AGENDA

MARINA ADVISORY COMMITTEE
February 26, 2024 at 2pm
Warrenton City Commission Chambers – 225 S Main Ave
Warrenton, OR 97146

Public Meetings will also be audio and video live streamed. Go to https://www.ci.warrenton.or.us/administration/page/live-stream-public-meetings for connection instructions.

1. **CALL TO ORDER**
2. **PUBLIC COMMENTS**
3. **CONSENT CALENDAR**
   A. Meeting Minutes January 2024
   B. Harbormaster Report
4. **OLD BUSINESS ITEMS**
   A. Warrenton and Hammond Campground – Seth Hague & Mark Tolley
5. **NEW BUSINESS ITEMS**
   A. Marina Presentation – City Manager Esther Moberg & Interim Harbormaster Don Beck
   B. Capital Improvements FY 2024-2025 – Interim Harbormaster Don Beck
6. **DISCUSSION ITEMS**
   A. Constituent Suggestions
7. **GOOD OF THE ORDER**
8. **ADJOURNMENT**

Warrenton City Hall is accessible to the disabled. An interpreter for the hearing impaired may be requested under the terms of ORS 192.630 by contacting Dawne Shaw, City Recorder at (503) 861-2233 at least 48 hours in advance of the meeting so appropriate assistance can be provided.

MARINAS' ADVISORY COMMITTEE PUBLIC COMMENT FORM

NAME: Kelly Short

ADDRESS: P.O Box 161 1064 4th 97121

EMAIL: ~~Fishing~~ fishwithkelly@Gmail.com.

DOES YOUR COMMENT HAVE TO DO WITH AN AGENDA ITEM: ☒ YES or ☐ NO

BRIEFLY DESCRIBE YOUR TOPIC: Crab Cooking on Madeira property.

Trash Cans - (Parking) - pay Station.

PLEASE GIVE THIS CARD TO THE SECRETARY PRIOR TO THE MEETING

All remarks will be limited to 3 minutes per person.

Once this card is submitted to the secretary, it becomes a part of the permanent public record.

MINUTES
Marina Advisory Board
January 22, 2024
Warrenton City Hall – Commission Chambers
225 S Main
Warrenton, OR 97146

Chairperson Lylla Gaebel called the meeting to order at 2:01 p.m.

Marina Advisory Board Members Present: Chairperson Lylla Gaebel, Vice Chair Bill Kerr, Mike Balensifer, Dick Hellberg

Staff Present: Interim Harbormaster Don Beck, Marina Office Assistant Jessica McDonald

CONSENT CALENDAR
Meeting minutes from 12.18.2023 were presented by staff.
Mike Balensifer made motion to approve minutes. Motion was seconded by Bill Kerr and passed unanimously.

DISCUSSION
Chairperson Lylla Gaebel lead the committee in introductions of the new and previous members.

The committee held officer elections.

Bill Kerr made a motion to nominated Lylla Gaebel as chairperson. Mike Balensifer seconded, and motion passed unanimously.

Mike Balensifer made a motion to nominate Bill Kerr as Vice Chair. Jen Fowler seconded, and motion passed unanimously.

Interim Harbormaster Don Beck shared his Harbormaster Report and Marina's 2023 accomplishments.

The committee discussed E dock piles and Don Beck shared staff plans for an inspection of the piles. Discussed need for E Dock replacement in future planning.

The committee discussed rates for the upcoming budget year and the importance of Suzanne's removal.

Don Beck shared an update on the damage to Seafarer's Park for the committee.

The next Marina Advisory meeting is set for February 26, 2024, at 2pm at the Warrenton Commission Chambers.
There being no further business for this meeting, Chairperson Lylla Gaebel adjourned the meeting at 3:20 p.m.

Respectfully prepared and submitted by Jessica McDonald, Marina Office Assistant.

APPROVED:

ATTEST:

_____
Lylla Gaebel, Marina Advisory Board Chairperson

_____
Don Beck, Interim Harbormaster

CITY OF WARRENTON MARINAS - REVENUE COLLECTED THROUGH DECEMBER 31, 2023

WARRENTON MARINA

REVENUE	BUDGET	July	August	September	October	November	December	January	Febuary	March	April	May	June	YTD	%
OSMB - MAP GRANT	$ -														
MOORAGE CREDITS															
ANNUAL MOORAGE	$ 345,000.00	$ 325,313.00	$ (1,104.00)	$ 8,817.00	$ (3,450.00)	$ (148.00)	$ 4,508.00							$ 333,936.00	97%
TRANSIENT DAILY	$ 50,000.00	$ 9,810.00	$ 32,880.50	$ 7,180.00	$ 450.00	$ -	$ 250.00							$ 50,570.50	101%
ELECTRIC	$ 50,000.00	$ 3,844.40	$ 2,088.10	$ 2,854.50	$ 3,327.42	$ 4,985.22	$ 6,162.39							$ 23,262.03	47%
DRY STORAGE	$ 35,000.00	$ 1,710.00	$ 1,615.00	$ 1,105.00	$ 5,760.00	$ 2,470.00	$ 2,660.00							$ 15,320.00	44%
LAUNCH RAMP	$ 30,000.00	$ 1,610.00	$ 17,280.00	$ 2,810.00	$ 400.00	$ 110.00	$ 130.00							$ 22,340.00	74%
HOIST	$ 30,000.00	$ 500.00	$ 900.00	$ 1,400.00	$ 1,500.00	$ 2,200.00	$ 3,600.00							$ 10,100.00	34%
MONTHLY MOORAGE	$ 35,000.00	$ 3,967.00	$ 46,655.00	$ 1,995.00	$ 3,245.00	$ 1,995.00	$ -							$ 57,857.00	165%
PARKING	$ 30,000.00	$ 850.00	$ 24,550.00	$ 1,380.00	$ 170.00	$ 40.00	$ 20.00							$ 27,010.00	90%
OVERNIGHT STAY	$ 25,000.00	$ 700.00	$ 27,300.00	$ 1,600.00	$ 50.00	$ -	$ -							$ 29,650.00	119%
LIVEABOARD FEES	$ 4,000.00	$ 325.00	$ 325.00	$ 325.00	$ 325.00	$ 325.00	$ 325.00							$ 1,950.00	49%
WORK SLIP	$ 6,000.00	$ 100.00	$ 200.00	$ -	$ 300.00	$ 100.00	$ 500.00							$ 1,200.00	20%
REPAIR CHARGES	$ 5,000.00		$ 75.00	$ -	110	$ -	$ 110.00							$ 295.00	6%
PIER USE	$ 15,000.00	$ 1,200.00	$ 200.00	$ 1,100.00	$ 1,000.00	$ 150.00	$ 250.00							$ 3,900.00	26%
FACILITY USE	$ 42,000.00	$ 24,545.00	$ 12,565.00	$ 1,890.00	$ 215.00	$ 161.00	$ 55.00							$ 39,431.00	94%
Fisherman's & Farmers M	$ 1,000.00													$ -	0%
MISCELLANEOUS	$ 1,000.00	$ 376.66		$ 17.48	$ 1,370.47	$ -	$ 10,000.00							$ 11,764.61	1176%
INTEREST EARNINGS	$ 25,000.00	$ 249.24	$ 1,327.46	$ 4,115.57	$ 4,772.13	$ 4,884.88	$ 843.15							$ 16,192.43	65%
LEASE RECIPTS	$ 16,959.00	$ 3,954.70	$ 475.00	$ 475.00	$ 475.00	$ 475.00	$ 475.00							$ 6,329.70	37%
TOTALS	**$ 745,959.00**	**$ 379,055.00**	**$ 167,332.06**	**$ 37,064.55**	**$ 20,020.02**	**$ 17,748.10**	**$ 29,888.54**	$ -	$ -	$ -	$ -	$ -	$ -	**$ 651,108.27**	**87%**

HAMMOND MARINA

REVENUE	BUDGET	July	August	September	October	November	December	January	Febuary	March	April	May	June	YTD	%
MOORAGE CREDITS															
ANNUAL MOORAGE	$ 150,000.00	$ 166,827.00	$ (644.00)	$ -	$ (966.00)	$ -	$ -							$ 165,217.00	110%
TRANSIENT DAILY	$ 10,000.00	$ 380.00	$ 6,615.00	$ 1,700.00	$ 250.00	$ 475.00	$ -							$ 9,420.00	94%
ELECTRIC	$ 1,000.00	$ 128.02	$ 118.66	$ 132.47	$ 182.70	$ -	$ (146.69)							$ 415.16	42%
LAUNCH RAMP	$ 105,000.00	$ 12,800.00	$ 51,670.00	$ 18,910.00	$ 7,260.00	$ 6,670.00	$ 4,000.00							$ 101,310.00	96%
MONTHLY MOORAGE	$ 20,000.00	$ 525.00	$ 19,825.00	$ -	$ -	$ -	$ -							$ 20,350.00	102%
PARKING	$ 35,000.00	$ 2,790.00	$ 22,940.00	$ 4,630.00	$ 2,460.00	$ 1,710.00	$ 1,280.00							$ 35,810.00	102%
OVERNIGHT STAY	$ 50,000.00	$ 6,050.00	$ 29,550.00	$ 6,300.00	$ 1,000.00	$ 400.00	$ 150.00							$ 43,450.00	87%
FACILITY USE	$ 15,000.00	$ 10,765.00	$ 3,825.00	$ 335.00	$ (50.00)	$ 95.00	$ -							$ 14,970.00	100%
MISCELLANEOUS	$ 3,000.00	$ 110.00	$ 340.00	$ 75.00	$ 1,075.78	$ -	$ (0.40)							$ 1,600.38	53%
INTEREST EARNINGS	$ 20,000.00	$ 10.00	$ 206.89	$ 5,248.73	$ 5,945.43	$ 6,065.92	$ 40.00							$ 17,516.97	88%
LEASE RECIPTS	$ 10,161.00	$ 1,129.00	$ 1,149.00	$ 1,129.00	$ 1,129.00	$ 1,129.00	$ 1,129.00							$ 6,794.00	67%
TOTALS	**$ 419,161.00**	**$ 201,514.02**	**$ 135,595.55**	**$ 38,460.20**	**$ 18,286.91**	**$ 16,544.92**	**$ 6,451.91**	$ -	$ -	$ -	$ -	$ -	$ -	**$ 416,853.51**	**99%**

January 2024

Marina Advisory Board meeting

Warrenton E-Dock

- 7/8 finger pile has been replaced.
- As a result, from the pile that failed, Repairs to 7/8 finger have been made.
- 11/12 finger pile has failed. Working on emergency permits and with Bergerson to replace pile before the limited work window is closed.
- Working through Bergeson with divers to sound and assess all the piles on E-Dock.

M and N Electrical services

- Bogh electric is updating and replacing the electrical services.
- New services will be encased in conduit along gangways and ramps.
- Old overhead services will be removed.

Hammond Stabilization

- Big River completed their portion of the project.
- North Coast Civil Engineering will monitor.

Warrenton fish cleaning station

- Rot repairs.
- Replaced post.
- Pressure washed and painted fence panels.

Hammond E-Dock pile

- North end of E-Dock, the top of a pile broke off at the high-water line. Can be repaired with a sleeve extension.

Hoist

- Repairs have been made.
- US Crane Service came for the Annual inspection.

Staff

- Jessica has completed two classes and working on a third online class through The University of Alaska.
- Both Marinas had numerous needed repairs after the storms. Maintainers are working hard to keep up with these ongoing repairs.
- Maintainers are moving efforts from E-Dock into the inner basin.

2023

Marina Accomplishments

Warrenton Marina

- Major construction on the pier involving engineering upgrades and facelift was completed significantly under budget.
- Removal and disposal of the derelict boat (Master Chris)
- Removal and disposal of the derelict sailboat (Indifference).
- Approximately 90 linear feet of the commercial E-Dock was overhauled.
- Replaced two 12"X60' main dock piles on the commercial E-Dock.
- Replaced one 16"X60' finger pile on the commercial E-Dock. (This was an emergency replacement)
- Painted all the guardrails leading to the gangway ramps.
- Installed new throw rings and fire extinguishers on the commercial E-dock.
- Replaced the main feed electrical junction boxes for A and B docks.
- Independent dock assessment for the inner basin is in review.
- New camera for the dumpsters and commercial parking lot.
- Annual moorage sold for 2023 was a record year 274 sold in 2023 VS. 211 sold in 2022.
- Record number of monthly campers
- Offloaded 122,397 pounds of live crab.
- Marina entrance sign painted and new graphics.

Hammond Marina

- Overhauled and reconfigured the gangway ramp landing docks for A and B Docks.
- A and B docks, 30' wooden gangway ramps were replaced with two 45' aluminum ramps.
- Overhauled approximately 300 linear feet of main dock and finger docks, to include new floats, substructure and deck boards.
- Electrical services for both A and B Docks were replaced with underground fed meter bases.
- Electrical feeds from the new meter bases to the docks main junction box were replaced on both A and B Dock.
- The North end of E-Dock was reconfigured, which added three extra side tie slips.
- The bank stabilization, Big River has completed the work. North Coast Engineering will monitor it.
- Staff saved a boat that was sinking. Staff could not contact the owner and made a decision to load it on the marina's spare trailer. The owner was very happy with the decision made by the marina staff to save his boat.
- New welcome sign with graphics.

Marina Office

- Newly designed, Welcome brochure.
- Newly designed, user-friendly rate sheet.
- Newly designed maps for both Warrenton and Hammond marinas.
- New online reservation system.
- Improvements to annual moorage renewal.

Respectfully submitted,

Don Beck

Interim Harbor Master

Marina Foreman

February Harbor Master Report **2-26-2024**

Budget season has started, and office staff have been working on CIP planning for fiscal year 2024-2025 and future CIP planning through 2030. Staff have started working on the Budget request for the fiscal year 2024-2025.

Jessica has been busy taking reservations for moorage for this upcoming fiscal year. Reservations are pointing towards a good year.

In the office a new camera network central processor has been installed and this enabled the inner-basin and pier cameras to function again.

The hoist was busy loading crab gear and pots. Staff worked some overtime to accommodate the boats when they needed to reload pots and take their second and third round of pots to set. The live crab market is ready to start. The information that has been given to staff is that the buyer is going to be more aggressive in quantity than in previous years. With that information the hoist will see a lot of use for the remainder of the season.

The maintenance crew has moved efforts from E-Dock to the inner-basin where they are rebuilding areas of docks and fingers that are no longer repairable. Staff have also repaired multiple water leaks, in areas replacing PVC with PEX. We have also experienced several electrical receptacles burn outs and breaker failures. This is common for this time of year since the commercial boats have added the use of heaters to their electrical needs.

The marina is in contract with Bergerson Construction to replace four piles on E-Dock. Work is to be completed before March 1st. When the piles are replaced, staff will return to E-Dock to repair some damage that was created from the failed pile.

Respectfully

Don Beck

Interim Harbor Master

Warrenton-Hammond Marina RV Resort
Warrenton, OR

Exclusive Class A RV Resort
P3 Development Opportunity

Mission DG PNW
February 2024

Hammond Marina

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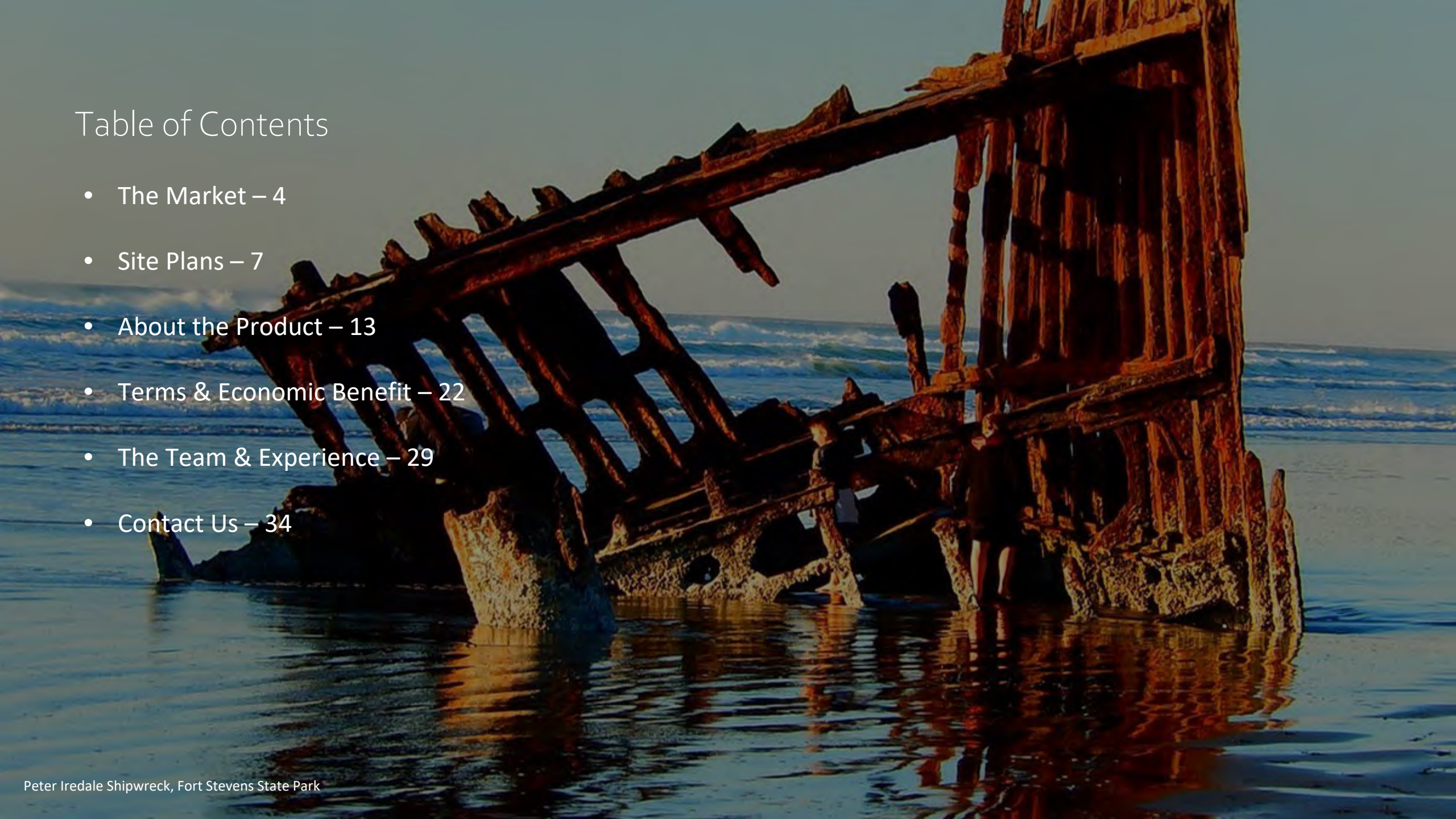


Peter Iredale Shipwreck, Fort Stevens State Park

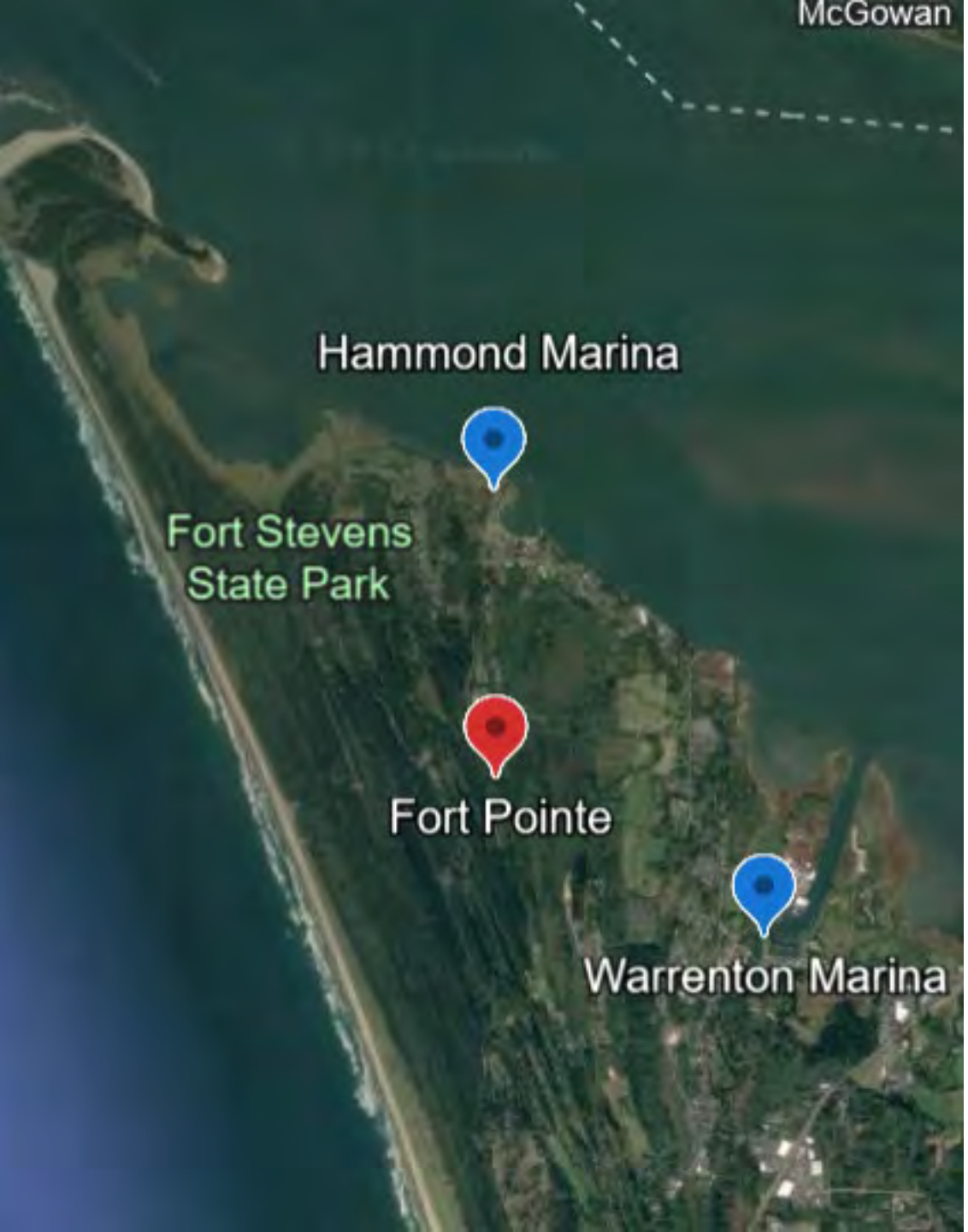
Scope and Positioning

Location:	Hammond and Warrenton Marinas, Warrenton, OR 97146
Asset:	Class A RV Resort
Keys:	200 RV Pads; 30 Park Mods
Project Timing:	Three (3) phases over 24 months from breaking ground to fully operational
Management Group:	Advanced Outdoor Solutions
Development Group:	Mission DG PNW w/ RV consultant, Ron Beard & Associates
Construction Partners:	Mission Construction Company
Ownership:	Public-Private Partnership between Mission DG PNW and The City of Warrenton

Warrenton Marina

The Market

Warrenton Marina



Location Overview

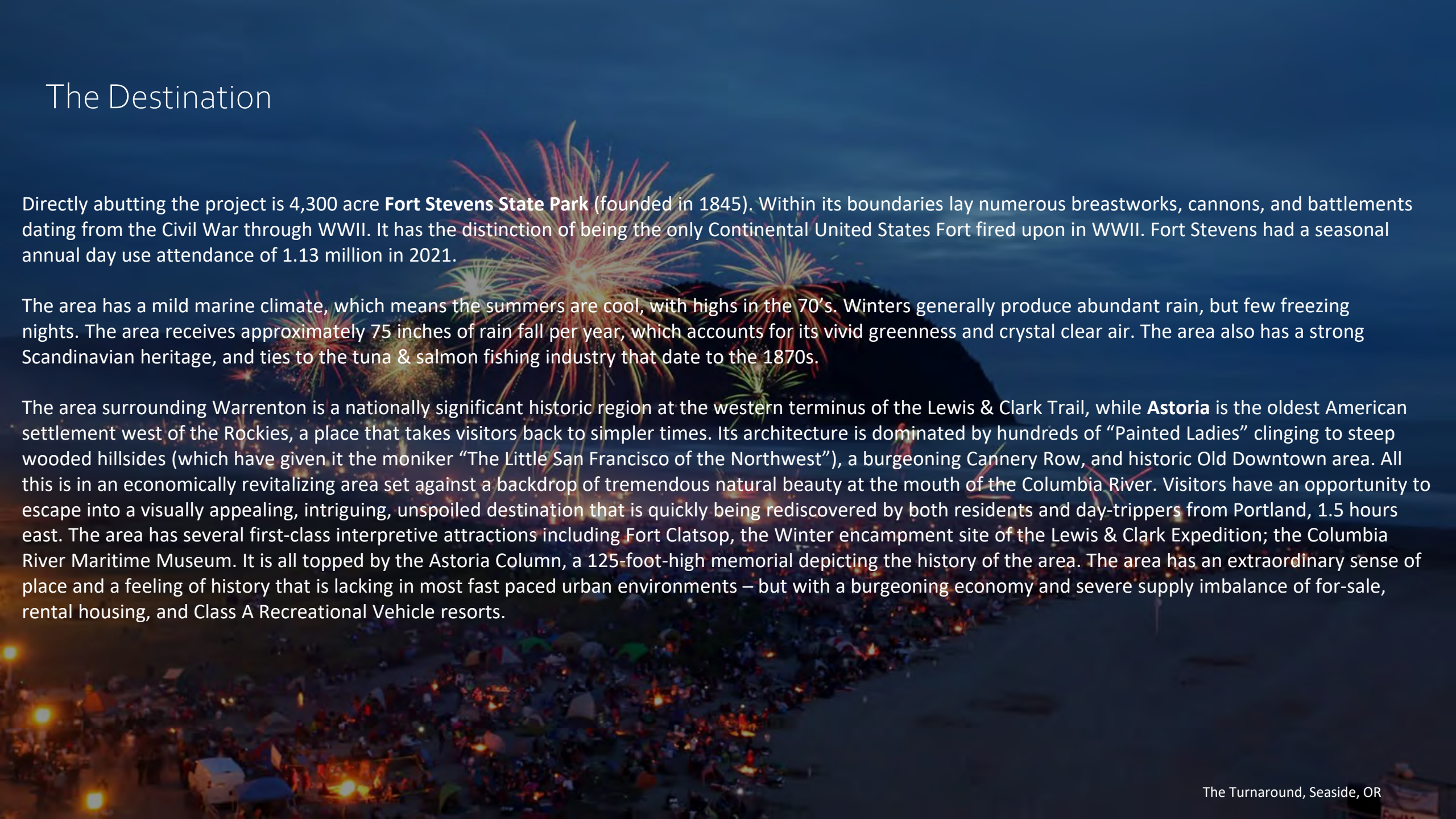
The City of Warrenton is vibrant seaside fishing village, deeply steeped in the maritime tradition. The community of approximately 5,685 residents is located on a coastal peninsula at the mouth of the Columbia River, bordered by the Pacific Ocean to the West, Columbia River to the East, and State Highway 1 to the South. The city boasts two busy marinas, numerous “Dunal” lakes, abundant parkland, wide clean beaches, and a quaint fishing village atmosphere. Clatsop County has a heritage that dates to before the arrival of Lewis & Clark in 1805, starting with fur traders and fishermen working for the British East Indies Trading Company. It is surrounded by lush coastal rain forests, mountains, rivers, and broad accessible beaches. Just across Young’s Bay is the rapidly growing City of Astoria. These Marinas are located within a 2-mile radius from our 450-unit master planned housing development, Fort Pointe and within easy access of restaurants, shopping and retail.

The Destination

Directly abutting the project is 4,300 acre **Fort Stevens State Park** (founded in 1845). Within its boundaries lay numerous breastworks, cannons, and battlements dating from the Civil War through WWII. It has the distinction of being the only Continental United States Fort fired upon in WWII. Fort Stevens had a seasonal annual day use attendance of 1.13 million in 2021.

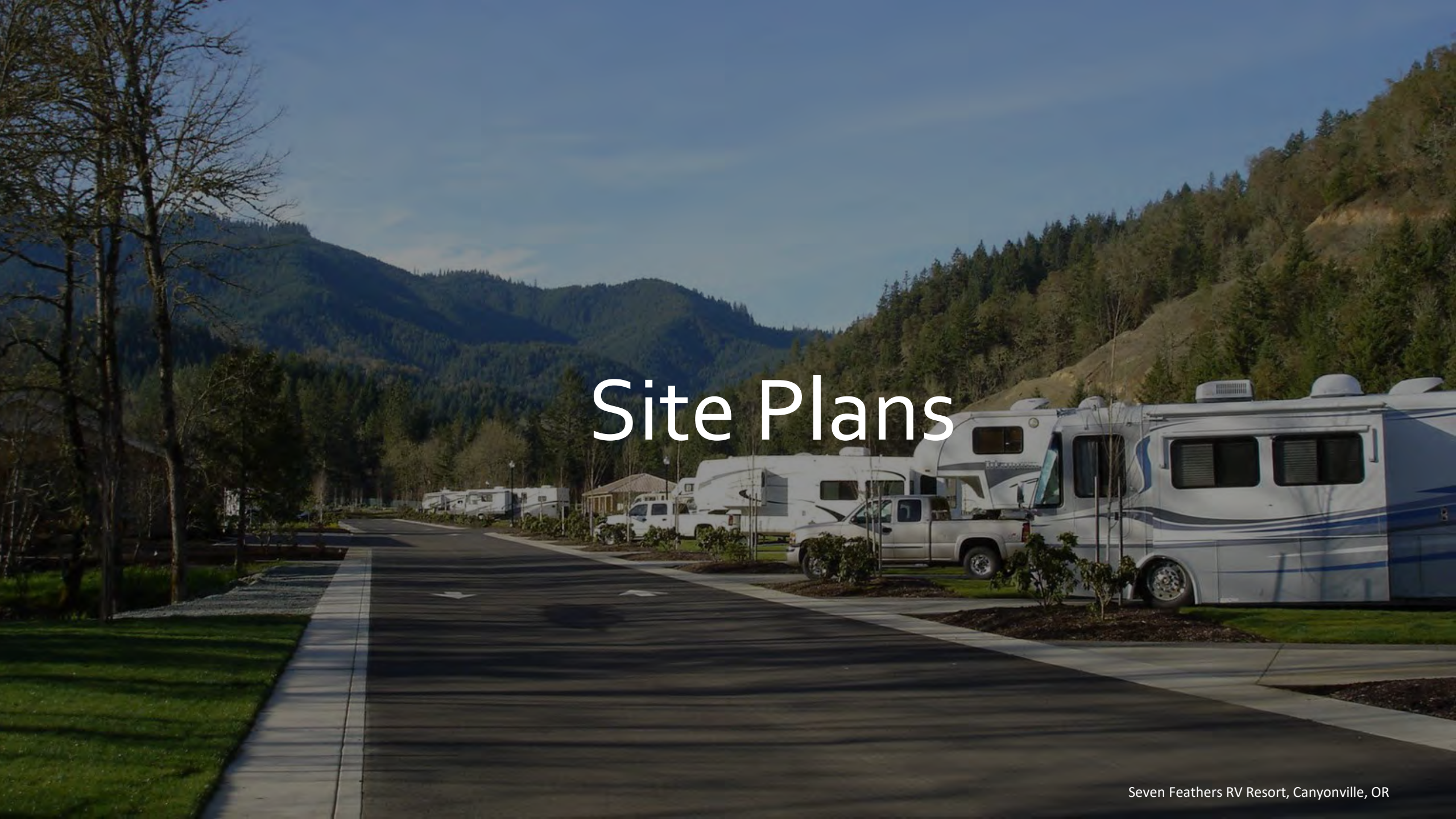
The area has a mild marine climate, which means the summers are cool, with highs in the 70's. Winters generally produce abundant rain, but few freezing nights. The area receives approximately 75 inches of rain fall per year, which accounts for its vivid greenness and crystal clear air. The area also has a strong Scandinavian heritage, and ties to the tuna & salmon fishing industry that date to the 1870s.

The area surrounding Warrenton is a nationally significant historic region at the western terminus of the Lewis & Clark Trail, while **Astoria** is the oldest American settlement west of the Rockies, a place that takes visitors back to simpler times. Its architecture is dominated by hundreds of "Painted Ladies" clinging to steep wooded hillsides (which have given it the moniker "The Little San Francisco of the Northwest"), a burgeoning Cannery Row, and historic Old Downtown area. All this is in an economically revitalizing area set against a backdrop of tremendous natural beauty at the mouth of the Columbia River. Visitors have an opportunity to escape into a visually appealing, intriguing, unspoiled destination that is quickly being rediscovered by both residents and day-trippers from Portland, 1.5 hours east. The area has several first-class interpretive attractions including Fort Clatsop, the Winter encampment site of the Lewis & Clark Expedition; the Columbia River Maritime Museum. It is all topped by the Astoria Column, a 125-foot-high memorial depicting the history of the area. The area has an extraordinary sense of place and a feeling of history that is lacking in most fast paced urban environments – but with a burgeoning economy and severe supply imbalance of for-sale, rental housing, and Class A Recreational Vehicle resorts.



The Turnaround, Seaside, OR

Site Plans



Seven Feathers RV Resort, Canyonville, OR

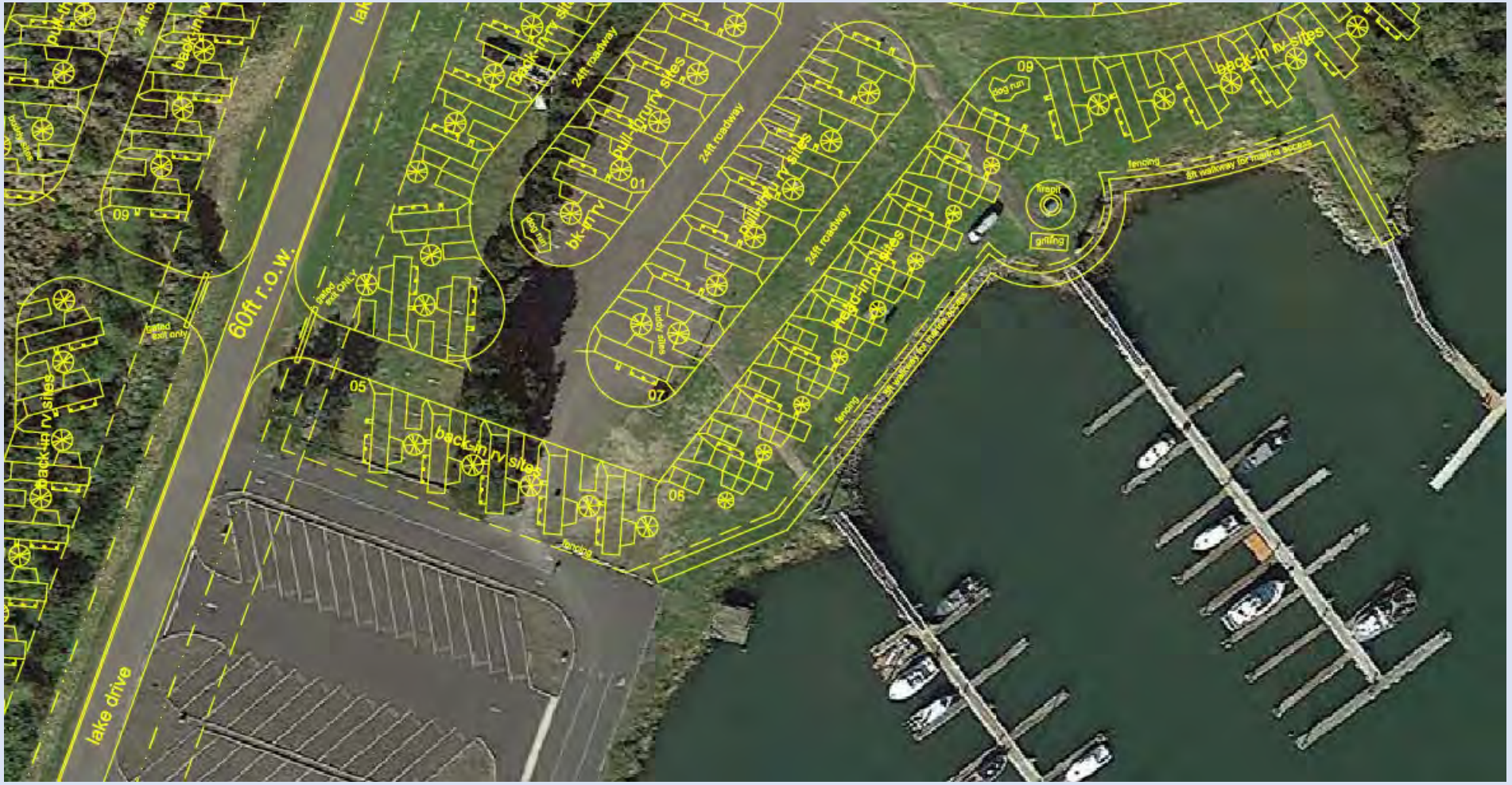
Site Plan - Warrenton

Site Plan - Hammond

Site Plan – Hammond – Great Lodge & Amenities

Site Plan – Hammond – Seafarers Park & Public Pickleball Court

Site Plan – Hammond – Public Dock Access



About the Product

Spec Park Mod

Projected Product

Phase 1 (3.7 acres) is planned to consist of 39 high-end Class A motorcoach recreational vehicle pads on the Warrenton Marina. The site is in an unparalleled peninsula currently owned by the City or Warrenton and is being operated as a dry camping site. All pads will be paved, 50' back in and 60' pull-though sites with 100amp full hookups.

Phase 2 (11.8 acres) will consist of 161 high-end Class A motorcoach recreational vehicle pads on the Hammond Marina. All pads will be paved, 50' back in and 60' pull-though sites with 100amp full hookups. Additionally, there will be 30 units of park mods.

The second phase will also consist of the buildout of the required amenities to make it the top-rated Motorcoach Resort on the coast of Oregon and Washington. The project will have upscale facilities such as;

- Great Lodge – offices, store, gathering rooms, fitness center, arcade, bath house & guest laundry
- Outdoor heated rec pool with cabanas
- Playgrounds
- Grilling stations
- Cornhole
- Bocce ball
- Pickleball
- 5 Dog Parks
- Public firepits
- Direct access to 4,300 acre Fort Stevens State park
- Access to Hammond Marina & Warrenton Marinas
- Walkable to Hammond and Downtown Warrenton's restaurants, retail & services.

All entry monumentation / landscaping, internal water-features, water service (115 SFD unit capacity), sewer approvals, engineering and entitlements are underway).

RV Pads

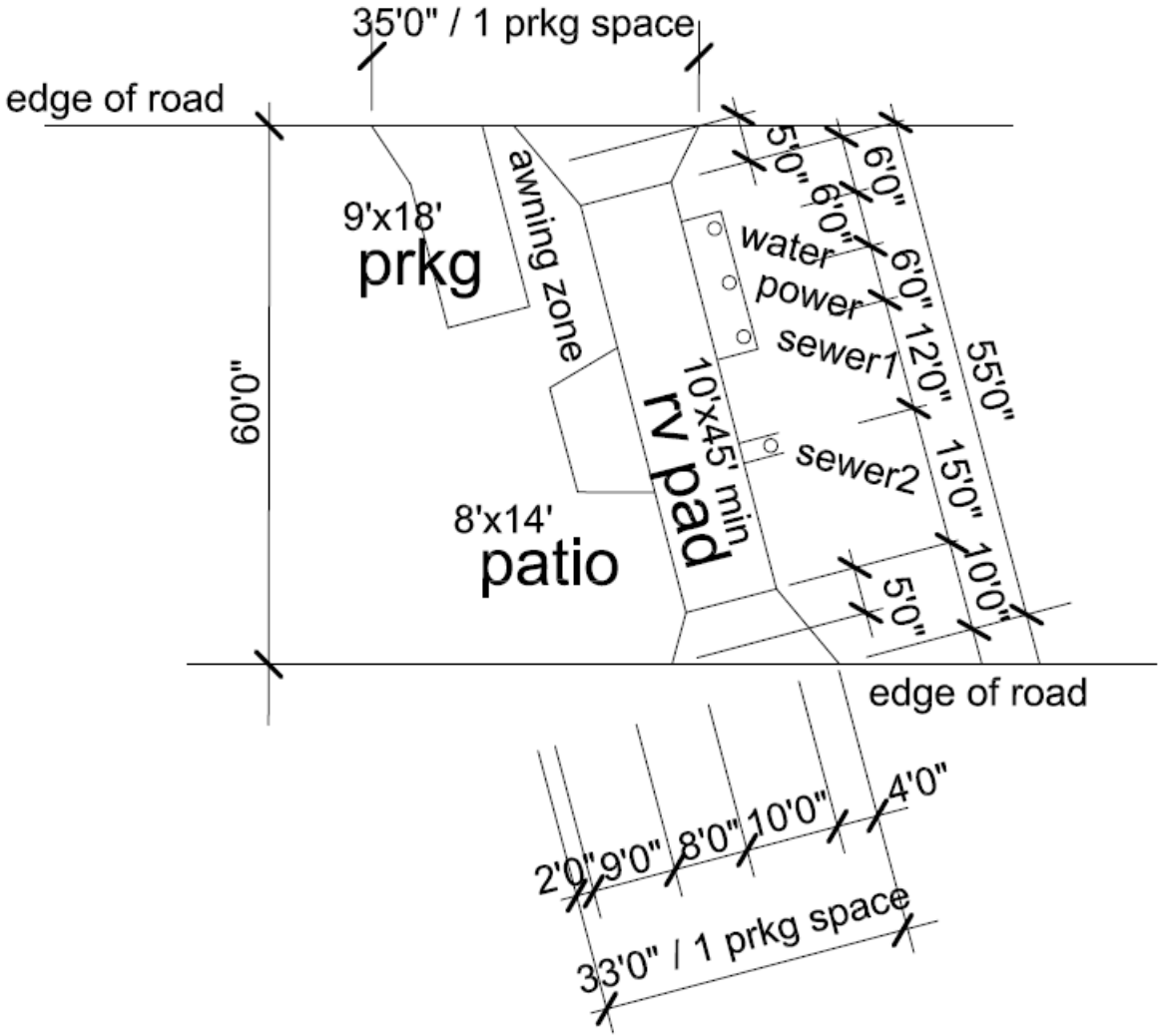

Camp Fimfo, TX


Camp Fimfo, TX


Camp Margaritaville RV Resort &
Cabana Cabins Auburndale, FL


Seven Feathers RV Resort, Canyonville, OR

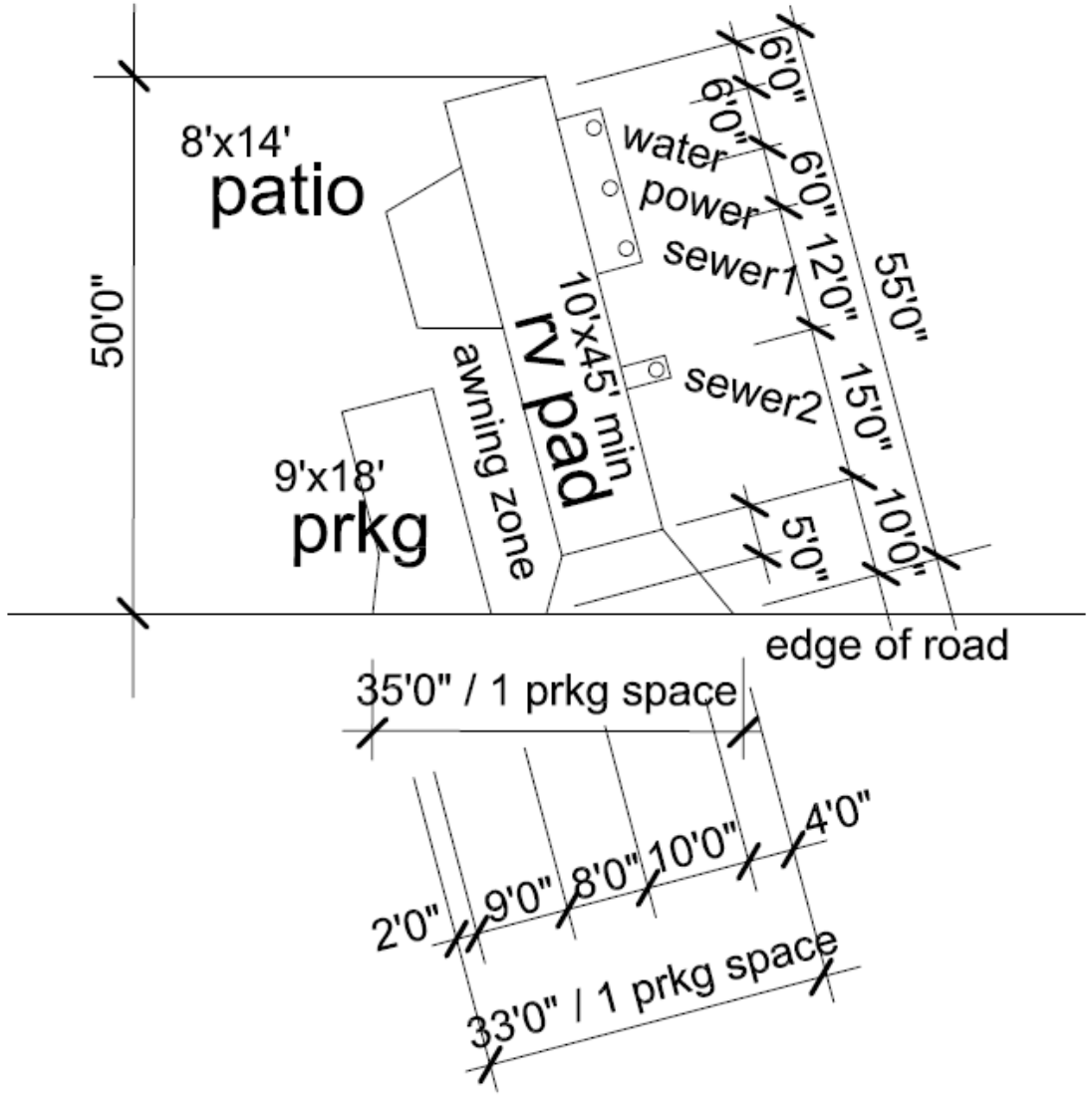
RV Pads – Pull-Thru



pull-thru rv site

75 degrees to road edge

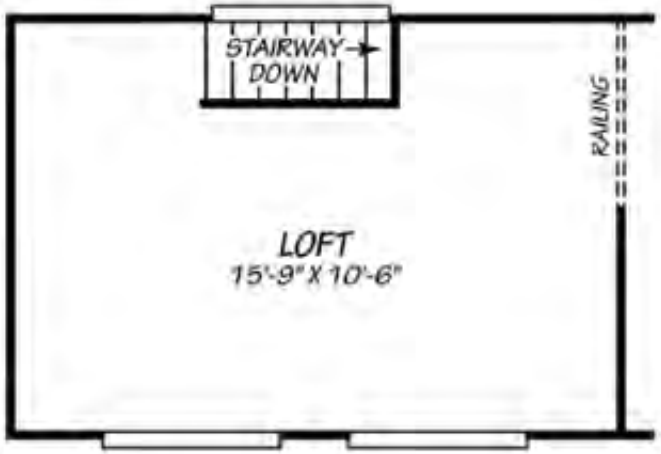
RV Pads – Back-In

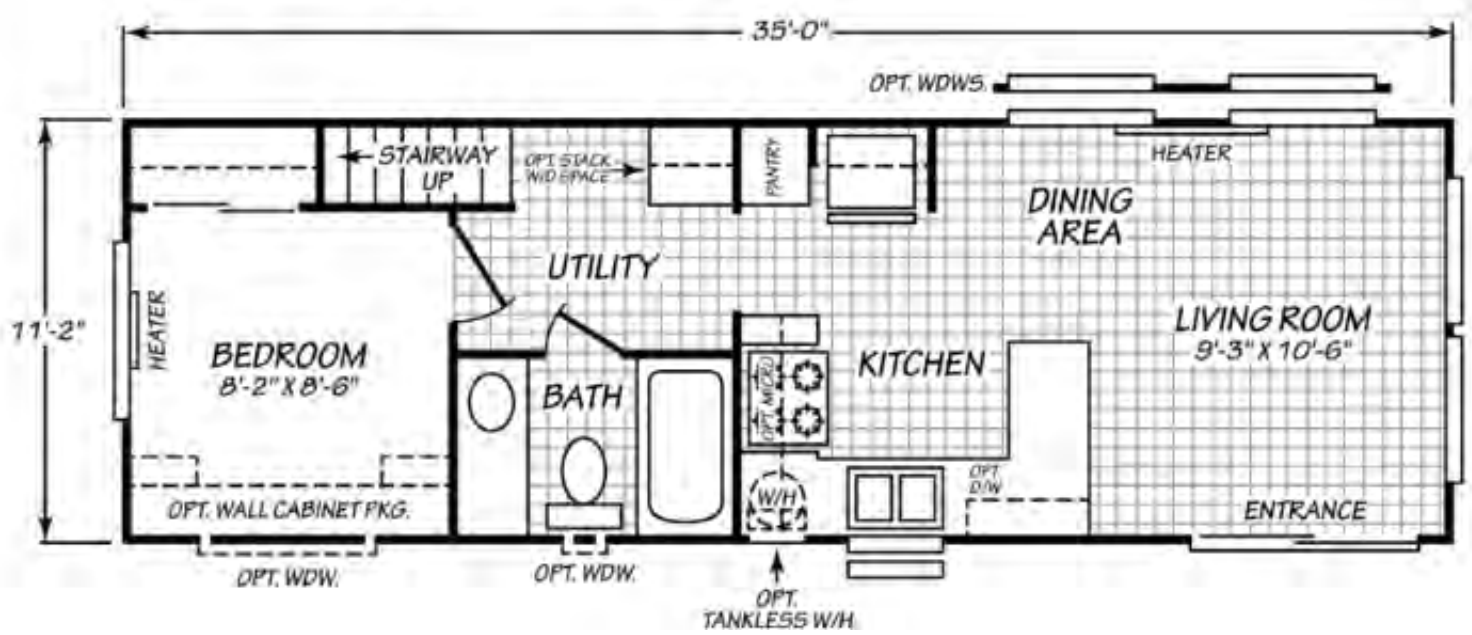


back-in rv site

75 degrees to road edge

Park Mods


STAIRWAY DOWN
RAILING
LOFT
15'-9" X 10'-6"


35'-0"
OPT. WDWS.
HEATER
STAIRWAY UP
OPT STACK WID SPACE
PANTRY
DINING AREA
UTILITY
LIVING ROOM
9'-3" X 10'-6"
11'-2"
HEATER
BEDROOM
8'-2" X 8'-6"
BATH
KITCHEN
OPT. MICRO
OPT. D/W
W/H
ENTRANCE
OPT. WALL CABINET PKG.
OPT. WDW.
OPT. WDW.
OPT. TANKLESS W/H.

Park Mods


H5420E
2061
2061
1440OB
OPT CORNER FP
KITCHEN
LIVING ROOM
BATH
PORCH
WIRE/BRACE
3036
WIRE/BRACE
3080
OPT 24" PKT
24" PKT
BEDROOM
24" BF
24" BF
15'
2061
PORCH
OPENING
3061E
3061E
H5420E
10' OPT PORCH
30'
LINO THROUGHOUT

Amenities


Camp Margaritaville RV Resort & Cabana Cabins Auburndale, FL


Pickleball


Seven Feathers RV Resort, Canyonville, OR


Seven Feathers RV Resort, Canyonville, OR

Clubhouse

1 GENERAL STORE/DELI
2 CATERING KITCHEN
3 OFFICES
4 STORAGE
5 RESTROOMS
6 GREAT ROOM/DINING
7 ADULT'S GAME ROOM
8 KID'S CRAFTS
9 RESTROOMS/SHOWERS
10 EXERCISE ROOM
11 KID'S GAME ROOM
12 OUTDOOR GRILL
13 FIRE PIT
14 HOT TUB
15 ADULT'S POOL
16 KID'S POOL

CASEY DESIGN
Residential | Commercial | Interiors

WHITEWATER RV RESORT | amenity center | new braunfels, tx
top/ plan view of site | March 10, 11

Terms & Economic Benefits; City of Warrenton.

Gearhart, OR

Terms & Economic Benefits; City of Warrenton.

- City of Warrenton ("CW") to serve as a Limited Partner of the Joint Venture "P3" Partnership, providing long-term lease rights at both marina development sites – minimum of 60 years.
- MDG to provide *construction completion & equity operating guarantees*
- MDG to provide all required project pursuit costs
- MDG to fully indemnify CW
- CW to be paid 1st year lease amount of $72,000 at start of construction
- CW to receive 5% split (annually) of Net Projected Cash Flows, or $6,000 monthly lease payment for Marina sites – which ever is greater
- *Hundreds of thousands in potential added revenue* to CW from Transient Occupancy Taxes, 5% profit share, land lease payment and eventual refinance **at no risk** to the City of Warrenton
- 200 RV units and 30 cabins to promote additional community rejuvenation and economic growth through both direct and intrinsic involvement.

Feasibility / Pursuits Estimates

ZERO PURSUIT COST TO CW

Mission DG to source and fund all “At Risk” project pursuit costs.

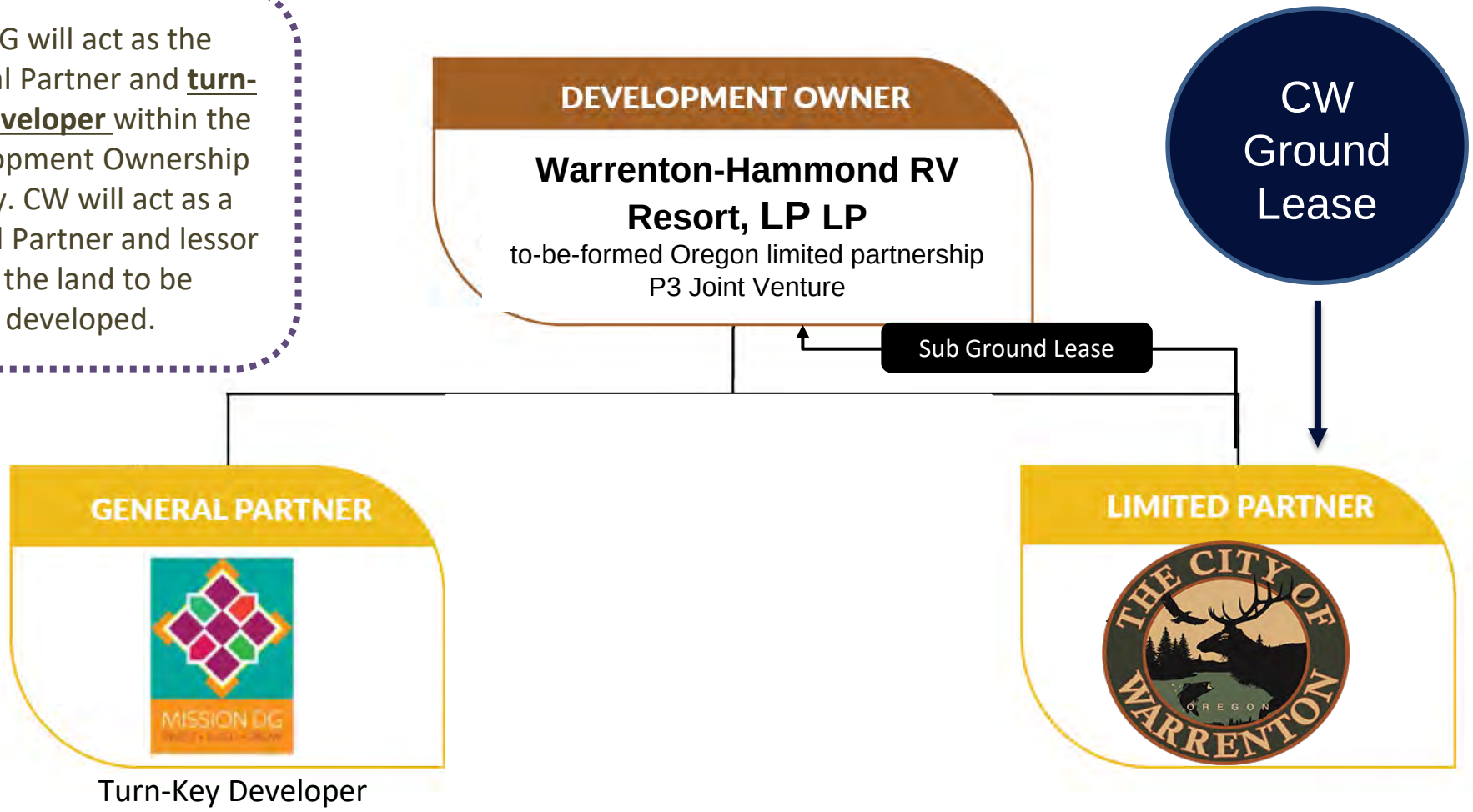
Demand exists for affordable housing, RV and transient commercial with associated “TOT” tax income.

Land is currently owned by CW and will continue to be.

ESIMATED PURSUIT COSTS	
Survey	$20,000
Site Plan	$20,000
Architectural Site Plans	$100,000
Engineering	$120,000
Feasibility Study	$10,000
Market Study	$8,000
Environmental	$40,000
Environmental/ Delineation Fees	$50,000
Lender Fees	$110,000
Legal Fees	$150,000
Miscellaneous	$50,000
Total	**$678,000**

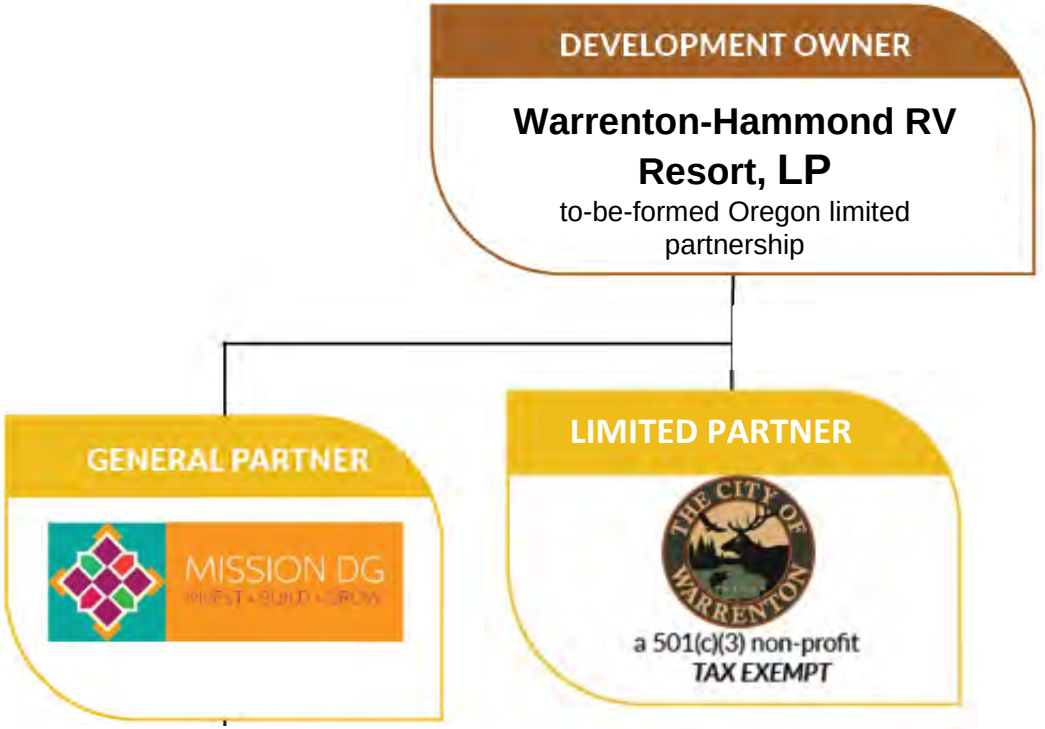
Land Structure

MDG will act as the General Partner and **turn-key developer** within the Development Ownership entity. CW will act as a Limited Partner and lessor of the land to be developed.



Turn-Key Developer

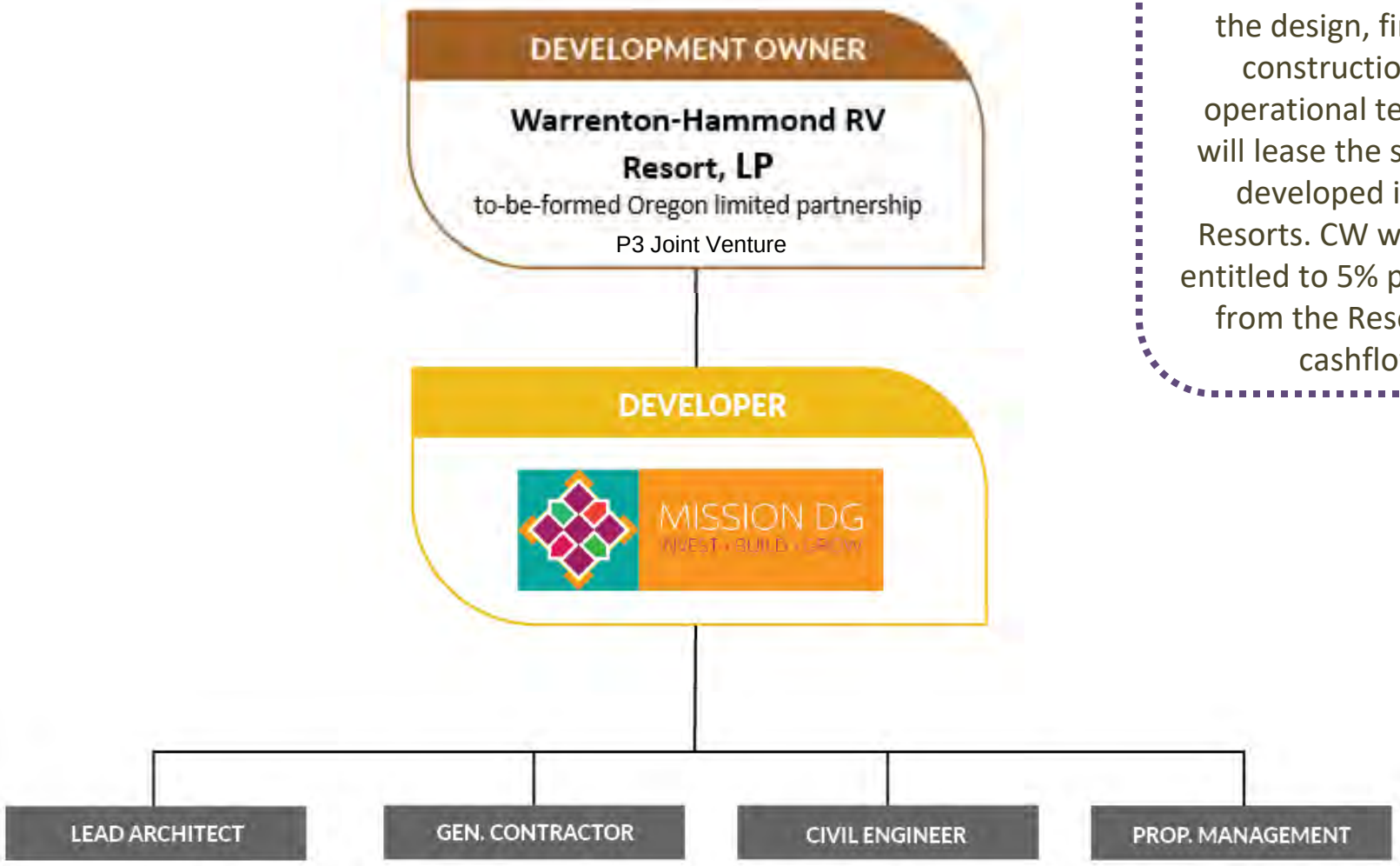
Legal Structure



A new Partnership will be formed to serve as the Development Owner. MDG will serve as the sole member General Partner and CW will be a Limited Partner, contributing the vacant sites to be developed through a long-term land lease.

CW is to be indemnified from any operational and financial resources through out the life of the partnership with MDG.

Organizational Structure



Mission DG will coordinate and manage the design, financing, construction, and operational teams. CW will lease the sites to be developed into RV Resorts. CW will also be entitled to 5% profit share from the Resort's net cashflow.

Development Budget & Cashflow

Warrenton & Hammond, OR
Development Budget

Month Month	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
GROSS RENTAL REVENUE	$18,414	$1,407,742	$3,411,566	$4,280,334	$4,582,167	$4,890,345
ALL SITES						
C/N (Rooms Occupied/Month)						
Available Daily Rooms/Month (# Sites x # Days)						
Average Daily Rate (Revenue/Occupied Rooms)						
Average % Occupancy						
Revenue per Available Room (REVPAR; Occ. x Daily F						
Ancillary Income (Rentals, Activities, Events, Laun						
Bar Revenues						
% of Rental Revenue						
Gross Ancillary Income	368	28,155	68,231	85,607	91,643	97,807
COGS % of Anc. Inc.						
COGS	(37)	(2,815)	(6,823)	(8,561)	(9,164)	(9,781)
Net Bar Revenues	331	25,339	61,408	77,046	82,479	88,026
Store Revenues						
% of Rental Revenue						
Gross Store Revenues	552	42,232	102,347	128,410	137,465	146,710
COGS % of Store Revenues						
COGS	(276)	(21,116)	(51,173)	(64,205)	(68,733)	(73,355)
Net Store Revenues	276	21,116	51,173	64,205	68,733	73,355
Other Income	-	-	-	-	-	-
Laundry	-	-	-	-	-	-
Vending Machine	-	-	-	-	-	-
Activity Rentals	-	-	-	-	-	-
Club/Space Rental	-	-	-	-	-	-
Damage Reimbursement	-	-	-	-	-	-
Interest Income	-	-	-	-	-	-
Total Ancillary Income	608	46,455	112,582	141,251	151,212	161,381
NET REVENUE	**$19,022**	**$1,454,197**	**$3,524,148**	**$4,421,586**	**$4,733,379**	**$5,051,727**
Hotel Tax To City - 12.00%	**1,442**	**155,723**	**377,798**	**478,158**	**511,898**	**546,348**

The Team & Experience

Warrenton Marina

Developer Biographies

Mark Tolley, Managing Partner

Mission DG PNW

Mark Tolley has over 30 years of experience within the residential construction industry, focusing predominantly on urban infill, Smart Growth, residential, and mixed-use projects.

His enthusiasm, entrepreneurial spirit, and commitment to excellence are the driving forces behind the ongoing development and success of the company, with over 2,000 residential units either completed or under construction in San Antonio and the surrounding areas.

Prior to joining Mission, Mr. Tolley worked as Managing Director of B. Knightly Homes in Austin, Texas, and was Co-Founder and Managing Partner of Urban Pacific Builders of Long Beach, California. Additionally, he served as Senior Vice President of Acquisitions at Regis Homes and Director of Acquisitions at Legacy Homes.

As a Partner, Mr. Tolley's extensive national experience increases the breadth of Mission's construction and development expertise. He is experienced in all aspects of market rate and affordable housing development, but with special emphasis in the acquisition, renovation, and adaptive reuse of historical properties.

Throughout his career, Mr. Tolley has worked with institutional and high-net private investors from across the nation. Over the tenure of his career, he has been responsible for the finance, acquisition, development, construction, and sale of over 6,000 residential units. This list includes multiple historic adaptive reuse projects, condominiums, apartments, RV resorts, and residential detached housing units throughout the United States.

Mr. Tolley attended Oxford University and graduated from University of California at Irvine.

Developer Biographies

John Latham, Partner

Mission DG PNW

John Latham joined Mission, after serving as the Chief Investment Officer for an Austin Texas private investment firm with over 350 million dollars in assets. While there he led the acquisitions, development and asset management teams and was directly involved in all the firm's investments.

He has acquired or developed over 4,000 multifamily units, and as a principal has acquired or developed over $400 million worth of real estate. Prior to that, Mr. Latham spent several years working with various private real estate investment firms as well as Banc of America Securities, LLC in their investment banking division, where his teams raised over $4 billion through IPOs, senior and subordinated debt, convertible equity, and private placements of derivative instruments. He holds a Bachelor's Degree in Civil Engineering and a Master of Business Administration in Finance from the University of Texas at Austin.

Developer Biographies

Seth Hague, Project Manager

Mission DG PNW

Seth Hague is Founding Principal of Mag-Amb Development.

Mag-Amb, short for the Latin phrase Magnum Ambitio, or “Big Ambition,” is a real estate investment company that sponsors and partners with industry leaders to acquire and develop best-in-class real estate assets.

Mag-Amb Development seeks out real estate investments that will provide investors with a combination of short and long-term investment opportunities with varying risk and reward profiles to meet a range of investor needs.

The Mag-Amb portfolio and pipeline includes hospitality, workforce housing, Build-to-Rent masterplans, mixed-use land development, and urban infill throughout the Western US. Leveraging volumetric modular construction methodologies, Mag-Amb has been able to create incremental value to its investors through expediting construction timelines, mitigating overall risk profiles, and providing cost-efficient alternatives to secondary and tertiary markets where labor is a significant factor.

Seth grew up on the Oregon Coast in Seaside, OR - home of the movie ‘Goonies’ and enjoys watching/playing every sport under the sun. He is also a drummer, hiker, self-proclaimed foodie, craft beer connoisseur, real estate nut, and avid Oregon Duck fan.

Seth attended The University of London and graduated from the University of Oregon.

Developer Biographies

Ron Beard, RV Resort Consultant

Ron D. Beard has been in business since 1974, providing architectural, planning and interior design services for all areas of revenue-producing developments. Almost a decade ago, Ron began to focus on the RV Park, Campground & RV Resort consulting business. He now devotes 100% of his practice to the designing, planning, feasibility and asset management for RV Resort and Campground clients across the entire USA. Ron also brings an understanding of the operations side of the campground business along with the related economic issues.

Ron D. Beard offers full economic analysis, design and construction document services, master planning, vision guidelines and business plans for both "ground-up" and existing RV Resort and Campground developments.

Ron D. Beard conducts numerous workshops and seminars each year on subjects ranging from Facilities Planning, to Revenue Enhancement Strategies/Economic Analysis and Business Planning with a specific focus on the privately-owned RV Park, Campground, RV Resort or Outdoor Hospitality business, whether rental or condo in nature.

To date, Ron has been a consultant on RV Park, Campground and RV Resort Outdoor Hospitality Projects in over 20 states.

Contact

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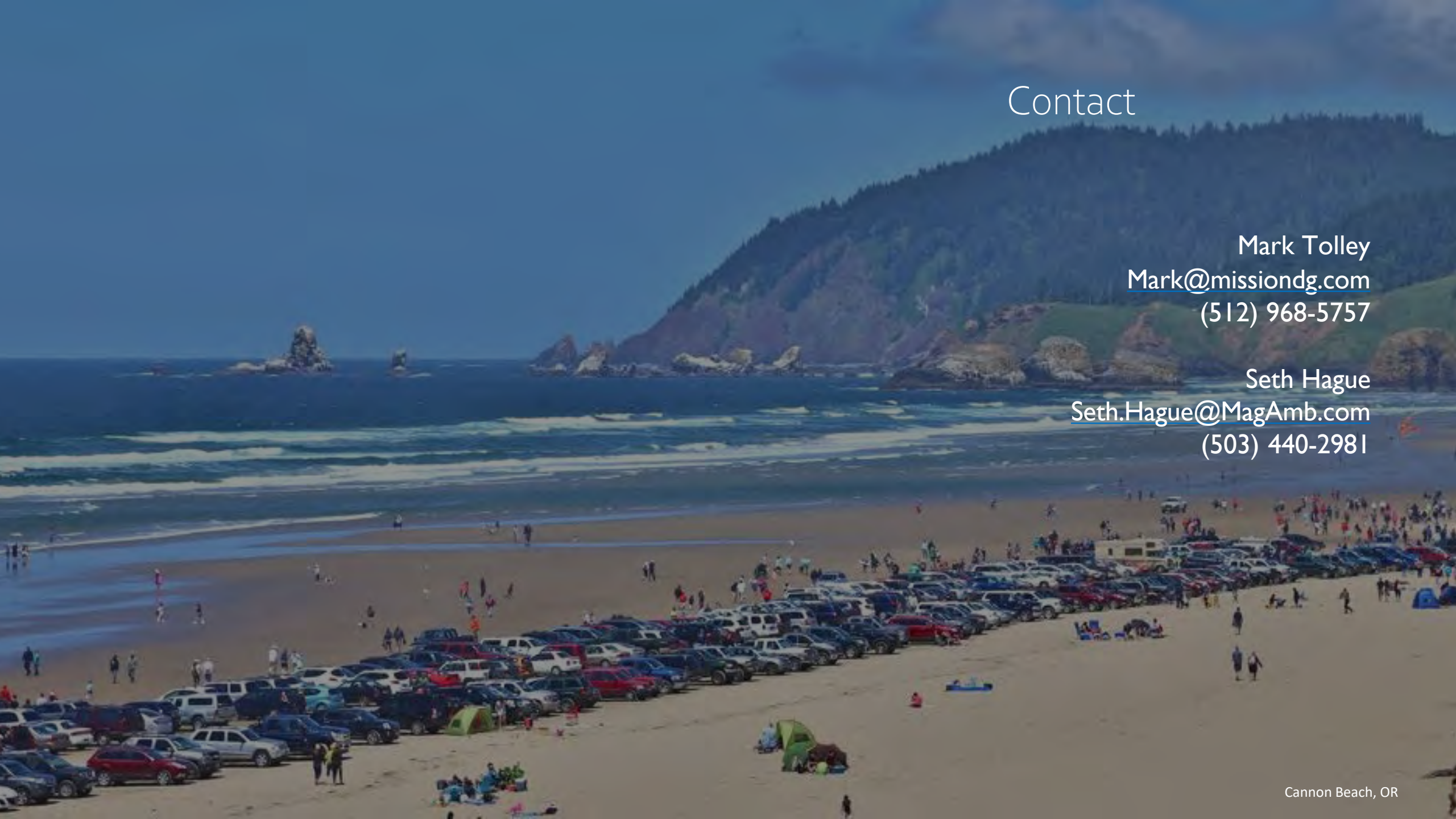


Cannon Beach, OR

Ms. Esther Moberg
City Manager
City of Warrenton
225 S Main Ave
PO Box 250
Warrenton, Oregon 97146

December 19, 2023

SUBJECT: Warrenton Marina Assessment

Dear Ms. Moberg

HDR was retained by the City of Warrenton to perform an evaluation of the Warrenton Marina to assess general condition of the docks, identify any recommended repairs and/or replacement of the docks, and provide guidance on prioritization of upgrades and maintenance.

Andy Fortner, P.E. visited the site on Tuesday, October 31, 2023, and met with Warrenton Marina staff to walk the dock and evaluate its condition.

Background

The Warrenton Marina consists of seven regions, labeled A, B, C, G, H, M, and N (see Figure 1). The marina is sited in a former mill pond off the Skipanon River. The original marina dates back to 1958. Detailed records of maintenance and upgrades over the years are not available, however the layout of the marina has been generally unchanged since at least 1994 based on historic Google Earth imagery. The marina sees primarily commercial traffic that varies seasonally but does house a handful of recreational tenants year-round.

All the docks consist of 2x6 decking supported by 6x6 and 6x8 stringers, supported on a pair of parallel timber float logs. In some locations, foam floats have been added to supplement the float logs due to decay and lack of buoyancy.

Over time multiple repairs have been made to the dock, with varying levels of workmanship and quality.

Condition Assessment

HDR's assessment of the topside included evaluating the condition of the deck surface, mooring hardware, the piles above the dock surface, and any other deficiencies visible from the deck.

HDR subcontracted with Collins Engineers to do an underwater inspection. The scope of the underwater inspection included a visual and tactile Level I assessment of the guide piles and timber float logs, with at least 10% receiving a more in-depth Level II visual inspection. Level III inspection, with ultrasonic thickness measurements were taken on a representative sample of the steel guide piles. Findings were documented via notes and photos. Collins' report is attached to this memo as an appendix and is incorporated by reference.

Structural Piles

12-to-16-inch diameter timber piles are placed at 50- to 60-foot intervals along the main walkways. At docks A, G, H, M and N, piles are present at the ends of the fingers. Slips 16 through 26 on Dock C also have finger piles. At Dock A, multiple finger piles have been replaced with steel. These piles appear to be in good condition. In general, all timber piles above the water show significant checking and weathering above the waterline, with marine growth in the splash zone. Some evidence of marine borers is also present in the splash zone. No significant decay was noted above water; however, multiple piles were loose when pushed on. This can be an indicator of decay below water or a lack of embedment, which decreases the fixity of the pile.

Piles are secured to the dock via wooden hoops above water or chains below water. Multiple piles, particularly on Dock C, G and H appeared to be lacking a positive connection to the float logs or severely decayed hoops; however, no lack of lateral stability of the dock was noted. The pile anchors and associated hardware that were visible appeared to be in fair condition; however, the capacity is limited by the level of decay in the float logs and stringers.

Examples of typical condition of the piles above water are shown in Photos 1 and 2. Typical pile hoop attachments are shown in Photos 3 through 5.

The underwater inspection from Collins revealed most piles to be in fair condition below water, with checking and splitting up to ½-inch or with a section loss of up to 25%. Some piles show more severe decay (50% or greater section loss). The steel piles at Docks A and N are in poor condition below the water, with section loss between 18% and 50%. Some piles were noted to have complete section loss with holes in them. For additional details on the below water condition of the piles, refer to the Collins dive report, attached.

Float Logs

HDR's assessment of the float logs above water was limited to assessing only the visible portions of the float logs and assessing their overall ability to provide buoyancy and stability to the dock structure.

In general, the float logs are in poor condition. Multiple areas of obvious decay are noted, and a general lack of buoyancy is present throughout. Supplemental foam floats have been installed over time; however, these are beginning to fail as well. Photo 6 shows a representative condition of the float logs. Multiple areas were noted to lack stability while walking the dock, with it apparent that one float log was more buoyant than the other.

Throughout the facility, there are locations where the dock is not level under its own self weight (see Photos 7 and 8). Areas where this was particularly pronounced are noted in Figure 1. It should be noted that the entire facility exhibits a general lack of buoyancy and the deficiencies noted in Figure 1 are those areas that were particularly noticeable as having even less buoyancy than typical.

The float logs throughout Dock H have particularly severe decay in the portion visible above the water, particularly on the finger piers. The walkways rock side to side and the finger piers lack stability. The finger pier float logs (and supplemental floats, where installed) on the south side of Dock G were noted to be in particularly poor condition. At the time of HDR's assessment, Docks G and H were nearly empty.

Photo 9 shows a representative photo of one of the more decayed float logs. The reduction in buoyance has led to a listing of the finger pier, even with supplemental flotation.

Dock A has had float logs replaced; however, logs of a different size than the original were installed, leading to significant racking of the walkway and finger piers. This is shown in Photo 10.

The underwater assessment of the float logs found severe decay, with significant loss of cross-sectional area and evidence of marine borers. For additional details of the underwater condition of the float logs, please refer to the Collins Engineers report, attached.

Deck and Stringers

The 2x6 decking is in generally fair to good condition, with no significant decay noted in the deck planks. Photo 11 shows a representative condition of the deck planks. Excessive deflections of the decking under pedestrian loading were noted throughout; however, this appears to be due to the long spans of the planks. The 6x6 and 6x8 stringers supporting the deck are on roughly 8-ft centers. It appears that the decking is regularly maintained and replaced when needed.

Cracks in the decking are noted throughout the facility where the main walkway intersects the fingers. This occurs where the deck planks for the finger are tied into the main

walkway. This creates excessive stress in the deck as the finger and walkway are unable to move freely. The deck is cracking to create the joint that is not present. This is exacerbated where there are no piles present at the ends of the finger piers. Photo 12 shows the cracking in the deck planks (near the nail line), while Photos 11 and 13 shows a sample of the detail causing this.

The stringers supporting the deck were noted to be in generally fair condition. Multiple stringers throughout the facility show signs of decay at the exposed ends; however, none were noted to be broken. There are locations throughout the facility where stringers have been cut to allow the passage of a PVC pipe for water distribution on the docks. In some instances, an additional member has been sistered in to reinforce the cut member, but in other locations, it is simply the deck planks passing over the top keeping the two halves together. This leads to a lack of support for the deck and areas that exhibit significant deflections under loading. In some cases, it also leads to a localized instability where the deck deflects along a longitudinal line under loading (see Photo 14).

During HDR's visit, the vessel Aquarius was berthed in slips 5 and 6 of Dock M. It was noted that this vessel had inadequate springlines, and was riding up onto the dock, pushing the dock out of alignment and causing damage to the deck. It appears that a vessel (whether this one or others) is regularly moored there, as the damage to the deck did not appear to be recent. See Photo 15.

Gangways and Approaches

Access to the marina is via three gangways: two servicing Dock C, and one serving Docks M and N. The gangways are aluminum structures built by Topper Industries with a manufacturing date of 11/2016 on their identification plates. The gangways are in good condition, with no flaws noted. Should the dock be replaced, these gangways could likely be reused, as they have significant service life remaining.

The short trestles from shore that connect to the gangways are in overall fair condition. The piles and bracing show signs of decay. Decking and stringers are in good condition. The wooden railings are in fair condition, with peeling paint and some instability noted. It is unlikely these meet current building code strength standards for fall protection. Furthermore, at Docks M and N, utility wires attached to a pole that is supported by the handrail are pulling the handrail down, as shown in Photo 16.

Photo 17 shows the existing trestle, with Photos 18 and 19 depicting the condition of the gangway.

On-Dock Utilities, Mooring Hardware, and Other Observations

Power and water are available at all slips. Both systems are in poor condition and appear to have been pieced together over time. Electrical conduit and cabling that was once fastened to the side of the dock has fallen off and is in the water in multiple locations as shown in Photo 20. A utility drop near Dock N is in the water (see Photo 21). Action should be taken to get all live electrical circuits out of the water. The meter pedestals (Photo 22) appear to be very old units, with significant corrosion present.

Water piping is generally fastened to the sides of the dock, but in some instances, runs below the deck. As noted previously, stringers have been cut to allow for installation/replacement of water pipe. Water piping appears to be oversized for the use case. Per marina staff, water demand is generally low. Water is typically used for rinsing off vessels and other light tasks. It appears that the water piping along Dock N has recently been replaced and should be a model for future waterline repairs that are made until the facility is replaced. (see Photos 8 and 23).

Mooring hardware is present at all slips and is in generally fair condition. Wear on the galvanizing is noted, however that is to be expected. Cleat capacity is limited by the capacity of the members to which the hardware is attached. In some instances, mooring hardware is only attached to the deck. Ideally, these cleats should be solidly attached into the rest of the supporting structure (see Photo 24).

On finger piers where an end pile is present, connection between the main walkway and the fingers are made in a variety of ways, including fastening directly to the float logs/stringers with a ledger, or via lashing with chains. Throughout the facility, these connections are noted to be degraded, either via corrosion of the chains and hardware or by decay of the connected elements (float logs, stringers, etc.), leading to pullout of the hardware. Typical connections are shown in Photos 25 through 28.

It is also noted that the finger piers are rather narrow (approximately 3’ wide) and, although useable, their width is less than ideal, particularly when the facility is full and vessels are moored on either side of the finger.

Conclusions and Recommendations

The Warrenton Marine is in overall poor condition and has exceeded its useful service life. The overall degradation and deferred maintenance of the facility is to a point where making repairs would likely be of a similar cost to a complete replacement.

At a high level, the current layout is reasonable for the location, and appears to allow adequate maneuvering room for vessels to get in and out. To keep the facility somewhat

operational during replacement, the current layout of the facility lends itself well to a staged approach based on the layout of the access points and arrangement of the dock sections.

In the short term, we recommend that supplemental flotation be added in areas noted as being particularly unstable, and severely degraded guide piles be replaced to keep the facility operational until it can be replaced. As an alternative to short-term pile replacement, the use of slips near significantly degraded piles could be limited to times with clear weather, where wind induced mooring and current loadings on the piles will be low.

HDR's experience on other recent projects requiring in-water work in the region is that permit approvals from the regulatory agencies can take anywhere from 18 to 24 months and will be the driving factor in any timeline for replacement. In-water work permits would also be required for the geotechnical investigation that would be necessary to design a new facility. HDR's experience is that permits for a geotechnical investigation can be fast tracked through the agencies and can be turned around in a shorter timeframe, but an allowance for at least six (6) months of agency review time should be made.

HDR would be pleased to assist the City in developing a more detailed phasing, permitting and replacement plan, as well as a plan for short term repairs.

If there are any questions about the contents of this memorandum, please reach out to either Andy Fortner, project engineer, or Frank Proctor, project manager.

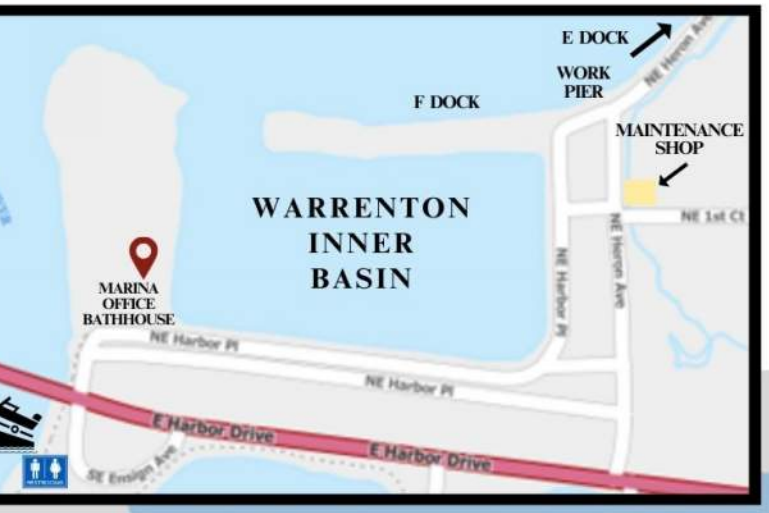
Sincerely,
HDR Engineering, Inc.

Andrew Fortner, P.E.
360-975-3865
andrew.fortner@hdrinc.com

Attachments: Figure 1 – Marina Layout and Defects
Photos
Collins Engineers, Inc. – UW Condition Assessment of Warrenton Marina

EC: Frank Proctor, HDR

CITY OF WARRENTON
WARRENTON MARINA BERTH MAP



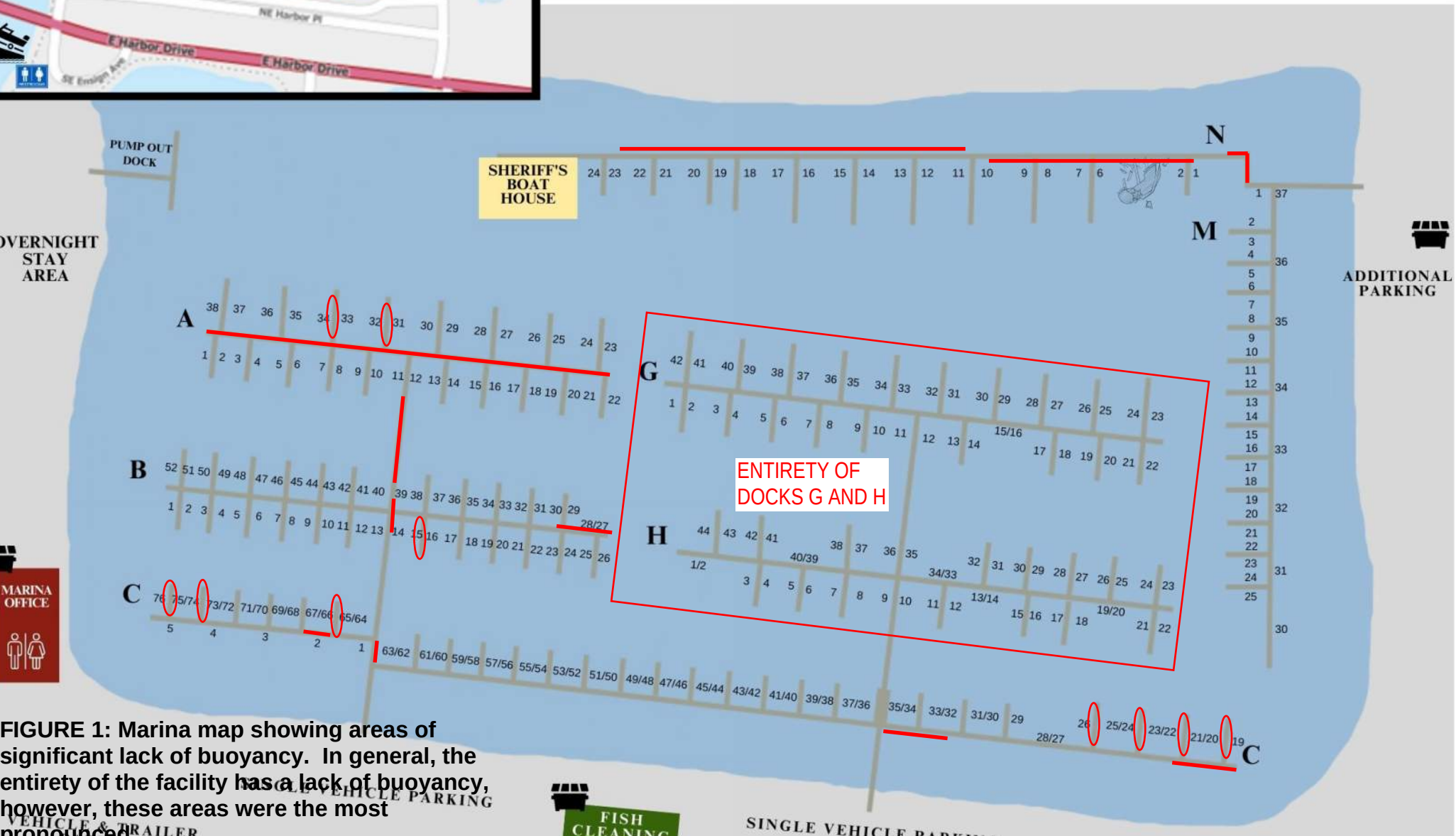


FIGURE 1: Marina map showing areas of significant lack of buoyancy. In general, the entirety of the facility has a lack of buoyancy, however, these areas were the most pronounced.

Photo 1:
Typical condition of timber piling. Note marine growth near the waterline.

Photo 2:
Close up showing possible marine borer activity.

Photo 3:
Recently replaced wooden pile hoop.

Photo 4:
Typical wooden pile hoop.

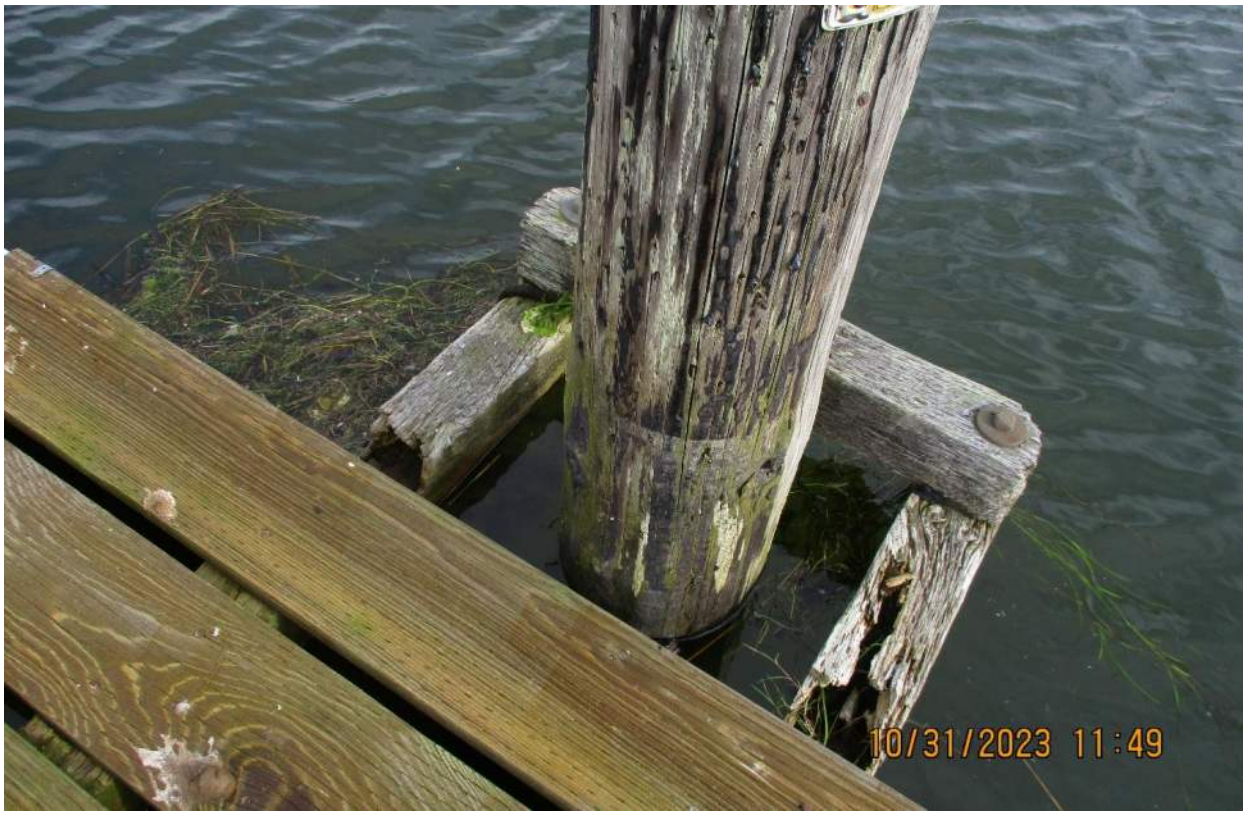


Photo 5:
Severely decayed wooden pile hoop. Hardware appears to be intact, but timber is fully decayed.

Photo 6:
Typical float log condition. Can also see supplemental foam floats installed.

Photo 7:
Uneven finger piers due to lack of buoyancy in float logs.

Photo 8:
Corner where Dock M and N meet. Note the sag in the corner due to lack of float log buoyancy.

Photo 9:
Severely decayed float log, with significant tilt in the finger pier.

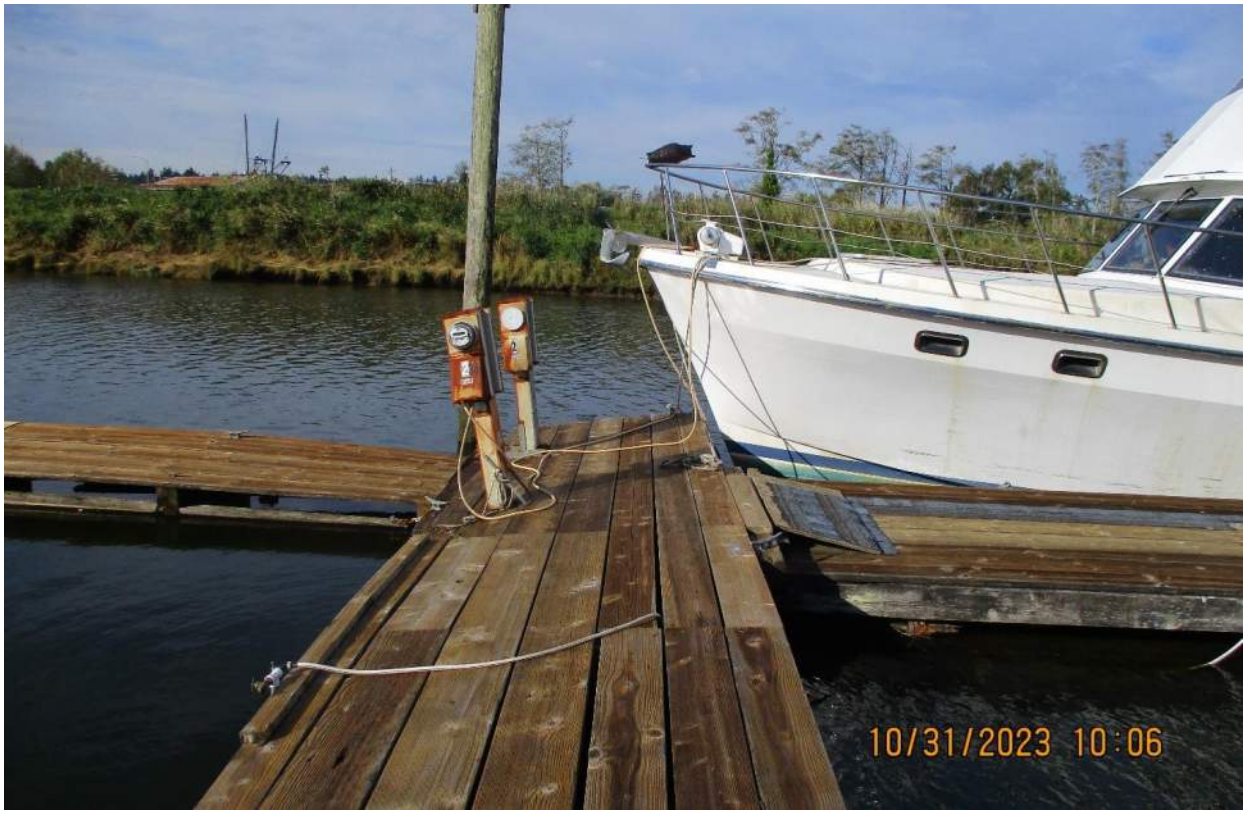


Photo 10:
Significant heaving in Dock A due to an improperly sized float log replacement

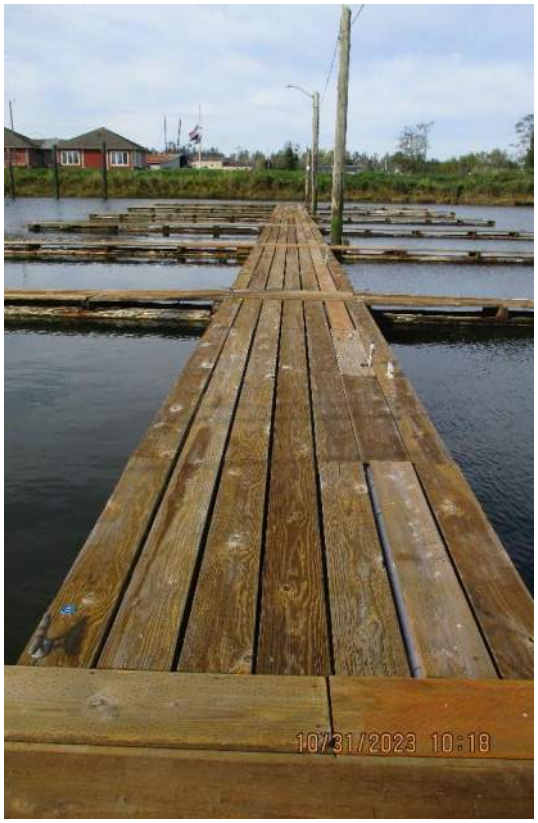


Photo 11:
Typical deck condition. Note the finger pier decking intersecting and continuous over the main walkway.

Photo 12:
Distress in the finger pier decking where it crosses over and is continuous with the main walkway.

Photo 13:
Another example of finger pier decking continuous into the walkway.

Photo 14:
Example of cut stringer to allow for water pipe to be installed below the deck.

Photo 15:
Vessel Aquarius riding up on the dock.

Photo 16:
Handrail being pulled down by utility pole.

Photo 17:
Typical condition of existing trestles. Note the decay in the timber piling.

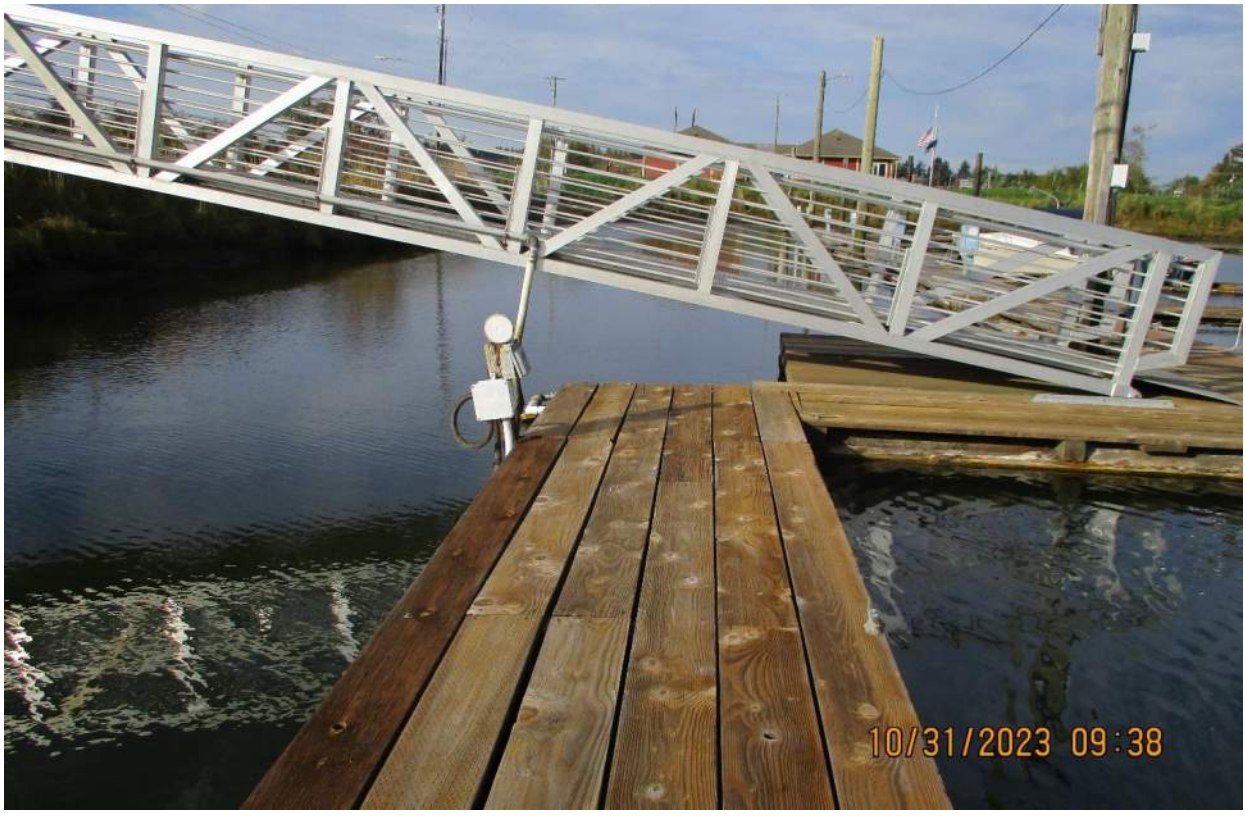


Photo 18:
Typical condition of the gangway

Photo 19:
Another photo of the gangway.

Photo 20:
Overall view of the marina. Note the PVC conduits in the water.

Photo 21:
Utility drop in the water near Dock N.

Photo 22:
Typical utility pedestal.

Photo 23:
Recently replaced water piping along Dock N. Should be a model for future piping repairs.

Photo 24:
Typical condition of cleat. Cleat is only restrained by the deck, stringer below is decayed.

Photo 25:
Chain connection, with lag bolt into the deck. Unclear if lag bolt is into stringer below.

Photo 26:
Decayed chain connect. Note corrosion in chain and heavily corroded hardware in float log.

Photo 27:
Chain connection, lagged into deck only.

Photo 28:
Ledger type connection where finger pier meets main walkway.

Underwater Condition Assessment of Warrenton Marina

Skipanon River
Warrenton, Oregon

November 2023

Prepared for:
HDR
Frank Proctor

COLLINS ENGINEERS INC.
7576 W. Victory Rd.
Boise, Idaho 83709
208.254.1266 • www.collinsengr.com

Table of Contents

EXECUTIVE SUMMARY

Project:	Underwater Condition Assessment of City of Warrenton Marina Floating Dock on Skipanon River in Warrenton, Oregon.
Purpose of Project:	To establish the general condition of the floating docks and guide piles that comprise the Warrenton Marina, in accordance with the ASCE MOP 130 Waterfront Facilities Inspection and Assessment Manual, and to provide repair/replacement recommendations.
Inspection Team:	Team Leader – Tanner Wild, P.E. – Collins Engineers, Inc. Team Members – Tristan Sanderson, E.I.T. and Isaiha Easley – Collins Engineers, Inc.
Inspection Date(s):	November 14-15, 2023

Summary of Findings:

- The timber guide piles typically exhibited minor damage consisting of checks, splits, and loss of section, with isolated locations of severe damage.
- The steel guide piles typically exhibited moderate to severe corrosion consisting of flaking corrosion, pitting, holes, and areas of section loss.
- The timber floats typically exhibited major damage consisting of checks, splits, loss of section, and evidence of marine borer activity.
- There were several loose or missing connections between the floating logs and the transverse timber planks supporting the deck.
- There were several finger docks, as well as one area of the main dock that were rotating and unstable to walk on.
- Several guide pile assemblies had missing, detached, and/or deteriorated timber rub strips.
- There was a partially submerged utility line due to a leaning pole at the northeast marina entrance.

Summary of Recommendations:

- Replace timber guide piles with major to severe damage.
- Replace steel guide piles with major to severe damage.
- Replace timber float modules with major to severe damage.
- Secure all loose and missing connections between the timber floats and the transverse timber planks.
- Repair utility pole near northwest marina entrance so that utility line is no longer submerged.
- Repair or replace guide pile assemblies.

1.0 INTRODUCTION

The Warrenton Marina was constructed in 1958 and is primarily a commercial facility located on the Skipanon River. The marina serves small crafts and is comprised of several clusters of docks with multiple shore connectivity points. Docks generally consist of 2 inch x 6 inch decking over a pair of parallel timber logs that provide flotation with a total of approximately 7,500 linear feet of docks. The facility is more than 60 years old and exhibited significant wear and deterioration.

1.1 Purpose and Scope

The purpose of this report is to convey the findings of the underwater condition assessment of the approximately 7,500 linear feet of a floating dock and guide piles at City of Warrenton Marina. The underwater condition assessment took place on November 14th and 15th, 2023, and was performed in accordance with the ASCE MOP 130 Waterfront Facilities Inspection and Assessment Manual. The inspection consisted of a visual and tactile structural inspection (Level I) of the guide piles and timber floats, a Level II (in-depth visual) inspection of at least 10% of the below-water surface area, and Level III inspections consisting of ultrasonic thickness measurements on a representative amount of the steel guide piles.

The following report includes a description of the method of investigation, inspection observations broken down by asset type, and recommendations based on the observed conditions.

1.2 Method of Investigation

A three-person team consisting of one licensed Professional Engineer-diver, one engineer-diver, and one technician-diver performed the inspection of the Warrenton Marina timber floats and guide piles utilizing commercial SCUBA equipment and techniques. The diver-inspector's observations were transmitted to the notetaker utilizing continuous hardwired communications. The underwater inspection of Docks A, B, C, G, H, M, N, as well as the Pump Out Dock consisted of a Level I (swim-by) inspection of 100% of the piles and timber floats, and a Level II (in-depth visual) inspection of 10% of the below water surface area which included the cleaning of marine growth at mudline, mid-water, and waterline. A Level III inspection consisting of ultrasonic thickness measurements was conducted on 5 of the steel guide piles at three elevations (waterline, mid-height, and channel bottom). Photographs were taken during the inspection to document typical conditions of the structures as well as some specific defects and deficiencies.

2.0 INSPECTION OBSERVATIONS

2.1 Timber Floats

The timber floats supporting the dock consist of approximately 1 foot diameter timber logs which are arranged parallel to each other in pairs and are connected using the transverse timber supports for the decking planks (see Figure T-01 in Appendix B). This timber float system comprises the main docks, as well as their attached finger docks which create the slips for small vessels.

Overall, the timber floats were in **serious** condition, exhibiting minor to severe damage. Approximately 70% of the timber floats exhibited minor to major damage consisting of up to 50% loss of cross-sectional area, with the remaining 30% exhibiting severe damage consisting of greater than 50% loss of cross sectional area (See Photos 19 and 20). The timber floats also exhibited evidence of marine borer activity (see Photo 18). In many instances, the connections between the timber floats and the transverse timber members were loose or missing due to the deterioration of the timber and/or the steel connection hardware (see photo 29). In some cases the loose connections, combined with loss of section and bearing capacity of some timber floats, resulted in the rotation of several sections of dock making them unstable to walk on (see Photo 31). There was a chain connecting the two floating logs adjacent to Slip 36 which exhibited flaking rust and significant section loss (see Photo 30). Refer to Figures I-02 through I-09 in Appendix B for extents and locations of timber float defects.

2.2 Timber Guide Piles

The timber guide piles measure approximately 1 foot in diameter and are typically located at the ends of finger docks or along the main docks throughout the marina. In many cases, the timber piles are connected to the docks via timber guide pile assemblies. In other instances, where the timber guide pile assemblies have failed, timber piles are connected to the finger docks via steel chains or U-bolts (see Photo 9 and 10). Several timber piles are not connected to the dock by any means.

Overall, the timber guide piles were typically in satisfactory condition with minor to moderate damage consisting of checks and splits measuring approximately 0.5 inch wide and/or up to 25% loss of cross sectional area (see Photos 26 and 27). However, there were four timber guide piles in serious condition, typically with major to severe damage consisting of up to 50% loss of cross-sectional area, one of which had heartwood rot and greater than 50% loss of cross-sectional area. The timber guide pile at Dock M, at the end of the finger dock between Slips 6 and 7 was cut off 5 feet below the waterline and then extended with a PVC pipe. The PVC pipe did not appear to be hollow. Several guide pile assemblies had missing, detached, and/ or

deteriorated rub strips. Please see Figures I-02 through I-09 in Appendix B for extents and locations of timber pile defects.

2.3 Steel Guide Piles

The steel guide piles measure approximately 1 foot in diameter and are typically located at the ends of several finger docks and along the main docks at Docks A and N. The Sherrif's Boat House and the Pump Out Dock also each have four steel piles. The steel piles located at the ends of the finger docks are connected to the finger docks via steel chains.

Overall, the steel piles were typically in serious condition with moderate to severe corrosion consisting of flaking rust and pitting from the channel bottom up 5 feet to 8 feet (see Photo 25). Ultrasonic thickness measurements taken at several piles indicated typical section loss of approximately 25% to 50% as shown in Table 1. There were also several steel piles with areas of complete section loss (see Photos 21-24). Refer to Figures I-02 and I-09 in Appendix B for extents and locations of steel pile defects

Table 1 - Ultrasonic Thickness Measurements

Ultrasonic Thickness Measurements						
Dock	Location	Nominal (in.)	Channel Bottom (in)	Mid-Height (in.)	Waterline (in.)	Max. Loss of Section (%)
A	End of finger pier between Slips 31 and 32	0.380	0.190	0.360	0.315	50%
A	End of finger pier between Slips 29 and 30	0.380	0.310	0.330	0.370	18%
A	Along main dock between Slips 24 and 25	0.380	0.285	0.375	0.355	25%
N	End of finger pier between Slips 16 and 17	0.380	0.215	0.377	0.320	43%
N	Sherrif's Boat House, SE Pile	0.380	0.285	0.360	0.360	25%

3.0 EVALUATION AND RECOMMENDATIONS

3.1 Timber Floats

Overall, the timber floats were in serious condition, exhibiting minor to severe damage with loss of cross-sectional area, and some with evidence of marine borer activity. Some of the connections between the timber floats and the transverse timber supports were no longer effective, and in some cases caused the rotation of several sections of dock making them unstable to walk on.

It is recommended that the timber floats with major to severe damage be replaced. It is also recommended that all loose and missing connections be repaired or replaced. In some cases it may be necessary to replace the transverse timber planks in order to ensure a secure connection.

3.2 Timber Guide Piles

Overall, the timber guide piles were typically in satisfactory condition with minor to severe damage consisting of checks, splits, and loss of cross sectional area. The timber guide pile at Dock M, at the end of the finger dock between Slips 6 and 7 was cut off 5 feet below the waterline and then extended with a PVC pipe. Several guide pile assemblies had missing, detached, and/ or deteriorated rub strips.

It is recommended that four timber guide piles with major to severe damage be replaced. It is also recommended that all guide pile assemblies with loose or missing, detached, and or deteriorated rub strips be repaired or replaced.

3.3 Steel Guide Piles

Overall, the steel piles were typically in serious condition with minor to severe corrosion consisting of flaking rust, pitting, 25% to 50% loss of section, and some with holes.

It is recommended that the steel guide piles with major to severe corrosion be replaced and that other piles be monitored for advancing section loss.

3.4 Miscellaneous

There was a partially submerged utility line near the northeast entrance of the marina due to a utility pole that was unstable and leaning on the entrance dock (see Photo 17).

It is recommended that the utility pole be repaired so that the utility line is no longer submerged.

Respectfully Submitted,
COLLINS ENGINEERS, INC.

Jordan Furlan, P.E.
Regional Manager

Appendix A
Inspection Photographs

Photograph 1– Overall View of Marina, Looking Northwest

Photograph 2– Overall View of Marina, Looking Northeast

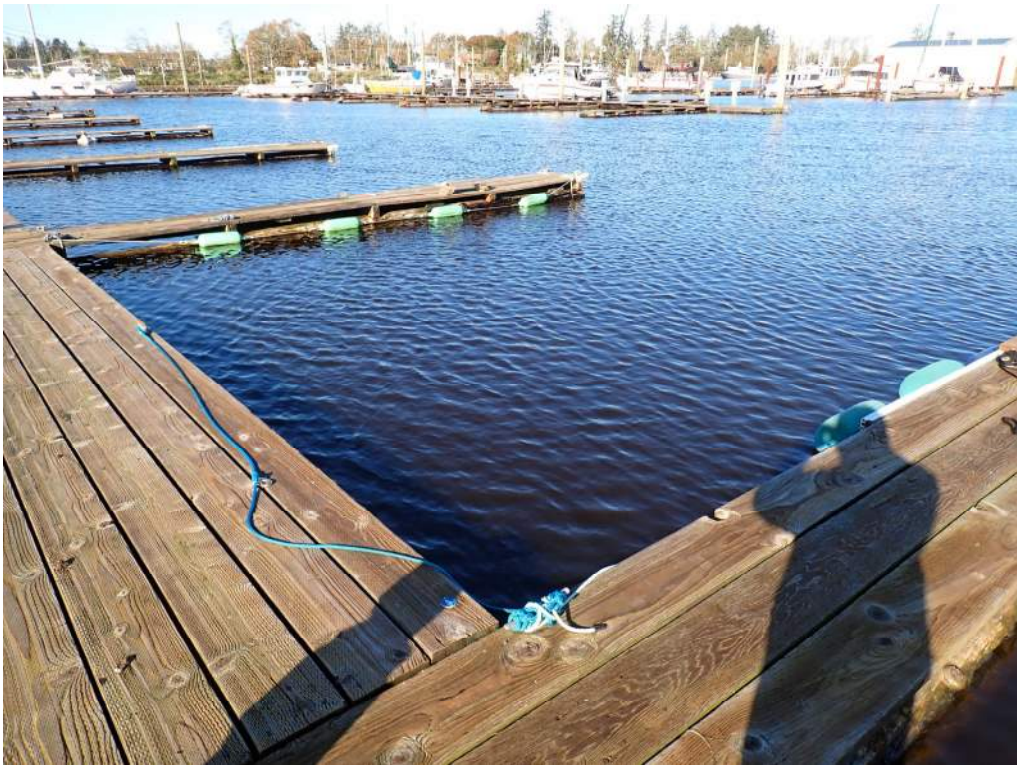
Photograph 3– Northeast Marina Entrance, Looking Northwest

Photograph 4– Southeast Marina Entrance, Looking Northwest

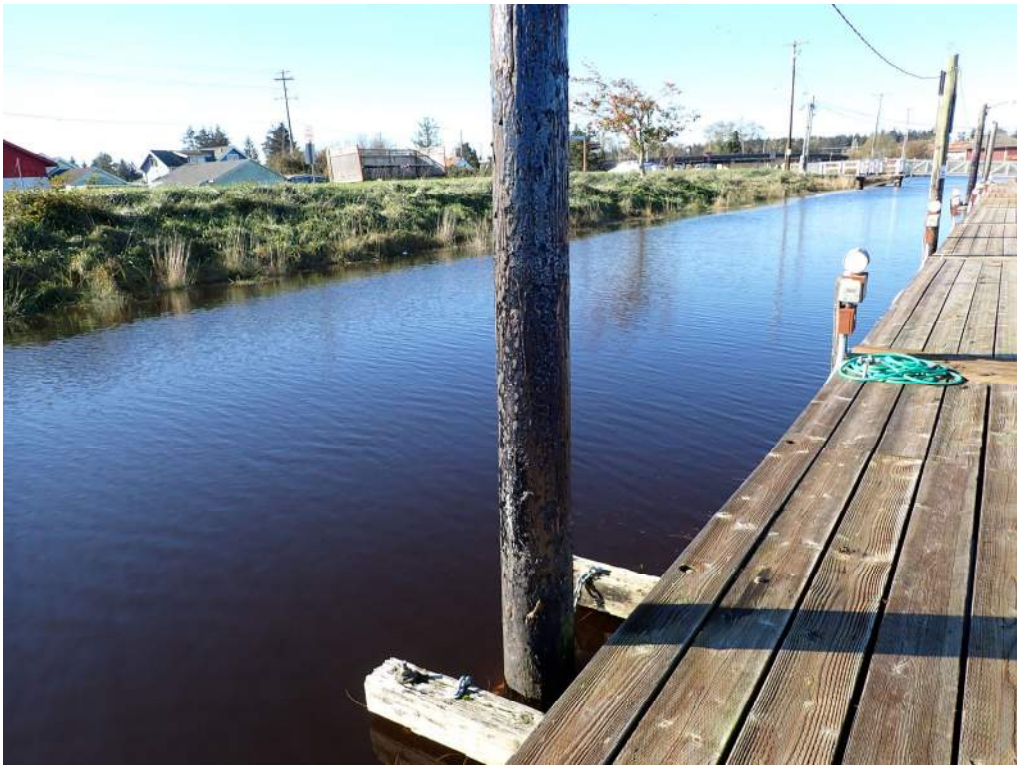
Photograph 5– Southwest Marina Entrance, Looking Northwest

Photograph 6– Pump Out Dock, Looking Northwest

Photograph 7– Typical Main Floating Dock Condition

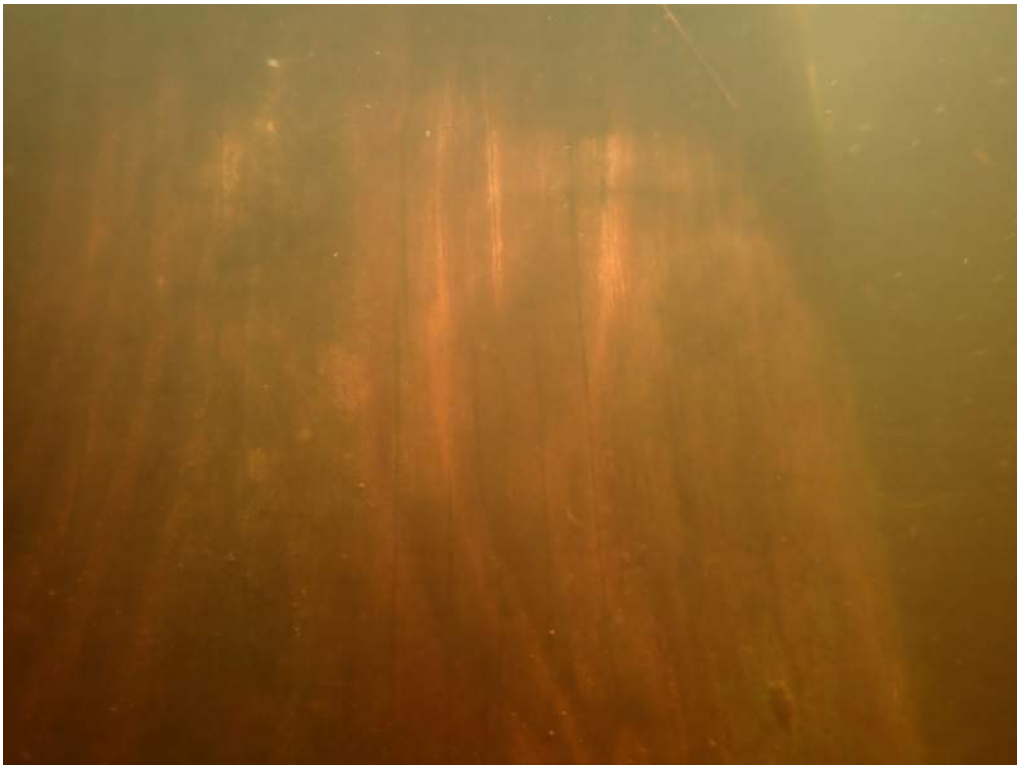


Photograph 8– Typical Finger Pier Condition



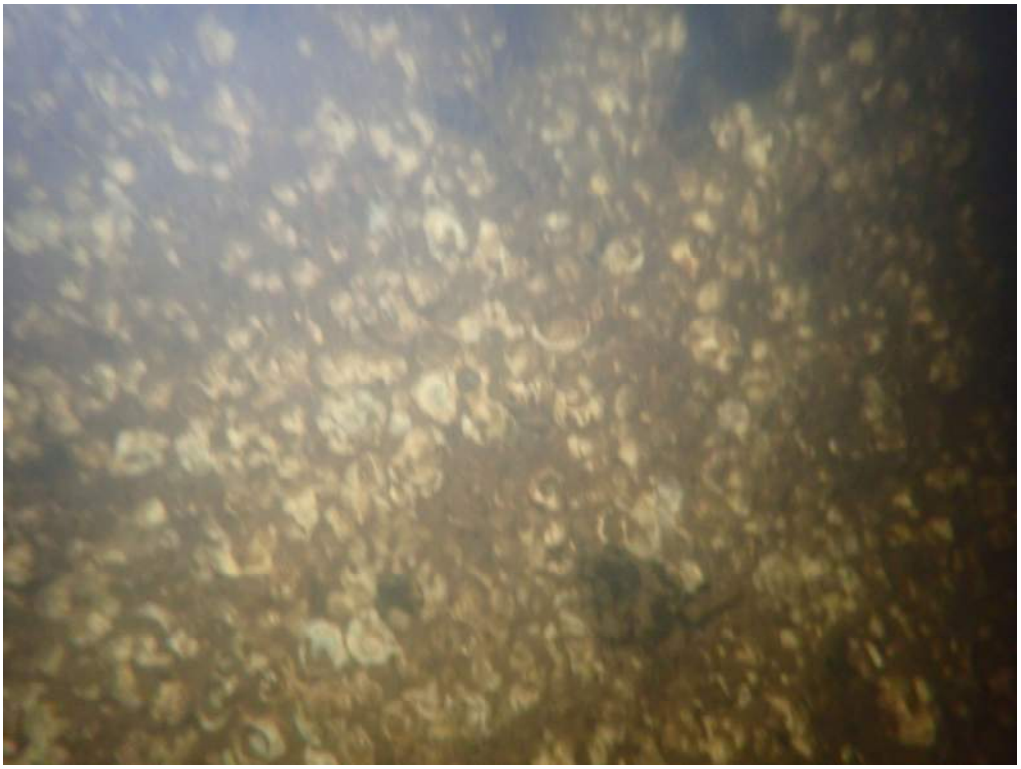
Photograph 9– Typical Timber Guide Pile Above Water

Photograph 10– Typical Timber Guide Pile at Waterline



Photograph 11– Typical Timber Guide Pile Underwater

Photograph 12– Typical Steel Guide Pile at Waterline



Photograph 13– Typical Marine Growth on Steel Guide Pile Underwater

Photograph 14– Typical Timber Float at Waterline

Photograph 15– Typical Timber Float Underwater

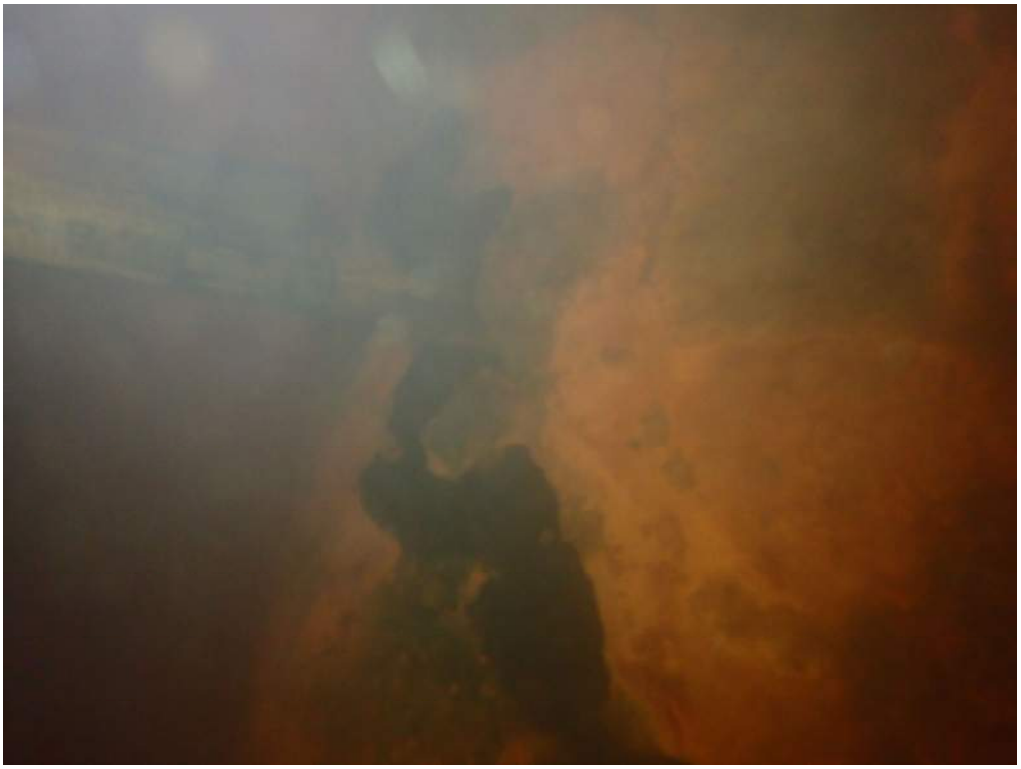
Photograph 16– Typical Transverse Timber Support

Photograph 17– Unstable Utility Line Post at Northeast Marina Entrance Looking West

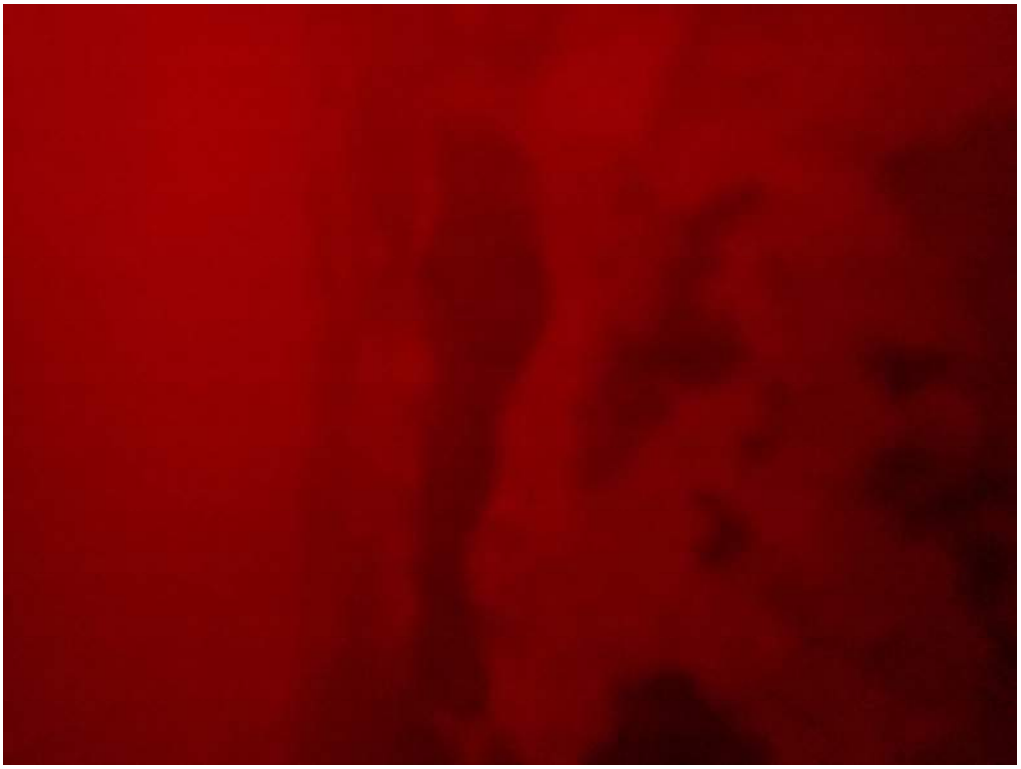
Photograph 18– Typical Evidence of Marine Borers in Timber Floats

Photograph 19– Typical Area of Severe Section Loss in Timber Floats

Photograph 20– Typical Area of Severe Section Loss in Timber Floats



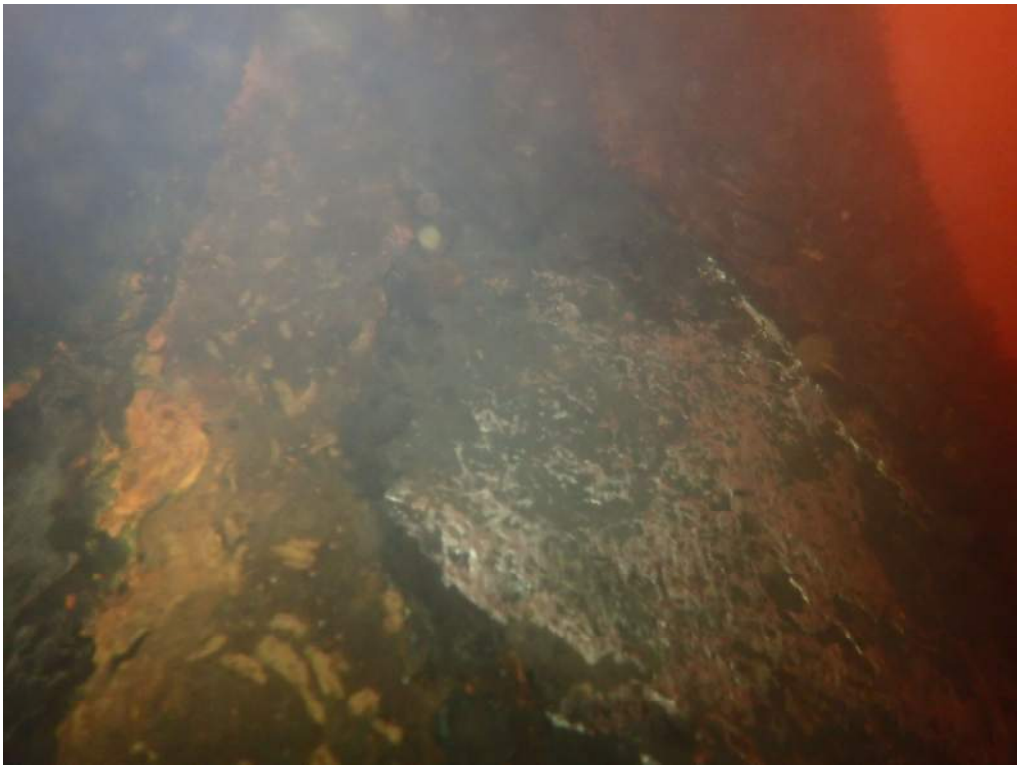
Photograph 21– Corrosion Hole in Steel Pile at Dock N , Between Slips 14 and 15



Photograph 22– Corrosion Hole in Steel Pile at Dock A, Between Slips 33 and 34

Photograph 23– Corrosion Hole in Steel Pile at Dock A , Between Slips 27 and 28

Photograph 24– Corrosion Hole in Steel Pile at Dock A, Between Slips 25 and 26



Photograph 25– Typical Flaking Corrosion on Steel Piles Below Water

Photograph 26– Typical Severe Loss of Section in Timber Guide Piles

Photograph 27– Typical Check in Timber Piles

Photograph 28– Typical Section Loss in Timber Transverse Supports

Photograph 29– Loose Connection Between Timber Float and Transverse Timber Support

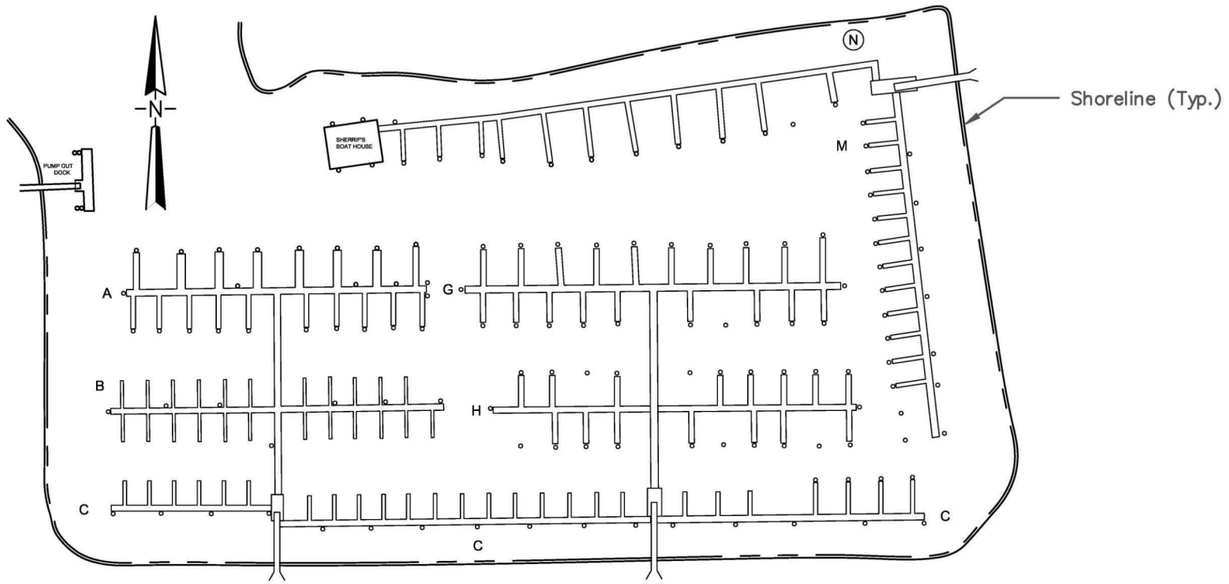
Photograph 30– Flaking Rust at Chain Connection at Dock C, Slip 36

Photograph 31– Typical Rotated Finger Pier (Dock C, between Slips 65 and 66)

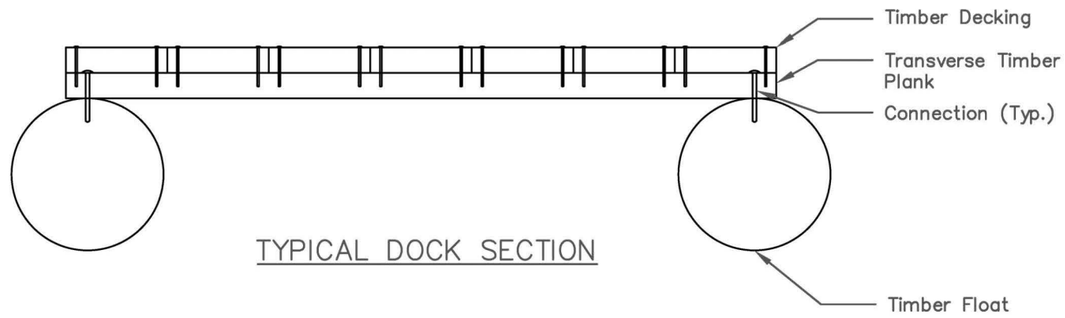
Photograph 32– Submerged Utility Line Near Northwest Marina Entrance

Appendix B
Inspection Drawings

WARRENTON MARINA UNDERWATER INSPECTION



PLAN VIEW



TYPICAL DOCK SECTION

LEGEND

- Steel Pile, Minor Corrosion – Weathering of steel coating, surface corrosion with no significant pitting.
- Steel Pile, Moderate Corrosion – Up to 25% localized section loss.
- Steel Pile, Major Corrosion – 25% to 50% localized section loss
- Steel Pile, Severe Corrosion – Significant corrosion with over 50% localized section loss
- Timber Pile, Minor Weathering – Checks, splits, and gouges less than 0.5 inch wide
- Timber Pile, Moderate Weathering – Cross section loss of up to 25%
- Timber Pile, Major Weathering – Cross section loss of 25% to 50%
- Timber Pile, Severe Weathering – Cross section loss exceeding 50%
- Timber Float, Minor Weathering – Checks, splits, and gouges less than 0.5 inch wide
- Timber Float, Moderate Weathering – Cross section loss of up to 25%
- Timber Float, Major Weathering – Cross section loss of 25% to 50%
- Timber Float, Severe Weathering – Cross section loss exceeding 50%
- (1) Inspection Note
- A Dock Label
- 1 Slip Number

GENERAL NOTES

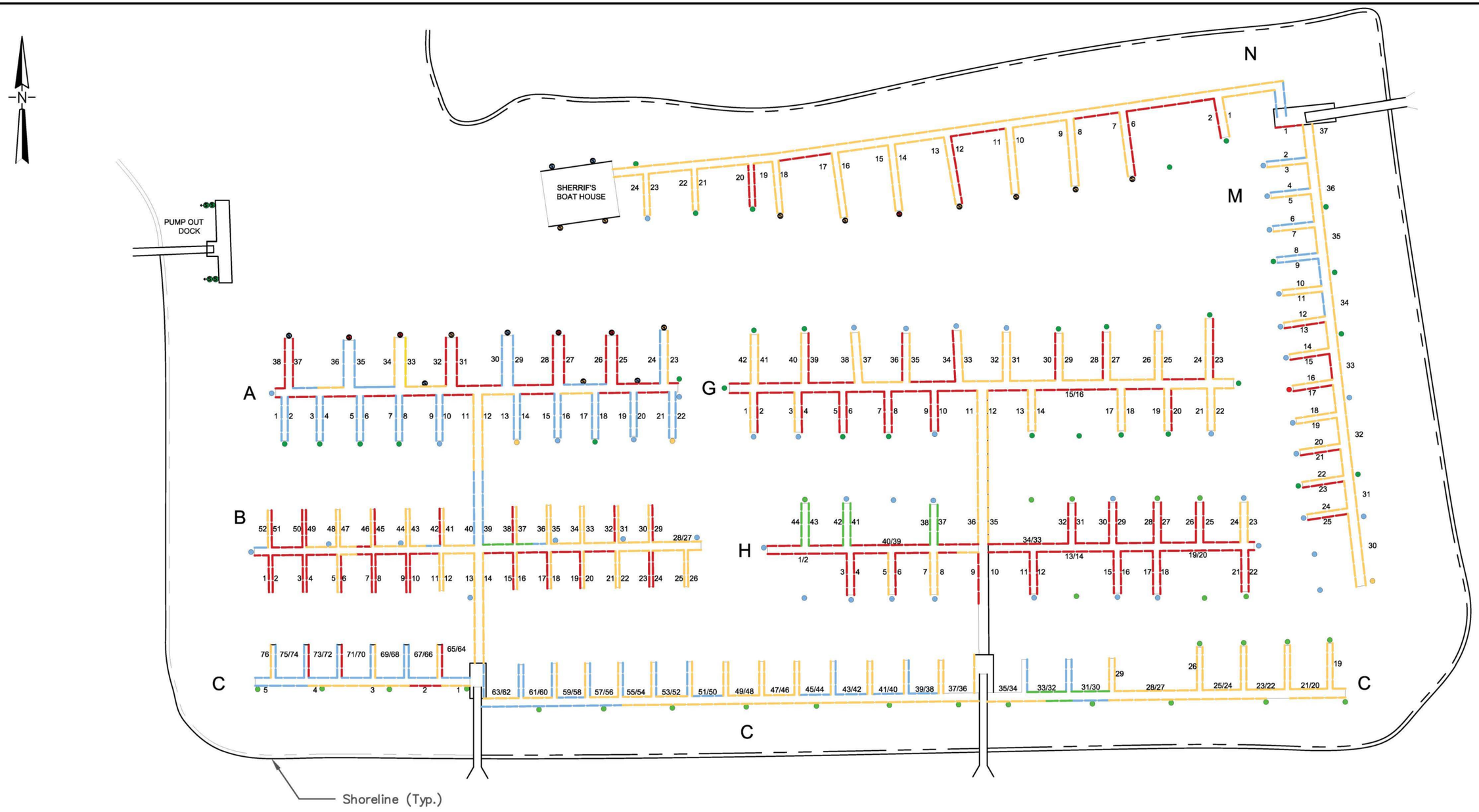
1. Docks C, G, and H were inspected on November 14, 2023. Docks A, B, M, and N, as well as the pumpout dock were inspected on November 15, 2023.
2. Color coding for condition states throughout the report are in accordance with the legend on this page and follow the ASCE MOP 130 Waterfront Facilities Inspection and Assessment Manual (Appendix C).

WARRENTON MARINA

UNDERWATER INSPECTION REPORT

TITLE PAGE AND LEGEND

Drawn By: CCT	COLLINS ENGINEERS INC 7576 W. Victory Rd. Boise, ID 83709 (208) 297-5324 www.collinsengr.com	Date: 11/14/2023
Checked By: JTF		Scale: NTS
Project: 14994.00		Figure No.: T-01



GENERAL NOTES

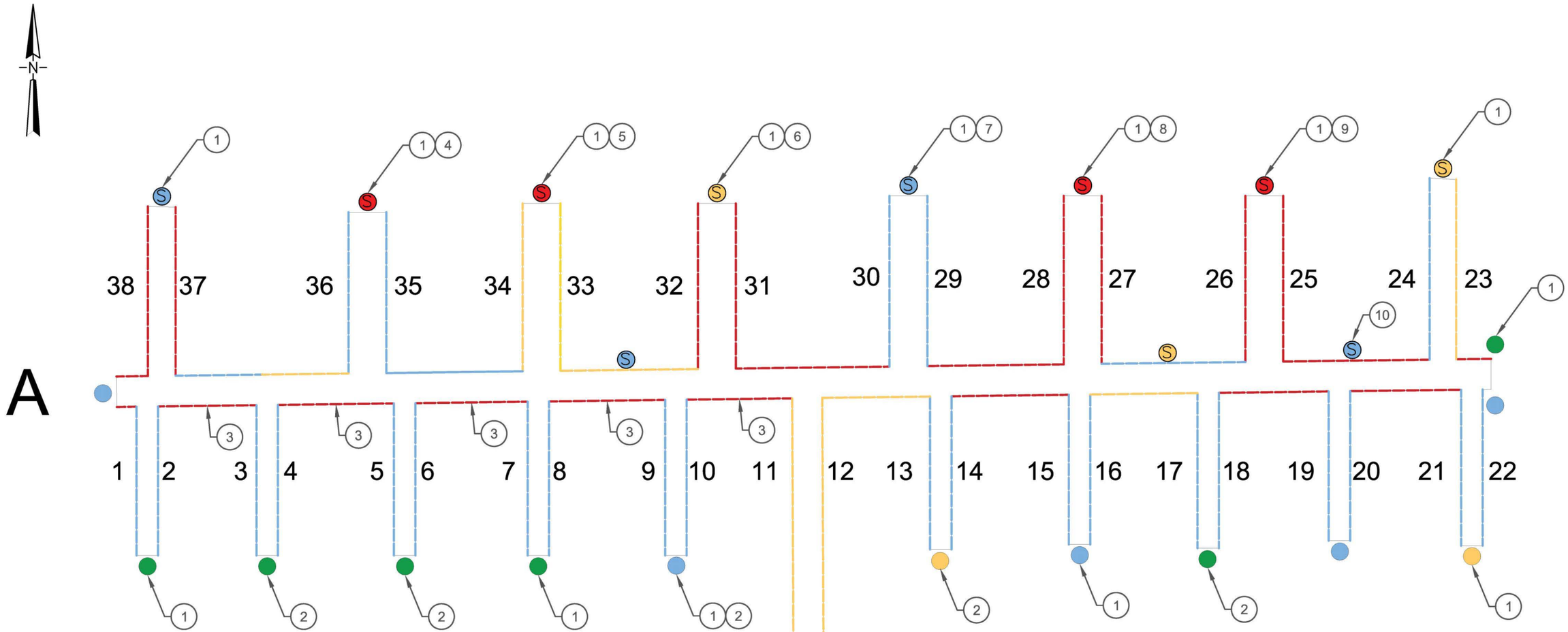
1. Docks C, G, and H were inspected on November 14, 2023. Docks A, B, M, and N, as well as the pumpout dock were inspected on November 15, 2023.
2. Color coding for condition states throughout the report are in accordance with the legend on Page T-01 and follow the ASCE MOP 130.

WARRENTON MARINA

UNDERWATER INSPECTION PLAN

OVERALL

Drawn By: CCT	COLLINS ENGINEERS INC 7576 W. Victory Rd. Boise, ID 83709 (208) 297-5324 www.collinsengr.com	Date: 11/14/2023
Checked By: JTF		Scale: NTS
Project: 14994.00		Figure No.: I-01



NOTES:

1. Several of the guide piles connected to the finger docks were connected via a steel chain.
2. Several of the guide piles connected to the finger docks were connected via a U–bolt.
3. There were several missing or loose connections between the longitudinal floating logs and the transverse timber planks.
4. The steel pile at the end of the finger dock between slips 35 and 36 exhibited three corrosion holes between 3 feet and 6 feet above the channel bottom, typically measuring approximately 3 inches high by 1 inch long.
5. The steel pile at the end of the finger dock between slips 33 and 34 exhibited a hole 6 feet above the channel bottom which measured approximately 3 feet high by 6 inches wide.
6. Ultrasonic thickness measurements taken at the steel pile at the end of the finger dock between slips 31 and 32 indicated up to 50% loss of section.
7. Ultrasonic thickness measurements taken at the steel pile at the end of the finger dock between slips 29 and 30 indicated up to 18% loss of section.
8. The steel pile at the end of the finger dock between slips 27 and 28 exhibited a hole 6 feet above the channel bottom which measured approximately 2 feet high by 2 inches wide.
9. The steel pile at the end of the finger dock between slips 25 and 26 exhibited a hole 2 feet above the channel bottom which measured approximately 4 inches wide by 1.5 feet high.
10. Ultrasonic thickness measurements taken at the steel pile along the main dock between slips 24 and 25 indicated up to 25% loss of section.

GENERAL NOTES

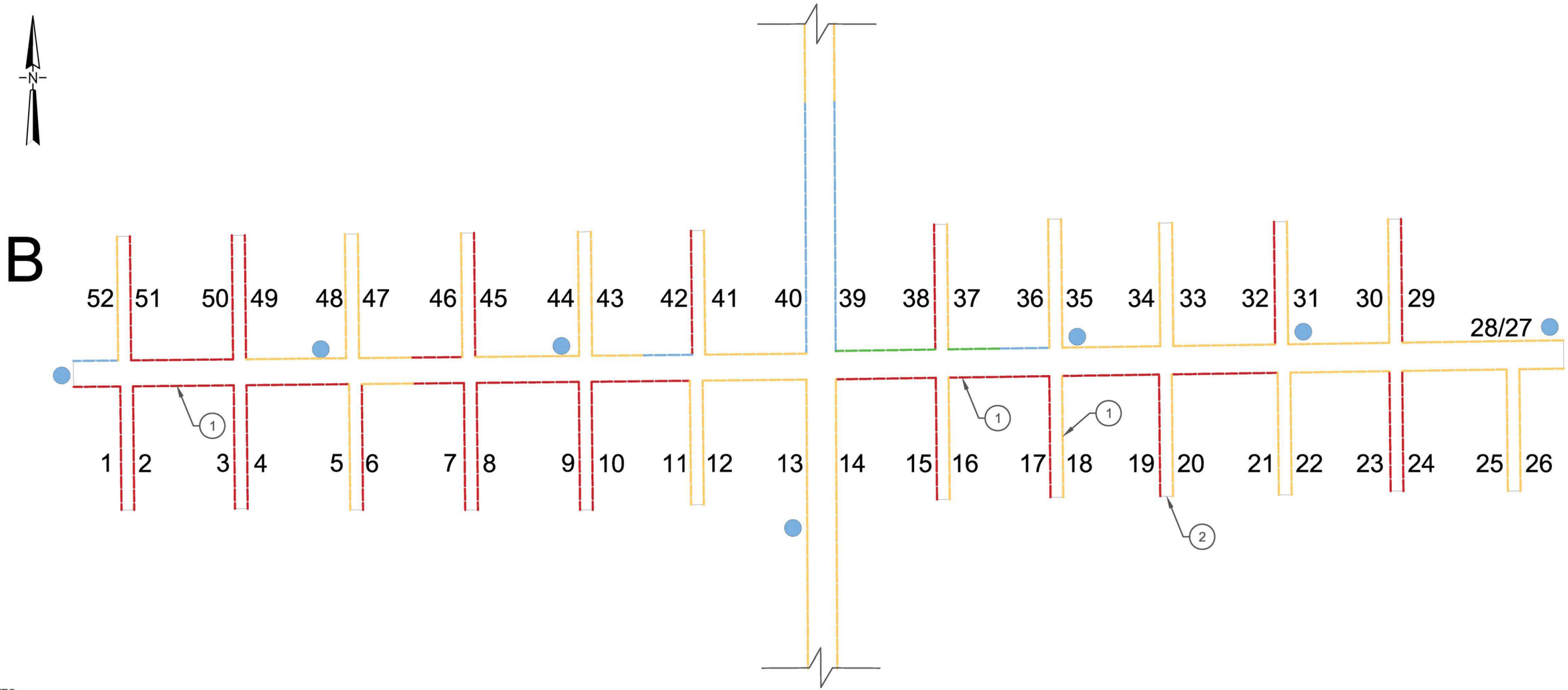
1. Docks C, G, and H were inspected on November 14, 2023. Docks A, B, M, and N, as well as the pumpout dock were inspected on November 15, 2023.
2. Color coding for condition states throughout the report are in accordance with the legend on Page T–01 and follow the ASCE MOP 130.

WARRENTON MARINA

UNDERWATER INSPECTION

DOCK A

Drawn By: CCT	COLLINS ENGINEERS INC 7576 W. Victory Rd. Boise, ID 83709 (208) 297-5324 www.collinsengr.com	Date: 11/15/2023
Checked By: JTF		Scale: NTS
Project: 14994.00		Figure No.: I–02



NOTES:

1. There were several missing or loose connections between the longitudinal floating logs and the transverse timber planks.
2. The finger pier between slips 19 and 20 was rotated and unstable.

GENERAL NOTES

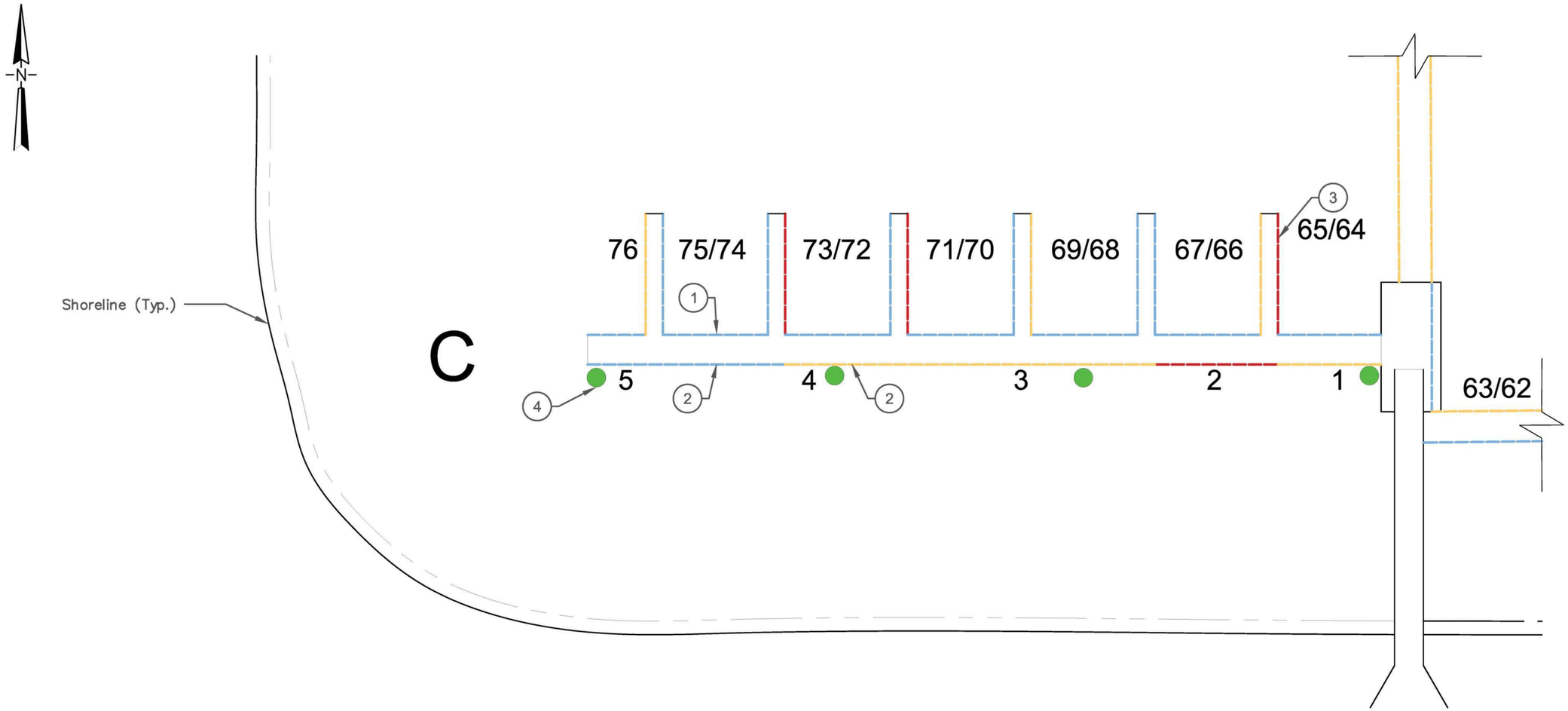
1. Docks C, G, and H were inspected on November 14, 2023. Docks A, B, M, and N, as well as the pumpout dock were inspected on November 15, 2023.
2. Color coding for condition states throughout the report are in accordance with the legend on Page T–01 and follow the ASCE MOP 130.

WARRENTON MARINA

UNDERWATER INSPECTION PLAN

DOCK B

Drawn By: CCT	COLLINS ENGINEERS INC 7576 W. Victory Rd. Boise, ID 83709 (208) 297-5324 www.collinsengr.com	Date: 11/15/2023
Checked By: JTF		Scale: NTS
Project: 14994.00		Figure No.: I–03



NOTES:

1. There were several missing or loose connections between the longitudinal floating logs and the transverse timber planks.
2. There were several transverse timber planks with severe section loss.
3. The finger pier between slips 65 and 66 was unstable.
4. The transverse guide crib at the west most timber pile exhibited a split and severe section loss.

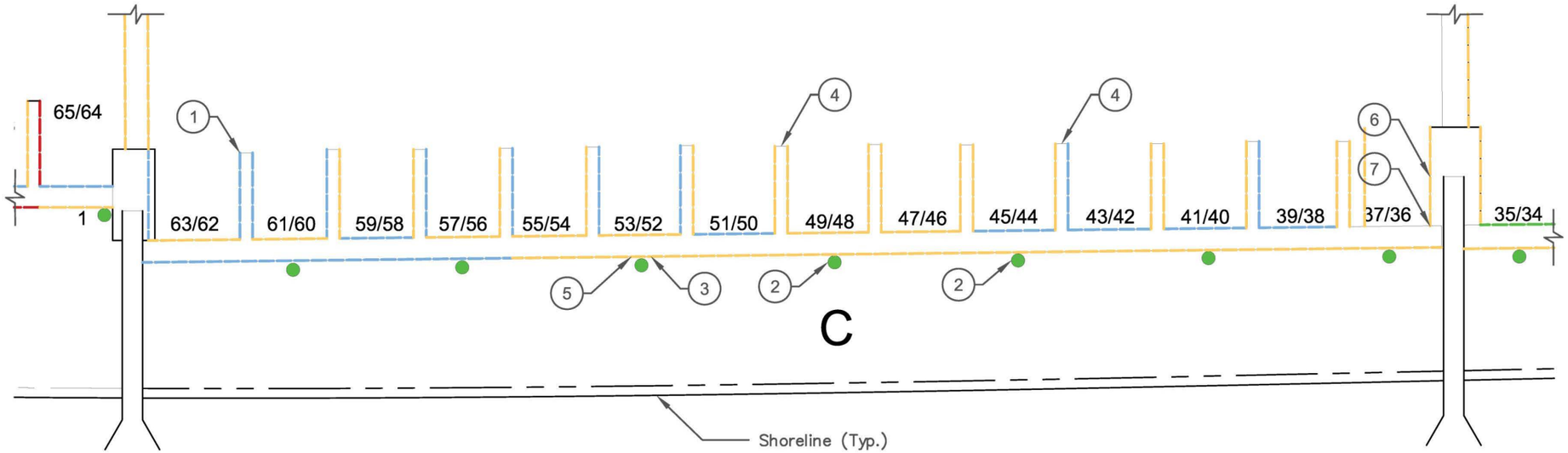
GENERAL NOTES

1. Docks C, G, and H were inspected on November 14, 2023. Docks A, B, M, and N, as well as the pumpout dock were inspected on November 15, 2023.
2. Color coding for condition states throughout the report are in accordance with the legend on Page T-01 and follow the ASCE MOP 130.

WARRENTON MARINA

UNDERWATER INSPECTION PLAN
DOCK C (WEST SECTION)

Drawn By: CCT	COLLINS ENGINEERS INC 7576 W. Victory Rd. Boise, ID 83709 (208) 297-5324 www.collinsengr.com	Date: 11/14/2023
Checked By: JTF		Scale: NTS
Project: 14994.00		Figure No.: I-04



NOTES:

1. There were several missing or loose connections between the longitudinal floating logs and the transverse timber planks.
2. Several of the guide piles connected to the dock were connected via a steel chain with rollers.
3. There was a transverse timber plank with severe section loss.
4. The finger docks between slips 49 and 50 and between slips 43 and 44 were unstable.
5. The transverse guide crib at timber pile between slips 52 and 53 had severe section loss
6. The floating log adjacent to slip 36 was loosely connected.
7. There was a chain connecting the two floating logs adjacent to slip 36 which exhibited flaking rust.

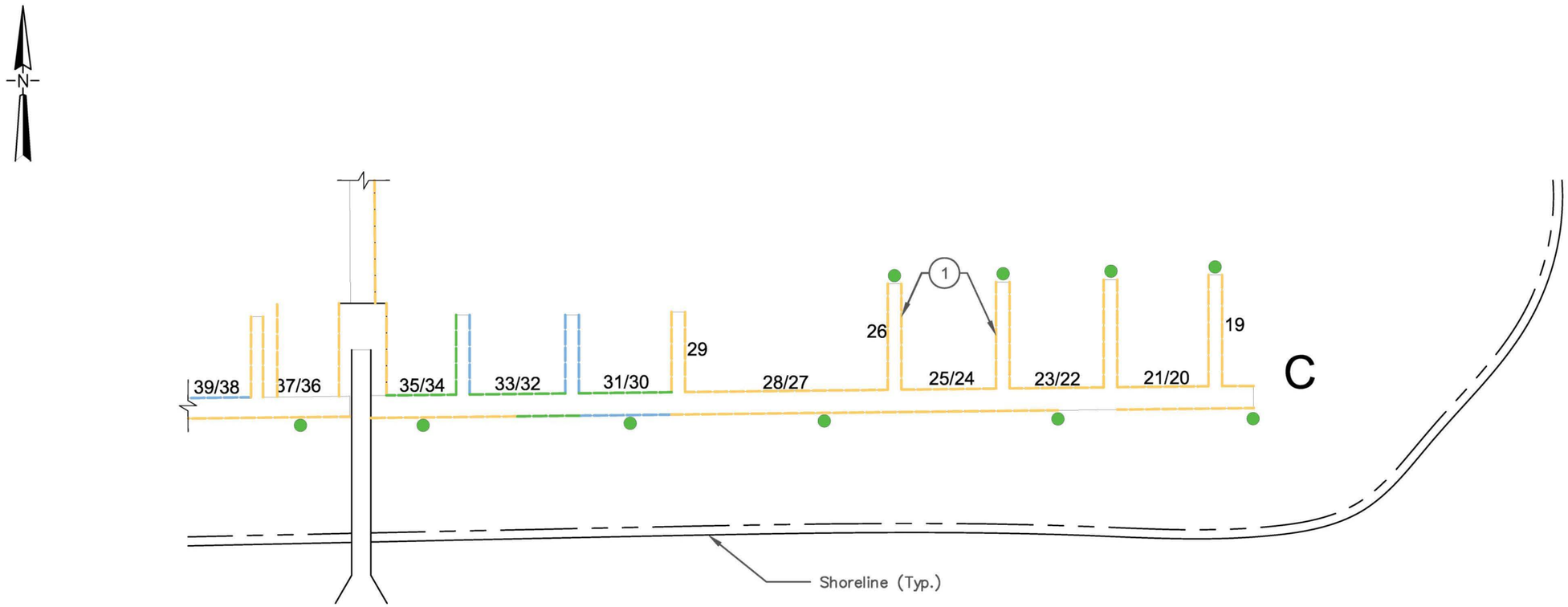
GENERAL NOTES

1. Docks C, G, and H were inspected on November 14, 2023. Docks A, B, M, and N, as well as the pumpout dock were inspected on November 15, 2023.
2. Color coding for condition states throughout the report are in accordance with the legend on Page T–01 and follow the ASCE MOP 130.

WARRENTON MARINA

UNDERWATER INSPECTION PLAN
DOCK C (MIDDLE SECTION)

Drawn By: CCT	COLLINS ENGINEERS INC 7576 W. Victory Rd. Boise, ID 83709 (208) 297-5324 www.collinsengr.com	Date: 11/14/2023
Checked By: JTF		Scale: NTS
Project: 14994.00		Figure No.: I–05



NOTES:

(1) The finger docks between Slips 23 and 24 and between Slips 25 and 26 were unstable.

GENERAL NOTES

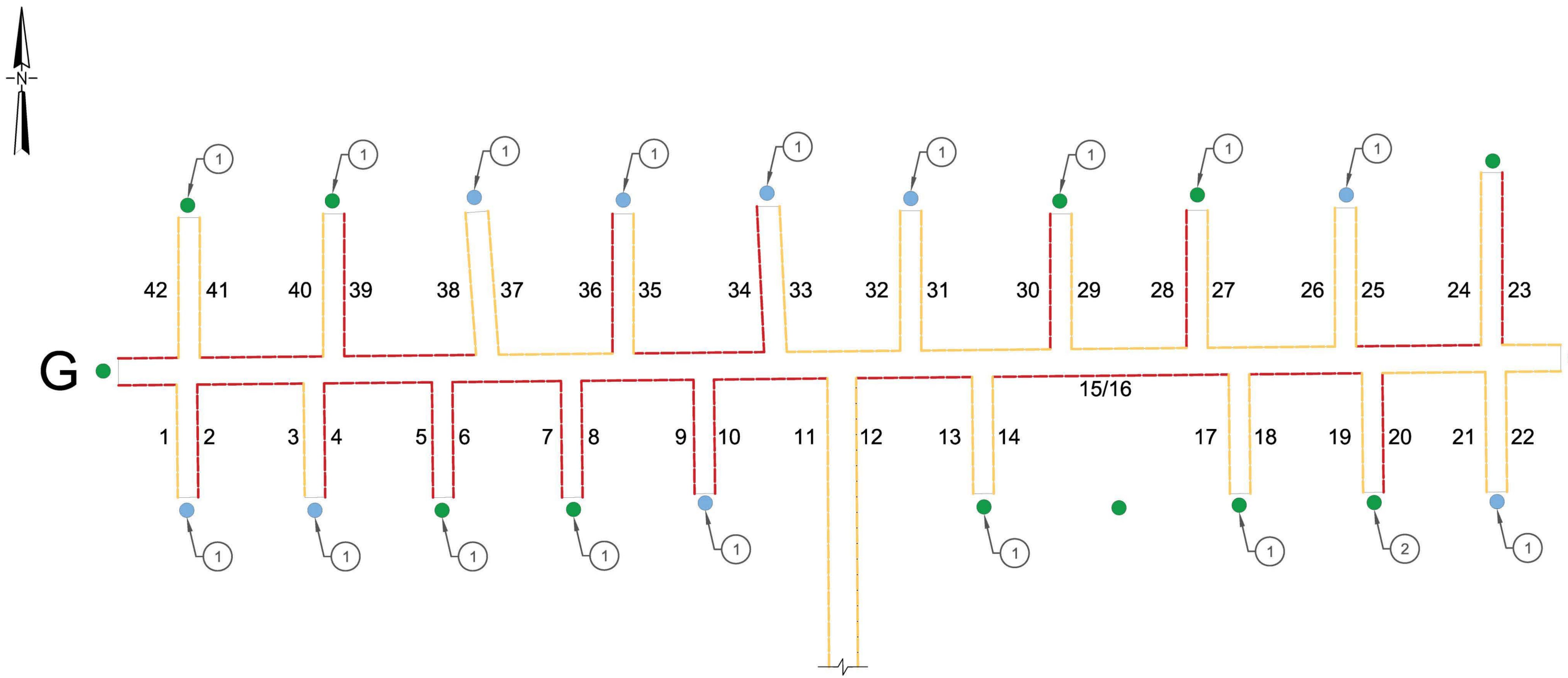
1. Docks C, G, and H were inspected on November 14, 2023. Docks A, B, M, and N, as well as the pumpout dock were inspected on November 15, 2023.
2. Color coding for condition states throughout the report are in accordance with the legend on Page T–01 and follow the ASCE MOP 130.

WARRENTON MARINA

UNDERWATER INSPECTION PLAN

DOCK C (EAST SECTION)

Drawn By: CCT	COLLINS ENGINEERS INC 7576 W. Victory Rd. Boise, ID 83709 (208) 297-5324 www.collinsengr.com	Date: 11/14/2023
Checked By: JTF		Scale: NTS
Project: 14994.00		Figure No.: I–06



NOTES:

(1) Several of the guide piles connected to the finger docks were connected via a steel chain.

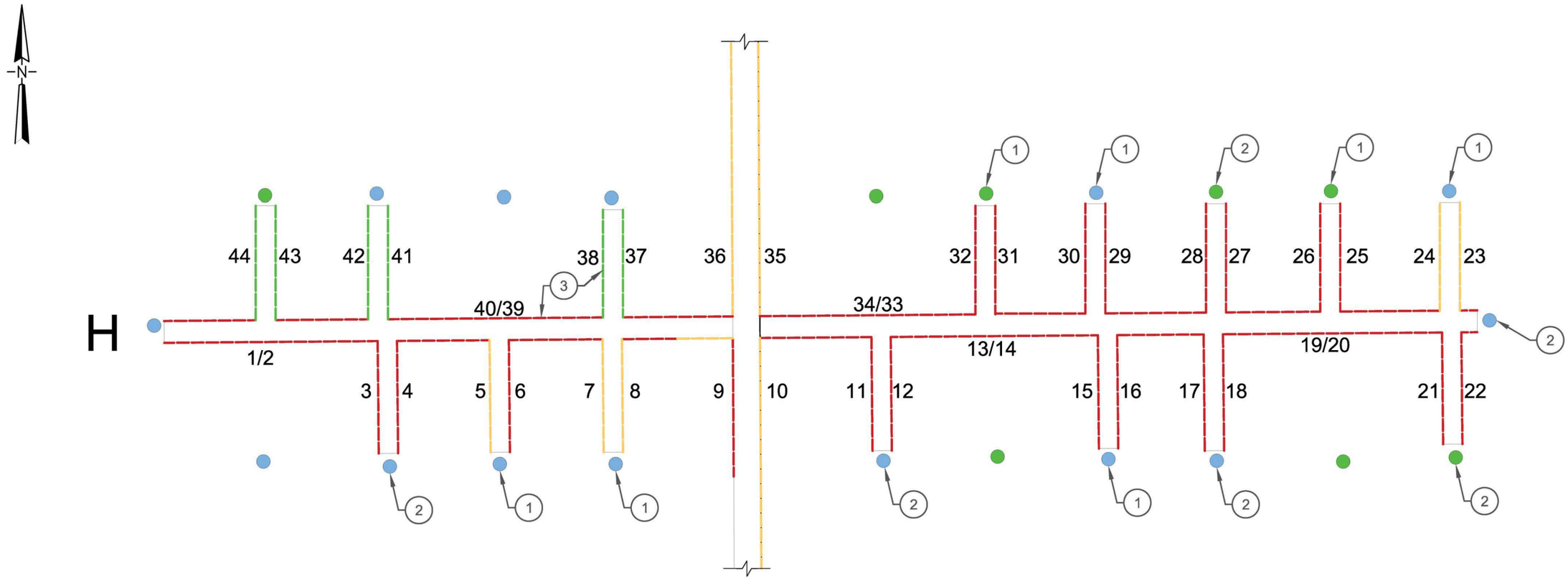
(2) Guide pile at the finger dock between slips 19 and 20 was connected to the finger dock via a steel tube.

GENERAL NOTES

1. Docks C, G, and H were inspected on November 14, 2023. Docks A, B, M, and N, as well as the pumpout dock were inspected on November 15, 2023.

2. Color coding for condition states throughout the report are in accordance with the legend on Page T-01 and follow the ASCE MOP 130.

WARRENTON MARINA		
UNDERWATER INSPECTION PLAN DOCK G		
Drawn By: CCT	COLLINS ENGINEERS INC. 7576 W. Victory Rd. Boise, ID 83709 (208) 297-5324 www.collinsengr.com	Date: 11/14/2023
Checked By: JTF		Scale: NTS
Project: 14994.00		Figure No.: I-07



NOTES:

1. Several of the guide piles connected to the finger docks were connected via a steel chain.
2. Several of the guide piles connected to the finger docks were connected via a U-bolt.
3. The area of the main dock at slips 39 and 40, as well as the finger dock between slips 37 and 38, were warped and uneven.

GENERAL NOTES

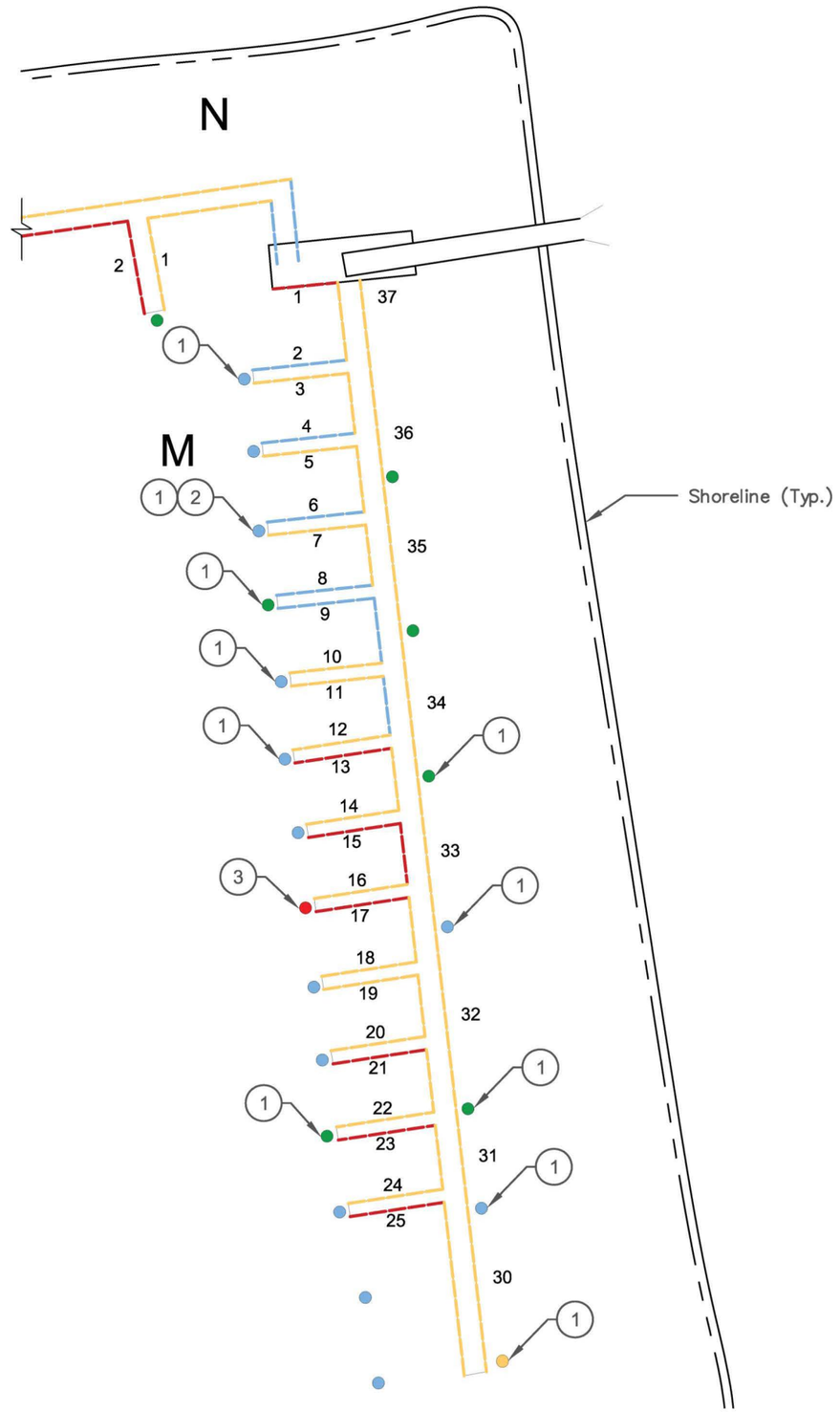
1. Docks C, G, and H were inspected on November 14, 2023. Docks A, B, M, and N, as well as the pumpout dock were inspected on November 15, 2023.
2. Color coding for condition states throughout the report are in accordance with the legend on Page T-01 and follow the ASCE MOP 130.

WARRENTON MARINA

UNDERWATER INSPECTION PLAN

DOCK H

Drawn By: CCT	COLLINS ENGINEERS INC 7576 W. Victory Rd. Boise, ID 83709 (208) 297-5324 www.collinsengr.com	Date:11/14/2023
Checked By: JTF		Scale: NTS
Project: 14994.00		Figure No.: I-08



NOTES:

1. Several of the guide piles connected to the finger docks were connected via a steel chain.
2. The guide pile at the end of the finger dock between slips 6 and 7 was cut off 5 feet below the waterline and then extended with a PVC pipe. The PVC pipe did not appear to be hollow, but it was not evident what it was filled with, if anything.
3. The guide pile at the end of the finger dock between slips 16 and 17 had severe heartwood rot.

GENERAL NOTES

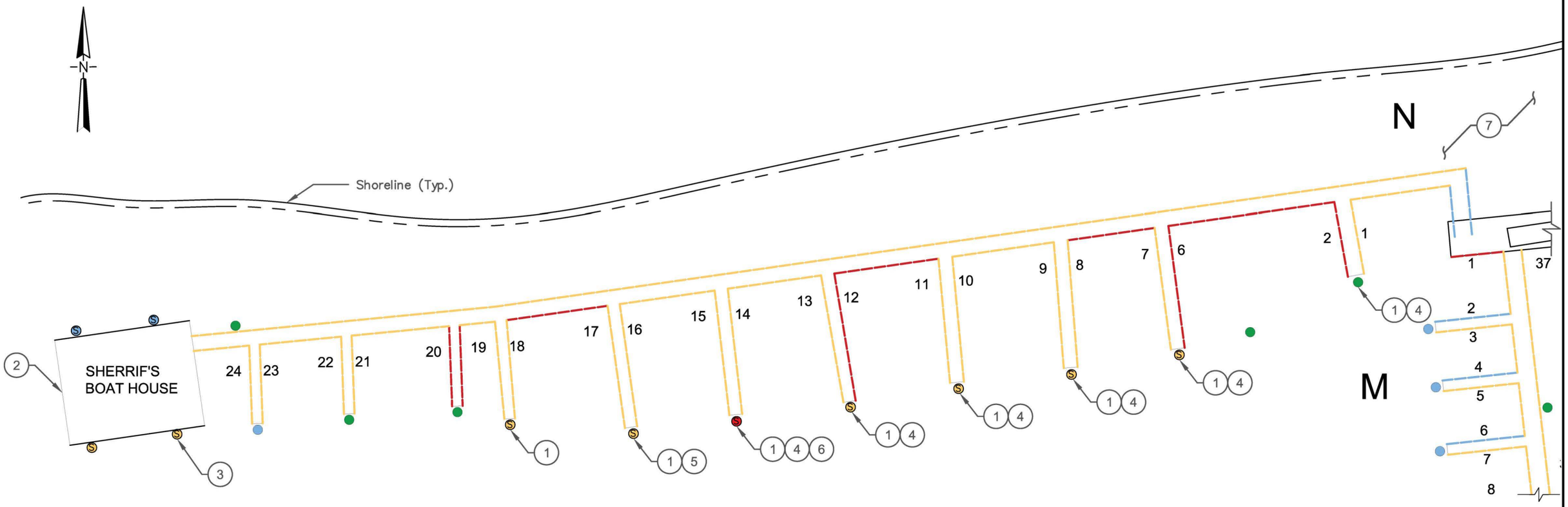
1. Docks C, G, and H were inspected on November 14, 2023. Docks A, B, M, and N, as well as the pumpout dock were inspected on November 15, 2023.
2. Color coding for condition states throughout the report are in accordance with the legend on Page T–01 and follow the ASCE MOP 130.

WARRENTON MARINA

UNDERWATER INSPECTION PLAN

DOCK M

Drawn By: CCT	COLLINS ENGINEERS INC 7576 W. Victory Rd. Boise, ID 83709 (208) 297-5324 www.collinsengr.com	Date: 11/15/2023
Checked By: JTF		Scale: NTS
Project: 14994.00		Figure No.: I–09



NOTES:

1. Several of the guide piles connected to the finger docks were connected via a steel chain.
2. The timber members supporting the Sherrif's Boat House were in good condition with no significant defects.
3. Ultrasonic thickness measurements taken at the southeast steel pile of the Sherrif's Boat House indicated up to 25% loss of section.
4. Several of the steel piles exhibited flaking corrosion.
5. Ultrasonic thickness measurements taken at the steel pile at the end of the finger dock between slips 16 and 17 indicated up to 43% loss of section.
6. The steel pile at the end of the finger dock between slips 14 and 15 exhibited a corrosion hole 6 feet above the channel bottom which measured approximately 1 foot high by 6 inches wide.
7. There was a cable in the water in the area where docks M and N meet. Due to safety concerns, this area was not inspected from the water

GENERAL NOTES

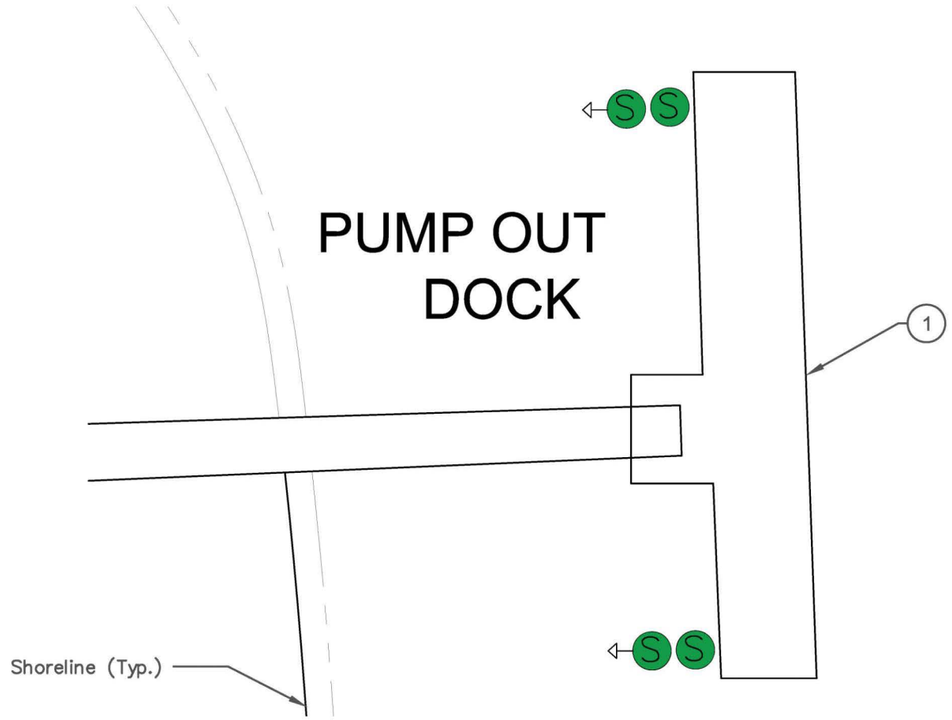
1. Docks C, G, and H were inspected on November 14, 2023. Docks A, B, M, and N, as well as the pumpout dock were inspected on November 15, 2023.
2. Color coding for condition states throughout the report are in accordance with the legend on Page T-01 and follow the ASCE MOP 130.

WARRENTON MARINA

UNDERWATER INSPECTION PLAN

DOCK C (WEST SECTION)

Drawn By: CCT	COLLINS ENGINEERS INC 7576 W. Victory Rd. Boise, ID 83709 (208) 297-5324 www.collinsengr.com	Date: 11/15/2023
Checked By: JTF		Scale: NTS
Project: 14994.00		Figure No.: I-09



NOTES:

(1) The concrete blocks comprising the pump out dock typically exhibited abrasion that was approximately 1/16 inch deep.

GENERAL NOTES

1. Docks C, G, and H were inspected on November 14, 2023. Docks A, B, M, and N, as well as the pumpout dock were inspected on November 15, 2023.
2. Color coding for condition states throughout the report are in accordance with the legend on Page T–01 and follow the ASCE MOP 130.

WARRENTON MARINA

UNDERWATER INSPECTION PLAN

PUMP OUT DOCK

Drawn By: CCT	COLLINS ENGINEERS INC 7576 W. Victory Rd. Boise, ID 83709 (208) 297-5324 www.collinsengr.com	Date: 11/15/2023
Checked By: JTF		Scale: NTS
Project: 14994.00		Figure No.: I–10

Appendix C
Damage Ratings for Timber and Steel Elements from ASCE MOP 130

Table 2-4. Damage Ratings for Timber Elements

Damage Rating		Existing Damage[a]	Exclusions [Defects Requiring Elevation to the Next Higher Damage Rating(s)]
NI	Not Inspected	• Not inspected, inaccessible, or passed by[b]	
ND	No Defects	• Sound surface material	
MN	Minor	• Checks, splits, and gouges less than 0.5 in. wide • Evidence of marine borers or fungal decay	Minor damage not appropriate if • Loss of cross section • Marine borer infestation • Displacements, loss of bearing, or connections
MD	Moderate	• Remaining diameter loss up to 15% • Checks and splits wider than 0.5 in. • Cross section area loss up to 25% • Corroded hardware • Evidence of marine borers or fungal decay, with loss of section	Moderate damage not appropriate if • Displacements, loss of bearing or connections

(Continued)

Table 2-4. Damage Ratings for Timber Elements *(Continued)*

Damage Rating		Existing Damage[a]	Exclusions [Defects Requiring Elevation to the Next Higher Damage Rating(s)]
MJ	Major	• Remaining diameter loss 15 to 30% • Checks and splits through full depth of cross section • Cross-section area loss 25 to 50%; heavily corroded hardware • Displacement and misalignments at connections	Major damage not appropriate if • Partial or complete breakage
SV	Severe	• Remaining diameter loss more than 30% • Cross section area loss more than 50% • Loss of connections and/or fully nonbearing condition • Partial or complete breakage	

[a]Any defect listed below is sufficient to identify relevant damage grade.
[b]If not inspected due to inaccessibility or passed by, note as such.

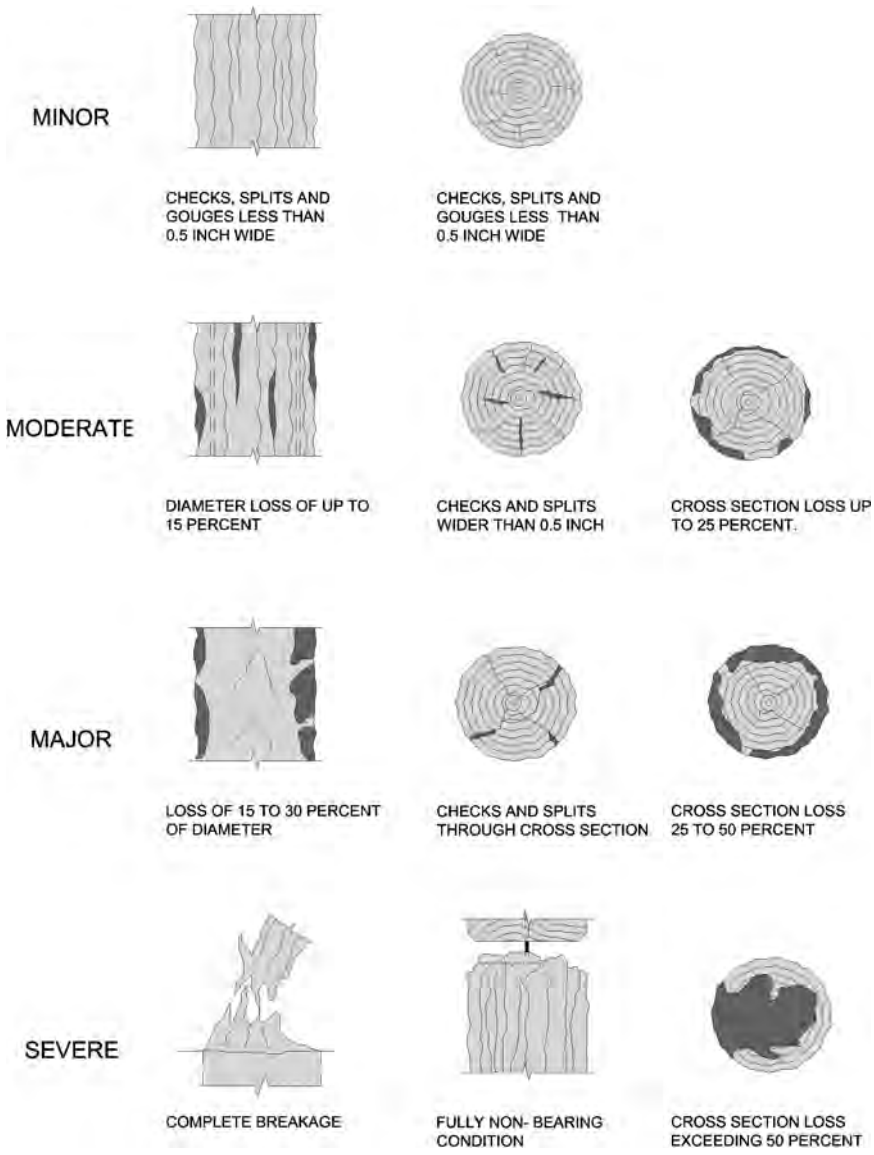


Fig. 2-2. Condition ratings for timber elements
Source: Courtesy of CH2M HILL, Inc. and COWI, Inc., reproduced with permission.

Table 2-5. Damage Ratings for Steel Elements

Damage Rating		Existing Damage[a]	Exclusions [Defects Requiring Elevation to the Next Higher Damage Rating(s)]
NI	Not Inspected	• Not inspected, inaccessible, or passed by[b]	
ND	No Defects	• Protective coating or wrap intact • Light surface rust • No apparent loss of material	
MN	Minor	• Protective coating or wrap damaged and loss of thickness up to 15% of nominal at any location • Less than 50% of perimeter or circumference affected by corrosion at any elevation or cross section • Loss of thickness up to 15% of nominal at any location	Minor damage not appropriate if • Changes in straight line configuration or local buckling • Corrosion loss exceeding fabrication tolerances (at any location)
MD	Moderate	• Protective coating or wrap damaged and loss of thickness 15 to 30% of nominal at any location • More than 50% of perimeter or circumference affected by corrosion at any elevation or cross section • Loss of thickness 15 to 30% of nominal at any location	Moderate damage not appropriate if • Changes in straight line configuration or local buckling • Loss of thickness exceeding 30% of nominal at any location

(Continued)

Table 2-5. Damage Ratings for Steel Elements *(Continued)*

Damage Rating		Existing Damage[a]	Exclusions [Defects Requiring Elevation to the Next Higher Damage Rating(s)]
MJ	Major	• Protective coating or wrap damaged and loss of nominal thickness 30 to 50% at any location • Partial loss of flange edges or visible reduction of wall thickness on pipe piles • Loss of nominal thickness 30 to 50% at any location	Major damage not appropriate if • Changes in straight line configuration or local buckling • Perforations or loss of wall thickness exceeding 50% of nominal
SV	Severe	• Protective coating or wrap damaged and loss of wall thickness exceeding 50% of nominal at any location • Structural bends or buckling, breakage and displacement at supports, loose or lost connections • Loss of wall thickness exceeding 50% of nominal at any location	

[a] Any defect listed below is sufficient to identify relevant damage grade.
[b] If not inspected due to inaccessibility or passed by, note as such.

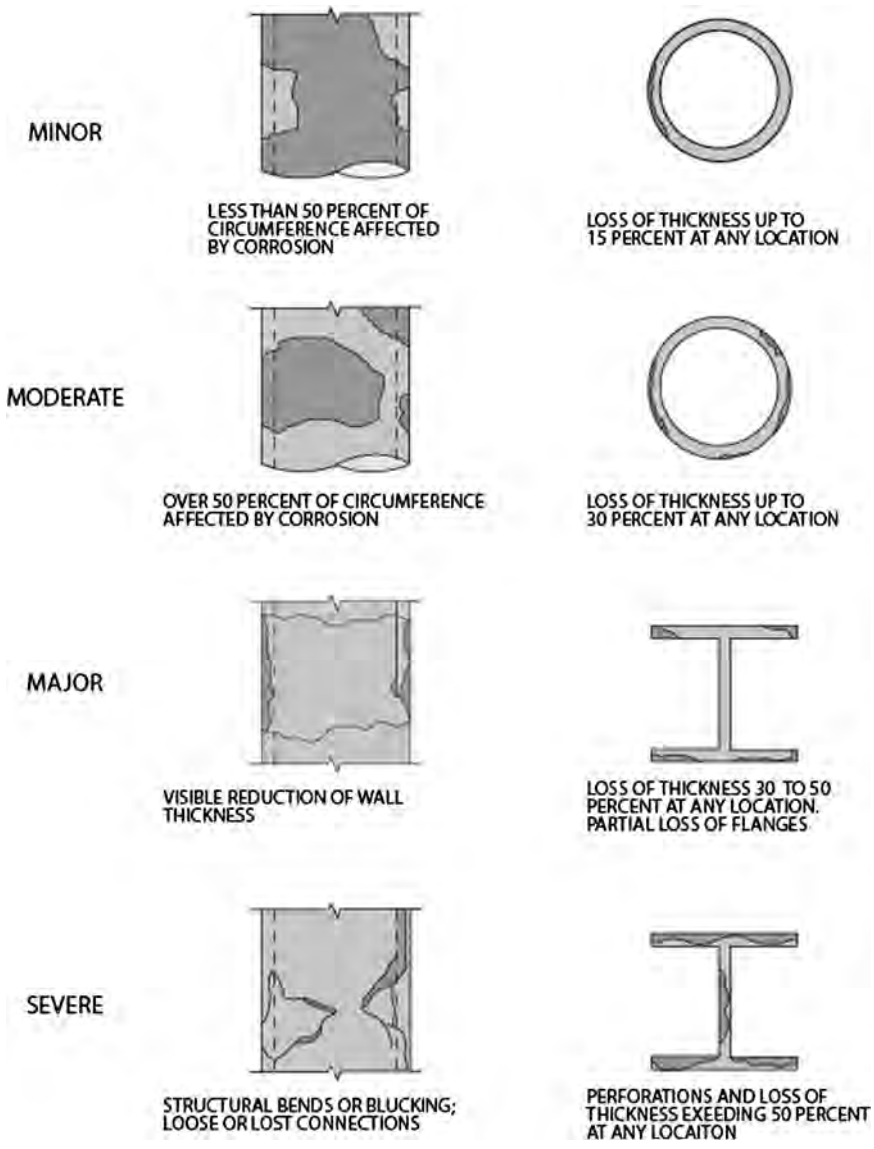


Fig. 2-3. Damage ratings for steel elements
Source: Courtesy of CH2M HILL, Inc. and COWI, Inc., reproduced with permission.

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