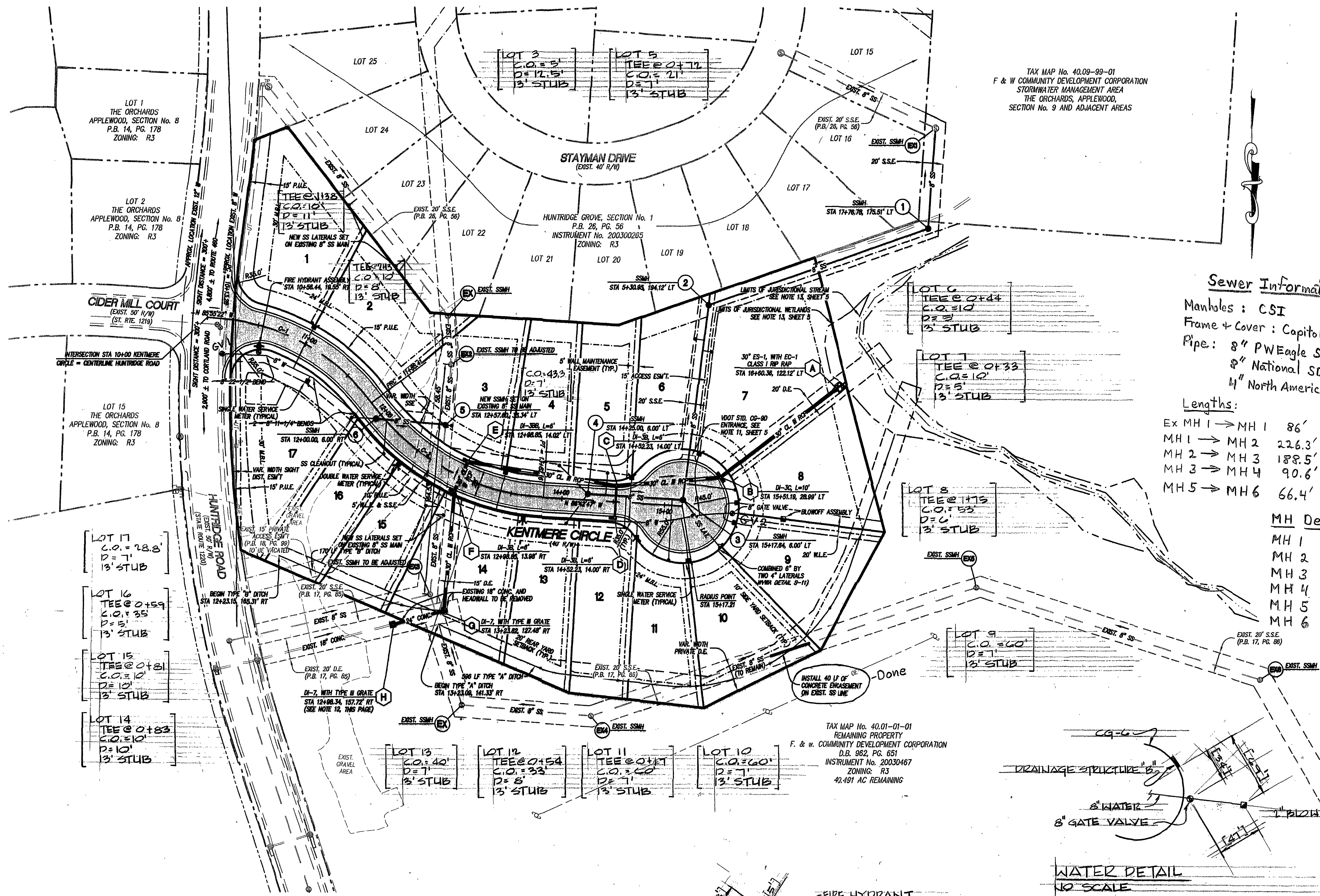




TAX MAP No. 40.09-99-01  
F & W COMMUNITY DEVELOPMENT CORPORATION  
STORMWATER MANAGEMENT AREA  
THE ORCHARDS, APPLEWOOD,  
SECTION No. 9 AND ADJACENT AREAS

### Sewer Information

Manholes : CSI  
Frame & Cover : Capitol Foundry  
Pipe : 8" PWEagle SDR-35  
8" National SDR35  
4" North American SDR35

### Lengths:

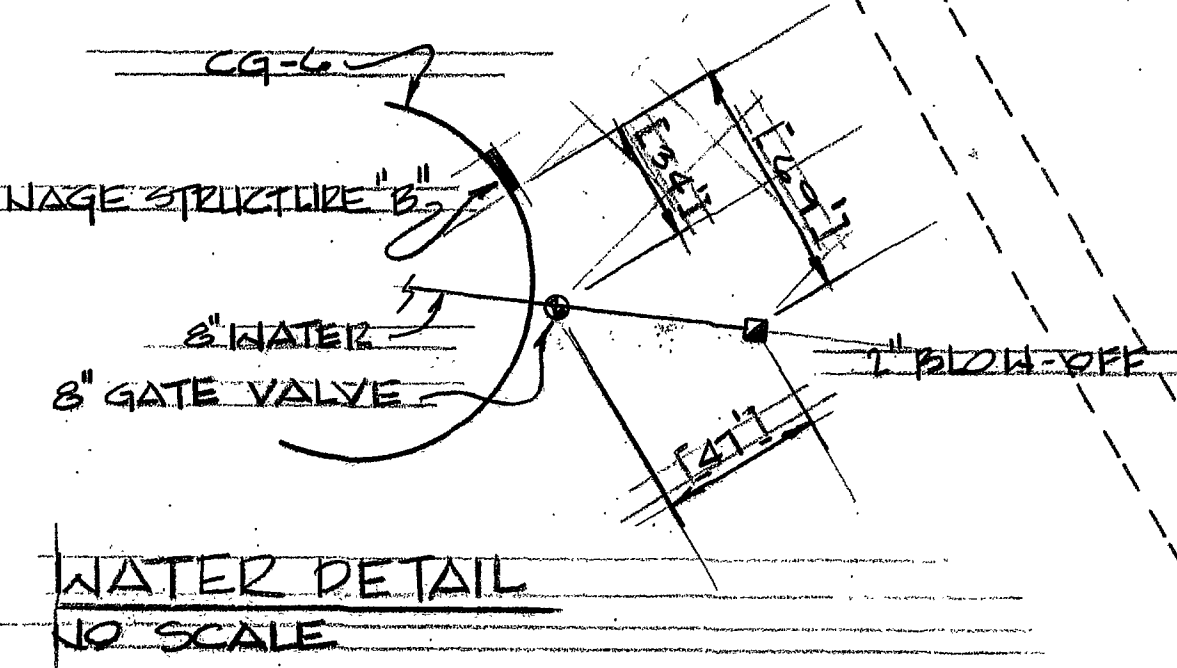
Ex MH 1 → MH 1 86'  
MH 1 → MH 2 226.3'  
MH 2 → MH 3 188.5'  
MH 3 → MH 4 90.6'  
MH 5 → MH 6 66.4'

### MH Depths

MH 1 6.0'  
MH 2 6.45'  
MH 3 9.20'  
MH 4 9.90'  
MH 5 12.50'  
MH 6 6.0'

### NOTES:

- ALL WATER AND SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE WESTERN VIRGINIA WATER AUTHORITY'S WATER AND SANITARY SEWER STANDARDS.
- ALL DIMENSIONS ARE TO THE FACE OF CURB, UNLESS OTHERWISE NOTED.
- SANITARY SEWER MATERIAL SHALL BE PVC, SDR 35, UNLESS OTHERWISE NOTED.
- WATER LINE MAIN MATERIAL SHALL BE C900, DR14, OR APPROVED EQUAL, UNLESS OTHERWISE NOTED.
- ALL WATER METERS SHALL BE 5/8" x 3/4" SIZE.
- ALL LOTS WITHIN THIS SUBDIVISION SHALL BE REQUIRED TO HAVE AN INDIVIDUAL PRESSURE REDUCING VALVE ON THE CUSTOMER'S SIDE OF THE METER. SEE DETAIL ON SHEET 11.
- NEW SANITARY SEWER MANHOLE No. 5 SET ON THE EXISTING SEWER MAIN LINE WILL REQUIRE BYPASS PUMPING OF THE EXISTING SEWER FLOWS PER THE CONDITIONS OF SECTION 3.5 OF SPECIFICATION 02731 OF THE WESTERN VIRGINIA WATER AUTHORITY'S WATER AND SANITARY SEWER STANDARDS. NEW SANITARY SEWER MANHOLE No. 5 CAN ALSO BE INSTALLED AS A NEW STRADDLE MANHOLE IN ACCORDANCE WITH THE WESTERN VIRGINIA WATER AUTHORITY'S STANDARDS. A WESTERN VIRGINIA WATER AUTHORITY INSPECTOR MUST BE ON SITE DURING THE INSTALLATION OF THE NEW MANHOLES.
- A WESTERN VIRGINIA WATER AUTHORITY INSPECTOR MUST BE ON SITE DURING WORK TO RAISE EXISTING SANITARY SEWER MANHOLE No. 2.
- SANITARY SEWER CONNECTION TO THE EXISTING MANHOLE No. 1 SHALL BE EXCAVATED BY THE CONTRACTOR AND CENTERMARKED FOR CORING. CORING TO BE PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY AT THE CONTRACTOR'S EXPENSE.
- WET TAP TO EXISTING WATER MAIN TO BE PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY AFTER EXCAVATION IS PERFORMED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE THE 8" TAPPING SLEEVE AND 8" TAPPING VALVE.
- TWELVE (12) FOOT WIDE ENTRANCE FOR ACCESS EASEMENT TO THE STORMWATER MANAGEMENT FACILITY MAY BE COMBINED WITH THE DRIVEWAYS FOR THE ADJACENT LOTS.
- THE CONTRACTOR IS RESPONSIBLE TO REPLACE AND REPAIR ANY STRUCTURES DAMAGED DURING THE INSTALLATION OF DRAINAGE STRUCTURE "H" IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.
- JURISDICTIONAL STREAMS AND WETLANDS EXIST ON THE SITE AND ARE NOT TO BE DISTURBED.
- THE WORKING PRESSURE FOR THE WATER LINE WITHIN THE LIMITS OF THIS DEVELOPMENT IS BELOW 100 PSI.



### Water Information

Water Valves : American Flow  
Fire Hydrant : American Flow  
Pipe : National 8" C900 DR-14

### Lengths:

Gate Valve 1 → G.V. 2 : 554.5'  
G.V. 1 → Blowoff : 600.25'

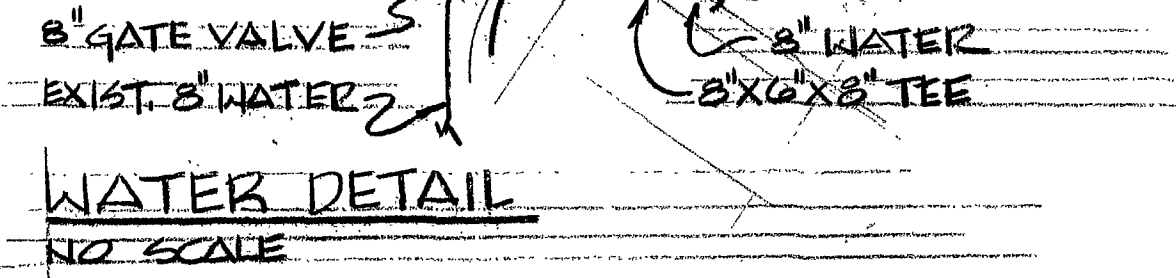
There are no bends in the water line.

| SANITARY SEWER MAIN LINE BEARINGS AND DISTANCES |                 |          |
|-------------------------------------------------|-----------------|----------|
| LINE                                            | BEARING         | DISTANCE |
| EXT - 1                                         | N 04° 13' 24" E | 94.70'   |
| 1 - 2                                           | N 71° 02' 20" E | 226.70'  |
| 2 - 3                                           | N 07° 20' 02" E | 188.59'  |
| 3 - 4                                           | S 88° 42' 47" E | 92.64'   |
| 5 - 6                                           | S 85° 01' 45" E | 67.56'   |

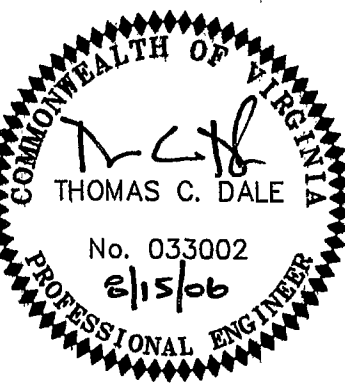
| FIRE HYDRANT FLOW AND PRESSURE INFORMATION |                 |           |                   |
|--------------------------------------------|-----------------|-----------|-------------------|
| HYDRANT LOCATION                           | STATIC PRESSURE | FLOW      | RESIDUAL PRESSURE |
| STA 10+56.44<br>KENTMERE CIRCLE            | 84 PSI          | 1,000 GPM | 20 PSI            |

THE ABOVE INFORMATION IS BASED ON A WATERCAD COMPUTER SIMULATION ASSUMING THAT THE WATER TANKS SERVING THIS DEVELOPMENT ARE AT ELEVATION 1380. IN ADDITION, AN ESTIMATION OF THE EXISTING DOMESTIC DEMAND ON THE SYSTEM WAS INCLUDED IN THE SIMULATION. THIS INFORMATION HAS NOT BEEN FIELD VERIFIED.

| C-1                                                                                                                                 | C-2                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Centerline<br>A= 49'10.42"<br>D= 28'39.93"<br>R= 200.00<br>T= 91.82<br>L= 172.13<br>P.C. 10+13.28<br>P.T. 11+05.09<br>P.T. 11+05.09 | Centerline<br>A= 50'10.08"<br>D= 25'27.53"<br>R= 225.00<br>T= 102.16<br>L= 168.75<br>P.C. 11+85.41<br>P.T. 12+00.57<br>P.T. 13+02.16 |



LUMSDEN ASSOCIATES, P.C.  
ENGINEERS-SURVEYORS-PLANNERS  
ROANOKE, VIRGINIA



DIMENSIONAL  
LAYOUT

KESWICK COURT  
PREPARED FOR  
FRALIN & WALDRON, INC.  
HOLLIS MAGISTERIAL DISTRICT  
ROANOKE COUNTY, VIRGINIA

| REVISIONS |         | DATE | DESCRIPTION |
|-----------|---------|------|-------------|
| NO.       | DATE    | 1    | 8/15/06     |
| 1         | 8/15/06 | 2    | 8/15/06     |
| 2         | 8/15/06 | 3    | 8/15/06     |
| 3         | 8/15/06 | 4    | 8/15/06     |
| 4         | 8/15/06 | 5    | 8/15/06     |

DATE: June 8, 2006  
SCALE: 1" = 50'  
COMMISSION NO: 2004-375  
SHEET 5 OF 12