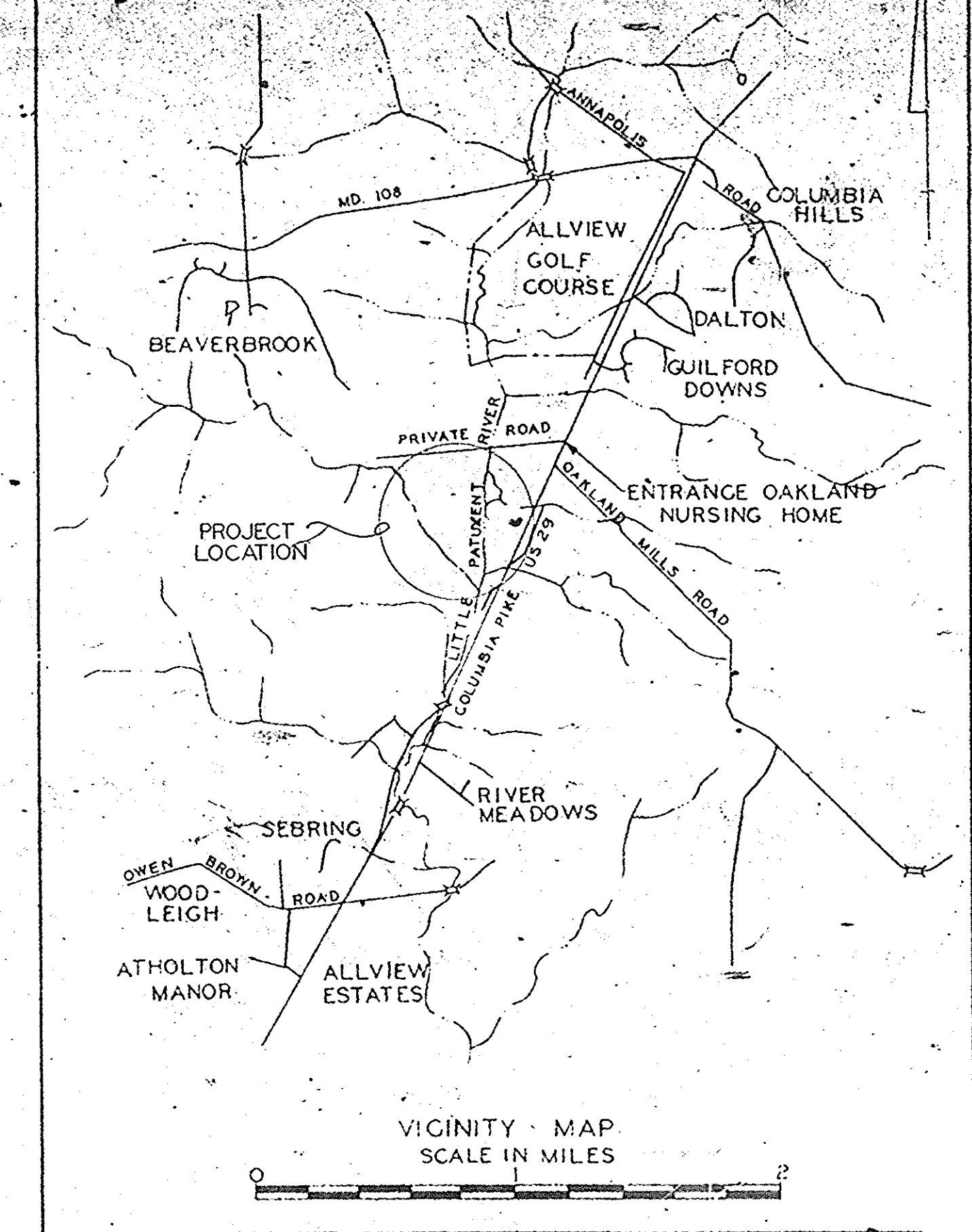
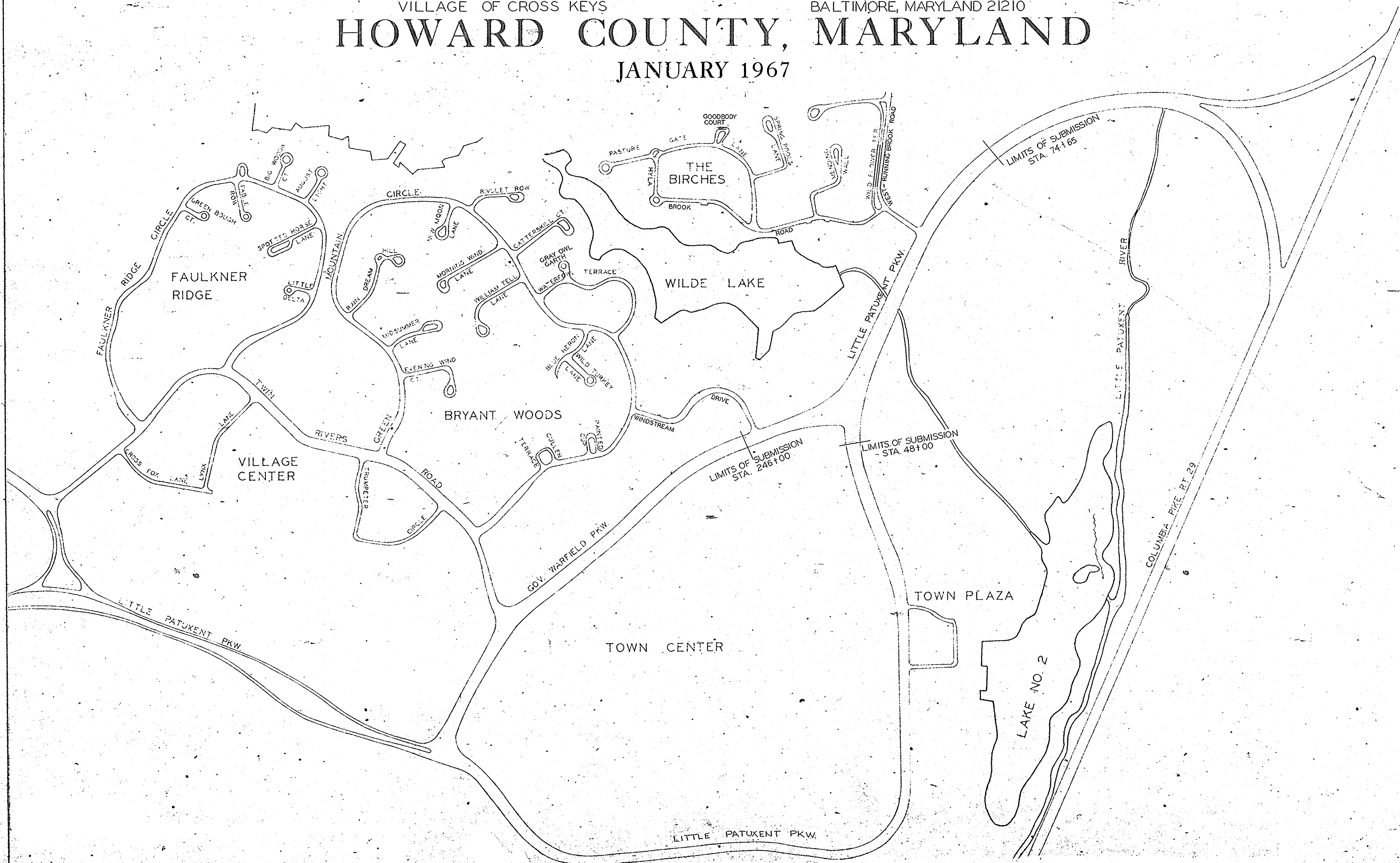


COLUMBIA

ELECTION DISTRICT 5

VILLAGE OF WILDE LAKE SECTION 3 WILDE LAKE AND PORTOFINO

HOWARD RESEARCH & DEVELOPMENT CORP.
VILLAGE OF CROSS KEYS BALTIMORE, MARYLAND 21210
HOWARD COUNTY, MARYLAND
JANUARY 1967



VICINITY MAP
SCALE IN MILES

INDEX		
DESCRIPTION	STREET NAME	DRAWING NO.
TITLE		1
DETAILS	TYPICAL SECTIONS	2 & 3
PLAN & PROFILE	LITTLE PATUXENT PARKWAY	4, 5 & 6
PLAN & PROFILE	GOV. WARFIELD PARKWAY	7
PLAN & PROFILE	WINDSTREAM DRIVE	8
DETAILS	DRAINAGE	9
PROFILES	DRAINAGE	10, 11 & 12

APPROVED BY

HOWARD COUNTY PLANNING COMMISSION *J. H. Clouston* 2-2-67
SENIOR ENGINEER DATE

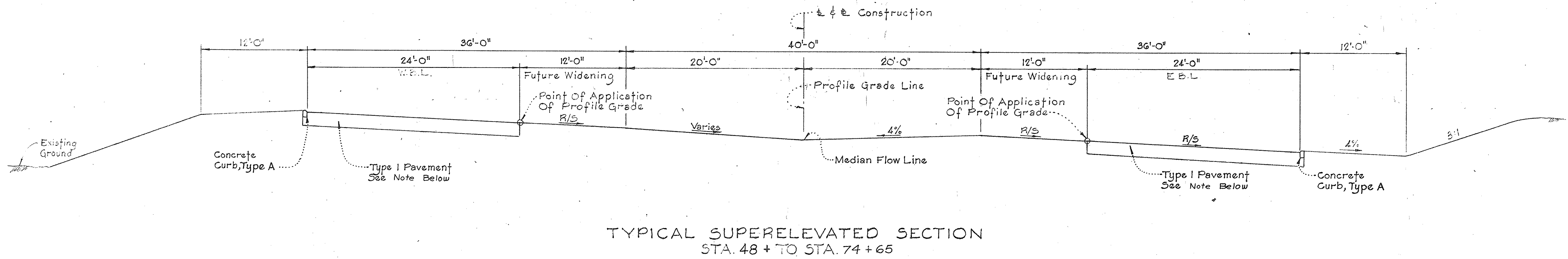
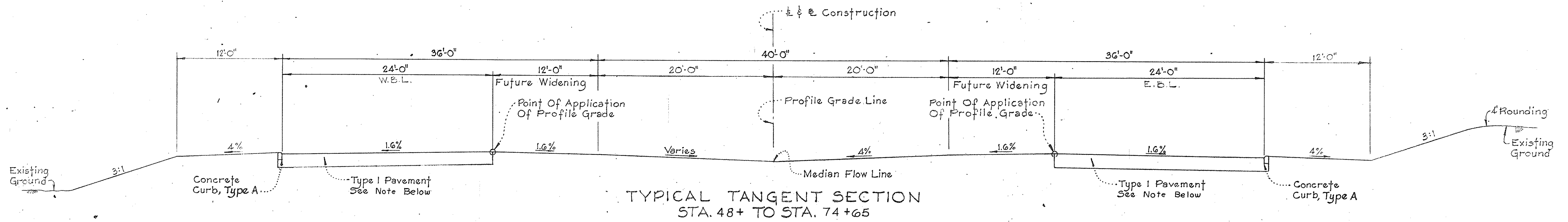
HOWARD COUNTY ROAD DEPARTMENT *Herman S. Chell* 2-2-67
ROAD SUP. DATE

HOWARD COUNTY METROPOLITAN COMMISSION *W. O. Reed* 6-19-67
CHIEF ENGINEER DATE

RUMMEL, KLEPPER AND KAHL
CONSULTING ENGINEERS
BALTIMORE, MARYLAND
SHEETS 2 TO 7, 9 TO 11 *August W. Muehl*

C. D. MESSICK, JR. & ASSOCIATES
CONSULTING ENGINEERS & LAND SURVEYORS
21 WEST STREET ANNAPOLIS, MARYLAND
SHEETS 8 & 12 *Russell E. Johnson*

Note: 2" Topsoil, Seed (Art. 36.04) & Mulch (Art. 36.05) To Be Placed On All Median Areas, Construction Slopes & Ditches, Unless Otherwise Noted On The Plans.



Note: Type I Pavement
 7" Crusher Run Subbase
 4" Bituminous Concrete Base Course
 2 1/2" Bituminous Concrete Binder Course
 2-1/2" Bituminous Concrete Surface Courses
 This surface type to be constructed in accordance with the Howard County Road Construction Code and specification Dwg D112 Page 165b

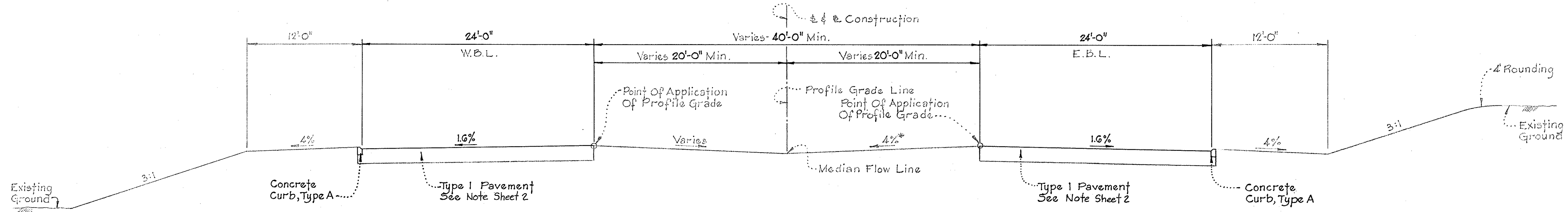
LITTLE PATUXENT PARKWAY

RUMMEL, KLEPPER & KAHL
 CONSULTING ENGINEERS
 BALTIMORE, MARYLAND

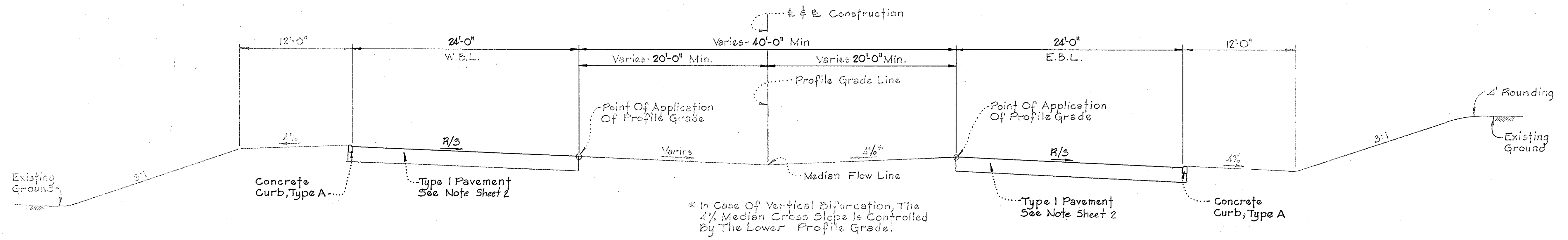
#14

Pavement Spec. Amended	2/10/67
Added Note	1/10/67
Curb Type	9/22/66
LITTLE PATUXENT PARKWAY TYPICAL SECTION COLUMBIA	
Scale: 1" = 6'	Date: 3-30-67
Design by:	Traced by:
Checked by:	Drawing No. 2-12

Note: 2" Topsoil, Seed (Art. 36.04) & Mulch (Art. 36.05) To Be Placed On All Median Areas, Construction Slopes & Ditches, Unless Otherwise Noted On The Plans.

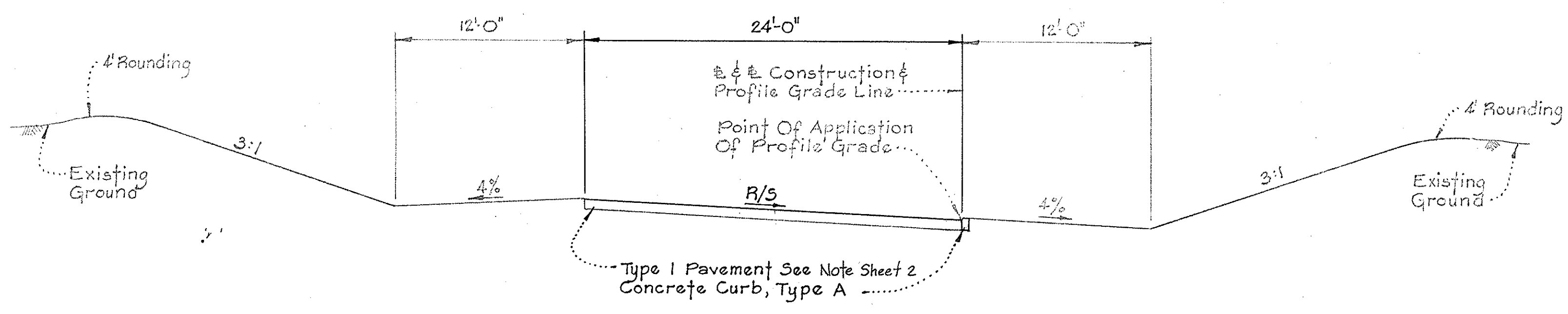


STA. 246+ TO STA. 252+
TYPICAL TANGENT SECTION



STA. 246+ TO STA. 252+
TYPICAL SUPERELEVATED SECTION

* In Case Of Vertical Bifurcation, The 4% Median Cross Slope Is Controlled By The Lower Profile Grade.



E.B.L. STA. 250+ TO STA. 252+
W.B.L. STA. 250+ TO STA. 255+
LOOKING IN DIRECTION OF TRAFFIC

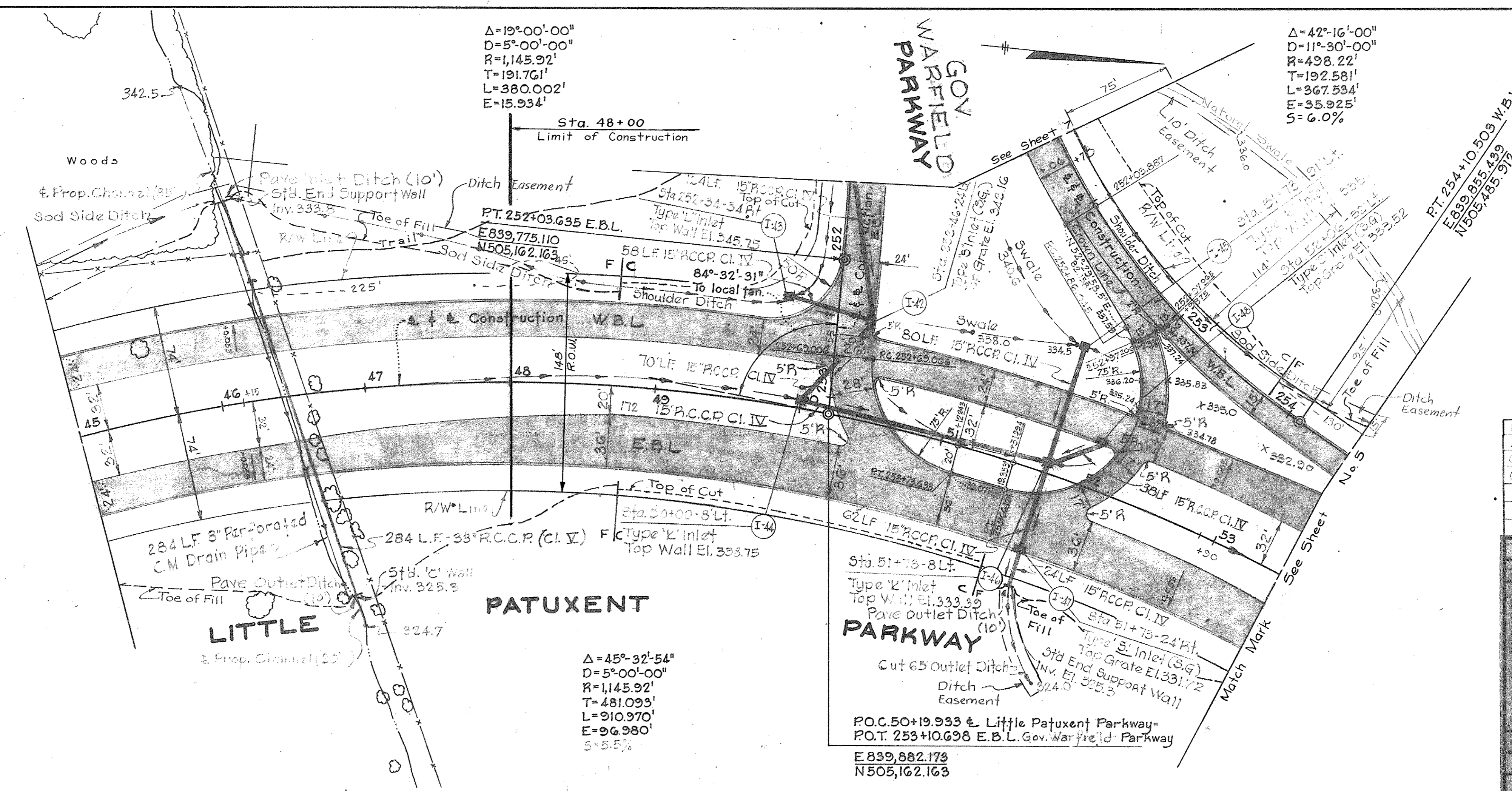
GOV. WARFIELD PARKWAY

Curb Type	9/22/66
GOV. WARFIELD PARKWAY	
TYPICAL SECTION	
COLUMBIA	
DATE	9-20-66
BY	
NO.	3 OF 12

PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	RT. OF WAY CHECKED	

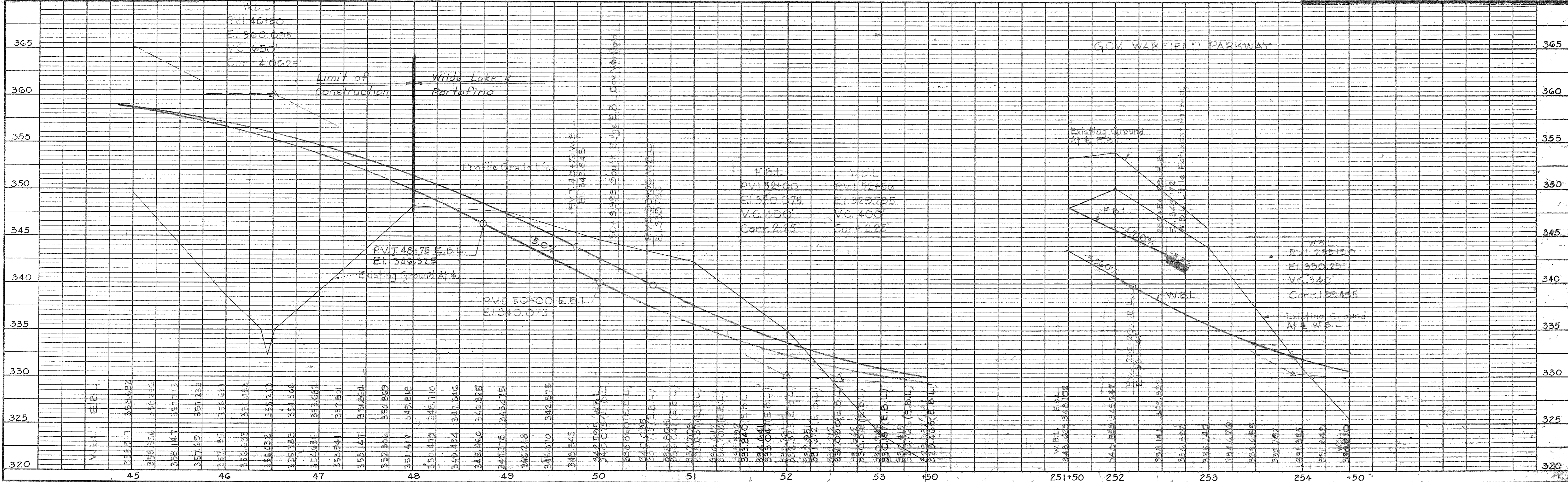
PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	

RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
BALTIMORE, MARYLAND



Revision Sheet No's	Date
Added Drainage	1/10/67
Grade Change Gov. Warfield Parkway	9/22/66
Grade Change Little Patuxent Parkway	8/12/66
Roadway Change	7/22/66
Revised Grade	6/29/66
Revised Grade	6/24/66
Revised Grade	5/18/66

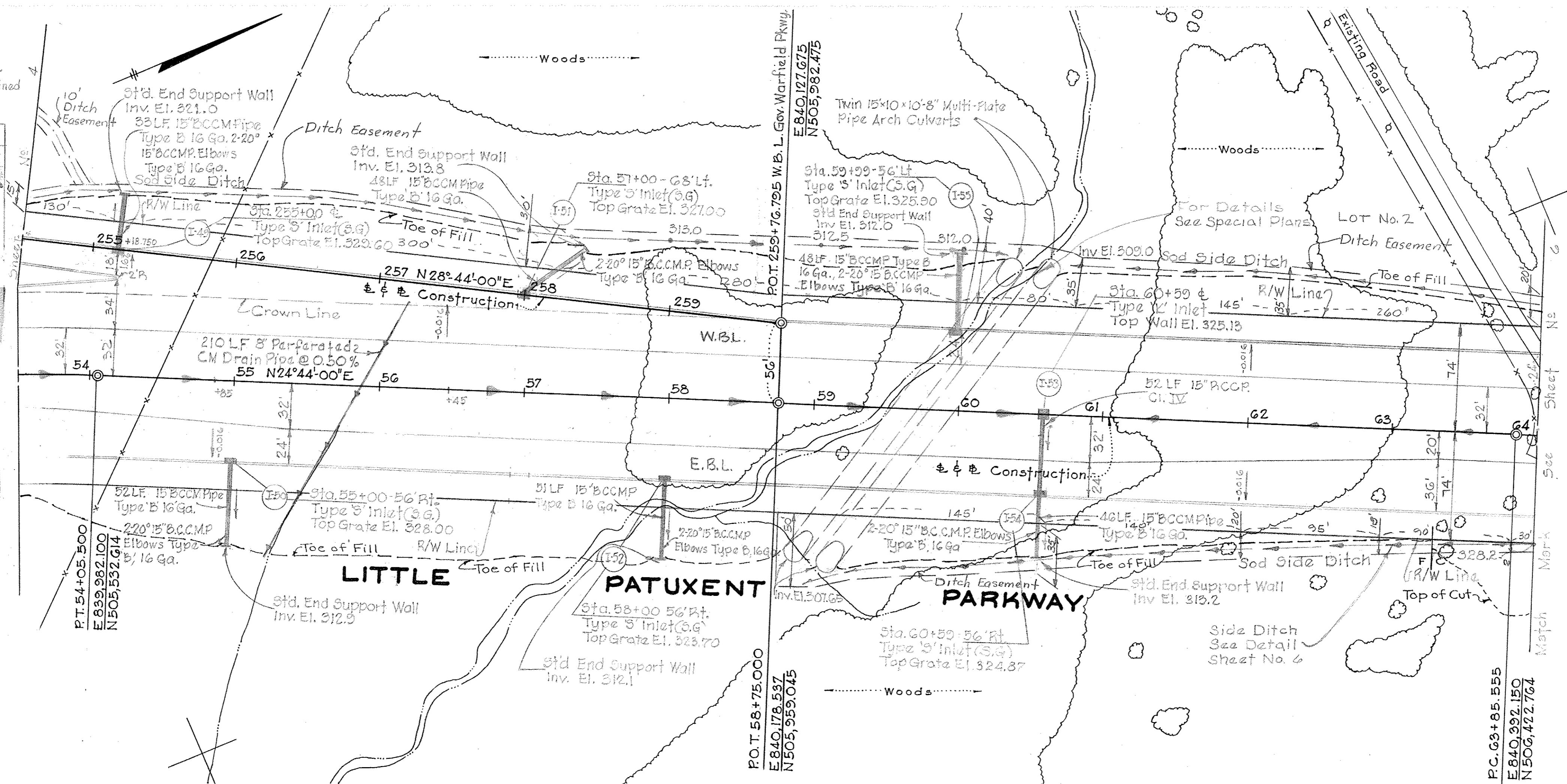
Description	By	Mark	Date
REVISIONS			
LITTLE PATUXENT PARKWAY			
Sta. 45+ To Sta. 55+			
COLUMBIA			
Scale: Horiz. 1"=50' Vert. 1"=5'	Date: April 15, 1966		
Design by:	Traced by:		
Checked by:	Drawing No.: 4-12		



Sta. 54+ to 67+
Remove Unsuitable Material For The Full Width Of Embankment Construction To The Depths Indicated In The Following Table And Replace With Granular Backfill. Exact Limits Of Removal To Be Determined By The Engineer:

Sta.	100' Left	50' Left	Center	50' Right	100' Right
54	10'	10'	10'	10'	10'
55	10'	10'	10'	10'	10'
56	10'	10'	10'	10'	10'
57	10'	10'	10'	10'	10'
58	10'	10'	10'	10'	10'
59	10'	10'	10'	10'	10'
60	10'	10'	10'	10'	10'
61	10'	10'	10'	10'	10'
62	10'	10'	10'	10'	10'
63	10'	10'	10'	10'	10'
64	10'	10'	10'	10'	10'

STORM DRAIN PROFILES
Sta. 54+ To Sta. 64+ See Sheet No. 10



Removed Pedestrian Underpass	1/10/67
Added Drainage	9/27/66
Grade Change Gov. Warfield Pkwy	8/12/66
Added Limits Of Unsuitable Material	7/22/66
Drainage Grade	6/23/66
	5/13/66

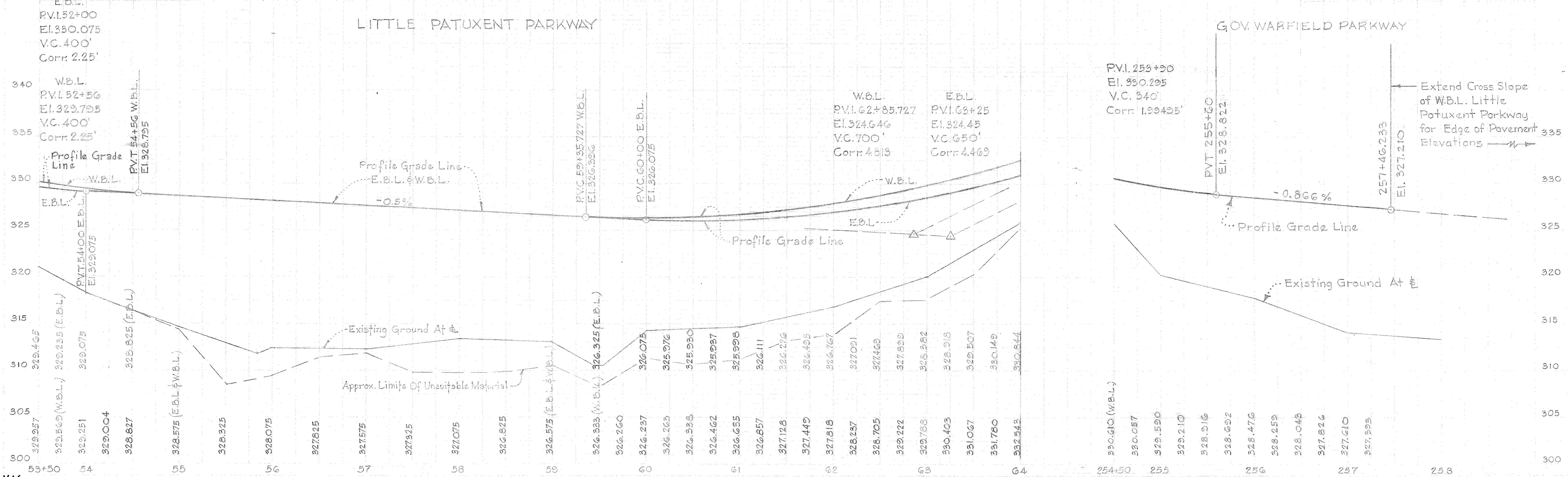
LITTLE PATUXENT PARKWAY

Sta. 53+ to Sta. 64+

COLUMBIA

Scale: 1"=80' Horiz. 1"=4' Vert. Date: April 13, 1966

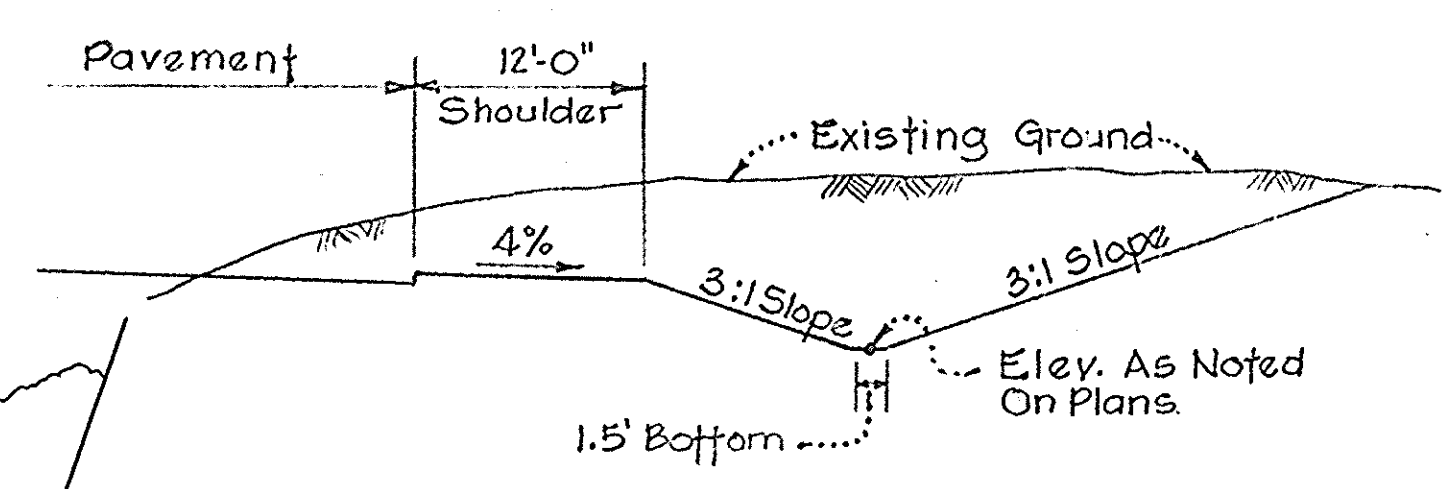
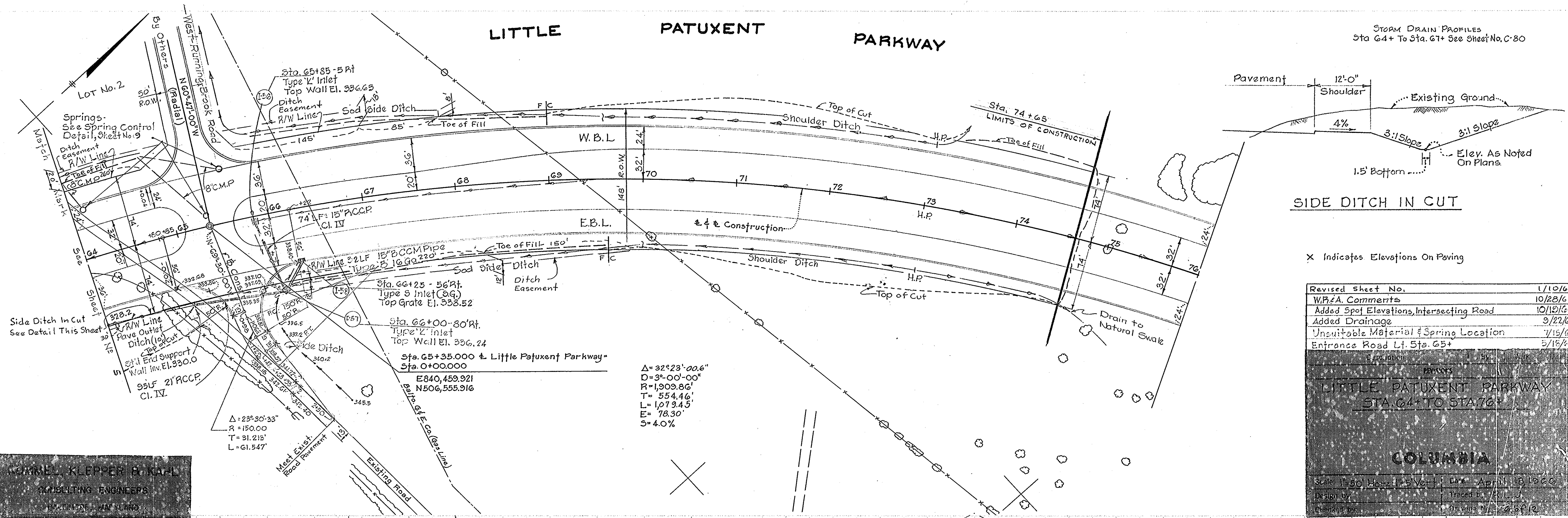
Drawn by: [Signature] Checked by: [Signature]



#14

LITTLE PATUXENT PARKWAY

STORM DRAIN PROFILES
Sta. 64+ To Sta. 67+ See Sheet No. C-80



SIDE DITCH IN CUT

X Indicates Elevations On Paving

Revised Sheet No.	1/10/67
W.P. & A. Comments	10/28/66
Added Spot Elevations, Intersecting Road	10/19/66
Added Drainage	9/22/66
Unsuitable Material & Spring Location	7/15/66
Entrance Road Lt. Sta. 65+	5/18/66

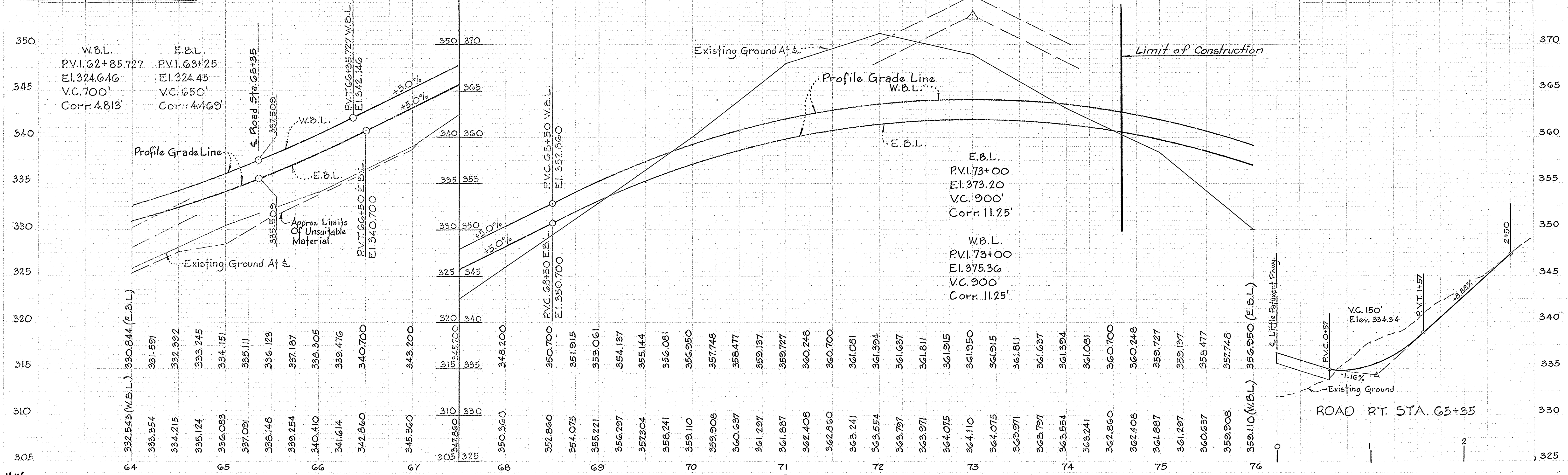
LITTLE PATUXENT PARKWAY
STA. 64+ TO STA. 76+

COLUMBIA

Scale: 1" = 50' Horiz. 1" = 5' Vert. Date: April 18, 1966
 Design by: Traced by: Checked by:

WIMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
WASHINGTON, D.C.

$\Delta = 32^\circ 23' 00.6''$
 $D = 3^\circ 00' 00''$
 $R = 1,909.86'$
 $T = 554.46'$
 $L = 1,079.45'$
 $E = 78.30'$
 $S = 4.0\%$

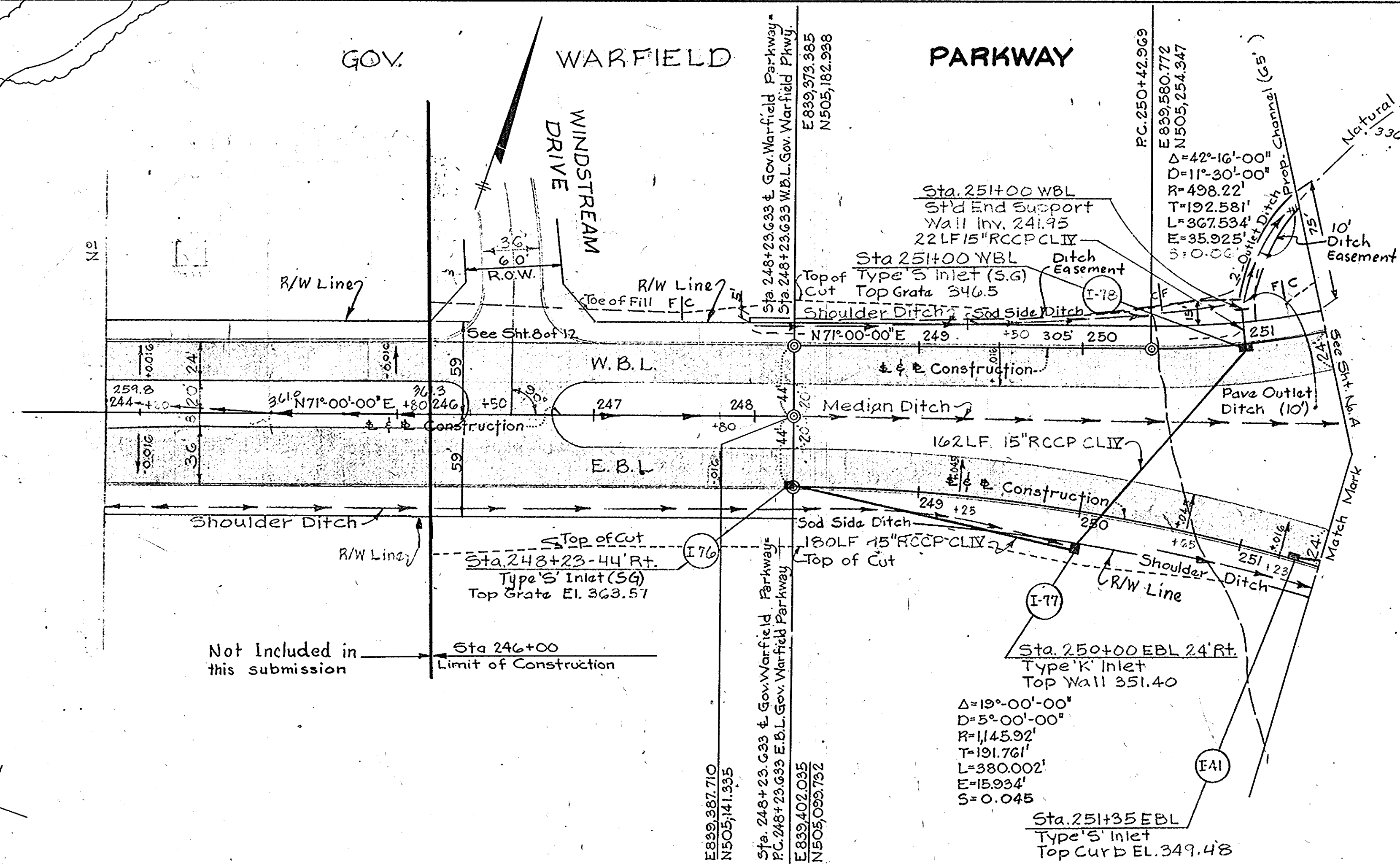


#14

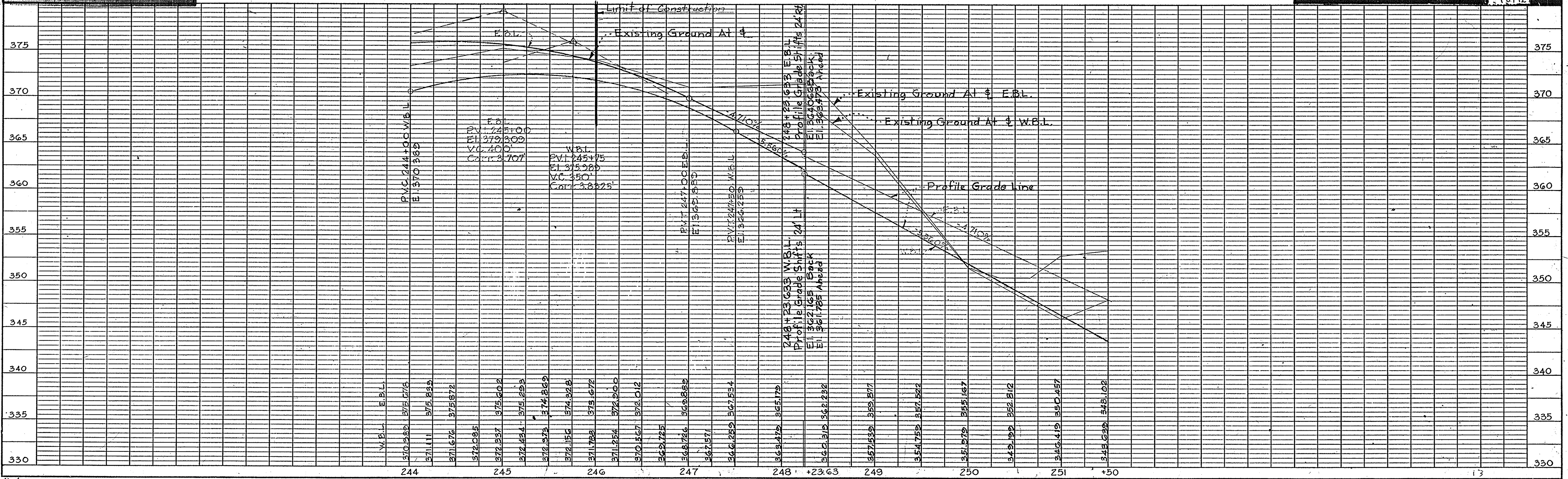
PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNED	CHECKED
	NO. OF INT. CHECKED	
	NO.	

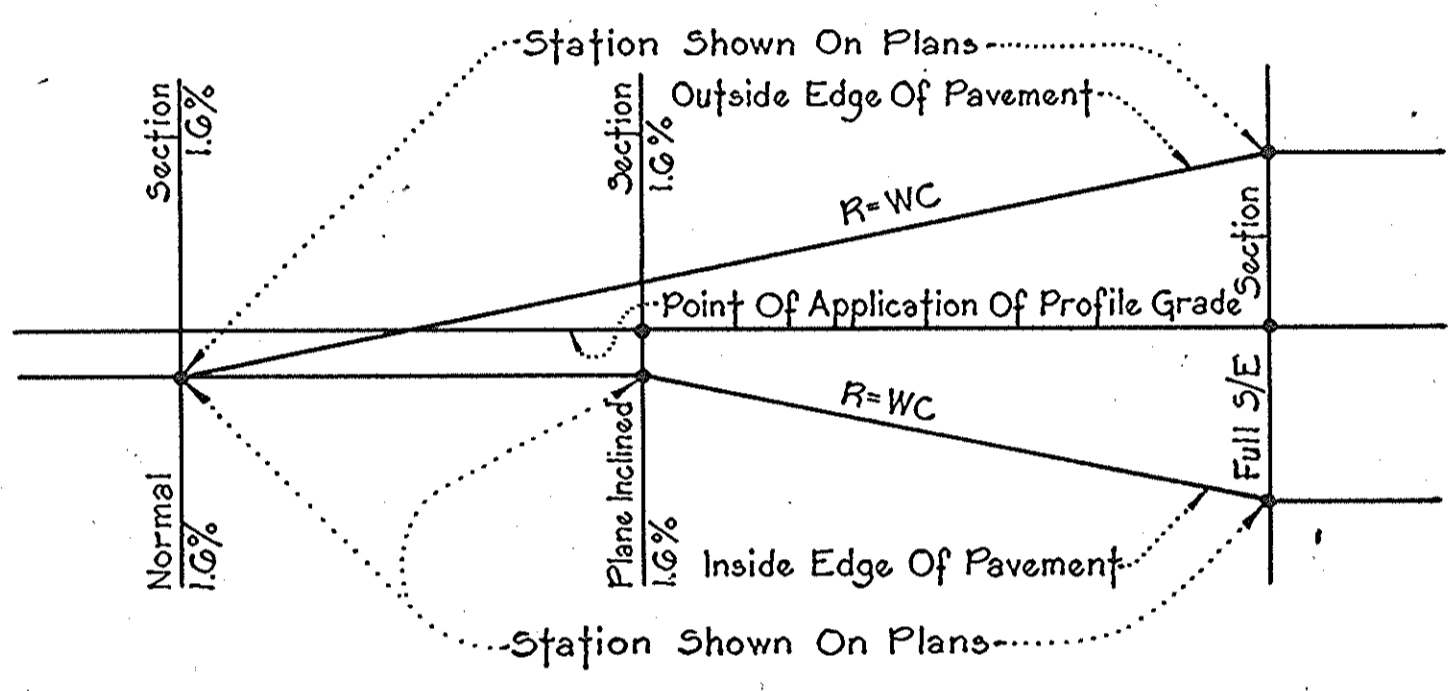
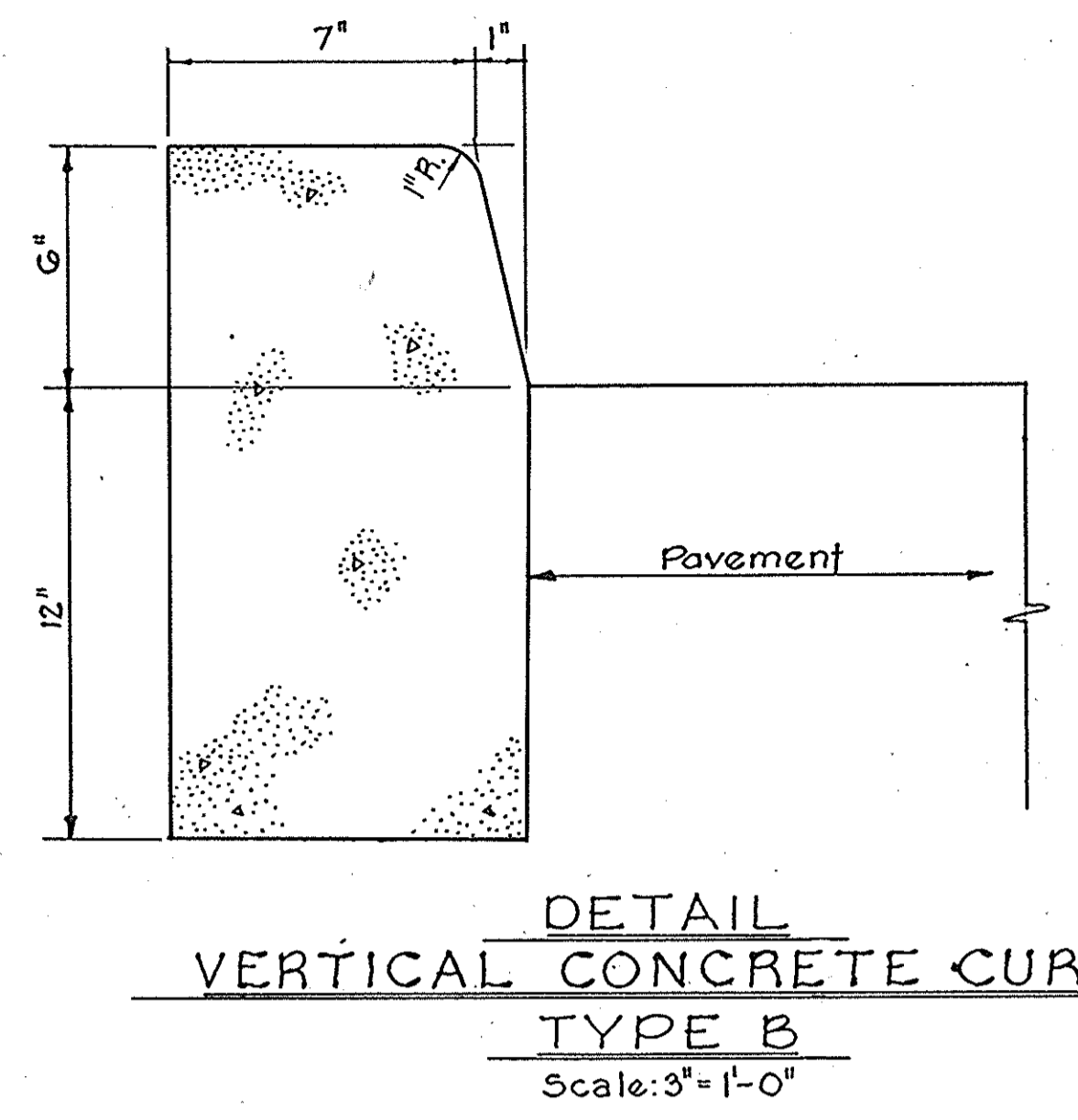
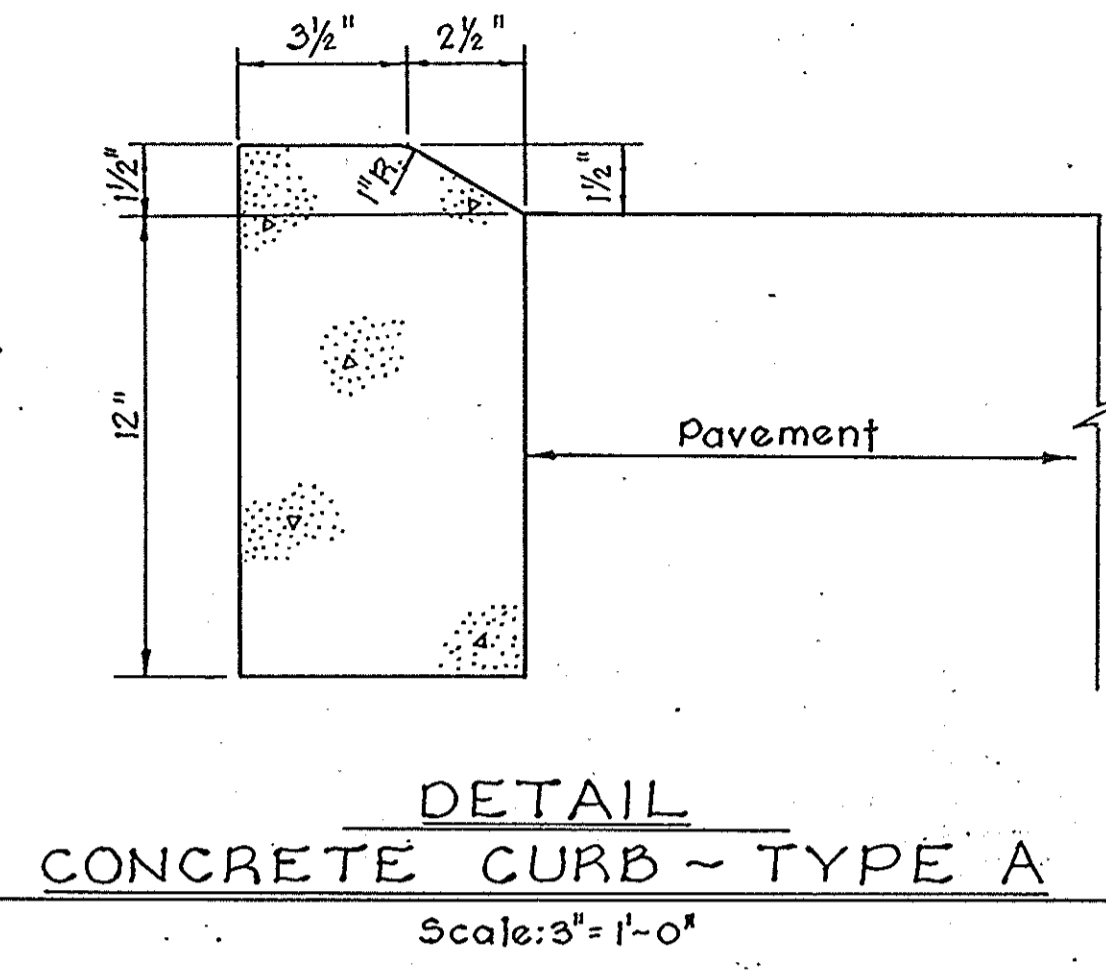
PROFILE	SURVEYED	DATE
	PLOTTED	BY
	ALIGNED	CHECKED
	NO. OF INT. CHECKED	
	NO.	

RUMMEL, KLEPPER & KAHL
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

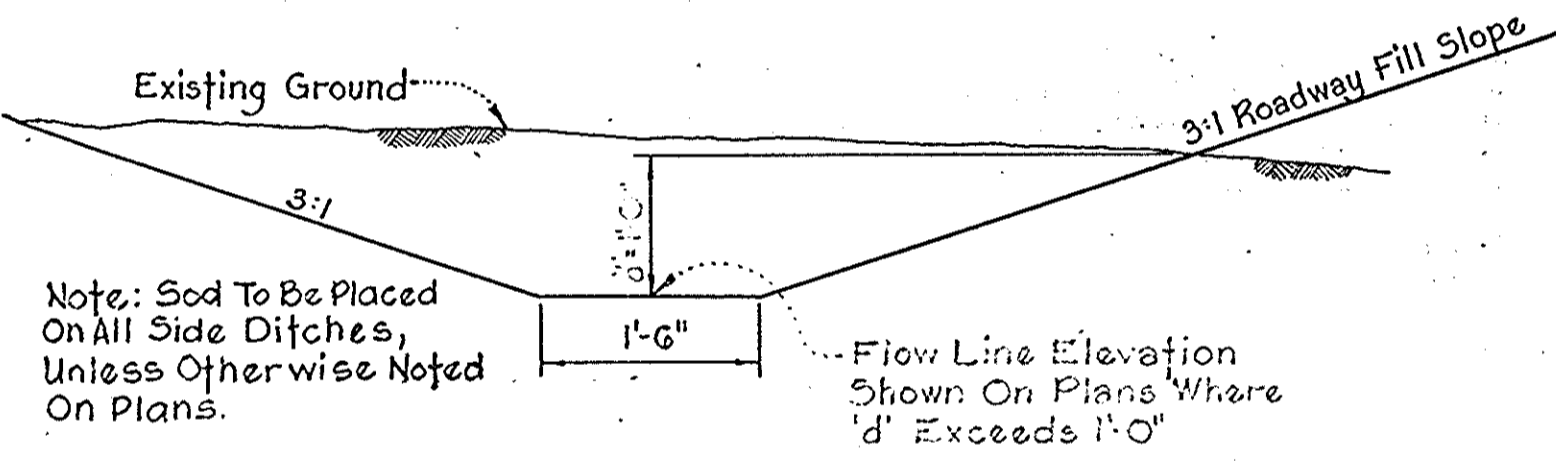


Added Limits	1/10/67
Added Drainage	9/22/66
Grade Revised	8/12/66
Grade Revised	7/22/66
Drainage	4/23/66
Grade & Green Cove Road Location	5/18/66

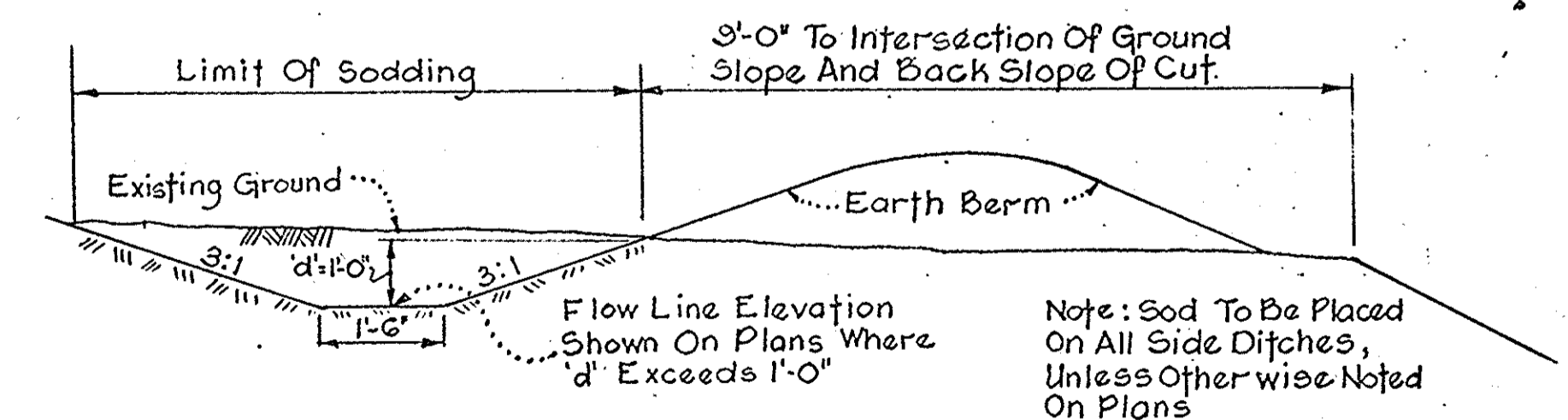




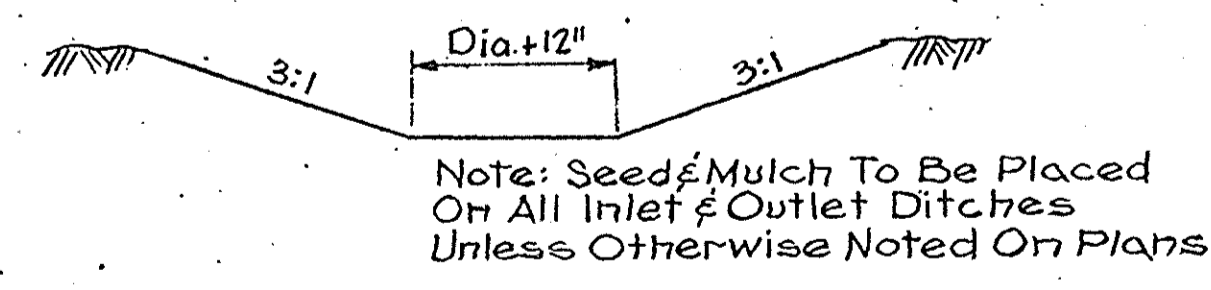
W: Width Of Pavement.
R: Rate Of Change Of A Given Point On The Pavement With Respect To The Point Of Application Of Profile Grade.
C: 0.0002 ft. per ft. Except For The Transitions Between Station 28+25 And Station 43+21.67, Which Are 0.00015 ft. per ft.



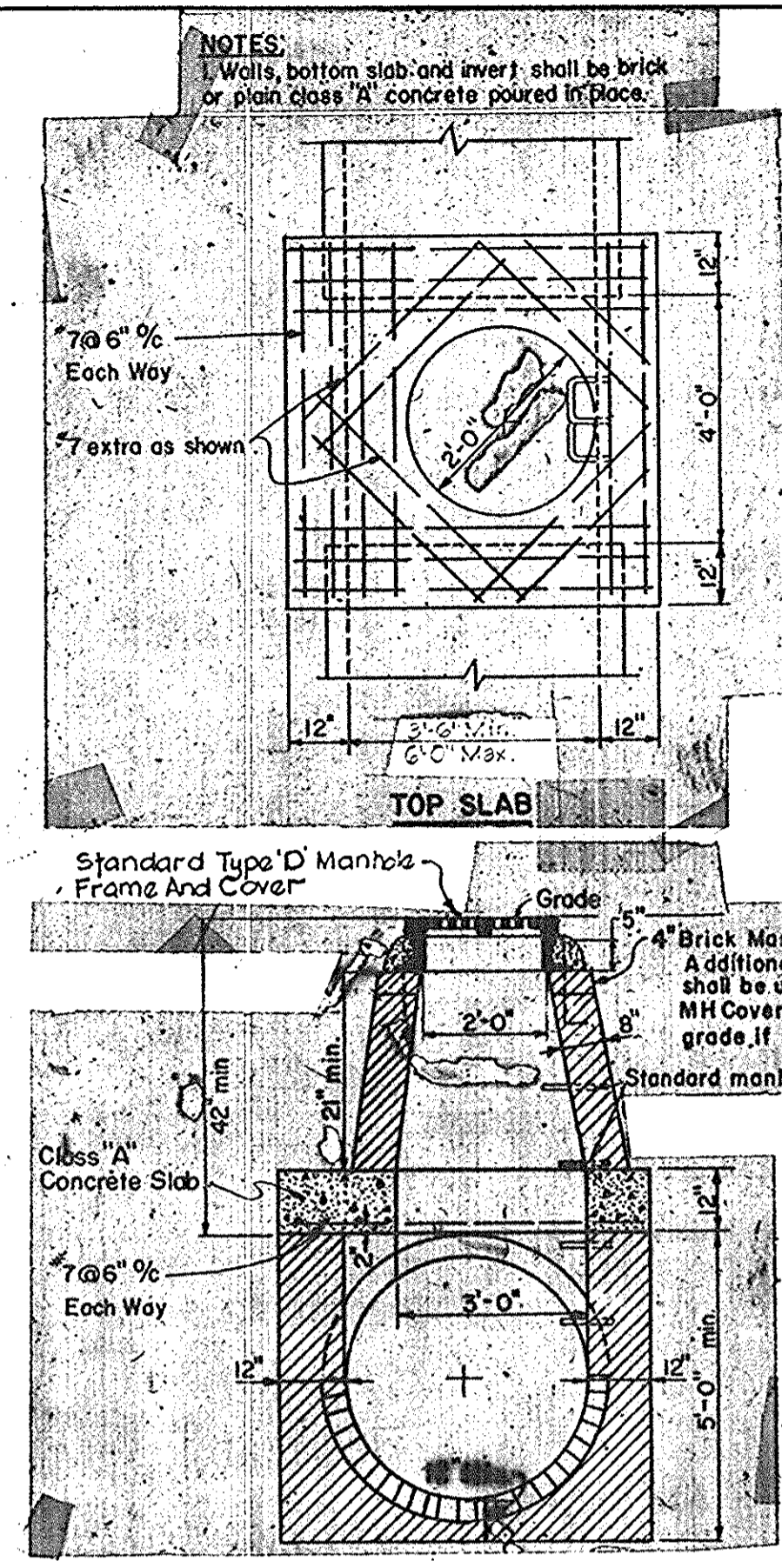
Note: Sod To Be Placed On All Side Ditches Unless Otherwise Noted On Plans.



Note: Sod To Be Placed On All Side Ditches, Unless Otherwise Noted On Plans

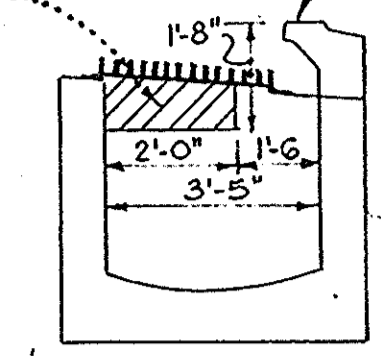


Note: Seed & Mulch To Be Placed On All Inlet & Outlet Ditches Unless Otherwise Noted On Plans

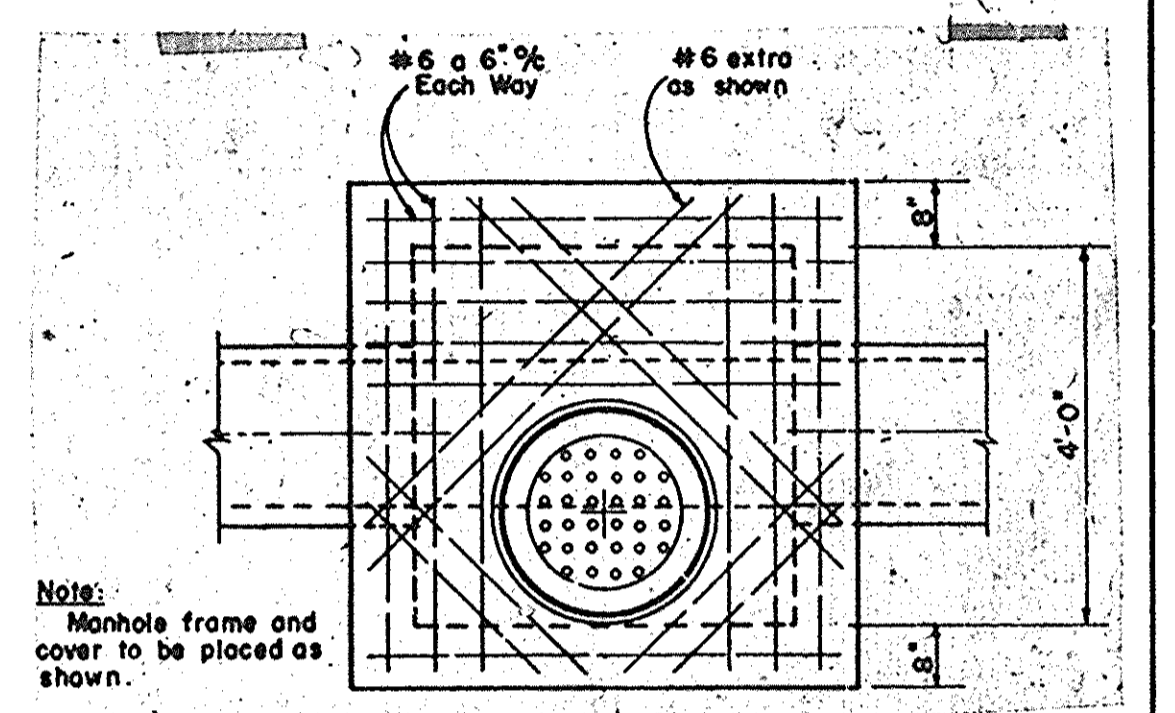
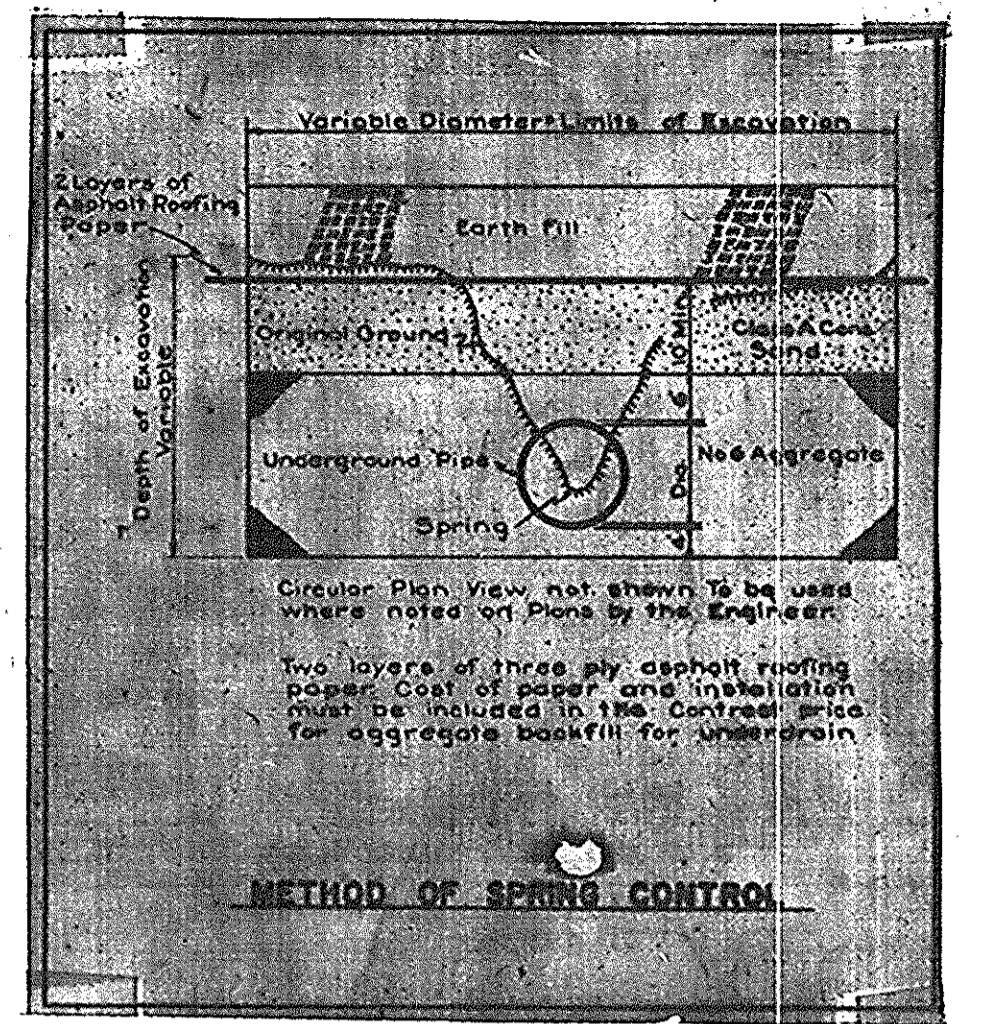


**DETAIL
TYPE 'C' MANHOLE**

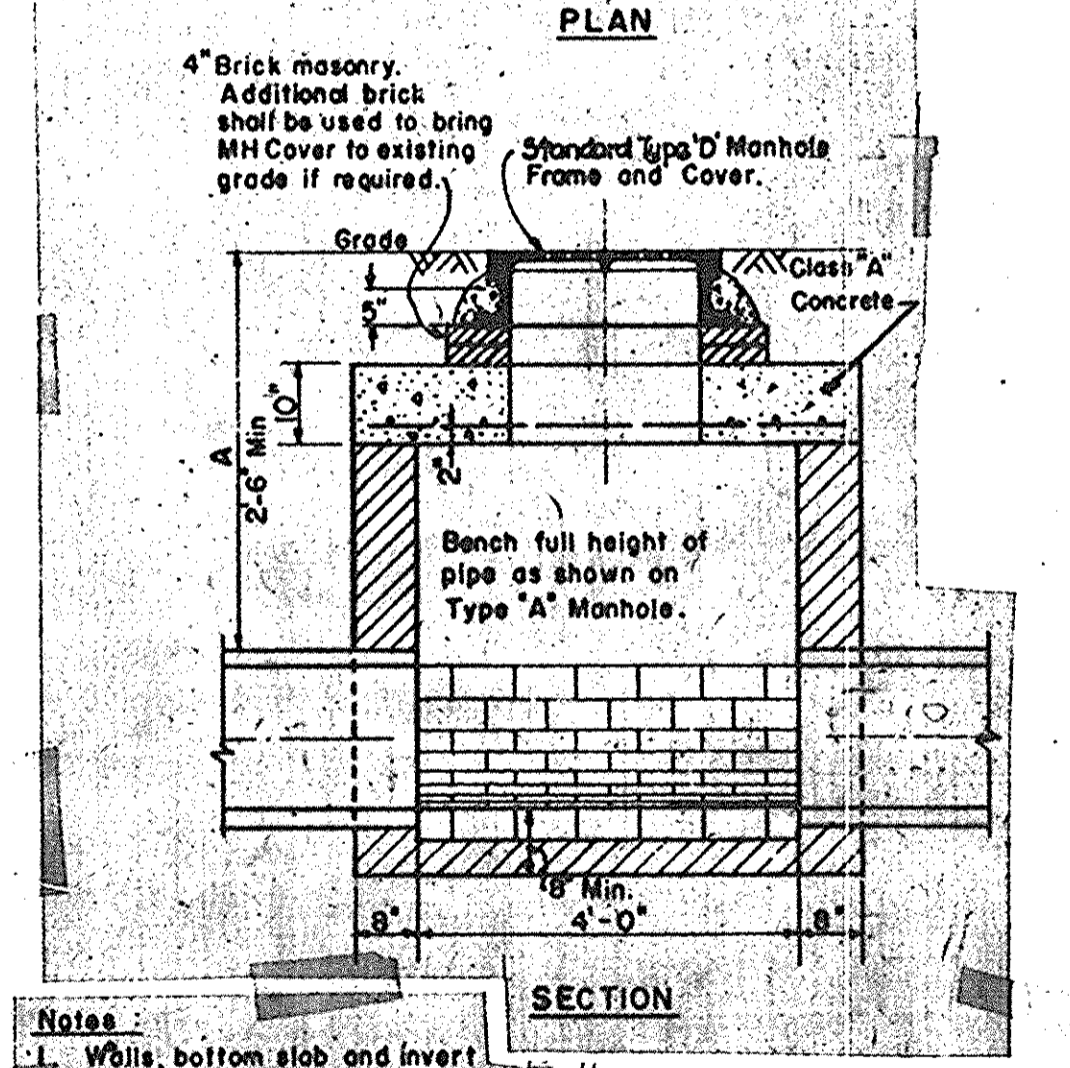
Provide Temporary Slot In End Of 'S'-Inlet As Shown



**TEMPORARY DRAINAGE SLOT
'S'-INLETS**
Note: To Be Constructed Where Noted On Plans

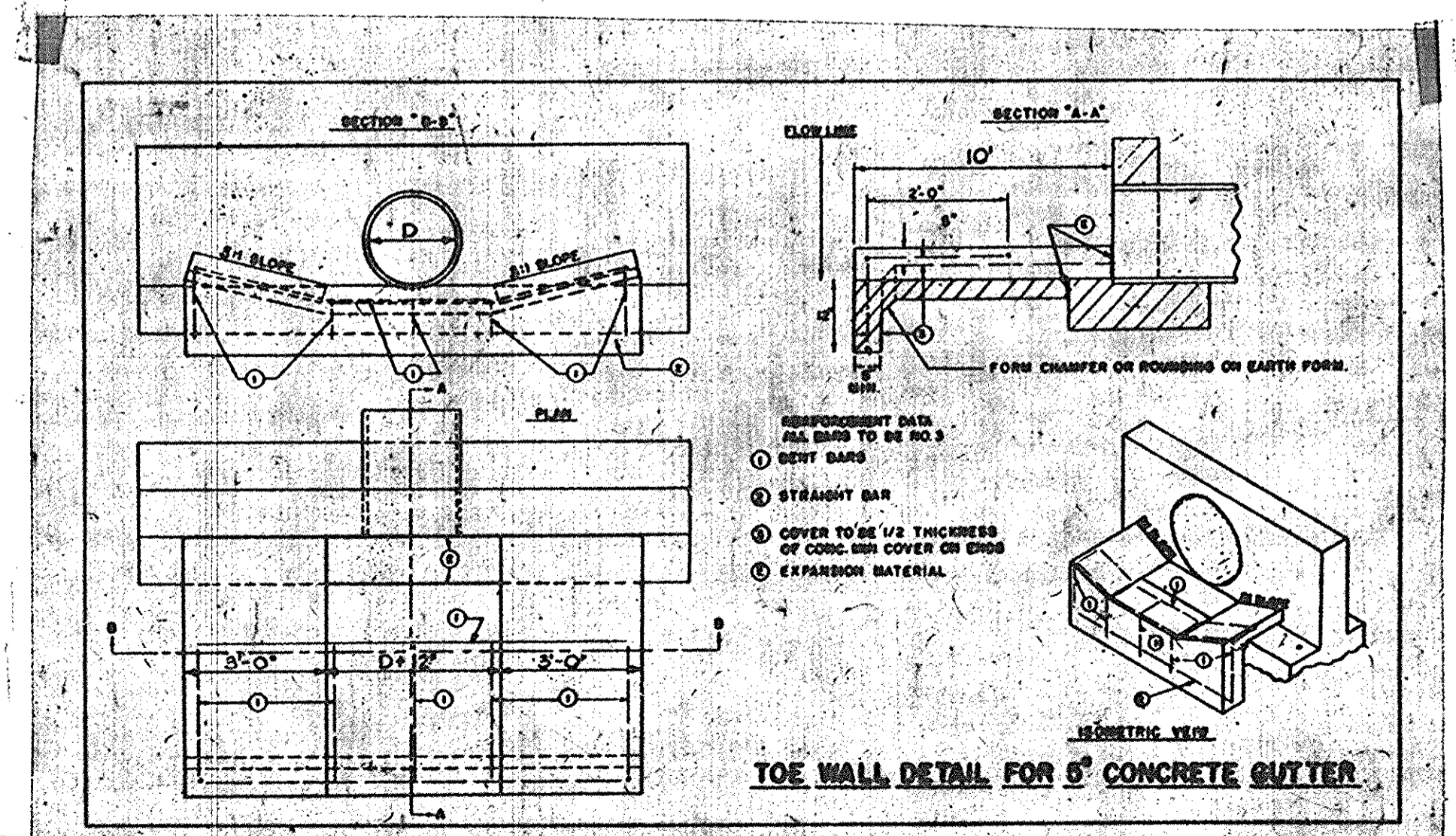


Note: Manhole frame and cover to be placed as shown.



Note: Walls, bottom slab and invert shall be brick on plain Class 'A' Concrete poured in place.

**DETAIL
TYPE 'B' MANHOLE**

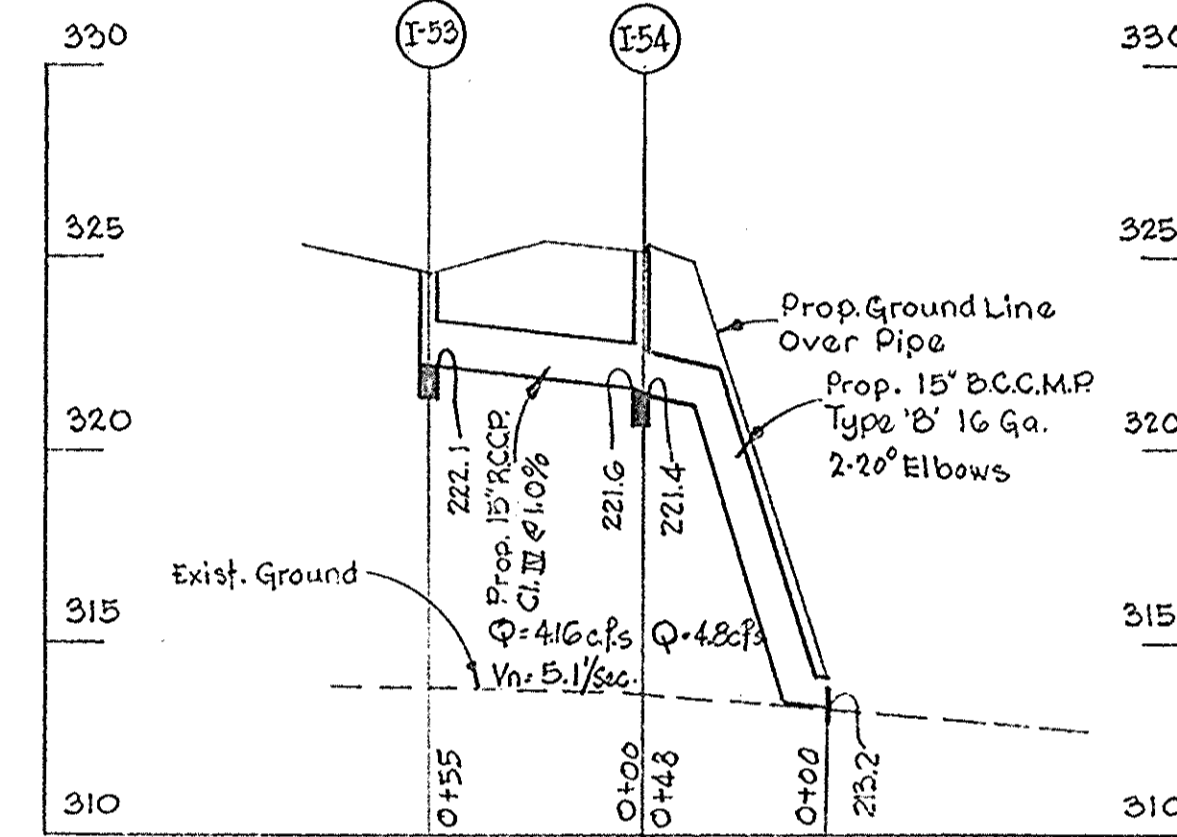
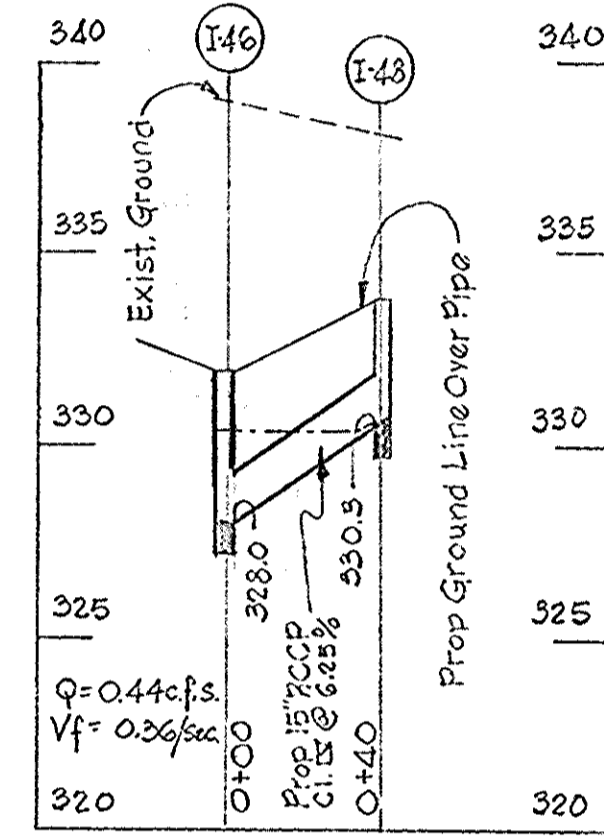
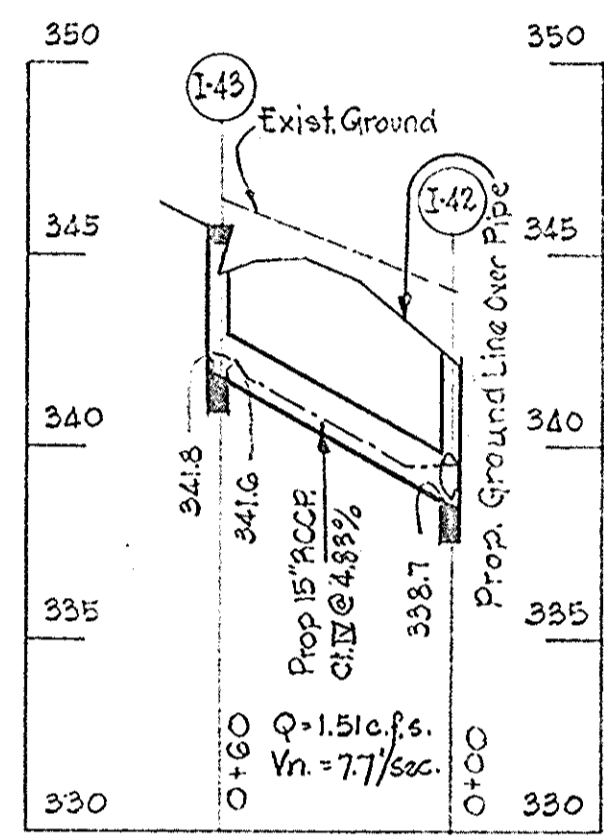
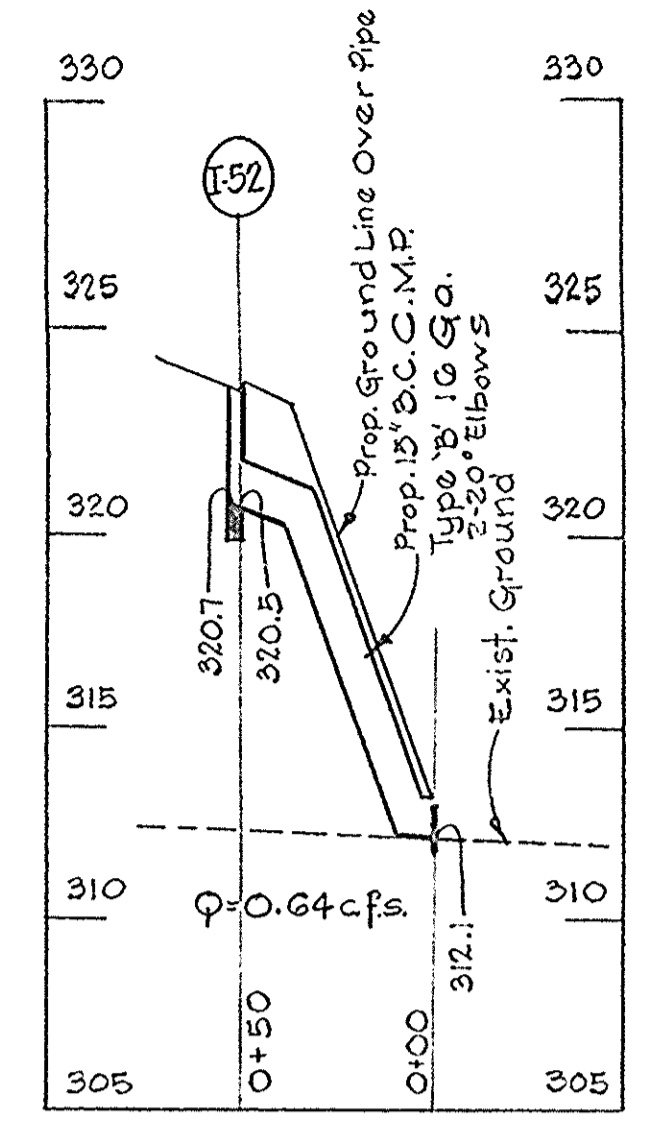
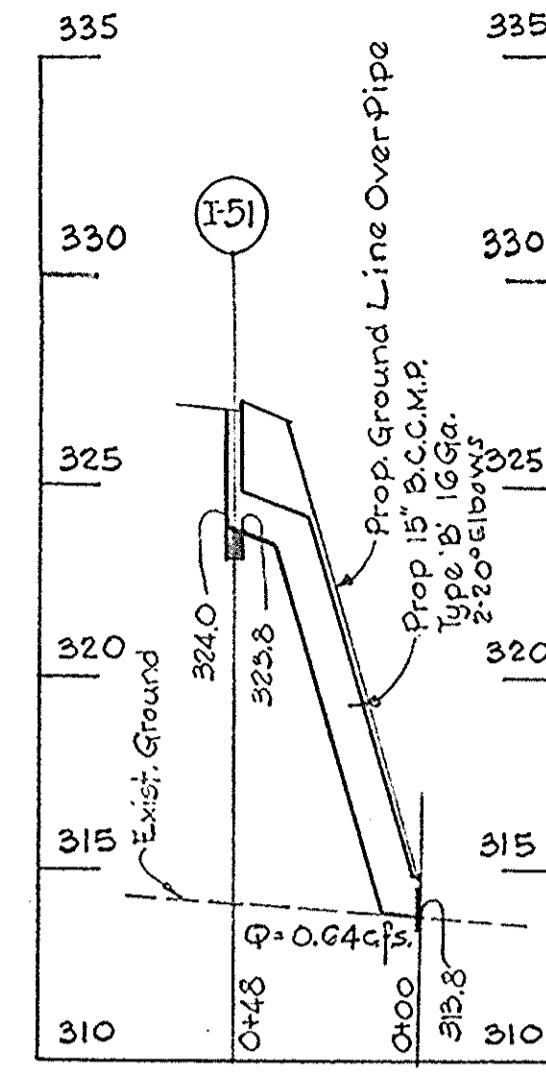
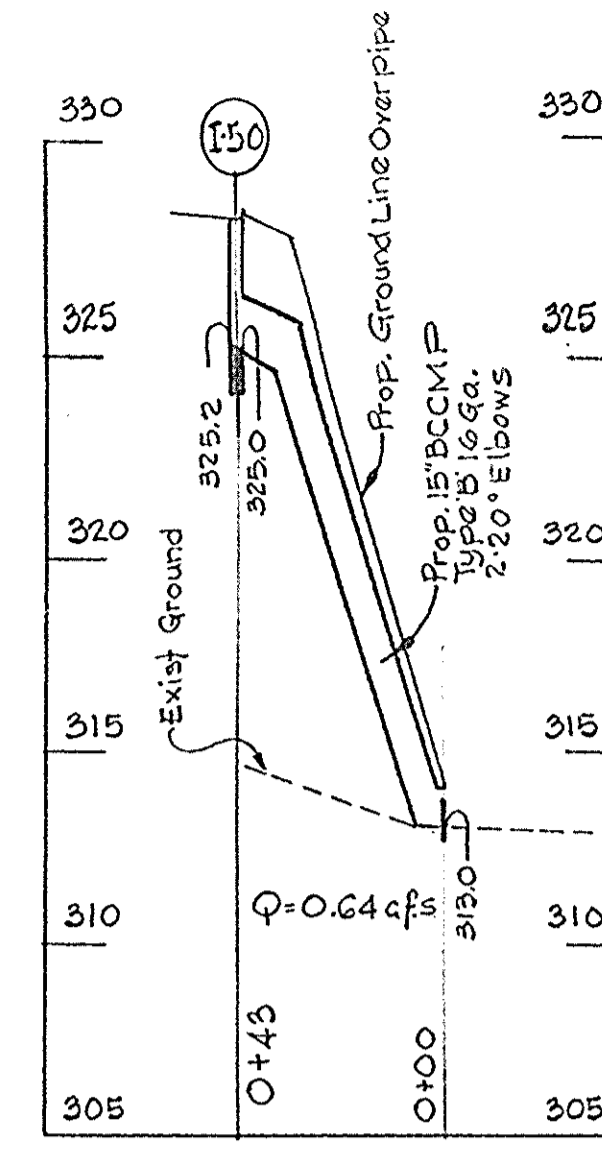
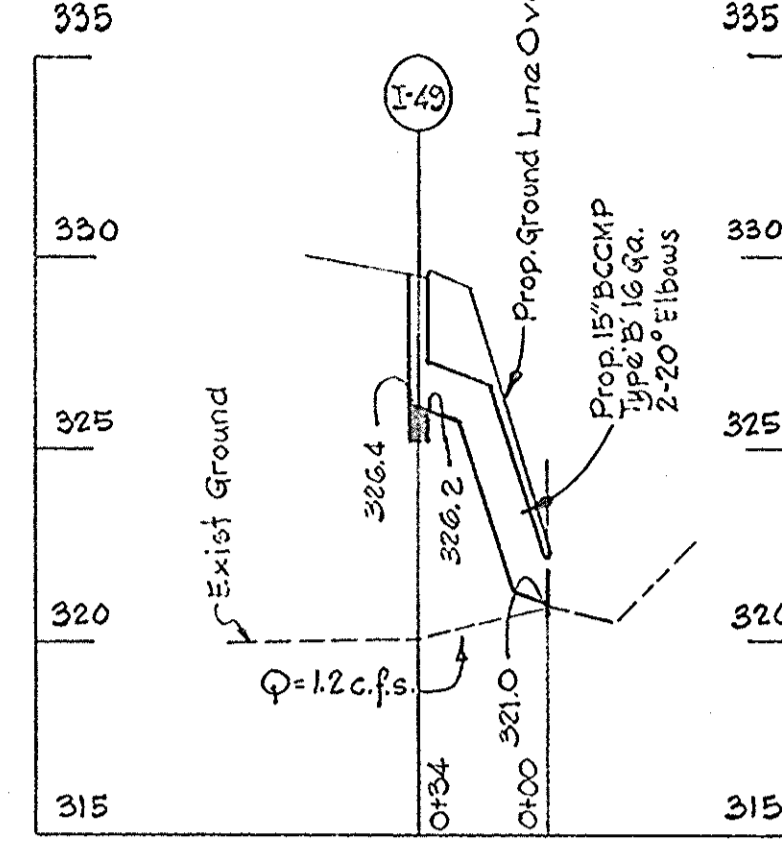
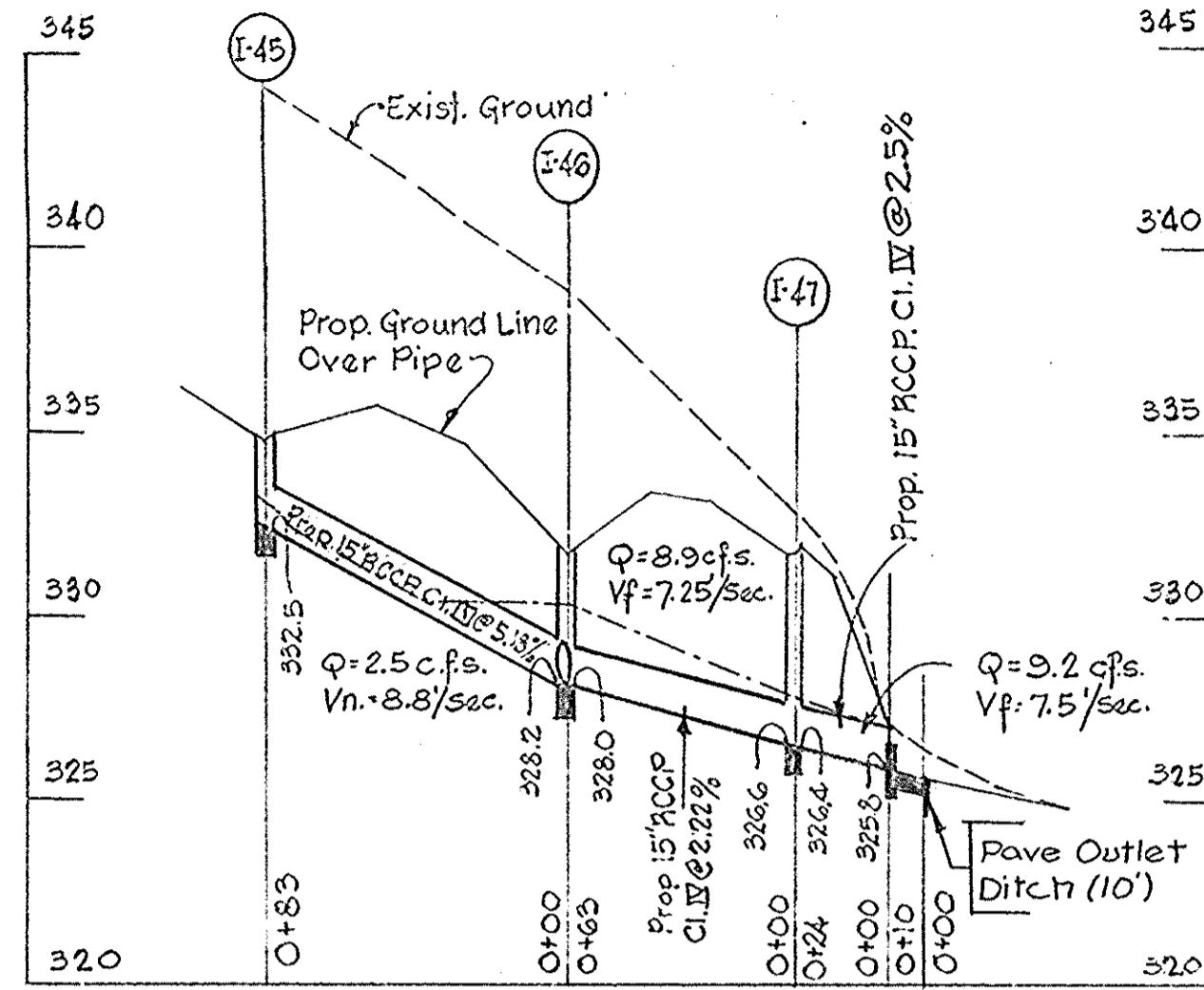
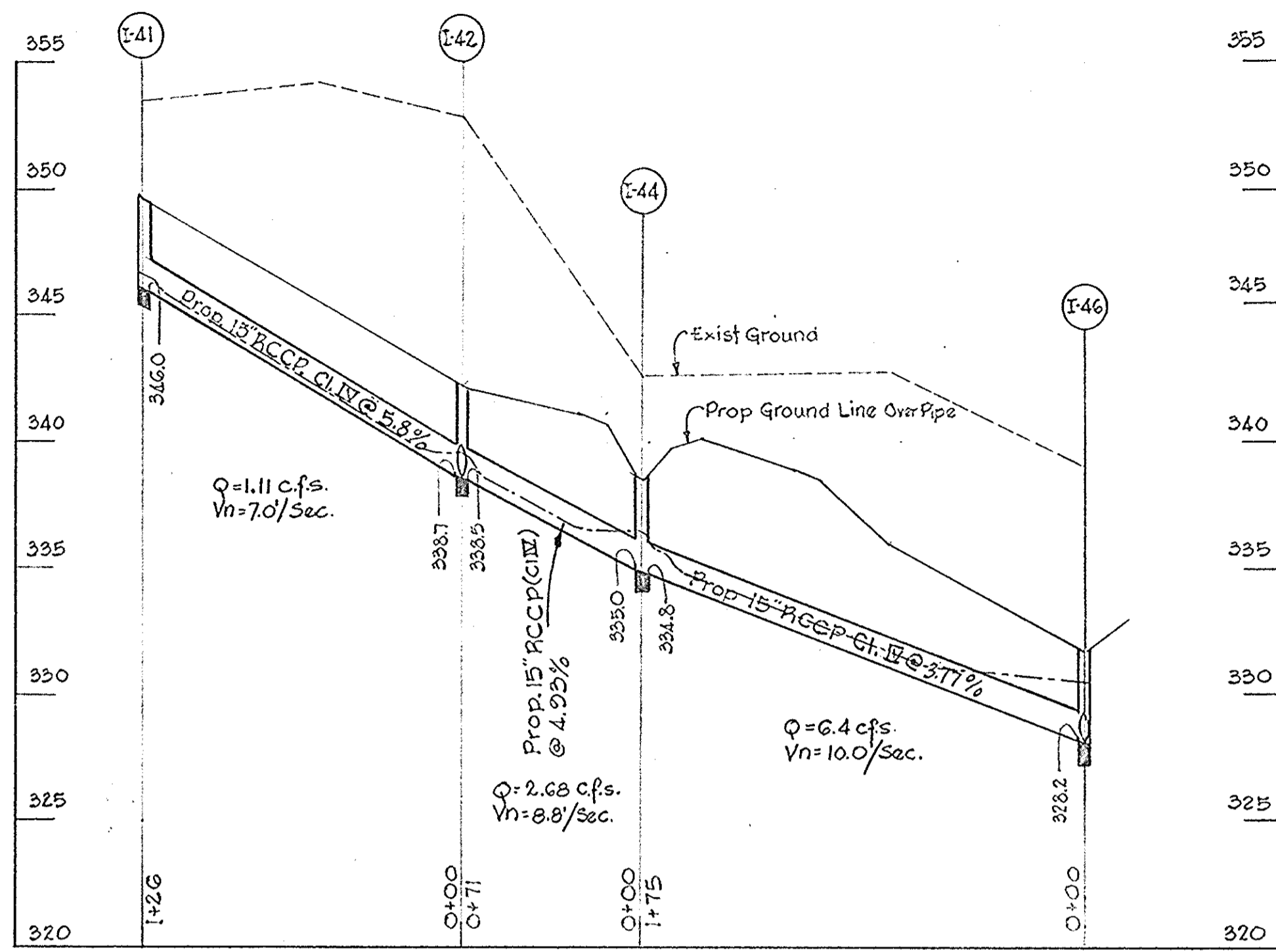


Note: To Be Constructed Where Noted On Plans

Revised Sheet Number	1/10/67
Manhole & Curb Type	9/22/66
Description	By
DATE	DATE
DETAIL SHEET	
COLUMBIA	
Scale As Noted	Date
Design by	Drawn by
Checked by	Drawing No.

RUMMEL, KLEPPER & KAIL
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

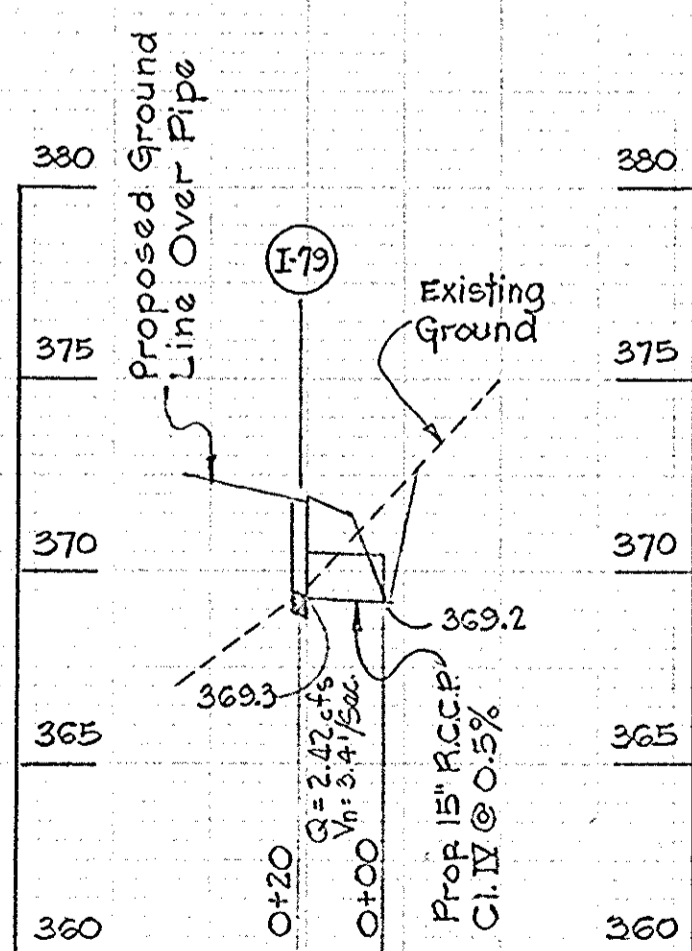
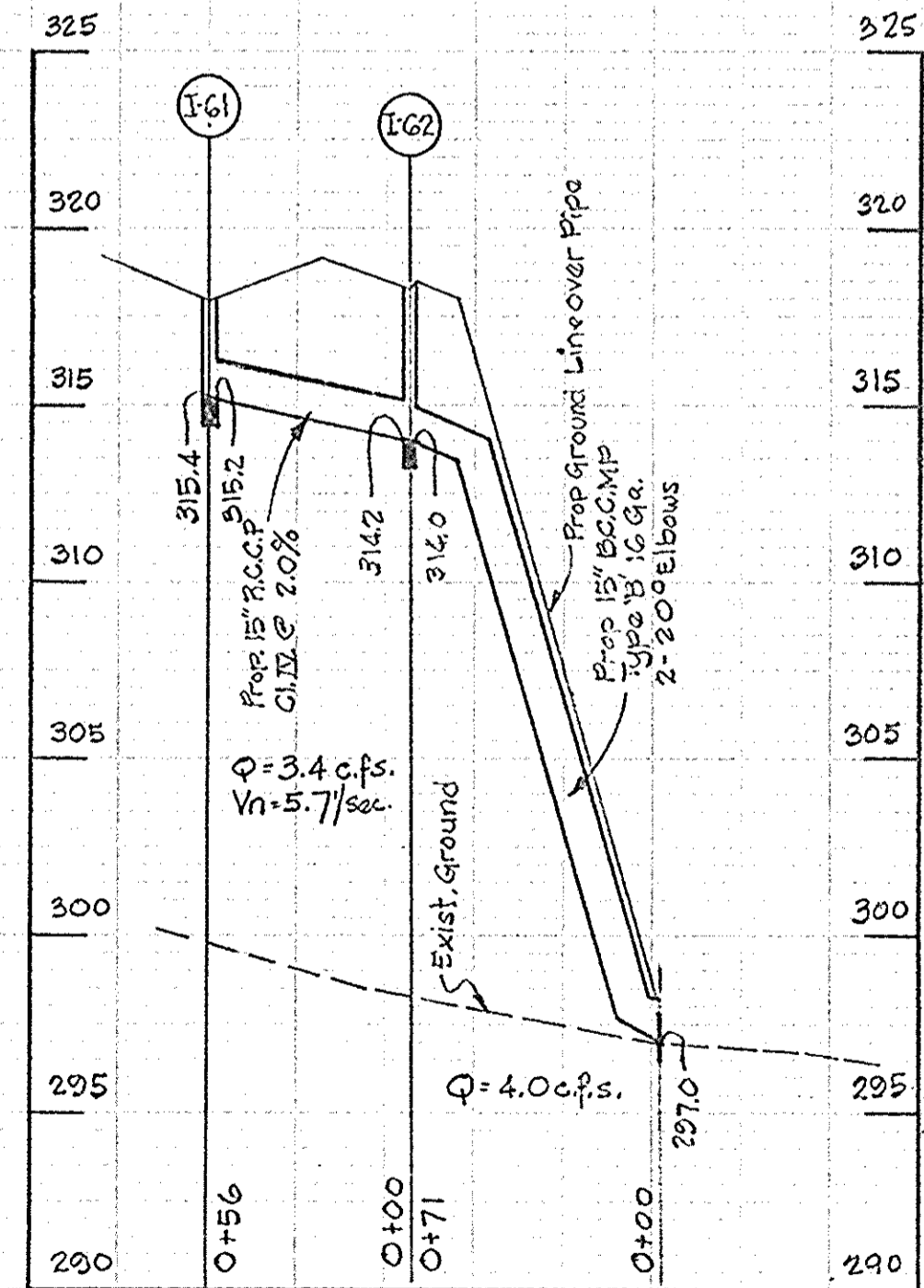
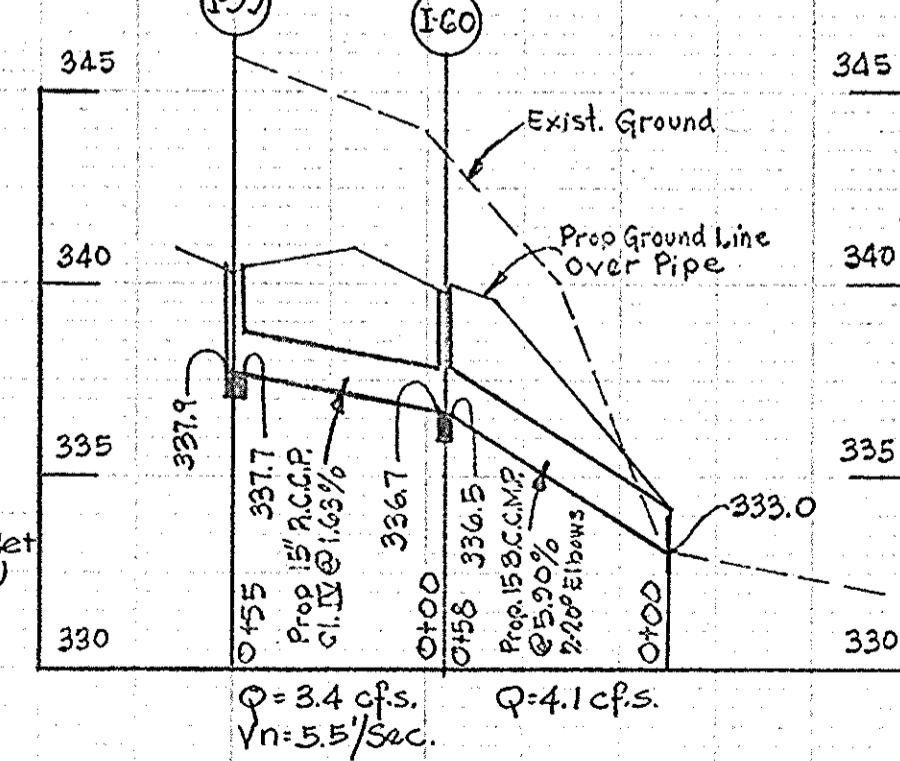
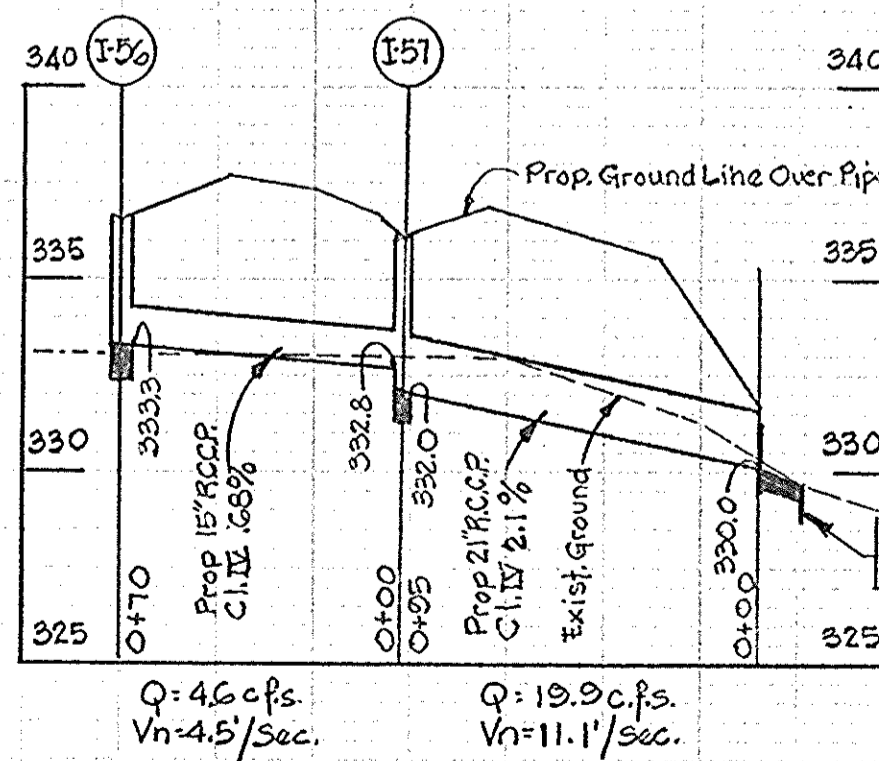
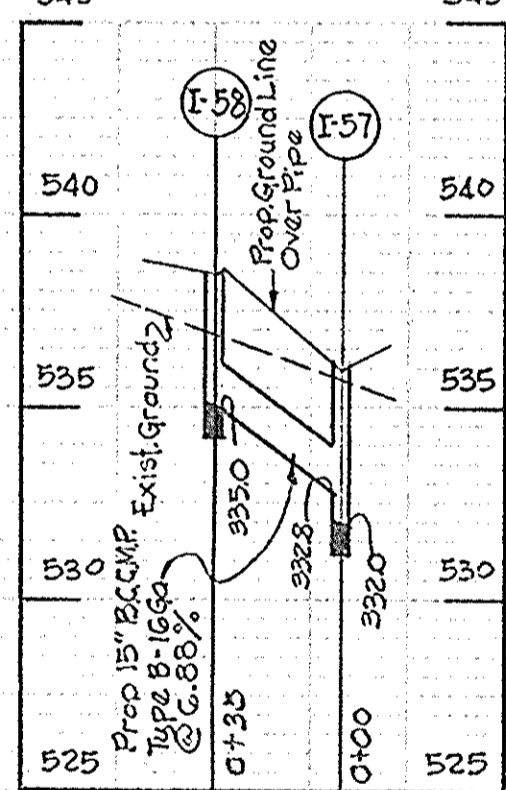
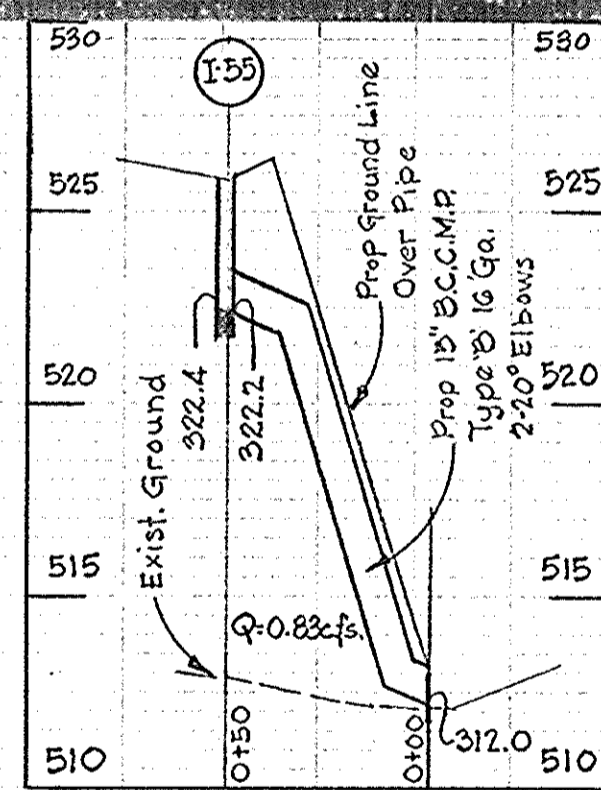
H.G. Line (10 Yr. Storm) -----



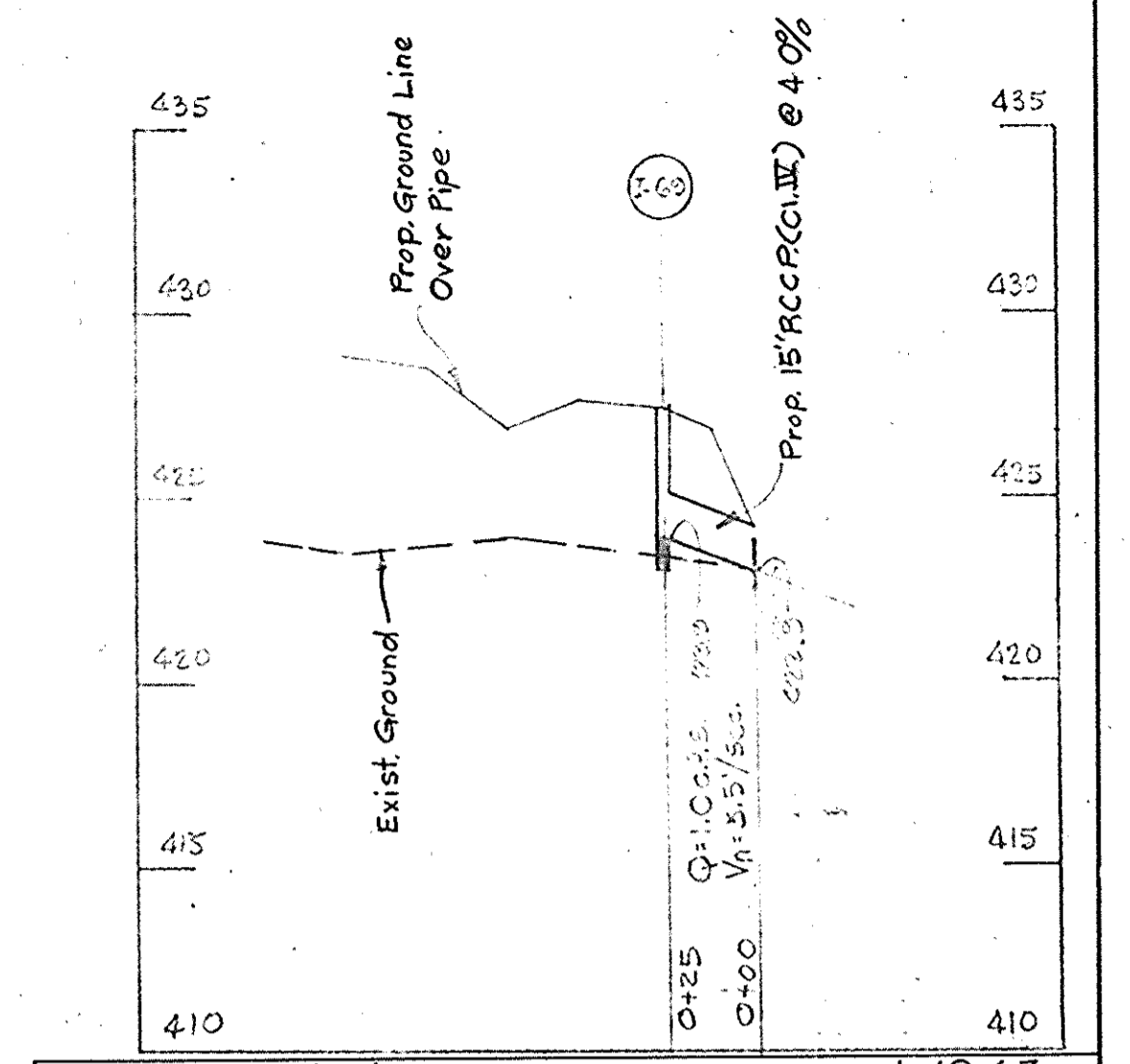
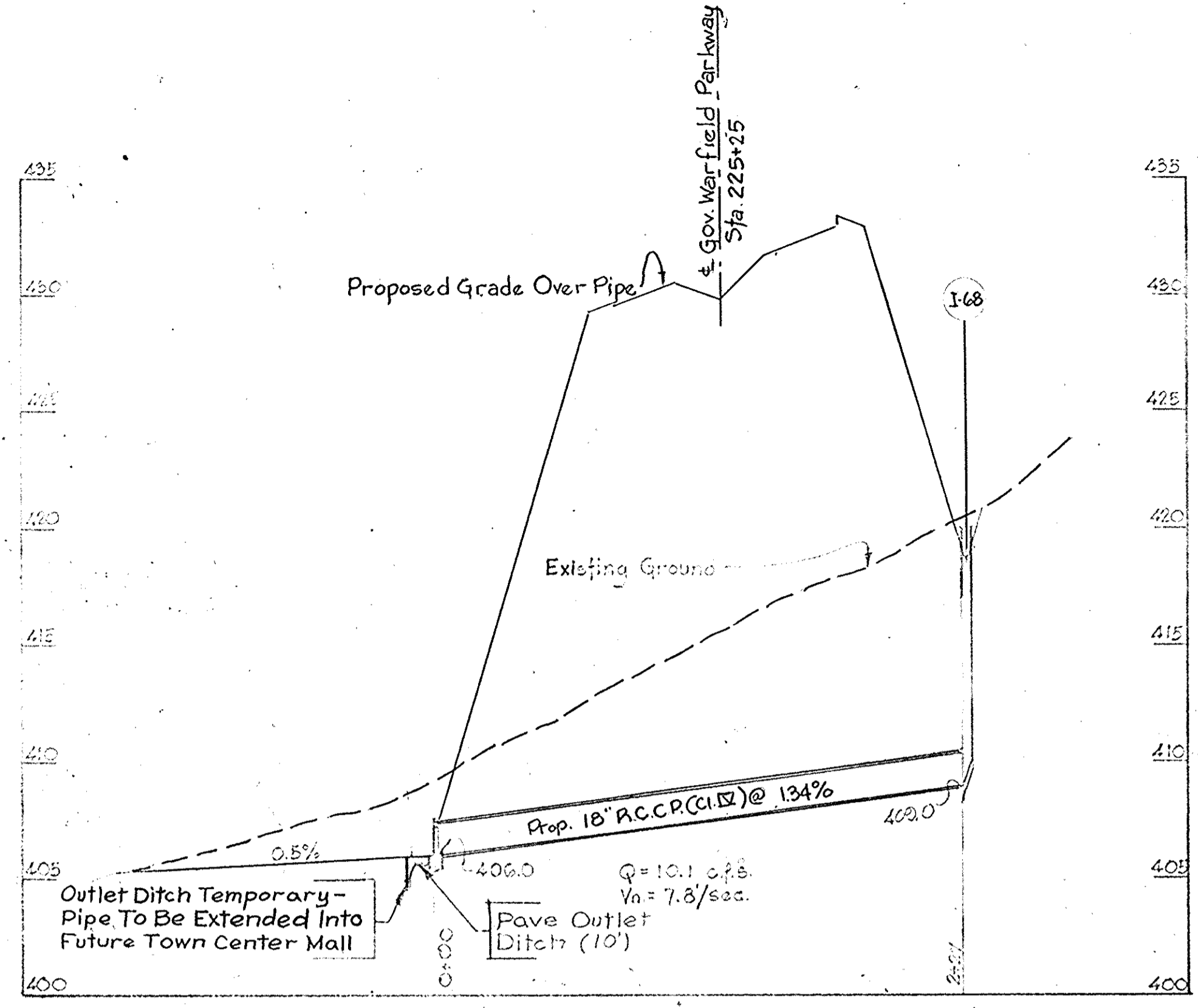
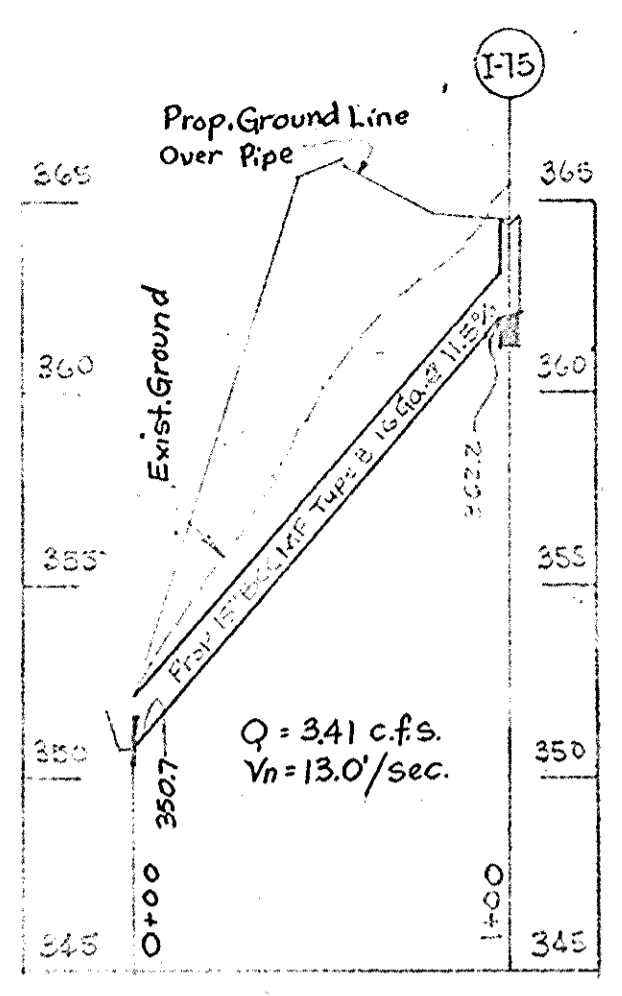
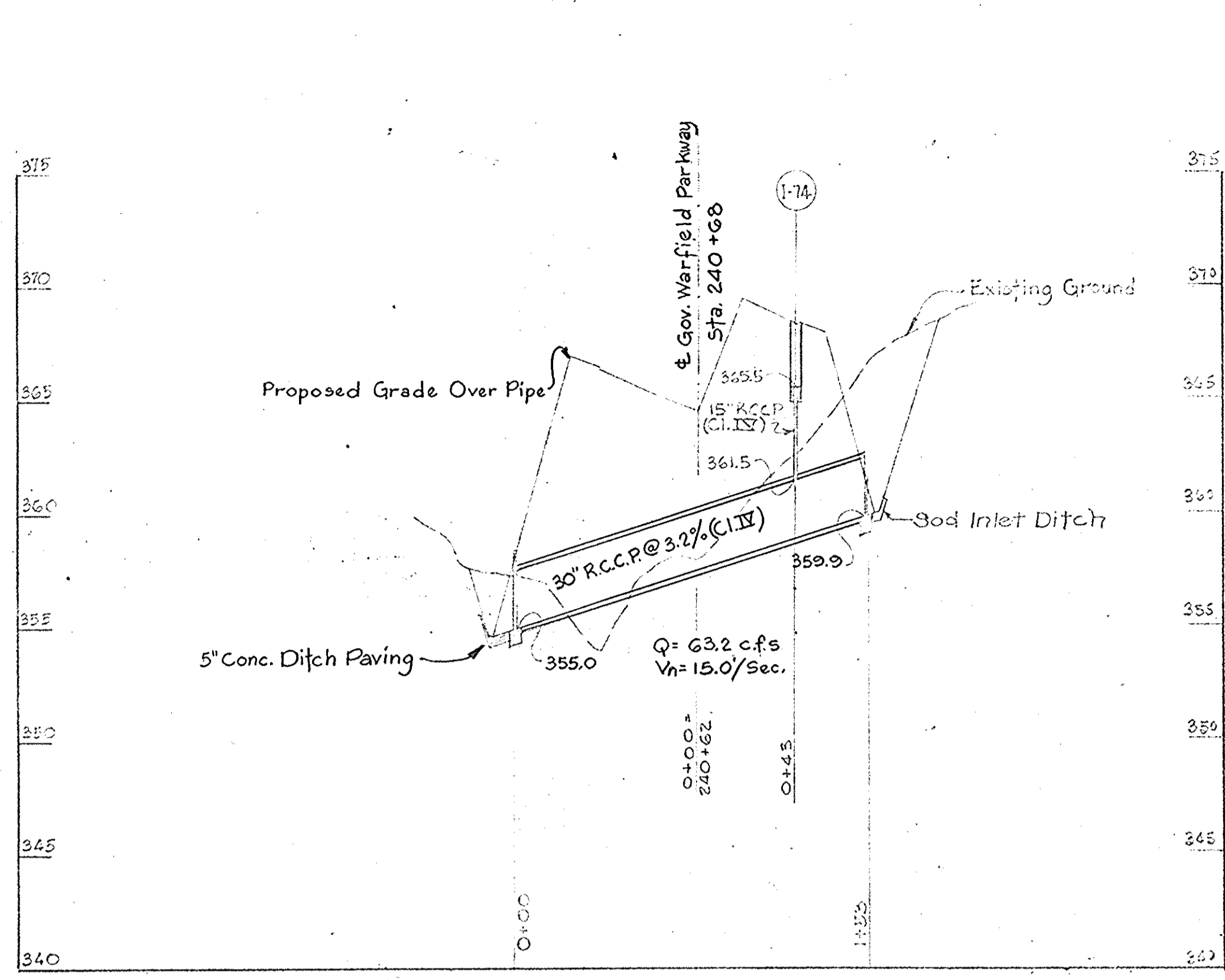
NOTE: All Pipe Elbows Shown On This Sheet Are 20° 15" B.C.C.M.P. Type 'B' 16 Ga.
See Detail Sheet No. 9 For:
1. Typical Section Of Inlet / Outlet Ditch
2. Paving Details For Ditches

Revised Sheet Number	1-10-67
W.P.E.A. Comments	10-28-66
Added H.G. Line & Profile I-79	10-19-66
LITTLE PATUXENT PARKWAY	
STORM DRAIN PROFILES	
COLUMBIA	
Sheet 30 of 72, 15' Storm	22, 1066
Designed by	10-15-67

WALTER K. KUPPER & HARR
CONSULTING ENGINEERS



DATE: _____
 BY: _____
 SURVEYED: _____
 PLOTTED: _____
 CHECKED: _____
 NOTE BOOK NO. _____
 NO. _____

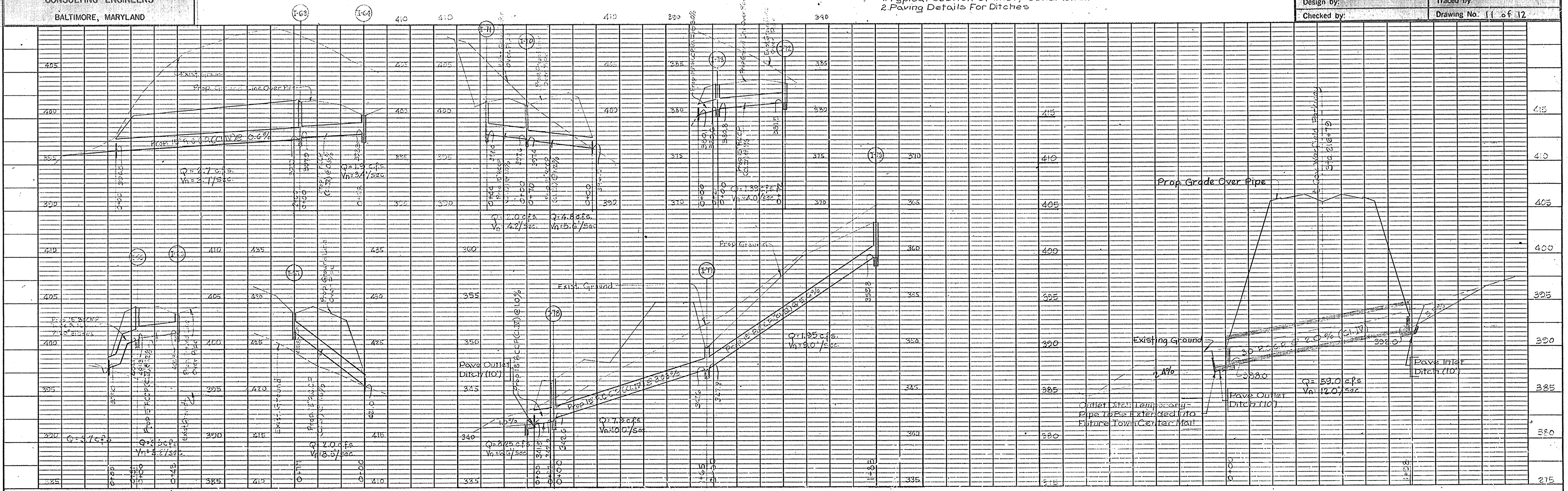


Revised Sheet No.	1-10-67		
W.P. & A. Comments	10-28-66		
Description	By	Mark	Date
REVISIONS			
GOV. WARFIELD PARKWAY			
STORM DRAIN PROFILES			
COLUMBIA			
Scale: Horiz. 1"=50' Vert. 1"=5'	Date: Aug 22, 1966		
Design by:	Traced by:		
Checked by:	Drawing No. 11 of 12		

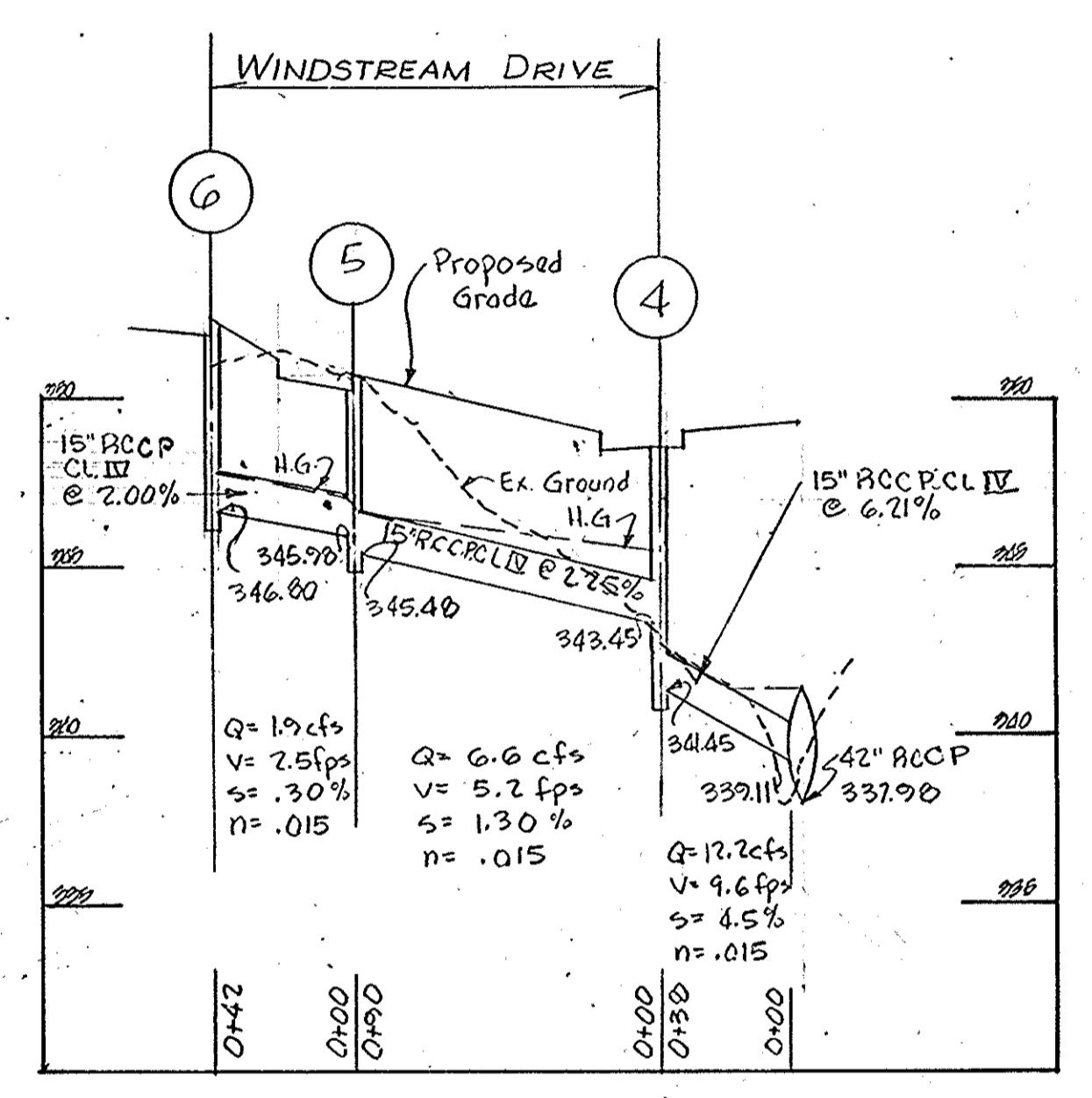
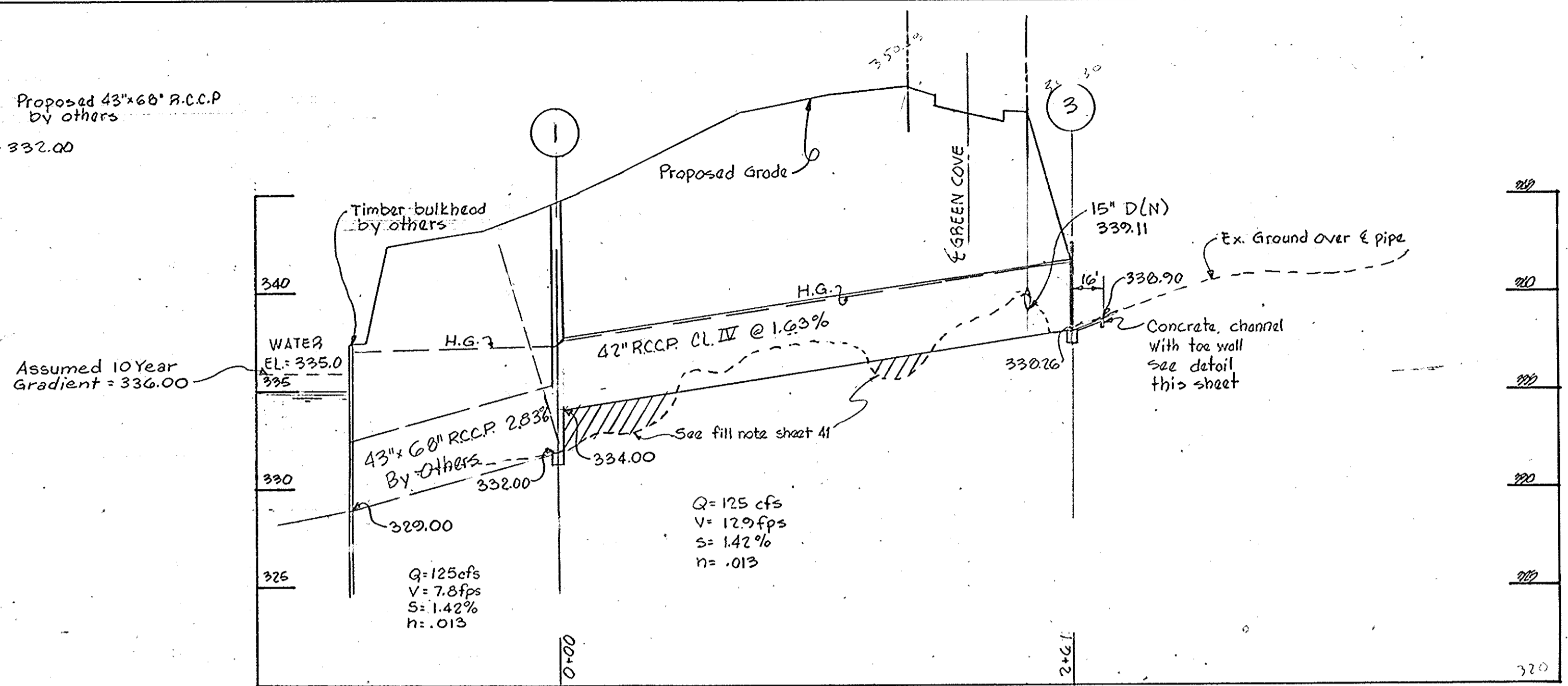
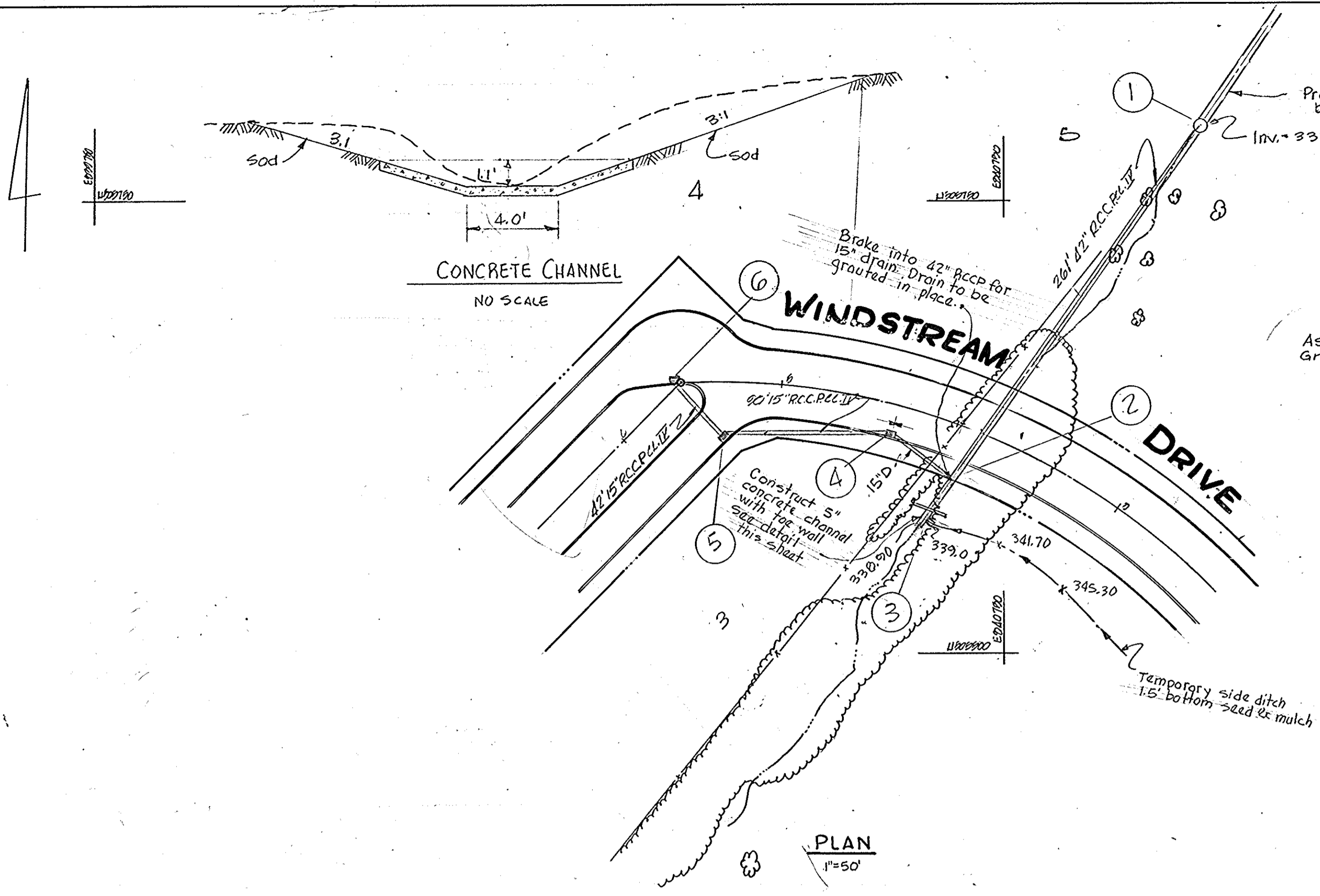
RUMMEL, KLEPPER & KAHL
 CONSULTING ENGINEERS
 BALTIMORE, MARYLAND

See Detail Sheet No. 9 For:
 1. Typical Section of Inlet & Outlet Ditch
 2. Paving Details for Ditches

DATE: _____
 BY: _____
 SURVEYED: _____
 PLOTTED: _____
 CHECKED: _____
 NOTE BOOK NO. _____
 NO. _____



#14

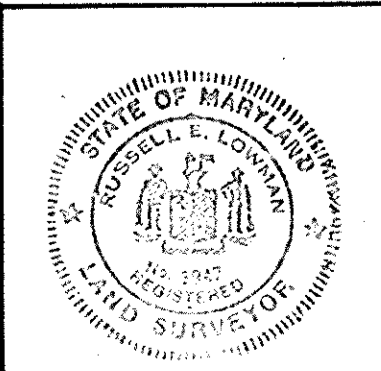


PROFILE
Hori.: 1" = 50'
Vert.: 1" = 5'

STORM DRAIN STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	T.C. ELEV.	INV. IN	INV. OUT	REMARKS
6	Mod. "S" Comb. Single Gr. Und.	Rt. Sta. 5+54.45	352.49		346.00	See Detail Sheet 22
5	"S" Comb. Dbl. Grate - Dept.	Lt. Sta. 5+60	350.75	345.90	345.40	Ho. Co. Road Code Pa. 157
4	Mod. "S" Comb. Single Grate Und.	Lt. Sta. 4+34.67	349.08	343.45	341.45	See Detail Sheet 22
3	10" Endwall	Lt. Sta. 3+97	342.76		338.26	Ho. Co. Road Code Pa. 107
2	Cut-in	Lt. Sta. 3+95				
1	Special Manhole	See Plan		334.00	332.00	See detail sheet 22 of 34

C.D. MESSICK JR. & ASSOCIATES, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
21 WEST STREET
ANNAPOLIS, MARYLAND

Russell E. Lowman
9-8-66
RUSSELL E. LOWMAN L.S. NO. 3947 DATE



REVISED SHEET NUMBER	J.M.	1-10-67	
REVISED STREET NAME	J.M.	12-1-66	
GENERAL STORM DRAIN REVISIONS	JAS	10-17-66	
DESCRIPTION	BY	MARK	DATE
REVISIONS			
VILLAGE OF WILDE LAKE SECTION 3 WILDE LAKE & PORTOFINO COLUMBIA SYSTEM N" STORM DRAIN			
SCALE: As shown	DATE: NOV. 1966		
DESIGNED BY: JAS	TRACED BY: JAS		
CHECKED BY:	DRAWING NO. 12 of 12		