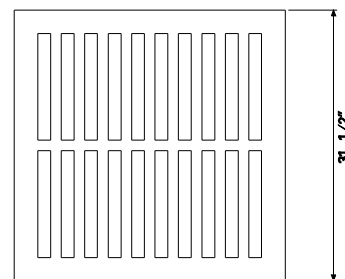
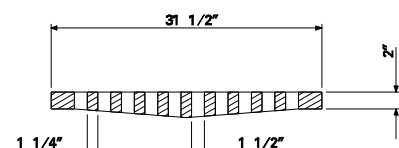


FRAME AND GRATE CASTING

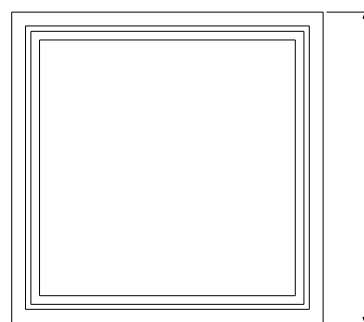


PLAN

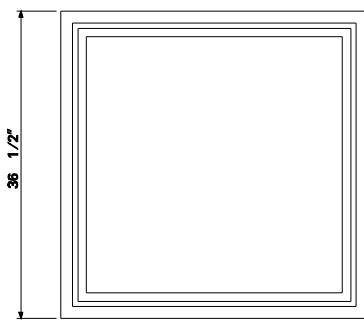


CROSS SECTION

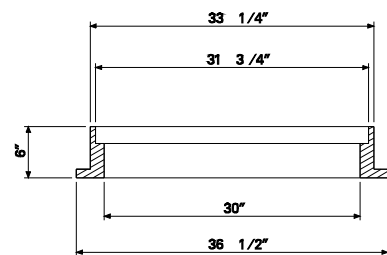
TYPE A and B



PLAN

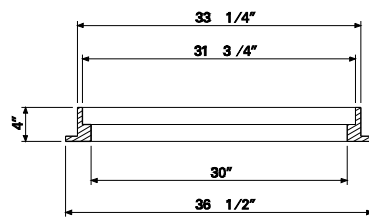


PLAN



CROSS SECTION

TYPE A

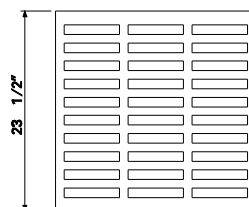


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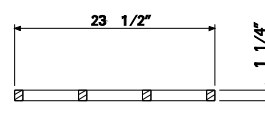
TYPE B

FRAME AND GRATE CASTING

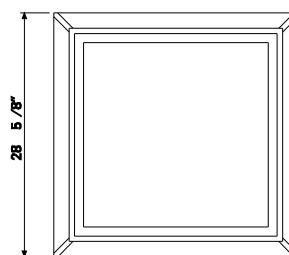
TYPE C



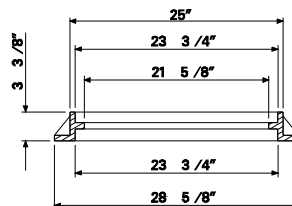
PLAN



CROSS SECTION

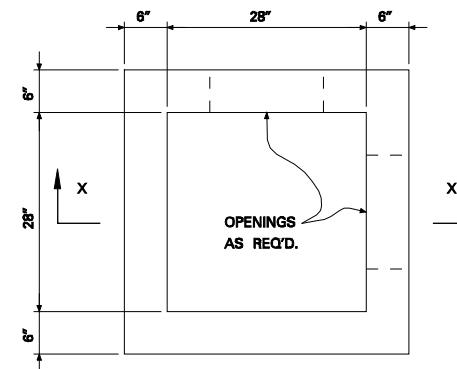


PLAN

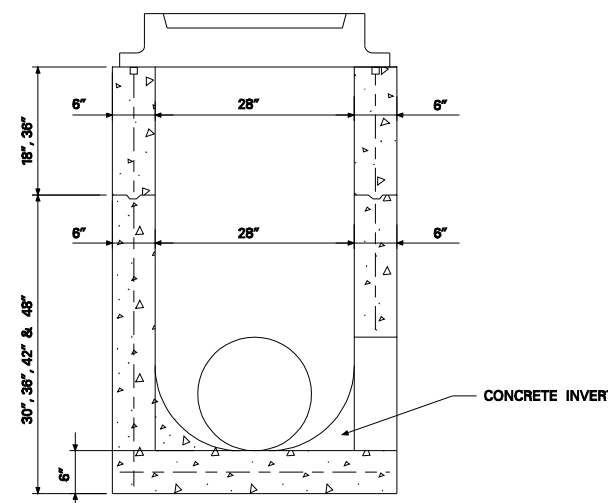


CROSS SECTION

| REVISIONS | | | |
|-----------|-----------|-----|----------------------------|
| No. | DATE | BY | BRIEF DESCRIPTION |
| 1 | 08-NOV-01 | RLT | Addition of notes 7 and 8. |
| 2 | 08-MAY-08 | JHC | Addition of note 9. |
| | | | |
| | | | |
| | | | |
| | | | |



PLAN



SECTION X-X

NOTES:

1. ALL CASTINGS SHALL CONFORM TO ASTM A48 CLASS 30.
2. ALL GRATES AND FRAMES SHALL BE APPROVED FOR HS-20 TRAFFIC LOADING.
3. EACH SECTION OF THE PRECAST STRUCTURE SHALL HAVE NOT MORE THAN THREE HOLES FOR THE PURPOSE OF HANDLING AND LAYING.
4. LIFTING DEVICE HOLES SHALL BE TAPERED AND PLUGGED WITH STOPPERS OR MORTARED AFTER INSTALLATION.
5. CONCRETE INVERTS SHALL BE CONSTRUCTED IN THE FIELD AS TO PROVIDE POSITIVE FLOW.
6. CASTINGS SHALL BE TREATED WITH TWO COATS OF BITUMINOUS PAINT.
7. MINIMUM CONCRETE STRENGTH 4,000 POUNDS PER SQUARE INCH.
8. STEEL REINFORCEMENT MINIMUM OF 0.14 SQUARE INCH PER SQUARE FOOT.
9. ENVIRONMENTAL STATEMENT SHALL BE PLACED ON ALL GRATES "NO DUMPING DRAINS TO RIVER" OR EQUIVALENT WITH A MINIMUM RAISED LETTER HEIGHT OF 1/2".

| | |
|--|-----------------|
| CITY OF KNOXVILLE DEPARTMENT OF ENGINEERING | DRAWN: MLR |
| | DATE: 08-MAY-01 |
| STANDARD DETAIL FOR AREA DRAIN | CHECKED: RLT |
| | APPROVED: OTH |