

Scoring for North Henderson Alternatives

Evaluation Criteria	Scores									
	Tunnel	Convey and Store (Orcas Pump Station + Tank in Martha Washington Park)	Complete Separation	Distributed Storage (comprised of one element from Basin 44 and one element from Basin 45 below)						Distributed Storage
				Basin 44: Tank in Seward Park	Basin 44: Pipe in Lake Washington Boulevard	Basin 44: Tank in Private Property	Basin 45: Tank in Martha Washington Park	Basin 45: Pipe in 57th Ave	Basin 45: Tank in Private Property	
I. Minimize Long-term Life Cycle Cost (including capital, operating, maintenance and replacement) Cost in millions.	\$85.000	\$82.500	\$106.500	\$59.100	\$103.900	\$63.600	\$8.700	\$10.800	\$10.000	\$67.800
II. Maximize non-monetary value resulting from alternatives										
A. Increase open space in the neighborhood	1.0	1.0	1.0	1.0	1.0	3.0	1.0	1.0	3.0	1.0
B. Provides environmental benefit or limits impact to the environment										
b1). Provide comprehensive solution to all environmental needs (i.e. stormwater treatment and CSO)	1.0	1.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
b2). Create other environmental benefit (beyond water quality) or limit environmental impact	2.0	2.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
b3). Preserve tree quantity and quality	2.0	2.0	1.0	1.0	2.0	2.0	2.0	1.0	2.0	1.0
C. Limit short-term construction impacts										
c1). Disproportionate short-term impacts to property owners (noise, odor, visual, access to property)	2.0	2.0	1.0	3.0	1.0	2.0	3.0	1.0	2.0	3.0
c2). Short-term neighborhood traffic impacts including LW Boulevard	3.0	2.0	1.0	3.0	1.0	3.0	3.0	2.0	3.0	2.0
c3). Short-term park impacts	1.0	1.0	3.0	1.0	1.0	3.0	1.0	2.0	3.0	1.0
D. Preserve homes and private property	2.0	3.0	3.0	3.0	3.0	1.0	3.0	3.0	1.0	3.0
E. Preserve Park use and character of design										
e1). Preserve use of Martha Washington Park and character of park design	1.0	1.0	3.0	3.0	3.0	3.0	1.0	2.0	3.0	1.0
e2). Preserve use of Seward Park and character of park design	2.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	2.0
e3). Preserve use of Lake Washington Blvd. and character of park design	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0
F. Limit impact from operation and maintenance (noise, odor, traffic, duration and frequency of maintenance and	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

Community Evaluation Criteria for North Henderson Alternatives

		Performance Measures		
		Best=3	Medium=2	Worst=1
A. Increase open space in the neighborhood	Square feet of additional open space created resulting in increased accessibility and availability	Significant increase in open space	Moderate increase in open space	No increase in open space
B. Provides environmental benefit or limits impact to the environment				
b1). Provide comprehensive solution to all environmental needs (i.e. stormwater treatment and CSO)	To what level does the alternative provide a comprehensive solution for both stormwater treatment and CSO?	Alternative completely provides SW and CSO solutions	Alternative provides CSO remedy with some treatment	Alternatives provides CSO remedy with little treatment
b2). Create other environmental benefit (beyond water quality) or limit environmental impact	To what level does the alternative provide other environmental benefits or limit environmental impacts?	Alternative likely to result in environmental benefit beyond water quality	No noticeable effect on the environment other than water quality is anticipated	Alternative likely to result in environmental impacts that cannot be easily mitigated
b3). Preserve tree quantity and quality	Trees removed (number of trees, canopy area of trees removed)	Disruption will be minimal during construction and impacts could be easily mitigated.	Disruption will be high during construction but could be easily mitigated.	Disruption will be high during construction and cannot be easily mitigated.
C. Limit short-term construction impacts				
c1). Disproportionate short-term impacts to property owners (noise, odor, visual, access to property)	To what level does the alternative limit disproportionate impacts to property owners including: minimizing short term damage to individual properties; minimizing the	Disruption will be minimal during construction and impacts could be easily mitigated.	Disruption will be high during construction but most issues could be mitigated.	Disruption will be high during construction and cannot be easily mitigated.
c2). Short-term neighborhood traffic impacts including LW Boulevard	To what extent will vehicular mobility in the neighborhood be affected?	Disruption will be minimal during construction and impacts could be easily mitigated.	Disruption will be high during construction but could be easily mitigated.	Disruption will be high during construction and cannot be easily mitigated.
c3). Short-term park impacts	To what extent will the alternative impact park use?	Disruption will be minimal during construction and impacts could be easily mitigated.	Disruption will be high during construction but could be easily mitigated.	Disruption will be high during construction and cannot be easily mitigated.
D. Preserve homes and private property	To what level does the alternative impact private property?	No impact to Private Property	Some temporary impacts to private property	Private property is acquired for alternative
E. Preserve Park use and character of design				
e1). Preserve use of Martha Washington Park and character of park design	How well does the alternative minimize impact to Martha Washington Park, and improve character and design of park?	No impact to MW Park	Minor impact to MW Park	Permanent change in current use of park
e2). Preserve use of Seward Park and character of park design	How well does the alternative minimize impact to Seward Park, and improve character and design of park?	No impact to Seward Park	Minor impact to Seward Park	Permanent change in current use of park
e3). Preserve use of Lake Washington Blvd. and character of park design	How well does the alternative minimize impact to Lake Washington Blvd. and improve character and design Blvd.?	No impact to Lake Washington Blvd.	Minor impact to Lake Washington Blvd.	Permanent change in current use of park
F. Limit impact from operation and maintenance (noise, odor, traffic, duration and frequency of maintenance and operation, scale of equipment)	To what extent does the alternative limit impact from operation and maintenance, including: noise, odor, and traffic impacts; duration and frequency of maintenance and operation; and, scale of equipment used?	<p>The facility requires no operating staff or can be remotely operated. Peak staff times require < 1 operator. The facility can be shut down with minimal staff time. Cleanup work is automated or can be scheduled to be integrated with other staff duties.</p> <p>The facilities only require annual preventive maintenance. The processes have minimal mechanical/instrumentation components (i.e., storage tank). Reliable in intermittent use.</p>	<p>The facility can generally be remotely operated. An operator may need to be present periodically for sampling, chemical make-up, chemical delivery acceptance or other discrete tasks. Peak staff times require 1-2 operators. The facility can be shut down with minimal staff time. Cleanup work is generally automated; however, 1-2 personnel may be required.</p> <p>The facilities require monthly maintenance such as bumping pumps. The processes have an increasing level of mechanical/instrumentation components (i.e., pump station).</p>	<p>The facility requires operator attention during the event. Peak staff times require 2 or more operators. The facility requires significant effort for shut down (e.g., vac/boom truck, several days for cleanup). Cleanup work is generally manual with 2 or more personnel required for more than one day. Most procedures of shutdown need to be conducted immediately.</p> <p>The facilities require monthly maintenance such as bumping pumps. The processes have an increasing level of mechanical/instrumentation components (i.e., treatment facility). Equipment is prone to failure with intermittent use.</p>

Value	Description of Rationale for Scoring (1-3)
A. Increase open space in neighborhood	<ul style="list-style-type: none"> • Alternatives which included private property acquisition (Basin 44: Tank in Private Property and Basin 45: Tank in Private Property) received a 3 (best) for this value, because the open space above the tank could be converted to park open space after the project is completed. • All other alternatives received a 1 (worst) since they did not result in additional open space in the neighborhood.
B. Provides environmental benefit or limits impact to environment	
b1) Provide comprehensive solution to all environmental needs (i.e., stormwater treatment and CSO)	<ul style="list-style-type: none"> • The complete separation alternative received a 3 (best) for this value, because it will include both stormwater treatment and reduction in CSOs. • All other alternatives received a 1 (worst) since they only reduce CSOs and do not involve stormwater treatment.
b2) Create other environmental benefit (beyond water quality) or limit environmental impact	<ul style="list-style-type: none"> • The complete separation alternative received a 3 (best) for this value because it could result in new green stormwater infrastructure (GSI) to treat stormwater. • The Basin 44 (Tank in Seward Park) alternative received a 3 (best) for this value because it could be coupled with a habitat/beach restoration project on the South side of Seward Park. • The rest of the alternatives received a 2 (medium) because it is not expected that they will result in any additional environmental benefit.
b3) Preserve tree quantity and quality	<ul style="list-style-type: none"> • The complete separation alternative, Basin 44 (Tank in Seward Park), and Basin 45 (Pipe in 57th Ave S.) all received a 1 (worst) for this value, because those alternatives would involve significant tree removal in the parks or on private properties. • The rest of the alternatives received a 2 (medium) because they would result in minimal tree removal.
C. Limit short-term construction impacts	
c1) Disproportionate short-term impacts to property owners (noise, odor, visual, access to property)	<ul style="list-style-type: none"> • The complete separation alternative received a 1 (worst) for this value because it will have significant impacts on homeowners, including digging up driveways and landscaped areas around homes. • The Basin 44 (Pipe in Lake Washington Blvd) and Basin 45 (Pipe in 57th Ave S) alternatives received a 1 (worst) for this alternative, because they will both restrict access to private properties during construction. • The alternatives in parks (Basin 44 – Tank in Seward Park and Basin 45 – Tank in Martha Washington Park) received a 3 (best) for this alternative, because they are slightly removed from private properties. • The rest of the alternatives received a 2 (medium) because property owners would not have restricted access to their homes, however, the impacts to property owners would be in closer proximity than the parks alternatives.
c2) Short-term neighborhood traffic impacts including Lake Washington Blvd	<ul style="list-style-type: none"> • The complete separation alternative received a 1 (worst) for this value because it will have significant impacts on every road within the two basins; roads will be dug up to replace sewers, side sewers, and to add new storm drain mains. • The Lake Washington Blvd alternative received a 1 (worst) for this value because it is an arterial and a major cycling route, and it would be closed down for the majority of the construction duration. • The private property alternatives (Basin 44 – Tank in Private Property and Basin 45 – Tank in Private Property), the parks alternatives (Basin 44 – Tank in Seward Park, Basin 45 – Tank in Martha Washington Park), and the Tunnel alternative received a 3 (best) because there would be not be road shut-downs for long durations. • The convey and store alternative and the Basin 45 (Pipe in 57th Ave S) alternative both received a 2 (medium) because they would require longer duration road shut-downs; however, the impacted roads are not major arterials.

c3) Short-term park impacts	<ul style="list-style-type: none"> • The tunnel alternative, convey and store alternative, Basin 44 (Tank in Seward Park), Basin 44 (Tank in Lake Washington Blvd), and Basin 45 (Tank in Martha Washington Park) all received a 1 (worst) for this value because they would have significant short-term impacts to parks. • The Basin 45 (Pipe in 57th Ave S) alternative received a 2 (medium) for this value because it will have a smaller impact to Martha Washington Park. • All other alternatives received a 3 (best) for this value, because they would not have any impacts on parks.
D. Preserve homes and private property	<ul style="list-style-type: none"> • The private property alternatives (Basin 44 – Tank in private property and Basin 45 – Tank in private property) received a 1 (worst) for this value, because they will require acquisition of private property. • The tunnel alternative received a 2 (medium) for this value, because it will require subsurface easements from property owners. • All other alternatives received a 3 (best) for this value, because they will not involve private property acquisition.
E. Preserve Park use and character of design	
e1) Preserve use of Martha Washington Park and character of park design	<ul style="list-style-type: none"> • The tunnel alternative, convey and store alternative, and Basin 45 (Tank in Martha Washington Park) all received a 1 (worst) for this value because they would add new hatches and hard surfaces in the existing green space of Martha Washington Park. • The Basin 45 (Pipe in 57th Ave S) alternative received a 2 (medium) for this value because it will require tree removal on the South side of Martha Washington Park. • All other alternatives received a 3 (best) for this value, because they would not have any impact on Martha Washington Park.
e2) Preserve use of Seward Park and character of park design	<ul style="list-style-type: none"> • The tunnel alternative and the Basin 44 (Tank in Seward Park) received a 2 (worst) for this value because they add new hatches in the parking area of the park. • All other alternatives received a 3 (best) for this value, because they would not have any impacts on parks.
e3) Preserve use of Lake Washington Blvd and character of bouelvard design	<ul style="list-style-type: none"> • The Basin 44 (Tank in Lake Washington Blvd received a 2 (medium) for this value because it would add new hatches along Lake Washington Blvd and would require some cut-back of trees. • All other alternatives received a 3 (best) for this value, because they would not change the use or character of Lake Washington Blvd.
F. Limit impact from operation and maintenance (noise, odor, traffic, duration and frequency of maintenance)	<ul style="list-style-type: none"> • All alternatives received a 2 (medium) for this value, because they would require some regular maintenance of mechanical equipment either in a park or adjacent to private property owners.