

CULVERT	WIDTHS					LENGTH
	A	B	C	D	E	
W60	4'3"	7'4"	2'7"	1'10"	13'9"	16'9"
W66	5'9"	1'6"	5'3"	2'7"	17'9"	20'11"
W80	7'3"	1'8"	3'11"	2'9"	21'9"	25'0"

CULVERT	WIDTHS					LENGTH
	A	B	C	D	E	
W60	4'3"	1'8"	3'11"	3'7"	2'4"	37'2"
W66	5'9"	1'10"	4'7"	4'7"	2'7"	43'9"

CULVERT SIZE	STEEL (LBS)	CONCRETE CU YDS.
W46	58.2 E + 190	0.55E + 6.8
W60	65.1 E + 800	0.73E + 8.2
W66	137.3 E + 1060	1.31E + 10.9
W80	96.8 E + 880	0.94E + 9.4
W86	177.2 E + 1260	1.71E + 13.2
W106	127.0 E + 900	1.22E + 11.1
W107	322.5 E + 1470	3.42E + 21.3
W126	171.0 E + 890	1.62E + 13.3
W127	471.0 E + 1490	4.52E + 27.4

BAR No.	SIZE	LENGTH	SQUARE FEET	DESCRIPTION
W1	1/2"	10'	5.0	STRT CURB
W2	1/2"	10'	5.0	STRT CURB
W3	1/2"	10'	5.0	STRT CURB
W4	1/2"	10'	5.0	STRT CURB
W5	1/2"	10'	5.0	STRT CURB
W6	1/2"	10'	5.0	STRT CURB
W7	1/2"	10'	5.0	STRT CURB
W8	1/2"	10'	5.0	STRT CURB
W9	1/2"	10'	5.0	STRT CURB
W10	1/2"	10'	5.0	STRT CURB
W11	1/2"	10'	5.0	STRT CURB
W12	1/2"	10'	5.0	STRT CURB
W13	1/2"	10'	5.0	STRT CURB
W14	1/2"	10'	5.0	STRT CURB
W15	1/2"	10'	5.0	STRT CURB
W16	1/2"	10'	5.0	STRT CURB
W17	1/2"	10'	5.0	STRT CURB
W18	1/2"	10'	5.0	STRT CURB
W19	1/2"	10'	5.0	STRT CURB
W20	1/2"	10'	5.0	STRT CURB

THESE BARS REQUIRE ONLY WHEN THE CULVERT TO BE EXTENDED HAS MORE THAN ONE OPENING.

- 1 BAND IN FIELD
- 2 TWO BARS TO BE CUT FROM EACH TRIM MARKED TRUE (S) ONE LONG AND ONE SHORT
- 3 LENGTH OF B. SEE STANDARD PLAN
- 4 SIZE OF B. SEE STANDARD PLAN
- 5 NUMBER OF B. SEE STANDARD PLAN
- 6 LENGTH OF F₁
- 7 F₁
- 8 F₂
- 9 F₃
- 10 F₄
- 11 F₅
- 12 F₆
- 13 F₇
- 14 F₈
- 15 F₉
- 16 F₁₀
- 17 F₁₁
- 18 F₁₂
- 19 F₁₃
- 20 F₁₄
- 21 F₁₅
- 22 F₁₆
- 23 F₁₇
- 24 F₁₈
- 25 F₁₉
- 26 F₂₀

NOTE: THE MINNESOTA HIGHWAY DEPARTMENT'S CURRENT SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SHALL APPLY.

THE STANDARD PLAN FOR THE SIZE OF CULVERT TO BE EXTENDED SHALL BE USED IN CONNECTION WITH THIS SHEET.

REMOVAL OF OLD CONCRETE AND PREPARATION OF OLD WORK SHALL CONFORM TO THE REQUIREMENTS OF M.H.D. 2433.3.

STATE OF MINNESOTA
 DEPARTMENT OF HIGHWAYS
 EXTENSION DETAILS & DETAILS OF APRON & WINGS FOR 2:1 FILL SLOPES
 ALL 6FT. HIGH CULVERTS (W SERIES)
 APPROVED: MAY 1, 1954

E. J. Miller
 BRIDGE ENGINEER

O. J. Fisher
 CHIEF ENGINEER

EXCAVATION EMBANKMENT

Sub-TOTALS	Exc. Yds.	Emb. Yds.	Sub-TOTALS
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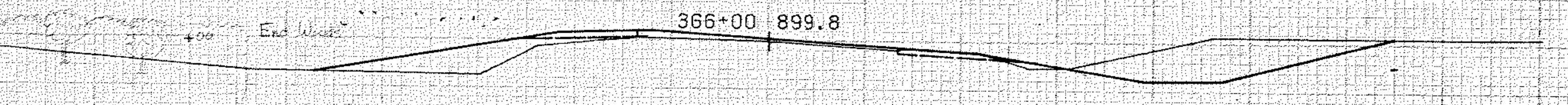
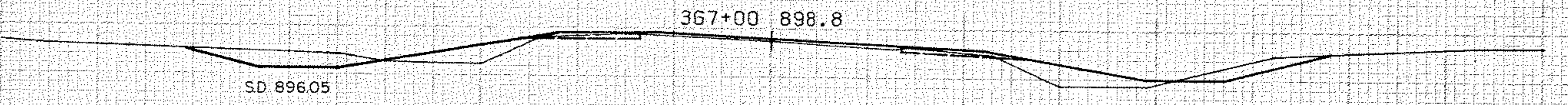
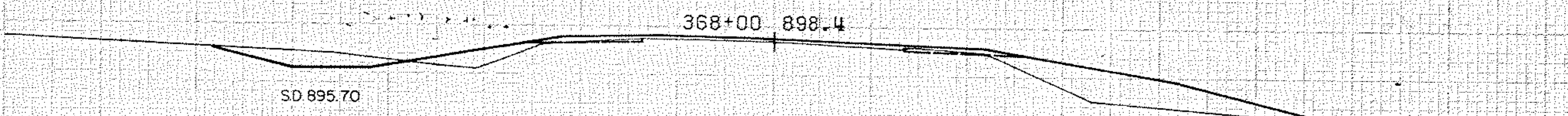
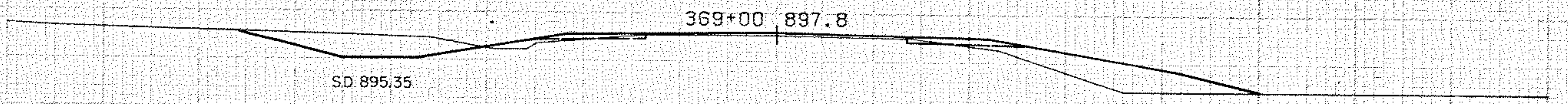
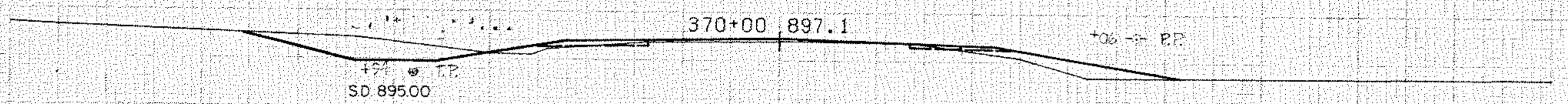
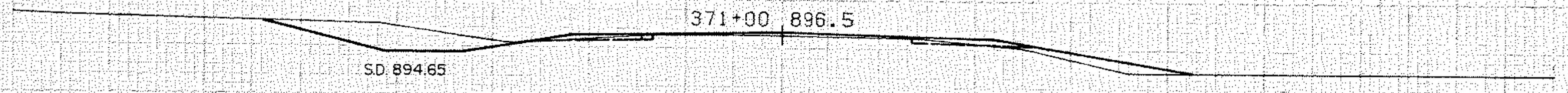
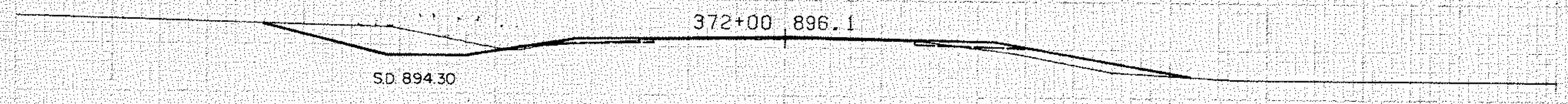
381	48	
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+22 1/4 Elm

231	69	
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+21 1/4 Elm

+21 1/4 Elm



STA. 366+00 TO STA. 372+00

S.A.P. 02-623-02 SHEET OF

EXCAVATION EMBANKMENT

Sub-TOTALS	Exc. Yds.	Emb. Yds.	Sub-TOTALS
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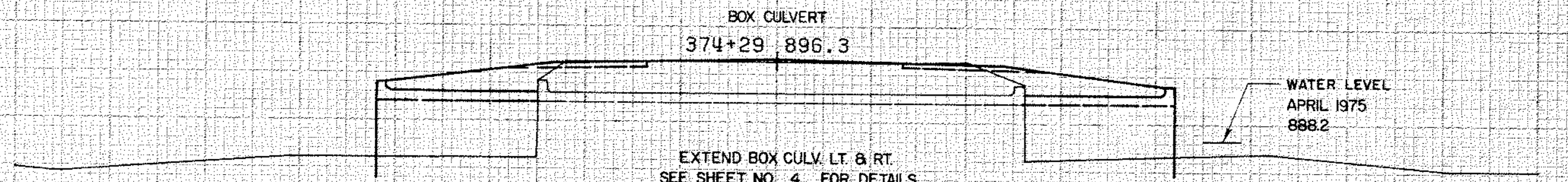
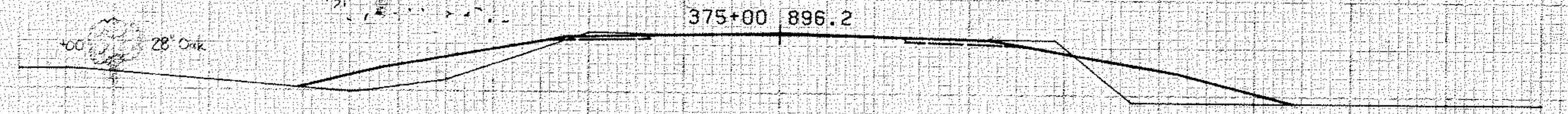
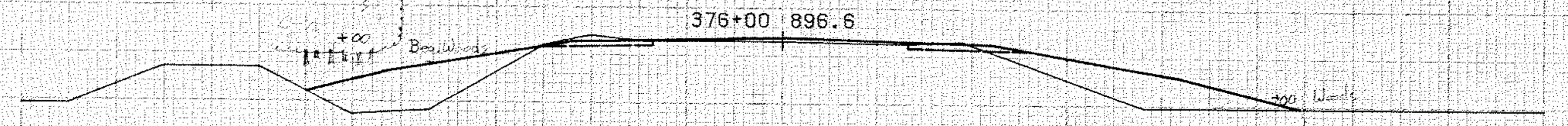
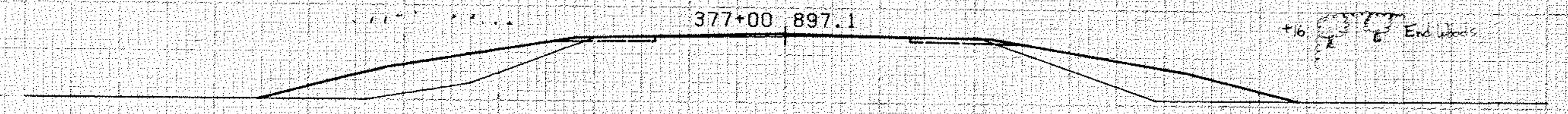
235	254	
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+21 1/2 Box Cyclic Fence

+16 1/2 Elm

44	522	
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65	463	
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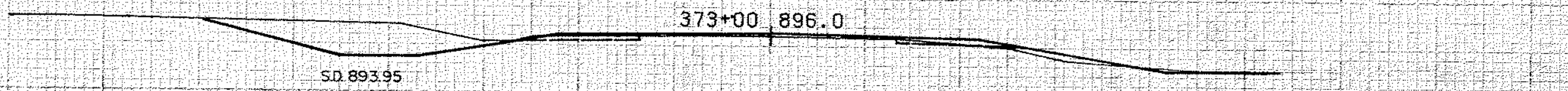
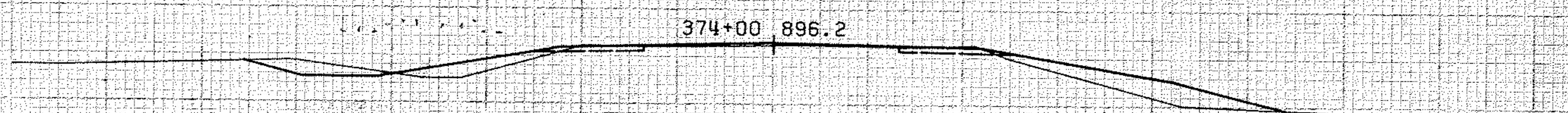
BOX CULVERT
374+29 896.3

EXTEND BOX CULV. LT. & RT.
SEE SHEET NO. 4 FOR DETAILS

WIDTH 10.15' ID.
HEIGHT 6.0' ID.
LENGTH 50'

WATER LEVEL
APRIL 1975
888.2

85	293	
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STA. 373+00 TO STA. 377+00

S.A.P. 02-623-02 SHEET 29 OF 36

PLAN
 SURVEYED
 PLOTTED
 ALIGNED
 CHECKED
 BY
 DATE

PROFILE
 SURVEYED
 PLOTTED
 CHECKED
 BY
 DATE

