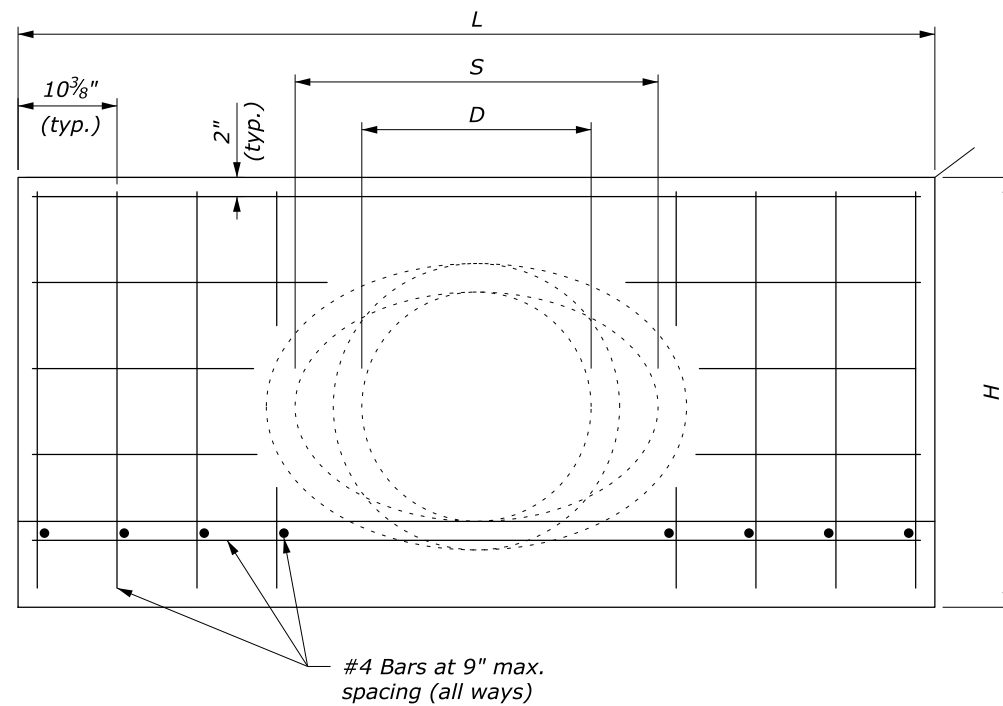
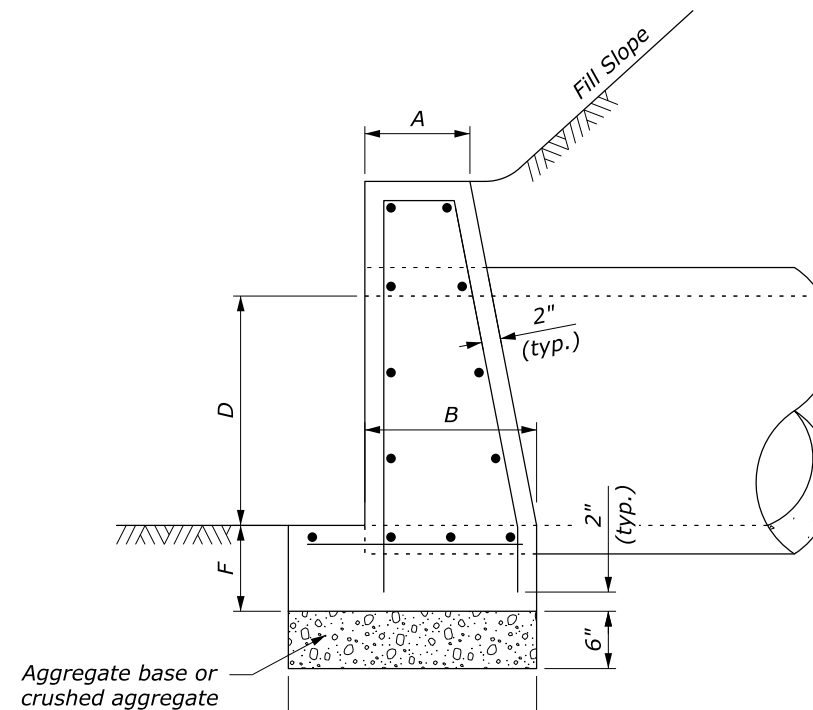


NOTES:

1. Orient all headwalls parallel to the roadway centerline unless otherwise indicated in the plans or by the CO.
2. When pipes are on a skew, adapt and lengthen headwalls as directed.
3. Chamfer all exposed corners not rounded to 3/4 inch.
4. Quantities shown are for one headwall with pipe at right angles.
5. Construct headwalls using dimensions shown under values for 1V:1.5H slope, unless otherwise designated by the CO.



FRONT ELEVATION



SIDE ELEVATION

HEADWALL FOR ELLIPTICAL PIPE

SIZE OF ELLIPTICAL PIPE CULVERT (SPAN x RISE)

| | 23" x 14" | 30" x 19" | 34" x 22" | 38" x 24" | 42" x 27" | 45" x 29" | 49" x 32" | 53" x 34" | 60" x 38" | 68" x 43" |
|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| A | 0'-8" | 0'-9" | 0'-10" | 0'-10" | 0'-11" | 1'-0" | 1'-0" | 1'-0" | 1'-0" | 1'-0" |
| B | 1'-2" | 1'-5" | 1'-6" | 1'-8" | 1'-9" | 1'-10" | 1'-11" | 1'-11" | 1'-11" | 2'-0" |
| C | 1'-8" | 1'-11" | 2'-1" | 2'-4" | 2'-5" | 2'-7" | 2'-8" | 2'-9" | 3'-3" | 3'-6" |
| D | 1'-2" | 1'-7" | 1'-10" | 2'-0" | 2'-3" | 2'-5" | 2'-8" | 2'-10" | 3'-2" | 3'-7" |
| F | 0'-8" | 0'-8" | 0'-9" | 0'-9" | 0'-9" | 0'-9" | 0'-9" | 0'-9" | 0'-9" | 0'-9" |
| H | 2'-10" | 3'-3" | 3'-7" | 3'-9" | 4'-0" | 4'-2" | 4'-5" | 4'-7" | 4'-11" | 5'-4" |
| L | 5'-5" | 7'-2" | 8'-6" | 9'-2" | 10'-2" | 10'-11" | 12'-1" | 12'-11" | 13'-0" | 13'-0" |
| S | 1'-11" | 2'-6" | 2'-10" | 3'-2" | 3'-6" | 3'-9" | 4'-1" | 4'-5" | 5'-0" | 5'-8" |
| CUBIC YARDS OF CONCRETE | | | | | | | | | | |
| Conc. Pipe | 0.502 | 0.855 | 1.236 | 1.500 | 1.811 | 2.101 | 2.512 | 2.801 | 2.969 | 2.904 |

HEADWALL FOR CIRCULAR PIPE

DIAMETER OF PIPE CULVERT

| | 6" | 15" | 18" | 21" or 24" | 27" or 30" | 33" or 36" |
|-------------------------|-------|--------|-------|------------|------------|------------|
| A | 0'-6" | 0'-8" | 0'-9" | 0'-11" | 1'-0" | 1'-0" |
| B | 0'-9" | 1'-1" | 1'-3" | 1'-6" | 1'-9" | 2'-0" |
| C | 1'-2" | 1'-7" | 1'-9" | 2'-2" | 2'-6" | 2'-9" |
| D | 1'-0" | 1'-3" | 1'-6" | 2'-0" | 2'-6" | 3'-0" |
| F | 0'-6" | 0'-8" | 0'-8" | 0'-9" | 0'-9" | 0'-9" |
| H | 2'-0" | 2'-11" | 3'-2" | 3'-9" | 4'-3" | 4'-9" |
| L | 3'-8" | 5'-0" | 6'-0" | 8'-0" | 10'-0" | 12'-0" |
| CUBIC YARDS OF CONCRETE | | | | | | |
| Conc. Pipe | 0.241 | 0.492 | 0.697 | 1.319 | 2.067 | 2.947 |
| C.M. Pipe | 0.257 | 0.521 | 0.739 | 1.398 | 2.198 | 3.145 |

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
OFFICE OF FEDERAL LANDS HIGHWAY

EFLHD DETAIL

CONCRETE HEADWALL FOR SMALL PIPE CULVERT

NO SCALE

STANDARD APPROVED FOR USE 6/2005
REVISED: 3/2016 9/2020

DETAIL
ET 601-4