

# GENERAL NOTES

1. All construction methods and materials shall conform to the Construction Standards and Specifications of Roanoke County, the Western Virginia Water Authority, and the Virginia Department of Transportation.
2. Stormwater Management Agreements with an attached 8 1/2" x 11" or 8 1/2" x 14" plot must be approved and recorded prior to the pre-construction meeting.
3. Once all required items are submitted to the County of Roanoke, the developer must contact the Development Review Coordinator to indicate that a pre-construction meeting needs to be scheduled. The pre-construction meeting will be scheduled with the owner/developer two (2) working days later.
4. All land disturbing projects that require approval of an erosion and sediment control plan, grading or clearing permit shall require that the applicant provide the name of an individual who will be responsible for land disturbing activities and that the individual hold a Responsible Land Disturber (RLD) Certificate from the Department of Environmental Quality. The Responsible Land Disturber can be anyone from the Project team that is certified by the Commonwealth of Virginia to be in charge of carrying out the land disturbing activity for the project.
5. It is the responsibility of the owner/developer to notify the certified Responsible Land Disturber and the Utility Contractor to attend the pre-construction meeting.
6. The Development Review Coordinator will schedule the pre-construction meeting with the County Review Engineer, the County Inspector, and the Western Virginia Water Authority and the Town of Vinton Public Works Department if applicable.
7. An approved set of plans, Storm Water Pollution Prevention Plan (SWPPP), VSMMP coverage letter, and all permits must be available at the construction site at all times.
8. 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.
9. The project engineer will inform the owner/developer verbally and in writing of the County's obligation to perform inspections on site. Everyone in the meeting will be required to sign a pre-construction checklist indicating their knowledge of Roanoke County's obligation to perform inspections on site.
10. The Erosion Control Permit or Combined Erosion Control & VSMMP Permit is given to the developer at this pre-construction meeting.
11. Notify the County of Roanoke prior to beginning installation of ESC measures. The County will inspect initial installations to ensure compliance with approved plan prior to start of grading. The developer SHALL contact the project inspector 24 hours before beginning any grading or construction on the property.
12. County inspectors must inspect storm drain / stormwater management / BMP installations during the process of installation. Please contact the site inspector 24 hours in advance.
13. All work shall be subject to inspection by Roanoke County, the Western Virginia Water Authority and the Virginia Department of Transportation inspectors.
14. 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 "True Utility": 1-800-552-7001 or VA 811.
15. The 100 year Floodway shall be staked prior to any construction.
16. Grade stakes shall be set for all curb and gutter, culvert, sanitary sewer and storm sewer at all times of construction.
17. The Department of Community Development shall be notified when a spring is encountered during construction.
18. Construction debris shall be contained in accordance with the Virginia Litter Control Act. No less than one litter receptacle shall be provided on site.
19. The contractor shall provide adequate means of clearing mud from trucks and/or other equipment prior to entering public streets or rights of ways. It is the contractor's responsibility to insure that the streets are in a clean, mud and dust free condition at all times.
20. Plan approval in no way releases the developer or contractors of the responsibilities contained within the erosion and sediment control or stormwater management policies.
21. Field construction shall honor proposed drainage divides as shown on plans.
22. Field corrections shall be approved by the Roanoke County Engineering Division and/or the Western Virginia Water Authority and the Professional of Record, prior to such construction.
23. The developer or contractor shall supply the County and the Western Virginia Water Authority with correct As-Built plans before final acceptance.

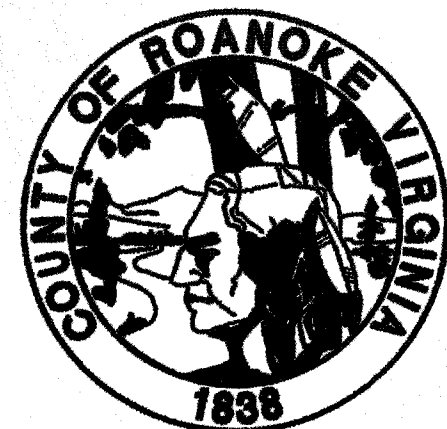
## VIRGINIA DEPARTMENT OF TRANSPORTATION

24. Plan approval by Roanoke County does not guarantee issuance of any permits by the Virginia Department of Transportation.
25. A permit must be obtained from the Virginia Department of Transportation, Salem Residency Office prior to construction in the highway right-of-way.
26. The preliminary pavement design should be based on a predicted sub-grade CBR value of 7.0 and with a Resiliency Factor (RF) of 2.0 as shown in Appendix I of the 2000 Virginia Department of Transportation Pavement Design Guide for Suburban and Secondary Roads. The sub-grade soil is to be tested by an independent laboratory and the results submitted to the Virginia Department of Transportation prior to base construction. Should the sub-grade CBR value and/or the RF value be less than the predicted values, additional base material will be required in accordance with Departmental specifications. Refer to the same manual as the number and tonnage of the required soil samples to be tested. All pavement designs shall be submitted to the Department for review and approval. The sub-grade shall be approved by the Virginia Department of Transportation prior to placement of the base. Base shall be approved by the Virginia Department of Transportation for depth, template, and compaction before the surface is applied.
27. Standard guardrail with safety and sections may be required on hills or in areas where hazards exist as deemed necessary. After completion of rough grading operations, the County Engineer and Virginia Department of Transportation shall be contacted to schedule a field review. Where guard rail is warranted, the standard shoulder width shall be provided and the guard rail shall be installed in accordance with the 2001 VDOT Road and Bridge Standards as part of this development.
28. Standard street and traffic control signs shall be erected at each intersection by the developer prior to final street acceptance.
29. All traffic devices shall be in accordance with current edition of the "Manual on Uniform Traffic Control Devices" (MUTCD).
30. All unsuitable material shall be removed from the construction limits of the roadway before placing embankment.

See Sheet 1/1 for Stormwater Site Statistics Table.  
See Sheet 1/1 for New BMP Information Table.

The Project Engineer shall provide electronic copies of the approved plans to the Development Review Coordinator within 5 working days of the pre-construction meeting.

The notes on this sheet shall not be modified.



# COUNTY OF ROANOKE, VA

NAME OF DEVELOPMENT	<b>SITE PLANS FOR NEW SHOPS "A" AND "B"</b> <b>TANGLEWOOD MALL</b>	
MAGISTERIAL DISTRICT(S)	CAVE SPRING	
OWNER (name, address, telephone)	TANGLEWOOD VENTURE LLC 700 MONTGOMERY HIGHWAY - SUITE 186 BIRMINGHAM, AL 35216 CONTACT: MR. PHILIP McAFEE, TEL: (205) 972-9637	
DEVELOPER (name, address, telephone)	(SAME AS OWNER)	
ENGINEER, ARCHITECT OR SURVEYOR (name, address, telephone)	CALDWELL WHITE ASSOCIATES PO BOX 6260 ROANOKE, VA 24017	ATTN: CORBIN L. WHITE, PE TEL: (840) 366-3400 EMAIL: CWhite@cwawhite.com
TAX MAP NO(S)	077.16-01-02-00-0000	

## WATER NOTES

All water facilities shall be constructed according to the Western Virginia Regional 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 their exact location. The contractor shall comply with the (State Water Works Regulations, Section 12VAC5-590-115), where lines cross.

All trenches in existing or future Highway right-of-ways shall be compacted according to Virginia Department of Transportation 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 the Western Virginia Regional Design and Construction Standards shall be required for all pipe with a working pressure equal to or greater than 100 p.s.i.

## SEWER NOTES

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

A minimum cover of three (3) feet is required over proposed lines.

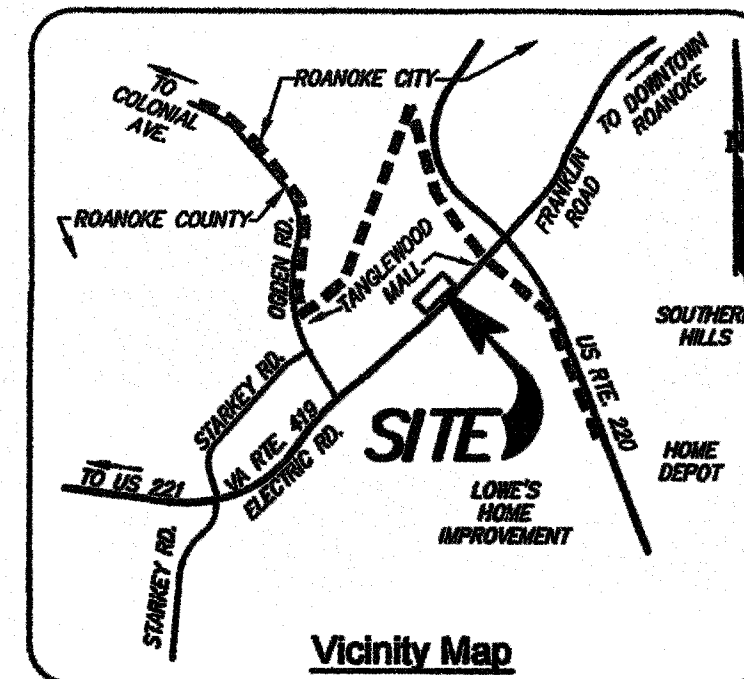
Contractor shall be responsible for locating and uncovering all manholes after paving. Manhole tops shall be adjusted to grade if necessary.

All existing utilities may not be shown in their exact location. The contractor shall comply with (State Water Works Regulations, Section 12VAC5-590-115), where lines cross.

All trenches in existing or future rights-of-way shall be compacted according to Virginia Department of Transportation standards.

Lines shall be staked prior to construction.

Western Virginia Water Authority  
Availability letter number: (PENDING)



## LEGEND

Property Line	P
Right-of-way	RAV
Centerline	CL
Minimum Building Line	MBL
Existing Storm Sewer	SS
Existing Sanitary Sewer	SS
Existing Water Main	WM
Existing Culvert	CU
Proposed Contour	1045
Proposed Drainage Divide	1045
Proposed Limits of Clearing	24' ± D
Proposed Storm Sewer	SS
Proposed Sanitary Sewer	SS
Proposed Water Main	WM
HYDRANT	VALVE
BLOWOFF	

## PRIVATE UTILITIES

Underground utilities installed on private property or in private utility easements and building related storm drains shall be designed and installed per the current edition of the Virginia Uniform Statewide Building Code. Design and installation requirements issued by the Western Virginia Water Authority that meet or exceed the USBC requirements are acceptable for private utilities. All private utilities are to be permitted through and inspected by the Roanoke County Inspections Office. Valves, valves and other devices installed by or under the control of the Western Virginia Water Authority may not be substituted for the code required devices.

PR #:	NOTES:
12/07/20	Per First Review
01/06/21	Per Second Review & Bldg Coord.

## Revision Table

- C-01 ROANOKE COUNTY STANDARD COVER SHEET
- C-02 NOTES AND LEGEND
- C-03 EXISTING CONDITIONS & SITE DEMOLITION PLAN-WEST
- C-04 EXISTING CONDITIONS & SITE DEMOLITION PLAN-EAST
- C-05 DIMENSIONAL LAYOUT & CODE REQUIRED LANDSCAPING PLAN - SHOPS A & B
- C-06 SITE PLAN - PEDESTRIAN ROUTE TO MALL
- C-07 SOIL EROSION & SEDIMENTATION CONTROL PLAN
- C-08 GRADING & STORM DRAINAGE PLAN
- C-09 SITE UTILITIES PLAN - SHOPS A & B
- C-10 SITE UTILITIES PLAN - OFF SITE WATER AND SANITARY EXTENSIONS
- C-11 PROFILES - NEW PUBLIC WATERLINE
- C-12 PROFILES - NEW PRIVATE SANITARY SEWER
- C-13 PROFILES - NEW PRIVATE STORM DRAIN
- C-14 EROSION CONTROL NARRATIVE, MEASURES & CONSTRUCTION SEQUENCING
- C-15 DETAILS - SOIL EROSION & SEDIMENTATION CONTROL
- C-16 DETAILS - SITE CONSTRUCTION
- C-17 DETAILS - WATER AND SANITARY SEWER

## SURVEY INFORMATION

Horizontal and vertical control surveys were performed in year 2018  
By: CALDWELL WHITE ASSOCIATES

All vertical elevations must be referenced to the National Geodetic Vertical Datum of 1929 or 1988.  
All horizontal elevations must be referenced to the North American Datum of 1927 or 1983.

Horizontal Datum: NAD 83 Vertical Datum: NAD 83

Source of topographic mapping is dated APRIL 2018

Boundary was performed by CWA (ALTA/NSPS) dated: 08/14/2016

Benchmark information: 100' MONUMENT LOCATED WEST OF MAIN BLENDING ROAD ENTRANCE  
SEE SHEET C-07 OF THESE PLANS FOR DESCRIPTION OF  
REFERENCE BENCHMARK AS WELL AS TEMPORARY ON-SITE  
BENCHMARK.

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

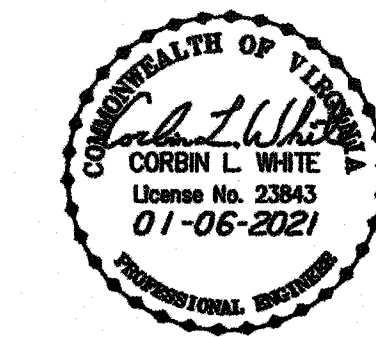
## QUANTITY & COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	COST	BONDABLE
CLEARING AND GRUBBING		ACRES			
EXCAVATION (ON-SITE CUT & FILL)	413	C.Y.	\$ 2.75	\$ 1,136	\$ 1,136
EXCAVATION (IMPORT)	1,361	C.Y.	20.00	27,220	\$ 27,220
EMBANKMENT		C.Y.			
GRATE INLET D4-1	3	EACH	2,200.00	6,600	6,600
GRATE INLET D4-7		EACH			
CURB INLET D4-3	1	EACH	3,100.00	3,100	3,100
CONC STORM MANHOLE	1	EACH	1,800.00	1,800	1,800
12-IN DBL WALL HOPE PIPE (STORM)		LIN. FT.			
12-IN CONCRETE (STORM)	283	LIN. FT.	24.50	6,934	6,934
16-IN DBL WALL HOPE PIPE (STORM)		LIN. FT.			
16-IN DBL WALL HOPE PIPE (STORM)		LIN. FT.			
16-IN DUCTILE IRON PIPE (STORM)		LIN. FT.			
24-IN DBL WALL HOPE PIPE (STORM)		LIN. FT.			
42-IN CLASS II CONCRETE PIPE (STORM)		LIN. FT.			
60-IN CLASS II CONCRETE PIPE (STORM)		LIN. FT.			
12-IN 88-2 FLARED END SECTION		EA			
16-IN HOPE FLARED END SECTION		EA			
24-IN HOPE FLARED END SECTION		EA			
DBL 60-IN CONCRETE ENDWALL 8W-2		EACH			
42-IN CONCRETE ENDWALL 8W-2		EACH			
BOX CULVERT		LUMP SUM			
12" WIDE CL III RIP-RAP CHANNEL CP		LIN. FT.			
TRIPRAP - CLASS		S.F.			
PERMANENT GRASS SOD		S.F.			
CONCRETE SIDEWALK (PUBLIC)		S.F.			
CONCRETE ENTRANCE APRON C9-30		LUMPS UM			
CONCRETE CURB & GUTTER C9-6		LIN. FT.	32.00	10,288	10,288
CONCRETE CURBING C9-2	2,145	LIN. FT.	28.50	61,133	61,133
VALLEY GUTTER		EACH			
GRAVEL BASE		S.F.			
2-IN BIT. CONC TYPE BM2.0	615	S.F.	10.50	6,458	6,458
2-IN BIT. CONC TYPE BM2.5A	4,325	S.F.	10.50	45,413	45,413
1-1/2-IN BIT. CONC TYPE BM2.5A	915	S.F.	6.50	5,948	5,948
8-IN BASE MATERIAL TYPE 21B	5,724	C.Y.	38.00	217,712	217,712
TRAFFIC CONTROL		LS			
2 WATER LINE	420	LIN. FT.	22.50	9,450	9,450
4" WATER LINE		LIN. FT.			
6" WATER LINE	54	LIN. FT.	42.50	2,295	2,295
8" WATER LINE	790	LIN. FT.	48.00	38,020	38,020
WATERLINE SPECIALTY VALVE (P.V. BIANCHI FDC)	4	EACH	1,500.00	6,000	6,000
FIRE HYDRANT ASSEMBLIES (w/ VALVE & BOX)	2	EACH	2,200.00	4,400	4,400
AIR RELEASE VALVES W/VAULT, FRAME & COVER	1	EACH	1,800.00	1,800	1,800
1-IN GATE VALVES, W/VAULT, FRAME & COVER		EACH			
1-IN GATE VALVES, W/VAULT, FRAME & COVER	1	EACH	1,100.00	1,100	1,100
1-IN GATE VALVES, W/VAULT, FRAME & COVER	7	EACH	1,300.00	9,100	9,100
1-IN GATE VALVES, W/VAULT, FRAME & COVER	2	EACH	9,000	18,000	18,000
FIRE VAULT ASSEMBLY	1	EACH	2,700	2,700	2,700
END OF LINE SLOW OFF ASSEMBLY					
8" SDR-35 PVC SANITARY SEWER	776	LIN. FT.	45.00	34,920	34,920
6" DUCTILE IRON SANITARY SEWER		LIN. FT.			
STANDARD MANHOLE W/FRAME & COVER	3	EACH	1,800.00	5,400	5,400
SAMPLING MANHOLE / PORT	2	EACH	1,800.00	3,600	3,600
GREASE INTERCEPTOR	2	EACH	3,500.00	7,000	7,000
LANDSCAPING	1	LUMP SUM	13,700	13,700	13,700
ASBESTOS (INCLUDING BUT NOT LIMITED TO TRAILS, ETC.)		LUMP SUM			
STORMWATER MANAGEMENT FACILITY (COMPLETE)		LUMP SUM			
AS-BUILT PLANS (WATER & SANITARY)	1	LUMP SUM	4,000.00	4,000.00	4,000.00
AS-BUILT PLANS (STORM DRAIN)	1	LUMP SUM	1,800.00	1,800.00	1,800.00
SUBTOTAL				\$ 610,148	\$ 610,148
10% CONTINGENCY				\$ 61,015	\$ 61,015
ESTIMATED TOTAL				\$ 671,163	\$ 671,163

**CWA**  
**CALDWELL WHITE ASSOCIATES**  
ENGINEERS / SURVEYORS / PLANNERS

4305 MELROSE AVENUE  
P.O. BOX 6260  
ROANOKE, VIRGINIA 24017-0260  
(840) 366-3400  
FAX: (840) 366-3702

Designed: CL White  
Drawn: CL White  
Checked: September 01, 2020  
Field Book: N/A  
VIA No.: 20-0211 / 0001



Approved



PLAN APPROVED  
Dennis Saville  
REVIEW COORDINATOR, 2328261

SITE PLANS FOR NEW SHOPS "A" AND "B"  
FOR  
TANGLEWOOD VENTURE LLC  
4305 Electric Road (VA Route 419)  
Roanoke County Tax Parcel: 077.16-01-02-00-0000  
Cave Spring Magisterial District  
County of Roanoke, Virginia

SHEET  
C0.1  
OF  
17

Materials: Water: CLS2 U.S.P. 8" 6"  
Air Relief: ARI  
Valves: 8" + 6" AFG - 8" - 24 Turns 1/6" To Left  
At Gate: 2" G.V.S. In Sewer TOP Box  
1" Turn to LCP to open All AFC  
SEWER - 8" SDR 35 National  
6" SDR 26  
Manholes & Grease Traps: C.T.  
AS-Built's  
See - New Public Water and  
Sanitary Sewer System  
As-built Survey  
For As-built Notes  
Last PAGE #

Contractor: Jack St. Clair  
Inspector: Brian Whitenack

9/3/21