ALAN AMOS, INC.
OFFICE & GARAGE FACILITIES
SITE DEVELOPMENT PLANS
WITH EROSION CONTROL MEASURES
ROANOKE, VIRGINIA

GENERAL CONSTRUCTION NOTES

SITEWORK

The Contractor shall be responsible for notifying the City of Roanoke and the Design Engineer at least 48 hours prior to starting any work on this project. All work shall be subject to inspection by City Inspectors and Design Engineer. The Contractor shall obtain all necessary permits.

The location of existing utilities across or along the line of proposed work is not necessarily shown in the plans and where shown, is approximate. The Contractor shall, on his own initiative and at no extra cost, locate all underground lines and structures as necessary. The Contractor shall be responsible for any damage to underground lines and structures. The Contractor shall comply with the State Water Works Regulations, Section 12.05.03 where lines cross.

Contractor shall call "Miss Utility" at 1-800-552-7001 prior to construction.

Power lines and poles, telephone lines and poles, and gas lines shall be protected from damage in accordance with the utility owners's instructions. The Contractor is responsible for contacting the utility owners, obtaining the proper protective measures for each individual construction location and for protecting utilities from damage. Any damage caused by the Contractor or the Contractor's construction operations shall be corrected by the Contractor at his expense.

The Contractor should notify the Engineer for a review should discrepancies be discovered at the site or on the drawings.

The Contractor shall notify the City of any field revisions or corrections to the approved plans prior to such construction.

The Contractor is responsible for verifying the most recent revision date of the plans prior to commencing with construction.

All lines to be staked prior to construction.

All dimensions shown are measured from outside face of building to face of curb.

EROSION CONTROL

All erosion and sediment control measures shall be accomplished in strict accordance with the Standards and Specifications of the Virginia Erosion and Sediment Control Handbook, latest edition.

Erosion control measures shall be the first step of construction.

The Contractor shall inspect all erosion control measures periodically and after every erodible rainfall. Any necessary repairs or cleanup shall be made immediately and at no extra cost.

The approving authority may add to, delete, relocate, or otherwise modify certain measures where field conditions warrant. Erosion Control Measures shown are not necessarily all that will be required. The approving authority shall be the City of Danville Inspectors and Engineers.

EARTHWORK

The Contractor shall comply with the latest revisions of the Virginia Occupational Safety and Health Standards for the Construction Industry as adopted by the Safety and Health Codes Commission of Virginia.

Earthwork shall be to the lines and grades shown. Proofrolling and compaction test shall be accomplished in the field to test all areas.

The Grading Contractor shall proof-roll the construction area with heavy-pneumatic equipment. All unsuitable material shall be undercut and recompacted with approved structural fill material.

Surplus excavated material shall be removed from the site and disposed of by the Grading Contractor, at his own expense.

The top 18" of all new fill material shall be compacted to 98% of maximum dry density as determined by ASTM D698 (Standard Proctor Method). All other fill shall be compacted to 95%.

All fill material shall be from a source approved by the testing company and shall be free of roots, organics and stones greater than 4" in diameter. Fill shall be placed in 8" layers and compacted as specified.

The Grading Contractor shall scarify all asphalt pavement before placing fill.

The Grading Contractor shall conform to elevations and dimensions shown to within a tolerance of plus or minus 0.10 feet. (Final graded surface under building slabs shall be within 3/8" when measured with a 10' straight edge.

GENERAL UTILITY NOTES

Natural gas line conflicts, should they exist, should be coordinated with Roanoke Gas Company (703-344-6651).

Temporary service, permanent service, and conflicts should be coordinated with Appalachian Power Company (703-985-2723).

Telephone service and conflicts should be coordinated with C & P Telephone of Virginia (703-342-2800).

Construction of water and sewer service shall be coordinated with the City of Roanoke (981-2601).

WATER NOTES

A minimum cover of three (3) feet is required over proposed lines.

All water lines shall be installed as shown on the plans. All pipes, valves, and fittings shall be in accordance with the latest edition of the AWWA standards and all local codes and standards.

Water lines shall be pressure tested, disinfected, and tested in accordance with AWWA Standard C601 (latest revision).

The Contractor shall provide all materials, equipment, and necessary taps and shall perform all work required for sterilization, testing, and flushing.

All trenches shall be thoroughly compacted to prevent settlement and damage to future pavement and structures.

Contractor is responsible for locating and uncovering all valve vaults after paving and adjusting to final grade if necessary.

SEWER NOTES

A minimum cover of three (3) feet is required over all lines.

All sanitary sewer work shall be constructed to the lines and grades indicated. Pipe bedding and backfill shall be carefully controlled. All work shall comply with local codes.

Installation shall begin at the downstream manhole and proceed upstream.

All trenches shall be thoroughly compacted to prevent settlement and damage to future pavement and structures.

Contractor is responsible for locating and uncovering all manholes after paving and adjusting to final grade if necessary.

PAVEMENT, CURBS, AND WALKS

Asphalt pavement for light duty areas shall be constructed with 6" compacted stone base (Virginia Department of Transportation standard 21, 21A, or 22 aggregate base) with prime coat. The surface shall be 2" asphalt concrete type S-5. All work shall comply with VDOT specifications in accordance with the latest revision of the VDOT Road and Bridge Specifications.

Concrete curb and gutter shall be VDOT standard CG-2 or CG-6 as indicated.

Concrete sidewalks shall be 4" thick, VDOT standard A-3 (3000 psi) concrete, installed in accordance with Section 505 of the latest revision of the VDOT Road and Bridge Specifications.

All areas not covered with pavement, sidewalk, or building shall receive topsoil and be grassed in accordance with the owner's specifications.

Erosion control measures shown are not necessarily all that will be required. See note above modifications where field conditions warrant. The approving authority shall be the City of Roanoke Inspectors and Engineers.

SITE DATA

OWNER/DEVELOPER: ALAN L. AMOS, INC.
1734 ELEVENTH STREET, N.E.
ROANOKE, VIRGINIA 24012
(703) 362-2252

ENGINEER: SHANKS ASSOCIATES, P.C.
313 LUCK AVENUE
ROANOKE, VIRGINIA 24016
(703) 343-6685

OFFICIAL TAX No(s): 3042101

ZONING: CURRENT: LM

ACREAGE: (TOTAL): 3.066 acre
(DISTURBED): 2.0 +/- acre

BUILDING & PARKING DATA

EXISTING USE: VACANT TRACT

BUILDING AREA: PROPOSED GARAGE 4,800 sf
FUTURE OFFICE 1,200 sf

BUILDING ADDRESS: 915 POCAHONTAS AVE., N.E.

PARKING SCHEDULE:

REQUIRED PARKING: 6,000 SF/400 = 15 SPACES

PROVIDED PARKING: 24 PROVIDED SPACES

PAVEMENT SECTION

THE PAVEMENT DETAILS ARE SHOWN ON SHEET C-2

NOTICE

ALL LANDOWNERS, DEVELOPERS, AND CONTRACTORS

Failure to comply with the construction procedure requirements listed below may result in the costly removal of structures, time delays, or the issuance of a stop work order:

CONSTRUCTION PROCEDURE REQUIREMENTS

CITY INSPECTIONS: To insure the coordination of timely and proper inspections, a preconstruction conference shall be initiated by the Contractor with the City Planning Department. Call 703-981-2250 to arrange a conference at least three (3) days prior to anticipated construction.

STREET OPENING PERMIT: Prior to the commencement of any digging, alteration, or construction within the public right-of-way, (streets, alleys, public easements) a street opening permit shall be applied for and obtained by the Contractor from the City of Roanoke.

PLANS AND PERMITS: A copy of the plans approved by the City (signed by the proper City Officials) and all permits issued by the City shall be available at the construction site at all times of ongoing construction.

LOCATION OF UTILITIES: The Contractor shall verify the location of all existing utilities prior to the commencement of any construction.

CONSTRUCTION ENTRANCE: The Contractor shall install an adequate construction entrance for all construction related egress from the site. Size and composition of the construction entrance shall be determined by the City plan inspector.

STREETS TO REMAIN CLEAN: It shall be the responsibility of the Contractor to insure that the public street adjacent to the construction entrance remains free of mud, dirt, dust, and/or any type of construction materials or litter at all times.

BARRICADES/DITCHES: The Contractor shall maintain the integrity of all excavated ditches and shall furnish and insure that all barricades proper and necessary for the public are in place.

SEWER AND PAVEMENT REPLACEMENT: Construction of sanitary sewers and the replacement of pavement shall be in accordance with approved standards and specifications of the City of Roanoke.

APPROVED PLANS/CONSTRUCTION CHANGES: Any change or variation from the construction design as shown on the officially approved plans shall be approved by the City Engineer prior to said changes or variation prior to the changes being made.

FINAL ACCEPTANCE/CITY: The Developer or Contractor shall furnish the City of Roanoke Engineering Department with a final correct set of AS-Built Plans prior to final acceptance by the City.

SHEET INDEX

FLOOD NOTE: THIS PROPERTY DOES NOT LIE WITHIN THE LIMITS OF A 100 YEAR FLOOD BOUNDARY AS DESIGNATED BY CURRENT FEMA MAPS.

APPROVALS:

AGENT TO THE PLANNING COMMISSION — DATE

CITY ENGINEER — DATE

LEGEND

ROADS

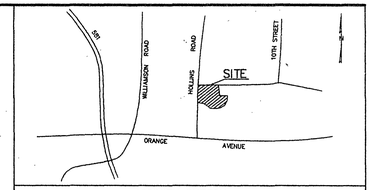
EXISTING		PROPOSED
	CULVERT	
	DROP INLET	
	FACE OF CURB	
	CURB & GUTTER	
	PAVEMENT	
	PAVED DITCH	
	JUTE MESH DITCH	
	EARTH DITCH	
(EXISTING)	BENCH MARK	
T/C (1100.0)	SPOT ELEVATIONS	T/C 1100.0
	CONTOUR	

SANITARY SEWER

	SEWER LINE	
	SEWER CONNECTION	
	DUCTILE IRON PIPE	

WATER

8" W	WATER LINE	8" W
	VALVE	
	REDUCER	
	PLUG	
	TEE OR CROSSING	
	FIRE HYDRANT (COMPLETE)	
	SINGLE RESIDENTIAL CONNECTION	
	DOUBLE RESIDENTIAL CONNECTION	



VICINITY SKETCH
NOT TO SCALE

MATERIAL NOTES

1. All construction and materials shall conform with City standards and specifications.
2. Minimum cover above water line shall be 36 inches.
3. PVC plastic sewer pipe shall be ASTM D-3034 SDR 35 (minimum).
4. Ductile iron sewer pipe shall be ANSI/AWWA C-151, Class 52 minimum.
5. PVC plastic water line shall be AWWA C-900, Table 2, Class 150 (minimum).
6. Ductile iron water line shall be ANSI/AWWA C-151, Class 52 up to 12" and Class 51 for larger pipe.
7. All storm sewer shall be ASTM C-76, Class III except as noted.
8. All drainage structures shall be precast unless otherwise noted.

COMMERCIAL ENTRANCE NOTES

1. Standard commercial "Entrance" shall have a minimum curb radius (R) of 7 1/2 feet.
1A. Minimum Entrance width shall be 12 feet.
2. Where curb & gutter already exists both curb & gutter shall be removed. If proposed entrance falls within five (5) feet of an existing joint, removal & reconstruction shall be to that joint. Any concrete removed at other than an existing joint shall be cut with a mechanical saw specifically manufactured for that purpose; this also shall apply to street pavement.
3. Where sidewalk exists or is to be constructed across driveways, the thickness thereof must correspond with the thickness of the entrance.
4. Whenever "Entrance" exceeds twenty-four (24) feet in width, a 1/2" premolded expansion joint filler shall be installed through the center perpendicular to flow line.
5. Finish "Entrances" shall have a "course broom finish" running parallel to flow line.
6. Curing shall be accomplished by the use of a liquid membrane seal containing white pigment applied at the rate of one (1) gallon per 150 square feet.
7. All "Entrance Ways" shall be constructed according to VDoT specifications.

SIDEWALK CONSTRUCTION

1. All concrete shall be Class A 3000 P.S.I.
2. Spacing for expansion joints shall be the same for sidewalks as that for "Curb & Gutter".
3. Sidewalk Finish: sidewalk shall first be smooth trowelled, the ending with a "Light Broom Finish" unless otherwise noted.
4. When sidewalk abuts Curb or Building, a 1/2" Premolded Expansion Joint is to be used.
5. Curing shall be accomplished by the use of a liquid membrane seal containing white pigment, applied at the rate of one (1) gallon per 150 square feet.
6. All concrete "Curb & Gutter" and "Sidewalks" shall be constructed according to VDoT specifications.

EROSION and SEDIMENT CONTROL DEVICES
LEGEND

KEY	DEVICE TITLE
CE	Construction Entrance
CRS	Construction Road Stabilization
SF	Silt Fence
IP	Inlet Protection
FB	Fill Diversion
ST	Sediment Trap
SB	Sediment Basin
SCC	Stormwater Conveyance Channel
OP	Outlet Protection
RR	Riprap
CD	Check Dams
SR	Surface Roughening
TS	Temporary Seeding
PS	Permanent Seeding
MU	Mulching

VIRGINIA
Erosion and Sediment Control Law

MINIMUM STANDARDS FOR CONTROLLING EROSION AND SEDIMENTATION

MS-1. Stabilization of Denuded Areas

Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant (undisturbed) for longer than 30 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.

Soil stabilization refers to measures which protect soil from the erosive forces of raindrop impact and flowing water. Applicable practices include vegetative establishment, mulching, and the early application of gravel base on areas to be paved.

MS-2. Stabilization of Soil Stockpiles

During construction of the project, soil stock piles shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all stockpiles on site as well as soil intentionally transported from the project site.

MS-3. Permanent Vegetation

A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that, in the opinion of the local program administrator or his designated agent, is uniform, mature enough to survive and will inhibit erosion.

MS-4. Timing and Stabilization of Sediment Trapping Measures

Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.

MS-5. Stabilization of Earthen Structures

Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.

MS-6. Sediment Basins

Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The sediment basin shall be constructed to accommodate the anticipated sediment loading from the land-disturbing activity.

MS-7. Cut and Fill Slopes

Cut and fill slopes shall be constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.

A. Roughened soil surfaces are generally preferred to smooth surfaces on slopes (see SURFACE ROUGHENING, E & S Handbook).

B. DIVERSIONS should be constructed at the top of long steep slopes which have significant drainage areas above the slopes. Diversions or terraces may also be used to reduce slope lengths.

MS-8. Concentrated Runoff Flow Down Cut or Fill Slopes

Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.

MS-9. Water Seeps From a Slope Face

Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.

MS-10. Storm Sewer Inlet Protection

All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.

MS-11. Stabilization of Outlets

Before newly constructed stormwater conveyance channels are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.

MS-12. Work in Live Watercourses

When work in live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials.

MS-13. Crossing a Live Watercourse

When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary stream crossing constructed of nonerodible material shall be provided.

MS-14. Applicable Regulations

All applicable federal, state and local regulations pertaining to working in or crossing live watercourses shall be met.

MS-15. Stabilization of Bed and Banks

The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.

MS-16. Underground Utility Construction

Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

a. No more than 500 linear feet of trench may be opened at one time.

b. Excavated material shall be placed on the uphill side of trenches.

c. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.

MS-17. Construction Access Routes

Where construction vehicle access routes intersect paved public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto a public road surface, the road shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual subdivision lots as well as to larger land-disturbing activities.

MS-18. Temporary Erosion & Sediment Control Measure Removal

All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after temporary measures are no longer needed, unless otherwise authorized by the local program administrator.

MS-19. Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff. Contractor shall be responsible for obtaining copy of approved Erosion and Sediment Control Plan and adhere to same. The Virginia Erosion and Sediment Control Handbook shall be used in addition to the approved narrative and plan.

COMMONWEALTH OF VIRGINIA
FRED O. SHANKS, III
No. 17201
11/15/96
PROFESSIONAL ENGINEER

DATE	REVISIONS
11/08/95	REVISIONS PER ROANOKE CITY COMMENTS
01/15/96	REVISIONS PER DEVELOPER'S REQUEST

DATE: 10-19-95
DRAWN BY: WMW
DESIGNED BY: WMW
CHECKED BY: FOS
SCALE: AS NOTED

SHANKS ASSOCIATES, P.C. - ENGINEERS - SURVEYORS - PLANNERS
313 LUCK AVENUE ROANOKE, VIRGINIA 24016 (703) 343-6685

ALAN AMOS FACILITY
COVER SHEET

DEVELOPMENT PLAN APPROVED
REVISED

	Date
Agent, Planning Commission	2-22-96
Development Engineer	2-22-96
Zoning Administrator	2-22-96

Any changes to this approved plan must be coordinated with the Agent to the Planning Commission and revisions approved prior to construction.

SHEET NUMBER C-1 OF C-4
JOB NUMBER 795047