

PUBLIC IMPROVEMENT BOND COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
Supply & Install 8" D.I. Waterline	4942	L.F.	\$ 30.00	\$ 148,260.00
Supply & Install 8" Gate Valve	4	EACH	\$ 1,000.00	\$ 4,000.00
Supply & Install Fire Hydrant Assemblies	4	EACH	\$ 2,500.00	\$ 10,000.00
Supply & Install Tapping Sleeve and Valve	2	EACH	\$ 3,000.00	\$ 6,000.00
Supply & Install Air Release Valve	1	EACH	\$ 2,500.00	\$ 2,500.00
Supply & Install 8" PVC SDR 35	1951	L.F.	\$ 30.00	\$ 58,530.00
Supply & Install Sanitary Sewer Manholes	133	V.F.	\$ 350.00	\$ 46,550.00
Supply & Install Frame and Cover	19	EACH	\$ 500.00	\$ 9,500.00
Supply & Install Connection to Existing Manhole	1	EACH	\$ 1,500.00	\$ 1,500.00
Supply & Install CL III 18" RCP	4146	L.F.	\$ 30.00	\$ 124,380.00
Supply & Install CL III 24" RCP	1133	L.F.	\$ 35.00	\$ 39,655.00
Supply & Install CL III 30" RCP	136	L.F.	\$ 45.00	\$ 6,120.00
Supply & Install CL III 36" RCP	902	L.F.	\$ 50.00	\$ 45,100.00
Supply & Install CL III 42" RCP	643	L.F.	\$ 58.00	\$ 37,294.00
Supply & Install 48" CMP	48	L.F.	\$ 35.00	\$ 1,680.00
Supply & Install VDOT MH-2	30	LF	\$ 350.00	\$ 10,500.00
Supply & Install VDOT DI-3B	58	EACH	\$ 2,500.00	\$ 145,000.00
Supply & Install VDOT DI-7	10	EACH	\$ 2,000.00	\$ 20,000.00
Supply, Place & Compact 8" Gravel Base	3,006	TONS	\$ 18.00	\$ 54,106.60
Supply & Place 2" SM-2A Surface Course	827	TONS	\$ 75.00	\$ 61,996.00
Supply & Place 4" BM-3 Asphalt Base Course	1,653	TONS	\$ 75.00	\$ 123,992.00
Construction of Concrete Curb & Gutter - CG-6	11,272	L.F.	\$ 20.00	\$ 225,440.00
Landscaping Shrubs	24	EACH	\$ 75.00	\$ 1,800.00
TOTAL				\$ 1,183,902.60

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 rolls 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.

SEE DRAWING C01 FOR VICINITY MAP

SURVEY INFORMATION

Horizontal and vertical control surveys were performed in (year)
by McKenzie Snyder, Inc., December 13, 2005.

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

Source of topographic mapping is McKenzie Snyder, Inc.
dated December 13, 2005

Boundary was performed by Lunsden Associates

Western Virginia Water Authority Notes

General Notes:

- All construction methods and materials shall conform to the Construction Standards and Specifications of Roanoke County, the Western Virginia Water Authority, and/or the Virginia Department of Transportation.
- The contractor or developer is required to notify the Roanoke County Engineering Division and the Western Virginia Water Authority in writing at least three (3) days prior to any construction, including but not limited to the following.
- A pre-construction conference should be scheduled with the Roanoke County Engineering Division and the Western Virginia Water Authority, to be held at least one (1) day prior to any construction.
- The developer or contractor shall supply the County and the Western Virginia Water Authority with correct As-Built plans before final acceptance.
- All work shall be subject to inspection by Roanoke County, the Western Virginia Water Authority, and/or V.D.O.T. inspectors.
- Field corrections shall be approved by the Roanoke County Engineering Division and the Western Virginia Water Authority prior to such construction.

Sewer Notes:

- All sanitary sewer connections to existing lines shall be coordinated with and performed by the Western Virginia Water Authority.
- All sanitary sewer facilities are to be installed according to the Western Virginia Water Authority Design and Construction Standards.
- All sanitary sewer mains are to remain private until the first tenant occupies a building.

Water Notes:

- All water connections to existing lines shall be coordinated with and performed by the Western Virginia Water Authority.
- All water facilities are to be installed according to the Western Virginia Water Authority Design and Construction Standards.
- Bends shown for waterlines may be eliminated and the waterline deflected as long as the deflection is within the limits recommended by the manufacturer of the pipe. See WVWA design & construction standards for acceptable deflections.

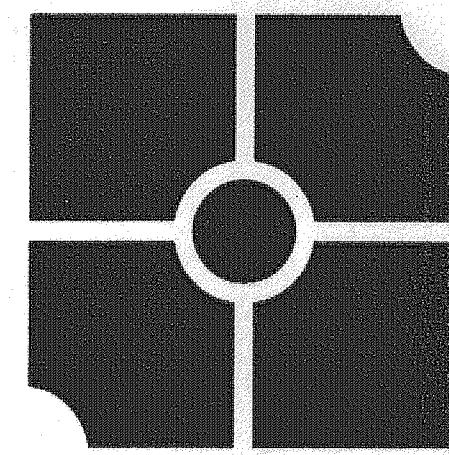
APPROVED

COUNTY OF ROANOKE

SEE DRAWING C01 FOR SHEET INDEX

NAME OF DEVELOPMENT	SLATE HILL	I, _____, OWNER/DEVELOPER, AM AWARE OF THE SITE DESIGN REQUIREMENTS IMPOSED BY THIS SITE DEVELOPMENT PLAN AND OTHER APPLICABLE COUNTY CODES. I HEREBY CERTIFY THAT I AGREE TO COMPLY WITH THESE REQUIREMENTS, UNLESS MODIFIED IN ACCORDANCE WITH LOCAL LAW.
MAGISTERIAL DISTRICT(S)	CAVE SPRING	
OWNER (name, address, telephone)	INTEGRA, LLC., 4415 PHEASANT RIDGE ROAD, SUITE 303, ROANOKE, VIRGINIA 24014, 540-769-5337	
DEVELOPER (name, address, telephone)	INTEGRA, LLC., 4415 PHEASANT RIDGE ROAD, SUITE 303, ROANOKE, VIRGINIA 24014, 540-769-5337	
ENGINEER, ARCHITECT OR SURVEYOR (name, address, telephone)	PARKER DESIGN GROUP, Inc., 816 BOULEVARD, SALEM, VIRGINIA 24153	
TAX MAP NO(S)	SEE DRAWING C01	BLOCK NO(S)
		PARCEL NO(S)

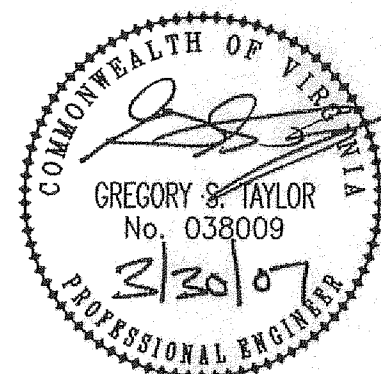
SHEET 2 OF 60



parker
DESIGN GROUP
ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS

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Site Development Plan
Prepared for Slate Hill II, LLC
Cave Spring Magisterial District
Roanoke, Virginia

REVISIONS:

County & VDOT Comment Revisions	August 8, 2006
County & VDOT Comment Revisions	October 20, 2006
County, WVWA & VDOT Revisions	December 8, 2006
County, WVWA & VDOT Revisions	January 12, 2007
County, WVWA & VDOT Revisions	March 2, 2007
County, WVWA Revisions	March 30, 2007

DESIGNED BY: GST

DRAWN BY: GST

CHECKED BY: SRB

SCALE: As Shown

DATE: April 7, 2006

SHEET TITLE:

Roanoke County
Cover Sheet

C02

02 OF 60

PROJECT NUMBER:

S05047-03