

Moving Forward

Memo I.02 – HPT Corridor Definition Refinement

Prepared for:
Planning and Development Committee

Final

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Overview

Purpose

The purpose of this memo is to detail the process and results of technical work conducted to define the corridors, and segments of corridors, of the STA's proposed High Performance Transit (HPT) Network. This process is referred to as HPT Corridor Definition Refinement and precedes a screening process wherein corridors will be ranked based on attributes that relate to the demand and opportunity for the corridor based on quantitative and qualitative metrics that are yet to be finalized.

Background

Spokane Transit is conducting a planning process to identify investments in public transportation that could be made during the next 10 to 15 years as funding opportunities arise. The central element of these investments is the High Performance Transit Network as identified in STA's long range plan, *Connect Spokane*. Spokane Transit envisions a network of HPT corridors providing all-day, two-way frequent service that is more attractive and effective than conventional fixed-route service.

This planning process, referred to as HPT Network Development or more simply, *Moving Forward*, has three major phases:

Phase I: Initiation and Scoping. The outcome of this phase will be the identification of the purpose and goals for the planning process, a list of projects that will be studied in greater detail, the analysis approach, and the public involvement plan for later phases.

Phase II: Conceptual Project Development and Evaluation: During this phase each project will be developed to a conceptual level to determine costs, benefits and other implementation considerations that are necessary to fully evaluate the merits of the possible projects.

Phase III: Scenario Development and Selection: In this phase the projects that have been developed will be combined into implementation scenarios for evaluation as a system of investments. Based on agreed upon criteria, these scenarios will be evaluated, refined and re-evaluated, both through public input and technical analysis. The outcome of this scenario will be a prioritization of transit investments, including HPT corridors that are ready for implementation as funding opportunities arise.

Organization

The remainder of this memo is divided into three sections.

- Process and Methodology
- Results and Reasoning
- Next Steps

Process and Methodology

As part of Phase I, the STA Board of Directors has approved a “Long List of Conceptual Projects” as identified in Memo 1.01. In it, all the corridors of the HPT Network are incorporated into the long list with the expectation that the list will be screened in order to identify three to five corridors that could be evaluated as part of Phase II.

There are 14 corridors identified on pages 27 and 28 in *Connect Spokane* as part of the High Performance Transit Network that are also listed in Memo 1.01. All of these corridors were refined in their definition unless the corridor had already been subject to an alternatives analysis that concluded with a board-adopted Locally Preferred Alternative (LPA) that defines the general alignment and mode for the HPT service. Considering fundamental HPT Corridor attributes as a guide, there will be 18 corridor definitions (including segments of corridors defined in *Connect Spokane*) that will be screened in advance of Phase II.

At the April 4, 2012 STA Planning & Development Committee meeting, staff identified the following attributes to be considered for corridor definition refinement process:

- There are logical terminal options for the corridor where high density or major transit facilities could exist in the planning horizon.
- There is existing public right-of-way that can be reasonably assumed as serviceable by the investment for nearly the entire length of the corridor.
- Major physical barriers (railroad crossings, rivers, canyons, freeways) can be crossed using existing infrastructure.

In addition to the three draft criteria, staff identified one additional follow-up question:

- Is there a reasonable segmentation of the corridor to reflect diverging land use patterns and/or implementation strategies?

The inclusion of this question ensures that an entire corridor in the Comprehensive Plan is not prematurely or unfairly rejected simply because it is part of a long-range vision associated with land use patterns or implementation strategies that are in various stages of development along a particular segment of the corridor. If the response is “yes” to this question, segment options are created and subjected to the same criteria until no new corridors can be reasonably identified.

Results and Reasoning

Spokane Transit Planning Department staff held a meeting with technical staff from the Spokane Regional Transportation Council on April 18, 2012 to consider each corridor against the statements and questions above. The results of that meeting are shown below and categorized by HPT Service Type (i.e. color). Rather than reduce the number of corridors to be screened, the number of corridors was expanded to capture reasonable permutations of HPT corridors identified in the Comprehensive Plan. This will ensure that strengths of each corridor are appropriately considered as part of the screening process.

Blue Lines

Blue Lines cover long distances quickly to connect major regional destinations. They operate at higher speeds with more limited access with 15-30 minute headways. The original corridor as described in *Connect Spokane* is left justified; any modified or segmented corridor is indented.

Comp Plan Corridor	Logical Terminals?	Public Right of Way?	Any major barriers?	Reasonable Segmentation?	Outcome
B1: Cheney to Hastings P&R	Yes	No	No	Yes	Move forward; identify segments
B1-A: Downtown to Cheney	Yes	Yes	No	Yes	Move forward
B1-Ab: SCC to Cheney	Yes	Yes	No	No	Move forward
B1-B: Downtown to Hastings P&R	Yes	Yes	No	No	Move forward
B2: Spokane Airport to CDA	Yes	Yes	No	No	Move forward

The B1 corridor as defined in *Connect Spokane* travels as a limited stop service from Cheney to North Spokane by way of I-90 and the North Spokane Freeway. As a result of the distinct characteristics of the planning corridor, B1 was segmented into three options for further analysis. B1-A travels between Downtown Spokane and Cheney. B1-Ab travels between SCC and Cheney, via downtown. B1-B travels between Downtown Spokane and Hastings Park & Ride via the planned North Spokane Freeway.

Red Lines

Red Lines offer direct service to major destinations within a metropolitan area. They operate at moderate speeds and offer moderate access with headways ranging from 10-15 minutes. The original corridor as described in *Connect Spokane* is left justified; any modified or segmented corridor is indented.

Comp Plan Corridor	Logical Terminals?	Public Right of Way?	Any Major Barriers?	Reasonable Segmentation?	Outcome
R1: Airway Heights to Newport Hwy	Yes	Yes	No	Yes	Move Forward; Identify segment(s)
R1-A: N. Division to CBD	Yes	Yes	No	No	Move forward
R1-B: Airway Heights to CBD	Yes	Yes	No	No	Move forward
R2: Downtown to Liberty Lake	Yes	Yes	No	No	Move forward
R3: VA Hospital to Sprague & Sullivan	<u>No</u>	Yes	No	Yes	Don't move forward; identify segment(s)
R3-A: Shadle Park to SCC	Yes	Yes	No	No	Move forward
R3-B: SCC to Sprague/Sullivan	Yes	Yes	No	No	Move forward
R4: Holland/Division to Lincoln Heights	Yes	Yes	No	Yes	Move forward
R4-A: SCC to Holland/Division	Yes	Yes	No	No	Move forward
R4-B: Lincoln Heights to SCC	Yes	Yes	No	No	Move forward

Corridor R1 meets all of the initial screening criteria; however, there is an opportunity to segment the route based on diverging land use patterns. The segment of R1 that travels between Downtown Spokane and North Spokane travels along a heavily traveled corridor of commercial and residential uses. The segment that travels between Downtown Spokane and

Airway Heights travels through miles of low density or vacant land use. While more intense development may occur in the West Plains within the next several decades, staff recommends that these two segments be analyzed separately.

Although the VA Hospital is an important destination for many travelers, it does not serve as a strong terminal for all-day, two-way frequent service. For this reason, Shadle Park is proposed to be the modified terminal. Additionally, the long route is suggested to be split into two distinct corridors for analysis. R3-A is Shadle Park to SCC and R3-B is SCC to Sprague and Sullivan.

Route R4 can also be divided into two distinct segments for analysis. The first section is from SCC to Division and Holland. The second segment can be defined as SCC to Lincoln Heights.

Green Lines

Green Lines support spontaneous travel, short trips and provide quick, easy access to other service types. They operate at lower speeds and have higher access. Green Lines typically operate with 6-15 minute frequencies. The original corridor as described in *Connect Spokane* is left justified; any modified or segmented corridor is indented.

Comp Plan Corridor	Logical Terminals?	Public Right of Way?	Any Major Barriers?	Reasonable Segmentation?	Outcome
G1: Five Mile to Moran Prairie	Yes	Yes	No	No	Move forward
G2: Browne's Addition to SCC	Yes	Yes	No	Yes	Move forward; Identify segment(s)
G2-A: Browne's Addition to Gonzaga	Moved forward to Phase III (adopted Central City Line LPA July 2011)				
G3: Downtown to VTC	Yes	Yes	No	No	Move forward
G4: Indian Trail to Lincoln Heights	Yes	Yes	No	No	Move forward
G5: Crestline to 14th/Lincoln	<u>No</u>	Yes	No	Yes	Don't move forward; Identify segment(s)
G5-A: Empire/Cook to 14th/Lincoln	Yes	Yes	No	No	Move forward

Comp Plan Corridor	Logical Terminals?	Public Right of Way?	Any Major Barriers?	Reasonable Segmentation?	Outcome
G6: Hamilton: Five Mile to South Side Medical District	Yes	Yes	<u>Yes</u>	Yes	Don't move forward; Identify segment(s)
G6-A: Five Mile to Riverpoint via Hamilton	Yes	Yes	No	No	Move forward
G7: SFCC to SCC	Yes	Yes	No	No	Move forward
G8: Millwood to SR 27 & E 32nd	Yes	Yes	no	No	Move forward

Green Lines, generally located in urbanized areas, were compatible with the HPT attributes listed except for two corridors. R5: Crestline to 14th and Lincoln did not have a logical terminal on the north end of the corridor. Instead, this terminal was modified to end at Empire and Cook.

The other corridor that did not meet the all the attributes was corridor G6: Five Mile to Southside Medical via Hamilton required a direct connection from the University District to the Southside Medical District over the rail lines in the University District that does not exist today. Instead, the modified corridor will be evaluated based on its terminal at the Riverpoint Campus.

Next Steps

Below is a table summarizing the definition of the corridors that will undergo the screening process. Please note that the Central City Line (technically G2-A for purposes of this analysis) will move forward for Phase III of the HPT Network Development process.

Blue Lines	Red Lines	Green Lines
B1: Cheney to Hastings P&R	R1-A: North Division to Downtown Spokane	G1: Five Mile to Moran Prairie
B1-A: Downtown Spokane to Cheney	R1-B: Airway Heights to Downtown Spokane	G2: Browne's Addition to SCC
B1-Ab: SCC to Cheney	R2: Liberty Lake to Downtown Spokane	G3: Downtown to VTC
B1-B: Downtown to Hastings P&R	R3-A: Shadle Park to SCC	G4: Indian Trail to Lincoln Heights
B2: Spokane Airport to Coeur d'Alene	R3-B: SCC to Sprague/Sullivan	G5-A: Empire/Cook to 14th/Lincoln
	R4-A: SCC to Holland/Division	G6-A: Five Mile to Riverpoint via Hamilton
	R4-B: Lincoln Heights to SCC	G7: SFCC to SCC
		G8: Millwood to SR 27 & E 32nd

No corridors were eliminated from the list. However, several notable route segments will not move forward:

Segment	Rationale
R3: VA Hospital to Shadle Park (Wellesley)	The VA Hospital area is not a suitable terminal for HPT service within the planning horizon
G5: Empire to Francis (Crestline)	Francis and Crestline is not a suitable terminal for HPT service within the planning horizon
G6: Riverpoint to Medical District (Sherman)	There is no bridge structure that exists to take HPT service over the rail lines in the University District

The corridors that move forward to the full screening will be evaluated based on travel demand measures and opportunity measures. A "Travel Demand/Opportunity Score" will be calculated once criteria have been finalized. Currently, the following measures have been identified, along with proposed criteria and point values:

Travel Demand Measure

The Travel Demand measure is quantitative and is designed to consider the likelihood that the HPT investment will provide usefulness to a high volume of people. Scores will be distributed based upon a normal distribution from the mean value for each criterion.

- Overall transit ridership on existing routes in corridor. (30 points)
- Forecast density of trip origins and destinations within walking distance of corridor/possible corridor stations. (30 points)

Opportunity Measure

The Opportunity measure is qualitative and is intended to consider the likelihood of the HPT investment will be supportive of, as well as supported by, other public and private investments that are planned in the corridor or that could be applied toward the investment. Qualitative responses to each will be graded on a one-to-five scale and that will be weighted based upon the points apportioned to each criterion.

- Activity centers that would be served are targeted and prioritized by local jurisdictions for urban and economic (re-)development conducive to High Performance Transit service. (30 points)
- Corridor implementation is likely compatible with and competitive for known grant opportunities. (10 points)

Final Scoring and Ranking

After the scoring of each corridor, corridors will be classified by service type (Blue, Red, Green) and then assigned a ranking. This information, along with public feedback and input from the Planning and Development Committee, will assist the STA Board in determining which HPT projects should move into Phase II.