

CIVIL SITEWORK COST ESTIMATE	QUANTITY	UNIT	UNIT PRICE	COST
SITEWORK				
Mobilization	1	L.S.	\$10,000.00	\$10,000.00
Earthwork	1680	C.Y.	\$5.00	\$8,400.00
EROSION AND SEDIMENT CONTROL				
Construction entrance	1	L.S.	\$2,500.00	\$2,500.00
Silt fence	245	L.F.	\$3.00	\$735.00
Inlet protection	8	EACH	\$500.00	\$4,000.00
Outlet protection (triprap)	22	TON	\$35.00	\$770.00
Temporary seeding	0.55	ACRE	\$2,500.00	\$1,375.00
Sodding	0.55	ACRE	\$10,000.00	\$5,500.00
Sediment trap	1	EACH	\$6,000.00	\$6,000.00
Diversion berm	200	L.F.	\$2.50	\$500.00
Silt fence	750	L.F.	\$3.00	\$2,250.00
STORM				
8" RCP	98	L.F.	\$13.00	\$1,274.00
15" RCP	622	L.F.	\$25.00	\$15,550.00
Curb inlet (DI 3A)	5	EACH	\$2,400.00	\$12,000.00
Endwall	2	EACH	\$1,200.00	\$2,400.00
WATER				
1" PVC pipe	321	L.F.	\$7.00	\$2,247.00
2" Copper pipe	333	L.F.	\$10.00	\$3,330.00
8" PVC pipe	440	L.F.	\$25.00	\$11,000.00
Vault with backflow preventer	1	L.S.	\$10,000.00	\$10,000.00
Water meters	3	EACH	\$1,200.00	\$3,600.00
Fire Hydrant	1	EACH	\$1,800.00	\$1,800.00
SANITARY SEWER				
6" PVC ASTM D 3034	115	L.F.	\$25.00	\$2,875.00
Cleanout	1	EACH	\$400.00	\$400.00
Grease trap	1	EACH	\$3,000.00	\$3,000.00
GAS				
Service	1	L.S.	\$6,000.00	\$6,000.00
ELECTRIC, TELEPHONE, & CABLE				
4" PVC conduit ASTM 3034	500	L.F.	\$13.00	\$6,500.00
PAVING & PARKING LOT				
Light duty asphalt (including base)	2153	S.Y.	\$18.00	\$38,754.00
Heavy duty asphalt (including base)	2270	S.Y.	\$24.00	\$54,480.00
Concrete pavement	9	S.Y.	\$35.00	\$315.00
Sidewalks	2385	S.F.	\$2.50	\$5,962.50
Curb & gutter	1470	L.F.	\$14.00	\$20,580.00
Permanent striping	2300	L.F.	\$0.70	\$1,610.00
Wheel Stop	4	EACH	\$100.00	\$400.00
Lighting	6	EACH	\$2,500.00	\$15,000.00
Signs	1	L.S.	\$1,000.00	\$1,000.00
Bollards	4	EACH	\$300.00	\$1,200.00
LANDSCAPING				
Trees				
Acer rubrum October Glory	2	EACH	\$253.00	\$506.00
Ilex attenuata Fosteri	3	EACH	\$322.00	\$966.00
Prunus Autumnalis	6	EACH	\$149.50	\$897.00
Ulmus 'Allee'	4	EACH	\$276.00	\$1,104.00
Shrubs and Groundcovers				
Berberis thunbergii 'Crimson Pygmy'	38	EACH	\$17.48	\$664.24
Buonymus alatus compacta	9	EACH	\$33.35	\$300.15
Hemerocallis	59	EACH	\$5.98	\$352.82
Ilex crenata Soft Touch	51	EACH	\$17.48	\$891.48
Ilex cornuta 'Needlepoint'	96	EACH	\$16.68	\$1,601.28
Juniperus scopulorum	6	EACH	\$264.50	\$1,587.00
Juniperus davurica	114	EACH	\$17.02	\$1,940.28
Liriodendron muscari 'Big Blue'	260	EACH	\$1.96	\$509.60
Miscanthus sinensis 'Gracillimus'	6	EACH	\$65.55	\$393.30
Nandina domestica 'Harbour Dwarf'	8	EACH	\$22.43	\$179.44
Spiraea x bumalda 'Gold Mound'	56	EACH	\$17.94	\$1,004.64
Taxus media 'Densiformis'	26	EACH	\$51.75	\$1,345.50
Thuja occidentalis 'Techny'	3	EACH	\$149.50	\$448.50
Other				
Sod	5500	S.F.	\$0.65	\$3,575.00
Color Bed	150	S.F.	\$5.00	\$750.00
Mulch	1	L.S.	\$650.00	\$650.00
GRAND SUBTOTAL				\$263,307.50
CONTRACTOR'S PROFIT (10%)				\$26,330.75
SITE BASE TOTAL				\$289,638.25

I HEREBY CERTIFY THAT THE FOREGOING ESTIMATE REFLECTS THE CURRENT IMPROVEMENT COSTS OF THIS PROJECT

SIGNED: Mik. Sta DATE: 7/4/06

GENERAL NOTES

All construction methods and materials shall conform to the Construction Standards and Specifications of Roanoke County and/or the Western Virginia Water Authority and 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 VDOT 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 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 VDOT inspectors.

Field corrections shall be approved by the Roanoke County Engineering Division and/or the Western Virginia Water Authority 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.

Drawing Index

General

T1	Cover Sheet
Civil	
C1.1	Survey / Existing Conditions Plan
C2.1	Site Improvement Plan
C3.1	Site Grading and Paving Plan
C3.2	Site Erosion & Sediment Control Plan
C4.1	Site Utility Plan
C4.2	Stormdrain Profile
C5.1	Site Details
C5.2	Site Details
C5.3	Erosion and Sediment Control Details
C5.4	Erosion and Sediment Control Details
L1.1	Landscape Plan
L2.1	Irrigation Plan
L3.1	Landscape Details

SEWER NOTES

All sanitary sewer facilities shall be installed according to the Western Virginia Water Authority Design and Construction Standards. (Latest Edition).

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 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 V.D.O.T. standards.

Lines shall be staked prior to construction.

WATER NOTES

All water facilities shall be installed according to the Western Virginia Water Authority Design and Construction Standards. (Latest Edition).

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 right-of-ways shall be compacted according to V.D.O.T. standards.

Lines shall be staked prior to construction.

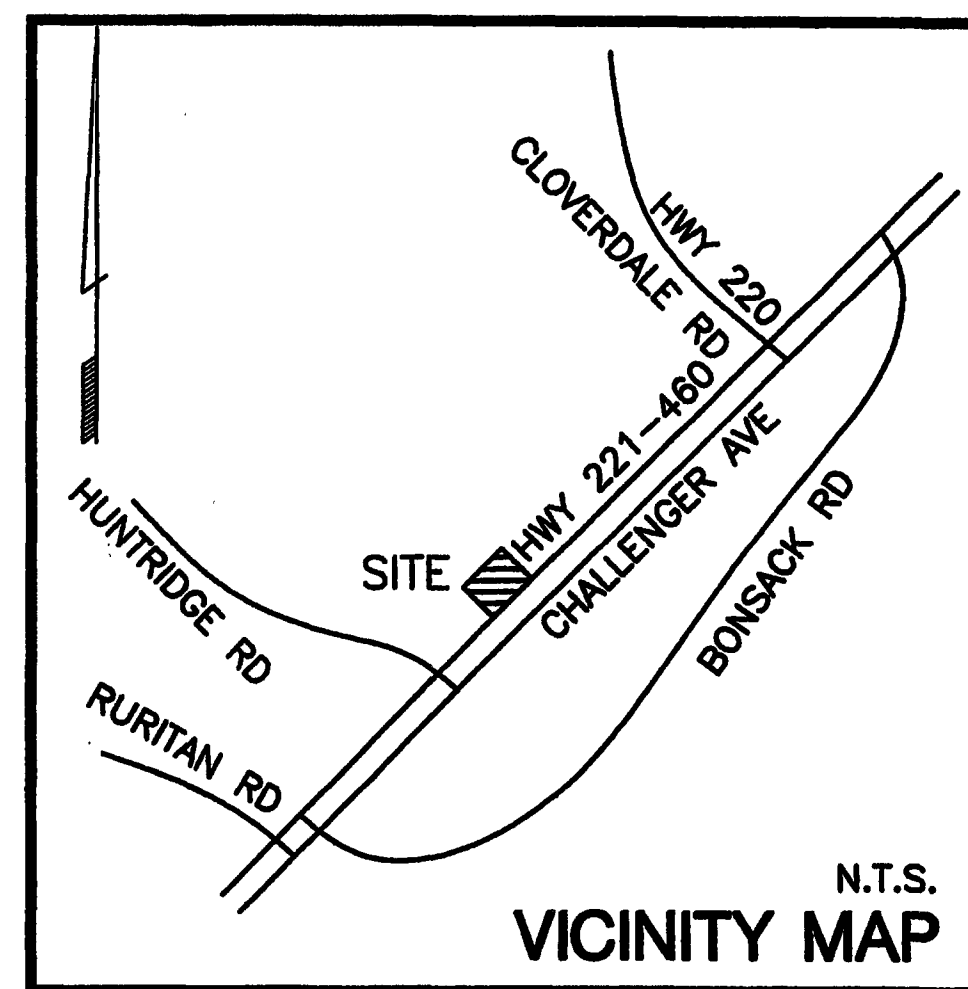
Water main shall be minimum Class 350 Ductile Iron in accordance to AWWA C151 or DR-14 PVC in accordance with AWWA C-900.

Ductile Iron Pipe in accordance with the Western Virginia Water Authority Design and Construction Standards shall be required for all pipe with a working pressure equal to or greater than 100 p.s.i.

Availability letter number _____

LEGEND

Property Line	---
Right-of-way	--- R/W ---
Centerline	---
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	--- 24" S.D. ---
Proposed Storm Sewer	== 18" S.D. ==
Proposed Sanitary Sewer	== 8" SAN. ==
Proposed Water Main	--- 4" W ---
HYDRANT	⊕
VALVE	⊕
BLOWOFF	⊕



SURVEY INFORMATION

Horizontal and vertical control surveys were performed in (year) 2005 by DEWBERRY & DAVIS, INC.

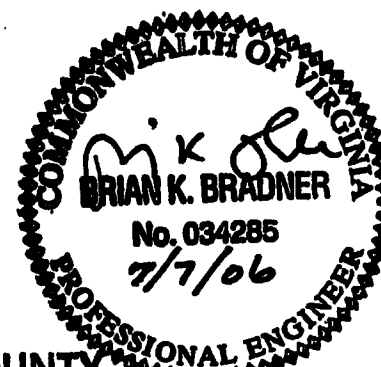
All elevations must be referenced to the National Geodetic Vertical Datum of 1929.

Source of topographic mapping is DEWBERRY & DAVIS, INC. dated MAY 19, 2005

Boundary was performed by DEWBERRY & DAVIS, INC. dated MAY 19, 2005

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

DEVELOPMENT PLAN APPROVED FOR CONSTRUCTION BY ROANOKE COUNTY	
Department	Date
Development Review	7/24/06
Engineering	7/24/06
Water & Sewer	7/24/06
Planning & Zoning	7/24/06



APPROVED BY ROANOKE COUNTY
THIS PLAN IS APPROVED FOR EROSION
AND SEDIMENT CONTROL
ONLY

Mik. Sta 7/10/06 PROFESSIONAL ENGINEER
Authorized Signature Date SEAL AND SIGNATURE

COUNTY OF ROANOKE

NAME OF DEVELOPMENT APPLEBEE'S OF ROANOKE VIRGINIA

MAGISTERIAL DISTRICT(S) HOLLIS

OWNER (name, address, telephone) APPLEBEE'S INTERNATIONAL, INC. DENNIS HAWLEY (913) 967-8956, FAX (913) 967-8103
4551 WEST 107th STREET
SUITE 100, OVERLAND PARK, KANSAS 6207

DEVELOPER (name, address, telephone) APPLEBEE'S INTERNATIONAL, INC. DENNIS HAWLEY (913) 967-8956
4551 WEST 107th STREET
SUITE 100, OVERLAND PARK, KANSAS 6207

ENGINEER, ARCHITECT OR SURVEYOR (name, address, telephone) DEWBERRY & DAVIS INC. BRIAN BRADNER (434) 797-4497, FAX (434) 797-4341
551 PINEY FOREST ROAD
P.O. BOX 1508, DANVILLE, VIRGINIA 24540

TAX MAP NO(S) 040.14 BLOCK NO(S) 01 PARCEL NO(S) 02

I, Dennis Hawley 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.

AS - BUILT
11/06/2006

WWW.ID# 0PAL88

SHEET ____ OF ____