

PIER DETAILS

LEGEND

(10) EXISTING PILES - TO BE REPAIRED

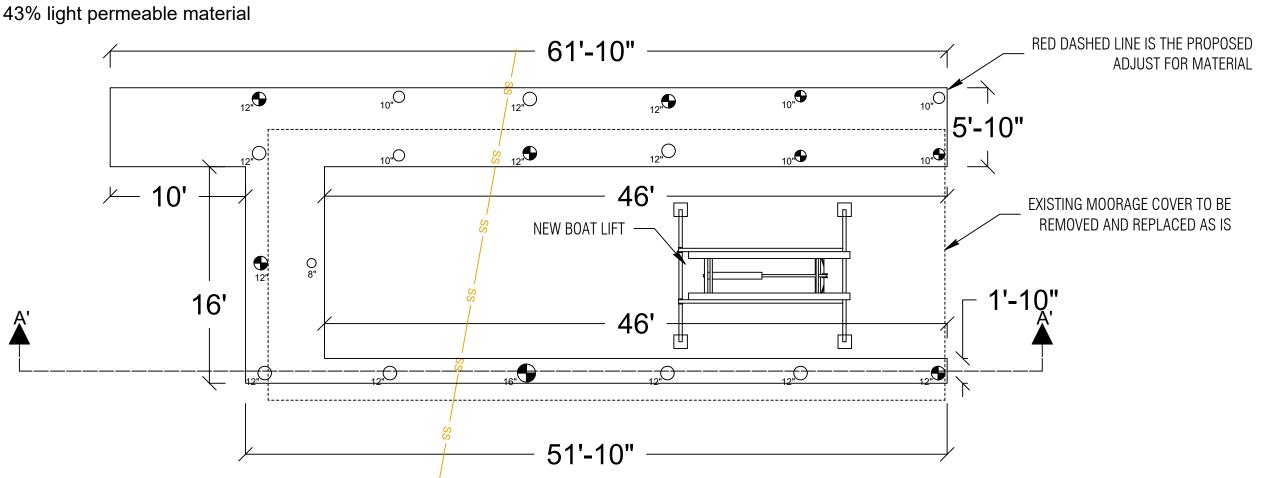
(11) EXISTING PILES - NO WORK TO BE DONE

(1) MOORING PILE TO BE REMOVED

Area: 538 sqft (total & over water)

Area: 538 sqft (new thruflow grated decking)

**Thruflow decking is 43% light permeable material



EXISTING MOOING PILE

TO BE REMOVED

PLAN VIEW

Prepared By:

Seaborn Pile Driving 1080 W Ewing St Seattle, WA 98119

Office: 206-236-1700

permits@seabornpiledriving.com www.seabornpiledriving.com

SEABORN

Purpose: The proposed dock is to provide for safe boat moorage and safe water recreational activities for a single family residence.

Scope of Work: We propose to repair (10) existing pile, remove (1) mooring pile, & install new thruflow decking on entire dock. Removing, repairing and replacing existing moorage cover for dock repair.

SHEET A4.0

Applicant:

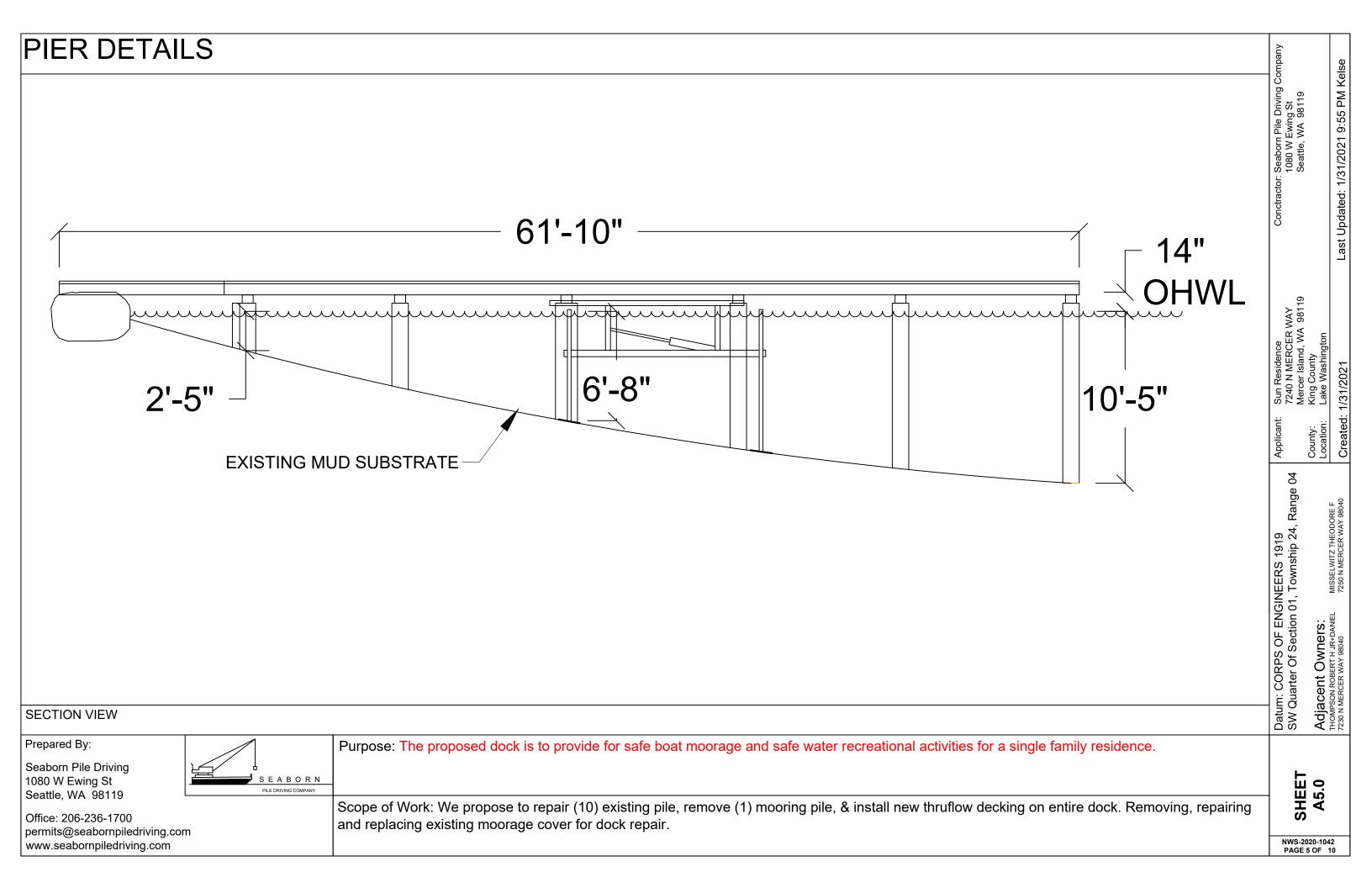
Datum: CORPS OF ENGINEERS 1919 SW Quarter Of Section 01, Township 24, Range 04

Last Updated: 1/31/2021 9:55 PM Kelse

EXISTING MOOING PILE

TO BE REPAIRED

NWS-2020-1042



BMP INFORMATION HEET HAG OF THE PARTY OF TH

DETAIL 1.1 DETAIL 1.2 Floatation OHWL Sediment Containment Curtain Weighted Chain

51'-1" TO

BMP NOTES:

A. Constant vigilance shall be kept for the presence of protected fish species during all aspects of the proposed action, particularly during in-water activities such as vessel movement, deployment of anchors & spuds, pile driving, dredging, and placement of gravels and other fill.

- 1. The project manager shall designate an appropriate number of competent observers to survey the project site and adjacent areas for protected species, including the presence of fish as conditions allow.
- 2. Visual surveys shall be made prior to the start of work each day, and prior to resumption of work following any break of more than an hour. Periodic additional visual surveys throughout the work day are strongly recommended.
- 3. All in-water work shall be done during the in-water work window for the waterbody. Where there is a difference between the USCOE and WDFW work windows, the overlap of the two shall apply.
- 4. All pile driving and extraction shall be postponed or halted when obvious aggregations or schooling of fish are observed within 50 yards of that work, and shall only begin/resume after the animals have voluntarily departed the area.
- 5. When piloting vessels, vessel operators shall operate at speeds and power settings to avoid grounding vessels, and minimize substrate scour and mobilization of bottom sediments.
- B. No contamination of the marine environment shall result from project-related activities.
- 1. Appropriate materials to contain and clean potential spills shall be stored and readily available at the work site and/or aboard project-related vessels.
- 2. The project manager and heavy equipment operators shall perform daily pre-work equipment inspections for cleanliness and leaks. All heavy equipment operations shall be postponed or halted should a leak be detected, and shall not proceed until the leak is repaired and the equipment is cleaned.
- 3. To the greatest extent practicable, utilize biodegradable oils for equipment that would be operated in or near water.
- 4. Fueling of land-based vehicles and equipment shall take place at least 50 feet away from the water, preferably over an impervious surface. Fueling of vessels shall be done at approved fueling facilities.
- 5. Turbidity and siltation from project-related work shall be minimized and contained through the appropriate use of erosion control practices, effective silt containment devices, and the curtailment of work during adverse weather and tidal/flow conditions.
- 6. All wastes shall be collected and contained for proper disposal at approved upland disposal sites appropriate for the material(s).
- 7. When removing piles and other similarly treated wood, containment booms must fully enclose the work area. Wood debris, oils, and any other materials released into lake waters must be collected, removed, and properly disposed of at approved disposal sites.
- 8. All in- and over-water wood cutting would be limited to the minimum required to remove the subject wood component, and all cutting work should be enclosed within floating containment booms.
- 9. When removing piles, no actions shall be taken that would cause adhering sediments to return to lake waters.
- 10. Above-water containment shall be installed around removed piles to prevent sediment laden waters from returning to lake waters.
- 11. Construction staging (including stocking of materials, etc.) will occur on the supply barge.

DETAIL 1.1 & 1.2

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Scope of Work: We propose to repair (10) existing pile, remove (1) mooring pile, & install new thruflow decking on entire dock. Removing, repairing and replacing existing moorage cover for dock repair.

SHEET A6.0

Adjacent (THOMPSON ROBE 7230 N MERCER W

Seaborn Pile Driving Company 1080 W Ewing St Seattle, WA 98119

Conctractor:

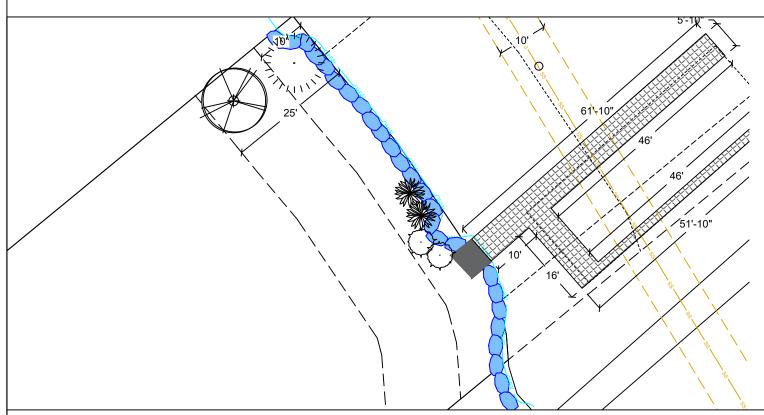
Sun Residence 7240 N MERCER WAY Mercer Island, WA 98119 King County Lake Washington

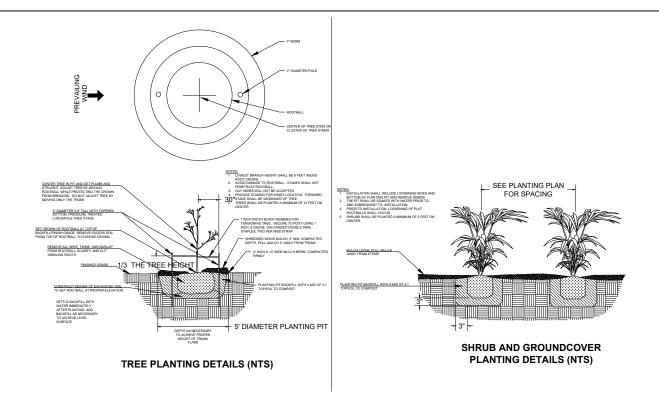
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PROPOSED MITIGATION





Notes:

- 1. Shrubs are show, and shall be planted, at least five feet on center. Trees are show, and shall be planted, at least ten feet to center.
- 2. The property owner will implement and abide by the shoreline planting plan. The plants shall be installed before or concurrent with the work authorized by this permit. A report, as-built drawing and photographs demonstrating the plants have been installed or a report on the status of project construction will be submitted to the U.S. Army Corps of Engineers, Seattle District, Regulatory Branch, within 12 months from the date of permit issuance. This reporting requirement may be met by completing and submitting a U.S. Army Corps of Engineers approved Report for Mitigation Work Completion form.
- 3. The property owner will maintain and monitor the survival of installed shoreline plantings for five years after the U.S. Army Corps of Engineers accepts the as-built report. Installed plants shall achieve 100% survival during monitoring Years 1 and 2. Installed plants shall achieve at least 80% survival during monitoring Years 3, 4 and 5. Percent survival is based on the total number of plants installed in accordance with the approved riparian planting plan. Individual plants that die will be replaced with native riparian species in order to meet the survival performance standards.
- 4. The property owner will provide annual monitoring reports for five years (Monitoring Years 1-5). Each annual monitoring report will include written and photographic documentation on plant mortality and replanting efforts and will document whether the performance standards are being met. Photos will be taken from established points and used repeatedly for each monitoring year. In addition to photos at designated points, photo documentation will include a panoramic view of the entire planting area. Submitted photos will be formatted on standard 8 1/2 x 11" paper, dated with the date the photo was taken, and clearly labeled with the direction from which the photo was taken. The photo location points will be identified on an appropriate drawing. Annual shoreline planting monitoring reports will be submitted to the U.S. Army Corps of Engineers, Seattle District, Regulatory Branch, by November 31 of each monitoring year. This reporting requirement may be met by completing and submitting a U.S. Army Corps of Engineers approved Mitigation Planting Monitoring Report form.

SEABORN

PROPOSED PLANTING SPECIES/QUANTITIES

SYMBOL	LATIN NAME	COMMON NAME	QTY	SIZE
	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	1	3 ft
	PINUS CONTORTA 'CONTORTA'	SHORE PINE	1	3 ft
	CORNUS SERICEA	DOGWOOD	2	1 Gallon
	RIBES SANGUINEUM	RED FLOWERING CURRANT	2	1 Gallon

PLANTS: Shrubs to be installed 5ft on center and trees to be installed 10ft on center.

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Office: 206-236-1700

permits@seabornpiledriving.com www.seabornpiledriving.com Purpose: The proposed dock is to provide for safe boat moorage and safe water recreational activities for a single family residence.

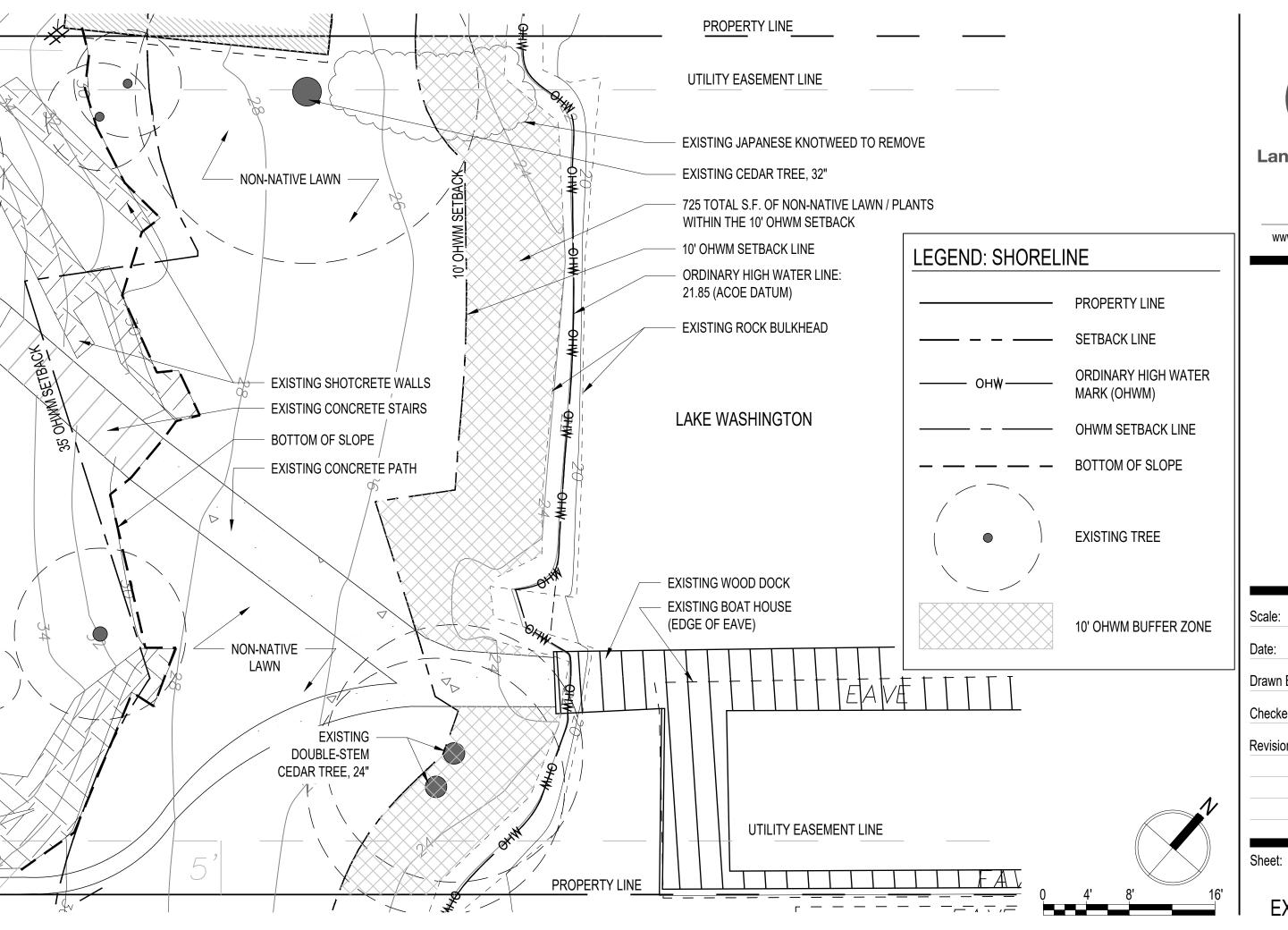
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SHEET A7.0

Adjacent (THOMPSON ROBE 7230 N MERCER W

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NWS-2020-1042





1512 Alaskan Way Seattle, WA 98101 206 443 2120

www.landmorphology.com

SUN RESIDENCE 7240 NORTH MERCER WAY MERCER ISLAND, WA 98040

1/8" = 1'-0" 10/01/2020 Drawn By: MJ Checked By: RF Revisions:

L-1.0 EX. VEG. PLAN

STRUCTURAL NOTES

GENERAL REQUIREMENTS

BUILDING CODE & REFERENCE STANDARDS: The "International Building Code" (IBC), 2015 Edition, as adopted and modified by the City of Mercer Island, governs the design and construction of this project. Reference to a specific section in the Code does not relieve the contractor from compliance with the entire materials reference standards noted below. The latest edition of the materials reference standards shall be used.

SCOPE OF STRUCTURAL WORK: Dock repair project involving the repair of (19) existing piles and redecking of the entire dock

<u>DEFINITIONS</u>: The following definitions apply to these general notes:

• "Structural Engineer of Record" (EOR) - The Structural Engineer who is legally responsible for stamping & signing the structural documents for the project. The EOR is responsible for the design of the Primary Structural System.

STRUCTURAL DETAILS: The structural drawings are intended to show the general character and extent of the project and are not intended to show all

STRUCTURAL RESPONSIBILITIES: The EOR is responsible for the strength and stability of the Primary Structure in its completed state.

CONTRACTOR RESPONSIBILITIES: The contractor is responsible for the means and methods of construction and all job-related safety standards such as OSHA and WISHA. The contractor is responsible for the strength and stability of the structure during construction and shall provide temporary shoring, bracing and other elements required to maintain stability until the structure is completed. It is the contractor's responsibility to be familiar with the work required in the construction documents and the requirements for executing it properly.

DISCREPANCIES: In case of discrepancies between these general notes, the contract drawings and specifications, and/or reference standards, the EOR shall determine which shall govern. Discrepancies shall be brought to the attention of the EOR before proceeding with the work. Accordingly, any conflict in or between the Contract Documents shall not be a basis for adjustment in the Contract Price.

SITE VERIFICATION: The contractor shall verify all dimensions and conditions at the site prior to fabrication and/or construction. Conflicts between the drawings and actual site conditions shall be brought to the attention of the EOR before proceeding with the work. All underground utilities shall be determined by the Contractor prior to excavation or drilling. Any utility information shown on the drawings and details is approximate and not necessarily

ADJACENT UTILITIES: The contractor shall determine the locations of all adjacent underground utilities prior to pile placement. Any utility information shown on the drawings and details is approximate and not necessarily complete.

CONSTRUCTION LOADS: Loads on the structure during construction shall not exceed the design loads or the capacity of the partially completed

WIND DESIGN: Wind load is determined using Chapter 27 of ASCE 7-10 in accordance with IBC Section 1609 with the following factors:

Basic Wind Speed (3-Second Gust) Wind Importance Factor Iw = 1.0 Risk Category = II Exposure Category = D Analysis Procedure - ASCE 7-10 Chapter 28. P = 21.08 PSF (Unfactored) Max Sail Area = 110 ft^2 or 20'x5.5' (Assumed) Max Load = 0.873 K/Pile (ASD) Dock (Live) 40 PSF Dock (Snow) 20 PSF

SUBMITTALS:

NON-STRUCTURAL COMPONENTS: Design, detailing and anchorage of all nonstructural components shall be in accordance with ASCE 7-10, Chapter 13 and the project specifications. Nonstructural components designed by others shall not induce torsional loading into supporting steel structural members without additional bracing of those members to eliminate torsional forces. Torsional bracing shall be designed by the nonstructural component designer and approved by the EOR. Anchorage to the primary structure is per the bidder-design contractor or supplier.

TESTS & INSPECTIONS

<u>INSPECTIONS:</u> All construction is subject to inspection by the Building Official in accordance with IBC Sec 110. The contractor shall coordinate all required inspections with the Building Official. Submit copies of all inspection reports to the Architect/EOR for review. The Building Official may accept inspection of and reports by approved inspection agencies in lieu of Building Official's inspections. The contractor shall obtain approval of Building Official to use the third-party inspection agency and contractor shall alert the Architect/EOR as such.

Soils & Foundations During driving and testing of piles.

PILES

REFERENCE STANDARDS: Conforms to IBC Sections 1810.3.2.4.

SUBMITTALS: Conform to drawings indicating location, steel strength, diameter, and minimum embedment length.

MATERIALS: Conform to notes for STRUCTURAL STEEL and WOOD FRAMING, this sheet.

SIZE: Pile size shall be as noted on the framing plan drawings.

CAPACITY: Pile capacities shall be as follows: Dock Piles - Lateral loading per tributary area per pile layout on dock for wind pressures, and moisture exposure for appropriate use based on the method of preservative treatment of the wood.

STRUCTURAL STEEL

DESIGN STANDARDS: Structural steel for this project is designed in accordance with the latest edition of the AISC Steel Construction Manual.

REFERENCE STANDARDS: Conform to: (1) AISC "Code of Standard Practice for Steel Buildings & Bridges." (2) RCSC "Specification for Structural Joints using ASTM A325 or A490 Bolts." (3) AWS D1.1 "Structural Welding Code - Steel."

SUBMITTALS:

(1) Submit shop drawings in accordance with AISC Specification Sec M1 "Shop and Erection Drawings."

MATERIALS: Structural WF Shapes ASTM A992, Fy = 50 ksi Other Structural Shapes ASTM A36, Fy = 36 ksi ASTM A36, Fy = 36 ksi Bars & Plates ASTM A53, Grade B, Fy = 35 ksi Steel Pipe ASTM A307 Bolts in Wood ASTM A563 or ASTM A194, Grade 2H Washers (flat or beveled) ASTM F436 Welding Electrodes E70XX, 70 ksi, low hydrogen, typical

WELDING: Conform to AWS D1.1, D1.3 & D1.8. Welders shall be certified in accordance with AWS and WABO requirements. Use E70 electrodes of type required for materials to be welded.

FABRICATION/ERECTION: Conform to AISC Specification Sec M2 "Fabrication," AISC Code Sec 6 "Fabrication and Delivery" and AISC Code Sec 8 "Quality Control." The fabricator and erector shall maintain a quality control program to the extent deemed necessary so that all of the work is performed in accordance with this Code, the AISC Specification, contract documents, and project specifications.

SHOP PAINTING: Conform to AISC 360, AISC Specification Sec M3, and AISC Code Sec 6.5. Do not paint surfaces to be field welded or where slip-critical bolts are specified. All other interior steel shall be painted with one coat of grey shop primer. All exposed exterior steel shall be painted with an exterior multi-coat system as per the Architect or project specifications or galvanized per section below. Field touch-up painting shall be with primer for exposed interior surfaces and as per the Architect or project specifications for exposed exterior surfaces.

GALVANIZING: Where required, all exposed steel outside the building envelope shall be hot-dipped galvanized. Apply field touch-ups per project specifications. It is acceptable for the contractor to use epoxy coated steel members in lieu of galvanized steel.

ERECTION: Conform to AISC Specification Sec M4 "Erection" and AISC Code Sec 7 "Erection." Steel work shall be carried up true and plumb within the limits defined in AISC Code Sec 7.11.

BRACING: The contractor shall provide temporary bracing by AISC Specification Sec M4.2 "Bracing" and AISC Code Sec 7.10 "Temporary Support of Structural Steel Frames."

WOOD FRAMING

REFERENCE STANDARDS: Conform to:

(1) IBC Chapter 23 "WOOD."

(2) NDS and NDS Supplement - "National Design Specification for Wood Construction."

ALTERNATES: Alternates for specified item may be submitted to the EOR for review. Contractor shall submit a current ICC-ESR/IAPMO-ER report identifying that an alternative component has the same or greater load capacity than the specified item.

<u>IDENTIFICATION</u>: All sawn lumber and pre-manufactured wood products shall be identified by the grade mark or a certificate of inspection issued by the certifying agency.

MATERIALS:

Sawn Lumber: Conform to grading rules of WWPA, WCLIB, or NLGA. Finger jointed studs acceptable at interior non-structural walls only.

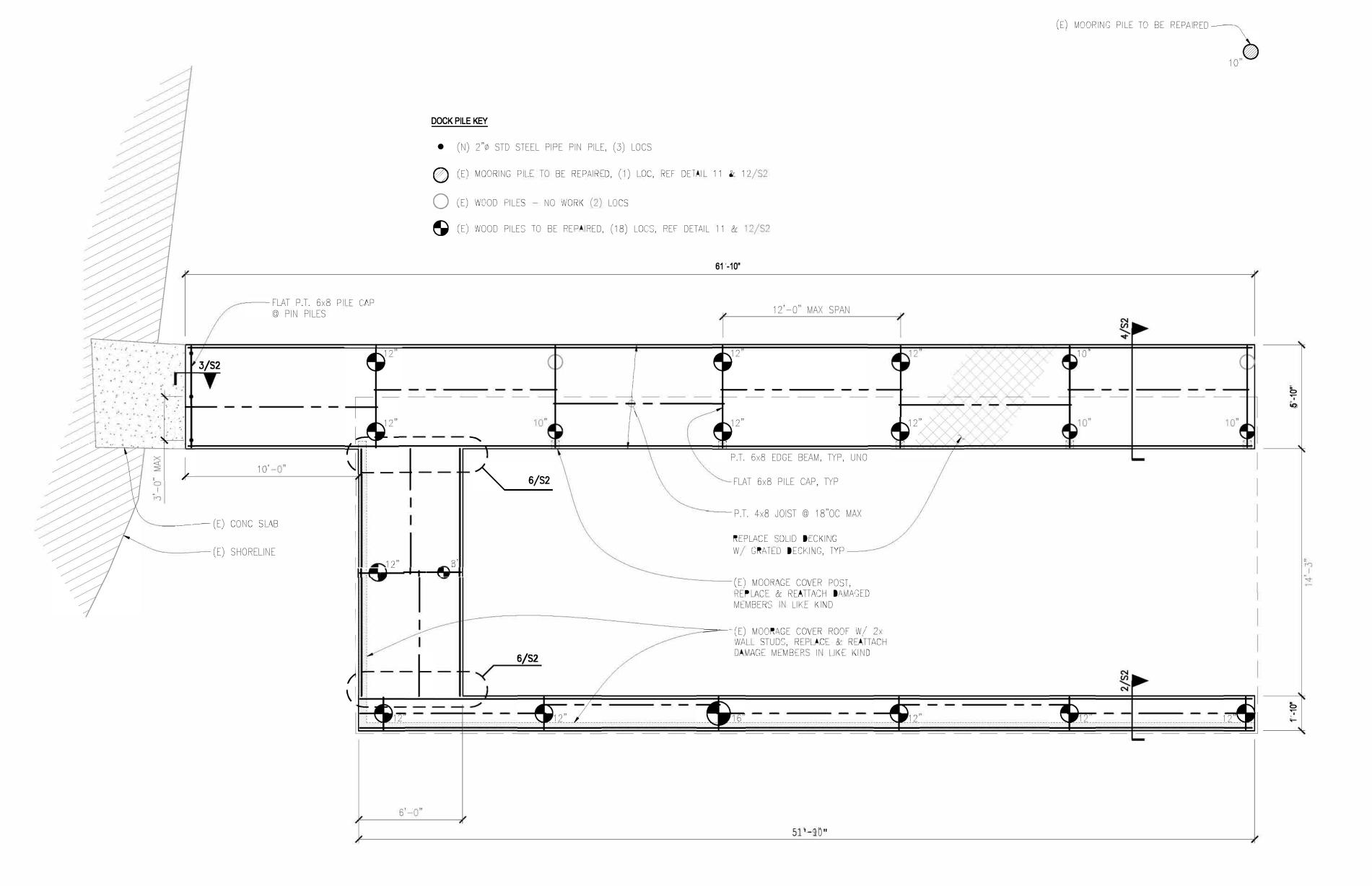
No. 1 Joists, Ledger 2x, 4x 5 1/8 x 10 ½ AC/AC GLB 20F-V12 All Diameter Pacific Coast DF

Lag Bolts/Thru-Bolts: Conform to ASTM A307. Provide plate washers under the heads and nuts of all bolts and lag screws bearing on wood.

MOISTURE CONTENT: Wood material used for this project shall have maximum moisture content of 19%.

PRESERVATIVE TREATMENT: Wood materials are required to be "treated wood" under certain conditions in accordance with IBC Sec 2304.12 "Protection against decay and termites." Conform to the appropriate standards of the American Wood-Preservers Association (AWPA) for sawn lumber, glued laminated timber, round poles, wood piles, and marine piles. Follow American Lumber Standards Committee (ALSC) quality assurance procedures. Products shall bear the appropriate mark.

METAL CONNECTORS/PT WOOD: All metal hardware and fasteners in contact with pressure treated lumber shall be stainless steel Type 316L. At the Owner's risk and discretion, hot-dipped galvanized metal hardware and fasteners may be investigated for use in lieu of stainless steel provided that the finish has a minimum zinc content of at least 1.85 oz./SF and its use is coordinated by the Contractor and Wood Supplier for the expected environment and moisture exposure for appropriate use based on the method of preservative treatment of the wood.



D CCK FRAMING PL AN SC AE: $\frac{1}{4}$ " = 1'-0"



ENGINEE

PROJECT #: 20-940 DRAWN BY: BGJ DESIGNED BY: MWD DESCRIPTION 11.02.2020 PERMIT

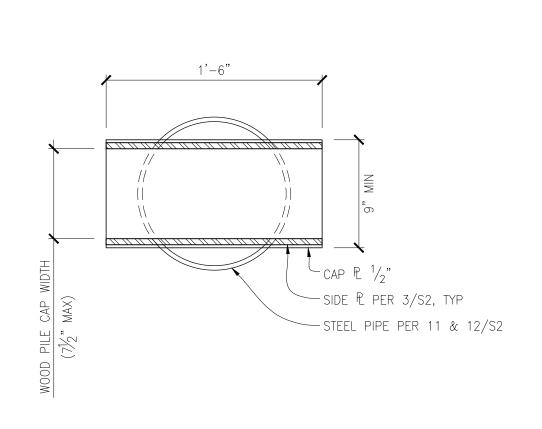
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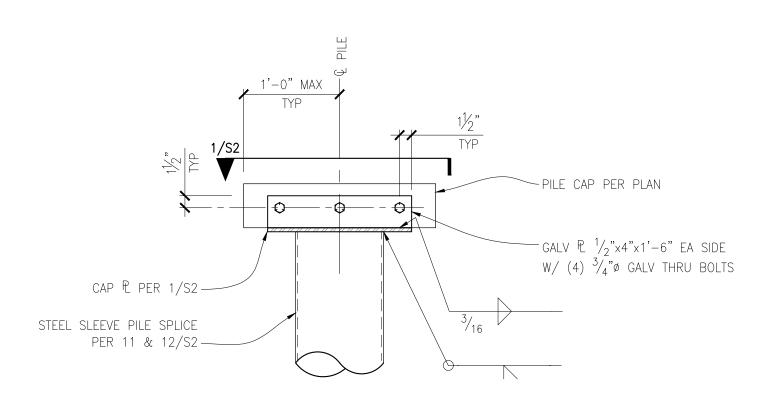
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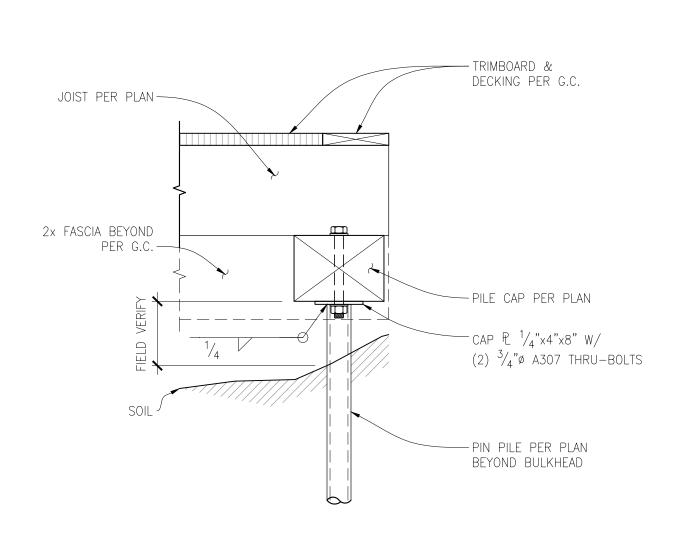
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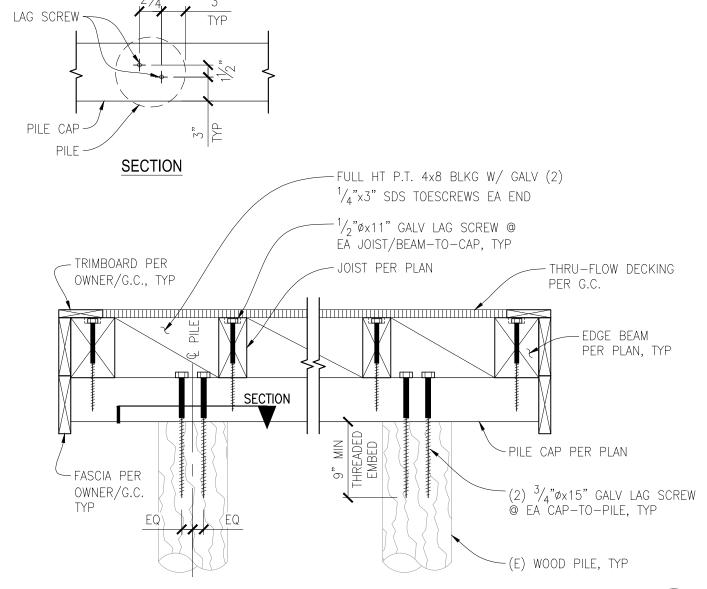
STRUCTURAL **GENERAL NOTES** PLAN

SHEET NUMBER:









PLAN VIEW: AT STEEL CAP

SCALE: $1\frac{1}{2}$ " = 1'-0"



PIER FRAMING AT BULKHEAD

SCALE: NTS

TYPICAL DOCK SECTION AT EXIST WOOD PILES

SCALE: NTS

Jest Specific Specifi

7240 N MERCER WAY MERCER ISLAND, WA 98119

SUN DOCK
DOCK REPAIR

PROJECT #:

DESIGNED BY:

11.02.2020 PERMIT

JURISDICTIONAL STAMP:

SHEET TITLE:

DRAWN BY:

DATE:

20-940

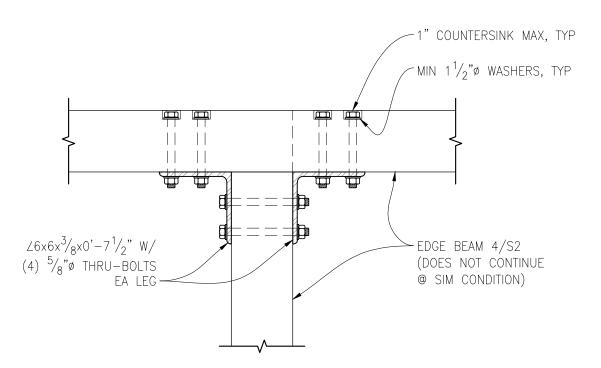
BGJ

MWD

DESCRIPTION

DEI
DIBBLE ENGINEERS INC
www.dibbleengineers.com
1029 Market Street, Kirkland, WA 98033
425.828.4200

TYPICAL ANGLE FACE





STEEL SLEEVE REPAIR					
PILE DIAMETER (IN)	# BOLTS	"H" MAX FROM TOP OF SPLICE			
	3	1'-11"			
8	4	3'-1"			
	5	4'-3"			
	3	2'-7"			
10	4	4'-0"			
	5	5'-5"			
	3	3'-3"			
12 & GREATER	4	5'-0"			
	5	6'-8"			

NOTES:

1. MAX PILE LOAD = 1091#/PILE (BOAT LOAD PARALEL TO DOCK).

CONTACT DEI IF BOAT SIZE EXCEEDS GSN MAXIMUM ALLOWABLE.

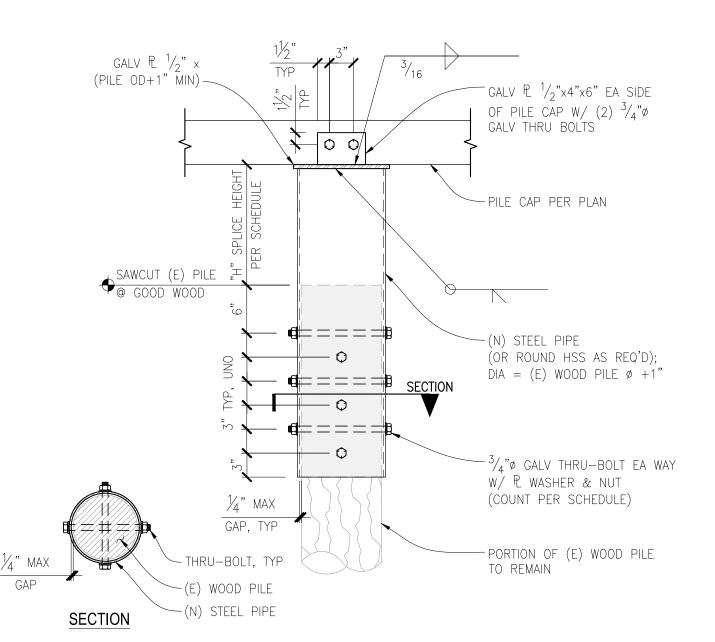
2. MINIMUM BOLT SPACING = 3"

STEEL SPLICE TABLE					
PILE DIAMETER (IN)	# BOLTS IN (E) WOOD PILE	"H" MAX FROM TOP OF SPLICE			
	2	2'-3"			
8	3	3'-5"			
0	4	4'-7"			
	5	5'-9"			
	2	2'-10"			
10	3	4'-3"			
10	4	5'-9"			
	5	7'-2"			
	2	3'-5"			
12 & GREATER	3	5'-2"			
12 & SINLATEIN	4	6'-10"			
	5	8'-7"			

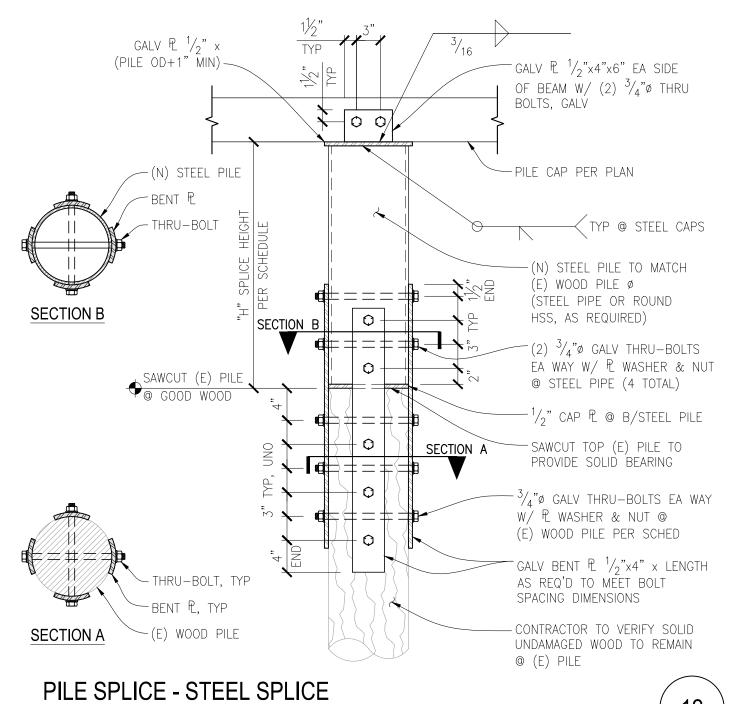
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2. MINIMUM BOLT SPACING = 3"







SCALE: N.T.S.

SHEET NUMBER:

STRUCTURAL

SECTIONS & DETAILS

020 Projects/20-940 Sun Dock/CADD/20-940 S2 (Details),dwg. 11/2/2020 12:00:33 PM, bjohnson