

NOTE:

SEE SHEET 2 OF 2 FOR END TREATMENTS

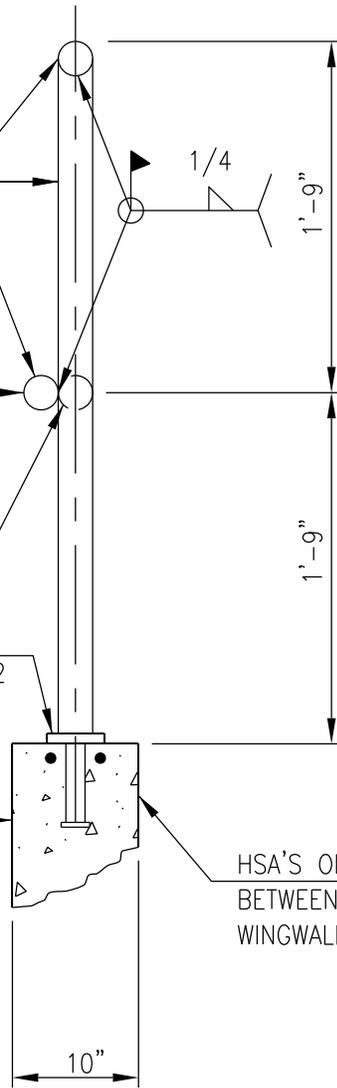
* 1 1/2" NOMINAL STEEL PIPE RAILS W/POST @ 5' O.C.

TYPE A-LOWER RAIL LOCATION (NON-ROADWAY SIDE)

TYPE-B LOWER RAIL LOCATION

ANCHOR PLATE SEE SHEET 2 OF 2 FOR OPTIONS

HEADWALL, CONC. WALL, ETC.



ANCHOR PLATE OPTION

NOTE:

SEE SHEET 2 OF 2 FOR END TREATMENTS

* 1 1/2" NOMINAL STEEL PIPE RAILS W/POST @ 5' O.C.

TYPE A-LOWER RAIL LOCATION (NON-ROADWAY SIDE)

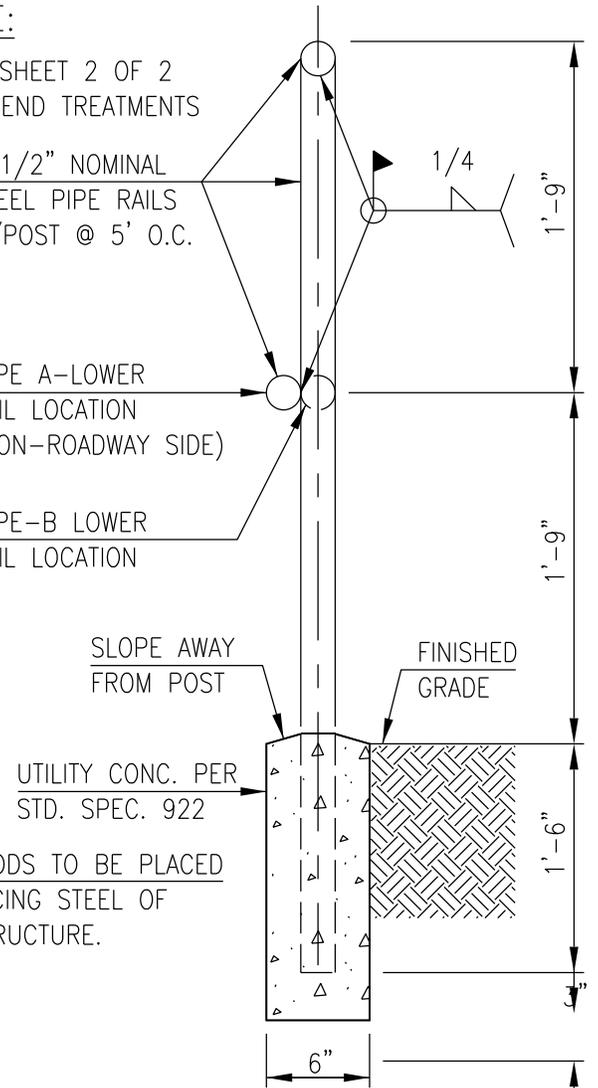
TYPE-B LOWER RAIL LOCATION

SLOPE AWAY FROM POST

FINISHED GRADE

UTILITY CONC. PER STD. SPEC. 922

HSA'S OR THREADED RODS TO BE PLACED BETWEEN HSA REINFORCING STEEL OF WINGWALL OR MISC. STRUCTURE.



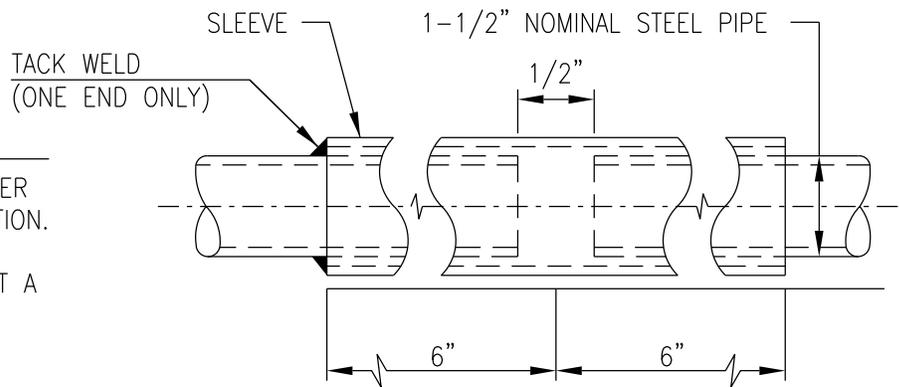
GROUND INSTALLATION OPTION

SECTION

- * - 1-1/2" NOMINAL STEEL PIPE = 1-1/2" I.D. STD. STEEL PIPE (SCHEDULE 40).
- 1-1/2" NOMINAL STEEL PIPE = 2" O.D. (SCHEDULE 40).

NOTES:

1. EXPANSION JOINTS FOR UPPER AND LOWER RAILS SHALL OCCUR AT THE SAME LOCATION.
2. EXPANSION JOINTS SHALL BE LOCATED AT A MAXIMUM OF 30 FOOT INTERVALS.
3. WHEN APPROVED BY THE ENGINEER, AN INTERNAL SLEEVE MAY BE USED AT THE EXPANSION JOINTS.



EXPANSION JOINT DETAIL

| | | | | |
|----------|---|-----------------|---|--------------|
| ISSUED: |  | STANDARD DETAIL |  | DETAIL NO. |
| 10/88 | | HANDRAIL | | 105 |
| REVISED: | | | | SHEET 1 of 2 |
| 2/14 | | | | |

ISSUED: 06/91
 REVISED: 3/12



STANDARD DETAIL
 HANDRAIL



DETAIL NO. 105
 SHEET 2 OF 2

