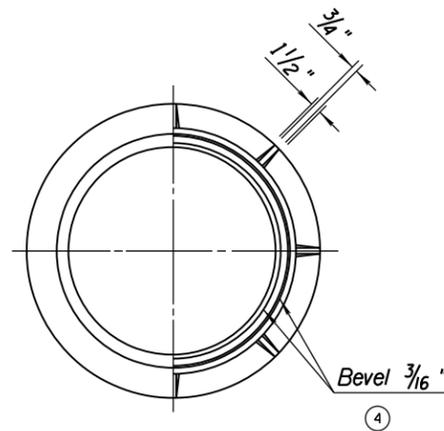
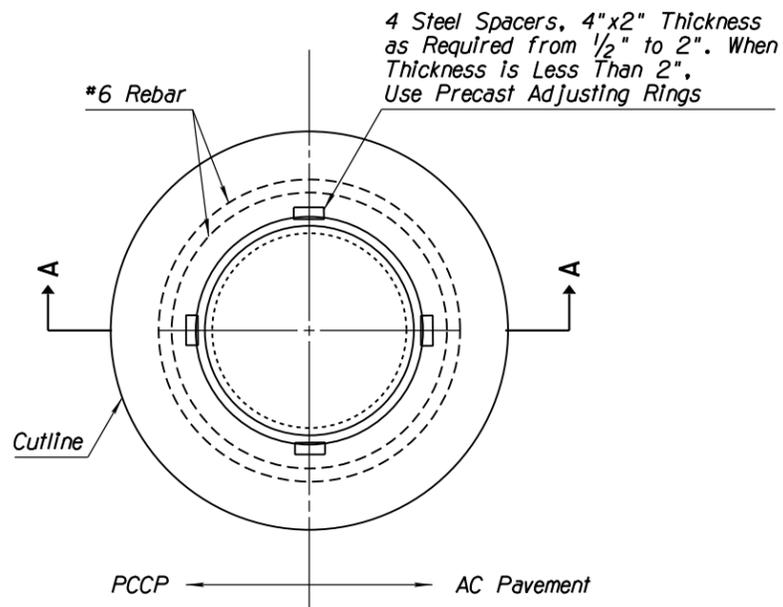
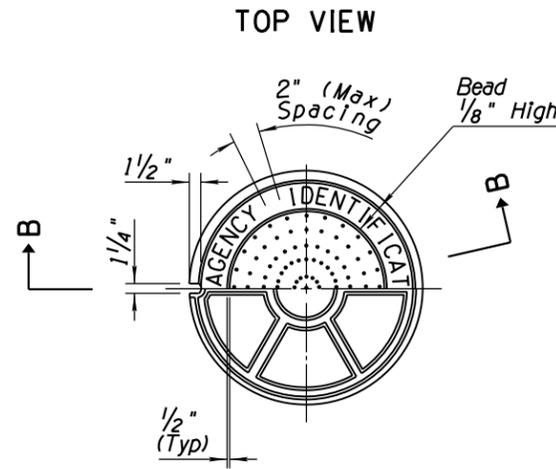


NO.	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	RENAMED STD DWG FROM C-18.20 TO C-18.10, SHEET 3 OF 3	RLF	9/04
2	MODIFIED SECTION VIEWS AND ADDED DETAIL A	RLF	5/12
3	NEW GENERAL NOTE 1; REVISED GENERAL NOTE NUMBERS	RLF	5/12
4	REVISED BEVEL SIZE	RLF	5/12

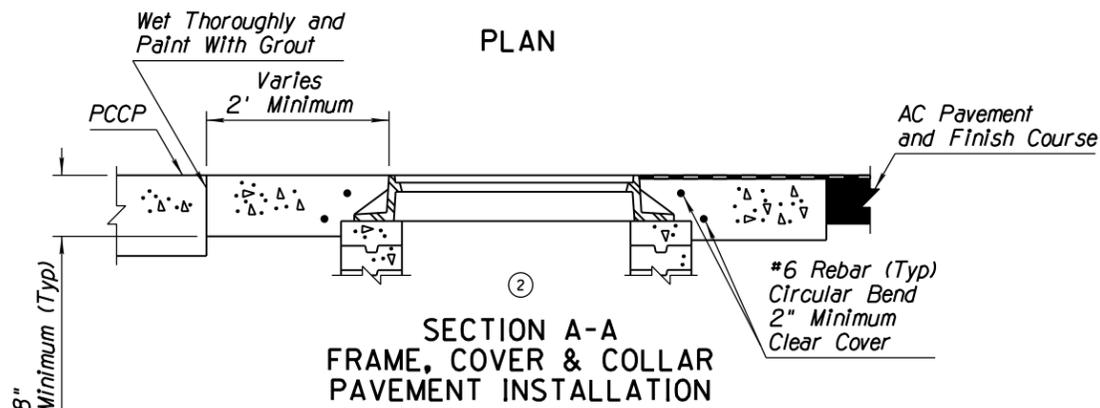


BOTTOM VIEW - TOP VIEW

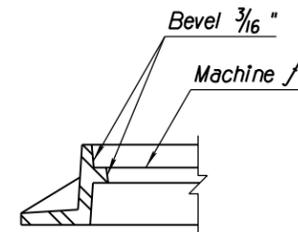


TOP VIEW - BOTTOM VIEW

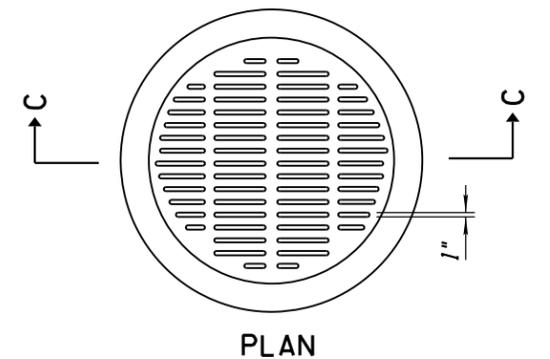
- GENERAL NOTES**
- The 30" minimum opening shall be required. Other Frame and Cover dimensions shown are nominal and vary by manufacturer.
  - All frames, grates, and covers shall support HS20 loading, minimum.
  - Casting weights shown are minimum weights and are either for cast-iron or ductile-iron castings. Casting weight shall not exceed 110% of the weights shown.
  - Covers (excluding grates) shall conform to the following:
    - Manhole covers to contain the agency name and utility, as directed;
    - Letters shall be 2 inches in height and raised 1/8-inch above the plane of the cover;
    - Letters and words to be equally spaced; and
    - Letter font and layout shall be as approved by the Engineer.
  - Details shown are typical. Alternative designs of manhole frames and covers may be used upon approval of the Engineer, as long as the minimum loading and weight criteria (see above) are met.



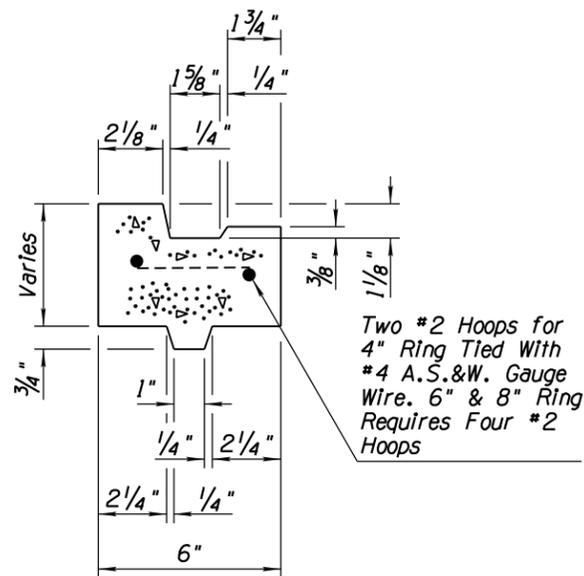
SECTION A-A  
FRAME, COVER & COLLAR  
PAVEMENT INSTALLATION



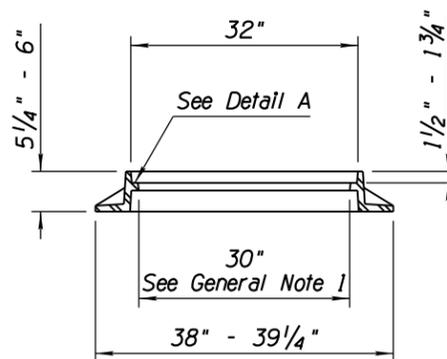
DETAIL A



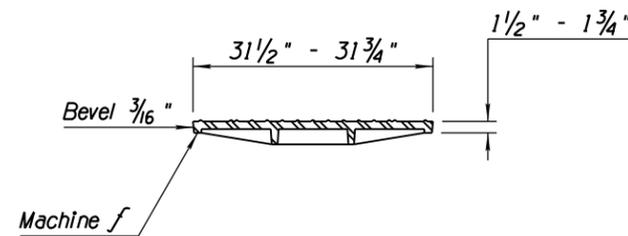
PLAN



PRECAST ADJUSTING RING DETAIL

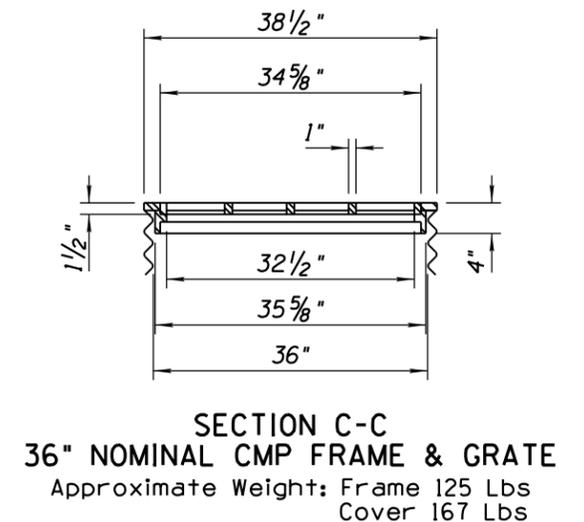


SECTION OF FRAME



SECTION B-B

**30" MANHOLE FRAME & COVER**  
 Approximate Weight: Frame 204 Lbs  
 Cover 209 Lbs



**SECTION C-C  
36" NOMINAL CMP FRAME & GRATE**  
 Approximate Weight: Frame 125 Lbs  
 Cover 167 Lbs

APPROVED FOR DESIGN 	STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION ROADWAY STANDARD DRAWINGS	REV. 5/12
APPROVED FOR DISTRIBUTION 	MANHOLE FRAME AND COVER DETAILS	DRAWING NO. C-18.10 Sheet 3 of 3