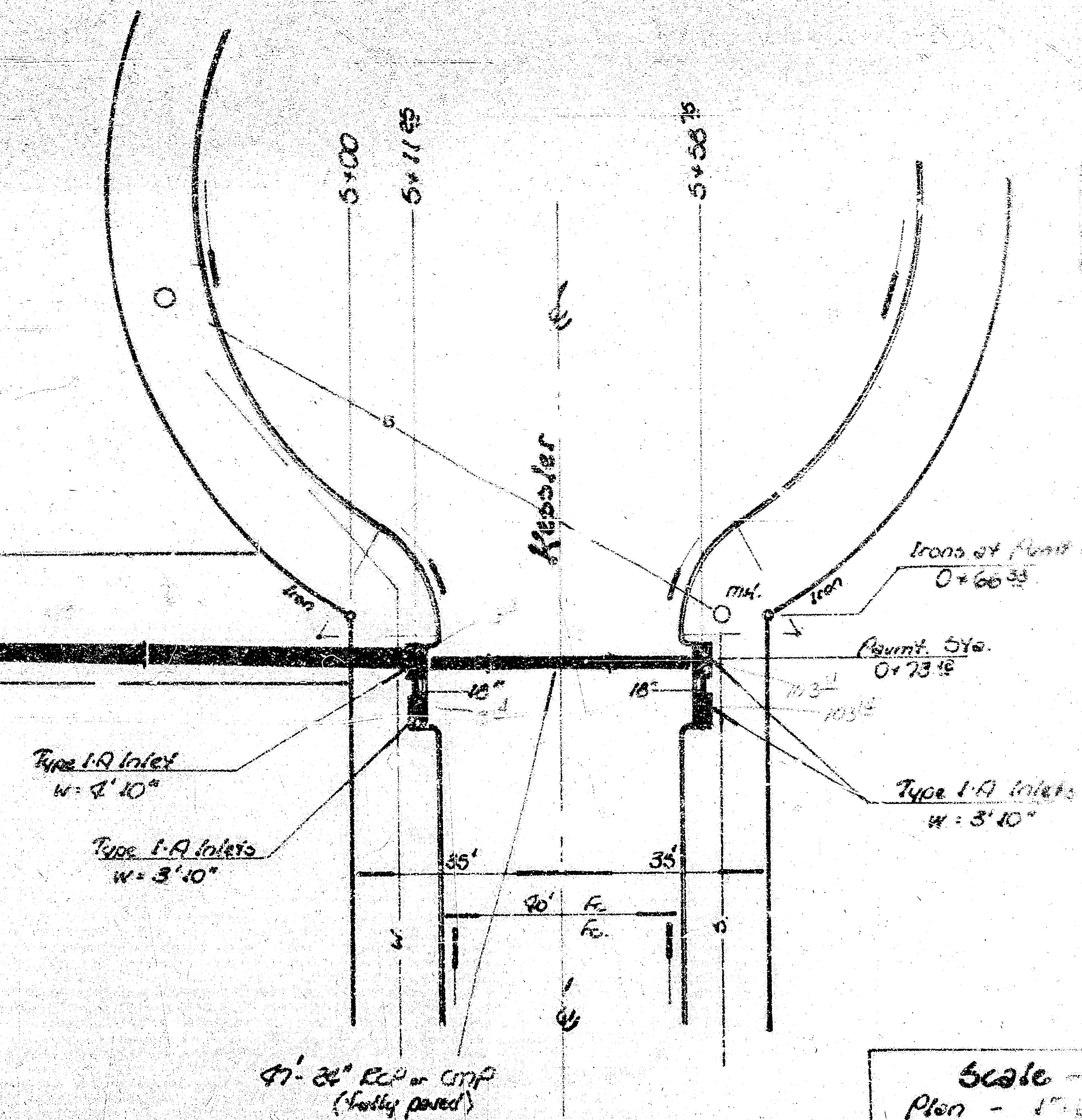


BM 104.08 RR Spk. NE Side of Ctr Support for 12" CI Ditching Pipe app. 20' S of S.L. Lot 3 Blk 2 Westport Ind. Park 2nd.
 BM 104.52 RR Spk. S Side PP. N. Side Pomeroy, 85' West of W.L. Leaning.

Lot 5
 Westport Ind. Park - 4th

502' 30" R.P. or CMP (fully paved)

80' Drainage Casement



Temp. Drainage Ditch See Note 1.
 Type 3 Rip Rap Rip-Rap shall be incidental to 4" Pipe.

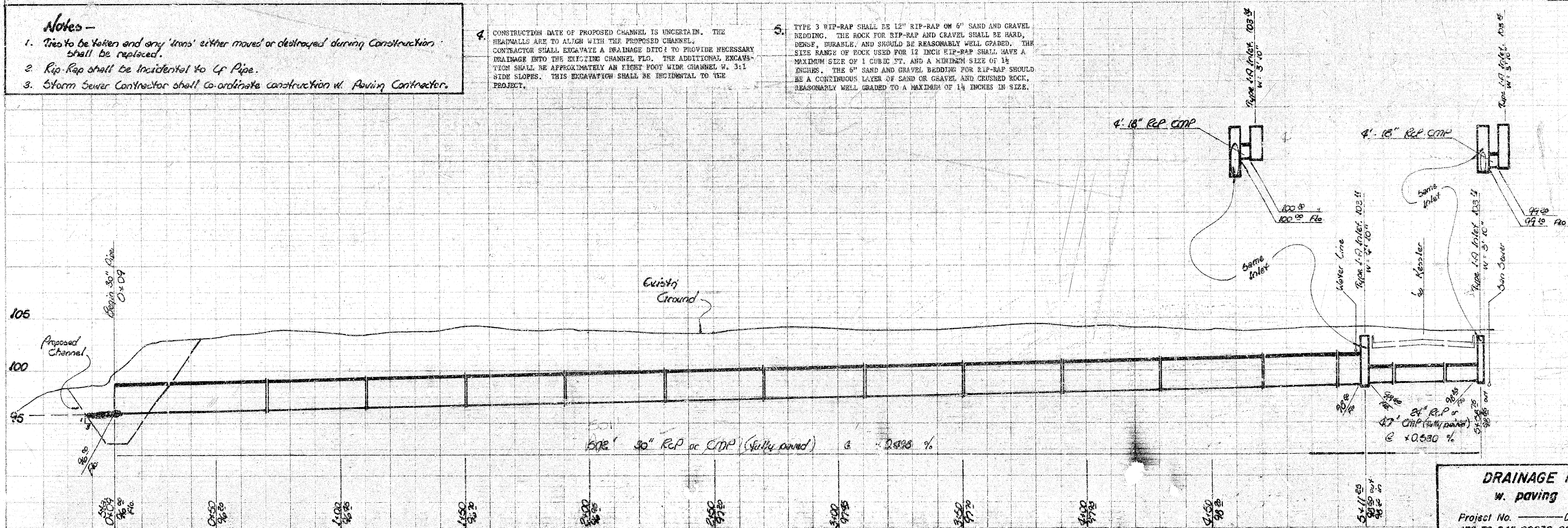
Scale -
 Plan - 1" = 100'
 Profile - 1" = 10'

Notes -

1. Ties to be taken and any 'irons' either moved or destroyed during construction shall be replaced.
2. Rip-Rap shall be incidental to 4" Pipe.
3. Storm Sewer Contractor shall co-ordinate construction w/ Paving Contractor.

4. CONSTRUCTION DATE OF PROPOSED CHANNEL IS UNCERTAIN. THE HEADWALLS ARE TO ALIGN WITH THE PROPOSED CHANNEL. CONTRACTOR SHALL EXCAVATE A DRAINAGE DITCH TO PROVIDE NECESSARY DRAINAGE INTO THE EXISTING CHANNEL FLO. THE ADDITIONAL EXCAVATION SHALL BE APPROXIMATELY AN EIGHT FOOT WIDE CHANNEL W. 3:1 SIDE SLOPES. THIS EXCAVATION SHALL BE INCIDENTAL TO THE PROJECT.

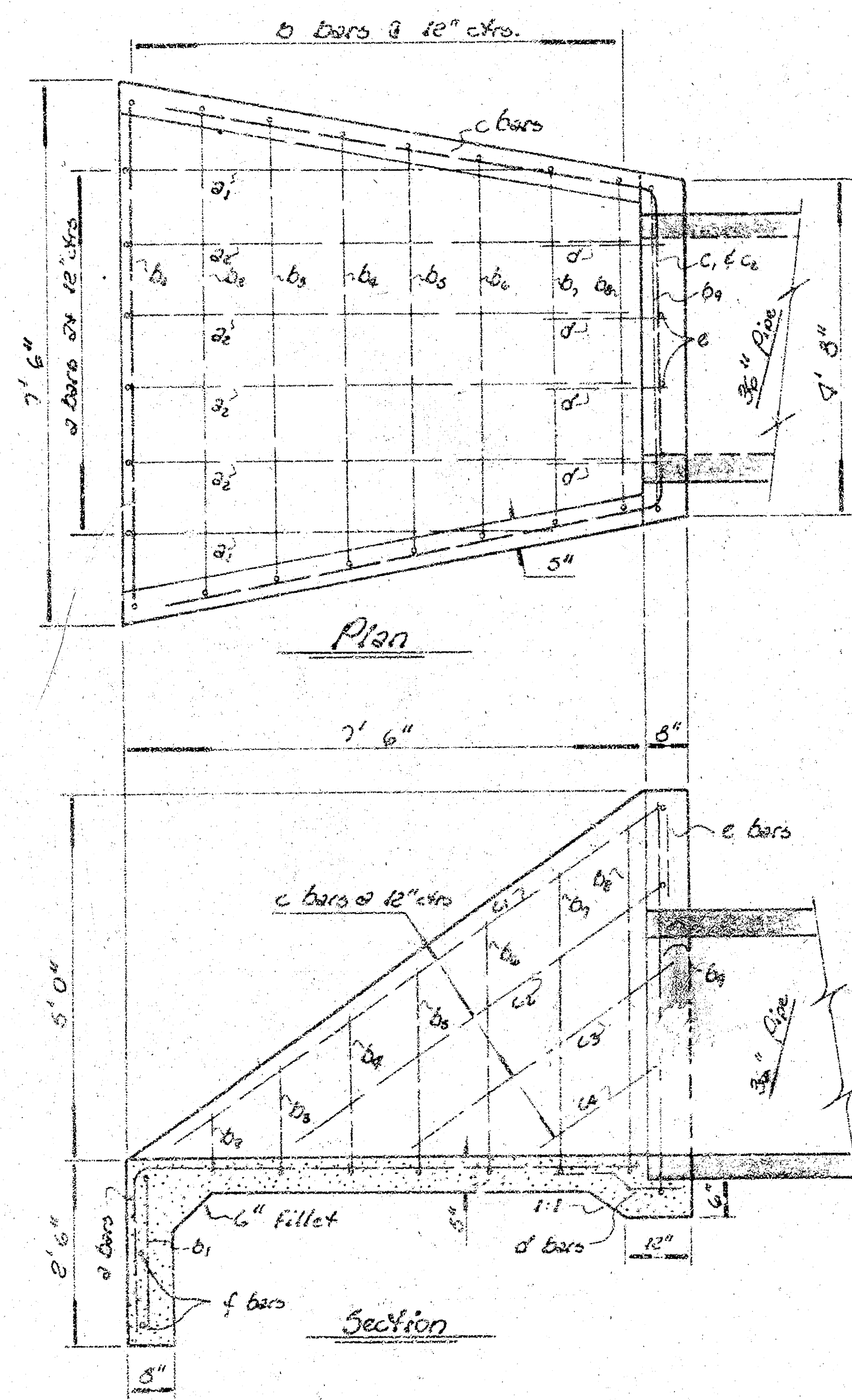
5. TYPE 3 RIP-RAP SHALL BE 12" RIP-RAP ON 6" SAND AND GRAVEL BEDDING. THE ROCK FOR RIP-RAP AND GRAVEL SHALL BE HARD, DENSE, DURABLE, AND SHOULD BE REASONABLY WELL GRADED. THE SIZE RANGE OF ROCK USED FOR 12" RIP-RAP SHALL HAVE A MAXIMUM SIZE OF 1 CUBIC FT. AND A MINIMUM SIZE OF 1 1/2 INCHES. THE 6" SAND AND GRAVEL BEDDING FOR RIP-RAP SHOULD BE A CONTINUOUS LAYER OF SAND OR GRAVEL AND CRUSHED ROCK, REASONABLY WELL GRADED TO A MAXIMUM OF 1 1/2 INCHES IN SIZE.



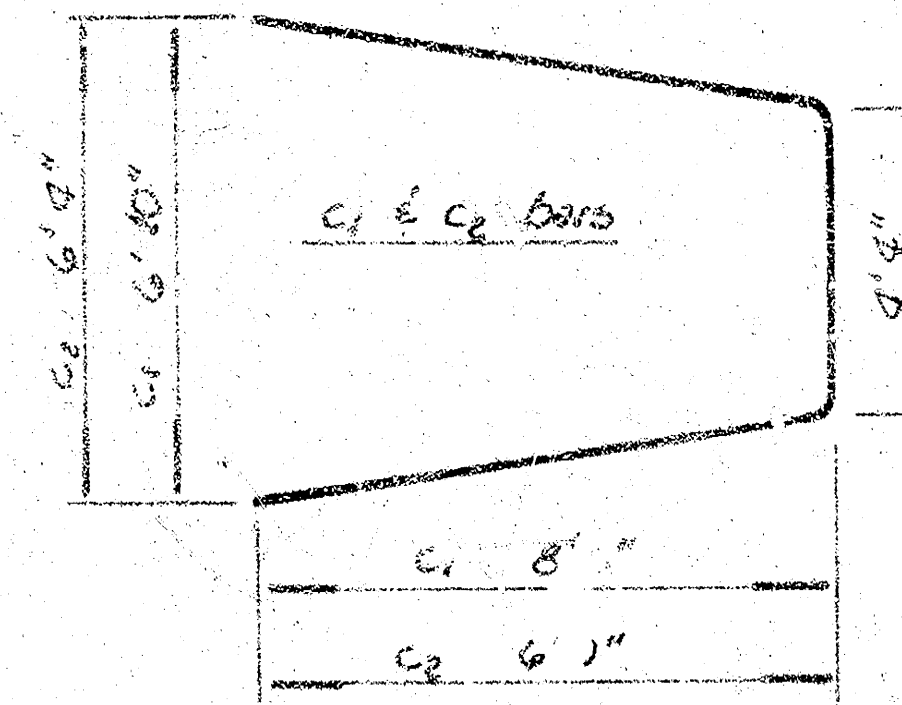
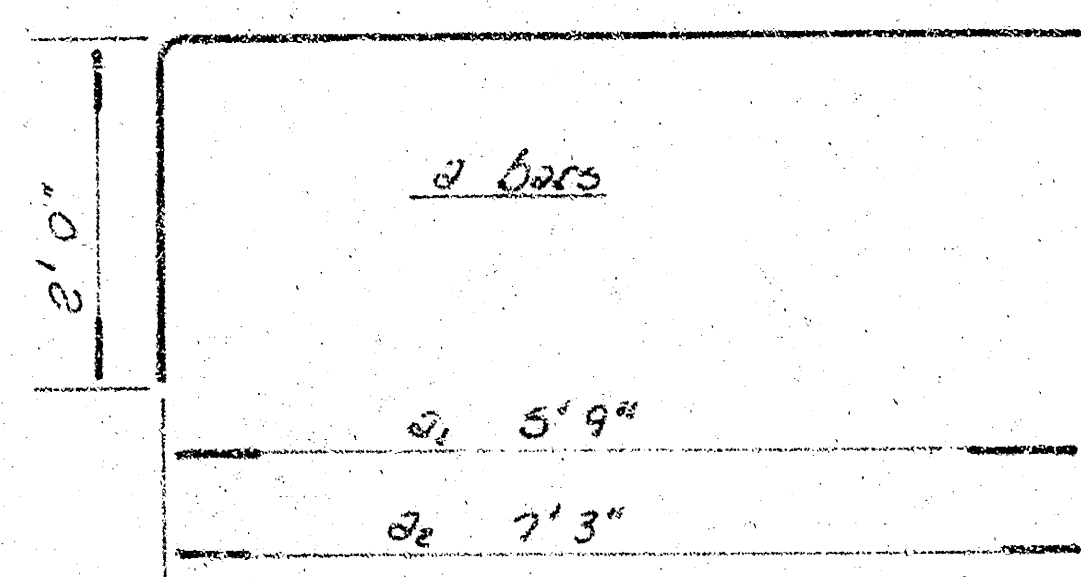
DRAINAGE in connection
 w/ paving KESSLER

Project No. - DAKD 577136
 472-75-245-80538-000-000-002

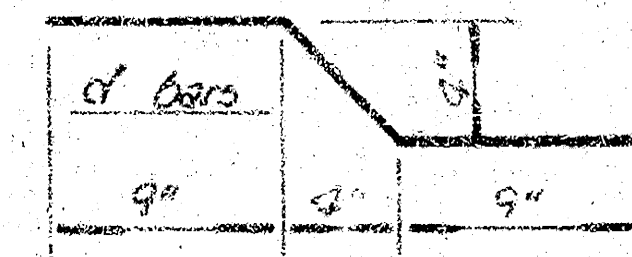
HEADWALL DETAIL SECTION



Headwall
Scale: 1/8" = 1'



b bars	
b1	6' 11"
b2	6' 7"
b3	6' 9"
b4	5' 11"
b5	5' 7"
b6	5' 3"
b7	4' 10"
b8	4' 6"
b9	4' 5"



Bill of Material		
Item	Quantity	Unit
Concrete	2.5	CY
Reinforcing Steel	157.41	Lbs.

Bar Schedule					
Bar	Size	Length	No.	Shape	Weight
a1	#4	7' 9"	2	┌─┐	10.35
a2	#4	9' 3"	4	┌─┐	24.72
b1	#4	10' 11"	1	┌─┐	7.29
b2	#4	8' 3"	1	┌─┐	5.51
b3	#4	9' 4"	1	┌─┐	6.23
b4	#4	10' 3"	1	┌─┐	6.85
b5	#4	11' 3"	1	┌─┐	7.52
b6	#4	12' 3"	1	┌─┐	8.13
b7	#4	13' 0"	1	┌─┐	8.68
b8	#4	14' 0"	1	┌─┐	9.35
b9	#4	15' 1"	1	┌─┐	10.08
c1	#4	21' 6"	1	┌─┐	14.36
c2	#4	17' 8"	1	┌─┐	11.80
c3	#4	4' 6"	2	┌─┐	6.01
c4	#4	2' 6"	2	┌─┐	3.34
d1	#4	2' 0"	4	┌─┐	5.34
e	#4	1' 4"	2	┌─┐	1.73
f	#4	7' 0"	2	┌─┐	9.35