

# QUANTITY AND COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	COST	BONDABLE
CLEARING AND GRUBBING	1	ACRES	2,000	2,000	
EXCAVATION		C.Y.			
EMBANKMENT		C.Y.			
CURB INLET DI-1	3	EACH	1,500	4,500	
CURB INLET DI-		EACH			
MANHOLE MH-		EACH			
MANHOLE MH-		EACH			
12 -IN. CONCRETE PIPE, CLASS III		LIN. FT.			
15 -IN. CONCRETE PIPE, CLASS V	313	LIN. FT.	45.00	14,085	
-IN. C.M. CULVERT		LIN. FT.			
-IN. C.M. CULVERT		LIN. FT.			
SITE RETAINING WALLS	488	SQ FT	15.00	7,320	
BOX CULVERT		LUMP SUM			
PAVED DITCH		LIN. FT.			
RIPRAP - CLASS		S.F.			
SODDED SWALE		S.Y.			
-IN. CONCRETE ENDWALL EW-		EACH			
-IN. END SECTION ES-		EACH			
SIDEWALKS	980	SQ FT	4.50	4,410	
HEADER CURB & GUTTER CG-6	465	LIN. FT.	18.00	8,370	
CURB CG-2 STRAIGHT	490	LIN. FT.	12.00	5,880	
CURB CG-2 RADIUS	45	LIN. FT.	12.00	540	
GRAVEL BASE		S.Y.			
GRAVEL SHOULDER		S.Y.			
SURFACE TREATMENT		S.Y.			
HEAVY DUTY PAVEMENT	1,225	S.Y.	21.00	25,725	
LIGHT DUTY PAVEMENT	1,578	S.Y.	18.00	28,404	
PAVEMENT STRIPING		LUMP SUM	2,000	2,000	
TRAFFIC BARRICADE		EACH			
12" WATER LINE	510	LIN. FT.	65.00	33,150	
6" WATER LINE	103	LIN. FT.	45.00	4,635	
1 1/2" WATER LINE	103	LIN. FT.	15.00	1,545	
FIRE HYDRANT ASSEMBLIES	1	EACH	2,000	2,000	
BLOW OFFS W/VAULT, FRAME & COVER	1	EACH	1,500	1,500	
12-IN. GATE VALVE,W/VAULT, FRAME&COVER	1	EACH	1,500	1,500	
6" SANITARY SEWER	127	LIN. FT.	30.00	3,810	
STANDARD MANHOLE W/FRAME & COVER		EACH			
SAMPLING MANHOLE/PORT	1	EACH	2,000	2,000	
AS-BUILT PLANS	1	LUMP SUM	500	500	
STORMWATER MANAGEMENT	1	LUMP SUM	44,900	44,900	
LANDSCAPING	1	LUMP SUM	30,000	30,000	
10% CONTINGENCY				22,877	
ESTIMATED TOTAL				251,651	

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

SIGNED: DATE:

## GENERAL NOTES

ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF ROANOKE COUNTY AND/OR THE VIRGINIA 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 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 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 WITH CORRECT AS-BUILT PLANS BEFORE FINAL ACCEPTANCE.

ALL WORK SHALL BE SUBJECT TO INSPECTION BY ROANOKE COUNTY AND/OR V.D.O.T. INSPECTORS.

FIELD CORRECTIONS SHALL BE APPROVED BY THE ROANOKE COUNTY ENGINEERING DIVISION 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.

CITY OF ROANOKE RIGHT OF WAY EXCAVATION PERMIT REQUIRED. ALL WORK SHALL CONFORM TO RIGHT OF WAY EXCAVATION & RESTORATION STANDARDS, CURRENT EDITION.

## INDEX

- C1.0 ROANOKE COUNTY COVER
- C1.1 EXISTING CONDITIONS
- C1.2 DIMENSIONAL PLAN
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- C1.5 EROSION CONTROL NARRATIVE AND DETAILS
- C1.6 EROSION CONTROL DETAILS
- C1.7 CONSTRUCTION DETAILS AND NOTES
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## SEWER NOTES

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.

SERVICE CONNECTION IS TO BE MADE WITH 6" SDR 35 PIPE INSTALLED AT A MIN. GRADE OF 1/4 INCH TO 1 FOOT.

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 ASBESTOS CEMENT OR CONCRETE PIPE SHALL BE MADE WITH AN ADAPTER COUPLING IN R/W.

ALL TRENCHES IN EXISTING OR FUTURE RIGHT-OF-WAY SHALL BE COMPACTED ACCORDING TO V.D.O.T. STANDARDS.

LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.

ALL SEWER FACILITIES ARE TO BE INSTALLED IN ACCORDANCE WITH WESTERN VIRGINIA WATER AUTHORITY CONSTRUCTION STANDARDS.

## WATER NOTES

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 52 DUCTILE IRON IN ACCORDANCE TO AWWA C151 OR DR-14 PVC IN ACCORDANCE WITH AWWA C-900.

ALL WATER FACILITIES ARE TO BE INSTALLED IN ACCORDANCE WITH WESTERN VIRGINIA WATER AUTHORITY CONSTRUCTION STANDARDS.

AVAILABILITY NUMBER 06-36.

## ENGINEER'S NOTES

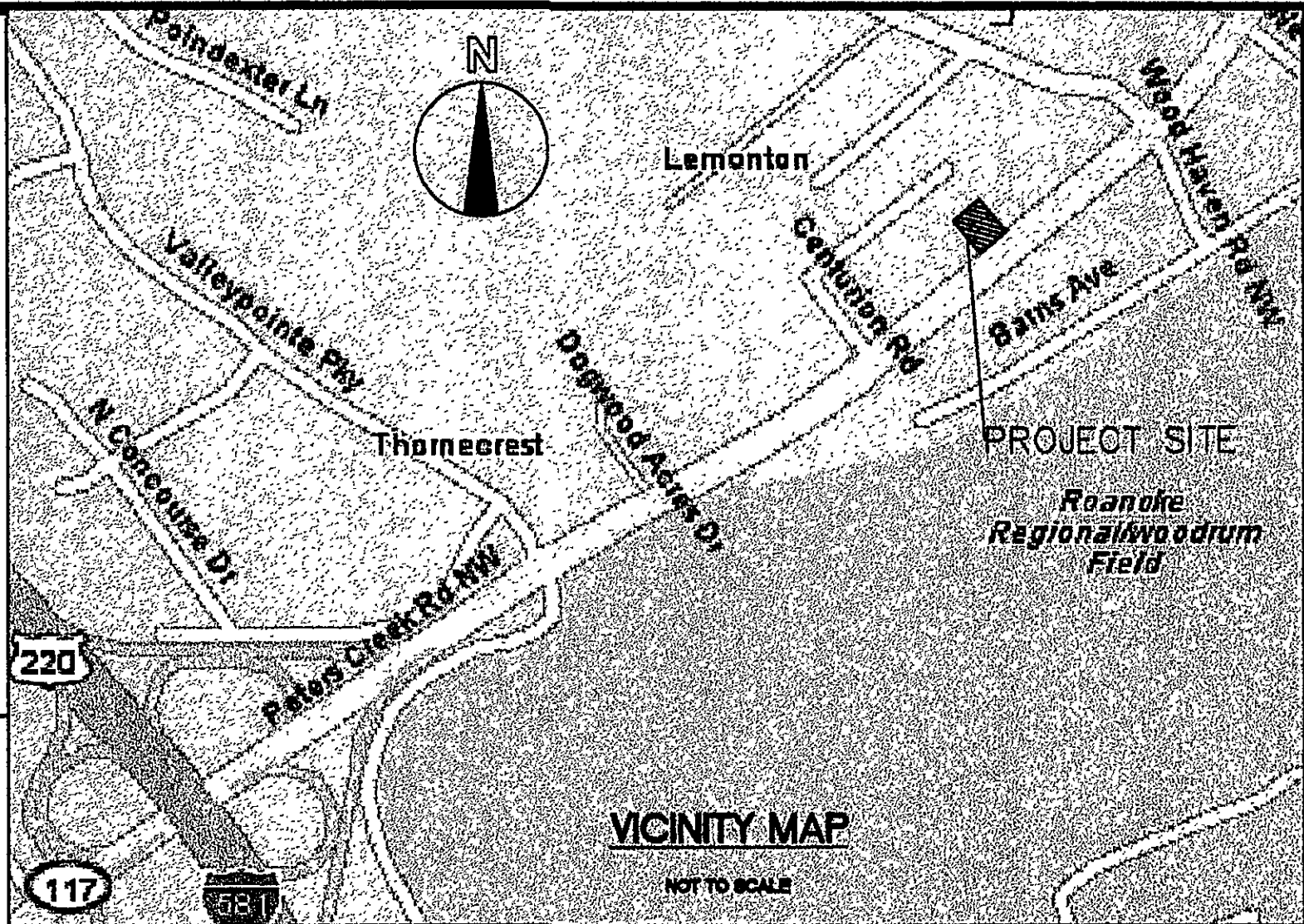
ACS DESIGN, L.L.C. ASSUMES NO RESPONSIBILITY FOR ADEQUACY OF PLANS OR FOR INFORMATION ON PLANS UNTIL SUCH PLANS HAVE BEEN APPROVED BY THE REQUIRED PUBLIC AGENCIES.

ANY WORK COMMENCED ON A PROJECT PRIOR TO PLAN APPROVAL IS AT SOLE RISK OF THE DEVELOPER.

ANY NEW ALIGNMENTS, CHANGE IN GRADES, ALTERNATIVE PIPE SIZES OR MANHOLES WILL REQUIRE A NEW SET OF PLANS STAMPED BY THE CONSULTING ENGINEER. COUNTY ENGINEERS WILL REVIEW THE PLANS WITHIN ONE DAY OF SUBMITTAL. PLAN SHEETS CAN BE 8.5 X 11 IF THE INFORMATION LEGIBLE.

EXISTING	NEW	DESCRIPTION
100	100	CONTOUR, CONTOUR WITH ELEVATION
+ EG 1025.00	X FG 1025	SPOT ELEVATION
-X-X-	-X-X-	FENCE (EXISTING OR PROPOSED NOTED)
50	50	BENCH MARK (EXISTING OR SET NOTED)
50	50	STORM DRAIN
FM	FM	SANITARY SEWER
G	G	FORCE MAIN
W	W	GAS MAIN OR SERVICE LINE
ONE	ONE	WATER MAIN OR SERVICE LINE
OT	OT	OVERHEAD ELECTRICAL LINE
UE	UE	OVERHEAD TELEPHONE LINE
UT	UT	UNDERGROUND ELECTRICAL LINE
UT	UT	UNDERGROUND TELEPHONE LINE
50	50	FIRE HYDRANT
50	50	GATE VALVE
50	50	CLEANOUT
50	50	MANHOLE
50	50	DROP INLET (CURB AND GRATING TYPES)
50	50	WM - WATER METER
50	50	DWM - DOUBLE WATER METER
50	50	UTILITY POLE
50	50	LIGHT POLE
50	50	TELEPHONE PEDESTAL
50	50	BURIED TELEPHONE VAULT

## LEGEND



## SURVEY INFORMATION

HORIZONTAL AND VERTICAL CONTROL SURVEYS WERE PERFORMED IN 2006 BY ACS DESIGN, LLC.

ALL ELEVATIONS SHOWN ARE BASED ON AN ASSUMED DATUM

SOURCE OF TOPOGRAPHIC MAPPING IS BASED ON A FIELD SURVEY BY ACS DESIGN, LLC.

REVISION	COMMENT	DATE
1	2nd Submittal	5/5/08
2	3rd Submittal	6/23/08
3	AMENDED SITE PLAN	7/14/08
4	Per Review 1 Revised Comments	9/19/08

## RESPONSIBLE LAND DISTURBER CERTIFICATION

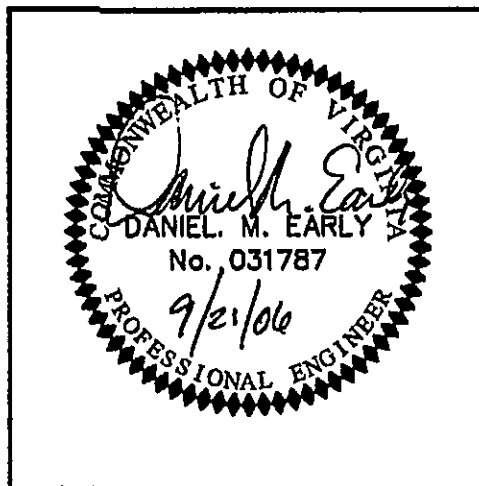
PRINTED NAME \_\_\_\_\_

SIGNATURE \_\_\_\_\_

COMPANY NAME \_\_\_\_\_ CONTACT ADDRESS \_\_\_\_\_ PHONE NUMBER \_\_\_\_\_

RESPONSIBLE LAND DISTURBER CERTIFICATION # \_\_\_\_\_

DEVELOPMENT PLAN APPROVED FOR CONSTRUCTION BY ROANOKE COUNTY	
Department	Date
Development Review	9/28/08
Engineering	9/28/08
Water & Sewer	9/28/08
Planning & Zoning	9/28/08



AS - BUILT

04/27/2007

PROFESSIONAL ENGINEER  
SEAL AND SIGNATURE

# COUNTY OF ROANOKE

NAME OF DEVELOPMENT	VISTAR EYE CENTER SITE PLAN	I, _____ 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.
MAGISTERIAL DISTRICT(S)	CATAWBA	
OWNER (name, address, telephone)	VISTAR PROPERTIES, L.L.C. P.O. BOX 1789 ROANOKE, VIRGINIA 24008	
DEVELOPER (name, address, telephone)	SAME AS OWNER	
ENGINEER, ARCHITECT OR SURVEYOR (name, address, telephone)	DANIEL M. EARLY, P.E. ACS DESIGN, LLC. 2203 PETERS CREEK RD., NW ROANOKE VA, 24017	PH: 540-562-2345 FAX: 540-562-2344
TAX MAP NO(S)	037.08	BLOCK NO(S) 01 PARCEL NO(S) 01