QUANTITY + COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	CDST	BONDABLE
CLEARING AND GRUBBING	2	ACRES	\$ 5,000.00		\$ 10,000.0
GRADING	1	LUMP SUM	\$ 20,000.00		\$ 20,000.0
CURB INLET DI-3	2	EACH	\$ 1,500.00		\$ 3,000.0
NLET DI-1	1	EACH	\$ 1,300.00		\$ 1,300.0
HMUS	2	EACH	\$ 1,200.00		\$ 2,400.0
24" RISER W/ 48" ANTI-VURTEX CAP	1	EACH	3,000.00		\$ 3,000.0
					<u> </u>
15-IN. CONC. STORM DRAIN	252	LIN FT.	\$ 37.00		\$ 9,324.0
24-IN, CONC, STORM DRAIN	232	LIN. FT.	\$ 60.00		\$ 13,920.0
				·······	
					
					
BOX CULVERT		LUMP SUM			 -
			<u> </u>	<u> </u>	
		LIN. FT.			
DIRDAD CLASS 1		LIN. FT.	#		
RIPRAP - CLASS - 1	3	TON	\$ 50.00		\$ 150.0
EC-2 LINING	85	S.Y.	\$ 8.00		\$ 680.
EC-3 LINING	10	S,Y,	\$ 15.00		\$ 150.
36 IN, END SECTION ES-1		EACH			<u> </u>
24 IN. MOD. EW-1 W/ ENERGY DISSIPATOR		EACH			
24-IN, CONCRETE END SECTION ES-1	1	EACH	\$ 800.00		\$ 800.
18-IN, END SECTION ES-1		EACH			
18-IN. CONCRETE ENDWALL EW-1		EACH			
15-IN END SECTION ES-1	3	EACH	\$ 400.00		\$ 1,200.
15-IN, CONCRETE ENDWALL EW-1		EACH			
CURB CG-2 / CG-3	546	LIN. FT.	\$ 14.00		\$ 7,644.
CURB & GUTTER CG~6	305	LIN. FT.	\$ 16.00		\$ 4,880.
IS-1, INVERT SHAPING		EACH			
GRAVEL BASE		S,Y,			
		<u> </u>			<u> </u>
GRAVEL SHOULDER		S.Y.			A 00.000
2" SM-9.5; 8" 21-B AGGREGATE BASE	2,340	S.Y.	\$ 12.00		\$ 28,080.
HEAVY DUTY PAVEMENT	117	S.Y.	\$ 21.00		\$ 2,457.
WATER LINE	143	LIN. FT.	\$14,00		\$2,002.00
6" GATE VALVE W/ FRAME AND COVER	1	EACH	\$600,00		\$600,00
FIRE HYDRANT ASSEMBLY W/ GATE VALVE	1	EACH	\$1,500.00	<u></u>	\$1,500,00
8" SANITARY SEWER	412	LIN. FT.	\$20,00		\$8,240.00
6" SANITARY SEWER	102	LIN, FT,	\$18,00		\$1,836.00
6" LATERAL, CLEANOUT, STUBOUT	1	EACH	\$400,00		\$400,00
STANDARD MANHOLE W/FRAME & COVER	3	EACH	\$1,200.00		\$3,600,00
SAN, SEW, SAMPLING MH W/FRAME & COVER	1	EACH	\$1,200,00		\$1,200,00
The second secon	<u> </u>				
STURMWATER MANAGEMENT	1	LUMP SUM	\$10,000,00		\$10,000.0
OFF SITE DRAINAGE IMPROVEMENTS	11	LUMP SUM	\$19,000.00		\$19,000.0
					
					
		<u> </u>			
	 	 	}	<u> </u>	+
	 			 	
		 	 	 	
LANDOGADUIG	 	1100 000	 	 _	440.000.0
LANDSCAPING		LUMP SUM	 		\$10,000.0
	 	_			+
		-			
SIRTOTAL	 		 	 	\$ 167,363.
SUBTOTAL					\$ 16,737.0
10% CONTINCENOV	1	<u> </u>	<u> </u>	 	10,737.
10% CONTINGENCY		1	1		1
10% CONTINGENCY					
10% CONTINGENCY ESTIMATED TOTAL					\$ 184,100.

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 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 and the Western Virginia Water Authority, 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.D.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

All unsultable 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.C.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.D.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.

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

The contractor shall provide adequate means of cleaning mud from

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 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.D.T. inspectors.

Field corrections shall be approved by the Roanoke County Engineering Division and the Western Virginia Water Authority prior to such construction.

100 year floodway and floodplain information shall be shown where

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

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.

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 aspestos 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.

SEE LUMSDEN ASSOCIATES, P.C. COVER SHEET

VICINITY MAP

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.

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 350 Ductile Iron in accordance to AWWA C151 or DR-14 PVC in accordance with AWWA C-900.

Availability number <u>06-355</u>

LEGEND

Property Line		
Right-of-way		R/W · · · ·
Centerline		
Minimum Building Line		M.B.L.,
Existing Storm Sewer	18" S.B	18' S.D
Existing Sanitary Sewer	8' SAN	8* SAN.====
Existing Water Main	4" W	
Existing Contour		
Proposed Contour		1045
Proposed Drainage Divide	\leftarrow	
Proposed Limits of Clearing	· •	`
Proposed Storm Sewer		24" S.D.
Proposed Sanitary Sewer		8' M.H.
Proposed Water Main	UNDONE TO MA	יון און און און און און און און און און א

SURVEY INFORMATION

iorizontal	and	verticai	control	surveys	were	performed	in	(year)
., LUMSDE	N AS	SOCIATES,	P.C.					

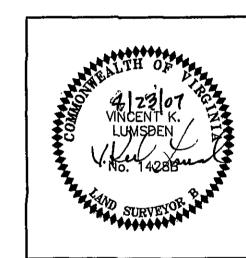
All elevations must be referenced to the National Geodetic Vertical Datum of 1929.

Source of topographic mapping is <u>LUMSDEN</u> ASSOCIATES, P.C.

Boundary was performed by LUMSDEN ASSOCIATES, P.C.

dated **2005**

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



PROFESSIONAL SEAL AND SIGNATURE

COUNTY OF ROANOKE

INDEX

SEE LUMSDEN ASSOCIATES, P.C. COVER SHEET

NAME OF DEVELOPMENT

VIRGINIA AIR DISTRIBUTORS

HOLLINS MAGISTERIAL DISTRICT(S)

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.

, <u>Chris Baker</u> OWNER/DEVELOPER, AM AWARE

DWNER (name, address, telephone)

TAX MAP NO(S)

BAKER PROPERTIES OF VIRGINIA, L.L.C. (ATTN: CHRIS BAKER) 601 JOHNSON WILLIS DRIVE RICHMOND, VIRGINIA 23230

(757) 438-8537

01.01

DEVELOPER (name, address, telephone) SAME AS ABOVE

27.10

LUMSDEN ASSOCIATES, P.C. P.O. BOX 20669 ENGINEER, ARCHITECT OR SURVEYOR (name, address, telephone) ROANOKE, VIRGINIA 24018

BLOCK NO(S)

15401 774-4411

PARCEL NO(S)

COMM. NO.: 2006-257 SHEET 2 DF 11