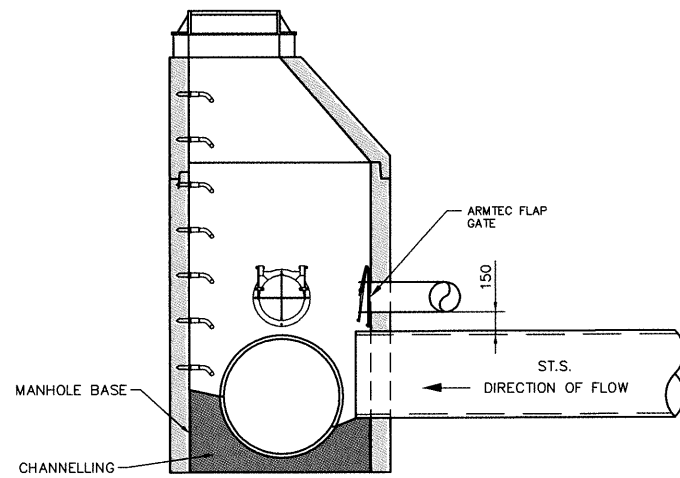
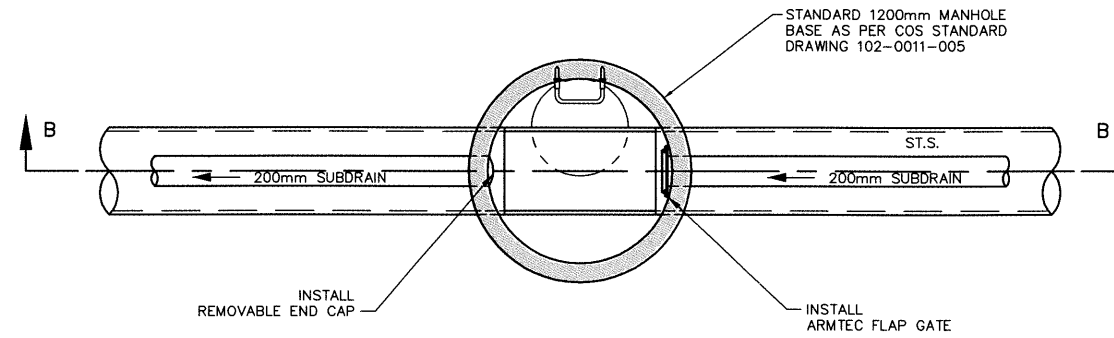


SECTION 'B-B'

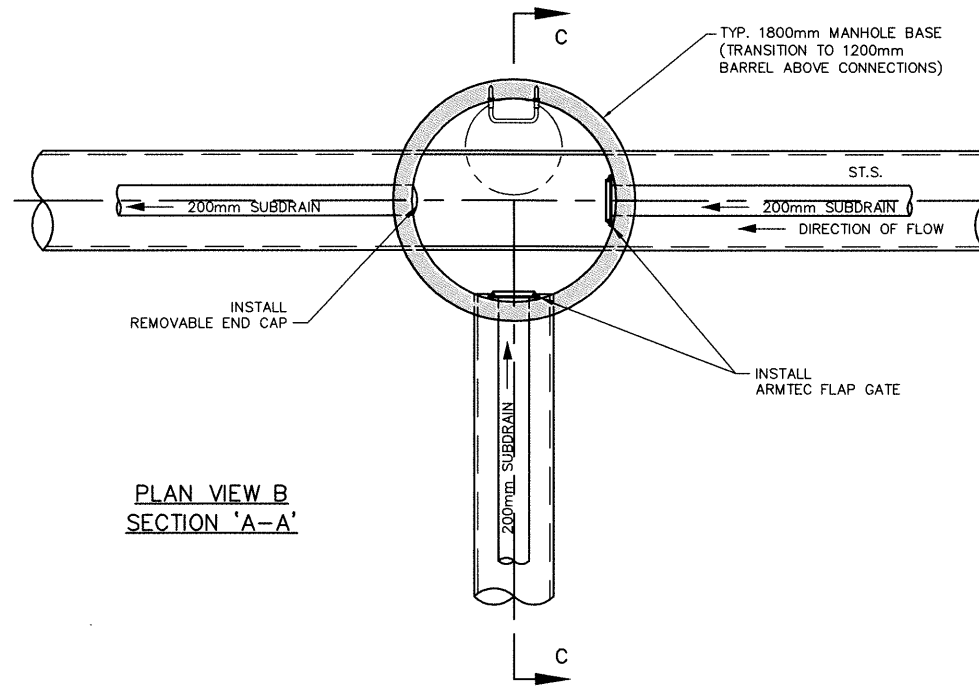


SECTION 'C-C'

TYPICAL ST.S. MANHOLE SUBDRAIN CONNECTION



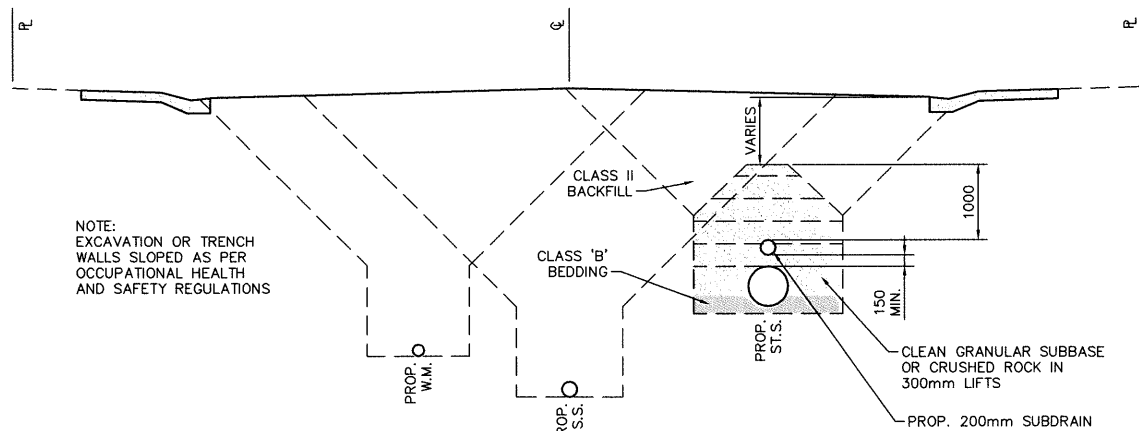
PLAN VIEW A  
SECTION 'A-A'



PLAN VIEW B  
SECTION 'A-A'

NOTES:

1. PIPE SHALL BE BOSS 2000 HDPE FACTORY PERFORATED SUBDRAIN OR APPROVED EQUIVALENT AND SHALL BE CONSTRUCTED WITH ARMTEC WOVEN GEOTEXTILE SOCK OR APPROVED EQUIVALENT.
2. PIPE SHALL BE EMBEDDED IN CLEAN GRANULAR SUBBASE OR CRUSHED ROCK AS PER COS STANDARD CONSTRUCTION SPECIFICATIONS UNLESS OTHERWISE NOTED.
3. SUBDRAIN SHALL BE GRADED PARALLEL TO ST.S. PIPE AND SHALL BE CONNECTED TO ST.S. MANHOLES AT ALL INTERSECTIONS.
4. ARMTEC MODEL 20C FLAP GATE OR EQUIVALENT SHALL BE INSTALLED AT ALL DOWNSTREAM CONNECTIONS TO ST.S. MANHOLES AS PER MANUFACTURER'S INSTALLATION GUIDELINES AND RECOMMENDATIONS.
5. REMOVABLE END CAPS c/w SNAP ADAPTERS SHALL BE INSTALLED AT ALL UPSTREAM CONNECTIONS TO ST.S. MANHOLES.
6. A MINIMUM OF 300mm HORIZONTAL AND 150mm VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN PIPES IN COMMON TRENCH.
7. BACKFILL & COMPACT CLAY & GRANULAR MATERIAL SIMULTANEOUSLY IN 300mm LIFTS.
8. LOCATION & ELEVATION OF SUBDRAIN CONNECTION SHALL BE DETERMINED IN THE FIELD.
9. ALIGNMENT OF SUBDRAIN CONNECTION TO MANHOLE (UPSTREAM & DOWNSTREAM) SHALL BE DETERMINED IN THE FIELD AND AS PER DETAIL.



TYPICAL SUBDRAIN COMBINED WITH STORM SEWER

**DETAILS ARE A VISUAL REPRESENTATION ONLY AND ARE NOT INTENDED TO BE SCALED**

DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE

10				
9				
8				
7				
6				
5				
4				
3	REPOSITIONED FLAP GATE FLUSH AGAINST MANHOLE INTERIOR WALL AND ADDED NOTE REGARDING EXCAVATION SLOPES.	2015-NOV-24	HLO	
2	REVISE SUBDRAIN & PIPING	2014-DEC-16	MJ	
1	ISSUED FOR CONSTRUCTION	2014-JUL-08	DLH	
	PLAN DESCRIPTION/REVISION	DATE	BY	SEAL

APPROVED BY:	APPROVED BY:
<i>Jake Chen</i>	<i>[Signature]</i>
Jan. 6, 2016	06/01/2016
DATE	DATE
DRAWN BY: DLH	DATE: 2014-JUL-10

**City of Saskatoon**  
Transportation & Utilities Department

STANDARD ST.S. SUBDRAIN DETAIL  
ALTERNATIVE INSTALLATION WHERE  
ST.S. CROWN IS DEEPER THAN 2.3m

ENGINEER: *[Signature]*  
SCALES: HOR. NTS, VERT. NTS  
DATE: JAN 08 2016  
SHEET NO. 102-0011-032r003