QUANTITY				[] & 2 To			
ITEM		ANTITY	UNIT	UNIT PRICE		COST	BONDAE
	SEC 1 & 2	TOTAL			SEC 1 & 2	TOTAL	
CURB INLET DI-3A	1.	1	EACH	1,300.00	1,300.00	1 700 00	
CURB INLET DI-3B	13	24	EACH	1,500.00		1,300.00 36,000.00	***************************************
CURB INLET DI-3BB	3	3	EACH	1,750.00	T	5,250.00	
CURB INLET DI-3C	1	5	EACH	1,500.00		7,500.00	
CURB INLET DI-4C	1	1	EACH	2000.00	2000.00	2,000.00	
CURB INLET DI-4BB	1	1	EACH	2000.00	2000.00	2,000.00	
CURB INLET DI 7 TYPE III	1	1 1	EACH	2000.00	2000.00	2,000.00	
YARD INLET: DI-7, TYPE III YARD INLET: DI-7, TYPE III - TRIPLE GRATE	1	1	EACH	1,250.00	1,250.00	1,250.00	
15" CONCRETE PIPE, CLASS III	949	1737	LIN. FT.	3,500.00	3,500.00	3,500.00	
18" CONCRETE PIPE, CLASS III	389	529	LIN. FT.	17.00	16,133.00	29,529.00	
24" CONCRETE PIPE, CLASS III	329	488	LIN. FT.	20.00	7,780.00 8,554.00	10,580.00 12,688.00	-
27" CONCRETE PIPE, CLASS III	616	622	LIN. FT.	30.00	18,480.00	18,660.00	
30" CONCRETE PIPE, CLASS III	464	467	LIN. FT.	36.00	16,704.00	16,812.00	
36" CONCRETE PIPE, CLASS III	356	488	LIN. FT.	44.00	15,664.00	21,472.00	
42" CONCRETE PIPE, CLASS III	140	148	LIN. FT.	60.00	8,400.00	8,880.00	
54" CONCRETE PIPE, CLASS III	37	40	LIN. FT.	85.00	3,145.00	3,400.00	
15" EW-1PC		2	EACH	1,250.00		2,500.00	
24" EW-1PC 27" EW-1PC	1	1	EACH	1,700.00	1,700.00	1,700.00	-
30" EW-1PC	11	1	EACH	1,800.00	1,800.00	1,800.00	
36" EW-1PC	1	2	EACH	1,900.00	1,900.00	3,800.00	
42" EW-7PC, 20 DEGREE SKEW	2	5 2	EACH	1,750.00	7,000.00	8,750.00	
54" EW-2PC	1	1	EACH EACH	3,000.00	6,000.00	6,000.00	
STORM DRAIN MANHOLE	2	1	EACH	2,500.00 1,750.00	2,500.00 3,500.00	2,500.00 1,750.00	,
		· · · · · · · · · · · · · · · · · · ·	-, , 🗸 ; 1	1,700.00	3,300.00	1,750.00	

DRIVEWAY ENTRANCE, TYPE CG-9D (1986 VER.)	57	98	EACH	148.00	8,436.00	14,504.00	
CURB & GUTTER CG-6	6,711	11,175	LIN. FT.	8.50	57,043.50	94,987.50	
ROADWAY PAVEMENT							
CATEGORY II	6,638	11,813	SQ. YD.	8.00	53,104.00	94,504.00	
CATEGORY II	3,103	3,592	SQ. YD.	9.00	27,927.00	33,226.00	
CATEGORY III CATEGORY IV	263	3,149	SQ. YD.	10.50	2,761.50	33,064.50	
STREET SIGNS	1,998	2,125	SQ. YD.	11.75	23,476.50	24,968.75	
PIPES AS SHOWN ON PLAT	129	7	EACH	100.00	400.00	700.00	
	129	256	EACH	20.00	2,580.00	5,120.00	
:							
8-IN. WATER LINE	4,763	6,350	LIN. FT.	18.00	85,734.00	114,300.00	
12-IN. WATER LINE	285	315	LIN. FT.	22.00	6,270.00	6,930.00	
FIRE HYDRANT ASSEMBLIES	5	6	EACH	1,500.00	7,500.00	9,000.00	
BLOW OFFS W/VAULT, FRAME & COVER	8	9	EACH	500.00	4,000.00	4,500.00	
8" IN. GATE VALVES, W/VAULT, FRAME & COVER	16	12	EACH	550.00	8,800.00	6,600.00	
12" IN. GATE VALVES, W/VAULT, FRAME & COVER	2	2	EACH	750.00	1,500.00	1,500.00	
SERVICE CONNECTIONS	59	98	EACH	350.00	20,650.00	34,300.00	
					V-10024		
4-IN. SANITARY FORCE MAIN	1,140	1,110	LIN. FT.	40.00	17.000.00		
8-IN. SANITARY SEWER	3,788	5,019	LIN. FT.	12.00	13,680.00	13,320.00	
PACKAGE SEWAGE PUMP STATION	1	1	EACH	22.00	83,336.00 24,000.00	110,418.00	
STANDARD MANHOLE W/FRAME & COVER	22.	27	EACH	1,200.00	26,400.00	24,000.00 32,400.00	
SERVICE CONNECTIONS WITH CLEANOUTS	69	97	EACH	600.00	41,400.00	58,200.00	
	/			000.00	11,100.00	30,200.00	
AS-BUILT PLANS	.1	1	LUMP SUM	7,500.00	3,500.00	7,500.00	
STORMWATER MANAGEMENT	1	1	LUMP SUM	35,530.00	35,530.00	35,530.00	
	nenev tota	****					
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UB TOTAL					605 500 50	071 107 75	
					695,588.50 69,558.85	971,193.75 97,119.38	
0% CONTINGENCY	•		1 .	. •	05,000,00	97.11 9. 38 1	
O% CONTINGENCY STIMATED TOTAL					765,147.35		

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

1. 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 for prior to plan approval. Plan approval in now 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.

construction site.

An approved set of plans and all permits must be available at the

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

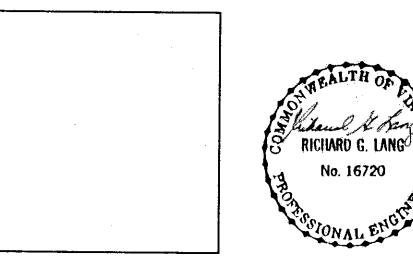
Division prior to such construction. 100 year floodway and floodplain information shall be shown where

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

SURVEY INFORMATION

Horizontal and vertical control surveys were performed in (year) 1994 by ROBERT G. CANTLEY, INC.	
All elevations must be referenced to the National Geodetic Vertical Datum of 1929.	
Source of topographic mapping is <u>AERIAL SURVEY</u> dated <u>MAY 1994</u>	_
Boundary was performed by ROBERT G. CANTLEY, INC.	

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



PROFESSIONAL SEAL AND SIGNATURE

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 of 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 cost construction as per water construction standards.

Water main shall be minimum Class 52 Ductile Iron in accordance to AWWA C151 or DR-14 PVC in accordance with AWWA C-900.

Application for utilities to serve development reference number <u>94-61</u>

LEGEND

	Property Line		· · · · · -		· · · · · · · ·
	Right-of-way	 .	· — · · —	R/W	· · · · · · · · · · · · · · · · · · ·
	Centerline		— — 	—— Ç ———	
	Minimum Building Line			M.B.L.	<u> </u>
	Existing Storm Sewer		=18" S.D.===		□18" S.D.
	Existing Sanitary Sewer		=8" SAN.===		=8" SAN.====
	Existing Water Main		—4" W—		4" W
	Existing Contour			- 1045	
	Proposed Contour			1045	
	Proposed Drainage Divide	<u> </u>			
•	Proposed Limits of Clearing		`		`
	Proposed Storm Sewer			24" S.D.	
	Proposed Sanitary Sewer			8" M.H.	
	Proposed Water Main	HYDRA	NT VALV	Æ/E	BLOWOFF

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.

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

Lines shall be staked prior to construction.

"AS-BUILT" SEC I & II 04/20/98

REVISED SUBMISSION: 04/17/98 REVISED SUBMISSION: 02/17/95 REVISED SUBMISSION: 11/14/94 ORIGINAL SUBMISSION: 08/30/94

COUNTY OF ROANOKE

NAME OF DEVELOPMENT $BRo($	OKFIELD	I,OWNER/DEVELOPER, AM AWARE OF THE SITE DESIGN REQUIREMENTS IMPOSED BY THIS SITE DEVELOPMENT PLAN AND OTHER APP-		
MAGISTERIAL DISTRICT(S) VINTO	N	LICABLE COUNTY CODES. I HEREBY CERTIFY THAT I AGREE TO COMPLY WITH THESE REQUIREMENTS, UNLESS MODIFIED IN ACCORDANCE WITH LOCAL LA		
OWNER (name, address, telephone)	FRALIN & WALDRON, INC. 2917 PENN FOREST BLVD., S.W. P.O. BOX ROANOKE, VIRGINIA (703)774-4415	20069		
	EDATIN O. WALDDON INC			

FRALIN & WALDRON, INC. 2917 PENN FOREST BLVD., S.W. P.O. BOX 20069 DEVELOPER (name, address, telephone)

ROANOKE, VIRGINIA (703)774-4415 LANG ENGINEERING COMPANY

ENGINEER, ARCHITECT OR SURVEYOR (name, address, telephone) 4415 ELECTRIC RD., S.W. P.O. BOX 18062 ROANOKE, VIRGINIA (703)772-0077

TAX MAP NO(S) 79.03-3-16, 79.01-3-25.1, 79.01-3-26 BLOCK NO(S)

SHEET 1 of 23