FOOTING DESIGN CALCULATION SUMMARY FOR BEAM FB-3

PERMIT NUMBER: SFD2504-0023

PROJECT: CL3034 SINGLE-FAMILY DWELLING

DATE: APRIL 21, 2025

PREPARED BY: TODD TUCKER, AIBD, CPBD & XAI

LOAD AND SOIL BEARING CAPACITY

PROJECT DATA

BEAM: FB-3

LOAD PER FOOTING: 9492 LBS (COMBINED LIVE AND DEAD LOAD)

FOOTING SIZE: 42" X 42" X 12" DEEP

CONCRETE STRENGTH: 3000 PSI

SOIL BEARING CAPACITY: 1500 PSF (ASSUMED)

COLUMN SIZE: 7" X 3.5" (GANGED SPF #2 LUMBER, CENTERED)

CODE: ACI 318-19

STEP I: SOIL BEARING CAPACITY CHECK

FOOTING AREA:

(42 / I2) X (42 / I2) = 3.5 FT X 3.5 FT = I2.25 SQ.FT

ALLOWABLE LOAD:

1500 PSF X 12.25 SQ.FT = 18,375 LBS

APPLIED LOAD: 9492 LBS

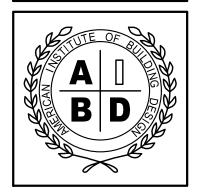
9492 LBS < 18,375 LBS (SATISFACTORY)

SOIL PRESSURE FOR DESIGN:

 $Q = 9492 / 12.25 \sim 774.9 PSF$ 



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FB-3: 1 OF 3