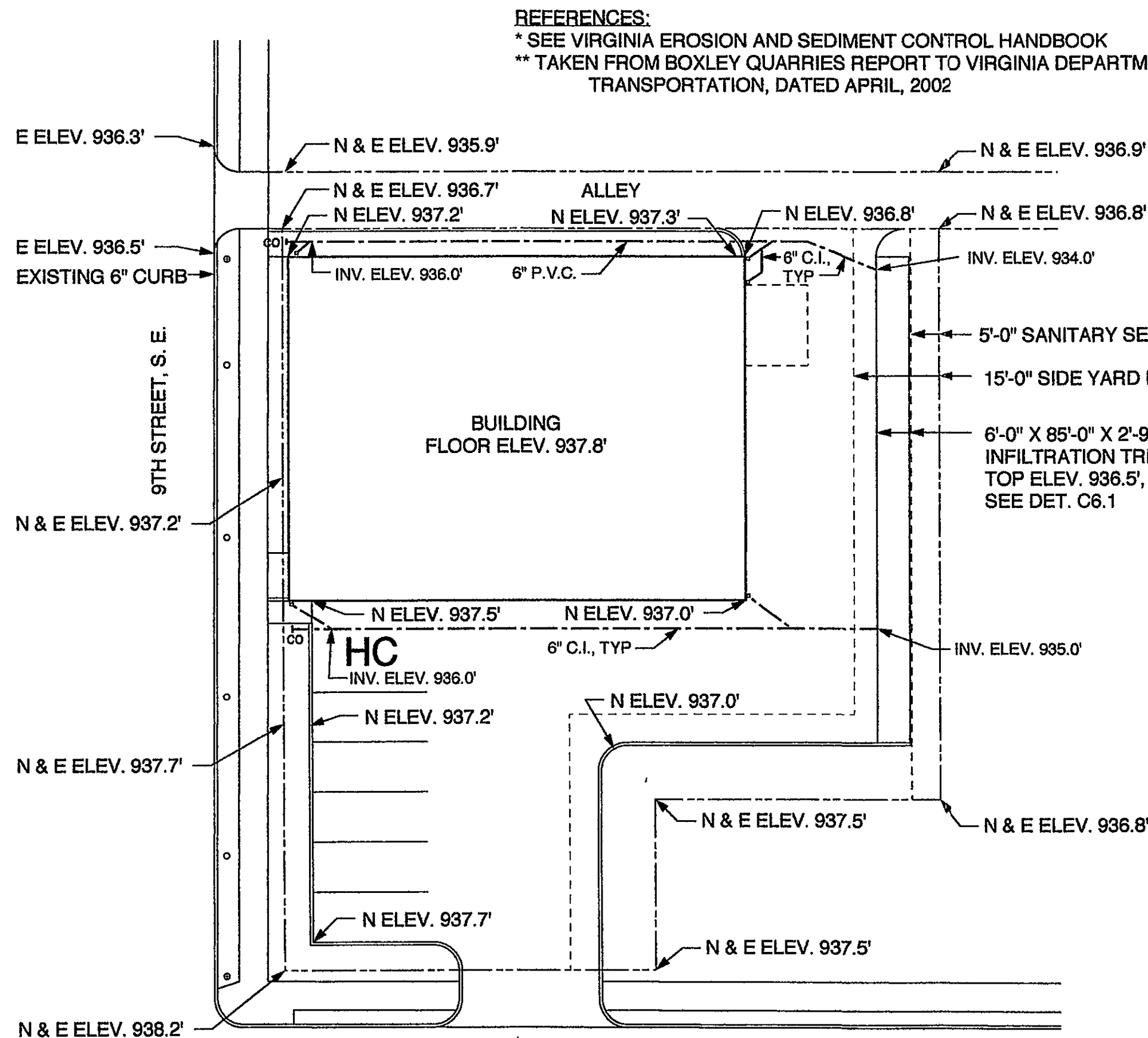




REFERENCES:
* SEE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK
** TAKEN FROM BOXLEY QUARRIES REPORT TO VIRGINIA DEPARTMENT OF TRANSPORTATION, DATED APRIL, 2002

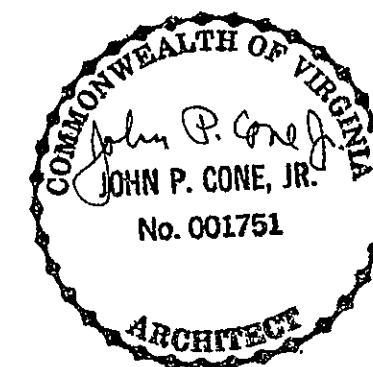
RUNOFF MANAGEMENT CALCULATIONS* :

TOTAL SITE AREA:	13,450 SQUARE FEET
2 YEAR 24 HOUR STORM:	3.5 INCHES (PLATE 5-19")
RUNOFF @ CN = 100:	3.5 INCHES (PLATE 5-22")
RUNOFF @ CN = 80:	1.6 INCHES (PLATE 5-22")
10 YEAR 24 HOUR STORM:	5.0 INCHES (PLATE 5-20")
RUNOFF @ CN = 100:	5.0 INCHES (PLATE 5-22")
RUNOFF @ CN = 80:	2.9 INCHES (PLATE 5-22")
PREVIOUS LAND USE:	
4 HOUSES:	3,504 SQUARE FEET (CN = 100)
LAWNS (ASSUMED):	9,946 SQUARE FEET (CN = 80)
2 YEAR RUNOFF @ CN = 100:	1,022 CUBIC FEET
2 YEAR RUNOFF @ CN = 80:	1,326 CUBIC FEET
TOTAL 2 YEAR RUNOFF:	2,348 CUBIC FEET
10 YEAR RUNOFF @ CN = 100:	1,460 CUBIC FEET
10 YEAR RUNOFF @ CN = 80:	2,404 CUBIC FEET
TOTAL 10 YEAR RUNOFF:	3,864 CUBIC FEET
PROPOSED LAND USE:	
IMPERVIOUS AREAS:	10,516 SQUARE FEET (CN = 100)
LANDSCAPING:	2,934 SQUARE FEET (CN = 80)
2 YEAR RUNOFF @ CN = 100:	3,067 CUBIC FEET
2 YEAR RUNOFF @ CN = 80:	391 CUBIC FEET
TOTAL 2 YEAR RUNOFF:	3,458 CUBIC FEET
10 YEAR RUNOFF @ CN = 100:	4,382 CUBIC FEET
10 YEAR RUNOFF @ CN = 80:	709 CUBIC FEET
TOTAL 10 YEAR RUNOFF:	5,091 CUBIC FEET
INCREASE IN RUNOFF:	
2 YEAR STORM:	1,110 CUBIC FEET
10 YEAR STORM:	1,227 CUBIC FEET
ASSUME 6'-0" X 85'-0" X 2'-9" DEEP INFILTRATION TRENCH	
AERA = 510 SQUARE FEET	
VOLUME OF TRENCH = 1,402 CUBIC FEET	
RATE OF EXFILTRATION = 0.05 FEET PER HOUR	
VOLUME OF EXFILTRATION IN 24 HOURS = 612 CUBIC FEET	
VOLUME NEEDING TO BE RETAINED = 1,227 - 612 = 615 CUBIC FEET	
TO RETAIN INDICATED RUNOFF VOLUME IN PIT FILLED WITH ROCK:	
USE VDOT GRADE 8/8P CLEAN CRUSHED ROCK WITH 47 % VOIDS**	
PIT REQUIRED TO RETAIN 10 YEAR INCREASE: 1,309 CUBIC FEET	
THEREFORE 6'-0" X 85'-0" X 2'-9" DEEP INFILTRATION TRENCH IS ADEQUATE	

THE EXISTING ELEVATION AT THE INTERSECTION OF 9TH & DALE IS GIVEN BY THE ROANOKE CITY ENGINEER AS 937.8'

SITE PLAN SCALE: 1" = 20'-0"

NOTE: ALL PIPING TO CONFORM TO THE NATIONAL PLUMBING CODE.



SUPER "D" DRUG STORE PHARMACY

414 NINTH ST., S.E., ROANOKE, VA.

STORM WATER MANAGEMENT PLAN

John P. Cone, Jr. Architect
Salem, Virginia

August, 2004

C-4