QUANTITY & COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	COST	BONDABLE
CLEARING AND GRUBBING		ACRES			
EXCAVATION		CY			
EMBANKMENT		CY			
JUNCTION BOX		EACH			
CURB INLET		EACH			
MANHOLE MH		EACH			
MANHOLE MH		EACH			
REINFORCED CONCRETE PIPE, CLASS III		LIN FT			
REINFORCED CONCRETE PIPE, CLASS IV		LIN FT			
CONCRETE CRADLE		LIN FT			
CONCRETE CULVERT		LIN FT			
HEADWALL		JUNCTION			
CURB INLET		LIN FT			
RIP RAP CLASS A		SF			
RIP RAP SWALE		SY			
REINFORCED CONCRETE ENDWALL FOR		EA			
METAL END SECTION FOR		EA			
DRIVE WAY ENTRANCE TYPE		EACH			
SIDEWALK FT WIDE		LIN FT			
CURB FT WIDE		LIN FT			
CONCRETE CURB & GUTTER CG		LIN FT			
CURB & GUTTER CG		LIN FT			
VALLEY GUTTER		EA			
GRAVEL WASH		SY			
GRAVEL SHOULDER		SY			
SURFACE TREATMENT		SY			
BITUMINOUS CONC TYPE H		SY			
BITUMINOUS CONC TYPE S		SY			
BITUMINOUS BASE MATERIAL		CY			
BITUMINOUS SUBBASE MATERIAL		CY			
STREET SIGNS		EA			
TRAFFIC BARRICADE		EA			
PIPES AS SHOWN ON PLAT		EA			
MONUMENTS AS SHOWN ON PLAT		EA			
6" WATER LINE		LIN FT			
8" WATER LINE		LIN FT			
12" WATER LINE		LIN FT			
FIRE HYDRANT ASSEMBLIES		EA			
BLOW OFFS W/VAULT, FRAME & COVER		EA			
6" GATE VALVES W/VAULT, FRAME & COVER		EA			
8" GATE VALVES W/VAULT, FRAME & COVER		EA			
12" GATE VALVES W/VAULT, FRAME & COVER		EA			
SERVICE CONNECTIONS		EA			
8" SAN SEWER	287	LIN FT	12.00	3444.00	
6" SAN SEWER		LIN FT			
12" SAN SEWER		LIN FT			
STD MANHOLE W/FRAME & COVER	2	EA	1000.00	2000.00	
SERVICE CONNECTIONS W/ CLEANOUTS		EA			
AS BUILT PLANS		LUMP SUM			
STORM WATER MANAGEMENT		LUMP SUM			
SUB TOTAL				5444.00	
ESTIMATED CONTINGENCY				544.40	
TOTAL				5988.40	

I hereby certify that the foregoing estimate reflects the current improvement costs of this project

Signed Jack Ellenwood JE Date 6/6/94

GENERAL NOTES

All construction methods and materials shall conform to the Construction Standards and Specifications of Roanoke County, and/or The Virginia Department of Highways and 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 preconstruction conference should be scheduled with the Roanoke County Engineering Division, to be held at least one day prior to any construction

Measures to control erosion and siltation must be provided for prior to plan approval. Plan approval in no way relieves the developer or contractor of the responsibilities contained in erosion and siltation control policies

A permit must be obtained from the VDH&T Residency Office, Roanoke County, prior to construction in the highway Right of Way

Plan approval does not guarantee issuance of any permits by VDH&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 min CBR of 10. CBR tests are to be performed by the engineer and submitted to the VDH&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% shall be paved with cement concrete to the limits 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 the VDH&T

All springs shall be capped and piped to the nearest storm sewer or natural water course. The pipe shall be 6" min. dia. and conform to VDH&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, but not more than ten working in advance. Area public utilities may be notified thru Miss Utility (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 VEH&T inspectors

Field corrections shall be approved by the Roanoke County Engineering Division prior to such construction

One year floodway and flood plain shall be shown where applicable

Grade stakes shall be set for all curb & gutter, water, sanitary sewer and storm sewer

SURVEY INFORMATION

Horizontal and vertical control surveys were performed in year JUNE 1994 by BALZER AND ASSOCIATES, INC

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

Source of topographic mapping is BALZER AND ASSOCIATES, INC dated JUNE 1994

Boundary survey was performed by BALZER AND ASSOCIATE, INC dated JUNE 1994

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

COMMONWEALTH OF VIRGINIA
JAMES F. WINDER, JR.
No. 015761
6/6/94
PROFESSIONAL ENGINEER

SIGNATURE

LEGEND

Property Line
Right of way — R/W —
Centerline
Minimum Building line — MBL —
Exist storm sewer — 18 SD —
Exist sanitary sewer — 8 SAN —
Exist water main — 4 W —
Exist contour — 1045 —
Prop contour — 1045 —
Prop drainage d vide
Prop limits of clearing
Prop storm sewer — 24 SD —
Prop sanitary sewer — 8 — MH —
Prop wate main — VALVE — BLOWOFF — HYDRANT

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 the exact location. The contractor shall comply with 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 VDH&T standards

Lines shall be staked prior to construction

Water cost construction as per water construction standards

All [illegible] in accordance with AWWA C-900.

93-81A

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 on a minimum grade of 1/4 inch to a 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

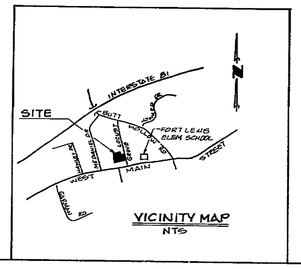
All trenches in existing or future highway right of ways shall be compacted according to VDH&T standards.

Lines shall be staked prior to construction

INDEX

SHEET 1 COVER SHEET
SHEET 2 DEVELOPMENT PLAN
SHEET 3 SANITARY SEWER DETAILS
SHEET 4 EROSION-SEDIMENT CONTROL DETAILS

AS-BUILT INFORMATION SHOWN IN BOXES
INFORMATION PROVIDED BY CONTRACTOR.



VICINITY MAP
NTS

COUNTY OF ROANOKE

NAME OF DEVELOPMENT: MICKEY EPPERLY - SANITARY SEWER EXTENSION

MAGISTERIAL DISTRICT(S): CATAWBA

I, Pamela C Epperly, 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.

(OWNER (name, address, telephone)) MICKEY EPPERLY
2570 WEST MAIN STREET
SALEM, VA 24153-1470

(DEVELOPER (name, address, telephone)) SAME

ENGINEER, ARCHITECT OR SURVEYOR (name, address, phone) BALZER AND ASSOCIATES, INC.
1208 CORPORATE CIRCLE
ROANOKE VA 24018 703-772-9580

TAX MAP NO(S) 55.10 BLOCK NO(S) 1 PARCEL NO(S) 11, 14

Sheet 1 of 4

SC-0396