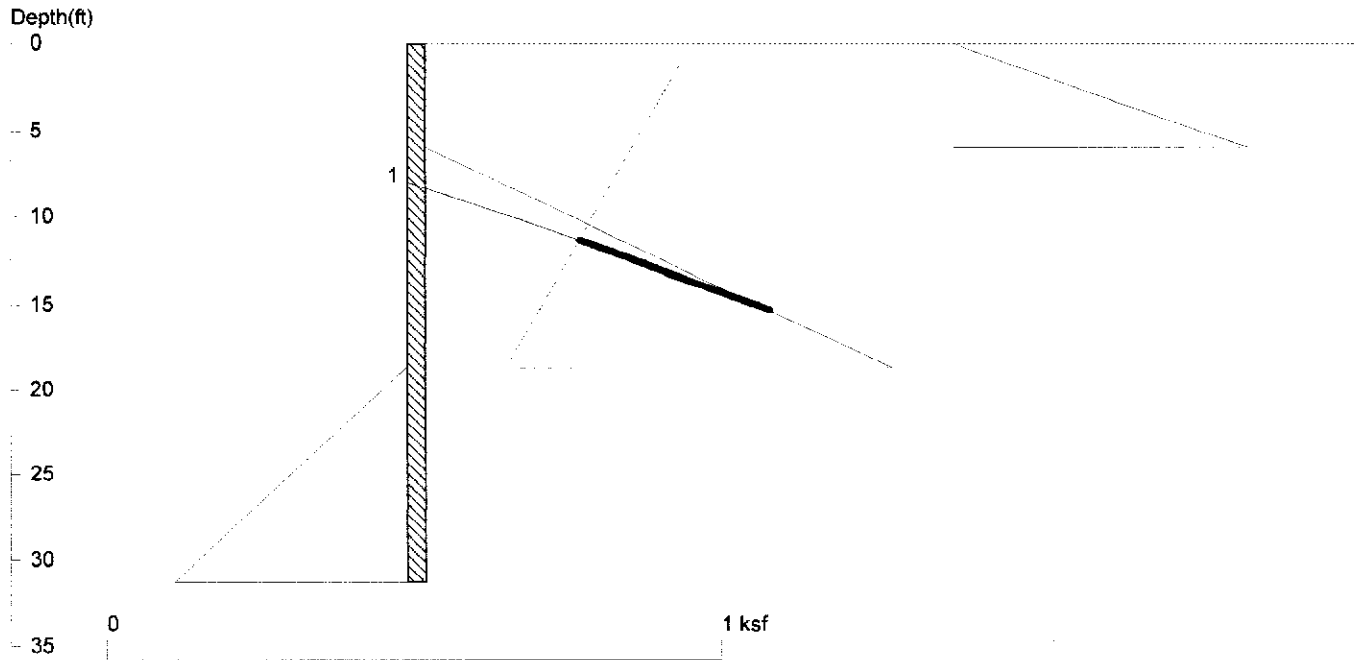


Mist P1

With Catchment FOS = 1.2



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File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P1 w catchment.sh8

Wall Height=18.7 Pile Diameter=2.0 Pile Spacing=6.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=12.61 Min. Pile Length=31.28

MOMENT IN PILE: Max. Moment=74.15 per Pile Spacing=6.0 at Depth=16.77

PILE SELECTION:

Request Min. Section Modulus = 37.5 in³/pile=613.70 cm³/pile, Fy= 36 ksi = 248 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W8X48 (-0.83) HP10X42 (-0.73) W10X39 (-0.73) HP12X53 (-0.39) W12X30 (-0.64)
 HP13X60 (-0.30) HP14X73 (-0.21) W14X30 (-0.53) W16X26 (-0.51) HP16X88 (-0.14)
 W16X89 (-0.12) HP16X101 (-0.12) W16X100 (-0.10) HP16X121 (-0.10)

BRACE FORCE: Strut, Tieback, Plate Anchor, Deadman, Sheet Pile as Anchor

| No. & Type | Depth | Angle | Space | Total F. | Horiz. F. | Vert. F. | L_free | Fixed Length |
|------------|-------|-------|-------|----------|-----------|----------|--------|--------------|
| 1. Tieback | 8.0 | 20.0 | 6.0 | 31.5 | 29.6 | 10.8 | 9.5 | 11.8 |

UNITS: Width,Diameter,Spacing,Length,Depth,and Height - ft; Force - kip; Bond Strength and Pressure - ksf

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|-------|-------|-------|
| 6 | 0 | 18.67 | 0.760 | .060 |
| 0 | 0 | 6 | 0.480 | .08 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|-------|----|----|-------|-------|
| 18.67 | 0 | 50 | 0.940 | .03 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.00 |
| 2 | 18.67 | 2.00 |

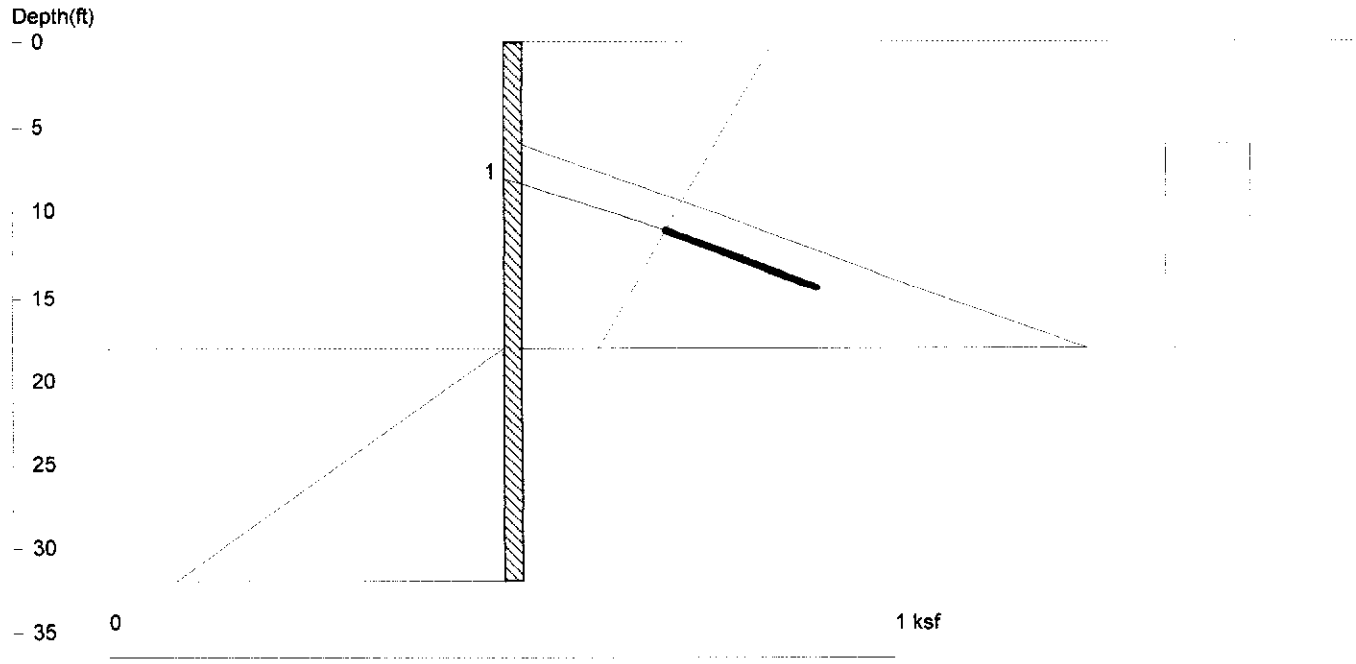
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 18.67 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P1

With Seismic FOS = 1.2



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File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P1 w seismic.sh8

Wall Height=18.0 Pile Diameter=2.0 Pile Spacing=6.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=13.91 Min. Pile Length=31.91

MOMENT IN PILE: Max. Moment=99.74 per Pile Spacing=6.0 at Depth=15.91

PILE SELECTION:

Request Min. Section Modulus = 50.4 in³/pile=825.49 cm³/pile, Fy= 36 ksi = 248 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W8X58 (-1.40) HP10X57 (-1.09) W10X49 (-1.17) HP12X53 (-0.81) W12X40 (-1.04)
 HP13X60 (-0.63) HP14X73 (-0.44) W14X38 (-0.83) W16X36 (-0.71) HP16X88 (-0.29)
 W16X89 (-0.25) HP16X101 (-0.25) W16X100 (-0.21) HP16X121 (-0.20)

BRACE FORCE: Strut, Tieback, Plate Anchor, Deadman, Sheet Pile as Anchor

| No. & Type | Depth | Angle | Space | Total F. | Horiz. F. | Vert. F. | L_free | Fixed Length |
|------------|-------|-------|-------|----------|-----------|----------|--------|--------------|
| 1. Tieback | 8.0 | 20.0 | 6.0 | 25.6 | 24.0 | 8.7 | 9.0 | 9.6 |

UNITS: Width,Diameter,Spacing,Length,Depth,and Height - ft; Force - kip; Bond Strength and Pressure - ksf

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|------|----|-------|-------|
| 6 | 0 | 18 | 0.720 | .060 |
| 6 | .108 | 18 | 0.108 | |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|----|-------|-------|
| 18 | 0 | 50 | 0.960 | .03 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.00 |
| 2 | 18.00 | 2.00 |

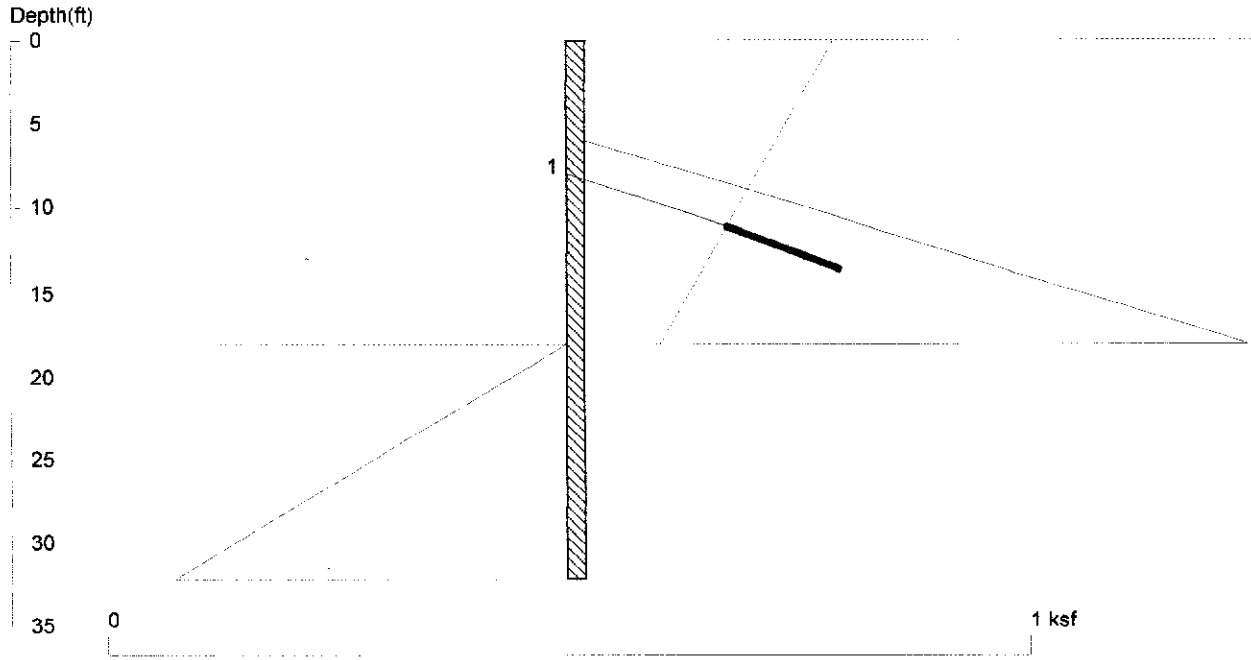
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 18.00 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P1

With Seismic FOS = 1.2



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Wall Height=18.0 Pile Diameter=2.0 Pile Spacing=6.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=14.15 Min. Pile Length=32.15

MOMENT IN PILE: Max. Moment=83.33 per Pile Spacing=6.0 at Depth=15.99

PILE SELECTION:

Request Min. Section Modulus = 42.1 in³/pile=689.66 cm³/pile, Fy= 36 ksi = 248 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W8X48 (-1.46) HP10X42 (-1.28) W10X39 (-1.29) HP12X53 (-0.69) W12X35 (-0.95)
 HP13X60 (-0.54) HP14X73 (-0.37) W14X34 (-0.79) W16X31 (-0.72) HP16X88 (-0.24)
 W16X89 (-0.21) HP16X101 (-0.21) W16X100 (-0.18) HP16X121 (-0.17)

BRACE FORCE: Strut, Tieback, Plate Anchor, Deadman, Sheet Pile as Anchor

| No. & Type | Depth | Angle | Space | Total F. | Horiz. F. | Vert. F. | L_free | Fixed Length |
|------------|-------|-------|-------|----------|-----------|----------|--------|--------------|
| 1. Tieback | 8.0 | 20.0 | 6.0 | 19.1 | 17.9 | 6.5 | 9.0 | 7.1 |

UNITS: Width,Diameter,Spacing,Length,Depth,and Height - ft; Force - kip; Bond Strength and Pressure - ksf

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|----|-------|-------|
| 6 | 0 | 18 | 0.720 | .060 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.5

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|----|-------|-------|
| 18 | 0 | 50 | 0.960 | .03 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.00 |
| 2 | 18.00 | 2.00 |

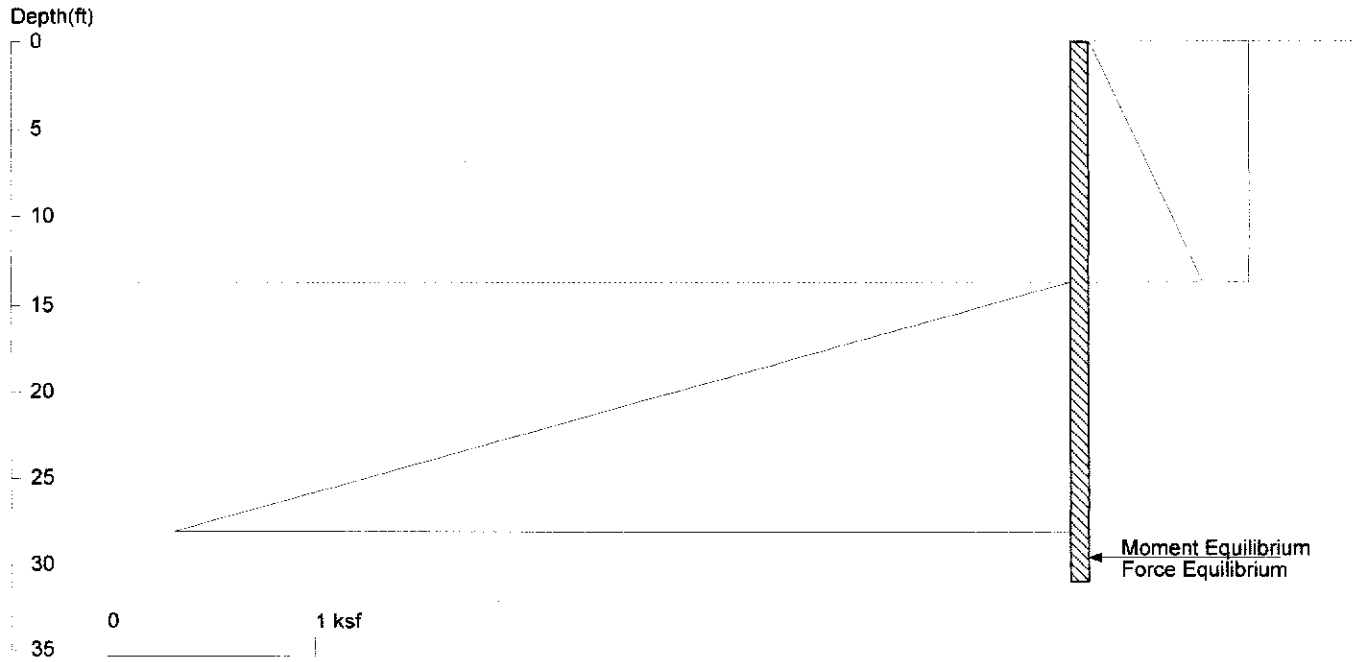
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 18.00 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P4

With seismic FOS = 1.2



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Wall Height=13.7 Pile Diameter=2.0 Pile Spacing=4.7 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=17.25 Min. Pile Length=30.91
 MOMENT IN PILE: Max. Moment=252.07 per Pile Spacing=4.7 at Depth=20.77

PILE SELECTION:

Request Min. Section Modulus = 91.7 in³/pile=1502.09 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66
 -> Piles meet Min. Section Requirements: Top Deflection is shown in (in)
 W10X88 (2.48) HP12X74 (2.32) W12X72 (2.21) HP13X73 (2.10) HP14X73 (1.81)
 W14X61 (2.07) W16X57 (1.74) HP16X88 (1.19) W16X89 (1.02) HP16X101 (1.02)
 W16X100 (0.89) HP16X121 (0.84) W18X55 (1.49) HP18X135 (0.60)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|------|-------|-------|-------|
| 0 | 0 | 13.66 | 0.546 | .04 |
| 0 | .123 | 13.66 | 0.123 | |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|-------|----|----|-------|-------|
| 13.66 | 0 | 50 | 10.90 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 4.66 |
| 2 | 13.66 | 2.00 |

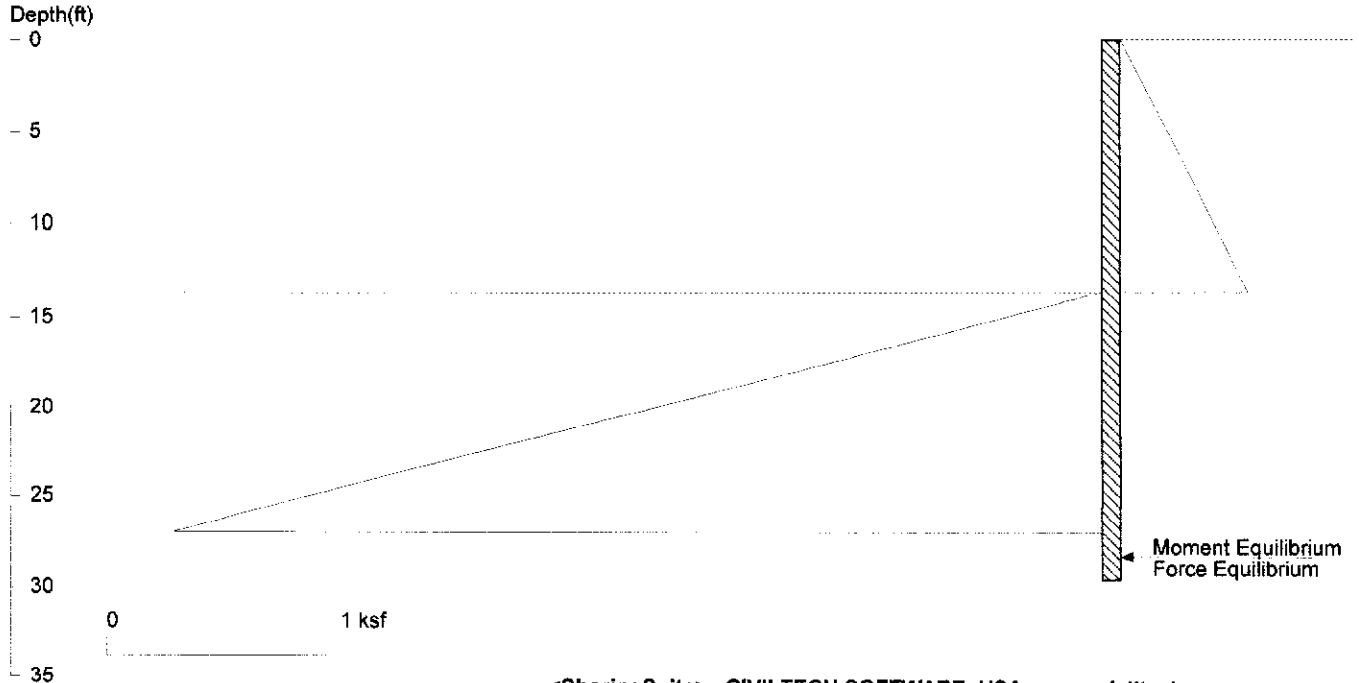
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 13.66 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P4

Without seismic FOS = 1.5



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Wall Height=13.7 Pile Diameter=2.0 Pile Spacing=4.7 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=15.89 Min. Pile Length=29.55

MOMENT IN PILE: Max. Moment=155.63 per Pile Spacing=4.7 at Depth=20.26

PILE SELECTION:

Request Min. Section Modulus = 56.6 in³/pile=927.39 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W8X67 (2.72) HP10X57 (2.51) W10X54 (2.44) HP12X53 (1.88) W12X45 (2.12)
 HP13X60 (1.47) HP14X73 (1.01) W14X43 (1.73) W16X40 (1.43) HP16X88 (0.66)
 W16X89 (0.57) HP16X101 (0.57) W16X100 (0.50) HP16X121 (0.47)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|-------|-------|-------|
| 0 | 0 | 13.66 | 0.546 | .04 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.5

| Z1 | P1 | Z2 | P2 | Slope |
|-------|----|----|-------|-------|
| 13.66 | 0 | 50 | 10.90 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 4.66 |
| 2 | 13.66 | 2.00 |

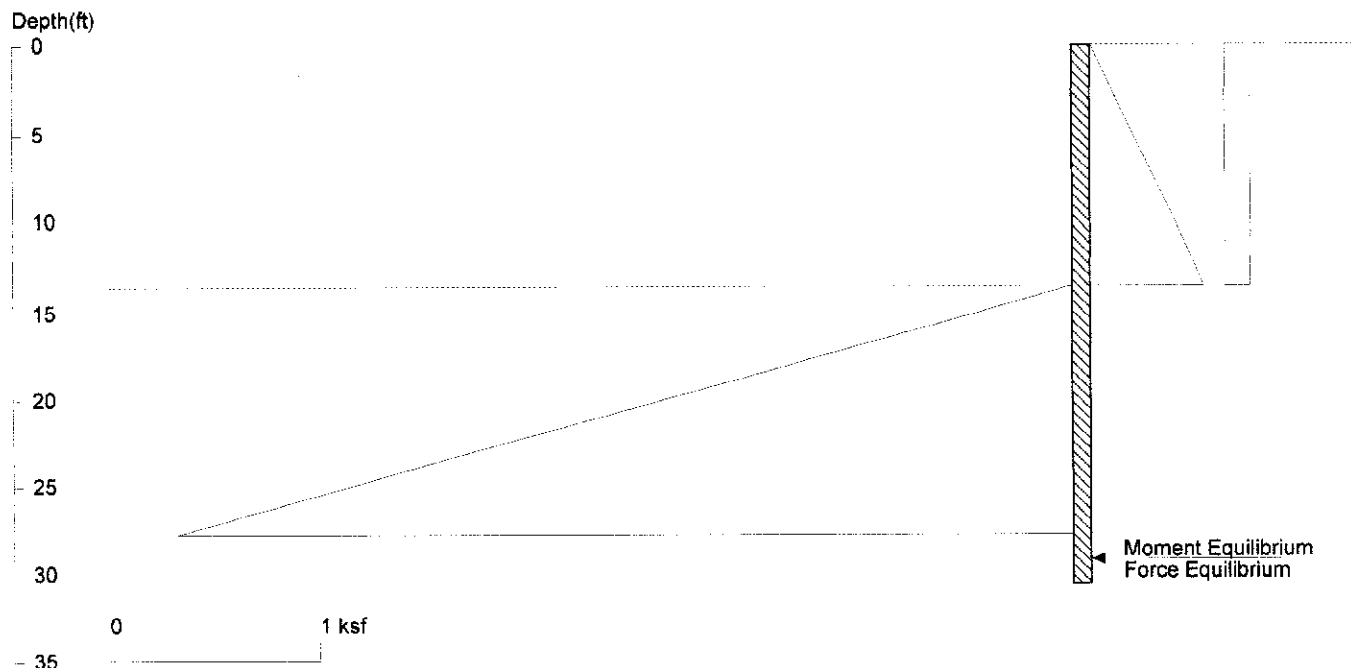
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 13.66 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P5

With seismic FOS = 1.2



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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P5 with seismic.sh8

Wall Height=13.5 Pile Diameter=2.0 Pile Spacing=4.7 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=17.06 Min. Pile Length=30.56

MOMENT IN PILE: Max. Moment=243.70 per Pile Spacing=4.7 at Depth=20.54

PILE SELECTION:

Request Min. Section Modulus = 88.6 in³/pile=1452.20 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

- W10X88 (2.34) HP12X74 (2.20) W12X72 (2.09) HP13X73 (1.98) HP14X73 (1.71)
- W14X61 (1.95) W16X57 (1.65) HP16X88 (1.12) W16X89 (0.96) HP16X101 (0.96)
- W16X100 (0.84) HP16X121 (0.79) W18X50 (1.56) HP18X135 (0.57)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|------|------|-------|-------|
| 0 | 0 | 13.5 | 0.540 | .04 |
| 0 | .122 | 13.5 | 0.122 | |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 13.5 | 0 | 50 | 10.95 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 4.66 |
| 2 | 13.50 | 2.00 |

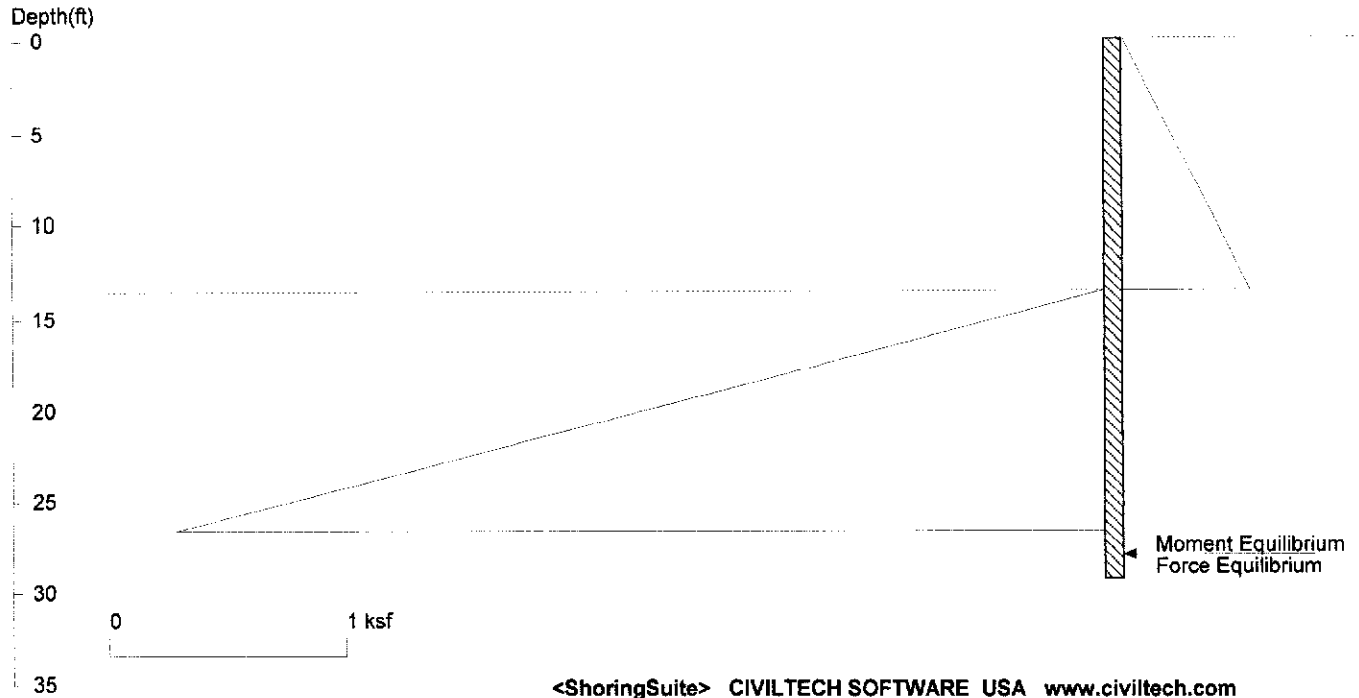
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 13.50 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P5

Without seismic FOS = 1.5



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Wall Height=13.5 Pile Diameter=2.0 Pile Spacing=4.7 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=15.70 Min. Pile Length=29.20

MOMENT IN PILE: Max. Moment=150.23 per Pile Spacing=4.7 at Depth=20.02

PILE SELECTION:

Request Min. Section Modulus = 54.6 in³/pile=895.19 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements:

Top Deflection is shown in (in)

W8X67 (2.56) HP10X57 (2.37) W10X54 (2.30) HP12X53 (1.77) W12X45 (2.00)
 HP13X60 (1.39) HP14X73 (0.96) W14X43 (1.63) W16X36 (1.56) HP16X88 (0.63)
 W16X89 (0.54) HP16X101 (0.54) W16X100 (0.47) HP16X121 (0.44)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|------|-------|-------|
| 0 | 0 | 13.5 | 0.540 | .04 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.5

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 13.5 | 0 | 50 | 10.95 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 4.66 |
| 2 | 13.50 | 2.00 |

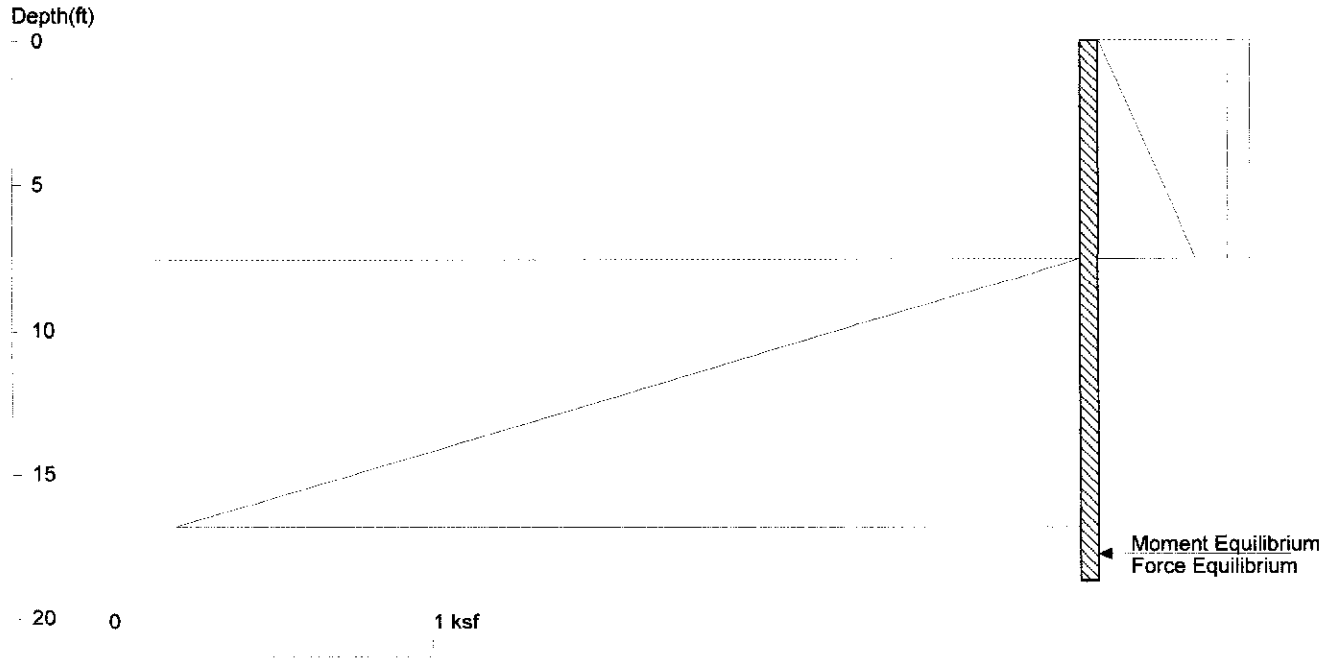
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 13.50 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P7

With seismic FOS = 1.2



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Wall Height=7.5 Pile Diameter=2.0 Pile Spacing=6.8 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=11.18 Min. Pile Length=18.68

MOMENT IN PILE: Max. Moment=66.46 per Pile Spacing=6.8 at Depth=12.20

PILE SELECTION:

Request Min. Section Modulus = 24.2 in³/pile=396.03 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

- HP8X36 (1.00) W8X28 (1.22) HP10X42 (0.57) W10X26 (0.83) HP12X53 (0.30)
- W12X22 (0.77) HP13X60 (0.24) HP14X73 (0.16) W14X22 (0.60) W16X26 (0.40)
- HP16X88 (0.11) W16X89 (0.09) HP16X101 (0.09) W16X100 (0.08)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|------|-----|-------|-------|
| 0 | 0 | 7.5 | 0.300 | .04 |
| 0 | .068 | 7.5 | 0.068 | |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|-----|----|----|-------|-------|
| 7.5 | 0 | 50 | 12.75 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.75 |
| 2 | 7.50 | 2.00 |

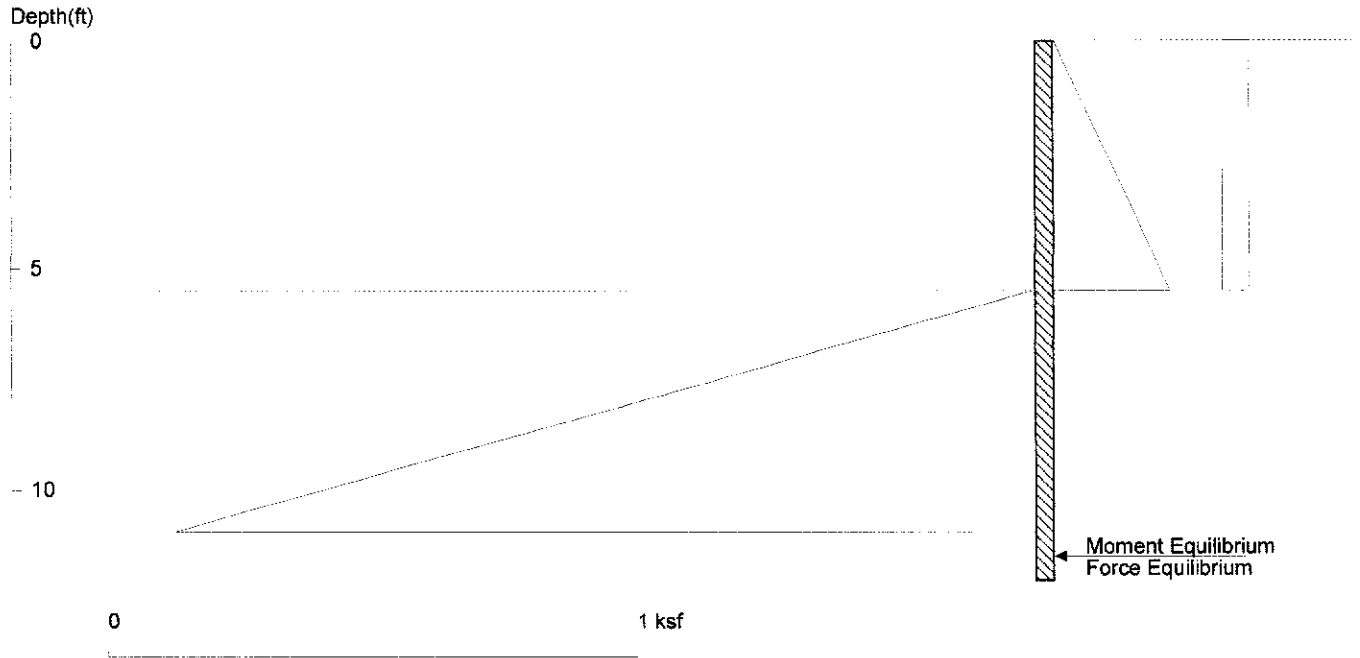
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 7.50 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P8

With seismic FOS = 1.2



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File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P8 with seismic.sh8

Wall Height=5.5 Pile Diameter=2.0 Pile Spacing=2.8 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=6.50 Min. Pile Length=12.00

MOMENT IN PILE: Max. Moment=9.41 per Pile Spacing=2.8 at Depth=8.15

PILE SELECTION:

Request Min. Section Modulus = 3.4 in³/pile=56.08 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W4X13 (1.13) W5X16 (0.60) W6X8.5 (0.86) HP8X36 (0.11) W8X10 (0.41)
 HP10X42 (0.06) W10X12 (0.24) HP12X53 (0.03) W12X14 (0.14) HP13X60 (0.03)
 HP14X73 (0.02) W14X22 (0.06) W16X26 (0.04) HP16X88 (0.01)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|-----|-----|-------|-------|
| 0 | 0 | 5.5 | 0.220 | .04 |
| 0 | .05 | 5.5 | 0.050 | |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|-----|----|----|-------|-------|
| 5.5 | 0 | 50 | 13.35 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 2.75 |
| 2 | 5.50 | 2.00 |

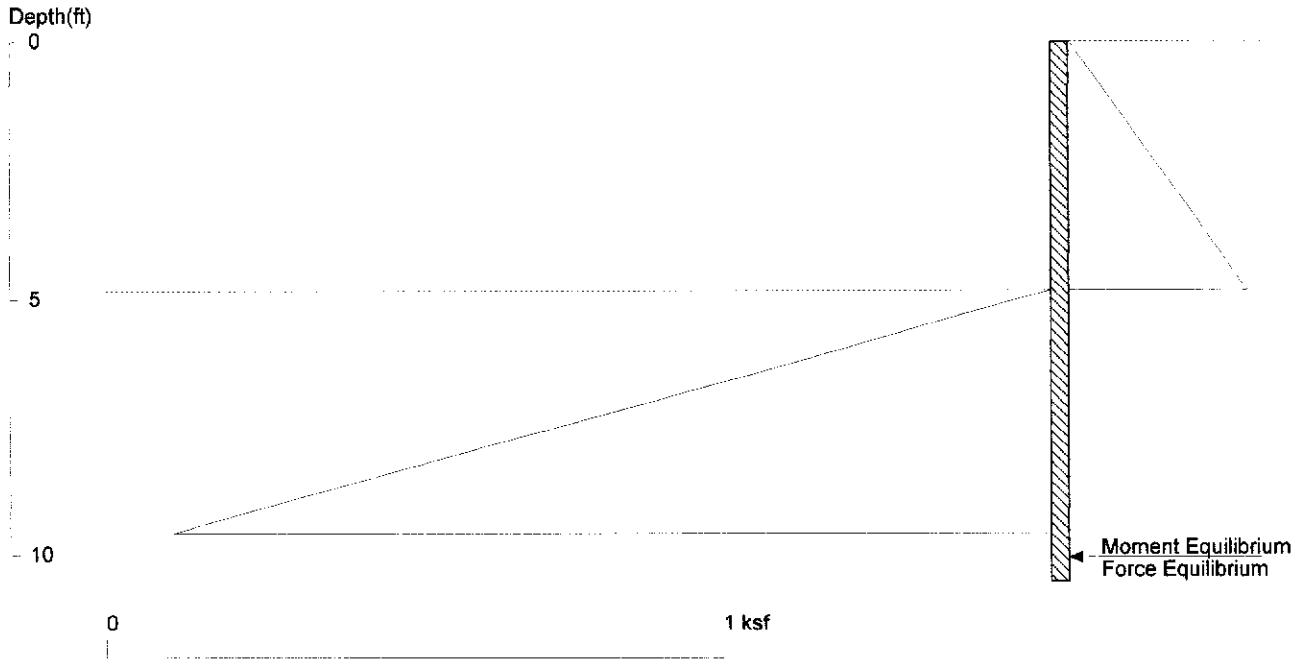
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 5.50 | 2.75 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P9

Without seismic FOS = 1.2



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 File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P10 without seismic.sh8

Wall Height=4.8 Pile Diameter=2.0 Pile Spacing=4.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=5.69 Min. Pile Length=10.52
 MOMENT IN PILE: Max. Moment=8.92 per Pile Spacing=4.0 at Depth=7.19

PILE SELECTION:

Request Min. Section Modulus = 3.2 in³/pile=53.17 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66
 -> Piles meet Min. Section Requirements: Top Deflection is shown in (in)
 W4X13 (0.80) W5X16 (0.42) W6X8.5 (0.61) HP8X36 (0.08) W8X10 (0.29)
 HP10X42 (0.04) W10X12 (0.17) HP12X53 (0.02) W12X14 (0.10) HP13X60 (0.02)
 HP14X73 (0.01) W14X22 (0.05) W16X26 (0.03) HP16X88 (0.01)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|------|-------|-------|
| 0 | 0 | 4.83 | 0.290 | .06 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 4.83 | 0 | 50 | 13.55 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 4.00 |
| 2 | 4.83 | 2.00 |

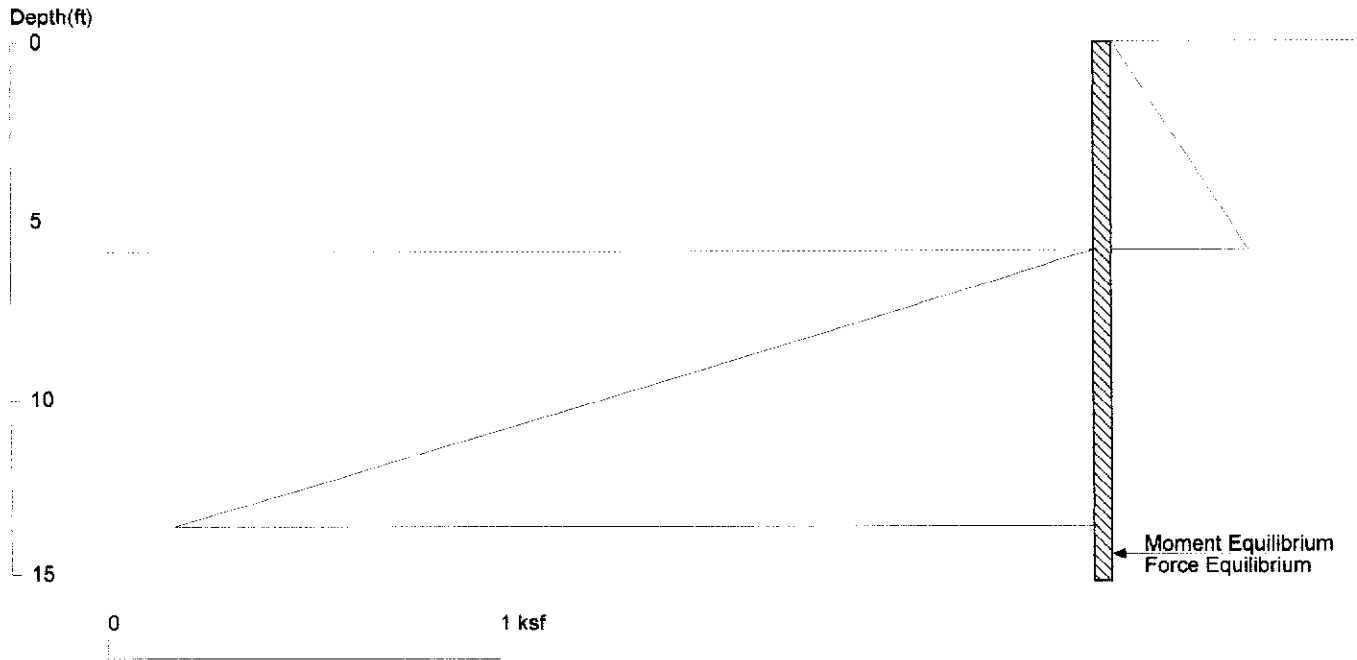
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 4.83 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P11

Without seismic FOS = 1.2



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File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P11 without seismic.sh8

Wall Height=5.8 Pile Diameter=2.0 Pile Spacing=8.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=9.38 Min. Pile Length=15.21

MOMENT IN PILE: Max. Moment=37.82 per Pile Spacing=8.0 at Depth=9.87

PILE SELECTION:

Request Min. Section Modulus = 13.8 in³/pile=225.36 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements:

Top Deflection is shown in (in)

- W6X25 (0.81) HP8X36 (0.36) W8X18 (0.70) HP10X42 (0.21) W10X15 (0.63)
- HP12X53 (0.11) W12X14 (0.49) HP13X60 (0.09) HP14X73 (0.06) W14X22 (0.22)
- W16X26 (0.14) HP16X88 (0.04) W16X89 (0.03) HP16X101 (0.03)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|------|-------|-------|
| 0 | 0 | 5.83 | 0.350 | .06 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 5.83 | 0 | 50 | 13.25 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 8.00 |
| 2 | 5.83 | 2.00 |

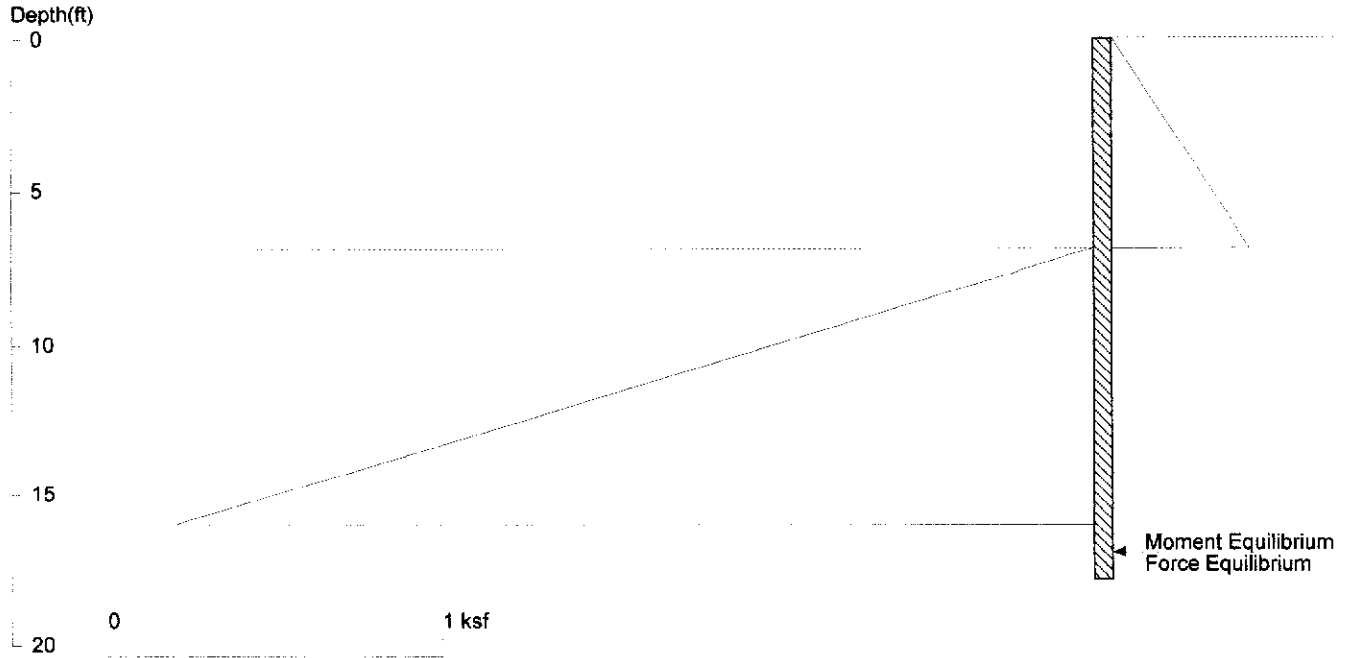
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 5.83 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P12

Without seismic FOS = 1.2



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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P12 without seismic.sh8

Wall Height=6.8 Pile Diameter=2.0 Pile Spacing=8.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=10.99 Min. Pile Length=17.82

MOMENT IN PILE: Max. Moment=60.81 per Pile Spacing=8.0 at Depth=11.56

PILE SELECTION:

Request Min. Section Modulus = 22.1 in³/pile=362.35 cm³/pile, F_y= 50 ksi = 345 MPa, F_b/F_y=0.66

-> Piles meet Min. Section Requirements:

Top Deflection is shown in (in)

- HP8X36 (0.76) W8X28 (0.93) HP10X42 (0.43) W10X22 (0.77) HP12X53 (0.23)
- W12X22 (0.58) HP13X60 (0.18) HP14X73 (0.12) W14X22 (0.46) W16X26 (0.30)
- HP16X88 (0.08) W16X89 (0.07) HP16X101 (0.07) W16X100 (0.06)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|------|-------|-------|
| 0 | 0 | 6.83 | 0.410 | .06 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 6.83 | 0 | 50 | 12.95 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 8.00 |
| 2 | 6.83 | 2.00 |

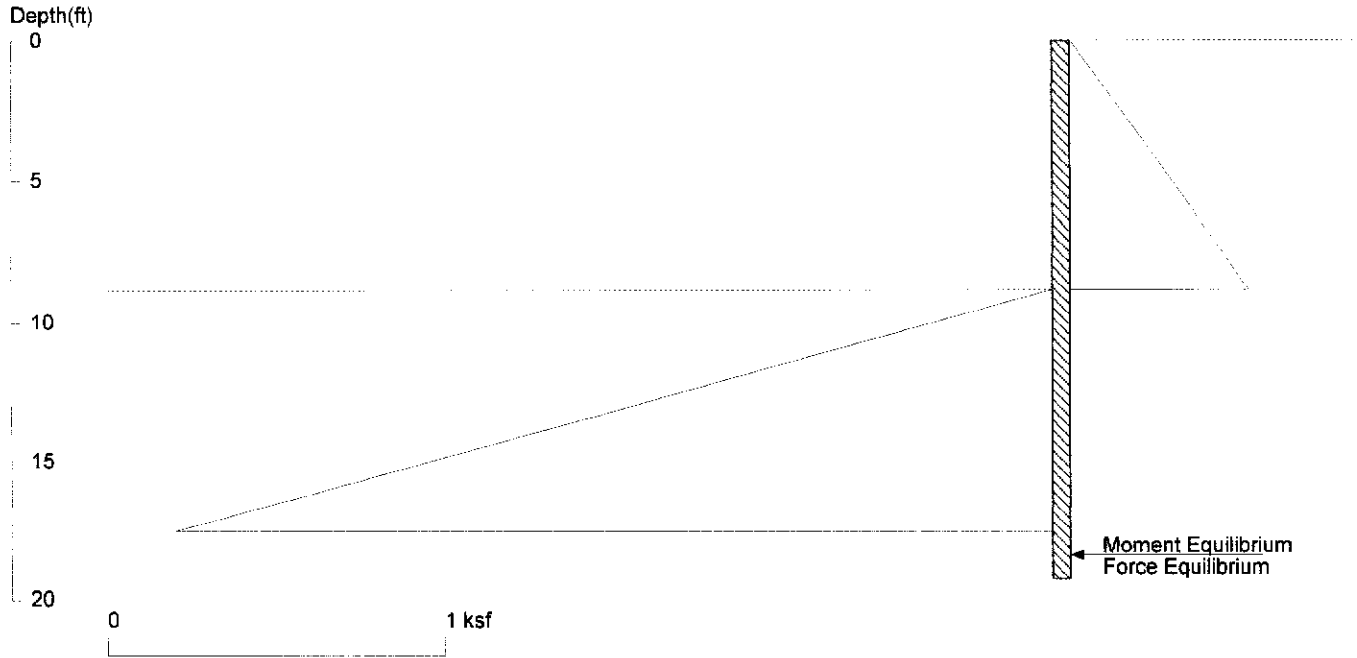
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 6.83 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P13

Without seismic FOS = 1.2



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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P13 without seismic.sh8

Wall Height=8.8 Pile Diameter=2.0 Pile Spacing=4.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=10.41 Min. Pile Length=19.24

MOMENT IN PILE: Max. Moment=54.52 per Pile Spacing=4.0 at Depth=13.16

PILE SELECTION:

Request Min. Section Modulus = 19.8 in³/pile=324.88 cm³/pile, F_y= 50 ksi = 345 MPa, F_b/F_y=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

HP8X36 (0.95) W8X24 (1.37) HP10X42 (0.54) W10X22 (0.96) HP12X53 (0.29)
 W12X19 (0.87) HP13X60 (0.22) HP14X73 (0.16) W14X22 (0.57) W16X26 (0.38)
 HP16X88 (0.10) W16X89 (0.09) HP16X101 (0.09) W16X100 (0.08)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|------|-------|-------|
| 0 | 0 | 8.83 | 0.530 | .06 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 8.83 | 0 | 50 | 12.35 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 4.00 |
| 2 | 8.83 | 2.00 |

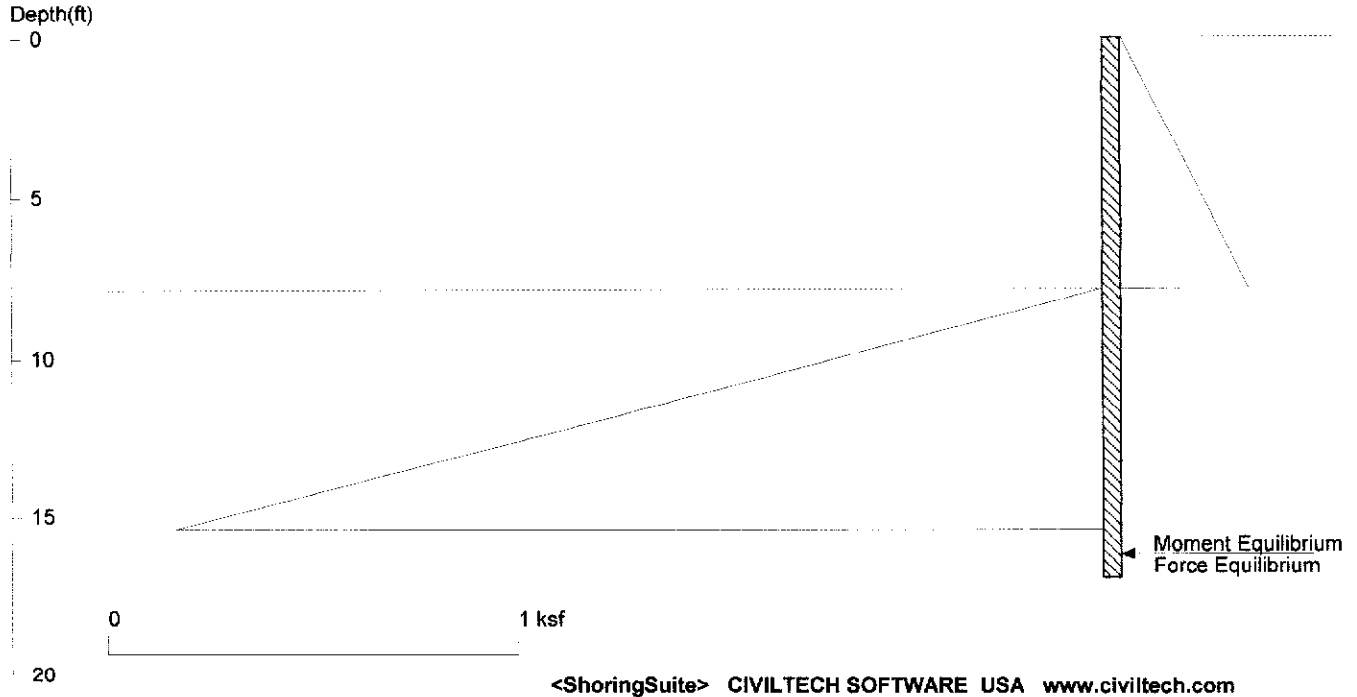
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 8.83 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P14

Without seismic FOS = 1.2



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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P14 without seismic.sh8

Wall Height=7.8 Pile Diameter=2.0 Pile Spacing=5.8 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=9.05 Min. Pile Length=16.88

MOMENT IN PILE: Max. Moment=36.05 per Pile Spacing=5.8 at Depth=11.58

PILE SELECTION:

Request Min. Section Modulus = 13.1 in³/pile=214.83 cm³/pile, F_y= 50 ksi = 345 MPa, F_b/F_y=0.66

-> Piles meet Min. Section Requirements:

Top Deflection is shown in (in)

- W6X20 (1.46) HP8X36 (0.51) W8X18 (0.98) HP10X42 (0.29) W10X15 (0.88)
- HP12X53 (0.15) W12X14 (0.68) HP13X60 (0.12) HP14X73 (0.08) W14X22 (0.30)
- W16X26 (0.20) HP16X88 (0.05) W16X89 (0.05) HP16X101 (0.05)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|------|-------|-------|
| 0 | 0 | 7.83 | 0.313 | .04 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 7.83 | 0 | 50 | 12.65 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 5.75 |
| 2 | 7.83 | 2.00 |

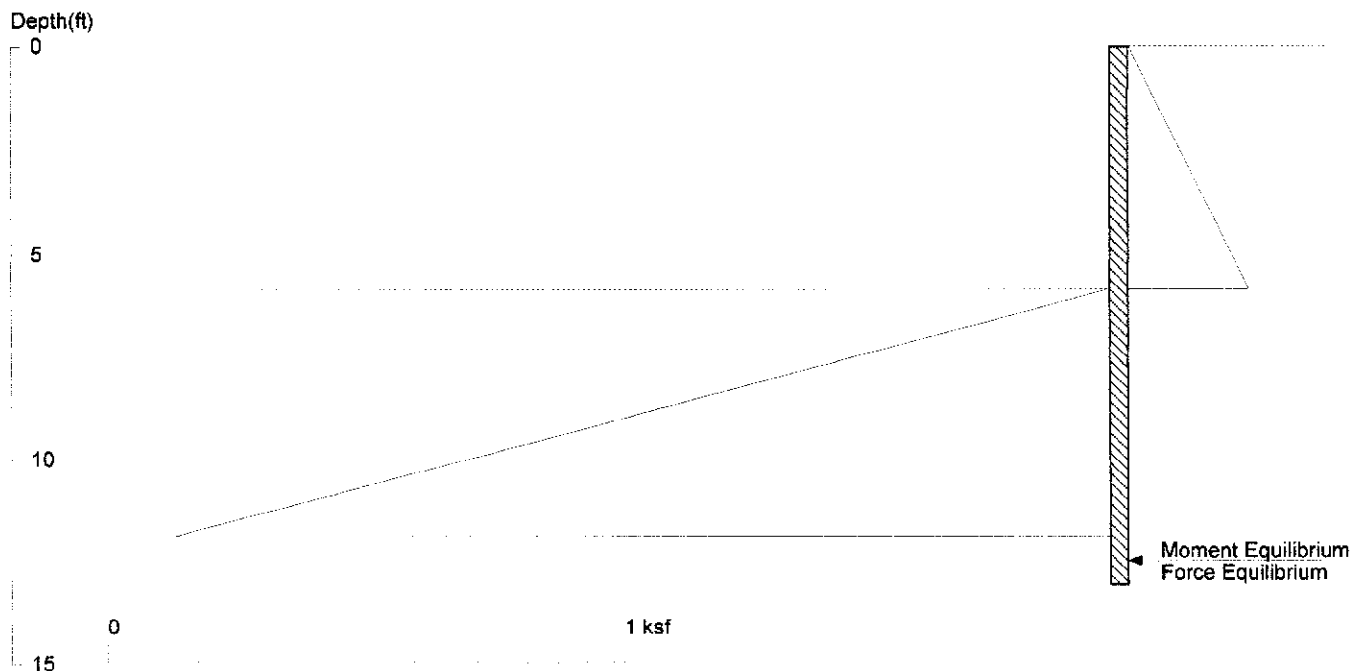
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 7.83 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P15

Without seismic FOS = 1.2



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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P15 without seismic.sh8

Wall Height=5.8 Pile Diameter=2.0 Pile Spacing=6.8 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=7.24 Min. Pile Length=13.07

MOMENT IN PILE: Max. Moment=18.18 per Pile Spacing=6.8 at Depth=8.86

PILE SELECTION:

Request Min. Section Modulus = 6.6 in³/pile=108.36 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

- W5X16 (0.94) W6X12 (0.91) HP8X36 (0.17) W8X10 (0.66) HP10X42 (0.10)
- W10X12 (0.38) HP12X53 (0.05) W12X14 (0.23) HP13X60 (0.04) HP14X73 (0.03)
- W14X22 (0.10) W16X26 (0.07) HP16X88 (0.02) W16X89 (0.02)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|------|-------|-------|
| 0 | 0 | 5.83 | 0.233 | .04 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 5.83 | 0 | 50 | 13.25 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.75 |
| 2 | 5.83 | 2.00 |

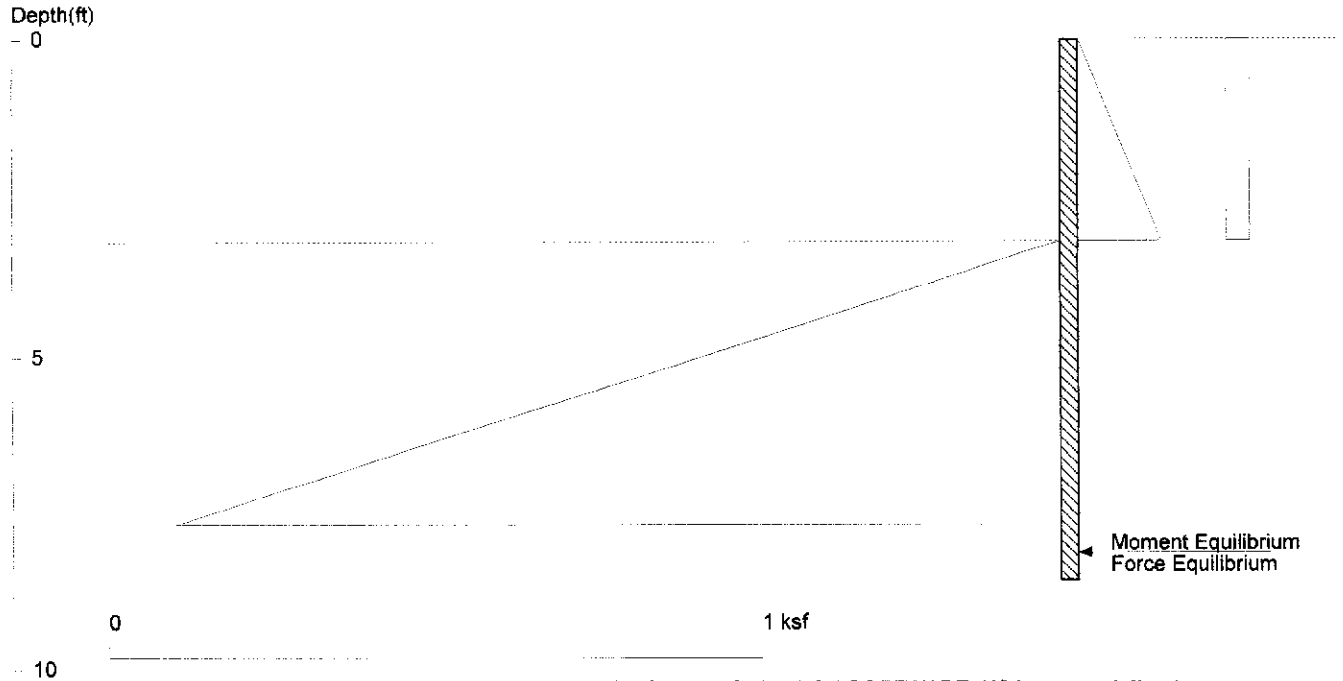
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 5.83 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P16

With seismic FOS = 1.2



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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P16 with seismic.sh8

Wall Height=3.2 Pile Diameter=2.0 Pile Spacing=6.8 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=5.42 Min. Pile Length=8.59

MOMENT IN PILE: Max. Moment=5.92 per Pile Spacing=6.8 at Depth=5.47

PILE SELECTION:

Request Min. Section Modulus = 2.2 in³/pile=35.30 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

- W4X13 (0.51) W5X16 (0.27) W6X8.5 (0.38) HP8X36 (0.05) W8X10 (0.19)
- HP10X42 (0.03) W10X12 (0.11) HP12X53 (0.01) W12X14 (0.06) HP13X60 (0.01)
- HP14X73 (0.01) W14X22 (0.03) W16X26 (0.02) HP16X88 (0.01)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|------|------|-------|-------|
| 0 | 0 | 3.17 | 0.127 | .04 |
| 0 | .036 | 3.17 | 0.036 | 0 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.5

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 3.17 | 0 | 50 | 14.04 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.75 |
| 2 | 3.17 | 2.00 |

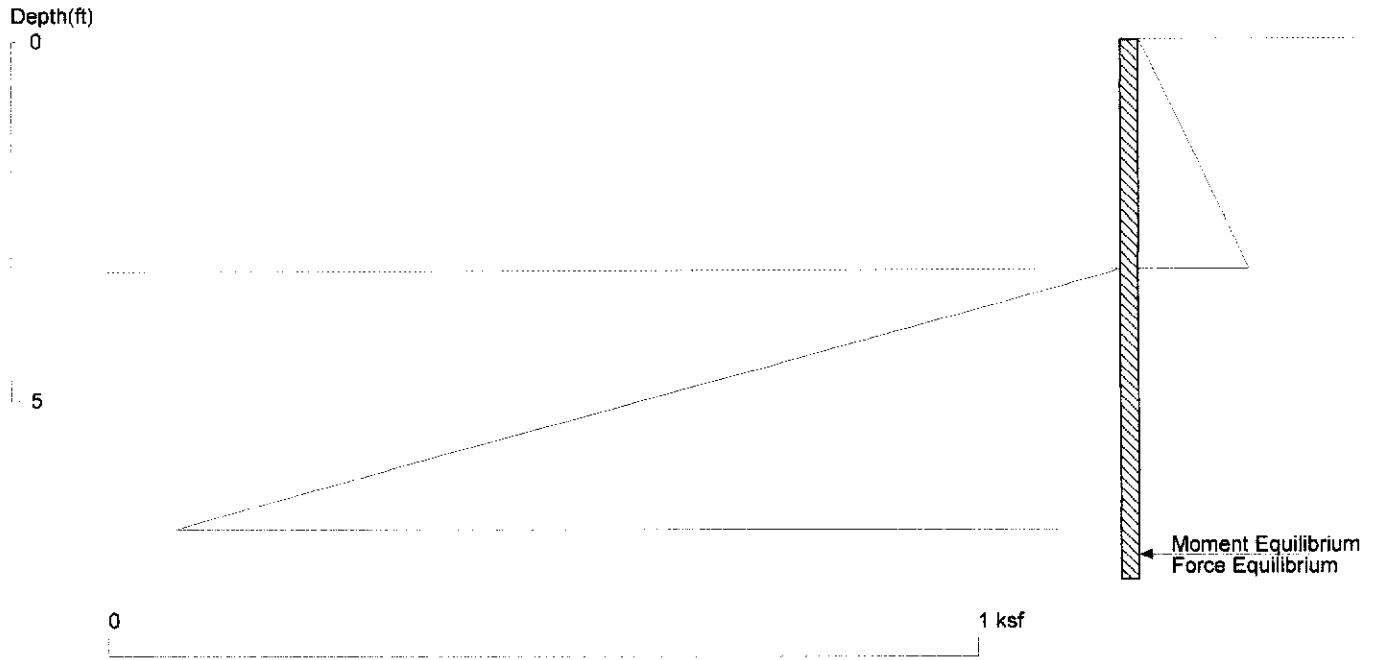
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 3.17 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P16

Without seismic FOS = 1.5



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File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P16 without seismic.sh8

Wall Height=3.2

Pile Diameter=2.0

Pile Spacing=6.8

Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=4.35 (5~10ft is recommended!!!) Min. Pile Length=7.52

MOMENT IN PILE: Max. Moment=3.10 per Pile Spacing=6.8 at Depth=5.01

PILE SELECTION:

Request Min. Section Modulus = 1.1 in³/pile=18.47 cm³/pile, F_y= 50 ksi = 345 MPa, F_b/F_y=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W4X13 (0.48) W5X16 (0.25) W6X8.5 (0.36) HP8X36 (0.05) W8X10 (0.18)
 HP10X42 (0.03) W10X12 (0.10) HP12X53 (0.01) W12X14 (0.06) HP13X60 (0.01)
 HP14X73 (0.01) W14X22 (0.03) W16X26 (0.02) HP16X88 (0.00)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|------|-------|-------|
| 0 | 0 | 3.17 | 0.127 | .04 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.5

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 3.17 | 0 | 50 | 14.04 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.75 |
| 2 | 3.17 | 2.00 |

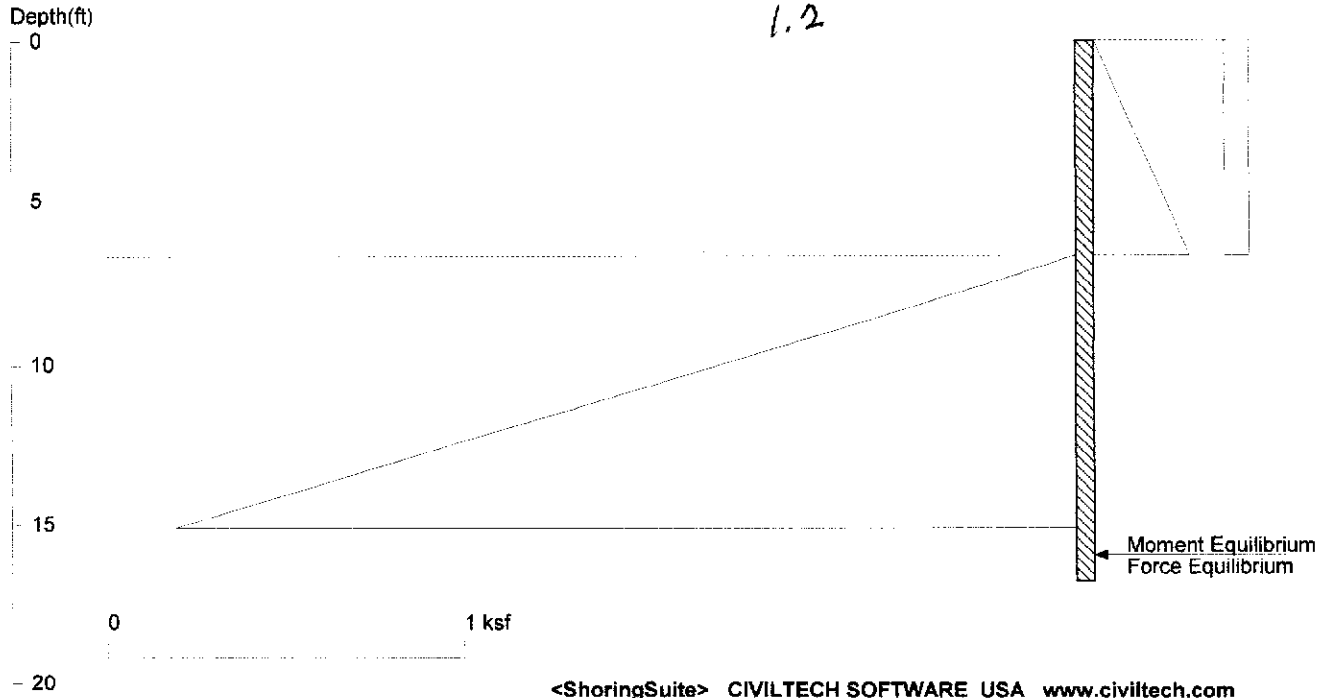
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 3.17 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P17

~~Without seismic FOS = 1.5~~
1.2



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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P17 with seismic.sh8

Wall Height=6.7 Pile Diameter=2.0 Pile Spacing=6.8 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=10.12 Min. Pile Length=16.79
MOMENT IN PILE: Max. Moment=49.31 per Pile Spacing=6.8 at Depth=10.93

PILE SELECTION:

Request Min. Section Modulus = 17.9 in³/pile=293.81 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

- HP8X36 (0.61) W8X21 (0.97) HP10X42 (0.35) W10X19 (0.76) HP12X53 (0.19)
- W12X19 (0.56) HP13X60 (0.14) HP14X73 (0.10) W14X22 (0.37) W16X26 (0.24)
- HP16X88 (0.07) W16X89 (0.06) HP16X101 (0.06) W16X100 (0.05)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|------|------|-------|-------|
| 0 | 0 | 6.67 | 0.267 | .04 |
| 0 | .068 | 6.67 | 0.068 | |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 6.67 | 0 | 50 | 12.99 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.75 |
| 2 | 6.67 | 2.00 |

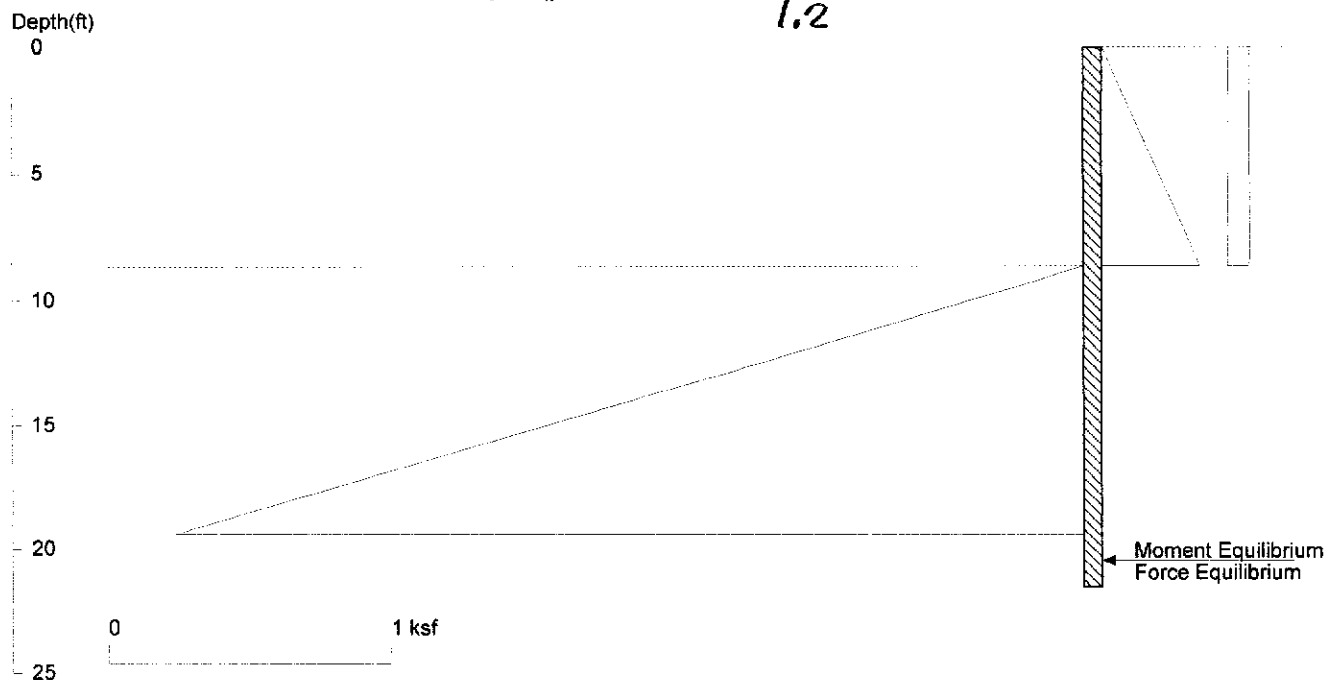
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 6.67 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P17

~~Without~~ seismic FOS = 1.5
1.2



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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P18 with seismic.sh8

Wall Height=8.7 Pile Diameter=2.0 Pile Spacing=6.8 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=12.86 Min. Pile Length=21.53

MOMENT IN PILE: Max. Moment=101.18 per Pile Spacing=6.8 at Depth=14.08

PILE SELECTION:

Request Min. Section Modulus = 36.8 in³/pile=602.92 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W8X48 (1.29) HP10X42 (1.13) W10X39 (1.14) HP12X53 (0.61) W12X30 (1.00)
 HP13X60 (0.47) HP14X73 (0.33) W14X30 (0.82) W16X26 (0.79) HP16X88 (0.21)
 W16X89 (0.18) HP16X101 (0.18) W16X100 (0.16) HP16X121 (0.15)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|------|------|-------|-------|
| 0 | 0 | 8.67 | 0.347 | .04 |
| 0 | .076 | 8.67 | 0.076 | |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 8.67 | 0 | 50 | 12.39 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.75 |
| 2 | 8.67 | 2.00 |

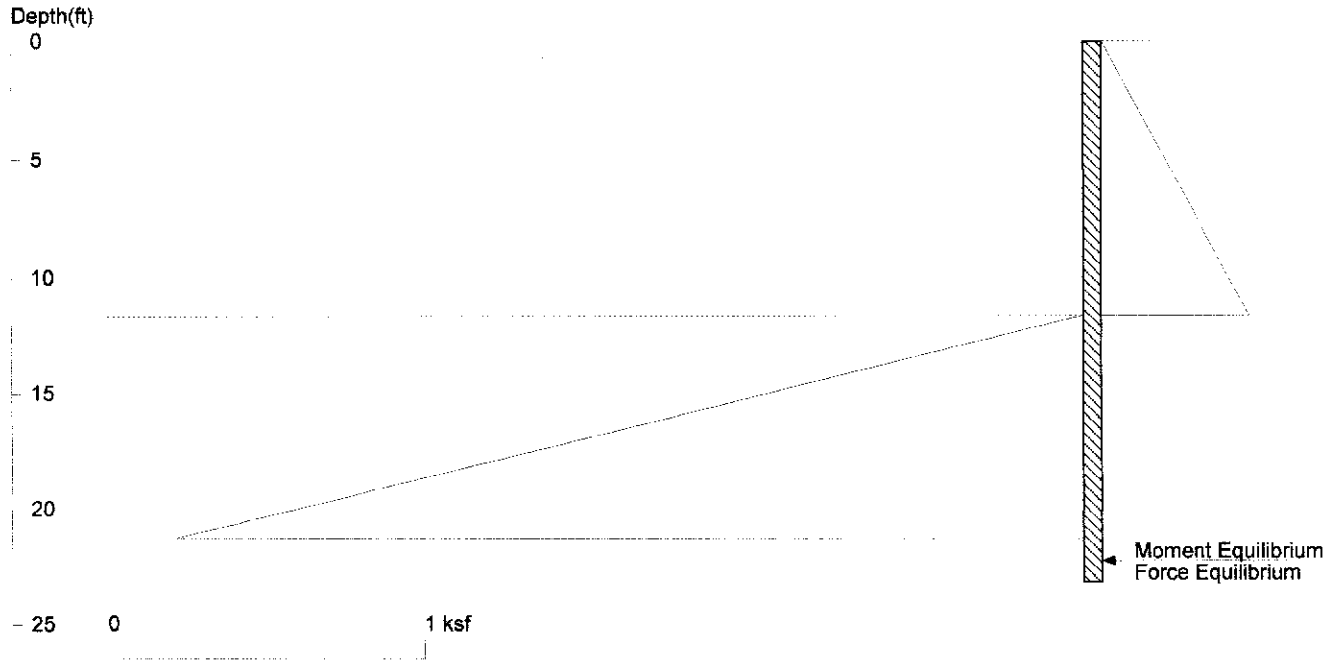
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 8.67 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P19

With Containment FOS = 1.2



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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P19 pre tieback.sh8

Wall Height=11.7 Pile Diameter=2.0 Pile Spacing=3.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=11.49 Min. Pile Length=23.15

MOMENT IN PILE: Max. Moment=57.07 per Pile Spacing=3.0 at Depth=16.33

PILE SELECTION:

Request Min. Section Modulus = 28.8 in³/pile=472.32 cm³/pile, F_y= 36 ksi = 248 MPa, F_b/F_y=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

- HP8X36 (1.58) W8X35 (1.48) HP10X42 (0.89) W10X30 (1.11) HP12X53 (0.48)
- W12X26 (0.92) HP13X60 (0.37) HP14X73 (0.26) W14X22 (0.94) W16X26 (0.62)
- HP16X88 (0.17) W16X89 (0.14) HP16X101 (0.14) W16X100 (0.13)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|-------|-------|-------|
| 0 | 0 | 11.66 | 0.466 | .040 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|-------|----|----|-------|-------|
| 11.66 | 0 | 50 | 11.50 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 3.00 |
| 2 | 11.66 | 2.00 |

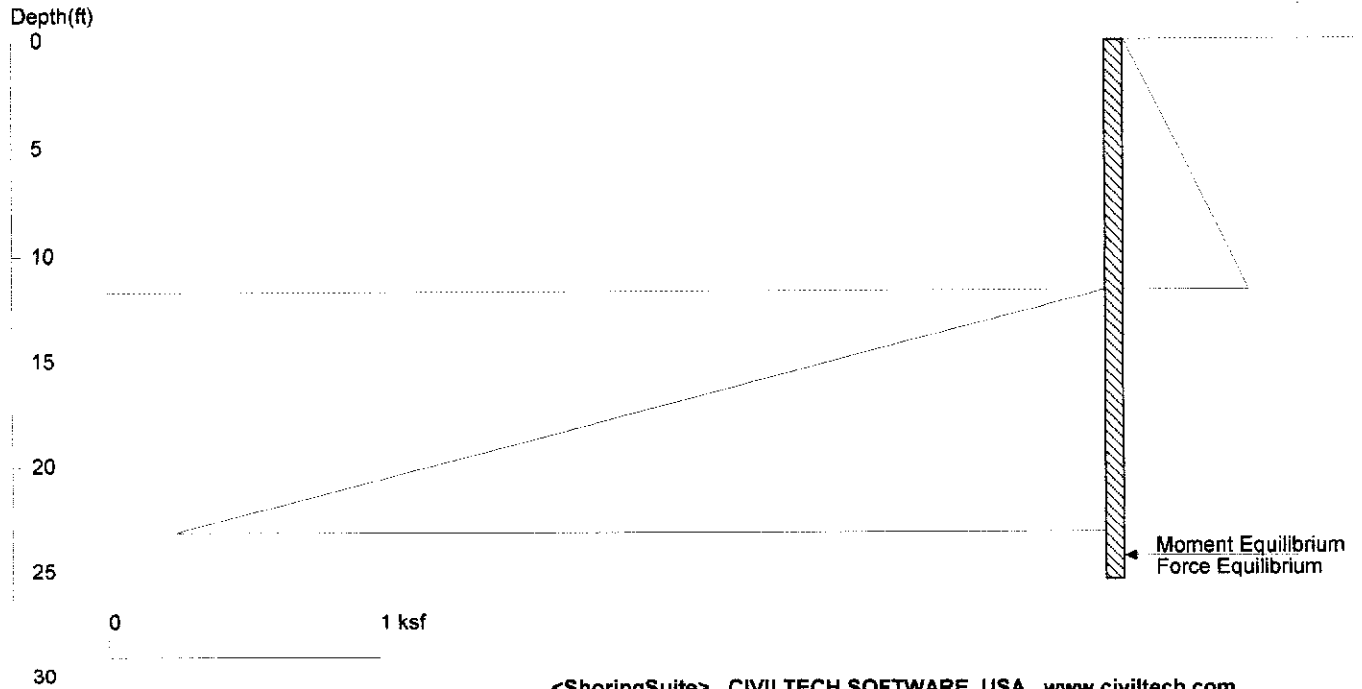
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 11.66 | 3.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P20

~~With Containment~~ FOS = 1.2



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Date: 2/25/2022

File: C:\Users\gil2\OneDrive\projects\mist\shoring\Mist P20 pre tieback.sh8

Wall Height=11.7 Pile Diameter=2.0 Pile Spacing=6.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=13.74 Min. Pile Length=25.40

MOMENT IN PILE: Max. Moment=125.54 per Pile Spacing=6.0 at Depth=17.38

PILE SELECTION:

Request Min. Section Modulus = 63.4 in³/pile=1038.99 cm³/pile, Fy= 36 ksi = 248 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

- W10X60 (1.29) HP12X53 (1.12) W12X50 (1.12) HP13X60 (0.87) HP14X73 (0.60)
- W14X48 (0.91) W16X40 (0.85) HP16X88 (0.39) W16X89 (0.34) HP16X101 (0.34)
- W16X100 (0.29) HP16X121 (0.28) W18X40 (0.72) HP18X135 (0.20)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|-------|-------|-------|
| 0 | 0 | 11.66 | 0.466 | .040 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|-------|----|----|-------|-------|
| 11.66 | 0 | 50 | 11.50 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.00 |
| 2 | 11.66 | 2.00 |

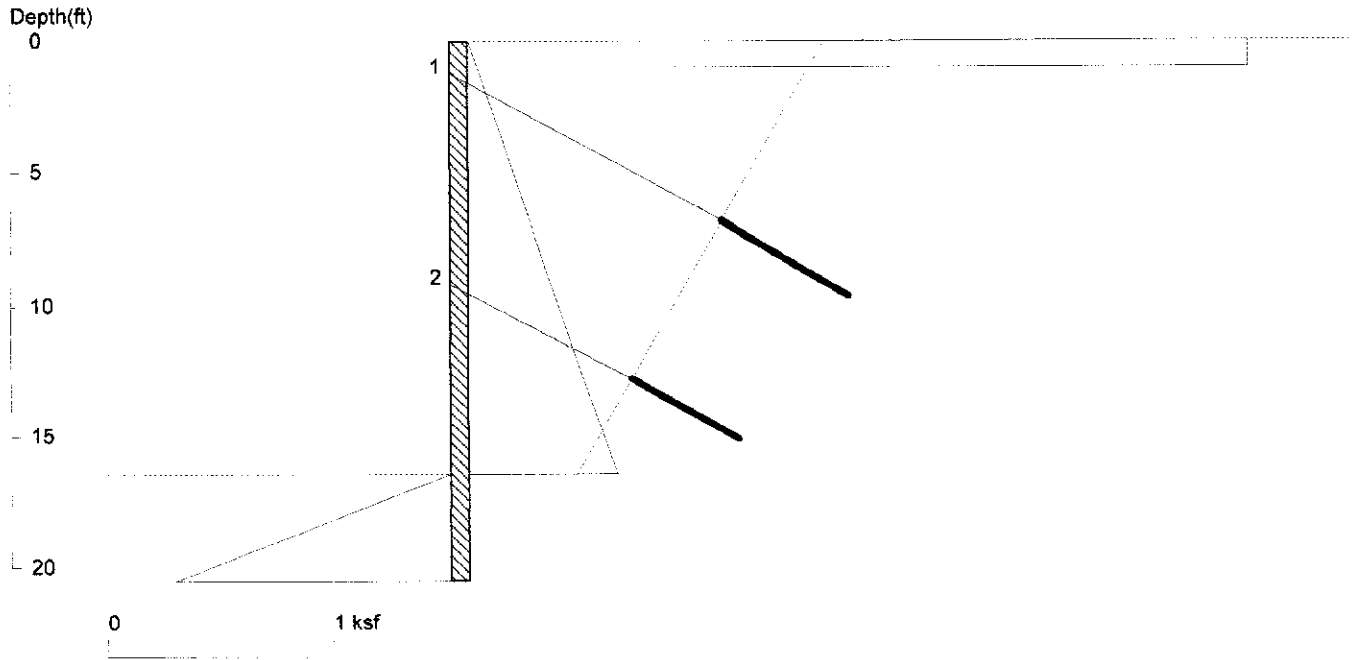
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 11.66 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P21

With Containment FOS = 1.2



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File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P20 w containment.sh8

Wall Height=16.5 Pile Diameter=2.0 Pile Spacing=5.6 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=4.07 (5~10ft is recommended!!!) Min. Pile Length=20.53

MOMENT IN PILE: Max. Moment=26.10 per Pile Spacing=5.6 at Depth=14.33

PILE SELECTION:

Request Min. Section Modulus = 13.2 in³/pile=216.04 cm³/pile, F_y= 36 ksi = 248 MPa, F_b/F_y=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W6X20 (0.00) HP8X36 (0.00) W8X18 (0.00) HP10X42 (0.00) W10X15 (0.00)
 HP12X53 (0.00) W12X14 (0.00) HP13X60 (0.00) HP14X73 (0.00) W14X22 (0.00)
 W16X26 (0.00) HP16X88 (0.00) W16X89 (0.00) HP16X101 (0.00)

BRACE FORCE: Strut, Tieback, Plate Anchor, Deadman, Sheet Pile as Anchor

| No. & Type | Depth | Angle | Space | Total F. | Horiz. F. | Vert. F. | L_free | Fixed Length |
|------------|-------|-------|-------|----------|-----------|----------|--------|--------------|
| 1. Tieback | 1.3 | 30.0 | 5.6 | 23.3 | 20.1 | 11.6 | 11.2 | 5.6 |
| 2. Tieback | 9.2 | 30.0 | 5.6 | 19.4 | 16.8 | 9.7 | 7.2 | 4.7 |

UNITS: Width,Diameter,Spacing,Length,Depth,and Height - ft; Force - kip; Bond Strength and Pressure - ksf

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|------|-------|-------|-------|
| 0 | 0 | 16.46 | 0.658 | .040 |
| 0 | 2.71 | 1 | 2.710 | |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|-------|----|----|-------|-------|
| 16.46 | 0 | 50 | 10.06 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 5.57 |
| 2 | 16.46 | 2.00 |

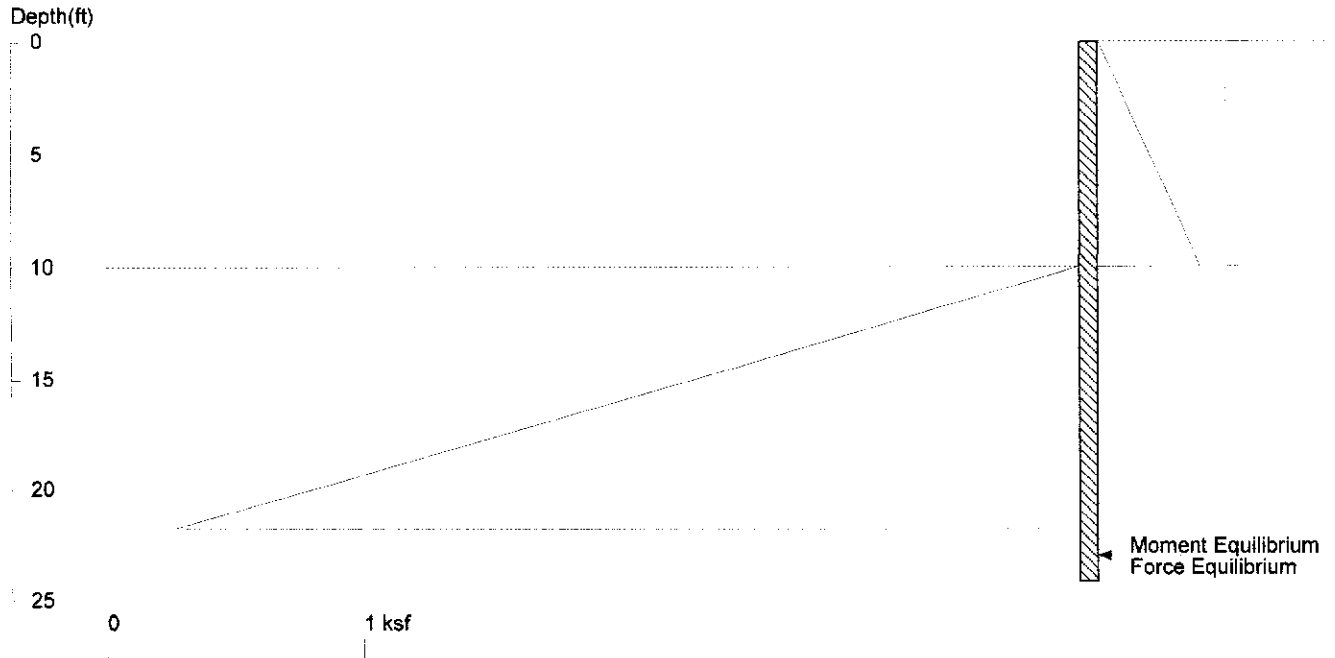
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 16.46 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P24

With Seismic FOS = 1.2



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File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P24 with seismic.sh8

Wall Height=10.0 Pile Diameter=2.0 Pile Spacing=6.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=14.12 Min. Pile Length=24.12

MOMENT IN PILE: Max. Moment=135.43 per Pile Spacing=6.0 at Depth=15.89

PILE SELECTION:

Request Min. Section Modulus = 68.4 in³/pile=1120.85 cm³/pile, Fy= 36 ksi = 248 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W10X68 (1.04) HP12X63 (0.86) W12X53 (0.96) HP13X60 (0.81) HP14X73 (0.56)
 W14X48 (0.84) W16X45 (0.70) HP16X88 (0.37) W16X89 (0.31) HP16X101 (0.31)
 W16X100 (0.27) HP16X121 (0.26) W18X40 (0.67) HP18X135 (0.19)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|-----|----|-------|-------|
| 0 | 0 | 10 | 0.400 | .040 |
| 0 | .09 | 10 | 0.090 | |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|----|-------|-------|
| 10 | 0 | 50 | 12.00 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.00 |
| 2 | 10.00 | 2.00 |

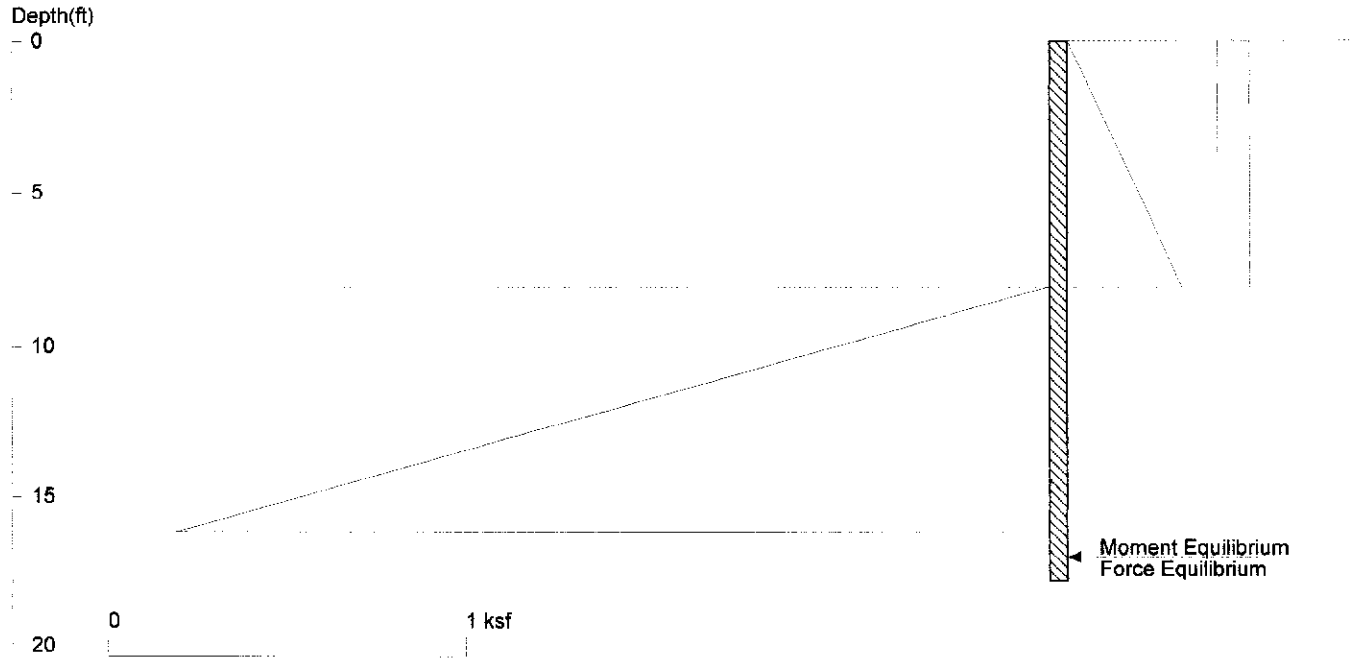
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 10.00 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P26

With Seismic FOS = 1.2



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Date: 2/25/2022

File: C:\Users\gil2\OneDrive\projects\mist\shoring\Mist P26 with seismic.sh8

Wall Height=8.0 Pile Diameter=2.0 Pile Spacing=3.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=9.79 Min. Pile Length=17.79

MOMENT IN PILE: Max. Moment=34.88 per Pile Spacing=3.0 at Depth=12.01

PILE SELECTION:

Request Min. Section Modulus = 17.6 in³/pile=288.68 cm³/pile, Fy= 36 ksi = 248 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

- HP8X36 (0.57) W8X21 (0.90) HP10X42 (0.32) W10X19 (0.70) HP12X53 (0.17)
- W12X19 (0.52) HP13X60 (0.13) HP14X73 (0.09) W14X22 (0.34) W16X26 (0.22)
- HP16X88 (0.06) W16X89 (0.05) HP16X101 (0.05) W16X100 (0.05)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|-----|----|-------|-------|
| 0 | 0 | 8 | 0.320 | .040 |
| 0 | .09 | 8 | 0.090 | |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|----|-------|-------|
| 8 | 0 | 50 | 12.60 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 3.00 |
| 2 | 8.00 | 2.00 |

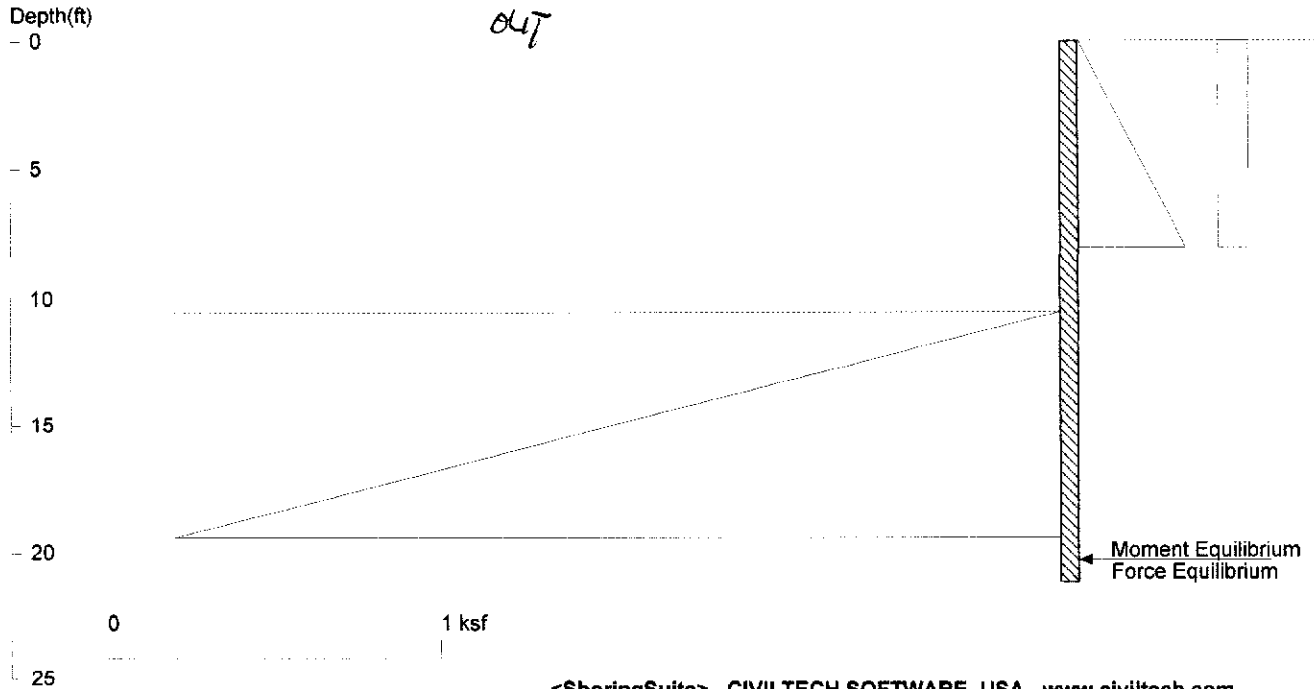
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 8.00 | 3.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P27

With Seismic FOS = 1.2



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Date: 2/25/2022

File: C:\Users\gil2\OneDrive\projects\mist\shoring\Mist P27 without seismic.sh8

Wall Height=10.5 Pile Diameter=2.0 Pile Spacing=3.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=10.64 Min. Pile Length=21.14

MOMENT IN PILE: Max. Moment=49.88 per Pile Spacing=3.0 at Depth=14.50

PILE SELECTION:

Request Min. Section Modulus = 25.2 in³/pile=412.82 cm³/pile, Fy= 36 ksi = 248 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

- HP8X36 (1.34) W8X31 (1.45) HP10X42 (0.76) W10X26 (1.11) HP12X53 (0.41)
- W12X22 (1.02) HP13X60 (0.32) HP14X73 (0.22) W14X22 (0.80) W16X26 (0.53)
- HP16X88 (0.14) W16X89 (0.12) HP16X101 (0.12) W16X100 (0.11)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|-----|----|-------|-------|
| 0 | 0 | 8 | 0.320 | .040 |
| 0 | .09 | 8 | 0.090 | |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 10.5 | 0 | 50 | 11.85 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 3.00 |
| 2 | 10.50 | 2.00 |

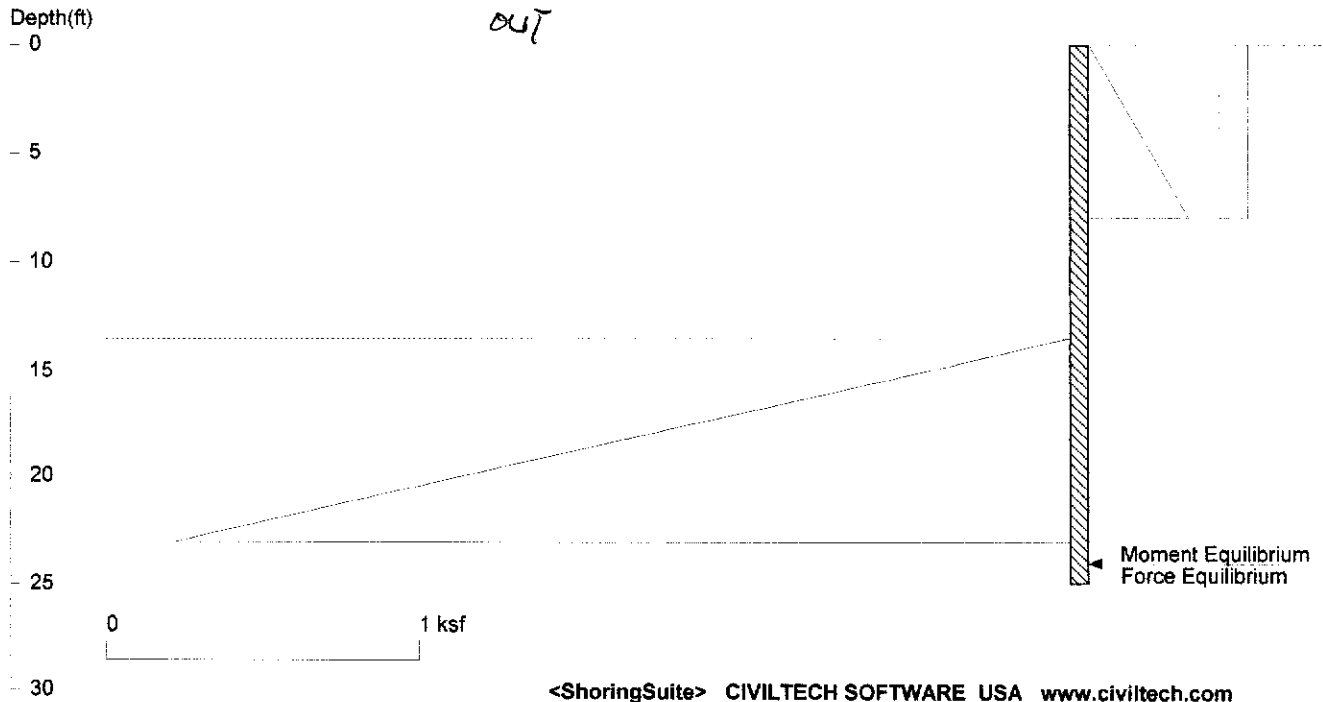
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 10.50 | 3.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P28

With Seismic FOS = 1.2



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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P28 without seismic.sh8

Wall Height=13.5 Pile Diameter=2.0 Pile Spacing=3.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=11.47 Min. Pile Length=24.97

MOMENT IN PILE: Max. Moment=67.88 per Pile Spacing=3.0 at Depth=17.50

PILE SELECTION:

Request Min. Section Modulus = 34.3 in³/pile=561.79 cm³/pile, F_y= 36 ksi = 248 MPa, F_b/F_y=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W8X40 (2.40) HP10X42 (1.67) W10X33 (2.05) HP12X53 (0.89) W12X30 (1.48)
 HP13X60 (0.70) HP14X73 (0.48) W14X26 (1.43) W16X26 (1.17) HP16X88 (0.32)
 W16X89 (0.27) HP16X101 (0.27) W16X100 (0.24) HP16X121 (0.22)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|-----|----|-------|-------|
| 0 | 0 | 8 | 0.320 | .040 |
| 0 | .09 | 8 | 0.090 | |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 13.5 | 0 | 50 | 10.95 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 3.00 |
| 2 | 13.50 | 2.00 |

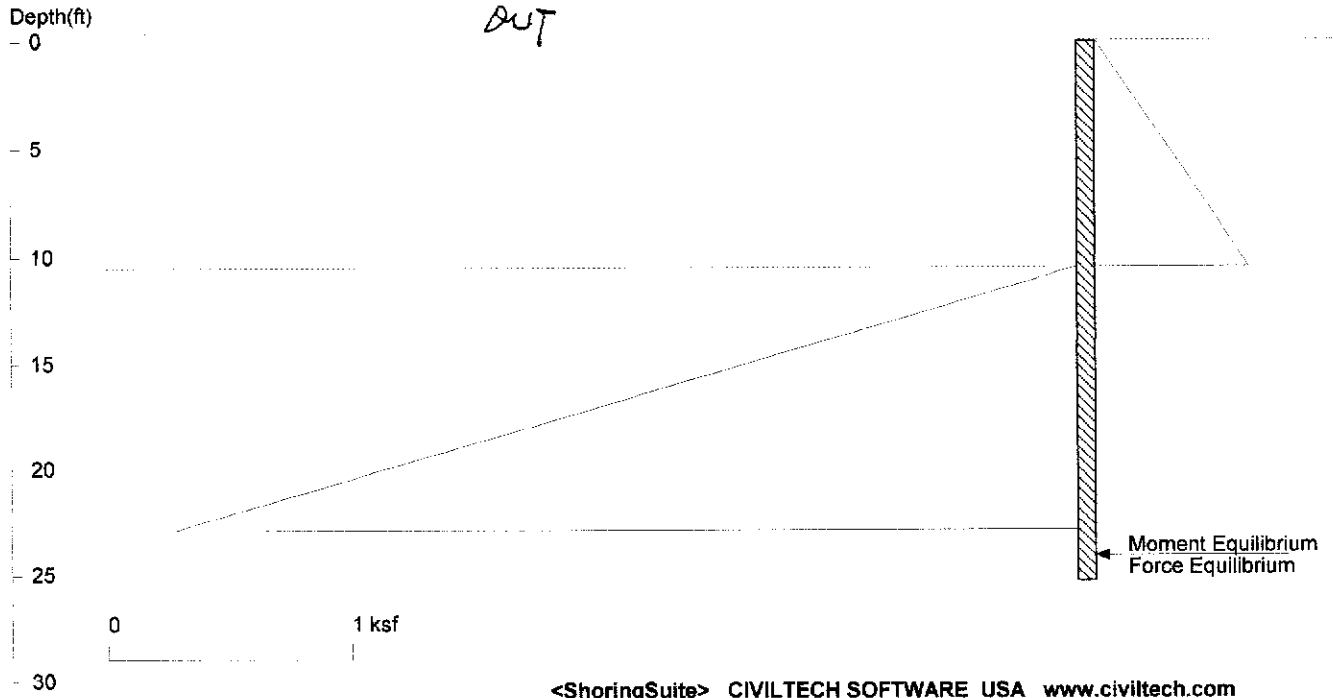
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 13.50 | 3.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P29

With Seismic FOS = 1.2



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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P29 without seismic.sh8

Wall Height=10.5 Pile Diameter=2.0 Pile Spacing=6.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=14.83 Min. Pile Length=25.33

MOMENT IN PILE: Max. Moment=152.81 per Pile Spacing=6.0 at Depth=16.81

PILE SELECTION:

Request Min. Section Modulus = 77.2 in³/pile=1264.66 cm³/pile, Fy= 36 ksi = 248 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W10X77 (1.05) HP12X63 (1.01) W12X58 (1.01) HP13X60 (0.95) HP14X73 (0.66)
 W14X53 (0.88) W16X50 (0.72) HP16X88 (0.43) W16X89 (0.37) HP16X101 (0.37)
 W16X100 (0.32) HP16X121 (0.30) W18X46 (0.67) HP18X135 (0.22)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|------|-------|----------|
| 0 | 0 | 10.5 | 0.630 | 0.060000 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|------|----|----|-------|-------|
| 10.5 | 0 | 50 | 11.85 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.00 |
| 2 | 10.50 | 2.00 |

PASSIVE SPACING:

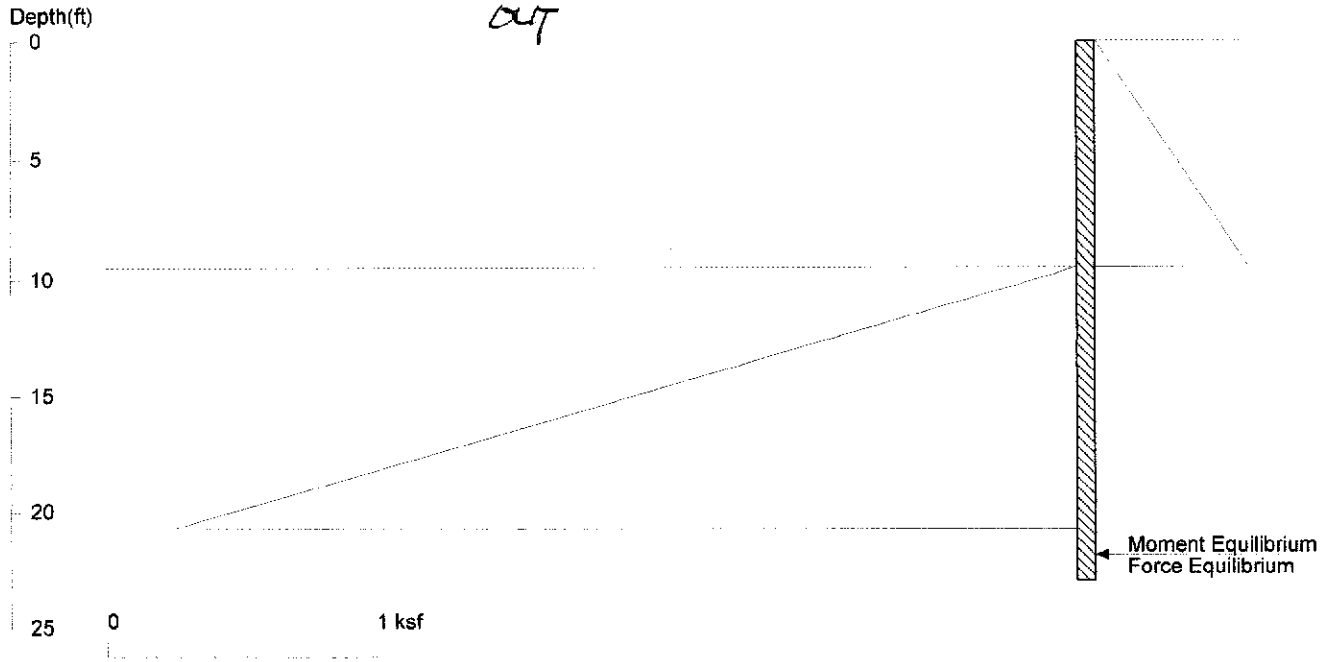
| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 10.50 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P30

With Seismic FOS = 1.2

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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P30 without seismic.sh8

Wall Height=9.5

Pile Diameter=2.0

Pile Spacing=6.0

Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=13.42 Min. Pile Length=22.92

MOMENT IN PILE: Max. Moment=113.17 per Pile Spacing=6.0 at Depth=15.19

PILE SELECTION:

Request Min. Section Modulus = 57.2 in³/pile=936.65 cm³/pile, Fy= 36 ksi = 248 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W8X67 (1.07) HP10X57 (0.99) W10X54 (0.96) HP12X53 (0.74) W12X45 (0.84)
 HP13X60 (0.58) HP14X73 (0.40) W14X43 (0.68) W16X40 (0.56) HP16X88 (0.26)
 W16X89 (0.22) HP16X101 (0.23) W16X100 (0.20) HP16X121 (0.18)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|-----|-------|----------|
| 0 | 0 | 9.5 | 0.570 | 0.060000 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|-----|----|----|-------|-------|
| 9.5 | 0 | 50 | 12.15 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.00 |
| 2 | 9.50 | 2.00 |

PASSIVE SPACING:

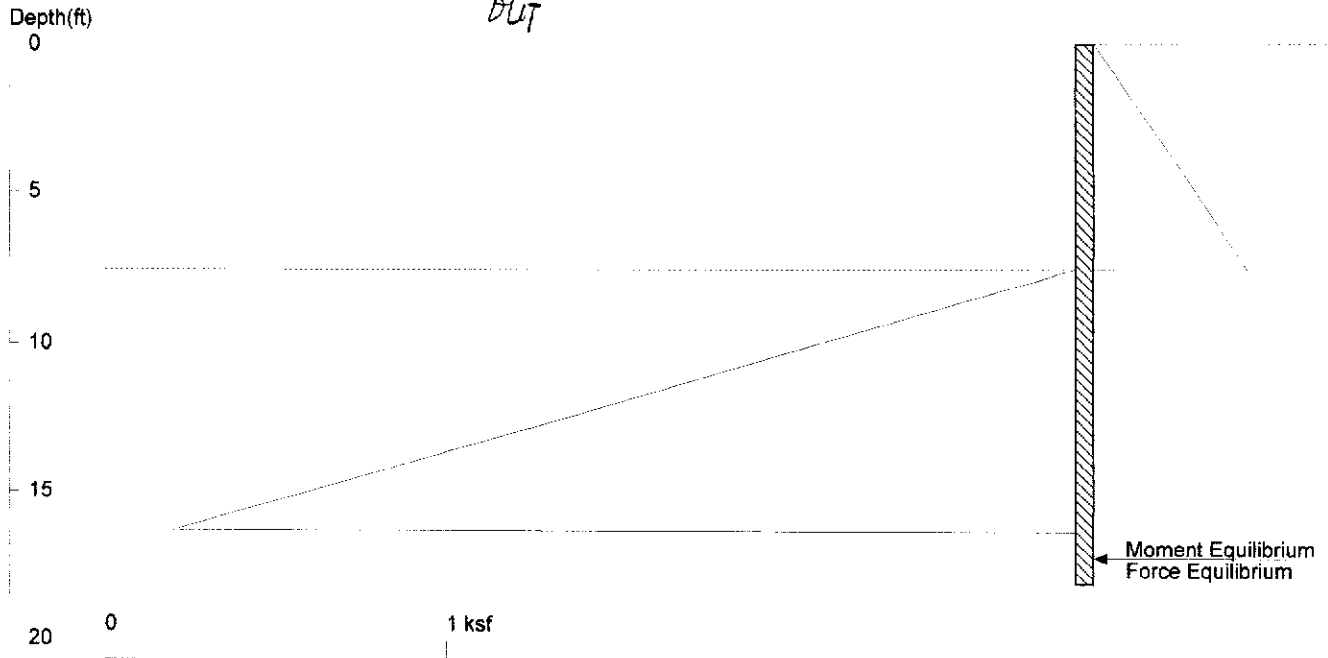
| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 9.50 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P301

With Seismic FOS = 1.2

DLT



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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P31 without seismic.sh8

Wall Height=7.5 Pile Diameter=2.0 Pile Spacing=6.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=10.59 Min. Pile Length=18.09

MOMENT IN PILE: Max. Moment=55.69 per Pile Spacing=6.0 at Depth=11.99

PILE SELECTION:

Request Min. Section Modulus = 28.1 in³/pile=460.88 cm³/pile, Fy= 36 ksi = 248 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

HP8X36 (0.78) W8X35 (0.73) HP10X42 (0.44) W10X30 (0.55) HP12X53 (0.24)
 W12X26 (0.46) HP13X60 (0.18) HP14X73 (0.13) W14X22 (0.47) W16X26 (0.31)
 HP16X88 (0.08) W16X89 (0.07) HP16X101 (0.07) W16X100 (0.06)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|-----|-------|----------|
| 0 | 0 | 7.5 | 0.450 | 0.060000 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|-----|----|----|-------|-------|
| 7.5 | 0 | 50 | 12.75 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.00 |
| 2 | 7.50 | 2.00 |

PASSIVE SPACING:

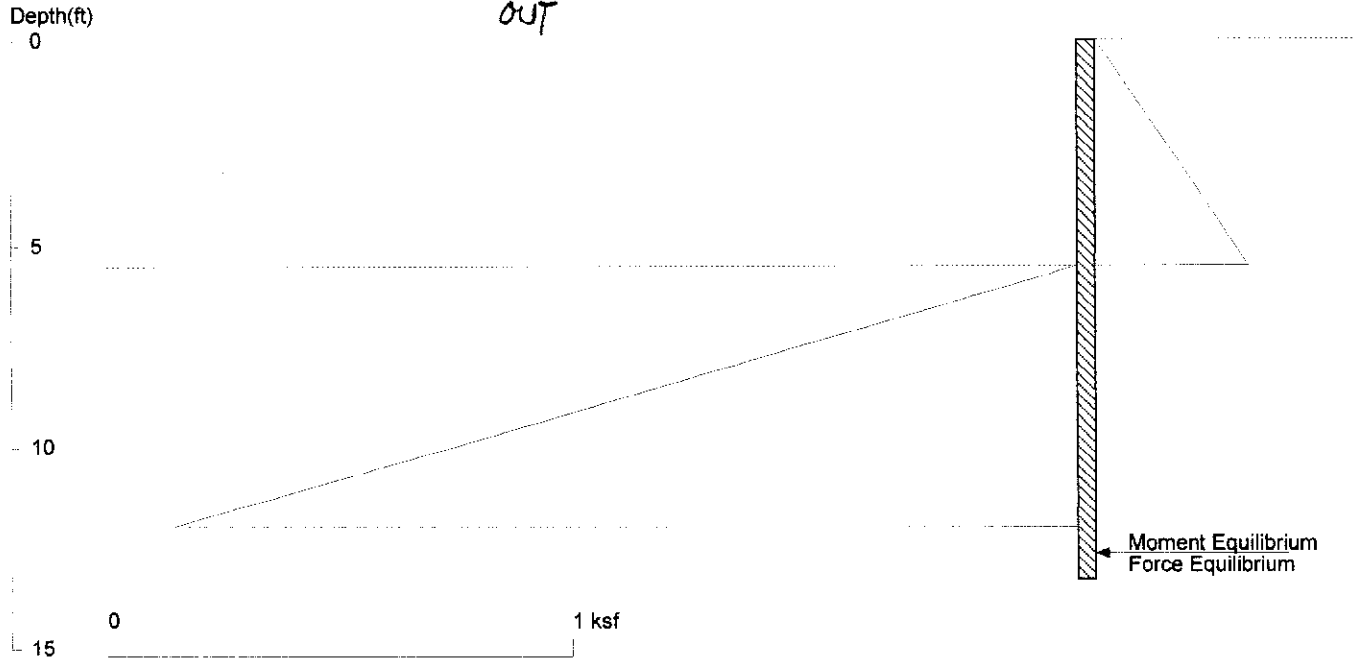
| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 7.50 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P32

With Seismic FOS = 1.2

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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P32 without seismic.sh8

Wall Height=5.5 Pile Diameter=2.0 Pile Spacing=6.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=7.77 Min. Pile Length=13.27

MOMENT IN PILE: Max. Moment=21.96 per Pile Spacing=6.0 at Depth=8.79

PILE SELECTION:

Request Min. Section Modulus = 11.1 in³/pile=181.76 cm³/pile, F_y= 36 ksi = 248 MPa, F_b/F_y=0.66

-> Piles meet Min. Section Requirements:

Top Deflection is shown in (in)

- W6X20 (0.55) HP8X36 (0.19) W8X15 (0.47) HP10X42 (0.11) W10X15 (0.33)
- HP12X53 (0.06) W12X14 (0.26) HP13X60 (0.05) HP14X73 (0.03) W14X22 (0.11)
- W16X26 (0.08) HP16X88 (0.02) W16X89 (0.02) HP16X101 (0.02)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|-----|-------|----------|
| 0 | 0 | 5.5 | 0.330 | 0.060000 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|-----|----|----|-------|-------|
| 5.5 | 0 | 50 | 13.35 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 6.00 |
| 2 | 5.50 | 2.00 |

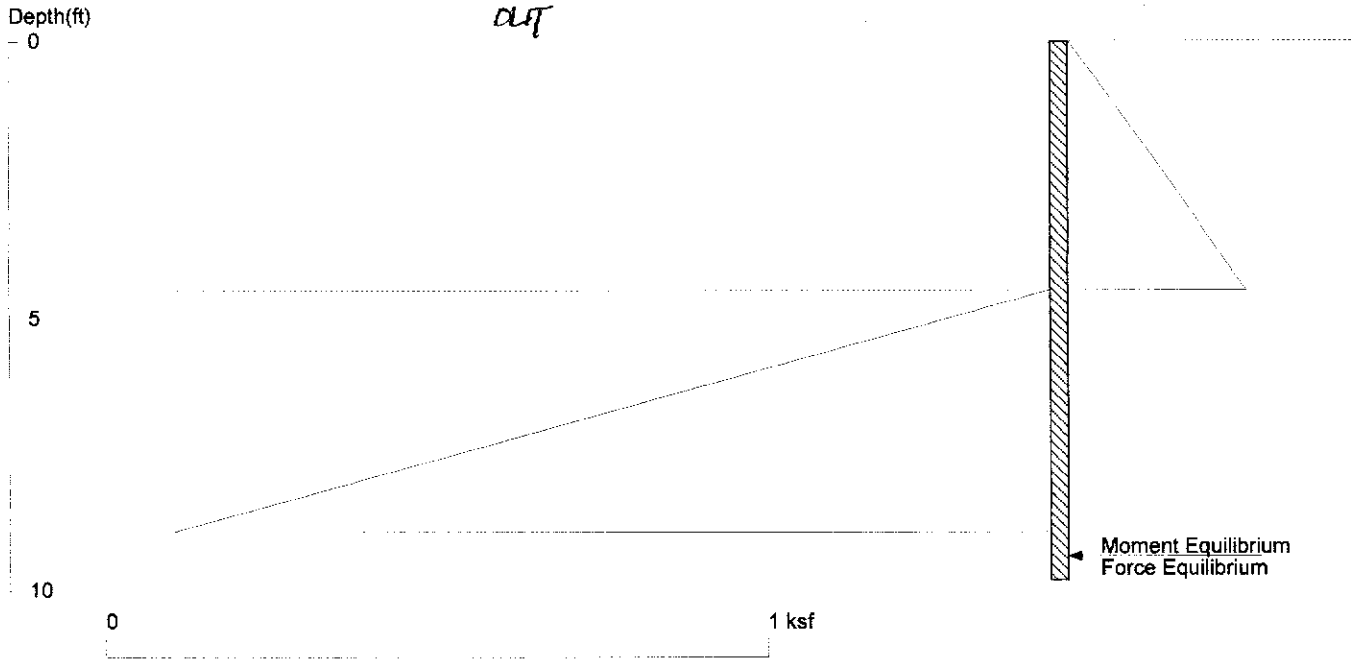
PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 5.50 | 4.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

Mist P33
With Seismic FOS = 1.2

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Date: 2/25/2022

File: C:\Users\gill2\OneDrive\projects\mist\shoring\Mist P33 without seismic.sh8

Wall Height=4.5 Pile Diameter=2.0 Pile Spacing=3.0 Wall Type: 2. Soldier Pile, Drilled

PILE LENGTH: Min. Embedment=5.30 Min. Pile Length=9.80

MOMENT IN PILE: Max. Moment=5.41 per Pile Spacing=3.0 at Depth=6.70

PILE SELECTION:

Request Min. Section Modulus = 2.7 in³/pile=44.79 cm³/pile, Fy= 36 ksi = 248 MPa, Fb/Fy=0.66

-> Piles meet Min. Section Requirements: Top Deflection is shown in (in)

W4X13 (0.68) W5X16 (0.36) W6X8.5 (0.52) HP8X36 (0.06) W8X10 (0.25)
 HP10X42 (0.04) W10X12 (0.14) HP12X53 (0.02) W12X14 (0.09) HP13X60 (0.02)
 HP14X73 (0.01) W14X22 (0.04) W16X26 (0.03) HP16X88 (0.01)

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

| Z1 | P1 | Z2 | P2 | Slope |
|----|----|-----|-------|----------|
| 0 | 0 | 4.5 | 0.270 | 0.060000 |

PASSIVE PRESSURES: Pressures below will be divided by a Factor of Safety =1.2

| Z1 | P1 | Z2 | P2 | Slope |
|-----|----|----|-------|-------|
| 4.5 | 0 | 50 | 13.65 | .3 |

ACTIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 0.00 | 3.00 |
| 2 | 4.50 | 2.00 |

PASSIVE SPACING:

| No. | Z depth | Spacing |
|-----|---------|---------|
| 1 | 4.50 | 3.00 |

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in