



Transportation Technical Committee Meeting

Wednesday, February 24, 2021 • 1:30 PM – 3:00 PM

Virtual Meeting via Teleconference

PUBLIC NOTICE:

Due to COVID-19 and in accordance with the Governor Inslee's proclamations 20-25.7 and 20-28.8, the SRTC office is closed to the public and no in-person meetings will be held until further notice.



Join the Zoom Meeting at:

<https://us02web.zoom.us/j/83345155453?pwd=Y2o0VzNjNmNmWINQZ2VpbC82RmhjQT09>

Meeting ID: 833 4515 5453 | Passcode: 723087

Or listen by phone at: 1-253-215-8782

Meeting ID: 833 4515 5453 | Passcode: 723087



Public comments can be submitted by email to contact.srtc@srtc.org or by phone to 509-343-6370. Deadline for submitting comments is 10:00 am on the day of the meeting.



SRTC is committed to nondiscrimination in accordance with Title VI of the Civil Rights Act of 1964, and Civil Rights Restoration Act of 1987 (P.O. 100.259) and the Americans with Disabilities Act. Reasonable accommodations can be requested by contacting the SRTC office by telephone at (509) 343-6370 or by email at contact.srtc@srtc.org at least 48 hours in advance.

Transportation Technical Committee Meeting

Wednesday, February 24, 2021 • 1:30 PM – 3:00 PM

AGENDA

- 1:30 1. Call to Order / Record of Attendance
- 1:32 2. Approval of January 27, 2021 Meeting Minutes Page 3
- 1:33 3. Public Comments
- 1:38 4. TTC Member Comments
- 1:48 5. Chair Report on SRTC Board of Directors Meeting
- ACTION**
- 1:53 6. 2021-2024 Transportation Improvement Program March Amendment (*Kylee Jones*) Page 7
- 1:55 7. DATA Project Draft Design Plan (*Mike Ulrich*) Page 17
- 2:30 8. TIP Contingency Funding (*Eve McMenemy*) Page 38
- INFORMATION AND DISCUSSION**
- 2:40 9. Freight Study Update (*David Fletcher*) Page 43
- 2:58 10. Agency Update
- 3:00 11. Adjournment *Next Meeting – Wednesday, March 24*

MEETING MINUTES

Spokane Regional Transportation Council Transportation Technical Committee
 January 27, 2021 | Zoom Video Conference

1 Call to Order/Record of Attendance

Mr. Adam Jackson, Chair, called the meeting to order at 1:00 p.m.

Committee Members Present

Adam Jackson - Chair	City of Spokane Valley	Mary Jensen - Vice Chair	WSDOT-Eastern Region
Heather Trautman	City of Airway Heights	Barry Greene	Spokane County
Todd Ableman	City of Cheney	April Westby	Spokane Regional Clean Air
Roger Krieger	City of Deer Park	Cindy Green	Spokane Regional Health Dist
Lisa Key	City of Liberty Lake	Karl Otterstrom	Spokane Transit
Kara Mowry	City of Spokane	Kristine Williams	Spokane Transit Authority
Inga Note	City of Spokane	Rachelle Bradley	Spokane Tribe of Indians
Kevin Picanco	City of Spokane	Larry Larson	WSDOT-Eastern Region
Gloria Mantz	City of Spokane Valley	Glenn Wagemann	WSDOT-Eastern Region
Brandi Colyar	Spokane County		

Committee Alternates Present

Colin Quinn-Hurst	City of Spokane	Tim Schwab	Spokane County
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Guests

Joel Freedman	RSG Inc.	Shauna Harshman	City of Spokane
Maria Maynard	Spokane County	Jerremy Clark	City of Spokane Valley
Adam Miles	DOWL	Keith Martin	WSDOT-Eastern Region
Brian Belsby		Sean Messner	HDR
Paul Kropp			

Staff

Eve McMenamy	Principal Transportation Planner
Ryan Stewart	Principal Transportation Planner
Mike Ulrich	Principal Transportation Planner
Jason Lien	Principal Transportation Planner
David Fletcher	Associate Transportation Planner III
Kevin Wallace	Interim Executive Director
Julie Meyers-Lehman	Exec-Admin Coordinator

2 Approval of December 2020 TTC Meeting Minutes

Mr. Greene made a motion to approve the December 2020 minutes as presented. Mr. Picanco seconded the motion, which passed unanimously.

3 Public Comments

There were no public comments.

4 Technical Member Comments

Members spoke about current projects or programs in their jurisdiction/agency.

5 Chair Report on SRTC Board of Directors Meeting

Chair Jackson shared highlights from the January 14 Board meeting.

ACTION ITEMS

6 2021-2024 Transportation Improvement Program (TIP) February Amendment

Ms. Jones provided details about the three projects in the proposed amendment. There were no questions or discussion.

Mr. Otterstrom made a motion to recommend Board approval of the 2021-2024 TIP February amendment. Ms. Mantz seconded the motion. All votes were in favor.

7 TIP Call for Projects – Principles of Investment

Ms. McMenemy spoke about SRTC's Call for Projects in 2018 in which \$6M was set aside for capital maintenance and preservation projects to be programmed in 2022/2023 so that jurisdictions could apply for funding based on actual pavement condition rather than on predicted condition. In October 2020 the Board approved a policy for SRTC to conduct a biennial preservation only call for projects.

She reported on discussions of this topic by the TIP Working Group in December, their recommendations, the reasoning behind them, and noted that there was support expressed at the January 14 Board meeting for a preservation only call for projects. She presented a preliminary schedule and read the requested action, which was:

Recommendation to the SRTC Board of Directors to approve

(1) Limit the \$6M SRTC call for preservation projects to include grind and overlays, chip seals and other sealants;

(2) Limit project awards not to exceed \$1M; and

(3) Limit any one jurisdiction total awards not to exceed \$2M.

Mr. Otterstrom made a motion to recommend Board approval of the three points as outlined above. Mr. Greene seconded. Motion carried unanimously.

8 Spokane County Cost Overrun Eligibility

Ms. McMenemy said the TTC is being asked to consider if Bigelow Gulch Project 6 cost overrun is eligible for SRTC contingency funding. In 2018 this project was awarded \$2.81M of partial funding and in 2020 received \$1.27M of contingency funding, and at that time was expected to be all the funding required for project completion. The project is planned for construction this year and to be in alignment with construction of the City of Spokane Valley's Wellesley/Sullivan intersection project.

She spoke about the cost overrun policies in the TIP Guidebook (Policies 6.3, 6.3.1 & 6.3.2) and provided examples of eligible and ineligible cost overrun situations. She explained that while this project does not qualify for the contingency CMAQ funding available, it does qualify for the \$429,000 of available HIP funding.

Ms. Colyar gave an overview of the project and discussed the nature and details of the cost overrun, which are mostly due to right-of-way costs for public school properties. Several comments were made about the rapidly increasing costs of construction and property values in the region creating real problems with project planning.

Mr. Krieger made a motion to recommend to the Board that Bigelow Gulch Project 6 is eligible for SRTC available contingency funding; Ms. Note seconded.

The group discussed the contingency funding process, projects on the current contingency list, and how much additional money Spokane County will need put forth in order for the project to be fully funded.

The motion passed with all votes in favor.

9 Metropolitan Transportation Plan Financial Forecast

Mr. Fletcher noted this item was carried forward from the last meeting to allow member agency staff additional time to review the forecast. He presented a summary of the Subject Matter Expert Team's comments, projected revenues to all local jurisdictions, and a summary of comments about the forecast by TTC members, which were:

- How does the forecast provide flexibility with its assumptions?
- Assumptions for future legislatively funded projects seem aggressive.
- STA recommended various edits to the financial forecast report's

He shared information about the adjustable assumption parameters which have been built into the forecast and said there is a 20% projected decrease in legislative funding from 2032 to 2045 and a 2.7% projected decrease of the region's share of statewide population in the same time frame.

The group discussed anticipated future funding availability and a concern was raised about not accounting for enough inflation in the construction area. Chair Jackson asked that the TTC be provided an intermediate touch on the Needs Analysis before the June meeting.

Mr. Larson made a motion to recommend the Board accept the MTP financial forecast with the proposed revisions as shown. Mr. Otterstrom seconded. Motion carried unanimously.

INFORMATION & DISCUSSION ITEMS

10 DivisionConnects Update

Mr. Lien provided a status update on the study, explained there are four alternatives currently under consideration, and announced that a new public engagement campaign has recently been launched. Information was presented about the structure of the study and the existing conditions along the corridor. He described the process by which the alternatives for final evaluation were identified and presented illustrations of the four alternatives and photo examples of similar layouts in other regions.

Mr. Lien presented the project schedule, upcoming public engagement activities and noted that Phase II of the project will focus on land use analysis. He said that while the TTC will be kept informed of the study's progress and can provide input, and there will not be a formal recommendation from the TTC to the Board.

11 DATA Draft Design Plan

Mr. Ulrich provided a history of the project and described the methods and touch points in which stakeholders and member agency staff have been involved in the project development process to date. He then gave the floor to Mr. Joel Freedman, project consultant from RSG. Mr. Freedman spoke about the updated Phase I and Phase II schedules, the decision-making process and outlined how stakeholder input has been obtained and applied.

Mr. Freedman outlined the draft design plan, which includes the following proposed Phase II investments:

- Household Travel Survey (1500 household smartphone enabled using rMove)
- Passive Data (Passenger & heavy truck trip tables from passive location based services data)
- Traffic Count Data (Selected traffic counts at key locations for model validation)
- Land Use Data Management System (For management of existing & future land use data and TAZ data)
- Travel Demand Model Updates
- Online Data Hub (Regional online data/tools platform to share SRTC's information with stakeholders and the community)

Chair Jackson asked if Mr. Ulrich would send a link to the project website so that the TTC could have an opportunity to comment on the plan. Mr. Ulrich stated that he would.

12 Agency Update

Ms. McMenemy reported on:

- Land use update for MTP is in the final stages and data requests have been sent to all member agencies/jurisdictions with land use authority; it was requested that members ensure TAZ level employment distribution is returned to SRTC next week.
- A series of meetings by SRTC's Interlocal Agreement Signatories to discuss the addition of Tribes to the Board and other governance structure issues. Notifications and links can be found on the SRTC website.
- A notice was distributed from MUCTD about a plan on novice traffic controls devices which is open for comment.

13 Agency Update

There being no further business, the meeting adjourned at 3:07 pm.

Julie Meyers-Lehman
Recording Secretary

To: Transportation Technical Committee 02/17/2021
From: Kylee Jones, Associate Transportation Planner II
Topic: **2021-2024 Transportation Improvement Program (TIP) March Amendment**

Requested Action:

Recommendation for SRTC Board of Directors approval of the March amendment to the 2021-2024 TIP, as shown in the **Attachment 1** and **Attachment 2**.

Key Points:

- Two agencies have requested amendments to the [2021-2024 TIP](#). See Attachment 1 for more details.
 - Spokane County Bigelow Gulch – Project 2
 - Spokane County Bigelow Gulch – Project 3
- On Dec. 17, 2020 Spokane Transit Authority (STA) adopted a Public Transportation Agency Safety Plan (PTASP) and set public transit safety performance measures and targets per federal requirements, 49 U.S.C. 5329 (d).
- Federal requirements also involve SRTC in their role as the Metropolitan Planning Organization, to incorporate public transit safety performance targets into our planning process and documents.
- Through this amendment SRTC is incorporating the STA's Public Transportation Safety Targets by amending text in the 2021-2014 TIP and reporting the targets in 2021-2024 TIP Appendix D, Performance Measures and Statewide Targets, see **Attachment 2**.

TIP Overview

The TIP is a programming document that identifies specific projects and programs to be implemented during the upcoming four years. Any project with federal funds from the Federal Highway Administration (FHWA) or Federal Transit Administration (FTA), as well as any regionally significant projects, must be included in the TIP. After a TIP has been incorporated into the Washington State TIP (STIP), project changes can be requested by local agencies. Minor changes can be made administratively by SRTC staff. Significant changes must be made through the amendment process, which requires a 10-day public comment period and action by the SRTC Board of Directors.

Board/Committee Discussions:

This item is being presented to the TTC for the first time.

Public Involvement:

Pursuant to SRTC's Public Participation Plan, this amendment will be published for a public review and comment period from February 17, 2021 through February 26, 2021 at 4:00 p.m. Notice of the amendment will be published in the Spokesman Review and posted to the SRTC website (www.srtc.org) and social media platforms on February 17, 2021. Public comments received during the public comment period will be addressed by SRTC staff and presented to the SRTC Board of Directors in their March 2021 meeting packet.

Supporting Information/Implications:

The TIP serves as an important tool in implementing the goals, policies, and strategies identified in Horizon 2040, SRTC's long-range plan. As such, any projects included in the TIP, including projects added through monthly amendments, must be consistent with Horizon 2040. Consistency with Horizon 2040 includes a demonstration of financial constraint and conformity with regional air quality plans. The March amendment has been reviewed by SRTC staff for compliance with federal and state requirements and consistency with Horizon 2040.

On Dec. 17, 2020 STA adopted a Public Transportation Agency Safety Plan (PTASP) and set public transit safety performance measures and targets per federal requirements 49 U.S.C. 5329 (d). The purpose of this plan is to provide a structured safety management approach that effectively controls operational risks and continually improves the agency's performance.

SRTC is required to update our TIP and planning processes to reflect new public transportation safety performance targets within 180 days after targets have been adopted by STA, 23 CFR 306 (4) (iii). In SRTC planning and documents, SRTC agrees to plan and program projects so that they contribute to all statewide and public transit targets as reported to the Federal Highway Administration and Federal Transit Administration. Thus, new public transportation safety performance targets are being incorporated in the SRTC 2021-2014 TIP, Appendix D through this TIP Amendment.

TIP amendments must be approved by the SRTC Board to be incorporated into the Washington State TIP (STIP). Projects receiving federal funds must be in both the TIP and the STIP to access those funds.

Pending approval by the SRTC Board, the March amendment will be incorporated into the STIP on or around April 15, 2021.

More Information:

- See Attachment 1: 2021-2024 TIP March Project Amendment
- See Attachment 2: 2021-2024 TIP Text Amendments
- For detailed information contact: Kylee Jones at kjones@strc.org or 509.343.6370.

2021-2024 Transportation Improvement Program

March Amendment (21-03)

Agency	Project Title Amendment Description	Funding Adjustment	Amendment	
			New Project	Existing Project
Spokane County	Bigelow Gulch/Forker Connector - Project 2 Project limits updated - Begin Termini (Urban Boundary – MP 0.50). End Termini (East of Espe Rd - MP 2.03). Total project length - 1.53 miles	No Funding Change		✓
Spokane County	Bigelow Gulch/Forker Connector - Project 3 Project limits updated - Begin Termini (East of Espe Rd -MP 2.03). End Termini (East of Jensen Rd - MP 3.15). Total project length - 1.12 miles	No Funding Change		✓

The advisory committee final report is due to the Legislature by December 1, 2020.

Over the coming years WSDOT and its partners will further align planning and programming areas with performance. All are committed to developing practical approaches to work towards our regional and statewide performance targets.

Federal Transit Administration Performance Targets

Under Title 49 CFR Part 625 and 630 under Transit Asset Management (TAM) requirements, public transit providers must set State of Good Repair performance targets for their assets.

Public Transit Targets

Asset Management Targets

~~Since~~ Spokane Transit Authority (STA) is the only Tier 1 public transportation provider currently required to report TAM targets. SRTC adopted these targets on June 14, 2018 (See Appendix D). Per federal requirements, anytime a public transit provider adopts new TAM targets, SRTC has 180 days to review and adopt TAM performance targets and bring them into the regional performance management efforts.

Public Transit Safety Targets

On December 17, 2020 STA adopted safety targets through their public transportation agency safety Plan as required by 49 U.S.C. 5329(d). As required by 23 CFR 306 4(iii), SRTC is integrating STA's safety performance targets into our planning processes as reported in Appendix C of this document.

2020-2023 TIP Accomplishments

Status of Major Projects

Pursuant to federal regulations, the status of major projects from the preceding TIP is provided below (§450.324(L)(2)). Given that the project status information is collected mid-year, it is possible that the status of these projects may change by the end of the program year (December 2020).

Complete (Constructed/Implemented or Under Construction)

Agency	Project Name	STIP ID
Cheney	Cheney High and Betz Elementary Pedestrian & Bicycle Route Safety Project	WA-12493
Cheney	Washington Street Preservation Project	WA-09444
Fairfield	1 st Street Sidewalk Improvement Project	WA-11317
WSDOT	Asphalt/Chip Seal Preservation Spokane Regional Transportation Council	BSRTC P1
WSDOT	Eastern Region Shoulder Rumble Strip Installation 2019-2021	600026A32
WSDOT	I-90/Barker Rd Intersection Improvements	609049M32
WSDOT	I-90/Barker to Harvard – Add Lane Harvard Rd Bridge	609049S23
WSDOT	I-90/Barker to Harvard – Improve Interchanges & Local Roads	609049L32
WSDOT	I-90/Barker to Harvard – WB on-Ramp Improvement	609049R23
WSDOT	I-90/US 2 Garden Springs to Broadway Ave – Variable Speed System	609047H32
WSDOT	SR 290/Spokane River E Trent Br – Replace Bridge	629001D32
WSDOT	US 2 & US 395 Safety Improvements – Shoulder Repair	600045J32

APPENDIX D PERFORMANCE MEASURES AND TARGETS

PERFORMANCE MEASURE 1: SAFETY TARGETS

Measure (5-year Averages)	2018 Baseline Statewide 5-year rolling avg.	Statewide Targets for 2020*
Number of Fatalities	531.8	443.2
Rate of Fatalities	0.879	0.732
Number of Serious Injuries	2154.6	1795.5
Rate of Serious Injuries	3.562	2.968
Number of Fatalities & Serious Injuries for Non-Motorized transportation	559.8	466.5

*The SRTC Board supported using statewide safety targets on May 9, 2019 (2022 targets are currently under development)

PERFORMANCE MEASURE 2: BRIDGE AND PAVEMENT TARGETS

Bridge Condition-Statewide	Baseline Data	2-year Target (2020)	4-year Target (2022)
Percent of NHS Bridges in good condition (weighted by deck area)	32.8%	30%	30%
Percent of NHS Bridges in poor condition (weighted by deck area)	7.8%	10%	10%

*Supported by the SRTC Board on November 8, 2018

Pavement Condition-Statewide	Baseline Data	2-year Target (2020)	4-year Target (2022)
Percent of Interstate pavement on the NHS in good condition	32.5%	N/A	30%
Percent of Interstate pavement on the NHS in poor condition	3.6%	N/A	4%
Percent of Non-Interstate pavement on the NHS in good condition	18%	45%	18%
Percent of Non-Interstate pavement on the NHS in poor condition	5%	21%	5%

*Supported by the SRTC Board on November 8, 2018

PERFORMANCE MEASURE 3: SYSTEM PERFORMANCE, FREIGHT AND CMAQ TARGETS

Highway System Performance (congestion)	Baseline Data	2-year Target (2020)	4-year Target (2022)
Percent of person-miles traveled on the Interstate System that are reliable	73%	70%	68%
Percent of person-miles traveled on the Non-Interstate System that are reliable	77%	N/A	61%
Truck Travel Time Reliability (TTTR) index	1.63	1.70	1.75
Carbon Monoxide (CO kg/day)	313.160	309.000	309.060
Particulate Matter less than 10 microns PM10 (kg/day)	435.690	0.305	224.000

**Supported by the SRTC Board on November 8, 2018*

OTHER PERFORMANCE MEASURES: PUBLIC TRANSIT TARGETS ASSET MANAGEMENT

Asset Category	Asset Class	Baseline Performance	STA Target & Proposed Regional Target
Rolling Stock	Buses	98%	Maintain the bus fleet that 90% or greater of the vehicles meet STA's State of Good Repair Standards
	Paratransit Vans	99%	Maintain the paratransit van fleet that 90% or greater of the vehicles meet STA's State of Good Repair Standards
	Rideshare Vans	99%	Maintain the rideshare van fleet that 90% or greater of the vehicles meet STA's State of Good Repair Standards
	Special Use Vans	100%	Maintain the special use van fleet that 90% or greater of the vehicles meet STA's State of Good Repair Standards
Equipment	Support of Non-Revenue Vehicles	94%	Maintain the support or non-revenue fleet that 90% or greater of the vehicles meet STA's State of Good Repair Standards
Facilities	Administration, Maintenance, passenger and parking facilities	100%	Maintain all facilities equal to or greater than 90% have a TERM condition rating of 3(adequate) or better

**Supported by the SRTC Board on June 14, 2018*

OTHER PERFORMANCE MEASURES: STA PUBLIC TRANSPORTATION SAFETY TARGETS

Safety Goals, Objectives, and Performance Targets

GOAL 1: SMS TO REDUCE CASUALTIES/OCCURRENCES

Using a safety management systems framework to identify safety hazards, mitigate risk and reduce casualties and occurrences resulting from transit operations to meet or exceed the acceptable level of safety performance.

FIXED ROUTE FATALITIES

Objective	Metrics (KPIs)	Baseline	Target
Reduce the number of fatalities	Number of fatalities per year	1	0

PARATRANSIT FATALITIES

Objective	Metrics (KPIs)	Baseline	Target
Reduce the number of fatalities	Number of fatalities per year	0	0

FIXED ROUTE PREVENTABLE VEHICLE ACCIDENT FREQUENCY RATE

Objective	Metrics (KPIs)	Baseline	Target
Reduce the frequency of preventable vehicle collisions	Number of preventable events per 10,000 miles	0.6	0.08 or less

PARATRANSIT PREVENTABLE VEHICLE ACCIDENT FREQUENCY RATE

Objective	Metrics (KPIs)	Baseline	Target
Reduce the frequency of preventable vehicle collisions	Number of preventable events per 10,000 miles	0.13	0.1 or less

FIXED ROUTE PREVENTABLE PASSENGER INJURY ACCIDENTS

Objective	Metrics (KPIs)	Baseline	Target
Reduce the frequency of preventable passenger injuries	Number of preventable passenger injuries per year	4	0

PARATRANSIT PREVENTABLE PASSENGER INJURY ACCIDENTS

Objective	Metrics (KPIs)	Baseline	Target
Reduce the frequency of preventable passenger injuries	Number of preventable passenger injuries per year	4	0

FIXED ROUTE SAFETY EVENTS

Objective	Metrics (KPIs)	Baseline	Target
Reduce the number of events per year	Total number of events per year	316	310

PARATRANSIT SAFETY EVENTS

Objective	Metrics (KPIs)	Baseline	Target
Reduce the number of safety events per year	Number of safety events per year	54	50

EMPLOYEE INJURY ACCIDENTS

Objective	Metrics (KPIs)	Baseline	Target
Reduce the frequency of employee injuries	Number of employee injuries per 1000 hours	.05	.07

EMPLOYEE INJURY SEVERITY

Objective	Metrics (KPIs)	Baseline	Target
Reduce employee time loss due to injury or illness	Number of days lost per 1,000 hours	.03	.04

FACILITY SAFETY INSPECTIONS

Objective	Metrics (KPIs)	Baseline	Target
Increase the assessment of facilities, equipment, and procedures to identify and mitigate any potential safety risks	Number of facility safety audits and inspections completed quarterly per year	1 per quarter	Meet the baseline

GOAL 2: SMS TO FOSTER A ROBUST SAFETY CULTURE

Foster Agency-wide support for transit safety by establishing a culture where managers are held accountable for safety and everyone in the organization takes an active role in securing transit safety. Cultivate a safety culture in which employees are comfortable and encouraged to bring safety concerns to the attention of agency leadership.

SAFETY TRAINING

Objective	Metrics (KPIs)	Baseline	Target
Increase attendance at monthly safety meetings	Percent of employees who participate in the monthly safety meetings	Establishing in 2020	Safety Committee Target = 100%
Annual Advanced Training completed by all Fixed Route, Paratransit, and Maintenance	Percentage of employees who complete Advanced training	100%	100%

GOAL 3: SYSTEMS/EQUIPMENT

Provide safe and reliable transit operations by ensuring that all vehicles, equipment, and facilities are inspected, maintained, and serviced as needed.

FIXED ROUTE ROAD CALLS

Objective	Metrics (KPIs)	Baseline	Target
Reduce the number of Fixed Route Road Calls	Number of miles between road calls	6,722 miles	7,500 miles

PARATRANSIT ROAD CALLS

Objective	Metrics (KPIs)	Baseline	Target
Reduce the number of Paratransit Road Calls	Number of miles between road calls	67,537 miles	75,000 miles

FACILITIES PREVENTIVE (SAFETY) INSPECTIONS & REPAIRS

Objective	Metrics (KPIs)	Baseline	Target
Prioritize preventative safety-related maintenance or inspections	Safety-related PMs completed on schedule	90% of all PM services completed on time	80% of all PM services completed on time

EXCERPT FROM 2021-2024 TIP BELOW

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To: Transportation Technical Committee 02/17/2021
From: Mike Ulrich, AICP, Principal Transportation Planner
Topic: **DATA Project Draft Design Plan**

Requested Action:

Recommend Board of Directors approve the DATA Project Design Plan.

Key Points:

- The current Metropolitan Transportation Plan (MTP) details as policy 2d (page 26) that SRTC should coordinate transportation relevant data for shared use among regional stakeholders. The strategic planning section of the executive summary (page 6) calls for an increase in trends monitoring and data availability to anticipate changing conditions.
- In October of 2018 the SRTC Board approved a program of projects that awarded \$1M in Surface Transportation Block Grant (STBG) grant funding to SRTC for data acquisition.
- \$850,000 of the total project cost included in the 2019-2022 Transportation Improvement Program (TIP) has been obligated.
- Staff convened a project team to develop an RFQ for a project to holistically evaluate SRTC's current tools, state of best practice, and agency need to create a design plan.
- Resource Systems Group, Inc. was the prime consultant selected. For over 30 years, RSG has been a national thought leader in developing and applying analytical techniques to help planners understand and forecast complex human behavior and systems dynamics.
- A [stakeholder questionnaire](#) was deployed to help the consultant team better understand member agencies' current analysis methods, data, and interests related to potential regional tools. The questionnaire was posted for online participation on April 2, 2020, with 17 people, representing 11 agencies, participating.
- Over the course of several weeks in July and August 2020, SRTC and the project consultant team held a series of [listening sessions](#) with SRTC partner agencies. The purpose of each session was to explore needs and opportunities for regional data collaboration, understand desired regional analysis capabilities and understand other agency specific needs.
- The input received was used to develop a [project summary and recommendations report](#). The report explores existing data and tools, synthesizes a review of relevant literature, summarizes stakeholder engagement and details the available options for Phase II of the project. This report serves as the critical and necessary foundation for recommended investments.

- A [stakeholder priorities work session](#) was held on November 10, 2020 for two key purposes. First, to help the project team understand the options presented by the consultant team for Phase II. Second, to provide feedback to the consultant team by way of ranking exercise based on project objectives and other strategic considerations.
- A [staff priorities work session](#) was held on November 30, 2020 with the added purpose of considering options based on State and Federal responsibilities as an MPO and RTPO prescribed by applicable RCWs and CFRs.
- The two work sessions generated differing perspectives among stakeholders on how to invest the project budget. Some agency staff suggested only investing to the extent that the minimum federal requirements are being met while others differed in which tools should be prioritized over others and at what investment level.
- Ultimately, SRTC staff believes that the experts in the field of applied data and MPO/RTPO best practices have delivered a draft design plan which accounts for the entirety of the feedback received and recommends reasonable, right-sized investments to advance SRTC's data analytics capabilities.

Board/Committee Discussions:

Information about this project was presented at the following:

- October 2018 TTC Meeting
- January and May 2019 Project Team meetings
- March 2019 Board Administrative Committee meeting
- April 2019 Board of Directors meeting
- July 2020 TTC meeting
- December 2019 Board of Directors meeting
- October 2020 Transportation Advisory Committee meeting
- January 2020 TTC meeting
- February 2020 Board of Directors meeting

Project Team Involvement:

The project team, which has been informing this project since its inception, is made up of staff-level partners who are consumers of SRTC data products. The project team was instrumental in developing the project's RFQ and in the consultant selection process. More recently, the project team was used to help the consultant team understand investment priorities. Additionally, the project has relied on the feedback from a larger stakeholder group. A summary of that feedback and how it was applied to the draft design plan can be found [here](#).

Public Involvement:

The funds for this project were included in the 2019-2022 TIP which was adopted October 11, 2018. A public meeting was held on September 19, 2018 to review and discuss the 2019-2022 TIP. A public comment period of thirty days ran from September 1 to September 30.

Supporting Information/Implications:

The draft design plan was presented to the Board at their February meeting for discussion; a member suggested that the Board may want to consider having a discussion about providing more resources to this project to address priority investments. The plan will be on the Board's March agenda for action to approve the draft design plan and to authorize the Interim Executive Director to negotiate and execute an agreement with more refined scopes and schedules.

More Information:

- Attachment: Draft Phase II Design Plan
- For detailed information contact: Mike Ulrich at mulrich@src.org or 509.343.6384



Spokane Regional Transportation Council

**DATA COLLECTION AND
TOOLBOX DEVELOPMENT AND
IMPLEMENTATION PLAN**

DRAFT

Report | January 6, 2021



55 Railroad Row
White River Junction, VT 05001
802.295.4999
www.rsginc.com

PREPARED FOR:
SPOKANE REGIONAL TRANSPORTATION COUNCIL

SUBMITTED BY:
RSG

IN COOPERATION WITH:
DKS ASSOCIATES, INC. AND PLANGINEERING, LLC



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1 INTRODUCTION AND EXECUTIVE SUMMARY

In 2019, SRTC initiated the DATA Project (Data Applications for Transportation Analysis) with several objectives in mind:

- Improve confidence in data and information used for transportation decision-making.
- Help align regional data and tools with member agency planning needs.
- Increase stakeholder agency input into existing tools, such as the regional travel demand model, and development of potential new tools; and
- Look for innovative ways to analyze and respond to emerging transportation trends.

A team led by RSG was selected to perform this project, and work began in early 2020. The project is organized using a 'design build' approach; the first phase of the project includes an analysis of SRTC's current data and toolset and their ability to address current and potential future planning needs, a review of relevant literature, and stakeholder listening sessions. These activities culminated in recommendations for investments in data and tools to be implemented in the second phase of the project. These recommendations were summarized in a technical report¹ that was shared with SRTC staff, project stakeholders, and the SRTC board. SRTC staff and project stakeholders were then led through a prioritization and ranking exercise in order to narrow and refine second phase activities.

The final selected recommended Phase II investments are shown in Table 1. They include household travel survey data collection, trip tables developed from passive data, traffic count data analysis and collection, development of an automated land-use data management system. travel demand model updates, and development of a lightweight online data hub. Optional ongoing investments in data collection and toolbox development are summarized in Table 2. Each table describes the investment, the cost of the investment, and the expected level of SRTC staff support. The rest of this document provides additional details on each of the recommended data collection and toolbox development elements in the second phase of the project.

¹ Spokane Regional Transportation Council Data Project Summary and Recommendations Final Draft Report, October 5, 2020, RSG.

TABLE 1: PHASE II INVESTMENTS

Data/Toolbox	Description	Cost	SRTC staff support
Household Travel Survey Data	A 1,500 household, smartphone enabled household travel survey	\$345,000	0.2 FTE for project management, coordination, and outreach.
Passive Data	Passenger and heavy truck trip tables from passive (location-based services) data	\$135,000	None
Traffic Count Data	Selected traffic counts at key locations	\$50,000	Coordination with jurisdictions, obtaining permissions/permits as needed. Exact level of effort TBD
Land-Use Data Management System	A system for management of existing and future land-use data and allocation of county-wide population and employment controls to TAZs, taking into account land capacity and recent developments.	\$100,000	0.05 - 0.1 FTE for project management. 0.5 FTE analyst support for tool development (1 year).
Travel Demand Model Updates	Update travel model zones, and networks. Calibrate models to survey and passive data. Validate to counts and boardings. Implement a data-driven heavy truck model from passive data. Documentation, user's guide and training.	\$250,000	0.05 - 0.1 FTE for project management. 0.25 analyst FTE over 3 months for collection and geocoding available traffic counts from jurisdictions.
Online Data Hub	A regional online data and tools platform to manage and share SRTC's data and tools with the community.	\$100,000	0.05 - 0.1 FTE for project management is assumed, along with additional planner/analyst FTE to periodically update the data and tools as needed. Limited IT support to help maintain the site.
Contingency	Funds to be held in reserve for supplementing other activities	\$20,000	N.A.

Data/Toolbox	Description	Cost	SRTC staff support
Total Cost		\$1,000,000	

TABLE 2: ONGOING DATA INVESTMENTS

Data/Toolbox	Description	Cost	SRTC staff support
Continuous Cross-Sectional Household Travel Survey Data	Ongoing data collection of approximately 500-750 households every 3 years.	\$50,000/yr	0.2 FTE for project management, coordination, and outreach every third year.
Continuous Passive Data	Yearly creation and expansion of passenger trip tables from passive data	\$45,000/yr	None
Traffic Count Data	Ongoing traffic count data collection	\$10,000-\$50,000 per year ²	Coordination with jurisdictions, obtaining permissions/permits as needed. Exact level of effort TBD
Land-Use Data Management System	A system for management of existing and future land-use data and allocation of county-wide population and employment controls to TAZs, taking into account land capacity and recent developments.	Hosting fees (e.g., \$500 to \$2500 / year for ArcGIS Online ³	0.5 FTE over 3 months bi-annually for updated land-use estimates.
Online Data Hub	A regional online data and tools platform to manage and share SRTC's data and tools with the community.	TBD ⁴	Planner/analyst to periodically update the data and tools as needed. Limited IT support to maintain the site may also be required.
Total Cost Per Year		\$105,500 - \$147,500	

² Exact amount depending on location and number of counts to be collected in each year.

³ Depends on the adopted technology for the website and whether additional functionality is added over time.

⁴ Depends on the adopted technology for the website and whether additional functionality is added over time.



2 DATA COLLECTION ACTIVITIES

2.1 HOUSEHOLD TRAVEL SURVEY

A household travel survey (HTS) collects detailed information on travel behavior and is the main source of information used to update travel demand models. Moreover, SRTC can use travel survey data to create descriptive statistics on regional travel and to analyze behavioral and attitudinal trends over time.

2.1.1 General Description

We will use rMove™, a smartphone app that uses location services for accurate origin, destination, departure time, and other information, to conduct the survey. rMove has been successfully used in a number of regions including the 2017 – 2019 PSRC travel survey, 2018 WCOG travel survey, and 2021 SCOG travel survey. An online option that aligns with the smartphone app will be provided for those who do not have access to smartphones.

Households will participate in a two-stage household survey. The first stage (recruitment) captures household composition, demographic information, and typical travel information (e.g., home, work, and school locations). Most households will participate and answer these questions via an online survey or in-app smartphone survey. A toll-free phone number, where the operators utilize the same online survey, will also be available. The second stage is a travel diary for households to report their travel for a given, assigned period. Based on studies in Washington State in recent years, an estimated 70% of households would participate using a smartphone for seven days and the remaining households would complete a one-day travel diary by reporting over the phone or online.

Other key features of the survey are as follows:

- A sample size target of 1,500 households - a sample rate of roughly 0.7% of households in Spokane County and modestly more households when compared to the 2005 HTS.
- Households residing in Spokane County will be recruited via mail using address-based sampling (ABS). We will use oversampling to help overcome non-response bias and to increase sample sizes for select populations or behaviors. We will attempt to recruit university/college students by issuing the survey invitation directly to their .edu email address. We will also consider targeted sampling for Fairchild AFB. These latter two (non-ABS) sampling steps will require assistance by SRTC staff.
- The survey will include questions on evolving travel behavior due to COVID-19 outbreak impacts (e.g., new and evolving work and school commute behaviors), e-commerce trends, and/or emerging mobility modes.
- We will develop a branded, public-facing website with general information about the survey, study region, and answers to frequently asked questions. Participants who complete the survey online (instead of by smartphone app) will also enter the survey through this website.



- The survey effort will include financial incentives for completion. Households completing the seven-day smartphone diary will receive an incentive of \$20 per participating adult, while households completing the online survey would receive \$10 per household. Households are given a choice of gift cards from Amazon, Walmart, or forgoing an incentive (out of public good will).
- The survey will include a public outreach effort targeted at traditionally hard-to-survey populations (e.g., low income, minority race/ethnicity). As budget allows, this effort will include some combination of targeted outreach materials and targeted invitations to hard-to-survey populations, multi-lingual survey materials, coordination with local programs, churches, and other community groups, and potentially advertising on social media.

2.1.2 Schedule

We currently anticipate a soft launch in fall 2021, assuming a return to stabilized travel conditions with minimal COVID-19 impacts. The soft launch would gauge response rates and monitor data quality while still allowing the data to be integrated with the final dataset (pilot data is typically not included). Following the approximate two to four-week survey soft launch, the main study data collection period would occur over approximately six weeks in fall 2021 (October – November). During data collection, real-time and regularly scheduled study progress updates will be provided to SRTC and partner stakeholders.

After survey data collection is concluded, the survey data will be reviewed, processed, and weighted. Data weighting expands the survey sample to reflect the greater regional population, while also removing any lingering sampling biases that may be present. It takes approximately 8-10 weeks from the end of data collection to provide the initial dataset to SRTC. The dataset will contain tables for the households, persons, vehicles, person-days, person-trips, and location/GPS data collected in the study. An initial recommended period of four weeks in total is suggested for SRTC to review and work with the data and to provide any questions or requested dataset edits.

After the dataset is agreed upon and finalized, a summary project report will be provided for review with again a four-week period to provide comments and requested edits. The final report is a “summary of response”, focusing on the survey methodology, the contents of the dataset, and key descriptive statistics on the data.

The data would be available for travel model updates by late Spring 2022.

2.1.3 Cost

At this time, the HTS budget for a single instance of data collection is estimated at approximately \$345,000 for approximately 1,500 households, including public outreach and engagement efforts. SRTC staff commitment will be 20% FTE for project management and oversight with slightly higher involvement during the planning and data review stages and lower involvement during data collection and RSG processing.

2.2 OPTIONAL: RECURRENT HOUSEHOLD SURVEY DATA COLLECTION

The recommendations above are primarily focused on a single-instance HTS. However, we recommend that SRTC also consider initiating a recurrent travel survey program.

2.2.1 General Description

Recurring survey programs involve re-sampling households over a fixed time interval using generally similar survey instruments and questionnaires. Supplemental questions can be added in order to better understand specific travel behavior of interest.

Recurrent household travel surveys provide more current, detailed, and readily available data for transportation planning and analysis than surveys on a more traditional 10 or 20-year schedule. Recurrent survey programs allow for trend analysis and help smooth the impact of short-term changes on long-term analysis (e.g., short-term impacts of COVID-19, changing availability of mobility companies, and shifting demographics). Recurrent surveys are also efficient to administer given that many materials, including participant invitations and survey questionnaires, can be refreshed following the first wave instead of re-developed each wave. Lastly, recurrent surveys can allow for alignment with other data needs, such as conducting a special-generator targeted sample, lower-cost follow-on surveys using the sample, and co-timing of passive data work.

2.2.2 Schedule

We recommend a three-year increment using a similar approach as PSRC where the first instance (2021) collects a larger, start-up or refresher sample, and subsequent years collect smaller sample sizes of approximately 500-750 households. Each survey wave would be collected over a period of several weeks in either Spring or Fall. Once survey weighting and summary processes are established in the initial survey, they can be re-used for the additional waves, saving time and effort. Generally, 4-5 months between recruitment and availability of cleaned and expanded data is a reasonable schedule. However, the exact schedule depends on the extent of staff availability or use of consulting services, the extent of differences in survey instruments between the various survey waves, and the types of analysis and documentation to be completed.

2.2.3 Cost

Recurrent HTS programs typically have numerous cost savings because many tasks are reduced (e.g., questionnaire design, sampling) and are based on the most recent survey instance. Annualized, we estimate planning for about \$50,000 per subsequent year or about \$150,000 every three subsequent years. We recommend that SRTC also allocate approximately 0.2 FTE every three years to manage and support the effort.



2.3 PASSIVE DATA

Trip tables and a visualization tool built from passive passenger and freight data will be included in Phase II, to supplement HTS data for calculation of trip attraction rates, trip distribution model calibration, serve as the basis for a heavy truck model, and to be available for use in corridor studies.

2.3.1 General Description

RSG purchases raw Location-Based Services (LBS) data from data providers and processes that data to create passenger trip tables. The data is processed to distinguish ‘trips’ from ‘stops’ or ‘stays’, device-level characteristics (e.g., home location) are inferred, and trip attributes are determined.

A data schema will be developed for passive data products to be provided to SRTC. This schema will cover all required dimensions of aggregated products (e.g., OD tables split by imputed trip purpose, time-of-day, resident/visitor, etc.). Based on the agreed-upon schema for passive data products, a data processing plan and data expansion plan will be developed. At a minimum, data processing will include:

1. Generation of aggregate OD matrices split by the agreed-upon dimensions for a zone system encompassing the SRTC regional model area plus a halo/buffer area to better capture external travel.
2. Routing of trips on the SRTC travel demand model network
3. Comparison of routed trip volumes to available traffic count data

Data expansion steps include:

1. Demographic expansion based on household travel survey data, Census data, and local demographic information
2. Creation of trip tables and network-based matrix adjustment methods (e.g., ODME/TFlowFuzzy) based on traffic counts

ATRI GPS data provide a robust sample of heavy-duty commercial truck movements, which processed alongside LBS data provides a comprehensive view of travel demand in the region. We will process the recently purchased ATRI data such that it can be used to provide an OD matrix, removing intermediate stops for activities such as refueling, expanded using a network-based approach using traffic counts, and used to develop a data-driven freight model (See the Travel Model recommendations in Section 3.2). ATRI data representing travel across all four seasons will be processed and expanded, according to modeling needs.

RSG’s online passive data dashboard will be setup to help SRTC and partner agencies view and summarize the data. Key dimensions in the data products (e.g., OD flows segmented by trip purpose) will be visualized using the web-based data visualization platform.

2.3.2 Schedule

Passive data processing will be coordinated to coincide with the timeline of the household travel survey.

If SRTC elects to field a recurrent household travel survey, passively collected data will be processed over the same timeframe (e.g., 3 years). Otherwise, passively collected data will be processed only for the year in which the travel survey is in the field. The processing and, if desired, expansion plan will guide this effort, and derived data products will match the consensus data schema.

2.3.3 Cost

A one-time passively collected, unexpanded passenger data purchase for the Spokane region is estimated to cost approximately \$60,000, plus \$35,000 for data expansion, for a total of \$95,000.

Assuming that SRTC has already purchased required ATRI data, data processing and expansion required to support the development of a data-driven freight model is estimated to cost approximately \$40,000. This estimate includes some cost-savings since the expansion of ATRI data is done in conjunction with a passenger passive data purchase.

If a continuous passive data program is desired, additional years of passenger data are estimated to cost \$30,000 each plus another \$15,000 for data expansion in each year, resulting in 45,000 for each subsequent year (\$185,000 across three years including the first year). We do not anticipate acquiring or expanding ATRI data in subsequent years.

2.4 OPTIONAL: TRANSIT ON-BOARD SURVEY

Transit on-board survey data can be used to understand current transit ridership markets including origin/destination patterns, trip purposes, modes of access/egress, and socio-economic characteristics.

2.4.1 General Description

Spokane Transit Authority currently conducts on-board transit surveys that provide useful information on current transit ridership and for Title VI reporting. Travel demand modeling imposes some additional requirements for on-board survey data. Ideally, on-board survey data includes origin and destination address, origin and destination purpose, access and egress mode, route sequence, and relevant socio-economic characteristics considered by the travel model.

A well-designed sample and data collection plan is essential to ensure that the data is representative. We recommend that tablet PC's be used to collect on-board data, to ensure accurate geocoding and high retainage of usable records. We recommend that SRTC coordinate with STA on the next on-board survey to determine if there are possibilities for collaborating on the design and collection of the next scheduled data collection effort, to improve the use of the data for travel modeling (both the regional travel demand model as well as potential future STOPS applications) and monitoring system performance. Spokane Transit

serves about 41k average daily riders; the target sample rate would be around 4,100 OD surveys (10% of daily ridership).

2.4.2 Schedule

The timing of the on-board survey should generally coincide with the household survey. We suggest spring 2022, to ensure that transit-related impacts of COVID are minimized.

2.4.3 Cost

The cost for a full transit on-board survey for a similarly sized system is around \$200,000. However, we do not include the cost of the on-board survey in the DATA project, as we believe there may be opportunities for some level of cost-sharing between SRTC, STA, and possibly other partner agencies.

2.5 TRAFFIC COUNTS

Traffic counts are used for cross-sectional validation of model outputs, including network flows and vehicle miles of travel (VMT). They will also be used for expansion of passive data trip tables.

2.5.1 General Description

The most recent model validation relied upon traffic counts from a variety of sources. Many of the traffic counts are dated. Updating the model to a new base year and expansion of passive data will require a recent and robust set of traffic counts, including classification counts.

2.5.2 Schedule

Traffic count collection will begin in spring 2022, to reflect post-COVID travel conditions.

2.5.3 Cost

We have set aside \$50,000 of project resources for collection of traffic counts. We expect SRTC staff to assist in coordinating count collection with local jurisdictions and obtaining necessary permissions and permits.

3 TOOLBOX DEVELOPMENT ACTIVITIES

3.1 LAND-USE DATA MANAGEMENT SYSTEM

A land use data management system will be developed to enable SRTC to generate population and employment forecasts at the TAZ level every two years. This will allow SRTC to keep the base-year of the travel demand model more current with land-use developments. The tool would also estimate intermediate year forecasts.

3.1.1 General Description

The system will allow for adjustments to reflect approved or recently built developments and recognize control totals for population and employment. The tool will include automation of the data processing steps and simple, transparent allocation rules. The data schema will include:

- Census estimates of existing households by block
- Existing employment and enrollment data by TAZ
- Spokane County's GIS and tax assessor parcel data
- Zoning and land use data from local jurisdictions including wetlands, geologically hazardous areas, steep slopes of over 30% and protected open space.
- Transportation Analysis Districts (TAD)
- Land quantity analysis (LQA) data from each jurisdiction (with available LQA data) by parcel
- Recent and planned development that has occurred, is in process, or been approved for development since the last-base year update and will be in use prior to the next base-year, by TAZ
- Countywide population control total (the Office of Financial Management's 2017 Growth Management Act (GMA) medium series county projection)
- Employment Security Department's long-term occupational projections for Spokane County by eight sectors

The land-use data management system will replicate the population and employment forecasting functionality described in SRTC's recently adopted Land Use Forecast Methodology technical memorandum. These steps include:

- Calculate population capacity for TAZs without jurisdiction level LQA data
- Reduce capacity and account for recent, or recently approved, land-use developments not included in existing population data
- Apply logistic regression allocation equation for population
- Estimate countywide employment total consistent with the base-year employment to population ratio

- Update zone level employment to account for recent, or recently approved, land-use developments not included in existing employment data, and reduce this employment from the allocated county employment
- Allocating the total employment to each of the employment sectors used in the SRTC model
- Distribute employment from the county control total to Transportation Analysis Districts, then to TAZs based on historical growth rates, by sector, from LEHD data
- Develop intermediate year forecasts by interpolating population and employment linearly between the base-year and future year, in 5-year increments

The data management system will be automated/scripted with Python and accessible online to provide access to SRTC staff and member jurisdictions. The online portal will at a minimum allow for accessing, displaying, uploading, and downloading data sets. Depending on the implemented technology, such as [ArcGIS Online](#), the system may also allow for additional interactivity, GIS analysis, and runnable tools/scripts. The land use data management system may also be integrated with the online data hub described below. An online data management system and runnable tool can have several features and so RSG will work with SRTC to finalize the tool design and features consistent with the project needs and resources.

To use the tool for bi-annual updates, the LQA data, recently built developments and pipeline developments will be updated before the process is re-run. The tool will automatically decrease the countywide population and employment control totals to be allocated to TAZs based on the updated land-use data. Partner agencies will need to work with SRTC to share these data via the online portal. The portal will also be used to publish the zonal land-use estimates by year for partner agency review.

3.1.2 Schedule

We anticipate design of the tool to begin in spring 2021, with development of the tool to begin in summer 2021. An initial version is planned to be available in spring 2022. The bi-annual update process should take less than 3 months each year.

3.1.3 Cost

We have budgeted \$100,000 for the development of this tool, with the final cost dependent on the implemented technology and the agreed upon design and project needs. Hosting fees (e.g., \$500 to \$2500 / year for ArcGIS Online for example) would be in addition. The level of SRTC staff support required will be determined by the format and scale of the data sources but is estimated to require approximately 0.5 FTE over the first year of the tool, primarily to populate the data schema and perform QA\QC of the calculations. We then anticipate 0.5 FTE over 3 months every other year for bi-annual forecasts. Additional resources for consulting assistance are not expected unless SRTC decides to improve the data management system or processes in the future.

3.2 TRAVEL DEMAND MODEL UPDATE

The SRTC travel demand model is a fundamental tool for analysis of transportation projects and policies considered by SRTC and partner agencies. Partner agencies recognized the need for an update of the model, validation to current conditions, and more frequent model releases.

3.2.1 General Description

The following model updates will be undertaken.

- **Analyze existing traffic counts and screenlines.** Traffic counts will be collected from partner agencies and evaluated with respect to current and potential new screenline locations. Additional traffic counts may be collected based on this analysis (see Section 2.5).
- **Update and enhance network detail.** The Transportation Analysis Zone (TAZ) system will be reviewed. Zonal detail may be added in more rural areas to support model applications. Network capacity, speed, intersection geometry, and control type will be reviewed and updated based on available data.
- **Update trip rates, gravity model parameters, mode choice calibration, and time-of-day factoring.** All model parameters will be updated based upon the household survey, transit on-board survey, and passive data described above.
- **Improve representation of special travel markets.** Certain land-uses such as major universities, the airport, recreation areas, casinos, and hospitals have unique travel patterns associated with them. Trip rates for special markets will be estimated from passive data.
- **Implement a data-driven heavy truck model.** A heavy truck model will be developed based on expanded ATRI data.
- **Validate the model using recent traffic counts.** The model will be validated against a regional count database adjusted to reflect average weekday conditions.
- **Update model documentation.** A model development report and a complete model user's guide will be developed. Model training will be offered to SRTC and partner agency staff.

3.2.2 Schedule

Analysis of traffic counts and network detail would start in summer 2021. Assuming a survey effort starting in fall 2021 (with completion by early 2022), the travel demand model update could wrap up by end of 2022.

3.2.3 Cost

The model update task is budgeted at \$250,000. SRTC staff support (0.25 FTE over 6 months) is requested to support traffic count collection and geocoding.

3.3 ONLINE DATA HUB

A regional online data and tools platform to manage and share SRTC's data and tools with the community will be developed. This will take the form of an expanded version of the current [SRTC Maps & Data section](#) of the website, complete with a backend data management solution and online, user-driven data visualization.

3.3.1 General Description

This platform will:

- Help organize SRTC's data and tools as a cohesive regional data and tools solution
- Make data and tools accessible to regional partners, stakeholders, and the public
- Enhance stakeholder participation through user-driven data visualization maps, charts, tables to assist with answering their planning questions

The platform will house and make accessible the following data and tools:

- Regional high-level base-year demographic data such as persons by age and employment totals by sector
- Household travel survey summaries such as percent of trips starting and ending by time-of-day, share of trips by purpose, worker telecommute frequency, active mode use by age, share of work trips by mode, trip mode share, share of regional trips between origin-destination district pairs, aggregate person activity by time-of-day
- Traffic count data and summaries such as traffic count volumes by location (x,y) and time-of-day
- Estimated base-year and forecasted⁵ traffic volumes
- Passive travel data and summaries such as share of regional trips between origin-destination district pairs for residents versus non-residents and trips by time-of-day
- Estimated base-year and forecasted TAZ data such as population and employment totals, and trip productions and attractions by purpose
- Estimated base-year and future year model results such as trip distribution by origin-destination district pair, trip mode share, district-level and region-wide VMT
- Links to tools for download, as well as links to accessory reports, maps, and/or plans

The platform implementation will consist of:

- A **home page** / landing page with links and descriptions to the highlighted data and tools
- An **interactive data visualization and download page for each data set**. There are several options for implementation of the interactive visualization pages, including custom-built solutions using open-source software such as RSG's [ActivityViz](#) and commercial solutions such as [Tableau](#). Open-source solutions are often easier to

⁵ Forecasted travel demand model data would be based on the current adopted MTP scenario.

customize for agency needs than commercial solutions, but open-source solutions do not include a maintenance and support plan, which can be a long-term maintenance issue. RSG recommends implementing the online data hub using ActivityViz because it has been utilized for several transportation planning projects and provides a wealth of interactive travel and land use data visualization capabilities. The final approach to data visualization technology will be discussed and agreed upon with SRTC.

- A **data management** solution such as [GitHub LFS](#) or [Azure Blob Storage](#). ActivityViz has been configured to work with both technologies. GitHub LFS is free if the data is publicly available. The final approach to data management will depend on the specific data sets and formats desired by SRTC.
- **Integrated documentation / help** for using the site, including adding new data sets, visualizing data, and downloading data sets. RSG will deliver a **one-day training** on using and maintaining the site.

The first task to develop the online data hub is to finalize the design and needs, discuss the pros and cons of the implementation technologies, and agree upon a set of data sets and visualizations to implement within the task budget. This discussion will include establishing SRTC's aesthetic standards for the hub, as well as delineating the needed functional site requirements and maintenance plan. By applying an understanding of SRTC's data and tools, audiences and context, the user experience will be iteratively defined through a series of increasingly detailed mockups of pages. SRTC and partner agencies will be asked to review and comment on the design before implementation. The second task is to implement the site using the latest technologies. The site will be built using responsive technologies so that it automatically adapts to differences between PC, tablet, and mobile displays. The initial site will be extensively beta-tested before full deployment, and improvements made based on SRTC feedback. Finally, the third task is to populate the documentation and deliver the training. RSG will reserve budget for one year of support. RSG will also deliver scripts used to prepare the data sets and summaries.

3.3.2 Schedule

We anticipate design of the tool to begin in spring 2021, with development of the tool to begin in summer 2021. An initial version is planned to be available in spring 2022. Updates to the data and visualizations will be on an as-needed basis.

3.3.3 Cost

The online data hub task is budgeted at \$100,000, with the final cost dependent on the implemented technology and the agreed upon design and project needs. In terms of SRTC staff support, 0.05 - 0.1 FTE for project management is assumed, along with additional planner/analyst FTE to periodically update the data and tools as needed. Limited IT support to help maintain the site may also be required.



55 Railroad Row
White River Junction, VT 05001
802.295.4999
www.rsginc.com



White River Junction & Burlington, VT



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To: Transportation Technical Committee 02/17/2021
From: Eve McMenamy, Principal Transportation Planner
Topic: **Transportation Improvement Program Contingency Funding Awards**

Requested Action:

Recommend the SRTC Board award contingency funds as outlined in Table 2 of this memo.

Key Points:

- SRTC has contingency funding available for project that can delivery in 2022 or 2023.
- Total available SRTC contingency funds are listed in Table 1 of the supporting information in this memo.
- On March 14, 2019 the SRTC Board approved a contingency funding process to establish a predictable procedure to assign available contingency funding, **Attachment 1**.
- This SRTC Board approved the SRTC Priority Project List that was develop during the 2018 SRTC Call for Projects as a basis for contingency funding assignment. SRTC recently updated the Priority Project List to reflect outstanding funding needs, **Attachment 2**.
- On Feb 11th the SRTC Board approved the eligibility of the Bigelow Gulch Project 6 cost overrun for potential contingency funding.
- The contingency funding process focuses on award eligibility requirements, project readiness and the ability to complete a project or project phase. This assists the region in meeting federal funding obligation targets.
- Table 2 reports the recommended projects and award levels for contingency funding as reviewed by SRTC Staff and the TIP Working Group.
- Two projects are recommended for Congestion Mitigation Air Quality (CMAQ) funding and are the only projects that qualify for this funding type. The remaining CMAQ can be rolled into the next SRTC Call for Projects in 2022.
- Bigelow Gulch Project 6 is recommended for the available Highway Infrastructure Program (HIP) funding since it can obligate the HIP funding the most expediently.

Board/Committee Discussions:

Contingency funding information was presented at the 12/16/20 and 1/27/21 TTC meetings.

Working Group/Subject Matter Expert Team Involvement:

The TIP Working Group (TIPWG) provides input and makes recommendations to the TTC on TIP policy and programming activities. The TIPWG also assists SRTC staff in managing the TIP to deliver our annual federal funding obligation targets. The multijurisdictional TIPWG meets monthly and is comprised of staff from the following agencies: City of Spokane, Spokane County, Spokane Transit Authority, City of Spokane Valley and WSDOT. The TIPWG last met on 2/9/2021.

Public Involvement:

Projects in the Transportation Improvement Program (TIP) have been through a formal public comment process. New projects will be subject to an additional public comment process.

Supporting Information/Implications:

Contingency funds become available through project de-obligations, project closures and allocations to SRTC. TIP Guidebook Policy 6.5.1 directs SRTC staff to provide a recommendation to the SRTC Board on how to best utilize leftover SRTC regional funds. This recommendation will be reviewed and discussed with the TTC prior to going to the Board when time allows. The contingency funding process includes using the Board approved contingency funding process and 2018 Priority Project List.

The amount of funding available is based on best available information in Table 1. CMAQ can only be award to projects that have quantifiable air quality benefits. HIP funding can be awarded to projects that result in the construction of a roadway or bridge.

Table 1 Contingency Funds Available

Approximate Amount	Type of Funding	Obligation Year
\$2,500,000	Congestion Mitigation Air Quality (CMAQ) (Must Provide Quantifiable Air Quality Benefits)	2023
\$429,680	Highway Infrastructure Program (HIP) (Highways and Bridges)	2023

The SRTC Staff and the TIP Working Group met on February 9, 2021 to discuss available funding, project delivery and potential funding awards. Only two projects qualify for CMAQ funding awards. Spokane Valley recently updated their project scope for Pines and Mission which was approved by the Executive Director with concurrence from the TTC on 10/21/20. This change in scope updated the project cost from 2018 and is accurately reflected in the projects remaining need and recommended funding award. Additional CMAQ funds could be awarded to the Driscoll-Alberta-Cochran Sidewalk project which also has an outstanding need.

The Staff and the TIP Working Group is recommending the TTC considering supporting the

recommendation in Table 2 to the Board of Directors. The remaining CMAQ funding which is approximately \$726,000 can be rolled into the next SRTC Call for Project in 2022.

Table 2 Regional Priority Projects, Staff Recommendation for Funding

Priority Project List Rank	Project Title, Year of Funding and Fund Type	Funding Partners	Remaining Need	Recommended Funding Awards
12	Bigelow/Forker Project 6: New Roadway Alignment, 2021 HIP	Spokane County, SRTC, TIB, FMSIB	\$850,000	\$429,680
22	Pines and Mission Intersection Improvement, 2023 CMAQ	Spokane Valley, SRTC	\$1,418,600	\$1,418,600
30	Driscoll-Alberta-Cochran Sidewalk Infill, 2022 CMAQ	City of Spokane, SRTC	\$355,252	\$355,252

More Information:

- Attachment 1: SRTC Contingency List Process
- Attachment 2: SRTC Regional Project Priority List-Projects Updated Funding Needs
- For detailed information contact: Eve McMenemy at evemc@srtc.org or 509.343.6370

2019 SRTC Contingency Process and List

At the November 2018 Board meeting, the SRTC Board selected a **2018 Prioritized List** of projects to fund with 2020-2023 regional allocations of the Surface Transportation Program Block Grant (STBG) and 2021-2023 Congestion Mitigation Air Quality (CMAQ) funds. As the prioritized list includes all funding sources and many partially funded projects, SRTC Staff and the TTC discussed ways to establish a contingency list process using the new **2018 Prioritized List (see Attachment)** to establish a predictable process yet maintain responsiveness to project changes. The recommended process was to seek to balance regional priority with the need to be nimble in utilizing funding quickly. The 2018 Prioritized list is now the 2019 Contingency List.

Approved Process, March 14, 2019 Board meeting:

- Use the 2018 Prioritized List as the **2019 Contingency List**.
- SRTC Staff will bring a draft recommendation for TTC consideration based on the criteria below.
- The TTC will make a recommendation to the Board using the same criteria below.

Criteria:

- Evaluate the technical requirements of the funding source for the project on **2019 Contingency List** and amount of funding that is available;
- Identify from the **2019 Contingency List** projects that meet such requirements;
- Review project readiness from the above identified projects to maximize project delivery;
- Review the capability of available funding to complete a project or phase; and
- Recommend a project or projects for Board approval.

2018 SRTC Call for Projects
SRTC Board-Approved Priority List, Projects Needing Funding
Updated 2/8/2021

Priority	Project Name	2018 SRTC Requested	Previous SRTC Awards	Total Unfunded Need	Suggested Award
6	Riverside-Monroe to Wall	5,003,141	850,000	5,150,000	
10	Bigelow Gulch Project 2	2,601,000	1,450,000	4,015,100	
12*	Bigelow Gulch Project 6	4,085,000	4,085,000	850,000*	429,680
13	Barker Corridor reconstruction & widening	6,331,800	2,050,000	750,000	
15	Havana St-Sprague to Broadway	5,836,971	0	6,900,000	
17	Argonne Rd preservation (PE + RW only option)	2,508,500	0	2,260,000	
18	US 2 Garfield Rd intersection improvement	2,200,000	0	2,200,000	
20	57th Avenue	2,126,000	0	2,458,341	
22	Pines and Mission intersection improvement	1,211,000	450,500	1,419,600*	1,419,600
23	Spokane Falls Blvd-Lincoln to Division	7,305,931	0	9,100,000	
24	Colville Reconstruction Third St to north City Limits	2,021,738	0	2,605,815	
29	Harvard Rd	4,827,000	0	4,827,000	
30	Driscoll-Alberta-Cochran Sidewalk Infill	1,060,452	705,200	355,252	355,252
31	Washington-Stevens, Spokane Falls to Boone	2,014,581	0	230,000	
33	Freya St - Wellesley to Decatur	3,658,690	0	4,310,000	
34	North Bank Trail Study	166,250	0	166,250	
35	Sprague & Barker intersection improvement	1,159,979	349,000	810,979	
36	Napa-2nd Ave to Sprague	1,508,697	0	1,800,000	
37	Craig Rd	962,700	0	962,700	
39	10th Ave Garfield Rd to Hayford Rd	3,203,000	0	2,922,203	
40	E Crawford Preservation	575,650	0	575,650	
42	Cascade Way	601,200	0	1,583,000	
43	Brooks Rd Phase 1	1,608,000	0	1,608,000	
44	Mullan Road preservation	1,211,000	0	1,825,000	
46	Columbia Dr	1,536,000	0	2,686,000	
49	Rattler Run Road reconstruction	799,433	0	799,433	
50	Cheney-Spokane Rd	2,132,000	0	2,645,000	
	Can accept CMAQ funding				

* Cost Overrun

** Scope updated and approved 10/21/20

To: Transportation Technical Committee 02/17/2021
From: David Fletcher, AICP, Associate Transportation Planner III
Topic: **MTP Freight Element Update**

Requested Action:

None. For information and discussion.

Key Points:

- The Metropolitan Transportation Plan (MTP) Freight consists of two components: a regional freight study and an investment strategy. The study portion is nearing completion and the project will shift to the investment strategy elements.
- The study portion of the project focused on understanding freight's impact on the regional transportation network. Impacts such as freight origins and destinations, significant freight generators, modal conflicts, and safety related impacts were studied.
- The study findings will be used to recommend freight policy objectives and freight-related key performance indicators for adoption by the SRTC Board of Directors. These will be used to inform future investment choices and evaluate plan implementation.

Board/Committee Discussions:

The MTP Freight Element is identified in SRTC's 2020–2021 Unified Planning Work Program (UPWP).

The Transportation Technical Committee was initially briefed on the purpose, scope, and schedule of the project in March 2020. They unanimously approved the establishment of a SME team to inform the development of the MTP Freight Element.

The SRTC Board was introduced the freight element at their May 2020 meeting. They were briefed on the project's initial findings at their January 2021 meeting.

Working Group/Subject Matter Expert Team Involvement:

A subject matter expert (SME) team with both public and private sector representation has been assembled to inform work on the MTP Freight Element. Through the course of five meetings, they have provided feedback which has guided SRTC's analysis during the study phase.

Public Involvement:

The MTP Freight Element is part of SRTC's MTP update. An MTP public participation plan has been drafted for the update. It will utilize public education and engagement to validate that the MTP and its various elements align with and implement the community vision.

Supporting Information/Implications:

The study phase of the project has analyzed freight's impact on the region in a variety of ways. First, an inventory of existing and planned freight related land use and truck parking has been completed. Freight generators and activity centers have also been identified and evaluated. Freight trip origins and destinations have been analyzed to identify key freight routes and corridors in the region. Finally, environmental justice related data has been analyzed to better understand the impacts of transportation investments on disadvantaged populations. A brief overview of the analysis that has been completed will be presented at the February TTC meeting

The next phase of the project will involve identifying goals and objectives that can be measured against the data derived from the study portion of the project.

More Information:

- For detailed information contact: David Fletcher at dfletcher@src.org or 509.343.6370