Appendix A Scoping Summary Report



June 2018 Seattle Aquarium Ocean Pavilion

SEPA EIS Scoping Summary Report

Prepared for

City of Seattle Department of Parks and Recreation Seattle Aquarium Society

Prepared by

Anchor QEA, LLC

Introduction

The City of Seattle Department of Parks and Recreation (Seattle Parks and Recreation), in coordination with the Seattle Aquarium Society (SEAS), is preparing a State Environmental Policy Act (SEPA) Environmental Impact Statement (EIS) to evaluate the Seattle Aquarium Ocean Pavilion (herein referred to as "Ocean Pavilion"), which includes two different building options located near the existing aquarium at Pier 59 along the Seattle waterfront and a proposed off-site Animal Care Center that would be established at the former Fisher Flour Mill on Harbor Island or a similar location.

A Determination of Significance and Scoping Notice for the EIS was published by Seattle Parks and Recreation on May 7, 2018, which initiated the environmental review process. The scoping period ended on May 28, 2018, and included one public scoping meeting on May 24, 2018.

This report provides an overview of the proposed action and preliminary alternatives considered, followed by a summary of the scoping process and comments received. Also included in this report are the notices, news releases, and meeting materials. No comments were received during the scoping comment period.

Proposed Action

The Ocean Pavilion would be located in Seattle, King County, Washington. The proposed action would create a new building to the east of the existing aquarium, which is located on Piers 59 and 60 and east of the future Waterfront Promenade. The proposed building would be adjacent to the City of Seattle's future Overlook Walk, enhancing the pedestrian experience between the waterfront and Pike Place Market, and would include approximately 48,000 gross square feet of public aquarium exhibits and associated support space. The proposed action would also include an off-site Animal Care Center to address both short- and long-term animal care, veterinary, and rehabilitation needs. The off-site Animal Care Center would be located at the former Fisher Flour Mill on Harbor Island in Seattle or a similar location.

The location of the proposed action is shown in Figure 1.



Figure 1-1 Vicinity Map

Objectives

The following objectives of the Ocean Pavilion will be used as the basis for evaluating the alternatives:

- Accommodate a 40% increase in expected attendance and visitors, which requires an approximately 48,000-square-foot building and multimodal pathways
- Provide a continuous connection with the existing Seattle Aquarium to facilitate movement of visitors, volunteers, and staff, and to support Aquarium programming
- Provide opportunities for public open space and enjoyment of the shoreline
- Create a space that supports the Aquarium's mission of *Inspiring Conservation of Our Marine Environment* and provides the public with a global ocean experience

Preliminary Alternatives

Three alternatives have been developed for the Ocean Pavilion: a No Action Alternative and two action alternatives. All of the alternatives evaluated in the EIS are based on the expected conditions in 2030.

The No Action Alternative is intended to represent the most likely future expected in the absence of implementing the proposed action alternative. Under the No Action Alternative, the Seattle Aquarium Ocean Pavilion would not be built. However, conditions in the area would be different from those that exist at the time this EIS is published (2018). The No Action Alternative serves as the baseline against which the potential impacts of the action alternatives are evaluated.

Alternative 2 includes the Ocean Pavilion design evaluated as part of the preferred alternative under the Alaskan Way, Promenade, and Overlook Walk (AWPOW) EIS (referred to as the "Aquarium Pavilion" in the AWPOW EIS; SDOT 2016). Alternative 3 includes building the Ocean Pavilion east of the future Waterfront Promenade, located farther south than Alternative 2 to accommodate better connections to the existing Aquarium facilities.

Scoping Process

SEPA Scoping Requirements and Purpose

The purpose of scoping is to establish and confirm the focus of the EIS by seeking input from agencies, tribal governments, and members of the public on the content and emphasis (scope) of the EIS. Scoping also provides notice to agencies and the public that an EIS is being prepared and initiates their involvement in the process.

Seattle Parks and Recreation and SEAS conducted a scoping period from May 7 to May 28, 2018, in accordance with SEPA requirements per Washington Administrative Code 197-11-408 and Seattle Municipal Code 25.05.408. SEAS and Seattle Parks and Recreation invited agencies, tribal governments, and members of the public to provide input on the EIS scope relating to the objectives, range of alternatives, probable significant adverse impacts, and elements of the affected environment to be analyzed in the EIS.

The following elements of the environment were identified in scoping materials as preliminarily proposed for discussion in the EIS:

- Transportation
- Construction
- Water quality
- Land use
- Public view protection
- Historic and archaeological resources

Determination of Significance and Scoping Notice

Scoping under SEPA began with the issuance and publication of a Determination of Significance and Scoping Notice. The Scoping Notice included a description and location of the proposal and scope of elements of the environment to be considered in the EIS. The Scoping Notice also announced public scoping meeting dates and the duration of the scoping comment period.

This Scoping Notice initiated the request for public comments and was distributed via multiple publication outlets, described herein. The following attachments include the publication records establishing the SEPA scoping process:

- Attachment 1: SEPA Determination of Significance and Scoping Notice
- Attachment 2: City of Seattle Department of Construction and Inspections (SDCI) Land Use Information Bulletin (LUIB) Public Notice
- Attachment 3: Washington State Department of Ecology (Ecology) SEPA Register Notice
- Attachment 4: Seattle Daily Journal of Commerce (DJC) Legal Notices

Outreach Summary Timeline

Seattle Parks and Recreation and SEAS conducted the following outreach activities to notify agencies, tribal governments, and members of the public of the scoping comment period and to announce the public scoping meeting date:

- The Determination of Significance and Scoping Notice, including scoping meeting announcements, was published in SDCI's LUIB and Ecology's SEPA register on May 7, 2018 (see Attachments 1 through 3)
- The legal notice was placed in the Seattle DJC on May 7, 2018, and a correction was placed on May 15, 2018, to correct the public scoping meeting date, which was incorrectly advertised as Tuesday instead of Thursday, May 24, 2018 (see Attachment 4)
- An email containing the scoping notice was sent to agencies, tribes, and stakeholders on May 7, 2018 (see Attachment 5)
- A public scoping meeting announcement was posted on the SEAS website
 (https://www.seattleaquarium.org/planning)
 on May 7, 2018, and included the time and location of the public scoping meeting and instructions on how to provide comments

 Adjacent property owner outreach was also conducted, including meetings with Waterfront Landings' residents on May 27, 2018, and a representative from the Fix Madore building on May 9, 2018

Public Scoping Meeting

A public scoping meeting was held from 5:00 p.m. to 7:00 p.m. on May 24, 2018, near the project area at the Friends of Waterfront Seattle Waterfront Space at 1400 Western Avenue in Seattle, Washington. The meeting opened with a 15-minute presentation, including a question-and-discussion period, followed by an open house. The presentation outlined SEAS' mission, environmental review process, proposed action, and objectives and preliminary alternatives considered. The public had an opportunity to provide formal public comment at the meeting by written comment cards or oral comments to a court reporter.

The SEAS website (https://www.seattleaquarium.org/planning) was also developed at the onset of the scoping period to provide information on the proposal and allow online scoping comments to be submitted. The website will be maintained and updated throughout the environmental review process.

Staff from SEAS, Seattle Parks and Recreation, and the consultant team were available throughout the open house portion of the scoping meeting to discuss the proposal and answer questions from the public. Display boards were provided to show the environmental review process, proposed action alternatives, and anticipated project schedule.

The following materials from the scoping process and public scoping meeting are attached:

- Attachment 6: Scoping Meeting Presentation
- Attachment 7: Scoping Meeting Presentation Boards
- Attachment 8: Scoping Meeting Comment Card Handout

Scoping Comments

During the scoping comment period, no comments on the proposal were received by email, mail, comment card, or via the court reporter at the public scoping meeting. This includes one email from the Seattle Fire Department received on May 8, 2018, stating that the Seattle Fire Department does not have any input or comments on the proposed action.

Next Steps

This report will be posted on the SEAS website. Public and agency outreach will continue for the duration of the environmental review process, including website updates and meetings with agencies, tribal governments, and members of the public.

References

SDOT (Seattle Department of Transportation), 2016. Final Environmental Impact Statement: Waterfront Seattle Alaskan Way, Promenade, and Overlook Walk. October.

Attachment 1 SEPA Determination of Significance and Scoping Notice

Seattle Aquarium Ocean Pavilion

SEPA Determination of Significance and Request for Comments on the Scope of the Environmental Impact Statement

DESCRIPTION OF PROPOSAL: The proposed action would create a new structure located east of the existing aquarium on Alaskan Way and the future Waterfront Promenade. The proposal would be adjacent to the City of Seattle's Overlook Walk, enhancing the pedestrian experience between the waterfront and the Pike Place Market. The proposed structure would include the development of approximately 50,000 gross square feet of public aquarium exhibits and associated support space. No construction in Elliott Bay would be required. Alternatives will be considered, including the configuration of the proposed structure, public open space and rooftop waterfront viewing space, as well as options for an off-site animal care facility.

PROPONENTS: City of Seattle through Seattle Parks and Recreation (City) and Seattle Aquarium Society

LOCATION OF PROPOSAL: The project area would be located within public property and bounded to the east, by Alaskan Way and to the west by the future pedestrian promenade along the waterfront. The northern boundary of the project area would be at Pine Street and the approximate southern boundary would be at Pike Street. The offsite animal care facility location would be determined during preparation of the environmental impact statement (EIS).

LEAD AGENCY: City

EIS REQUIRED: The lead agency has determined this proposal is likely to have a significant adverse impact on the environment. A State Environmental Policy Act EIS is required under Revised Code of Washington 43.21C.030 (2)(c) and will be prepared. The lead agency has preliminarily identified the following areas for discussion in the EIS: transportation, construction, water quality, land use, public view protection, and historic and archaeological resources.

SCOPING: Scoping is an opportunity for interested stakeholders to provide input on the content and emphasis (the scope) of the EIS. The City invites agencies, tribal governments, and members of the public to provide input on the EIS scope relating to alternatives, probable significant adverse impacts, potential mitigation measures, and licenses or other approvals that may be required.

HOW TO COMMENT: You can provide comments on the scope of the EIS by submitting written comments, as well as additional comments at the public scoping meetings, as described below. Comments will be accepted through May 28, 2018.

MEETING DATE: A scoping meeting will be held from 5 PM to 7 PM on May 24, 2018 at Friends of the Waterfront located at 1400 Western Avenue, Seattle, WA 98101

WRITTEN COMMENTS: Send written scoping comments, requests to be added to the mailing list, or requests for sign language interpretation for the hearing impaired or other special assistance needs, through the website at https://www.seattleaquarium.org/planning, by email at opeiscomments@seattleaquarium.org, or by mail at:

Seattle Aquarium EIS Scoping Comments c/o Anchor QEA 720 Olive Way, Suite 1900 Seattle, WA 98101

RESPONSIBLE OFFICIAL:

Christopher Williams, Interim Superintendent Seattle Parks and Recreation C/O David Graves 100 Dexter Avenue N Seattle, WA 98109

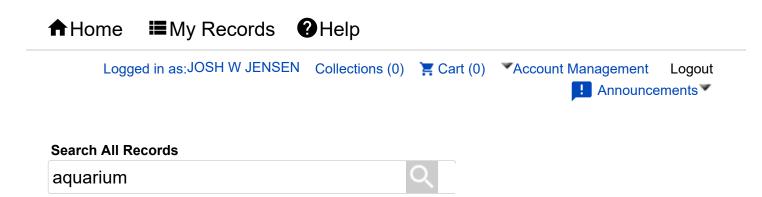
Christopher Williams, Interim Superintendent

May 1,2018

Attachment 2 SDCI LUIB Publication

If you have questions about the Seattle Services Portal, please search our **Help Center** and read our **information article**. If you still need help, please contact **SeattleServices_ITHelp@seattle.gov**. Thank you for your patience as we transition to the new system.

Seattle Services Portal



1 of 3 6/8/2018, 10:10 AM

Seattle.gov

Mayor Jenny A. Durkan



FUDIIC NOLICE

Record Status: Published

Record Info:

Record Details Status Related Records Attachments

Work Location

SEATTLE WA

Record Details

Project Description:

OTHER LAND USE NOTICE

SEPA Determination of Significance and Request

for Comments on the Scope of the Environmental

Impact Statement for Seattle Aquarium Ocean

Pavilion

2 of 3

Seattle.gov Mayor Jenny A. Durkan



Notice Type: OTHER LAND USE NOTICE

Publication Date: 05/07/2018

Comments:

See attachments link above for complete notice and supporting documents.

ADA Notice Notice of Nondiscrimination Privacy © 1995-2018 City of Seattle

3 of 3 6/8/2018, 10:10 AM

Seattle Aquarium Ocean Pavilion

SEPA Determination of Significance and Request for Comments on the Scope of the Environmental Impact Statement

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Seattle Aquarium EIS Scoping Comments c/o Anchor QEA 720 Olive Way, Suite 1900 Seattle, WA 98101

RESPONSIBLE OFFICIAL:

Christopher Williams, Interim Superintendent Seattle Parks and Recreation C/O David Graves 100 Dexter Avenue N Seattle, WA 98109

Christopher Williams, Interim Superintendent

May 1,2018

Attachment 3 Ecology SEPA Register Notice

State Environmental Policy Act (SEPA) Register

SEPA and NEPA documents posted by the Department of Ecology since 2000

Search (../../) / 201802375 - SEATTLE CITY OF

201802375 - SEATTLE CITY OF

Lead Agency

SEATTLE CITY OF

Website

https://www.seattl...

Contact

Christopher Williams

opeiscomments@seattleaquarium.org (mailto:opeiscomments@seattleaquarium.org)

County Region
KING NW

SEPA # 201802375

Document DS/SCOPING

Type

Date Issued

05/07/2018

Comments Due 05/28/2018

Proposal Description

Seattle Aquarium Ocean Pavilion - create a new structure located east of the existing aquarium on Alaskan Way and the future Waterfront Promenade. Would include the development of approximately 50,000 gross square feet of public aquarium exhibits and associated support space. Alternatives will be considered, including the configuration of the proposed structure, public open space and rooftop waterfront viewing space, as well as options for an off-site animal care facility.

Related Record

Notes

Location Address: within public property and bounded to the east by

Alaskan Way and to the west by the future pedestrian promenade along the waterfront. The northern boundary of the project area would be at Pine St. and the southern

boundary would be at Pike St.

Seattle, WA

Applicant City of Seattle through Parks and Recreation and Seattle

Aquarium Society

Applicant Seattle Aquarium EIS Scoping Comments

Contact c/o Anchor QEA

720 Olive Way Ste. 1900

Seattle WA 98101

Documents Aquarium Ocean Pavilion SEPA Determination of

Significance.pdf

(Document/DocumentOpenHandler.ashx?DocumentId=36514)

(98 KB)

1 of 2 5/7/2018, 2:36 PM

Attachment 4 Seattle DJC Legal Notices

State of Washington, King County

Notice of Determination of Significance (DS) and Scoping Meeting Notice for the Seattle Aquarium Ocean Pavilion

The City of Seattle Department of Parks and Recreation, in coordination with the Seattle Aquarium Society (SEAS), is preparing a State Environmental Policy Act Environmental Impact Statement (EIS) for the Seattle Aquarium Ocean Pavilion. The proposed action would create a new structure located east of the existing aquarium on Alaskan Way and the future Waterfront Promenade. The proposal would be adjacent to the City of Seattle's Overlook Walk, enhancing the pedestrian experience between the waterfront and the Pike Place Market. SEAS invites agencies, tribal governments, and members of the public to provide input on the EIS scope relating to alternatives, probable significant adverse impacts, potential mitigation measures, and licenses or other approvals that may be required. A public meeting is being held to obtain information about and provide comments on the EIS scope. Presentations will begin at 5:15 PM, followed by an open house until 7:00 PM.

Date and Location:

Tuesday, May 24, 2018

Friends of Waterfront Seattle Waterfront Space

1400 Western Avenue Seattle, WA, 98101

5:00 PM to 7:00 PM

Written scoping comments, requests to be added to the mailing list, or requests for sign language interpretation for the hearing impaired or other special assistance needs, can be submitted through the website at https://www.seattleaquarium.org/planning, by email at opeiscomments@seattleaquarium.org.

or by mail at: Seattle Aquarium EIS Scoping Comments

c/o Anchor **Q**EA

720 Olive Way, Suite 1900

Seattle, WA 98101

Date of publication in the Seattle Daily Journal of Commerce, May 7, 2018.

5/7(361639)

STATE OF WASHINGTON -- KING COUNTY

--SS.

361639 ANCHOR QEA,LLC

No.

Affidavit of Publication

The undersigned, on oath states that he is an authorized representative of The Daily Journal of Commerce, a daily newspaper, which newspaper is a legal newspaper of general circulation and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continuously as a daily newspaper in Seattle, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of this newspaper. The Daily Journal of Commerce was on the 12th day of June, 1941, approved as a legal newspaper by the Superior Court of King County.

The notice in the exact form annexed, was published in regular issues of The Daily Journal of Commerce, which was regularly distributed to its subscribers during the below stated period. The annexed notice, a

PN:SEATTLE AQUARIUM EIS

Affidavit of Publication

was published on

05/07/18

The amount of the fee charged for the foregoing publication is the sum of \$142.60 which amount has been paid in full.

05/07/2018

Notary public for the State of A ashingt

sworn to before me on

residing in Seattle

State of Washington, King County

*CORRECTION

Notice of Determination of Significance (DS) and Scoping Meeting Notice for the Seattle Aquarium Ocean Pavilion

The City of Seattle Department of Parks and Recreation, in coordination with the Seattle Aquarium Society (SEAS), is preparing a State Environmental Policy Act Environmental Impact Statement (EIS) for the Seattle Aquarium Ocean Pavilion. The proposed action would create a new structure located east of the existing aquarium on Alaskan Way and the future Waterfront Promenade. The proposal would be adjacent to the City of Seattle's Overlook Walk, enhancing the pedestrian experience between the waterfront and the Pike Place Market. SEAS invites agencies, tribal governments, and members of the public to provide input on the EIS scope relating to alternatives, probable significant adverse impacts, potential mitigation measures, and licenses or other approvals that may be required. A public meeting is being held to obtain information about and provide comments on the EIS scope. Presentations will begin at 5:15 PM, followed by an open house until 7:00 PM.

Date and Location:

*Thursday, May 24, 2018 Friends of Waterfront Seattle Waterfront Space

1400 Western Avenue Seattle, WA, 98101 5:00 PM to 7:00 PM

Written scoping comments, requests to be added to the mailing list, or requests for sign language interpretation for the hearing impaired or other special assistance needs, can be submitted through the website at https://www.seattleaquarium.org/planning by email at operation-needs

Seattle Aquarium EIS Scoping Comments

c/o Anchor QEA 720 Olive Way, Suite 1900 Seattle, WA 98101

Date of publication in the Seattle Daily Journal of Commerce, May 15, 2018.

5/15(361965)

STATE OF WASHINGTON -- KING COUNTY

--SS.

361965 ANCHOR QEA,LLC

No.

Affidavit of Publication

The undersigned, on oath states that he is an authorized representative of The Daily Journal of Commerce, a daily newspaper, which newspaper is a legal newspaper of general circulation and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continuously as a daily newspaper in Seattle, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of this newspaper. The Daily Journal of Commerce was on the 12th day of June, 1941, approved as a legal newspaper by the Superior Court of King County.

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05/15/18

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Subscribed and sworn to before me on

05/15/2018

residing in Seattle

Attachment 5 Scoping Notice Email to Agencies, Tribes, and Stakeholders

From: **Heather Page**

To: "david.graves@seattle.gov"

Cc: "opeiscomments@seattleaguarium.org"

Bcc: "DTS@gwestoffice.net"; "virginia.cross@muckleshoot.nsn.us"; "jolene.williams@snogualmietribe.us";

"Iforsman@suquamish.nsn.us"; "bcladoosby@swinomish.nsn.us"; "mzackuse@tulaliptribes-nsn.gov";

"Kirstan.Arestad@seattle.gov"; "Allyson.Brooks@dahp.wa.gov"; "Rob.Whitlam@dahp.wa.gov"; "gordon.white@ecy.wa.gov"; "director@dfw.wa.gov"; "Laura.Arber@dfw.wa.gov"; "derrick.toba@dnr.wa.gov"; . <u>"UDDRON@wsdot.wa.gov"; "RuckiG@wsdot.wa.gov"; "McIntosh@wsdot.wa.gov"; "SCARTOA@wsdot.wa.gov"; "</u>

"christina.oclaire@kingcounty.gov"; "mark.isaacson@kingcounty.gov"; "Nicole.Willis@seattle.gov"; <u>"nathan.torgelson@seattle.gov"; "margaret.glowacki@seattle.gov"; "Melinda.Bloom@seattle.gov";</u>

<u>"sarah.sodt@seattle.gov"; "harold.scoggins@seattle.gov"; "mami.hara@seattle.gov"; "bobd@keepclam.com";</u> "chieflibrarian@spl.org"; "Lisa@pioneersquare.org"; "president@belltowncc.org"; "catherine@castanford.com"; "richards@cascade.org"; "jons@downtownseattle.org"; "info@feetfirst.org";

"Heidi@friendsofwaterfrontseattle.org"; "info@historicsouthdowntown.org"; "bobd@keepclam.com"; "KarinM@pikeplacemarket.org"; "metruck.s@portseattle.org"; "emily.ehlers@seattle.gov";

"marta.idowu@seattle.gov"; "michael.jenkins@seattle.gov"; "christopher.eaves@seattle.gov"; "info@seattlechamber.com"; "DOT_PedBoard@seattle.gov"; "Susan Bullerdick"; Ben Franz-Knight; Josh Jensen;

Heather Page; Holly D. Golden

Subject: Seattle Aquarium Ocean Pavilion: Scoping Notice

Date: Monday, May 7, 2018 5:10:00 PM

The City of Seattle Department of Parks and Recreation, in coordination with the Seattle Aquarium Society, is preparing a State Environmental Policy Act Environmental Impact Statement (EIS) for the Seattle Aquarium Ocean Pavilion. The proposed action would create a new structure located east of the existing aquarium on Alaskan Way and the future Waterfront Promenade. The proposal would be adjacent to the City of Seattle's Overlook Walk, enhancing the pedestrian experience between the waterfront and the Pike Place Market. The Seattle Aquarium Society invites agencies, tribal governments, and members of the public to provide input on the EIS scope relating to alternatives, probable significant adverse impacts, potential mitigation measures, and licenses or other approvals that may be required. A public meeting is being held to obtain information about and provide comments on the EIS scope. Presentations will begin at 5:15 PM, followed by an open house until 7:00 PM.

Date and Location:

Thursday, May 24, 2018 Friends of Waterfront Seattle Waterfront Space 1400 Western Avenue Seattle, WA, 98101 5:00 PM to 7:00 PM

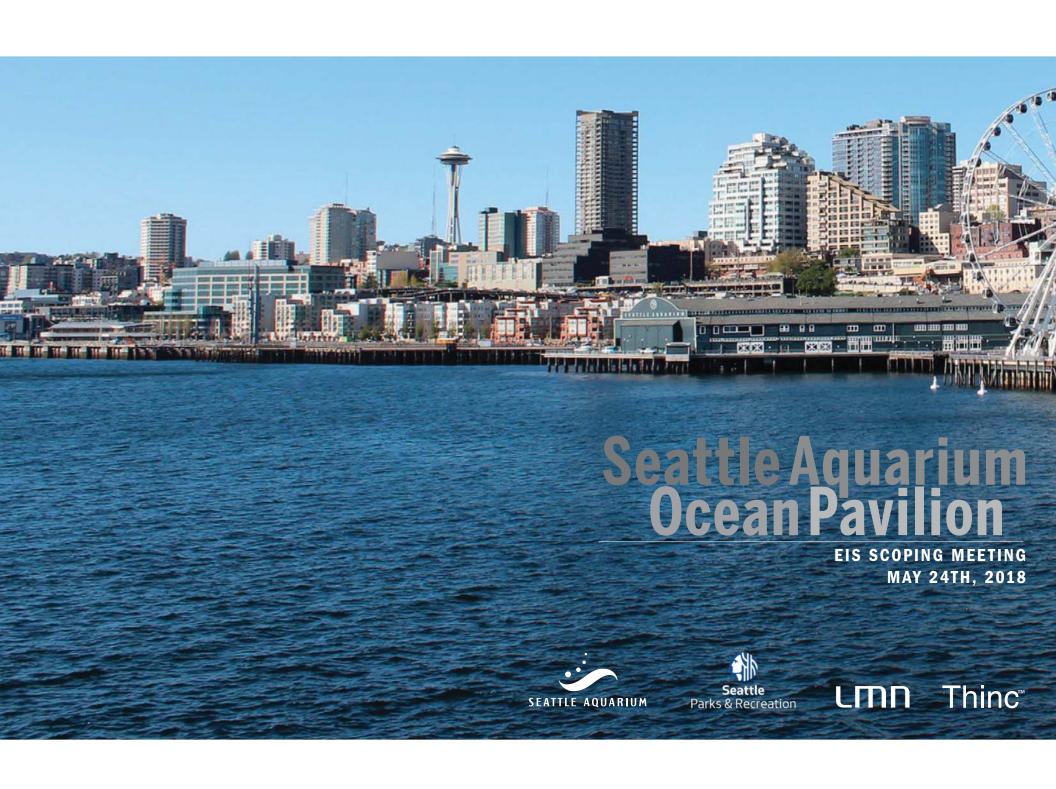
Written scoping comments, requests to be added to the mailing list, or requests for sign language interpretation for the hearing impaired or other special assistance needs, can be submitted through the website at https://www.seattleaguarium.org/planning, by email at opeiscomments@seattleaguarium.org, or by mail at:

Seattle Aquarium EIS Scoping Comments c/o Anchor QEA 720 Olive Way, Suite 1900 Seattle, WA 98101

We look forward to working with you on this exciting project.

Sending on behalf of: David Graves Seattle Parks and Recreation

Attachment 6 Scoping Meeting Presentation



PRESENTATION OVERVIEW

OCEAN PAVILION EIS SCOPING

- I. WELCOME, MEETING PURPOSE, AND AGENDA
- II. SEPA EIS PROCESS
- III. OCEAN PAVILION OVERVIEW
- IV. OBJECTIVES AND PRELIMINARY ALTERNATIVES
- V. QUESTIONS AND DISCUSSION

MEETING AGENDA

MAY 24TH, 2018

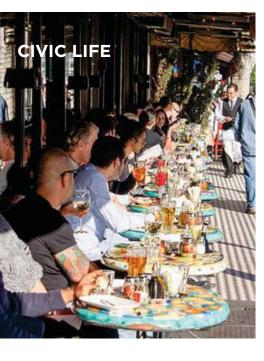
5:00 - 5:15 - RECEPTION / SIGN-IN

5:15 - 5:30 - PRESENTATION

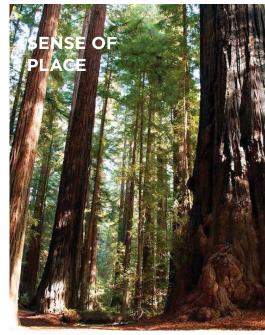
5:30 - 6:00 - QUESTIONS AND DISCUSSION

6:00 - 7:00 - OPEN HOUSE / STATIONS / COURT REPORTER

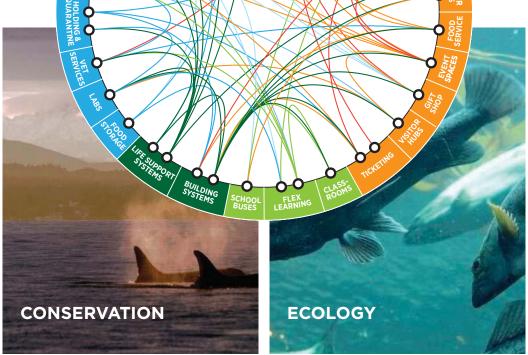














SEPA EIS PROCESS

STEPS TO PREPARE AN EIS

- I. SCOPING AS FIRST STEP
- II. FINAL EIS INFORMS FUTURE DECISIONS



SCOPINGPURPOSE / DESCRIPTION

SCOPING COMMENTS HELP DETERMINE THE ISSUES AND ALTERNATIVES TO FOCUS ON WITHIN THE EIS, BASED ON YOUR INPUT.

SCOPING PROVIDES AN OPPORTUNITY TO OBTAIN INFORMATION AS A KEY PART OF DEVELOPING THE EIS, INCLUDING:

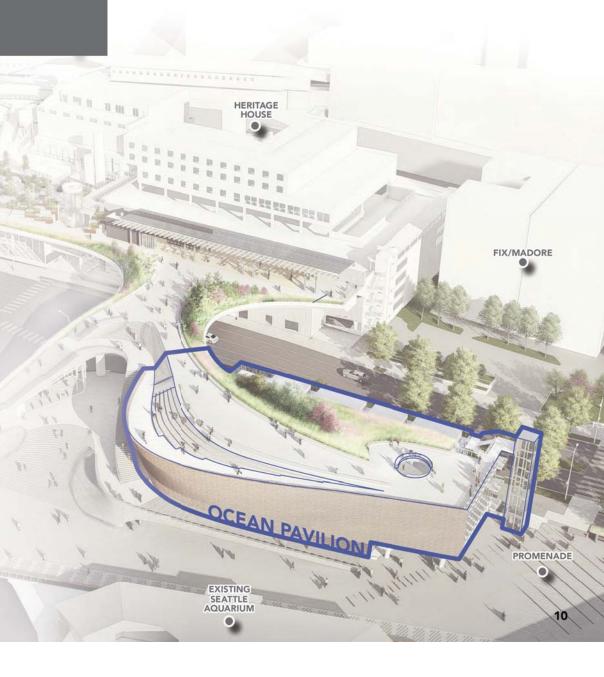
- What are the potential issues and environmental resources we should be reviewing?
- What other alternatives do you think should be considered?

OCEAN PAVILION PROJECT OVERVIEW

OCEAN PAVILION

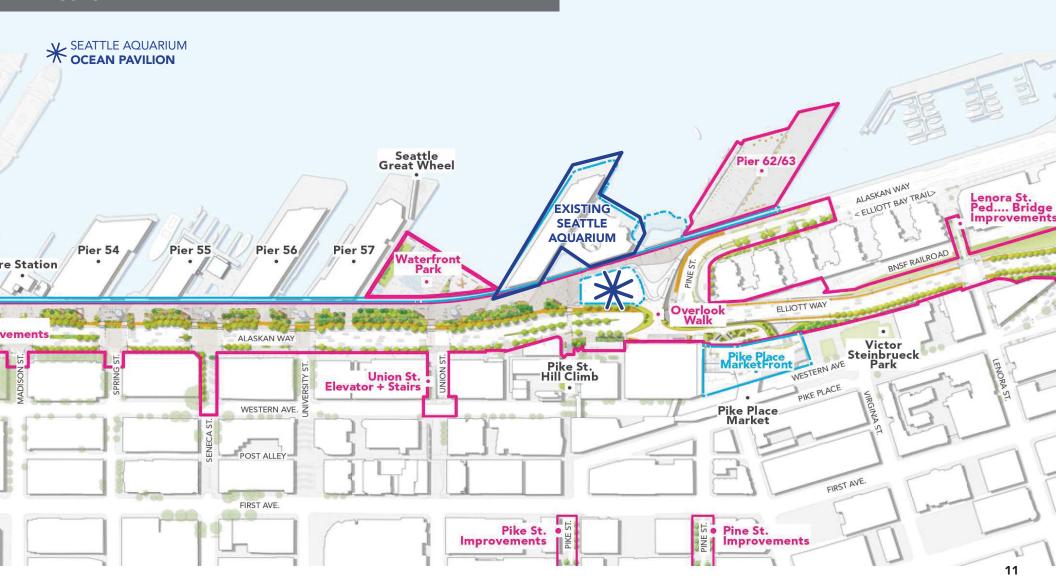
PROJECT OVERVIEW

- The City of Seattle Parks and Recreation
 Department and the Seattle Aquarium
 are preparing a SEPA EIS to evaluate
 environmental impacts from the proposed
 ocean pavilion.
- The City of Seattle Parks and Recreation will be the SEPA lead agency.
- The EIS will draw upon extensive environmental review conducted for the Alaskan Way Promenade and Overlook Walk EIS and other environmental reviews conducted for projects in the area.



CENTRAL WATERFRONT

PROJECT AREA



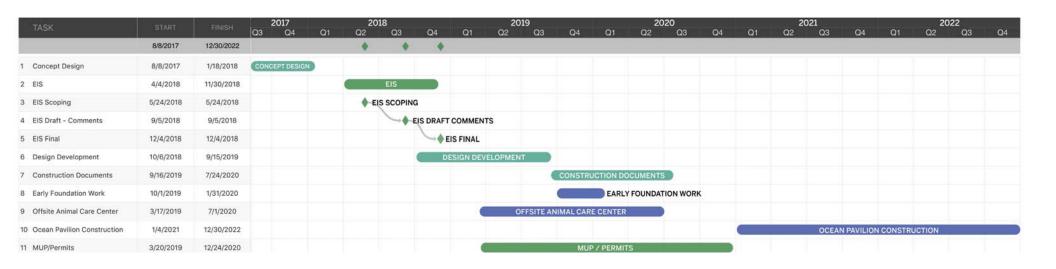
CENTRAL WATERFRONT

EXISTING PEDESTRIAN CONNECTIONS





PROJECT SCHEDULE



OBJECTIVESAND PRELIMINARY ALTERNATIVES

OBJECTIVES

The objectives of the Aquarium Ocean Pavilion include the following, which will be used as the basis for evaluating the alternatives:

- Accommodate a 40% increase in expected attendance and visitors, which requires an approximately 48,000 square foot building and multi-modal pathways
- Provide a continuous connection with the existing Seattle Aquarium to facilitate movement of visitors, volunteers, and staff, and to support Aquarium programming
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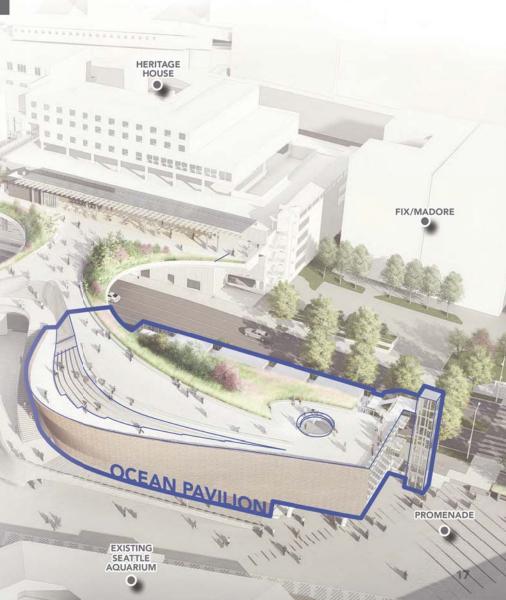
PRELIMINARY ALTERNATIVES

OCEAN PAVILION SITE LOCATION AND ORIENTATION

Three preliminary alternatives have been considered, including a no action alternative. Overwater alternatives were considered but not advanced.

The **preferred alternative** would create a new structure located east of the existing aquarium on Alaskan Way and the future Waterfront Promenade. The proposal would be adjacent to the City of Seattle's Overlook Walk, enhancing the pedestrian experience between the waterfront and the Pike Place Market. The proposed structure would include the development of approximately 48,000 gross square feet of public aquarium exhibits and associated support space.

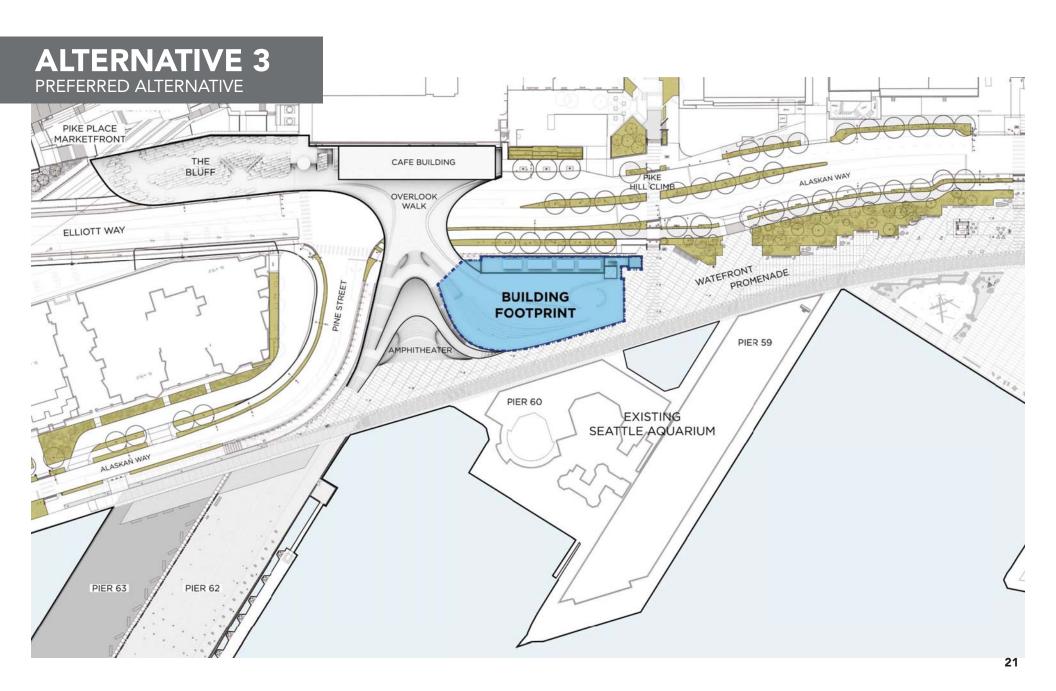
Alternatives will be considered, including the configuration of the proposed structure, public open space and roof top waterfront viewing space, as well as options for an off-site animal care center.





















ENVIRONMENTAL ASSESSMENT

ELEMENTS OF THE ENVIRONMENT ASSESSED

THE LEAD AGENCY HAS PRELIMINARILY IDENTIFIED THE FOLLOWING AREAS FOR ANALYSIS IN THE EIS:

- TRANSPORTATION
- CONSTRUCTION
- WATER QUALITY
- LAND USE
- AESTHETICS
- HISTORIC AND ARCHAEOLOGICAL RESOURCES

SCOPING INPUT

OCEAN PAVILION

- I. STATIONS
 - ENVIRONMENTAL REVIEW
 - PREFERRED ALTERNATIVE CONCEPT OVERVIEW PROJECT SCHEDULE
 - SITE MODEL

_

- II. COURT REPORTER
- III. COMMENT CARDS
- IV. SCOPING PERIOD CLOSES MAY 28, 2018



Attachment 7 Scoping Meeting Presentation Boards

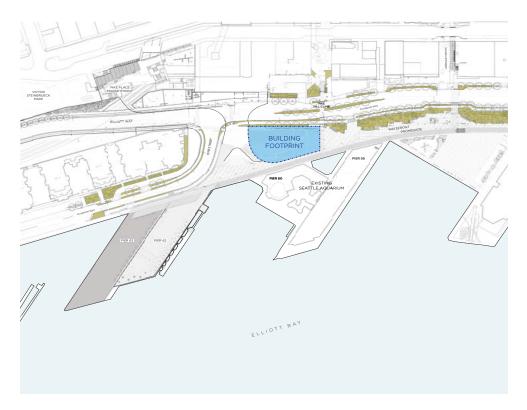
ENVIRONMENTAL REVIEW

SFATTI F AQUARIUM OCFAN PAVILION





LOCATION OF PROPOSAL



WHAT IS SEPA?

THE STATE ENVIRONMENTAL POLICY ACT (SEPA) IS AN ENVIRONMENTAL REVIEW PROCESS THAT PROVIDES A WAY TO IDENTIFY AND STUDY POSSIBLE ENVIRONMENTAL EFFECTS OF A PROPOSAL. THE PROCESS HELPS DECISION-MAKERS AND THE PUBLIC UNDERSTAND HOW A PROPOSED ACTION WILL AFFECT THE ENVIRONMENT.

WHAT IS SCOPING?

SCOPING IS THE FIRST STEP IN THE EIS PROCESS. THE PURPOSE OF SCOPING IS TO SEEK INPUT FROM THE PUBLIC, AGENCIES, TRIBES, AND STAKEHOLDERS ON THE ALTERNATIVES AND AFFECTED ENVIRONMENT PROPOSED TO BE DISCUSSED IN THE EIS.

WHAT IS AN EIS?

AN ENVIRONMENTAL IMPACT STATEMENT
(EIS) PROVIDES AN IMPARTIAL EVALUATION OF
SIGNIFICANT ENVIRONMENTAL IMPACTS AND
INFORMS DECISION MAKERS AND THE PUBLIC
OF REASONABLE ALTERNATIVES, INCLUDING
MITIGATION MEASURES, THAT WOULD
AVOID OR MINIMIZE ADVERSE IMPACTS OR
ENHANCE ENVIRONMENTAL QUALITY.

HOW CAN YOU HELP?

YOUR THOUGHTS ON THIS PROPOSAL ARE IMPORTANT TO US. PLEASE PROVIDE YOUR INPUT ON WHAT TO ANALYZE IN THE EIS AND IF THERE ARE OTHER ALTERNATIVES TO CONSIDER AT THIS TIME.

LOCATION OF PROPOSAL:

THE PROJECT AREA WOULD BE LOCATED WITHIN PUBLIC PROPERTY AND BOUNDED TO THE EAST BY ALASKAN WAY AND TO THE WEST BY THE FUTURE PEDESTRIAN PROMENADE ALONG THE WATERFRONT. THE NORTHERN BOUNDARY OF THE PROJECT AREA WOULD BE AT PINE STREET AND THE APPROXIMATE SOUTHERN BOUNDARY WOULD BE AT PIKE STREET.

THE OFF-SITE ANIMAL CARE CENTER LOCATION WOULD BE DETERMINED DURING PREPARATION OF THE ENVIRONMENTAL IMPACT STATEMENT (EIS).

DESCRIPTION OF PROPOSAL:

THE PREFERRED ALTERNATIVE WOULD CREATE A NEW STRUCTURE LOCATED EAST OF THE EXISTING AQUARIUM ON ALASKAN WAY AND THE FUTURE WATERFRONT PROMENADE. THE PROPOSAL WOULD BE ADJACENT TO THE CITY OF SEATTLE'S OVERLOOK WALK, ENHANCING THE PEDESTRIAN EXPERIENCE BETWEEN THE WATERFRONT AND THE PIKE PLACE MARKET. THE PROPOSED STRUCTURE WOULD INCLUDE THE DEVELOPMENT OF APPROXIMATELY 48,000 GROSS SQUARE FEET OF PUBLIC AQUARIUM EXHIBITS AND ASSOCIATED SUPPORT SPACE. ALTERNATIVES WILL BE CONSIDERED, INCLUDING THE CONFIGURATION OF THE PROPOSED STRUCTURE, PUBLIC OPEN SPACE AND ROOF TOP WATERFRONT VIEWING SPACE, AS WELL AS OPTIONS FOR AN OFF-SITE ANIMAL CARE CENTER.



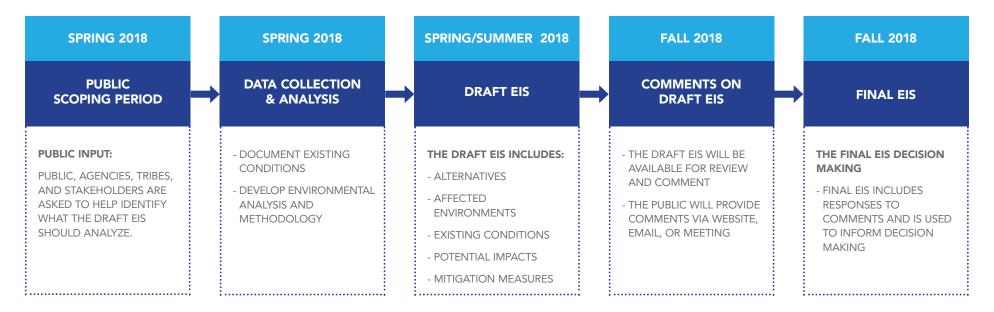
ENVIRONMENTAL REVIEW

SEATTLE AQUARIUM OCEAN PAVILION





SEPA EIS PROCESS AND TIMELINE



AREAS OF THE AFFECTED ENVIRONMENT PROPOSED FOR DISCUSSION IN THE EIS

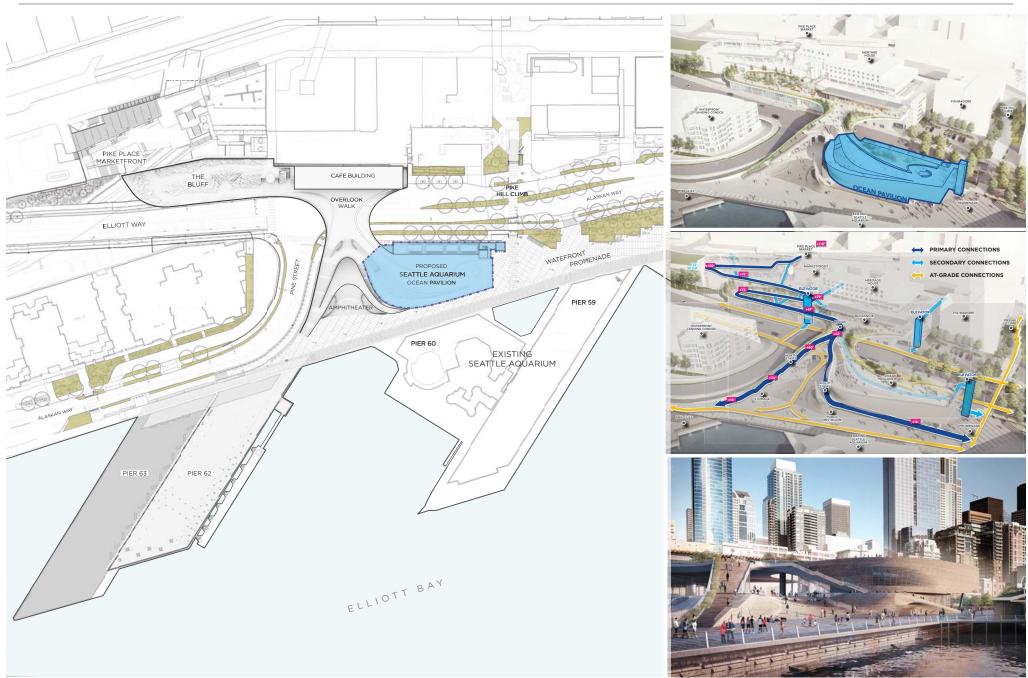


PREFERRED ALTERNATIVE CONCEPT OVERVIEW

SEATTLE AQUARIUM OCEAN PAVILION





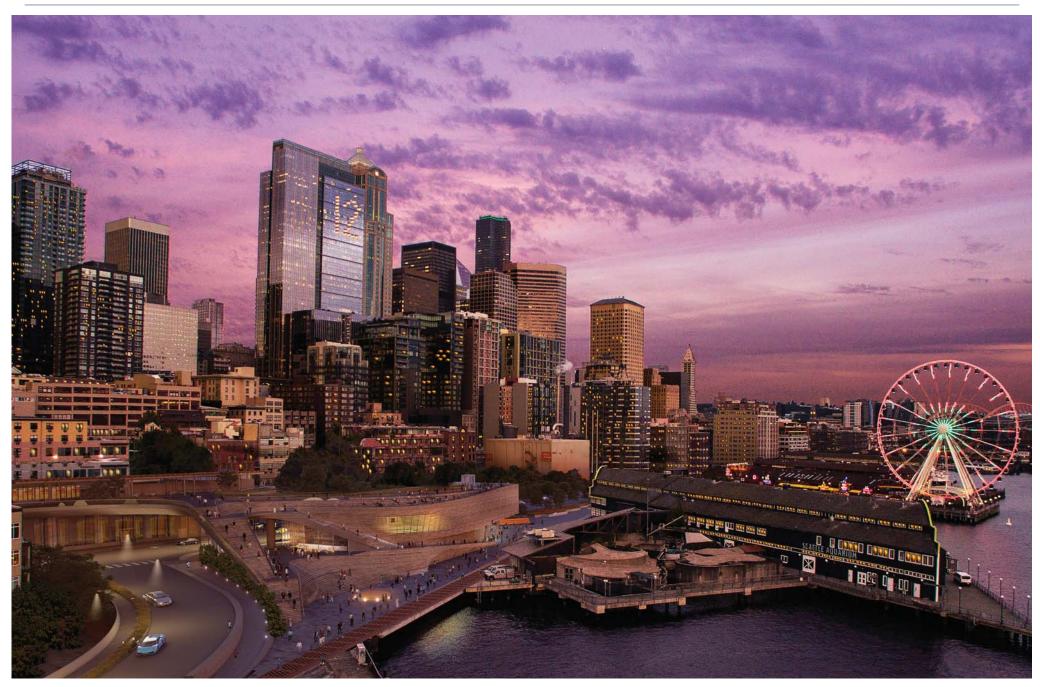


PREFERRED ALTERNATIVE CONCEPT OVERVIEW

SEATTLE AQUARIUM OCEAN PAVILION



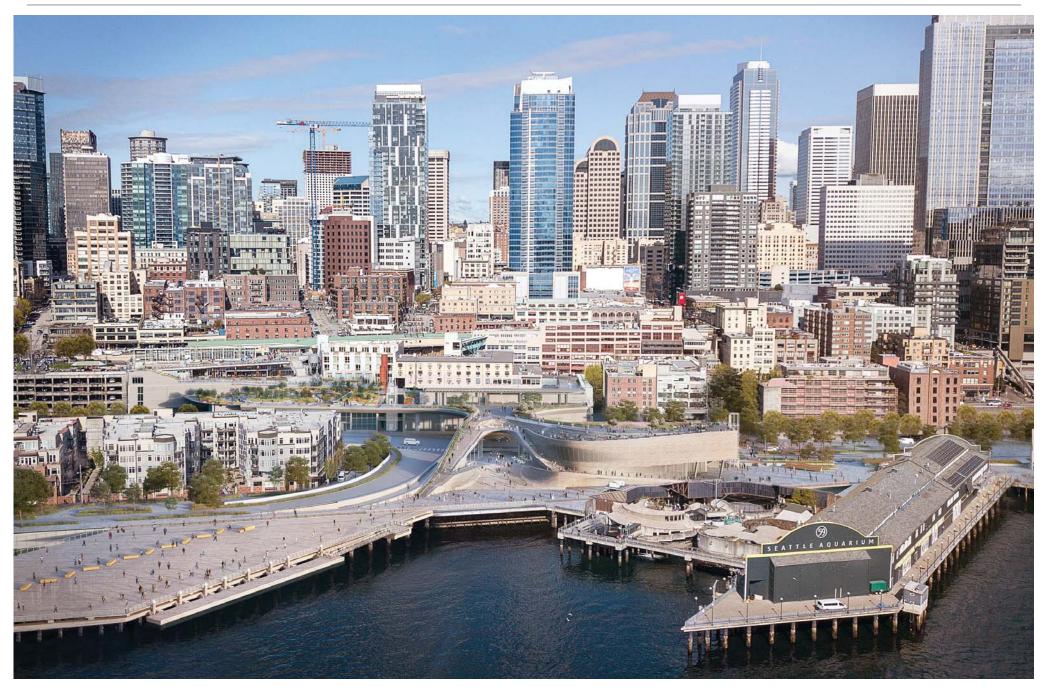




PREFERRED ALTERNATIVE CONCEPT OVERVIEW SEATTLE AQUARIUM OCEAN PAVILION







PREFERRED ALTERNATIVE CONCEPT OVERVIEW

SEATTLE AQUARIUM OCEAN PAVILION







PREFERRED ALTERNATIVE CONCEPT OVERVIEW

SEATTLE AQUARIUM OCEAN PAVILION



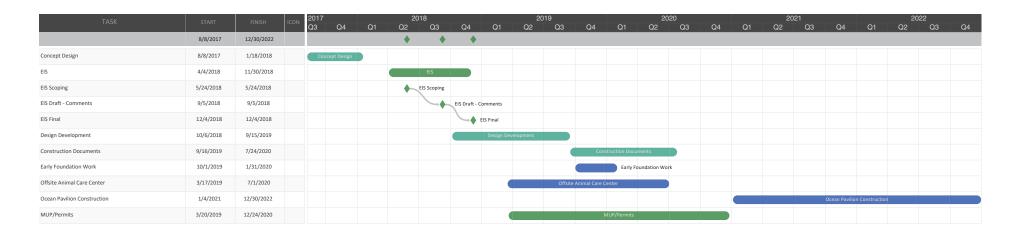








OCEAN PAVILION EIS SCHEDULE



Attachment 8 Scoping Meeting Comment Card Handout

REQUEST FOR COMMENTS ON THE SCOPE OF THE ENVIRONMENTAL IMPACT STATEMENT: Seattle Aquarium Ocean Pavilion

The City of Seattle through Seattle Parks and Recreation (City), in coordination with the Seattle Aquarium Society (SEAS), is preparing an Environmental Impact Statement (EIS) under the State Environmental Policy Act for the Ocean Pavilion, a new structure that would include approximately 50,000 gross sq/ft of public aquarium exhibits and associated support space and would be integrated into the City of Seattle's Overlook Walk. SEAS invites members of the public, tribes, and governmental agencies to provide input on the EIS scope and to identify elements of the environment to analyze in the EIS and other alternatives to consider

How to comment: Scoping comments will be accepted through May 28, 2018. You can provide comments on the scope of the EIS by submitting written comments, as well as at the public scoping meeting. Provide scoping comments online at: https://www.seattleaquarium.org/planning or by mail: Ocean Pavilion EIS, c/o Anchor QEA, 720 Olive Way, Suite 1900, Seattle, WA 98101

Before including your name or other personal identifying information in your comment, please be aware that your entire comment—including your personal identifying information—may be made publicly available at any time.

omment:
Name:
Email:
Phone #:
2ip:

Appendix B Comment Response Report



November 2018 Seattle Aquarium Ocean Pavilion

Comment Response Report

Prepared for

City of Seattle Department of Parks and Recreation Seattle Aquarium Society

Prepared by

Anchor QEA, LLC

Introduction

The Seattle Aquarium Society (SEAS), in coordination with the City of Seattle Parks and Recreation Department (Seattle Parks and Recreation), is proposing the Seattle Aquarium Ocean Pavilion (Ocean Pavilion) to further its mission of *Inspiring Conservation of our Marine Environment*, accommodate an expected increase in future attendance, provide a continuous connection with the existing Seattle Aquarium and support programming, and offer opportunities for public open space and enjoyment of the shoreline.

SEAS and Seattle Parks and Recreation published a Washington State Environmental Policy Act (SEPA) Draft Environmental Impact Statement (EIS) evaluating a range of alternatives for the proposed Ocean Pavilion in August 2018. The proposed Ocean Pavilion would be located along Seattle's central waterfront, just east of the existing Seattle Aquarium facilities on Piers 59 and 60. The proposed action also includes an off-site Animal Care Center, which may be located on Harbor Island at the former Fisher Flour Mill or a similar facility, to address both short- and long-term animal care and veterinary and rehabilitation needs, and to meet the Association of Zoos and Aquariums' standards. The Animal Care Center would support the objectives of the proposed action by providing necessary animal care for ongoing and future Seattle Aquarium exhibits and programs.

This Comment Response Report provides a summary of the comments received during the public comment period for the Draft EIS as well as responses from SEAS and Seattle Parks and Recreation. The Draft EIS was intended to provide an opportunity for agencies, tribal governments, and members of the public to consider the potential environmental effects of the proposed action. In total, four comments were received during the public comment period. SEAS and Seattle Parks and Recreation determined that comments received on the Draft EIS during the public comment period did not require modifications to the EIS. However, individual responses to each of the comments received are provided here for reference.

Public Comment Process

SEAS and Seattle Parks and Recreation published the Draft EIS on August 30, 2018, initiating a 30-day public comment period that ended on October 1, 2018, in accordance with Washington Administrative Code 197-11-455 and Seattle Municipal Code 25.05.455. SEAS and Seattle Parks and Recreation invited agencies, tribal governments, and members of the public to provide input on the Draft EIS, including impacts and mitigation measures.

SEAS and Seattle Parks and Recreation conducted the following outreach activities to notify agencies, tribal governments, and members of the public of the Draft EIS public comment period and to announce the public hearing date:

- A notice of availability of for the Draft EIS and public hearing, was published in the Seattle
 Department of Construction and Inspection's Land Use Information Bulletin and the Washington
 State Department of Ecology's SEPA register on August 30, 2018
- A legal notice was placed in the Seattle Daily Journal of Commerce on August 30, 2018
- An advertisement was placed in the Seattle Times on August 30, 2018
- An email containing the scoping notice was sent to agencies, tribes, and stakeholders on August 30, 2018

- A postcard was delivered to 222 residents and property owners within 500 feet of the proposed action on August 30, 2018
- A public scoping meeting announcement was posted on the SEAS website
 (https://www.seattleaquarium.org/planning) on August 30, 2018, and included the time and location of the public hearing and instructions on how to provide comments

The public hearing was held on September 27, 2018, which included a presentation describing the Draft EIS process and results, informational poster boards, and comment forms and boxes. SEAS, Seattle Parks and Recreation, and consultant staff were available to take comments and answer questions. A court reporter was also present to record public comments.

Comment Response

During the public comment period, a total of four comments were received. Three of the comments were received via email and one comment was taken by the court reporter at the September 27, 2018 public hearing. The commenters on the Draft EIS are as follows:

- 1. Washington State Department of Archaeology and Historic Preservation (DAHP; email)
- 2. Suquamish Tribe (email)
- 3. Czar Slae (email)
- 4. Bob Messina (comment received by court reporter)

Responses

The following includes responses to comments on the Draft EIS in the order they were received. Comments are summarized in **bold** text and responses are provided in plain text. The full text comments are provided in Attachment 1.

DAHP: We agree with Draft EIS proposal to provide an archaeological monitor for any excavation of sediments between 22 and 40 feet below ground surface and that an Inadvertent Discovery Plan should be created and maintained on-site during construction. We also request that an evaluation of the Fisher Flouring Mill be completed and submitted to our agency for review. If any federal funds or permits are associated with this proposal, federal laws and regulations and related processes will be required. Also, we appreciate receiving any correspondence or comments from concerned tribes or other parties concerning cultural resource issues that you receive. SEAS is proposing to lease a portion of the former Fisher Flouring Mill building from King County (property owner). The proposed Animal Care Center would be located inside the existing building, and very few changes to the building would be needed to accommodate the animal care facility. As a potential tenant, SEAS would coordinate with King County regarding appropriate compliance with the City of Seattle's requirements for historic buildings, if any modifications are needed. If an Appendix A analysis is required by the Department of Neighborhoods, then a copy will be provided to DAHP. At this time, no federal funds or permits are associated with the project. If they are, the Section 106 (National Historic Preservation Act) process will be followed. One comment was received from the Suquamish Tribe regarding water quality, which is provided in Attachment 1.

Suquamish Tribe: Every effort should be made to reduce the potential for the spread of
infectious disease and/or invasive species from the Animal Care Center to nearby surface waters
by incorporating proper sanitation methods and treatment methods (including UV treatment)
for water leaving the facility.

SEAS would implement proper sanitation practices at the Animal Care Center loading dock and interior operations to avoid or minimize the potential spread of infectious disease or invasive species to nearby surface waters. Water used at the Animal Care Center that comes into contact with aquarium species will not be discharged directly to nearby surface waters; instead, it will be sent to the sanitary sewer and publicly operated treatment works (POTW) to be treated prior to discharge. Water will be pre-treated as necessary prior to discharge to the sanitary sewer and POTW.

3. Czar Slae: Public funds should be used for homelessness services and added security around Pike Place Market.

SEAS is a certified 501(c)(3) non-profit organization and is funding a large portion of the project, in coordination with Seattle Parks and Recreation. The portion of the funds from SEAS dedicated to the Ocean Pavilion are being matched by the City of Seattle, as approved by the City Council. The Seattle Human Services Department provides services for the homeless and is allocated public funding via City initiatives and policies. Note that Pike Place Market is owned by the Pike Place Market Preservation and Development Authority and related improvements are outside of the scope of the project.

4. Bob Messina: To accommodate anticipated increases in visitation to the Seattle Aquarium and the waterfront, additional consideration needs to be made regarding number and size of elevators at the Ocean Pavilion and in other parts of the waterfront. Additionally, consider providing adequate men's and women's restroom facilities to accommodate increased visitors to the waterfront.

SEAS and Seattle Parks and Recreation would coordinate with the City of Seattle Office of the Waterfront to determine if a second elevator is needed at this location and if it can be incorporated as part of the Alaskan Way, Promenade, and Overlook Walk projects. The proposed action is not designed to a level that contemplates the number of restrooms required to accommodate increased visitors to the Ocean Pavilion. This would be considered during the design phase of the project starting in 2019.

Attachment 1 Draft EIS Public Comments

- 1. Washington State Department of Archaeology and Historic Preservation
- 2. Suquamish Tribe
- 3. Czar Slae
- 4. Bob Messina



September 30, 2018

Mr. Christopher Williams Interim Superintendent City of Seattle - Parks 100 Dexter Avenue North Seattle, WA, 98109

In future correspondence please refer to: Project Tracking Code: 2018-09-07613

Property: City of Seattle Proposed Seattle Aguarium Ocean Pavilion

Re: EIS Review Comments

Dear Mr. Williams:

Thank you for contacting the Washington State Historic Preservation Officer (SHPO) and Department of Archaeology and Historic Preservation (DAHP) regarding the above referenced proposal. In response, we have reviewed the materials you provided for this project. We agree with the proposal in the EIS to provide an archaeological monitor for any excavation of sediments between 22 and 40 feet below ground surface. We also agree that an Inadvertent Discovery Plan should be created and maintained on-site during construction. We also request that an evaluation of the Fisher Flouring Mill be completed and submitted to our agency for review.

If any federal funds or permits are associated with this proposal, Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations, 36 CFR 800, must be followed. This is a separate process from both the NEPA and SEPA environmental review processes and requires formal government-to-government consultation with the affected Tribes and the SHPO. Also, we appreciate receiving any correspondence or comments from concerned tribes or other parties concerning cultural resource issues that you receive.

These comments are based on the information available at the time of this review and on behalf of the SHPO in conformance with state and federal law. Should additional information become available, our assessment may be revised.

Thank you for the opportunity to comment on this project and we look forward to receiving the survey report. Should you have any questions, please feel free to contact me.

Sincerely,

Dennis Wardlaw

2) n

Transportation Archaeologist (360) 586-3085

dennis.wardlaw@dahp.wa.gov



From: Anne Baxter

To: <u>opeiscomments@seattleaquarium.org</u>
Cc: <u>Alison Osullivan; Rich Brooks; Melody Allen</u>

Subject: Suquamish Tribe Draft EIS comments Seattle Aquarium Ocean Pavilion

Date: Thursday, September 27, 2018 2:14:45 PM

Attachments: <u>image001.png</u>

The Suquamish Tribe has reviewed the Draft EIS submitted for the Seattle Aquarium Ocean Pavilion and we offer the following comment:

 Due to the proximity of the proposed Animal Care Center to the waterways, the Suquamish Tribe requests that every effort be made to reduce the potential for the spread of infectious disease and/or invasive species by designing facilities that incorporate proper sanitation methods for the loading dock and Care Center, and include adequate treatment (UV) of water leaving the facility.

Thank you,

Anne Baxter Ecologist

Suquamish Tribe Fisheries Department Environmental Program 18490 Suquamish Way Suquamish, WA 98392

Ph: 360-394-7135 abaxter@suquamish.nsn.us



Josh Jensen

From: czar slae <cs692u@gmail.com>
Sent: Thursday, August 30, 2018 12:47 AM
To: opeiscomments@seattleaquarium.org

Subject: comment

idk how much of the pavilion is paid by taxes but i was homeless and funds should go to homeless services before anything else thanks, we need more housing and cameras around pike place market to see assaults

Page 1

Seattle Aquarium

Draft Environmental Impact Statement

Public Comment Session

Friends of Waterfront Seattle

1400 Western Avenue

Seattle, Washington 98101

Thursday, September 27, 2018 5:00 p.m. to 7:00 p.m.

REPORTED BY: Douglas Armstrong, RPR Washington CCR No. 3444

Page 2 1 PRESENTATION BY AQUARIUM 2 5:00 p.m. to 5:30 p.m. 3 4 PUBLIC COMMENT DICTATED TO COURT REPORTER 5 5:30 p.m. 6 7 BOB MESSINA: In the presentation, in the EIS 8 requirements, you mention -- it mentions a 40-percent 9 The Aquarium is expecting a 40-percent increase. 10 increase. I believe that's a large number, and that's going to translate into many more people around that 11 12 area. Okay. Now, parallel to that, SDOT has its own 13 14 figures that they use to estimate how many people are 15 on the waterfront, let's say at the height of the season. And at one of the meetings that they had a few 16 17 months ago, Jessica Murphy, if I can use her name, gave the estimate of 20,000 as the current working figure. 18 19 But that may be a little out of date, but they're looking at upwards of 40,000 for the future build-out 20 when all this is done. So we're thinking of 40,000, a 21 40-percent increase in the Aquarium. That's many, many 22 23 more people. 24 If you just look at Pike Place Market, it has 25 seen huge increases as well.

Page 3

- 1 So what I'm getting to here is I believe that
- 2 your elevator layout is under capacity from the get-go.
- 3 I believe you need two elevators at each place. You
- 4 need two elevators right at the main entrance where you
- 5 show one, and the one that you show now is an
- 6 ordinary-sized elevator. That's very under capacity.
- 7 Even though it's just making one trip, there are going
- 8 to be, like you said, lots more people.
- 9 And going across Western, I believe the City
- 10 is going to be constructing that elevator, not part of
- 11 the Aquarium buildings. I believe you need two
- 12 elevators there too.
- I believe you should start with a positive
- 14 visitor experience from the get-go and not plan in what
- 15 I see as something that's going to be underpowered for
- 16 the large numbers of people that are going to be going
- 17 up and down, up and down.
- 18 Second to that is you mentioned the ADA
- 19 requirements there, a continuous pathway. That's
- 20 great. You do have a continuous pathway. But again,
- 21 if one one elevator breaks down, say that elevator
- 22 breaks down at the main Aquarium building -- that
- 23 elevator breaks down, and people have arrived there
- 24 with their strollers, pushing kids, there are only
- 25 steps surrounding them. They're standing 60 feet

Page 4

- 1 above. What they have to do is double-back across the
- 2 overlook back to that first elevator, come down to
- 3 Western, cross at the crosswalk. So that's just going
- 4 to increase the numbers of people that may be affected,
- 5 all right?
- 6 So I do actually commend you highly. The
- 7 Alternative 3, I support very much, the design of the
- 8 building.
- 9 It's the -- like I said, I just immediately
- 10 see you need more elevators. This is part of the
- 11 Pike-Pine corridor as well. It's part of a huge influx
- of people that are coming, so I think you should build
- 13 in for that.
- 14 So it's sort of a compliment and a criticism,
- 15 I guess, together.
- 16 Can I add one more point?
- 17 Restrooms: Just go to the Market if you want
- 18 to see restroom lines. Are you building in enough men
- 19 and women stalls that you can handle the public, public
- 20 aspect of this restroom situation?
- I understand it's going to be the Parks
- 22 Department, not the Aquarium, that's designing this.
- 23 So I don't know the numbers, the metrics you're using,
- 24 but I think someone from the Market mentioned, "Why
- 25 not, when you're planning in for the cleaning of the

September 27, 2018

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Page 5
     restrooms, that you only close half of a restroom at a
 1
     given time and let the other half stay open?" That was
 2
     well received by Jessica Murphy, by the way.
 3
 4
               So I know that maybe you're not directly
     involved in that, but I have to get my comment out
 5
 6
    here.
 7
               So these are my two focuses. Everything else
     I see, the evolution of this is wonderful. I really
 8
     think it's going to be a tremendous asset to the
 9
     waterfront.
10
11
               (End of public comments.)
12
13
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Page 6
 1
                      CERTIFICATE
     STATE OF WASHINGTON
                           )
     COUNTY OF KING
                           )
 4
 5
               I, a Reporter and Washington Certified Court
     Reporter, hereby certify that the foregoing public
 6
 7
     comment was taken stenographically before me on
 8
     September 27, 2018, and transcribed under my direction;
 9
               That the transcript of the proceedings is a
10
     full, true and correct transcript to the best of my
     ability; that I am neither attorney for nor a relative
11
12
     or employee of any of the parties to the action nor
     financially interested in its outcome.
13
14
               IN WITNESS WHEREOF, I have hereunto set my
15
     hand this 4th day of October, 2018.
16
17
               /s/Douglas Armstrong, RPR
18
19
               Washington Certified Court Reporter No. 3444
               License expires 11/26/2018
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Appendix C Transportation and Parking Technical Memorandum



November 2018

Seattle Aquarium Ocean Pavilion

Transportation and Parking Technical Memorandum

Prepared for

City of Seattle Department of Parks and Recreation Seattle Aquarium Society

Prepared by

Heffron Transportation, Inc.

Executive Summary

The purpose of this technical memorandum is to describe the potential impacts on transportation and parking associated with the proposed Seattle Aquarium Ocean Pavilion (Ocean Pavilion). This memorandum evaluates the potential effects of project construction and operation on these resources for two action alternatives as well as a No Action Alternative. The City of Seattle Department of Parks and Recreation, in coordination with the Seattle Aquarium Society (SEAS), is preparing a State Environmental Policy Act (SEPA) Environmental Impact Statement (EIS) to evaluate the proposal, which includes two different building options located near the existing Seattle Aquarium at Piers 59 and 60 along the Seattle waterfront and an off-site Animal Care Center that may be located on Harbor Island at the former Fisher Flour Mill or similar facility.

The construction of an "Aquarium Pavilion" was reviewed by the City of Seattle (City) as part of the Alaskan Way, Promenade, and Overlook Walk (AWPOW) SEPA EIS and AWPOW EIS *Appendix A: Transportation Discipline Report* (SDOT 2016a, 2016b). Information and analysis from the AWPOW EIS is incorporated by reference into the analysis and findings of this memorandum, in accordance with Seattle Municipal Code (SMC) 25.05.635 and Washington Administrative Code (WAC) 197-11-635.

The Ocean Pavilion is being proposed as a separate and independent project from the AWPOW and other ongoing projects along the central waterfront. However, the proposal is intended to anchor these projects and reconnect the city with Puget Sound and its central waterfront. This memorandum summarizes the relevant findings from the AWPOW EIS, describes changes to the Ocean Pavilion proposal that have occurred since that time, and evaluates whether the changes would result in any potential additional construction and long-term impacts on transportation and parking.

The findings of this analysis indicate that no significant long-term impacts to transportation or parking would result from operation of the Ocean Pavilion. The additional vehicle trips generated by additional visitors to the Seattle Aquarium would have a small effect on intersection operations nearby, but would not change overall operational level. Vehicle trips generated by the action alternatives, including the off-site Animal Care Center, would be spread out and would not have a noticeable effect on traffic operations surrounding either site. The Pike Place Market Garage, which was expanded in 2017 from 529 to 820 spaces specifically to accommodate future increases in visitors to area attractions, including the proposed Ocean Pavilion, is located adjacent to the existing Seattle Aquarium. The analysis found that there is adequate parking at the Pike Place Market Garage to accommodate the additional parking demand generated by increased visitors and employees. It is anticipated that additional visitors to the Ocean Pavilion would also generate parking demand at other private and public lots and garages throughout downtown (as visitors often include a visit to the Seattle Aquarium with visits to other downtown attractions) but there is ample capacity to accommodate the anticipated increases. Additional pedestrians, bicyclists, and transit riders would be accommodated by improvements planned by the AWPOW to support those modes of travel. The action alternatives would be designed in accordance with the City's standards for bus loading and truck deliveries; no adverse impacts related to loading would result from the Ocean Pavilion.

Construction of the action alternatives is anticipated to have impacts related to truck trips, construction employee trips and parking, and short-term lane or sidewalk closures during some elements of

construction activity. With the recommended mitigation, these impacts are anticipated to be minor to moderate. Table 1 provides a summary of impacts.

Table 1
Transportation and Parking Impacts Summary

Alternative	During Construction	Long Term
1 (No Action)	No Adverse Impact No construction, therefore no construction impacts	No Adverse Impact No additional transportation or parking impact beyond what was previously analyzed in the AWPOW EIS
2	Minor to Moderate Impact Potential temporary impacts associated with truck and construction employee trips, construction employee parking, and street lane or sidewalk closures adjacent to construction activities; impacts can be reduced through implementation of a Construction Management Plan and are anticipated to be minor to moderate depending on the construction activity	Minor Impact Additional visitors accommodated by Alternative 2 would generate additional vehicle, transit, and non-motorized trips, which could be accommodated by existing and planned future infrastructure without the need for transportation capacity improvements, and additional vehicle parking demand which could be accommodated by available parking garage capacity
3	Same as Alternative 2	Same as Alternative 2

Introduction and Project Description

The Ocean Pavilion would be located in Seattle, King County, Washington (Figure 1). The building would be constructed east of the existing Seattle Aquarium, and east of the future pedestrian promenade along the waterfront constructed as part of the AWPOW projects. A potential off-site Animal Care Center may be located on Harbor Island at the former Fisher Flour Mill or a similar facility (Figure 1). Three alternatives have been developed for the Ocean Pavilion: a No Action Alternative and two action alternatives. A full description of these alternatives is included in the Draft Ocean Pavilion EIS, with summary descriptions provided within this technical memorandum.



Figure 1 Vicinity Map

Alternative 1: No Action Alternative

Under Alternative 1 (No Action Alternative), the Ocean Pavilion would not be built. However, conditions in the area would be different from those that exist at the time this EIS is published (2018). The analysis for the No Action Alternative is based on the expected conditions in 2030, which is the year used for the assessment of future conditions. The following major changes are assumed to be in place under the No Action Alternative:

- The AWPOW projects identified in the preferred alternative within the AWPOW EIS would be completed. The AWPOW projects would continue to be refined through the Office of the Waterfront and Civic Projects' design process.
- The Alaskan Way Viaduct Replacement Project (AWVRP) would be completed, with the viaduct eliminated and the State Route (SR) 99 tunnel in operation.
- The Elliott Bay Seawall Project (EBSP) would be completed.
- Ongoing public and private development projects that are currently being permitted through the Seattle Department of Construction and Inspections would be completed, with an additional projected baseline growth of 1% per year.

A description of the AWPOW's selected preferred alternative is included in Section 2.3 of the AWPOW EIS (SDOT 2016a). The main difference between the two is that the No Action Alternative for Ocean Pavilion does not include construction of the "Aquarium Pavilion," which was one option described as part of the AWPOW's preferred alternative. Descriptions of the AWVRP and EBSP are described in Section 2.2 of the AWPOW EIS. Figure 2 shows the No Action Alternative, which serves as the baseline against which the potential impacts of the action alternatives are evaluated.

Office of the Waterfront and Civic Projects' Potential Design Refinements

The AWPOW projects would continue to be refined through the Office of the Waterfront and Civic Projects' design process. As of the publication of this EIS, the conceptual design of the Overlook Walk lid (or bridge) connecting the waterfront to Pike Place Market over Elliott Way would be narrower (90 feet versus 190 feet) and higher (50 feet versus 40 feet) than the design in the AWPOW EIS. In addition, Building B would be replaced by a smaller one-story building with a covered outdoor café and seating area on its roof. Public stairs and elevators would maintain connections from the Overlook Walk to the waterfront. These refined conditions were used in assessing the range of impacts of the action alternatives as compared to No Action Alternative and potential design refinements.

Alternative 2

Alternative 2 includes the Ocean Pavilion concept evaluated as one option for the preferred alternative under the AWPOW EIS (referred to as the "Aquarium Pavilion" in the AWPOW EIS). Alternative 2 includes an approximately 48,000-square-foot building featuring an interior elevator and connections to a fully accessible route between the waterfront and Pike Place Market. The orientation of the proposed building would locate it farther north and closer to Pine Street, compared to Alternative 3 which would be located farther south. The building would be approximately 40 feet tall with a rooftop waterfront viewing space accessible

from the Overlook Walk. An off-site Animal Care Center would be included under Alternative 2, as described herein. Figure 3 shows Alternative 2.

Alternative 3

Alternative 3 includes building the Ocean Pavilion east of the existing Seattle Aquarium on Alaskan Way and the future Waterfront Promenade. The Ocean Pavilion would be located farther south than Alternative 2, resulting in a shorter distance from the Ocean Pavilion entrance to the existing Seattle Aquarium entrance and improved accessibility for visitors, volunteers, staff, and Seattle Aquarium programs. The proposed building would include an approximately 48,000-square-foot public aquarium featuring an exterior elevator and connections to a fully accessible route between the waterfront and Pike Place Market. The building would be approximately 50 feet tall with unobstructed public views of Elliott Bay over the existing Seattle Aquarium on Pier 59 and would be accessible from the future Overlook Walk. This alternative also includes an off-site Animal Care Center, as described herein. Figure 4 shows Alternative 3.

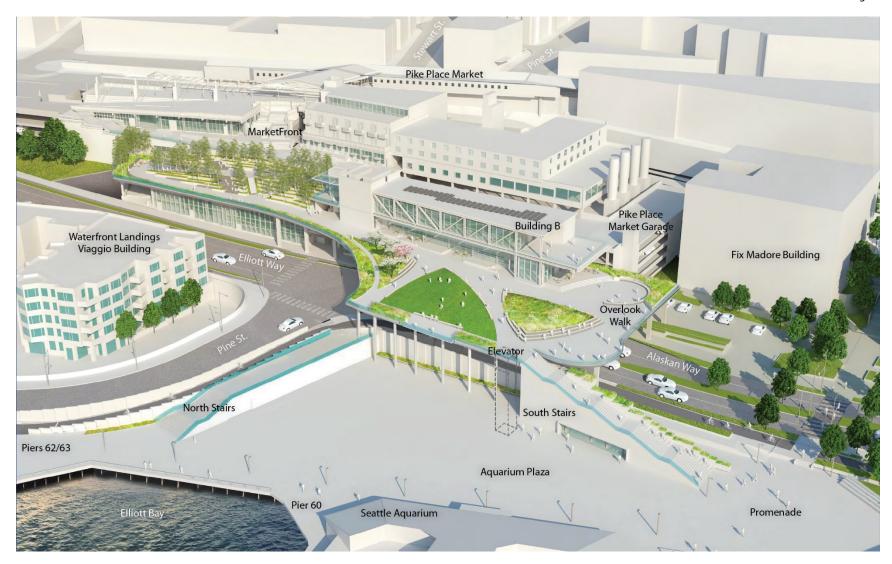


Figure 2 Alternative 1 (No Action)

Source: LMN Architects



Figure 3 Alternative 2

Source: LMN Architects



Figure 4 Alternative 3

Source: LMN Architects

Off-Site Animal Care Center for Alternatives 2 and 3

An off-site Animal Care Center is proposed to address both short- and long-term animal care, veterinary, and rehabilitation needs and to meet the Association of Zoos and Aquariums' standards. The most immediate need is to provide necessary animal care to support the opening of the Ocean Pavilion and the turtle rehabilitation program. The Animal Care Center would also be a long-term care facility that supports SEAS' exhibit animal population, animal rehabilitation, and research efforts.

The Animal Care Center would be designed to meet peak animal care demand for the Seattle Aquarium exhibits and programs. This would include approximately 15,000 square feet of interior space, plus an additional 5,000 to 7,000 square feet of area surrounding the facility for outdoor animal holding, water storage, and parking. The center is intended to meet the care needs of both warm- and cold-water fish, birds and mammals, and rehabilitating animals. The center would also provide long-term care, including life support systems, with flexibility in the design to accommodate future needs.

SEAS plans to have the Animal Care Center constructed and operational 2 to 3 years prior to the opening of the Ocean Pavilion. This would allow for coral propagation, animal quarantine, and acclimation of the animals for the exhibits. SEAS has identified a potential site at the former Fisher Flour Mill property on Harbor Island, which is owned by King County. While the Fisher Flour Mill site is a potential location for the center, a similar location could be pursued. It is not anticipated that the identified impacts would differ at a similar location.

Construction Methods for Alternatives 2 and 3

Construction methods for the action alternatives are described in the following subsection. It is anticipated that construction methods would be similar for both action alternatives. During construction, access to existing utilities would be maintained for surrounding property uses.

Construction Activities

It is anticipated that construction at the Ocean Pavilion would require the following activities:

- Open excavation for the basement of the Ocean Pavilion, which would reach about 20 feet below the ground surface, with 48-inch-diameter piles extending at various depths
 - It should be noted that for Alternative 2, the AWPOW EIS shows 60 to 80 feet of excavation proposed in this area (SDOT 2016b: Figure 10-2, page 245). It is expected that this depth is specific to the future Overlook Walk and other improvements, and depths of that magnitude would not be required to construct the Ocean Pavilion.
- Dewatering of excavation areas below the water table or implementing soil freezing treatments to provide a dry work area as necessary
- Protecting, relocating, and/or connecting utilities
- Using best management practices to protect water quality and reduce erosion (may include installation of silt fencing, covering of stockpiled soil, and collection and treatment of construction stormwater runoff)
- Drilling shafts for piers to support the building, including exterior elevators or stairwells as necessary

- Removing existing knock-outs in the adjacent seawall under Pier 60 to connect the overwater intake pipe, seawater discharge, and utilities and infrastructure between the Ocean Pavilion and existing Seattle Aquarium buildings
- Erecting structural components and installing mechanical and other building features, using a crane tower for hoisting
- Potentially using one barge for 3 to 8 weeks, located between Piers 62/63 and Pier 60 for delivery of acrylic windows for the exhibits

Construction at the Animal Care Center would be limited to the building interior. No substantial modifications or new construction would be required to the exterior or surrounding areas.

Construction Staging

It is anticipated that areas within or near the proposed action (e.g., Aquarium Plaza) would be used for staging construction and storing materials, equipment, and temporary construction trailers.

Construction Timing

Construction of the Ocean Pavilion is expected to take up to approximately 4 months for early foundation work and 24 months for general construction. Preparation of the off-site Animal Care Center is expected to take approximately 9 months and would occur in advance of construction of the Ocean Pavilion.

Worker Parking, Access, and Haul Routes

The Ocean Pavilion contractor is expected to establish a worksite office, which could be located in existing office space near the Seattle Aquarium or in a mobile facility in the established laydown area or nearby. A limited number of construction workers may be able to park at the worksite office or on the work site, others could use off-street parking garages near the Seattle Aquarium, and some may use transit and walk to the work site. The Animal Care Center contractor is anticipated to establish a construction office in existing space within the building that would house the Animal Care Center. Very little parking demand is expected to be generated during build out of the Animal Care Center.

Construction activities would generate traffic for equipment and removing debris and soil. The contractor would determine the best construction methods, as permitted by the City and in conformance with the project construction plans.

Regulatory Context

Transportation facilities and functions are governed by state, regional, and local laws, plans, and policies that identify infrastructure needs, priorities, and performance standards for the transportation system elements, including pedestrian, bicycle, vehicular, and transit modes. The following laws, plans, and policies apply to the transportation and parking analysis.

State Laws, Plans, and Policies

State Environmental Policy Act

The SEPA process considers short- and long-term direct and indirect impacts as well as cumulative impacts on transportation (WAC 197-11-060 and WAC 197-11-444).

Washington State Growth Management Act

Established under Revised Code of Washington 37.70A.070, the Growth Management Act (GMA) sets goals and provides guidance for state and local governments to manage Washington's population and employment growth, including identifying and funding the transportation infrastructure and services needed to support it. The GMA includes a set of planning goals that local governments use to guide planning efforts, through the establishment of comprehensive plans and development regulations. Seattle's Comprehensive Plan, including its Transportation Element (described herein), was developed in compliance with the GMA. In addition to establishing long-term planning needs, the GMA requires that local governments and agencies to annually prepare and adopt a 6-year transportation improvement program, which must be consistent with the transportation element of the local comprehensive plan as well as other state and regional plans and policies.

Regional Plans and Policies

Puget Sound Regional Council, Transportation 2040

Transportation 2040 is the region's long-range transportation plan developed by the Puget Sound Regional Council (PSRC 2010). It addresses critical issues such as congestion and mobility, the environment, and transportation finance in the central Puget Sound region. The plan calls for improved mobility through a combination of effective land use planning, demand management, efficiency enhancements, and strategic capacity investments. It lays out strategies to guide transportation investment decisions to meet growing travel needs for people and freight, calling for more transit, biking and walking facilities, and more complete streets. The plan lays out strategies for all modes, including local roads, non-motorized transportation, vehicle and passenger ferries, aviation, and rail.

Local Plans and Policies

Seattle Municipal Code 25.05 (Environmental Policies and Procedures)

The City has established rules to implement SEPA under SMC Chapter 25.05. For projects in which the City is the lead SEPA agency, these rules interpret and administer the SEPA policies, regulations, and laws set forth by the State of Washington. The City's SEPA regulations about parking impacts are included in SMC 25.05.675.M, and regulations about traffic and transportation impacts in SMC 25.05.675.R.

Seattle 2035: A Comprehensive Plan for Managing Growth 2015-2035

The Seattle Comprehensive Plan identifies the City's land use strategy for accommodating future job and housing growth, and shows how transportation infrastructure, policies and programs will be developed to ensure that the transportation system can efficiently support that growth; this includes mode shift goals

that promote a transition away from single-occupant vehicles toward walking, biking, transit, and carpools. The City has developed a number of plans that focus on specific transportation modes, as described in the following sections. These more focused plans are all consistent with the Comprehensive Plan and build on the policy framework it establishes (City of Seattle 2016).

Seattle Bicycle Master Plan

The City's Bicycle Master Plan sets forth a vision that riding a bicycle be a comfortable and integral part of daily life in Seattle for people of all ages and abilities; it provides a blueprint to make it easier to decide to ride a bike. The plan identifies existing and recommended future trails, bicycle lanes, shared use facilities, and neighborhood greenways (SDOT 2014). The Implementation Plan, which is typically updated on an annual basis, identifies the master plan projects that are targeted for completion within the next 5 years (SDOT 2017a). The installation of protected bicycle lanes (PBLs) along Alaskan Way is included in the Bicycle Master Plan (SDOT 2014). The current Implementation Plan identifies construction of PBL connections along the Alaskan Way Corridor, south to South King Street and north to the Elliott Bay Trail, with target completion by 2020 or 2021 (SDOT 2017a). The bicycle facilities along Alaskan Way are part of the AWPOW projects.

Pedestrian Master Plan

The City's *Pedestrian Master Plan* defines the actions needed to improve walkability in Seattle. The pedestrian improvements included in the AWPOW projects support the plan's objectives to complete and maintain the citywide pedestrian system, improve walkability and pedestrian safety on all streets, and to get more people walking for transportation, recreation, and health reasons (SDOT 2017b).

Transit Master Plan

Seattle's *Transit Master Plan* (SDOT 2016c) defines the critical role that transit plays in meeting the City's goals related to sustainability, equity, economic productivity, and livability. Developed with feedback from King County Metro (Metro) and Sound Transit, the *Transit Master Plan* identifies the types of transit facilities, services, programs, and system features that will be required to meet Seattle's transit needs through 2030, based on market analysis, review of future growth patterns, and evaluation of transit needs.

The *Transit Master Plan* also identifies Seattle's Frequent Transit Network (FTN), which is a vision for a network of transit corridors that connect the city's urban centers and villages with frequent, reliable transit service within a short walk for most residents and identifies the corridor as a high priority for transit investments (SDOT 2016c). Downtown Seattle is the largest transit hub in the region, and continued transit improvements along the FTN will serve to improve transit connectivity between the Seattle Aquarium and regional destinations.

Affected Environment

Transportation Study Area

The study area for the transportation and parking analysis, shown in Figure 5, includes the site access points (vehicular and non-motorized) and nearby off-site intersections in the area bounded by Alaskan Way to the west, Lenora Street to the north, Western Avenue to the east, and Union Street to the south.

The Pike Place Market Garage, located across the street from the Seattle Aquarium, provides the nearest available public parking. This parking facility includes the original garage combined with the garage expansion that was completed in 2017 as part of the MarketFront project. The garages connect internally and share driveways on Western Avenue and Alaskan Way; together they have 820 spaces. It should be noted that the 2030 analysis presented in this memorandum reflects conditions with the completion of the AWPOW projects, as shown in Figure. 5 The planned street configuration changes are described in the following section.

Street Characteristics

The following key roadways are within the transportation study area:

- Alaskan Way is a Principal Arterial that is oriented roughly parallel to the waterfront between
 Broad Street to the north and Yesler Way to the south. It will be reconfigured as part of the AWPOW
 projects; when complete, it will have two vehicle lanes in each direction, sidewalks on both sides,
 and a two-way PBL on the east side.
- Western Avenue is a Minor Arterial that is parallel to Alaskan Way, one block to the east. Between Lenora Street and Yesler Way, it has one travel lane in each direction with left-turn pockets at some intersections; on-street parking is allowed along much of its length. It has sidewalks on both sides and is marked with a combination of painted bicycle lanes where street width allows (generally in the uphill direction), and sharrows (pavement markings that indicate vehicles and bicyclists should share the travel lane) along the other portions. North of Lenora Street, it becomes a one-way street in the northwest direction, forming a couplet with Elliott Avenue which carries traffic in the southeast direction. The transition between these segments will be reconfigured with completion of the AWPOW project, which includes a new Elliott Way Connector between Western Avenue at Bell Street and Alaskan Way at Pine Street.
- Lenora Street is a Minor Arterial that provides connection between Western Avenue and Denny Way. It has a southwest-northeast orientation. Between First Avenue and Western Avenue, it has one travel lane in each direction, sidewalks on both sides, and angled parking on the south side. East of First Avenue, Lenora Street is a one-way in the southwest direction. Its intersection with Western Avenue is signalized and will remain so with the intersection reconfiguration that is completed with the AWPOW projects. The Lenora Street pedestrian bridge connects from Elliott Avenue at the top of the bluff to the Pier 66 building, with elevators connecting to grade on the east and west sides of Alaskan Way. With the completion of the AWPOW projects, the pedestrian bridge will remain largely intact, with just the east end rebuilt to connect to the new segment of Elliott Way. There is an existing pedestrian signal across Alaskan Way at Lenora Street.

- **Pine Street** has a short segment within the study area designated as a local access street that provided access to some on-street parking across Alaskan Way from Piers 62/63 prior to the construction of the AWPOW projects. The segment of Pine Street near the Seattle Aquarium will also be reconfigured with AWPOW, providing direct local access to Piers 62/63 on the west side of Alaskan Way; its intersection with Alaskan Way will be signalized. The study area does not include the portion of Pine Street east of Pike Place Market.
- Union Street within the study area is also separated from the primary portion that connects downtown and Capitol Hill. There is a stairway for pedestrians that provides a connection from just west of First Avenue to Alaskan Way, but no through vehicular access is provided. The intersection of Union Street and Alaskan Way will be improved with the AWPOW projects; the grade separation will remain, with a stair and elevator connection for pedestrian traffic, and it will continue to provide local access. Its intersection with Alaskan Way is currently signalized and will remain so with completion of the AWPOW projects.

The transportation analysis reflects expected conditions in 2030, which is the year used for the assessment of future conditions, including the completion of the AWPOW projects. In addition to the transportation improvements described previously, the AWPOW projects will also signalize the intersection of the Pike Place Market Garage driveway at Alaskan Way, adjacent to the proposed action.

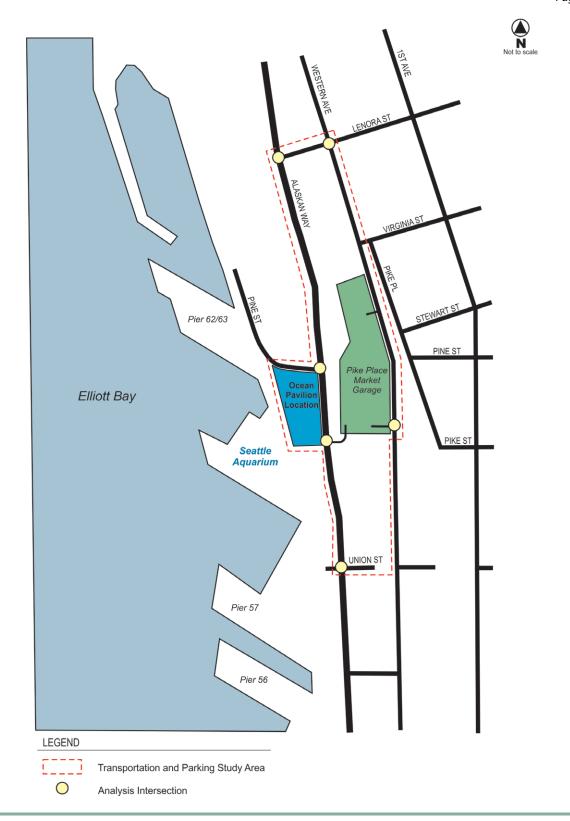


Figure 5
Transportation and Parking Study Area with Completion of AWPOW Projects

Source: Heffron Transportation, July 2018

Parking Characteristics

The Seattle Aquarium does not have dedicated on-site parking. All parking is provided off site by surface parking lots and garages throughout downtown as well as on-street parking. Most of the existing on-street parking along Alaskan Way will be eliminated by the AWPOW projects.

As part of the Washington State Department of Transportation's SR 99 Tunnel Project Parking Mitigation Program, off-street parking utilization of surface lots and garages along the waterfront and in Pioneer Square is monitored annually (WSDOT and SDOT 2018). Monitoring is conducted for a weekday condition in late summer because that is when commuters and visitors combine to generate the highest level of parking demand. The SR 99 Tunnel Project Parking Mitigation Program area extends approximately from Alaskan Way to First Avenue and from Wall Street to King Street.

Table 2 summarizes the results of monitoring surveys that were conducted over the period between August 22 and 31, 2017; all counts were performed on midweek days when the cumulative parking demand generated by downtown employees and visitors is highest. In addition to the Pike Place Market Garage within the study area (the nearest available public parking), results are shown for the broader SR 99 Tunnel Project study area, and also for facilities that are located within about 0.25 mile walking distance from the Seattle Aquarium.

As shown, parking occupancy (number of vehicles parked divided by the number of parking spaces) in the Pike Place Market Garage was 29% in the morning and 50% in the afternoon. In the SR 99 Tunnel Project Parking Mitigation Program area, it was 58% in the morning and 71% in the afternoon (WSDOT and SDOT 2018). In the smaller area within 0.25 mile of the Seattle Aquarium, occupancy was slightly lower in the morning and slightly higher in the afternoon. During the peak afternoon period when occupancy was highest, there were more than 500 unused parking spaces within 0.25 mile of the Seattle Aquarium, most in the adjacent Pike Place Market Garage.

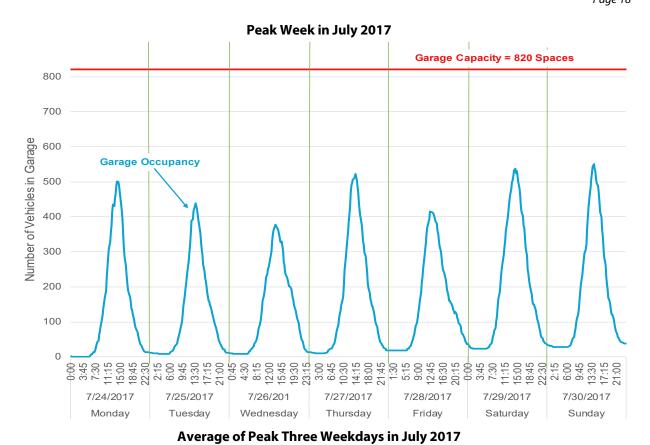
Table 2
Parking Garage Occupancy – Weekdays

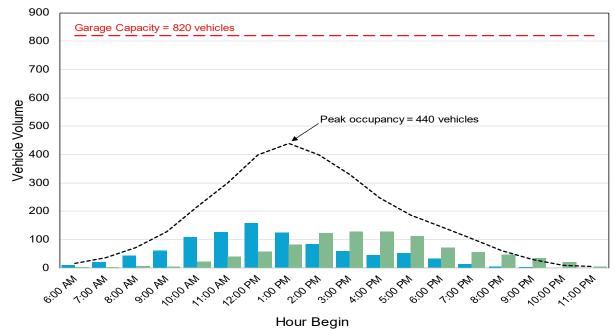
	SR 99 Tunnel Project Parking Mitigation Program Area ¹	Within .25 Mile Walking Distance of Aquarium ²	Pike Place Market Garage²			
Parking Supply (Number of Stalls) ³	7,158	2,021	820			
Morning (8:30 to 11:30 a.m.)						
Parking Occupancy	58%	50%	29%			
Unused Spaces	3,036	1,016	585			
Afternoon (1:00 to 3:00 p.m.)						
Parking Occupancy	71%	70%	50%			
Unused Spaces	2,087	598	406			

Source: Heffron Transportation, SR 99 Tunnel Project – Parking Mitigation Plan, Monitoring of Off-Street Parking Facilities, 2017. Notes: Counts were performed in August 2017 (included in WSDOT and SDOT 2018).

- 1. Area bounded generally by Alaskan Way, Wall Street, First Avenue, and South King Street
- 2. The area within 0.25 mile walking distance is a subarea included in the Parking Mitigation Program Study Area; the Pike Place Market Garage is included in each of these larger areas.
- 3. Supply was adjusted to include 91 additional spaces at the Pike Place Market Garage that were still under construction during the monitoring period, but now are open and available for general parking

More detailed analysis was completed for the Pike Place Market Garage, which is located within the study area directly across Alaskan Way from the Seattle Aquarium and provides the closest public parking. A full month of driveway entry and exit data were compiled for July 2017, and the last week in that month had the highest volumes. Figure 6 shows the parking accumulation by day of week. As shown, Saturday and Sunday had slightly higher occupancy than the peak weekday. This is expected at Pike Place Market, which attracts local and regional visitors on weekends. However, throughout the rest of downtown, the volume of weekend parking is much lower than on a weekday. The City's 2016 Downtown Off-Street Parking Study, Supply and Occupancy Survey in June 2016 determined that all off-street parking in Seattle's downtown core areas (including the financial district, retail district, and waterfront) was 69% to 71% occupied during the weekday but decreased to 43% on a Saturday (Heffron Transportation 2017). Because the cumulative demand among downtown office and recreational parking is highest overall on weekdays, the peak weekday condition was evaluated for the Ocean Pavilion alternatives. Figure 6 shows the average hourly garage entries and exits for three peak-season weekdays as well as parking occupancy. As shown, during the peak three weekdays in July, the Pike Place Market Garage had an average occupancy of 440 vehicles, with a peak occurring midday. This is about half of the garage's capacity of 820 parking stalls. Even on the peak season weekday, more than 300 parking stalls were unused during the period of highest parking demand.





---- Garage Occupancy

Garage Capacity

Figure 6
Pike Place Market Garage – Hourly Use on Peak Season Weekday

Vehicles In

Source: Pike Place Market Garage Usage Data for July 2017, compiled by Heffron Transportation, June 2018

Vehicles Out

Transit Characteristics

Downtown serves as the largest transit hub in Seattle, with bus transit, light rail, streetcar, commuter rail, ferries, and water taxis all servicing this area (King County Metro 2018a).

Bus transit service in Seattle is primarily provided by Metro and Sound Transit. Snohomish County's Community Transit and Pierce County's Pierce Transit also provide limited bus service to and from Seattle, typically during the weekday commute periods. Metro has implemented ongoing plans to enhance transit service along high-demand corridors with RapidRide bus service, which provides frequent two-way bus service along high-demand routes, with amenities that include buses with low floors to facilitate faster passenger loading and unloading, ORCA card readers at stations that allow riders with cards to pay before they board, and electronic signs that provide arrival time information (King County Metro 2018b). Metro is evaluating re-establishing transit along Alaskan Way to replace service on SR 99 that will be lost with the removal of the Alaskan Way Viaduct. There are several options being evaluated, including extending other routes to this corridor.

The Seattle Streetcar provides fixed-guideway service between Westlake and South Lake Union, and between Pioneer Square and Capitol Hill. The City's Center City Connector project plans to connect these two separate systems with a streetcar line along First Avenue and Stewart Street in downtown Seattle. Construction of the connector is being reviewed and could be resumed after the Alaskan Way Viaduct demolition is complete.

Sound Transit operates Link light rail service that serves downtown Seattle. The light rail connects the University of Washington and Angle Lake, with stops in the Capitol Hill, downtown, Central Seattle, and South Seattle neighborhoods, as well as SeaTac Airport. Light rail service will be extended north to the University District, Roosevelt, and Northgate neighborhoods in 2021, and north to Lynnwood by 2024. East Link will extend light rail service to Overlake in 2023. Additional light rail lines have been approved as part of Sound Transit's ST3 program, with the largest element of that plan creating new lines to Ballard and West Seattle and a new transit tunnel through downtown Seattle scheduled to open in 2035. Sound Transit also operates the Sounder commuter rail service, which operates Monday through Friday during commute peak hours. In Seattle, the Sounder trains stop at the King Street Station, downtown at South King Street and Second Avenue South. Sounder trains travel between Lakewood and Seattle and between Everett and Seattle (Sound Transit 2018).

Washington State Ferries operates ferry service accommodating both vehicle and walk-on traffic. Two ferry routes operate from the Colman Dock Terminal in downtown Seattle: the Seattle-Bainbridge ferry and the Seattle-Bremerton ferry. Metro operates the King County Water Taxi, which provides service between Pier 50 at the Seattle waterfront to West Seattle and Vashon Island. The ferry and water taxi terminals are about 1,500 feet walking distance from the Seattle Aquarium.

Non-Motorized Characteristics

Very high levels of bicycle and pedestrian activity characterize the downtown and waterfront areas. The downtown sidewalk system is generally complete. Marked crosswalks with pedestrian crossing signals are provided at all signalized intersections. The City has constructed PBLs along Second Avenue and continues

to implement bicycle facility improvements throughout the downtown area. In addition to PBLs, the AWPOW projects include constructing pedestrian enhancements along the waterfront such as crossing improvements, buffers between pedestrian and vehicle travel ways, and pedestrian amenities along the sidewalks. The Alaskan Way non-motorized improvements will also provide connection between the sections of the Elliott Bay Trail located along the waterfront to the north and south of the corridor.

Analysis of Impacts and Mitigation

Overview

This section incorporates by reference the analysis completed for the AWPOW – Preferred Alternative (SDOT 2016a), which reflects 2030 transportation conditions for Alternative 1 (No Action Alternative) for the Ocean Pavilion. Refined Alternative 1 would have no differences in transportation or parking characteristics or impacts as compared to what was studied in the AWPOW EIS; therefore, when comparing action alternatives with Alternative 1, there is no change to the Office of Waterfront and Civic Projects' Potential Design Refinement. This section also incorporates analysis completed for the Pike Place Market Garage expansion (Heffron Transportation 2013), which found that no significant transportation or parking impacts would result from the expanded garage at full occupancy. No construction or long-term impacts are anticipated from Alternative 1 beyond what was analyzed in the AWPOW EIS.

Construction of the Ocean Pavilion under the action alternatives may have impacts related to truck trips, construction employee trips and parking, and short-term lane or sidewalk closures during some elements of construction activity. With the recommended mitigation, these impacts during construction are anticipated to be minor to moderate. Construction activities associated with the Animal Care Center would generate a small number of trucks that would be spread out and would not have a noticeable effect on traffic operations. Construction-generated parking for the Animal Care Center would be accommodated on site and would not result in adverse impacts.

Long-term impacts from the action alternatives are related to increased visitors to the Ocean Pavilion, which would generate additional vehicle, transit, and non-motorized trips. Additional pedestrians, bicyclists, and transit riders would be accommodated by improvements planned by the AWPOW projects to support those modes of travel. Additional vehicle parking demand could be accommodated by available parking garage capacity. Based on this analysis, the long-term traffic impacts resulting from the action alternatives are anticipated to be minor. No long-term operational impacts are anticipated to result from the Animal Care Center.

Impact Thresholds

The transportation and parking impact analysis considers the long-term effects the Ocean Pavilion could have on elements of the transportation system that include the different modes of travel visitors may use to access the Ocean Pavilion, including walking, biking, driving, or taking transit. The short-term impacts on these transportation elements resulting from construction activities is also considered. The degree of impact depends on both quantitative and qualitative assessments. Table 3 describes the impact indicators for transportation and parking. Based on a combination of quantitative and qualitative assessments, the degree of impact is determined as minor, moderate, or significant.

Table 3
Impact Thresholds for Transportation and Parking

Impact Indicators	Criteria Determining Degree of Impact			
Long-Term Operations				
Intersection LOS	Minor Impacts: Increase in delay small enough that LOS does not change Moderate Impacts:			
	Increase in delay changes LOS, but does not result in congested conditions, or small increase in delay at already-congested location			
	Significant Impacts: For signalized intersections, increase in delay changes operation from uncongested to congested condition, or adds more than 5 seconds of delay to an already congested condition; for unsignalized intersections, increase in delay results in long queues that affect other operations			
Site Access and Circulation	Minor Impacts: Same as intersection (above) at vehicular access points, loading needs adequately accommodated			
	Moderate Impacts: Same as intersection (above) at vehicular access points, loading needs adequately accommodated			
	Significant Impacts: Same as intersection (above) at vehicular access points, and/or loading needs not adequately accommodated			
Parking	Minor Impacts: Increases in parking demand could be accommodated with existing Pike Place Market Garage capacity			
	Moderate Impacts: Increases in parking demand could exceed Pike Place Market Garage capacity, but could be accommodated by other parking capacity within the SR 99 Tunnel Parking Mitigation Program Area (see Table 2) and/or parking management measures			
	Significant Impacts: Increases in parking demand could not be accommodated by capacity within the SR 99 Tunnel Parking Mitigation Program Area (see Table 2) parking capacity or through parking management measures			
Transit	Minor Impacts: Little to no increase in transit demand			
	Moderate Impacts: Increase in transit demand could be accommodated with existing and/or planned future service			
	Significant Impacts: Increase in transit demand could not be accommodated with existing and/or planned future service			
Non-Motorized	Minor Impacts: Little to no increase in non-motorized demand			
	Moderate Impacts: Increase in non-motorized demand could be accommodated with existing and/or planned facilities			
	Significant Impacts: Increase in non-motorized demand could not be accommodated with existing and/or planned facilities			
Short-Term Constr	uction			
Truck and Employee Trips	Minor Impacts: Construction traffic would have a negligible effect on traffic operations			
	Moderate Impacts: Construction traffic would be noticeable to adjacent residents or businesses but would have small effect on peak hour traffic operations			
	Significant Impacts: Construction traffic would worsen peak hour congestion and could not be shifted to off-peak times			

Impact Indicators	Criteria Determining Degree of Impact			
Long-Term Operations				
Employee Parking	Minor Impacts: Construction-generated parking demand could be accommodated on the site, or through implementation of parking management measures, without affecting public parking			
	Moderate Impacts: Construction-generated parking demand could extend to off-site parking and have modest effect on public parking			
	Significant Impacts: Construction-generated parking demand could not be accommodated on-site parking, or through parking management measures, and would adversely affect public parking in area			
Street Lane or Sidewalk Closures	Minor Impacts: Closure would have little to no effect on vehicular or non-motorized travel			
	Moderate Impacts: Closure would affect vehicular or non-motorized travel, but could be accommodated with a detour			
	Significant Impacts: Closure would affect vehicular or non-motorized travel and could not be accommodated with a detour			

Note:

LOS: level of service

Long-Term Impacts and Mitigation Measures

The transportation and parking impact analysis considers the long-term effects the Ocean Pavilion could have on elements of the transportation system that include the different modes of travel visitors may use to access the Seattle Aquarium, including walking, biking, driving, or taking transit. The degree of impact depends on both quantitative and qualitative assessments. Based on a combination of quantitative and qualitative assessments, the degree of impact is determined as minor, moderate, or significant. These potential impacts are described in the following sections.

Traffic Volume Impacts

Traffic volume impacts were analyzed by estimating visitor and employee trips as well as travel mode, average vehicle occupancy, and parking data to determine changes likely to occur at peak volumes.

Alternative 1: No Action Alternative

Alternative 1 PM peak hour volumes at the study area intersections were obtained from Section 3.4.2 of the AWPOW EIS (SDOT 2016a) and reflect the AWPOW's selected preferred alternative in 2030 without the proposed Ocean Pavilion. The forecast volumes at the Pike Place Market Garage driveways were refined based on the July 2017 usage data, previously described, and analysis that was completed for the garage expansion (Heffron Transportation 2013). The forecast volumes at the Pike Place Market Garage driveways used in that analysis assumed traffic associated with the increased garage capacity and reflected growth in area visitors as well as vehicles that may be displaced from nearby on-street parking. Some of this growth could be associated with the existing Seattle Aquarium.

The AWPOW traffic volume forecasts reflect removal of the viaduct, completion of the SR 99 tunnel, and completion of the Alaskan Way reconstruction including the Elliott Way Connection that will link Alaskan Way to Elliott and Western avenues. They also account for expected tolls to use the SR 99 tunnel. This basis for the traffic volume forecasts is consistent with the methodology used for the Waterfront

Seattle Framework Plan traffic analysis, which was used to establish the lane configuration for the Preferred Alternative described in the AWPOW EIS. Sensitivity analysis completed for the AWPOW projects of the effect of different SR 99 tunnel tolling rates indicated that the travel demand forecasts represent a conservatively high estimate of travel demand volumes. They reflect summer conditions, which is also at the conservatively high end of the potential range of volumes.

Figure 7 shows the projected 2030 PM peak hour volumes for Alternative 1.

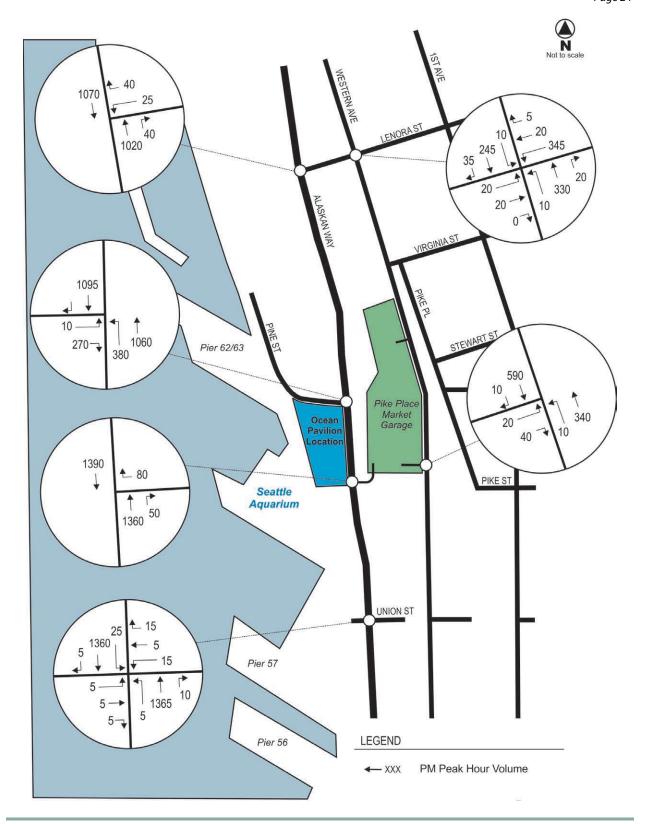


Figure 7 2030 Traffic Volumes for Alternative 1 – PM Peak Hour

Source: Heffron Transportation, July 2018

Alternatives 2 and 3

The action alternatives reflect different configurations of the Ocean Pavilion; however, it is anticipated that the future visitor volumes with the Ocean Pavilion, and in turn the trips they would generate to and from the facility, would be the same for both alternatives.

Traffic forecasts for the action alternatives were based on existing and projected future Seattle Aquarium visitor data (Orca Consulting 2018) combined with visitor travel survey data collected by the Seattle Aquarium (Seattle Aquarium 2015).

Table 4 summarizes the existing visitor volumes for the design day (typical) and peak days, and the future visitor volumes projected with the addition of the Ocean Pavilion. It is likely that some level of increase would occur without the Ocean Pavilion, but for the purpose of this analysis, the increased traffic volumes are conservatively attributed entirely to the two action alternatives. Overall, future visits are expected to increase by slightly more than 40% compared to existing conditions. Over the 12-year horizon evaluated for this transportation study, that relates to an annual growth rate of 2.9% per year.

Table 4
Existing and Projected Future Seattle Aquarium Visitors by Hour of Day

	Exist	ting¹	Future with Ocean Pa		Visitor Increase		
Time Period Design Day		Peak Day	Design Day	Peak Day	Design Day	Peak Day	
Daily Attendance	4,180	5,280	5,900	7,470	1,720	2,190	
Hourly Attendance							
9 – 10 a.m.	237	300	335	424	98	124	
10 – 11 a.m.	361	457	510	646	149	189	
11 a.m. – 12 p.m.	541	684	764	967	223	284	
12 – 1 p.m.	506	639	714	904	208	265	
1 – 2 p.m.	585	739	826	1,046	241	307	
2 – 3 p.m.	762	962	1,075	1,361	313	399	
3 – 4 p.m.	633	799	893	1,131	260	332	
4 – 5 p.m.	465	588	657	831	191	244	
5 – 6 p.m.	89	112	125	159	37	47	

Source: Seattle Aquarium 2018

Note:

To estimate the trips that would be generated by the visitor increases, travel mode, average vehicle occupancy, and parking data obtained from visitor surveys conducted by SEAS were applied. The survey, conducted in July 2015, collected travel information from 193 visitor groups, which included a total of 605 visitors. Of the respondents, about 40% were residents of the area and 60% were tourists. About two-thirds of responses were provided during peak visiting periods at the Seattle Aquarium (Wednesday through Friday between 9:30 a.m. and 1:00 p.m., and all day on weekends), and one-third were provided during off-peak visiting periods. In addition to the size of visiting groups, the survey data provided

^{1.} Based on average visitor data compiled for 2015 and 2016 $\,$

information about the mode of transportation used by visitors (walk, bike, transit, ferry, taxi/rideshare, and drive), and duration of stay. For those who drove, the surveys provided information about where they parked. Figure 8 shows the travel mode shares of the Seattle Aquarium visitors.

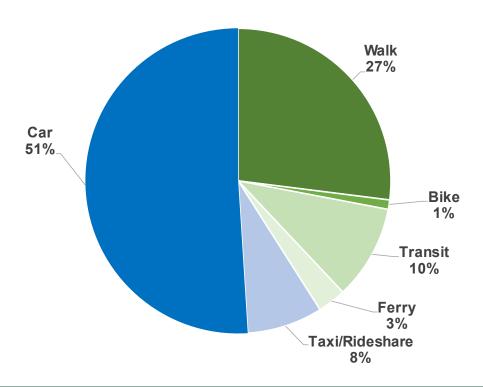


Figure 8
Travel Mode Shares for Visitors to the Seattle Aquarium

Source: Seattle Aquarium, July 2015; compiled by Heffron Transportation, June 2018

The Seattle Aquarium is not open during the commuter AM peak period and would generate few trips during that time. The highest visitor-generated volumes during the commuter PM peak period (period in which the highest traffic volumes typically occur on Seattle streets due to trips generated by evening commutes, typically between about 4:00 and 6:00 p.m.) is expected to occur between 4:00 and 5:00 p.m. The vehicle trips would be generated by visitors who travel by car or use a taxi or rideshare service. The vehicle trips they would generate were estimated by applying the following assumptions obtained from the Seattle Aquarium visitor travel surveys:

- Visitors who travel by car were assumed to generate one inbound trip to the downtown area, park their car, and make one outbound trip after their visit is complete.
- Visitors who travel by taxi or a rideshare service were assumed to generate four total trips: one
 inbound trip to be dropped off at the site, one outbound trip without passengers after drop-off, one
 inbound trip to pick up passengers at the site after the Seattle Aquarium visit, and one outbound
 trip with passengers after pick-up. This is a conservative assumption since some taxis or rideshare
 may pick up or drop off another visitor (either to or from the Seattle Aquarium or another nearby
 attraction).

- Assignment of trips to hour of the day was based on typical duration of visit information obtained from the survey data, which indicated that about 80% of visitors stay for 1 to 2 hours, and 20% stay for 3 hours or more.
- The travel surveys indicated an average of 3.4 persons travel together per vehicle, both for groups who drive and those who use taxi or rideshare service.

The Seattle Aquarium does not have its own parking supply, and none is proposed to be constructed. Visitor survey data indicated that about 19% of vehicles generated by Seattle Aquarium visitors are parked in the Pike Place Market Garage, which is the closest parking option. The remaining vehicles are parked on the street or in other garages outside the immediate study area (often chaining a visit to the Seattle Aquarium with visits to other downtown attractions). These vehicles would be spread out over the downtown area. The net new vehicle trips generated at the Pike Place Market Garage would enter and exit at either the Western Avenue or Alaskan Way driveways. The vehicle trips generated by taxis or rideshare vehicles are assumed to drop off and pick up passengers on Alaskan Way, next to the Seattle Aquarium.

The PM peak hour trips calculated for the action alternatives, using the method described previously, were added to the Alternative 1 volumes, to project future traffic conditions with the Ocean Pavilion.

The action alternatives reflect different configurations of the proposed action. As described previously, it is expected that the future visitor volumes with the Ocean Pavilion, and in turn the trips they would generate to and from the facility, would be similar for both alternatives. Table 5 summarizes the visitor estimates by travel mode for both the design (typical) and peak day conditions.

Table 5
Projected Visitor Increases by Travel Mode – Alternatives 2 and 3

	Walk/Bik	xe (28%)	Transit/Ferry (13%)		Taxi/Rideshare (8%)		Car (51%)	
Time Period	Design	Peak	Design	Peak	Design	Peak	Design	Peak
Daily	482	613	224	285	138	175	876	1,117
Hourly								
9 – 10 a.m.	27	35	13	16	8	10	50	63
10 – 11 a.m.	42	53	19	25	12	15	76	96
11 a.m. – 12 p.m.	62	80	29	37	18	23	114	144
12 – 1 p.m.	58	74	27	34	17	21	106	136
1 – 2 p.m.	67	86	31	40	19	25	124	156
2 – 3 p.m.	88	112	41	52	25	32	159	203
3 – 4 p.m.	73	93	34	43	21	27	132	169
4 – 5 p.m.	53	68	25	32	15	20	98	124
5 – 6 p.m.	10	13	5	6	3	4	19	24

Source: Seattle Aquarium 2018

Notes:

Based on average visitor data compiled for 2015 and 2016

Design = Design day Peak = Peak day Currently, about 140 paid employees and about 50 part-time volunteers work at the Seattle Aquarium on a typical peak season day; this is assumed to continue with Alternative 1. This daily number is projected to increase by about 60 staff persons and 40 volunteers with the Ocean Pavilion in full operation. Of these, about 55 people are expected to work daytime shifts, by which they could depart from the Seattle Aquarium during the PM peak hour (Seattle Aquarium 2018). It should be noted that these estimates are based on the most current information available at the time of EIS development; it is possible that they could be further refined as planning for the Ocean Pavilion progresses.

Commute mode-of-travel data for the area in which the Seattle Aquarium is located, compiled for the greater downtown area, indicate that about 28% of employees in the commercial core area commute by vehicle, with an average of about 1.14 persons per vehicle (Commute Seattle 2015). Applying these factors to the employees projected to depart the site during the PM peak hour results in an estimated 14 employee vehicle trips departing at this time. The analysis presented in this memorandum assumes that all would park at the Pike Place Market Garage; this results in conservatively high estimate within the study area, since some employees could park at other locations throughout downtown.

Table 6 summarizes the vehicle trips projected to be generated by the visitor and employee increases with the action alternatives, for design (typical) and peak days. It also summarizes trips by type and location.

Table 6
Projected Increase in Vehicle Trips Generated by Alternatives 2 and 3

	Design (Typical) Day		Peak Season Day			
	ln	Out	Total	ln	Out	Total
Daily Vehicle Trips						
Visitor Rideshare and Taxi Trips	82	82	164	102	102	204
Visitor Trips to/from Pike Place Market Garage	49	49	98	63	63	126
Staff/Volunteer Commute Trips to/from Pike Place Market Garage	25	25	50	25	25	50
Visitor Trips to/from On-Street Parking and Other Garages (Outside Study Area)	209	209	418	266	266	532
Increase in Vehicle Trips per Day	365	365	730	456	456	912
PM Peak Hour Vehicle Trips (4-5 p.m.)						
Visitor Rideshare and Taxi Trips	11	11	22	15	15	30
Visitor Trips to/from Pike Place Market Garage	4	8	12	4	11	15
Staff/Volunteer Commute Trips to/from Pike Place Market Garage	0	14	14	0	14	14
Increase in PM Peak Hour Vehicle Trips within Study Area	15	33	48	19	40	59
Visitor Trips to/from On-Street Parking and Other Garages (Outside Study Area)	17	34	51	17	47	64
Total Increase in Vehicle Trips in PM Peak Hour	32	67	99	36	87	123

Source: Heffron Transportation 2018

The PM peak hour vehicle trips that would be generated within the study area on a peak season day—those generated by rideshare, taxi, and visitor and employee vehicles parked at the Pike Place Market

Garage, calculated as 19 inbound and 40 outbound trips—were distributed to the street network, assuming similar overall traffic patterns as Alternative 1.

The additional trips generated by visitors and employees were added to the Alternative 1 study area volumes to estimate the projected 2030 PM peak hour volumes for the action alternatives, shown in Figure 9. It should be noted that the action alternative trip projections assume that new visitors and employees would travel directly to the Seattle Aquarium before their visit or work shift and depart directly after. This results in a conservatively high estimate of PM peak hour vehicle trips because it is likely that some would walk to other destinations (e.g., shopping, errands, other attractions) before or after their visit or shift at the Seattle Aquarium and therefore would be less concentrated than the analysis assumes. Also, all trips to and from the Pike Place Market Garage via Western Avenue were assumed to occur at one driveway. Since they could be spread between the two driveways on Western Avenue, this results in a more conservative estimate of operating conditions associated with garage access.

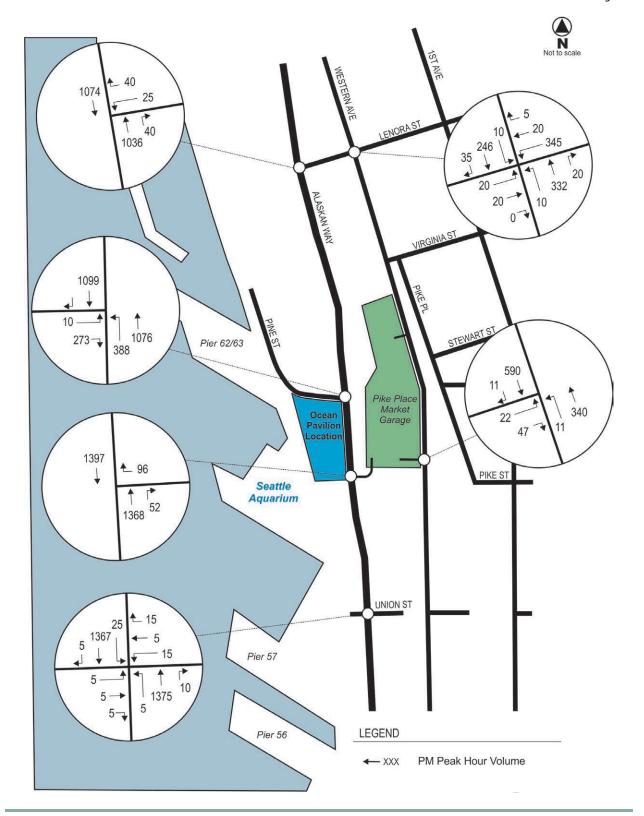


Figure 9
2030 Traffic Volumes for Alternative 2 or 3 – PM Peak Hour

Source: Heffron Transportation, July 2018

Intersection Level of Service

Levels of service (LOS) of study area intersections apply the same methods that were applied in the AWPOW EIS. LOS designations are qualitative descriptions of traffic operating conditions, designated with letters ranging from LOS A, which is indicative of good operating conditions with little or no delay, to LOS F, which is indicative of stop-and-go conditions with frequent and lengthy delays. LOS for this analysis was developed using procedures presented in the *Highway Capacity Manual* (Transportation Research Board 2016) and is consistent with the analysis method applied for the AWPOW EIS, as described in Section 4.5 of the *Appendix A: Transportation Discipline Report* prepared for that EIS (SDOT 2016c). All LOS calculations were performed with Trafficware's *Synchro 10.1* analysis software.

LOS for intersections is defined by the average delay per vehicle in seconds. Delay at a signalized intersection is a complex measure and is dependent on a number of variables including: lane geometry, traffic volumes for each turning movement, signal phasing and whether some movements need to yield to oncoming vehicles, cycle length and time allocated to each signal phase, bus stops and adjacent parking, and the number of pedestrian crossings. Delay at a side-street stop is related to the availability of gaps in the main street's traffic flow, and the ability of a driver to enter or pass through those gaps. The delay at an all-way stop sign-controlled intersection is based on saturation headways, departure headways, and service times.

Table 7 shows the LOS criteria for signalized and unsignalized intersections.

Table 7
Level of Service Thresholds

		Average Delay (seconds per vehicle)		
LOS	General Description	Signalized Intersections	Unsignalized Intersections	
Α	Free flow	<10.0	Less than 10.0	
В	Stable flow (slight delays)	10.1 – 20.0	10.1 – 15.0	
С	Stable flow (intermediate delays)	20.1 – 35.0	15.1 – 25.0	
D	Stable flow (intermediate delays)	35.1 – 55.0	25.1 – 35.0	
Е	Unstable flow (approaching forced flow)	55.1 – 80.0	35.1 – 50.0	
F	Forced flow (jammed)	> 80.0	> 50.0	

Source: Transportation Research Board, Highway Capacity Manual 2010

The 2030 analysis presented in this memorandum reflects conditions with the completion of the AWPOW projects. In addition to the street improvements described in the Affected Environment section of this memorandum, the AWPOW projects will also signalize the intersection of the Pike Place Market Garage driveway at Alaskan Way, adjacent to the Aquarium Plaza.

Intersection operations for Alternative 1 reflect the condition without the Ocean Pavilion.

Table 8 shows the anticipated LOS at the study area intersections for the alternatives for the year 2030. As described previously, all transportation improvements included in the AWPOW projects are expected to be in place by that year. The table shows that all study area intersections are anticipated to operate at LOS D

or better with Alternative 1. The additional vehicle trips generated in the study area by the action alternatives are projected to add a small amount of average delay to some intersections but are not expected to change their overall LOS. Based on these results, the long-term traffic impacts resulting from the action alternatives are anticipated to be minor.

Table 8
Level of Service Summary – 2030 Conditions – PM Peak Hour

	Alternative 1 (or Refined Alternative 1)		Alternative 2 or 3		
Intersection	LOS	Delay ¹	LOS	Delay ¹	
Signalized	Signalized				
Western Avenue/Lenora Street	D	39	D	39	
Elliott Avenue/Lenora Street	В	16	В	16	
Alaskan Way/Pine Street	С	34	C	35	
Alaskan Way/Pike Place Market Garage driveway	А	5	Α	6	
Alaskan Way/Union Street	В	12	В	13	
Stop Sign-Controlled					
Western Avenue/Pike Place Market Garage driveway (overall)	Α	1	Α	1	
Eastbound movement	С	19	С	20	
Northbound left-turn movement	А	9	А	9	

 $Source: Heffron\, Transportation, June\, 2018$

Note:

Site Access and Circulation

The site access evaluation addresses deliveries and buses accessing the existing Seattle Aquarium and proposed Ocean Pavilion. The loading configuration was developed as part of the AWPOW projects and would be the same with Alternatives 1, 2, and 3.

A loading area would be provided on the west side of Alaskan Way, next to the proposed Ocean Pavilion, and separated from the adjacent sidewalk (to the west) and Alaskan Way vehicle lanes (to the east) by landscaped buffers. The loading area would accommodate both delivery vehicles and buses. A curb cut within the loading area would allow direct east-west access to the waterfront piers via the Waterfront Promenade (located between Piers 59 and 60 and the Ocean Pavilion) for emergency, freight, delivery, garbage, and recycling vehicles. These vehicles would have access to the piers at all times, but any loading directly on or off the Waterfront Promenade would be discouraged during peak pedestrian periods, and loading activities would be managed by staff, to maintain safety. The evaluation presented in Section 3.4.2 of the AWPOW EIS found that overall freight mobility on Alaskan Way would improve with the AWPOW projects, and that curb space and loading zones would be adequate to accommodate loading needs.

The action alternatives are expected to generate about 6 to 8 trucks per day (including deliveries, facility maintenance contractors, and trash, recycling and compost removal), including 4 to 6 truck deliveries that

^{1.} Average seconds of delay per vehicle

are typically generated by the existing Seattle Aquarium, and would continue with Alternative 1 (Seattle Aquarium 2018). Deliveries primarily are spread out during off-peak periods and are anticipated to have a minor effect on traffic operations. All three alternatives include service routes to the Seattle Aquarium that cross the Aquarium Plaza that would be used by a small number of trucks per day. With either action alternative, the loading dock and site frontages would be designed to meet City standards and would adequately accommodate loading without adversely affecting pedestrian or vehicle circulation at and near the Ocean Pavilion.

Based on overall visitor increases that are expected to result from the Ocean Pavilion, the current range of about 8 to 10 buses per day that carry groups to and from the Ocean Pavilion is expected to increase to about 15 to 20 buses per day during peak day conditions. The loading zone would be designed to meet City standards to adequately accommodate passenger loading. Bus traffic is typically generated by the Seattle Aquarium during daytime hours, between 9:00 a.m. and 3:00 p.m., to correspond to typical school hours and is not expected to affect PM peak hour traffic conditions for all three alternatives. Because delivery and passenger loading activities are not expected to adversely affect traffic operation at site access points and loading needs would adequately accommodated through adherence to City standards, impacts resulting from loading activities are anticipated to be minor.

Parking

With Alternative 1, there would be no changes to parking demand or supply, beyond what was evaluated in Section 3.7 of the AWPOW EIS. The AWPOW EIS analysis inventoried on-street and off-street parking in its study area and evaluated parking utilization within that area during several times per day. The Affected Environment section of this memorandum provides updated parking utilization data for off-street parking near the site and in the broader waterfront study area. Findings of the updated utilization information are consistent with the findings of the AWPOW analysis; while parking is priced and tightly controlled, there is unused parking available during all times of day. No additional assessment was conducted for Alternative 1.

Parking demand increase for Alternative 2 was forecast utilizing the survey results described for the traffic volume forecasts. As previously described, the Seattle Aquarium does not have its own parking supply, and none is proposed to be constructed. Visitor survey data indicated that about 19% of vehicles generated by aquarium visitors are parked in the Pike Place Market Garage, which is the closest parking option. The remaining vehicles are parked on the street or in other garages outside the immediate study area (often chaining a visit to the Seattle Aquarium with visits to other downtown attractions).

It is anticipated that most parking generated by Seattle Aquarium events occurs at the adjacent Pike Place Market Garage. The capacity of the garage to accommodate increased event-related parking demand was evaluated, based on the parking usage data described previously in the Affected Environment section.

Additional parking demand generated by new visitors with the action alternatives is summarized in Table 9. The visitor survey data indicated that visitors who travel to the Seattle Aquarium by car have an average of 3.4 persons per car. Applying this average vehicle occupancy to the additional visitors projected to travel by car with the action alternative results in a total additional 258 vehicles parked per day on a

design (typical) day and 329 vehicles parked per day on a peak day. Parked vehicles generated by aquarium visitors would be spread throughout the day and would not be all parked at the same time. Applying the visitors by hour of day, shown previously in Table 5, as well as the typical duration of stay reflected in the Seattle Aquarium visitor surveys, results in a peak hour demand of 89 parked vehicles on a design (typical) day and 116 parked vehicles on a peak day.

Table 9
Additional Parking Demand Generated by Visitor Increases – Alternatives 2 and 3

	Design Day	Peak Day
Additional Daily Visitors Traveling by Car	876	1,117
Additional Cars Parked Per Day ¹	258	329
Peak Hour Additional Demand ²	89	116
Peak hour demand at Pike Place Market Garage	17	22
Peak hour demand on street and at other downtown garages	72	94

Source: Seattle Aquarium 2018; compiled by Heffron Transportation, June 2018 Notes:

Based upon the parking occupancy shown previously in Figure 6, the Pike Place Market Garage has adequate capacity to accommodate all of this additional parking demand. However, based on the visitor survey data, about 19% are expected to park at the Pike Place Market Garage, and the rest are expected to park on street or at other downtown garages.

Based on employee vehicle trip projections summarized in Table 4, each action alternative is expected to generate an additional 25 vehicles parked by Seattle Aquarium staff and volunteers per peak season day. As discussed previously, the analysis presented in this memorandum assumes that all employees and staff would park at the Pike Place Market Garage; this results in conservatively high estimate within the study area, because some employees could park at other public and private lots and garages throughout downtown. Additional staff generated by the action alternatives were assumed to arrive between 8:00 and 11:00 a.m. and depart between 3:00 and 7:00 p.m. (with a little over half departing during the PM peak hour, as previously described).

Figure 10 shows the projected distribution by hour, with the additional parking demand expected to be generated by visitors and staff with the action alternatives. The figure shows that on a typical weekday during the peak visitor season, when parking demand is highest in the downtown core area of Seattle, including garages along the waterfront, the action alternatives are projected to generate an additional peak parking demand of about 45 vehicles in the Pike Place Market Garage at mid-afternoon, compared to Alternative 1, as shown in Figure 6.

^{1.} Daily parking demand estimated by dividing the number of daily visitors traveling by car by an average vehicle occupancy of 3.4 persons per vehicle

^{2.} Peak hour parking demand estimated by applying the projected visitor demand profile by hour (see Table 5) and calculating the cumulative parking demand based on typical durations of stay reflected in the visitor travel surveys

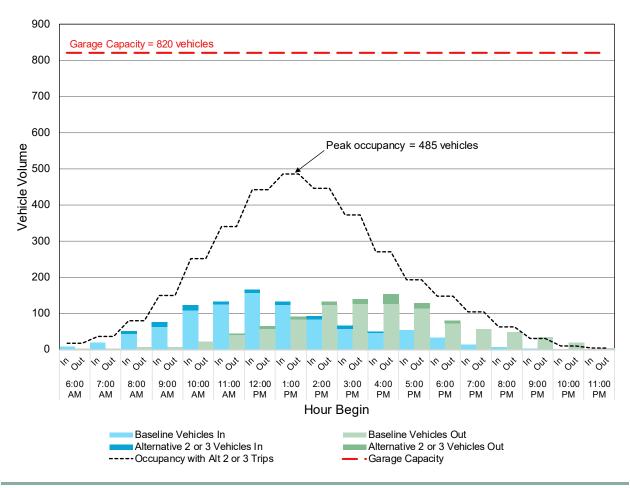


Figure 10
Pike Place Market Garage – Hourly Use on Peak Season Weekday with Alternative 2 or 3 Demand
Source: Heffron Transportation 2018

With additional parking demand generated by either of the action alternatives, the Pike Place Market Garage is expected to have more than 300 spaces available throughout the weekday to accommodate demand generated by other uses. As described previously, while the Pike Place Market Garage would have adequate capacity to accommodate all increased parking demand, the action alternatives are expected to generate about 94 additional vehicles at other locations spread throughout downtown during the peak demand hour (as patrons often chain a visit to the Seattle Aquarium with visits to other downtown attractions). However, the visitor travel survey showed that these vehicles would be spread out between on-street parking and private lots and garages throughout the downtown area and would be less concentrated than the demand generated within the study area. Downtown parking capacity illustrated in Table 2 shows that there is ample capacity in private lots and garages to accommodate this demand. If more visitors opted to park at the Pike Place Market Garage than the visitor travel surveys indicated, analysis completed for the garage expansion project concluded that even at full garage occupancy, parking demand would not result in significant adverse transportation impacts (Heffron Transportation

2013). Because parking capacity would be available to accommodate the additional parking demand generated by the action alternatives, parking impacts are anticipated to be minor.

Freight

Consistent with the AWPOW EIS analysis, and as described in Section 4.4.2 of the *Appendix A: Transportation Discipline Report* prepared for that document, the Alternative 1 operational analysis assumes the same percentage of heavy (freight) vehicles in the study area as under 2017 existing conditions (SDOT 2016c). This assumption was based on the EBSP analysis, which determined that removal of the viaduct and opening of the bored tunnel would not affect the percentage of freight traffic on the study area streets. The number of truck trips would increase with the increased traffic forecast for 2030 conditions. Consistent with the AWPOW EIS and Alternative 1 operational analysis described previously, the action alternative analysis assumes the same percentage of heavy (freight) vehicles in the study area as under 2017 existing conditions. None of the alternatives would affect citywide freight routes. Therefore, no freight impacts are anticipated.

Transit

With Alternative 1, there would be no changes to transit demand or supply, beyond what was evaluated in the AWPOW EIS. As described in Section 4.4.4 of the AWPOW EIS *Appendix A: Transportation Discipline Report*, analysis included future public transportation volumes in the study area, as provided by Metro, in the traffic operations model (SDOT 2016c). Changes to public transportation routing as a result of AWPOW improvements, including anticipated impacts on ridership and bus stops, were qualitatively analyzed to evaluate impacts on public transportation. No additional assessment was conducted for Alternative 1.

Additional transit demand generated by the action alternatives was estimated by applying the survey travel mode data previously described to the forecast visitor increases. The data indicated that 13% of visitors travel to the Seattle Aquarium by transit for ferry. The impact of the increased demand was qualitatively evaluated with respect to available transit service and facilities in the area, and also consistency with local and regional policies (described previously in the Regulatory Context section of this memorandum) that encourage use of alternative travel modes.

As shown in Table 5, the proposed Ocean Pavilion under the action alternatives is projected to result in an increased number of visitors who travel to and from the Seattle Aquarium by transit. The 224 (typical day) to 285 (peak day) additional visitors who travel by transit translates to 448 to 570 new transit trips per day, as each visitor makes one inbound transit trip to the Seattle Aquarium and one outbound trip at the end of their visit. The peak transit demand would occur mid-day and would not overlap with the commuter peak hours into and out of downtown. As described previously, downtown Seattle is the largest transit hub in the region; the waterfront area is served by light rail, streetcar, commuter rail, ferry, water taxi, and dozens of local, regional, and RapidRide bus routes provided by Metro, Sound Transit, Community Transit, and Pierce Transit. These collective transit options for downtown Seattle provide capacity that is more than adequate to support the increased transit demand generated by the action alternatives. Increased transit ridership is considered beneficial because it supports, local, regional, and statewide policies that encourage the use of alternative transportation modes instead of driving. None of the alternatives would affect transit stops, stations, or routes. No adverse transit impacts are anticipated to result from the action alternatives.

Non-Motorized Travel

With Alternative 1, there would be no changes to non-motorized facilities or conditions, beyond what was documented in Section 3.4.2 of the AWPOW EIS for the reconfiguration of Alaskan Way next to the Ocean Pavilion. The AWPOW pedestrian comfort and safety analysis was qualitative and considered the types of driveways, roadways, and impediments pedestrians will encounter and the types of intersection control provided. It also considered the width of facilities and the separation provided to pedestrians from bicyclists and vehicular traffic. A qualitative analysis was conducted of bicycle comfort and safety through the study area. The bicycle analysis was also qualitative and considered the number of driveways and roadways cyclists would cross and the types of intersection control provided. The width of facilities and the separation provided to bicyclists from pedestrians and vehicular traffic were also considered. No additional assessment was conducted for Alternative 1.

Additional non-motorized demand generated by the action alternatives was estimated by applying the survey travel mode data previously described to the forecast visitor increases. The data indicated that 27% of visitors walk to the Seattle Aquarium (many of whom are tourists staying at downtown hotels) and 1% bike. Since the Seattle Aquarium has no added parking, all new patron trips are assumed to be non-motorized trips between the site and parking, transit, or other walking destinations. The impact of the increased demand was qualitatively evaluated with respect to available non-motorized facilities in the area, including pedestrian connections and at-grade crossings of Alaskan Way, and also consistency with local and regional policies (described previously in the Regulatory Context section of this memorandum) that encourage use of travel modes.

As shown in Table 5, the proposed Ocean Pavilion under the action alternatives is projected to result in an increased number of visitors who travel to and from the Seattle Aquarium by walking or biking. The 482 (typical day) to 613 (peak day) additional visitors who travel by walking or biking translates to 964 to 1,226 new walking and biking trips per day, as each visitor makes one inbound trip to the Seattle Aquarium and one outbound trip at the end of their visit. In addition, since the Seattle Aquarium has no on-site parking, all new patron trips would include a non-motorized component, as visitors traveling by other modes would walk between the site and parking, transit, or other walking destinations. With Alternative 1, the existing Seattle Aquarium site would be incorporated into the extensive pedestrian and bicycle improvements that are being constructed along the waterfront as part of the AWPOW projects. With the action alternatives, the Ocean Pavilion would be integrated with the AWPOW projects' improvements, providing additional pedestrian space and meeting all accessibility standards. The existing and planned future pedestrian and bicycle facilities would adequately accommodate additional non-motorized demand generated by the Ocean Pavilion. Increases in people walking or biking is considered beneficial because it supports, local, regional, and statewide policies that encourage the use of alternative transportation modes instead of driving. No adverse non-motorized impacts are anticipated to result from the action alternatives.

Event Condition Impacts

The Seattle Aquarium also currently hosts special events, and the Ocean Pavilion could increase event capacity. Information about the current size and frequency of events at the Seattle Aquarium, as well as information about how they are expected to change with under the action alternatives, was provided by the Seattle Aquarium staff.

The existing facility has an event capacity of 800 guests. In 2017, 113 events were held over the course of the year, with an average attendance of 230. In July 2017, the month with the highest level of overall visitor activity, 19 events were held, ranging in size from 15 to 800 guests, with an average attendance of 176. With the action alternatives, event capacity would increase to about 1,200 guests. The frequency of events is not expected to materially change, but an average attendance of about 600 is projected with full operation of these alternatives. Because these events primarily occur during off-peak hours (during weekends or weekdays after the Seattle Aquarium is closed to the general public, after the PM peak hour) the overall typical traffic volumes are anticipated to be lower than the PM peak hour condition, and intersection operations would typically be better than the results summarized in Table 8. Therefore, no operational analysis was conducted for event conditions.

As shown in Figure 6, peak parking occupancy at the Pike Place Market Garage typically occurs in the mid-afternoon and occupancy steadily declines later in the afternoon on all days of the week. During the evening hours, there is ample parking capacity available to accommodate event parking demand, and no adverse impacts on parking are anticipated from event activities.

Animal Care Center Impacts

The proposed Animal Care Center may be located on Harbor Island or a similar warehouse location, about 5 miles from the Seattle Aquarium. It is anticipated that up to 2 to 4 employees would typically generate about 2 to 4 commute trips per day. Fewer than 3 trips per day would typically be generated by operation of the facility and would primarily occur during off-peak periods. Because trips generated by the Animal Care Center would be small in number and spread through the day, they would have a negligible effect on traffic operations. On-site parking supply and loading facilities would meet City code requirements and standards; therefore, no adverse impacts related to parking or loading are anticipated.

Mitigation

No significant long-term transportation or parking impacts are anticipated to result from Alternatives 1, 2, or 3, or the Animal Care Center; therefore, no mitigation is proposed.

Construction-Related (Short-Term) Impacts and Mitigation Measures

Construction-related activities may have impacts related to truck trips, construction employee trips and parking, and short-term lane or sidewalk closures. The degree of the impact depends on both quantitative and qualitative assessments. Based on a combination of quantitative and qualitative assessments, the degree of impact is defined as minor, moderate, or significant. These potential impacts are described in the following sections.

Alternative 1 Impacts

Alternative 1 would not include construction beyond what was analyzed in Section 3.3 of the AWPOW EIS, which considered the transportation and parking impacts of the overall improvements along the waterfront between Wall Street and South King Street, but did not explicitly consider the potential impacts of construction of the Ocean Pavilion. No additional construction impacts are identified for this alternative.

Alternatives 2 and 3 Impacts

The following transportation and parking impacts are anticipated to result during the construction of either action alternative.

Construction-Generated Vehicle Trips and Parking

For the action alternatives, estimates of vehicle trips generated by construction activities—including trucks hauling site materials and construction employee trips—were based on the preliminary design and construction phasing anticipated for these alternatives. It should be noted that because estimates are preliminary, they are conservatively high. For the action alternatives, trips would be generated by trucks traveling to support construction activities and also by construction workers commuting to and from the work site. Trucks are expected to average between about 10 and 20 round trips per day, over the duration of the 28-month construction period. The highest daily truck trips (about 50 round trips per day) are expected to occur during the period when excavation and foundation construction occurs.

It is anticipated that construction workers would arrive at the work site before the morning peak traffic period on area streets and depart the site prior to the evening commute peak period. Vehicle trips generated by construction workers may be constrained by the amount of available parking at the work site; if measures are needed to eliminate potential parking overspill, they would also serve to reduce vehicle trips.

An average of 100 construction employees are expected to be at the work site on any given day; the exact number would vary from day to day depending on the construction activities taking place. Construction employees who drive to the work site would generate parking demand. For downtown projects, any employee parking that cannot be accommodated at the site may require the use of off-site parking and transit or employee shuttles between the parking location and the site, to prevent overspill to the public parking supply. However, it may be possible for some construction-generated parking to occur within the Pike Place Market Garage during periods or times of year when there is excess capacity. With mitigation in place, construction-generated parking impacts would be minor.

Construction-generated trips and parking demand were estimated based on preliminary design and anticipated construction phasing. They would be refined as part of ongoing design.

Street Lane or Sidewalk Closures

The Ocean Pavilion would coordinate construction along its Alaskan Way frontage with the AWPOW projects to minimize lane and sidewalk closures. To the extent possible, truck staging would be located off Alaskan Way.

No major street closures are anticipated to occur with construction of the action alternatives. If necessary, lane or sidewalk closures during construction would be localized and limited in duration. Any closures that occur would need to be managed through measures developed as part of a Construction Management Plan, described in the following mitigation section. With mitigation measures in place, impacts related to street lane or sidewalk closures are anticipated to be minor to moderate, depending on the duration, level of capacity reduction, and length of detour.

Animal Care Center Impacts

Construction activities associated with the Animal Care Center would generate a small number of trucks that would be spread out and would not have noticeable effect on traffic operations.

Construction-generated parking for the Animal Care Center would be accommodated on site and would not result in adverse impacts.

Mitigation

For the action alternatives, the Ocean Pavilion contractor would be required to develop and implement a Construction Management Plan, which could potentially include, but not be limited to, the following avoidance and minimization measures:

- Prepare Maintenance of Traffic plans for any work within the public right-of-way that affects
 vehicular, transit, bicycle, or pedestrian traffic. These plans would be required to show the location
 of traffic cones, traffic control personnel, and signs, and indicate special treatments for pedestrian
 and bicycle access.
- Coordinate with the City to determine appropriate times of travel and haul routes for construction-generated truck traffic. In general, construction-generated truck traffic may be prohibited during weekday peak periods (6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.). Haul routes generally would be on arterial streets through commercial areas and consist of the most direct path to and from the state highway system.
- Maintain access for driveways near the work site.
- Provide adequate staging areas for construction-related vehicles.
- Provide on-site loading areas for removal and delivery of material.
- Encourage construction workers to commute via alternative modes, or provide shuttle service to
 and from the work site for construction employees, to minimize added vehicle trips and parking
 demand at or near the work site.
- Maintain pedestrian and bicycle access and circulation during project construction.
- Provide access for emergency vehicles at all times. During lane closures, notify police and fire
 departments of construction locations to ensure that alternative evacuation and emergency routes
 are designed to maintain response times during construction periods, if necessary.

Through its Street Use Permit process and consistent with SMC 15.32.050, SDOT would coordinate the construction needs and potential construction-related impacts of this project with the other infrastructure and development projects in the study area, including potential overlapping elements of the AWPOW projects' construction. SEAS would participate in construction coordination processes that SDOT establishes for major projects. Implementation of these measures is expected to reduce construction traffic and parking impacts to less-than-significant levels. Therefore, no mitigation measures are proposed.

Cumulative Effects and Mitigation Measures

Since the analysis in this report builds on the AWPOW EIS, which included additional background traffic forecasted to result from regional development growth through 2030, all operational transportation and parking analysis provided is cumulative.

The AWPOW EIS identifies other planned and programmed projects with construction activities that could potentially overlap. As described in the mitigation section, through its Street Use Permit process and consistent with SMC 15.32.050, SDOT would coordinate the construction needs and impacts of this project with the other infrastructure and development projects in the study area, including potential overlapping elements of the AWPOW construction. SEAS would participate in construction coordination processes that SDOT establishes for major projects. With this mitigation, no significant adverse cumulative effects are anticipated.

Overall, transportation and parking within the study area would be improved by the AWPOW projects and would further the goals of regional and local land use and transportation plans (SDOT 2016b). It is also anticipated that there would be adequate long-term parking within the study area to accommodate the Ocean Pavilion and other simultaneous and planned projects. It is expected that the City would continue to assess parking needs and require parking be provided, as needed, for future development. Therefore, it is anticipated that there would be no cumulative effects from operation of the proposed action on transportation and parking.

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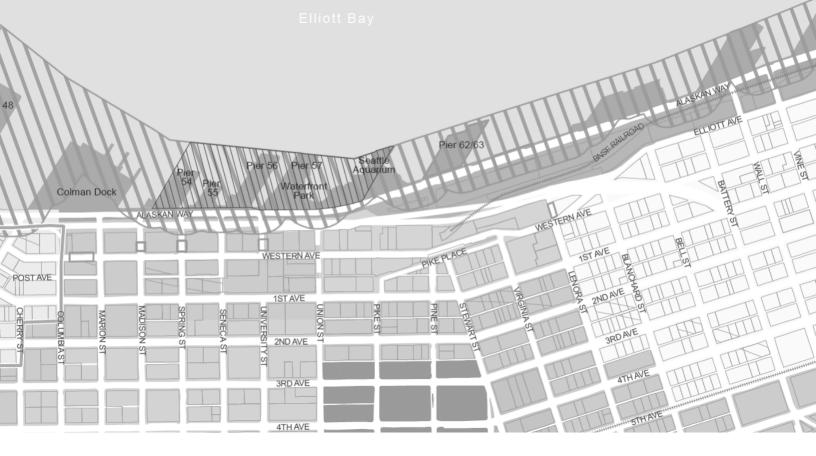
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Appendix D Land Use Technical Memorandum



November 2018

Seattle Aquarium Ocean Pavilion

Land Use Technical Memorandum

Prepared for

City of Seattle Department of Parks and Recreation Seattle Aquarium Society

Prepared by Anchor QEA, LLC

Executive Summary

The purpose of this technical memorandum is to describe the potential impacts on land use associated with the proposed Seattle Aquarium Ocean Pavilion (Ocean Pavilion). This memorandum evaluates the potential effects of project construction and operation on these resources for two action alternatives as well as a No Action Alternative. The City of Seattle Department of Parks and Recreation (Seattle Parks and Recreation), in coordination with the Seattle Aquarium Society (SEAS), is preparing a State Environmental Policy Act (SEPA) Environmental Impact Statement (EIS) to evaluate the proposal, which includes two different building options located near the existing Seattle Aquarium at Piers 59 and 60 along the Seattle waterfront and an off-site Animal Care Center that may be located on Harbor Island at the former Fisher Flour Mill or similar facility.

The construction of an "Aquarium Pavilion" was reviewed by the City of Seattle (City) as part of the Alaskan Way, Promenade, and Overlook Walk (AWPOW) SEPA EIS (SDOT 2016). Information and analysis from the AWPOW EIS is incorporated by reference into the analysis and findings of this memorandum, in accordance with Seattle Municipal Code (SMC) 25.05.635 and Washington Administrative Code (WAC) 197-11-635.

The Ocean Pavilion is being proposed as a separate and independent project from the AWPOW and other ongoing projects along the central waterfront. However, the proposal is intended to anchor these projects and reconnect the city with Puget Sound and its central waterfront. This memorandum summarizes the relevant findings from the AWPOW EIS, describes changes to the Ocean Pavilion proposal that have occurred since that time, and evaluates whether the changes would result in any potential additional construction and long-term impacts on land use.

The findings of this Ocean Pavilion EIS land use analysis indicate that Alternative 1 would have no construction-related impacts to adjacent land uses, while the action alternatives (Alternatives 2 and 3) would have minor construction-related impacts due to effects associated with noise, dust, congestion, loss of parking, and access (Table 1). Mitigation measures for construction impacts would include maintaining access to businesses and recreational facilities, communicating with residents, businesses, and stakeholders, and applying measures developed for other environmental topics, such as controlling noise and dust.

The action alternatives are anticipated to provide minor long-term benefits because the Ocean Pavilion would increase educational opportunities and support anticipated land uses in the area, consistent with local plans and policies. Alternative 3 would have slightly more benefit because it preserves unobstructed public views of Elliott Bay, whereas Alternative 2 would have partially obstructed public views. Additionally, both action alternatives would improve access to the Pike Place Market from the waterfront, although this would occur to a greater extent with Alternative 3 because pedestrian access would have a more level connection with the Overlook Walk and a more visible elevator connection

Table 1
Land Use Impacts Summary

Alternative	During Construction	Long Term
1 (No Action)	No Adverse Impact No construction, therefore no construction impacts	No Adverse Impact Would maintain public open space and access consistent with the goals of applicable land use plans and policies as analyzed in the AWPOW EIS (SDOT 2016)
2	Minor Impacts Potential impacts associated with noise, dust, congestion, loss of parking, and access changes	Would further the goals of applicable land use plans and policies for education, increased multimodal connections, and open space and recreation Would provide public open space and access to the rooftop and partially obstructed public views of Elliott Bay, preserving some views of the water
3	Minor Impacts Potential impacts associated with noise, dust, congestion, loss of parking, and access changes	 No Adverse Impact, Minor Benefit Would further the goals of applicable land use plans and policies to a greater degree than Alternative 2 for increased multimodal connections and open space and recreation Would provide public open space and access to the rooftop; the higher elevation would provide unobstructed public views of Elliott Bay over Pier 59, preserving views of the water consistent with policies and goals of the City's Comprehensive Plan Would also provide improved access to the Pike Place Market from the waterfront to a greater degree than Alternative 2 because pedestrian access would have a more level connection with the Overlook Walk and a more visible elevator connection; there would also be more landscaping on the Ocean Pavilion roof as compared to Alternative 2

Introduction and Project Description

The Ocean Pavilion would be located in Seattle, King County, Washington (Figure 1). The building would be constructed east of the existing Seattle Aquarium, and east of the future pedestrian promenade along the waterfront constructed as part of the AWPOW projects. A potential off-site Animal Care Center may be located on Harbor Island at the former Fisher Flour Mill or a similar facility (Figure 1). Three alternatives have been developed for the Ocean Pavilion: a No Action Alternative and two action alternatives. A full description of these alternatives is included in the Draft Ocean Pavilion EIS, with summary descriptions provided within this technical memorandum.



Figure 1 Vicinity Map

Alternative 1: No Action Alternative

Under Alternative 1 (No Action Alternative), the Ocean Pavilion would not be built. However, conditions in the area would be different from those that exist at the time this EIS is published (2018). The analysis for the No Action Alternative is based on the expected conditions in 2030, which is the year used for the assessment of future conditions. The following major changes assumed to be in place under the No Action Alternative:

- The AWPOW projects identified in the preferred alternative within the AWPOW EIS would be completed. The AWPOW projects would continue to be refined through the Office of the Waterfront and Civic Projects' design process.
- The Alaskan Way Viaduct Replacement Project (AWVRP) would be completed, with the viaduct eliminated and the State Route 99 tunnel in operation.
- The Elliott Bay Seawall Project (EBSP) would be completed.
- Ongoing public and private development projects that are currently being permitted through the Seattle Department of Construction and Inspections would be completed, with an additional projected baseline growth of 1% per year.

A description of the AWPOW's selected preferred alternative is included in Section 2.3 of the AWPOW EIS (SDOT 2016). The main difference between the two is that the No Action Alternative for Ocean Pavilion does not include construction of the "Aquarium Pavilion," which was one option described as part of the AWPOW's preferred alternative. Descriptions of the AWVRP and EBSP are described in Section 2.2 of the AWPOW EIS. Figure 2 shows the No Action Alternative, which serves as the baseline against which the potential impacts of the action alternatives are evaluated.

Office of the Waterfront and Civic Projects' Potential Design Refinements

The AWPOW projects would continue to be refined through the Office of the Waterfront and Civic Projects' design process. As of the publication of this EIS, the conceptual design of the Overlook Walk lid (or bridge) connecting the waterfront to the Pike Place Market over Elliott Way would be narrower (90 feet versus 190 feet) and higher (50 feet versus 40 feet) than the design in the AWPOW EIS. In addition, Building B would be replaced by a smaller one-story building with a covered outdoor café and seating area on its roof. Public stairs and elevators would maintain connections from the Overlook Walk to the waterfront. These refined conditions were used in assessing the range of impacts of the action alternatives as compared to No Action Alternative and potential design refinements.

Alternative 2

Alternative 2 includes the Ocean Pavilion concept evaluated as one option for the preferred alternative under the AWPOW EIS (referred to as the "Aquarium Pavilion" in the AWPOW EIS). Alternative 2 includes an approximately 48,000-square-foot building featuring an interior elevator and connections to a fully accessible route between the waterfront and Pike Place Market. The orientation of the proposed building would locate it farther north and closer to Pine Street, compared to Alternative 3 which would be located farther south. The building would be approximately 40 feet tall with a rooftop waterfront viewing space accessible

from the Overlook Walk. An off-site Animal Care Center would be included under Alternative 2, as described herein. Figure 3 shows Alternative 2.

Alternative 3

Alternative 3 includes building the Ocean Pavilion east of the existing Seattle Aquarium on Alaskan Way and the future Waterfront Promenade. The Ocean Pavilion would be located farther south than Alternative 2, resulting in a shorter distance from the Ocean Pavilion entrance to the existing Seattle Aquarium entrance and improved accessibility for visitors, volunteers, staff, and Seattle Aquarium programs. The proposed building would include an approximately 48,000-square-foot public aquarium featuring an exterior elevator and connections to a fully accessible route between the waterfront and Pike Place Market. The building would be approximately 50 feet tall with unobstructed public views of Elliott Bay over the existing Seattle Aquarium on Pier 59 and would be accessible from the future Overlook Walk. This alternative also includes an off-site Animal Care Center, as described herein. Figure 4 shows Alternative 3.

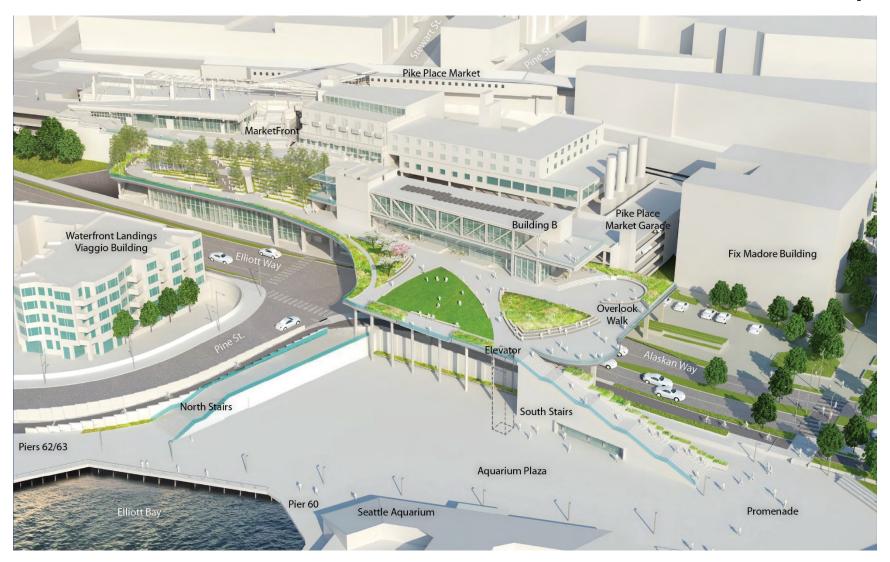


Figure 2 Alternative 1 (No Action)

Source: LMN Architects



Figure 3 Alternative 2

Source: LMN Architects



Figure 4 Alternative 3

Source: LMN Architects

Off-Site Animal Care Center for Alternatives 2 and 3

An off-site Animal Care Center is proposed to address both short- and long-term animal care, veterinary, and rehabilitation needs and to meet the Association of Zoos and Aquariums' standards. The most immediate need is to provide necessary animal care to support the opening of the Ocean Pavilion and the turtle rehabilitation program. The Animal Care Center would also be a long-term care facility that supports SEAS' exhibit animal population, animal rehabilitation, and research efforts.

The Animal Care Center would be designed to meet peak animal care demand for the Seattle Aquarium exhibits and programs. This would include approximately 15,000 square feet of interior space, plus an additional 5,000 to 7,000 square feet of area surrounding the facility for outdoor animal holding, water storage, and parking. The center is intended to meet the care needs of both warm- and cold-water fish, birds and mammals, and rehabilitating animals. The center would also provide long-term care, including life support systems, with flexibility in the design to accommodate future needs.

SEAS plans to have the Animal Care Center constructed and operational 2 to 3 years prior to the opening of the Ocean Pavilion. This would allow for coral propagation, animal quarantine, and acclimation of the animals for the exhibits. SEAS has identified a potential site at the former Fisher Flour Mill property on Harbor Island, which is owned by King County. While the Fisher Flour Mill site is a potential location for the center, a similar location could be pursued. It is not anticipated that the impacts identified in this analysis would differ at a similar location.

Construction Methods for Alternatives 2 and 3

Construction methods for the action alternatives are described in the following subsection. It is anticipated that construction methods would be similar for both action alternatives. During construction, access to existing utilities would be maintained for surrounding property uses.

Construction Activities

It is anticipated that construction at the Ocean Pavilion would require the following activities:

- Open excavation for the basement of the Ocean Pavilion, which would reach about 20 feet below the ground surface, with 48-inch-diameter piles extending at varying depths
 - It should be noted that for Alternative 2, the AWPOW EIS shows 60 to 80 feet of excavation proposed in this area (SDOT 2016: Figure 10-2, page 245). It is expected that this depth is specific to the future Overlook Walk and other improvements, and depths of that magnitude would not be required to construct the Ocean Pavilion.
- Dewatering of excavation areas below the water table or implementing soil freezing treatments to provide a dry work area as necessary
- Protecting, relocating, and/or connecting utilities
- Using best management practices to protect water quality and reduce erosion (may include installation of silt fencing, covering of stockpiled soil, and collection and treatment of construction stormwater runoff)
- Drilling shafts for piers to support the building, including exterior elevators or stairs as necessary

- Removing existing knock-outs in the adjacent seawall under Pier 60 to connect the overwater intake pipe, seawater discharge, and utilities and infrastructure between the Ocean Pavilion and existing Seattle Aquarium buildings
- Erecting structural components and installing mechanical and other building features, using a crane tower for hoisting
- Potentially using one barge for 3 to 8 weeks, located between Piers 62/63 and Pier 60 for delivery of acrylic windows for the exhibits

Construction at the Animal Care Center would be limited to the building interior. No substantial modifications or new construction would be required to the exterior or surrounding areas.

Construction Staging

It is anticipated that areas within or near the proposed action (e.g., Aquarium Plaza) would be used for staging construction and storing materials, equipment, and temporary construction trailers.

Construction Timing

Construction of the Ocean Pavilion is expected to take up to approximately 4 months for early foundation work and 24 months for general construction. Preparation of the off-site Animal Care Center is expected to take approximately 9 months and would occur in advance of construction of the Ocean Pavilion.

Worker Parking, Access, and Haul Routes

The Ocean Pavilion contractor is expected to establish a worksite office, which could be located in existing office space near the Seattle Aquarium or in a mobile facility in the established laydown area or nearby. A limited number of construction workers may be able to park at the worksite office or on the work site, others could use off-street parking garages near the Seattle Aquarium, and some may use transit and walk to the work site. The Animal Care Center contractor is anticipated to establish a construction office in existing space within the building that would house the Animal Care Center. Very little parking demand is expected to be generated during build out of the Animal Care Center.

Construction activities would generate traffic for equipment and removing debris and soil. The contractor would determine the best construction methods, as permitted by the City and in conformance with the project construction plans.

Regulatory Context

Land use plans and policies, required by local, state, and federal laws and regulations, guide development in the study area. The plans and policies establish goals for growth locally, regionally, and statewide.

State Laws, Plans, and Policies

The SEPA process considers short- and long-term direct and indirect impacts as well as cumulative impacts on land use (WAC 197-11-060 and WAC 197-11-444). This includes review of current land use and zoning, shoreline master program (SMP) designations, critical areas, economic and residential activity, and consistency with land use plans.

The Growth Management Act (Revised Code of Washington [RCW] Chapter 36.70A) requires state and local governments to prepare comprehensive plans, capital improvement programs, and development regulations.

The Shoreline Management Act (RCW 90.58.020) requires local governments to plan shoreline use as well as environmental protection and public access to the shoreline.

Regional Plans and Policies

The Puget Sound Regional Council (PSRC) develops policies and coordinates decisions about regional growth, transportation, and economic development planning in Northwestern Washington. PSRC's Vision 2050 includes a regional economic strategy that sets development priorities (PSRC 2017).

Local Plans and Policies

The SMC includes the following laws:

- Policies and procedures for implementing the City's SEPA responsibilities (SMC 25.05)
- Land Use Code (SMC Title 23), specifically:
 - Downtown Zoning including Downtown Harborfront 2 (SMC 23.49)
 - SMP (SMC 23.60A), which guides and regulates development of the shorelines
 - Regulations governing environmentally critical areas (SMC 25.09)

A number of other plans and policies govern the study area. The City's Comprehensive Plan (2017) fulfills requirements of the Growth Management Act, and aims to manage growth in a way that benefits residents and preserves the natural environment.

The Downtown Urban Center Neighborhood Plan (City of Seattle 1999a) includes the Ocean Pavilion area in the "Commercial Core" neighborhood. The plan provides detailed goals to support the City's Comprehensive Plan. The Seattle Commercial Core Neighborhood Plan (City of Seattle 1999b) tiers off of the Downtown Urban Center Neighborhood Plan and provides specific recommendations for the Commercial Core.

The SEAS *Seattle Aquarium Strategic Plan 2011-2030* (2011) and *A Master Plan for Expansion* (2015) describe plans for expansion to accommodate an increase in future attendance that is integrated with other planned waterfront development in coordination with the City.

To the east, a portion of the study area is within the Pike Place Market Historical District (SMC 25.24). There are no design or use changes proposed within this area.

In the potential Animal Care Center area, the Greater Duwamish Manufacturing and Industrial Center Plan provides goals and strategies for maintaining manufacturing and industrial character (GDPC 1999). If the Animal Care Center is located elsewhere, it is anticipated that the center would be consistent with surrounding land use plans and policies.

Methodology

Study Area

The study area was defined based on the expected impacts of the proposed action during construction and operation. The study area includes the building footprints of the Ocean Pavilion and Animal Care Center (potential location), with a 500-foot buffer from the footprint boundaries, to include adjacent properties where impacts may occur (Figure 5).

Current zoning and land uses were identified by reviewing local, state, and regional land use plans and policies documents, including online resources such as King County Assessor's records. These uses were verified by observing current conditions.

Existing Zoning, Land Use, and Other Classifications

Ocean Pavilion

The two parcels in the footprint of the building in the action alternatives include King County Parcel No. 7666202380 at 1529 Alaskan Way, which is currently a parking lot, and the Alaskan Way right-of-way (Figure 6).

The parcel at 1529 Alaskan Way is zoned Downtown Harborfront 2, as are the other parcels in the study area between Alaskan Way and the Alaskan Way Viaduct. Zoning of the remaining parcels in the study area is Downtown Harborfront 1 west of Alaskan Way, and Pike Market Mixed east of the Alaskan Way Viaduct (Figure 7). The study area is located entirely within the Downtown Fire District overlay district.

To the west, the building footprint and a portion of the surrounding study area is within the Shoreline District and regulated by the SMP. This area is designated as an Urban Harborfront shoreline environment. Pier 59 is also within the Urban Harborfront Historic Character Area.

The 1529 Alaskan Way parking and the Alaskan Way roadway are currently used for transportation purposes. According to King County Assessor's records and direct observation, land use of surrounding parcels includes the following:

- Museum (Seattle Aquarium)
- Park/Open Space (Piers 62/63 Park and Waterfront Park)
- Multifamily Residential (Waterfront Landings Viaggio building, Hillclimb Court Condominiums and Fix Madore building)
- Parking (lot bounded by Union Street, Alaskan Way South, and Western Avenue)
- Commercial Office and Retail (Antiques Market at 1400 Alaskan Way, Offices at 1415 Western Avenue and 1426 Alaskan Way)
- Mixed Use (MarketSpace development, consisting of multifamily residential, parking, and commercial space)

A parcel to the north of the Ocean Pavilion area was previously a commercial office building at 1528 Alaskan Way, but the building is scheduled for demolition under the AWVRP. The 1528 Alaskan Way parcel is currently identified for transportation use, and is a planned staging area for AWVRP.

Two Seattle Parks and Recreation-owned and operated parks are located in the study area: Piers 62/63 Park and Waterfront Park. The Piers 62/63 Park previously hosted special events and is now in the process of being rebuilt in partnership with Friends of Waterfront Seattle. The rebuilt pier will be a place to view Elliott Bay, the Olympic Mountains, and the Seattle skyline to the east, and host events and activities. There will also be a floating dock for access to the water. Waterfront Park hosts two viewing platforms, benches, and picnic tables, and will be redesigned by the City to improve access, safety, and flexibility, while offering views of Elliott Bay and the Olympic Mountains.

Animal Care Center

The King County parcel in the study area is No. 7666703020. It is zoned Industrial General 1, as are the surrounding parcels. The established land use of the parcel is Warehouse, and the former Fisher Flour Mill building is currently used for light industrial activities and storage. Although the former Fisher Flour Mill building is more than 50 years old, the land use is not classified as Historic Property; the building is not a City of Seattle Landmark and has not been evaluated for listing in state or national preservation registers. Parcels to the north, west, and east are classified as Industrial, and to the south as Parking. The study area is located entirely within the Manufacturing Industrial overlay district.

There are no retail businesses or residences on the parcel or surrounding parcels. Part of the parcel is within the Shoreline District and regulated by the SMP. This area is designated as an Urban Industrial shoreline environment.

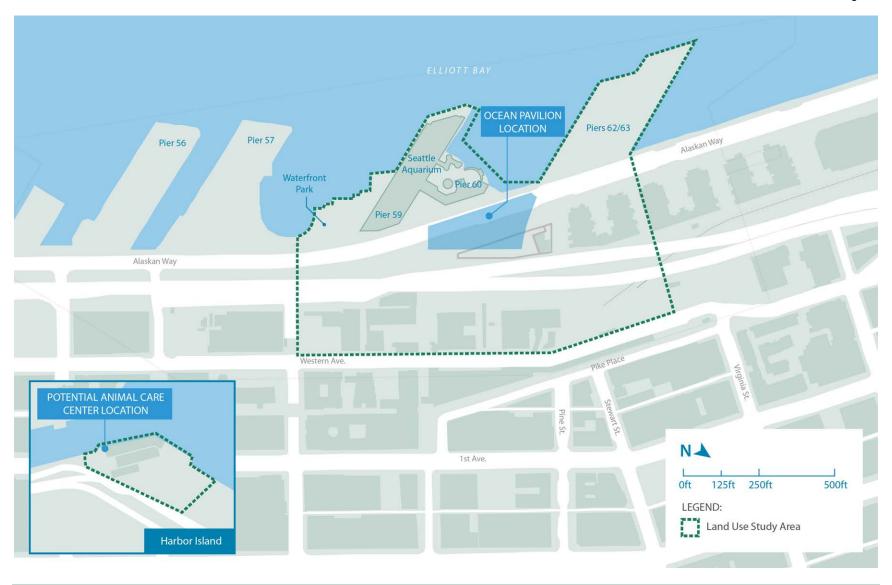


Figure 5 Land Use Study Area

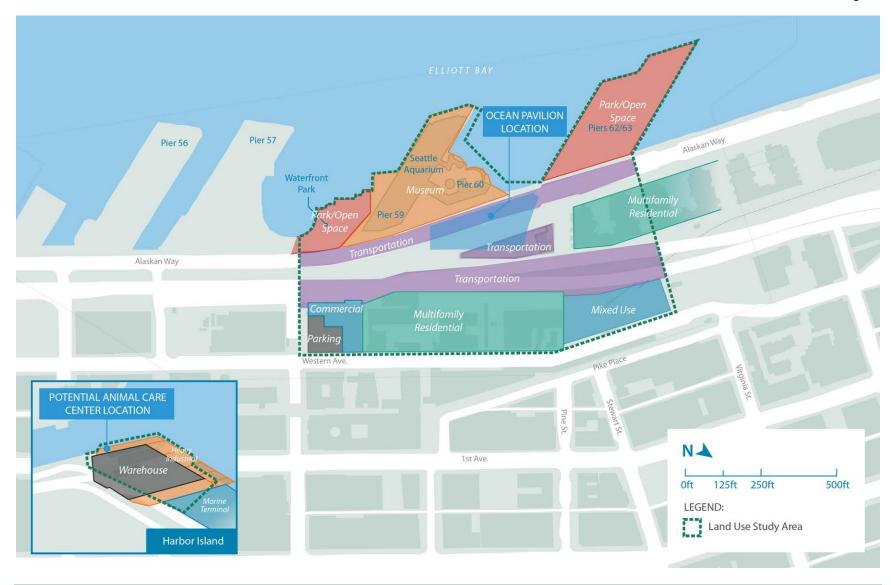


Figure 6
Existing Land Use

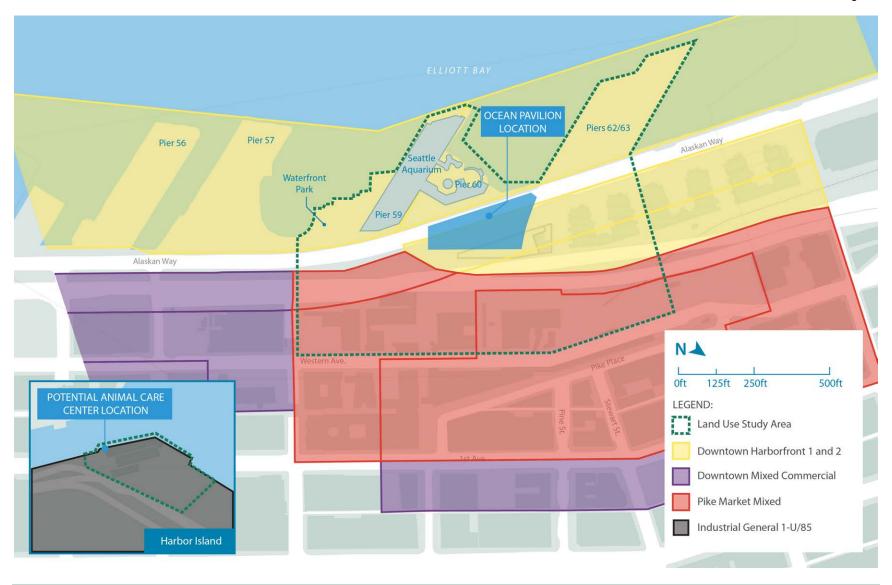


Figure 7
Existing Zoning

Technical Approach

The analysis of impacts included reviewing existing land use plans and primary goals, current zoning, critical areas, shoreline designations, special districts, parks, and recreational facilities. Long-term impacts were evaluated by identifying conversions, restrictions, and potential long-term land use changes within the study area. Construction impacts were evaluated by identifying construction activities that could temporarily limit, disrupt, or displace current land uses in the study area. If necessary, avoidance or minimization measures, or compensatory mitigation for unavoidable impacts, have been recommended.

Impact Thresholds

The indicators for assessing potential impacts on land use are identified in Table 2, along with the criteria that was used to determine the degree of impact.

Table 2 Impact Thresholds for Land Use

iiiipact iiiiesii	olds for Land Use
Impact Indicators	Criteria for Determining Degree of Impact
Consistency with existing plans and policies	Beneficial Impacts: Results in uses that are more compatible with, and promote the stated goals of, existing plans and policies Minor Impacts:
	Compatibility with surrounding uses and applicable land use planning documents; limited change to zoning or designations that does not have an associated negative economic or environmental effect
	Moderate Impacts: Compatibility with surrounding uses and with applicable land use planning documents; limited change to zoning or designations that has a limited negative economic or environmental effect
	Significant Impacts: Incompatible with applicable land use planning documents and causes substantial economic or environmental effects
Land use conversions that disrupt	Beneficial Impacts: Conversions from existing land uses to uses that promote the function of communities or neighborhoods
communities, either natural or anthropogenic	Minor Impacts: No conversions to existing land use(s) occur(s), or the conversions are so minor that the role and function of a community or neighborhood is not affected
ununopogenie	Moderate Impacts: Conversion of existing land use(s) would occur and there is a limited negative economic or environmental effect
	Significant Impacts: Conversion of existing land uses that causes substantial economic or environmental effects
Land use restrictions or changes that may occur as a	Minor Impacts: No land use changes are anticipated as a result of project actions, or the changes are temporary (e.g., access restrictions during construction) or are not anticipated to have effects on surrounding land uses Moderate Impacts:
result of new facilities or	Changes or restrictions in land use that are consistent with applicable land use planning documents and are anticipated to have limited effects on surrounding land uses
programs	Significant Impacts: Land use restrictions or changes as a result of project actions that have substantial effects on surrounding land uses

Results

Overview

Construction of either action alternative would result in minor construction impacts. Although both action alternatives would result in a change in land use of 1529 Alaskan Way, a long-term minor benefit is anticipated. The parcel would retain its existing transportation use because the building would incorporate pedestrian transportation as part of connectivity with the Overlook Walk. As compared to the No Action Alternative, however, the action alternatives would include a building in a space that could otherwise be fully open to the public. Both action alternatives would also add a water-oriented education use with the Ocean Pavilion. No changes would occur to zoning or other classifications, and both action alternatives are consistent with applicable plans and policies. Alternative 3 would have slightly more benefit because it preserves unobstructed public views of Elliott Bay, whereas Alternative 2 would have partially obstructed public views. Additionally, both action alternatives would improve access to the Pike Place Market from the waterfront, although this would occur to a greater extent with Alternative 3 because pedestrian access would have a more level connection with the Overlook Walk and a more visible elevator connection.

Construction-Related Impacts and Mitigation Measures

For the No Action Alternative, no construction would occur; therefore, no mitigation would be required.

Both action alternatives would have the same construction-related impacts and mitigation. Access to land uses such as residences, parks and recreational facilities, and the Seattle Aquarium would change temporarily during construction. None of these disruptions would change or convert any land uses. Temporary occupation of the right-of-way at sidewalks, streets, and utility corridors would occur; however, local construction access would be provided at all times. Other disruptions that could affect land uses include an increase in traffic congestion around work zones, road closures, traffic diversions, and detour routes affecting access to residences, parks and recreational facilities, and the Seattle Aquarium. Construction equipment, staging or stockpiling of materials, fencing, or scaffolding could make the area less convenient or appealing to potential visitors. Noise levels in areas of active construction could be intermittently high, resulting in higher ambient noise levels for nearby land uses. In general, the loudest construction activities would be limited to daylight hours to the extent practicable. These impacts would be minor because there would be no conversions of existing land uses, land uses would remain consistent with existing plans and policies and land use changes (such as detours or short-term occupations of sidewalks) would be temporary.

Construction at the potential Animal Care Center would occur under either action alternative. Because no exterior construction is planned, construction would be of a much lesser magnitude. No disruptions to traffic patterns or access are anticipated. The area where the potential Animal Care Center would be located is already industrial in character; no residences, or recreational or educational facilities are in the immediate vicinity. Limited park space is available in the area, and includes the Terminal 18 Park immediately to the southeast along the shoreline. Given the minimal construction activity and industrial setting, construction at the potential Animal Care Center would have no adverse impacts on land use.

For Alternative 2, the AWPOW EIS identified temporary adverse impacts on land use during construction, primarily related to noise, dust, congestion, loss of parking, and access changes associated with construction (see Section 4.2 of the AWPOW EIS). No significant long-term impacts were identified; instead, the long-term impacts were anticipated to be positive (see Section 4.3 of the AWPOW EIS). Within the study area, full property acquisitions and associated land use conversions were also evaluated. The conversion of land use was not anticipated to have permanent impacts on land use trends or development activity. The AWPOW EIS identified a number of avoidance and minimization measures for potential impacts on land use during construction, including the following (see Section 16.3.1 of the AWPOW EIS):

- Maintaining access to businesses and recreational facilities
- Communicating with residents, businesses, and stakeholders
- Applying measures developed for other environmental topics, such as controlling noise and dust

Avoidance and minimization measures for minor temporary construction impacts on land uses in the area include transportation and parking as well as access to residences and parks/open space (SDOT 2016; Appendix C to the Final EIS). These would include clearly marking roadway detours and pedestrian and bicycle routes, accommodating loading and delivery access, and use of traffic control devices and flaggers.

Avoidance and minimization measures to address increased noise levels and reduced visual quality would include minimizing light and glare (especially near condominium residences) through such means as directional lighting or light barriers, screening the construction area and adding interpretive display elements or viewing windows in screening, using low-noise emission equipment or installing silencers or sound-deadening materials, minimizing the use of generators, and limiting high-noise activities to daytime hours to the extent practicable. The contractor would need to comply with the City's Noise Ordinance for construction activities and would be expected to obtain any required variances from the City during construction, as necessary.

Long-Term Impacts and Mitigation Measures

All three alternatives are compatible with applicable land use plans and policies and are expected to accomplish the following:

- Improve pedestrian connections through the waterfront
- Encourage and support planned growth
- Develop water-oriented uses of the shoreline and waterfront public facilities
- Provide opportunities for public open space and enjoyment of the shoreline and water views (although this would occur to a greater extent for Alternative 3, as described in Appendix E of the Final EIS, in particular because Alternative 3 would provide additional public open space between the building and Pier 60, Piers 62/63, and the Elliott Bay shoreline, including space to provide a wider stairwell and viewing areas in the Overlook Walk design; additionally, the 50-foot building height in Alternative 3 would provide unobstructed public views of Elliott Bay, consistent with the policies and goals of City's Comprehensive Plan [City of Seattle 2017])

 Improve access to the Pike Place Market from the waterfront, although this would occur to a greater extent with Alternative 3 because pedestrian access would have a more level connection with the Overlook Walk and a more visible elevator connection

The two action alternatives would develop an Ocean Pavilion to accommodate an increase in future attendance and meet the objectives of the proposed action consistent with the SEAS *Seattle Aquarium Strategic Plan 2011-2030* (2011) and *A Master Plan for Expansion* (2015). These planning documents were developed in coordination with the City to integrate expansion of the Seattle Aquarium in concert with planned waterfront development.

The two action alternatives would also increase educational opportunities in the area. Providing opportunities for environmental education is identified as a goal (Land Use Goal 17.7) in the City's Comprehensive Plan (City of Seattle 2017). Under the No Action Alternative, this goal would not be met by development at the site; whereas under either action alternative, an immersive environmental education opportunity related to conservation of the marine environment would be provided by the Ocean Pavilion.

The two action alternatives would result in beneficial impacts on land use due to increased compatibility with land use plans and policy goals. As described in Table 3, Alternative 3 has a greater beneficial impact than the other two alternatives, because it better promotes several of the stated goals. Specifically, the height of the building provides for increased views of the water, more open space and better pedestrian connectivity consistent with the goals (Downtown Harborfront 2 zoning and Shoreline Access [Goal SA G7]) and policies (Shoreline Use Policy [SA P16.3]; General Development Standards Land Use Policy [LU 5.15]) of the City's Comprehensive Plan (2017). The increased landscaping on the Ocean Pavilion rooftop also better promotes the City's Comprehensive Plan Urban Design Policy for extended sustainable landscaping on typically underdesigned sites such as rooftops (Policy GS 3.6; City of Seattle 2017).

Under both action alternatives, public right-of-way would be reduced because the Ocean Pavilion would occupy a greater extent of the Aquarium Plaza space. However, both action alternatives would provide additional public open space on the roof of the Ocean Pavilion, which is a partially dedicated right-of-way. Therefore, no land use or access restrictions related to public space are identified with the action alternatives.

The operation of the Animal Care Center would continue industrial uses of Harbor Island. It is consistent with land use plans and policies, and would not convert or restrict land use. No adverse impacts are anticipated from operation of the Animal Care Center.

Table 3
Summary of Consistency with Applicable Land Use Plan Goals

Alternative	Increased Multimodal Connectivity	Economic Development	Urban Growth	Environmental Protection and Education	Open Space and Recreation	Public Facilities and Services
1 (No Action)	No change to existing pedestrian connectivity	No additional infrastructure to draw visitors	Compatible with planned growth in the waterfront area	No changes related to environmental protection or enhancement; no environmental education component because there would be no Ocean Pavilion	No change in open space and recreation opportunities	No change in public facilities and services
2	No change to existing pedestrian connectivity as compared to the No Action Alternative	Provides substantial investment in infrastructure that supports tourist destinations and small businesses	Compatible with planned growth in the waterfront area	No changes related to environmental protection or enhancement improved opportunity for environmental education	No change in open space and recreation opportunities; elevated viewpoint (40-foot building height) would provide partially obstructed public views of the water from the roof	Includes an exterior public elevator and stairs
3	Provides an enhanced connection with the Overlook Walk as well as connections to Pike Place Market	Provides substantial investment in infrastructure that supports tourist destinations and small businesses	Compatible with planned growth in the waterfront area	Allows for more landscaping on the public plaza and roof, improved opportunity for environmental education	Elevated viewpoint (50-foot building height) allows for 180-degree views of the water above Pier 59 from the roof; moving the building south creates direct public open space with public views of the water on the north side of the Ocean Pavilion	As a result of moving the public elevator and stairs to the south, there would be closer proximity and more direct connection to the existing Seattle Aquarium

No adverse impacts are anticipated under either action alternative; therefore, no mitigation measures are proposed. The range of potential long-term impacts associated with the Office of the Waterfront and Civic Projects' potential design refinements would be similar to those described previously, including consistency with applicable land use plan goals described in Table 3.

Cumulative Effects and Mitigation Measures

A number of projects are expected to be completed before and during the construction and operation of the Ocean Pavilion. As discussed previously, these include AWPOW, AWVRP, and EBSP, in addition to renovations of Piers 62/63 and Waterfront Park (Seattle Parks and Recreation), pedestrian improvements at Pike and Pine Streets (Office of the Waterfront and Civic Projects), utilities renovation and reduction of Combined Sewer Outfalls (Seattle Public Utilities), replacement of the Seattle Ferry Terminal at Colman Dock (Washington State Department of Transportation), and extension of the streetcar line (Seattle Streetcar). See the Ocean Pavilion EIS for more detailed information on these and other nearby projects.

For the action alternatives and most of the reasonably foreseeable future projects and actions, temporary construction impacts are expected to occur. These are primarily due to temporary changes in access and use during construction. Through its Street Use Permit process and consistent with SMC 15.32.050, SDOT would coordinate the construction needs and impacts of this project with the other infrastructure and development projects in the study area, including potential overlapping elements of the AWPOW projects' construction. SEAS would participate in construction coordination processes that SDOT establishes for major projects. With this mitigation, no significant adverse cumulative effects from construction are anticipated.

The proposed action is consistent with land use goals and policies and planned future development as described here. Additionally, none of the reasonably foreseeable future projects or actions have been identified as having long-term adverse impacts on land use. Most would be beneficial, increasing pedestrian and bicycle connectivity, promoting public use of and access to the waterfront, and protecting the environment. Because no moderate or significant long-term impacts are anticipated from any of the action alternatives and no long-term impacts have been identified for other reasonably foreseeable projects, no long-term cumulative effects are anticipated and no mitigation measures are proposed.

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Appendix E Aesthetics and Scenic Resources Technical Memorandum



November 2018 Seattle Aquarium Ocean Pavilion

Aesthetics and Scenic Resources Technical Memorandum

Prepared for

City of Seattle Department of Parks and Recreation Seattle Aquarium Society

Prepared by Anchor QEA, LLC

Executive Summary

The purpose of this technical memorandum is to describe the potential impacts on aesthetics and scenic resources associated with the proposed Seattle Aquarium Ocean Pavilion (Ocean Pavilion). This memorandum evaluates the potential effects of project construction and operation on these resources for two action alternatives as well as a No Action Alternative. The evaluation was performed consistent with State Environmental Policy Act (SEPA) policies, following Federal Highway Administration visual analysis guidelines. In addition to SEPA-protected views, other public, and private views were assessed. The City of Seattle Department of Parks and Recreation, in coordination with the Seattle Aquarium Society (SEAS), is preparing a SEPA Environmental Impact Statement (EIS) to evaluate the proposal, which includes two different building options located near the existing Seattle Aquarium at Piers 59 and 60 along the Seattle waterfront and an off-site Animal Care Center that may be located on Harbor Island at the former Fisher Flour Mill or similar facility.

The construction of an "Aquarium Pavilion" was reviewed by the City of Seattle (City) as part of the Alaskan Way, Promenade, and Overlook Walk (AWPOW) SEPA EIS (SDOT 2016). Information and analysis from the AWPOW EIS is incorporated by reference into the analysis and findings of this memorandum, in accordance with Seattle Municipal Code (SMC) 25.05.635 and Washington Administrative Code (WAC) 197-11-635.

The Ocean Pavilion is being proposed as a separate and independent project from the AWPOW and other ongoing projects along the central waterfront. However, the proposal is intended to anchor these projects and reconnect the city with Puget Sound and its central waterfront. This memorandum summarizes the relevant findings from the AWPOW EIS, describes changes to the Ocean Pavilion proposal that have occurred since that time, and evaluates whether the changes would result in any potential additional construction and long-term impacts on aesthetics and scenic resources.

The findings of this aesthetics and scenic resources analysis indicate that while moderate construction-related impacts are anticipated, only minor long-term impacts from the two action alternatives are anticipated. Table 1 provides a summary of impacts.

Table 1
Aesthetics and Scenic Resources Impacts Summary

Alternative	During Construction	Long Term
1 (No Action)	No Adverse Impact	Moderate Benefit
	No construction, therefore no construction-related impacts	Beneficial effects to the general public from increasing the visual quality of existing important views of the water, sky, and background landforms as described in the AWPOW EIS (SDOT 2016b)
2	Moderate Impact	Minor Impact
	Potential short-term impacts associated with construction equipment, temporary facilities and staging, soil/dust/exhaust, temporary lighting, and traffic pattern changes; SEPA-protected view impacts may include loss of some views of the downtown city skyline to the north from Waterfront Park's adjacent sidewalk and potential loss of some views of Puget Sound from Victor Steinbrueck Park dependent on the location and height of the construction crane and other equipment	 Views of the downtown skyline to the north from Waterfront Park's adjacent sidewalk may be affected, but SEPA-protected views of Puget Sound from Victor Steinbrueck Park will not be affected Slight impact from public and private views through the limited obstruction of natural and city skyline views (natural harmony), and obstruction of the street grid limiting viewer understanding and wayfinding cues (project coherence); these impacts would be most pronounced from viewpoints looking south or looking east and are due to the building location projecting out prominently from the Overlook Walk However, this alternative is currently designed to a 40-foot-tall building and adjoining Overlook Walk, while current code would allow for a 50-foot-tall building; this alternative's current height obstructs slightly less views of the water and background landforms from viewpoints looking west, compared to Alternative 3
3	Moderate Impact	Minor Impact
	Potential short-term impacts associated with construction equipment, temporary facilities and staging, soil/dust/exhaust, temporary lighting, and traffic pattern changes; SEPA-protected view impacts may include loss of some views of the downtown city skyline to the north from Waterfront Park's adjacent sidewalk and potential loss of some views of Puget Sound from Victor Steinbrueck Park dependent on the location and height of the construction crane and other equipment	 Views of the downtown skyline to the north from Waterfront Park's adjacent sidewalk may be affected, but SEPA-protected views of Puget Sound from Victor Steinbrueck Park will not be affectedSlight impact from public and private views through the limited obstruction of natural and city skyline views (natural harmony), and obstruction of the street grid limiting viewer understanding and wayfinding cues (project coherence); these impacts would be most pronounced from views looking west and looking north due to the building's location and taller height (50 feet) compared to Alternative 2 Unobstructed public views of Elliott Bay from the rooftop will be provided However, the building has better integration within the Overlook Walk compared to Alternative 2 Alternative 3 also has a more level connection with the Overlook Walk and connections to Pike Place Market that increases legibility and wayfinding at this location

Introduction and Project Description

The Ocean Pavilion would be located in Seattle, King County, Washington (Figure 1). The building would be constructed east of the existing Seattle Aquarium, and east of the future pedestrian promenade along the waterfront constructed as part of the AWPOW projects. A potential off-site Animal Care Center may be located on Harbor Island at the former Fisher Flour Mill or a similar facility (Figure 1). Three alternatives

have been developed for the Ocean Pavilion: a No Action Alternative and two action alternatives. A full description of these alternatives are is included in the Draft Ocean Pavilion EIS, with summary descriptions provided within this technical memorandum.



Figure 1 Vicinity Map

Alternative 1: No Action Alternative

Under Alternative 1 (No Action Alternative), the Ocean Pavilion would not be built. However, conditions in the area would be different from those that exist at the time this EIS is published (2018). The analysis for the No Action Alternative is based on the expected conditions in 2030, which is the year used for the assessment of future conditions. The following major changes are assumed to be in place under the No Action Alternative:

- The AWPOW projects identified in the preferred alternative within the AWPOW EIS would be completed. The AWPOW projects would continue to be refined through the Office of the Waterfront and Civic Projects' design process.
- The Alaskan Way Viaduct Replacement Project (AWVRP) would be completed, with the viaduct eliminated and the State Route 99 tunnel in operation.
- The Elliott Bay Seawall Project (EBSP) would be completed.
- Ongoing public and private development projects that are currently being permitted through the Seattle Department of Construction and Inspections would be completed, with an additional projected baseline growth of 1% per year.

A description of the AWPOW's selected preferred alternative is included in Section 2.3 of the AWPOW EIS (SDOT 2016). The main difference between the two is that the No Action Alternative for Ocean Pavilion does not include construction of the "Aquarium Pavilion," which was one option described as part of the AWPOW's preferred alternative. Descriptions of the AWVRP and EBSP are described in Section 2.2 of the AWPOW EIS. Figure 2 shows the No Action Alternative, which serves as the baseline against which the potential impacts of the action alternatives are evaluated.

Office of the Waterfront and Civic Projects' Potential Design Refinements

The AWPOW projects would continue to be refined through the Office of the Waterfront and Civic Projects' design process. As of the publication of this EIS, the conceptual design of the Overlook Walk lid (or bridge) connecting the waterfront to Pike Place Market over Elliott Way would be narrower (90 feet versus 190 feet) and higher (50 feet versus 40 feet) than the design in the AWPOW EIS. In addition, Building B would be replaced by a smaller one-story building with a covered outdoor café and seating area on its roof. Public stairs and elevators would maintain connections from the Overlook Walk to the waterfront. These refined conditions were used in assessing the range of impacts of the action alternatives as compared to No Action Alternative and potential design refinements.

Alternative 2

Alternative 2 includes the Ocean Pavilion concept evaluated as one option for the preferred alternative under the AWPOW EIS (referred to as the "Aquarium Pavilion" in the AWPOW EIS). Alternative 2 includes an approximately 48,000-square-foot building featuring an interior elevator and connections to a fully accessible route between the waterfront and Pike Place Market. The orientation of the proposed building would locate it farther north and closer to Pine Street, compared to Alternative 3 which would be located farther south. The building would be approximately 40 feet tall with a rooftop waterfront viewing space accessible

from the Overlook Walk. An off-site Animal Care Center would be included under Alternative 2, as described herein. Figure 3 shows Alternative 2.

Alternative 3

Alternative 3 includes building the Ocean Pavilion east of the existing Seattle Aquarium on Alaskan Way and the future Waterfront Promenade. The Ocean Pavilion would be located farther south than Alternative 2, resulting in a shorter distance from the Ocean Pavilion entrance to the existing Seattle Aquarium entrance and improved accessibility for visitors, volunteers, staff, and Seattle Aquarium programs. The proposed building would include an approximately 48,000-square-foot public aquarium featuring an exterior elevator and connections to a fully accessible route between the waterfront and Pike Place Market. The building would be approximately 50 feet tall with unobstructed public views of Elliott Bay over the existing Seattle Aquarium on Pier 59 and would be accessible from the future Overlook Walk. This alternative also includes an off-site Animal Care Center, as described herein. Figure 4 shows Alternative 3.

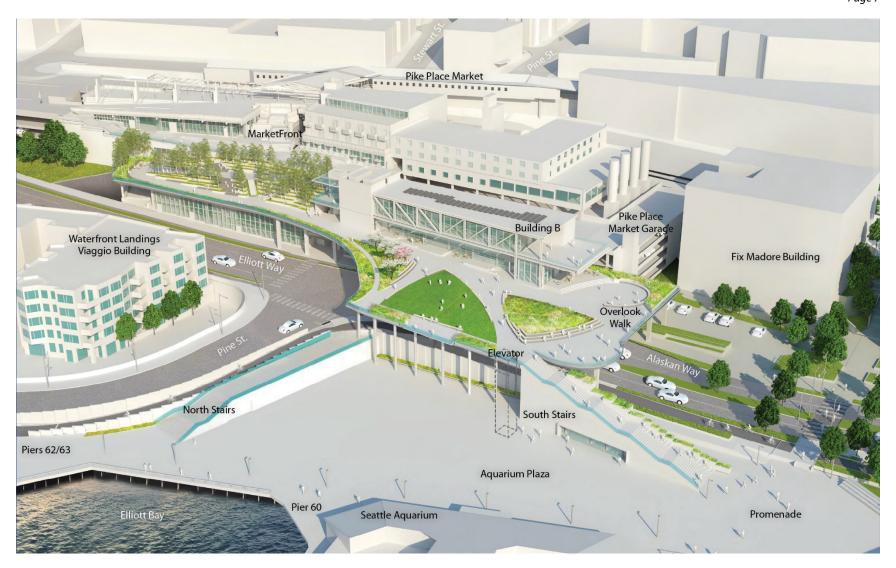


Figure 2 Alternative 1 (No Action)

Source: LMN Architects



Figure 3 Alternative 2

Source: LMN Architects



Figure 4 Alternative 3

Source: LMN Architects

Off-Site Animal Care Center for Alternatives 2 and 3

An off-site Animal Care Center is proposed to address both short- and long-term animal care, veterinary, and rehabilitation needs and to meet the Association of Zoos and Aquariums' standards. The most immediate need is to provide necessary animal care to support the opening of the Ocean Pavilion and the turtle rehabilitation program. The Animal Care Center would also be a long-term care facility that supports SEAS' exhibit animal population, animal rehabilitation, and research efforts.

The Animal Care Center would be designed to meet peak animal care demand for the Seattle Aquarium exhibits and programs. This would include approximately 15,000 square feet of interior space, plus an additional 5,000 to 7,000 square feet of area surrounding the facility for outdoor animal holding, water storage, and parking. The center is intended to meet the care needs of both warm- and cold-water fish, birds and mammals, and rehabilitating animals. The center would also provide long-term care, including life support systems, with flexibility in the design to accommodate future needs.

SEAS plans to have the Animal Care Center constructed and operational 2 to 3 years prior to the opening of the Ocean Pavilion. This would allow for coral propagation, animal quarantine, and acclimation of the animals for the exhibits. SEAS has identified a potential site at the former Fisher Flour Mill property on Harbor Island, which is owned by King County. While the Fisher Flour Mill site is a potential location for the center, a similar location could be pursued. It is not anticipated that the impacts identified in this analysis would differ at a similar location.

Construction Methods for Alternatives 2 and 3

Construction methods for the action alternatives are described in the following subsection. It is anticipated that construction methods would be similar for both action alternatives. During construction, access to existing utilities would be maintained for surrounding property uses.

Construction Activities

It is anticipated that construction at the Ocean Pavilion would require the following activities:

- Open excavation for the basement of the Ocean Pavilion, which would reach about 20 feet below the ground surface, with 48-inch-diameter piles extending at varying depths
 - It should be noted that for Alternative 2, the AWPOW EIS shows 60 to 80 feet of excavation proposed in this area (SDOT 2016: Figure 10-2, page 245). It is expected that this depth is specific to the future Overlook Walk and other improvements and depths of that magnitude would not be required to construct the Ocean Pavilion.
- Dewatering of excavation areas below the water table or implementing soil freezing treatments to provide a dry work area as necessary
- Protecting, relocating, and/or connecting utilities
- Using best management practices to protect water quality and reduce erosion (may include installation of silt fencing, covering of stockpiled soil, and collection and treatment of construction stormwater runoff)
- Drilling shafts for piers to support the building, including exterior elevators or stairwells as necessary

- Removing existing knock-outs in the adjacent seawall under Pier 60 to connect the overwater intake pipe, seawater discharge, and utilities and infrastructure between the Ocean Pavilion and existing Seattle Aquarium buildings
- Erecting structural components and installing mechanical and other building features, using a crane tower for hoisting
- Potentially using one barge for 3 to 8 weeks, located between Piers 62/63 and Pier 60 for delivery of acrylic windows for the exhibits

Construction at the Animal Care Center would be limited to the building interior. No substantial modifications or new construction would be required to the exterior or surrounding areas.

Construction Staging

It is anticipated that areas within or near the proposed action (e.g., Aquarium Plaza) would be used for staging construction and storing materials, equipment, and temporary construction trailers.

Construction Timing

Construction of the Ocean Pavilion is expected to take up to approximately 4 months for early foundation work and 24 months for general construction. Preparation of the off-site Animal Care Center is expected to take approximately 9 months and would occur in advance of construction of the Ocean Pavilion.

Worker Parking, Access, and Haul Routes

The Ocean Pavilion contractor is expected to establish a worksite office, which could be located in existing office space near the Seattle Aquarium or in a mobile facility in the established laydown area or nearby. A limited number of construction workers may be able to park at the worksite office or on the work site, others could use off-street parking garages near the Seattle Aquarium, and some may use transit and walk to the work site. The Animal Care Center contractor is anticipated to establish a construction office in existing space within the building that would house the Animal Care Center. Very little parking demand is expected to be generated during build out of the Animal Care Center.

Construction activities would generate traffic for equipment and removing debris and soil. The contractor would determine the best construction methods, as permitted by the City and in conformance with the project construction plans.

Regulatory Context

State and local regulations and policies related to visual resources in the Ocean Pavilion study area are discussed in this section. The aesthetic preferences of viewers that can be derived from these documents include the importance of preserving scenic waterfront and natural area views and design of new development that sensitively fits within the character of the surrounding built environment.

State Laws, Plans, and Policies

Revised Code of Washington (RCW) 43.21C.020 notes the responsibility to "assure for all people of Washington safe, healthful, productive, and aesthetically and culturally pleasing surroundings." The SEPA

process considers short- and long-term direct and indirect impacts as well as cumulative impacts on aesthetics (WAC 197-11-060 and WAC 197-11-444). Aesthetic elements of the environment consider height of proposed structures, principal exterior building material, altered/obstructed views, and measures to reduce impacts.

Separate from the SEPA rules and policies, there is also a provision of the Shoreline Management Act related to residential view impacts. RCW 90.58.320 states:

No permit shall be issued pursuant to this chapter for any new or expanded building or structure of more than 35 feet above average grade level on shorelines of the state that will obstruct the view of a substantial number of residences on areas adjoining such shoreline except where a master program does not prohibit the same and only then when overriding considerations of public interest will be served.

Regional Plans and Policies

The Vision 2040, Puget Sound Regional Council (2009) plan's Environmental Goal notes the aesthetic value of natural environments, noting these benefits occur within as well as outside urban growth areas.

Local Plans and Policies

The Seattle Comprehensive Plan: Seattle 2035 (City of Seattle 2017) has an urban design goal (Goal GS G3) to preserve and enhance the City's unique character and "sense of place" that includes the historical and natural setting, community identity, and human-scaled development. The urban design section provides specific natural environment policies that emphasize protection and respect of natural features, and access through both visual and physical connections to natural surroundings and the waterfront (GS 3.1, 3.2, 3.4, and 3.5). Built environment policies note the importance of tree canopy for aesthetics (GS 3.8), and promoting neighborhood development that has varied building forms/heights and is legible to contribute to an attractive and walkable character (GS 3.10 and GS 3.18). Urban form goals for the downtown neighborhood include protecting the special character of the neighborhood's many parts, enhancing the pedestrian environment including ensuring light and air at the street level, preserving important views, and promoting the "spectacular" natural context (DT-G4). Shoreline goals include enhancing public access opportunities and maintaining historic characteristics (DT-G8).

The SMC establishes land use codes, Shoreline Master Program, and SEPA policies for the protection of public views including from specific public parks, corridors, and scenic routes (SMC 23.49.024, SMC 23.60A.170, and SMC 25.05.675.P), and ensuring light and glare of considered in project design (SMC 25.05.675.K). SEPA-protected views include Puget Sound waterfront and natural scenic landforms (Olympic Mountains, Mount Rainier), the downtown skyline, and specific views of distinctive structures (e.g., Space Needle) from specified parks, view corridors, scenic routes, and parks. There are no private view protections provided under SEPA rules and policies.

Methodology

The approach that was applied in this analysis is similar to that of the AWPOW EIS, in its use of the Federal Highway Administration visual impact assessment process (FHWA-VIA), but also uses the updated FHWA-VIA guidance developed in 2015 (U.S. Department of Transportation 2015).

The FHWA-VIA process includes the following four phases:

- **Establishment**: Defines the regulatory context and the study area based on project visibility and the visual character of the proposed project
- **Inventory:** Defines key viewpoints based on project visibility and affected populations that would experience view changes, and describes the visual character and visual quality of the affected environment
- **Analysis**: Evaluates impacts on visual quality based on the compatibility of impacts (ability of the environment to absorb project changes in surrounding environment) and the sensitivity of viewers
- **Mitigation**: Defines enhancement efforts to be included in the project design; this phase is often completed following selection of a preferred alternative

The study area boundary is described herein, and defines the one "landscape unit" used for the analysis. Landscape units are the geographic unit of a visual assessment and have a particular visual identity (U.S. Department of Transportation 2015). Because of the limited project footprint compared to AWPOW, only one landscape unit is established. Within the foreground views of this landscape unit, key viewpoints were selected and representative photographs were taken. These photographs and field observations were used to provide a baseline assessment of existing conditions, and the photographs were also used as a base with modeled structure modifications and design features to illustrate changes to the existing views.

Following publication of the visual assessment within the AWPOW EIS in 2015, new updates to the FHWA-VIA guidance were made that relate to the inventory and analysis phases through the components of visual quality, which have changed from levels of "vividness, intactness, and unity" to levels of "natural harmony, cultural order, and project coherence." Visual quality is the experience of having pleasing visual perceptions, and can depend somewhat on the congruity of what the "eye sees and the mind wants to see" (U.S. Department of Transportation 2015).

Viewers evaluate the degree of natural harmony (pleasing combination of elements), cultural order (regular, neat arrangement of elements), and project coherence (ease of understanding of a view) in determining how pleasing a view is. The change to these components in the latest FHWA-VIA guidance may reflect an understanding that while views of important and memorable visual landmarks should be inventoried and preserved, vivid elements of a project may not sensitively fit into the surrounding environment—in effect, distinctive proposals are not always aesthetically pleasing.

Study Area

The study area delineates places in the surrounding landscape where viewers may perceive a change in visual character and visual quality. Because changes to the Animal Care Center would be to the interior of an existing building, and no visual impacts are anticipated with the Animal Care Center, it is not included in

the study area. The study area is adapted from the project viewshed presented in the AWPOW EIS, using a smaller study area and refining project-level views to include a foreground view area where changes to the view would be more noticeable and, barring obstructions, would be seen from the street and public lands, and a background view area where view changes would be less perceptible to viewers, except for those looking west from upper floor windows.

Affected Environment

The affected environment represents the conditions in the study area as of 2018, before construction of the Ocean Pavilion. The analysis would compare the No Action Alternative with the action alternatives. This section provides an overview of the affected environment and describes the overall visual character, affected viewers, and visual quality levels (based on natural harmony, cultural order, and project coherence).

Overview

The project landscape unit is centered around the waterfront along Alaskan Way and is bounded by Puget Sound to the west, Downtown's Fourth Avenue to the east, Belltown's Battery Street to the north, and Pioneer Square's Yesler Way to the south. The waterfront and Pike Place Market are regional destinations for tourism, and the surrounding area hosts a wide range of commercial, office, residential, and open space uses.

Visual Character

The natural environment is dominated by the open water of Puget Sound, views of West Seattle and Bainbridge Island, and background views of the Olympic Mountains to the south and west of Elliott Bay. The landform includes flat, filled land along the waterfront and steep, terraced hillsides rising up east of Alaskan Way to First Avenue. Given the highly urbanized landscape, vegetation is limited and mostly consists of ornamental species (e.g., a variety of mostly deciduous street trees, perennial plantings within medians), turf within Victor Steinbrueck Park, and west of Alaskan Way temporary grey-metal planter boxes with a variety of small trees and ornamental flowers and grasses.

The built environment is quite legible, aided by a strong street grid, though a grid that pivots at Stewart Street. Buildings and structures comprise a mixture of styles and ages, ranging from historic piers and low-rise buildings to modern steel and glass high-rises. In general, continuity of building heights exists with low-rise structures along the waterfront, predominately mid-rise structures in the hillclimb areas, and high-rise buildings farther east. The exception to this continuity on the waterfront is the Seattle Great Wheel, a Ferris wheel that stands 175 feet tall above Pier 57. Ground-level parking lots and loading areas are interspersed throughout the landscape unit, but are fairly limited given development trends in the city.

Affected viewers include a mixture of tourists, local workers, residents, and commuters. Viewers with closer proximity views, longer exposure to views (office workers or residents), or who are explicitly visiting the area for views (tourists) will be more sensitive to visual quality changes. Commuters passing through the area who have more limited view extents and/or limited duration of views will be less sensitive to visual quality changes.

Key Viewpoints

The terraced development and landforms combined with view protection policies (SMC 23.49.024, SMC 23.60A.170, and SMC 25.05.675.P) have preserved a number of view locations overlooking the project footprint. Preservation of open space on piers and street or hillclimb rights-of-way also provide ground-level views of the project footprint. Four key viewpoints (Figure 5) were selected based on the project footprint's visibility from them, their public accessibility and popularity of use, and, for some viewpoints, their protected status under SEPA. Two of these viewpoints are located in public open spaces with SEPA-protected views (Waterfront Park and Victor Steinbrueck Park), and two more viewpoints are in well-used public open spaces that have good visibility of the proposal and currently contain views of the city skyline (Piers 62/63) or limited peep-hole views of Puget Sound (Pike Street Hillclimb). All protected viewpoints, scenic routes, and view corridors are presented in Figure 6. A scenic route viewpoint along Alaskan Way was considered, but not included within this analysis because the reconfiguration of the Alaskan Way scenic route through the AWPOW projects would change some of the direct views of the water and Olympic Mountains from this route.

Although private views are not protected under SEPA rules and policies, an analysis was undertaken of the view impacts on adjacent residential uses, using the Waterfront Landings Viaggio (Waterfront Landings) building and the Fix Madore building as representative of private viewpoints.

Technical Approach

The technical approach to evaluating aesthetic and scenic resource impacts follows FHWA-VIA guidance by evaluating the change to visual quality compared to the No Action Alternative. Daytime view, visual simulations were developed using three-dimensional modeling software (Rhino) for the two action alternatives, adding representative photographs of associated landscaping and people, and combining these over existing photos using Adobe Photoshop.

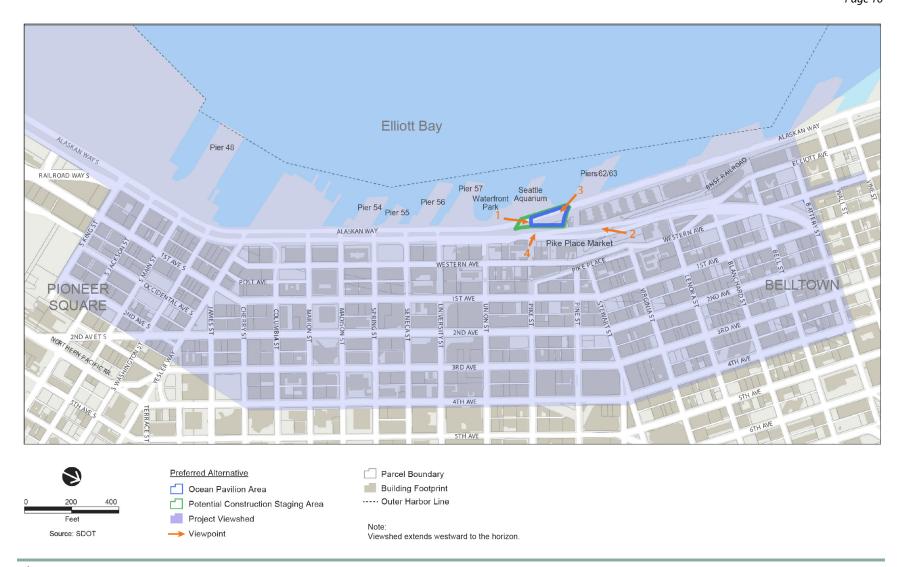


Figure 5 Project Viewshed and Viewpoints

Source: LMN Architects (modified from SDOT 2016)



Figure 6
SEPA-Protected Viewpoints, Scenic Routes, and View Corridors

Source: LMN Architects (modified from SDOT 2016)

Impact Thresholds

Impacts on visual resources relate to changes to the environment and how viewers perceive them. Specifically the analysis examines whether the proposed action alternatives are compatible with the surrounding environment and can be visually absorbed into the environment. How viewers perceive views includes an examination of whether viewers will be sensitive to changes in the views and also relates to whether scenic views for this population will increase or decrease. Taken together, these changes define the degree of impact as either minor, moderate, or significant.

Table 2 presents impact thresholds for both the construction phase and built condition of the Ocean Pavilion.

Table 2
Impact Thresholds for Aesthetics and Scenic Resources

Impact Indicators	Criteria Determining Degree of Impact
Assessment of the loss of SEPA-protected public views (from specified public places including parks, scenic routes, and view corridors)	No Impacts: Protected public views of significant features (i.e., Olympic Mountains, downtown skyline, or Puget Sound) are not blocked Impact: Protected public views of significant features are blocked
Assessment of the visual quality rating of the affected environment against the visual quality rating of the construction phase and the built conditions (e.g., operational)	Beneficial Impacts: Physical changes will enhance the natural harmony, cultural order, and project coherence (criteria of visual quality) and increase the quality of existing important views Minor Impacts: No or few physical changes, important views are not affected, viewers are not likely to notice visual changes, changes in shadow or light levels and glare are not noticeable Moderate Impacts: Changes in qualities of natural harmony, cultural order, and project coherence (criteria of visual quality) are noticeable, important views may be affected but are still available, viewers are aware of visual changes, changes in shadow or light level are noticeable Significant Impacts: Changes in qualities of natural harmony, cultural order, and project coherence (criteria of visual quality) are pronounced, important views are blocked, viewers see and are sensitive to view changes, changes in shadow or light level are obvious

Results

Overview

The inventory phase of the analysis defines the existing conditions, affected population, and projections based on professional observations of what this population likes or dislikes about the existing visual character of the views. The visual character, affected viewers, and visual quality levels for each key viewpoint are presented in Tables 3 and 4 for the existing conditions.

Tables 5 and 6 present the visual quality levels for each key viewpoint, which will be compared against the action alternative visual quality levels to determine impacts. Potential design refinements to the

Overlook Walk are discussed in the operational visual quality levels and impacts for the action alternatives in Tables 7 and 8. These design refinements include a narrower Overlook Walk and heights that would meet the roof of the building. Alternative 2 in the current design would reach 40 feet but design refinements could allow for a height of up to 50 feet. The Alternative 3 building and Overlook Walk height would reach 50 feet.

Because changes to the Animal Care Center would be to the interior of an existing building, there are no visual impacts anticipated during construction or in the long term.

Table 3
Public Viewpoint Summary – Existing 2018 Conditions

	SEPA-				Visual Quality				
Viewpoint Description	Protected View Location	Visual Character	Affected Viewers	Natural Harmony	Cultural Order	Project Coherence	Overall Level		
Waterfront Park/ sidewalk west of Alaskan Way looking north	Yes	 Foreground views of existing Seattle Aquarium building, sidewalk (with light-penetrating surface) and planter boxes Midground view of Alaskan Way and Alaskan Way Viaduct Background views of low- and mid-rise buildings (city skyline falls under SEPA-protected view) and the sky 	Predominately tourists and locals visiting the waterfront, also commercial employees working along the waterfront and office employees working in select buildings near the area	With the exception of the Alaskan Way Viaduct, the view includes a favorable mixture of built and natural environment elements (e.g., planters).	Current construction activities with temporary utility poles and temporary barriers somewhat detract from the order of the view.	Alaskan Way viaduct is distinctive and somewhat jarring in its scale and unique materials compared to surrounding buildings and structures.	Medium- low		
South end of Victor Steinbrueck Park looking south	Yes	 Foreground views of the Alaskan Way Viaduct, lighting associated with this structure, the back side of Waterfront Landings, and the Pike Place Market Garage deck Midground views of Elliott Bay open water (Puget Sound falls under SEPA-protected view), existing Seattle Aquarium buildings, Great Wheel, low-rise waterfront and mid- to high-rise buildings east of the viaduct, stadiums, and Port of Seattle cranes Background views of the Duwamish green belt, West Seattle, and the sky 	Park users including tourists visiting Pike Place Market, local residents, and employees of businesses near the market	The Alaskan Way Viaduct deck and structure bisects the view and detracts from the natural harmony of the view; however, open views of the water, sky, background greenery, and interesting built environment fabric provide some harmony.	The two different leveled viaduct decks, the signage associated with the viaduct and the temporary facilities (temporary utilities, water tanks, fencing) associated with waterfront construction detract from the order of the view.	The two decks of the viaduct cutting across this view with only minimal views of the street below detract from the legibility of this view.	Medium- low		

SEPA-					Visual Quality	1	
Viewpoint Description	Protected View Location	Visual Character	Affected Viewers	Natural Harmony	Cultural Order	Project Coherence	Overall Level
South edge of Piers 62/63 looking east	No	 Foreground views of the seawall and promenade currently under construction, Alaskan Way, and waterfront condominiums and other nearby low-rise buildings Midground views of the Alaskan Way Viaduct, Seattle Aquarium buildings, and mid-rise buildings rising up behind the viaduct Background views of the high-rise, building-dominated city skyline as well as the sky 	Predominately tourists and locals visiting the waterfront, possibly more cruise terminal passenger and employees at this location; residents of waterfront condos and employees at commercial, office, and hospitality businesses nearby	Foreground views with construction operation and staging in addition to the viaduct bisecting the city skyline view make a large portion of the view unharmonious	Construction operations including water treatment, temporary facilities, and staging all detract from the order of the view.	Temporary facilities including rerouting of surface streets detract from legibility in the foreground. The viaduct acts as an obstruction to the legibility of the city skyline view in the midground.	Low
Pike Street Hillclimb base looking west	No	 Foreground views of lighting fixtures, brick paving, retaining walls/railings, and vegetation including atlas cedar, linden, and ginkgo trees with ivy groundcover Midground views of the Alaskan Way Viaduct and street, surface parking lots, Seattle Aquarium buildings, and sidewalks Background views of the sky, Elliott Bay open water, and Bainbridge Island 	Predominately tourists and locals visiting the waterfront, also commercial and office employees working along the waterfront or hillclimb areas and some residents living along the waterfront	While the natural vegetation creates an attractive "room" at the base of the hillclimb and peep-hole views of the water are available, the parking lot and viaduct detract from the natural harmony.	Construction staging along Alaskan Way as well as irregularly spaced surface parking spaces somewhat detract from the order of the view.	The viaduct acts as an obstruction to the legibility of the view, blocking views of the waterfront through its spans, and views of the street through its columns.	Medium- low

Table 4
Private Viewpoint Summary – Existing 2018 Conditions

	SEPA-			Visual Quality			
Viewpoint Description	Protected View Location	Visual Character	Affected Viewers	Natural Harmony	Cultural Order	Project Coherence	Overall Level
Private residences (Fix Madore and Waterfront Landings)	No	 Generally foreground views of built structures, buildings, and/or transportation elements Midground views of waterfront buildings and structures including the Seattle Aquarium, Elliott Bay, and West Seattle Background views of Puget Sound, Bainbridge Island, Olympic Mountains, and the sky 	Private residents and employees within businesses	With the exception of the Alaskan Way Viaduct, the view includes a favorable mixture of built and natural environment elements, including views of the water and vistas of the Olympic Mountains.	Current construction activities and staging somewhat detract from the order of the view.	Alaskan Way Viaduct is distinctive and somewhat jarring in its scale and unique materials compared to surrounding buildings and structures.	Medium

Table 5
Public Viewpoint Visual Quality – No Action Alternative

	SEPA-	Visual Quality						
Viewpoint Description	Protected View Location	Natural Harmony	Cultural Order Project Coherence					
Waterfront Park/ sidewalk west of Alaskan Way looking north	Yes	While the removal of the Alaskan Way Viaduct would benefit the view, removal of the existing, moderately mature natural vegetation currently in the foreground with a paved plaza would decrease some of the softer elements of the view that contribute to natural harmony.	Removal of temporary facilities would contribute greater order to the view.	The Overlook Walk would be a distinctive element but is anticipated to make wayfinding and travel through the space and uphill quite legible.	Medium			
South end of Victor Steinbrueck Park looking south	Yes	Removal of the viaduct and rerouting of Alaskan Way with additional street trees would increase the natural harmony of the view in the foreground.	Removal of the viaduct and removal of construction staging and temporary facilities would increase the order of this view.	Removal of the viaduct would increase the viewer's understanding of this view, though the underpass of the Overlook Walk would slightly detract from this legibility by blocking a full view of the street below.	Medium			

	SEPA-	Visual Quality							
Viewpoint Description	Protected View Location	Natural Harmony	Cultural Order	Project Coherence	Overall Level				
South edge of Piers 62/63 looking east	No	Completion of the seawall and promenade combined with removal of the viaduct and installation of new street trees would contribute to a harmonious urban view.	Finishing installation of the seawall and updated street grid would increase the order of the view.	The removal of the viaduct would benefit coherence of the city skyline view, although viewing the underside of the Overlook Walk would still slightly detract from coherence of this view.	Medium				
Pike Street Hillclimb base looking west	No	Most vegetation would likely remain or be replaced following removal of the viaduct; these soft elements combined with removal of the viaduct opening up greater views of the sky and replacement of disjointed surface parking with the rerouted Alaskan Way would result in an increase in natural harmony.	Removal of staging areas and replacement of parking areas on Alaskan Way would increase the order in this view.	The removal of the viaduct and surface parking lots would benefit coherence, although the underside of the Overlook Walk would still slightly detract from coherence of this view at the street level by partially blocking midground building views.	Medium				

Table 6
Private Viewpoint Visual Quality – No Action Alternative

	SEPA-		Visual (Quality	
Viewpoint Description	Protected View Location	Natural Harmony	Cultural Order	Project Coherence	Overall Level
Private residences (Fix Madore and Waterfront Landings)	No	The removal of the Alaskan Way Viaduct would greatly benefit the view. The Overlook Walk, with its mix of built structure and natural vegetation, would contribute to harmony of the view.	Removal of construction activities, staging, and temporary facilities would contribute greater order to the view.	The Overlook Walk would be a distinctive element, but, combined with the rerouting of Alaskan Way surface streets, would maintain overall coherence and legibility of the view.	Medium- high

Construction-Related Impacts and Mitigation Measures

The AWPOW EIS, through the preferred alternative, identified substantial temporary construction-related impacts, primarily related to construction of the Overlook Walk (SDOT 2016, Section 5.2.2). These impacts are incorporated by reference for Alternative 1.

For Alternative 2, the AWPOW EIS identified substantial temporary adverse impacts on aesthetics during construction within the waterfront landscape unit, primarily related to construction of the Overlook Walk, but the Aquarium Pavilion construction was also determined to contribute temporary impacts (SDOT 2016, Section 5.2.2). The action alternatives would have similar temporary adverse impacts on aesthetics. Visual quality would be temporarily degraded due to the following conditions:

- Construction equipment including a land-based crane, land-based equipment, and material staging and stockpiling areas around the site may obstruct some water and background landform views.
 The construction crane and other equipment could block SEPA-protected Puget Sound views from Victor Steinbrueck Park depending on its height and location.
- High-visibility (likely orange-colored) barriers and fencing for safety and sediment and erosion control would be installed and detract from the orderliness of the views.
- Soil, dust, and exhaust from equipment and activities could detract from the air and visual quality.
- Temporary lighting could brighten the area during nighttime construction activity (if needed).
- Traffic patterns for motorists, pedestrians, and cyclists would be disrupted, potentially leading to more congestion.

In general, construction of both action alternatives has some potential to affect visual resources; but in both cases, impacts are likely to be moderate and there would not be substantial differences in impacts between the two action alternatives. Action alternative construction-related impacts for each key viewpoint are provided in Tables 7 and 8, these impact ratings are based upon the change in overall visual quality level compared to the No Action Alternative for each viewpoint. The overall impact for each alternative is based on a combination of these ratings. For both action alternatives, a moderate impact on visual quality was determined during construction.

Table 7
Public View Construction Visual Quality Levels and Impacts for Action Alternatives

	SEPA-		V	isual Quality			Construction
Viewpoint Description	Protected View Location	Natural Harmony	Cultural Order	Project Coherence	Overall Level	SEPA-Protected View Impact	Period Impact Rating
Waterfront Park/ sidewalk west of Alaskan Way looking north	Yes	Temporary loss of natural vegetation, and construction activities and staging in the foreground may detract from the city skyline view and affect harmony.	This viewpoint may have prominent views of construction activities that may contribute to cluttered, disorderly views.	Legibility and wayfinding during construction at this location may decrease.	Low for both alternatives	Impact: Views of downtown city skyline to the north affected from Waterfront Park's adjacent sidewalk	Moderate for both alternatives
South end of Victor Steinbrueck Park looking south	Yes	Changes to this view may be shielded by Alaskan Way and Overlook Walk.	Disorderly effects of construction may be shielded by foreground and midground views.	Legibility at this viewpoint may be minimally disrupted as changes may occur in the background.	Medium for both alternatives	Impact: Portion of view of Puget Sound may be blocked by construction crane and other equipment depending on its height and location	Minor for both alternatives
South edge of Piers 62/63 looking east	No	Construction activities may detract from harmonious aspects of open water and city skyline views.	This viewpoint may have prominent views of construction activities that may contribute to cluttered, disorderly views.	Legibility and wayfinding during construction at this location may decrease.	Low for both alternatives	No Impact: Not a SEPA-protected view location	Moderate for both alternatives
Pike Street Hillclimb base looking west	No	Changes to the view may be shielded by foreground vegetation and the midground Overlook Walk.	Disorderly effects of construction may be shielded by foreground and midground views.	Legibility at this viewpoint may be minimally disrupted as changes may occur in the background.	Medium for both alternatives	No Impact: Not a SEPA-protected view location	Minor for both alternatives

Table 8
Private View Construction Visual Quality Levels and Impacts for Action Alternatives

Viewpoint Description	SEPA- Protected View Location	Visual Quality Natural Harmony Cultural Order Project Coherence Overall Level					
Private residences (Fix Madore and Waterfront Landings)	No	May be affected by crane use, construction activities, and staging	Prominent views of construction activities that may contribute to cluttered, disorderly views	Less applicable; affected viewers may be less sensitive to this from interior viewpoints	Low for both alternatives	Moderate for both alternatives	

Measures to avoid or minimize construction-related impacts for both action alternatives could include the following:

- Protecting visual resources through the development of a construction screening plan, which could
 include integrating temporary public artwork murals and select windows into construction areas to
 provide an attractive screen to construction activities and opportunities for interested parties to
 observe the progress of construction
- Limiting nighttime construction activities and thus lighting and considering light barriers or the direction of lighting away from residential buildings that could be disturbed by glare

Long-Term Impacts and Mitigation Measures

Under the No Action Alternative, visitor levels to the study area could increase due to planned development (Alaskan Way Viaduct removal, Overlook Walk, Alaskan Way promenade), adding more viewers to the study area. The planned development would be moderately beneficial to the general public in the study area. Figures 7 through 11 present the No Action Alternative (Alternative 1) and action alternatives (Alternatives 2 and 3) from four key public viewpoints as well as private residential views. For Alternative 2, the AWPOW EIS identified substantial view benefits during operation but also moderate adverse impacts due to view blockages and changes to form, texture, and materials of the view within the waterfront landscape unit. The "Aquarium Pavilion" described in the AWPOW EIS was not identified as a primary contributor of impacts, which were identified as the Overlook Walk, kiosks, and new street trees, but the building envelope would contribute to potential impacts by blocking some public views of the city skyline from a few viewpoints (SDOT 2016, Section 5.3.2).

Alternative 3 provides a greater degree of aesthetic improvement compared to Alternative 2, through the following components:

- The building's rooftop design would allow for rooftop landscaping that, together with the Overlook Walk public plaza landscaping, has more vegetation contributing to natural harmony
- Building height would allow for enhanced public views from the Overlook Walk/rooftop, by elevating the viewpoint above Pier 59, allowing 180-degree views of the water
- A more level connection with the Overlook Walk and connections to Pike Place Market would be provided and increase legibility and wayfinding at this location
- With the Ocean Pavilion located farther south, the following benefits would be provided:
 - The creation of a public open space directly opposite the opening between Piers 62/63 and
 Pier 60, providing direct public views to the water from the open space
 - Fewer waterfront views would be blocked from the public space on the Overlook Walk or from the public stairs

Location of the public elevator to the south would provide more visible access for visitors on the Alaskan Way sidewalk, contributing to project coherence





Existing View



Alternative 2



Alternative 1

Alternative 3

Figure 7
Viewpoint 1: Waterfront Park/Sidewalk West of Alaskan Way Looking North





Existing View



Alternative 2



Alternative 1 Alternative 3

Figure 8
Viewpoint 2: South End of Victor Steinbrueck Park Looking South

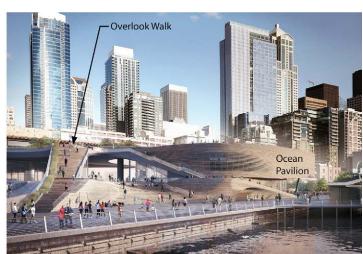




Existing View



Alternative 2



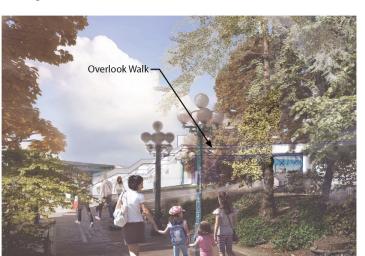
Alternative 1 Alternative 3

Figure 9 Viewpoint 3: South Edge of Piers 62/63 Looking East





Existing View



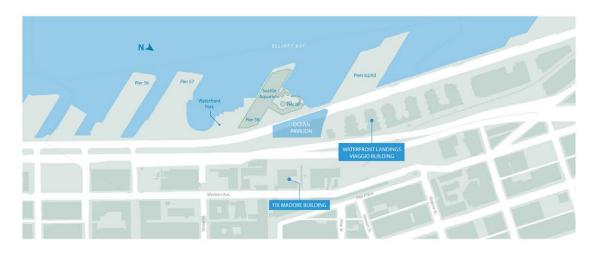
Alternative 2



Alternative 1

Alternative 3

Figure 10 Viewpoint 4: Pike Street Hillclimb Base Looking West



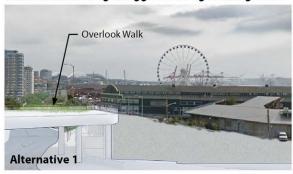
Fix Madore Building Looking West







Waterfront Landings Viaggio Building Looking South



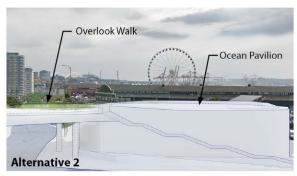




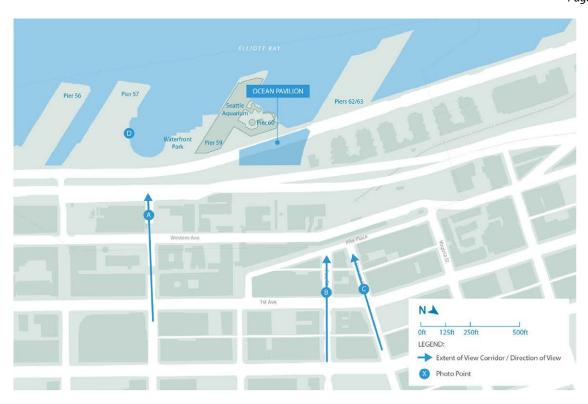
Figure 11 Private Building Views

Overall, the action alternatives would have minor adverse impacts on scenic views of the open water and background landforms from street-level views, due to existing waterfront buildings currently obstructing these views and the proposed building heights being low enough to avoid further view obstruction.

Private waterfront views from Fix Madore would likely be moderately impacted, with the height of the proposed buildings reaching halfway past the second-highest floor; however, views from most of the west-facing windows appear to be obstructed by existing vegetation and the existing Alaskan Way Viaduct. Private city skyline views from Waterfront Landings would likely be moderately impacted, though only limited waterfront views to the south may be obstructed.

The action alternatives would affect views of the open sky present in the No Action Alternative view at the base of the Pike Street Hillclimb, but only to a minor degree (approximately 6% of the view for Alternative 2 and 24% of the view for Alternative 3), the existing view has very limited views of the sky and water due to the existing Alaskan Way Viaduct. Background views of the city skyline and open sky present in the No Action Alternative view from Waterfront Park would be obstructed depending on a viewer's location in the park (approximately 18% of the view for Alternative 2 and 37% of the view for Alternative 3); but the proposed development would fit into the surrounding urban view, and a plaza rather than a street foreground view from this location would provide a visual benefit. The building would not obstruct views for visitors looking toward the city skyline from interior locations in the park (30 feet west of the sidewalk, note that the Waterfront Park assessment includes the adjacent sidewalk); approximately 49% of the pedestrian-accessible park (total area including the sidewalk portion of park but not the water portion) has views of the building. Figure 12 shows SEPA-protected viewpoints currently obstructed by buildings or other infrastructure and would not be affected by the proposed action.

Action alternative long-term impacts for each key viewpoint are provided in Tables 9 and 10.









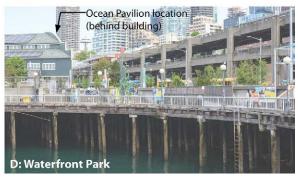


Figure 12
Obstructed View Corridor and SEPA-Protected Views

Table 9
Public Views Operational Visual Quality Levels and Impacts for Action Alternatives

	SEPA-		Visual Quality			Operational	SEPA-	
Viewpoint Description	Protected View Location		Natural Harmony	Cultural Order	Project Coherence	Overall Level	Impact Rating	Protected View Impact
Waterfront Park/ sidewalk west of Alaskan Way looking north	Yes	2	There are benefits from a plaza that will include planter and street tree vegetation rather than a surface street view. Alternative 2 would have slightly higher levels of natural harmony from this viewpoint due to the buildings being located farther from the viewpoint.	There would be minimal impact from this view, because the building fits neatly into the urban context of the scene. The refined Overlook Walk that "meets" the height of the building with a narrower structure	There would be obstruction of Alaskan Way beyond limit legibility and of wayfinding somewhat, though this also occurs in the No Action Alternative. Coherence of the path towards the Overlook Walk may be slightly higher for Alternative 2, but legibility/wayfinding towards Alaskan Way may be lower compared to Alternative 3. Design refinements of the Overlook Walk would have minimal effects from this view.	Medium	No Adverse Impact	Impact: Views of downtown city skyline to the north are affected from Waterfront Park's adjacent sidewalk
		3	There are benefits from a plaza that will include planter and street tree vegetation rather than a surface street view. Alternative 3 would have slightly lower levels of natural harmony from this viewpoint due to the buildings being located closer to the viewpoint.	provides a slight aesthetic improvement from the previous design at this location because it would minimally obstruct city skyline views to the north from Waterfront Park's adjacent sidewalk.	There would be obstruction of Alaskan Way beyond limit legibility and of wayfinding somewhat, though with the narrower Overlook Walk this will be improved upon compared to Alternative 2. Coherence of the path towards the Overlook Walk may be slightly lower for Alternative 3, but legibility/wayfinding towards Alaskan Way may be better for Alternative 3. Design refinements of the Overlook Walk would have minimal effects from this view.	Medium	Minor	Impact: Views of downtown city skyline to the north are affected from Waterfront Park's adjacent sidewalk

	SEPA-			Visual (Quality		Operational Impact Rating	SEPA- Protected View Impact
Viewpoint Description	Protected View Location	ted	Natural Harmony	Cultural Order	Project Coherence	Overall Level		
South end of Victor Steinbrueck Park looking south	Yes	2	Slight obstruction of the existing Seattle Aquarium building along the pier detracts slightly from the natural harmony. This obstruction is more pronounced for Alternative 2 because the building is more prominent in this view. Additionally, while the current height of this alternative's building and Overlook Walk is 40 feet, current code would allow for up to 50 feet, which would further obstruct this view.	Minimal impact from this view due to changes occurring within the background of this viewpoint	The gap in the line of street trees along Alaskan Way at the detracts slightly from the coherence of the view. Narrowing the Overlook Walk through design refinement in both action alternatives would provide slight benefits, because the structure would obstruct less of Elliott Way and the Aquarium Plaza.	Medium	Minor	No Impact: Views of Puget Sound would not be blocked by the building
		3	Slight obstruction of the existing Seattle Aquarium building along the pier detracts slightly from the natural harmony. This obstruction is more pronounced for Alternative 2 than Alternative 3, because Alternative 3 is more tucked behind the Overlook Walk.			Medium- high	Minor	No Impact: Views of Puget Sound would not be blocked by the building

	SEPA-		Visual Quality				_ Operational	SEPA-
Viewpoint Description	Protected View Location	Alternative	Natural Harmony	Cultural Order	Project Coherence	Overall Level	Impact Rating	Protected View Impact
South edge of Piers 62/63 looking east	No	2	The larger size of the building compared to surrounding low-rise buildings in the foreground detracts slightly from harmony. This would be more pronounced in Alternative 2 due to the building being closer to the viewpoint and taking up much more of the foreground plaza space compared to Alternative 3.	There would be minimal impact from this view. The building fits neatly into the urban context of the scene. The refined Overlook Walk that "meets" the height of the building with a narrower structure provides a slight aesthetic improvement from the previous design. While	There would be obstruction of Alaskan Way beyond limit legibility and of wayfinding somewhat, though this also occurs in the No Action Alternative. The building in Alternative 2 is slightly more exposed in front of the Overlook Walk stairs, detracting somewhat from coherence in terms of wayfinding both toward the street and to the Overlook Walk. While the narrowing of the Overlook Walk through design refinements may improve views to Alaskan Way, the building still obstructs most of these views.	Medium	Minor	No Impact: Not a SEPA- protected view location
		The larger size of the building compared to surrounding low-rise buildings in the foreground detracts slightly from harmony. This would be less pronounced for Alternative 3 due to the building being farther from the viewpoint and taking up much less of the foreground plaza space compared to Alternative 2.	low-rise background buildings would be slightly more obstructed, the overall city skyline view is minimally affected.	There would be obstruction of the street beyond limit legibility and of wayfinding somewhat, though with the narrower Overlook Walk this will be improved upon compared to Alternative 2. Alternative 3, which has the building tucked behind both Overlook Walk stairs, has moderately better coherence in terms of wayfinding, both toward the street and to the Overlook Walk.	Medium- high	Minor	No Impact: Not a SEPA- protected view location	

	SEPA-			Visual (Quality		Operational	SEPA-
Viewpoint Protected		Alternative	Natural Harmony	Cultural Order	Project Coherence	Overall Level	Impact Rating	Protected View Impact
Pike Street Hillclimb base looking west	No No	3	The natural vegetation foreground, street trees, and balanced built environment midground contribute to harmony. The sky would be slightly less obstructed in this view because the building would be located farther north. The natural vegetation foreground, street trees, and balanced built environment midground contribute to harmony. The open sky would be slightly	There would be minimal impact from this view due to changes occurring within the background of this viewpoint. Provided foreground vegetation is preserved, the design refinements of the Overlook Walk would be minimally visible from	There would be minimal impact from this view due to changes occurring within the background of this viewpoint. Design refinements of the Overlook Walk would have minimal effects from this view.	Medium- high	Minor	No Impact: Not a SEPA- protected view location No Impact: Not a SEPA- protected view location
			built environment midground contribute to harmony. The open	the Overlook Walk would be minimally				'

Table 10
Private Views Operational Visual Quality Levels and Impacts for Action Alternatives

	SEPA-		Visual Quality					
Protected Viewpoint View Description Location A		Alternative	Natural Harmony	Cultural Order	Project Coherence	Overall Level	Operational Impact Rating	
Private residences (Fix Madore and Waterfront Landings)	No	2	There would be a slight obstruction of waterfront views (both locations) and city skyline views (Waterfront Landings) due to the building and the future Overlook Walk. These obstructions would detract from the natural harmony for both alternatives, but would be more pronounced in Alternative 2 for views from Waterfront Landings. The refinements of the Overlook Walk would provide slight improvements compared to the earlier design through a narrower structure, and the lower building and Overlook Walk height would obstruct less private waterfront views from Fix Madore compared to Alternative 3.	There would be minimal impact from this view. The building fits neatly into the urban context of the scene.	The building would slightly detract from coherence by obstructing views of the shoreline's edge	Medium	Minor	
		3	There would be a slight obstruction of waterfront views (both locations) and city skyline views (Waterfront Landings) due to the building and the future Overlook Walk would detract from the natural harmony for both alternatives, but would be less pronounced for Alternative 3 for views from Waterfront Landings. The refinements of the Overlook Walk would provide slight improvements compared to the earlier design through a narrower structure, but the walk and the building that are higher in this alternative would obstruct more private waterfront views from Fix Madore.			Medium	Minor	

Mitigation Measures

No significant adverse impacts on aesthetic and scenic resources are anticipated; therefore, no mitigation measures are proposed. However, as the preferred design is selected and undergoes review through the Design Commission process, design refinements to minimize potential impacts will be incorporated. These refinements may relate to the building envelope's material selection, landscaping, or changes to more prominent aspects of the building. The design refinement process will ensure that the Ocean Pavilion is integrated with the overall Waterfront Seattle program.

Cumulative Effects and Mitigation Measures

There are multiple projects that could be near or built at the same time as the Ocean Pavilion including the AWPOW projects, Piers 62/63 Rebuild, Pike Pine Renaissance: Act One, the Waterfront Park Rebuild, Seattle Multimodal Terminal at Colman Dock, Vine Basin Combined Sewer Overflow (CSO) Control Project, and multiple commercial and residential development projects along the Seattle central waterfront and downtown area. These projects would contribute additional temporary construction-related cumulative effects on aesthetics and scenic resources. The City's urban design goals and policies for the waterfront and downtown areas would be enforced through Design Commission review and the AWPOW projects, Piers 62/63 Rebuild, Waterfront Park Rebuild, and CSO reduction projects in particular would contribute to enhancement of visual resources when completed. No long-term cumulative effects are anticipated from the proposed action and no mitigation measures are proposed.

References

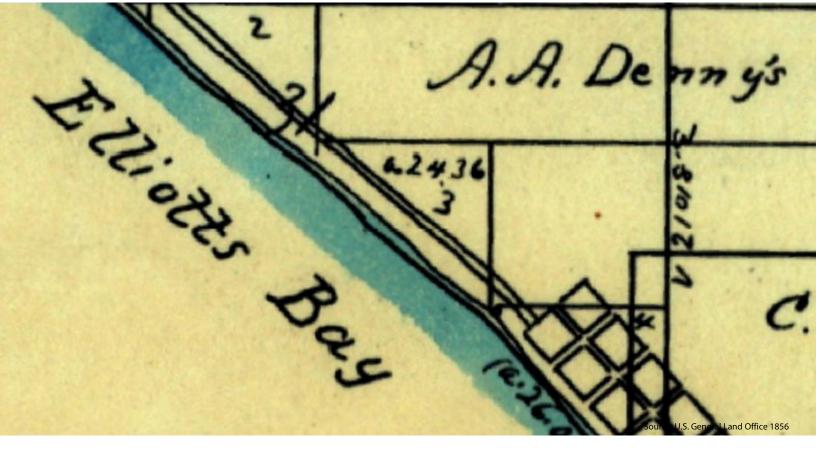
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Appendix F Cultural Resources Technical Memorandum



November 2018 Seattle Aquarium Ocean Pavilion

Cultural Resources Technical Memorandum

Prepared forCity of Seattle Department of Parks and Recreation
Seattle Aquarium Society

Prepared by Anchor QEA, LLC

Executive Summary

The purpose of this technical memorandum is to describe the potential impacts on cultural resources, which includes historical and archaeological resources, associated with the proposed Seattle Aquarium Ocean Pavilion (Ocean Pavilion). This memorandum evaluates the potential effects of project construction and operation on these resources for two action alternatives as well as a No Action Alternative. The City of Seattle Department of Parks and Recreation, in coordination with the Seattle Aquarium Society (SEAS), is preparing a State Environmental Policy Act (SEPA) Environmental Impact Statement (EIS) to evaluate the proposal, which includes two different building options located near the existing Seattle Aquarium at Piers 59 and 60 along the Seattle waterfront and an off-site Animal Care Center that may be located on Harbor Island at the former Fisher Flour Mill or similar facility.

The construction of an "Aquarium Pavilion" was reviewed by the City of Seattle (City) as part of the Alaskan Way, Promenade, and Overlook Walk (AWPOW) SEPA EIS (SDOT 2016). Information and analysis from the AWPOW EIS is incorporated by reference into the analysis and findings of this memorandum, in accordance with Seattle Municipal Code (SMC) 25.05.635 and Washington Administrative Code (WAC) 197-11-635.

The Ocean Pavilion is being proposed as a separate and independent project from the AWPOW and other ongoing projects along the central waterfront. However, the proposal is intended to anchor these projects and reconnect the city with Puget Sound and its central waterfront. This memorandum summarizes the relevant findings from the AWPOW EIS, describes changes to the Ocean Pavilion proposal that have occurred since that time, and evaluates whether the changes would result in any potential additional construction and long-term impacts on historical and archaeological resources.

The findings of this Ocean Pavilion EIS cultural resources analysis indicate that minor construction-related impacts on historic buildings are anticipated, as well as potential moderate impacts on unrecorded archaeological sites. Alternative 2 has slightly more potential to affect archaeological materials than Alternative 3, because the horizontal footprint of the basement is larger (26,100 square feet [0.6 acre] for Alternative 2 versus 17,400 square feet [0.4 acre] for Alternative 3). Mitigation measures during construction would include maintaining access to businesses, communicating with residents, and applying measures developed for other environmental topics, such as controlling noise and dust. Depending on construction methods, mitigation measures could also include development of an Archaeological Monitoring Plan and Inadvertent Discovery Plan. No long-term impacts are anticipated from the built condition of the Ocean Pavilion. Table 1 provides a summary of impacts.

Table 1
Cultural Resources Impacts Summary

Alternative	During Construction	Long Term
1 (No Action)	No Adverse Impact No construction, therefore no construction impacts	No Adverse Impact No ongoing effects beyond what was previously analyzed in the AWPOW EIS (SDOT 2016)
2	Minor to Moderate Impacts Historic buildings: Potential impacts associated with construction noise, dust, and/or access limitations Archaeological sites: Potential moderate impacts associated with excavation in sediment with archaeological potential between 22 to 40 feet below ground surface; slightly more potential for disturbance than Alternative 3 due to the increased horizontal footprint of the basement (26,100 square feet [0.6 acre])	No Adverse Impact No ongoing effects
3	 Minor to Moderate Impacts Historic buildings: Potential impacts associated with construction noise, dust, and/or access limitations Archaeological sites: Potential moderate impacts associated with excavation in sediment with archaeological potential between 22 to 40 feet below ground surface; slightly less potential for disturbance than Alternative 2 due to the reduced horizontal footprint of the basement (17,400 square feet [0.4 acre]) 	No Adverse Impact No ongoing effects

Introduction and Project Description

The Ocean Pavilion would be located in Seattle, King County, Washington (Figure 1). The building would be constructed east of the existing Seattle Aquarium, and east of the future pedestrian promenade along the waterfront constructed as part of the AWPOW projects. A potential off-site Animal Care Center may be located on Harbor Island at the former Fisher Flour Mill or a similar facility (Figure 1). Three alternatives have been developed for the Ocean Pavilion: a No Action Alternative and two action alternatives. A full description of these alternatives is included in the Draft Ocean Pavilion EIS, with summary descriptions provided within this technical memorandum.



Figure 1 Vicinity Map

Alternative 1: No Action Alternative

Under Alternative 1 (No Action Alternative), the Ocean Pavilion would not be built. However, conditions in the area would be different from those that exist at the time this EIS is published (2018). The analysis for the No Action Alternative is based on the expected conditions in 2030, which is the year used for the assessment of future conditions. The following major changes are assumed to be in place under the No Action Alternative:

- The AWPOW projects identified in the preferred alternative within the AWPOW EIS would be completed. The AWPOW projects would continue to be refined through the Office of the Waterfront and Civic Projects' design process.
- The Alaskan Way Viaduct Replacement Project (AWVRP) would be completed, with the viaduct eliminated and the State Route 99 tunnel in operation.
- The Elliott Bay Seawall Project (EBSP) would be completed.
- Ongoing public and private development projects that are currently being permitted through the Seattle Department of Construction and Inspections would be completed, with an additional projected baseline growth of 1% per year.

A description of the AWPOW's selected preferred alternative is included in Section 2.3 of the AWPOW EIS (SDOT 2016). The main difference between the two is that the No Action Alternative for Ocean Pavilion does not include construction of the "Aquarium Pavilion," which was one option described as part of the AWPOW's preferred alternative. Descriptions of the AWVRP and EBSP are described in Section 2.2 of the AWPOW EIS. Figure 2 shows the No Action Alternative, which serves as the baseline against which the potential impacts of the action alternatives are evaluated.

Office of the Waterfront and Civic Projects' Potential Design Refinements

The AWPOW projects would continue to be refined through the Office of the Waterfront and Civic Projects' design process. As of the publication of this EIS, the conceptual design of the Overlook Walk lid (or bridge) connecting the waterfront to Pike Place Market over Elliott Way would be narrower (90 feet versus 190 feet) and higher (50 feet versus 40 feet) than the design in the AWPOW EIS. In addition, Building B would be replaced by a smaller one-story building with a covered outdoor café and seating area on its roof. Public stairs and elevators would maintain connections from the Overlook Walk to the waterfront. These refined conditions were used in assessing the range of impacts of the action alternatives as compared to No Action Alternative and potential design refinements.

Alternative 2

Alternative 2 includes the Ocean Pavilion concept evaluated as one option for the preferred alternative under the AWPOW EIS (referred to as the "Aquarium Pavilion" in the AWPOW EIS). Alternative 2 includes an approximately 48,000-square-foot building featuring an interior elevator and connections to a fully accessible route between the waterfront and Pike Place Market. The orientation of the proposed building would locate it farther north and closer to Pine Street, compared to Alternative 3 which would be located farther south. The building would be approximately 40 feet tall with a rooftop waterfront viewing space accessible

from the Overlook Walk. An off-site Animal Care Center would be included under Alternative 2, as described herein. Figure 3 shows Alternative 2.

Alternative 3

Alternative 3 includes building the Ocean Pavilion east of the existing Seattle Aquarium on Alaskan Way and the future Waterfront Promenade. The Ocean Pavilion would be located farther south than Alternative 2, resulting in a shorter distance from the Ocean Pavilion entrance to the existing Seattle Aquarium entrance and improved accessibility for visitors, volunteers, staff, and Seattle Aquarium programs. The proposed building would include an approximately 48,000-square-foot public aquarium featuring an exterior elevator and connections to a fully accessible route between the waterfront and Pike Place Market. The building would be approximately 50 feet tall with unobstructed public views of Elliott Bay over the existing Seattle Aquarium on Pier 59 and would be accessible from the future Overlook Walk. This alternative also includes an off-site Animal Care Center, as described herein. Figure 4 shows Alternative 3.

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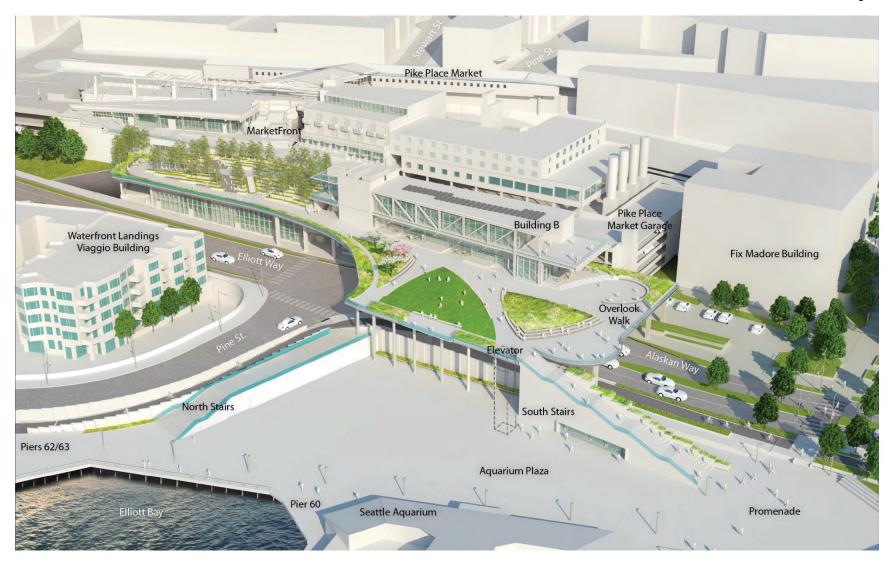


Figure 2 Alternative 1 (No Action)

Source: LMN Architects



Figure 3 Alternative 2

Source: LMN Architects



Figure 4 Alternative 3

Source: LMN Architects

Off-Site Animal Care Center for Alternatives 2 and 3

An off-site Animal Care Center is proposed to address both short- and long-term animal care, veterinary, and rehabilitation needs and to meet the Association of Zoos and Aquariums' standards. The most immediate need is to provide necessary animal care to support the opening of the Ocean Pavilion and the turtle rehabilitation program. The Animal Care Center would also be a long-term care facility that supports SEAS' exhibit animal population, animal rehabilitation, and research efforts.

The Animal Care Center would be designed to meet peak animal care demand for the Seattle Aquarium exhibits and programs. This would include approximately 15,000 square feet of interior space, plus an additional 5,000 to 7,000 square feet of area surrounding the facility for outdoor animal holding, water storage, and parking. The center is intended to meet the care needs of both warm- and cold-water fish, birds and mammals, and rehabilitating animals. The center would also provide long-term care, including life support systems, with flexibility in the design to accommodate future needs.

SEAS plans to have the Animal Care Center constructed and operational 2 to 3 years prior to the opening of the Ocean Pavilion. This would allow for coral propagation, animal quarantine, and acclimation of the animals for the exhibits. SEAS has identified a potential site at the former Fisher Flour Mill property on Harbor Island, which is owned by King County. While the Fisher Flour Mill site is a potential location for the center, a similar location could be pursued. It is not anticipated that the impacts identified in this analysis would differ at a similar location.

Construction Methods for Alternatives 2 and 3

Construction methods for the action alternatives are described in the following subsection. It is anticipated that construction methods would be similar for the action alternatives. During construction, access to existing utilities would be maintained for surrounding property uses.

Construction Activities

It is anticipated that construction at the Ocean Pavilion would require the following activities:

- Open excavation for the basement of the Ocean Pavilion, which would reach about 20 feet below ground surface (bgs), with 48-inch-diameter piles extending at varying depths
 - It should be noted that for Alternative 2, the AWPOW EIS shows 60 to 80 feet of excavation proposed in this area (SDOT 2016: Figure 10-2, page 245). It is expected that this depth is specific to the future Overlook Walk and other improvements and depths of that magnitude would not be required to construct the Ocean Pavilion.
- Dewatering of excavation areas below the water table or implementing soil freezing treatments to provide a dry work area as necessary
- Protecting, relocating, and/or connecting utilities
- Using best management practices to protect water quality and reduce erosion (may include installation of silt fencing, covering of stockpiled soil, and collection and treatment of construction stormwater runoff)
- Drilling shafts for piers to support the building, including exterior elevators or stairwells as necessary

- Removing existing knock-outs in the adjacent seawall under Pier 60 to connect the overwater intake pipe, seawater discharge, and utilities and infrastructure between the Ocean Pavilion and existing Seattle Aquarium buildings
- Erecting structural components and installing mechanical and other building features, using a crane tower for hoisting
- Potentially using one barge for 3 to 8 weeks, located between Piers 62/63 and Pier 60 for delivery of acrylic windows for the exhibits

Construction at the Animal Care Center would be limited to the building interior. No substantial modifications or new construction would be required to the exterior or surrounding areas.

Construction Staging

It is anticipated that areas within or near the proposed action (e.g., Aquarium Plaza) would be used for staging construction and storing materials, equipment, and temporary construction trailers.

Construction Timing

Construction of the Ocean Pavilion is expected to take up to approximately 4 months for early foundation work and 24 months for general construction. Preparation of the off-site Animal Care Center is expected to take approximately 9 months and would occur in advance of construction of the Ocean Pavilion.

Worker Parking, Access, and Haul Routes

The Ocean Pavilion contractor is expected to establish a worksite office, which could be located in existing office space near the Seattle Aquarium or in a mobile facility in the established laydown area or nearby. A limited number of construction workers may be able to park at the worksite office or on the work site, others could use off-street parking garages near the Seattle Aquarium, and some may use transit and walk to the work site. The Animal Care Center contractor is anticipated to establish a construction office in existing space within the building that would house the Animal Care Center. Very little parking demand is expected to be generated during build out of the Animal Care Center.

Construction activities would generate traffic for equipment and removing debris and soil. The contractor would determine the best construction methods, as permitted by the City and in conformance with the project construction plans.

Regulatory Context

At this time, there are no applicable federal or regional laws, plans, or policies relevant to the proposed Ocean Pavilion. The state and local regulatory policies related to cultural resources are described here.

State Laws, Plans, and Policies

The SEPA process considers short- and long-term direct and indirect impacts as well as cumulative impacts on historic and cultural preservation (WAC 197-11-060 and WAC 197-11-444).

RCW 27.53 (Archaeological Sites and Records) prohibits unpermitted excavation of archaeological sites. RCW 27.44 (Indian Graves and Records) and RCW 68.60.050 (Protection of Historic Graves) guides actions following a discovery of human remains.

Executive Order 05-05, which requires a cultural resources review of state capital projects, is not applicable because the Ocean Pavilion is not a state capital project.

Local Plans and Policies

Under SMC 25.12 (Historic Landmark Preservation Ordinance), sites or improvements older than 25 years and having significant character, interest, or value to the history or culture of Seattle may become landmarks. A Certificate of Approval is required before alterations or significant changes can be made to a landmark.

Chapter 25.05 SMC (Environmental Policies and Procedures) authorizes the Seattle Department of Construction and Land Use (now the Seattle Department of Construction and Inspections) through Director's Rule 2-98 to grant, deny, or condition construction or use permit applications. This rule clarifies SEPA historic preservation requirements with respect to a project's potential for impacts on significant archaeological sites and requirements for archaeological assessments.

The City's Shoreline Master Program requires that development avoid disruption to historic and cultural resources, and requires procedures in the event of an inadvertent discovery of archaeological resources during construction (SMC 23.60A.154 - Standards for Archaeological and Historic Resources).

The Pike Place Market Historical Commission Revised Guidelines would apply if any impacts are identified within the Pike Place Market Historic District.

Methodology

Study Area

The study area has been defined using SEPA guidelines for cultural resources. It includes the area where project work would occur and a larger area to include indirect potential effects on cultural resources (Figure 5). Cultural resources include archaeological sites and objects as well as historic buildings and traditional tribal properties that have been determined eligible for national, state, or local preservation registers. Within the study area, the geographical scope of analysis differs for the various types of cultural resources. The study area includes the geographic scope of potential construction effects from noise, dust, vibration, and changes in access or traffic patterns during construction and operation of the Ocean Pavilion and Animal Care Center. Generally, it includes all parcels in or adjacent to the construction area. It also accommodates the City Historic Preservation Officer's adjacency review of potential impacts on City of Seattle Landmarks.

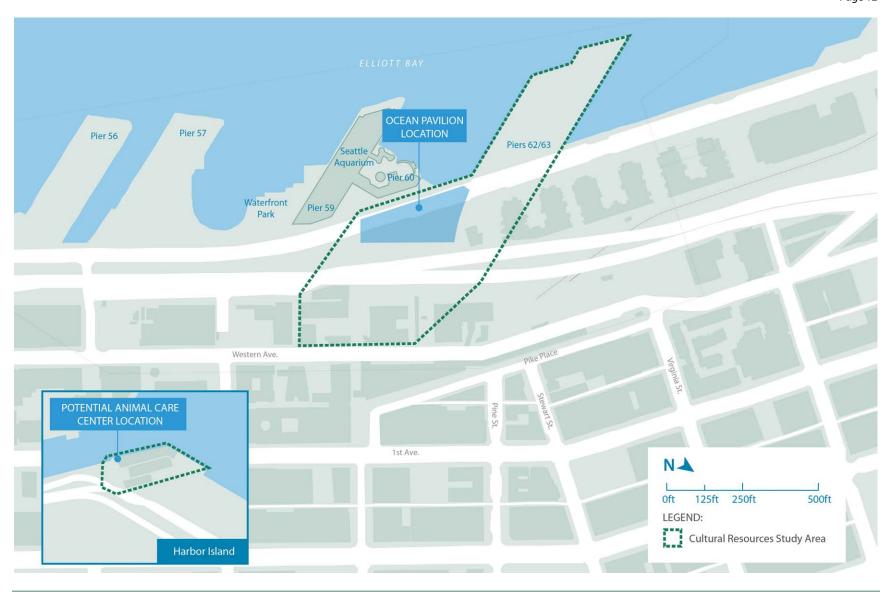


Figure 5 Cultural Resources Study Area

Environmental and Cultural Context

The history and geomorphology of the Seattle waterfront has been extensively reviewed for the recent AWVRP (Miss and Hodges 2007; Miss et al. 2007) and EBSP (Hudson et al. 2013). The AWPOW EIS also reviewed cultural resources information in the study area (SDOT 2016: Sections 9 and 10). A summary is presented here, to support the assessment of archaeological potential and potential impacts on cultural resources.

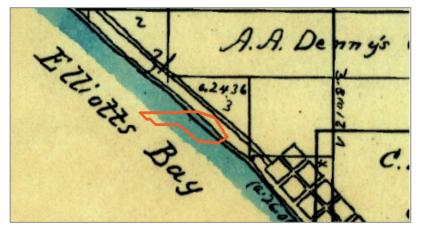
Geologic Context

The study area is in the Puget Trough physiographic province, a valley system that extends from Puget Sound south through the Willamette Valley and that separates the Olympic Mountains from the Western Cascades (Franklin and Dyrness 1973). During the last glacial advance, the Vashon Stade of the Late Wisconsin glaciation, glaciers extended as far as Centralia, 85 miles south of Seattle. Glaciers began to recede about 15,000 years ago, leaving behind a rapidly changing landscape of proglacial lakes, meltwater streams, and other alluvial features. This process created the Vashon till, which is the thick layer of Pleistocene glacial outwash underlying Holocene sediments in the project vicinity. As the glaciers retreated, land formerly depressed by the weight of the ice began to rebound, a process of uplift that lasted until approximately 9,000 years ago (Dragovich et al. 1994). By the time sea levels stabilized in the mid-Holocene, the downtown waterfront was characterized by steep topography. The bluffs that now host the Belltown neighborhood would have dropped to a narrow beach. The Ocean Pavilion location area itself would have been in intertidal and subtidal waters (Figure 6). Previous archaeological and geotechnical coring has revealed buried beach deposits between approximately 28 and 40 feet bgs, between Pleistocene till below and historical/modern fill above (Hudson et al. 2013: Figure 5-34).

The Harbor Island area near the potential site of the proposed Animal Care Center was deeply subtidal in the early Holocene. It was part of an embayment that extended south as far as present-day Auburn. The Duwamish River delta began to aggrade about 5,700 years ago after a large eruption of Mount Rainier. The eruption created the Osceola mudflow, which introduced massive amounts of sediment into the Duwamish drainage and caused the river mouth to move northward as the river valley filled with sediment (Dragovich et al. 1994). The Duwamish River delta was near its historical location by 1,500 to 2,200 years ago.

Cultural Context

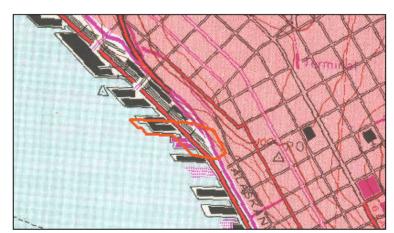
The study area is in the traditional territory of the Duwamish, a Southern Coast Salish group speaking the Southern Lushootseed language who lived in villages from Lake Washington to the Black River (Suttles and Lane 1990). Southern Coast Salish villages were occupied part of the year, largely in winter, and residents made seasonal journeys to camps near resource gathering areas. Coastal villages relied on fish (Suttles and Lane 1990), which they caught with various weirs and traps, as well as shellfish and sea mammals (Ruby and Brown 1986). These food sources were supplemented by various berries, roots, and bulbs (Suttles and Lane 1990; Ruby and Brown 1986). A Duwamish place in the project vicinity was mapped in the early twentieth century by geographer T.T. Waterman; the home of Princess Angeline, Chief Seattle's daughter, was said to be at the foot of Pike Street near what is now the northbound lanes of the Alaskan Way Viaduct (Hilbert et al. 2001).





1856 General Land Office Map

1875 U.S. Coast and Geodetic Survey T-Sheet



1918 U.S. Coast and Geodetic Survey Chart

35







1949 USGS 7.5' Quad, Seattle South

Figure 6 Historical Maps

Captain George Vancouver's 1792 exploration of Puget Sound marked the first Euroamerican intrusion in the region (Kirk and Alexander 1990). However, Euroamerican settlement in the region was not established until 1832; the earliest instance was at Fort Nisqually at the southern end of Puget Sound. The Wilkes Expedition of 1841 used the fort as a base for explorations in southern Puget Sound, which included mapping in proximity to the project area (Kirk and Alexander 1990). The earliest Euroamericans in what would become Seattle settled on Denny Island, near what is now Second Avenue South and South King Street, in the 1850s.

Site Development History

Yesler's Mill was constructed in the Pioneer Square area in 1853, and the settlement grew quickly. By 1875, a U.S. Coast and Geodetic Survey chart shows the Seattle Coal & Transportation Company's wharf and railroad in the study area (see Figure 6). Various rail lines were constructed along the waterfront after 1882, including numerous lines in the rail right-of-way on the waterfront known as Railroad Avenue. The Great Northern Rail tunnel from South Washington Street to Alaskan Way between Virginia Street and Stewart Street was built in 1903; the north portal to the tunnel is about 250 feet northwest of the study area. In 1916, the first portion of the Seattle seawall was built, in the Pioneer Square area. Brought to a halt by the Great Depression, construction resumed in 1934 and reached as far north as Broad Street.

The Duwamish River outlet was a shifting intertidal zone prior to historic land modifications. Dredging of the East and West waterways of the Duwamish River occurred in 1895 to 1905, creating Harbor Island. William P. Fisher began the Fisher Flouring Mill shortly thereafter, in 1910. Production and capacity at the mill grew steadily through the twentieth century (with a dip during the Great Depression). In the 1990s, the flour milling operation was moved to Portland, and the building was sold to the Pendleton Flour Mills in 2001. King County purchased the building in 2003 and currently leases the warehouse and office portions (DAHP 2018); the Animal Care Center may be located in this building.

At the proposed Ocean Pavilion location, an office building was constructed at 1528 Alaskan Way in 1947, soon after the completion of the seawall. It is scheduled for demolition under the AWVRP.

Based on the historical development of Elliott Bay and contemporaneous maps, the history of the Ocean Pavilion location was likely intertidal and subtidal habitat prior to historic contact and into the early historic period. By the 1880s, this area was likely on piles as part of Railroad Avenue, and then filled by the seawall construction in 1934, and home to an office building and parking lot since 1947. The EBSP, substantially completed in 2017, included excavation and soil improvements from the southern curb of the project property to the waterfront. No significant cultural resources were observed during monitoring of the new seawall construction project, which reached approximately 25 feet bgs.

Previous Research and Historic Properties

One archaeological site has been recorded in the study area: 45Kl1099, a historic debris scatter, is located under Pier 62. Seven other archaeological sites have been recorded within 0.5 mile of the study area (Table 2). They are primarily historic sites, with the notable exception of the Baba'kwob site, where shell midden and human remains were found. A deeply buried precontact shell midden (45Kl1353) was found within 0.5 mile of the potential location of the Animal Care Center. However, it is across the West

Waterway from the location, and is in a context that would have been upland prior to historic land modifications. No external construction will be required for the Animal Care Center.

Table 2
Cultural Resources Within 0.5 Mile of the Study Area

Site Number/ Historic Building	Description	Distance from Study Area
45KI1099	Submerged debris scatter at Piers 62/63	In water underneath Pier 62
45KI1161	Foundation of Municipal Market Commercial Building	0.06 mile north of Ocean Pavilion
45KI1085	Concrete wall near Western Avenue	0.12 mile south of Ocean Pavilion
45KI1084	Historic wood wall underneath Alaskan Way Viaduct	0.20 mile south of Ocean Pavilion
45KI0456	Baba'k ^w ob site – precontact shell midden, historic debris, human remains	0.25 mile northwest of Ocean Pavilion
45KI1011	Submerged debris scatter under Pier 54	0.32 mile south and in water of Ocean Pavilion
45KI0482	World Trade Center North site – historic debris scatter	0.39 mile northwest of Ocean Pavilion
45KI1353	Deeply buried shell midden identified in a geotechnical boring	0.5 mile southwest of potential Animal Care Center location
Fix Madore building	Built in 1920, formerly a small hotel	160 feet west of Ocean Pavilion building
Ton of Gold and Sailing of Willapa Site	Marker commemorating a historic location related to the Klondike Gold Rush	60 feet southwest of Ocean Pavilion building

Two historic buildings are located within the Ocean Pavilion portion of the study area, the Fix Madore building (1507 Western Avenue) and the Ton of Gold and Sailing of Willapa Site, a historic marker (Figure 7). The Fix Madore building has been determined eligible for listing in the National Register of Historic Places (NRHP). The Ton of Gold marker has been determined eligible for listing in the Washington Heritage Register (WHR). Neither is a designated City of Seattle Landmark.

Pier 62 is in the study area, but it was determined not eligible for listing in the NRHP and is not part of the Central Waterfront Piers Seattle Landmark (Piers 54, 55, 56, 57, and 59). There are more than 350 historic and potentially historic buildings within 0.5 mile of the study area, but none would be affected and are not discussed further in this memorandum.

The Fisher Flour Mill (also known as the Fisher Flouring Mill or Pendleton Mill), the potential location of the Animal Care Center, dates to 1910. Although the former Fisher Flour Mill building is older than 50 years, the land use is not classified as Historic Property; the building is not a City of Seattle Landmark and has not been evaluated for listing in state or national preservation registers. The construction of the Animal Care Center would not result in any modifications to the exterior of the mill, and therefore has no potential to affect the potential historic integrity of the building.

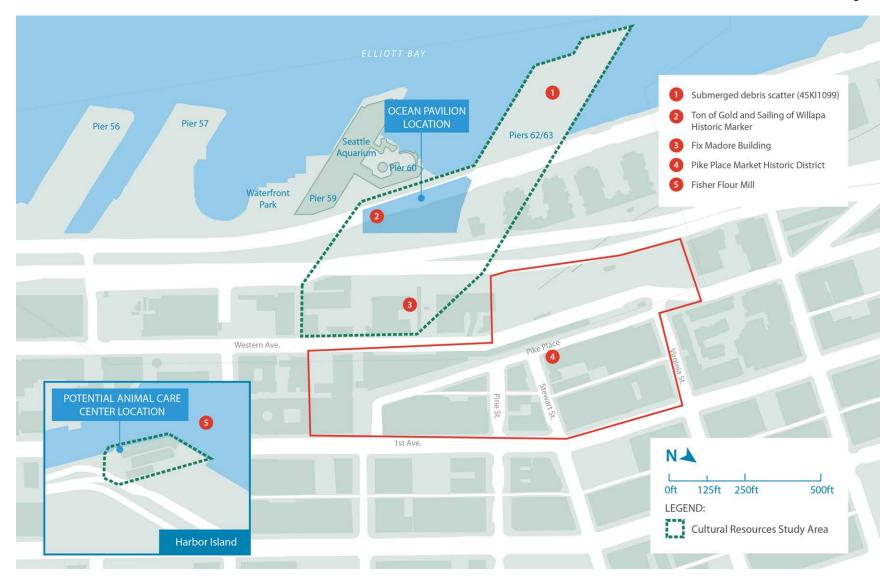


Figure 7
Existing Cultural Resources in the Study Area

Twenty-eight cultural resources studies have been conducted within 0.5 mile of the Ocean Pavilion portion of the study area, one of which included subsurface testing. Three archaeological sonicores were excavated in the immediate vicinity of the Ocean Pavilion as part of the EBSP environmental review process (Hudson et al. 2013). The cores revealed approximately 26 feet of fill bgs. Beneath the fill was an indication of buried beach deposits. Extensive archaeological monitoring during construction of the EBSP did not encounter these deposits, likely because construction only reached about 25 feet bgs.

A number of geotechnical borings were collected as part of the design development of the Ocean Pavilion alternatives (Shannon and Wilson 2018). The profiles of the geotechnical borings show the depth of the buried beach deposits across the site and the characteristics of borings. Four borings were within the proposed footprint of one or both action alternatives. The buried beach deposits were present above glacial sediments in three of the four, as follows:

- EB-8B: buried beach deposit at 22 to 27 feet bgs (at the northern extent of the combined proposed footprint, approximately halfway between eastern and western extents)
- WS-21: no evidence of buried beach deposit; historic fill contacts glacial sediments (at the eastern
 extent of the combined proposed footprint, approximately halfway between the northern and
 southern extents)
- OP-2: buried beach deposits at 24 to 29 feet bgs (in the southwest corner of the combined proposed footprint)
- OP-2: buried beach deposits at 27 to 32 feet bgs (in the southwest corner of the combined proposed footprint)

These results indicate that buried beach deposits are thicker to the west (nearer the shoreline), and can be expected in the study area between 22 and 32 feet bgs.

Two cultural resources studies have been conducted within 0.5 mile of the potential Animal Care Center location. Neither included subsurface testing or recordation of the Fisher Flour Mill.

Technical Approach

The No Action Alternative would not result in adverse impacts on cultural resources and no impact analysis was conducted for this alternative. Similarly, no adverse impacts are anticipated as a result of the development of the Animal Care Center because modifications to the building is anticipated to be limited to the interior of the building regardless of the location chosen; therefore, no additional analysis of impacts was conducted.

The potential impacts on cultural resources from the Ocean Pavilion under Alternative 2 were analyzed in the AWPOW EIS; therefore, this review focuses on the potential impacts of Alternative 3. The proposed Ocean Pavilion concept evaluated under Alternative 3 was compared to the No Action Alternative, including the Office of the Waterfront and Civic Projects' potential design refinements, to identify potential impacts and compare the two action alternatives.

To address archaeological resources, archaeological and geotechnical information from previous studies were synthesized to identify archaeological potential within the horizontal and vertical footprint of

potential ground disturbance. To address the historic buildings, potential impacts were identified based on Appendix C of the Final EIS, which identified changes in traffic patterns.

Impact Thresholds

The indicators for assessing potential impacts on cultural resources are identified in Table 3, along with the criteria that was used to determine the degree of impact. These indicators can also be used to identify differences between action alternatives and the associated potential impacts, including actions such as ground disturbance in areas with potential for buried archaeological resources; demolition modification of structures; increased noise, vibration, or dust that diminishes the integrity of the building; changes to vehicle or pedestrian access that affect the viability of a building; or impacts on the setting of a historic building.

Table 3
Impact Thresholds for Cultural Resources

Impact Indicators	Criteria for Determining Degree of Impact
 Destruction or modification of a cultural resource Changes to the use or physical features 	Minor Impacts: No known cultural resources are present within the vicinity of the proposed action; or cultural resources are present in the vicinity of the proposed action, but would not be destroyed, removed, changed, or diminished; the potential for encountering archaeological deposits is low
 of a cultural resource Introduction of visual, atmospheric, or audible elements that diminish the 	Moderate Impacts: No known cultural resources are present within the vicinity of the proposed action, or cultural resources are present in the vicinity of the proposed action, but impacts would not be of a severity that resulted in a resource no longer being eligible for listing in the WHR or NRHP; the potential for encountering archaeological deposits is moderate
integrity of the significant features of a cultural resource	Significant Impacts: Cultural resources would be destroyed, removed, changed, or diminished by the proposed action such that it would no longer be eligible for listing in the WHR or NRHP, and/or the potential for encountering archaeological deposits is high to very high

Results

Overview

In general, construction of the Ocean Pavilion under both the action alternatives has some potential to affect historic or archaeological resources. However, in both cases impacts are likely to be minor. Alternative 2 has slightly more potential to affect archaeological materials than Alternative 3, because the horizontal footprint of the basement is larger (26,100 square feet [0.6 acre] for Alternative 2 versus 17,400 square feet [0.4 acre] for Alternative 3).

Construction-Related Impacts and Mitigation Measures

No significant impacts on historic buildings or recorded archaeological sites during construction or operation were identified within the AWPOW EIS for Alternative 2, and the potential to affect unrecorded archaeological sites was determined to have a minor impact (SDOT 2016: Sections 9.2, 9.3, 10.2, and 10.3).

Potential minor impacts during construction on historic buildings may occur under both action alternatives. Potential impacts on the Fix Madore building could include those typical of large construction projects, such as noise, vibration, and airborne dust. There may be short-term access limitations, traffic congestion, and reduced parking in the study area. These impacts are considered minor because they are not expected to alter or diminish the historic significance or integrity of the property. Mitigation measures would include maintaining access to businesses, communicating with residents, and applying measures developed for other environmental topics, such as controlling noise and dust. No adverse impacts are anticipated to the Ton of Gold and Sailing of Willapa Site, a historic location and marker that would remain in place.

Potential moderate impacts during construction on archaeological resources may occur under both action alternatives due to ground-disturbing activities that may affect archaeological sites or objects. Ground disturbance for Alternative 2 could reach 60 to 80 feet bgs for the building basement and foundation (SDOT 2016, Figure 10-2). Under Alternative 3, ground disturbance is expected to extend approximately 40 feet bgs. Open excavation for the basement of the Ocean Pavilion would reach about 20 feet bgs, with 48-foot-diameter piles extending an additional 20 feet beneath the open excavation. The historic-era fill (extending 22 to 27 feet from the ground surface) and Pleistocene sediments (below 27 to 40 feet bgs) have little to no potential to disturb archaeological materials. However, the buried beach deposits in between (22 to 40 feet bgs) have moderate potential to disturb archaeological materials. Alternative 2 has slightly more potential to affect archaeological materials than Alternative 3 because the horizontal footprint of the basement is larger.

Mitigation measures to address potential impacts on archaeological materials between 22 to 40 feet bgs during installation of drilled shafts for piles could include preparation of an Archaeological Monitoring Plan to provide monitoring of any sediments between 22 to 40 feet bgs that are safely visible and accessible, if any. An Inadvertent Discovery Plan would be prepared and maintained on-site during construction.

The build out of the Animal Care Center would not result in any modifications to the exterior of the building, and therefore has no potential to affect the potential historic integrity of the building. No ground disturbance is proposed, so there is no potential to affect archaeological materials.

Long-Term Impacts and Mitigation Measures

The Ocean Pavilion would not operate in, or affect the use of, any historic buildings. The operation of the Animal Care Center would not include any activities that would alter or diminish the Fisher Mill building. No long-term impacts on archaeological sites, historic buildings, or traditional cultural properties are currently anticipated under any of the alternatives; therefore, no mitigation measures are proposed.

Cumulative Effects and Mitigation Measures

No adverse impacts have been identified; therefore, no cumulative effects are anticipated.

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