


**MC** OLYMPIA WASHINGTON  
 MIC SOLARID 360-754-9339

<p><b>PURPOSE:</b> The proposed repair of the dock is to provide for safe boat moorage for the owners' personal boats.</p>	<p><b>PREPARED BY:</b>          JACOB BAWDEN          OF SEABORN PILE DRIVING          9311 SE 36TH ST, SUITE 204          MERCER ISLAND, WA 98040          OFFICE: 206-236-1700          JACOB@SEABORNPILEDIVING.COM          WWW.SEABORNPILEDIVING.COM</p> 	<p><b>PROPOSED :</b> Normal maintenance on an existing community pier by repairing two wood piles and replacing the solid wood decking over the entire pier.</p>		
<p><b>DATUM:</b> CORPS OF ENGINEERS 1919          NE QUARTER OF SECTION 24, TOWNSHIP 24, RANGE 04  <b>ADJACENT OWNERS:</b>          MOSSAFER ALBERT N-TRUSTEE EE          5063 84TH AVE SE          MERCER ISLAND, WA 98040          GORSKI DONALD J+MARY ANN          5045 FOREST AVE SE          MERCER ISLAND, WA 98040</p>		<p><b>IN:</b> LAKE WASHINGTON  <b>AT:</b> 5087 84th Ave SE, Mercer Island, WA 98040  <b>COUNTY:</b> KING  <b>LAT:</b> 47.55726 <b>LONG:</b> -122.23064  <b>CREATED:</b> 07/30/2018 <b>REVISED:</b> 2/26/2019</p>	<p><b>APPLICANT:</b> JACOB BAWDEN          SEABORN PILE DRIVING COMPANY          9311 SE 36th ST, SUITE 204          MERCER ISLAND, WA 98040</p>	<p><b>SHEET</b>  <b>A4.0</b></p>

19299  
 1 of 2



**STRUCTURAL NOTES**

**General Notes:**

Design a fixed pier dock piling for various wind, wave, and vertical load conditions.  
 All construction shall conform to the applicable portions of the latest edition of the International Building Code except where noted.

**Design Criteria:**

- 1. Live Load = 12.5 PSF (Snow)  
= 60 PSF (Pier)
- 2. Dead Load = 12 PSF (Floor)
- 3. Wind = 2015 IBC Exposure D @ 110 mph (LRFD), 85 MPH (ASD), 3 second gust  
= 70 MPH Sustained (ASD)
- 4. Wave =  
Fetch = 2.5 Miles  
Wave Height = 3.3 ft  
Wave Period = 3.2 sec  
Wave Length = 41 ft  
Wave Acceleration 8.14 ft/sec/sec
- 5. Earthquake = 2015 IBC,  
S<sub>s</sub> = 1.435 Site Class D  
IE = 1.0  
Seismic Design Category D  
SDS = 0.956  
R = 1.5 I Timber Columns  
ρ = 1.3 Non-Redundant Structure  
C<sub>s</sub> = SDS I/R  
V = ρ C<sub>s</sub> W  
V = 0.829W for Load Factor Design  
C<sub>s</sub> = SDS I / (1.4R)  
V = 0.580W for Allowable Stress Design
- 6. Soil = 400 PCF, Passive Pressure
- 7. Moored Boat = 25' Long, 8000 #, avg height above wl 6'

**Steel:**

- 1. All steel shall be ASTM A36 except as noted.
- 2. Structural pipe shall be ASTM A53 type S.
- 3. All bolts shall be ASTM A-307, except as noted.
- 4. Anchor bolts shall be ASTM F1554 Gr. 36.
- 5. Welding shall be by AWS certified welders with E70 electrodes in accordance with AWS D1.1-75.
- 6. All steel members and parts exposed to weather or in contact with the ground shall be galvanized per ASTM A-123 with 1.25 oz. of zinc speller per square foot of contact area. All other steel surfaces shall be shop painted with two coats of red oxide primer after fabrication. Columns and other steel parts placed below grade and exposed to earth shall be painted with two coats of coal tar from the base to 6 inches above grade; such coating to be in addition to the galvanized coating.

**Carpentry:**

- 1. Structural framing shall be #2 Douglas Fir.
- 2. 6X Timber shall be #1 Douglas Fir.
- 3. 2X joists shall be kiln dried and stored in a dry area prior to installation.

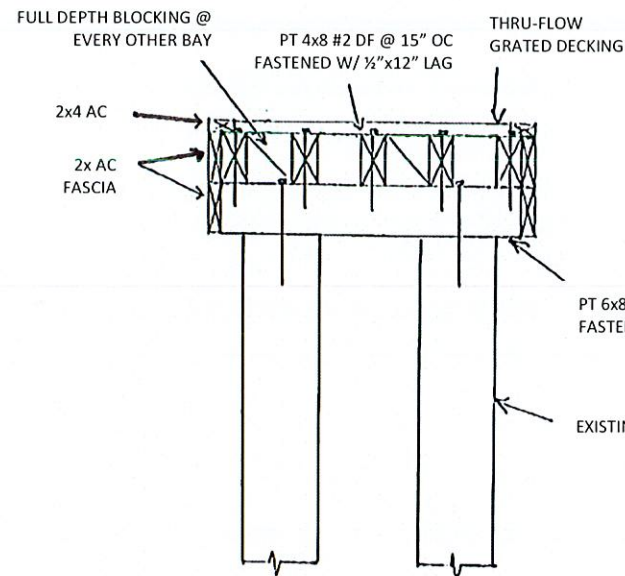
**Hardware:**

All connection hardware shall be Simpson "Strong Tie", unless noted otherwise.

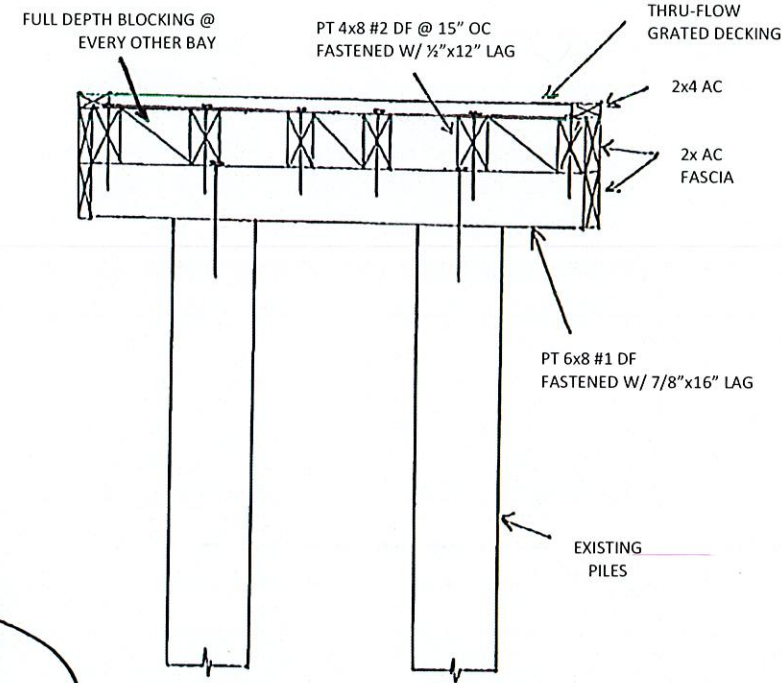
Connection hardware exposed to weather or in contact with the ground or pressure treated wood shall be galvanized per ASTM A-123 with 1.25 oz. of zinc speller per square foot of contact area.

**CAUTION**

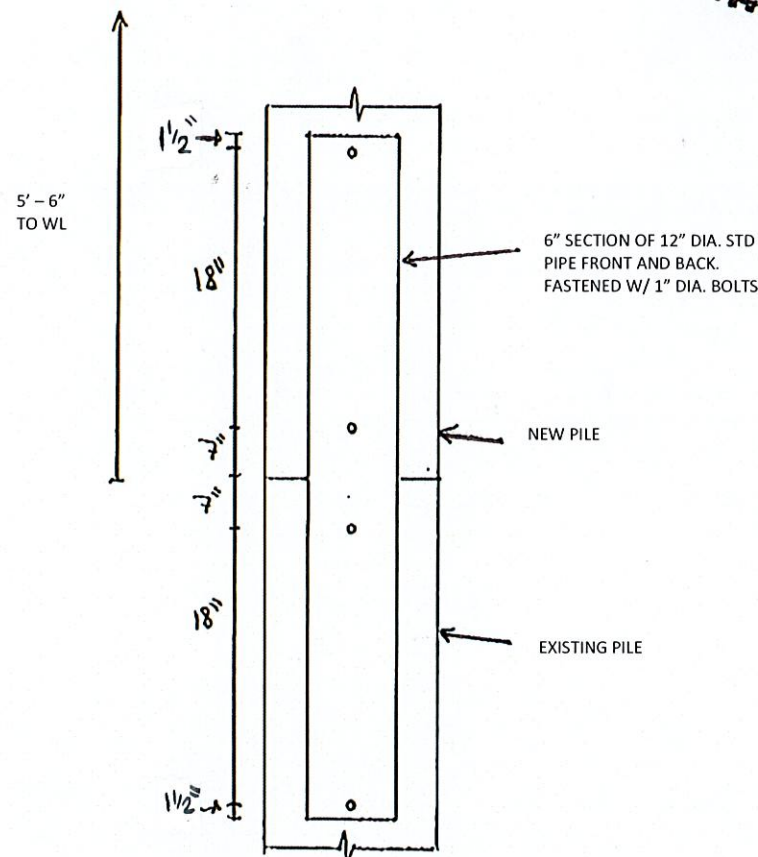
CONTRACTOR TO FIELD VERIFY ALL CONDITIONS AND ALL ELEVATIONS.



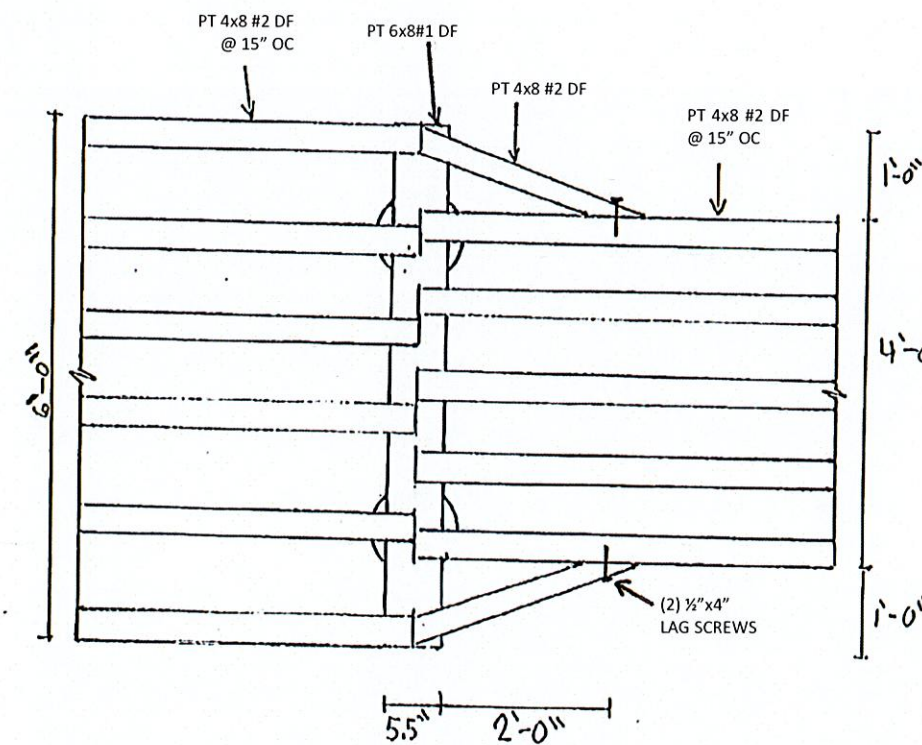
3 4' PIERSECTION



1 6' PIERSECTION



4 TYPICAL PILE REPAIR



2 FRAMING @ TRANSITION

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NO.	REVISION	DATE

**STRUCTURAL NOTES & DETAILS**  
 Project: FALOUJIST COMMUNITY DOCK REPAIR  
 5067 64TH AVE  
 MERCER ISLAND, WA 98040  
 FOR: SEABORN PILE DRIVING

Checked by: JAG  
 Created by: JAG  
 Quoted by: JAG  
 Date:  

Project Number: 19299