

THE APPROVED CONSTRUCTION PLANS, DOCUMENTS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

FULL SIZED LEDGIBLE COLOR PLANS ARE REQUIRED TO BE PROVIDED BY THE PERMITEE ON SITE FOR INSPECTION



SHBTC Water Heater Support  
1019 39<sup>th</sup> Ave SE, Suite 250  
Puyallup, WA 98374

Approval of submitted plans is not an approval of omissions or oversights by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable codes and regulations of the local government.

Structural Details and Calculations



Prepared For:  
MacDonald-Miller Facility Solutions  
7717 Detroit Avenue SW  
Seattle, WA 98106

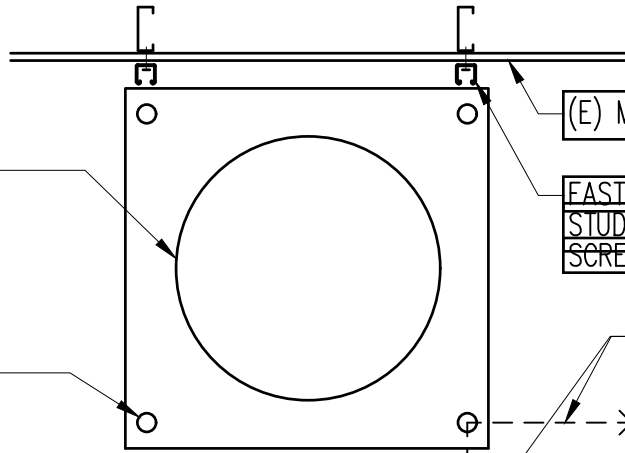
February 15, 2022

B-21-0820

City of Puyallup Development & Permitting Services ISSUED PERMIT	
Building	Planning
Engineering	Public Works
Fire	Traffic

20 GALLON HOT WATER HEATER

3/8" DIA THREADED ROD AT EACH CORNER



PLAN VIEW

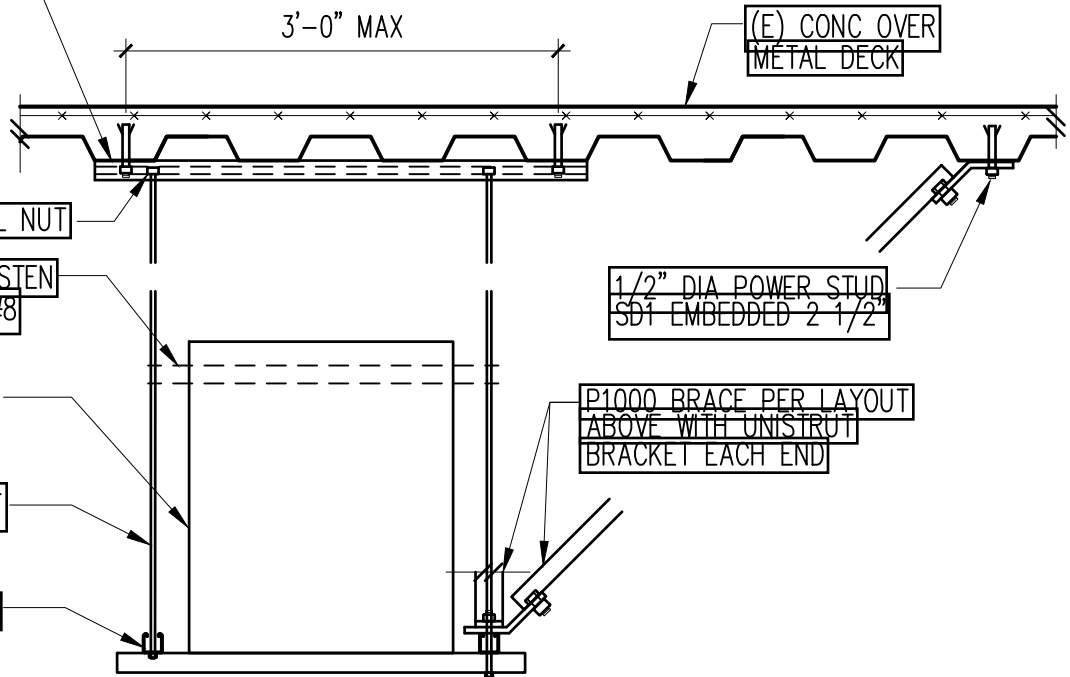
P1000 UNISTRUT FASTENED TO LOWER FLUTE OF DECK W/ (2) 1/2" DIA POWER STUD SD1 EMBEDDED 3"

MIN 25 GA SEISMIC STRAP FASTEN TO STUD IN WALL W/ MIN (2) #8 SCREWS EACH END

20 GALLON HOT WATER HEATER W/ MAX FULL WEIGHT 250#

3/8" DIA THREADED ROD AT EACH CORNER

P1000 UNISTRUT, TYP



# Water Heater Support

3/4"=1'-0"

**STABBERT**  
ENGINEERING

3040 78TH AVE. SE #501 • MERCER ISLAND • WA 98040  
O • 425-968-5432 W • www.stabbertengineering.com

## SHBTC Water Heater

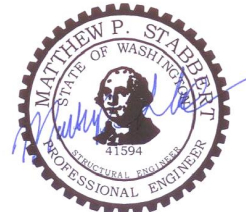
1019 39th Ave SE, Suite 250  
Puyallup, WA 98374

DESIGN BY: **MPS**

PROJECT NO.: **1044-2021-14**

DATE: **11/16/2021**

SHEET: **SSK1**



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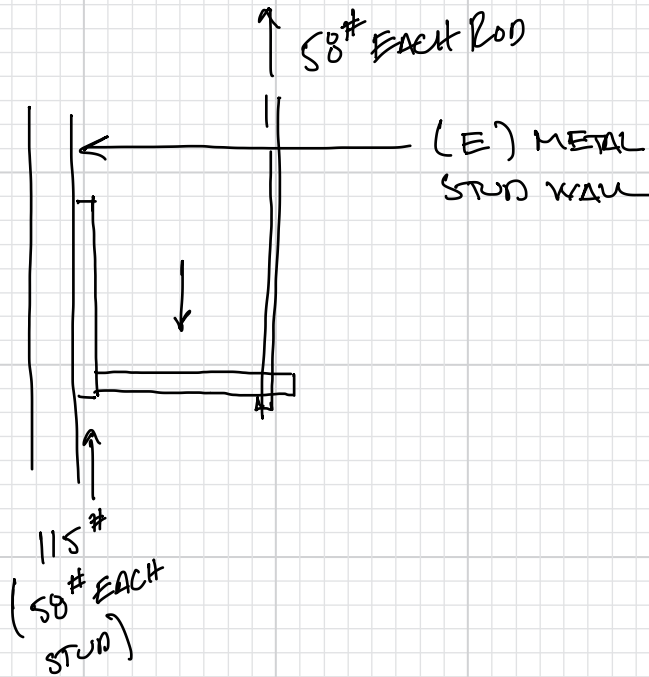


## Structural Calculations

WEIGHT OF WATER

HEATER:

$$W = 68 \# + 8.2(19) = 230 \#$$



CONSIDER ATTACHMENT TO WALL:

FOR 1/4" SCREW INTO 18 MIL STUDS  $F_v = 60 \#$

⇒ MIN 1/4" SCREW EACH SIDE INTO STUD.

CONSIDER BEACH

$$F_p = \frac{0.4 q_p S D_s W_p}{R_p / I_p} \left( 1 + 2 z / h \right)$$

$$F_p = \frac{0.4(1.0)(1.0)}{2.5} (3) W_p = 0.48 W_p = 0.34 W_p$$

$$F_p = (0.34)(230 \#) = 78 \#$$