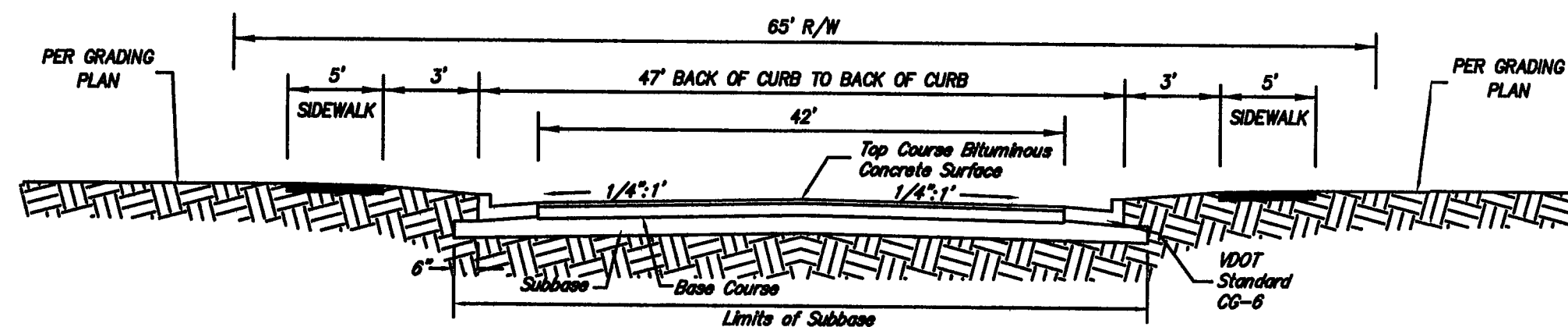


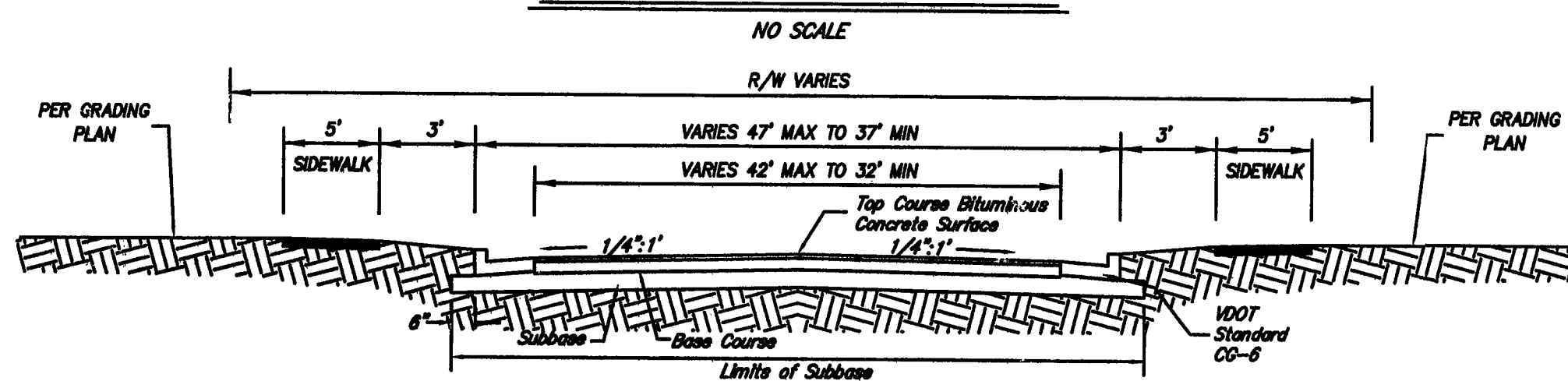
PAVEMENT SPECIFICATIONS

STREET NAME	FROM STATION TO STATION	VPD	PAVEMENT WIDTH	R/W	PAVEMENT SPECIFICATION
WILLOW WALK DRIVE	10+12 TO 16+97	870	VARIES	VARIES	220 PSY ASPH. CONCRETE (2"), TYPE SM-9.5A 3" BM-25.0, ASPHALTIC CONCRETE 8" AGGREGATE BASE-21B
WHISPERING WILLOW LANE	30+16 TO 33+40	400	26'	50'	220 PSY ASPH. CONCRETE (2"), TYPE SM-9.5A 10" AGGREGATE BASE-21B, -- SEE NOTE BELOW
SPRING WILLOW LANE	40+13 TO 43+23	270	26'	50'	220 PSY ASPH. CONCRETE (2"), TYPE SM-9.5A 10" AGGREGATE BASE-21B, -- SEE NOTE BELOW
WILLOW PARK DRIVE	CUL-DE-SAC TO 61+81	60	26'	50'	220 PSY ASPH. CONCRETE (2"), TYPE SM-9.5A 8" AGGREGATE BASE-21B, -- SEE NOTE BELOW
WILLOW PARK DRIVE	61+81 TO 65+40	240	26'	50'	220 PSY ASPH. CONCRETE (2"), TYPE SM-9.5A 10" AGGREGATE BASE-21B, -- SEE NOTE BELOW

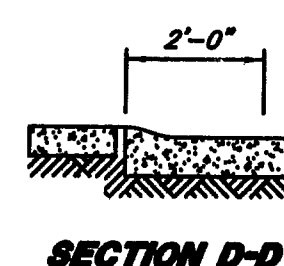
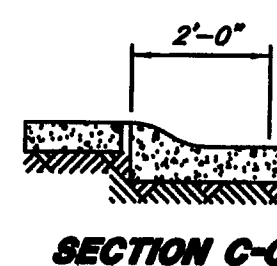
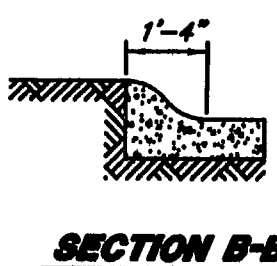
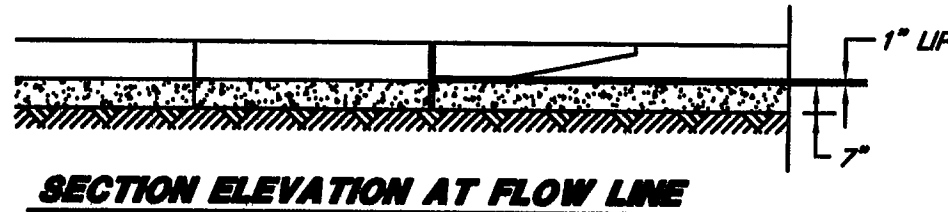
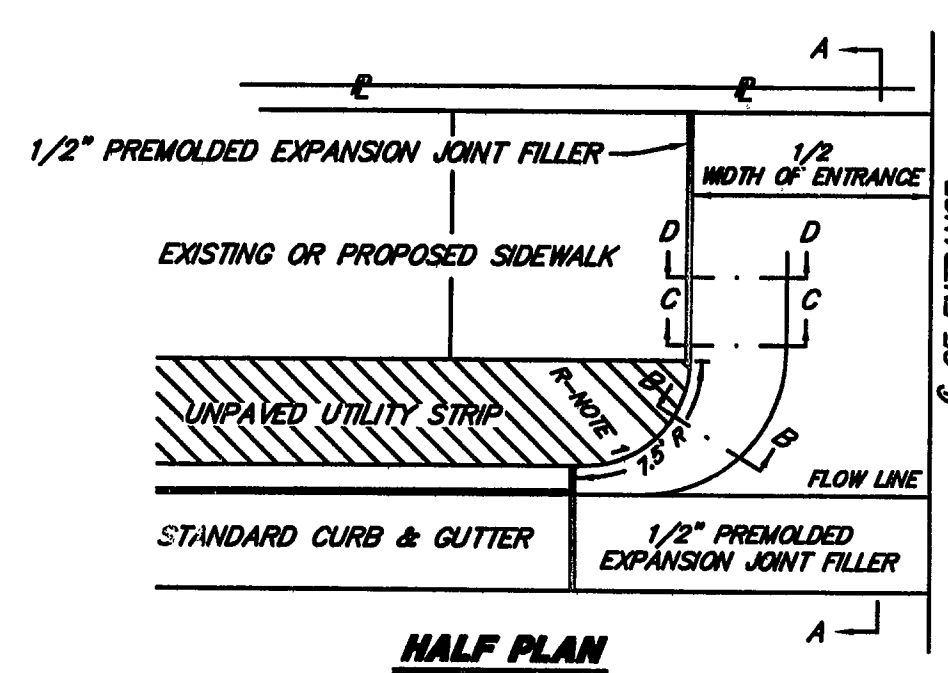
- NOTE:
 1. THE SIZE 21B AGGREGATE SHALL BE PRIMED WITH APPROXIMATELY 0.35 GAL/S.Y. OF RC-250 ASPHALT AND COVERED WITH 16 TO 18 LBS/S.Y. OF SIZE 8-P AGGREGATE BEFORE PLACING OF THE 3"-9.5A (NOT REQUIRED FOR THOUSAND DANK LANE OR DRIVE).
 2. DESIGN WAS BASED ON AN ASSUMED CBR OF 7 AND AN ASSUMED RESILIENCY FACTOR OF 2. CONTRACTOR SHALL VERIFY THE ACTUAL CBR AND RESILIENCY FACTOR FOR MATERIAL USED AND, IF LESS THAN 7, SHALL CHECK ITS EFFECT ON THE DESIGN AND IF NECESSARY SUBMIT TO CITY FOR APPROVAL A REVISED PAVEMENT DESIGN.



WILLOW WALK DR, NW
STA. 10 + 73.67 TO STA. 12 + 13.65



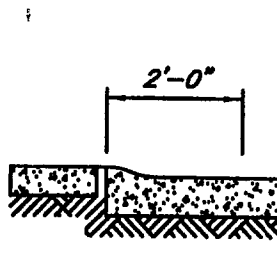
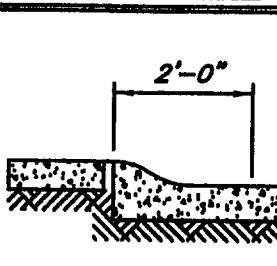
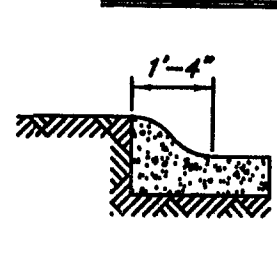
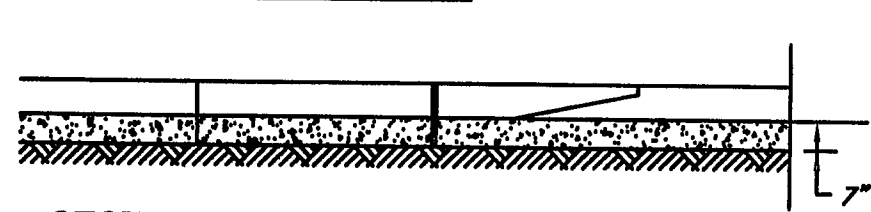
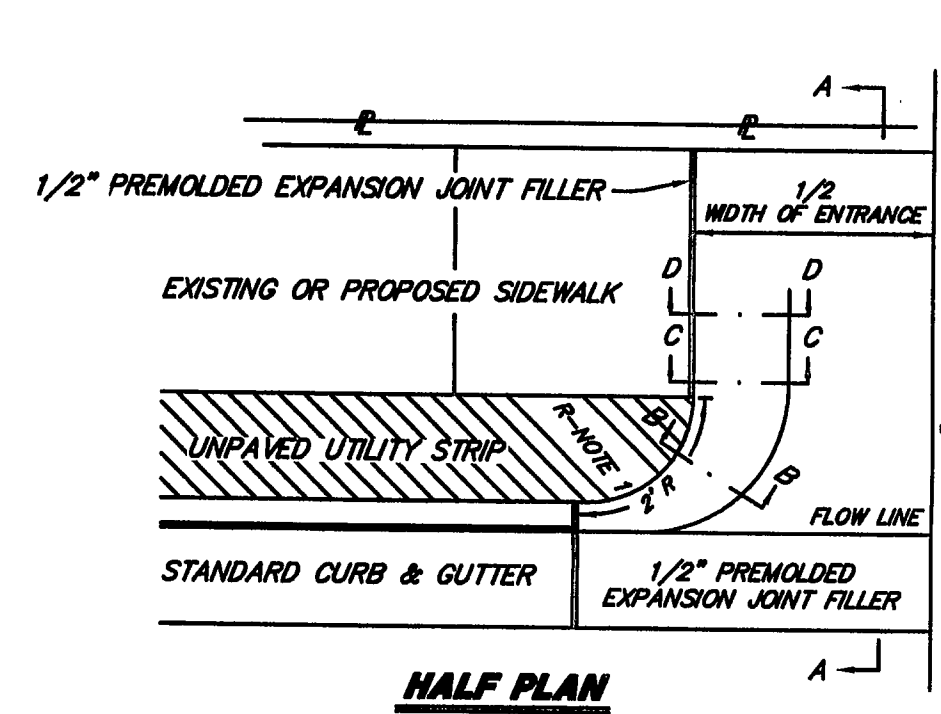
WILLOW WALK DR, NW
STA. 12 + 13.65 TO STA. 13 + 55.58



GENERAL NOTES:

- Standard commercial "Entrance" shall have a minimum curb radius (R) of 7 1/2 feet.
- Minimum Entrance width to be 12 feet.
- 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.
- Where sidewalk exists or is to be constructed across driveways the thickness thereof must correspond with the thickness of the entrance.
- Whenever "Entrances" exceeds twenty-four (24) feet in width a 1/2" premolded expansion joint filler shall be installed through the center perpendicular to flow line.
- Finish "Entrances" shall have a "coarse broom finish" running parallel to flow line.
- 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.
- All "Entrance Ways" shall be constructed according to City of Roanoke specifications and to line and grades established by the City Engineering Department.
- Entrances exceeding 30 feet in width shall be approved by the City Manager.

CITY OF ROANOKE COMMERCIAL
"ENTRANCE" STANDARD



GENERAL NOTES:

- Standard residential "Entrance" shall have a curb radius (R) of 2 feet.
- Minimum Entrance width to be 12 feet at P.T. of radius return.
- 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.
- Where sidewalk exists, or is to be constructed across driveways, the thickness thereof must correspond with the thickness of the entrance.
- Whenever "Entrances" exceeds twenty-four (24) feet in width a 1/2" premolded expansion joint filler shall be installed through the center perpendicular to flow line.
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- All "Entrance Ways" shall be constructed according to City of Roanoke specifications and to line and grades approved by the City Engineering Department.
- Entrances exceeding 30 feet in width shall be approved by the City Manager.

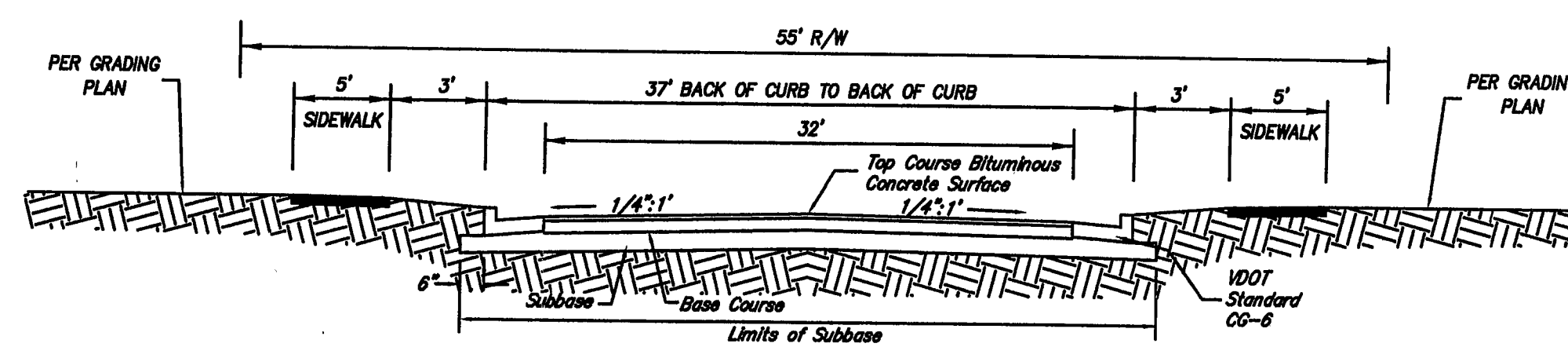
CITY OF ROANOKE RESIDENTIAL
"ENTRANCE" STANDARD

Willow Walk CBR Tests

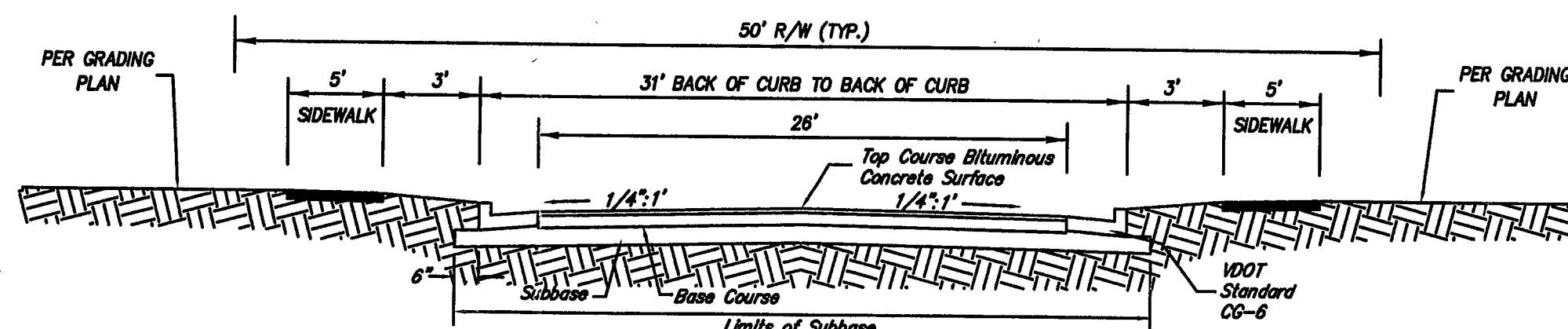
Willow Walk Drive	3 tests; one at each intersection
Whispering Willow Lane	1 test, midway
Spring Willow Drive	1 test, midway
Willow Park Drive	3 test; at cul-de-sac, one at each intersection

Total recommended tests: 8 tests

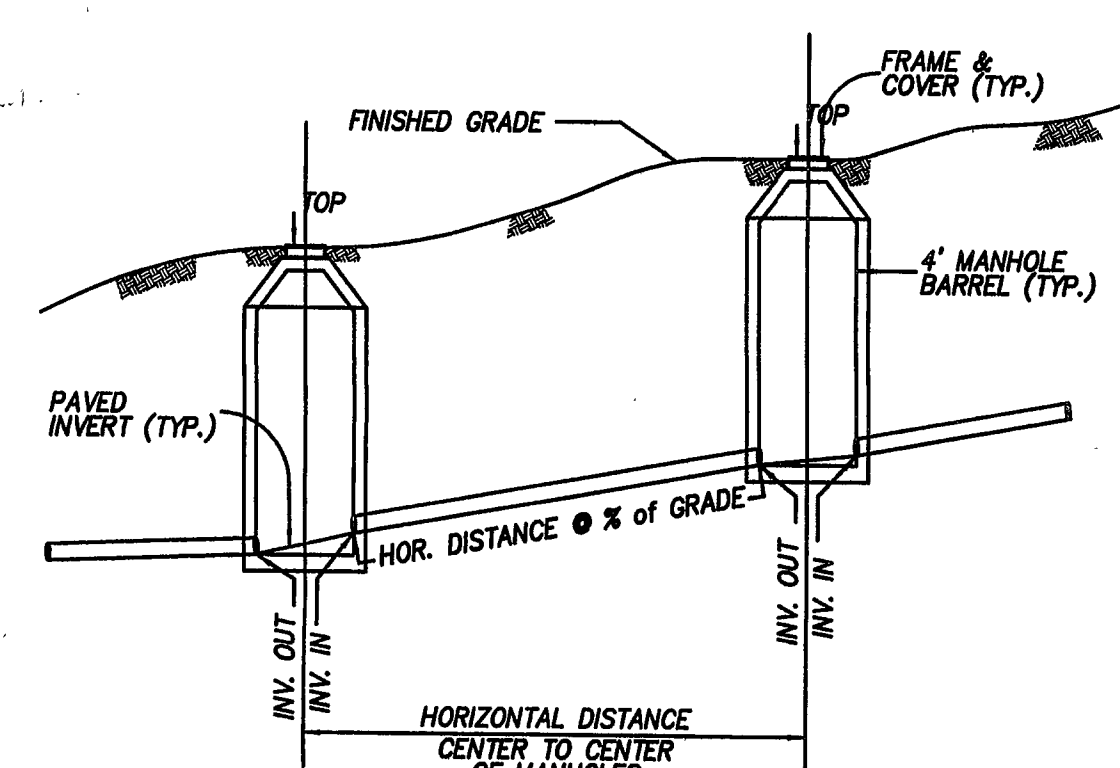
Exhibit A



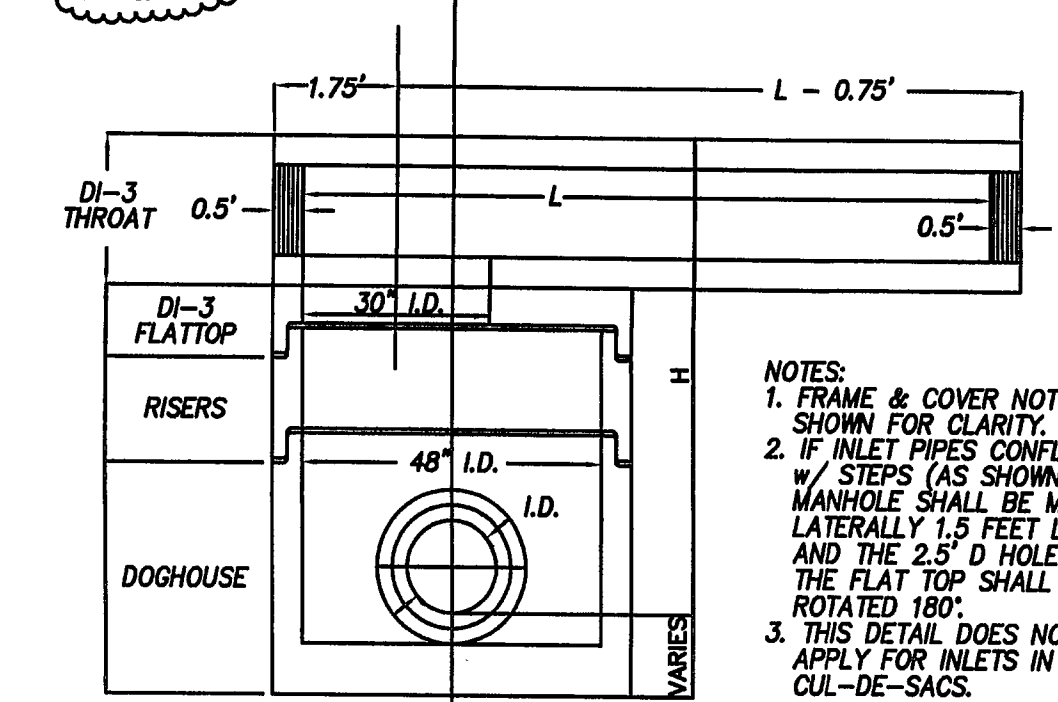
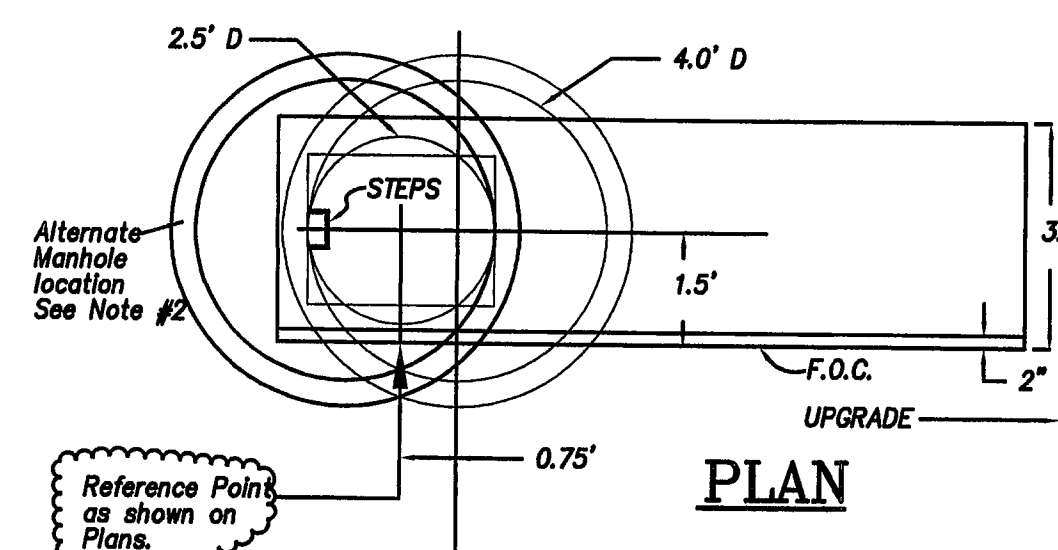
WILLOW WALK DR, NW
STA. 13 + 55.58 TO STA. 15 + 75.69



TYPICAL STREET SECTION
FOR ALL OTHER STREETS



SANITARY SEWER
HORIZONTAL AND SLOPE DISTANCE DETAIL



LOCATION DETAIL FOR DI-3B (PRECAST)

SITE AND ZONING TABULATIONS

CURRENT ZONING: RS-3 RESIDENTIAL SINGLE-FAMILY DISTRICT
 PROPOSED USE: SINGLE FAMILY DETACHED DWELLINGS
 SITE ACREAGE: 11.404 ACRES
 PROPOSED NUMBER OF LOTS: 44
 MINIMUM LOT AREA REQUIRED: 5,000 S.F.
 MINIMUM FRONTAGE REQUIRED: 50'
 MINIMUM SETBACKS REQUIRED:
 FRONT: 30'
 SECONDARY FRONT: 15'
 REAR: 25'
 SIDE YARD: COMBINED WIDTH OF BOTH SIDE YARDS SHALL BE 20% OF LOT FRONTAGE OR 10', WHICHEVER IS LEAST. NO INDIVIDUAL SIDE YARD SHALL BE LESS THAN 4'.
 MAXIMUM HEIGHT ALLOWED: 35' (PRINCIPAL STRUCTURE)
 ACTUAL MAXIMUM HEIGHT: 30'
 MAXIMUM LOT COVERAGE: 35%

GENERAL NOTES

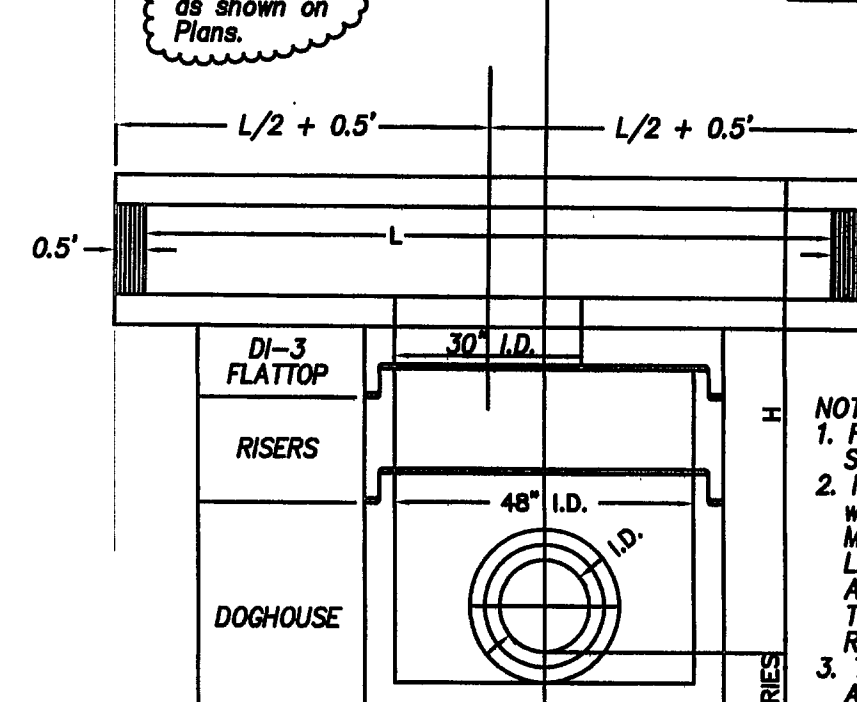
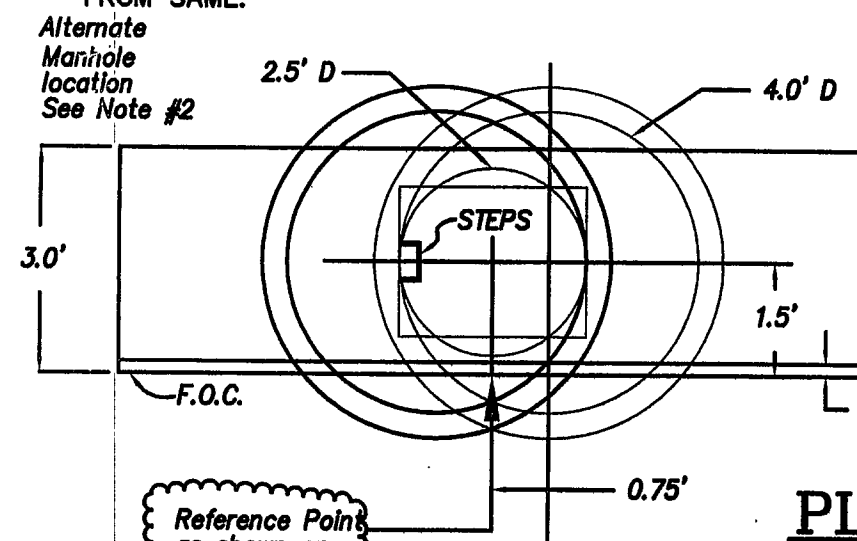
- THE PROPERTY SHOWN ON THESE PLANS IS LOCATED AT ROANOKE CITY TAX ASSESSMENT MAP No. 8410112 THROUGH 8410116.
- OWNER/DEVELOPER: BLACKSTOCK, INC. 4358 STARKY ROAD, SUITE 3A ROANOKE, VA 24014
- THE BOUNDARY IS THE DIRECT RESULT OF A FIELD SURVEY BY LUMSDEN ASSOCIATES, P.C. IN 2005.
- TOPOGRAPHY DATA IS BASED ON A FIELD SURVEY BY LUMSDEN ASSOCIATES, P.C. IN 2005.
- NO TITLE REPORT WAS FURNISHED FOR THIS PROPERTY.
- THE DEVELOPMENT SHOWN ON THESE PLANS SHALL BE SERVED BY WESTERN VIRGINIA WATER AUTHORITY WATER AND SEWER.
- THE PROPERTY ON THESE PLANS SHALL BE ACCESSED BY PUBLIC ROADS.
- ANY PRIVATE SIGNS SHALL BE SET A MINIMUM OF 15 FEET OFF OF THE RIGHT OF WAY. A SEPARATE SIGN PERMIT WILL BE REQUIRED.

CONSTRUCTION NOTES

- ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE WESTERN VIRGINIA WATER AUTHORITY, THE CITY OF ROANOKE AND OR THE VIRGINIA DEPARTMENT OF TRANSPORTATION.
- ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE WESTERN VIRGINIA WATER AUTHORITY AND THE CITY OF ROANOKE INSPECTORS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED FROM ANY AUTHORITY ISSUING PERMITS.
- THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
- SEE VDOT ROAD AND BRIDGE STANDARDS FOR CONCRETE CURB AND STORM DRAINAGE DETAILS.
- THE CONTRACTOR AND OR OWNER SHALL PROVIDE A STORAGE CONTAINER FOR TEMPORARY STORAGE AND DISPOSAL OF LAND CLEARANCE DEBRIS AND BUILDING MATERIALS. ON-SITE BURIAL OF MATERIAL SHALL NOT BE PERMITTED.
- FOR EXISTING AND PROPOSED EASEMENT INFORMATION, SEE THE RECORD PLAT.
- ALL WATER AND SANITARY SEWER FACILITIES ARE TO BE INSTALLED ACCORDING TO THE WESTERN VIRGINIA WATER AUTHORITY WATER AND SANITARY SEWER DESIGN AND CONSTRUCTION STANDARDS.
- A QUALIFIED GEOTECHNICAL ENGINEER SHALL PROVIDE OWNER CBR, COMPACTION, AND LIFT THICKNESS TESTING RESULTS TO ENSURE STRUCTURAL STABILITY OF STREET PAVEMENTS. CBR TEST RESULTS TO BE GIVEN TO THE CITY TRAFFIC ENGINEER FOR APPROVAL OF PAVEMENT DESIGNS.

GRADING NOTES

- AREAS TO BE GRADED SHALL BE CLEARED OF ALL VEGETATION, STRUCTURES, AND OTHER PHYSICAL FEATURES IN PREPARATION OF GRADING.
- TOPSOIL SHALL BE REMOVED FROM THE CLEARED AREA AND STOCKPILED FOR FUTURE USE.
- FILL MATERIAL SHALL BE FREE FROM ORGANIC MATTER AND ROCKS LARGER THAN 6 INCHES IN DIAMETER.
- FILL MATERIAL SHALL BE PLACED AND COMPACTED IN EIGHT (8) INCH LOOSE LIFTS AND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF THE MATERIAL'S MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698, STANDARD PROCTOR. MAINTAIN MOISTURE CONTENT OF FILL MATERIAL WITHIN THREE (3) PERCENT OF OPTIMUM TO ATTAIN REQUIRED COMPACTION DENSITY.
- NO SUBSURFACE SOILS INFORMATION HAS BEEN FURNISHED TO THE DESIGNING ENGINEER (LUMSDEN ASSOCIATES, P.C.). A QUALIFIED GEOTECHNICAL ENGINEER, LICENSED IN THE STATE OF VIRGINIA, SHOULD BE CONSULTED CONCERNING SOIL STABILITY, SLOPE STABILIZATION, SOIL COMPACTION, TESTING, AND OTHER SOIL CHARACTERISTICS. LUMSDEN ASSOCIATES ASSUMES NO RESPONSIBILITY OR LIABILITY RELATING TO FAILURES RESULTING FROM SAME.



LOCATION DETAIL FOR DI-3A AND DI-3C (PRECAST)

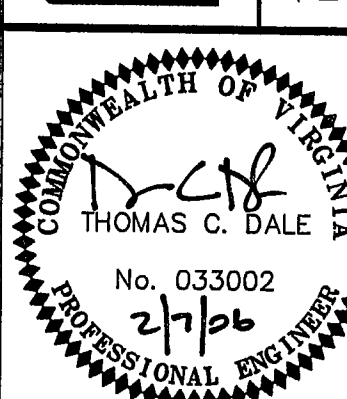
NOTES AND
DETAILS

SECTION NO. 1
"WILLOW WALK"
PREPARED FOR
BLACKSTOCK, INC.
SITUATED ALONG COVE ROAD, N.W.
THE CITY OF ROANOKE, VIRGINIA

REVISIONS	DATE	DESCRIPTION
1		
2		
3		
4		
5		

DATE: FEBRUARY 7, 2006
 SCALE: NONE
 COMMISSION NO: 2004-367
 SHEET 4 OF 16

LUMSDEN ASSOCIATES, P.C.
ENGINEERS-SURVEYORS-PLANNERS
ROANOKE, VIRGINIA



PHONE: (540) 774-4411
 FAX: (540) 772-9445
 E-MAIL: MAIL@LUMSDENPC.COM