

**VERTICAL SECTION**

**NOTES:**

1. THE PRECAST CONCRETE SHALL BE CLASS A TYPE II/V 4000 PSI CONCRETE.
2. ALL MORTAR SHALL BE CLASS "B"
3. EXCEPT AS NOTED HEREON, PRECAST UNIT SHALL BE MANUFACTURED AND TESTED IN ACCORDANCE WITH A.S.T.M. C-478. THE CURING OF THE PRECAST UNITS SHALL CONFORM TO SECTION 207-2.7 OF STANDARD SPECIFICATIONS.
4. RISER SECTIONS AND ECCENTRIC CONE SHALL BE REINFORCED. REINFORCED SECTIONS SHALL BE IN ACCORDANCE WITH A.S.T.M. C-478 AND SHALL HAVE A MINIMUM WALL THICKNESS OF 6 INCHES.
5. JOINTS MAY BE KEY TYPE OR TONGUE AND GROOVE AND SHALL CONFORM WITH A.S.T.M. C-478, SECTION 14.
6. THE PCC COLLAR SHALL BE 1 1/2 INCHES FROM FINISH GRADE AND 3 INCHES BELOW THE RING AND CONE JOINT. THE MIX DESIGN SHALL BE 560-C-3250.

**SEWER MANHOLE: CONCRETE SHAFT**

**WDS - 505**



**LONG BEACH  
WATER DEPARTMENT**

RECOMMEND

*Robert J. [Signature]*

DIVISION ENGINEER

APPROVED

*[Signature]*

DIRECTOR OF ENGINEERING

DATE: 8/3/15

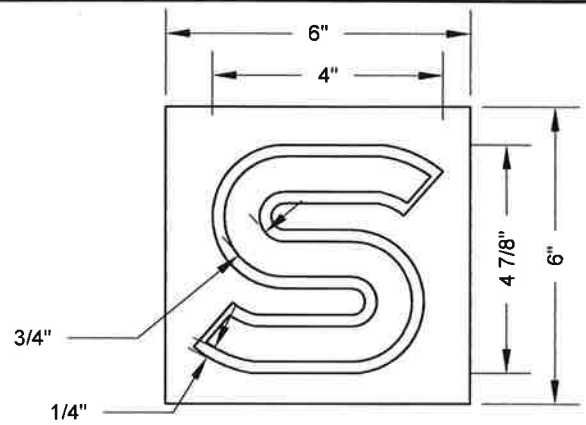
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SHEET 1 OF 3

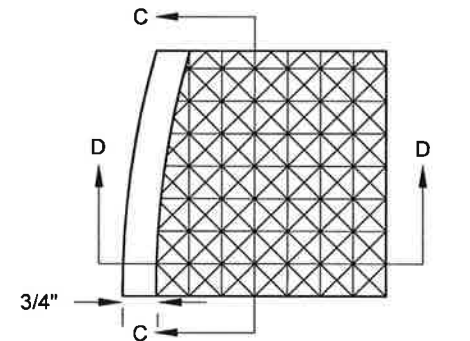




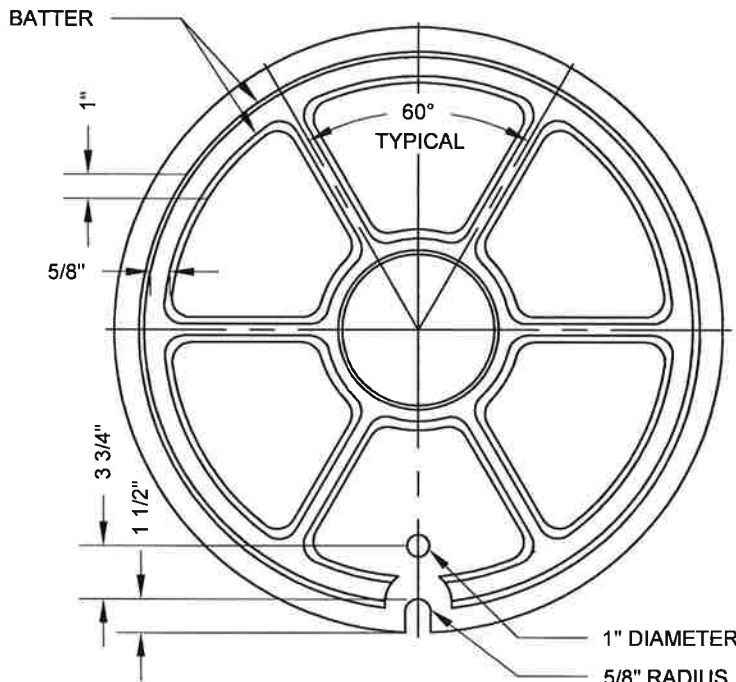
PLAN OF TOP



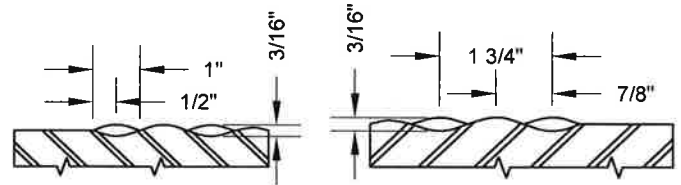
PLAN OF LETTER



DETAIL OF DIAMONDS

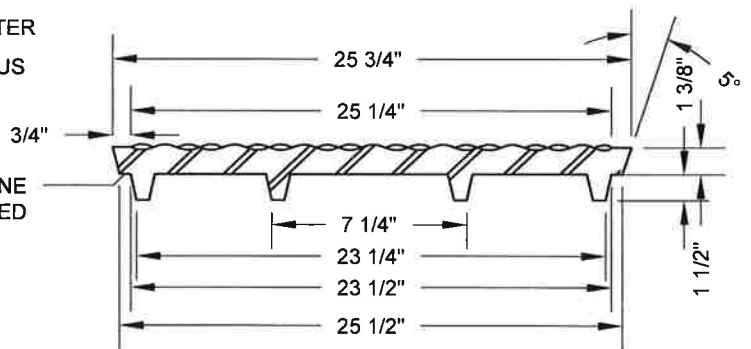


PLAN OF BOTTOM



SECTION D-D

SECTION C-C



SECTION B-B

**NOTES:**

1. CAST IRON SHALL CONFORM TO A.S.T.M. SPECIFICATION A-48-64 TO CLASS 30 MINIMUM.
2. TOP EDGE OF MANHOLE COVER SHALL BE FLUSHED WITH TOP EDGE OF FRAME  $\pm 1/32$  INCH.
3. DIAMETER OF TOP OF MANHOLE COVER SHALL NOT EXCEED A DIMENSIONAL TOLERANCE OF  $\pm 1/16$  INCH.

MACHINE SURFACED

**SEWER MANHOLE: COVER**

**WDS - 505**



**LONG BEACH  
WATER DEPARTMENT**

RECOMMEND

*Robert J. [Signature]*

DIVISION ENGINEER

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DIRECTOR OF ENGINEERING

DATE: 8/3/15

SCALE: N.T.S.

SHEET 2 OF 3