

# WATERFORD NORTH THIRD

## STORM WATER DRAIN NO 67

### PROJECT NO.

468-76-245-81433-000-000-001

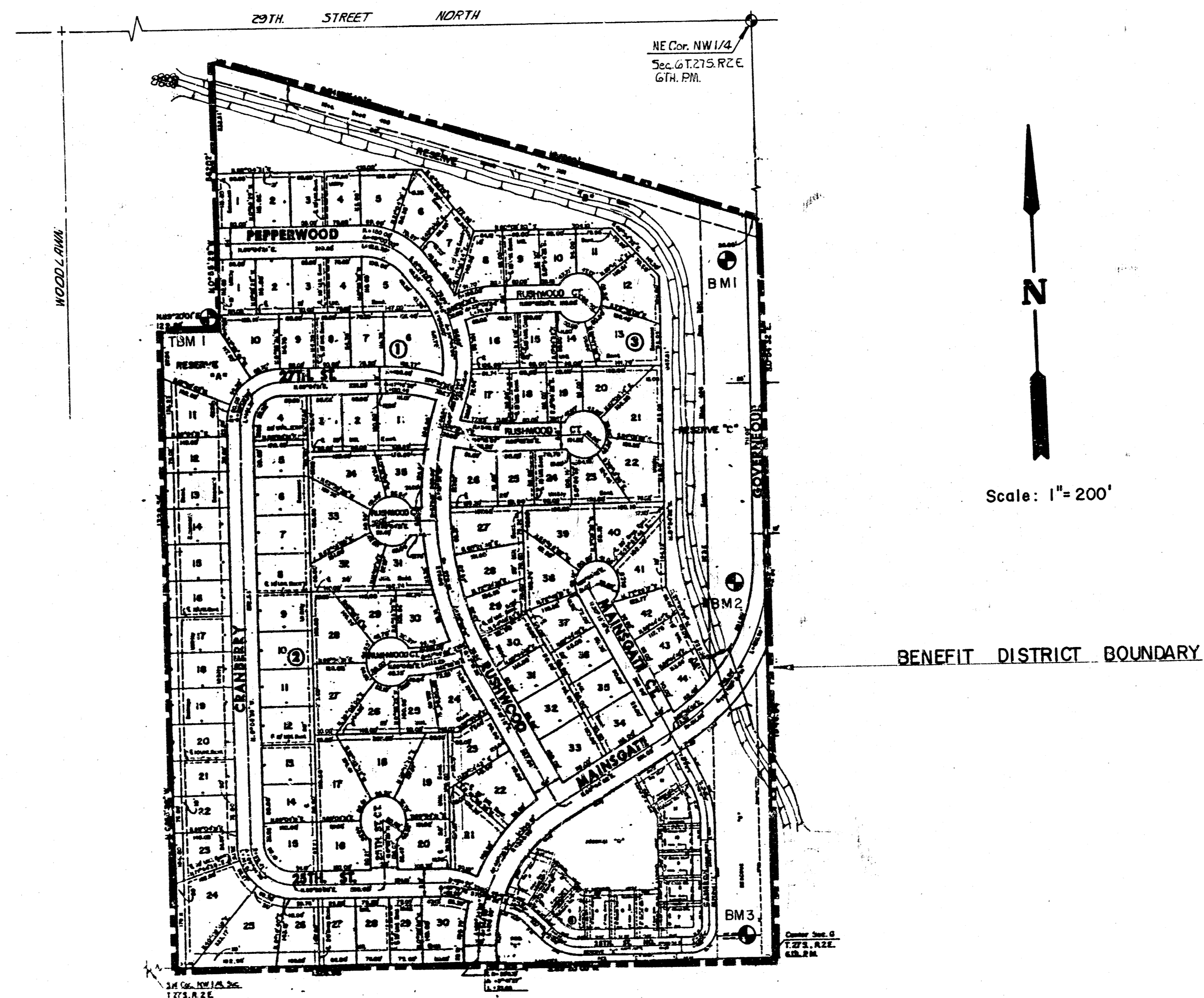
CITY OF WICHITA, KANSAS  
 MIKE LINDEBAK, CITY ENGINEER  
 MARCH, 1985

#### GENERAL NOTES

1. CONTRACTOR SHALL AVOID UNCOVERING EXISTING WATER LINES UNLESS ABSOLUTELY NECESSARY. UNCOVERING SHALL BE DONE ONLY IN THE PRESENCE OF A WATER DEPARTMENT ENGINEER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS.
3. CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF CONSTRUCTION SCHEDULING.
4. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.
5. EXCAVATION SHALL REMAIN ON SITE. CONTRACTOR SHALL NOTIFY THE OWNER 24 HOURS PRIOR TO CONSTRUCTION TO OBTAIN THE LOCATION TO PLACE EXCESS MATERIAL. SPREADING OF THE EXCESS MATERIAL SHALL BE SUBSIDIARY TO THIS PROJECT.

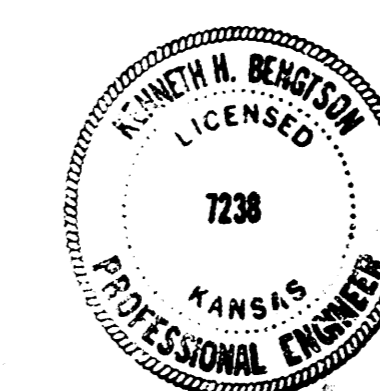
#### BENCH MARKS

- B.M. #1 Railroad spike west face of west pole first H-pole south of 29th. Elev. = 187.88
- B.M. #2 Railroad spike west face of west pole second H-pole south of 29th. Elev. = 191.85
- B.M. #3 Railroad spike west face of west pole third H-pole south of 29th. Elev. = 195.71
- TBM #1 South rim of existing manhole 1-0. Elev. = 177.36



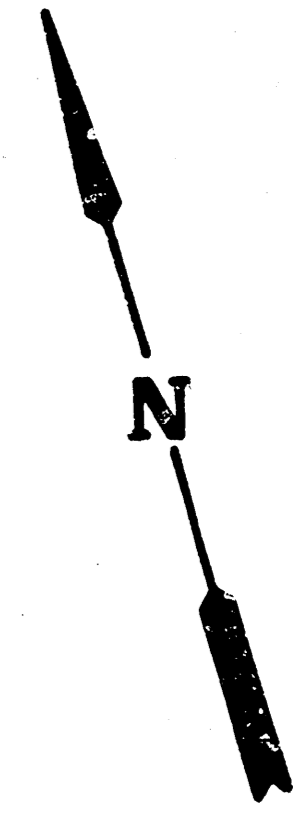
#### INDEX TO DRAWINGS

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1	TITLE SHEET
2-7	CHANNEL
8	PLAN & PROFILE
9	WASH CHECK DETAILS
10-14	CONC. RIP-RAP DETAILS
15-16	CROSS SECTIONS
	FINAL PLAT

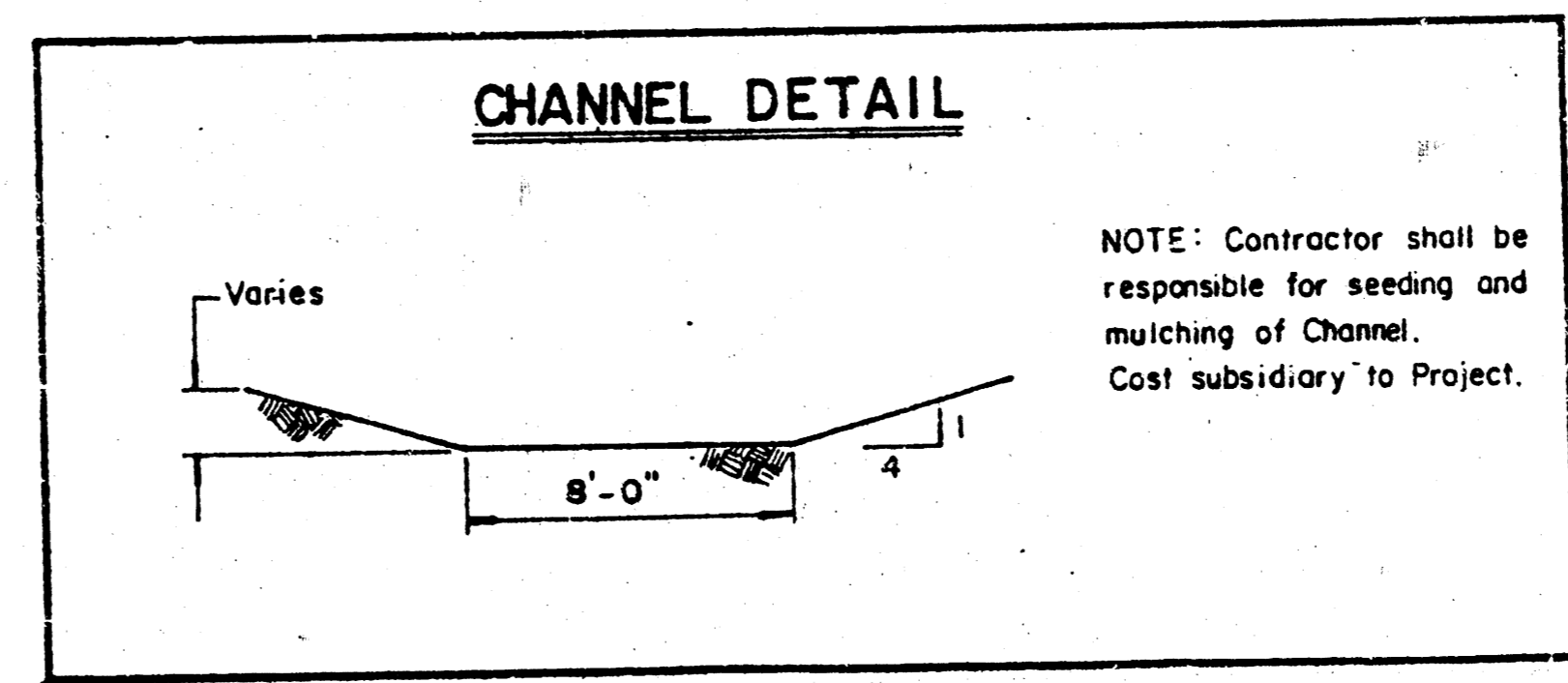
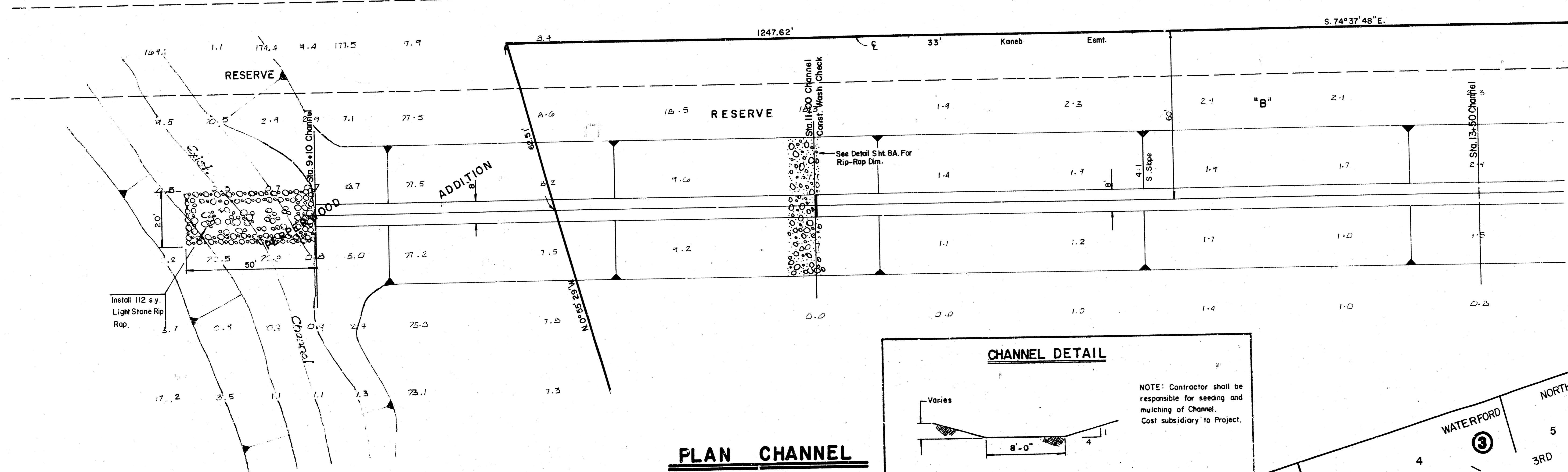


	<b>WATERFORD NORTH                  THIRD ADDITION                  STORM WATER DRAIN</b>	Design F.F. Drawn by F.F. Checked by KHB Date 1985 Job no.
	MID-KANSAS ENGINEERING CONSULTANTS PA 3500 NORTH ROCK ROAD BUILDING #800 WICHITA, KANSAS 67226	682-6561 Sheet 1 of 16

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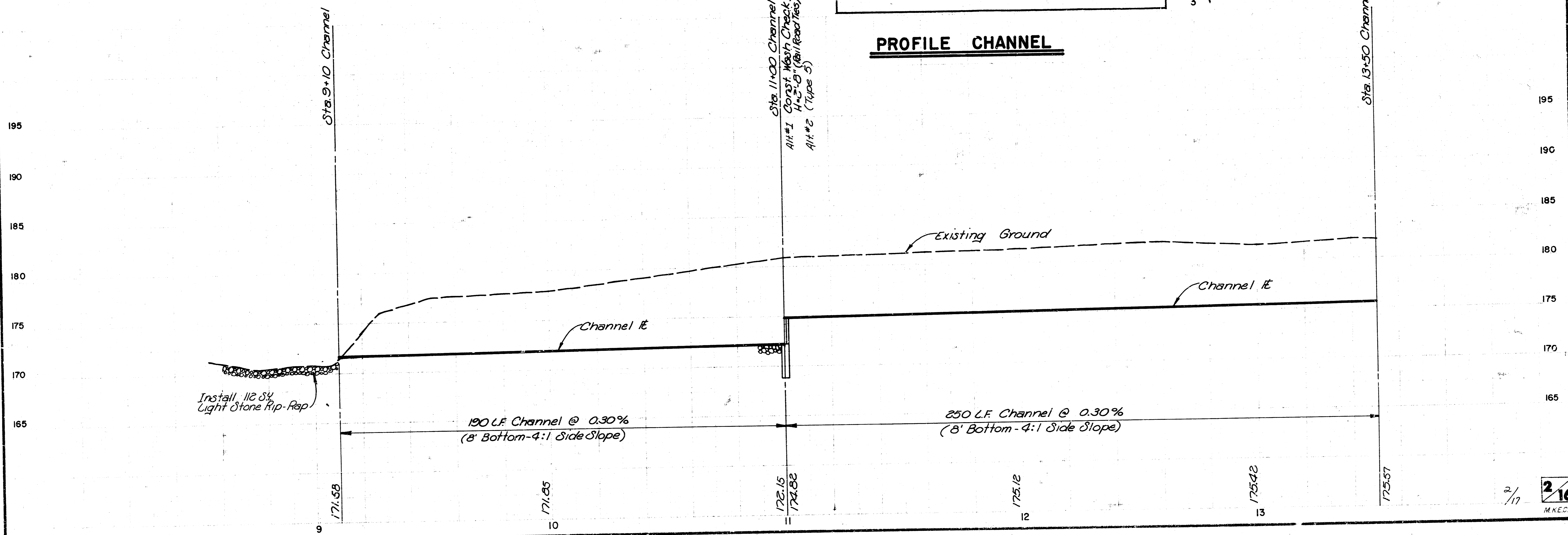


Scale: 1" = 20' Horiz.  
 1" = 5' Vert.



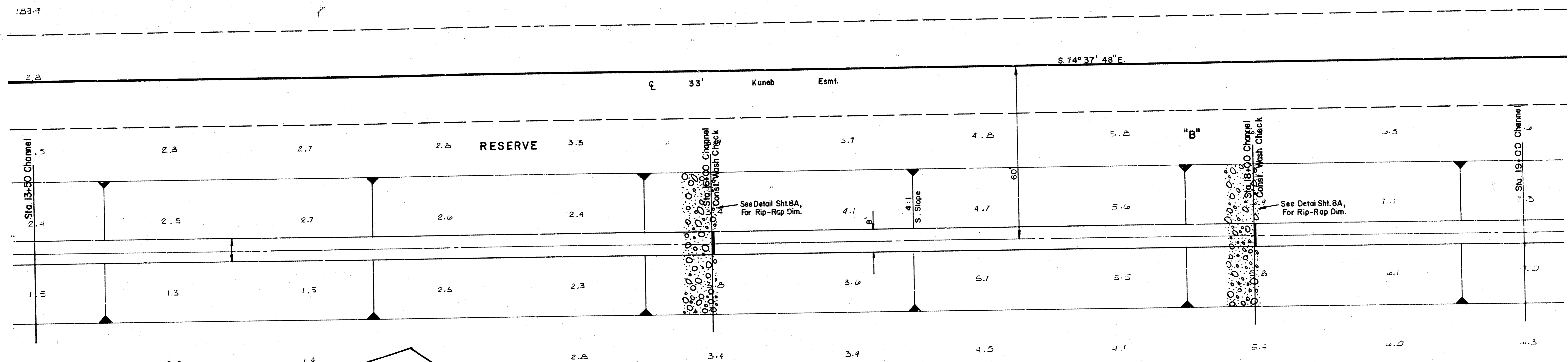
**PLAN CHANNEL**

**PROFILE CHANNEL**



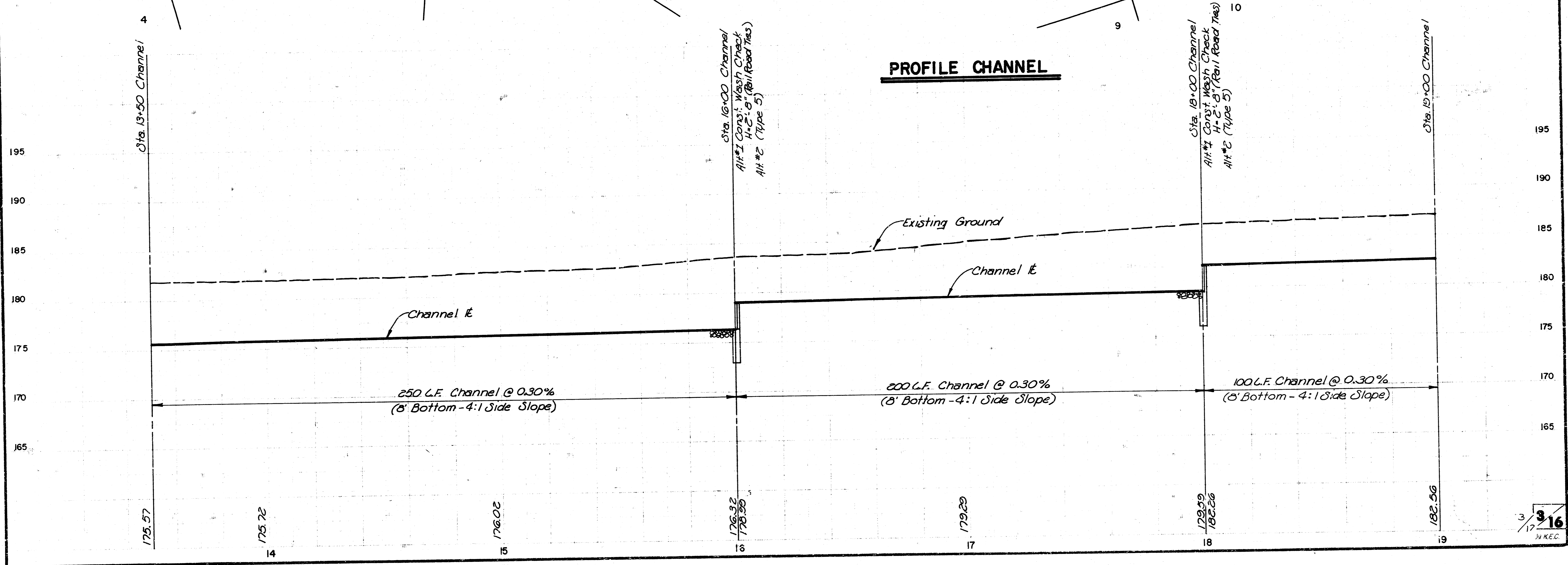
2/17  
 MKEC

Scale: 1" = 20' Horiz.  
 1" = 5' Vert.



**PLAN CHANNEL**

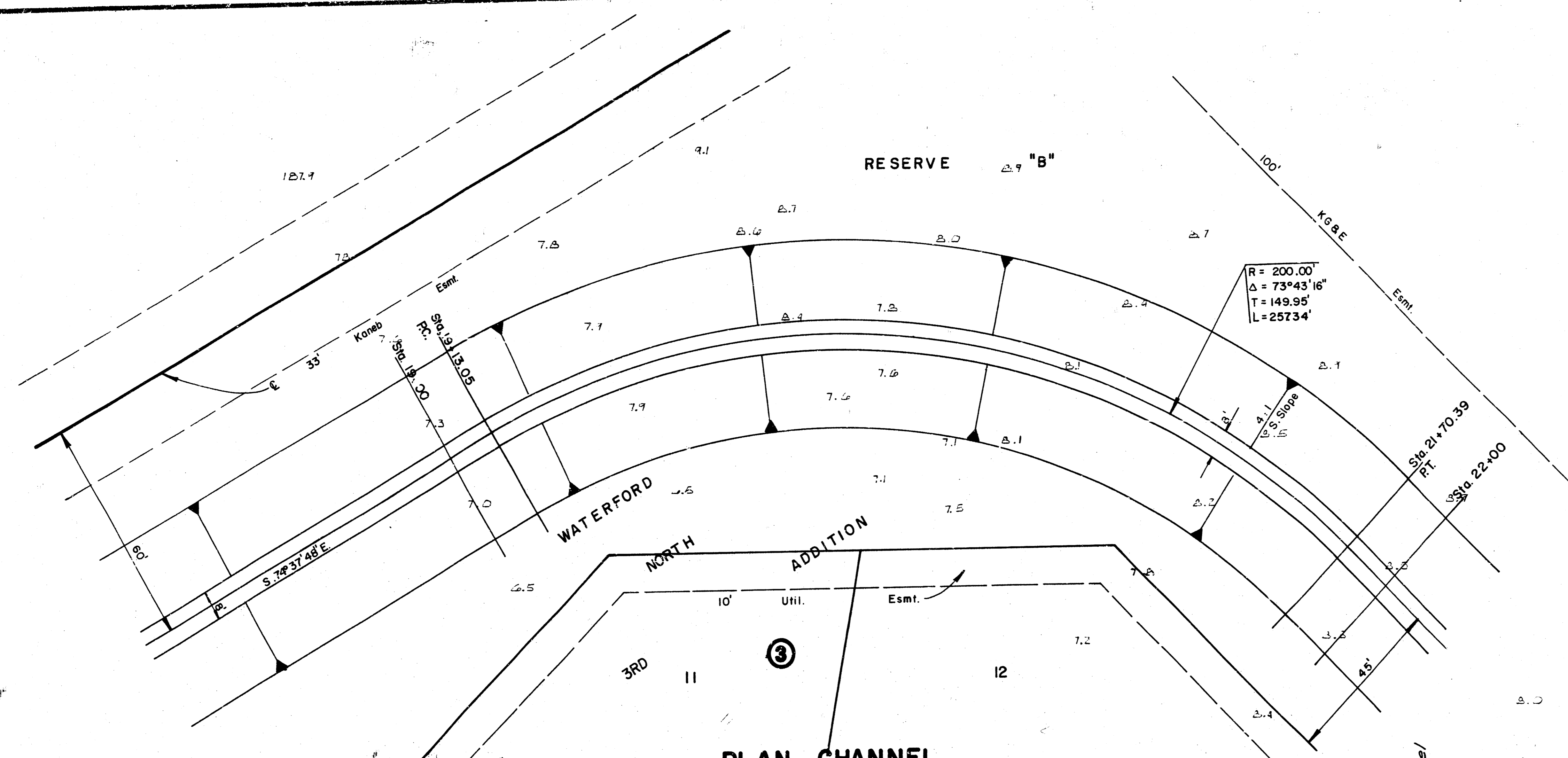
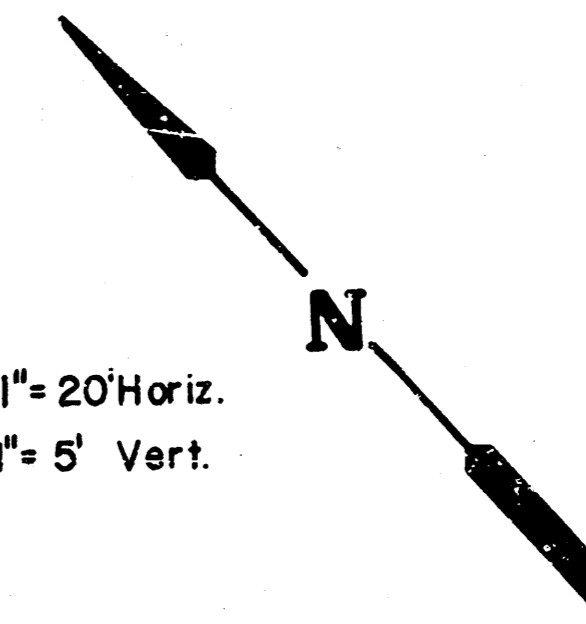
**PROFILE CHANNEL**



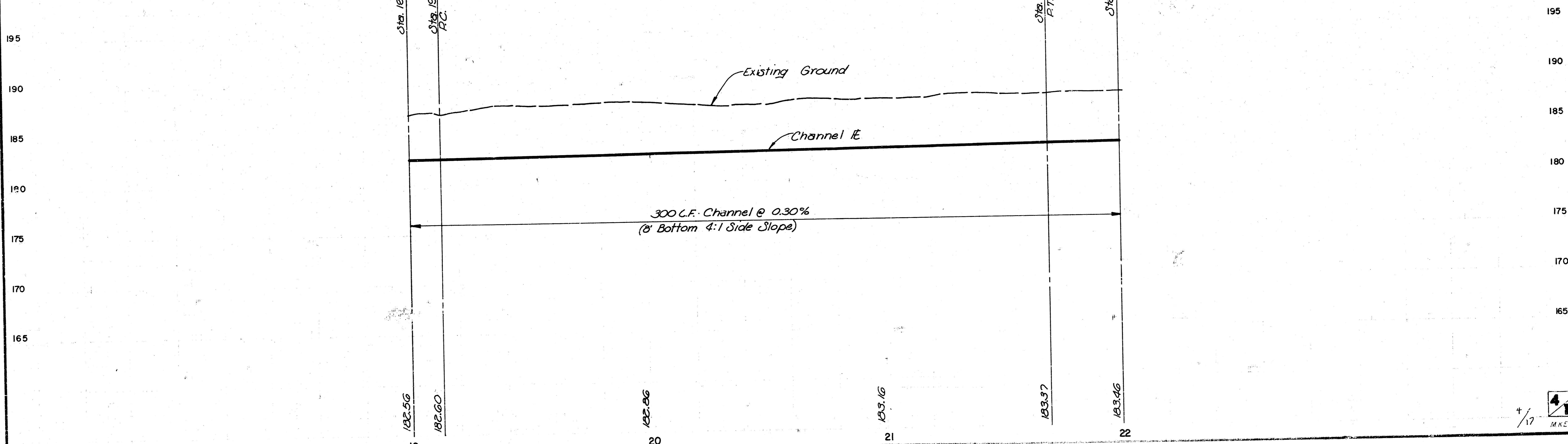
3/16  
 HKEC

WATERFORD NORTH THIRD ADDITION  
 STORM WATER DRAIN NO. 67  
 PROJ. NO. 46876-245-81433-000-000-001

Scale: 1" = 20' Horiz.  
 1" = 5' Vert.



PLAN CHANNEL  
PROFILE CHANNEL

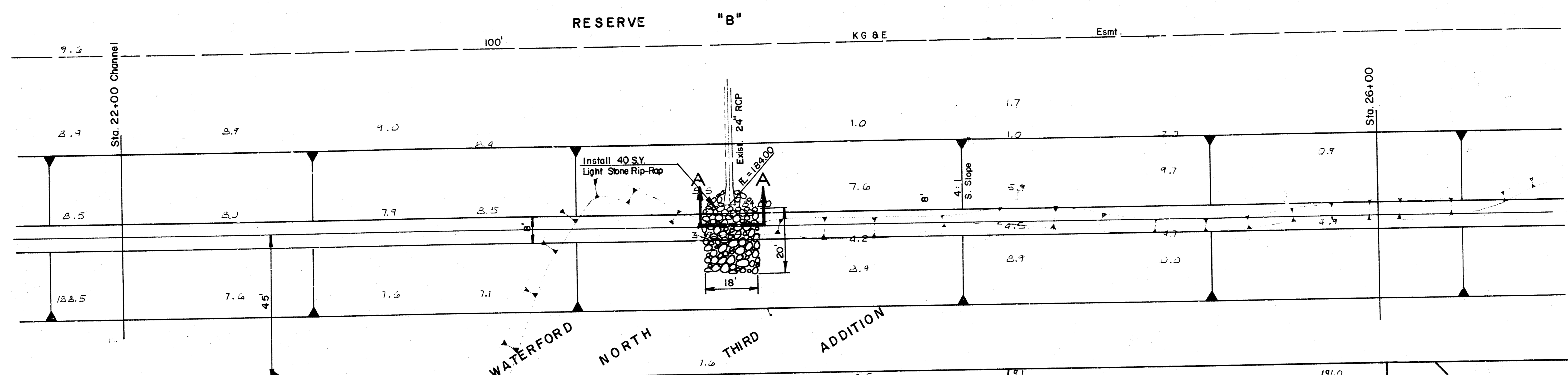


4/16  
 MKEC

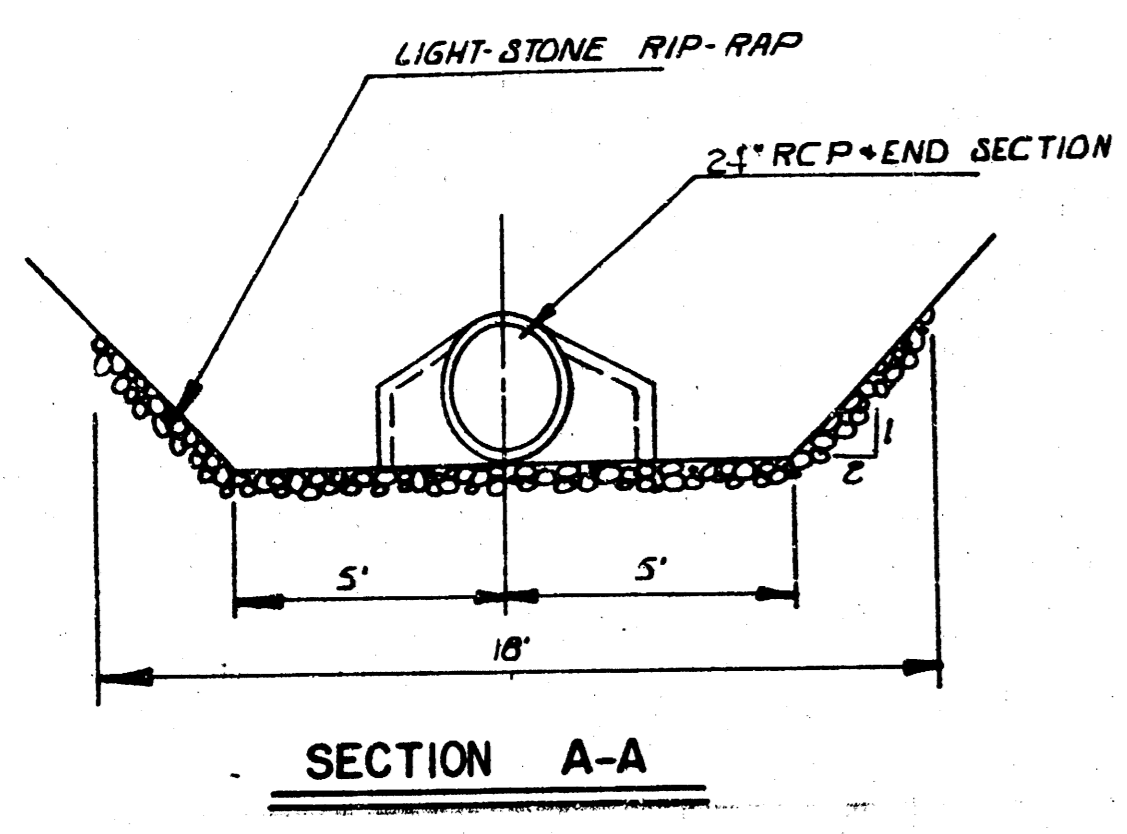
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WATERFORD NORTH THIRD ADDITION  
STORM WATER DRAIN NO. 67  
PROJ. NO. 468-76-24581433-000-000-001

N  
Scale: 1" = 20' Horiz.  
1" = 5' Vert.



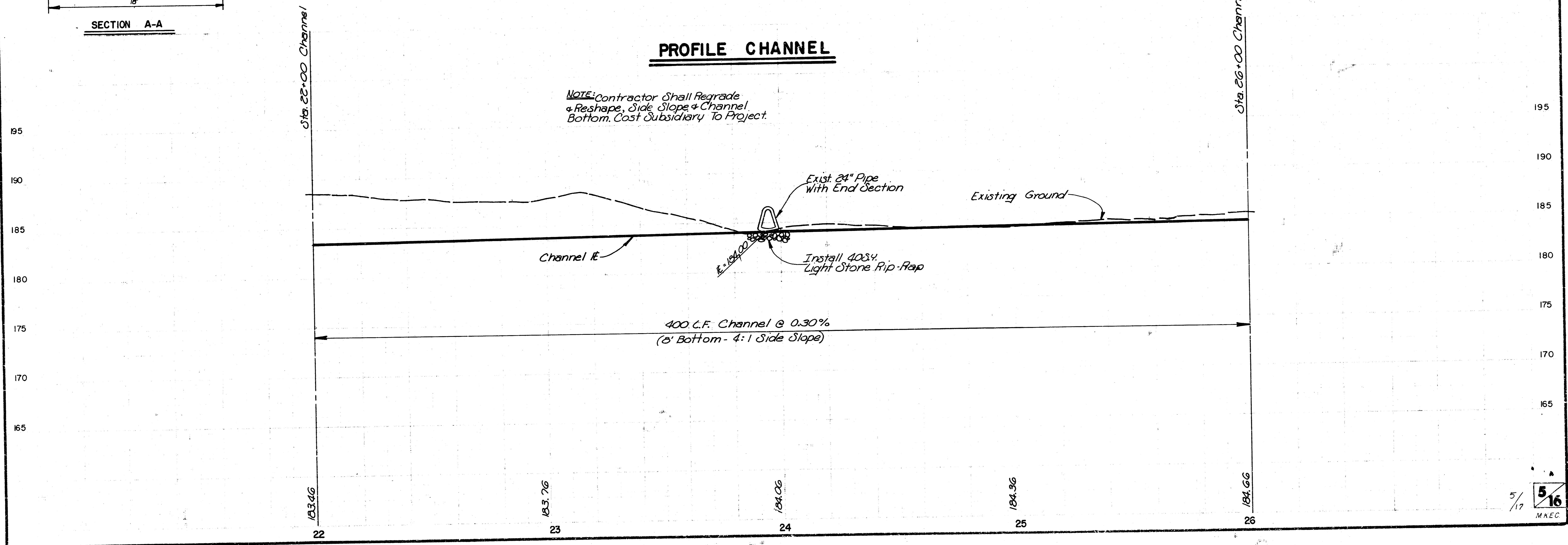
NOTE:  
Contractor to fill existing channel with desirable material (top soil and free from vegetation) from new channel and grade to match. Work subsidiary to cost of project.



**PLAN CHANNEL**

**PROFILE CHANNEL**

NOTE: Contractor Shall Regrade & Reshape, Side Slope & Channel Bottom. Cost Subsidiary To Project.

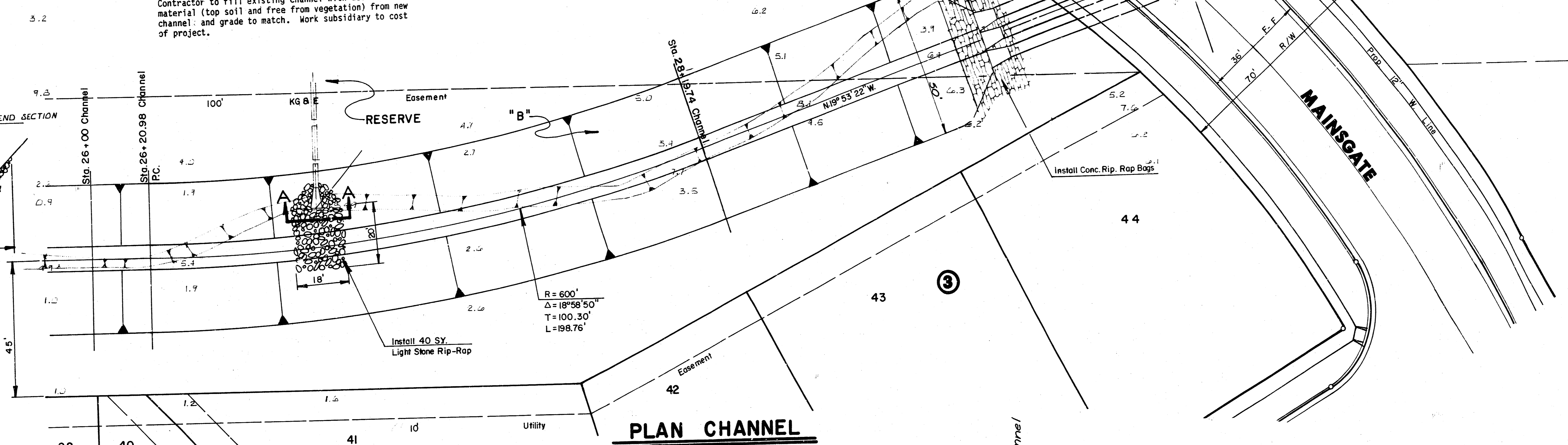
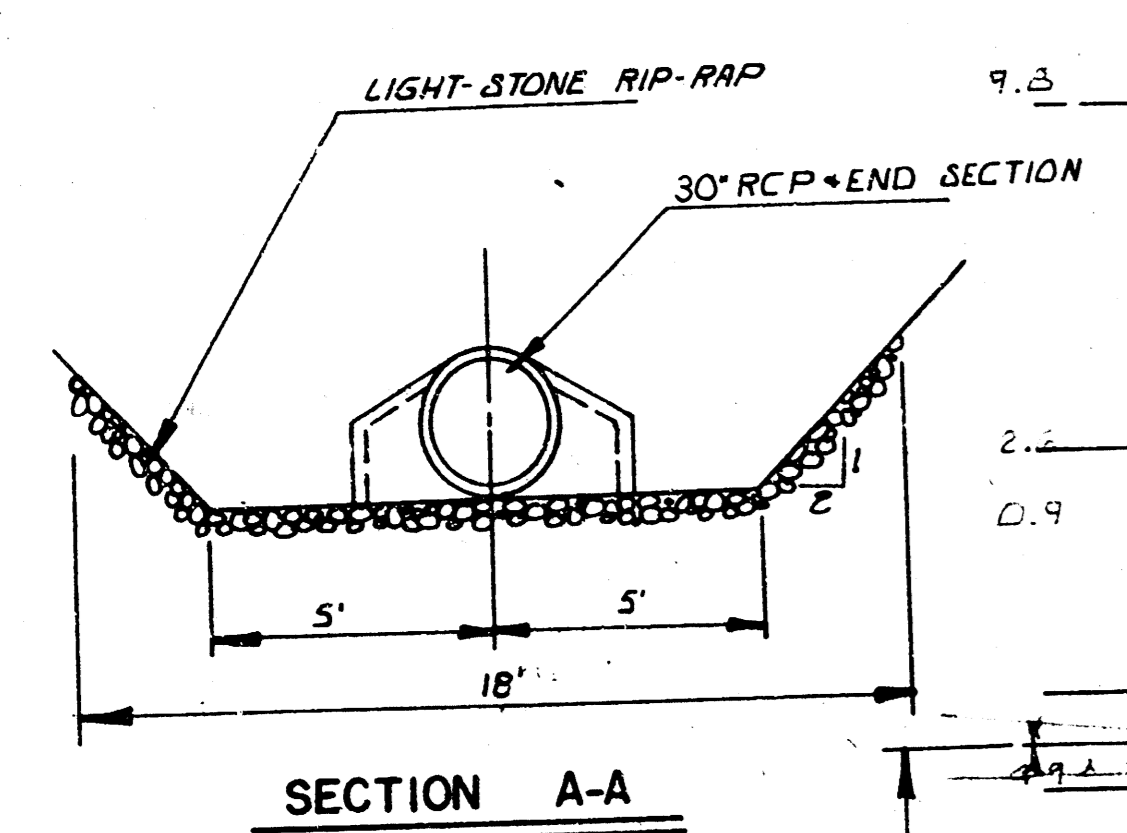


5/17 MAEC 5/16

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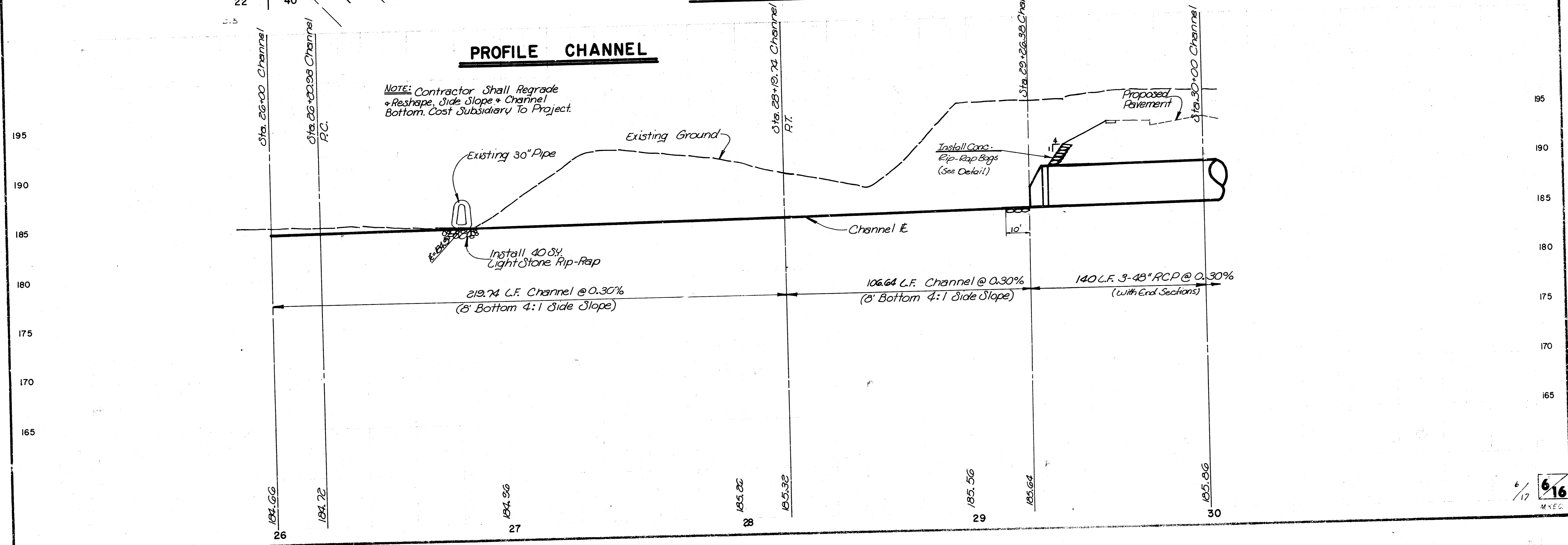
Scale: 1" = 20' Horiz.  
 1" = 5' Vert.

**NOTE:**  
 Contractor to fill existing channel with desirable material (top soil and free from vegetation) from new channel and grade to match. Work subsidiary to cost of project.

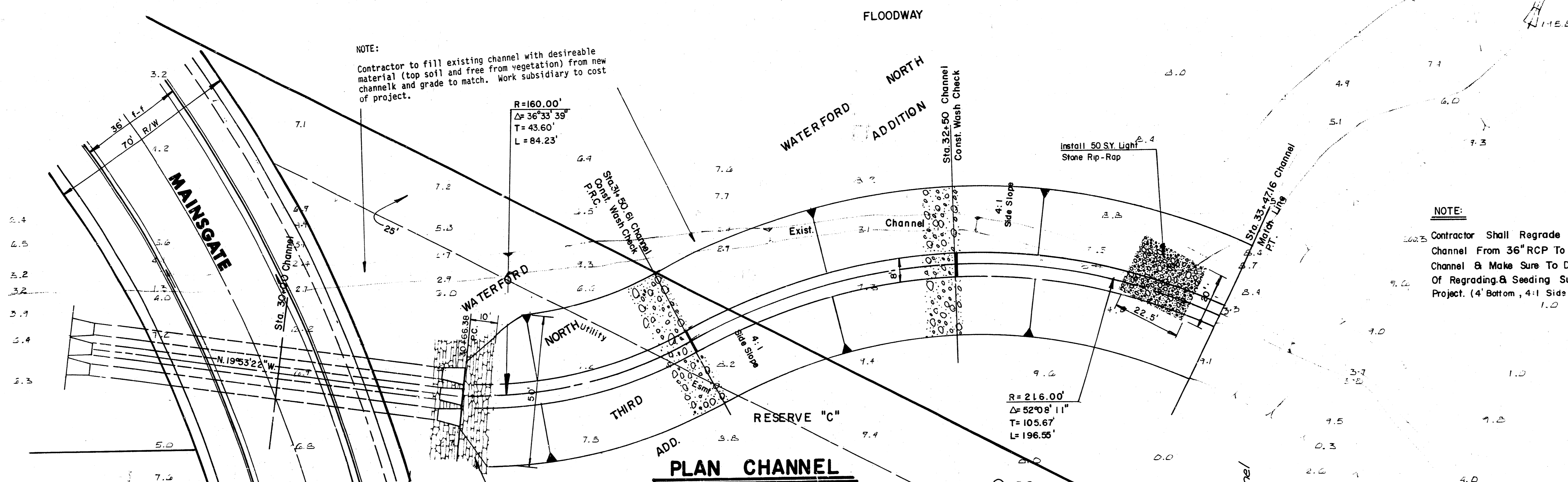


**PROFILE CHANNEL**

**NOTE:** Contractor shall Regrade + Reshape, Side Slope + Channel Bottom. Cost Subsidiary To Project.



6/17  
 6/16  
 M.Y.E.C.



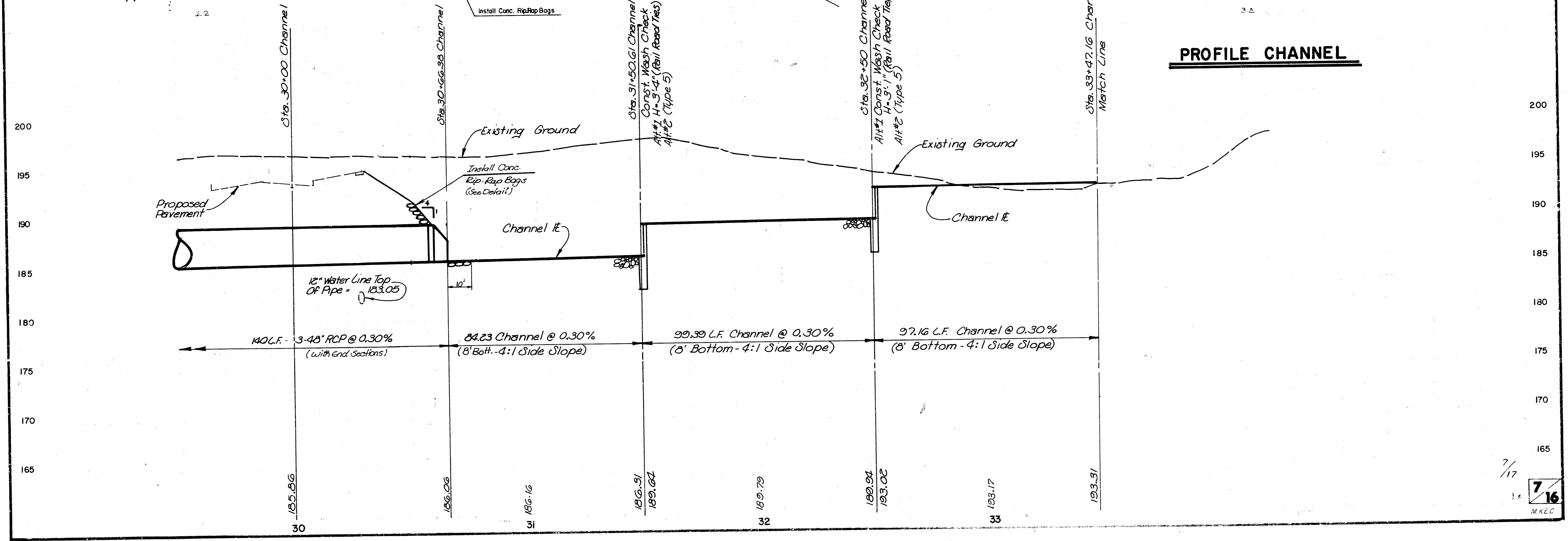
NOTE:  
 Contractor to fill existing channel with desirable material (top soil and free from vegetation) from new channel and grade to match. Work subsidiary to cost of project.

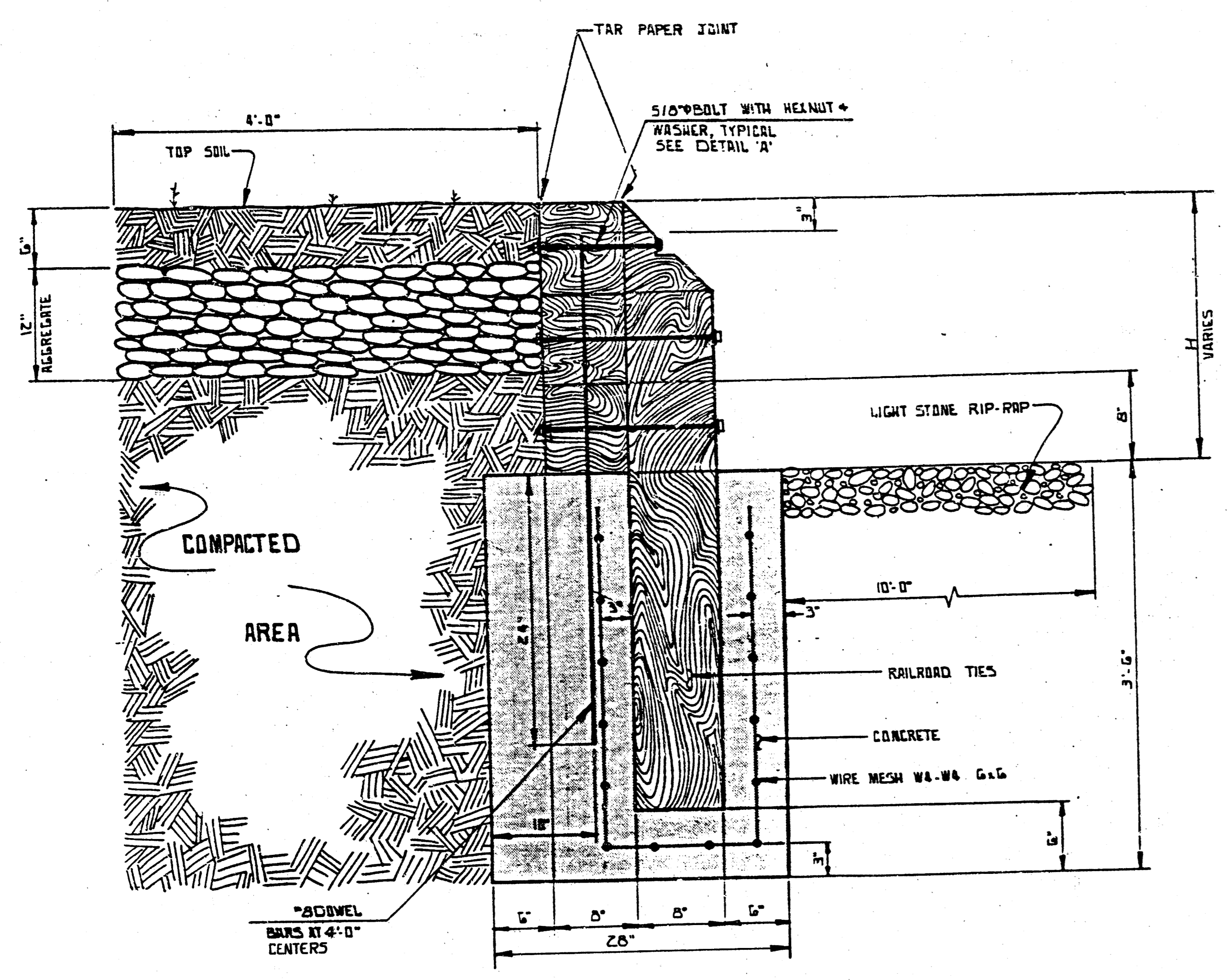
NOTE:  
 Contractor Shall Regrade Existing Channel & Make Sure To Drain Cost Of Regrading & Seeding Subsidiary To Project. (4' Bottom, 4:1 Side Slopes)

Scale: 1" = 20' Horiz.  
 1" = 5' Vert.

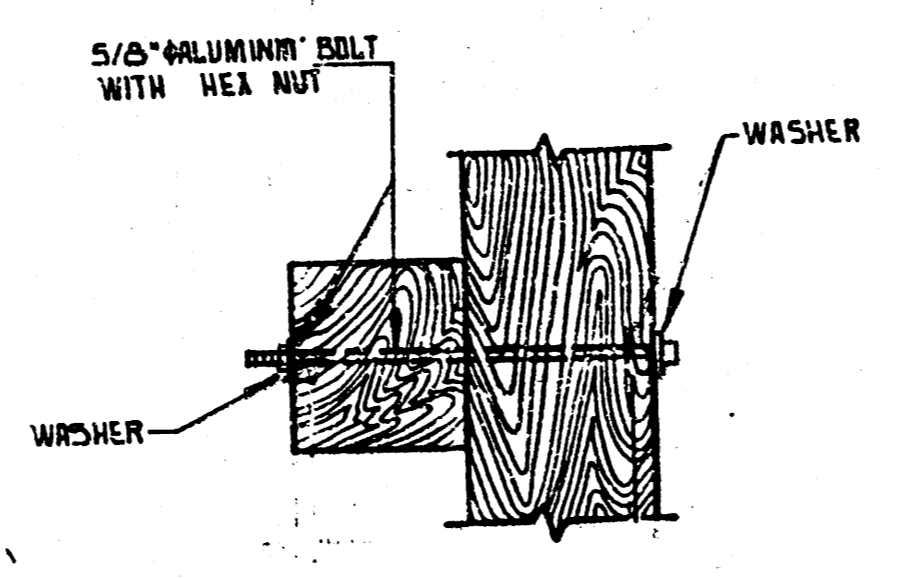
**PLAN CHANNEL**

**PROFILE CHANNEL**

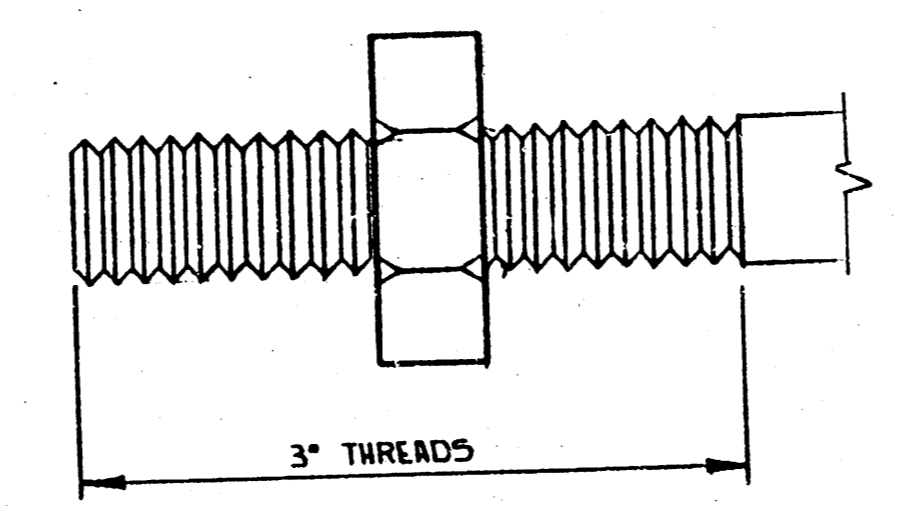




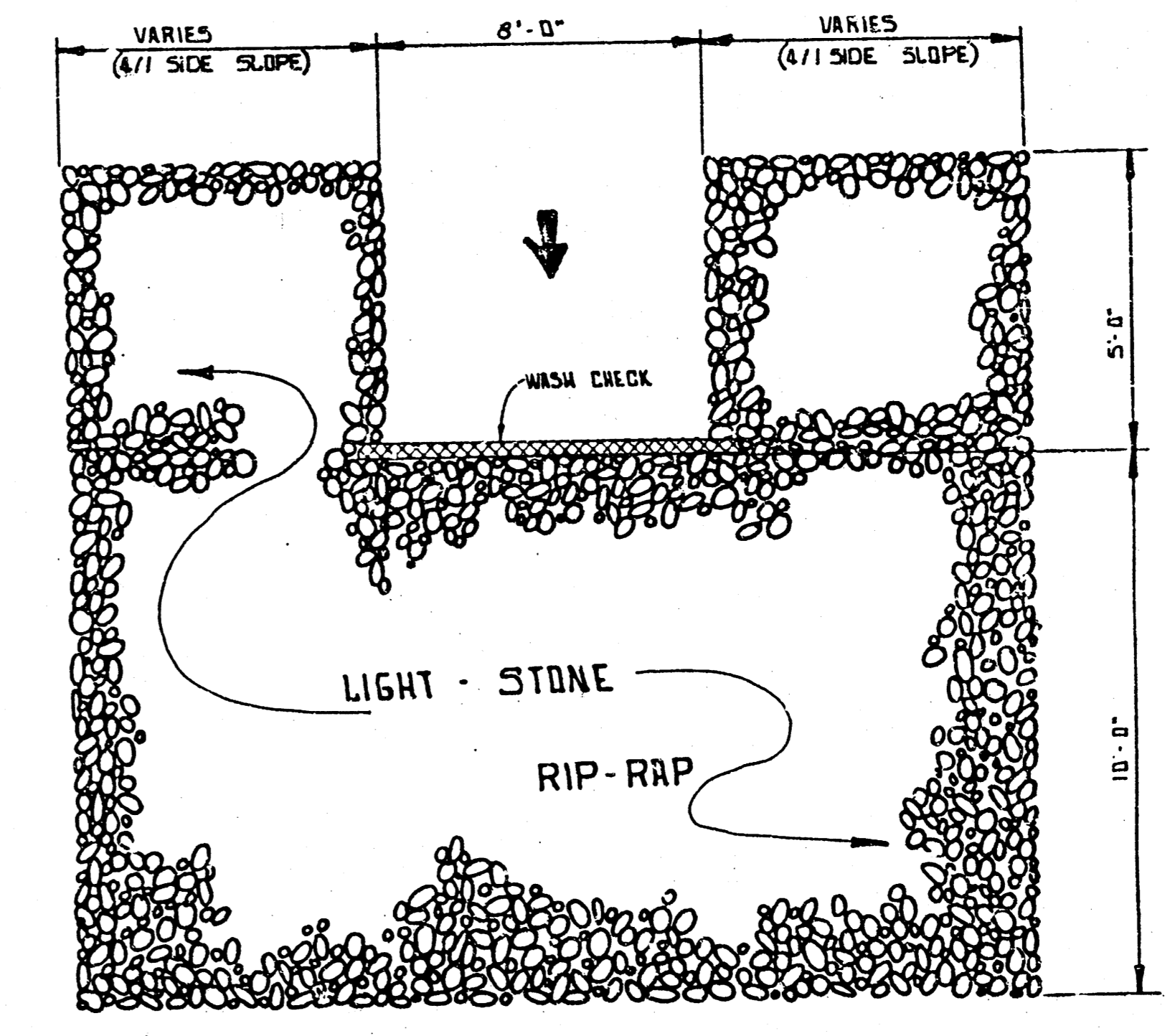
**SIDE VIEW**  
NO SCALE



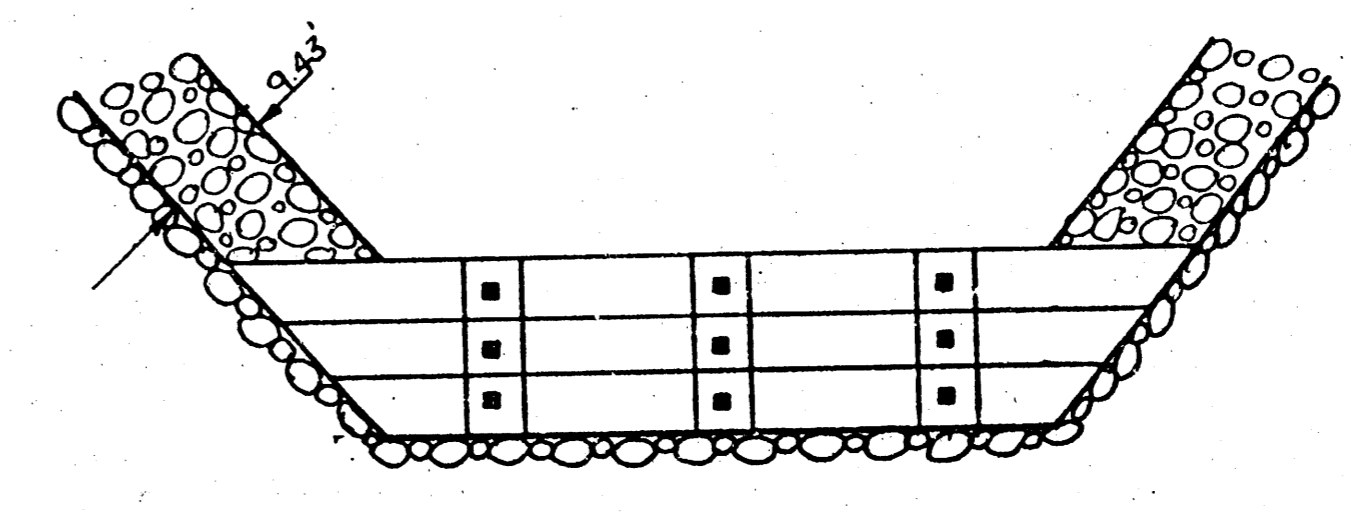
**DETAIL 'A'**  
NO SCALE



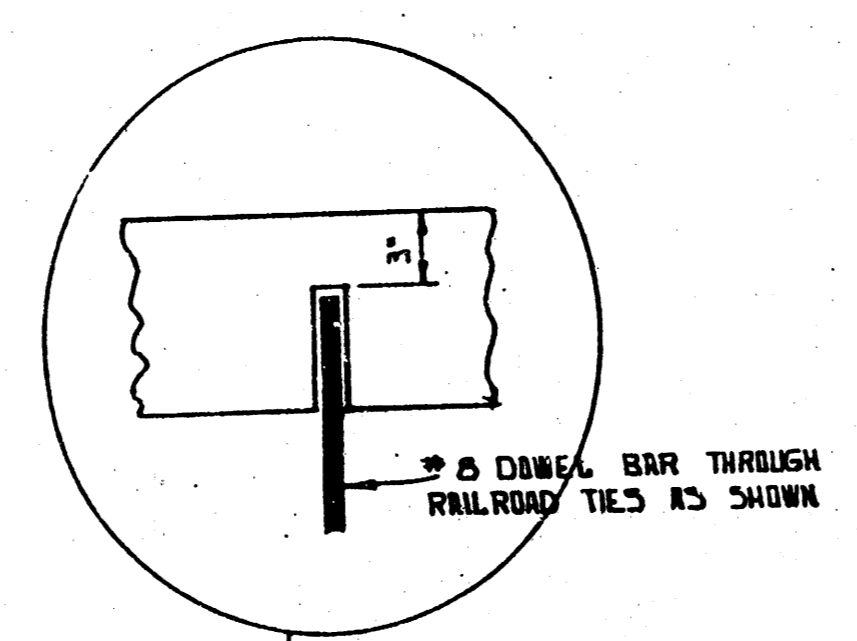
**ALUMINUM BOLT DETAIL**  
NO SCALE



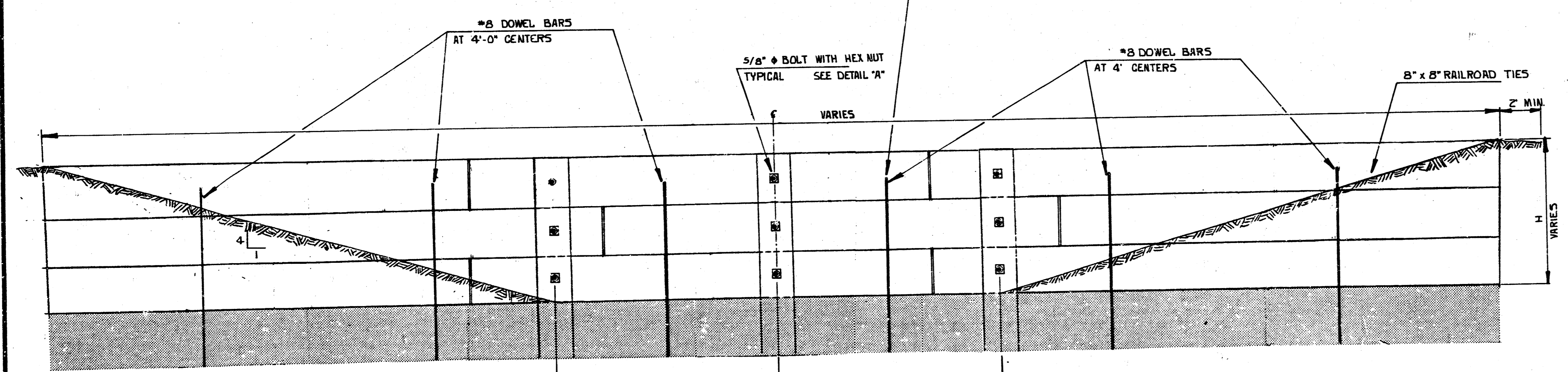
**RIP-RAP DETAIL**  
NO SCALE



**FRONT VIEW RIP-RAP**



#8 DOWEL BAR THROUGH RAILROAD TIES AS SHOWN

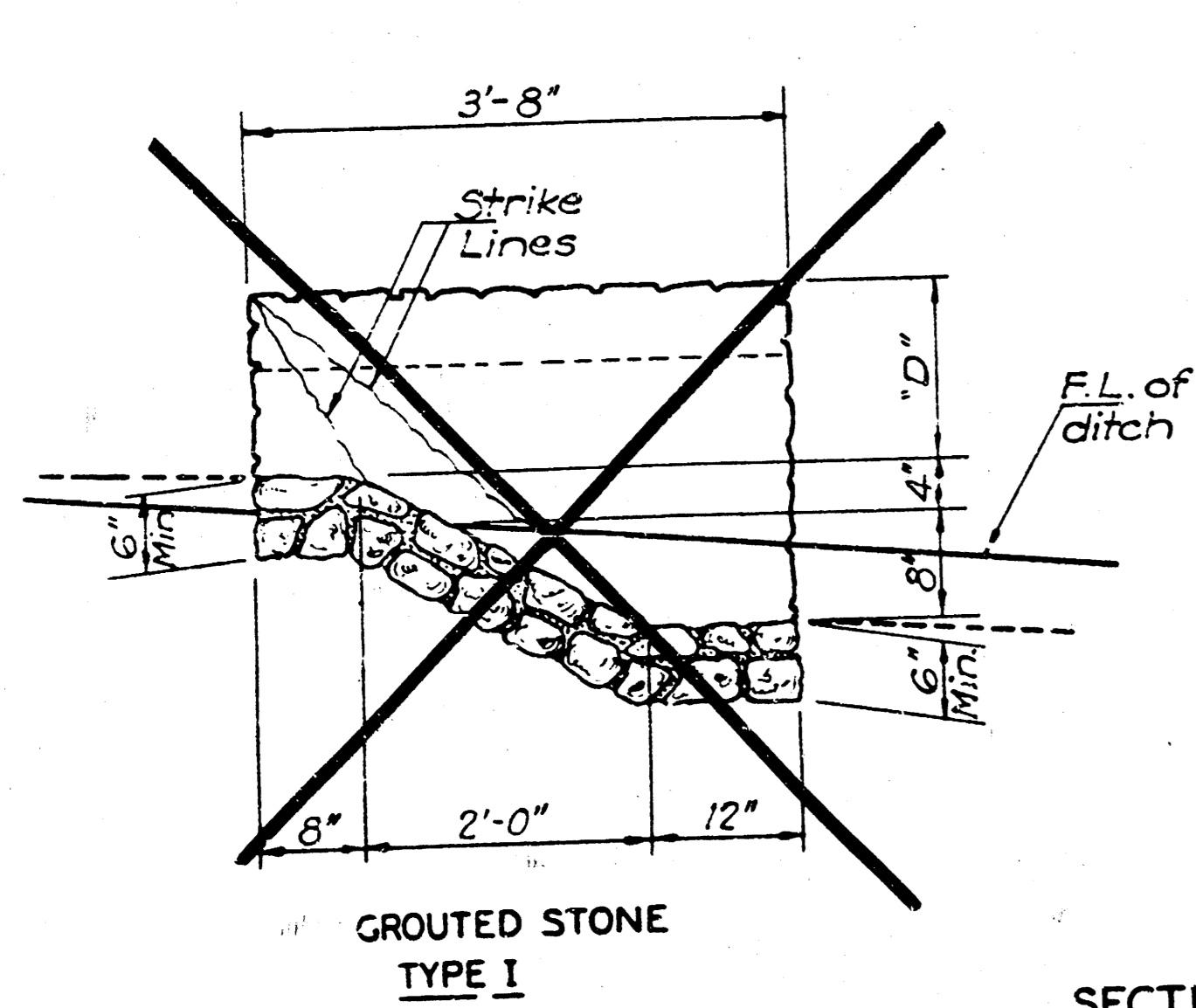


**FRONT VIEW**  
NO SCALE

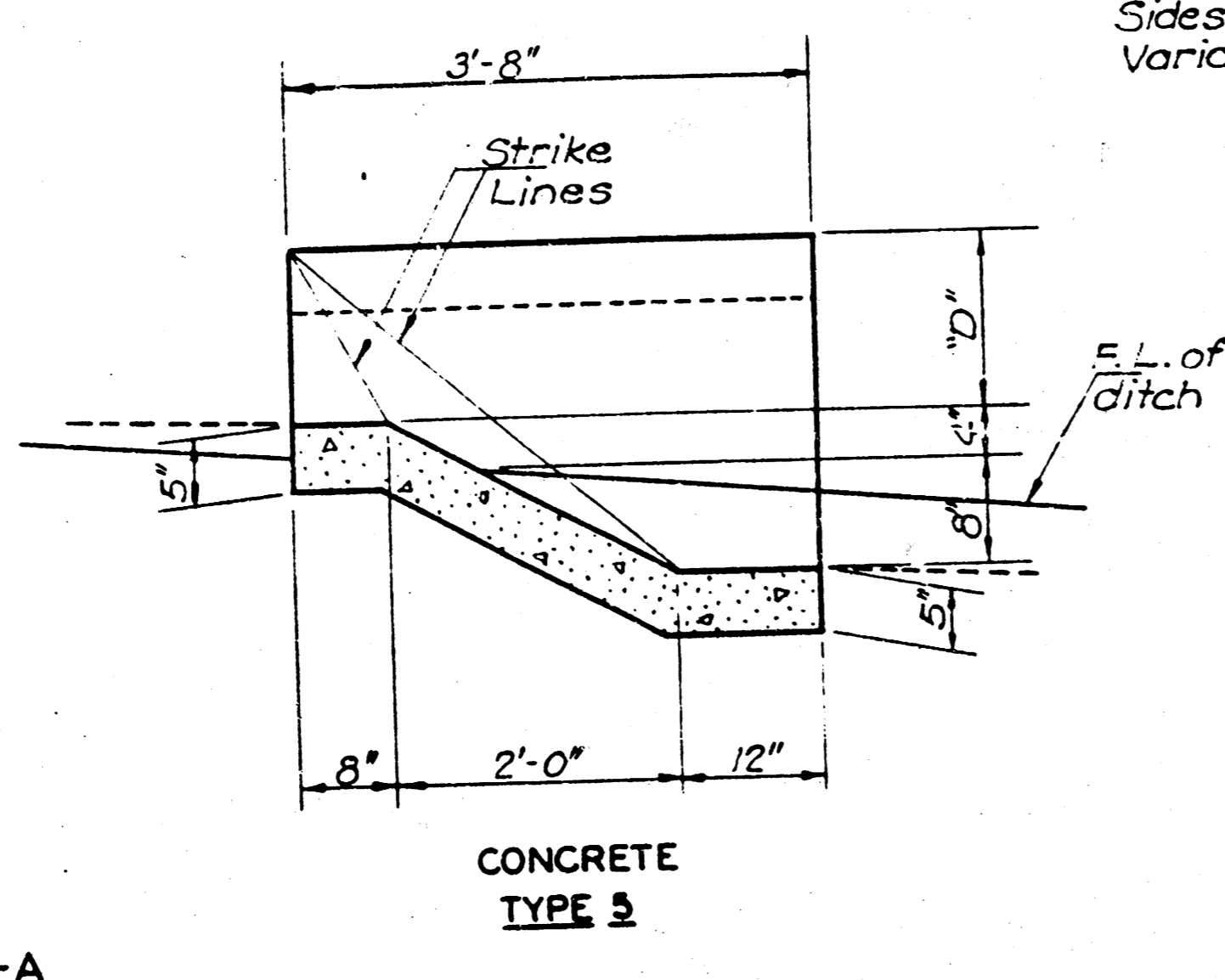
- GENERAL NOTES:**
1. Contractor shall use new railroad ties.
  2. Contractor shall re-treat railroad ties around bolts and bars.
  3. All wash checks, earthwork, materials and labor shall be included in "lump sum" bid. Earthwork of channel shall be paid separately.

	<b>WASH CHECK DETAILS</b>	Design
		Drawn by
		Checked by
		Date
		Job no.
MID-KANSAS ENGINEERING CONSULTANTS PA 3500 NORTH ROCK ROAD BUILDING #800 WICHITA, KANSAS 67226		8/17 Sheet <b>8A</b> of <b>16</b>

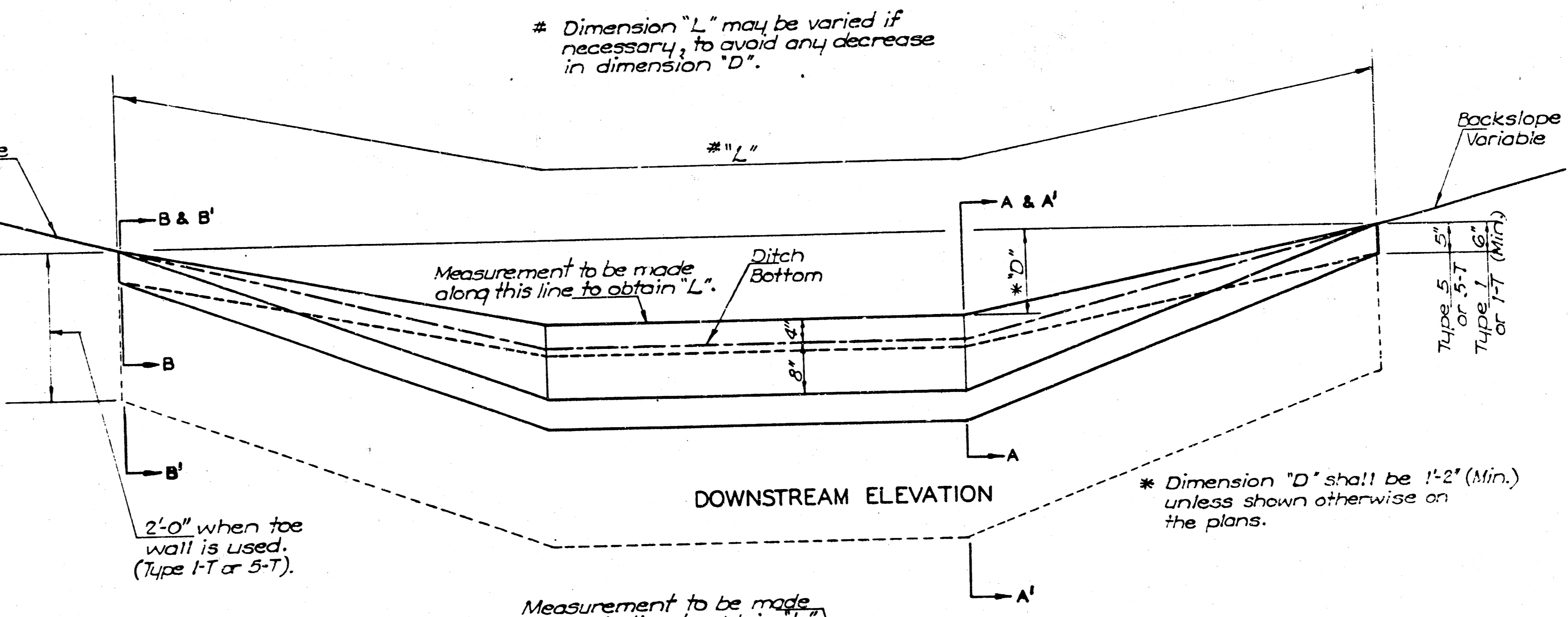
PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	KANSAS		19		



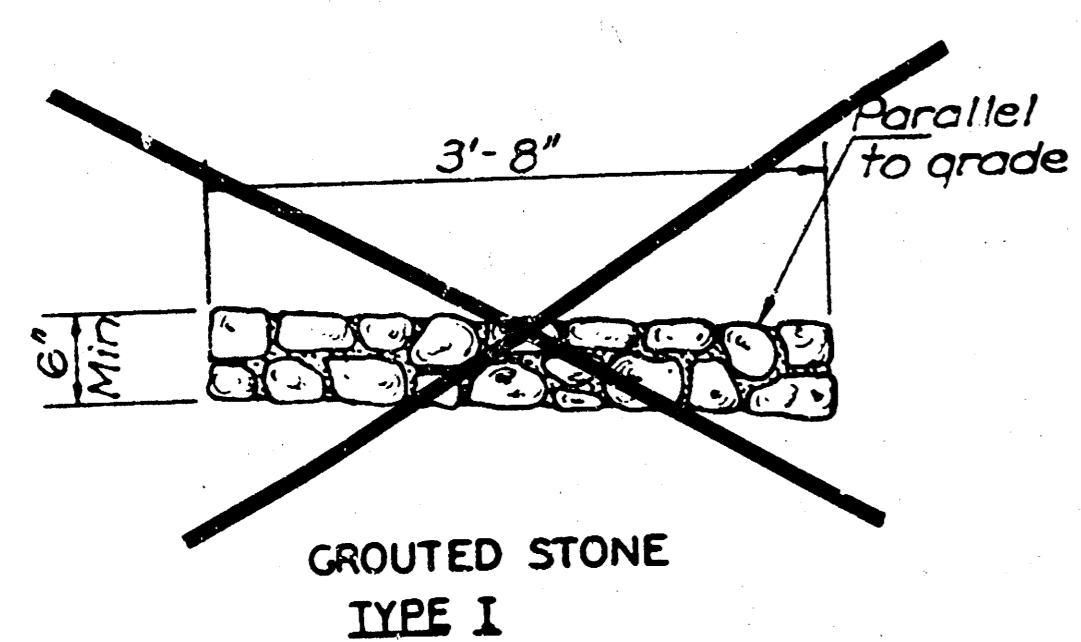
GRouted STone  
TYPE I



CONCRETE  
TYPE 5

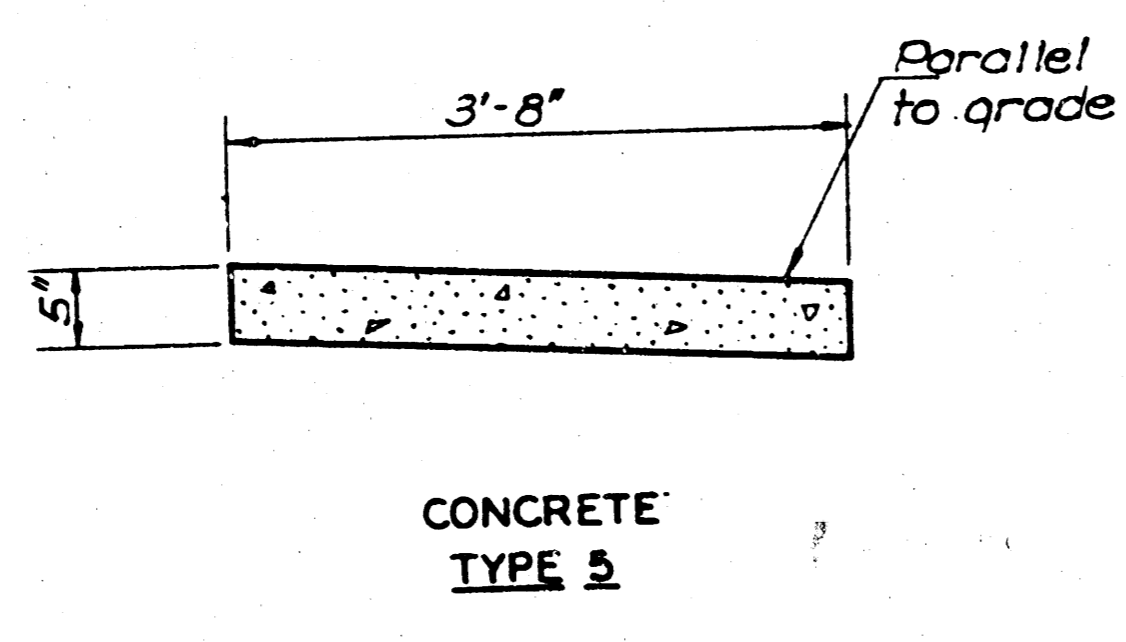


DOWNSTREAM ELEVATION

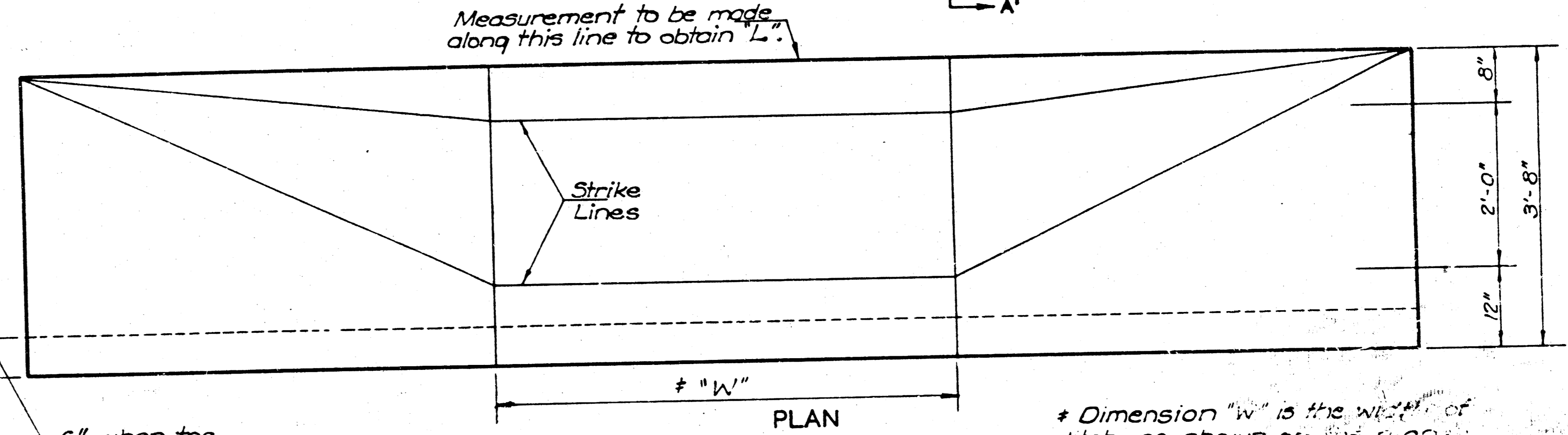


GRouted STone  
TYPE I

SECTION A-A  
Without Toe Wall.



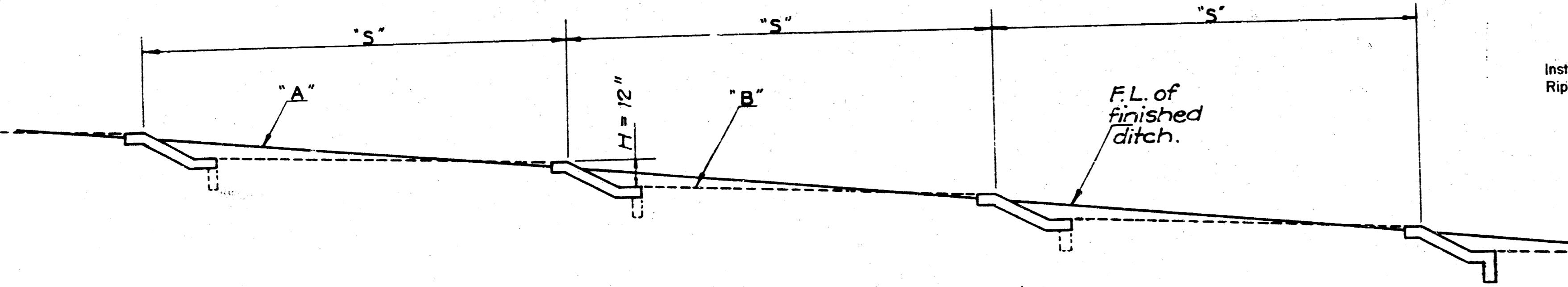
CONCRETE  
TYPE 5



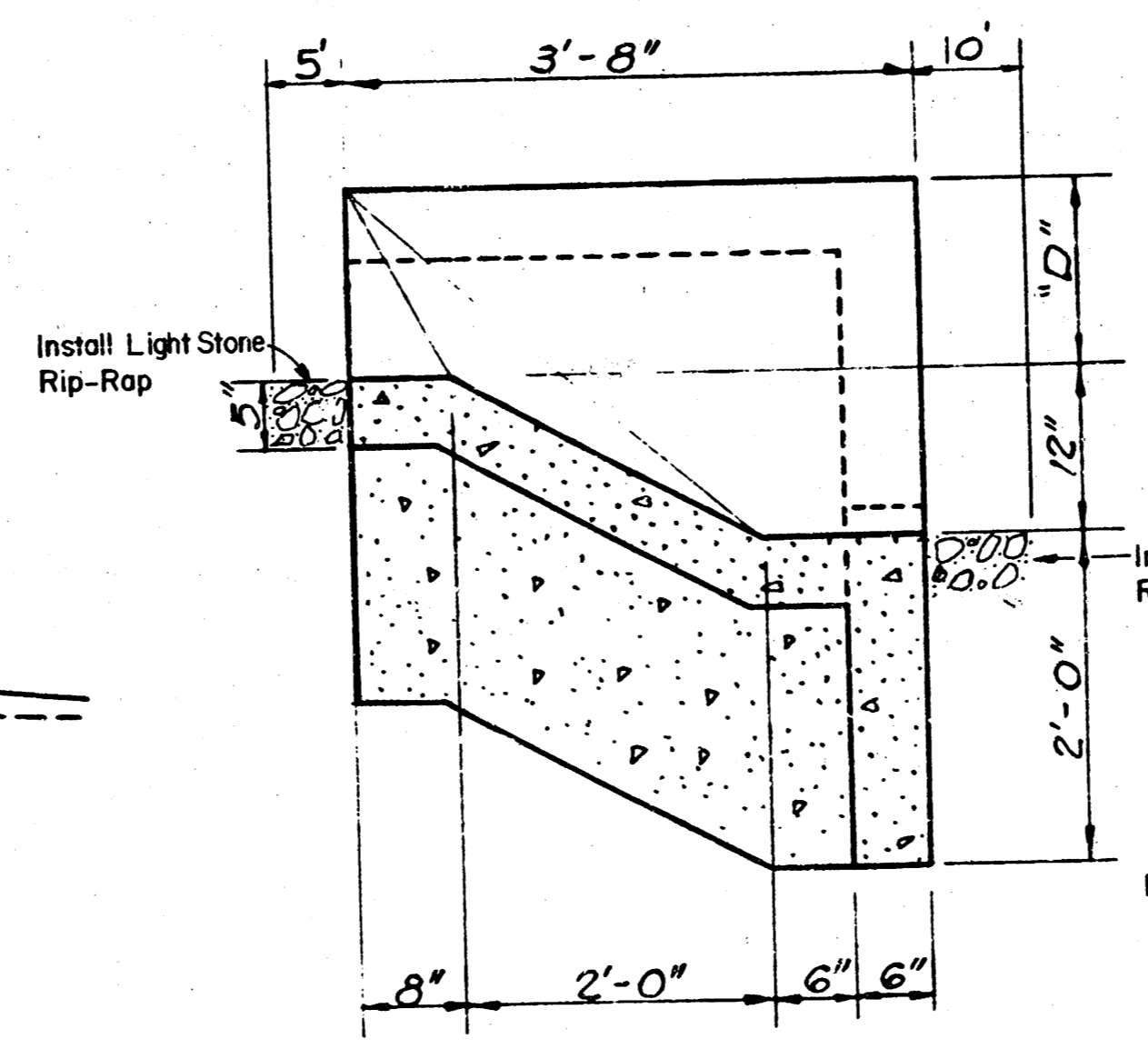
PLAN

Note: The stone in all stone wash checks shall be laid in a 3" mortar bed and the spaces between stones shall be filled with mortar.

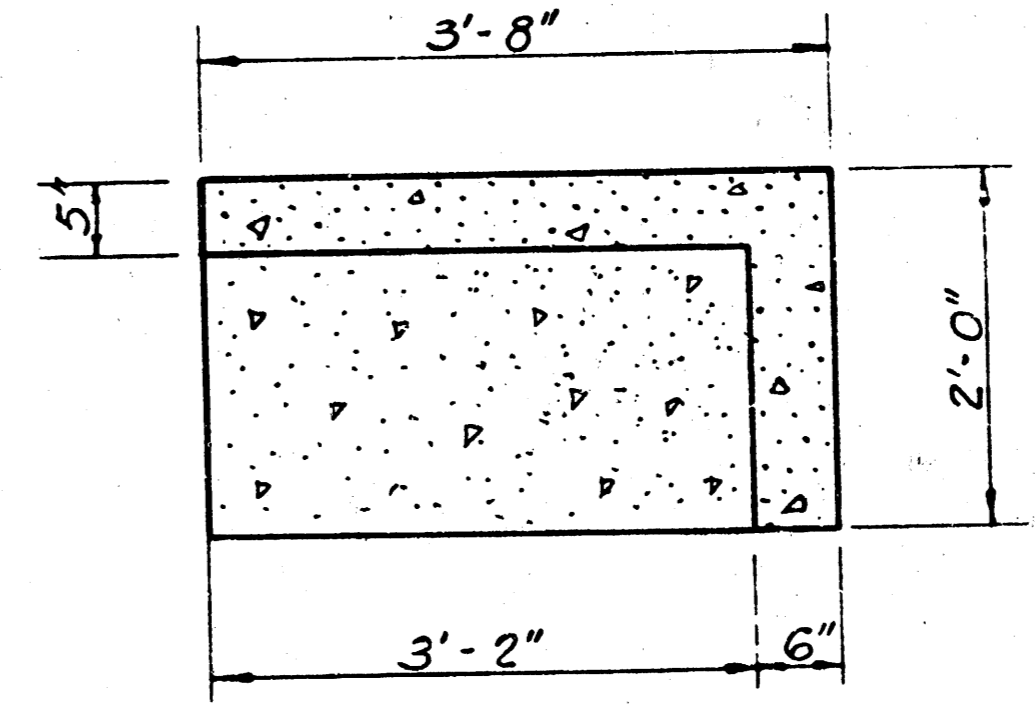
Note: Use Class "A" concrete thruout for Type 5 & 5-T Wash Checks.



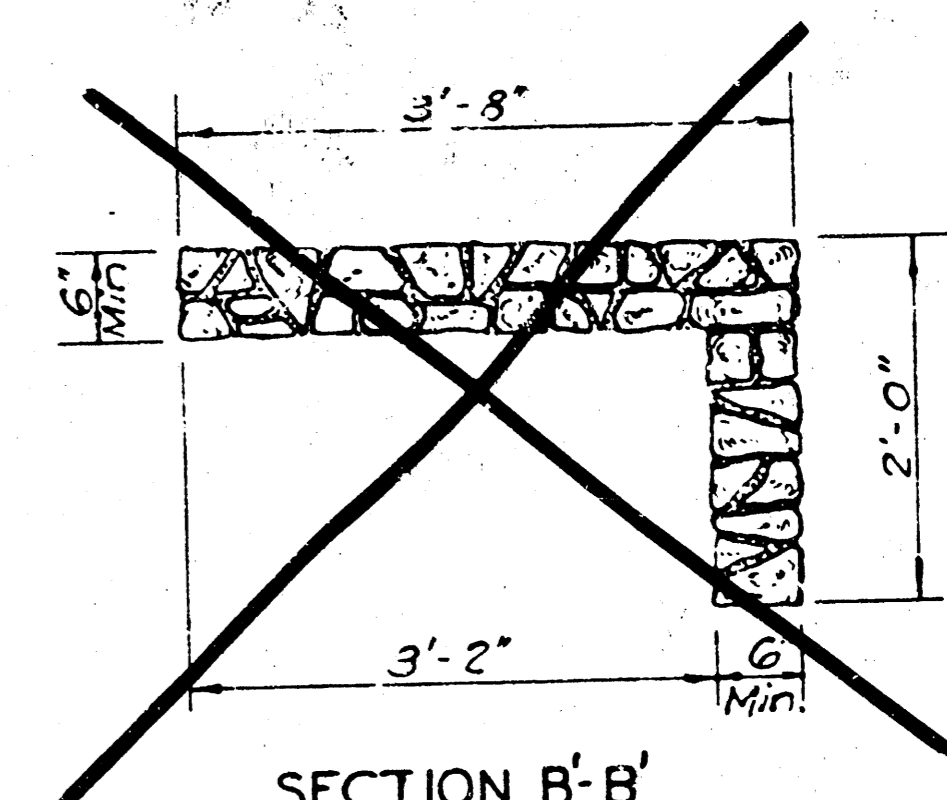
SPACING DIAGRAM  
Same for each type.



SECTION A-A'  
With Toe Wall  
TYPE 5-T



SECTION B-B'  
With Toe Wall  
TYPE 5-T



SECTION B-B'  
With Toe Wall  
TYPE I-T

Note: Unless otherwise noted, either of these types may be used.

S = Spacing of units in feet (10' min.).  
A = Per cent grade of ditch.  
B = Per cent at which washing is expected to stop. This will vary with the type of soil, etc.  
H = Height of drop at each unit.

$$S = \frac{100H}{(A-B)}, (10' \text{ min.})$$

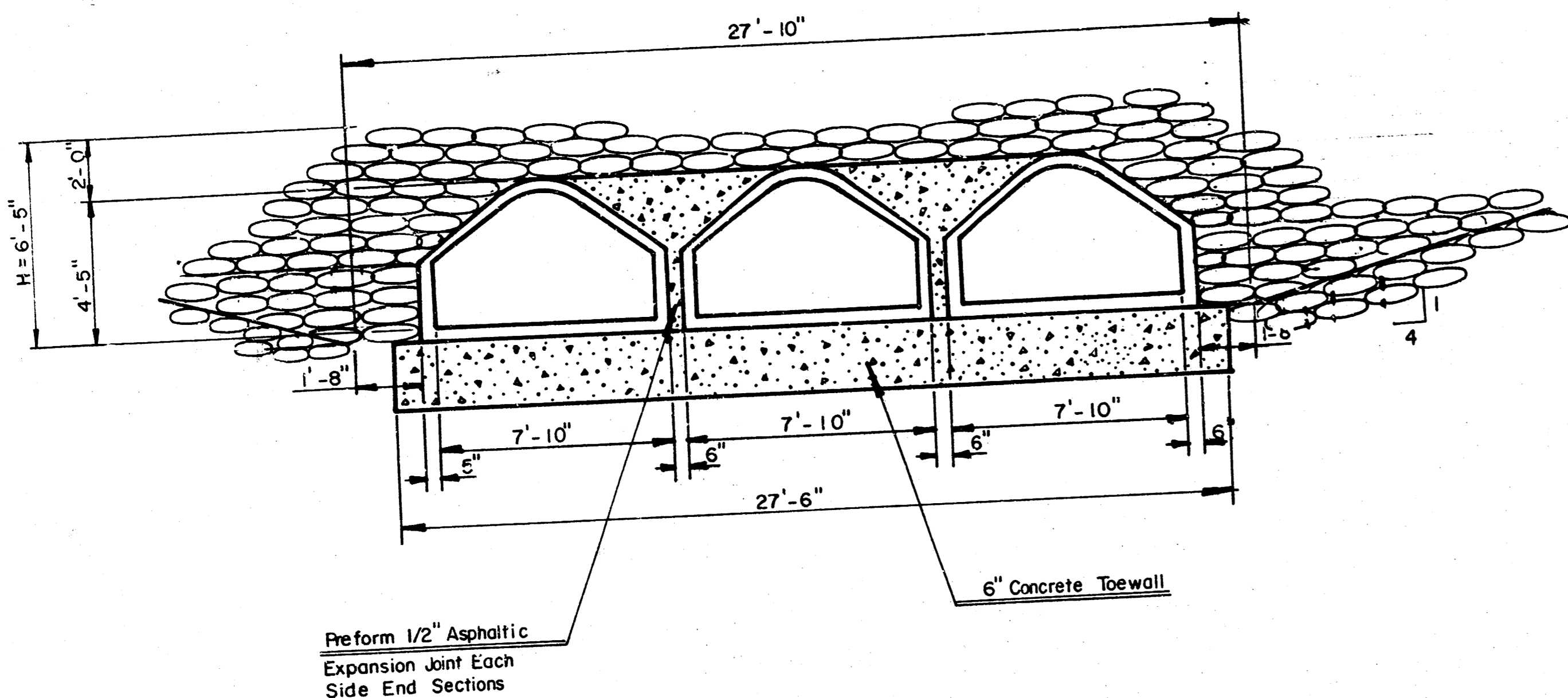
FORMULA

(A-B)	Spacing	(A-B)	Spacing
1	100'	6	17'
1.5	67'	6.5	15.5'
2	50'	7	14'
2.5	40'	7.5	13'
3	33'	8	12.5'
3.5	29'	8.5	12'
4	25'	9	11'
4.5	22'	9.5	10.5'
5	20'	10	10'
5.5	18'		

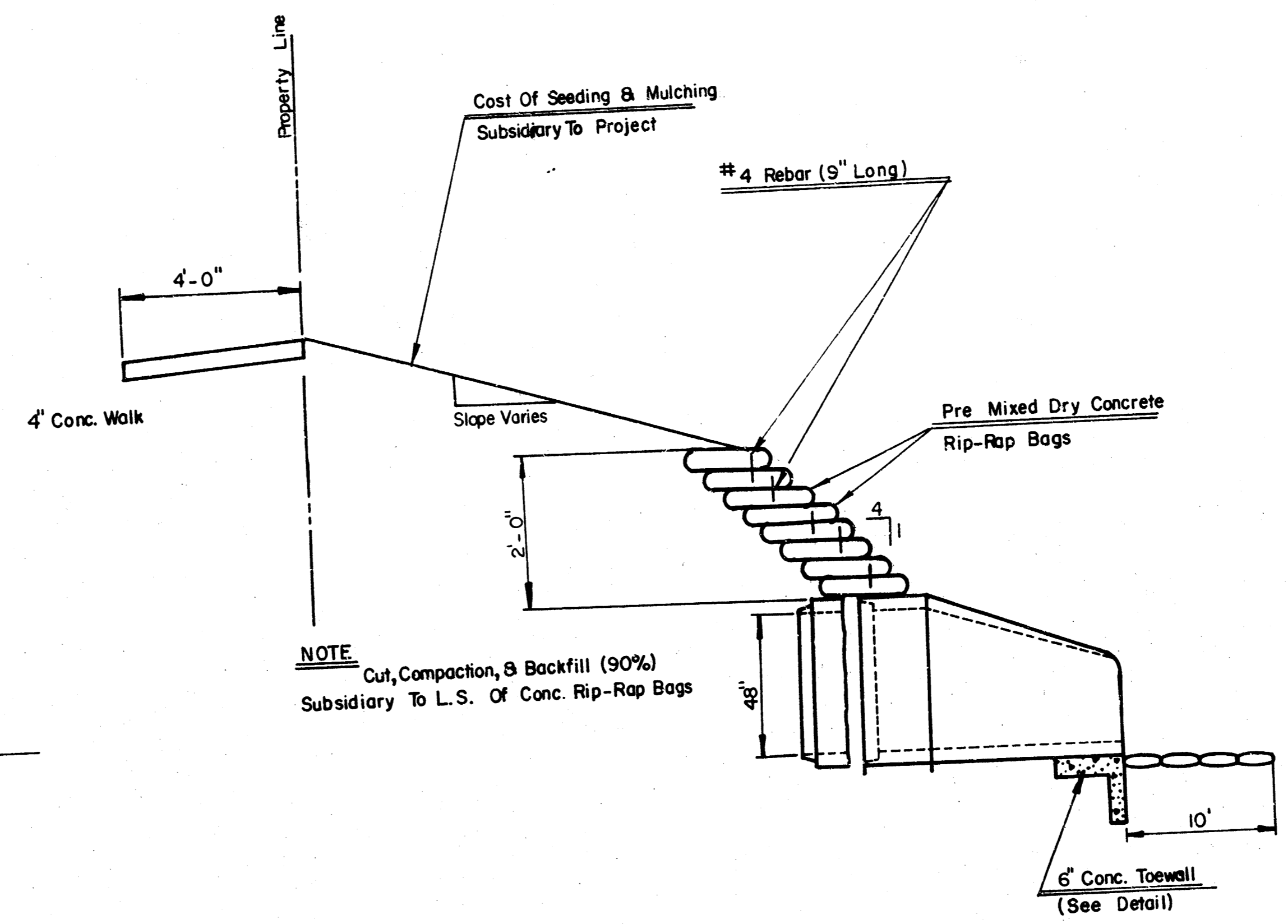
Note: Type I-T or 5-T wash checks shall be used on the lowest unit in each row. Additional locations where these units are to be constructed shall be designated by the Engineer.

NO.	DATE	REVISIONS	BY	APP'D.
STATE HIGHWAY COMMISSION OF KANSAS				
<b>WASH CHECKS</b>				
TYPE I & TYPE 5				
STD. NO. 506				
SHEET NO. OF	SCALE	NO. SCALES	APPROVED	DATE
DESIGNED WAB	DETAILED WAB	QUANTITIES	TRACED W.A.B.	2-51
DESIGN CK. EAR	DETAIL CK.	QUAN. CK.	TRACE CK.	

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**FRONT VIEW**

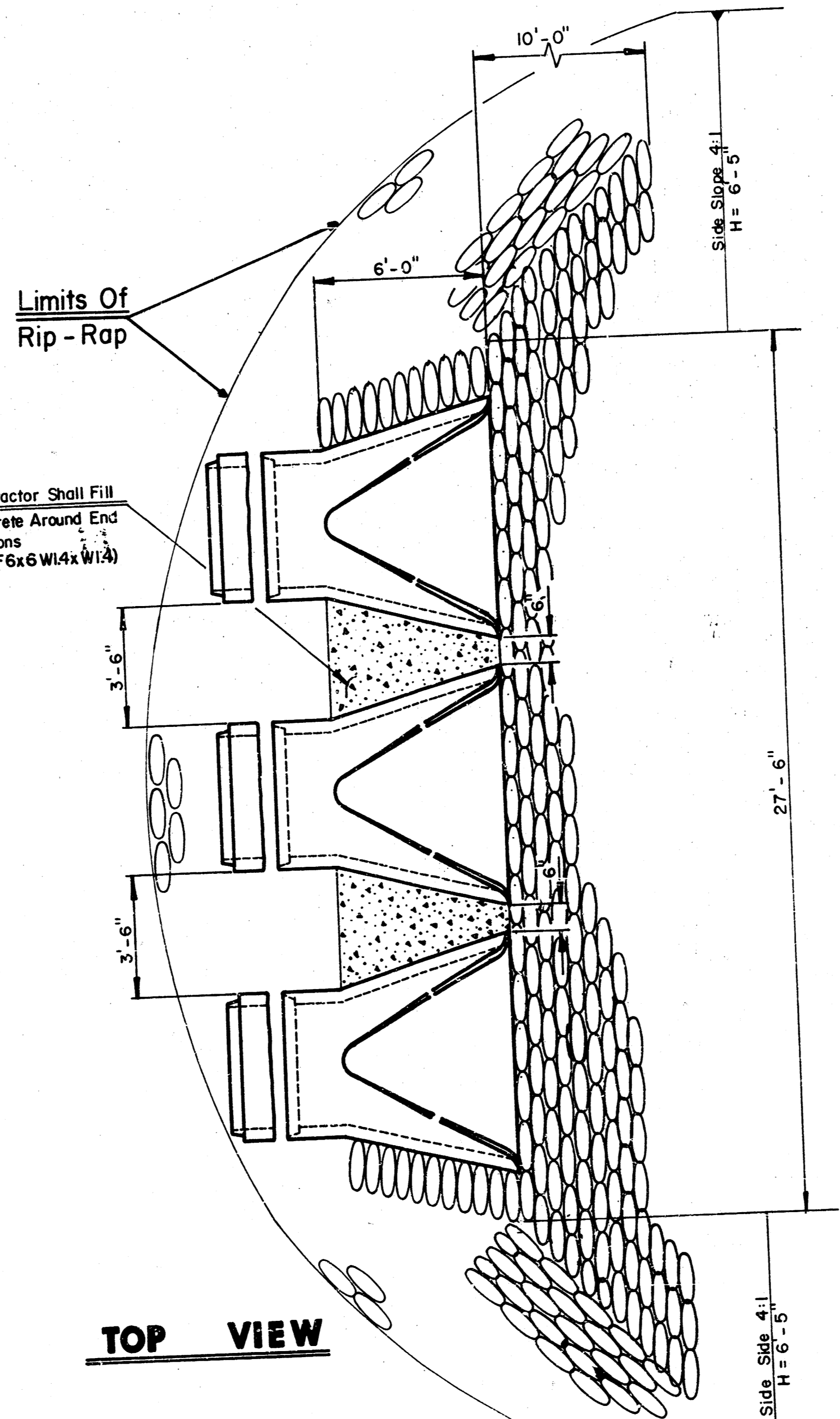
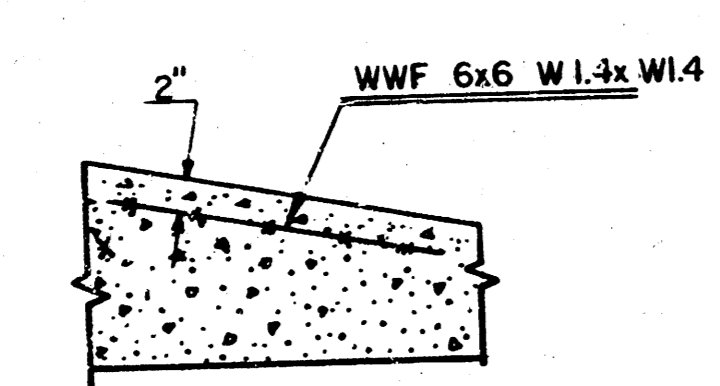
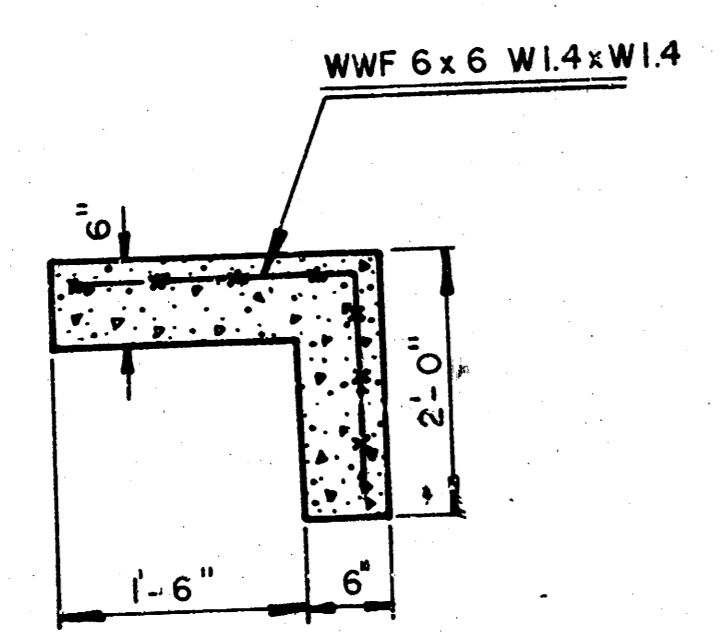


**SIDE VIEW**

All type work, material, and labor on this sheet are subsidiary to Lump Sum of Concrete Rip-Rap Bags.

Perform 1/2\"/>

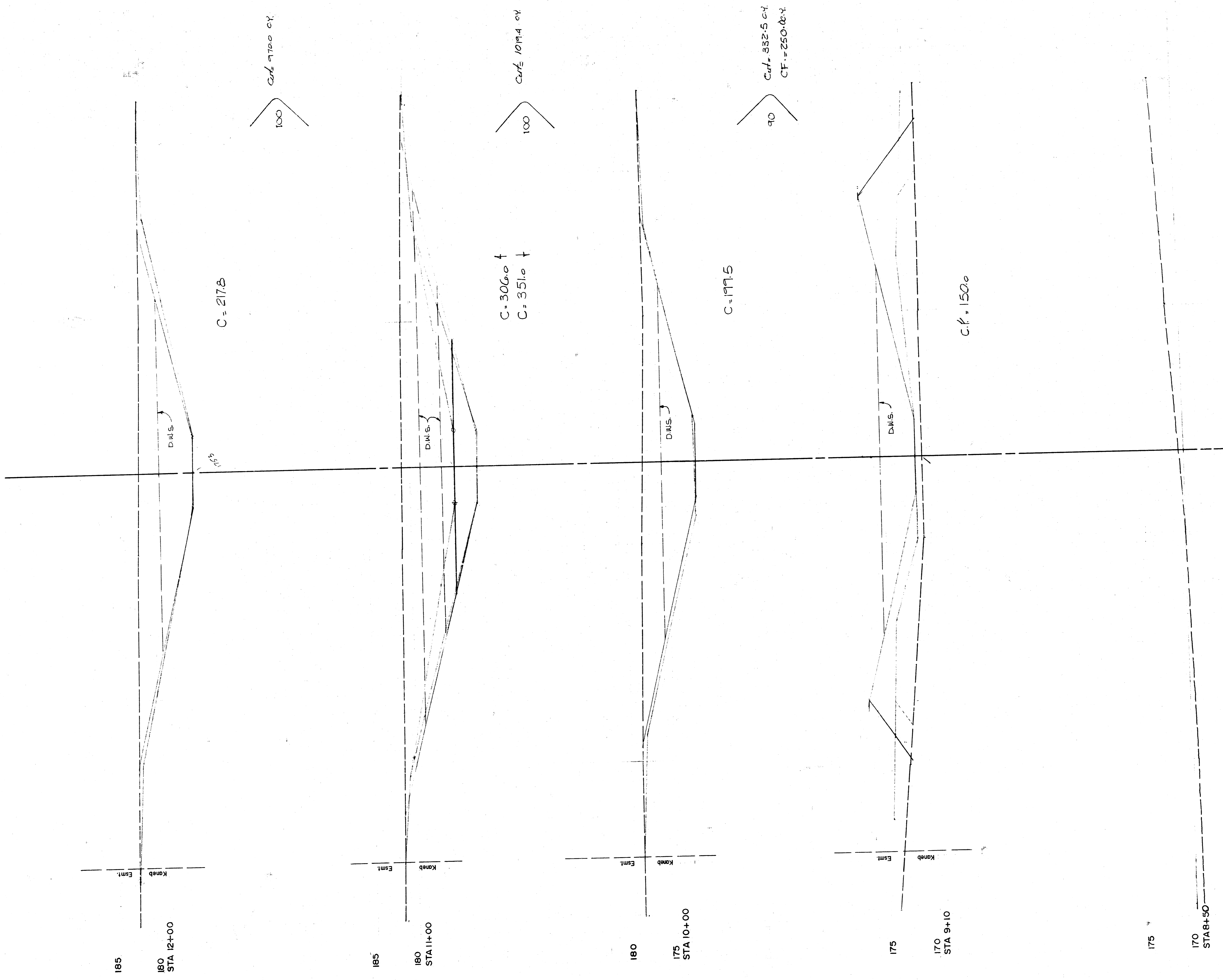
**TOEWALL DETAIL**



**TOP VIEW**

	<b>DRY CONCRETE RIP-RAP BAG DETAILS</b>	Design: Drawn by: Checked by: Date: Job No:
	MID-KANSAS ENGINEERING CONSULTANTS PA 3500 N. Rock Road Building No. 800 WICHITA, KANSAS 67206	10/17 682-6561

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TOTAL CUT = 131.8 CY  
 TOTAL C.F. = 1663.2 CY

19/16

17

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WATERFORD NORTH 3rd ADDITION  
STORM WATER DRAIN NO. 67  
PROJ. NO. 46876245-81433000000-001

Cut = 773.7 c.y.



50  
45  
40  
35  
30  
25  
20  
15  
10  
5  
0  
5  
10  
15  
20  
25  
30  
35  
40  
45  
50

C = 200.0

D.M.S.

180 STA. 13+00

185

C = 201.0

D.M.S.

180 STA. 14+00

185

C = 214.5

D.M.S.

180 STA. 15+00

185

C = 205.8  
C = 203.0

D.M.S.

180 STA. 16+00

185

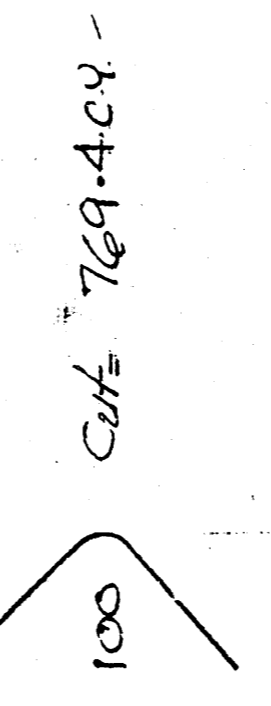
C = 165.0

D.M.S.

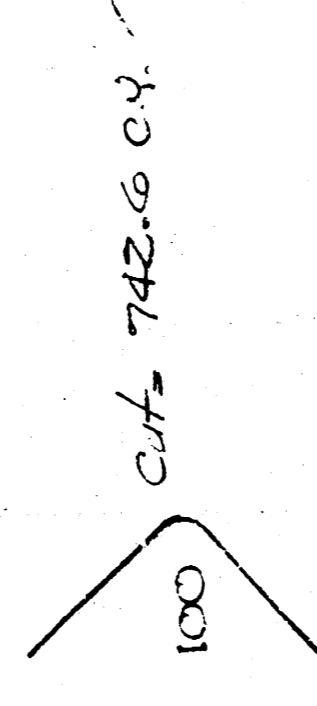
180 STA. 17+00

185

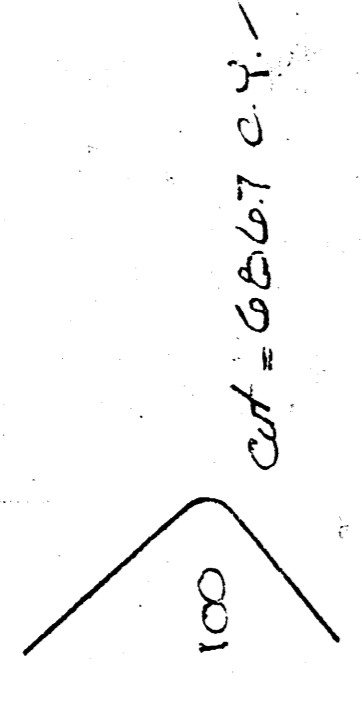
Lot 6  
W. Ford N. 3rd



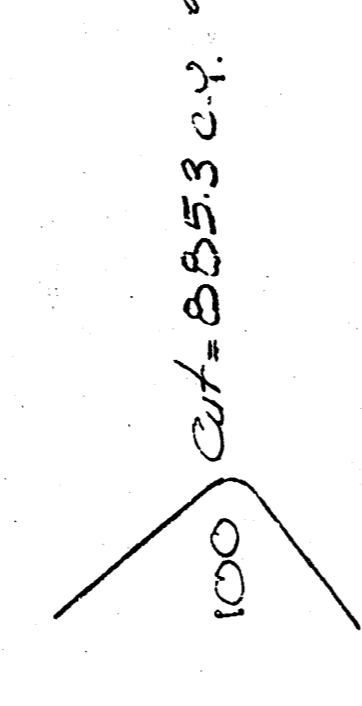
Cut = 769.4 c.y.



Cut = 742.0 c.y.

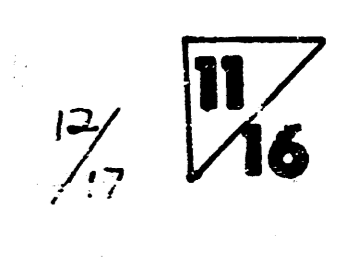


Cut = 666.7 c.y.

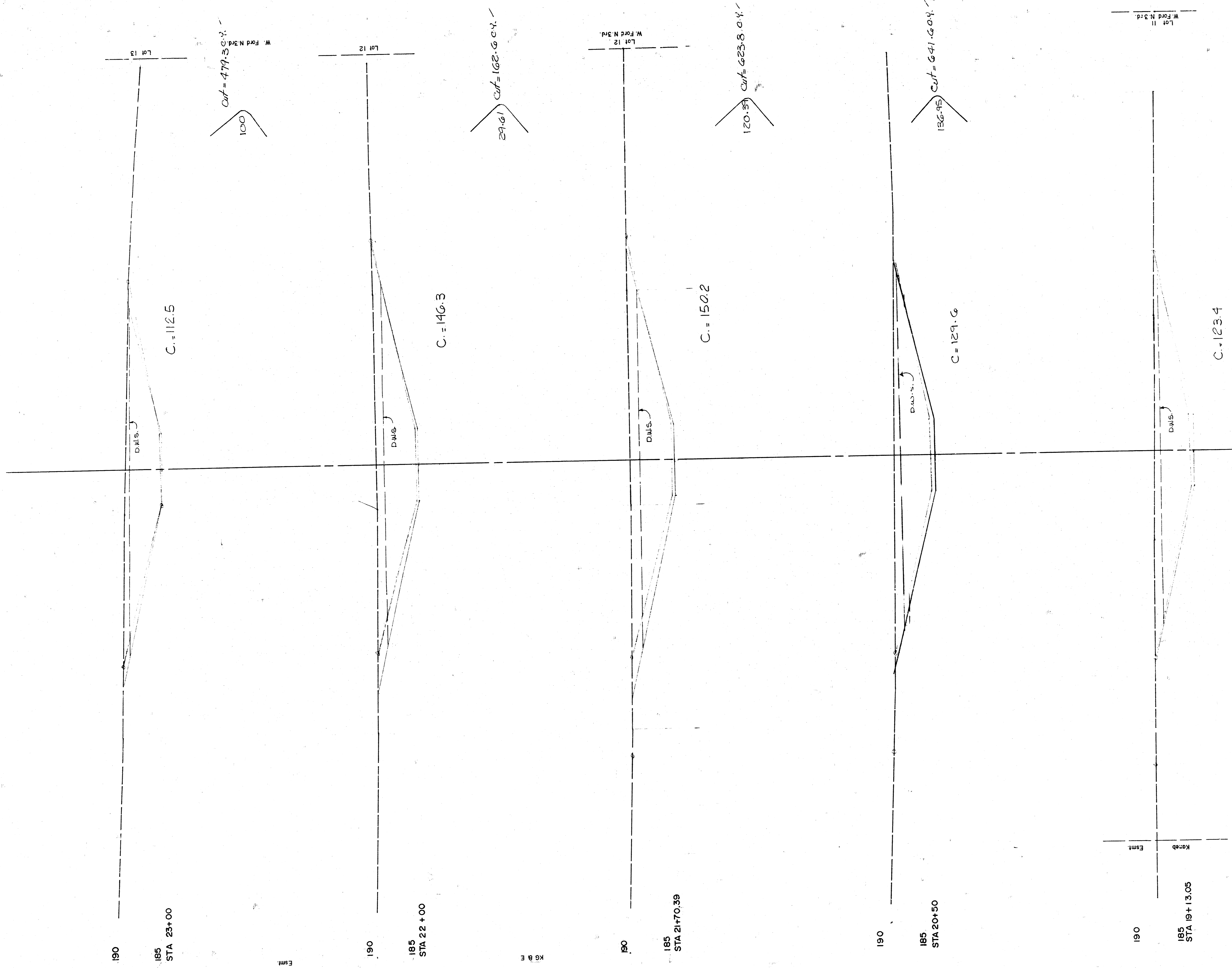


Cut = 855.3 c.y.

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WATERFORD NORTH 3rd ADDITION  
STORM WATER DRAIN NO. 67  
PROJ.NQ4687624581433000-000-001

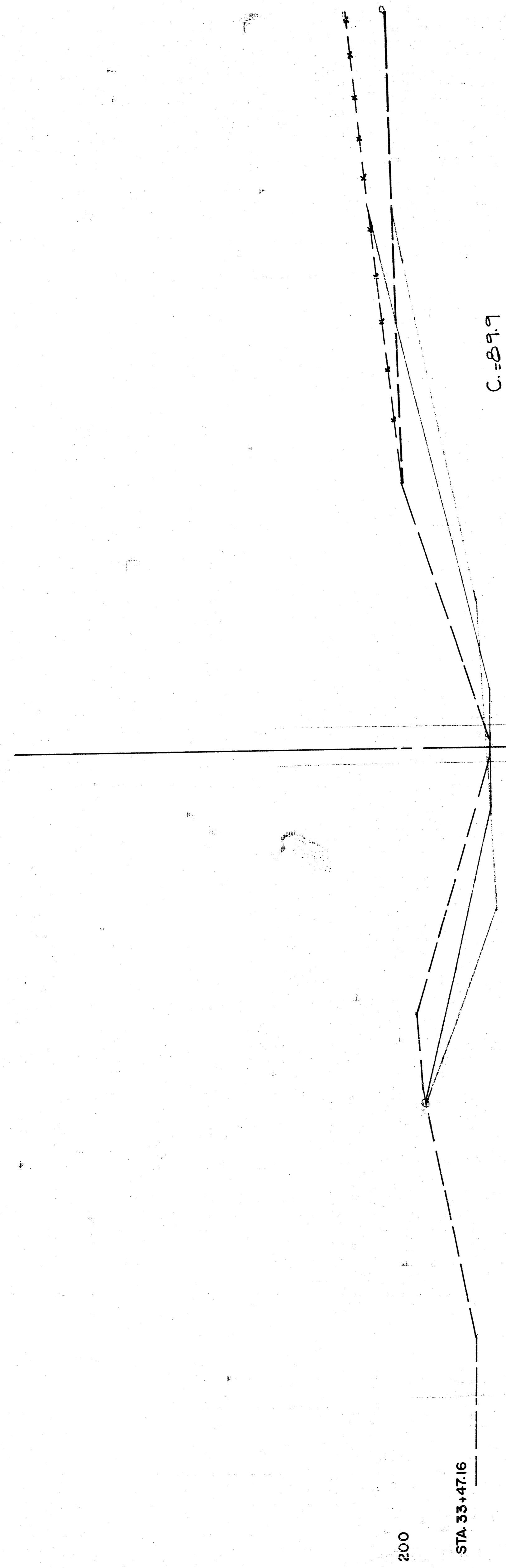


50  
45  
40  
35  
30  
25  
20  
15  
10  
5  
0  
5  
10  
15  
20  
25  
30  
35  
40  
45  
50

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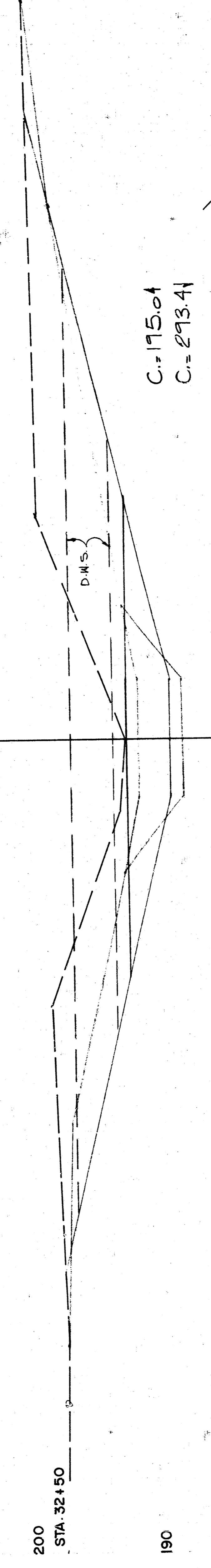
13/17 12/16





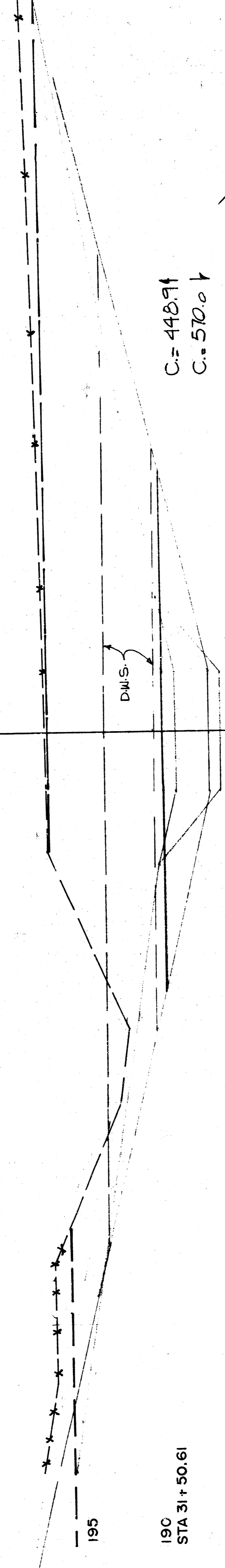
C = 36.97  
 97160 Cut = 512.6 cy

200  
 STA. 33+47.16  
 190



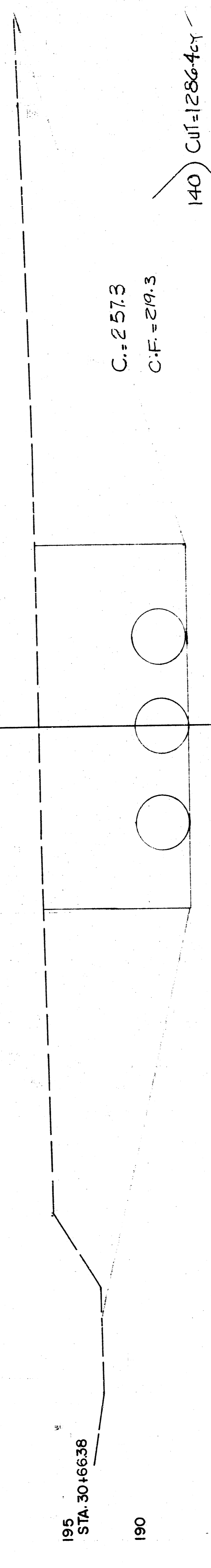
C = 48.01  
 C = 293.41  
 99339 Cut = 1366.2 cy

200  
 STA. 32+50  
 190



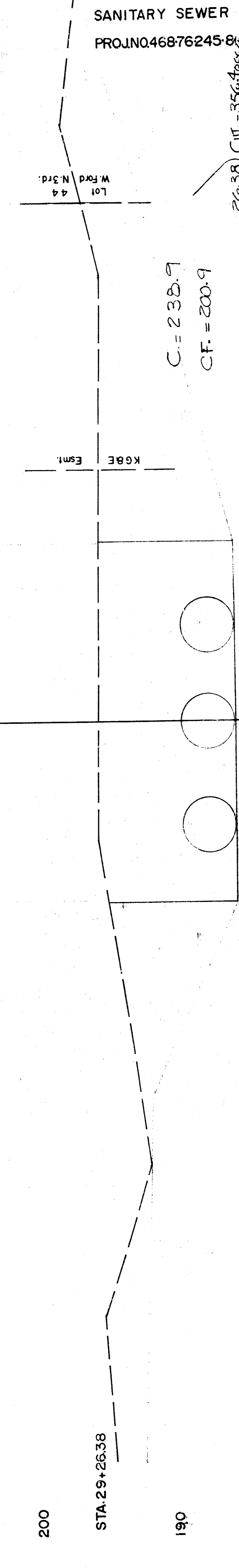
C = 48.91  
 C = 570.01  
 84423 Cut = 1290.4 cy

195  
 STA. 31+50.61  
 190



C = 257.3  
 C.F. = 299.3  
 140 Cut = 1286.4 cy  
 C.F. = 1089.4

195  
 STA. 30+66.38  
 190



C = 238.7  
 C.F. = 200.9  
 26338 Cut = 356.4 box

200  
 STA. 29+26.38  
 190

WATERFORD NORTH 3rd ADDITION  
 SANITARY SEWER DRAIN NO. 67  
 PROJ. NO. 46876245-8433-000000-001

14/16

50  
45  
40  
35  
30  
25  
20  
15  
10  
5  
0  
5  
10  
15  
20  
25  
30  
35  
40  
45  
50

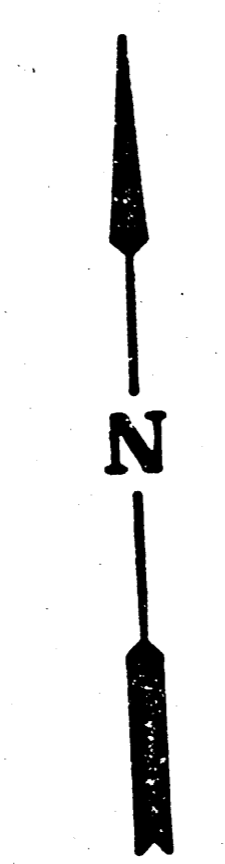
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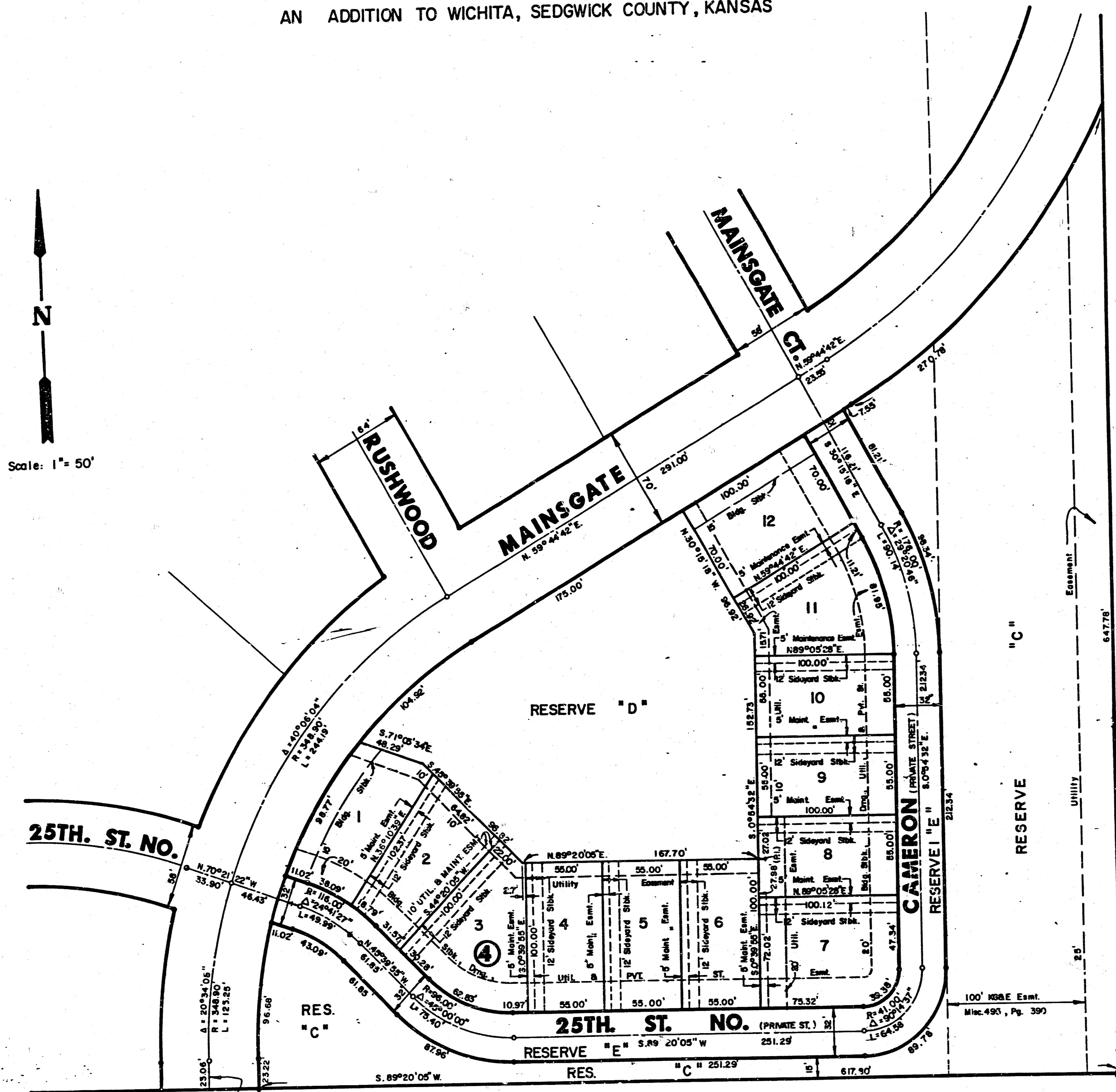
870-L 1-W

# FINAL PLAT OF WATERFORD NORTH THIRD ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



Scale: 1" = 50'



**DETAIL "A"**

M-1 7-26B

44 0 4 15 17/17 16/16

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