

QUANTITY + COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	COST	BONDABLE
CLEARING AND GRUBBING	1.2	ACRES	4,000.00	4,800.00	4,800.00
EXCAVATION	8,090	C.Y.	3.50	28,315.00	28,315.00
EMBANKMENT		C.Y.			
CURB INLET DI-3B	3	EACH	2,200.00	6,600.00	6,600.00
CURB INLET DI-		EACH			
MANHOLE MH-1	3	EACH	1,500.00	4,500.00	4,500.00
MANHOLE MH-		EACH			
-IN. CONCRETE PIPE, CLASS III		LIN. FT.			
15-IN. HDPE PIPE	203	LIN. FT.	16.00	3,248.00	3,248.00
18-IN. CMP PIPE	27	LIN. FT.	9.00	243.00	243.00
-IN. C.M. CULVERT		LIN. FT.			
-IN. C.M. CULVERT		LIN. FT.			
BOX CULVERT		LUMP SUM			
PAVED DITCH		LIN. FT.			
RIPRAP - CLASS		S.F.			
SODDED SWALE	40	S.Y.	8.00	320.00	320.00
18 -IN. CONCRETE ENDWALL EW-1	1	EACH	450.00	450.00	450.00
18-IN. END SECTION ES-1	1	EACH	350.00	350.00	350.00
RETAINING WALL	223	LIN. FT.	17.00	3,791.00	3,791.00
HEADER CURB & GUTTER CG-6	249	LIN. FT.	10.50	2,614.50	
CURB & GUTTER CG-2	968	LIN. FT.	10.00	9,680.00	
VALLEY GUTTER		EACH			
GRAVEL BASE		S.Y.			
SIDEWALK	520	L.F.	6.00	3,120.00	
GRAVEL SHOULDER		S.Y.			
SURFACE TREATMENT		S.Y.			
-IN. BIT. CONC.: SITE	2,160	S.Y.	16.00	34,560.00	
-IN. BIT. CONC.: TYPE S-		S.Y.			
-IN. BASE MATERIAL		C.Y.			
-IN. SUBBASE MATERIAL		C.Y.			
TURN LANE	444	S.Y.	18.00	7,992.00	7,992.00
GUARD RAIL GR-2	120	LIN. FT.	15.00	1,800.00	1,800.00
CG-7	200	LIN. FT.	10.00	2,000.00	2,000.00
12" WATER LINE	555	LIN. FT.	20.00	11,100.00	11,100.00
6" WATER LINE		LIN. FT.			
WATER SERVICE		LIN. FT.			
FIRE HYDRANT ASSEMBLIES	1	EACH	1,500.00	1,500.00	1,500.00
BLOW OFFS W/VAULT, FRAME & COVER	2	EACH	750.00	1,500.00	1,500.00
8-IN. GATE VALVES, W/VAULT, FRAME & COVER	1	EACH	750.00	750.00	750.00
-IN. GATE VALVES, W/VAULT, FRAME & COVER		EACH			
8" SANITARY SEWER		LIN. FT.			
6" SANITARY LATERAL W/ CO	300	LIN. FT.	20.00	6,000.00	6,000.00
STANDARD MANHOLE W/FRAME & COVER	2	EACH	1,500.00	3,000.00	3,000.00
SAMPLING MANHOLE/PORT	1	EACH	1,500.00	1,500.00	1,500.00
LANDSCAPING	1	LUMP SUM	6,194.00	6,194.00	6,194.00
AS-BUILT PLANS	1	LUMP SUM	2,500.00	2,500.00	2,500.00
STORMWATER MANAGEMENT	1	LUMP SUM	15,950.00	15,950.00	15,950.00
SUB TOTAL				164,377.00	114,403.00
10% CONTINGENCY				16,438.00	11,440.00
ESTIMATED TOTAL				180,815.00	125,843.00
I HEREBY CERTIFY THAT THE FOREGOING ESTIMATE REFLECTS THE CURRENT IMPROVEMENT COSTS OF THIS PROJECT.					
SIGNED:	DATE:				

GENERAL NOTES

All construction methods and materials shall conform to the Construction Standards and Specifications of Roanoke County and/or the Virginia Department of Transportation.

The contractor or developer is required to notify the Roanoke County Engineering Division in writing at least three (3) days prior to any construction, including, but not limited to the following:

- A. Installation of approved erosion control devices
- B. Clearing and grubbing
- C. Subgrade excavation
- D. Installing storm sewers or culverts
- E. Setting curb and gutter forms
- F. Placing curb and gutter
- G. Placing other concrete
- H. Placing gravel base
- I. Placing any roadway surface
- J. Installing water lines
- K. Installing sanitary sewer lines

A pre-construction conference should be scheduled with the Roanoke County Engineering Division, to be held at least one (1) day prior to any construction.

Measures to control erosion and siltation must be provided prior to plan approval. Plan approval in no way relieves the developer or contractor of the responsibilities contained within the erosion and siltation control policies.

A permit must be obtained from the V.D.O.T. Residency Office, Roanoke County, prior to construction in the highway right-of-way.

Plan approval does not guarantee issuance of any permits by V.D.O.T.

An approved set of plans and all permits must be available at the construction site.

Field construction shall honor proposed drainage divides as shown on plans.

All unsuitable material shall be removed from the construction limits of the roadway before placing embankment.

Pavement sections on approved plans are based on a minimum CBR of 10. CBR tests are to be performed by the engineer and submitted to V.D.O.T. and to the Roanoke County Engineering Division prior to placement. CBR values < 10 will require revised pavement sections.

All roadside ditches or grades of more than 5 percent shall be paved with cement concrete to the limits as indicated on the plans and as required at the field inspection.

Location of guard rails shall be determined at a joint field inspection by the County and V.D.O.T.

All springs shall be capped and piped to the nearest storm sewer or natural watercourse. The pipe shall be 6 inch minimum diameter and conform to V.D.O.T. Standard SB-1.

Standard street and traffic control signs shall be erected at each intersection by the developer prior to final street acceptance.

Construction debris shall be containerized in accordance with the Virginia Litter Control Act. No less than one litter receptacle shall be provided on site.

The contractor shall provide adequate means of cleaning mud from trucks and/or other equipment prior to entering public streets. It is the contractors responsibility to insure that the streets are in a clean, mud and dust free condition at all times.

The developer and/or contractor shall supply all utility companies with copies of approved plans, advising them that all grading and installation shall conform to approved plans.

Contractors shall notify utilities of proposed construction at least two (2), but not more than ten (10) working days in advance. Area public utilities may be notified thru "Miss Utility": 1-800-552-7001.

The developer or contractor shall supply the county with correct As-Built plans before final acceptance.

All work shall be subject to inspection by Roanoke County and/or V.D.O.T. inspectors.

Field corrections shall be approved by the Roanoke County Engineering Division prior to such construction.

100 year floodway and floodplain information shall be shown where applicable.

Grade stakes shall be set for all curb and gutter, culver, sanitary sewer and storm sewer.

INDEX

- C1 COVER SHEET
- C2 SITE LAYOUT
- C3 GRADING PLAN
- C4 EROSION CONTROL PLAN
- C5 EROSION CONTROL DETAILS
- C6 LANDSCAPE PLAN
- C7 OVERVIEW PLAN
- C8 PROFILES
- C9 NOTES

7-30-03 REV PER COUNTY COMMENTS  
8-5-03 REV PER VDOT COMMENTS  
4-30-04 REV PER COUNTY COMMENTS

SEWER NOTES

A minimum cover of three (3) feet is required over proposed lines.

Contractor shall be responsible for locating and uncovering all manholes after paving. Manhole tops shall be adjusted to grade if necessary.

All existing utilities may not be shown or may not be shown in the exact location. The contractor shall comply with State Water Works Regulations, Section 12.05.03, where lines cross.

House connections are to be made with 4" pipe installed at a minimum grade of 1/4 inch to 1 foot in R/W.

Laterals from manholes shall be PVC or Ductile Iron of sufficient length to provide two (2) feet of bearing on natural ground. The transition from ductile iron to asbestos cement or concrete pipe shall be made with an adapter coupling in R/W.

All trenches in existing or future rights-of-way shall be compacted according to V.D.O.T. standards.

Lines shall be staked prior to construction.

All water and sanitary sewer facilities are to be installed according to the Roanoke County Water and Sanitary Sewer Design and Construction Standards.

WATER NOTES

A minimum cover of three (3) feet is required over proposed lines.

Contractor shall be responsible for locating and uncovering valve vaults after paving and adjustment to final grade if necessary.

All existing utilities may not be shown or may not be shown in the exact location. The contractor shall comply with the State Water Works Regulations, Section 12.05.03, where lines cross.

All trenches in existing or future highway right-of-ways shall be compacted according to V.D.O.T. standards.

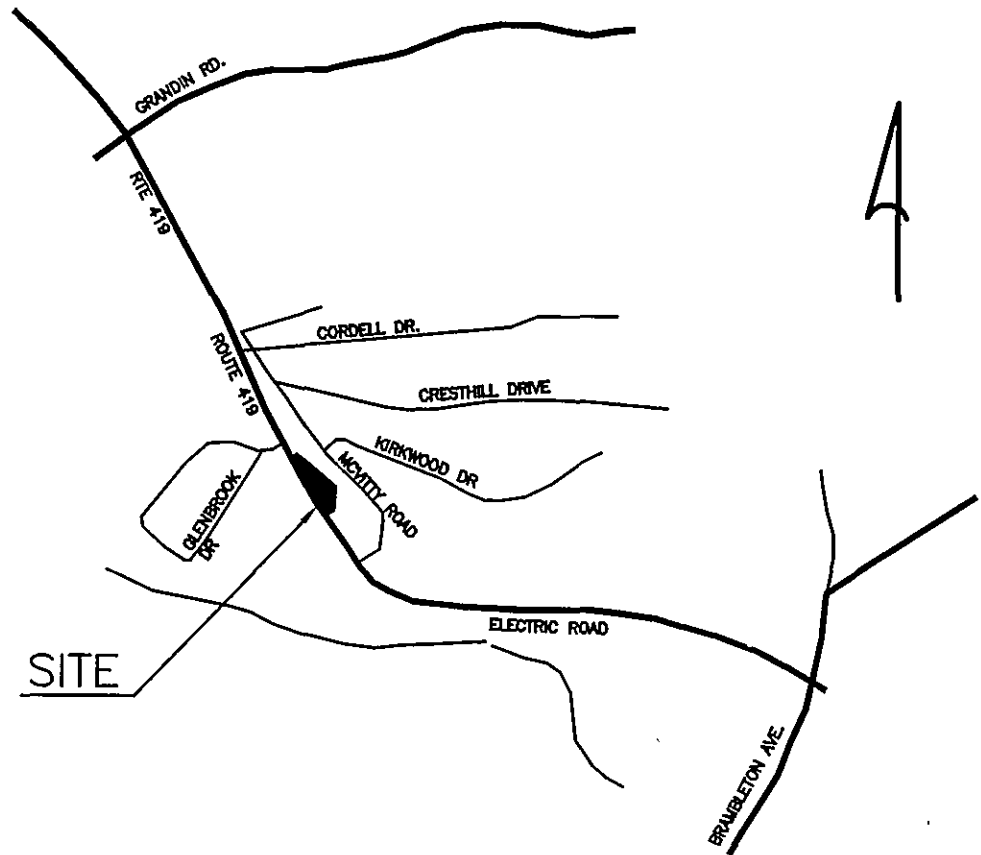
Lines shall be staked prior to construction.

Water main shall be minimum Class 52 Ductile Iron in accordance to AWWA C151 or 14" PVC in accordance with AWWA C-900. Availability number 03-119C

All water and sanitary sewer facilities are to be installed according to the Roanoke County Water and Sanitary Sewer Design and Construction Standards.

LEGEND

Property Line	_____
Right-of-way	_____
Centerline	_____
Minimum Building Line	_____
Existing Storm Sewer	=====
Existing Sanitary Sewer	-----
Existing Water Main	_____
Existing Contour	-----1155-----
Proposed Contour	-----1155-----
Proposed Drainage Divide	-----
Proposed Limits of Clearing	-----
Proposed Storm Sewer	=====
Proposed Sanitary Sewer	-----●-----
Proposed Water Main	_____●_____



VICINITY MAP

1012 FT ± TO THE INTERSECTION OF McVITTY ROAD

SURVEY INFORMATION

Horizontal and vertical control surveys were performed in (year) N/A by \_\_\_\_\_

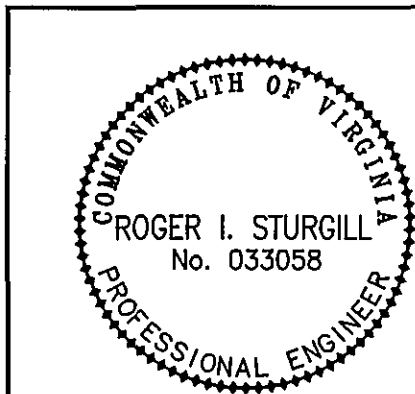
All elevations must be referenced to the National Geodetic Vertical Datum of 1929.

Source of topographic mapping is BALZER AND ASSOCIATES, INC. dated MAY 2003

Boundary was performed by BALZER AND ASSOCIATES, INC. dated MAY 2003

The professional seal and signature below certifies the boundary survey and topographic mapping to be accurate and correct.

BENCHMARK SSMH ACROSS RT. 419, TOP=102.54, INV OUT=97.59  
BENCHMARK IPF AT THE SOUTHEAST SIDE OF THE PROPERTY ALONG THE R/W. ELEV=91.12



PROFESSIONAL ENGINEER  
SEAL AND SIGNATURE

DEVELOPMENT PLAN APPROVED FOR CONSTRUCTION BY ROANOKE COUNTY	
Department	Date
Development Review	OK 7/28/04
Engineering	WLS 7/29/04
Water & Sewer	
Planning & Zoning	

AS - BUILT

06/22/2007

COUNTY OF ROANOKE

NAME OF DEVELOPMENT STRUCTURES OFFICE PARK

MAGISTERIAL DISTRICT(S) WINDSOR HILLS

OWNER (name, address, telephone) SECURITY III, L.L.C.  
5100 BERNARD DRIVE, S.W.  
ROANOKE, VA 24018 ATTN: ADAM COHEN 540-774-4800 FAX 540-989-7062

DEVELOPER (name, address, telephone) STRUCTURES DESIGN BUILD, L.L.C.  
5100 BERNARD DRIVE, S.W.  
ROANOKE, VA 24018 ATTN: ADAM COHEN 540-774-4800 FAX 540-989-7062

ENGINEER, ARCHITECT OR SURVEYOR (name, address, telephone) BALZER AND ASSOCIATES, INC.  
1208 CORPORATE CIRCLE  
ROANOKE, VA 24018 540-772-9580 FAX 540-772-8050

TAX MAP NO(S) 76.15 BLOCK NO(S) 1 PARCEL NO(S) 3