

Puget Sound Gateway Program: Phase 1, Stage 2 of the SR 509 Completion Project

NEPA/SEPA Environmental Reevaluation: SR 509/24th Avenue South to South 188th Street – New Expressway (SR 509 Stage 2) Project

23 CFR §771.129

Washington State Department of Transportation/Federal Highway Administration

REGION/MODE HQ/Mega Programs	SR I-5/SR 509	PROJECT PROGRAM# M00600R	FEDERAL AID # N/A	PROJECT# 150907E/G
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PROJECT TITLE, ENVIRONMENTAL DOCUMENT TYPE & DATE APPROVED:

- 1) SR 509: Corridor Completion/I-5/South Access Road, Final Environmental Impact Statement and Section 4(f) Evaluation, January 2003. Approved by signatory agencies Federal Highway Administration, Washington State Department of Transportation, City of Des Moines, City of Sea Tac, Port of Seattle, and King County on January 6, 2003.
- 2) SR 509: Corridor Completion/I-5/South Access Road, Record of Decision, March 2003. Approved by signatory agency Federal Highway Administration on March 20, 2003.
- 3) Puget Sound Gateway Program, Phase 1 of the SR 509 Completion Project, Environmental Reevaluation. Approved by signatory agencies FHWA and WSDOT in January 2018.
- 4) Puget Sound Gateway Program, Phase 1 of the SR 509 Completion Project, Stage 1b, Environmental Reevaluation. Approved by signatory agencies FHWA and WSDOT in March 2020.
- 5) Puget Sound Gateway Program, Phase 1 of the SR 509 Completion Project, Stage 1b, Environmental Reevaluation. Approved by signatory agencies FHWA and WSDOT in February 2022.

REASON FOR REEVALUATION:

The purpose of this Reevaluation is to determine how recent design revisions for the SR 509/24th Avenue South to South 188th Street – New Expressway (SR 509 Stage 2) Project would affect the natural and built environment and whether those effects are substantially different from the effects described in the Final Environmental Impact Statement (EIS), Record of Decision (ROD), and subsequent environmental Reevaluations.

DESCRIPTION OF CHANGED CONDITIONS:

WSDOT has revised the design as follows:

- Roundabouts have been added to the ramp terminals at the S 160th Street interchange, and two new noise walls are recommended at the interchange: one wall in the southwest quadrant and one wall in the northeast quadrant.
- Roundabouts have been added to the ramp terminals at the S 188th Street/Des Moines Memorial Drive interchange, and the interchange configuration has been revised to a diamond with a folded southbound on-ramp.
- The new four-lane expressway between S 188th Street and 24th Avenue S. has been adjusted such that the bridge over Wetland 23.05 has been revised from the 900-foot-long bridge evaluated in the 2003 FEIS and 2018 Re-evaluation to a 355-foot-long bridge.
- The location of select stormwater facilities has been revised.
- The I-5 southbound auxiliary lane has been revised such that a short section of widening from S 259th Street to just north of S 272nd Street will occur toward the inside median instead of toward the outside lane.

HAVE ANY NEW OR REVISED LAWS OR REGULATIONS BEEN ISSUED SINCE APPROVAL OF THE LAST ENVIRONMENTAL DOCUMENT THAT AFFECT THIS PROJECT?

YES () NO (X) (If yes explain, use additional sheets if necessary)

WILL THE CHANGED CONDITIONS AFFECT THE FOLLOWING DIFFERENTLY THAN DESCRIBED IN THE ORIGINAL ENVIRONMENTAL DOCUMENT? (If yes, attach a detailed summary addressing the impacts and mitigation)

	YES	NO		YES	NO
1) THREATENED or ENDANGERED SPECIES	()	(X)	5) HAZARDOUS WASTE SITES	()	(X)
2) PRIME and UNIQUE FARMLAND	()	(X)	6) HISTORIC or ARCHAEOLOGICAL SITES	()	(X)
3) WETLANDS	(X)	()	7) 4 (f) LANDS	()	(X)
4) FLOODPLAINS	()	(X)	8) 6 (f) LANDS	()	(X)

WILL THESE CHANGES RESULT IN ANY CONTROVERSY? YES () NO (X) (If yes explain)

WILL THESE CHANGES CAUSE ADVERSE IMPACTS IN THE FOLLOWING AREAS: (If yes, address comments below.)

	YES	NO		YES	NO
1) AIR QUALITY	()	(X)	7) WATER QUALITY	()	(X)
2) NOISE	()	(X)	8) VISUAL QUALITY	()	(X)
3) LAND USE	()	(X)	9) NATURAL RESOURCES and ENERGY	()	(X)
4) TRAFFIC or TRANSPORTATION	()	(X)	10) PUBLIC SERVICES and UTILITIES	()	(X)
5) DISPLACEMENT (business or residence)	()	(X)	11) VEGETATION and WILDLIFE	()	(X)
6) ECONOMIC GROWTH and DEVELOPMENT	()	(X)	12) RECREATION	()	(X)
			13) SOCIAL IMPACTS	()	(X)

COMMENTS:

The revised design addressed by this Reevaluation does not substantially change the overall impacts that were discussed in the previously prepared project documents list at the top of this form (see Attachment 1).

- WSDOT will implement the minimization measure to span all Category II wetlands except at Wetland 23.05 (Wetland B). The impacts from the two-span bridge over Wetland 23.05 (Wetland B) will be mitigated for at the AMB "Advance" mitigation site which is located directly adjacent to the impact. There are currently enough credits to offset the permanent direct impacts from a shorter bridge and there will be no net loss of wetland acreage and function.
- The minimization measure to cross all streams with bridges and design them to comply with WDFW criteria for safe fish passage included in the 2003 FEIS will not be applied to the two newly identified stream channels and fish barriers. WSDOT will continue to engage and collaborate with the Puyallup Tribe of Indians (PTOI) to develop a barrier correction strategy that addresses the UNT to West Fork Des Moines Creek (935212) and UNT to South Fork McSorley Creek (935070) sites. These fish barriers are being addressed as independent projects and will be evaluated in a separate NEPA document.

CONCLUSIONS and/or RECOMMENDATIONS:

Changes as noted above would not result in new significant adverse effects. SR 509 Stage 2 remains compliant with current federal, state, local, and departmental regulations and directives with regard to National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) processes. This Reevaluation form and the Attachments demonstrate that there would be no new significant effects resulting from the proposed changes as compared to the Final EIS that was approved in January 2003, the ROD that was approved in March 2003, and the NEPA Reevaluations that were approved in January 2018, March 2020, and February 2022.

I concur with the conclusions and recommendations above.

WSDOT Official

FHWA Official

Date

Date

ATTACHMENT 1

DESCRIPTION OF CHANGED CONDITIONS AND EFFECTS

**Environmental Re-evaluation/Consultation Form for
SR 509/24th Avenue South to South 188th Street – New Expressway (SR 509 Stage 2) Project**

- Final Environmental Impact Statement, approved January 2003
- Record of Decision, approved March 2003
- NEPA/SEPA Environmental Re-evaluation: Phase 1 of the SR 509 Completion Project, approved January 2018
- NEPA/SEPA Environmental Re-evaluation: Stage 1b of the SR 509 Completion Project, approved March 2020
- NEPA/SEPA Environmental Re-evaluation: Stage 1b of the SR 509 Completion Project, approved February 2022

The purpose of this re-evaluation is to document National Environmental Policy Act (NEPA), State Environmental Policy Act (SEPA), Endangered Species Act (ESA), and Section 106 and 4(f) compliance for the SR 509 Stage 2 Project (Stage 2 Project) associated with design refinements at S 160th Street interchange, S 188th Street interchange, the new SR 509 corridor, and the southbound auxiliary lane on Interstate 5 between SR 516 and S. 272nd Street. The design refinements were evaluated along with any changed conditions to determine if the Stage 2 Project would cause significant environmental impacts that were not evaluated in the SR 509: Corridor Completion/I-5/South Access Road's Final Environmental Impact Statement (Final EIS) and Section 4(f) Evaluation (January 2003) (23 CFR 771.129; 23 CFR §771.130(b)(1)).

Since completion of the Final EIS and ROD (FHWA 2003), WSDOT has advanced Phase 1 (which consists of Stages 1a, 1b and 2) of the SR 509 Corridor Completion Project with the following:

- Completion of a 2018 NEPA Re-evaluation for Phase 1 Improvements
- Completion of a 2020 NEPA Re-evaluation for Stage 1b Improvements
- Began construction of the Stage 1a and 1b improvements
- Continued design work on the Stage 2 Project and acquisition of right-of-way:
- Continued coordination with the Cities of Burien, SeaTac, Des Moines and Kent,
- Reinitiated coordination with resource agencies and Tribes to discuss potential impacts to natural resources and mitigation
- Engaged the Muckleshoot Indian Tribe Fisheries Division staff and Puyallup Tribe of Indians Fisheries Department staff to address wetland/stream mitigation and fish barrier correction

Figure 1 identifies the general limits for Phase 1 (the Stage 1a, Stage 1b and Stage 2 Projects). The Stage 2 Project is the subject of this re-evaluation. This re-evaluation describes the changed conditions and how the proposed design refinements for the Stage 2 Project would affect the natural and built environment and whether those effects differ from the effects described in the Final EIS and Record of Decision (2003 FEIS and ROD) and 2018 Re-evaluation for the Phase 1 Improvements. **Figure 2** depicts the SR 509 Stage 2 Project elements and most current design refinements in the context of the 2003 Final EIS and 2018 Re-evaluation.

DESCRIPTION OF DESIGN CHANGES

WSDOT has further refined the SR 509 Stage 2 Project elements since issuance of the Final EIS and the 2018 Re-evaluation. **Figure 3 and Figure 4** along with the following subsections describes the current Stage 2 Project and highlights the design refinements that are subject to this re-evaluation in more detail.

S 160th Street Interchange Improvements

- Improvements at the S 160th Street Interchange were identified as traffic mitigation in the 2018 Re-evaluation. Subsequent to the 2018 Re-Evaluation, an Interchange Control Evaluation (ICE) (see **Attachment A**) was prepared and determined that traffic would be controlled by roundabouts at both of the non-signalized ramp terminals. Pedestrian crossings would also be provided at both ramp terminals on the north side of S 160th Street to accommodate the existing sidewalk. See **Figure 5** for updated the channelization.
- Two new noise walls will be constructed at the interchange: one wall in the northwest quadrant and one wall in the northeast quadrant.

S 188th Street/Des Moines Memorial Drive (DMMD) Interchange Improvements

- The interchange configuration at S 188th Street/Des Moines Memorial Drive has been revised to include a -diamond interchange with a folded southbound on-ramp. The footprint of the interchange is smaller than the footprint of the Single-Point Urban Interchange evaluated in the 2003 Final EIS. Subsequent to the 2018 Re-evaluation, an ICE (see **Attachment B**) was prepared and determined that traffic would be controlled by roundabouts at the ramp terminals instead of signals. A non-motorized multi-use path would be provided on the south side of Des Moines Memorial Drive (DMMD) throughout the interchange area, as pedestrians are restricted on the northeast side of the interchange due to the proximity to Sea-Tac International Airport. See **Figure 6** for the updated channelization.

SR 509, S 188th Street to 24th Ave S

- The SR 509 Expressway between S 188th Street and 24th Ave S is approximately 40-feet narrower than the six-lane roadway evaluated in the 2003 Final EIS and is largely consistent with what was evaluated in the 2018 Re-evaluation. As was evaluated previously, the Stage 2 Project will construct bridges at the following locations:
 - SR 509 bridge over Des Moines Memorial Drive/South 188th Street
 - SR 509 bridge over Wetland 23.05 (Wetland B)
 - South 192nd Street bridge over SR 509
 - SR 509 bridge over Des Moines Memorial Drive (DMMD)
 - SR 509 bridge over Wetland 21.75 (Wetland A) and Des Moines Creek
- The bridge over Wetland 23.05 has been revised from the 900-foot-long bridge evaluated in the 2003 FEIS and 2018 Re-evaluation to a 355-foot-long bridge. The shorter bridge over Wetland 23.05 results in substantially improved roadway geometry for the mainline and northbound ramps to and from S. 188th Street/Des Moines Memorial Drive, simplifies the structure over Des Moines Memorial Drive, and reduces the amount of new roadway/pavement within the SeaTac Airport runway protection zone. The shorter bridge spans the wetland to the extent practicable, maintains wetland connectivity to the AMB Advance Mitigation site, and accommodates the Lake to Sound Trail undercrossing.

I-5, Southbound Auxiliary Lane between S 272nd Street and SR 516

- The roadway profile and alignment of the southbound auxiliary lane is narrower than the two southbound lanes that were evaluated in the 2003 FEIS and is largely consistent with what was previously evaluated in the 2018 Re-evaluation. The design has been revised such that a short section of widening from S 259th Street to just north of S 272nd Street will occur toward the inside median instead of toward the outside lane. See **Figure 4**.

Stormwater Treatment Design

- The overall stormwater management approach is largely consistent with what was previously evaluated in the 2018 Re-evaluation with the following minor revisions to the locations of proposed stormwater facilities:
 - Pond B2 has been reconfigured and shifted slightly south to avoid impacts on Wetland 22.65.
 - Pond J has been removed, and the Midway Landfill Detention Pond (a regional facility) will be used instead to detain runoff from the Project.
 - Bioretention areas and a media filter drain will be constructed at the NE 160th Street interchange to treat stormwater runoff from the Project.
- As was previously evaluated, the existing and new drainage systems would provide treatment that conforms to accepted best management practices (BMPs) outlined in the WSDOT *Highway Runoff Manual* (WSDOT 2019) and, as applicable, will meet local jurisdictional requirements, including the King County Surface Water Design Manual (King County 2016) and the Des Moines Creek Basin Plan (1997).

AGENCY AND TRIBAL OUTREACH

Local, state, and federal agencies are actively involved in the development of the SR 509 Completion Project. WSDOT holds regular meetings with the Port of Seattle, King County and the Cities of Kent, Des Moines, Burien, and SeaTac to communicate and collaborate about the Project. WSDOT is also working with the Washington State Department of Archaeology and Historic Preservation (DAHP), U.S. Army Corps of Engineers (USACE), Washington State Department of Ecology (Ecology), and Washington Department of Fish and Wildlife (WDFW) to discuss potential Project impacts and minimization measures and to obtain permits and approvals needed to construct the Project.

WSDOT has also participated in government-to-government consultation with the following four federally recognized tribes since the beginning of the Gateway Program: Muckleshoot Indian Tribe (MIT), Puyallup Tribe of Indians (PTOI), Snoqualmie Tribe, and the Confederated Tribes and Bands of the Yakama Nation. WSDOT also consulted with the Duwamish Tribe (non-federally recognized) as an interested party. Tribal representatives have been provided opportunities to review and comment on the Section 106 Area of Potential Effects (APE) and draft survey reports for cultural resources. In addition to consulting on cultural resources, WSDOT initially coordinated with the MIT regarding the Stage 2 Project mitigation site. The MIT was also involved in early discussions regarding the two fish passage barriers within the Project limits. As coordination progressed, the MIT indicated that they would defer to the Puyallup Tribe of Indians (PTOI) on this Project. Beginning in April 2021, tribal coordination efforts shifted to occur primarily between WSDOT and PTOI to resolve fish barrier corrections; however, these fish barriers are being addressed as independent projects and will be evaluated in a separate NEPA document.

ANALYSIS OF CHANGED CONDITIONS AND EFFECTS

FHWA and WSDOT reviewed the affected environment for changed conditions and evaluated the design refinements for the Stage 2 Project to determine whether any new significant environmental impacts, beyond those described in the Final EIS, ROD, and 2018 Re-evaluation would result from the Stage 2 Project design refinements. Specific resources that have the potential to be affected by either changed conditions or design refinements are described below.

Transportation

Improvements at the S 160th Street interchange are in response to the following transportation impacts and mitigation measures that were identified in the 2018 Re-evaluation:

- The SR 509 southbound ramps/S 160th Street intersection LOS would deteriorate due to the stop-controlled southbound off-ramp left-turn movement (which only affects 15 vehicles per hour (Vph)). Possible mitigation measures to improve this intersection include signalization or conversion to a roundabout.
- The SR 509 northbound ramps/S 160th Street intersection LOS would deteriorate due to high delays experienced by the stop-controlled northbound off-ramp left-turn movement caused by increased volume on S 160th Street, as the SR 509 extension would attract more demand. Possible mitigation measures to improve this intersection include conversion to an all-way, stop-controlled intersection.

The original 2003 FEIS included a single-point-urban-interchange configuration at the at the SR 509/S 188th Street/DMMD interchange. The 2018 Re-evaluation included a half-diamond interchange configuration that would not preclude a full diamond if additional funding became available. Since the 2018 Re-evaluation, there has been subsequent legislation which has included enough funding to build a full interchange. Therefore, the SR 509/S 188th Street/DMMD interchange configuration has been revised as a diamond with a folded southbound on-ramp which provides access in both the north and south directions.

Subsequent to the 2018 Re-Evaluation, two Interchange Control Evaluations (ICEs) were prepared to evaluate traffic control options at both the SR 509/160th Street interchange and the revised SR 509/S 188th Street/DMMD diamond interchange (see **Attachments A and B**). The ICE for the SR 509/S 160th Street Interchange evaluated an all-way stop control, which is the current configuration (No Build alternative), a signalized control, and a roundabout configuration. The ICE for the SR 509/S 188th Street/DMMD interchange evaluated a signalized control, and a roundabout configuration. Both ICEs recommended the roundabout designs based on the related peak hour traffic operations, safety performance, right-of-way impacts, environmental concerns, physical and geometric constraints, sustainable design, and costs.

Information related to traffic operations is summarized below and indicates that with the roundabout designs, traffic would operate well above the LOS standards and there would be **no new impacts** that were not previously identified in the 2003 FEIS. As summarized below, the roundabouts would promote a continuous flow of traffic as compared to the existing stop-controlled or signalized intersection. No new or revised mitigation measures would be required.

S 160th Street Interchange Improvements

The estimated LOS at each of the ramp terminals is listed in **Table 1**. The LOS analysis indicates that the roundabout configuration at SR 509/S 160th Street interchange would operate at LOS A at both ramp terminals with no queues anticipated to spill back to adjacent intersections. No new or revised mitigation measures would be required for proposed refinements to the SR 509/S 160th Street interchange.

Table 1. Level of Service and Delay at SR 509/S 160th Street interchange					
Year	Intersection	No Build		Roundabouts	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
2030	SR 509 SB Ramps/S 160th St	C	D	A	A
	SR 509 NB Ramps/5th Pl S/ S 160th St	E	F	A	A
2045	SR 509 SB Ramps/S 160th St	C	F	A	A
	SR 509 NB Ramps/5th Pl S/ S 160th St	F	F	A	A

S 188th Street/Des Moines Memorial Drive Interchange Improvements

The estimated LOS at each of the ramp terminals is listed in **Table 2**. The LOS analysis indicates that the ramp terminals for both the signalized and roundabout configurations and adjacent intersections would operate well above the LOS standard of D, with no queues anticipated to spill back to adjacent intersections. No new or revised mitigation measures would be required for proposed refinements to the SR 509/S 188th Street/DMMD interchange.

Table 2. Level of Service and Delay at SR 509/S 188 th Street/DMMD interchange					
Year	Intersection	Signalized LOS		Roundabouts LOS	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
2030	8 th Ave S/DMMD	B	A	B	A
	SR 509 SB Ramps/DMMD	B	B	A	B
	DAR 509 NB Ramps/DMMD	A	A	A	A
	DMMD/Starling/S 188 th St	C	C	C	C
2045	8 th Ave S/DMMD	B	B	B	B
	SR 509 SB Ramps/DMMD	B	B	A	B
	DAR 509 NB Ramps/DMMD	A	A	A	A
	DMMD/Starling/S 188 th St	C	C	C	C

Non-motorized Facilities

Design refinements for the Stage 2 Project would further enhance non-motorized transportation by providing new pedestrian crossings at both ramp terminals on the north side of S 160th Street and the non-motorized path along the south side of 188th/DMMD interchange area. This was not considered in the 2003 FEIS or the 2018 Re-evaluation.

In addition, WSDOT continues to contribute funding for the Lake to Sound Trail, which was identified as mitigation in the 2003 FEIS. The Lake to Sound Trail Segment C construction is scheduled to be complete in 2023.

Noise

Traffic noise was re-evaluated to include an expanded study area. Since the Stage 2 Project includes improvements at the S 160th Street Interchange, the noise study area was correspondingly increased to capture the SR 509 corridor between 188th/DMMD Interchange and the S 160th Street Interchange. This segment of roadway was not previously evaluated. WSDOT prepared a Noise Impact Technical Memorandum (2021) to evaluate potential noise impacts to sensitive receptors within the added study area. (see **Attachment C**).

Impacts

Traffic noise impacts occur when predicted noise levels approach or exceed noise abatement criteria (NAC) established by the FHWA, or substantially exceed existing noise levels. WSDOT considers a noise impact to occur if predicted noise levels approach within 1 A-weighted decibels (dBA) of the NAC. The NAC for residential (single- and multifamily units) is 67 dBA. Noise abatement was considered at locations where traffic noise levels were predicted to be 66 dBA or greater with or without the project.

The dominant existing sound source within the added study area for this noise analysis is traffic noise from SR 509. Traffic on Des Moines Memorial Drive as well as South 160th Street are also significant noise sources. Land uses within the study area are primarily single-family residences. There are multi-family residences near the South 160th Street interchange. There are no existing noise walls within the study area. SeaTac International Airport Level Day-Night sound contours do not overlap any receptors within the study area, although airplanes are often audible throughout the study area.

A total of 534 receivers were modeled to determine traffic noise levels. Under existing conditions, the model indicates that sound levels range between 36 and 70 dBA and that 53 receptors experience noise levels that approach or exceed the NAC (**Table 3**). Without the project, traffic volumes are projected to remain similar to existing conditions for the next 25 years and in the year 2045, the model predicted noise levels would range between 45 dBA and 74 dBA and fewer receptors (31) would experience noise levels that approach or exceed the NAC. In the year 2045, with the Project (i.e., build condition), the model predicted noise levels would range between 39 dBA and 73 dBA. There would be 99 receptors that would experience noise levels that approach or exceed the NAC.

Condition	Range of Sound Levels (dBA)	Locations where noise levels are predicted to be 66 dBA or greater
Existing (2017)	36 – 70	51
No-Build (2045)	45-74	62
Build (2045)	39 – 73	97

dBA = A-weighted decibels

Mitigation

Traffic noise abatement was considered for the expanded study area to reduce sound levels at impacted first-row receptors. Six noise walls were analyzed for the expanded study area and compared to WSDOT feasible and reasonable criteria. Two of the six noise walls were found to pass WSDOT criteria and are recommended for construction. These walls are shown on **Figure 7** and summarized as follows:

- Wall 104 is recommended for construction southwest of the South 160th Street Interchange. The wall has a length of 1,180-feet and a height that ranges from 8-feet to 14-feet.
- Wall 105 is recommended for construction northeast of the South 160th Street Interchange. This wall has a length of 874 feet and a height that ranges from 8-feet to 16-feet.

Noise abatement will not be planned if more than 50 percent of eligible property owners oppose the proposed noise abatement. No other new or revised mitigation measures would be required.

Air Quality, Energy

Air quality due to construction activities would remain the same as previous analyses. The estimated vehicle miles travelled in the study area and the resultant regional emissions and energy consumption during operation would not increase as a result of any of the proposed design refinements because

there are no major funded transportation projects planned for construction, no major changes in land use, and no major capacity improvements beyond those included in the previous analysis. Consistent with the previous analyses, there would be an overall improvement in air quality and no new impacts would occur as a result of the SR 509 Stage 2 Project design refinements that were not previously identified in the 2003 FEIS or subsequent evaluations. No new or revised mitigation measures would be required.

Geology and Soils

The design refinements included in the Stage 2 Project would not result in substantial changes in horizontal or vertical alignment and would occur within areas previously studied. The roundabouts at S 160th Street interchange would not require large amounts of earthwork and would occur within WSDOT right-of-way. The amount of earthwork in and around the Wetland 23.05 would increase as compared to the 2003 FEIS and 2018 Re-evaluation. A longer segment of the roadway would be constructed on fill material. Organic soils would be removed and replaced with appropriate subgrade soils to support the pavement from beneath. No other impacts to geology and soils would occur as a result of the design refinements included in the SR 509 Stage 2 Project that were not previously identified in the 2003 FEIS or subsequent evaluations. No new or revised mitigation measures would be required.

Water Quality

WSDOT prepared the Conceptual Level Hydraulic Report (April 2020) and the Supplement to Conceptual Level Hydraulic Report (September 2021) to document that the stormwater design meets the requirements defined in WSDOT's current WSDOT *Highway Runoff Manual* (WSDOT 2019) (see **Attachment D**). As was previously evaluated, the existing and new drainage systems would provide treatment that conforms to accepted best management practices (BMPs) outlined in the WSDOT *Highway Runoff Manual* (WSDOT 2019) and, as applicable, will meet local jurisdictional requirements, including the King County Surface Water Design Manual (King County 2016) and the Des Moines Creek Basin Plan (1997). As per the Des Moines Creek Basin Plan, the design follows King County Stormwater Design Manual Flow Control Level 1 standard for project improvements within Des Moines Creek Basin. Stormwater will be treated using existing and new stormwater ponds to provide flow control, and BMPs, including media filter drains, compost-amended biofiltration swales and bioretention swales, to provide enhanced runoff treatment.

The following minor adjustments to the stormwater design have been proposed since the previous analysis:

- Pond B2 has been reconfigured and shifted slightly south to avoid impacts on Wetland 22.65.
- Pond J has been removed, and the Midway Landfill Detention Pond (a regional facility) will be used to detain runoff from the project instead.
- Bioretention areas and a media filter drain will be constructed at the NE 160th Street interchange to treat stormwater runoff from the project. The roundabout designs reduce the amount of pavement slightly (approximately 0.5 acre) as compared to the existing lane configuration. All new and replaced pollutant generating impervious surfaces (PGIS) will receive treatment from bioretention areas along S. 160th Street or media filter drains inside the loop of the northbound on-ramp.

The areas of existing and new PGIS in some Threshold Discharge Areas were updated to account for the design refinements within the SR 509 Stage 2 Project. Overall, the total area of PGIS is much smaller than disclosed in the 2003 FEIS and similar to the total area described in the 2018 Re-evaluation (see **Table 4**). As documented in the Conceptual Level Hydraulic Report (April 2020) and the Supplement to Conceptual Level Hydraulic Report (September 2021) the Stage 2 Project design refinements will meet the applicable standards for runoff treatment and flow control and will be consistent with the Des

Moines Creek Basin Plan (1997). With the proposed BMPs, the potential for downstream impacts due to the minor increase in new impervious surfaces within the Project limits will be mitigated.

Pollution-Generating Impervious Surface	2018 Re-evaluation (acres)	2021 Stage 2 Project Update (acres)
New	50	53
Replaced	4	8
Existing to be Treated by the Stage 2 Project	66	51
Total to be Treated by the Stage 2 Project	121	112

No new impacts to water resources would occur as a result of the design refinements included in the SR 509 Stage 2 Project that were not previously identified in the 2003 FEIS or subsequent evaluations. No new or revised mitigation measures would be required.

Wetlands

Both the 2003 FEIS and the 2018 Re-evaluation relied on wetland delineations from 2000. In 2021, WSDOT prepared a Wetland and Streams Assessment Report (WSAR) (see **Attachment E**) to:

- Confirm the presence of wetlands from previous studies (2003 FEIS)
- Identify updates to wetland boundaries and ratings based on 2021 conditions
- Identify additional wetlands that were not previously identified
- Update buffer widths based on the most current municipal codes for the City of Burien (Burien 2021), City of SeaTac (SeaTac 2021), City of Des Moines (Des Moines 2020), and City of Kent (Kent 2021)

Impacts

Table 5 provides a comparison of the estimated wetland impacts (within the Stage 2 Project limits) during the 2000 Draft EIS phase, Final EIS/ROD phase and current Re-evaluation phase. The impacts provided for the 2022 Re-evaluation are based on the changed conditions described above and the updated Project footprint from design refinements. A summary of key updates to wetland impacts are described as follows:

- **New/additional wetland impacts.** As was evaluated previously, the Stage 2 Project will construct bridges over Wetland 21.75 (Wetland A), Des Moines Creek, and Wetland 23.05 (Wetland B). However, the refinements to SR 509 include a shorter length of the bridge over Wetland 23.05 (Wetland B) than previously evaluated and would result in greater direct wetland impacts. Additionally, the Project would result in impacts to the four newly delineated wetlands identified in the 2021 WSAR.
- **Wetland conversion impacts.** Wetland conversion impacts were not identified outright in the 2003 FEIS but would occur as a result of shading and tree removal under the new bridges. The bridges for the Stage 2 Project are narrower and taller so would create less shading and conversion of wetlands than those proposed in the 2003 FEIS.
- **Buffer impacts.** Wetland buffer impacts were updated in the 2021 WSAR in accordance with updated increased buffer widths in local Critical Areas Ordinances. The wetland buffer impacts for the Stage 2 Project would also be less than those estimated in the 2003 FEIS.

At the time of the 2003 FEIS, wetland impacts within the Stage 2 Project Limits had been reduced from 8.41 acres down to 0.27 acres through alignment adjustments and a minimization measure included to avoid all Category I wetlands and span all Category II wetlands with bridges.

Study	Direct Impacts	Shading/ Conversion	Buffer Impacts
2000 Draft EIS/Discipline Report	8.41	None	13.82
2003 FEIS/ROD	0.27	3.56	4.61
2022 Re-evaluation	1.48	0.70	3.89

The two wetlands currently affected by the minimization measure to span are: Wetland 21.75 (Wetland A) and Wetland 23.05 (Wetland B). These wetlands were delineated and then reevaluated using the original bridge designs and revised designs.

Wetland 21.75 (Wetland A) has since been re-typed from a Category II to a Category III wetland. Regardless of its lower rating, the Stage 2 Project will implement the minimization measure to span over Wetland 21.75 (Wetland A) because it would not only avoid impacts to the wetland itself but also Des Moines Creek, Des Moines Creek Park and Des Moines Creek Trail (as Section 4(f) resource).

Wetland 23.05's (Wetland B) rating was also updated and is considered a marginal Category II wetland based on current Ecology Guidance. The wetland size also increased to include the wetland area created as part of the AMB mitigation site. The Stage 2 Project design has been revised to include a two-span bridge with retaining walls as compared to the original five-span bridge design. The shorter bridge over Wetland 23.05 results in substantially improved roadway geometry for the mainline and northbound ramps to and from S. 188th Street/Des Moines Memorial Drive, simplifies the structure over Des Moines Memorial Drive, and reduces the amount of new roadway/pavement within the SeaTac Airport runway protection zone. The two-span bridge would also maintain east/west connectivity to the AMB mitigation site and would result in direct impacts and permanent conversion impacts to Wetland 23.05 (Wetland B). As shown in **Table 6**, the two-span bridge with retaining fill walls would result in greater permanent direct impact and lesser conversion impacts than the five-span bridge. Mitigation for the permanent direct impacts would be at a ratio twice that of the conversion impacts.

Study	Direct Impacts	Shading/ Conversion
2018 Re-Evaluation (five-span bridge)	0.06	0.87
2022 Re-evaluation (two-span bridge)	0.93	0.30

Mitigation

WSDOT will implement the minimization measure to span all Category II wetlands except at Wetland 23.05 (Wetland B). At the time the FEIS was written the conversion/shading impacts and mitigation requirements were not fully understood, nor was it known how successful the AMB mitigation site would be. The impacts from the two-span bridge over Wetland 23.05 (Wetland B) will be mitigated for at the AMB "Advance" mitigation site which is located directly adjacent to the impact. There are currently enough credits to offset the permanent direct impacts from a shorter bridge and there will be no net loss of wetland acreage and function.

AMB Mitigation Site

In 2007, WSDOT constructed the AMB Property Mitigation Site to offset impacts for the SR 509 Completion Project. The mitigation site is located adjacent to the footprint of the SR 509 Stage 2 Project and is part of Wetland 23.05 (Wetland B) extending off site to the north and west (**Figure 9**). Before the property was developed into a mitigation site, it was a highly modified property covered with fill material. Since its development the mitigation site has grown more rapidly than originally anticipated and is considered very successful. The site was delineated on March 17, 2015, and had exceeded the final, Year 10 wetland acreage requirements. The site is now considered an “Advance” Mitigation site because it avoids any temporal loss and has eliminated any risks associated mitigation site failure. The site’s advance mitigation credits will be used to compensate for the 1.60 acre of permanent wetland impacts.

Barnes Creek Mitigation Site

In 2021, WSDOT identified the Barnes Creek mitigation site to mitigate for the permanent conversion and long-term temporary wetland impacts and wetland buffer impacts. The site parallels Barnes Creek between S. 220th Street and S. Kent Des Moines Road (SR 516) in Des Moines. The mitigation site comprises an approximately 0.75 mile stretch of undeveloped property between 13th Avenue S. and 15th Avenue S. (**Figure 10**). It is bounded on the north by S. 220th Street and on the south by Kent Des Moines Road (SR 516). WSDOT proposes to preserve the existing wetlands and the upland buffer areas by removing invasive species and infilling with native vegetation in both perimeter buffers and credit generating areas where invasive species are predominant. Preservation of the Barnes Creek is proposed to compensate for the permanent conversion and long-term temporary wetland impacts in addition to wetland buffer impacts.

Des Moines Creek Basin Plan.

Since the 2003 FEIS and ROD, WSDOT has also contributed \$9 million to the Des Moines Creek Basin Planning Committee to help finance three major and several minor projects that have improved degraded water quality, fish passage, and in-stream habitat. These projects are shown on **Figure 10** and described below:

- Marine View Drive fish passage barrier correction (WDFW #990115). Removal of the existing culvert to restore fish passage to approximately 12,647 feet (3,855 linear meters) of upstream habitat by replacing the 225-foot-long box culvert with a bridge.
- Regional Detention Facility in the upper Des Moines Creek watershed to reduce peak storm flow and to limit erosion and sedimentation downstream. Habitat enhancements included reconstruction of approximately 2,160 feet of the existing channel with instream roughness.
- High-flow Bypass Pipeline along the existing Des Moines Creek to divert high flow around the sensitive portion of the stream channel to minimize channel erosion and create a more fish friendly flow regime. The project constructed a new diversion pipe from the regional detention facility to South 200th Street and then connected to the abandoned sanitary sewer pipeline that was already in place near South 200th Street to Puget Sound.
- Habitat Restoration - King County completed a series of habitat restoration projects along Des Moines Creek between Marine View Drive and the Midway Sewer Treatment Plant. Specific work included placing logs, boulders, and other stream enhancement elements; removing invasive plants; and installing native vegetation within the stream buffer. King County also removed invasive species and planted native vegetation below Marine View Drive.

Over the years, the Des Moines Creek Basin Plan and projects have provided the following benefits for the basin:

- Reduction in the loss of streamside vegetation

- Reduction of sediment inputs into streamside wetlands allowing effective stream restoration
- Retention of streamside vegetation providing shading and wildlife habitat
- Improvement in water quality
- Improved fish passage and spawning habitat direct impacts

Based on the comparison of impacts to mitigation benefits there will be no new significant impacts to wetlands as a result of the design refinements included in the SR 509 Stage 2 Project. The Stage 2 Project will achieve no net loss of wetland acreage and function. A WSDOT biologist has reviewed and concurred with this analysis.

Vegetation, Wildlife, and Fish

The 2003 FEIS included a measure to cross all streams with bridges designed to comply with WDFW criteria for safe fish passage, while also minimizing project impacts on streams and fish habitat. At that time, the only known stream crossing within the Stage 2 Project area was Des Moines Creek. Since the 2003 FEIS and subsequent evaluations, three new streams within the project limits were identified and two fish barrier culverts were confirmed by WDFW.

- **Three new stream crossings** (West Fork Des Moines Creek, UNT to West Fork Des Moines Creek and UNT to South Fork McSorley Creek) have been identified within the Stage 2 Project area.
- **Two fish barriers** (UNT to Des Moines Creek -WDFW ID 935212 and UNT to South Fork McSorley Creek- WDFW ID 935070) have also been identified at two of the new streams.

The **West Fork Des Moines Creek** originates from stormwater inputs in the vicinity of 8th Avenue S. that converge into an open channel near S. 186th Lane (mapped as the origin of the stream). In this area, the stream is intermittent. The stream enters the study area from the west, near the west boundary of Wetland 23.05. The channel flows into Wetland 23.05, where it loses channel definition in two places including where the SR 509 roadway would bridge over Wetland 23.05. The flow re-channelizes on the east side of the new roadway on the west side of Des Moines Memorial Drive S then enters an approximately 54-inch culvert under Des Moines Memorial Drive S. The stream is piped for approximately 1,800 feet and eventually discharges north of Wetland 22.40.

The **UNT to West Fork Des Moines Creek** (site ID 935212) crossing is located under S. 194th Street where the SR 509 roadway will be constructed. The stream currently crosses under S. 194th Street in a 24-inch diameter, 256-foot-long culvert, flowing south to north. UNT to West Fork Des Moines Creek originates from Wetland 22.55 and is piped under S. 194th Street. The stream converges with stormwater inputs before discharging near 11th Place S. (see **Figure 9**). The channel loses definition within Wetland 22.65.

The **UNT to South Fork McSorley Creek** (site ID 935070) crossing is located underneath I-5. The stream crosses I-5 in a 30-inch, 450-foot-long corrugated steel pipe at MP 147.60. It drains Wetland 147.65R on the east side of I-5 and outlets into Wetland 147.6L on the west side of I 5 (see **Figure 10**). East of I-5, riparian vegetation along UNT to South Fork McSorley Creek consists of Himalayan blackberry, salmonberry, and red-osier dogwood. West of the I-5 crossing, vegetation consists of forested vegetation with a mixed canopy of red alder, Douglas-fir, and bigleaf maple trees. Salmonberry and red osier dogwood are also present in the understory community.

Fish Barriers

WSDOT determined that the correction of the two barriers has independent utility from the SR 509 project, although they may be constructed at the same time. These barrier sites involve challenging site conditions and correcting them would provide limited length of upstream habitat gain that would be of marginal quality. WSDOT has engaged with the PTOI, WDFW, and the USACE to develop a two-pronged barrier correction strategy that includes both developing draft Preliminary Hydraulic Designs (PHDs) for potential onsite corrections and investigating offsite fish habitat enhancement solutions that would

provide greater benefits to fish. The Project team will continue to collaborate with the PTOI on both the onsite barrier correction designs and the off-site fish habitat enhancement project solutions. The fish barrier resolution will be evaluated in a separate NEPA document and will be permitted separately.

Impacts

The impacts from constructing the Stage 2 Project would be as follows:

- **West Fork Des Moines Creek.** There would be no direct impact to West Fork Des Moines Creek as a result of the Stage 2 Project, other than shading where the new SR 509 roadway will bridge the stream at a location where the channel has no clear definition. This area is accounted as wetland conversion impacts. The new SR 509 roadway will span the area with an approximately 30-foot high and 80-foot-wide bridge. The bridge will consist of two spans, and each span will be approximately 177-feet long.
- **UNT to West Fork Des Moines Creek.** The SR 509 roadway would be constructed on top of new roadway fill placed over a portion of the UNT to West Fork Des Moines Creek and the existing fish barrier culvert. Approximately 120-feet of headwater channel for this stream would be enclosed in a new drainage culvert. Enclosing the headwater stream would not significantly change the water quality, volume or destination of the flow. The existing fish barrier culvert would be removed and replaced with a new 24-inch diameter, 231-foot-long culvert.
- **Des Moines Creek.** As indicated in the 2003 Final EIS and subsequent re-evaluation, there would be no impact to Des Moines Creek as a result of the Stage 2 Project. The new SR 509 roadway will span the stream with an approximately 50-foot high and 80-foot-wide bridge. The bridge will consist of seven spans, and each span will be approximately 188-feet long.
- **UNT to South Fork McSorley Creek.** The new southbound auxiliary lane on I-5 would be constructed within the existing roadway prism and would not result in any impacts to the existing fish barrier culvert or any portion of the open channel of UNT to South Fork McSorley Creek.

Mitigation

The minimization measure to cross all streams with bridges and design them to comply with WDFW criteria for safe fish passage included in the 2003 FEIS will not likely be applied to the two newly identified stream channels and fish barriers. Upon coordination with the PTOI it was determined that offsite solutions that would provide greater benefits to fish in lieu of on-site barrier corrections was the preferred mitigation measure. As such, WSDOT will continue to engage and collaborate with the PTOI to develop a barrier correction strategy that addresses the UNT to West Fork Des Moines Creek (935212) and UNT to South Fork McSorley Creek (935070) sites. If an agreement for off-site fish habitat enhancement projects with the PTOI is not reached, the fish barrier corrections would be permitted separately as a fish habitat enhancement project and corrected either concurrent with the transportation project or at a later stage.

Although the newly identified impact to UNT to West Fork Des Moines Creek was not considered in the original 2003 FEIS, other impacts from the Project were identified including the extension of a culvert at S 200th Street that passes Des Moines Creek. The culvert extension is no longer planned nor scheduled as part of the Stage 2 Project. Regardless, of the impacts as understood in the 2003 FEIS versus the impacts from the Stage 2 Project, WSDOT has already implemented compensatory mitigation for stream impacts through the \$9 million contribution to Des Moines Creek Basin Planning and capital facility projects. These projects have benefited the basin for years by providing a reduction in the loss of streamside vegetation, reduction of sediment inputs into streamside wetlands allowing effective stream restoration, retention of streamside vegetation providing shading and wildlife habitat, and improvement in water quality (see Wetlands section for additional description of mitigation sites).

With the mitigation that has already been implemented, the potential for impacts on vegetation, wildlife, fish and threatened and endangered species will be minimized. **No new significant impacts would occur as a result of the design refinements** included in the SR 509 Stage 2 Project that were not previously identified in the 2003 FEIS or subsequent evaluations. A WSDOT biologist has reviewed and concurred with this analysis.

Threatened and Endangered Species

Design updates for stormwater treatment do not result in effects to listed species, as there is no direct discharge to potentially ESA-fish bearing waters. All but the S 160th Street interchange improvements will occur within the action area addressed in the 2017 No Effect Documentation. The proposed construction activities at the S 160th Street interchange and construction equipment moving to and from the construction site will increase noise in the action area. However, as provided in the updated No Effects documentation (**Attachment F**) there are no listed terrestrial species documented to be present or suitable species identified within the action area around the S. 160th Street interchange. No riparian vegetation will be disturbed, and no in-water work will occur. As a result, the proposed design refinements would not affect listed species in a manner, or to an extent, not considered in the 2017 No Effect Documentation. The rationale for this determination is described in **Attachment F**.

The on-site fish barrier corrections would be evaluated later only if the requirements of the Injunction cannot be satisfied through off-site fish habitat enhancement projects. If it is determined that off-site options will be implemented, the off-site project(s) will be evaluated separately. A WSDOT biologist has reviewed and concurred with this analysis.

Land Use, Relocation, Social, Economics

The design refinements included in the Stage 2 Project would not result in any changes in land use, new property acquisitions or relocations that were not previously evaluated, or new social or economic impacts. The SR 509 Stage 2 Project remains consistent with local and regional planning efforts. No new impacts to land use, relocations, social elements, or economics would occur as a result of the design refinements included in the SR 509 Stage 2 Project that were not previously identified in the 2003 FEIS or subsequent evaluations. No new or revised mitigation measures would be required.

Historic and Archaeological Resources

WSDOT prepared a supplemental Cultural Resources Survey (2021) to include areas that were not studied in previous evaluations (see **Attachment G**). The SR 509 Area of Potential Effects (APE) was revised in March 2021 and includes those areas. The 2021 survey documented 35 new built environment properties, examined the portion of Des Moines Memorial Drive within the project footprint, and included subsurface archaeological testing. A total of 112 shovel tests were completed within project APE units, with no recovery of cultural materials. Four of the new built environment properties were determined to be eligible for the National Register of Historic Places (NRHP).

Impacts

No NRHP-eligible or listed cultural resources would be impacted by the Stage 2 Project and there would be no new significant historic and archaeological resource effects would occur as a result of the Stage 2 Project that were not previously identified in the 2003 FEIS and subsequent evaluations.

Mitigation

Because shovel testing was limited in some locations, the Cultural Resources Survey recommended construction monitoring in areas where construction may require deep excavations that could encounter previously unidentified cultural resources. These areas are summarized below, see Figure A-1 in Attachment G for more details:

- **I-5 Shoulder** –Monitoring is recommended for areas outside the Federal Way Link Extension footprint. Monitoring is recommended along the 272nd ramp and ‘L’ polygon east of I-5 near S 255th St., if construction is expected disturb soils below 66 centimeters below the surface (cmbs).
- **S 204th Street Pond** –The area near S 204th Street has been previously disturbed by a detention pond construction; however, monitoring is recommended in areas where construction is expected to disturb ground deeper than the known depth of fill.
- **S 192nd Street Vicinity** – Subsurface investigations are recommended in locations where ground-disturbing activities would occur below 84 cmbs.
- **S 188th Street Interchange** – Monitoring is recommended for construction activities exceeding 100 cmbs in areas adjacent to the location of roundabouts. No further work is recommended for areas surveyed as part of the previous 2018 Re-evaluation.
- **S 160th Street Interchange** - Monitoring is recommended for construction activities exceeding 77cmbs, including noise walls, ditch excavation, and ramp widening. Any other activities proposed by a design builder that exceed this depth may also be subject to additional review or archaeological monitoring.

With the proposed archaeological monitoring, there will be no new significant impacts as a result of the design refinements included in the SR 509 Stage 2 Project that were not previously identified in the 2003 FEIS or subsequent evaluations. A finding of No Adverse Effect was received from the Washington State Department of Archaeology and Historic Preservation on November 15, 2021 (see **Attachment G**). In the event that cultural resources are identified during construction, work should be halted in the immediate vicinity of the find and the unanticipated discovery plan should be followed. No other new or revised mitigation is required. A WSDOT cultural resources specialist has reviewed and concurred with this analysis.

Hazardous Waste

WSDOT prepared a Hazardous Materials Assessment Update (**Attachment H**) to identify any changed conditions. The assessment update identified one high impact site that has undergone remediation efforts, and five moderate impact sites within 1/8 mile of the SR 509 Stage 2 limits.

Seattle Public Utilities Midway Landfill. The Seattle Public Utilities (SPU) Midway Landfill was identified as high risk in both the 2003 Final EIS and the 2018 Re-evaluation hazardous material assessments. Federally supervised cleanup efforts were completed, but groundwater contamination was still present at the time of the 2018 Re-evaluation. Since that time, an additional remediation effort has been completed and the Cleanup Site Details Report, generated by Ecology, indicates that remediation is complete, and monitoring is ongoing. Therefore, the site is no longer anticipated to impact the Stage 2 Project.

Hertz Corporation. The Hertz Corporation site was identified as low risk in the 2003 Final EIS and as moderate risk in the 2018 Re-evaluation. Ecology’s Cleanup Site Search website indicates two separate releases have been reported at the Hertz site. The first was remediated and closed in 2008. The second cleanup started in September 2014. Ecology terminated Hertz’s voluntary cleanup in 2017 because Hertz had not responded to status requests. The Hertz site is also a hazardous waste generator. An underground storage tank and a leaking underground storage tank are on the Hertz site, which are subject to Tier 2 reporting.

Battery Power Systems Inc. (Cold Storage Site). The Battery Power Systems Inc. site was listed as substantially contaminated in the 2003 Final EIS and as a moderate risk in the 2018 Re-evaluation due to

the site's historical use as a battery recycling facility and the lack of any records indicating soil or groundwater sampling. The primary risk associated with the site is that of soil disposal. WSDOT has acquired the southern portion of the site for bridge and pier abutment, fill placement, excavating for drainage removal, relocation clearing, and grading. Any soils being exported from the site will need to be characterized and may require containment, depending on the type and extent of contamination.

General Environmental Management. The General Environmental Management site was not identified in previous studies, and no releases have been identified. However, the General Environmental Management site is a hazardous waste generator adjoining the Hertz site, which has a history of releases. Contaminated groundwater may be encountered on the General Environmental Management site because of its proximity to the Hertz site and the potential for groundwater to migrate from the Hertz site.

WA DOT Foreman Property. The WA DOT Foreman property was not identified in the 2003 Final EIS but was identified as low risk in the 2018 Re-evaluation. In 2019, a Phase II Environmental Site Assessment (ESA) Report was prepared to provide a summary of information associated with soil investigation and excavation activities within existing unconstructed WSDOT right-of-way. WSDOT completed soil investigation and excavation activities within the WA DOT Foreman site. On January 17, 2019, Ecology submitted an Initial Investigation Field Report (IIFR) that included a review of the WSDOT Phase II ESA. The IIFR requested additional data to include quarterly groundwater monitoring and reporting. A second Phase II ESA will be prepared to address the issues Ecology included in the IIFR. The scope includes installing groundwater monitoring wells, collecting soil and groundwater samples, and performing quarterly groundwater monitoring for one year. The results of the sampling and quarterly monitoring will be uploaded to Ecology's Environmental Information Management system. Analytical results will inform decisions on how to proceed with SR 509 Stage 2 improvements in this area.

Tech Marine Enterprises Inc. (S&M Machine Shop Property). Tech Marine Enterprises was identified as low risk in both the 2003 Final EIS and the 2018 Re-evaluation. Large machinery, which might have leaked fuels and lubricants, has been parked at the site. The USEPA ECHO database indicated that the site had an NPDES permit for discharge of contaminated stormwater, but the permit was terminated at the end of 2014 because a monitoring report was not submitted in 2013. Ecology does not have information about past sampling events at the S&M Machine Shop property. A Phase II ESA will be prepared to include collecting soil and groundwater samples at the site. The results of the sampling and quarterly monitoring would be uploaded to Ecology's Environmental Information Management system. Analytical results will inform decisions on how to proceed with SR 509 Stage 2 improvements in this area.

Mitigation

The analytical results from the Phase II Environmental Site Assessments will inform decisions on how to proceed with SR 509 Stage 2 improvements on the WA DOT Foreman property and the Tech Marine Enterprises Inc. property. In addition, a Soil and Groundwater Management Plan (SGMP) would be prepared to address any unanticipated contaminated soil and/or groundwater that may be encountered during the construction. The SGMP would include methods for identification, handling, and management of potentially contaminated soil, sediment, and dewatering fluids that may be generated during construction.

With the proposed mitigation, the potential for hazardous materials impacts from the moderate to high-risk sites within the project limits will be mitigated. No new significant impacts would occur as a result of the design refinements included in the SR 509 Stage 2 Project that were not previously identified in the 2003 FEIS or subsequent evaluations.

Visual Quality

The Visual Quality element was reevaluated to determine whether new impacts would result from the revised interchange configurations at S 188th Street/Des Moines Memorial Drive and S 160th Street Interchange.

S 188th Street/Des Moines Memorial Drive Interchange Improvements

The interchange configuration at S 188th Street/DMMD has been revised to include a diamond interchange with a folded southbound on-ramp and roundabouts at the ramp terminals instead of signals and a non-motorized path would be provided on the south side of DMMD throughout the interchange area. The footprint of the revised interchange is smaller than the footprint of the Single-Point Urban Interchange that was evaluated in the 2003 Final EIS.



The roundabout designs at the 188th Street/DMMD interchange would result in changes to the appearance of those interchanges. However, any long-term impacts to visual quality would be avoided by protecting existing vegetation where possible and mitigated by replanting and restoring the native vegetation according to the requirements of the environmental permits and WSDOT Roadside Policy Manual. With adherence to these measures, **no new significant impacts would occur as a result of the design refinements** that were not previously identified in the 2003 FEIS or subsequent evaluation. No new or revised mitigation measures would be required.

S 160th Street Interchange Improvements

Improvements at the S 160th Street interchange have not been previously evaluated in either the 2018 Re-evaluation or the 2003 FEIS and have been added to the Stage 2 Project. Interchange improvements include the addition of roundabouts at both of the non-signalized ramp terminals. Pedestrian crossings would be provided at both ramp terminals on the north side of S 160th Street to accommodate the existing sidewalk.



The roundabout designs at the 160th Street interchange would result in changes to the appearance of those interchanges. Consistent with the adherence measure and evaluation described for the 188th Street/DMMD interchange above, no new significant impacts would occur as a result of the design refinements that were not previously identified in the 2003 FEIS or subsequent evaluation. No new or revised mitigation measures would be required.

Section 4(f)

No new Section 4(f) Resources (parks or historic properties) have been identified in the project area since the 2003 FEIS or 2018 Re-evaluation were prepared. The 2003 FEIS and subsequent evaluations identified the acquisition of 4.2 acres of parkland from Des Moines Creek Park, a Section 4(f) resource. The revised design would not change those effects nor the finding that there are no feasible and prudent locations or alternatives for the action to avoid the use of Section 4(f) land and resources; and no other feasible and prudent alternative is more effective in minimizing potential harm to Section 4(f) resources.

Mitigation

Since the 2003 FEIS, WSDOT has mitigated for the 4(f) impact by replacing the area of Des Moines Creek Park that was acquired for ROW with an equal amount of acreage of reasonably equivalent or greater recreational utility. WSDOT has also integrated the northward extension of the Des Moines Creek Trail (Lake to Sound Trail, Segment C) into the design of the Stage 2 Project. Since the 2003 FEIS, WSDOT has provided \$10.2 million in funding for construction of this trail segment to satisfy the previously approved Section 4(f) mitigation. Construction of the Lake to Sound Trail, Segment C is planned to begin in January/February of 2022. No new or revised mitigation measures would be required.

Environmental Justice

The overall demographics in the project area are consistent with the data from the 2018 Re-evaluation. The proposed design refinements would not change the conclusions regarding environmental justice communities from the Final EIS and subsequent evaluations. No new or revised mitigation measures would be required.

CONCLUSION

Based on the information included in this re-evaluation, FHWA and WSDOT have concluded that no new significant environmental impacts, beyond those described in the Final EIS and ROD, would result from the changed conditions, impacts, and mitigation measures. The proposed design refinements would not result in additional significant environmental impacts beyond those described in the Final EIS, ROD, and subsequent Environmental Re-evaluations and technical memoranda. The Project remains compliant with current federal, state, local, and departmental regulations and directives with regard to NEPA/SEPA processes, Section 106 and 4(f), and ESA. FHWA and WSDOT have concluded, in accordance with 23 CFR §771.130(b)(1), that the changes would not necessitate a supplemental EIS.

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- A. SR 509/160th Street Interchange Intersection Control Evaluation
- B. SR 509/S 188th Street/DMMD Street Interchange Intersection Control Evaluation
- C. Noise Impact Analysis
- D. Conceptual Level Hydraulic Report and Supplement to the Conceptual Level Hydraulic Report
- E. Wetland Streams Assessment Report
- F. SR 509 Completion Project Phase 1, Stage 2 Project Update for Endangered Species Act
- G. Cultural Resources Report, SR 509/24th Avenue South to South 188th Street – New Expressway (SR 509 Stage 2) Project, King County, Washington
- H. Hazardous Materials Update