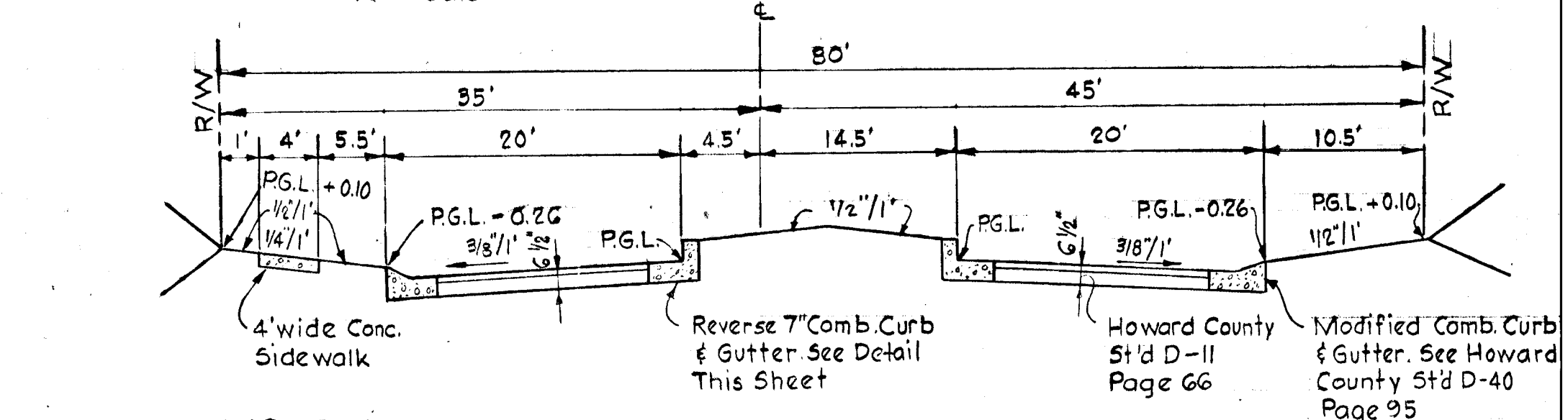
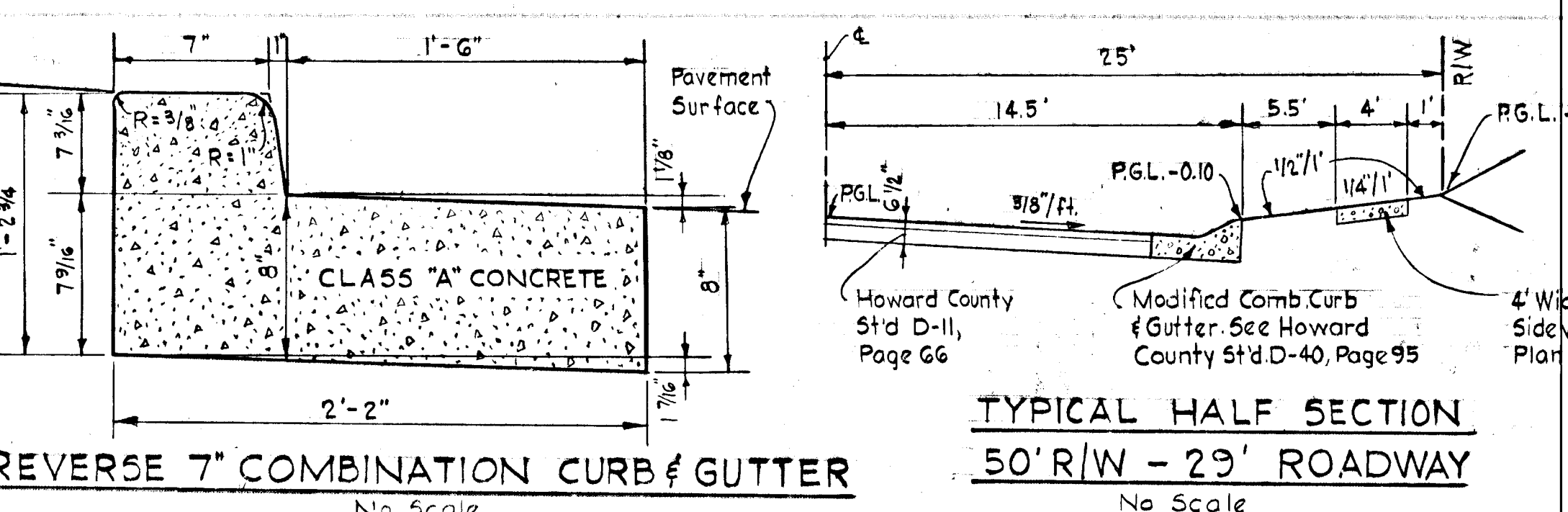
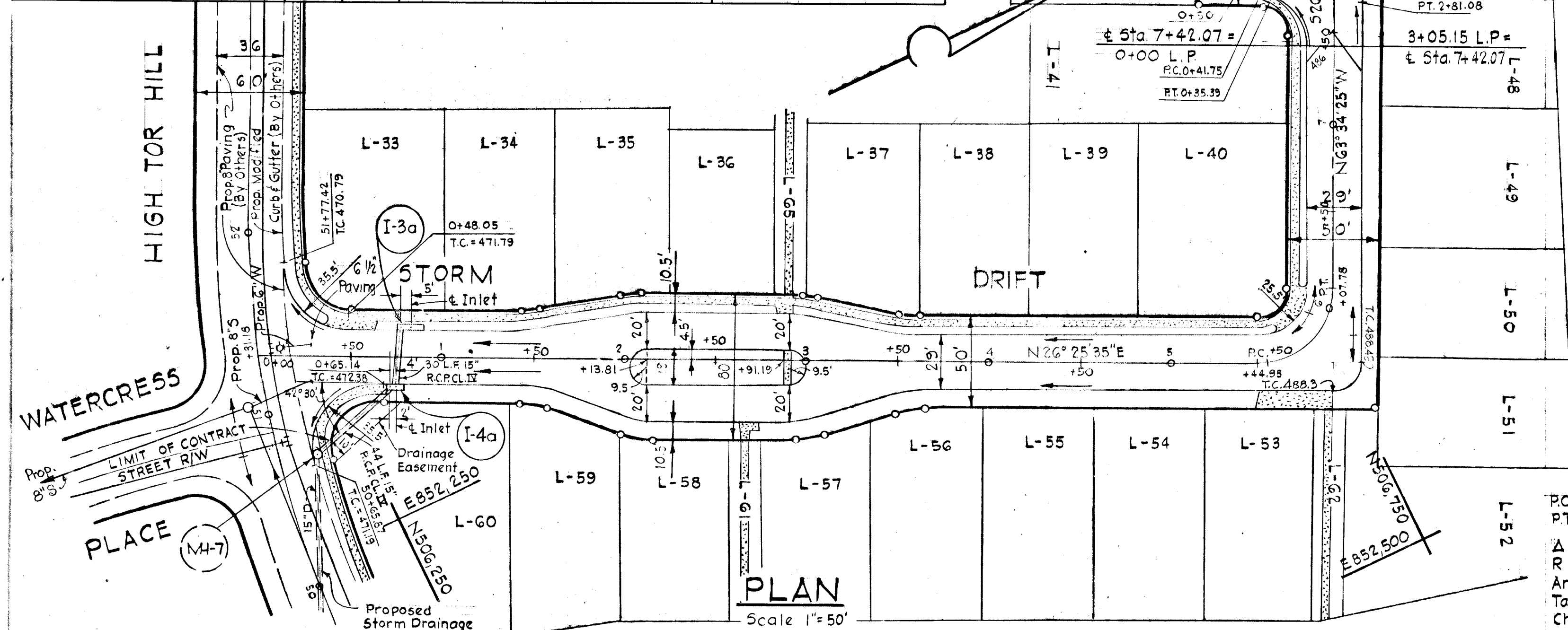


No.	Type	Top Elev.	Inv. Elev.	Location	Howard Co. Standard Details
I-1a	A-10 Inlet width = 2'-6"	469.21	464.15	± Inlet 15.92' left of ± sta. 0+87	Drawing G4-A, Page 119-A
I-2a	A-15 Inlet width = 2'-6"	468.43	463.25	± Inlet 15.92' right of ± sta. 0+88	"
I-3a	A-15 Inlet width = 2'-6"	473.20	468.54	± Inlet 15.92' left of ± sta. 0+83	"
I-4a	A-10 Inlet width = 2'-6"	472.92	467.53	± Inlet 15.92' right of ± sta. 0+75	"
I-5a	A-5 Inlet width = 2'-6"	484.05	479.10	± Inlet 11.5' back of Linear Profile Sta. 1+14	"
I-6a	A-15 Inlet width = 2'-6"	466.65	461.51	± Inlet 15.92' right of ± sta. 0+78	"
I-7a	A-10 Inlet width = 2'-6"	466.56	461.78	± Inlet 15.92' left of ± sta. 0+75	Drawing G4-A, Page 119-A
M4-1a	Type "B" Manhole	478.10	473.55	See Plan and Profile	"
M4-2a	Type "B" Manhole	465.00	460.34	± MH 48.00' right of ± sta. 0+43	"



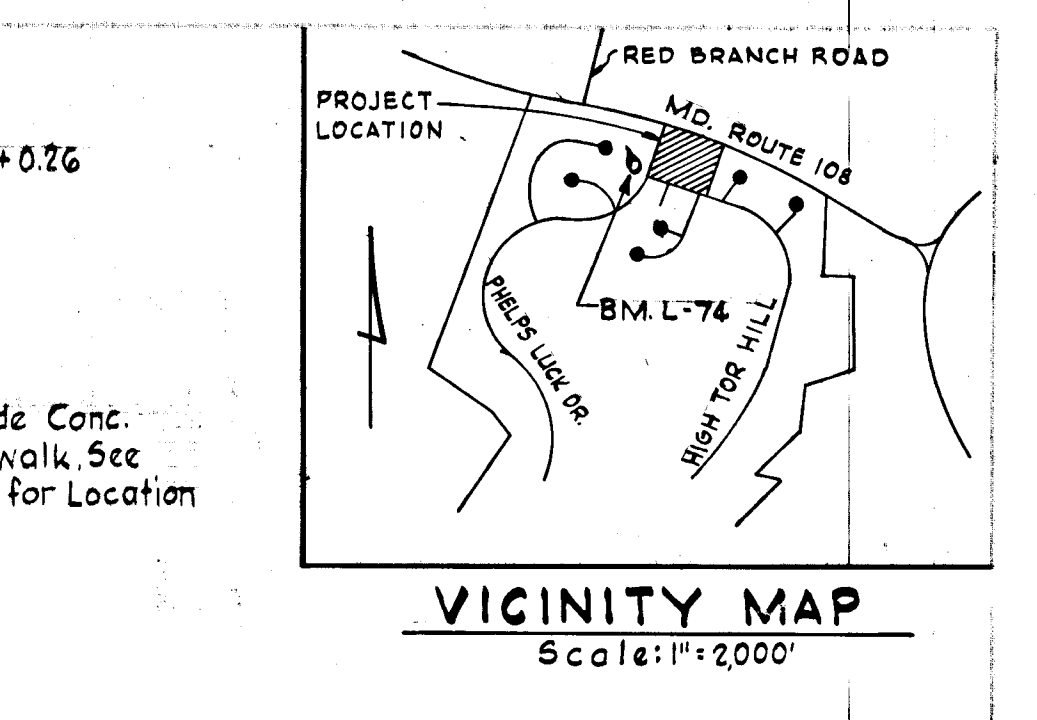
**CURVE DATA**  
 PC: E+44.95 to PT: 6+07.78  
 $\Delta = 90^{\circ}00'00''$   
 $R = 40.00'$   
 $Arc = 62.83'$   
 $Tan. = 40.00'$   
 $Ch. = 56.57'$   
 $Brg. = N18^{\circ}34'25''W$

**STORM DIFT CURVE DATA FOR LINEAR PROFILE**

PC	PT	AND	PC	PT	AND	PC	PT
E+00.00	0+35.39		0+41.75	2+42.61		2+42.61	7+42.07
$\Delta$	$70^{\circ}31'44''$		$261^{\circ}32'59''$			$11^{\circ}01'15''$	
$R$	$28.75'$		$R = 44.00'$			$R = 200.00'$	
$Arc$	$35.39'$		$Arc = 200.86'$			$Arc. = 38.47'$	
$Tan.$	$20.33'$					$Tan. = 19.29'$	
$Ch.$	$33.20'$					$Ch. = 38.40'$	
$Ch. Brg.$	$581^{\circ}09'42''W$					$Ch. Brg. = 558^{\circ}03'54''E$	

DEPARTMENT OF PUBLIC WORKS  
*Granville W. Williams* 4-12-71  
 CHIEF BUREAU OF HIGHWAYS DATE

OFFICE OF PLANNING AND ZONING  
*J. J. Clouston* 4-12-71  
 CHIEF ENGINEER DIVISION OF LAND DEVELOPMENT DATE



4/1/71 Revised Cul-de-sac - Plan and Profile  
 Rev. No. Revision Description

**COLUMBIA**  
 6TH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND  
 OWNER AND DEVELOPER  
 HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA:  
**VILLAGE OF LONGREACH**  
 SECTION 1, AREA 1  
 RESUBDIVISION OF PARCEL "L"

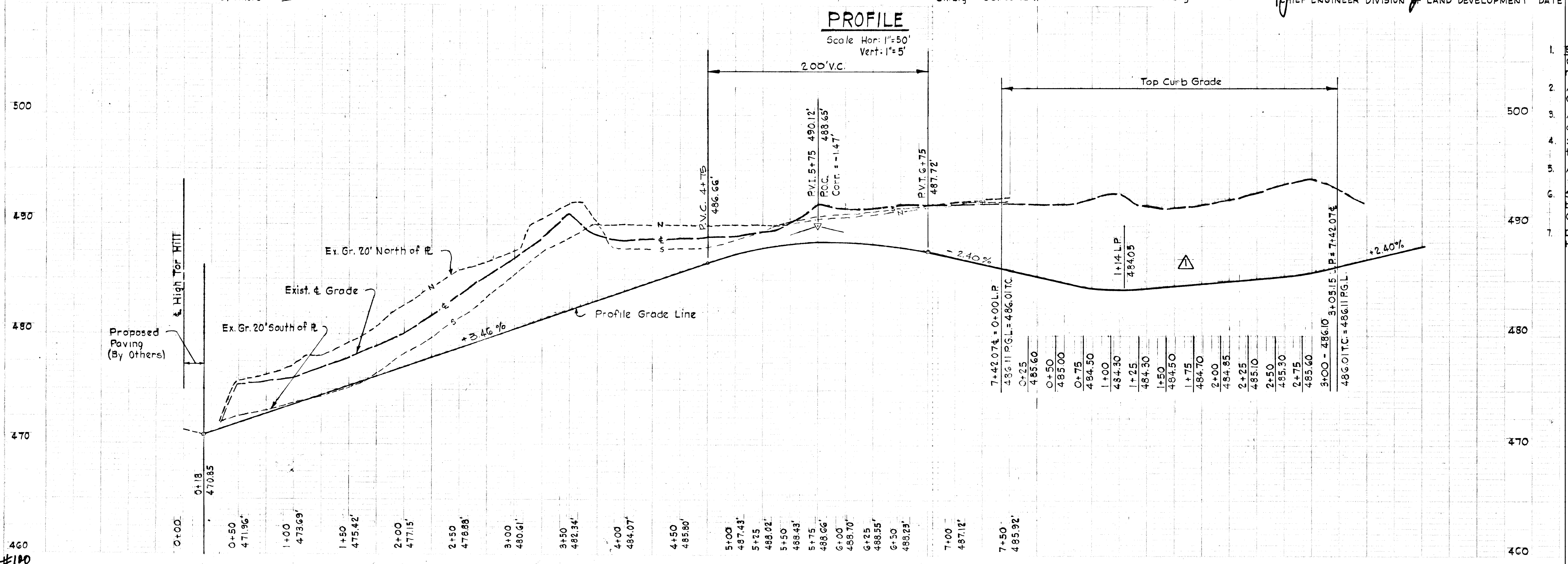
PROJECT TITLE:  
**PLAN & PROFILE**  
**STORM DIFT**

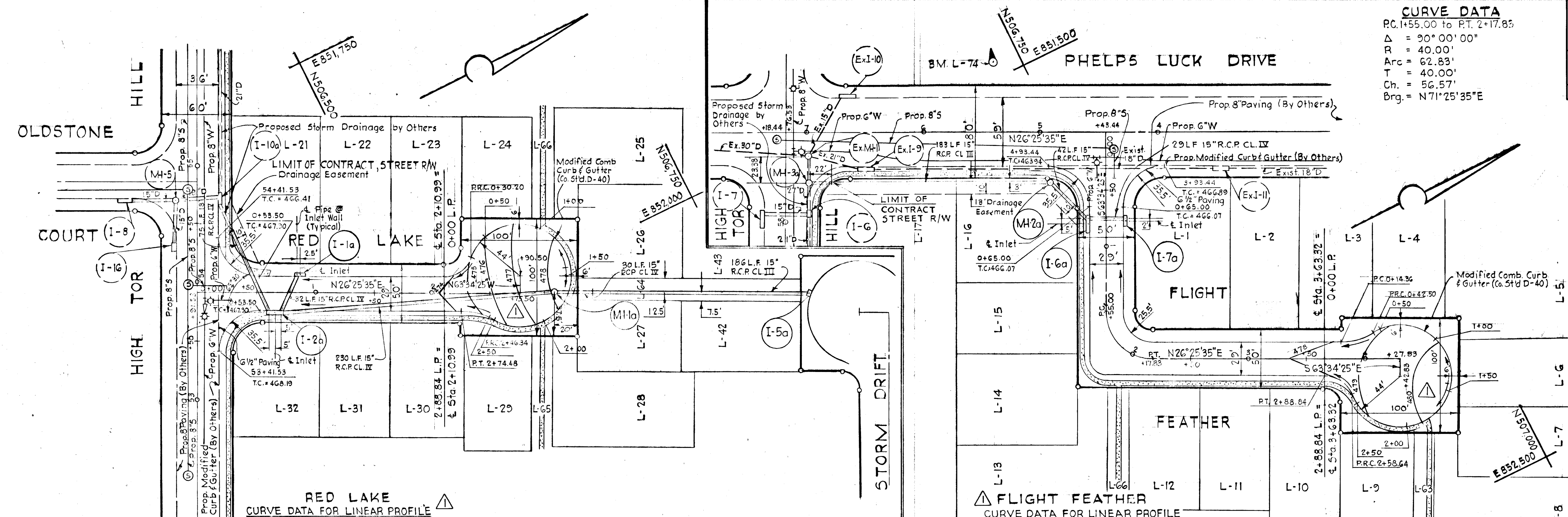
SCALE: AS SHOWN DATE: January 28, 1971

WHITMAN REQUARD & ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21202

*Kenneth A. McCord*  
 KENNETH A. MCCORD  
 Registered Engineer  
 No. 1974

- GENERAL NOTES**
- Bench Mark L-74 Elev. 465.88  
Galvanized spike in base of 14" Pine tree 60' right of Station 5+40 Phelps Luck Drive
  - All work shall be performed in accordance with the Howard County Road Construction Code and Standard Specifications.
  - All utility companies shall be notified 24 hours in advance of construction.
  - Secondary residential streets are designed for 25 M.P.H. traffic speed in accordance with AASHTO standards.
  - All inlets shall be Howard County standards unless otherwise shown.
  - Storm drain trenches within road rights-of-way shall be backfilled and compacted in accordance with Howard County Road Code.
  - Driveway entrances shall be constructed in accordance with Howard County Standard D-34.





**CURVE DATA**  
 PC: 1+55.00 to PT: 2+17.85  
 $\Delta = 90^{\circ}00'00''$   
 $R = 40.00'$   
 $Arc = 62.83'$   
 $T = 40.00'$   
 $Ch. = 56.57'$   
 $Brg. = N71^{\circ}25'35''E$

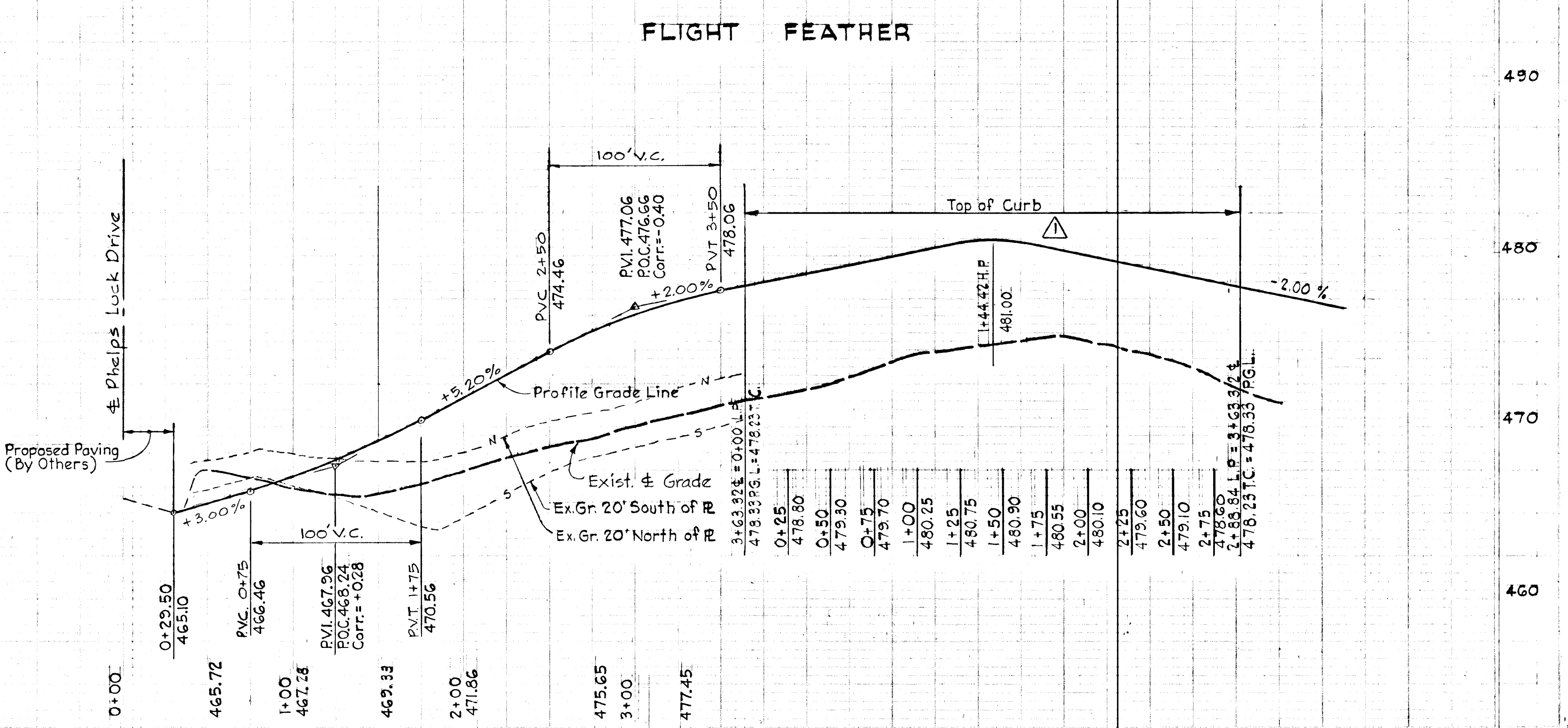
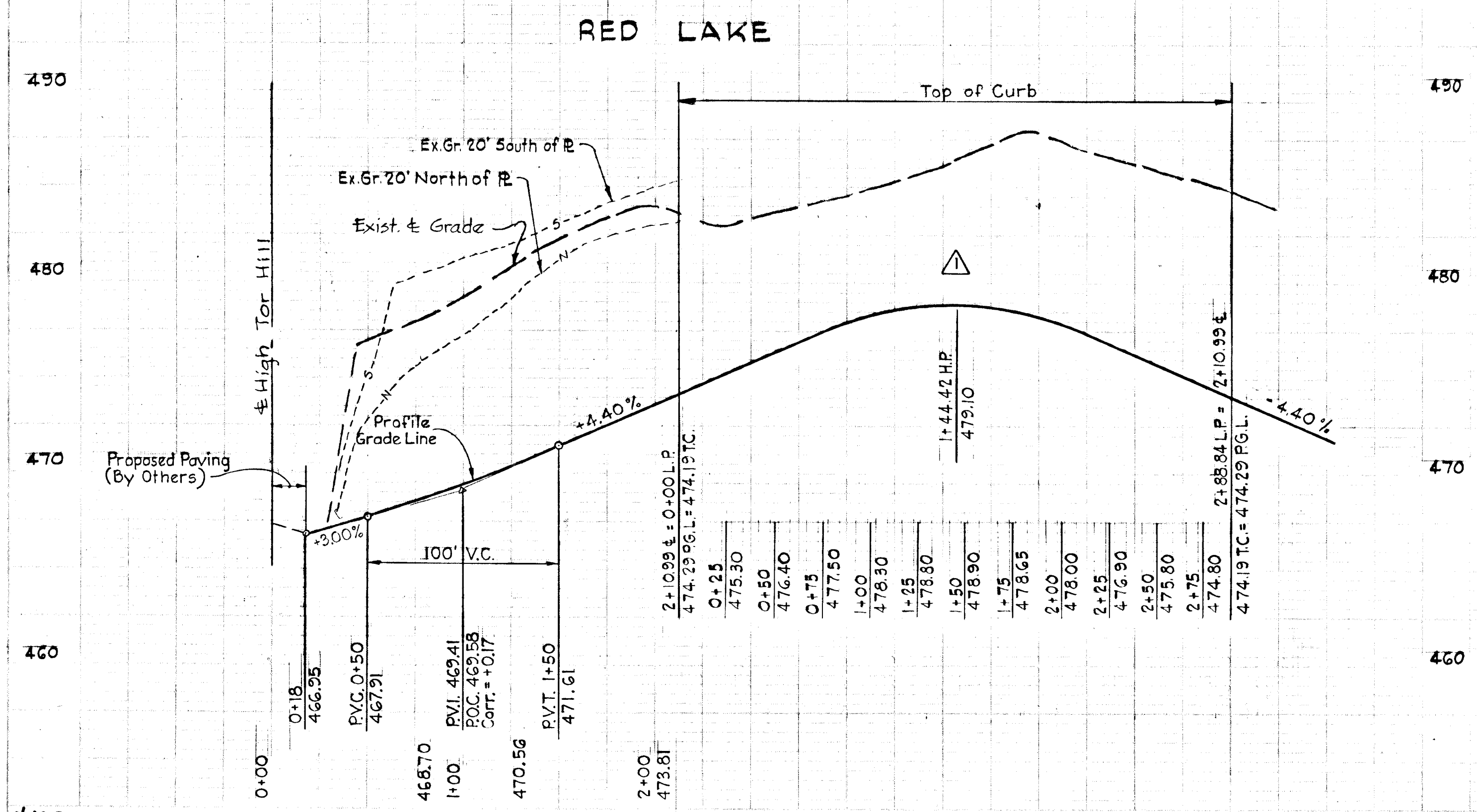
DEPARTMENT OF PUBLIC WORKS  
*Granville W. Wilford* 4-12-71  
 CHIEF BUREAU OF HIGHWAYS  
 OFFICE OF PLANNING AND ZONING  
*H. Clawson* 4-12-71  
 CHIEF ENGINEER DIVISION OF LAND DEVELOPMENT

**RED LAKE**  
 CURVE DATA FOR LINEAR PROFILE  
 PC: 0+00 to AND PRC: 0+30.20 to AND PRC: 2+46.34 to  
 PRC: 0+30.20 AND PRC: 2+46.34 AND PT: 2+74.48  
 $\Delta = 69^{\circ}12'24''$   $\Delta = 28^{\circ}26'56''$   $\Delta = 32^{\circ}14'32''$   
 $R = 25.00'$   $R = 44.00'$   $R = 50.00'$   
 $Arc. = 30.20'$   $Arc. = 216.14'$   $Arc. = 28.14'$   
 $Tan. = 17.25'$   $Tan. = 14.45'$   
 $Ch. = 28.40'$   $Ch. = 27.77'$   
 $Ch. Brg. = N111^{\circ}19'00''E$   $Ch. Brg. = S42^{\circ}32'58''W$

**PLAN**  
 Scale 1" = 50'

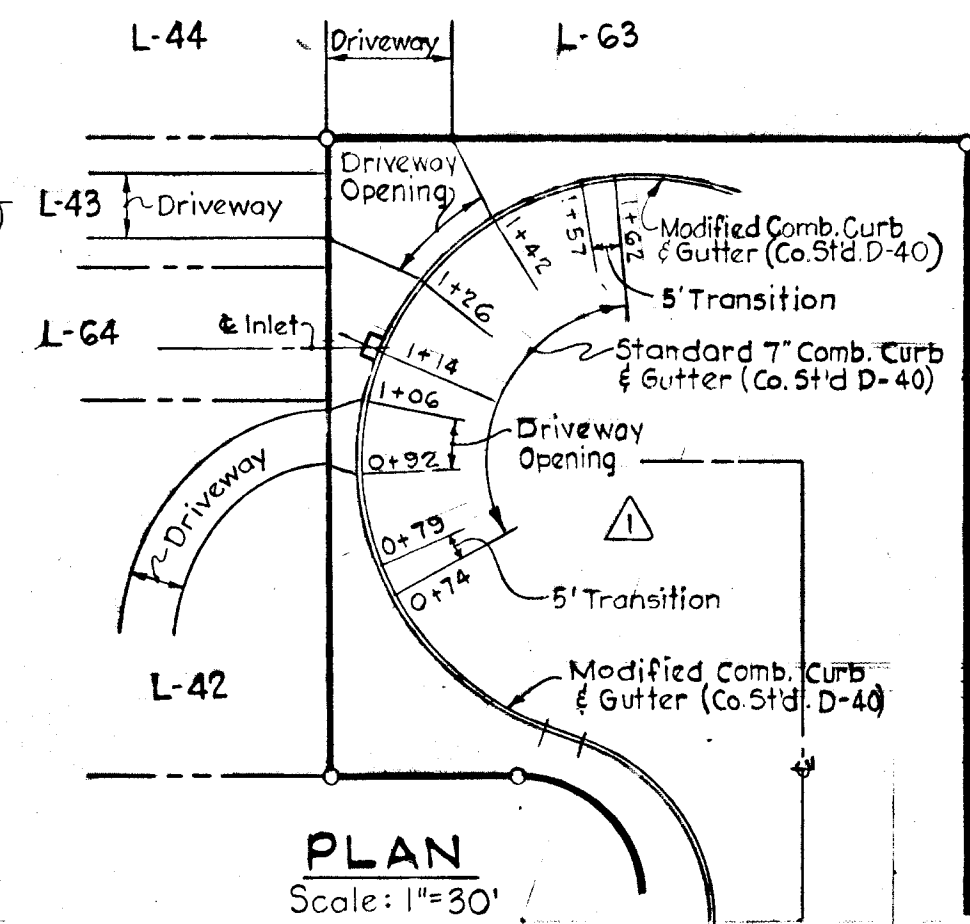
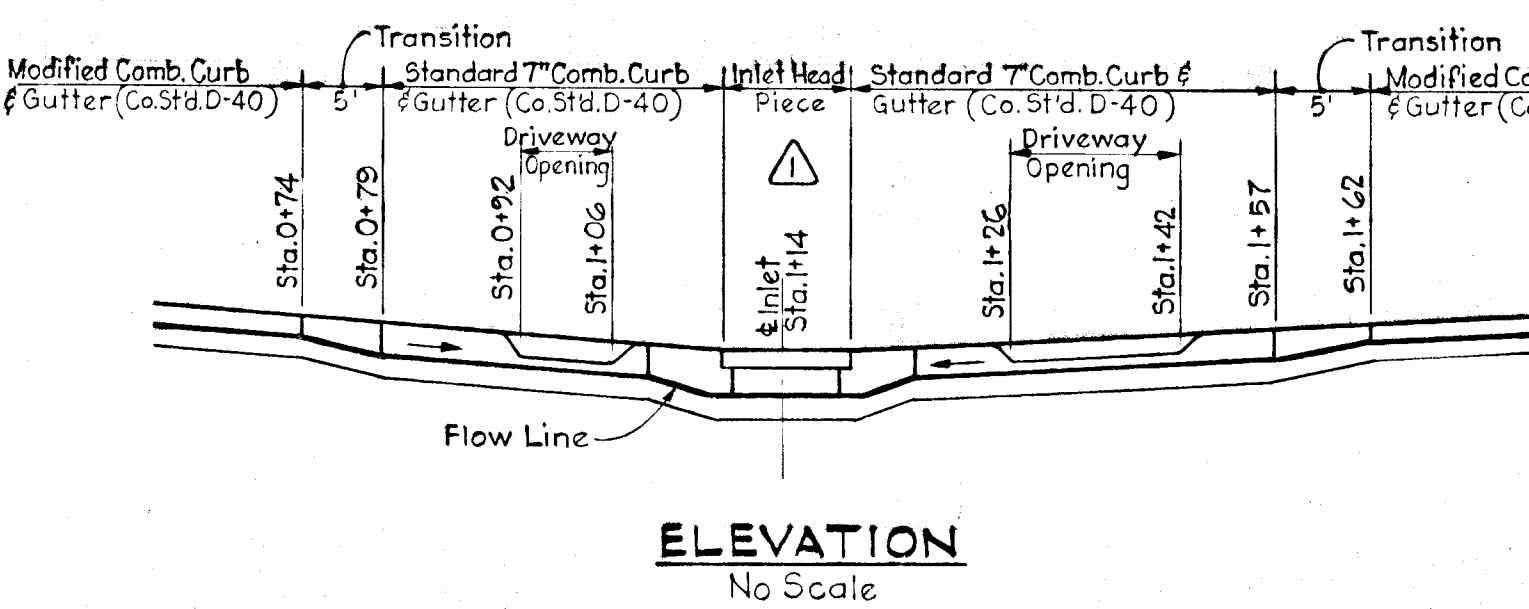
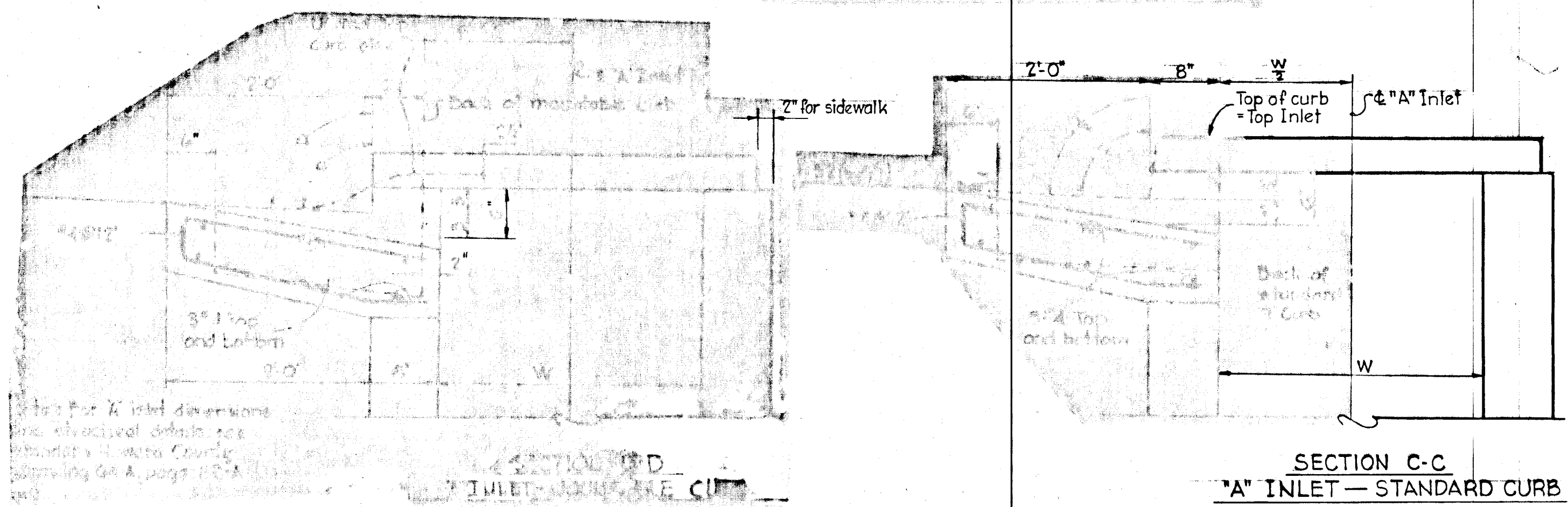
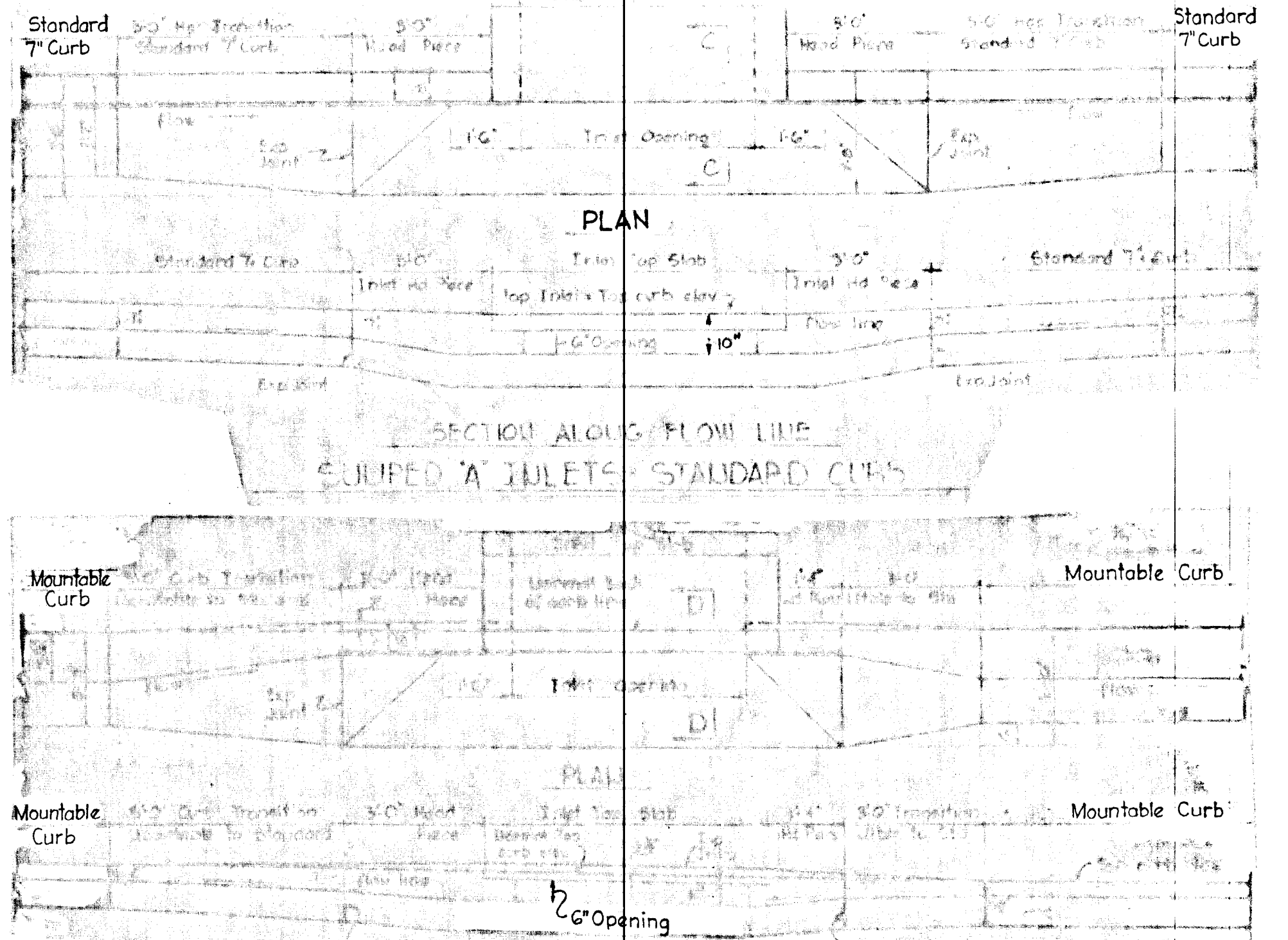
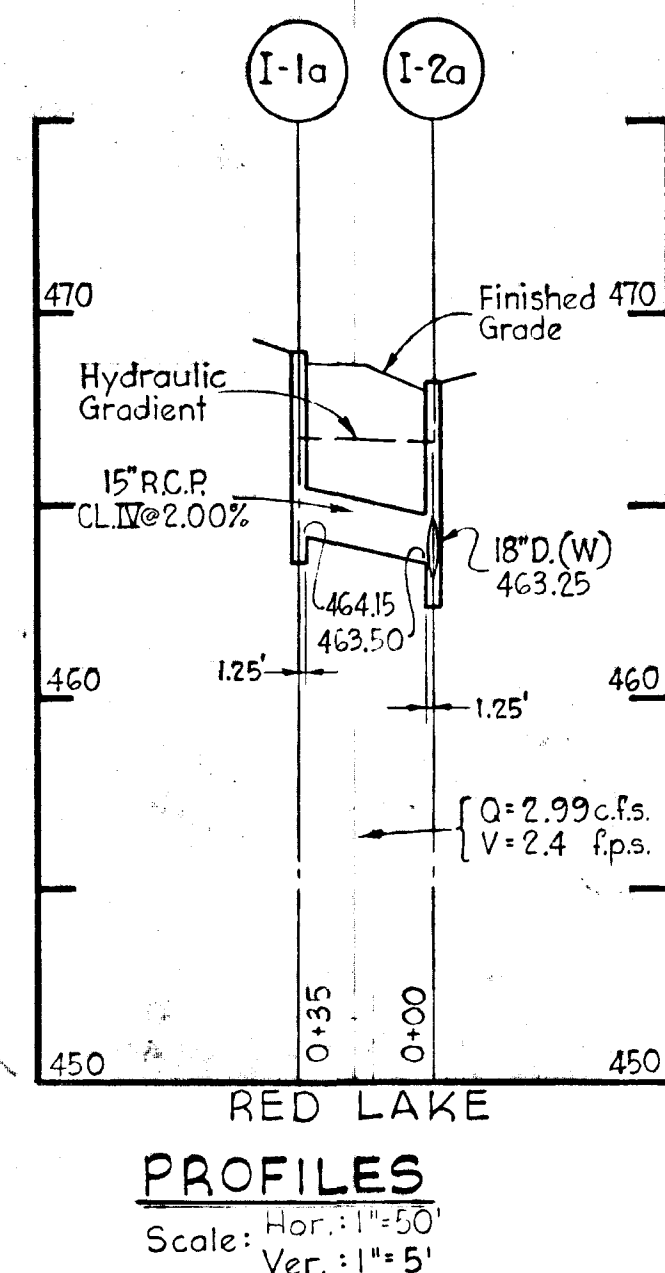
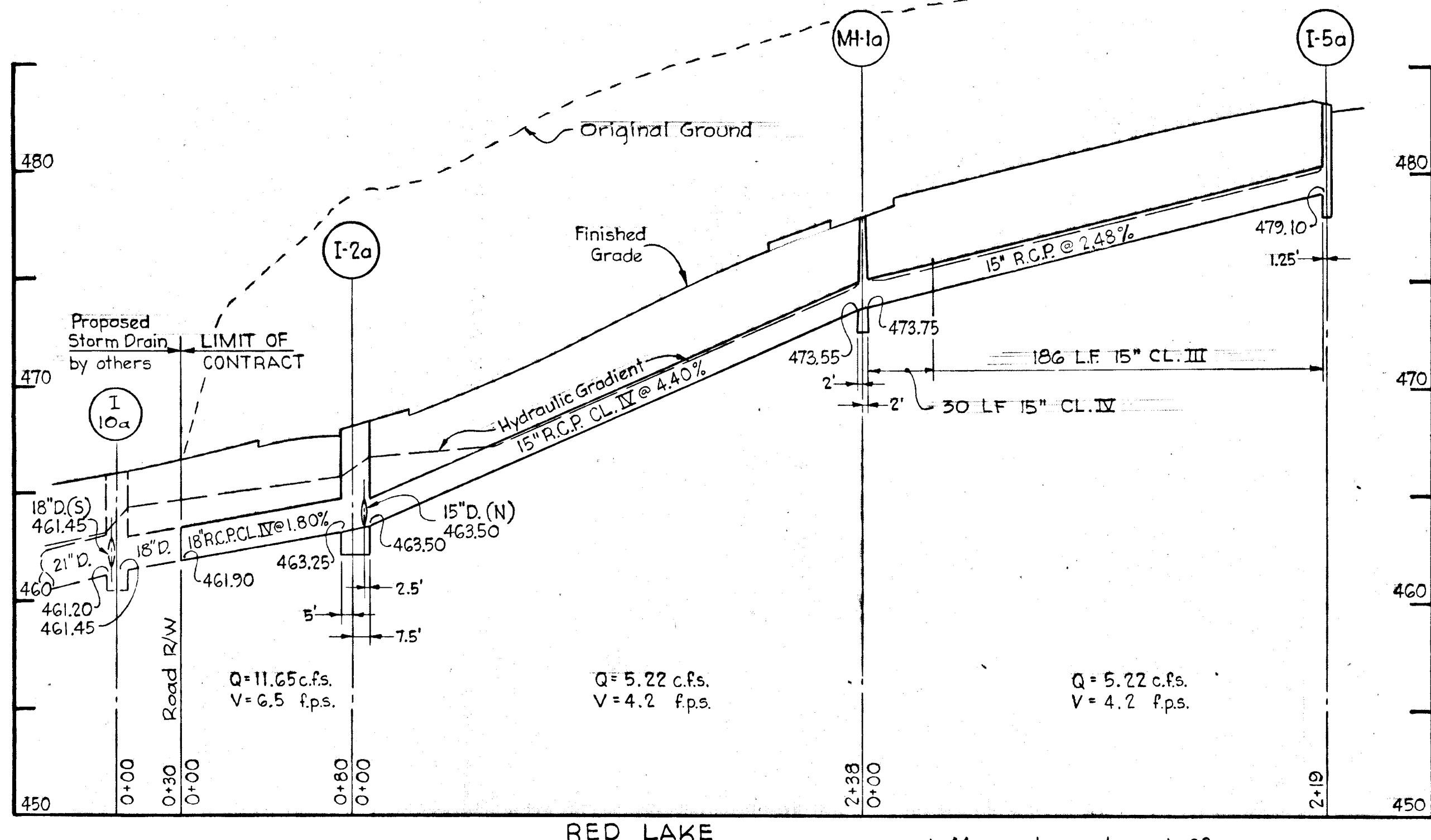
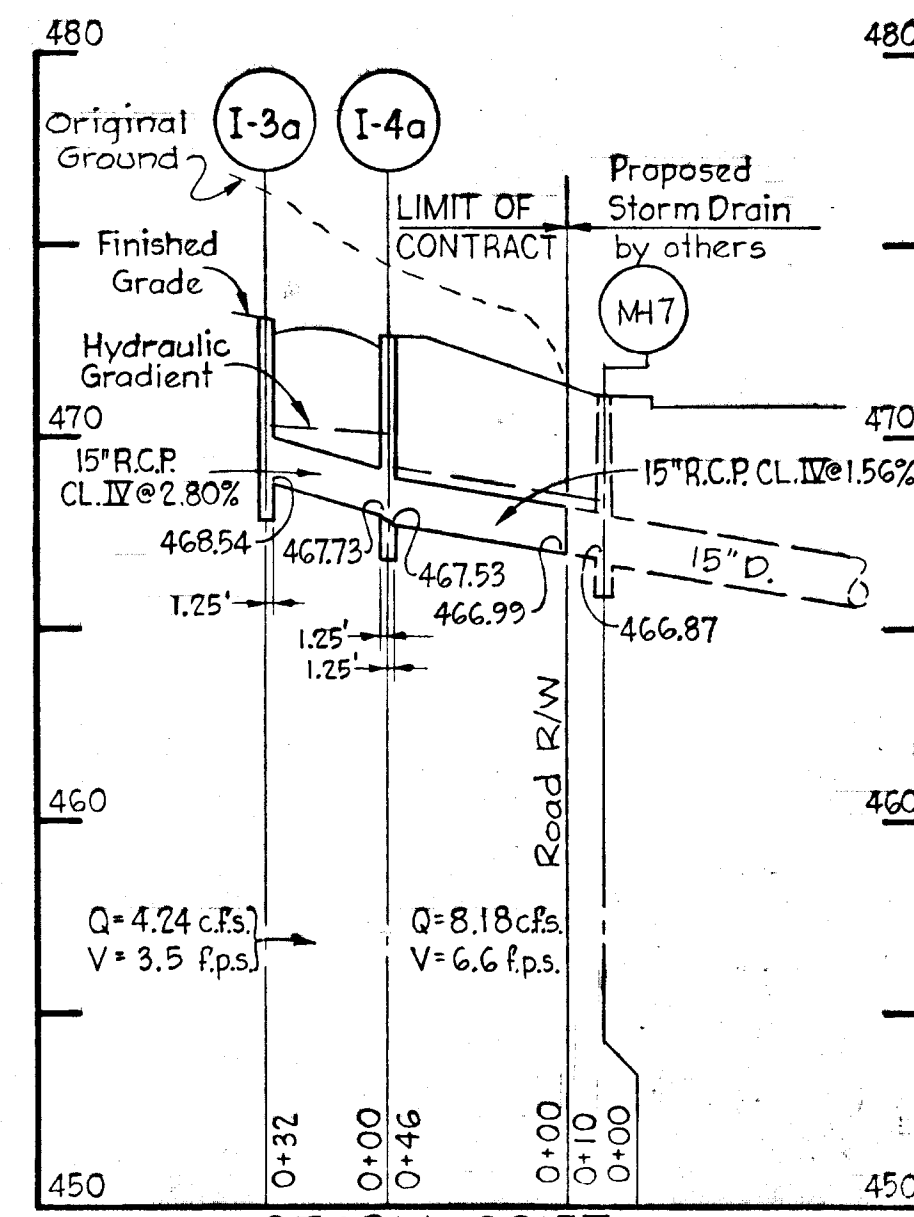
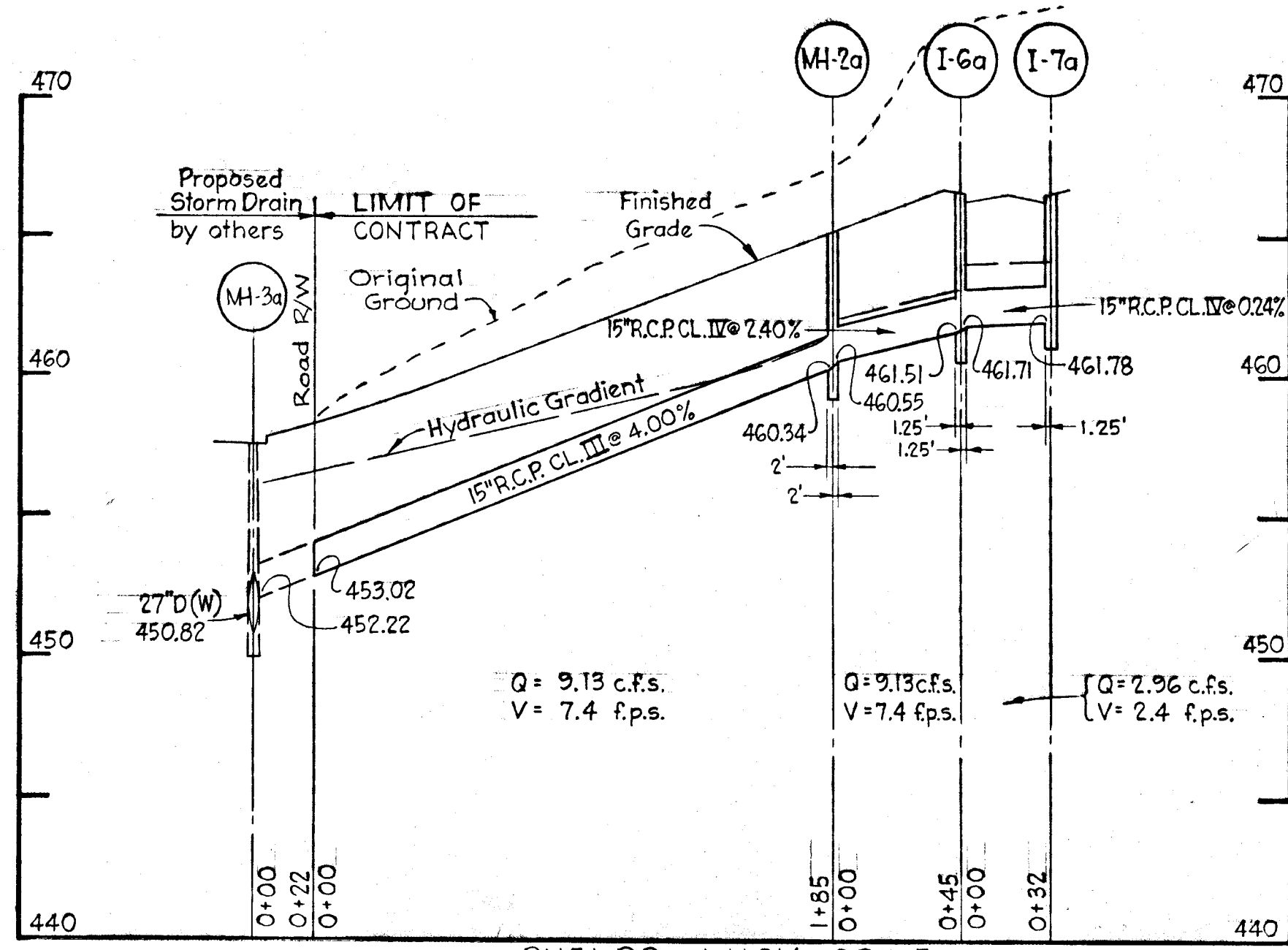
**FLIGHT FEATHER**  
 CURVE DATA FOR LINEAR PROFILE  
 PC: 0+14.36 to AND PRC: 0+42.50 to AND PRC: 2+58.64 to  
 PRC: 0+42.50 AND PRC: 2+58.64 AND PT: 2+88.84  
 $\Delta = 32^{\circ}14'32''$   $\Delta = 28^{\circ}26'56''$   $\Delta = 69^{\circ}12'24''$   
 $R = 50.00'$   $R = 44.00'$   $R = 25.00'$   
 $Arc. = 28.14'$   $Arc. = 216.14'$   $Arc. = 30.20'$   
 $Tan. = 14.45'$   $Tan. = 17.25'$   
 $Ch. = 27.77'$   $Ch. = 28.40'$   
 $Ch. Brg. = S10^{\circ}18'19''W$   $Ch. Brg. = N61^{\circ}01'47''E$

**PROFILE**  
 Scale Hor: 1" = 50'  
 Vert: 1" = 5'

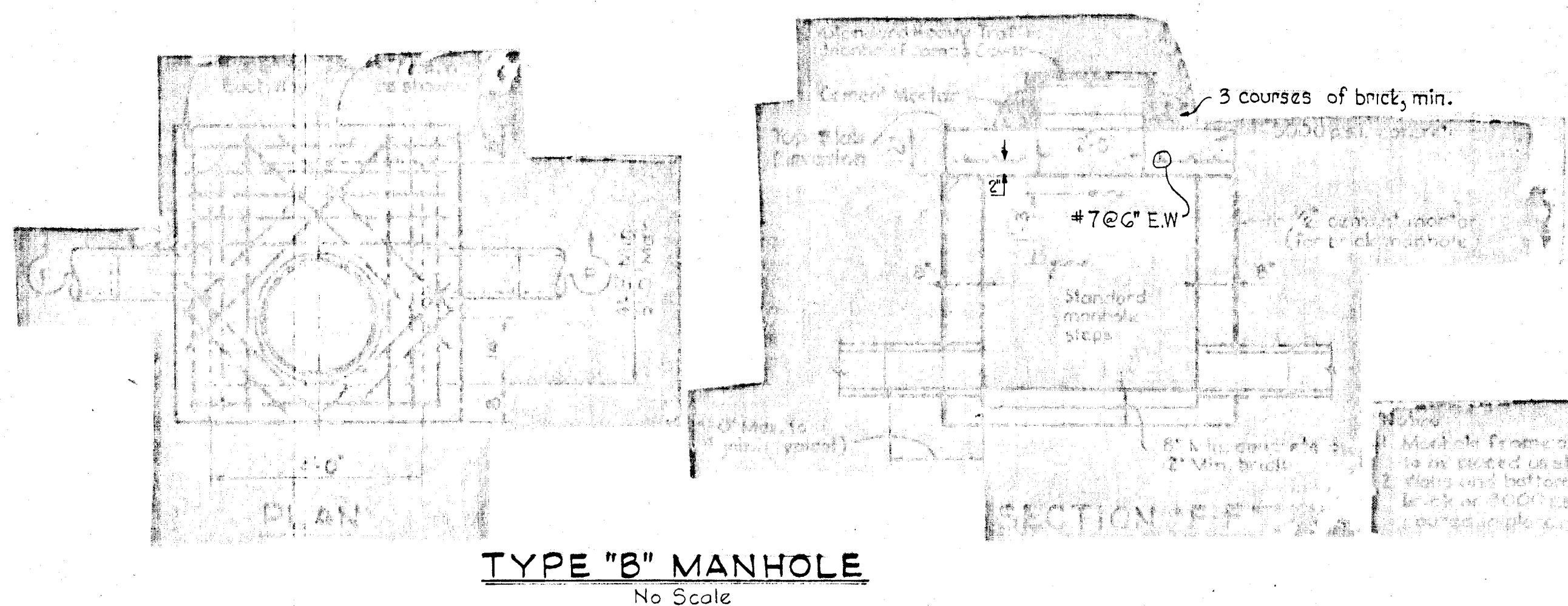


#110  
 W.O. 6425-2

4/11/71	Revised Cul-de-sacs-Plan and Profile
Rev. Date	Rev. No.
Revision Description	
<b>COLUMBIA</b>	
6TH ELECTION DISTRICT HOWARD COUNTY MARYLAND	
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.	
PROJECT AREA:	
<b>VILLAGE OF LONGREACH</b>	
SECTION 1, AREA 1 RESUBDIVISION OF PARCEL "L"	
PROJECT TITLE:	
PLAN AND PROFILE RED LAKE & FLIGHT FEATHER	
SCALE: AS SHOWN	DATE: January 28, 1971
WHITMAN REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202	
<i>Kenneth McCord</i> KENNETH McCORD Registered Engineer No. 1974	



STORM DRIFT SUMP DETAIL



Rev. Date	Rev. No.	Revision Description
4/1/71	Δ	Revised Storm Drift Sump Detail

**COLUMBIA**  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
OWNER AND DEVELOPER  
HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA  
**VILLAGE OF LONG REACH**  
SECTION I, AREA I  
RESUBDIVISION OF PARCEL "L"

PROJECT TITLE  
STORM DRAINS - PROFILES AND DETAILS

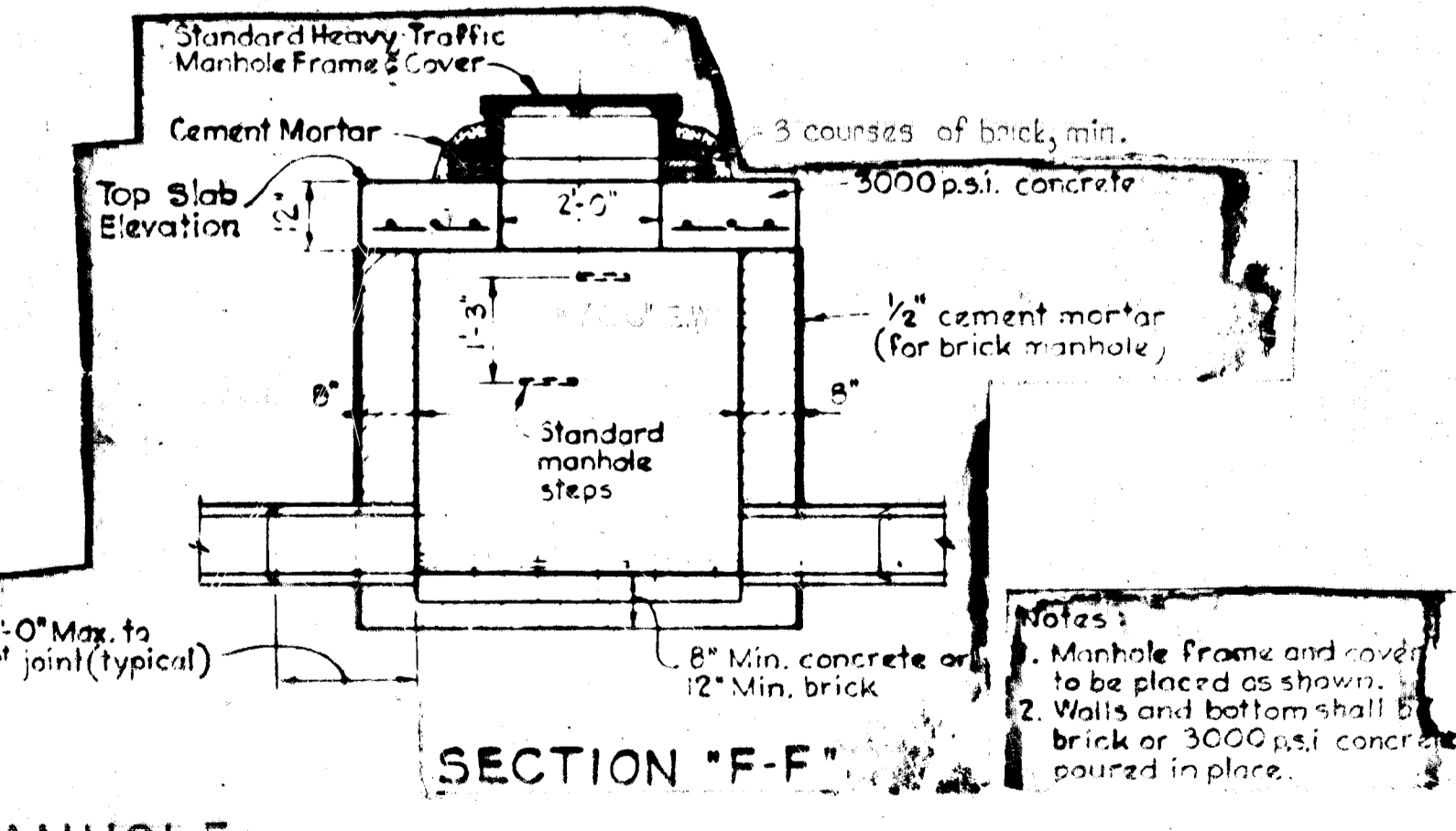
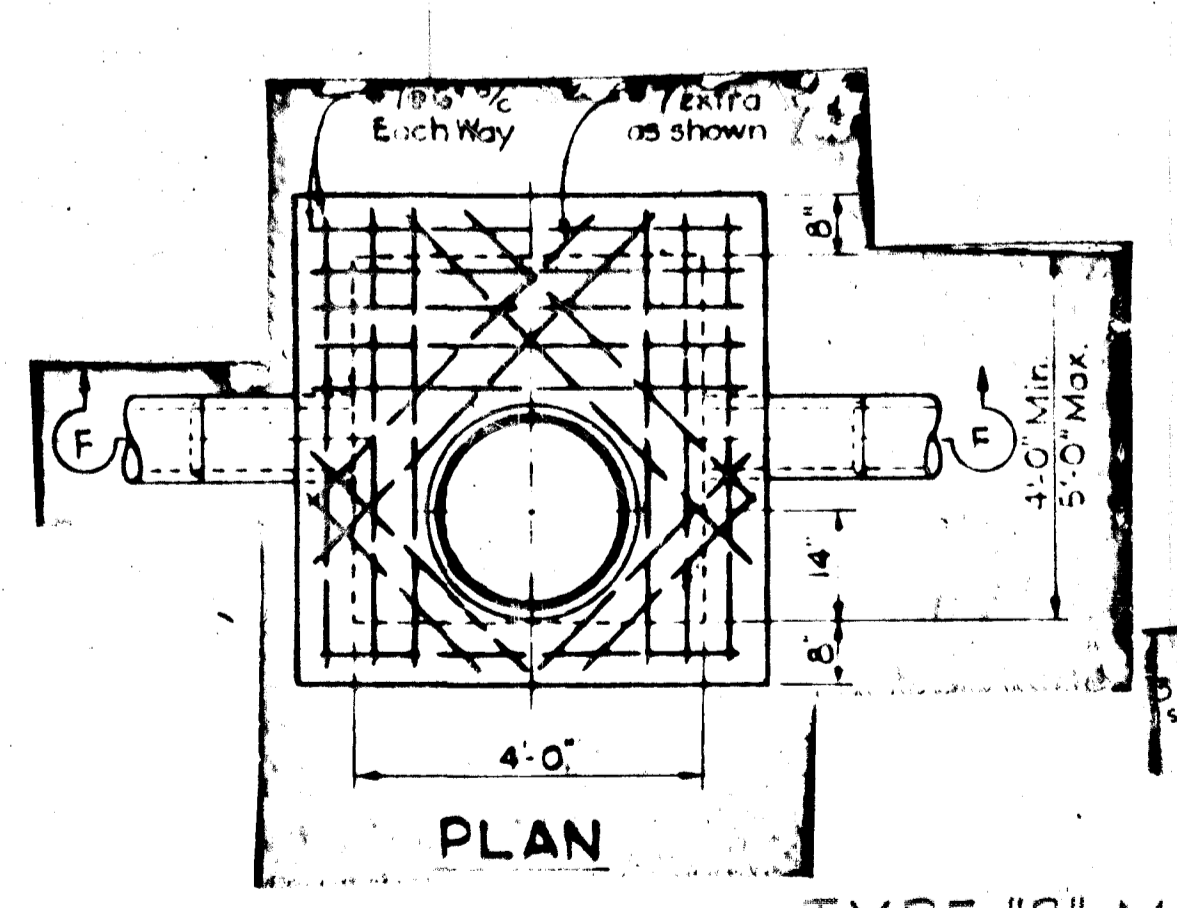
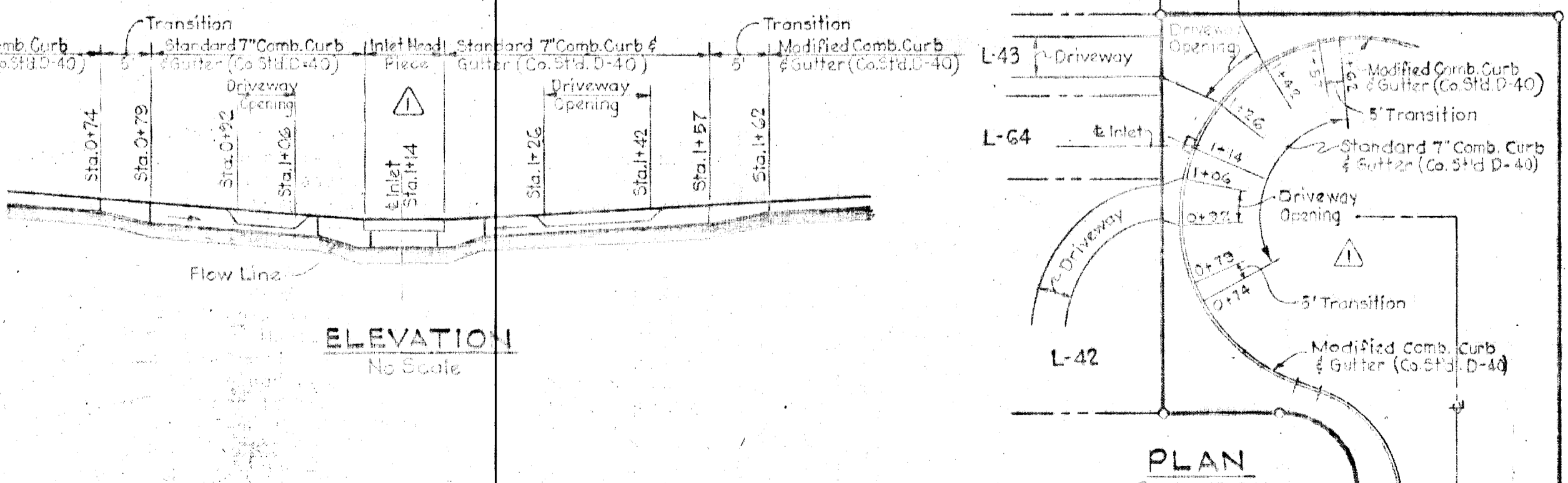
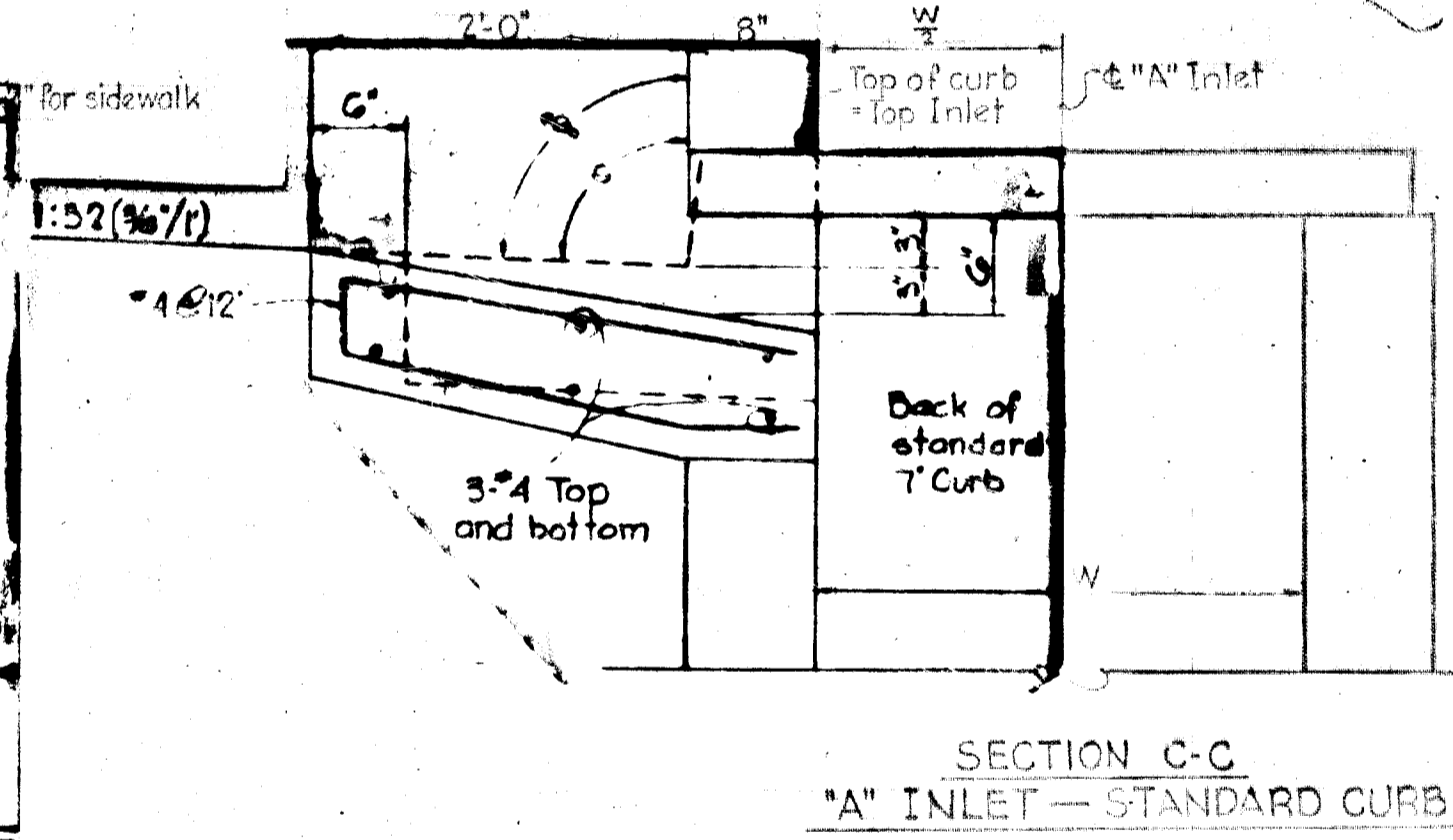
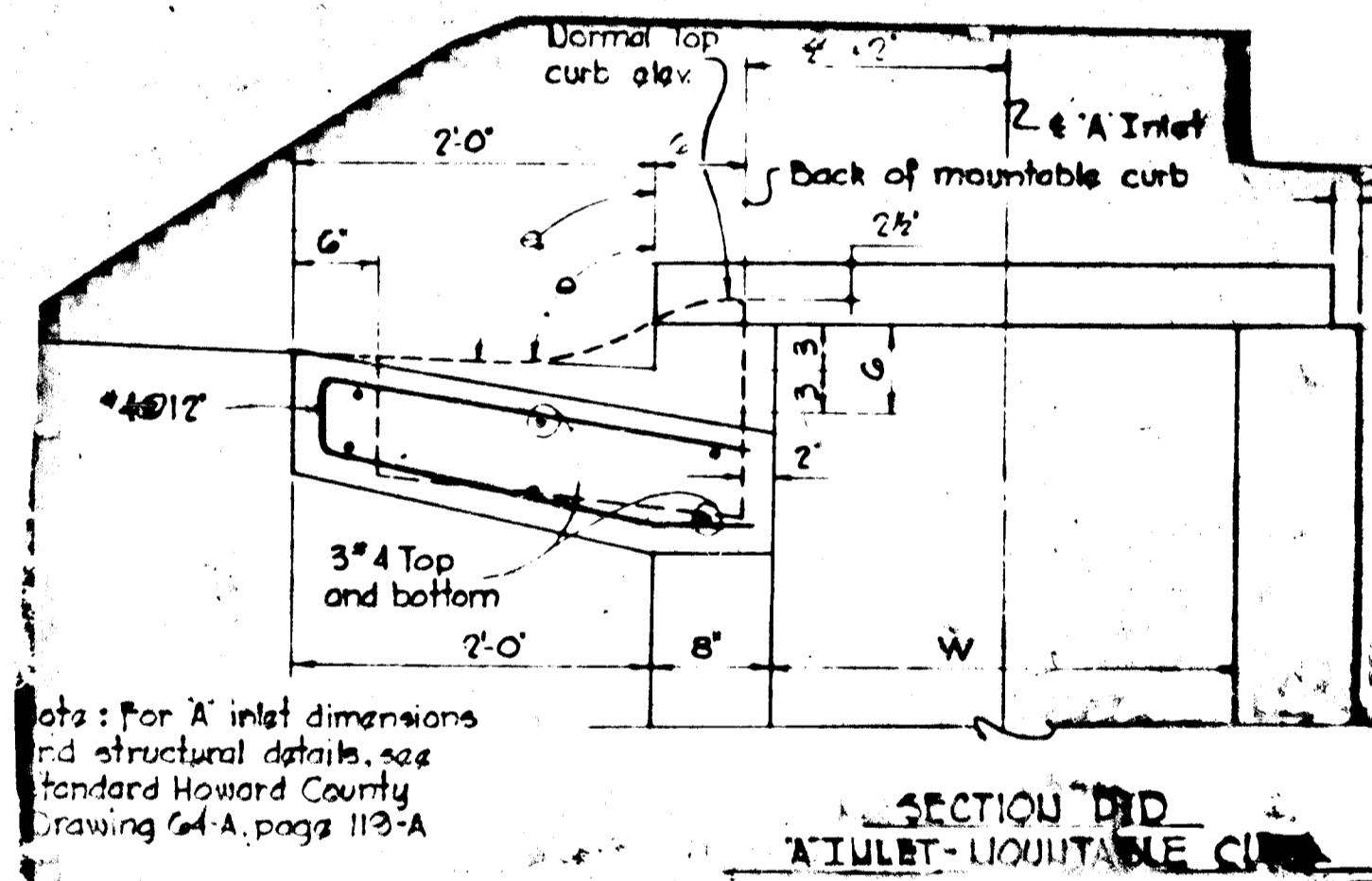
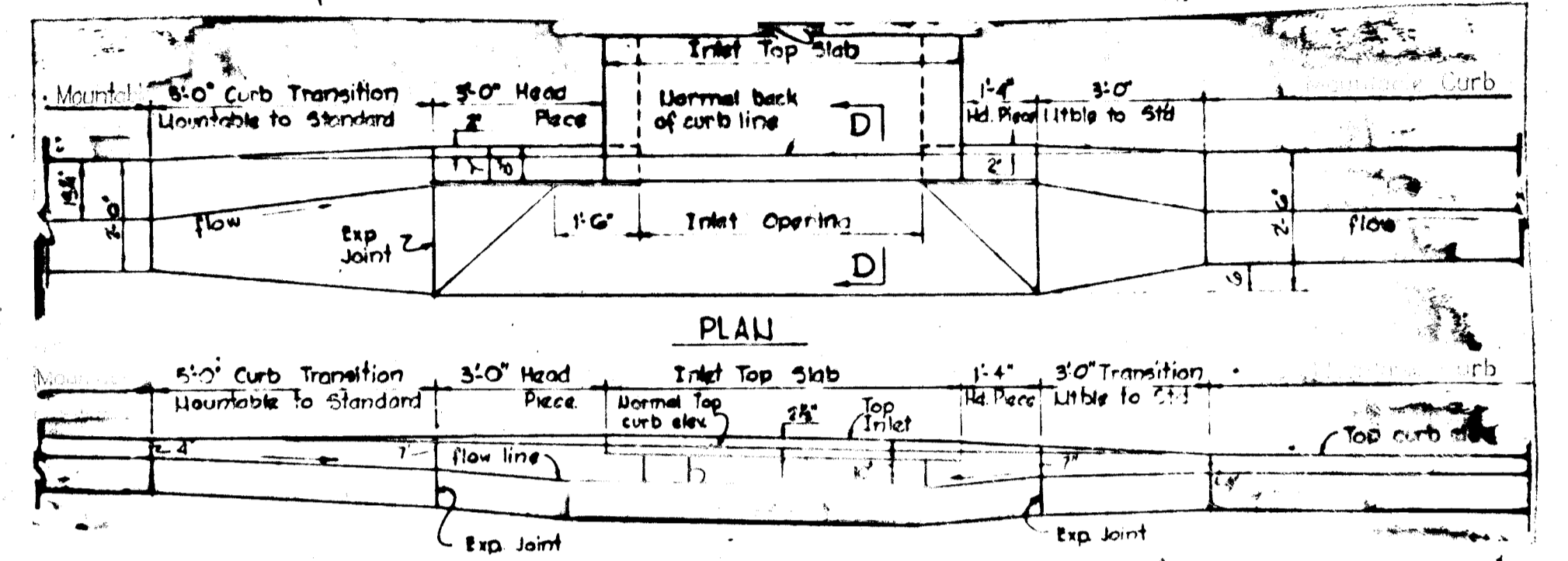
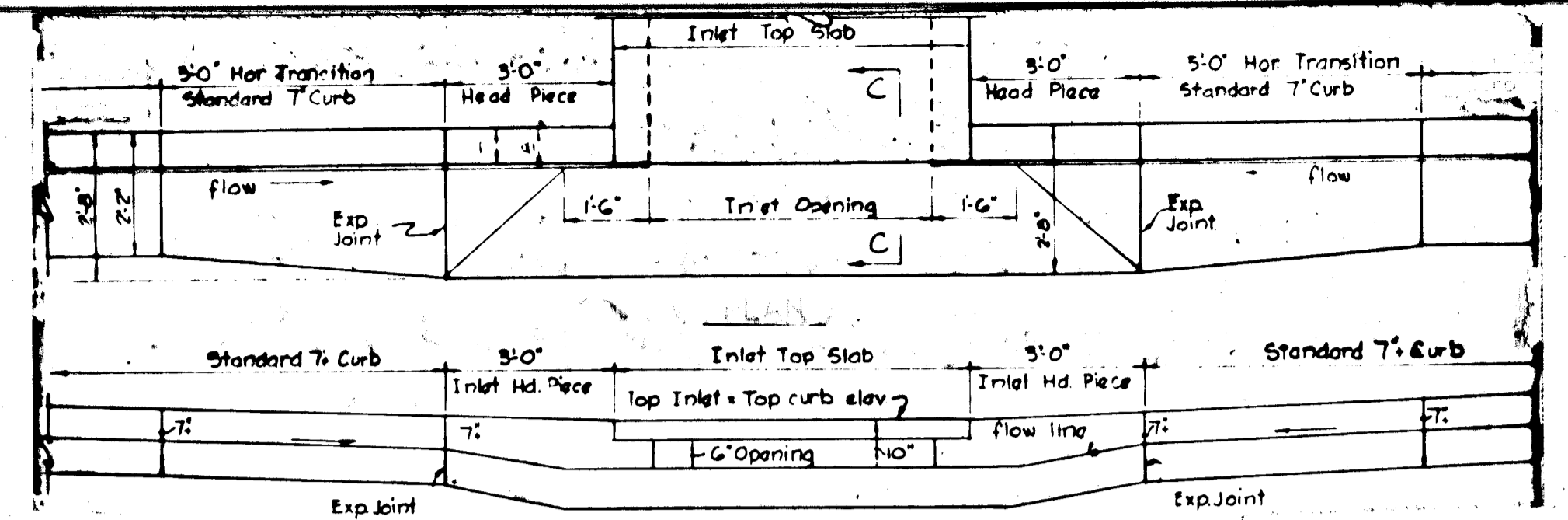
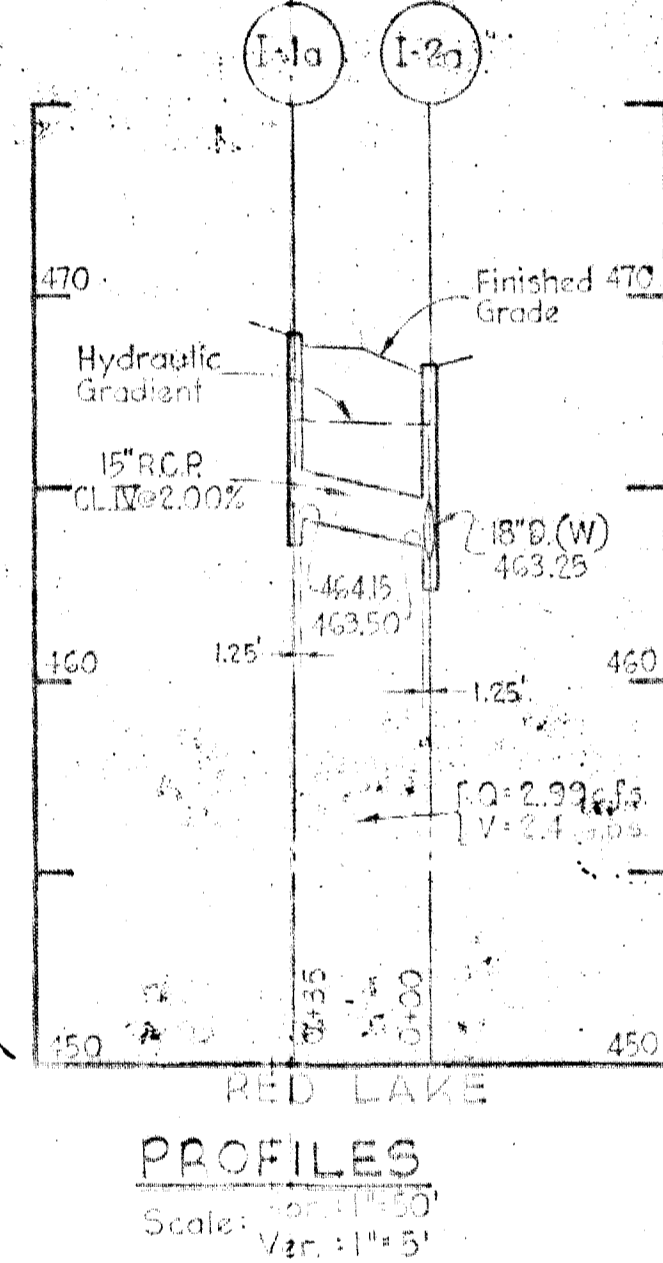
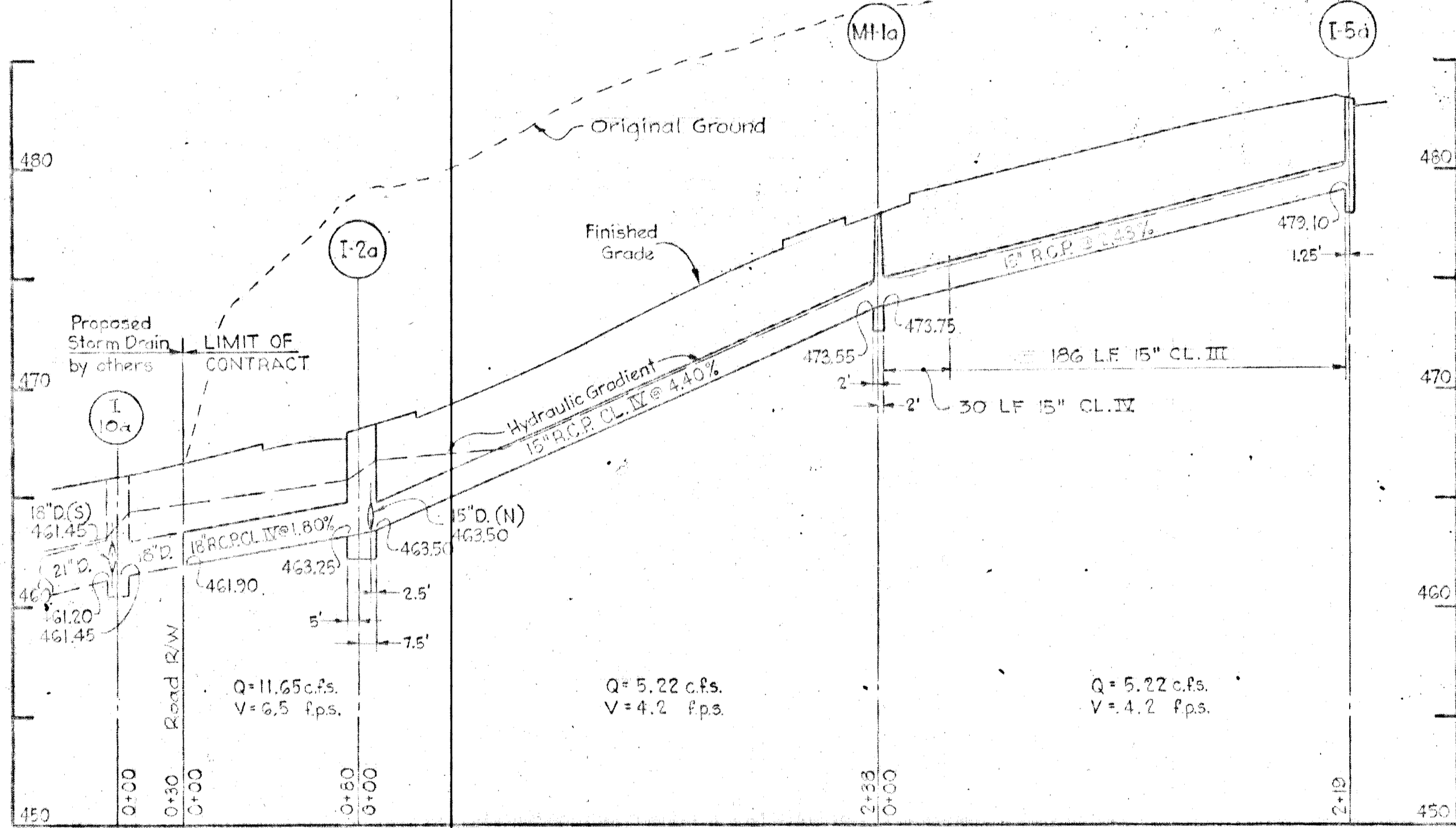
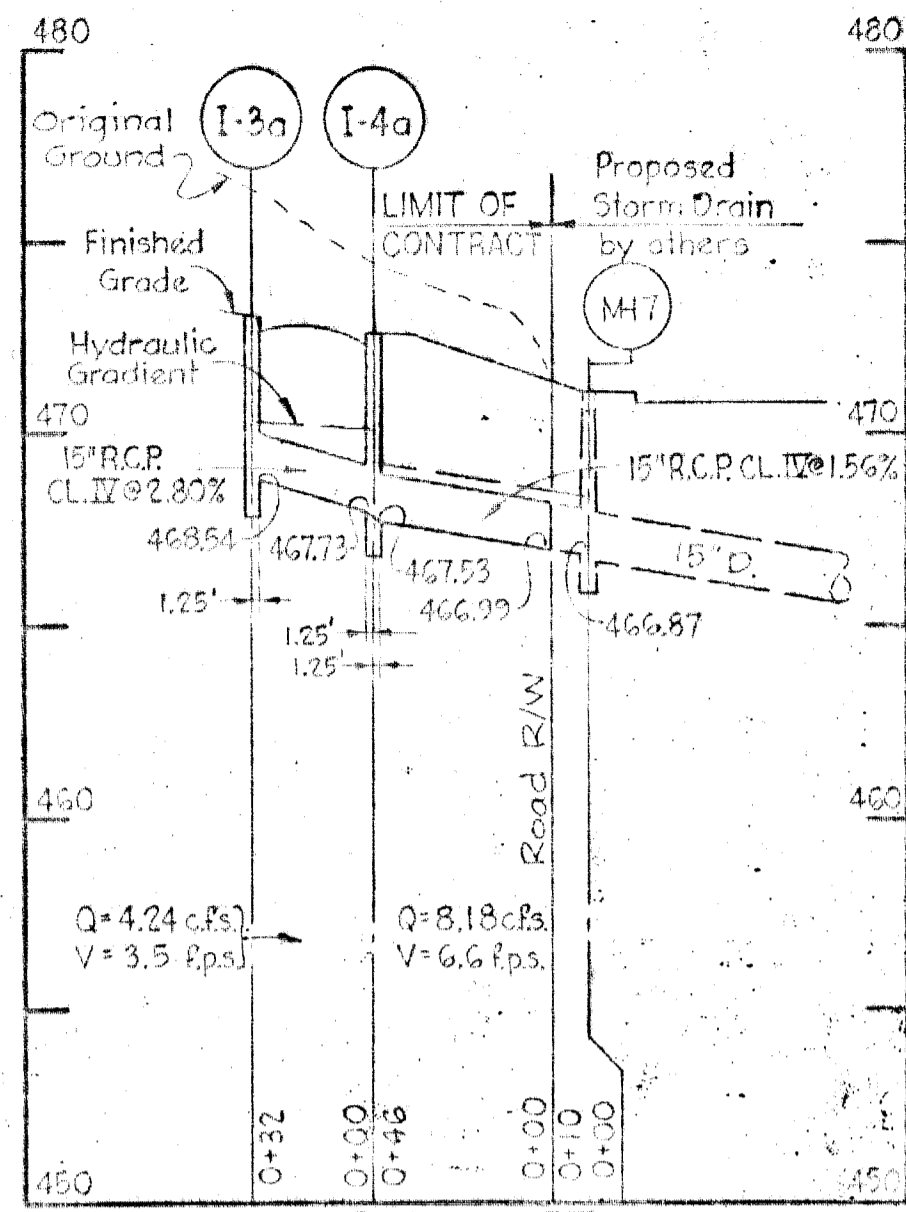
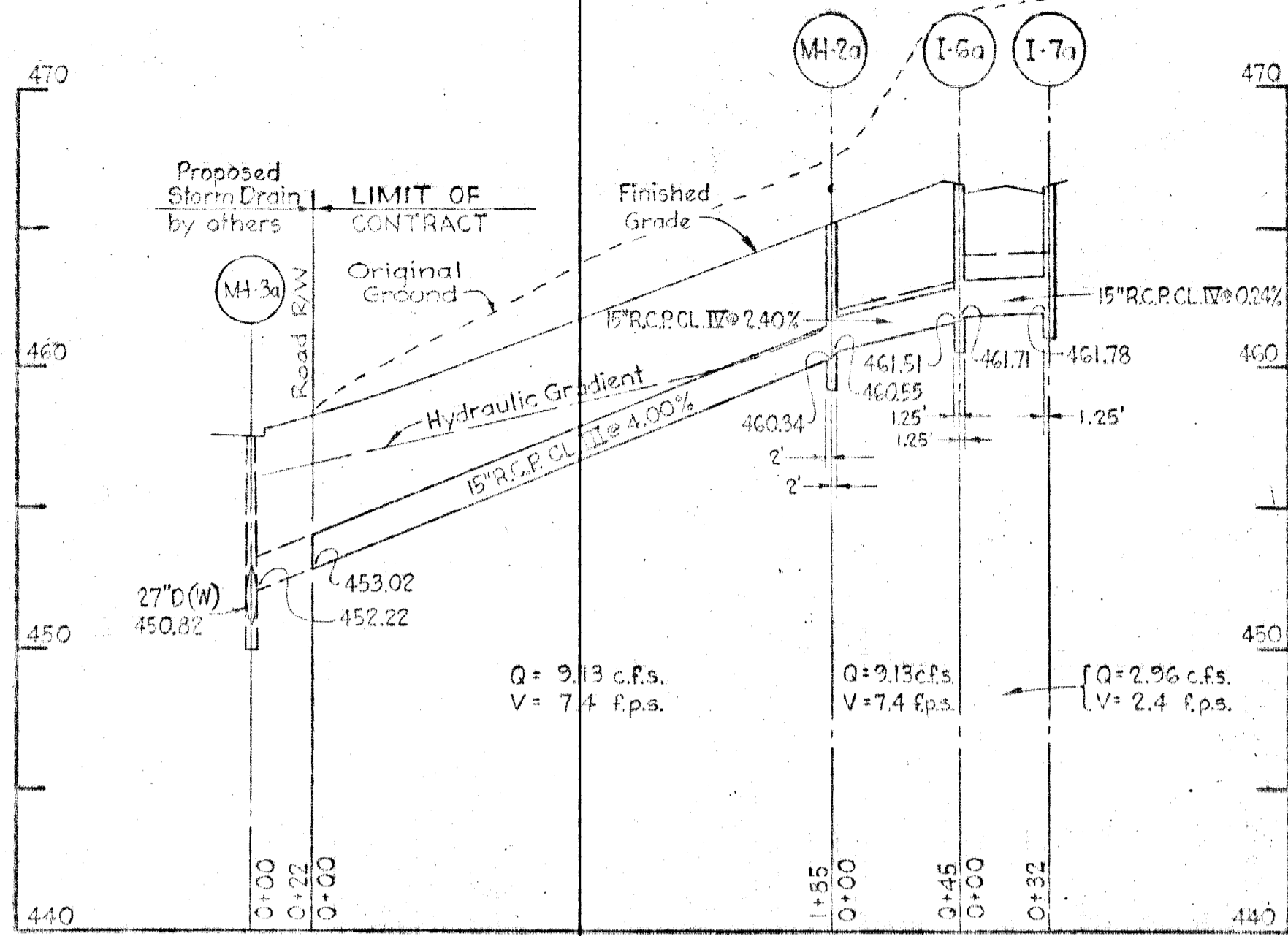
SCALE: As Shown DATE: January 28, 1971

WHITMAN, REQUARD & ASSOCIATES  
ENGINEERS  
BALTIMORE, MARYLAND 21202

DEPARTMENT OF PUBLIC WORKS  
*James W. Wickland*  
CHIEF BUREAU OF HIGHWAYS  
*J. H. Clauson*  
CHIEF ENGINEER, DIVISION OF LAND DEVELOPMENT

4-27-71  
DATE  
4-12-71  
DATE

*Kenneth A. McCord*  
KENNETH A. MCCORD  
Registered Engineer  
No. 1974



Rev/Date	Rev/No	Revision Description
4/7/71	1	Revised Storm Drift Sump Detail

**COLUMBIA**  
 6TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 OWNER AND DEVELOPER  
 HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA  
**VILLAGE OF LONG REACH**  
 SECTION I, AREA I  
 RESUBDIVISION OF PARCEL "L"

PROJECT TITLE  
**STORM DRAINS - PROFILES AND DETAILS**

SCALE: As Shown      DATE: January 25, 1971

WHITMAN, REARDT & ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND      21202

DEPARTMENT OF PUBLIC WORKS  
*Travis W. Welland*  
 CHIEF BUREAU OF HIGHWAYS      4-21 DATE

OFFICE OF PLANNING AND ZONING  
*Kenneth A. McCord*  
 CHIEF ENGINEER, DIVISION OF LAND DEVELOPMENT      4-12-71 DATE

KENNETH A. MCCORD  
 Registered Engineer  
 No. 1974