

SITE SUMMARY

CURRENT SITE ZONING:	C2
PROPOSED USE:	RETAIL SALES – SHOPPING CENTER
TAX PARCEL (WORK AREA):	077.16–01–02.00–0000
PARCEL SIZE:	53.91 AC = 2,348,450 SF
AREA OF PROPOSED WORK:	0.078 AC = 3,388 SF

PROJECT DESCRIPTION

THE PURPOSE OF THIS PROJECT IS THE EXTENSION OF A PUBLIC WATER MAIN TO INTERCONNECT A NEW WATERLINE BEING CONSTRUCTED FOR TANGLEWOOD 'SHOPS A&B' WITH AN EXISTING 8 INCH PUBLIC MAIN LOCATED IN THE WESTERN MALL ACCESS DRIVE FROM ELECTRIC ROAD. IT IS NOTED THAT THESE PLANS ARE SOLELY FOR THE WATER MAIN EXTENSION AND INTERCONNECTION. THERE ARE NO NEW SERVICE CONNECTIONS OR BUILDING CONSTRUCTION ASSOCIATED WITH THIS PLAN. THE ONLY SITEWORK ASSOCIATED WITH THESE PLANS IS THE REPLACEMENT "IN KIND" OF CURB AND GUTTER, CONCRETE FLATWORK, AND BITUMINOUS PAVEMENT DISTURBED DURING THE CONSTRUCTION OF THE NEW WATERLINE EXTENSION.

ENGINEER’S NOTES

CALDWELL WHITE ASSOCIATES ASSUMES NO RESPONSIBILITY FOR ADEQUACY OF PLANS OR FOR INFORMATION ON PLANS UNTIL SUCH PLANS HAVE BEEN APPROVED BY THE REQUIRED PUBLIC AGENCIES. ANY WORK COMMENCED ON A PROJECT PRIOR TO PLAN APPROVAL IS AT SOLE RISK OF THE DEVELOPER. CALDWELL WHITE ASSOCIATES DOES NOT GUARANTEE THE COMPLETION OR QUALITY OF PERFORMANCE OF THE CONTRACTS BY CONTRACTORS OR OTHER THIRD PARTIES. ALL TRENCHING AND EXCAVATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH OSHA RULES AND REGULATIONS PERTAINING THERETO.

GRADING, COMPACTION AND FINISH SURFACE NOTES

ASIDE FROM TRENCHING, BACKFILLING, AND REPLACEMENT OF HARD SURFACES, THERE IS NO GRADING ASSOCIATED WITH THIS PROJECT. FINISH GRADE SHALL MATCH EXISTING GRADE. ALL TRENCHING, BEDDING, WATERLINE CONSTRUCTION AND BACKFILL SHALL BE PERFORMED TO WYMA REQUIREMENTS, SEE NOTES HEREON. ALL BACKFILL SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR (ASTM D698).

INTERNAL TRAFFIC CONTROL AND SAFETY

THE CONTRACTOR SHALL COORDINATE CLOSELY WITH THE OWNER'S REPRESENTATIVE RELATIVE TO PROVIDING TEMPORARY TRAFFIC CONTROL MEASURES AND SCHEDULING LANE OR ROAD CLOSURES. TEMPORARY CONSTRUCTION BARRIERS SHALL BE IN PLACE AT ALL TIMES TO PHYSICALLY SEPARATE THE CONSTRUCTION AREA FROM THE CUSTOMERS AND THE GENERAL PUBLIC. FOR WORK AREAS THAT WILL REQUIRE MULTI-DAY WORK, THE CONTRACTOR SHALL PROVIDE CHAIN-LINK SECURITY FENCING WITH LOCKED GATES, OR OTHER OWNER-APPROVED MEANS OF SECURING THE CONSTRUCTION AREA FROM THE TIME OF EVENING CONSTRUCTION END AND MORNING CONSTRUCTION START. CONSTRUCTION SHALL BE STAGED SUCH THAT MAIN ACCESS ROADS AND TRAVELWAYS ARE NOT REQUIRED TO BE CLOSED OVERNIGHT. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL BARRELS, CONES, CONCRETE MEDIAN BARRIERS, ETC., AS DIRECTED BY THE OWNER TO ENSURE THE SAFETY OF MOTORISTS, PEDESTRIANS, AND CONSTRUCTION PERSONNEL.

VIRGINIA DEPARTMENT OF TRANSPORTATION NOTES

AS ALL PROPOSED WORK IS WELL WITHIN THE CONFINES OF THE PRIVATE PROPERTY, AND THE PROJECT IS SOLELY AN EXTENSION OF A PUBLIC WATERLINE, THERE ARE NO VDOT PERMITS REQUIRED FOR THIS WORK.

WESTERN VIRGINIA WATER AUTHORITY NOTES

GENERAL NOTES:

- ALL MATERIALS, FABRICATION, AND INSTALLATION OF NEW WATERLINE PIPELINES, MANHOLES, AND APPURTENANCES SHALL CONFORM TO THE LATEST EDITION OF THE WESTERN VIRGINIA REGIONAL DESIGN AND CONSTRUCTION STANDARDS AVAILABLE AT WWW.WESTERNVWATER.ORG, OR BY CONTACTING THE AUTHORITY AT (540) 853-5700. THE PROJECT SHALL ALSO COMPLY WITH THE GOVERNING JURISDICTION'S STANDARDS AND OTHER AGENCY STANDARDS (e.g. VDOT, DEQ, DCR, VDH, ETC.), WHERE APPLICABLE.
- THE CONTRACTOR OR DEVELOPER IS REQUIRED TO NOTIFY THE WESTERN VIRGINIA WATER AUTHORITY IN WRITING AT LEAST THREE (3) DAYS PRIOR TO ANY CONSTRUCTION. PLEASE CONTACT MARK SINK AT 537-3460.
- ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE WESTERN VIRGINIA WATER AUTHORITY.
- FIELD CORRECTIONS SHALL BE APPROVED BY THE WESTERN VIRGINIA WATER AUTHORITY PRIOR TO SUCH CONSTRUCTION.
- THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" CLEARANCE VERTICALLY AND 2' MINIMUM HORIZONTALLY FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE AT ALL WATER, SANITARY SEWER CROSSINGS OF ANY OTHER UTILITIES. WHERE THIS CANNOT BE ACHIEVED ADDITIONAL MEASURES IN ACCORDANCE WITH WYMA STANDARDS SHALL BE ENFORCED. CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY UPON DISCOVERY OF SUCH CONDITIONS. ADDITIONAL DESIGN EFFORTS MAY BE REQUIRED.
- ANY EXISTING APPURTENANCES SHOULD BE ADJUSTED TO GRADE AND NEW FRAME AND COVERS INSTALLED WHERE REQUIRED.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE ALL EXISTING UTILITIES LOCATED AND POTHOLED TO VERIFY LOCATIONS. THIS PLAN REVIEW DOES NOT REMOVE THE CONTRACTOR'S RESPONSIBILITY TO RELOCATE ANY EXISTING CONFLICTS FOUND DURING CONSTRUCTION.

WATER NOTES:

- AT THE TIME OF PREPARATION OF THESE PLANS, THE CONSTRUCTION OF 'NEW SHOPS A&B' HAS JUST COMMENCED. AS SUCH, THE 8 INCH PUBLIC WATERLINE ONTO WHICH THESE PLANS CONNECT IS NOT YET IN PLACE. THE CONTRACTOR SHALL COORDINATE WITH THE WYMA, THE OWNER, AND THE CONTRACTOR FOR SHOPS A&B RELATIVE TO TIMING OF CONSTRUCTION, AND MEASURES REQUIRED FOR EXTENSION OF SHOPS A&B PUBLIC WATER MAIN. IF WELL COORDINATED, IT MAY BE POSSIBLE TO OMIT THE 'TEMPORARY BLOW-OFF' ASSEMBLY AT THE WESTERN TERMINUS OF THE SHOPS A&B PUBLIC WATER MAIN.
- ALL WATER CONNECTIONS TO EXISTING LINES SHALL BE COORDINATED WITH AND PERFORMED BY THE WESTERN VIRGINIA WATER AUTHORITY. ALL LABOR AND MATERIALS ARE TO BE PROVIDED BY THE CONTRACTOR.
- ALL WATER FACILITIES ARE TO BE INSTALLED ACCORDING TO THE WESTERN VIRGINIA REGIONAL DESIGN AND CONSTRUCTION STANDARDS.
- AT THE POINT OF INTERCONNECTION TO THE EXISTING SYSTEM, THE WATERLINE PRESSURE IS ESTIMATED TO BE 107 psi WITH NO FIRE FLOWS IN EFFECT.
- THERE ARE NO NEW SERVICE CONNECTIONS ASSOCIATED WITH THE CONSTRUCTION PROPOSED HEREIN.

FIRE FLOW NOTES

EXISTING CONDITIONS:

- DURING THE COURSE OF DESIGN FOR 'NEW SHOPS A & B', LOCATED ADJACENT TO STATION 0+00 OF THIS WATERLINE EXTENSION, THE WYMA FLOW TESTED THREE PUBLIC HYDRANTS IN THE SURROUNDING AREA ON OCTOBER 21, 2020, THE LOCATIONS AND RESULTS OF WHICH ARE:
  - HYDRANT 20127, LOCATED AT 4135 FRANKLIN ROAD  
STATIC PRESSURE = 105 psi  
FLOW = 2288 gpm WITH 97 psi RESIDUAL PRESSURE  
CALCULATED FLOW AT 20 psi RESIDUAL = 8198 gpm
  - HYDRANT 21278, LOCATED AT 4420 ELECTRIC ROAD  
STATIC PRESSURE = 105 psi  
FLOW = 2183 gpm WITH 95 psi RESIDUAL PRESSURE  
CALCULATED FLOW AT 20 psi RESIDUAL = 6934 gpm
  - HYDRANT 20751, LOCATED AT 4389 ELECTRIC ROAD  
STATIC PRESSURE = 102 psi  
FLOW = 2556 gpm WITH 90 psi RESIDUAL PRESSURE  
CALCULATED FLOW AT 20 psi RESIDUAL = 7215 gpm

SYMBOLS

EXISTING	NEW	
---= 100.5	100.5	SPOT ELEVATION
---= 100	100	CONTOURS
== 8"SS ==	8"SS	SANITARY SEWER LINE
--- 4"W ---	4"W	WATERLINE
== 8"SD ==	8"SD	STORM DRAIN
--- 2"G ---	2"G	GAS LINE
=== E	E	OVERHEAD ELECTRIC LINE
--- T	T	OVERHEAD TELEPHONE LINE
CATV	CATV	OVERHEAD CABLE TELEVISION LINE
--- UE --- UT ---	UE --- UT ---	UNDERGROUND TEL OR ELEC LINE
		WATER OR GAS METER
		FIRE HYDRANT
		MANHOLE
		CLEANOUT
		DROP INLET (CURB OR GRATE)
		UTILITY POLE, GUY & ANCHOR
		DITCH OR SWALE
		CENTERLINE OR BASELINE
		PROPERTY LINE
		BENCHMARK
		FENCE
		HANDICAPPED SPACE

LEGEND

ABBREVIATIONS		
AHFH	ARROW HEAD TOP OF FIRE HYDRANT	MIN MON
APPROX	APPROXIMATE	PYMT
ASPH	ASPHALT	R
BC	BOTTOM OF CURB	R/W
BIT	BITUMINOUS	REQD
BLDG	BUILDING	RADIUS
BM	BENCHMARK	SAN
C&G	CURB & GUTTER	SS
CMP	CORRUGATED METAL PIPE	STA
CONC	CONCRETE	STD
DI	DROP INLET	TBM
DIA	DIAMETER	TC
ELEC	ELECTRIC	TEL
ELEV	ELEVATION	TYP
EP	EDGE OF PAVEMENT	VDOT
EXIST	EXISTING	VERT
FF	FINISHED FLOOR	
FO	FINISH GRADE	
HPT	HIGH POINT	
INV	INVERT	
IP	IRON PIN	
MBL	MINIMUM BUILDING LINE	
MH	MANHOLE	

GENERAL DEMOLITION NOTES

UNLESS OTHERWISE STATED HEREIN, ALL EXISTING PHYSICAL IMPROVEMENTS LOCATED WITHIN THE LIMITS OF "DISTURBED AREA" OR "AREA OF WORK" ARE TO BE REMOVED FROM THE SITE IN THEIR ENTIRETY. IN THE EVENT THAT THERE ARE QUESTIONS REGARDING THE DISPOSITION OF CERTAIN IMPROVEMENTS, THE CONTRACTOR SHALL VERIFY WITH THE ENGINEER PRIOR TO ENGAGING IN ANY DEMOLITION WORK RELATIVE TO THE ITEM(S) IN QUESTION. DEMOLITION SHALL INCLUDE, UNLESS OTHERWISE NOTED ON DRAWINGS, REMOVAL OF EXISTING OBJECTS OR IMPROVEMENTS, WHETHER INDICATED ON THE DRAWINGS OR NOT, THAT WOULD IN THE OPINION OF THE OWNER, PREVENT OR INTERFERE WITH THE PROGRESS OR COMPLETION OF THE PROPOSED WORK. PERMITS, FEES AND LICENSES SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR, INCLUDING DISPOSAL CHARGES AS REQUIRED. WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE GOVERNING AUTHORITIES IN DEMOLITION OF EXISTING PAVEMENT, CURBS AND GUTTERS, DRAINAGE STRUCTURES AND UTILITIES AS MAY BE REQUIRED. CONTRACTOR SHALL SAW-CUT ALL JOINTS WHERE EXISTING CURBING, PAVEMENT AND SIDEWALK IS TO BE DEMOLISHED AND NEW CONSTRUCTION JOINS THE EXISTING. ALL EXISTING CURBING, CONCRETE SIDEWALK, ETC. THAT ARE DEMOLISHED SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR. DEMOLITION DEBRIS, ETC. SHALL NOT BE USED AS FILL MATERIAL ON THE SITE. CONTRACTOR SHALL PROVIDE THE FOLLOWING PROTECTIONS AT THE JOB SITE: MAKE ARRANGEMENTS, BEFORE INITIATING DEMOLITION, FOR RELOCATING, DISCONNECTION, REROUTING, ABANDONING, OR SIMILAR ACTION AS MAY BE REQUIRED RELATIVE TO UTILITIES AND OTHER UNDERGROUND PIPING, TO PERMIT WORK TO PROCEED WITHOUT DELAY. ARRANGEMENTS SHALL BE MADE IN ACCORDANCE WITH REGULATIONS OF AUTHORITIES OF UTILITIES MENTIONED, SUCH AS OVERHEAD / UNDERGROUND POWER AND TELECOMMUNICATION LINES AND EQUIPMENT, GAS PIPING, STORM SEWERS, SANITARY SEWERS, OR WATER PIPING. CONTRACTOR SHALL NOT USE WATER WHEN IT MAY CREATE HAZARDOUS OR OBJECTIONABLE CONDITIONS SUCH AS ICE, FLOODING AND/ OR POLLUTION. ENSURE SAFE PASSAGE OF PERSONS AROUND ALL AREAS OF DEMOLITION. CONDUCT OPERATIONS TO PREVENT DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, OTHER FACILITIES, OR INJURY TO PERSONS. PROMPTLY REPAIR DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS AT NO COST TO THE OWNER. MAINTAIN EXISTING UTILITIES INDICATED TO REMAIN, KEEP IN SERVICE, AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. PREVENT INTERRUPTION OF EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES AS ACCEPTABLE TO OWNER AND GOVERNING AUTHORITIES. PROVIDE TRAFFIC CONTROL MEASURES AS DEEMED NECESSARY FOR CONTROL OF VEHICULAR ROUTES DURING TIMES OF DEMOLITION OR RECONSTRUCTION WITHIN OR ADJACENT TO PUBLIC STREETS OR OTHER OFF-SITE VEHICULAR ROUTES. CONTROLS MAY INCLUDE, BUT NOT BE LIMITED TO, CONES, BARRELS, BARRICADES, SIGNAGE (STATIC AND/OR MARQUISE) AND FLAGMEN. USE WATER SPRINKLING AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN AIR TO LOWEST PRACTICAL LEVEL. COMPLY WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF DUST, DIRT, AND DEBRIS CAUSED BY DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITIONS EXISTING PRIOR TO THE START OF WORK, OR BETTER.

EXPLORATORY EXCAVATION REQUIREMENTS

AT LOCATIONS WHERE NEW PUBLIC WATER CROSSES EXISTING UTILITY LINES, THE CONTRACTOR SHALL PERFORM EXPLORATORY EXCAVATIONS TO DETERMINE ACTUAL ELEVATION OF EXISTING LINES. SHOULD THE DEPTHS OF COVER OF ANY EXISTING LINES VARY FROM THE DEPTHS SHOWN HEREIN TO THE POINT WHERE LESS THAN 18 INCHES CLEAR SEPARATION WILL EXIST BETWEEN EXISTING AND NEW LINES, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY, AND SHALL CEASE INSTALLATION OF NEW LINES, IF COMMENCED. IT IS SUGGESTED THAT THESE EXCAVATIONS BE PERFORMED AS A FIRST STEP IN THE CONSTRUCTION, AS REVISED DESIGNS MAY BE REQUIRED.

NOTES AND LEGEND  
FOR  
**NEW PUBLIC WATERLINE EXTENSION**  
TO BE CONSTRUCTED AT  
**TANGLEWOOD MALL**  
PREPARED FOR  
**TANGLEWOOD VENTURE LLC**  
SITUATE ELECTRIC ROAD (VA ROUTE 419)  
CAVE SPRING MAGISTERIAL DISTRICT  
COUNTY OF ROANOKE, VIRGINIA

Designed: C.L. White  
Drawn: C.L. White  
Checked: \_\_\_\_\_  
Date: March 19, 2021  
Scale: As Shown  
Tax Parcel: 077.16-01-02.00-0000  
Field Book: CH-22  
W.O. No.: 21-0013

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