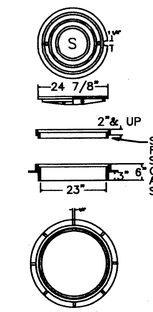
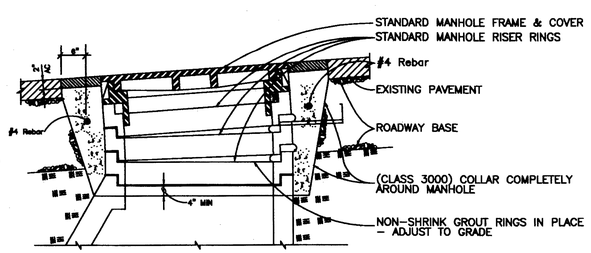
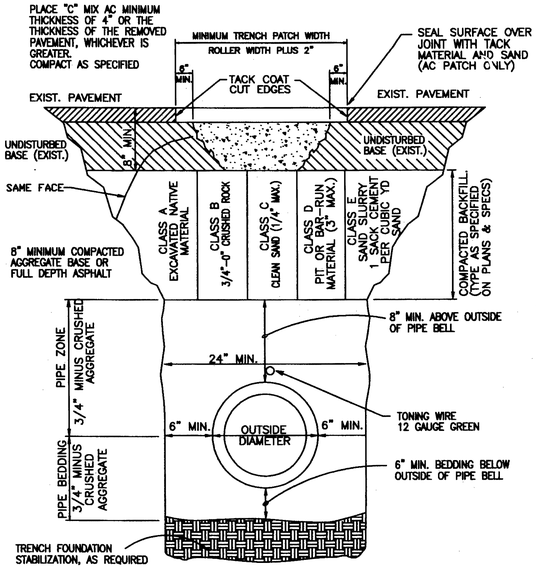


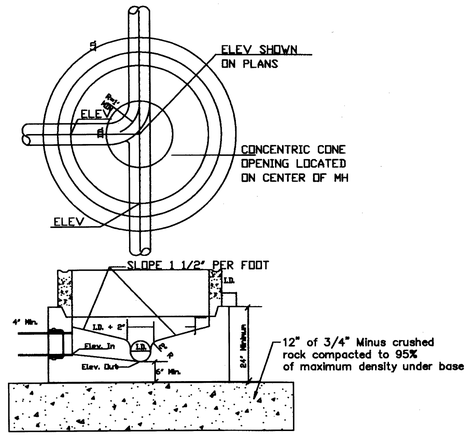
TRAFFIC RING MH-26 WITH GRADE RING



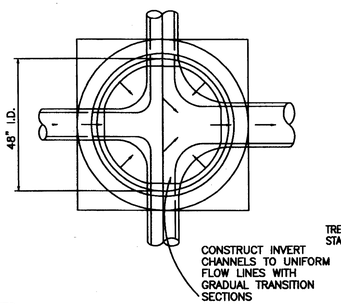
TYPICAL MANHOLEGRADE ADJUSTMENT IN STREET



TYPICAL TRENCH BACK-FILL ZONES

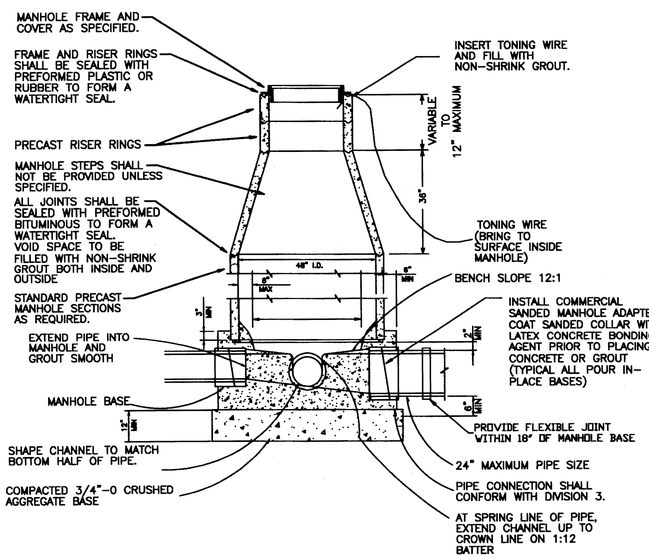


STANDARD MANHOLE BASE

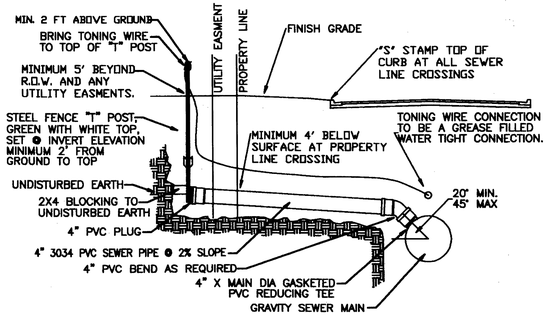


NOTES:
1. CONCRETE SHALL BE CLASS 3000.
2. CHANNELS SHALL BE CONSTRUCTED TO PROVIDE SMOOTH SLOPES AND RADII TO OUTLET PIPE.
3. BASES MAY BE PRECAST OR POURED IN PLACE.
4. THIS MANHOLE BASE SECTION SHALL BE USED FOR PIPE SIZES UP TO 24".

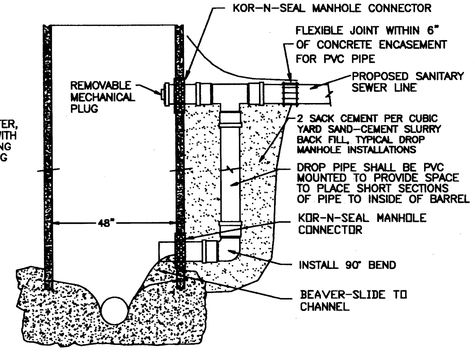
MANHOLE BASE SECTION



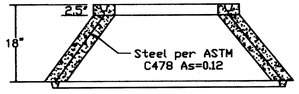
CONCENTRIC CONE MANHOLE



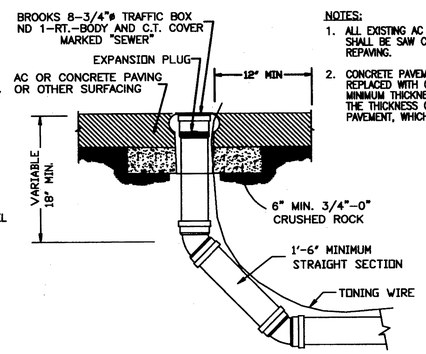
TYPICAL 4' SEWER CONNECTION DETAIL



OUTSIDE DROP INLET CONCRETE MANHOLE



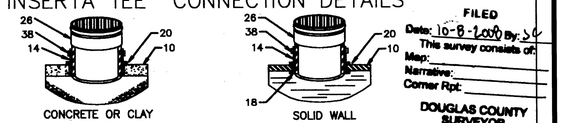
LOW PROFILE CONCENTRIC CONE



NOTES:
1. ALL EXISTING AC OR PCC PAVEMENT SHALL BE SAW CUT PRIOR TO REPAVING.
2. CONCRETE PAVEMENT SHALL BE REPLACED WITH CONCRETE TO A MINIMUM THICKNESS OF 6" OR TO THE THICKNESS OF REMOVED PAVEMENT, WHICHEVER IS GREATER.

CLEAN-OUT DETAIL

INSERTA TEE® CONNECTION DETAILS



10 MAINLINE PIPE WALL WHERE BRANCH LINE IS CONNECTED
14 COMPLETE RUBBER SLEEVE CONSISTING OF C-443 SPECIFICATIONS
18 RUBBER SEGMENT WHICH IS MOLDED INTO THE RUBBER SLEEVE
20 RUBBER SEGMENT WHICH IS MOLDED INTO THE RUBBER SLEEVE
26 SDR-26 PVC HUB (ASTM D-3034) WHICH IS DRIVEN INTO THE CENTER OF THE RUBBER SLEEVE AFTER THE RUBBER SLEEVE IS IN THE HOLE
38 STAINLESS STEEL BAND, PUT ON ABOVE 20 AS AN ADDED PRECAUTION

INSERTA TEE® INSTALLATION INSTRUCTIONS

BITS	INSERTA TEE SIZE	BIT (HOLE) DIAMETER
	4" (100 MM)	4 1/2" (112.5 MM)
	6" (150 MM)	6 1/2" (162.5 MM)
	8" (200 MM)	8 3/4" (218.8 MM)
	10" (250 MM)	10 7/8" (271.9 MM)
	12" (300 MM)	12 7/8" (321.9 MM)
	15" (375 MM)	15 13/16" (395.3 MM)

INSERTA TEE® INSTALLATION PROCEDURE

1. CORE THE PROPER SIZE HOLE AS SHOWN ABOVE
2. INSERT THE RUBBER SLEEVE INTO THE CORED HOLE WITH THE GOLD VERTICAL LINE ON THE RUBBER SLEEVE FACING TO THE SIDE OF THE MAINLINE. THE UPPER SEGMENT SHOULD BE ON THE TOP OF THE WALL OR RIB AND THE LOWER SEGMENT (PVC, RIBBED & POLYETHYLENE PIPE ONLY) SHOULD BE ON THE INSIDE OF THE PIPE.
3. APPLY THE INSERTA TEE SOLUTION SUPPLIED TO THE INSIDE OF THE RUBBER SLEEVE AND TO THE OUTSIDE OF THE PVC HUB ADAPTER. CAUTION! USING PIPE LUBE MAY RESULT IN HUB ADAPTER POPPING OUT
4. PLACE THE PVC HUB ADAPTER INTO THE RUBBER SLEEVE. MAKE SURE THAT THE RED VERTICAL LINE ON THE PVC HUB ADAPTER IS IN LINE WITH THE GOLD VERTICAL LINE ON THE RUBBER SLEEVE.
5. PLACE THE 2X4 BOARD ONTO THE TOP OF THE PVC HUB ADAPTER.
6. THE RED HORIZONTAL LINE AT THE TOP OF THE HUB ADAPTER IS A DEPTH MARK. THIS TELLS THE INSTALLER JUST HOW FAR TO DRIVE THE ADAPTER INTO THE RUBBER SLEEVE. USING THE BOARD AND HAMMER, DRIVE THE PVC HUB ADAPTER INTO THE RUBBER SLEEVE TO WHERE THE HORIZONTAL RED LINE ON THE PVC HUB ADAPTER MEETS THE TOP OF THE RUBBER SLEEVE.
7. PLACE THE STAINLESS BAND AROUND THE TOP OF THE RUBBER SLEEVE AND TIGHTEN DOWN
8. INSTALL SIDE SERVICE PIPE IN NORMAL MANNER

REVISION DATE MAY 2006

GREEN SANITARY DISTRICT GENERAL CONSTRUCTION SPECIFICATIONS

1. ALL SANITARY SEWER WORK SHALL BE IN CONFORMANCE WITH GREEN SANITARY DISTRICT'S STANDARDS, SPECIFICATIONS AND ORDINANCES. COMPLETE CONSTRUCTION PLANS(ALL UTILITIES) TO BE PROVIDED TO DISTRICT FOR PRE-CONSTRUCTION REVIEW.
2. SANITARY BUILDING SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH OREGON STATE DEPARTMENT OF COMMERCE, BUILDING CODE (LATEST REVISION) AND ITS AMENDMENTS. 8" AND LARGER PUBLIC SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DEQ STANDARDS FOR PUBLIC SEWERS AND TO THE LINES, GRADES AND DETAILS SHOWN ON THE PLANS. 4" AND 6" SANITARY BUILDING SEWERS SHALL BE PVC ASTM 3034. CONTRACTOR SHALL INSTALL SEWER LATERALS TO A POINT 5 FEET BEHIND THE PROPERTY LINE OR ANY PUBLIC UTILITY EASMENTS AND LATERALS MUST BE AT LEAST 4 FEET DEEP ON PROPERTY.
3. ALL LINES SHALL HAVE 12 GAGE INSULATED GREEN TONING WIRE INSTALLED IN THE TRENCH FOR FUTURE LOCATING.
4. ALL SANITARY BUILDING SEWERS SHALL BE AIR TESTED IN ACCORDANCE WITH APPLICABLE CODE.
5. SANITARY SEWER PIPE SHALL BE PVC ASTM 3034 SDR 35. FOR GRADES OVER 25%, USE CEMENT LINED DUCTILE IRON PIPE AND BACKFILL RETAINING DAMS.
6. SANITARY SEWERS SHALL BE AIR TESTED IN ACCORDANCE WITH STANDARD SPECIFICATION, UNIBELL B-0.6.85, AFTER COMPACTION OF BACKFILL.
7. SANITARY SEWERS SHALL PASS THE 5% MANDREL DEFLECTION TEST IN ACCORDANCE WITH APPLICABLE APWA SPECIFICATIONS.
8. SANITARY SEWERS SHALL BE INSPECTED AFTER CONSTRUCTION AND BEFORE FINAL SURFACING WITH A TV CAMERA PER D.E.Q. REQUIREMENTS.
9. CONCRETE SHALL BE CLASS 5 (1 1/2" MAXIMUM AGGREGATE SIZE) WITH 6 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE, WITH A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 P.S.I. AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C-39.86.
10. WHEREVER SANITARY SEWERS CROSS WATER LINES WITH LESS THAN 18" VERTICAL CLEARANCE, THE SANITARY SEWER SHALL BE C900 PVC OR DUCTILE IRON PIPE 10' MINIMUM EACH SIDE OF WATER LINE.
11. MANHOLES SHALL BE TESTED ACCORDING TO THE MOST CURRENT APWA STANDARD SPECIFICATION 306.6.03. WATER TO BE FILLED TO THE RIM OR VACUUM TESTED IN ACCORDANCE WITH ASTM C-924.86.
12. NEW SANITARY SEWER LINES SHALL BE CLEANED WITH A JETTER TRUCK CAPABLE OF PRODUCING 65 GPM AT A PRESSURE OF 1200 PSI MINIMUM. CLEANING SHALL BEGIN AT THE UPSTREAM END OF THE LINE AND PROCEED DOWNSTREAM TO THE BEGINNING OF THE PROJECT. ANY SOIL, ROCKS OR RUBBISH WILL BE REMOVED FROM THE PROJECT SITE.
13. CONTRACTOR SHALL REPLACE ANY AND ALL SURVEY MONUMENTS WHICH ARE AFFECTED BY THE CONSTRUCTION. ALL MONUMENTS WILL BE RESET BY A LICENSED LAND SURVEYOR.
14. CONTRACTOR SHALL PROVIDE GREEN SANITARY DISTRICT WITH A BOND FOR ONE YEAR EQUIVALENT TO THE COST OF THE SEWER PORTION OF THE CONSTRUCTION BID. GREEN SANITARY DISTRICT IS TO BE INCLUDED AS ADDITIONAL INSURED ON CONTRACTOR'S INSURANCE POLICY.
15. ALL TONING WIRE SHALL BE TESTED FOR CONTINUITY BEFORE FINAL SURFACING.
16. CONTRACTOR SHALL CONTACT ONE-CALL AT 1-800-332-2344 AT LEAST 48 HOURS PRIOR TO COMMENCING ANY EXCAVATION.
17. CONSTRUCTION DOCUMENTS MUST BE APPROVED BY BOTH DEQ AND THE DISTRICT BEFORE THE DISTRICT WILL ISSUE A PERMIT TO CONSTRUCT THE SEWER EXTENSION.
18. LOCK DOWN MANHOLE LIDS SHALL BE REQUIRED IN REMOTE LOCATIONS IDENTIFIED BY THE DISTRICT AND WITHING THE 100 YEAR FLOOD PLAIN.
19. A PRE-CONSTRUCTION MEETING WILL OCCUR 7 DAYS BEFORE CONSTRUCTION OF SANITARY SEWER.

SPECIFICATIONS FOR CONCRETE MANHOLES

1. POURED IN PLACE MANHOLE CONNECTIONS SHALL BE FACTOR SANDED COLLAR CONNECTORS WITH NON-SHRINK GROUT. ALL OTHER MANHOLE CONNECTIONS SHALL BE CORED HOLE WITH FLEXIBLE BOOT. IE KOR-N-SEAL.
2. GROUT USED TO INSTALL HEIGHT ADJUSTING RINGS, LID FRAMES AND BASES SHALL BE NON-SHRINK GROUT.
3. CHANNELS SHAL BE VERTICAL WALLED AND PROVIDE SMOOTH SLOPES & RADIUS TO OUTLET PIPE.
4. CONTRACTOR SHALL USE COMMERCIAL CONCRETE BONDING AGENT ON ALL CONCRETE FACES, BOTH INTERIOR AND EXTERIOR, TO BE GROUTED OR WHERE NEW CONCRETE WILL BE PLACED AGAINST EXISTING CONCRETE SURFACES.
5. ALL MANHOLES GREATER THAN 5 FEET IN DEPTH SHALL BE 48" DIAMETER WITH CONCENTRIC CONES.
6. ALL MANHOLES LESS THAN 5 FEET IN DEPTH SHALL BE 48" DIAMETER WITH LOW PROFILE 18" CONCENTRIC CONES.
7. BASE MAY BE PRECAST OR POURED IN PLACE ON 12" BEDDING MATERIAL
8. MANHOLE BASE TO BE FINISHED AT TIME OF CONCRETE PLACEMENT. CHANNEL SHAPE TO MATCH BOTTOM HALF OF PIPE, WITH VERTICAL SIDES TO BASE SHELF.
9. BASE CHANNEL WIDTH SHALL REMAIN UNIFORM & MATCH OUTLET PIPE DIAMETER WITHOUT FLARING.
10. LIFTING EYELETS SHALL BE REMOVED BELOW FINISHED SURFACE & FINISHED WITH NON-SHRINK GROUT. LIFTING LUGS SHALL BEGROUTED WITH 2" MINIMUM COVER.
11. ALL JOINTS SHALL BE SEALED WITH A PREFORMED BITUMINOUS SEAL TO FORM A WATER TIGHT SEAL. VOID SPACE FILLED AND SEALED INSIDE AND OUT WITH NON-SHINK GROUT WITH BONDING AGENT.

W R G DESIGN INC.
5415 SW Westgate Dr, Ste 100 Portland, OR 97221
Tel. 503.419.2500 Fax. 503.419.2600
PLANNERS ▪ ENGINEERS ▪ LANDSCAPE ARCHITECTS ▪ SURVEYORS

SANITARY SEWER NOTES AND DETAILS
RIVER CREST ESTATES 2 - PHASE 2
HAYDEN HOMES
Green District, Oregon

AS-BUILT
BASED ON CHANGES IDENTIFIED DURING CONSTRUCTION AS OF 3/7/08

FILED
Date: 10-8-2008 By: JC
This survey consists of:
Map:
Narrative:
Corner Rpt:
DOUGLAS COUNTY SURVEYOR

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2001
KEVIN S. RUSSELL
EXPIRES: 12-31-08

DATE	09/21/06
DRAWN	MDB
DESIGNED	MDB
CHECKED	KSR
PROJECT #	HAY619.00

SHEET TITLE
NOTES AND DETAILS
SHEET NUMBER
C235
OF # SHEETS

PH2SEWDT

Co. Rd. # 375J, 366, 288D, 375P, 375Q

CO. RD. 375J 366 288D 375P 375Q