

**FRAME AND GRATES**

- F-33 ROLLED CURB - RESIDENTIAL
- F-51 GRATE & SIDE INLET - STRAIGHT FACED SECTIONS
- F-39 GRATE - LANSAPED AREAS
- F-38 GRATE - MODIFIED FOR RAMPS AND BIKE TRAILS
- NF-K2 - HIGH CAPACITY ROLLED CURB LOCATIONS

**NOTES:**

1. CAST-IN-PLACE CONC. BASE MAY BE USED. CAST-IN-PLACE CONC. TO BE TYPE 50 25MP<sub>a</sub> IN 28 DAYS. CAST-IN-PLACE CONC. BASE TO BE MIN. 150mm THICK AND CONSTRUCTED ON UNDISTURBED SOIL.
2. PRECAST RINGS, CONES AND BARRELS TO MEET CURRENT ASTM C478 STANDARDS.
3. STORM MH JOINTS TO BE SEALED WITH CEMENT MORTAR OR CONFINED O-RING GASKET.
4. CONNECTION OF PIPES TO MH TO BE SEALED WITH CEMENT MORTAR
5. INLET AND OUTLET PIPES TO BE GROUTED FLUSH WITH WALL.
6. BENCHING TO BE FINISHED TO TROWEL SMOOTHNESS.
8. MINIMUM COVER ON LEAD TO BE 1.2 METRES.
9. VELOCITY TO BE BETWEEN 1.0 TO 2.4 m/s IN LEADS

REVISIONS	
Date	Details
98-06-18	DESIGN STANDARD UPDATE

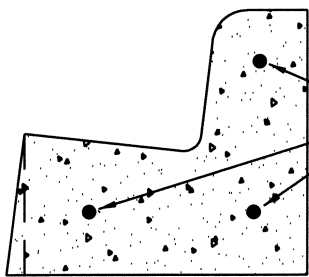
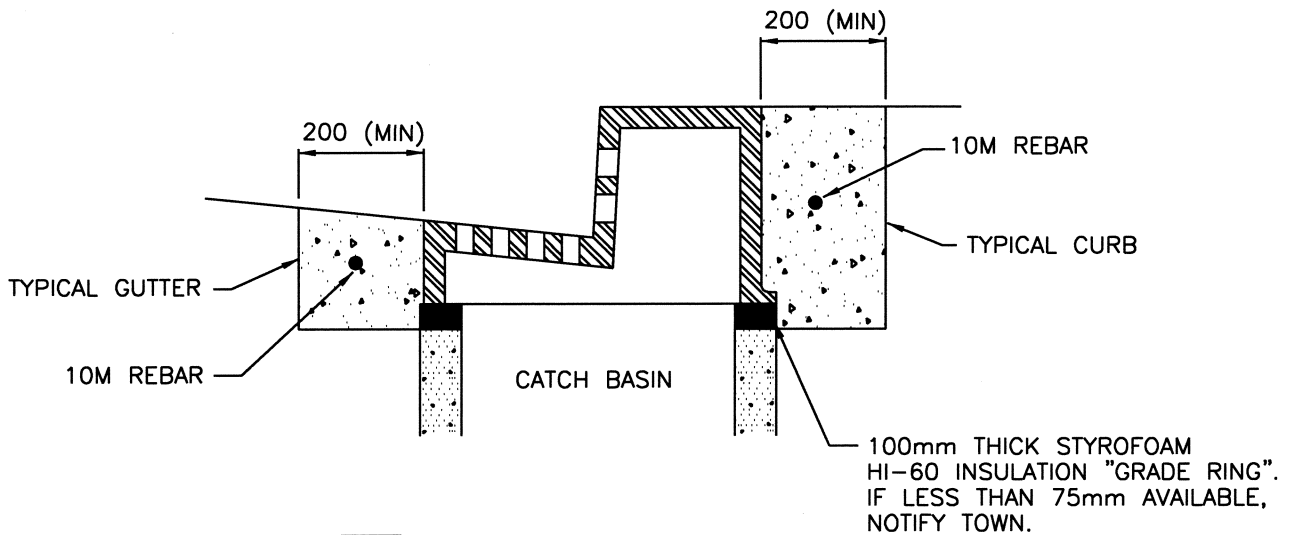
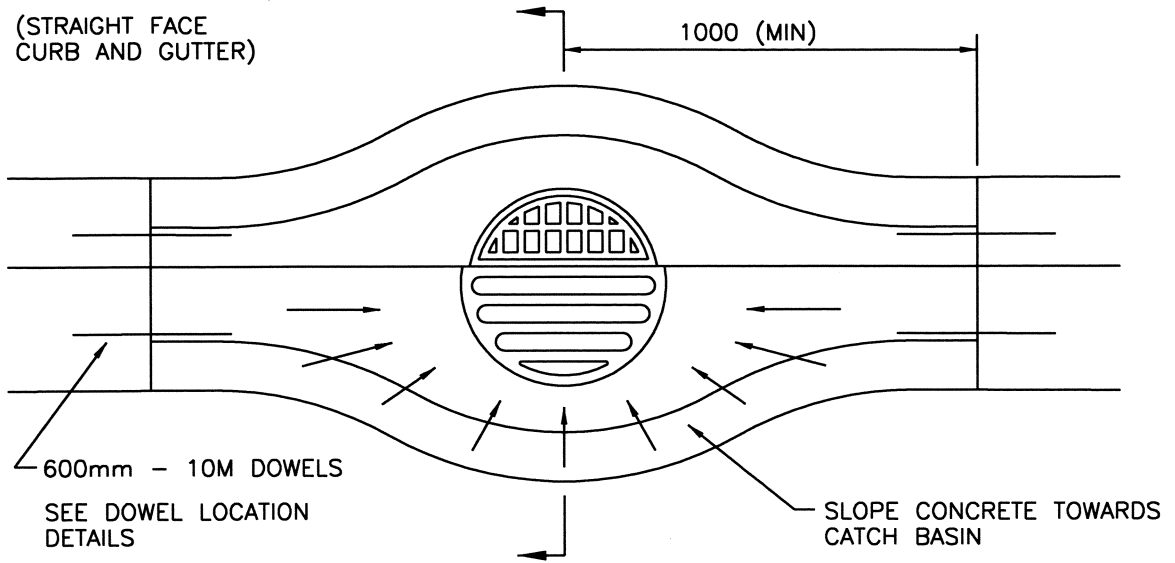


Town of Whitecourt	
<b>STANDARD CATCHBASIN</b>	
APPROVED:	STD. DWG. No.
SCALE: N.T.S.	<b>4-01</b>
DATE: JANUARY, 1996	

ACH 98-06-22 4-01.DWG

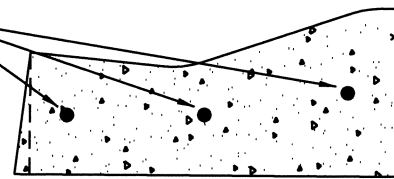


(STRAIGHT FACE CURB AND GUTTER)



STRAIGHT FACE

PLACE DOWELS AS SHOWN



ROLLED FACE

REVISIONS	
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Town of Whitecourt  
CURB AND GUTTER  
AT C.B. LOCATIONS

APPROVED:	STD. DWG. No.
SCALE: N.T.S.	4-03
DATE: JANUARY, 1996	

REVISIONS

Date

Details

98-06-18 DESIGN STANDARD UPDATE

Town of Whitecourt

SACKED CONCRETE  
RIP-RAP

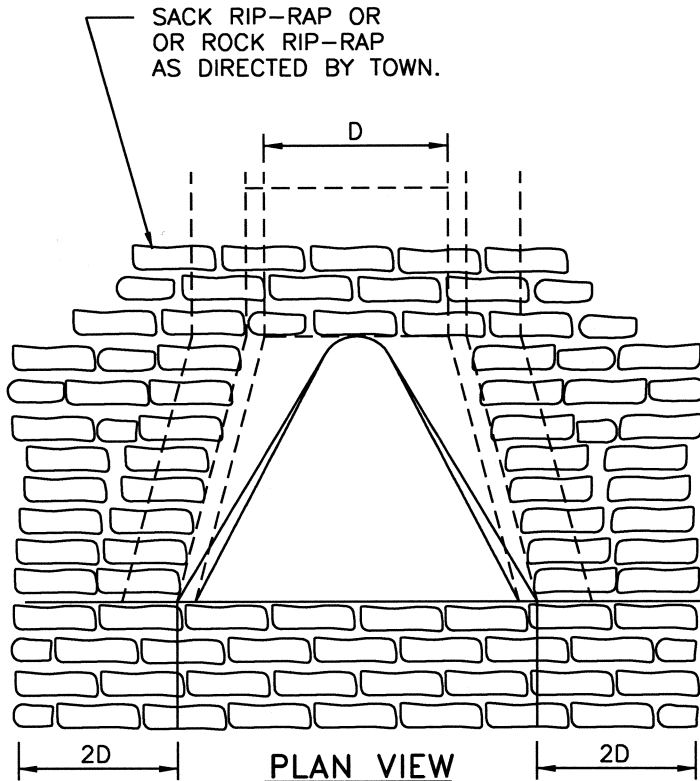
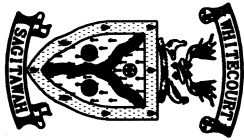
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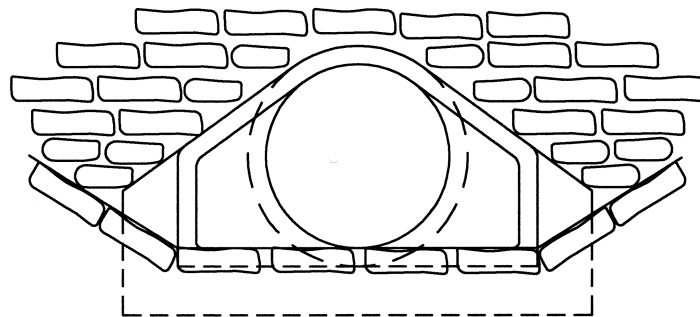
DATE: JANUARY, 1996

STD. DWG. No.

4-04



PLAN VIEW



FRONT VIEW

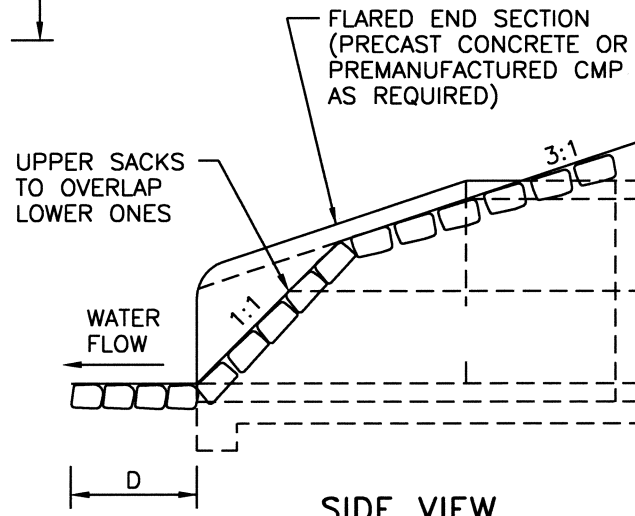
NOTES:

SACK RIP-RAP

- SACKS SHALL BE FILLED TWO-THIRDS (2/3) FULL WITH CONCRETE (18 MPa MIN.) AND SECURELY SEWN OR STAPLED TO FORM A STRAIGHT-EDGE CLOSURE.
- THE PREPARED SACKS SHALL BE IMMEDIATELY PLACED ON THE SURFACE AND SHALL BE RAMMED AND PACKED AGAINST EACH OTHER TO FORM A CLOSE MOLDED AND UNIFORM SURFACE AVERAGING 130mm IN THICKNESS WITH ALL JOINTS BETWEEN ROWS BEING STAGGERED.
- SACKS TO OVERLAP IN DIRECTION OF FLOW OF WATER. APRONS ARE TO BE CONSTRUCTED AT OUTLET END OF CULVERT.

ROCK RIP-RAP

- ROCKS AND BOULDERS SHALL BE SELECTED AS NEARLY CUBICAL IN FORM AS PRACTICABLE AND OF A SIZE GREATER THAN 200mm AS SPECIFIED.
- THE STONES SHALL BE PLACED WITH THEIR LONGEST DIMENSION PARALLEL TO THE SLOPE. LARGER STONES TO BE USED ON THE BOTTOM COURSES WITH SMALLER STONES AT THE TOP.
- STONES SHALL BE LAID IN CLOSE CONTACT WITH STAGGERED JOINTS AND IN SUCH A MANNER THAT THE WEIGHT OF THE STONE IS CARRIED BY THE UNDERLYING EARTH AND NOT BY ADJACENT STONES.



SIDE VIEW