



**Washington State
Department of Transportation
Bridge Preservation Dive Team**

**UNDERWATER INSPECTION REPORT FOR
STEILACOOM BLDG TRESTLE**

BRIDGE NO. DOC-1

STRUCTURE ID 00200436



Prepared For WA State Dept. of Corrections (DOC)

Inspection Date April 26, 2021

Lead Inspector/Diver James R. W. Harding
Cert. # G0911

Inspector/Diver Loren A. Wilson



Status: **Released**

Printed On: 7/8/2021

Agency: Other State Agencies

CD Guid: 2c31e030-f0e8-4348-a6a2-ca973fb9bd0c

CD Date: 6/22/2021

Program Mgr: Evan M Grimm

UNDERWATER INSPECTION REPORT
FOR THE
STEILACOOM BLDG TRESTLE

BRIDGE NO. DOC-1
STRUCTURE ID 00200436

EXECUTIVE SUMMARY

The WSDOT Bridge Preservation Dive Team performed an underwater inspection of the Steilacoom Building Trestle on April 26, 2021. A total of 60 timber piles and 1 timber pile dolphin (7 pile group) were inspected from mudline to the water surface by diving.

In general, the submerged structural elements are in satisfactory condition with only minor defects noted. Eight building trestle piles and two fender piles had notable defects in the form of marine borer entry holes (bankia damage), open rot cavities, or shake (ring split) missing from the exterior of the pile. These defects do not require repair at this time but will be monitored for further deterioration during future inspections. The most significant pile damage was the previously noted rot cavity in Pile 8.9A. Repair #10002 was created to evaluate capacity/demand of Pile 8.9A and replace as required.

No underwater repairs are required at this time. Recommend retaining the 48-month frequency for underwater inspections.



Status: Released

Printed On: 7/8/2021

Agency: Other State Agencies

CD Guid: 2c31e030-f0e8-4348-a6a2-ca973fb9bd0c

CD Date: 6/22/2021

Program Mgr: Evan M Grimm

Inspector James R. W. Harding **Date** 4/26/2021
Bridge No. DOC-1 **Bridge Name** STEILACOOM BLDG TRESTLE
Bridge Type Stringer/multi-beam **Waterway Name** PUGET SOUND
Dive Objective Inspection of submerged substructure elements.

Diving Operation

Type of Operation ☐ SCUBA ☒ Surface Supplied Air ☐ Snorkel ☐ ROV ☐ Other _____

Equipment **Suit** Dry suit
Air Supply Surface Supplied
Site Access Munson dive boat - launched from Zittel's Marina
Inspection Tools GoPro camera, probe, hammer/scrapper

Conditions

Water ☒ Salt ☐ Fresh ☐ Brackish **Temperature** 48 °F **Visibility** 15 ft
Surface ☒ Calm ☐ Choppy ☐ Rough
Tide ☐ High ☐ Low ☐ Flood ☒ Ebb ☐ N/A
Current ☐ Fast ☐ Moderate ☒ Slow **Velocity** < 0.5 ft/sec
Weather ☒ Clear ☐ Cloudy ☐ Overcast ☐ Rain ☐ Windy **Air Temp** 52 °F

Diver Checks

<input checked="" type="checkbox"/> First Aid Equipment on Site	<input checked="" type="checkbox"/> Physical Condition of Diver(s) Checked
<input checked="" type="checkbox"/> Communication for EMS	<input checked="" type="checkbox"/> Communications for Diver(s) Checked
<input checked="" type="checkbox"/> Dive Gear Inspected	<input checked="" type="checkbox"/> Team Briefed and Understands Dive Plan
<input checked="" type="checkbox"/> Air Source Checked	<input checked="" type="checkbox"/> Special Site Hazards Noted
<input checked="" type="checkbox"/> Pre-Activity Safety Plan Reviewed	<input checked="" type="checkbox"/> Line-Tending Procedures Reviewed
<input checked="" type="checkbox"/> COVID-19 Addendum to PASP	<input type="checkbox"/> _____

Dive Plan and Dive Team Procedures

Assess site conditions and determine type of dive operation. Hold on-site pre-dive safety meeting to discuss and plan dive operation, determine roles and responsibilities, review emergency procedures, and check physical condition of diver(s). Assemble and check dive gear. Check communication for diver(s). After completion of dive, review notes, check condition of diver(s), take soundings and photos as required.



Status: Released

Printed On: 7/8/2021

Agency: Other State Agencies

CD Guid: 2c31e030-f0e8-4348-a6a2-ca973fb9bd0c

CD Date: 6/22/2021

Program Mgr: Evan M Grimm

Dive Schedule

Dive No.	Entry Time	Exit Time	Total Time in Water	Maximum Depth	Remarks
1	09:05:00	10:51:00	01:46:00	23 fsw*	Loren inspected all of DOC-2 and DOC-1 in this one dive.

Dive Narrative

The team converged at Zittel's Marina and proceeded to prepare the boat and gear. A pre-activity safety plan was discussed and team roles for the inspection were decided upon. A surface-supplied air (SSA) diver operation was chosen and after the appropriate gear was loaded, the boat was launched and the team proceeded to motor east, around the southern tip of the Key Peninsula, and along the west side of Anderson Island, to the inspection location on the south side of McNeil Island. The boat was moored to the south side of the concrete pontoon floats, and after making contact with DOC personnel on-site, the diver was geared up and checked. DOC-2 was inspected first then the boat was moved to the east end of the south side of the pontoon. The diver began the inspection at seven pile dolphin at the NW corner of the trestle and swam east inspecting the facing piles and Bent 9. Once he got to the end of Bent 9 he swam onshore to bent 8 and inspected on the way back towards the boat. He then swam to Bent 7 inspected it and came back Bent 6. He continued this procedure until all trestle bents were inspected. Notes and findings were relayed to support personnel on the dive boat via hardwired communications in the umbilical. Depths and photos were taken as necessary. Passenger ferry boat traffic was monitored to ensure the safety of the diver during boat arrivals and departures. Once all underwater elements had been inspected, the diver was recovered to the boat, where his physical condition was checked. All notes and photos were reviewed for completeness prior to leaving the site.

* fsw = feet sea water

Dive Diver Air IN/OUT (psig)

1 LAW 3600/2900

Dive Team Members

Loren A. Wilson, P.E.

(Name)

Diver

(Role)

James R. W. Harding, P.E.

(Name)

Notes / Comms.

(Role)

Richard M. Pawelka, P.E.

(Name)

DPIC

(Role)

Darren O. Nebergall, P.E.

(Name)

Standby Diver

(Role)



Status: Released

Printed On: 7/8/2021

Agency: Other State Agencies

CD Guid: 2c31e030-f0e8-4348-a6a2-ca973fb9bd0c

CD Date: 6/22/2021 Program Mgr: Evan M Grimm

Inspector	James R. W. Harding	Agency/Owner	WA State Dept. of Corrections (DOC)	Date	4/26/2021
Bridge No.	DOC-1	Bridge Name	STEILACOOM BLDG TRESTLE		
Bridge Type	Stringer/multi-beam	Waterway Name	PUGET SOUND		
Substructure	Treated Timber Piles	Foundation	Treated Timber Piles		
No. Spans	8	No. Piers Dived	9	Inspection Hours	3.0

5	<input type="checkbox"/>	Substructure Condition (1676)	8	<input type="checkbox"/>	Chan/Protection (1677)	T	<input type="checkbox"/>	Scour Code (1680)
---	--------------------------	-------------------------------	---	--------------------------	------------------------	---	--------------------------	-------------------

BMS Elements							
Element	Element Description	Total	Units	State 1	State 2	State 3	State 4
8124	Timber Submerged Pile/Column	60	EA	49	0	10	1
8361	Scour	9	EA	9	0	0	0
8460	Timber Pile Dolphins	1	EA	1	0	0	0

Notes	
0	<p>ORIENTATION: The Steilacoom Building Trestle includes the security building and the concrete deck between the building and the Pierce County Trestle. For location reference: Offshore is north, shore is south, left side is west, and right side is east. For pile defect location the offshore side is considered 12 O'clock looking down.</p>
1676	<p>SUBSTRUCTURE CONDITION: Substructure NBI coded from 6 to 5 due to red tagged pile 8.9.</p>
1677	<p>CHANNEL: This structure abuts another structure and does not connect to the shoreline directly. No bank issues noted. No restrictions to water flow past the structure.</p>
1680	<p>SCOUR: Structure is in tidal waters with weak and variable tidal currents. Scour code set to "T - tidal" and is considered a low risk for scour. See note 8361.</p>
8124	<p>TIMBER SUBMERGED PILE: There are 49 piles supporting the dock and building. There are also 11 fender piles. Timber pile 8.9A has a significant rot pocket that substantially effects the capacity, see attached cross section drawing (photos UW-3, UW-4, #8, and #11). Pile Red Tagged for REPAIR #10002.</p> <p>Underwater Inspection Findings: In general, the timber piles are in satisfactory condition with only minor defects noted. Eight (8) trestle piles and two (2) fender piles were noted to have minor defects and associated section loss. Observed defects included evidence of marine borer entry (MBE), shake or ring split missing from pile exterior, and open rot cavities (photos UW-1 through UW-6). Generally, these defects do not significantly affect the structural capacity of the pile and do not require repair at this time but will be monitored for further deterioration during future inspections. See Layout drawing and Pile Data Sheets for defect descriptions and locations.</p>



Underwater Inspection Report

Status: Released

Printed On: 7/8/2021

Agency: Other State Agencies

CD Guid: 2c31e030-f0e8-4348-a6a2-ca973fb9bd0c

CD Date: 6/22/2021 Program Mgr: Evan M Grimm

Inspector	James R. W. Harding	Agency/Owner	WA State Dept. of Corrections (DOC)	Date	4/26/2021
Bridge No.	DOC-1	Bridge Name	STEILACOOM BLDG TRESTLE		
Bridge Type	Stringer/multi-beam	Waterway Name	PUGET SOUND		
Substructure	Treated Timber Piles	Foundation	Treated Timber Piles		
No. Spans	8	No. Piers Dived	9	Inspection Hours	3.0

Notes (Continued)

8361	SCOUR (Field): Nine piers in the water. Underwater Inspection Findings: Water flow in the vicinity is tidal. No scour patterns or scour countermeasures were observed around the trestle bents.
8460	TIMBER PILE DOLPHINS: There is a seven pile timber dolphin near the left offshore end of the security building. Underwater Inspection Findings: The center pile has minor Limnoria striations. The pile group moves very easily even with light wave action. It appears to be due to the wraps being loose which doesn't make the dolphin act as a unit. The piles are not showing any distress at mudline (photo UW-7).

Repairs

Repair No	Pr	R	Repair Description	BMS	Noted	Maint	Verified
10002	1	B	Timber pile 8.9A has a significant rot pocket that substantially effects the capacity. 2019 inspection moved this pile from Yellow to Red Tagged. Evaluate capacity/demand and replace as required.	8124	4/8/2019		

Inspections Performed and Resources Required

Report Type	Date	Freq	Hrs	Insp	CertNo	Coinsp	Note		
Routine	4/8/2019	24	2.0	JHL	D2016	CRT			
Resources	Hours	Min	Pref	Max	Freq	Date	Need Date	Override	Notes
SNDG					999				Floating structures do not require soundings.
Boat			D						Boat needed for inspection. Kvichak used during 2019 inspection; dive boat used in 2017.
Third Party Notification									Schedule inspection with Greg Buikema (DOC) 253-328-3229 or 253-588-5281 (cell). A security clearance must be done for all inspectors prior to landing on the island. This can be done via Greg, provide full name, SS#, and date of birth (DOB).
Underwater	4/26/2021	48	3.0	JRWH	G0911	LAW	Underwater inspection by WSDOT Dive Team. Frequency set at 48 months to correspond with every-other routine inspection.		
Resources	Hours	Min	Pref	Max	Freq	Date	Need Date	Override	Notes



Underwater Inspection Report

Status: Released

Printed On: 7/8/2021

Agency: Other State Agencies

CD Guid: 2c31e030-f0e8-4348-a6a2-ca973fb9bd0c

CD Date: 6/22/2021 Program Mgr: Evan M Grimm

Inspector	James R. W. Harding	Agency/Owner	WA State Dept. of Corrections (DOC)	Date	4/26/2021
Bridge No.	DOC-1	Bridge Name	STEILACOOM BLDG TRESTLE		
Bridge Type	Stringer/multi-beam	Waterway Name	PUGET SOUND		
Substructure	Treated Timber Piles	Foundation	Treated Timber Piles		
No. Spans	8	No. Piers Dived	9	Inspection Hours	3.0
Boat	M	M	M	Used Munson dive boat for access.	
Third Party Notification	Schedule inspection with Greg Buikema (DOC) 253-328-3229 or 253-588-5281 (cell). A security clearance must be done for all inspectors prior to landing on the island. This can be done via Greg.				

BRIDGE INSPECTION REPORT

Page 1 of 5

Status: Released

Printed On: 7/8/2021

Agency: Other State Agencies

CD Guid: 2c31e030-f0e8-4348-a6a2-ca973fb9bd0c

Release Date: 6/22/2021

Program Mgr: Evan M Grimm

Br. No. DOC-1

SID 00200436

Br. Name STEILACOOM BLDG TRESTLE

Carrying

Route On

Mile Post

Intersecting PUGET SOUND

Route Under

Mile Post

UW-3

8124 Timber Submerged Pile/Column

Photo Type: I - In Depth

Orientation: Left

Date: 5/22/2013

Repairs: 10002

Pile 8.9A: Rot cavity 6"W x 12"H x 6"D
(2013 photo)



UW-4

8124 Timber Submerged Pile/Column

Photo Type: I - In Depth

Orientation:

Date: 4/24/2017

Repairs: 10002

8.9A: updated view of rot cavity (2017).



BRIDGE INSPECTION REPORT

Page 2 of 5

Status: Released
CD Guid: 2c31e030-f0e8-4348-a6a2-ca973fb9bd0c

Printed On: 7/8/2021
Release Date: 6/22/2021

Agency: Other State Agencies
Program Mgr: Evan M Grimm

Br. No. DOC-1

SID 00200436

Br. Name STEILACOOM BLDG TRESTLE

Carrying

Route On

Mile Post

Intersecting PUGET SOUND

Route Under

Mile Post

SI-8

8124 Timber Submerged Pile/Column

Photo Type: R - Repair

Orientation: Sea

Date: 4/8/2019

Repairs: 10002

Pile 8.9A: Measured 9" W x 16" H x 8" D (2019).



SI-11

8124 Timber Submerged Pile/Column

Photo Type: R - Repair

Orientation: Sea

Date: 4/8/2019

Repairs: 10002

Pile 8.9A: Measured 9" W x 16" H x 8" D (2019).



BRIDGE INSPECTION REPORT

Page 3 of 5

Status: Released

Printed On: 7/8/2021

Agency: Other State Agencies

CD Guid: 2c31e030-f0e8-4348-a6a2-ca973fb9bd0c

Release Date: 6/22/2021

Program Mgr: Evan M Grimm

Br. No. DOC-1

SID 00200436

Br. Name STEILACOOM BLDG TRESTLE

Carrying

Route On

Mile Post

Intersecting PUGET SOUND

Route Under

Mile Post

UW-1

8124 Timber Submerged Pile/Column

Photo Type: I - In Depth

Orientation:

Date: 4/24/2017

Repairs:

Pile 3B: two marine borer entries (MBE's) near mudline.



UW-2

8124 Timber Submerged Pile/Column

Photo Type: I - In Depth

Orientation:

Date: 4/24/2017

Repairs:

Pile 7.1H: MBE with 2.5" penetration. Typical of MBE defects throughout the facility.



BRIDGE INSPECTION REPORT

Page 4 of 5

Status: Released

Printed On: 7/8/2021

Agency: Other State Agencies

CD Guid: 2c31e030-f0e8-4348-a6a2-ca973fb9bd0c

Release Date: 6/22/2021

Program Mgr: Evan M Grimm

Br. No. DOC-1

SID 00200436

Br. Name STEILACOOM BLDG TRESTLE

Carrying

Route On

Mile Post

Intersecting PUGET SOUND

Route Under

Mile Post

UW-5

8124 Timber Submerged Pile/Column

Photo Type: I - In Depth

Orientation:

Date: 5/22/2013

Repairs:

Pile 9B: 3 marine borer entry holes. Up to 2" pen. Typical MBE defect.



UW-6

8124 Timber Submerged Pile/Column

Photo Type: I - In Depth

Orientation: Right

Date: 4/26/2021

Repairs:

Pile F7 has a 3/4" diameter MBE with 3" of penetration at 6:00 MDL +10.



BRIDGE INSPECTION REPORT

Page 5 of 5

Status: Released

Printed On: 7/8/2021

Agency: Other State Agencies

CD Guid: 2c31e030-f0e8-4348-a6a2-ca973fb9bd0c

Release Date: 6/22/2021

Program Mgr: Evan M Grimm

Br. No. DOC-1

SID 00200436

Br. Name STEILACOOM BLDG TRESTLE

Carrying

Route On

Mile Post

Intersecting PUGET SOUND

Route Under

Mile Post

UW-7

8460 Timber Pile Dolphins

Photo Type: G - General

Orientation: Sea

Date: 4/26/2021

Repairs:

Timber dolphin at ground line. Note the minor Limnoria striations on the center pile.

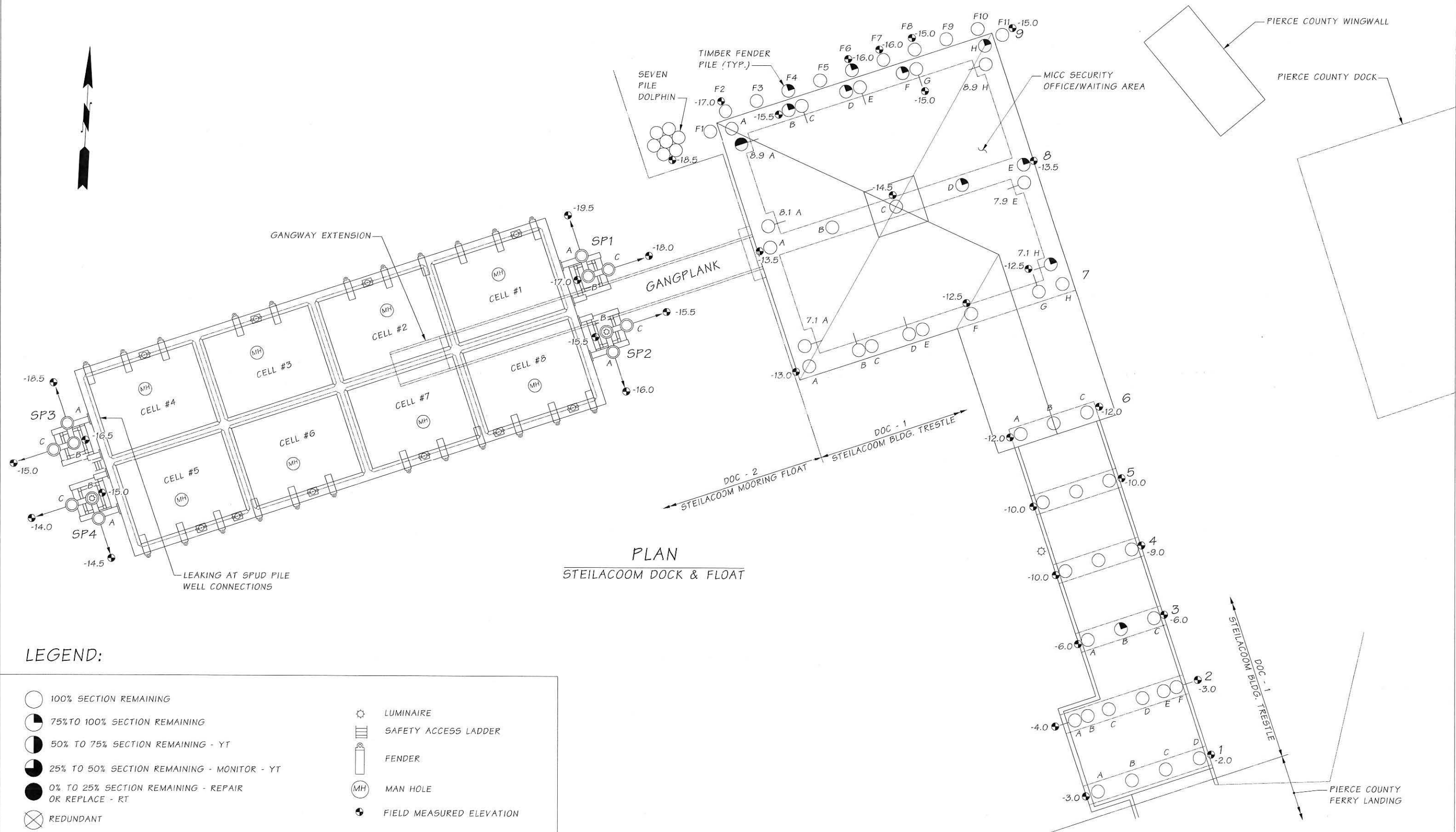


Underwater		4/26/2021	Lead: JRWH		Co: LAW				
Routine		4/24/2017	Lead: JSW		Co: KGH				
Pile Location		Condition/Damage						Inspection Type	
Bent	Pile	% Area Remaining	RT or YT	RT Pile Circum. (in)	Elevation	Details/Remarks	Routine/UW	Date	
PILE INSPECTION DATA - Building Trestle (12:00 = offshore / ahead on station)									
1	A	100			-3	MDL	UW	4/26/2021	
	B	100					UW	4/26/2021	
	C	100					UW	4/26/2021	
2	D	100			-2.0 Cap to Cap -5	MDL Checks	UW	4/26/2021	
	A	100			-4	MDL. Battered pile.	UW	4/26/2021	
	B	100					UW	4/26/2021	
	C	100					UW	4/26/2021	
	D	100					UW	4/26/2021	
	E	100					UW	4/26/2021	
	F	100			-3	MDL. Battered pile.	UW	4/26/2021	
3	A	100			-6	MDL	UW	4/26/2021	
	B	75			MDL +1	Two MBEs @ 11:00; 3/4" diam. w/ 1" pen. each (Photo #UW-1)	UW	4/26/2021	
4	C	100			-6	MDL	UW	4/26/2021	
	A	100			-10	MDL	UW	4/26/2021	
	B	100					UW	4/26/2021	
5	C	100			-9	MDL	UW	4/26/2021	
	A	100			-10	MDL	UW	4/26/2021	
	B	100					UW	4/26/2021	
6	C	100			-10	MDL	UW	4/26/2021	
	A	100			-12	MDL	UW	4/26/2021	
	B	100					UW	4/26/2021	
7	C	100			-12	MDL	UW	4/26/2021	
	A	100			-13	MDL	UW	4/26/2021	
	B	100				Battered pile.	UW	4/26/2021	
	C	100					UW	4/26/2021	
	D	100				Battered pile.	UW	4/26/2021	
	E	100					UW	4/26/2021	
	F	100			-12.5	MDL	UW	4/26/2021	
G	100			-12.5	MDL. Battered pile.	UW	4/26/2021		

Underwater		4/26/2021	Lead: JRWH		Co: LAW				
Routine		4/24/2017	Lead: JSW		Co: KGH				
Pile Location		Condition/Damage						Inspection Type	
Bent	Pile	% Area Remaining	RT or YT	RT Pile Circum. (in)	Elevation	Details/Remarks	Routine/UW	Date	
7.1	H	100					UW	4/26/2021	
	A	100				Battered pile.	UW	4/26/2021	
7.9	H	75			MDL+16	Battered pile. MBE; 1/2" diam. w/ 2.5" pen. @ 5:00 (Photo #UW-2)	UW	4/26/2021	
	E	100				Battered pile.	UW	4/26/2021	
8	A	100			-13.5	MDL	UW	4/26/2021	
	B	100					UW	4/26/2021	
	C	100			-14.5 MDL+14	MDL Shake: 1"W x 1/2" D x 2' tall @ 8:00	UW	4/26/2021	
	D	75			MDL+15	Two MBEs @ 6:00: 3/4" diam. w/ 2" pen. and 1/2" diam. w/ 1.5" pen.	UW	4/26/2021	
8.1	E	75			-13.5 MDL+12	MDL MBE @ 3:00; 3/4" diam w/ 3" pen.	UW	4/26/2021	
	A	100				Battered pile.	UW	4/26/2021	
8.9	A	50	RT	50"	MDL+20 MDL+22	Battered pile. Two MBEs. Rot cavity from 1:00 - 3:00: 11" W x 12" H x 7" deep. Photos #UW-3 and #UW-4.	UW	4/26/2021	
9	H	100				Battered pile.	UW	4/26/2021	
	A	100					UW	4/26/2021	
	B	75			-15.5 MDL+17 MDL+19 MDL+21	MDL Two MBEs @ 4:00 w/ up to 2" pen. Photo #UW-5 Two MBEs @ 4:00: 3/4" diam. w/ up to 3" pen. MBE @ 4:00: 3/4" diam. w/ up to 2" pen.	UW	4/26/2021	
	C	100				Battered pile has minor striations.	UW	4/26/2021	
	D	75			Cap -5	4 holes @ 12:00: 1" W x 2" H x up to 4" deep.	UW	4/26/2021	
	E	100				Battered pile.	UW	4/26/2021	
	F	75			Cap -5	2 holes @ 12:00: 3/4" diam w/ up to 4/5" pen.	UW	4/26/2021	
	G	100			-15	MDL. Battered pile.	UW	4/26/2021	
	H	75			Cap -5	MBE @ 5:00 w/ 3" pen. And MBE @12:00 3/4" diam. w/ 4" pen.	UW	4/26/2021	
Fenders	F1	100			MDL+2	2 MBEs @ 11:00; both 3/4" diam. w/ 1.5" pen.	UW	4/26/2021	
	F2	100			-17	MDL	UW	4/26/2021	







Underwater		4/26/2021	Lead: JRWH		Co: LAW			
Routine		4/24/2017	Lead: JSW		Co: KGH			
Pile Location		Condition/Damage					Inspection Type	
Bent	Pile	% Area Remaining	RT or YT	RT Pile Circum. (in)	Elevation	Details/Remarks	Routine/UW	Date
	F3	100					UW	4/26/2021
	F4	75			MDL+4 MDL+7 MDL+11	Two MBEs @ 7:00: 3/4" diam. w/ up to 2" pen. Two MBEs @ 9:00: 3/4" diam. w/ 2" pen. Two MBEs @ 8:00: 3/4" diam. w/ 3" pen.	UW	4/26/2021
	F5	100					UW	4/26/2021
	F6	75			-16 MDL+3 MDL+8 MDL+15	MDL Up to 5 MBE holes from 7:00 to 8:00, up to 3" pen. Two MBEs @ 8:00: 3/4" diam. w/ 4" pen. Two MBEs @ 6:00: 3/4" diam. w/ 3" pen.	UW	4/26/2021
	F7	100			-16 MDL +10	MDL 3/4" diameter MBE at 6:00 with 3" of penetration	UW	4/26/2021
	F8	100			-15 MDL +6	MDL 2 MBC's at 6:00 1-1/2" deep	UW	4/26/2021
	F9	100					UW	4/26/2021
	F10	100			MDL +10 MDL+16	MBE @ 6:00 1" diameter with 2" penetration MBE @ 6:00 3/4" diameter with 3" penetration	UW	4/26/2021
	F11	100			-15	MDL	UW	4/26/2021
Dolphin	Dolphin				-18.5	MDL. Seven pile dolphin. Center pile has Limnoria striations (photo UW-7).	UW	4/26/2021
Counts	Timber =	60	7	(dolphin piles)				



LEGEND:

-  100% SECTION REMAINING
-  75% TO 100% SECTION REMAINING
-  50% TO 75% SECTION REMAINING - YT
-  25% TO 50% SECTION REMAINING - MONITOR - YT
-  0% TO 25% SECTION REMAINING - REPAIR OR REPLACE - RT
-  REDUNDANT
-  VERTICAL TREATED TIMBER PILE
-  VERTICAL ROUND STEEL PILE
-  BATTERED (br) TREATED TIMBER PILE
-  BATTERED (br) ROUND STEEL PILE

-  LUMINAIRE
-  SAFETY ACCESS LADDER
-  FENDER
-  MAN HOLE
-  FIELD MEASURED ELEVATION

ROUTINE INSPECTION		UNDERWATER INSPECTION	
Date:	4/26/2021	Date:	4/26/2021
Scale:	NA	Scale:	NA
Inspected by:	LAW/ABK	Inspected by:	JRWH/LAW



DOC - 1 AND DOC - 2
STEILACOOM BUILDING TRESTLE
AND MOORING FLOAT

LAYOUT

SHEET
NO.
1
SHEET
OF
SHEETS

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
NBI STRUCTURE INVENTORY AND APPRAISAL REPORT
(ENGLISH UNITS)

CD Date: 6/22/2021 Printed on: 7/8/2021
CD Guid: 2c31e030-f0e8-4348-a6a2-ca973fb9bd0c

IDENTIFICATION		WSBIS DATA	
(1) STATE NAME - WASHINGTON	530	BRIDGE NUMBER	DOC-1
(8) STRUCTURE NUMBER	# 002004360000000	BRIDGE NAME	STEILACOOM BLDG TRESTLE
(5) INVENTORY ROUTE (ON/UNDER) - Under	0 5 1 10210	CUSTODIAN	Other State Agencies
STATE ROUTE MILEPOST	5.96	CROSSING DESC	
(2) HIGHWAY AGENCY DISTRICT -		MAIN LISTING FLAG	M
(3) COUNTY CODE 53 - Pierce County	(4) PLACE CODE 00000	SUFFICIENCY RATING	
(6) FEATURES INTERSECTED	PUGET SOUND	CLASSIFICATION	
(7) FACILITY CARRIED		(112) NBIS BRIDGE LENGTH	
(9) LOCATION		(104) HIGHWAY SYSTEM - Not on the NHS	0
(12) BASE HIGHWAY NETWORK - Not part of network	0	(26) FUNCTIONAL CLASS -	
(13) LRS INV ROUTE AND SUB ROUTE		(100) DEFENSE HIGHWAY - Not a STRAHNET route	0
(11) LRS MILEPOST		(101) PARALLEL STRUCTURE -	
(16) LATITUDE	47 Deg 10 Min 21.03 Sec	(102) DIRECTION OF TRAFFIC -	
(17) LONGITUDE	122 Deg 36 Min 12.19 Sec	(103) TEMPORARY STRUCTURE - Not Applicable	
(98A) BORDER BR. - (98B)	(99) BORDER BR. SID	(105) FEDERAL LANDS HIGHWAY -	
STRUCTURE TYPE AND MATERIAL		(110) DESIGNATED NATIONAL NETWORK - Not part of network	0
(43) STRUCTURE TYPE MAIN: MATERIAL -		(20) TOLL -	
DESIGN - Stringer/multi-beam	02	(21) MAINTENANCE -	
(44) STRUCTURE TYPE APPR: MATERIAL -		(22) OWNER -	
DESIGN -		(37) HISTORICAL SIGNIFICANCE -	
(45) NO. OF SPANS IN MAIN UNIT		CONDITION	
(46) NO. OF APPROACH SPANS		(58) DECK	
(107) DECK STRUCTURE TYPE -		(59) SUPERSTRUCTURE	
(108) WEARING SURFACE / PROTECTIVE SYSTEM:		(60) SUBSTRUCTURE	
(A) TYPE OF WEARING SURFACE -		(61) CHANNEL AND CHANNEL PROTECTION	
(B) TYPE OF MEMBRANE -		(62) CULVERTS	
(C) TYPE OF DECK PROTECTION -		LOAD RATING AND POSTING	
AGE AND SERVICE		(31) DESIGN LOAD -	
(27) YEAR BUILT	1900	(63) OPER RATING METHOD -	
(106) YEAR RECONSTRUCTED		(64) OPERATING RATING	
(42) TYPE OF SERVICE ON - Building or plaza	9	(65) INV RATING METHOD -	
UNDER - Other	0	(66) INVENTORY RATING	
(28) LANES: ON STRUCTURE 0	UNDER STRUCTURE 0	(70) BRIDGE POSTING -	
(29) AVERAGE DAILY TRAFFIC	0	(41) STRUCT OPEN, POSTED, CLOSED -	
(30) YEAR OF ADT	(109) TRUCK ADT 0%	APPRAISAL	
(19) BYPASS, DETOUR LENGTH	000	(67) STRUCTURAL EVALUATION	
GEOMETRIC DATA		(68) DECK GEOMETRY	
(48) LENGTH OF MAXIMUM SPAN		(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	
(49) STRUCTURE LENGTH		(71) WATERWAY ADEQUACY	
(50) CURB OR SIDEWALK: LEFT	RIGHT	(72) APPROACH ROADWAY ALIGNMENT	
(51) BRIDGE ROADWAY WIDTH CURB TO CURB		(36) TRAFFIC SAFETY FEATURES	
(52) DECK WIDTH OUT TO OUT		(113) SCOUR CRITICAL BRIDGE	
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)		PROPOSED IMPROVEMENTS	
(33) BRIDGE MEDIAN -		(75) TYPE OF WORK -	
(34) SKEW Deg	(35) STRUCTURE FLARED	(76) LENGTH OF STRUCTURE IMPROVEMENT	
(10) INVENTORY ROUTE MIN VERT CLEAR	99 ft 99 in	(94) BRIDGE IMPROVEMENT COST	
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR		(95) ROADWAY IMPROVEMENT COST	
(53) MIN VERT CLEAR OVER BRIDGE RDW		(96) TOTAL PROJECT COST	
(54) MIN VERT UNDERCLEAR		(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(55) MIN LAT UNDERCLEAR RT		(114) FUTURE ADT	
(56) MIN LAT UNDERCLEAR LT		(115) YEAR OF FUTURE ADT	
NAVIGATION DATA		INSPECTIONS	
(38) NAVIGATION CONTROL -		(90) INSPECTION DATE	(91) FREQUENCY MO
(111) PIER PROTECTION - Not Applicable		(92) CRITICAL FEATURE INSPECTION:	(93) CFI DATE
(39) NAVIGATION VERTICAL CLEARANCE		(A) FRACTURE CRIT DETAIL - NO -	Month (A) _/_
(116) VERT-LIFT BRIDGE NAV MIN VERT CLR		(B) UNDERWATER INSP - NO -	Month (B) _/_
(40) NAVIGATION HORIZONTAL CLR		(C) OTHER SPECIAL INSP - NO -	Month (C) _/_

UNDERWATER INSPECTION PROCEDURES SUMMARY SHEET

Bridge Name:	Steilacoom Bldg Trestle
Bridge Number:	DOC-1
Structure ID:	00200436
Owner:	DOC
Marine Environment:	Saltwater
Substructure Units Inspected:	Timber Piles
Scour Mitigation Present:	None
Bridge Site Orientation:	See attached bridge layout sheet(s)

Substructure and Foundation Type(s):

Trestle Piles

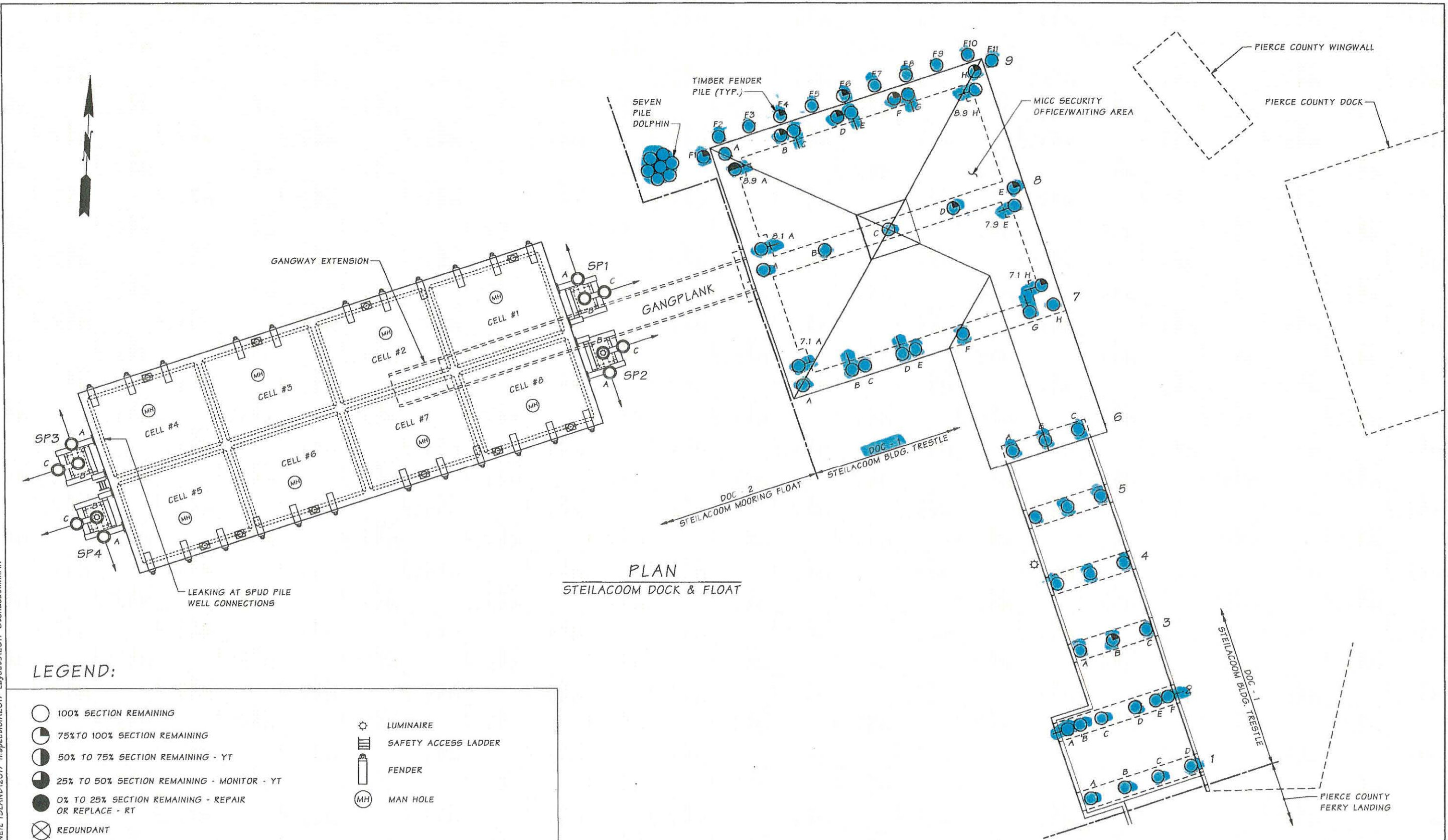
Timber

Inspection Procedures:

Level I Inspection:	Visual inspection and sounding, with a hammer, of 100% of structural members full length. Examine members for splits, checks, impact damage, and marine borers in seawater environments.
Level II Inspection:	Clean a 12 in. band of all marine growth at the mudline, mid-depth, and intertidal zone of 10% of the piles in a bent, with one pile per bent minimum.
Level III Inspection:	Drill a 3/8 in. diameter hole in members with advanced deterioration or internal decay to determine remaining section.

Scour Critical (Y/N): N

G:\Ferry Terminal\McNEIL ISLAND\2017 Inspection\2017 Layouts\2017 Steilacoom.MAN



LEGEND:

- 100% SECTION REMAINING
- 75% TO 100% SECTION REMAINING
- 50% TO 75% SECTION REMAINING - YT
- 25% TO 50% SECTION REMAINING - MONITOR - YT
- 0% TO 25% SECTION REMAINING - REPAIR OR REPLACE - RT
- REDUNDANT
- VERTICAL TREATED TIMBER PILE
- VERTICAL ROUND STEEL PILE
- BATTERED (br) TREATED TIMBER PILE
- BATTERED (br) ROUND STEEL PILE

- LUMINAIRE
- SAFETY ACCESS LADDER
- FENDER
- MAN HOLE

ROUTINE INSPECTION		UNDERWATER INSPECTION	
Date:	4/24/2017	Date:	4/24/2017
Scale:	NA	Scale:	NA
Inspected by:	JSW/KGH	Inspected by:	DON/MBS



Washington State
Department of Transportation
Bridge and Structures Office

DOC-1 AND DOC-2
STEILACOOM BUILDING TRESTLE
AND MOORING FLOAT

LAYOUT

SHEET
NO.
1
OF
SHEETS