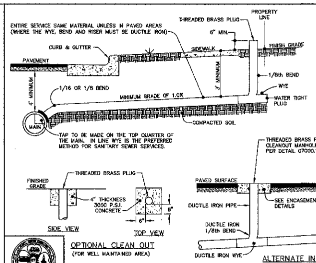
O:\sdskdsgn\proj\pcscary\pcs-DETAILS.dwg Mon Nov 19 13:32:58 2007 AIKEN & YELLE PA



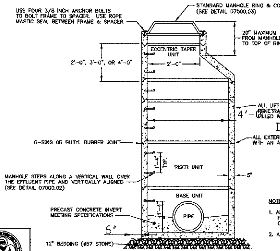
NOTES:

1. DO NOT REMOVE PLUGS UNTIL SEWER SYSTEM IS UNDER ONE (1) YEAR WARRANTY OR OTHERWISE APPROVED FOR OPERATION BY TOWN OF CARY.
2. SANITARY SEWER SERVICES WHICH ARE 8 FEET TO 20 FEET DEEP SHALL REQUIRE BEDDING IN ACCORDANCE WITH DETAIL 07000.13 FOR FLEXIBLE PIPE. SEWER SERVICES OVER 20 FEET DEEP AND UNDER 3 FEET DEEP SHALL REQUIRE D.I.P.

EFFECTIVE: 09/08/05

STANDARD SANITARY SEWER TAP AND SERVICE

DETAIL No. 07000.10 SHEET 1 OF 2



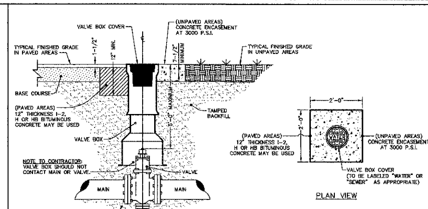
NOTES:

1. ALL MANHOLE CONNECTIONS SHALL BE PREFABRICATED OR CORED WITH A CONCRETE CORING MACHINE.
2. ALL MANHOLES SHALL BE VACUUM TESTED.

EFFECTIVE: 07/01/04

STANDARD PRECAST CONCRETE MANHOLE

DETAIL No. 07000.01 SHEET 1 OF 1



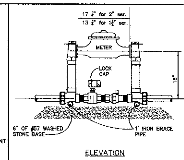
NOTES:

1. ONLY MANUFACTURED VALVE BOX EXTENSIONS SHALL BE ALLOWED.
2. VALVE OPERATING NUT MUST BE EXTENDED SO THAT THE DEPTH IS NO GREATER THAN 5' (ft.) FROM THE SURFACE USING A MANUFACTURER APPROVED EXTENSION KIT.
3. PRECAST CONCRETE ENCASEMENT IS ALLOWED OUTSIDE OF PAVED AREAS.

EFFECTIVE: 07/01/04

STANDARD VALVE BOX INSTALLATION

DETAIL No. 06000.08 SHEET 1 OF 2



NOTE:

PIPING TO BE BRASS & COPPER TUBING & SHALL BE EQUIPPED W/ANGLED CHECK VALVE OUTLETS & BY-PASS FLANGED VALVE OR BY-PASS FLANGED BALL VALVE INLETS AS FURNISHED BY FORD CUSTOMSETTERS, MUELLER OR OTHER APPROVED EQUAL.

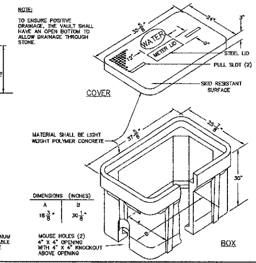
ALL COMMERCIAL APPLICATIONS REQUIRE AN ABOVE GROUND BACKFLOW PREVENTER.

NOTE:

PRECAST CONCRETE BOX WITH ALUMINUM ACCESS HATCH WILL BE AN ACCEPTABLE ALTERNATIVE WITH APPROVAL OF THE TOWN ENGINEER

NOTE:

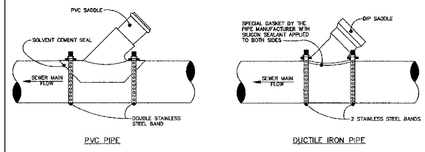
TO ENSURE POSITIVE DRAINAGE, THE VAULT SHALL HAVE AN OPEN BOTTOM TO ALLOW DRAINAGE THROUGH STONE.



EFFECTIVE: 09/08/05

STANDARD 1-½" & 2" METER INSTALLATION & VAULT

DETAIL No. 06000.02 SHEET 1 OF 1



NOTES:

1. PVC SOLVENT CEMENT SHALL BE USED FOR PVC SADDLES.
2. TRUSS SADDLES SHALL BE USED WITH TRUSS PIPE.
3. DIP CONNECTIONS SHALL BE MJ IN-LINE WYE OR ROMAC SEWER SADDLE TYPE CB OR OTHER AS APPROVED.

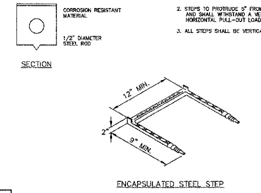
EFFECTIVE: 07/01/04

STANDARD SANITARY SEWER LATERAL CONNECTIONS

DETAIL No. 07000.11 SHEET 1 OF 1

NOTES:

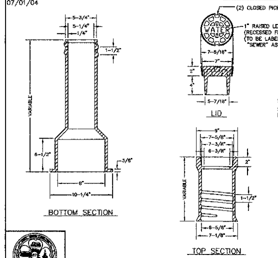
1. VERTICAL SPACING = 16" O.C., ON VERTICAL WALL ONLY.
2. STEPS TO PROTRUDE 5" FROM FACE OF STRUCTURE WALL, AND SHALL WITHSTAND A VERTICAL LOAD OF 400 LBS. AND A HORIZONTAL PULL-OUT LOAD OF 1000 LBS. WHEN INSTALLED.
3. ALL STEPS SHALL BE VERTICALLY ALIGNED IN A STRAIGHT LINE.

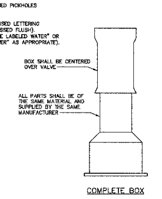


EFFECTIVE: 07/01/04

MANHOLE STEPS

DETAIL No. 07000.02 SHEET 1 OF 1





NOTES:

1. VALVE BOX COVER SHALL WEIGH A MINIMUM 26 lbs.
2. ENTIRE VALVE BOX ASSEMBLY & COVER SHALL BE CAST FROM CLASS 35 GRAY IRON.
3. ASSEMBLY SHALL BE DOMESTICALLY MADE AND MANUFACTURED IN THE U.S.A.

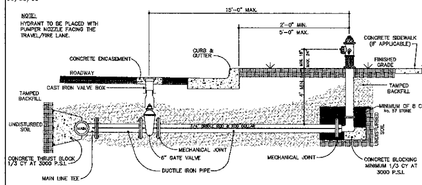
EFFECTIVE: 07/01/04

STANDARD VALVE BOX INSTALLATION

DETAIL No. 06000.08 SHEET 2 OF 2

NOTE:

HYDRANT TO BE PLACED WITH PUMPER NOZZLE FACING THE TRAVEL/FIRE LANE.



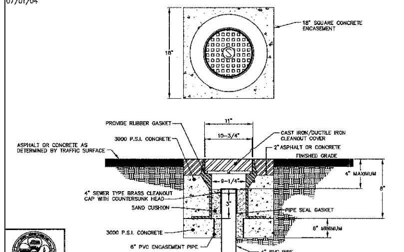
NOTES:

1. TOP OF BLOCKING TO BE 2" FROM HYDRANT WEEP HOLES.
2. HYDRANT TEE MAY BE SUBSTITUTED FOR D.I.P. NIPPLE AND RODDING TO VALVE.
3. TAPPING SADDLES MAY BE USED INSTEAD OF A TEE FOR WATER LINES LARGER THAN 16 INCHES.
4. IF HYDRANT IS LOCATED ON A DOT ROADWAY USE DOT STANDARDS FOR LOCATION OF HYDRANT
5. STD. RODDING AND BLOCKING FROM GATE VALVE TO HYDRANT MAY BE SUBSTITUTED WITH A CONCENTRIC RING RESTRAINT SYSTEM SUCH AS MUELLER AQUAGRIP OR AN APPROVED EQUAL PRODUCT PROVIDED ALL PIPE SEGMENTS ARE RESTRAINED.

EFFECTIVE: 09/08/05

STANDARD HYDRANT INSTALLATION

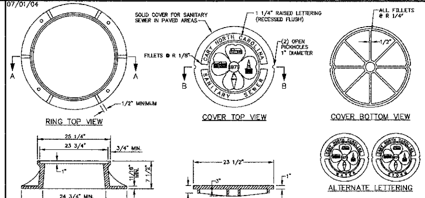
DETAIL No. 06000.06 SHEET 1 OF 1



EFFECTIVE: 09/08/05

CLEANOUT COVER ASSEMBLY TRAFFIC AREA

DETAIL No. 07000.12 SHEET 1 OF 1



MINIMUM WEIGHTS	
RING	190
COVER	120
TOTAL	310

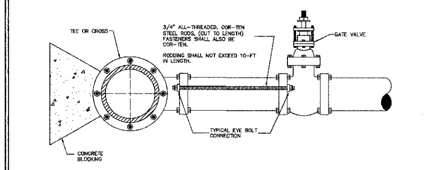
SPECIFICATIONS:

1. CLASS 35 GREY IRON.
2. COMPLIES WITH ASTM A48 CL35B.
3. CASTING TO BE COATED WITH A WATER BASED ASPHALT PAINT (BLACK).
4. ALL LETTERING SHALL BE CLEAN, CRISP, AND CLEARLY LEGIBLE.
5. DOMESTICALLY MADE & MANUFACTURED IN THE USA.

EFFECTIVE: 07/01/04

STANDARD MANHOLE RING AND COVER (TYPE 1 PAVED AREAS)

DETAIL No. 07000.03 SHEET 1 OF 3



COR-TEN ROD REQUIREMENTS

BRANCH SIZE	NO. OF RODS
4"	2
6"	2
8"	4
12"	6
16"	8
24"	10

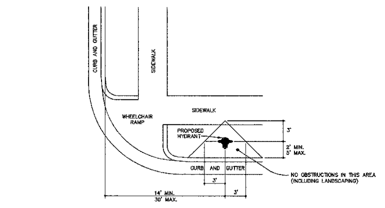
GENERAL NOTES:

1. SEE STANDARD THRUST BLOCK.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL FITTINGS.

EFFECTIVE: 09/08/05

STANDARD VALVE RODDING

DETAIL No. 06000.09 SHEET 1 OF 1

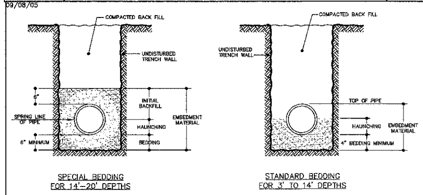


NOTE: LOCATION SHOULD BE COORDINATED WITH NCDOT ALONG STATE MAINTAINED ROADWAYS.

EFFECTIVE: 07/01/04

STANDARD HYDRANT LOCATION

DETAIL No. 06000.07 SHEET 1 OF 2



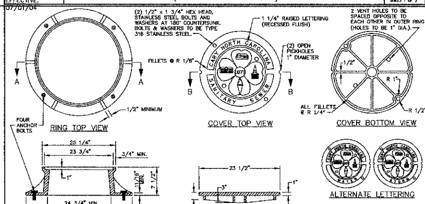
NOTES:

1. EMBEDMENT MATERIAL MUST BE CLASS I (NO. 67 OR NO. 78M WASHED STONE IS TYPICALLY USED).
2. EMBEDMENT MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY FOR CLASS I MATERIAL.
3. STANDARD BEDDING SHALL BE UTILIZED FOR ALL CASES WHERE TRENCH BOTTOMS ARE UNSTABLE DUE TO SOIL TYPE, OR MOISTURE CONDITIONS.
4. ALL SANITARY SEWER LINES LESS THAN 3 FEET AND OVER 20 FEET IN DEPTH MUST BE D.I.P.

EFFECTIVE: 07/01/04

BEDDING FOR FLEXIBLE & SEMI- RIGID SANITARY SEWER PIPE

DETAIL No. 07000.13 SHEET 1 OF 1



MINIMUM WEIGHTS	
RING	180
COVER	120
TOTAL	300

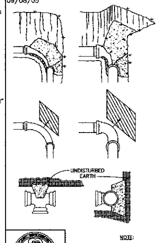
SPECIFICATIONS:

1. CLASS 35 GREY IRON.
2. COMPLIES WITH ASTM A48 CL35B.
3. CASTING TO BE COATED WITH A WATER BASED ASPHALT PAINT (BLACK).
4. ALL LETTERING SHALL BE CLEAN, CRISP, AND CLEARLY LEGIBLE.
5. DOMESTICALLY MADE & MANUFACTURED IN THE USA.

EFFECTIVE: 07/01/04

STANDARD MANHOLE RING AND COVER (TYPE 2 FOR OUTFALLS OR UNPAVED AREAS)

DETAIL No. 07000.03 SHEET 2 OF 3



MINIMUM CONCRETE BLOCKING (C.Y.) *

NOM. PIPE DIA. IN.	TEES & DEAD ENDS	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND
4	1/3	1/3	1/3	1/3	1/3
6	1/3	1/3	1/3	1/3	1/3
8	1/3	1/2	1/3	1/3	1/3
10	2/3	3/4	1/2	1/3	1/3
12	3/4	1.0	2/3	1/3	1/3
14	1.0	1-1/2	3/4	1/2	1/3
16	1-1/3	2.0	1.0	1/2	1/3
18	1-2/3	2-1/3	1-1/3	2/3	1/3
20	2.0	3.0	1-2/3	3/4	1/2
24	3.0	4-1/3	2-1/3	1-1/3	2/3

* CONCRETE SHALL BE 3000 P.S.I. MIX.

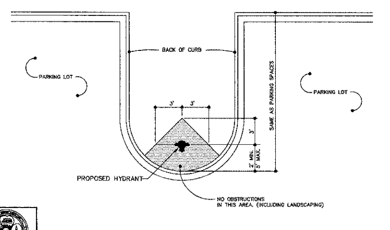
NOTE:

FITTING SHALL BE WRAPPED WITH A MINIMUM 4 MIL PLASTIC. NO CONCRETE SHALL COVER BOLTS OR GLANDS.

EFFECTIVE: 07/01/04

STANDARD REACTION BLOCKING

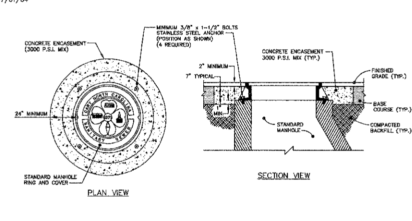
DETAIL No. 06000.13 SHEET 1 OF 1



EFFECTIVE: 07/01/04

STANDARD HYDRANT LOCATION (FOR PARKING LOT)

DETAIL No. 06000.07 SHEET 2 OF 2



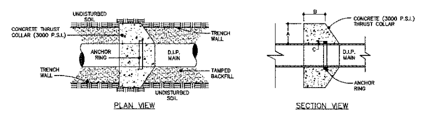
NOTES:

1. MANHOLE RING TO BE BOLTED AS SHOWN W/ ROPE MASTIC SEAL BETWEEN FRAME & SPACER.
2. INSURE CONCRETE ENCASEMENT FORMS BOND AROUND LIP OF MANHOLE TOP.

EFFECTIVE: 07/01/04

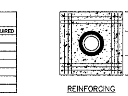
STANDARD MANHOLE RING AND COVER ENCASEMENT

DETAIL No. 07000.05 SHEET 1 OF 1



SCHEDULE

PIPE DIAMETER	CONCRETE THRUST COLLAR A	CONCRETE THRUST COLLAR B	ANCHOR RING C	RINGS REQUIRED
6",8",12"	1'-0"	1'-0"	2"	ONE
16"	1'-4"	1'-0"	2"	ONE
20 "	1'-4"	1'-0"	3"	ONE
24"	1'-4"	1'-0"	3"	TWO
30"	1'-4"	1'-2"	4"	TWO
36"	1'-4"	1'-4"	4"	TWO



NOTE:

6" TO 16" MAINS = 12-NO. 7 BARS
20" TO 36" MAINS = 12-NO. 8 BARS
BARS PLACED AS SHOWN

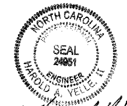
EFFECTIVE: 07/01/04

STANDARD THRUST COLLAR INSTALLATION

DETAIL No. 06000.14 SHEET 1 OF 1

06-SP-101-A
APPROVED
TOWN OF CARY

Approved by DRC Date 1-28-08
Planning BP Date 4-1-08
Engineering SS Date 3/20/08



Harold A Yelle
11/19/07

SHEET 22 OF 24

Aiken & Yelle Associates, PA
Professional Engineers & Land Surveyors
3755 Benson Drive
Raleigh, North Carolina 27609
919-877-9992 Fax 919-877-9979
email: AYES@BELLSOUTH.NET

AYES

DRAWN BY: RCS
CHECKED BY: HAY
SCALE: NTS
DATE: 08/07/06
REVISIONS: 10/27/06

SITE DETAILS

WEATHERFIELD TOWNHOMES
AT HAVEN SITE COURT PDD
CARY, NORTH CAROLINA

07-057