

PILE & ANCHOR SCHEDULE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| PILE NUMBER | PILE TYPE | TOP/PILE ELEV. | PILE TIP ELEV. | EST. PILE LENGTH (FT.) | STUD SPA. (IN.) | *NO. OF STUDS PER BEAM | ANCHOR NUMBER | DESIGN LOAD (K) | INCLINATION (DEG.) | EST. UNBONDED LENGTH (FT.) | EST. BOND LENGTH (FT.) | EST. TOTAL LENGTH (FT.) | **DIST. TO R.O.W. (FT.) |
|-------------|-------------|----------------|----------------|------------------------|-----------------|------------------------|---------------|-----------------|--------------------|----------------------------|------------------------|-------------------------|-------------------------|
| 1 | HP12X84 | 739.19 | 715.19 | 24.00 | 12 | 2 | - | - | - | - | - | - | - |
| 2 | HP12X84 | 742.39 | 714.39 | 28.00 | 12 | 5 | - | - | - | - | - | - | - |
| 3 | (2)-HP10x42 | 745.60 | 731.60 | 14.00 | 12 | 8 | 3 | 55.18 | 15 | 10.0 | 14.7 | 24.7 | 49.4 |
| 4 | (2)-HP10x42 | 748.80 | 728.80 | 20.00 | 12 | 11 | 4 | 89.32 | 15 | 10.0 | 23.8 | 33.8 | 49.4 |
| 5 | (2)-HP10x42 | 752.01 | 724.01 | 28.00 | 12 | 15 | 5 | 124.43 | 15 | 11.4 | 33.2 | 44.6 | 49.4 |
| 6 | (2)-HP10x42 | 755.22 | 717.22 | 38.00 | 12 | 18 | 6-U | 96.19 | 15 | 13.3 | 25.7 | 39.0 | 49.4 |
| | | | | | | | 6-L | 73.21 | 15 | 10.0 | 19.5 | 29.5 | 49.4 |
| 7 | (2)-HP10x42 | 758.43 | 712.43 | 46.00 | 12 | 21 | 7-U | 117.99 | 15 | 15.5 | 31.5 | 47.0 | 49.4 |
| | | | | | | | 7-L | 113.88 | 15 | 10.0 | 30.4 | 40.4 | 49.4 |
| 8 | (2)-HP10x42 | 758.74 | 712.74 | 46.00 | 12 | 21 | 8-U | 102.76 | 15 | 15.5 | 27.4 | 42.9 | 50.2 |
| | | | | | | | 8-L | 99.19 | 15 | 10.0 | 26.5 | 36.5 | 50.2 |
| 9 | (2)-HP10x42 | 758.75 | 716.75 | 42.00 | 12 | 20 | 9-U | 84.95 | 15 | 14.9 | 22.7 | 37.6 | 43.0 |
| | | | | | | | 9-L | 77.30 | 15 | 10.0 | 20.6 | 30.6 | 43.0 |
| 10 | (2)-HP10x42 | 758.69 | 713.69 | 45.00 | 12 | 20 | 10-U | 112.07 | 15 | 15.0 | 29.9 | 44.9 | 43.5 |
| | | | | | | | 10-L | 101.97 | 15 | 10.0 | 27.2 | 37.2 | 43.5 |
| 11 | (2)-HP10x42 | 757.92 | 713.92 | 44.00 | 12 | 20 | 11-U | 112.07 | 15 | 15.0 | 29.9 | 44.9 | 44.1 |
| | | | | | | | 11-L | 101.97 | 15 | 10.0 | 27.2 | 37.2 | 44.1 |
| 12 | (2)-HP10x42 | 757.13 | 713.13 | 44.00 | 12 | 19 | 12-U | 112.07 | 15 | 15.0 | 29.9 | 44.9 | 44.7 |
| | | | | | | | 12-L | 101.97 | 15 | 10.0 | 27.2 | 37.2 | 44.7 |
| 13 | (2)-HP10x42 | 756.34 | 716.34 | 40.00 | 12 | 18 | 13-U | 99.79 | 15 | 13.7 | 26.6 | 40.3 | 45.3 |
| | | | | | | | 13-L | 79.32 | 15 | 10.0 | 21.1 | 31.1 | 45.3 |
| 14 | (2)-HP10x42 | 755.55 | 717.55 | 38.00 | 12 | 17 | 14-U | 99.79 | 15 | 13.7 | 26.6 | 40.3 | 45.9 |
| | | | | | | | 14-L | 79.32 | 15 | 10.0 | 21.1 | 31.1 | 45.9 |
| 15 | (2)-HP10x42 | 754.77 | 716.77 | 38.00 | 12 | 17 | 15-U | 99.79 | 15 | 13.7 | 26.6 | 40.3 | 46.4 |
| | | | | | | | 15-L | 79.32 | 15 | 10.0 | 21.1 | 31.1 | 46.4 |
| 16 | (2)-HP10x42 | 753.98 | 717.98 | 36.00 | 12 | 16 | 16-U | 99.79 | 15 | 13.7 | 26.6 | 40.3 | 47.0 |
| | | | | | | | 16-L | 79.32 | 15 | 10.0 | 21.1 | 31.1 | 47.0 |
| 17 | (2)-HP10x42 | 753.19 | 723.19 | 30.00 | 12 | 15 | 17-U | 81.15 | 15 | 11.8 | 21.7 | 33.5 | 47.6 |
| | | | | | | | 17-L | 50.24 | 15 | 10.0 | 13.4 | 23.4 | 47.6 |
| 18 | (2)-HP10x42 | 752.40 | 722.40 | 30.00 | 12 | 14 | 18-U | 76.71 | 15 | 11.3 | 20.5 | 31.8 | 32.7 |
| | | | | | | | 18-L | 44.24 | 15 | 10.0 | 11.8 | 21.8 | 32.7 |
| 19 | (2)-HP10x42 | 751.78 | 723.78 | 28.00 | 12 | 14 | 19-U | 76.71 | 15 | 11.3 | 20.5 | 31.8 | 33.3 |
| | | | | | | | 19-L | 44.24 | 15 | 10.0 | 11.8 | 21.8 | 33.3 |
| 20 | (2)-HP10x42 | 751.99 | 721.99 | 30.00 | 12 | 14 | 20-U | 76.71 | 15 | 11.3 | 20.5 | 31.8 | 33.9 |
| | | | | | | | 20-L | 44.24 | 15 | 10.0 | 11.8 | 21.8 | 33.9 |
| 21 | (2)-HP10x42 | 752.17 | 734.17 | 18.00 | 12 | 10 | 21 | 74.74 | 15 | 10.0 | 19.9 | 29.9 | 34.0 |
| 22 | (2)-HP10x42 | 752.38 | 734.38 | 18.00 | 12 | 10 | 22 | 74.74 | 15 | 10.0 | 19.9 | 29.9 | 34.0 |
| 23 | (2)-HP10x42 | 752.59 | 734.59 | 18.00 | 12 | 10 | 23 | 74.74 | 15 | 10.0 | 19.9 | 29.9 | 34.0 |
| 24 | (2)-HP10x42 | 752.79 | 736.79 | 16.00 | 12 | 10 | 24 | 74.74 | 15 | 10.0 | 19.9 | 29.9 | 34.0 |
| 25 | (2)-HP10x42 | 753.00 | 737.00 | 16.00 | 12 | 10 | 25 | 74.74 | 15 | 10.0 | 19.9 | 29.9 | 34.0 |
| 26 | (2)-HP10x42 | 753.20 | 737.20 | 16.00 | 12 | 10 | 26 | 74.74 | 15 | 10.0 | 19.9 | 29.9 | 33.9 |
| 27 | (2)-HP10x42 | 753.41 | 737.41 | 16.00 | 12 | 9 | 27 | 74.74 | 15 | 10.0 | 19.9 | 29.9 | 33.9 |
| 28 | (2)-HP10x42 | 753.61 | 737.61 | 16.00 | 12 | 9 | 28 | 74.74 | 15 | 10.0 | 19.9 | 29.9 | 33.9 |
| 29 | (2)-HP10x42 | 753.82 | 737.82 | 16.00 | 12 | 9 | 29 | 74.74 | 15 | 10.0 | 19.9 | 29.9 | 33.9 |
| 30 | (2)-HP10x42 | 754.03 | 738.03 | 16.00 | 12 | 9 | 30 | 74.74 | 15 | 10.0 | 19.9 | 29.9 | 33.9 |
| 31 | (2)-HP10x42 | 754.24 | 738.24 | 16.00 | 12 | 9 | 31 | 74.74 | 15 | 10.0 | 19.9 | 29.9 | 33.9 |
| 32 | (2)-HP10x42 | 754.45 | 738.45 | 16.00 | 12 | 9 | 32 | 74.74 | 15 | 10.0 | 19.9 | 29.9 | 33.9 |
| 33 | (2)-HP10x42 | 754.69 | 738.69 | 16.00 | 12 | 9 | 33 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 34 | (2)-HP10x42 | 754.95 | 738.95 | 16.00 | 12 | 8 | 34 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 35 | (2)-HP10x42 | 755.21 | 739.21 | 16.00 | 12 | 8 | 35 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 36 | (2)-HP10x42 | 755.48 | 739.48 | 16.00 | 12 | 8 | 36 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 37 | (2)-HP10x42 | 755.74 | 739.74 | 16.00 | 12 | 8 | 37 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 38 | (2)-HP10x42 | 756.00 | 740.00 | 16.00 | 12 | 8 | 38 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 39 | (2)-HP10x42 | 756.26 | 740.26 | 16.00 | 12 | 8 | 39 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 40 | (2)-HP10x42 | 756.53 | 742.53 | 14.00 | 12 | 8 | 40 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 41 | (2)-HP10x42 | 756.79 | 742.79 | 14.00 | 12 | 8 | 41 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 42 | (2)-HP10x42 | 757.05 | 743.05 | 14.00 | 12 | 8 | 42 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 43 | (2)-HP10x42 | 757.31 | 743.31 | 14.00 | 12 | 8 | 43 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 44 | (2)-HP10x42 | 757.58 | 743.58 | 14.00 | 12 | 8 | 44 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 45 | (2)-HP10x42 | 757.84 | 743.84 | 14.00 | 12 | 7 | 45 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 46 | (2)-HP10x42 | 758.10 | 744.10 | 14.00 | 12 | 7 | 46 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 47 | (2)-HP10x42 | 757.61 | 743.61 | 14.00 | 12 | 6 | 47 | 56.35 | 15 | 10.0 | 15.0 | 25.0 | 33.9 |
| 48 | HP12X84 | 753.87 | 729.87 | 24.00 | 12 | 2 | - | - | - | - | - | - | - |

* Number of studs per beam shown. Number of studs per pile for built-up section will be twice number shown.
** Horizontal distance from face of wall to R.O.W. Contractor to verify.

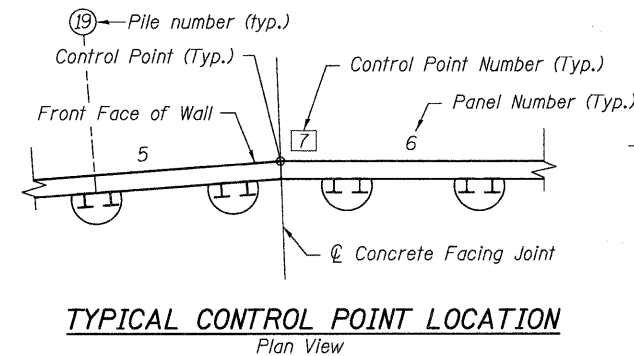
| | |
|----------|---------|
| DESIGNED | JCE/KJH |
| CHECKED | PMH |
| DRAWN | JCE/PMH |
| CHECKED | KJH |

SUGGESTED SEQUENCE OF CONSTRUCTION

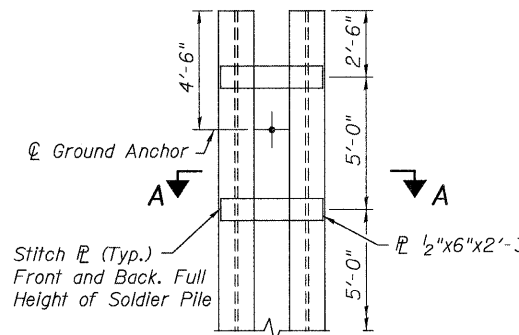
1. Drill holes for soldier piles. Do not excavate near these holes at this stage.
2. Set soldier piles.
3. Place soldier pile encasement concrete and controlled low-strength material (CLSM), as shown on plans.
4. Begin earth excavation. Remove only earth and CLSM as necessary to install timber lagging.
5. Install permanent ground anchors. Earth excavation shall be no more than two feet below anchor location.
6. Test permanent ground anchors and fill cover with anti-corrosion grout.
7. Complete remaining earth excavation and installation of wall components as in Step #5.
8. Install geocomposite wall drain.
9. Install stud shear connectors.
10. Backfill timber lagging.
11. Construct concrete fascia.

CONTROL POINTS

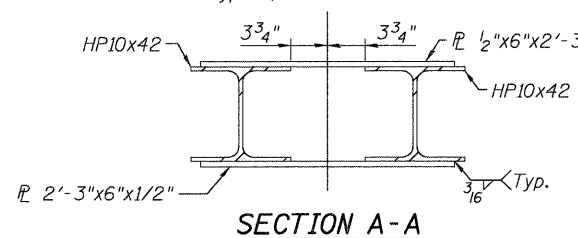
| Panel | Control Point No. | McLean Blvd. Station | Offset Rt. (Ft.) |
|-------|-------------------|----------------------|------------------|
| 1 | 1 | 811+34.86 | 34.63 |
| 2 | 2 | 811+64.86 | 34.63 |
| 3 | 3 | 811+94.86 | 34.63 |
| 4 | 4 | 812+22.05 | 41.34 |
| 5 | 5 | 812+51.96 | 39.08 |
| 6 | 6 | 812+81.88 | 36.83 |
| 7 | 7 | 813+11.79 | 34.58 |
| 8 | 8 | 813+41.79 | 34.58 |
| 9 | 9 | 813+71.79 | 34.58 |
| 10 | 10 | 814+01.79 | 34.58 |
| 11 | 11 | 814+31.79 | 34.58 |
| 12 | 12 | 814+61.79 | 34.58 |
| 13 | 13 | 814+91.79 | 34.58 |
| 14 | 14 | 815+21.79 | 34.58 |



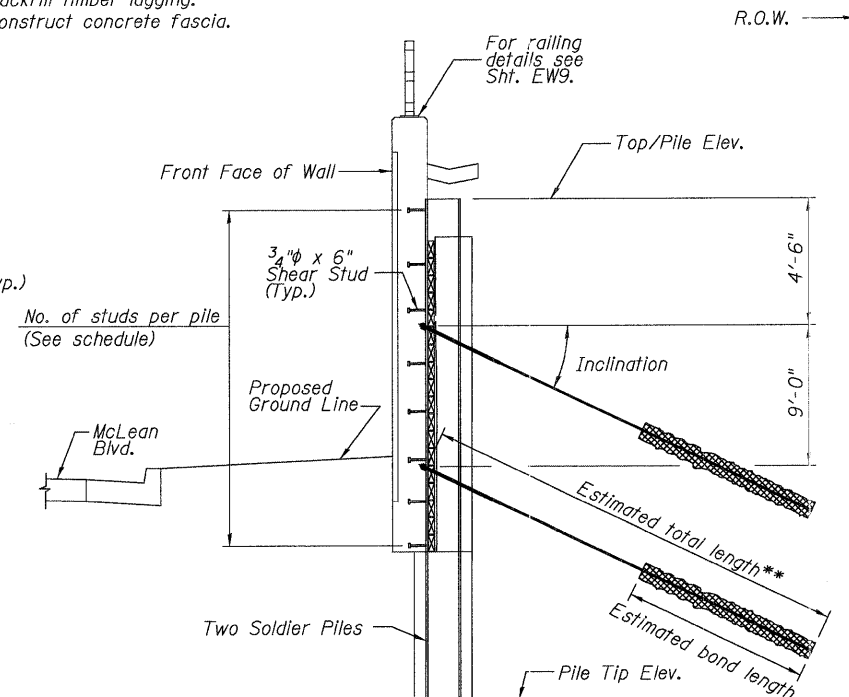
TYPICAL CONTROL POINT LOCATION
Plan View



FRONT VIEW OF SOLDIER PILE BUILT-UP SECTION
Typical, Piles 3 to 47



SECTION A-A



WALL SECTION W/GROUND ANCHORS

** Note: Actual required anchor length is to be determined by Contractor. Length shall not exceed the estimated total length shown in schedule, due to R.O.W. constraints.

DESIGN ASSUMPTIONS (USED TO CHECK FEASIBILITY ONLY):

1. Estimated ultimate transfer load = 7.5k/ft.
2. Maximum allowable design load = Estimated ultimate transfer load divided by 2.
3. Bar tendons were assumed for checking feasibility.
4. Unbonded portion must extend 5' beyond active failure wedge, not less than 10' minimum length for bar tendons. If strand type anchors are used, the minimum unbonded length shall be 15'.

Note: The above assumptions have been used only for the purpose of establishing minimum dimensions for drill hole diameter, unbonded length and bond length. The contractor shall be responsible for determining the selection and installation of the anchors that will provide the required design load, fitting within the R.O.W. limits of the site.

**PILE AND ANCHOR SCHEDULE
STRUCTURE NO. 045-2039**

| | | | | | |
|---|--------------------|----------------|--------|--------------|-----------|
| SHEET NO. EW5 | RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 361 | 06-00214-02-BR | KANE | 219 | 162 |
| EW13 SHEETS | CONTRACT NO. 63073 | | | | |
| FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT | | | | | |

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