

MURPHY YELLE ASSOCIATES, REGISTERED LAND SURVEYORS, RALEIGH NC.

**Q25 RUNOFF BY RATIONAL (Q=C.I.A.)**  
 $C = 5 \text{ min. } J_{25} = 6.5' / \text{hour}$   
 CB 6 DRAINS  $450 \times 35'$  C=0.9  
 $450 \times 15'$  C=0.5  
 WEIGHTED AREA =  $(450 \times 35 \times 0.9) + (450 \times 15 \times 0.5) / 43560 = 0.403$   
 $Q_{25} = 0.403 \times 8.5 = 3.42 \text{ CFS}$   
 CB 3 DRAINS  $400 \times 35'$  C=0.9  
 $400 \times 15'$  C=0.5  
 WEIGHTED AREA =  $0.358 \text{ AC}$   
 $Q_{25} = 3.04 \text{ CFS}$   
 CB 5 DRAINS  $120 \times 35'$  C=0.9  
 AREA OF 50' R. CIRCLE =  $\pi \times 2500$  C=0.5  
 $120 \times 15'$  C=0.5  
 WEIGHTED AREA =  $0.270 \text{ AC}$   
 $Q_{25} = 2.29 \text{ CFS}$

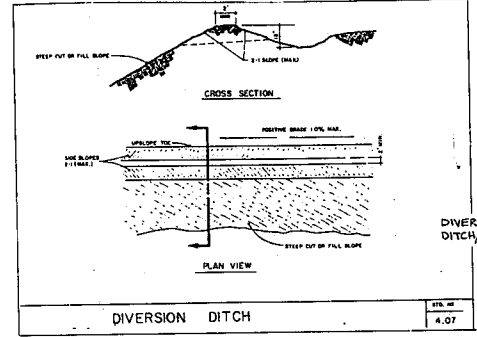
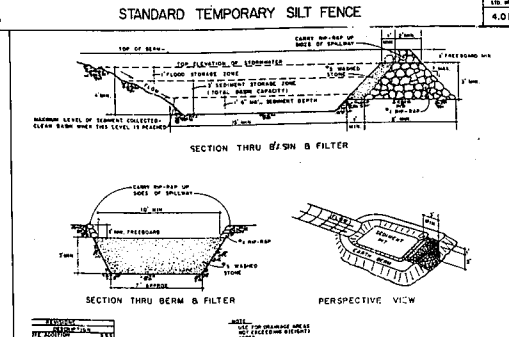
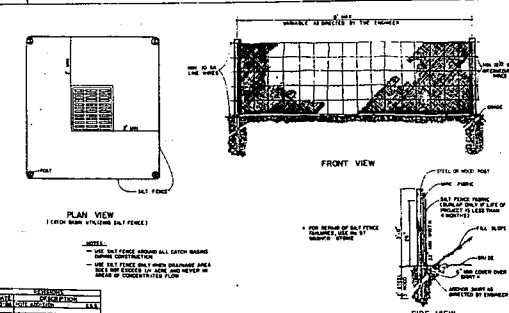
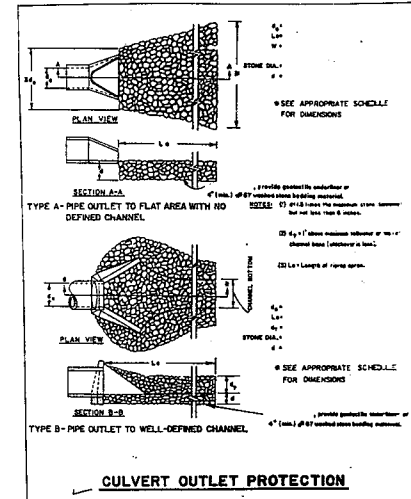
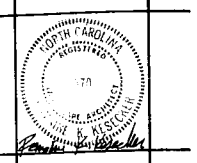
BASIN	AREA	STORAGE @ 18000 CF/ACRE
A	5.3 ac.	9540 CF
B	3.4 ac.	6120 CF
C	7.8 ac.	14,040 CF
D	1.7 ac.	3,060 CF
E	1.3 ac.	2,340 CF
F	1.3 ac.	2,340 CF

TOTAL DENuded AREA = 20.8 ACRES

BASIN	LENGTH	WIDTH	DEPTH
A	40'	40'	6'
B	32'	32'	6'
C	49'	49'	6'
D	26'	20'	6'
E	20'	20'	6'
F	36'	26'	6'

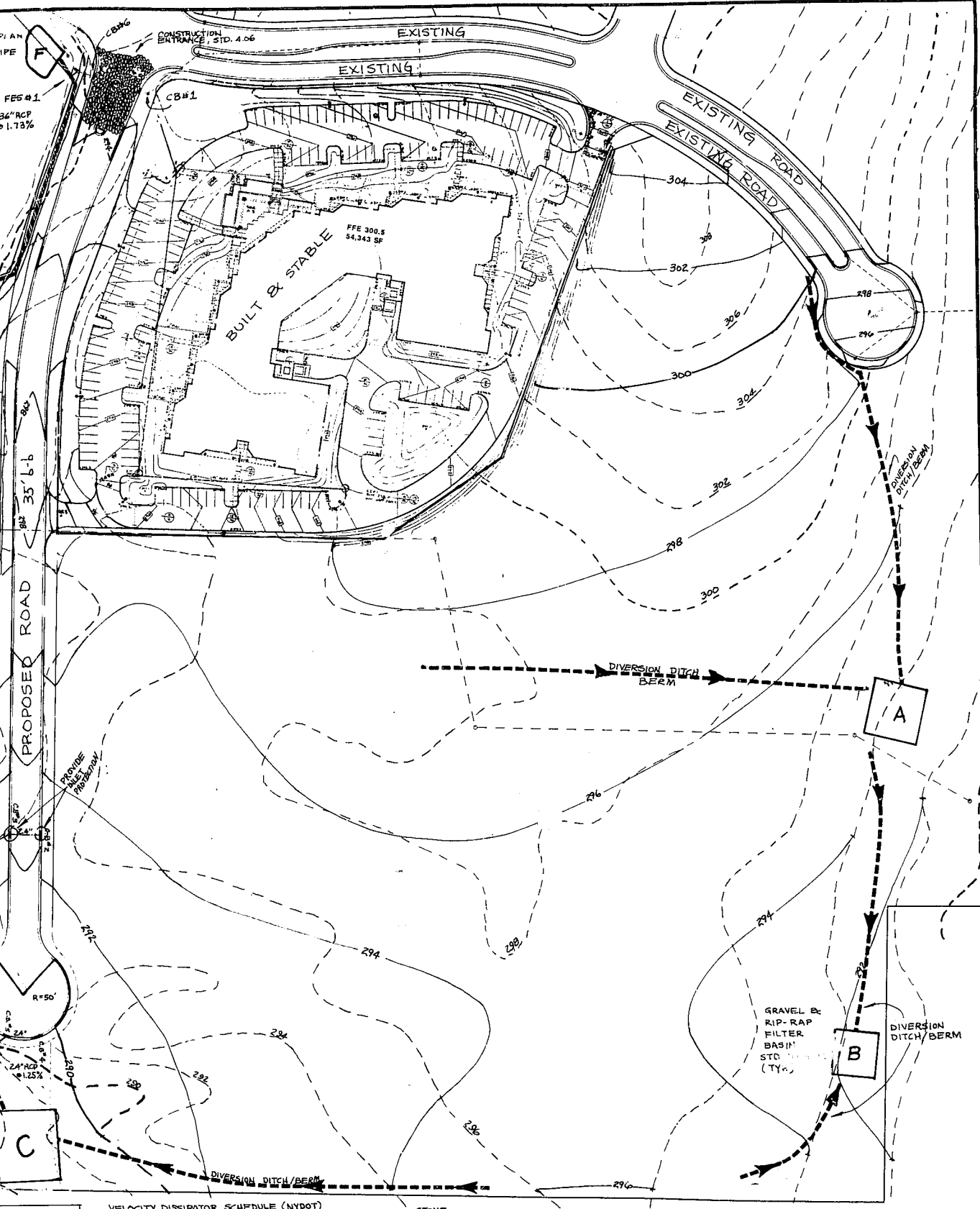
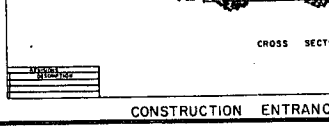
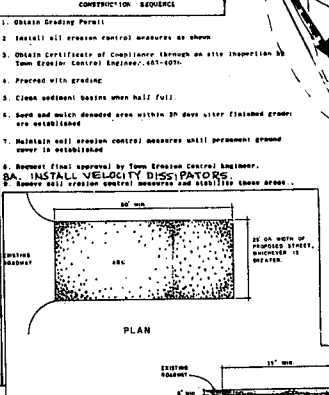
\* EXISTING BASIN

FROM CB1 TO CB6 WAS ORIGINALLY DESIGNED TO CARRY 24.9 CFS. THIS PLAN ADDS 3.42 CFS. CAPACITY OF 36" PIPE AT 1.73% IS 95.2 CFS, SO PIPE IS ADEQUATELY SIZED.  
 † DESIGNED IN 1986 BY WM. DANIEL ASSOCIATES.



**PERMANENT SEEDING**

DATE	DESCRIPTION	BY	CHKD.
Nov 11, 1986	Final Design	W. Daniel	J. Yelle
Nov 12, 1986	Construction Sequence	W. Daniel	J. Yelle
Nov 13, 1986	Velocity Dissipator Schedule	W. Daniel	J. Yelle
Nov 14, 1986	Final Review	W. Daniel	J. Yelle



**VELOCITY DISSIPATOR SCHEDULE (NYDOT)**

FES	%SLOPE	Q <sub>25</sub>	V <sub>25</sub>	ZONE LENGTH	WIDTH	DEPTH	STONE SIZE
1	1.73%	27.8	15.24	3	24'	9"	18" - "B"
2	1%	2.6	5.67	1	8'	6"	9" - "A"
3	1.25%	1.9	5.01	1	8'	6"	9" - "A"

SEDIMENT & SOIL EROSION CONTROL  
 AERIAL CENTER, TRACTS I, K, M, & N