

Burnside/Couch Alternatives Transportation Analysis and Evaluation

Draft

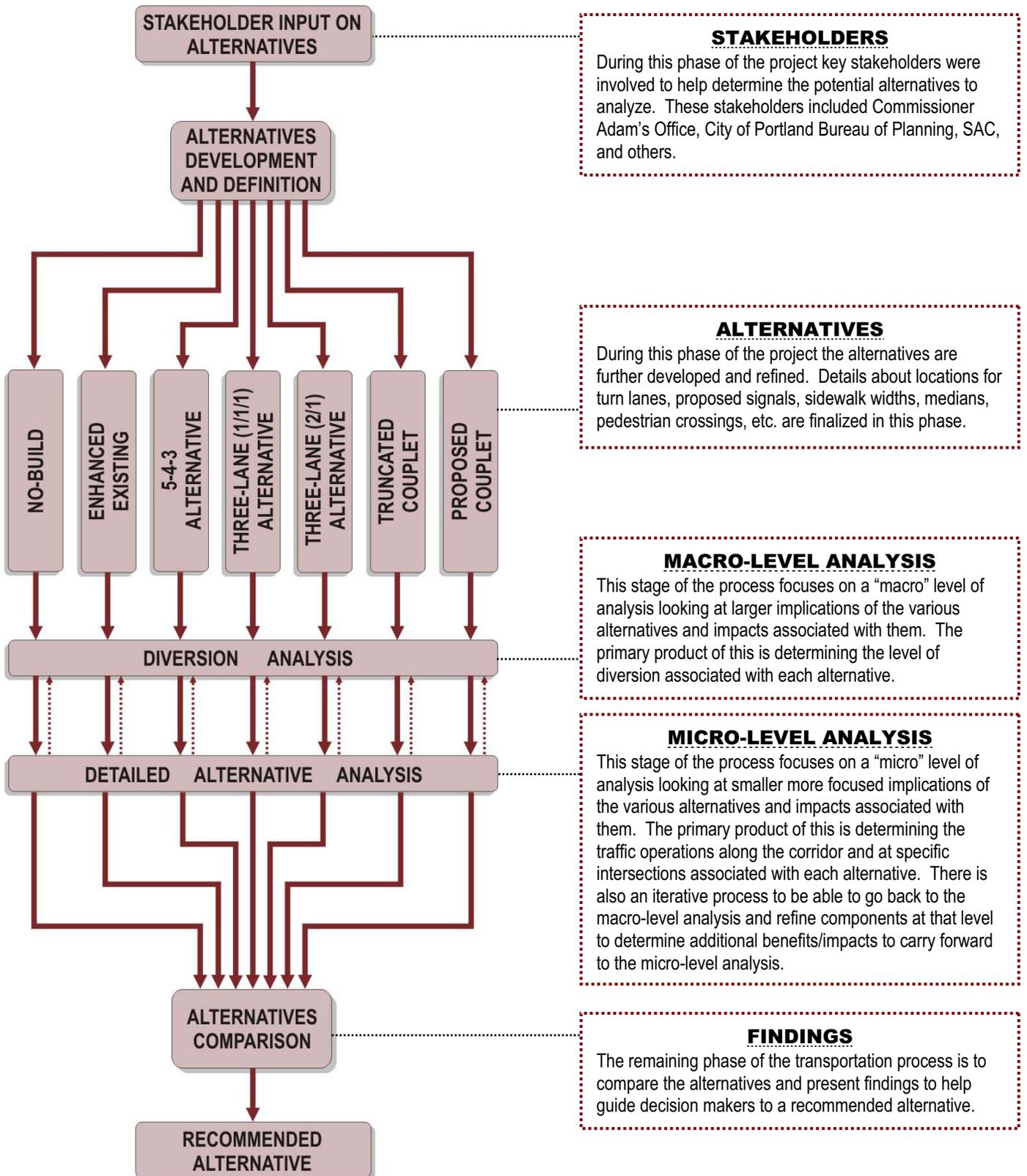
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OVERVIEW OF PROJECT PROCESS

The following is an overview of the project process for the transportation component of the development of alternatives and analysis of alternatives.



TRANSPORTATION EVALUATION CRITERION DEFINITION

The following is a narrative defining the transportation evaluation criteria used in the process of evaluating alternatives associated with this project. Some of these criteria are qualitative in nature, while other evaluation criteria are quantitative (have a measured value) in nature. These criteria were used for each alternative to be able to equally evaluate and compare the alternatives to one another. Please refer to the detailed alternative narratives later in this handout to see how each transportation evaluation criteria applied to the individual alternatives.

AUTO SAFETY

Safety is a qualitative evaluation method, meaning there is no easy way to measure the effects each alternative has on potential safety hazards or existing safety deficiencies using calculated methods. Rather, each alternative is evaluated based on the perceived impact (good or bad) it may have on the safety of the corridor. The safety component has been separated into two categories: Auto and Pedestrian. The auto safety is being evaluated on potential conflict points at signalized and unsignalized intersections, as well as the potential for increased or decreased vehicle volumes on a corridor.

PEDESTRIAN SAFETY

Pedestrian safety is a quantitative evaluation method, meaning there is a way to measure the effects each alternative has on potential pedestrian safety using calculated methods. The primary pedestrian safety components used were the number of signalized pedestrian crossings, implementation of signalized crossings at existing high motor vehicle/pedestrian collisions, crossing distance for pedestrians, and sidewalk widths along W Burnside. All of these components can be measures or quantified and compared between alternatives.

VEHICLE OPERATIONS

Vehicle operations are a quantitative evaluation method. Operations can be measured and easily compared between alternatives. The measures of effectiveness used for evaluation were travel times (from 2nd Avenue to 24th Place), travel speeds, level-of-service at intersections (based on delay), and volume-to-capacity ratios (how congested an intersection is). In addition to these measures, the potential for diversion was also measured. This is the number of vehicles potentially pushed away from W Burnside and ending up on the surrounding roadway network and the ability for that surrounding network capacity to accept this diversion from Burnside.

VEHICLE ACCESS/CIRCULATION

The vehicle access and circulation that was evaluated focused primarily on the ability to make left turns (or not), and the potential for out of direction (round the block) circulation for property access. This was a mixture of quantitative (number of left turn opportunities) and qualitative (potential for out of direction travel) comparison.

TRANSIT OPERATIONS

The transit operations evaluation is a mixture of quantitative and qualitative analysis that focuses on providing adequate operations at intersections on W Burnside where future light-rail will cross (5th and 6th Avenues) as well as where current streetcar crosses (10th and 11th Avenues). In addition, consideration is made where in lane transit stops are occurring where there is only one through lane in comparison to two travel lanes where other vehicles have an opportunity to pass transit.

BICYCLE MOBILITY

Bicycle mobility was determined by the ability to provide for safe bicycle crossings of W Burnside because the corridor itself is not designated for bicycle facilities (lanes).

DIVERSION ACCEPTABILITY

Part of the evaluation of each alternative focuses on the potential diversion (amount of vehicles that would leave traveling on W Burnside and select another parallel surrounding roadway). The measurement of diversion is not only important to gauge from the number of vehicles that could divert, but also to the ability of the surrounding roadway network to accept the diversion based on the available capacity.

No-BUILD ALTERNATIVE

The following is a narrative description of the thought process behind how this particular alternative was evaluated from both a qualitative and quantitative perspective.

Evaluation Scale



	15 th Ave to 24 th Place	Park Ave to 15 th Ave	2 nd Ave to Park Ave
AUTO SAFETY This alternative represents the future baseline condition if nothing changed. Currently there are limited opportunities to turn left across W Burnside, which limits the potential for left turn collisions. Left turns can only be made at unsignalized intersections, and currently there are 8 locations where this occurs.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PEDESTRIAN SAFETY Currently W Burnside has multiple locations where pedestrian collisions occur. The study area current has 15 of the top 100 pedestrian collision locations within the City of Portland. Four of these locations are currently unsignalized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VEHICLE OPERATIONS Similar to operations today, no new signals or new capacity is assumed under this alternative. The vehicle operations under this scenario serve as a “base-case” to compare against. Generally speaking, the four major criteria used as a comparison basis are travel time, arterial LOS (level-of-service), travel speed and signal delay.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VEHICLE ACCESS/CIRCULATION No new additional turning opportunities to/from W Burnside are being considered in this alternative. All existing travel patterns for access and circulation would remain. Currently left turns from W Burnside are allowed at unsignalized intersections, but not at signalized intersections. Alternatives will be compared in this category based on their potential to positively or negatively impact the access and circulation for motor vehicles.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
TRANSIT OPERATIONS W Burnside currently has transit running along it with the majority of the transit stops being “in-lane” (buses stop in the curb travel lane). At this level of analysis it is not expected that any changes would be made to locations of bus stops and/or the ability of buses to pull-out of the travel lane to pick-up/drop-off passengers. In addition to bus travel along W Burnside, the street-car currently crosses W Burnside at 10 th and 11 th Avenue. In the future light rail transit will cross W Burnside at 5 th and 6 th Avenues.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
BICYCLE MOBILITY Bicycle facilities (lanes) do not currently exist on W Burnside and are not expected to be in place in the future. W Burnside is not identified by the City of Portland as a city bikeway. Bicycles would use alternative parallel routes in the future. However, crossing W Burnside by bicycles could still happen which could be affected by the individual alternative.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DIVERSION ACCEPTABILITY This alternative does not have any diversion associated with it. Other alternatives will have diversion associated with them, which will be compared as to the affects on the surrounding roadway network to absorb that diversion.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

ENHANCED EXISTING

The following is a narrative description of the thought process behind how this particular alternative was evaluated from both a qualitative and quantitative perspective.

Evaluation Scale

<input type="checkbox"/>				
Low	Medium	High		

AUTO SAFETY

The additional left turn opportunity provided at 18th/19th Avenues, I-405 northbound, Broadway and 3rd Avenues introduce new conflict points between motor vehicles at the intersections. Even though the left turn movements would be protected, they do not exist today and would therefore present a potential auto safety risk. However, because they are protected the risk would most likely be minimal, and therefore the alternative is viewed to be similar to the no-build alternative.

PEDESTRIAN SAFETY

While the alternative does not directly improve any of the locations that have a high collision rating for pedestrians, the alternative does provide for some pedestrian enhancements along the corridor and at some selected intersections. For this reason it is ranked higher than the no-build alternative, but not as high as other alternatives that reduce crossing distances of W Burnside or provide for more pedestrian amenities.

VEHICLE OPERATIONS

Additional signals along the corridor create some additional potential travel time delay and additional potential signal delay in comparison to the no-build alternative. However, this additional impact to travel time and signal delay is minimal. Arterial LOS and travel speeds are also similar in nature to the no-build alternatives. For these reasons this alternative has been ranked similar to the no-build alternative.

VEHICLE ACCESS/CIRCULATION

This alternative allows for new left turn and access opportunities at 19th/18th Avenues, I-405 northbound, Broadway and 3rd Avenue. This additional access/circulation potential creates a slightly higher ranking than the no-build alternative, but not as high as some other alternatives that provide even more access (left-turn) potential.

TRANSIT OPERATIONS

The transit operations are similar in this alternative to the no-build alternative, and therefore the alternative receives the same ranking as the no-build alternative.

BICYCLE MOBILITY

The bicycle operations are similar in this alternative to the no-build alternative, and therefore the alternative receives the same ranking as the no-build alternative.

DIVERSION ACCEPTABILITY

This alternative has minimal diversion associated with it because it is most like the no-build alternative. The likelihood to accommodate diversion on surrounding roadways is high because the diversion is low. Surrounding roadway impacts due to vehicle diversion would be minimal. The area where diversion potential is the greatest is from 15th Avenue to 24th Avenue due to enhanced access to I-405 northbound from W Burnside. However, this would probably bring vehicles to W Burnside (relieving surrounding streets) rather than divert vehicles to surrounding streets. This alternative is therefore ranked similar to the no-build alternative.

15 th Ave to 24 th Place	Park Ave to 15 th Ave	2 nd Ave to Park Ave
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5-4-3 ALTERNATIVE

The following is a narrative description of the thought process behind how this particular alternative was evaluated from both a qualitative and quantitative perspective.

Evaluation Scale

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Low	Medium	High		

	15 th Ave to 24 th Place	Park Ave to 15 th Ave	2 nd Ave to Park Ave
AUTO SAFETY Additional left turn opportunities provided at multiple signalized intersections (existing and new signals) introduces new conflict points between motor vehicles at the intersections. The new signals in the area from 15 th Avenue to 24 th Place are providing protected left turns on W Burnside where vehicles would be making an unprotected left turn today. This provides a slightly safer environment than the no-build in this area, while the other areas would be similar to the no-build alternative.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PEDESTRIAN SAFETY The section of W Burnside to the west of I-405 has a three-lane cross-section and therefore reduces the pedestrian crossing distance. In addition, the new signals in this section provide for a potentially safer environment for pedestrians to cross W Burnside. The segment east of I-405 to Broadway also has new signals that provide a potentially safer environment for pedestrian crossings. East of Broadway this alternative is similar to the no-build.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VEHICLE OPERATIONS The operations east of I-405 are fairly similar to the no-build alternative, with some minor travel time delay and potential signal delay due to some additional new signals added in this segment. The segment west of I-405 has significant impacts to travel time, speed and signal delay due to the reduction of lane capacity from two through lanes to one-through lane in each direction. Some of the intersections do not operate at acceptable standards and would require additional diversion and/or capacity improvements to operate to standard.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VEHICLE ACCESS/CIRCULATION Additional left turns between Broadway to 2 nd Avenue, and between 15 th Avenue to 24 th Place create more access and circulation potential than exists in the no-build alternative. Between Park Avenue to 15 th Avenue access and circulation is similar to the no-build alternative.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
TRANSIT OPERATIONS The three-lane section west of I-405 would require transit to block the through lane of motor vehicle travel to pick-up/drop-off passengers. All other operations would be similar to the no-build, however this transit environment is viewed as detrimental to the other surrounding operations in the three-lane section.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
BICYCLE MOBILITY The bicycle operations are similar in this alternative to the no-build alternative, and therefore the alternative receives the same ranking as the no-build alternative.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DIVERSION ACCEPTABILITY The three-lane section west of I-405 creates diversion that may be problematic for surrounding parallel roadways (Everett Street, Glisan Street and Lovejoy Street). In addition, traffic operations on W Burnside have difficulties, which could push even more diversion onto these parallel streets. The diversion that occurs west of I-405 creates less volume along W Burnside east of I-405, which has less diversion impact (slightly more diversion than the Enhanced Existing Alternative).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

THREE-LANE (1/1/1) ALTERNATIVE

The following is a narrative description of the thought process behind how this particular alternative was evaluated from both a qualitative and quantitative perspective.

Evaluation Scale



	15 th Ave to 24 th Place	Park Ave to 15 th Ave	2 nd Ave to Park Ave
AUTO SAFETY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PEDESTRIAN SAFETY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VEHICLE OPERATIONS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VEHICLE ACCESS/CIRCULATION	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TRANSIT OPERATIONS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
BICYCLE MOBILITY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DIVERSION ACCEPTABILITY	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

AUTO SAFETY

Additional left turn opportunities provided at multiple signalized intersections (existing and new signals) introduces new conflict points between motor vehicles at the intersections. The two new signals at 22nd Avenue and 20th Place are providing protected left turns on W Burnside where vehicles would be making an unprotected left turn today. This provides a slightly safer environment than the no-build in this area, while the other areas would be similar to the no-build alternative.

PEDESTRIAN SAFETY

The section of W Burnside to the west of Park Avenue has a three-lane cross-section and therefore reduces the pedestrian crossing distance. In addition, new signals in locations provide for a potentially safer environment for crossing W Burnside. The segment east of east of Broadway in this alternative is similar to the 5-4-3 Alternative.

VEHICLE OPERATIONS

The operations east of Broadway are fairly similar to the no-build alternative, with some minor travel time delay and potential signal delay due to some additional new signals added in this segment. The segment west of Broadway has significant impacts to travel time, speed and signal delay due to the reduction of lane capacity from two through lanes to one-through lane in each direction. Some of the intersections do not operate at acceptable standards and would require additional diversion and/or capacity improvements to operate to standard.

VEHICLE ACCESS/CIRCULATION

Additional left turns along the corridor create more access and circulation potential than exists in the no-build alternative, and slightly more than the 5-4-3 Alternative (due to the three-lane cross-section extending further to the east). This would allow this alternative to have a higher rating in this category than the no-build or 5-4-3 Alternative.

TRANSIT OPERATIONS

The three-lane section would require transit to block the through lane of motor vehicle travel to pick-up/drop-off passengers. All other operations would be similar to the no-build, however this transit environment is viewed as detrimental to the other surrounding operations in the three-lane section.

BICYCLE MOBILITY

The bicycle operations are similar in this alternative to the no-build alternative, and therefore the alternative receives the same ranking as the no-build alternative.

DIVERSION ACCEPTABILITY

The three-lane creates diversion that may be problematic for surrounding parallel roadways (Everett Street, Glisan Street, Lovejoy Street, Alder Street and Jefferson Street). In addition, traffic operations on W Burnside have difficulties (to the west of Broadway), which could push even more diversion onto these parallel streets. The diversion that occurs west of Broadway creates less volume along W Burnside east of Broadway, which has less diversion impact (slightly more diversion than the 5-4-3 Alternative).

THREE-LANE (2/1) ALTERNATIVE

The following is a narrative description of the thought process behind how this particular alternative was evaluated from both a qualitative and quantitative perspective.

Evaluation Scale

<input type="checkbox"/>				
Low	Medium	Medium	High	High

	15 th Ave to 24 th Place	Park Ave to 15 th Ave	2 nd Ave to Park Ave
AUTO SAFETY Additional left turn opportunities provided in the segment from Broadway to 2 nd Avenue at multiple signalized intersections (existing and new signals) introduces new conflict points between motor vehicles at the intersections. Even though the left turn movements would be protected, they do not exist today and would therefore present a potential auto safety risk. However, because they are protected the risk would most likely be minimal, and therefore the alternative is viewed to be similar to the no-build alternative.	■	■	■
PEDESTRIAN SAFETY The section of W Burnside to the west of Park Avenue has a three-lane cross-section and therefore reduces the pedestrian crossing distance. In addition, new signals in locations provide for a potentially safer environment for crossing W Burnside. The segment east of east of Broadway in this alternative is similar to the 5-4-3 Alternative.	■	■	■
VEHICLE OPERATIONS The operations east of Broadway are fairly similar to the no-build alternative, with some minor travel time delay and potential signal delay due to some additional new signals added in this segment. The segment west of Broadway has significant impacts to travel time, speed and signal delay due to the reduction of lane capacity from two through lanes eastbound to one-through lane in eastbound. The intersection of 21 st Avenue does not operate at acceptable standards and would require additional diversion and/or capacity improvements to operate to standard.	□	■	■
VEHICLE ACCESS/CIRCULATION This alternative allows for left turn opportunity east of Park Avenue, however west of Park Avenue is similar to the no-build alternative because of two lanes westbound with a three-lane cross-section. Left turns were not allowed from a shared through lane.	■	□	■
TRANSIT OPERATIONS The three-lane section would require transit to block the through lane of motor vehicle travel in the eastbound direction only to pick-up/drop-off passengers. The westbound direction would operate similar to the no-build condition. This transit environment for the eastbound direction is viewed as detrimental to the other surrounding operations in the three-lane section.	■	■	■
BICYCLE MOBILITY The bicycle operations are similar in this alternative to the no-build alternative, and therefore the alternative receives the same ranking as the no-build alternative.	□	□	□
DIVERSION ACCEPTABILITY The three-lane section creates diversion that may be problematic for surrounding parallel roadways (Everett Street and Alder Street). In addition, traffic operations on W Burnside have difficulties at the intersection of 21 st Avenue, which could push even more diversion onto these parallel streets. The diversion that occurs west of Park Avenue creates less volume along W Burnside east of Park Avenue, which has less diversion impact (slightly more diversion than the 5-4-3 Alternative).	■	■	■

TRUNCATED COUPLET

The following is a narrative description of the thought process behind how this particular alternative was evaluated from both a qualitative and quantitative perspective.

Evaluation Scale



	15 th Ave to 24 th Place	Park Ave to 15 th Ave	2 nd Ave to Park Ave
AUTO SAFETY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PEDESTRIAN SAFETY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VEHICLE OPERATIONS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VEHICLE ACCESS/CIRCULATION	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
TRANSIT OPERATIONS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
BICYCLE MOBILITY	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
DIVERSION ACCEPTABILITY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

AUTO SAFETY

The couplet area removes opposing traffic to left turns, which eliminates potential conflict points for motor vehicles. Within the couplet area the auto safety would have a perceived benefit. Beyond the couplet area, the alternative would operate similar to the no-build alternative.

PEDESTRIAN SAFETY

The couplet alternative significantly reduces pedestrian crossing distances from 8th Avenue to 2nd Avenue. Two new signals at 22nd Avenue and 20th Place allow for new crossing opportunities of W Burnside. This is similar to the Enhanced Existing, so to the west of 8th Avenue this alternative has similar pedestrian characteristics as the Enhanced Existing.

VEHICLE OPERATIONS

The couplet area allows for better progression along W Burnside than two-way operations does, however there are some additional signals in place along the couplet so that can add to potential travel time and signal delay. The new signals along the corridor are at 22nd Avenue, 20th Place, 9th Avenue, Park Avenue and 8th Avenue.

VEHICLE ACCESS/CIRCULATION

The couplet area has additional opportunities to turn left, however with a couplet there is a system of one-way streets in place which can create some additional out of direction travel in comparison to some other alternatives that have two-way circulation on W Burnside with left turns. For this reason the couplet area has been rated slightly lower than the 5-4-3 Alternative, Two-lane (1/1/1) and Two-lane (2/1) Alternatives, but similar to Enhanced Existing and better than the No-build Alternative. West of the couplet area the same no-build access and circulation would exist.

TRANSIT OPERATIONS

The couplet area has a shorter crossing distance of W Burnside, which is beneficial for the proposed light rail transit for crossing time of W Burnside. Beyond the couplet area, the alternative would operate similar to the no-build alternative.

BICYCLE MOBILITY

The bicycle operations are similar in this alternative to the no-build alternative with the exception that the couplet allows for additional opportunity to add bicycle facilities on W Burnside from approximately 3rd Avenue to the Burnside Bridge. Therefore this alternative is rated slightly higher than the no-build alternative.

DIVERSION ACCEPTABILITY

With the exception of Couch Street (the complement to W Burnside for the couplet) there is minimal diversion to surrounding parallel roadways. The diversion potential would be similar to the Enhanced Existing Alternative. Couch Street within the couplet area does have a significant amount of diversion to it. For the purposes of rating and comparing, Couch Street was not considered as a "parallel" roadway impacted by diversion because it is part of the couplet system.

PROPOSED COUPLET

The following is a narrative description of the thought process behind how this particular alternative was evaluated from both a qualitative and quantitative perspective.

Evaluation Scale

□	◻	◼	■
Low	Medium	High	

15 th Ave to 24 th Place	Park Ave to 15 th Ave	2 nd Ave to Park Ave
◻	■	■
◻	■	■
■	■	◻
□	◻	◻
■	■	◻
□	□	◻
■	■	◻

AUTO SAFETY

The couplet area removes opposing traffic to left turns, which eliminates potential conflict points for motor vehicles. Within the couplet area the auto safety would have a perceived benefit. Beyond the couplet area, the alternative would operate similar to the no-build alternative.

PEDESTRIAN SAFETY

The couplet alternative significantly reduces pedestrian crossing distances from 8th Avenue to 2nd Avenue. Two new signals at 22nd Avenue and 20th Place allow for new crossing opportunities of W Burnside. This is similar to the Enhanced Existing, so to the west of 8th Avenue this alternative has similar pedestrian characteristics as the Enhanced Existing.

VEHICLE OPERATIONS

The couplet area allows for better progression along W Burnside than two-way operations does, however there are some additional signals in place along the couplet so that can add to potential travel time and signal delay. The new signals along the corridor are at 22nd Avenue, 20th Place, 9th Avenue, Park Avenue and 8th Avenue.

VEHICLE ACCESS/CIRCULATION

The couplet area has additional opportunities to turn left, however with a couplet there is a system of one-way streets in place which can create some additional out of direction travel in comparison to some other alternatives that have two-way circulation on W Burnside with left turns. For this reason the couplet area has been rated slightly lower than the 5-4-3 Alternative, Two-lane (1/1/1) and Two-lane (2/1) Alternatives, but similar to Enhanced Existing and better than the No-build Alternative. West of the couplet area the same no-build access and circulation would exist.

TRANSIT OPERATIONS

The couplet area has a shorter crossing distance of W Burnside, which is beneficial for the proposed light rail transit for crossing time of W Burnside. Beyond the couplet area, the alternative would operate similar to the no-build alternative.

BICYCLE MOBILITY

The bicycle operations are similar in this alternative to the no-build alternative with the exception that the couplet allows for additional opportunity to add bicycle facilities on W Burnside from approximately 3rd Avenue to the Burnside Bridge. Therefore this alternative is rated slightly higher than the no-build alternative.

DIVERSION ACCEPTABILITY

With the exception of Couch Street (the complement to W Burnside for the couplet) there is minimal diversion to surrounding parallel roadways. The diversion potential would be similar to the Enhanced Existing Alternative. Couch Street within the couplet area does have a significant amount of diversion to it. For the purposes of rating and comparing, Couch Street was not considered as a "parallel" roadway impacted by diversion because it is part of the couplet system.

BURNSIDE ALTERNATIVES TRANSPORTATION EVALUATION MATRIX

The following matrix attempts to compare all alternatives evaluated in a “Consumer Reports” fashion by ranking the relative performance of each alternative using a Low, Medium and High standard. Additional details as to how each alternative was ranked for each category can be found in the Alternatives Narrative following this matrix.

Location/Measure of Effectiveness How well does each alternative address the evaluation criteria? Evaluation Scale <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Low Medium High	No-build Alternative	Enhanced Existing	5-4-3 Alternative	Three-lane (1/1/1)	Three-lane (2/1)	Truncated Couplet	Proposed Couplet
2nd Avenue to Park Avenue							
<i>Auto Safety</i>	<input checked="" type="checkbox"/>						
<i>Pedestrian Safety</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Vehicular Operations</i>	<input checked="" type="checkbox"/>						
<i>Access/Circulation</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Transit Operations</i>	<input checked="" type="checkbox"/>						
<i>Bicycle Operations</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
<i>Surrounding Roadways Ability to Accept Diversion</i>	<input checked="" type="checkbox"/>						
Park Avenue to 15th Avenue							
<i>Auto Safety</i>	<input checked="" type="checkbox"/>						
<i>Pedestrian Safety</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Vehicular Operations</i>	<input checked="" type="checkbox"/>						
<i>Access/Circulation</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Transit Operations</i>	<input checked="" type="checkbox"/>						
<i>Bicycle Operations</i>	<input type="checkbox"/>						
<i>Surrounding Roadways Ability to Accept Diversion</i>	<input checked="" type="checkbox"/>						
15th Avenue to 24th Place							
<i>Auto Safety</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Pedestrian Safety</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Vehicular Operations</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Access/Circulation</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Transit Operations</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Bicycle Operations</i>	<input type="checkbox"/>						
<i>Surrounding Roadways Ability to Accept Diversion</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

SOURCE: DKS Associates