

QuickWall 7.0 - RETAINING WALL ANALYSIS AND DESIGN

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 Job ID :
 Job Description : Designed By :
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 S U M M A R Y O F R E S U L T S

 DIMENSIONS:

| | |
|--------------------------------|--------------------------------|
| Stem Height = 12.00 ft. | Heel Length = 6.08 ft. |
| Stem Thick. @ Top = 12.00 in. | Toe Length = 1.00 ft. |
| Stem Thick. @ Base = 12.00 in. | Total Ftg. Width, B = 8.08 ft. |
| Footing Thickness = 12.00 in. | Key Depth = 0.00 ft. |
| | Key Width = 0.00 ft. |

 ANALYSIS RESULTS:

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|------------------------------------|---------------------------------|
| Max Brg Press. @ Toe = 2,753 psf. | Sliding Force = 4,068 Lb |
| @ Heel = 57 psf. | Resisting Force = 6,128 Lb |
| Allowable Brg. Press. = 3,000 psf. | F.O.S. = 1.51 |
| Resultant Loc From C.L. = 1.29 ft. | Overturn. Moment = 18,206 ft-lb |
| Kern Point Loc., B/6 = 1.35 ft. | Resisting Moment = 49,420 ft-lb |
| Limit Resultant To Mid 1/3? = Yes | F.O.S. = 2.71 |

 DESIGN RESULTS: Design Method, Stem: USD, ACI 318-08 (Concrete)
 Ftg.: Ultimate Strength ACI 318-08

| | d (in.) | Mu (ft-k) | Vu (kip) | Phi Vn (kip) | As Flex. (in^2) | As Min. (in^2) | As T+S (in^2) |
|--------|------------|--------------|-------------|-----------------|--------------------|-------------------|------------------|
| Stem : | 9.50 | 23.09 | 5.58 | 10.81 | 0.565 | 0.380 | 0.431 |
| Toe : | 8.50 | 1.94 | 1.18 | 9.68 | 0.051 | 0.068 | 0.259 |
| Heel : | 9.50 | 23.35 | 5.04 | 10.81 | 0.571 | 0.380 | 0.259 |
| Key : | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 |

- Notes: 1. Stem moments are positive if they cause tension on the soil face. Negative if they cause tension on the outside face. Stem shear is positive to the left as measured on a section cut below the top of wall.
2. Heel moments are positive if they cause tension in the top of the footing. Heel shear is positive up as measured on a section cut to the right of the end of the heel.
3. Toe moments are positive if they cause tension in the bottom of the footing. Toe shear is positive up as measured on a section cut to the left of the end of the toe.