

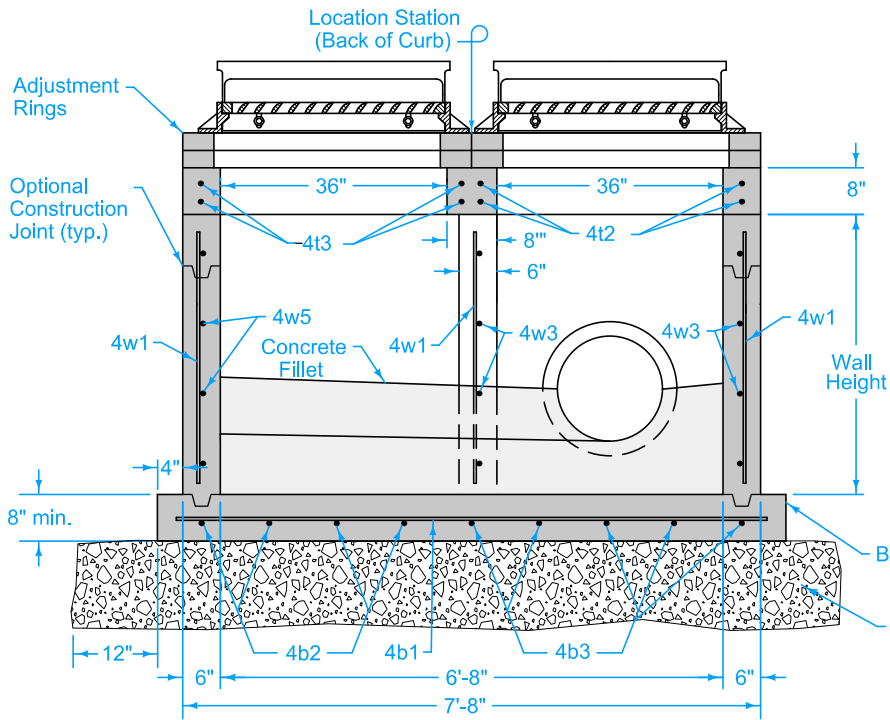
Maximum pipe diameters are set based on maximum structure depth of 6 feet-6 inches and the objective of placement of the centerline of the pipe on the centerline of the manhole opening for maintenance purposes.

Refer to SW-514 for boxout details.

- ① Install four #4 diagonal bars at manhole opening and at all pipe openings.
- ② If Wall 1 is widened to 4 feet, the maximum pipe diameter can be increased to 36 inches.
- ③ If Wall 1 is widened to 4 feet, the maximum pipe diameter in Wall 3 can be increased to 42 inches.

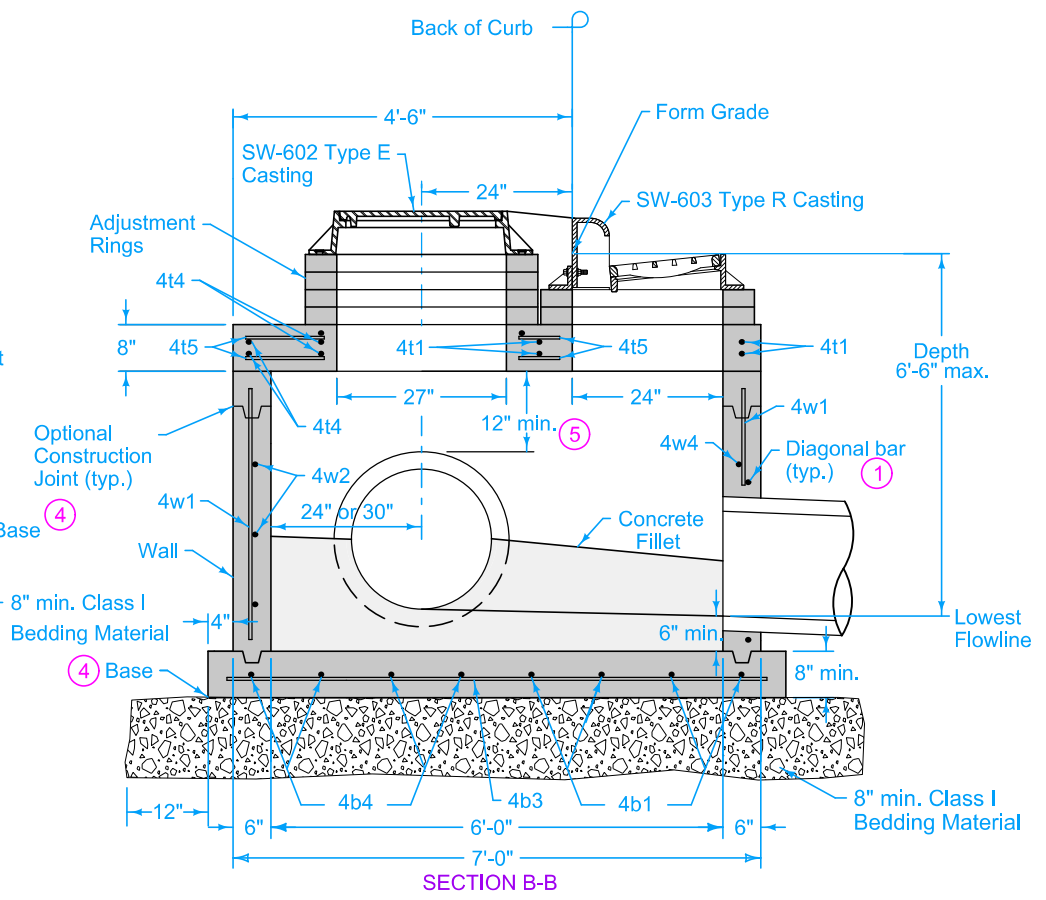
| MAXIMUM PIPE DIAMETERS | |
|------------------------|-----------|
| Wall | Max. Dia. |
| 1 | 30" ② |
| 2 | 24" |
| 3 | 36" ③ |
| 4 | 42" |

| | |
|--|-------------------------------|
| SUDAS IOWADOT | REVISION 4 04-21-20 |
| | SW-506 SHEET 1 of 2 |
| REVISIONS: Added Class 1 Bedding Material. | |
| Paul D. Wigand SUDAS DIRECTOR | |
| Stuart Miller DESIGN METHODS ENGINEER | |
| DOUBLE GRATE INTAKE WITH MANHOLE | |



SECTION A-A

| REINFORCING BAR LIST | | | | | | |
|----------------------|------|---------------|-------|--------|----------------------|------------|
| Mark | Size | Location | Shape | Count | Length | Spacing |
| 4t1 | 4 | Top | — | 4 | 7'-4" | See Detail |
| 4t2 | 4 | Top | — | 4 | 6'-8" | See Detail |
| 4t3 | 4 | Top | — | 4 | 2'-8" | See Detail |
| 4t4 | 4 | Top | — | 8 | 3'-8" | 12" |
| 4t5 | 4 | Top | — | 6 | 4'-2" | 12" |
| 4b1 | 4 | Base | — | 4 | 7'-10" | 12" |
| 4b2 | 4 | Base | — | 4 | 3'-2" | 12" |
| 4b3 | 4 | Base | — | 5 | 7'-2" | 12" |
| 4b4 | 4 | Base | — | 4 | 4'-2" | 12" |
| 4w1 | 4 | Walls | — | 29 | Wall Height minus 4" | 12" |
| 4w2 | 4 | Wall 2 | — | Varies | 3'-8" | 12" |
| 4w3 | 4 | Walls 1 and 3 | — | Varies | 6'-8" | 12" |
| 4w4 | 4 | Wall 4 | — | Varies | 7'-4" | 12" |
| 4w5 | 4 | Wall 5 | — | Varies | 2'-8" | 12" |
| 4w6 | 4 | Wall 6 | — | Varies | 3'-10" | 12" |



SECTION B-B

- ① Install four #4 diagonal bars at manhole opening and at all pipe openings.
- ④ Cast-in-place base shown. If base is precast integral with walls, the footprint of base is not required to extend beyond the outer edge of the walls.
- ⑤ 12 inch minimum wall height above all pipes.

FIGURE 6010.506 SHEET 2 OF 2

| | | |
|--|---------------------------------------|---|
| SUDAS IOWADOT | FIGURE 6010.506 STANDARD ROAD PLAN | REVISION 4 04-21-20 |
| | | SW-506 SHEET 2 of 2 |
| REVISIONS: Added Class I Bedding Material. | | |
| Paul D. Weigand SUDAS DIRECTOR | | Steve Miller DESIGN METHODS ENGINEER |
| DOUBLE GRATE INTAKE WITH MANHOLE | | |