s existing support for the project among political leaders and the intense population growth along the Front Range are two key reasons why Amtrak wants to invest in Colorado.

When you examine the details of Amtrak’s Front Range Corridor Vision document’s discussion (Figure A1-1), it appears to be a lot like FRPR’s “starter service”: three Pueblo-Fort Collins round trips daily, with one extending to Cheyenne. It would use BNSF and UP tracks, with ten new Amtrak stations along the way. In Dec 2020, FRPR estimated Pueblo to Fort Collins construction cost, sharing existing freight track, to be $1.7 billion to $2.8 billion.

Figure A1-1: Amtrak Front Range Corridor Vision

While it is possible that Amtrak may provide most of the construction costs, it is likely that a significant local financial commitment will be required to fund ongoing maintenance and operations. There is currently a bill in the legislature that creates a special taxing district mostly along I-25 in preparation for a ballot initiative. This could happen as early as Nov 2022 but might be Nov 2024 to give FRPR time to educate stakeholders and build campaign support. Upon mutual agreement of RTD and FRPR, RTD could share costs. However, while three daily round trips is helpful, is modest compared with FasTracks promised 15-to-30-minute NW Rail service frequency (RTD Board NW Rail Study Session, 2/9/21, page 60).

At an average of 45 mph, this “starter service” is not likely to convince many folks to give up their cars. FRPR might instead focus on a shorter 100+ mph demonstration line. Denver-Boulder would be a prime candidate. RTD could share these tracks, though intermediate NW Rail stations and sidings would still be needed. RTD could operate a relatively low-cost BRT on the proposed Boulder-Longmont CO 119 managed lanes. A collaboration could make both projects less expensive, and is something RTD should continue to pursue—while also exploring shorter-term alternatives.
2. **NW Rail Rush-Hour-Only service**: RTD is considering a Rush-Hour-Only service estimated to cost $708 million (2018$) that serves 800 people (1600 boardings/day) initially with 1400 people (2800 boardings/day) by 2035. Here’s why the economic justification of this project is challenging:

- Workdays with rush hours = 52 x 5 - 10 for holidays = 250 rush-hour days/year
- RTD’s estimated average annual operating and maintenance cost is $13.5 million (RTD Board NW Rail Study Session, 2/9/21, page 43).
- Financing $708 million at 2% interest over 30 years = $1,132 million
- Financing and capital cost = $1,132 million / 30 years = $37.7 million/year
- Initially: $51,200,000 / year ÷ (1600 boardings/day x 250 days/year) = $128/boarding
- By 2035: $51,200,000 / year ÷ (2800 boardings/day x 250 days/year) = $73/boarding

After pass discounts, the 2019 RTD rail service average boarding fare was $2.08, so RTD’s net cost per boarding would be $126 initially, $71 by 2035.

This boarding cost is an irrationally high expense. It is also not obvious why commuters would prefer this route over the Flatiron Flyer. Furthermore, this service would use the same freight rails as the FRPR “starter service” which could create freight rail access conflicts. The NW Rail Rush-Hour-Only service is not an economically viable solution. It doesn’t serve very many people for $708 million—almost a million dollars a customer at startup.

Expanding BRT to Longmont is a more economical and practical alternative than adding $1.132 billion to RTD’s already staggering debt obligations. BRT would be available much sooner and at a fraction of the cost.

3. **Build out the NW Rail extension (Figure A1-2)**: RTD’s Feb. 2021 estimate for NW Rail ridership is 5,400 boardings per weekday by the target year 2035. Data from MTA New York City Transit indicate that weekend transit boardings average about half of the weekday boardings. So, ignoring holidays, we will estimate annual boardings as 5,400 x 52 x (5+½+½) =1,684,800 boardings per year.

We’ll use a 30-year useful life, and the 2019 RTD Draft Initial Unfinished Corridors Report (page 5) estimated annual operating and maintenance cost for the NW Rail extension of $20.6 million per year. At an average $1.5 billion construction cost estimate and a 30-year 2% financing, here is the math (all 2018$):

- Total Debt Service = $1,500 million at 2% interest over 30 years = $2,400 million
- Annual Debt Service = $2,400 million / 30 years = $80.0 million/year
- Annual transit service cost = $20.6 + $80.0 = $100.6 million
- ($100,600,000/year) ÷ (1,684,800 boardings/year) = $59.71 per boarding

After pass discounts, the 2019 RTD rail service average boarding fare was $2.08, so RTD’s net cost per boarding would be about $57.63—an unreasonably high number. At 1,684,800 trips per year, that would add a new $97 million unfunded yearly obligation to RTD’s annual budget. Given that RTD’s 2020 Amended Budget for FasTracks Operations (Exhibit 1, Page 3) shows revenue from FasTracks Sales Tax ($135M) and use Tax ($15M) that total only $150 million, it is not clear how RTD could afford this—especially with FasTracks Project interest expenses already totalling $152 million (Exhibit 1, Page 2).
However, suppose US DOT or Amtrak was willing to fund the entire cost of construction of the rail lines, leaving RTD liable only for the $20.6 million annual operating costs. RTD’s cost per boarding after adjusting for the $2.08 average fare would be $10.15, and the additional unfunded obligation would be reduced to $17.1 million per year. This would be a much more manageable annual cost.

The other important “knob” to turn in improving transit economics is increased ridership. This is where mutually-beneficial partnerships with local governments and large employers can play a big role. Neighborhood or flexible employer pass discounts are one key strategy. Creating and promoting effective gathering mechanisms, from first/last mile, whether through TNC’s or sponsored vanpools, is another. And providing access lanes and trails suitable for bikes, e-bikes, scooters and all micromobility devices, along with “train-then-bike” and safe station storage, can provide great returns on investment. Finally, transit-oriented development combined with affordable housing can lead to affordable living for everyone while locking in transit customers.

**Figure A1-2: Buildout of the NW Rail Extension**

To Summarize:

- **Amtrak’s** plans to initially offer three 45 mph Pueblo-Fort Collins round trips per day, stopping at Boulder and Longmont, may be unconvincing to current I-25 drivers. Though Amtrak will likely fund a major part of the construction, it may still depend on voter approval of a substantial sales tax initiative. A collaboration among CDOT, RTD, and FRPR to create a Boulder-Denver 100+mph demonstration line may be a better strategy. It would still be roughly ten years away from
completion, but that’s far faster than RTD’s NW Rail estimates. This concept should be actively investigated and the NW Rail route actively supported.

- **The NW Rail Rush-Hour-Only service** proposal includes three Longmont-Boulder-Westminster station trips in the morning with three return trips in the afternoon. Unfortunately, it only serves 800 people/1600 boardings, 1400/2800 by 2035, operates on weekdays only, at a net cost of about $126 per person each way, $252 round trip—or $71/$142 by 2035 if the ridership projections are correct. A train change to the B Line is also required to get to Union Station. At a capital cost of almost a million dollars a passenger at inception, the Rush-Hour-Only service is not economically justifiable. Expanding Flatiron Flyer BRT services is a more reasonable alternative and could be implemented much sooner, and without spending $708 million.

- **Building out the full NW Rail extension** would require either waiting two decades to pay off debts from the rail that RTD has recently built or convincing the federal government to pay all construction costs. Even then, NW Rail would operate at an annual net loss of $17.1 million. RTD cannot build out NW Rail within a reasonable timeframe and still achieve long-term financial sustainability. But if it does come to pass, particular attention should be given to strategies to drive ridership. Finally, if Amtrak will build a high-speed rail demonstration segment along the NW Rail route, many of these issues can be addressed, and NW Rail can be a reality.

**Conclusion:** The Legislature and the Governor charged the RTD Accountability Committee with ensuring RTD’s long-term financial sustainability. But given the debt RTD has accumulated building out the current FasTracks system, the required completion of the unfinished corridors in a timely fashion seems unlikely at best. It appears that none of these three NW corridor rail alternatives has the potential to deliver a solution, though there is some promise in an Amtrak-FRPR-RTD-CDOT collaboration. It is apparent that finding alternative solutions to meet the 2004 FasTracks transit promises is essential if RTD is to meet its obligations to the people of the NW Corridor.

RTD needs to work with the local governments, transit organizations and customers to find an acceptable and more cost-effective alternative. Waiting two decades while growth stagnates and air quality continues to degrade is not an acceptable option. In Appendix A2 we will explore other ideas.
Appendix A2: Recommendations for Alternative Solutions

This Appendix describes a potential alternative solution to NW Rail, mostly based on the Northwest Area Mobility Study and subsequent research by various groups. RTD, CDOT, DRCOG, Commuting Solutions, Northwest Mayors and Commissioners Coalition, and other regional partners should work together to evaluate this and any other alternative solutions that can provide genuine relief—concrete plans that can meet or exceed the 2004 FasTracks promises or at least begin to deliver services far sooner. There should be expectations of measurable progress for the people of Boulder, Longmont, and all the communities within the Northwest Corridor.

Let’s start by reviewing those 2004 promises.

Promises Made, Promises Broken: The 2004 FasTracks Plan

- Cost estimate: $565 million [now $1.5 to $1.7 billion]
- Estimated completion date: 2015 [now 2042]
- Denver to Boulder Service: 15-minute peak/30-minute off-peak
- Longmont to Boulder Service: 30-minute all day
- Double-track rail corridor, Denver to Boulder
- Single-track rail corridor, Boulder to Longmont
- Technology: Diesel Locomotive-hauled coaches

(Source: RTD Board Northwest Rail Study Session, Feb. 9, 2021, page 30)

There are some folks in the Northwest Corridor who may feel that without a train, they can never be made whole. But consider this: Do you want a train, or do you want fast, frequent, comfortable, safe, and reliable transit? Because it may be possible without a train and without the expense, disruption, and delays that come with that choice.

Many Boulderites say good things about the Flatiron Flyer BRT buses (Figure A2-1). In 2019, it achieved 3,366,474 boardings, almost half the boardings of all 20 RTD Regional transit routes. The coaches are comfortable, there are 110v and USB connectors, plus bike and overhead storage. Also, the buses and the stations are designed for “Bus-Then-Bike” (Figure A2-2). You can even catch a nap on the way to Union Station, Denver Civic Center, or the Anschutz Medical Campus. The biggest complaint is, “RTD slashed our BRT services when the pandemic hit!” Such cuts have been made throughout RTD, with pandemic ridership dropping by up to 70%.
But is BRT a reasonable and financially sustainable alternative to the train? According to RTD data, the average pre-pandemic cost per boarding for the Flatiron Flyer was $4.94 (RTD Service Performance 2019, Page 19, Route FF). That’s half of RTD’s 2019 average rail boarding cost and a dollar less than RTD’s average regional bus boarding cost—neither of which include infrastructure construction costs. More importantly, it is less than a tenth the estimated NW Rail boarding cost of $57.63 since RTD gets free use of US 36 (a public highway) and its managed lanes (since it has 2+ passengers!).

Briefly, here is the case for why RTD should aggressively push ahead with a comprehensive BRT solution, as supported by the Northwest Mayors and Commissioners Coalition, and by doing so deliver services that exceed the 2004 promises of FasTracks:

- Unless alternative sources of funding are found, NW Rail won’t be built for decades
- These delays will result in growth of harmful emissions and impact ozone compliance
- The NW corridor is poised for strong economic growth, but needs better transit alternatives
- We already have a solid BRT infrastructure on US 36—no waiting for tracks to be laid
- The Flatiron Flyer already provides twice as many boardings as the 2035 NW Rail projection
- Flatiron Flyer could serve the anticipated NW Rail ridership demand simply by adding buses
- We’ll save enough by skipping trains and tracks to exceed NW Rail service frequency
- CO 119 Longmont-Boulder BRT can offer over twice as frequent service as the single track NW Rail
- Bus Rapid Transit (BRT) is an RTD/CDOT-proven, economical transit solution
- CDOT pays for construction and maintenance since personal autos dominate managed lane use
- By contrast, all rail construction and maintenance costs fall squarely on RTD’s shoulders
- Managed lanes will greatly reduce future congestion on SH 119, US 287, SH 6
- If we choose electric buses powered by renewables over a diesel train, we’ll all breathe easier
- Planning is already underway for adding managed BRT/bike lanes (Figure A2-3) for
  - SH 119 from Boulder to Longmont, shovel-ready, “Construction could begin in 2021”
  - US 287 from Denver to Fort Collins (planning stage)
  - SH 7 from Boulder thru Lafayette and Broomfield to Brighton (early planning stage)
- Nothing prevents NW Rail addition if funds become available or the full FRPR is built

Here is how RTD can exceed the NW Rail transit service promises:

- Instead of a Denver-Boulder-Longmont train with a single track for Longmont, create a grid of two-way BRT routes throughout the NW corridor
- Managed lanes will mostly serve 2+ passenger personal autos and toll customers during rush hours
- These managed lanes will be built and maintained by CDOT, as is the case with US 36
- Since BRTs won’t require dedicated lanes, fares and net boarding costs can be kept low
- Up to 15-minute peak/30-minute off-peak for all BRT lines (demand-based with room to grow)
- Begin BRT service to Longmont ASAP (Figure A2-5) while building out SH 119 managed lanes
- Begin building out SH 7 and unimpacted portions of US 287 as soon as planning is completed
- Put the Rapid back into B-Rapid-T with hourly one-stop Longmont-Boulder-Denver service
- BRT buses can provide service for special weekend events like concerts and CU games
- BRT in managed lanes reduces congestion, CO2, and ozone

Why BRT is better for Longmont than a single-track train:

- If a train’s single track is somehow shut down (repairs, accidents, etc.), all service stops
- BRTs can run on managed lanes and, if need be, any traffic lanes
- Station access by rubber-tire buses is much simpler and less expensive than rail stations
Free road use is far cheaper than building train tracks
Electric buses are cleaner and cheaper than diesel trains
Reducing costs keeps fares low
It is far easier to grow capacity with buses than trains—especially single-track trains
BRT’s impact on managed lanes is negligible, and service can be expanded by adding buses

The restoration to pre-pandemic levels of Flatiron Flyer service (Figure A2-4), including Union Station, Anschutz, and Civic Center, should begin right away by using some of the CRRSAA funds and part of the $124 million in RTD’s FasTracks Internal Savings Account (FISA). Using US 287/South Boulder Road highways (Figure A2-5), a temporary path to the Flatiron Flyer Table Mesa station can be provided from Longmont that would also serve Lafayette and Louisville residents while the CO 119 road construction is underway. Then the South Boulder Road route can be maintained to support Lafayette and Louisville while CO 7 and US 287 BRT managed lanes are being built. The goal should be a grid of full regional BRT services, as proposed by the Northwest Area Mobility Study and supported by the Northwest Mayors and Commissioners Coalition, within ten years. This is far better than the twenty-plus years for NW Rail, and the service frequency can more than exceed the 2004 promises of FasTracks.

Figure A2-3: Proposed BRT and Bikeway Additions
Of course, all BRTs don’t have to start or end in Boulder or Denver. By adding some smaller electric buses we can increase service frequency between and among lower-volume destinations like Superior, Flatirons, and Church Ranch.
Meanwhile, RTD and CDOT planners should be busy writing grant requests for some of the $2 trillion in federal infrastructure spending being sought by DOT Secretary Buttigieg and the Biden administration. And by relieving congestion on our state highways—for example, by adding and maintaining managed lanes—CDOT will be a vital partner in creating this grid of BRT within the NW corridor. CDOT can play the key role by empowering cost-effective mass transit and cutting this Gordian knot known as NW Rail.

To summarize:
- Expanded BRT Flatiron Flyer service should begin as soon as possible
- While managed lanes are added to CO 119, BRT service connecting Longmont, Lafayette, and Louisville to US 36 BRT should begin on existing surface roads (Figure A2-5)
- Similar strategies should be used while US 287 and CO 7 BRT is built out
- First/Last mile and bike/micromobility strategies should be part of BRT planning to drive ridership
- Greater transit ridership allows for growth while reducing greenhouse gas emissions
- Boulder should consider building solar or wind farms that use electric buses for power storage

The ultimate goal is the creation of a grid of BRT throughout the NW corridor with transit service that exceeds the 2004 FasTracks promises. This can be available decades sooner and at less cost than than NW Rail.

As a final note, a separate RTD Accountability Committee Recommendation for first-last mile services (called “FreeLift”) is currently under development. RTD should avoid a “build it and they will come” philosophy towards BRT. The grid of BRT stations can extend their ridership reach by offering easy access to the bypassed NW corridor neighborhoods who are within a few miles of a BRT station. This should be seen as a great market opportunity for RTD. In parallel with the expansion of Northwest Corridor BRT services, plans should include provisions for first/last mile services and bike/micromobility lanes and storage. These topics will be discussed as part of the FreeLift recommendations.

In advance of any final recommendations, we welcome ideas and suggestions from all sources. We would also sincerely appreciate hearing about any errors you see in this analysis or any challenges to this approach regarding proposed concepts or accounting for the costs.

Comments/Suggestions? Please contact: Rutt Bridges
Chair, Finance Subcommittee of the RTD Accountability Committee:
ru tt@bridgesfamily.net, (720) 840-1680 (mobile)
## Finance Subcommittee

<table>
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<tr>
<th>Focus Area</th>
<th>Issues in progress or yet to address</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
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| 1. Recommend changes to statutes that currently limit opportunities for revenue generation, cost savings and increased ridership, including provisions that:  
- Require RTD to raise a certain amount through fares (this is a barrier to lower cost service).  
- Limit RTD’s ability to develop anything but parking lots on its properties (e.g., rather than affordable housing and key services at TOD sites that can generate transit riders and potentially revenue).  
- Limit RTD from charging for parking. Examine how changes in parking policies and pricing could increase revenues, TOD and ridership.  
- Affect RTD’s ability to contract for cheaper service delivery. | Review of current legislation to identify opportunities to provide RTD with greater flexibility to improve services and increase revenue, draft proposed legislative changes *(completed, included in January 2021 interim report)* | XXXX | XXXX | XXXX | XXXX | XXXX |
<p>| 2. Gov. Polis and the Legislature specifically requested “A thorough review of the agency’s use of CARES Act stimulus funds” | The Finance Subcommittee worked with North Highland consultants to define requirements, and then reviewed and approved their report with some modest changes. <em>(completed, included in January 2021 interim report)</em> | XXXX | XXXX | XXXX | XXXX | XXXX |</p>
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<tr>
<td>3. Review and recommended changes to RTD operations and policies to achieve a more sustainable financial model, including review of investment policies/guiding principles, debt strategies.</td>
<td>Review of past investment policies, financing/debt strategies</td>
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<td>4. Recommend alternatives for regional/subregional funding allocation.</td>
<td>Will work with Governance Subcommittee</td>
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<td>5. Peer review of RTD Administrative Overhead / Organizational Efficiencies</td>
<td>Working with North Highland Consultants</td>
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<td>6. Review FasTracks spending and make recommendations on how to achieve an equitable resolution for the unfinished FasTracks Corridors. This will include answering the following questions:</td>
<td>FasTracks/base system funding</td>
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<td></td>
<td>• How have FasTracks and base operating monies been generated and spent to date across the RTD service area?</td>
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<td>• How much of base funding has been diverted to FasTracks projects?</td>
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<td>• What is the cost of finishing FasTracks?</td>
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<td>• How can unfinished corridors be served in a cost effective and cost efficient manner (e.g., project completion, equivalent mobility, financial, etc.)?</td>
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<td>7. Improve financial transparency to build back public trust and demonstrate RTD accountability to the voters and policy makers</td>
<td>Dashboard Recommendation</td>
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<td><strong>Strategy:</strong> Create a recommendation for a public, online dashboard that includes how RTD money is generated and spent, detailed monthly reporting of ridership, and information on planned service changes and rationale for those changes. The content should mostly be well-organized links to existing RTD reports. RTD should generate a publicly accessible prototype and then seek public comment before finalizing the design.</td>
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<td>8.</td>
<td>Examine partnership opportunities (i.e., with CDOT, local governments, human services agencies, non-profits, private sector, etc.) to enhance mobility services, allow RTD to focus on delivering the types of service(s) they can do most effectively/efficiently, and leverage RTD funding and/or decrease costs of service.</td>
<td>Contracted Services/Partnership Opportunities</td>
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