

QUANTITY & COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	COST	BONDABLE
CLEARING AND GRUBBING		ACRES			
EXCAVATION		C.Y.			
EMBANKMENT		C.Y.			
CURB INLET DI-3A	4	EACH	1500	6000	6000
CURB INLET DI-		EACH			
MANHOLE MH-					
MANHOLE MH-		EACH			
24 - IN. ADS PIPE		LIN. FT.			
18 -IN. CONCRETE PIPE		LIN. FT.			
18 - IN. ADS PIPE		LIN. FT.			
-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		S.Y.			
-IN. CONCRETE ENDWALL EW-		EACH			
24 -IN. END SECTION ES-		EACH			
CURB CG-2		LIN. FT.			
CURB & GUTTER CG-6	1080	LIN. FT.	10	10800	
VALLEY GUTTER		EACH			
GRAVEL BASE		S.Y.			
GRAVEL SHOULDER		S.Y.			
SURFACE TREATMENT		S.Y.			
-IN. BIT. CONC.: TYPE B-		S.Y.			
2 -IN. BIT. CONC.: TYPE SM-2A	1260	S.Y.	11	13,860	
8 -IN. BASE MATERIAL		C.Y.			
-IN. SUBBASE MATERIAL		C.Y.			
OFF SITE PAVEMENT REPAIR		S.Y.			
TRAFFIC BARRICADE		EACH			
8" WATER LINE	607	LIN. FT.	22	13,354	13,354
8" WATER LINE (OFF SITE)	1380	LIN. FT.	22	30,360	30,360
FIRE HYDRANT ASSEMBLIES	1	EACH	1500	1500	1500
BLOW OFFS W/VAULT, FRAME & COVER	2	EACH	1000	2000	2000
8 -IN. GATE VALVES, W/VAULT, FRAME & COVER	2	EACH	1500	3000	3000
-IN. GATE VALVES, W/VAULT, FRAME & COVER		EACH			
8" SANITARY SEWER	941	LIN. FT.	15	14,115	14,115
STANDARD MANHOLE W/FRAME & COVER	4	EACH	1500	6000	6000
SAMPLING MANHOLE/PORT		EACH			
AS-BUILT PLANS	1	LUMP SUM	500	500	500
SUB TOTAL					76,829
10% CONTINGENCY					7700
ESTIMATED TOTAL					84,529

All quantities and costs estimates indicated for site improvements, utilities, grading, landscaping, erosion and sediment control, and stormwater management are for Roanoke County purposes only and are not to be considered absolute. The contractor shall be responsible for all quantities and costs

TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FOREGOING ESTIMATE REFLECTS THE CURRENT IMPROVEMENT COSTS OF THIS PROJECT.

SIGNED: *[Signature]*

DATE: 24 JUNE 2002

ROANOKE COUNTY 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:

- Installation of approved erosion control devices
- Clearing and grubbing
- Subgrade excavation
- Installing storm sewers or culverts
- Setting curb and gutter forms
- Placing curb and gutter
- Placing other concrete
- Placing gravel base
- Placing any roadway surface
- Installing water lines
- 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, culvert, sanitary sewer and storm sewer.

STORMWATER MANAGEMENT COST ESTIMATE

ALL COSTS GIVEN ARE COMPLETE IN PLACE

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CLEARING & GRUBBING				
EXCAVATION				
EMBANKMENT				
FENCING				
STRUCTURES	EACH	1	500	500
END SECTION				
AS-BUILTS				
SUB-TOTAL				500
10% CONTINGENCY				50
TOTAL PROJECT COST				550

EROSION-SILTATION CONTROL COST ESTIMATE

ALL COSTS GIVEN ARE COMPLETE IN PLACE

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CONSTRUCTION ENTRANCE	EACH	1	500	500
SILT FENCE				
INLET PROTECTION				
DIVERSION DIKE	LF	725	3	2175
TEMPORARY FILL DIVERSION				
SEDIMENT TRAP	EACH	2	100	200
CHECK DAM	EACH	14	50	700
PERMANENT SEEDING				
OUTLET PROTECTION				
SEDIMENT BASIN				
SUB-TOTAL				3575
10% CONTINGENCY				350
TOTAL PROJECT COST				3925

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.

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 DR-14 PVC in accordance with AWWA C-900.

Availability number 00-41R-A

LEGEND

Property Line	---	R	---
Right-of-way	---	R/W	---
Centerline	---	C	---
Minimum Building Line	---	M.B.L.	---
Existing Storm Sewer	=====	18" S.D.	=====
Existing Sanitary Sewer	=====	8" SAN	=====
Existing Water Main	---	4" W	---
Existing Contour	-----	1045	-----
Proposed Contour	-----	1045	-----
Proposed Drainage Divide	←		→
Proposed Limits of Clearing	---		---
Proposed Storm Sewer	=====	24" S.D.	=====
Proposed Sanitary Sewer	=====	8" M.H.	=====
Proposed Water Main	---		---
	HYDRANT	VALVE	BLOWOFF

COUNTY OF ROANOKE

NAME OF DEVELOPMENT BROOKFIELD COURT RESIDENTIAL COMMUNITY

MAGISTERIAL DISTRICT(S) HOLLINS

OWNER R & J ENTERPRISES LLC
4415 PHEASANT RIDGE ROAD
ROANOKE, VIRGINIA 24014

DEVELOPER R & J ENTERPRISES LLC
4415 PHEASANT RIDGE ROAD
ROANOKE, VIRGINIA 24014

ARCHITECT JONES AND JONES ASSOCIATES ARCHITECTS, PC
6120 PETERS CREEK RD
ROANOKE, VIRGINIA 24019
(540) 366-3335

TAX MAP NO(S) 27.09-02-23, 27.09-02-28.2, 27.09-02-31

BLOCK NO(S)

PARCEL NO(S)

I, TODD ROSS, OWNER DEVELOPER AM AWARE OF THE SITE DESIGN REQUIREMENTS IMPOSED BY THIS SITE DEVELOPMENT PLAN AND OTHER APPLICABLE COUNTY CODES. I HEARBY CERTIFY THAT I AGREE TO COMPLY WITH THESE REQUIREMENTS, UNLESS MODIFIED IN ACCORDANCE WITH LOCAL LAW.