

Well No.	Approximate Existing Ground Surface Elevation	Proposed Well Bottom Elevation	Well Depth (ft.)
P-1	1600	1200	400
P-2	1515	1270	245
P-3	1600	1350	250
P-4	1500	1250	270
P-5	1450	1200	250
P-6	1600	1200	400

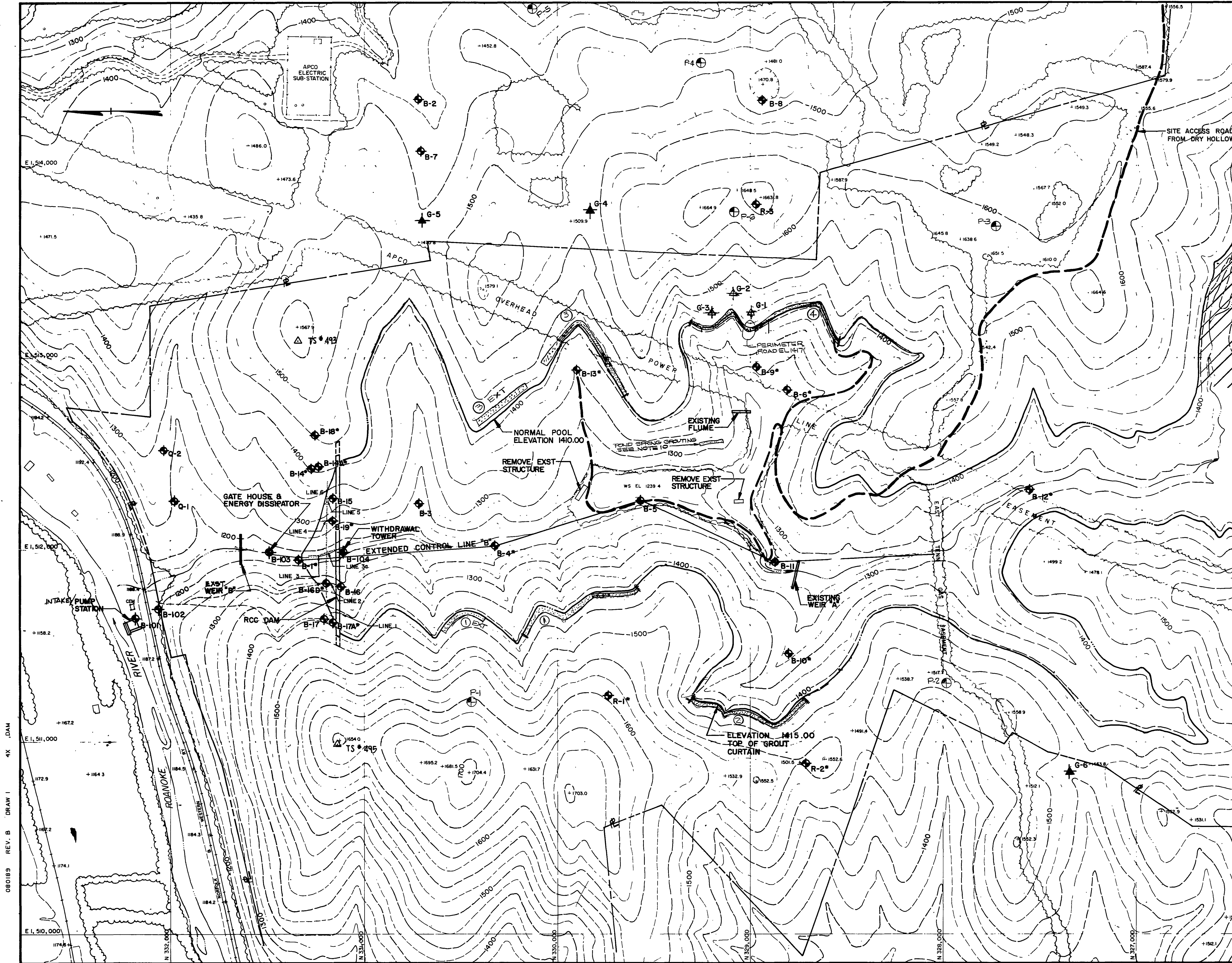
- NOTES**
- CURTAIN GROUTING SHALL BE ACCOMPLISHED IN 2 PHASES. PHASE I SHALL BE COMPLETED PRIOR TO FILLING THE RESERVOIR. PHASE I CONSISTS OF LOCATIONS 1 THRU 4. LOCATION OF PHASE II GROUTING WILL BE DETERMINED AFTER RESERVOIR FILLING.
 - PROVIDE CONSTRUCTION ACCESS TO RESERVOIR AREAS TO BE GROUTED. ESTABLISH A BENCH AT ELEVATION 1415 FOR GROUTING ACCESS. BENCHING FOR BOTH PHASE I AND II GROUTING SHALL BE DONE DURING PHASE I TO ALLOW ENGINEER TO GEOLOGICALLY MAP BENCH CUT.
 - GROUT CURTAIN SHALL BE CONSTRUCTED BETWEEN ELEVATION 1415 AND A POINT 50 FEET BELOW STREAM VALLEY.
 - GROUT HOLE DEPTH AND SPACING SHALL BE AS DIRECTED BY THE ENGINEER. ESTIMATED QUANTITIES FOR BID PURPOSES ARE PROVIDED IN TABLE I.

TABLE I
Estimated GROUT Hole Lengths

Area	Line	20 Ft Drill Hole Spacing	10 Ft Drill Hole Spacing	No. Holes	Drill Hole Depth	V.F. Drilling	GROUT Volume (c)
1	1	25	13	38	250	9,500	5,925
1	2	48	13	13	250	3,250	4,875
2	1	48	25	73	250	18,250	11,125
2	2	25	25	25	250	6,250	9,375
3	1	25	13	38	250	9,500	5,925
3	2	13	13	13	250	3,250	4,875
4	1	55	28	83	250	20,750	12,200
4	2	28	28	28	250	7,000	10,500
Sub Totals				311		77,750	64,800
Credit for Test GROUTING ZONE				(21)		(4,625)	(6,025)
Total: Phase I GROUTING				290		73,125	58,775

- CURTAIN GROUTING SHALL BE PERFORMED IN A SINGLE OR DOUBLE LINE OF GROUT HOLES. THE INITIAL SPACING SHALL BE AS INDICATED IN TABLE I. ADDITIONAL HOLES IF REQUIRED, SHALL BE SPLIT SPACED WHERE DIRECTED ALONG THE GROUT HOLE LINE.
- ⊙ DENOTES EXISTING BORING LOCATIONS.
- ⊙ DENOTES SEISMIC LOCATION.
- G-1 DENOTES EXISTING WATER MONITORING WELL
- G-4 DENOTES PROPOSED WATER MONITORING WELL
- REFERENCE: SCHNABEL ENGR ASSOC REPORT, POND SPRING DRILLING AND GROUTING, FEB 4, 1994
- FOR FURTHER DETAILS OF PHASE I GROUTING, REFERENCE SCHNABEL ENGR ASSOC REPORT, SUMMARY OF RESERVOIR PRODUCTION GROUTING ACTIVITIES, OCT 12, 1992
- ⊙ P-1 MONITORING WELL

RECORD DRAWINGS
THESE DRAWINGS RECORDED ON THE BASIS OF INFORMATION FURNISHED BY THE CONTRACTOR OR SPECIFICALLY KNOWN TO HIS KNOWLEDGE. OTHER REPRESENTATIONS ARE MADE OR IMPLIED.
Date: 8-2-95



DESIGNED: Ref
DRAWN: DMC
CHECKED: 9/1/91
APPROVED: 9/1/91
ISSUED: 9/1/91

DATE: 4 AUG 91
DATE: 4 AUG 91
DATE: 9/1/91
DATE: 9/1/91

REVISIONS							
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY
8/15/91	BA	PER CONTR RECORD DWS					
8/24/91	JSH	ISSUED TO VA DAM SAFETY					
9/1/91	RWF	RECORD DRAWING					



SPRING HOLLOW RESERVOIR
ROANOKE COUNTY, VIRGINIA
HAYES, SEAY, MATTERN & MATTERN, INC.
ARCHITECTS - ENGINEERS - PLANNERS
ROANOKE, VIRGINIA

CIVIL
RESERVOIR DEVELOPMENT AND GROUTING

SCALE: 1" = 200'
CONTOUR INTERVAL: 25'

DATE: 8/4/91
COMM: 4194E
SHEET: C-2
DWG: 4