

ITEM	QUANTITY	UNIT	UNIT PRICE	COST	BONDBLE
CLEARING AND GRUBBING					
EXCAVATION --- ACCESS AREA ONLY	2,000	C.Y.	\$2.50		\$5,000.00
EMBANKMENT					
CURB INLET DI-3 SERIES	4	EACH	\$2,000.00		\$8,000.00
CURB INLET DI-1 SERIES	3	EACH	\$1,500.00		\$4,500.00
MANHOLE MH-2 SERIES	4	EACH	\$1,500.00		\$6,000.00
		EACH			
15 -IN. CONCRETE PIPE, CLASS III	450	LIN. FT.	\$36.00		\$16,200.00
24 -IN. CONCRETE PIPE, CLASS III	100	LIN. FT.	\$48.00		\$4,800.00
84 -IN. CONCRETE PIPE, CLASS III	330	LIN. FT.	\$168.00		\$55,440.00
60 -IN. HDPE PIPE	240	LIN. FT.	\$120.00		\$28,800.00
EC-3 DITCH LINING	90	LIN. FT.	\$5.00		\$450.00
PAVED DITCH & WORK		LUMP SUM			\$1,000.00
RIPRAP -- CLASS I					
RIPRAP -- CLASS II					
SODDED SWALE					
15 -IN. END SECTION ES-1	2	EACH	\$150.00		\$300.00
CURB & GUTTER CG-2 (TO CONTROL SWM)	190	LIN. FT.	\$8.00		\$1,520.00
CURB & GUTTER CG-6	310	LIN. FT.	\$12.00		\$3,720.00
VALLEY GUTTER		LIN. FT.			
GRAVEL BASE		EACH			
		S.Y.			
GRAVEL SHOULDER					
SURFACE TREATMENT		S.Y.			
-IN. BIT. CONC.: TYPE B-		S.Y.			
-IN. BIT. CONC.: TYPE S-		S.Y.			
-IN. BASE MATERIAL		S.Y.			
		C.Y.			
PAVEMENT	5,900	S.Y.	\$10.00		\$59,000.00
12" WATER LINE	275	LIN. FT.	\$25.00		\$6,875.00
8" WATER LINE	340	LIN. FT.	\$22.00		\$7,480.00
AIR RELEASE VALVE	1	EACH	\$1,000.00		\$1,000.00
FIRE HYDRANT ASSEMBLIES	2	EACH	\$1,500.00		\$3,000.00
BLOW OFFS W/VAULT, FRAME & COVER	1	EACH	\$500.00		\$500.00
12-IN. GATE VALVES, W/VAULT, FRAME & COVER	1	EACH	\$1,000.00		\$1,000.00
8-IN. GATE VALVES, W/VAULT, FRAME & COVER	1	EACH	\$500.00		\$500.00
COMMERCIAL WATER METERS	4	EACH	\$750.00		\$3,000.00
8" SANITARY SEWER	360	LIN. FT.	\$20.00		\$7,200.00
COMMERCIAL LATERALS	4	EACH	\$750.00		\$3,000.00
STANDARD MANHOLE W/FRAME & COVER	3	EACH	\$1,500.00		\$4,500.00
SAMPLING MANHOLE/PORT	4	EACH	\$1,000.00		\$4,000.00
FENCING					
DOUBLE GATE					
AS-BUILT PLANS	1	LUMP SUM	\$2,500.00		\$2,500.00
LANDSCAPING (SEE SHEET C-8)	1	LUMP SUM	\$10,500.00		\$10,500.00
10% CONTINGENCY					
					\$250,285.00
					\$24,715.00
ESTIMATED TOTAL					\$275,000.00
I HEREBY CERTIFY THAT THE FOREGOING ESTIMATE REFLECTS THE CURRENT IMPROVEMENT COSTS OF THIS PROJECT.					
SIGNED:			DATE:		

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

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

For Roanoke County:

- 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

For Town of Vinton:

- 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.

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 contractor's 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 and Town of Vinton Public Works: 1-540-983-0646.

The developer or contractor shall supply the County and the Town of Vinton with correct As-Built plans before final acceptance.

All work shall be subject to inspection by Roanoke County, the Town of Vinton and V.D.O.T. inspectors.

Field corrections shall be approved by the Roanoke County Engineering Division and/or the Town of Vinton 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.

No construction and/or field changes without approval of the consulting engineer and/or Roanoke County and/or the Town of Vinton Public Works and/or the Virginia Department of Transportation.

Any new alignments, changes in grades, alternative pipe sizes or manholes and ESC measures will require a new set of plans stamped by the consulting engineer. Plan sheets can be 8.5"x11" if the information is legible.

ALL SANITARY SEWER FACILITIES SHALL BE INSTALLED ACCORDING TO THE LATEST EDITION OF THE WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS.

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 IN THEIR EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH STATE WATER WORKS REGULATIONS, SECTION 12.05.03, WHERE LINES CROSS.

ALL TRENCHES IN EXISTING OR FUTURE RIGHTS-OF-WAY SHALL BE COMPACTED ACCORDING TO VDOT STANDARDS.

LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.

ALL WATER FACILITIES SHALL BE INSTALLED ACCORDING TO THE LATEST EDITION OF THE WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS.

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 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 RIGHTS-OF-WAY SHALL BE COMPACTED ACCORDING TO VDOT STANDARDS.

LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.

WATER MAIN SHALL BE MINIMUM CLASS 350 DUCTILE IRON IN ACCORDANCE WITH AWWA C151 OR DR-14 PVC IN ACCORDANCE WITH AWWA C-900.

DUCTILE IRON PIPE IN ACCORDANCE WITH WESTERN VIRGINIA WATER AUTHORITY DESIGN AND CONSTRUCTION STANDARDS SHALL BE REQUIRED FOR ALL PIPE WITH A WORKING PRESSURE EQUAL TO OR GREATER THAN 100 psi.

AVAILABILITY LETTER NUMBER 07-14

Property Line

Right-of-way

Centerline

Minimum Building Line

Existing Storm Sewer

Existing Sanitary Sewer

Existing Water Main

Existing Contour

Proposed Contour

Proposed Drainage Divide

Proposed Limits of Clearing

Proposed Storm Sewer

Proposed Sanitary Sewer

Proposed Water Main

A vicinity map showing the location of the Cave Springs Library. The library is marked with a square icon and labeled "Cave Springs Library". It is situated near the intersection of Electric Rd and Brombleton Av. Other roads shown include Cresthill Dr, Kirkwood Dr, Shaden Dr, Electric Rd, Brombleton Av, and Colonial Av. A north arrow is located in the upper left corner, and a scale bar is in the upper right corner. The map also shows a "SITE" area, which is a shaded rectangular area, and a "Cave Springs Reservoir" area, which is a shaded irregular shape. The map includes a grid of roads and a network of streets. The "SITE" is located on a road that runs north-south, between Electric Rd and Brombleton Av. The "Cave Springs Reservoir" is located to the east of the "SITE". The "Cave Springs Library" is located to the south of the "SITE". The "Cave Springs Fire 3" is located to the south of the "Cave Springs Library". The "Cave Springs Reservoir 3" is located to the east of the "Cave Springs Library". The "Cave Springs Reservoir 3" is located to the east of the "Cave Springs Library". The "Cave Springs Reservoir 3" is located to the east of the "Cave Springs Library".

Horizontal and vertical control surveys were performed in (year) 2006
by BALZER & ASSOCIATES

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

Source of topographic mapping is COUNTY OF ROANOKE AERIAL MAPPING
dated 1992

Boundary was performed by BALZER & ASSOCIATES
dated 2006

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

I AM CERTIFIED BY THE STATE OF VIRGINIA AS A
"RESPONSIBLE LAND DISTURBER." I SHALL BE
RESPONSIBLE FOR THE IMPLEMENTATION OF THE
EROSION AND SEDIMENT CONTROL PLAN AS
SHOWN.

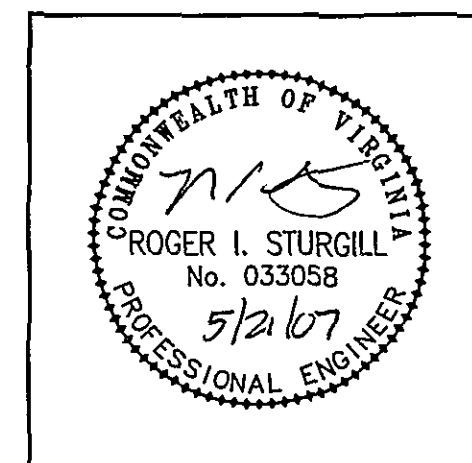
SIGNATURE: _____

PRINTED NAME: _____

CERTIFICATE DATE: _____

TELEPHONE NUMBER: _____

ADDRESS: _____



REGISTERED LAND DISTURBER

PROFESSIONAL ENGINEER
SEAL AND SIGNATURE

DEVELOPMENT PLAN APPROVED FOR CONSTRUCTION BY ROANOKE COUNTY		
Department		Date
Development Review	<i>[Signature]</i>	5/22/10
Engineering	<i>[Signature]</i>	5/22/10
Water & Sewer	<i>[Signature]</i>	5/23/07
Planning & Zoning	<i>[Signature]</i>	5/22/07

C-1	COVER SHEET
C-2	DIMENSIONAL PLAN
C-3	UTILITY PLAN
C-4	GRADING PLAN
C-5	PROFILES
C-6	PROFILES
C-7	NOTES AND DETAILS
C-8	LANDSCAPING PLAN
C-9	ESC PLAN
C-10	ESC NOTES
C-11	ESC DETAILS
C-12	WWVA DETAILS
C-13	WWVA DETAILS

REVISED	10/12/2006	PER RKE. CO. & VDOT COMMENTS
REVISED	12/06/2006	PER RKE. CO. COMMENTS
REVISED	01/09/2007	UPDATE UTILITIES
REVISED	01/22/2007	PER RKE. CO. COMMENTS
REVISED	03/02/2007	PER OWNER'S REQUEST
REVISED	04/18/2007	PER RKE. CO. COMMENTS

Till Office Park

LOCAL GOVERNING AUTHORITY		COUNTY OF ROANOKE		I, _____ OWNER/DEVELOPER, AM AWARE OF THE SITE DESIGN REQUIREMENTS IMPOSED BY THIS SITE DEVELOPMENT PLAN AND OTHER APP- LICABLE COUNTY CODES. I HEREBY CERTIFY THAT I AGREE TO COMPLY WITH THESE REQUIREMENTS, UNLESS MODIFIED IN ACCORDANCE WITH LOCAL LAW.	
MAGISTERIAL DISTRICT(S)		WINDSOR HILLS			
OWNER (name, address, telephone)		TILL LIMITED LLC 8125 MARTINS CREEK ROAD ROANOKE, VA 24018			
DEVELOPER (name, address, telephone)		TILL LIMITED LLC 8125 MARTIN CREEK ROAD ROANOKE, VA 24018			
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)		076.16-01-39.00-0000			
JOB NO.	R0600073.00	DATE:	08/02/2006	DESIGNED BY:	C.P.B.
		CHECKED BY:	J.V.J.	SHEET 1 OF 13	