QUANTITY + COST ESTIMATE

CLEADING AND CDURRING	QUANTITY	UNIT	UNIT PRICE	COST	BONDABLE
CLEARING AND GRUBBING	***************************************	ACRES	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
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15—IN. CONCRETE PIPE	210	LIN. FT.		WAI	
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-IN, C.M. CULVERT	***************************************	LIN. FT.			
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		t a finds at the color of the reference of the grown that a manner of the color of	***************************************	MATERIAL AND	annesse en
BOX CULVERT		LUMP SUM		Section 10-7-20-7-20-7-20-7-20-7-20-7-20-7-20-7-	
PAVED DITCH		LIN. FT.			
RIPRAP - CLASS I	D-11/1	C, Y.			
SODDED SWALE	Montes	S.Y.	No.		
15-IN. CONCRETE ENDWALL EW-1	ng	EACH	and the state of t		
STORM DRAIN CONSTRUCTION BID				\$ 10,900.00	
	÷61/4.5/(//			77.	
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HEADER CURB & GUTTER CG-		LIN. FT.			\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$
CURB & GUTTER CG-6	2400	LIN, FT.	\$ 8,00	\$ 19,200.00	
VALLEY GUTTER	an manyon ng 494 5 Ng kinga kalay njenjaka kahanan 1944 6 Ng kanturuhan nin	EACH	The background and the second of the second	Contract and the Contract of t	
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8-IN. BASE MATERIAL: TYPE 21B	670	S.Y.	\$ 5.00	\$ 3,350.00	And and the second seco
6-IN. BASE MATERIAL: TYPE 21B	3410	S.Y.	\$ 4.00	\$ 13,640.00	A CANAGA
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TRAFFIC BARRICADE		EACH		\$ 33,900.00	Transier ( parties of the high a high
WATER SYSTEM CONSTRUCTION BID 6" WATER LINE	1500	LIN. FT.	A CONTRACTOR OF THE PROPERTY O	\$ 33,900.00	
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6 -IN. GATE VALVES, W/VAULT, FRAME & COVER	5	EACH		No.	
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8" SANITARY SEWER	1100	LIN. FT.			
STANDARD MANIJOLE W/ERAME & COVER	7	EACH			
STANDARD MANHOLE W/FRAME & COVER	ľ	a mai	AND CONTRACTOR OF CONTRACTOR O		4//-004/2071/2
LATERAL STUB-OUT, CLEANOUT	27	EACH			
SANITARY SEWER CONSTRUCTION BID		LUMP SUM	\$ 200.00	\$ 46,200.00 \$ 200.00	
AS-BUILT PLANS		LUMIT SUM	W &UU.UU	w &VV.VL	
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STORMWATER MANAGEMENT	kwi-shikudo-Harri przeco	LUMP SUM			
SIONIVIAMVIEL IN INVANCINELA I		LUME SUM	60-9504 30-00		
SUBTOTAL				\$145,750.00	
10% CONTINGENCY				\$ 14,575.00	
				(h400 700 00	
the state of the state that and the state of		·	E	\$160,325.00	1
ESTIMATED TOTAL					

### 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:

- 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, 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.

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 contractor shall provide adequate means of cleaning mud from

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

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

## NDEX

SEE LUNSDEN ASSOCIATES, P.C. COVER SHEET

# 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.

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 asbestos 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 LUNSDEN ASSOCIATES, P.C. COVER SHEET

## VICINITY MAP

### 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.

98-119 Availability number ____ SEE NOTE #4, SHEET #5

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Property Line		manual P annual	
Right-of-way	heleringships delighters	R/W	
Centerline	www.company.company.company.company.company.company.company.company.company.company.company.company.company.co	<u> </u>	
Minimum Building Line	manus a costang any kanya kaya manang keya a resultan and a selektri dan a selekt	M.B.L.	
Existing Storm Sewer	18" S.O.	18" S.O.	
Existing Sanitary Sewer	8" SAN.	8" SAN.	
Existing Water Main	4" W	4" W months	
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Proposed Contour	HASTING THE STREET OF THE STRE	1045	
Proposed Drainage Divide			
Proposed Limits of Clearing	errymorpy, communication and a second and a	· Additional of the second sec	
Proposed Storm Sewer	24" S.D.		
Proposed Sanitary Sewer	8	M.H.	
Proposed Water Main	HYDRANT VAL.VE	BLOWOFF	

TAX MAP NO(S) 96.02

### SURVEY INFORMATION

Horizontal and vertical control surveys were performed in (year)_____ by LUMSDEN ASSOCIATES, P.C.

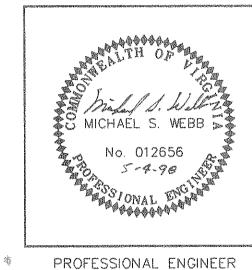
All elevations must be referenced to the National Geodetic Vertical Datum of 1929.

Source of topographic mapping is <u>AERIAL MAPPING (P. D. S.)</u>

dated 1989

Boundary was performed by <u>LUMSDEN ASSOCIATES, P.C.</u>

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



SEAL AND SIGNATURE

PARCEL NO(S) 45

# COUNTY OF ROANOKE

NAME OF DEVELOPMENT "ROSES OF THE GARDENS" - SECTION No. 4		OF THE SITE DESIGN REQUIREMENTS IMPOSED BY THIS SITE DEVELOPMENT PLAN AND OTHER APP-		
MAGISTERIAL DISTRICT(S) CAVE SPRING		LICABLE COUNTY CODES, I HEREBY CERTIFY THAT I AGREE TO COMPLY WITH THESE REQUIREMENTS, UNLESS MODIFIED IN ACCORDANCE WITH LOCAL LAW.		
STRAUSS CONSTRUCTION CORPORA OWNER (name, address, telephone) P. O. BOX 20287 ROANOKE, VA 24018 (540	ATION ) 989-7060			
STRAUSS CONSTRUCTION CORPO DEVELOPER (name, address, telephone) P. O. BOX 20287 ROANOKE, VA 24018 (5	RATION 40) 989-7060			
ENGINEER, ARCHITECT OR SURVEYOR (name, address, telephone) 4664	DEN ASSOCIATES, P.C. BRAMBLETON AVENUE OKE, VA 24018 (540) 774-	· <del>4 4</del> 1 1		

BLOCK NO(S) 1

COMM # 97-342 SHEET 2 OF 9