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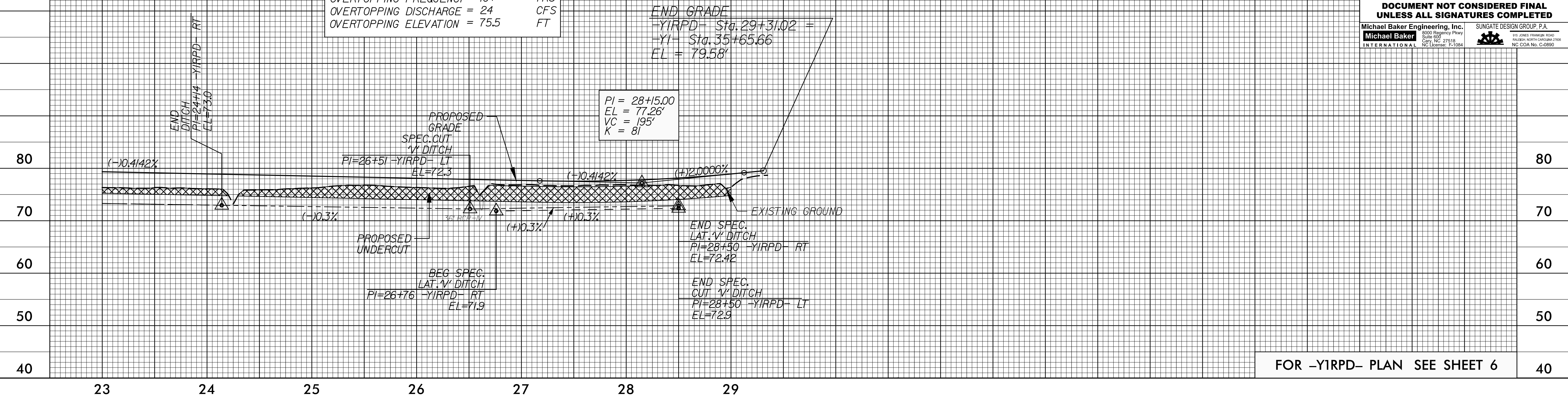
5/28/19

DITCH LEGEND LEFT DITCH - - - - - RIGHT DITCH - - - - -	PROJECT REFERENCE NO. R-5703	SHEET NO. 47
	ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 034367 JOSHUA G. DALTON 9/14/2017	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 26971 JOSHUA G. DALTON 9/14/2017
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
Michael Baker Engineering, Inc. 8000 Regency Parkway Suite 600 Cary, NC 27518 NC License: E-10884		SUNGATE DESIGN GROUP, P.A. 115 JONES FRANKLIN ROAD HAZLETON, NORTH CAROLINA 27840 NC CDR No. C-28990

PIPE HYDRAULIC DATA
36" RCP-IV Sta. 26+62

DRAINAGE AREA	= 21	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 30	CFS
DESIGN HW ELEVATION	= 76.5	FT
100 YEAR DISCHARGE	= 34	CFS
100 YEAR HW ELEVATION	= 77.57	FT
OVERTOPPING FREQUENCY	= 10+	YRS
OVERTOPPING DISCHARGE	= 24	CFS
OVERTOPPING ELEVATION	= 75.5	FT

-Y1RPD-

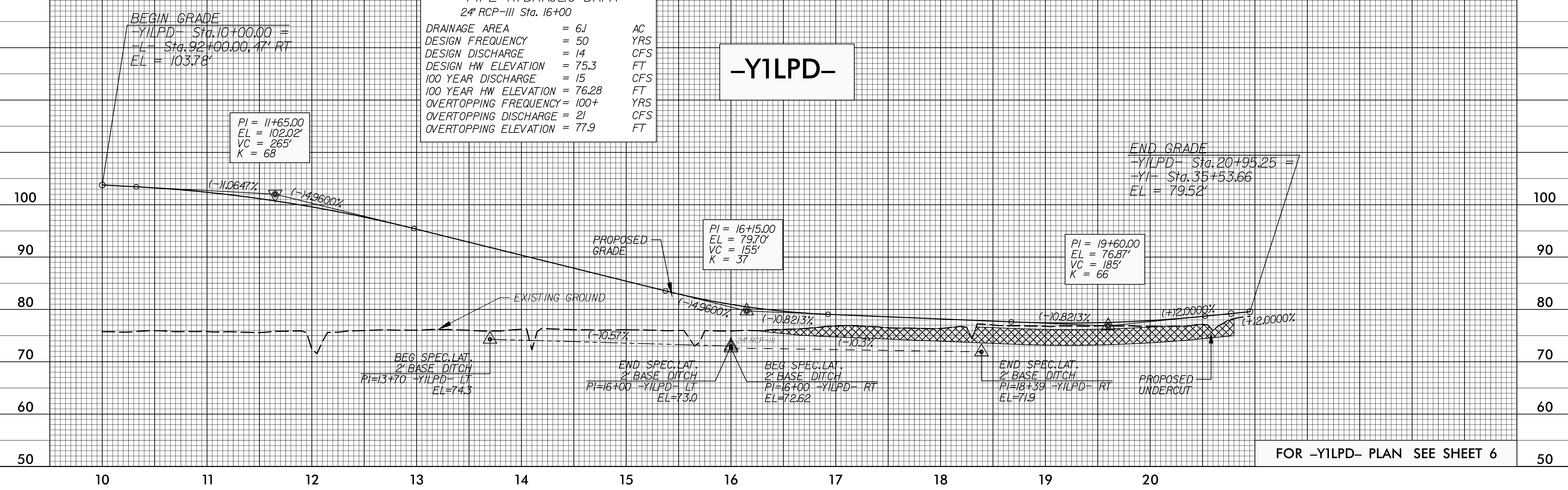


FOR -Y1RPD- PLAN SEE SHEET 6

PIPE HYDRAULIC DATA
24" RCP-III Sta. 16+00

DRAINAGE AREA	= 6.1	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 14	CFS
DESIGN HW ELEVATION	= 75.3	FT
100 YEAR DISCHARGE	= 15	CFS
100 YEAR HW ELEVATION	= 76.28	FT
OVERTOPPING FREQUENCY	= 100+	YRS
OVERTOPPING DISCHARGE	= 21	CFS
OVERTOPPING ELEVATION	= 77.9	FT

-Y1LPD-



FOR -Y1LPD- PLAN SEE SHEET 6

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 15-SEP-2017 09:38 \\R-5703-RDY-PRO-SHT.dgn

5/28/2017

DITCH LEGEND	
LEFT DITCH	-----
RIGHT DITCH	- - - - -

PROJECT REFERENCE NO. R-5703	SHEET NO. 48
ROADWAY DESIGN ENGINEER SEAL 034367 JOSHUA G. DALTON	HYDRAULICS ENGINEER SEAL 26971 JOSHUA G. DALTON
9/14/2017	9/14/2017

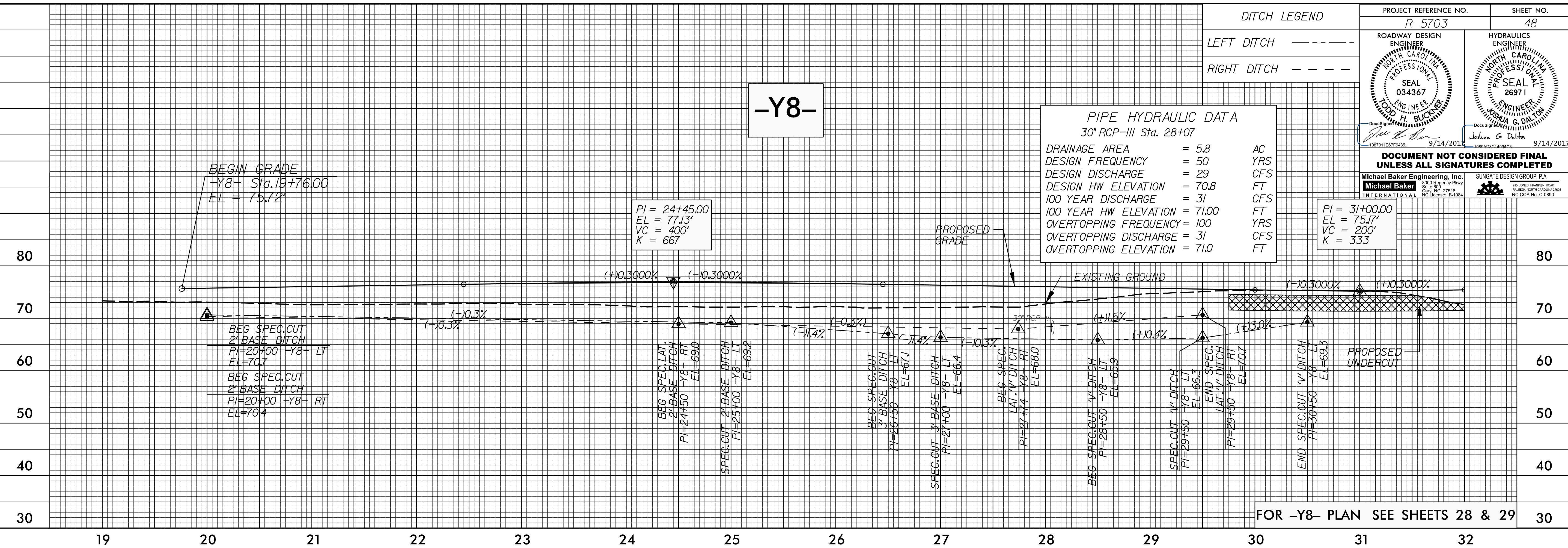
PIPE HYDRAULIC DATA
30" RCP-III Sta. 28+07

DRAINAGE AREA = 5.8 AC
DESIGN FREQUENCY = 50 YRS
DESIGN DISCHARGE = 29 CFS
DESIGN HW ELEVATION = 70.8 FT
100 YEAR DISCHARGE = 31 CFS
100 YEAR HW ELEVATION = 71.00 FT
OVERTOPPING FREQUENCY = 100 YRS
OVERTOPPING DISCHARGE = 31 CFS
OVERTOPPING ELEVATION = 71.0 FT

PI = 31+00.00
EL = 75.77'
VC = 200'
K = 333

PI = 24+45.00
EL = 77.13'
VC = 400'
K = 667

BEGIN GRADE
-Y8- Sta. 19+76.00
EL = 75.72'



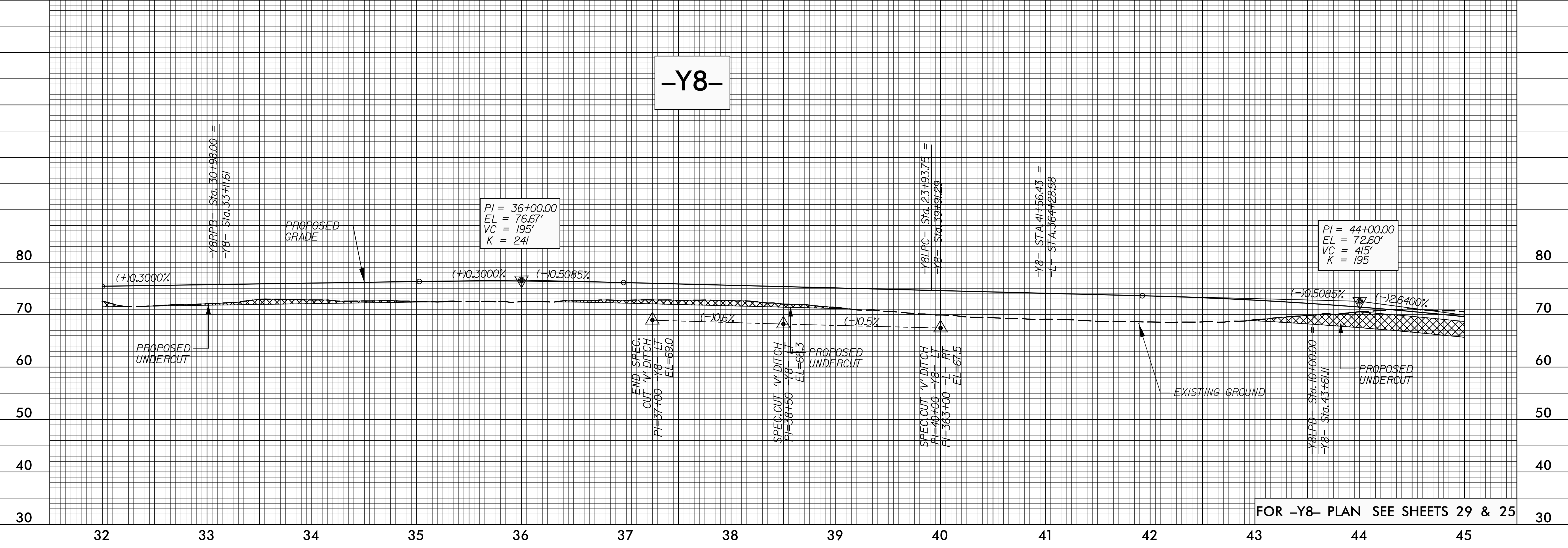
FOR -Y8- PLAN SEE SHEETS 28 & 29

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-Y8-

PI = 36+00.00
EL = 76.67'
VC = 195'
K = 241

PI = 44+00.00
EL = 72.60'
VC = 415'
K = 195



FOR -Y8- PLAN SEE SHEETS 29 & 25

5/28/19

DITCH LEGEND
 LEFT DITCH - - - - -
 RIGHT DITCH - - - - -

PROJECT REFERENCE NO. R-5703	SHEET NO. 49
ROADWAY DESIGN ENGINEER JOSHUA G. DALTON SEAL 034367 NORTH CAROLINA PROFESSIONAL ENGINEER	HYDRAULICS ENGINEER JOSHUA G. DALTON SEAL 26971 NORTH CAROLINA PROFESSIONAL ENGINEER
9/14/2017	9/14/2017

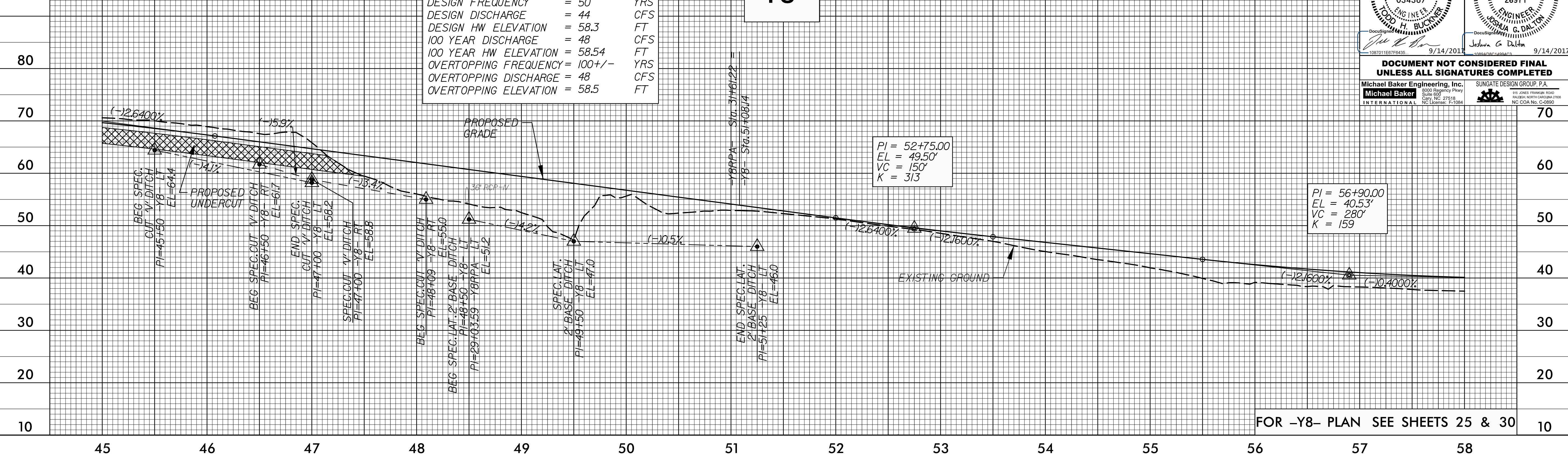
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PIPE HYDRAULIC DATA
 36" RCP-IV Sta. 48+48

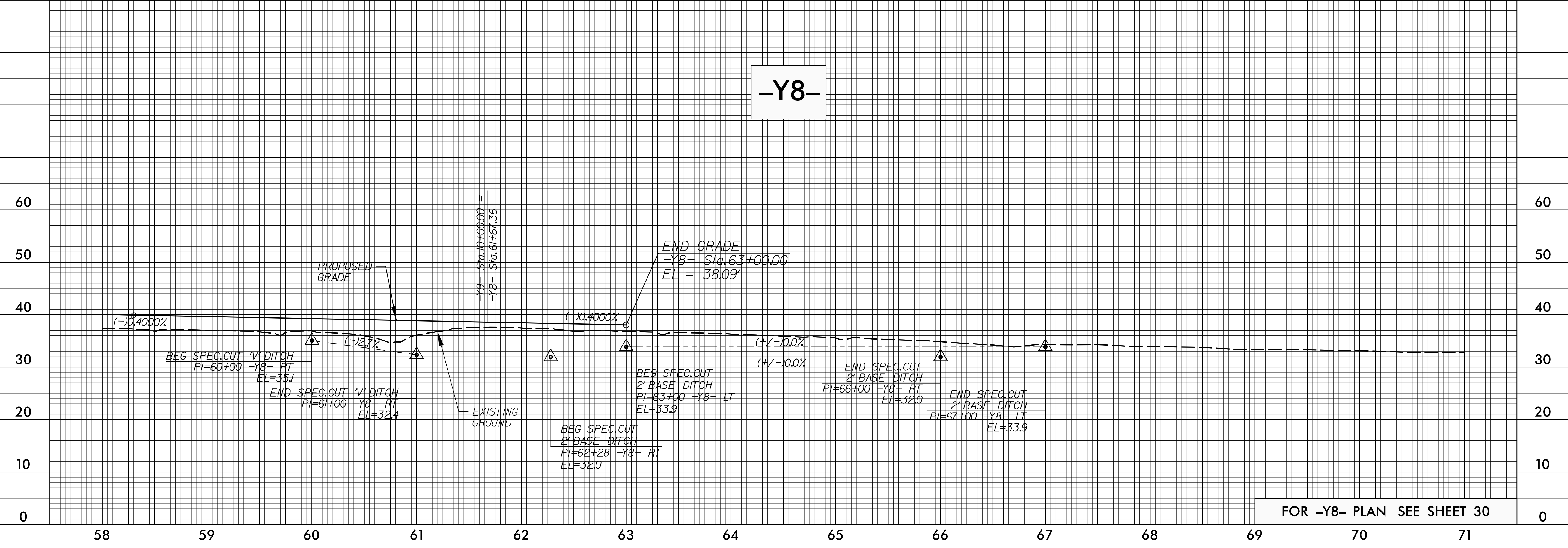
DRAINAGE AREA	= 9.0	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 44	CFS
DESIGN HW ELEVATION	= 58.3	FT
100 YEAR DISCHARGE	= 48	CFS
100 YEAR HW ELEVATION	= 58.54	FT
OVERTOPPING FREQUENCY	= 100 +/-	YRS
OVERTOPPING DISCHARGE	= 48	CFS
OVERTOPPING ELEVATION	= 58.5	FT

-Y8-



FOR -Y8- PLAN SEE SHEETS 25 & 30

-Y8-



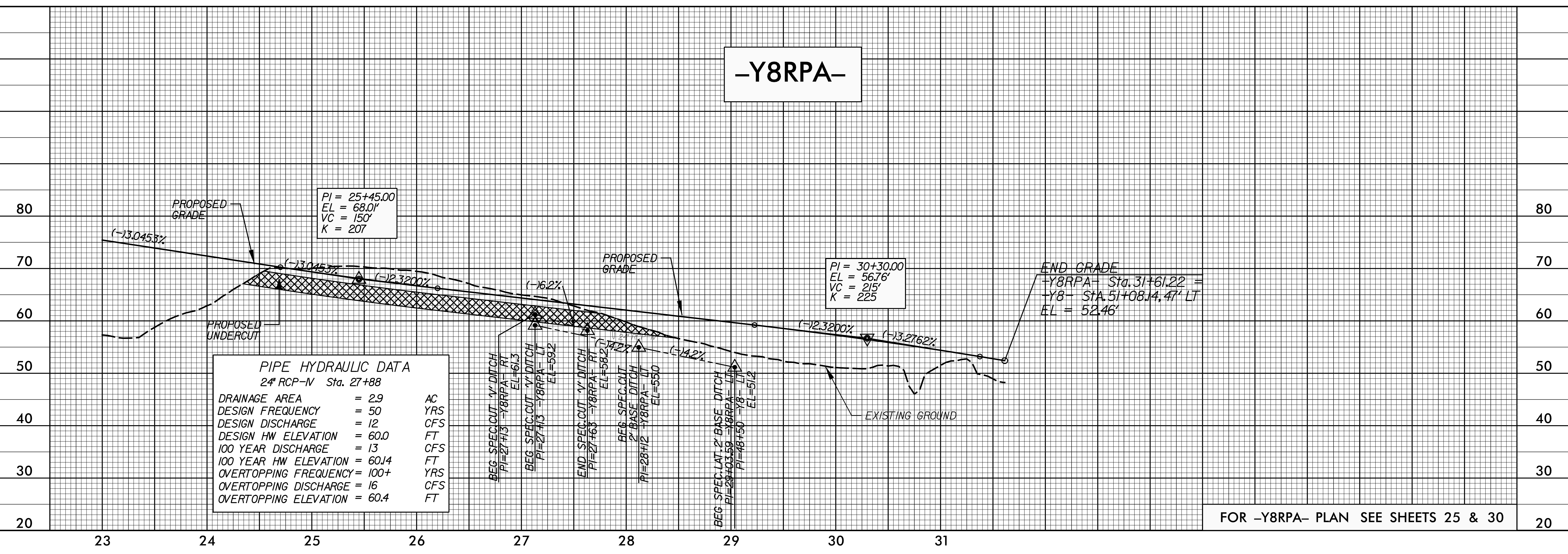
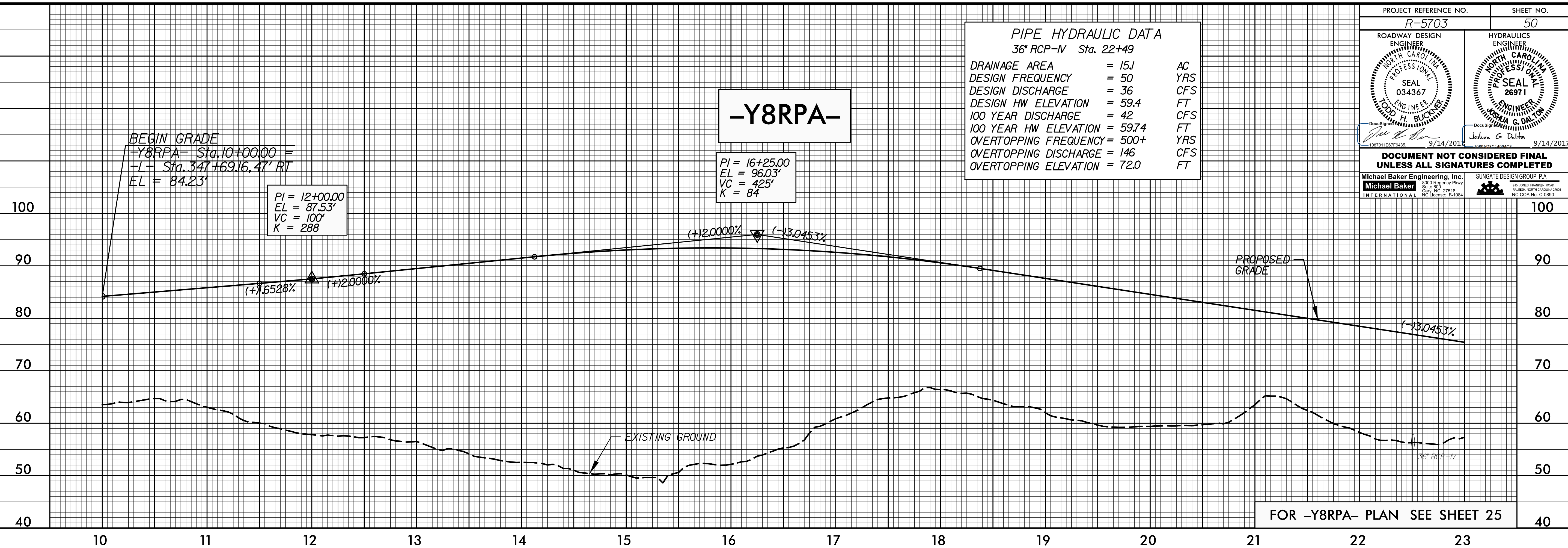
FOR -Y8- PLAN SEE SHEET 30

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PROJECT REFERENCE NO. R-5703	SHEET NO. 50
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 034367 ENGINEER JOSHUA G. DALTON	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 26971 ENGINEER JOSHUA G. DALTON
9/14/2017	9/14/2017
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PIPE HYDRAULIC DATA
36" RCP-N Sta. 22+49

DRAINAGE AREA	= 151	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 36	CFS
DESIGN HW ELEVATION	= 59.4	FT
100 YEAR DISCHARGE	= 42	CFS
100 YEAR HW ELEVATION	= 59.74	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 146	CFS
OVERTOPPING ELEVATION	= 72.0	FT



PIPE HYDRAULIC DATA
24" RCP-N Sta. 27+88

DRAINAGE AREA	= 2.9	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 12	CFS
DESIGN HW ELEVATION	= 60.0	FT
100 YEAR DISCHARGE	= 13	CFS
100 YEAR HW ELEVATION	= 60.14	FT
OVERTOPPING FREQUENCY	= 100+	YRS
OVERTOPPING DISCHARGE	= 16	CFS
OVERTOPPING ELEVATION	= 60.4	FT

BEG. SPEC. CUT 1/2" DITCH
PI=27+13 -Y8RPA- RT
EL=61.3

BEG. SPEC. CUT 1/2" DITCH
PI=27+13 -Y8RPA- LT
EL=59.2

END. SPEC. CUT 1/2" DITCH
PI=27+63 -Y8RPA- RT
EL=58.2

BEG. SPEC. CUT
2" BASE DITCH
PI=28+12 -Y8RPA- LT
EL=55.0

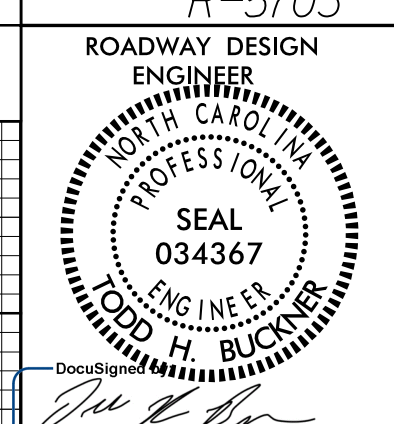
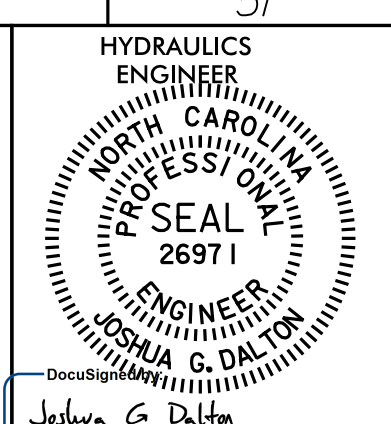
BEG. SPEC. LAT. 2" BASE DITCH
PI=29+03.59 -Y8RPA- LT
EL=51.2

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5/28/19

DITCH LEGEND

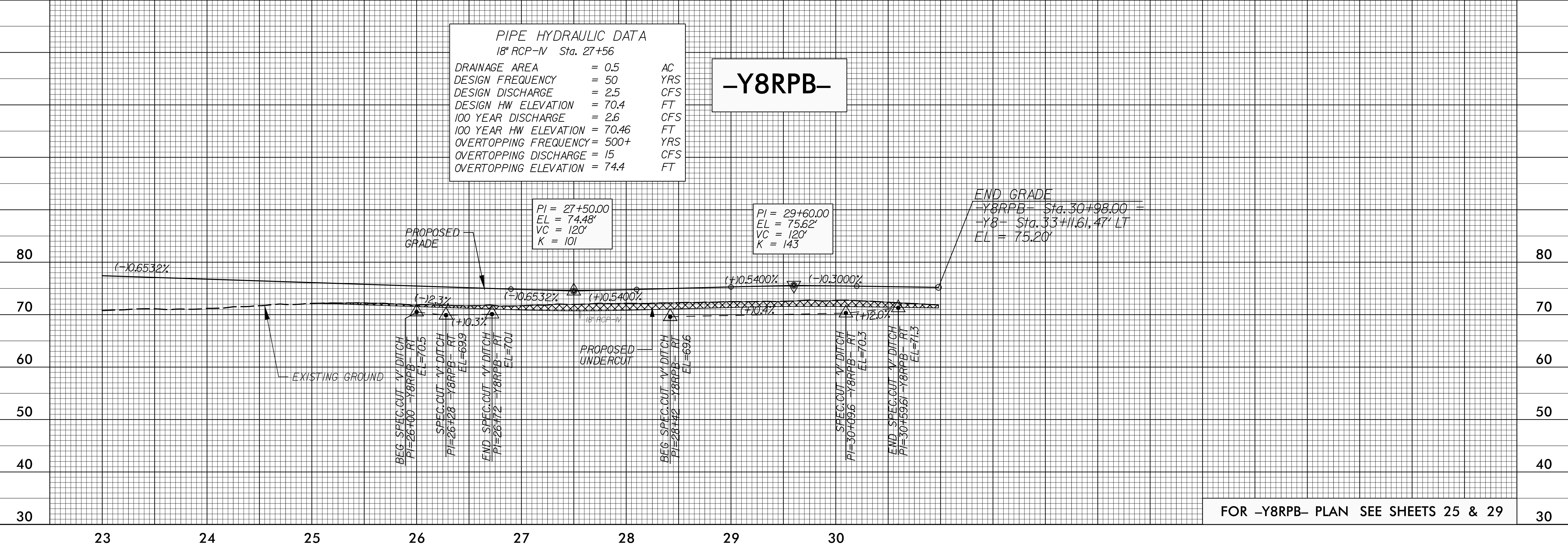
RIGHT DITCH - - - -

PROJECT REFERENCE NO. R-5703	SHEET NO. 51
	
ROADWAY DESIGN ENGINEER TODD H. BUCKNER SEAL 034367 ENGINEER STATE OF NORTH CAROLINA 9/14/2017	HYDRAULICS ENGINEER JOSHUA G. DALTON SEAL 26971 ENGINEER STATE OF NORTH CAROLINA 9/14/2017
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Michael Baker Engineering, Inc. 8000 Regency Parkway Suite 600 Cary, NC 27518 NC License: P-10884	SUNGATE DESIGN GROUP, P.A. 115 JONES FRANKLIN ROAD HAYDEN, NORTH CAROLINA 27542 NC CDR No. C-28980



PIPE HYDRAULIC DATA
18" RCP-M Sta. 27+56

DRAINAGE AREA	= 0.5	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 2.5	CFS
DESIGN HW ELEVATION	= 70.4	FT
100 YEAR DISCHARGE	= 2.6	CFS
100 YEAR HW ELEVATION	= 70.46	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 15	CFS
OVERTOPPING ELEVATION	= 74.4	FT



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5/28/17

DITCH LEGEND
 LEFT DITCH - - - - -
 RIGHT DITCH - - - - -

PROJECT REFERENCE NO. **R-5703** SHEET NO. **52**

ROADWAY DESIGN ENGINEER
 JOSHUA G. DALTON
 SEAL 034367
 ENGINEER
 JOSHUA G. DALTON
 9/14/2017

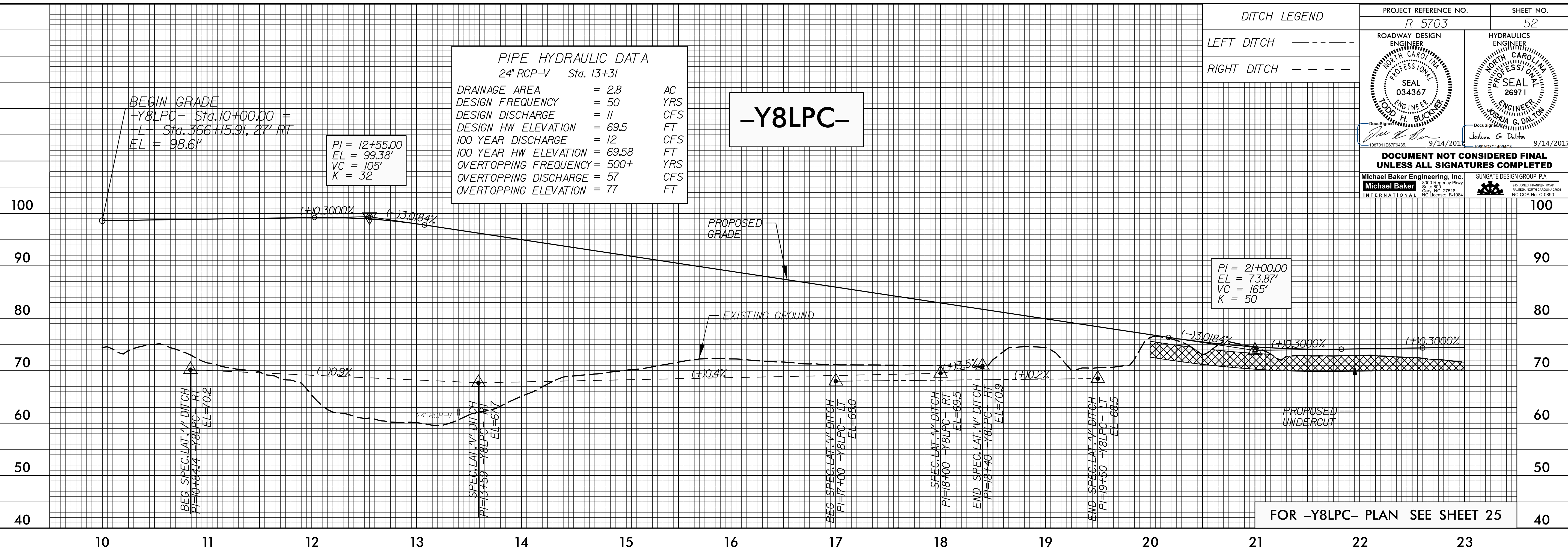
HYDRAULICS ENGINEER
 JESSE G. DALTON
 SEAL 26971
 ENGINEER
 JESSE G. DALTON
 9/14/2017

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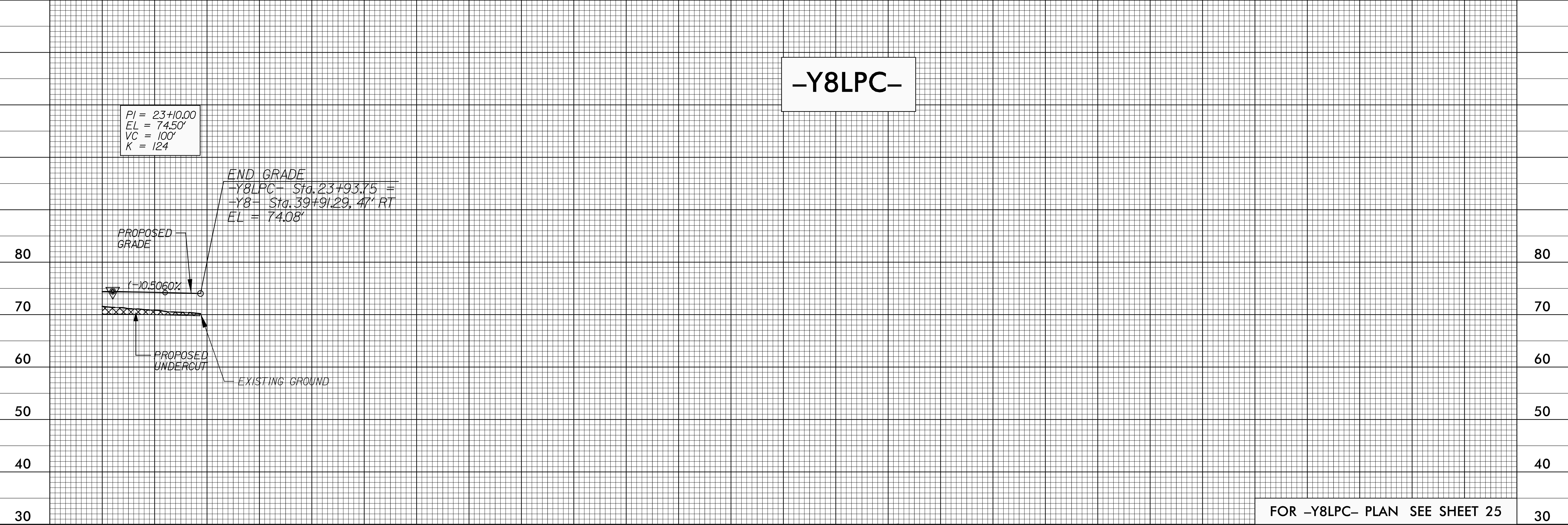
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 8000 Regency Parkway, Suite 600, Cary, NC 27518
 NC License No. C-6984

PIPE HYDRAULIC DATA
 24" RCP-V Sta. 13+31

DRAINAGE AREA	= 2.8	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 11	CFS
DESIGN HW ELEVATION	= 69.5	FT
100 YEAR DISCHARGE	= 12	CFS
100 YEAR HW ELEVATION	= 69.58	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 57	CFS
OVERTOPPING ELEVATION	= 77	FT



-Y8LPC-



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5/28/19

DITCH LEGEND
 LEFT DITCH - - - - -
 RIGHT DITCH - - - - -

PROJECT REFERENCE NO. **R-5703** SHEET NO. **53**

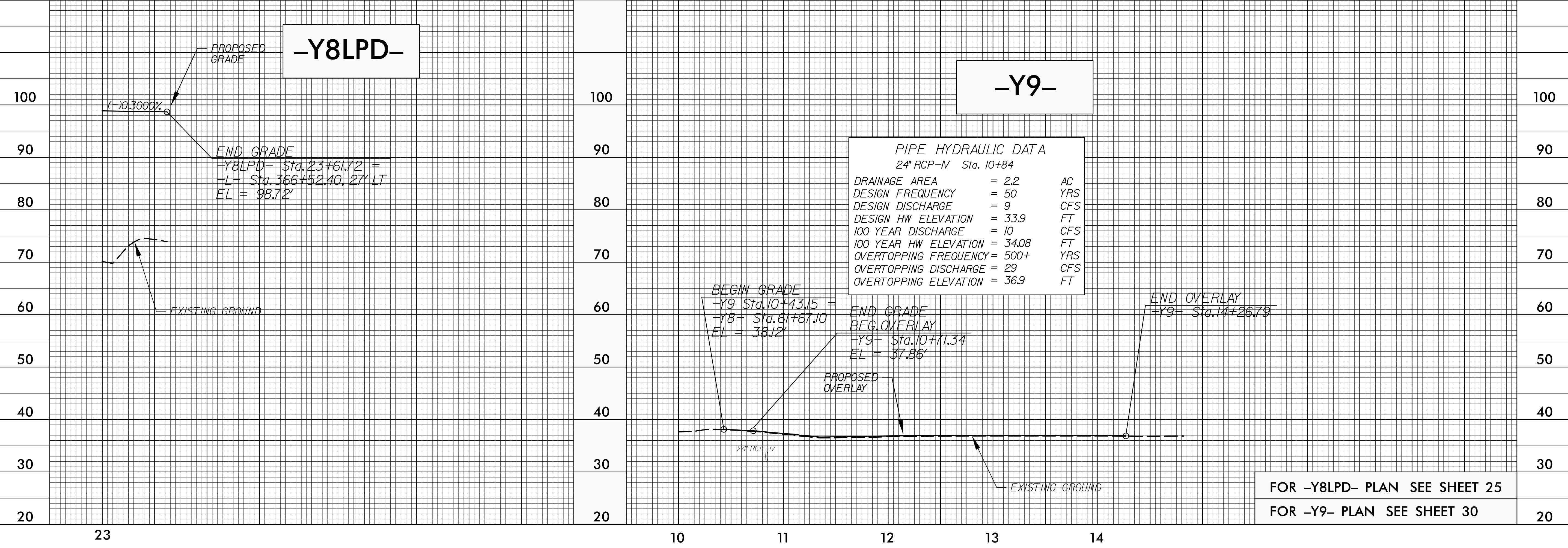
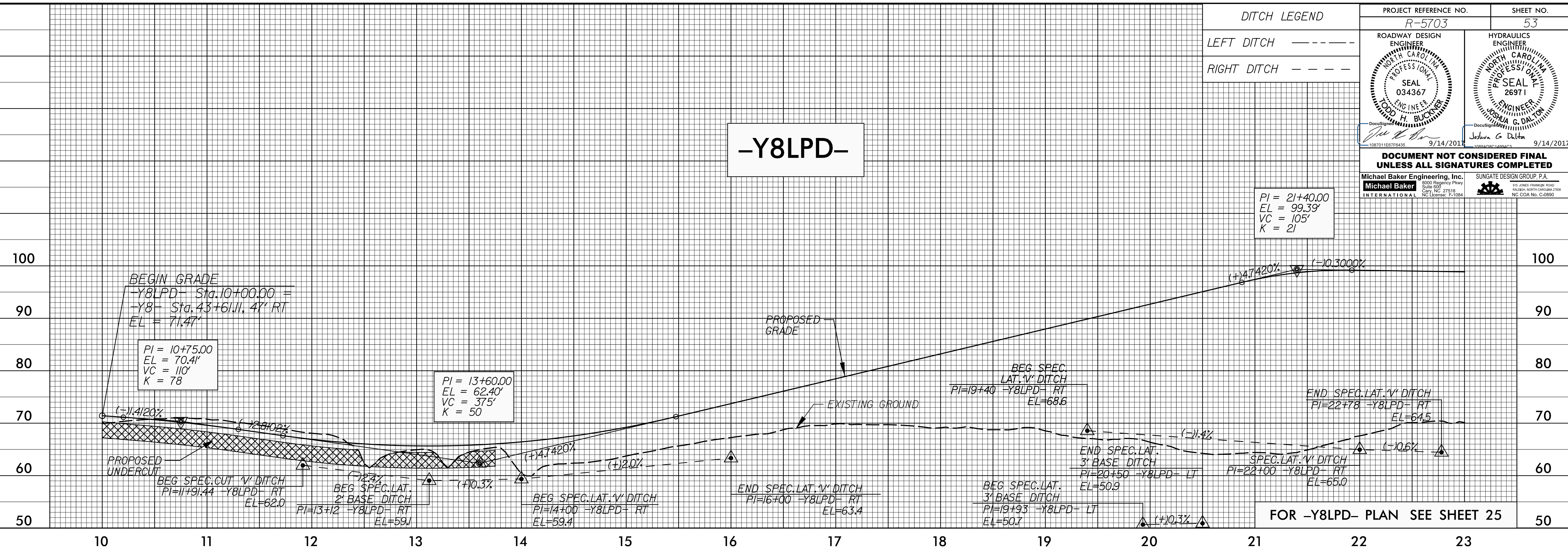
ROADWAY DESIGN ENGINEER
 JOSHUA G. DALTON
 SEAL 034367
 ENGINEER
 H. BUCKNER

HYDRAULICS ENGINEER
 JOSHUA G. DALTON
 SEAL 26971
 ENGINEER
 JOSHUA G. DALTON

9/14/2017

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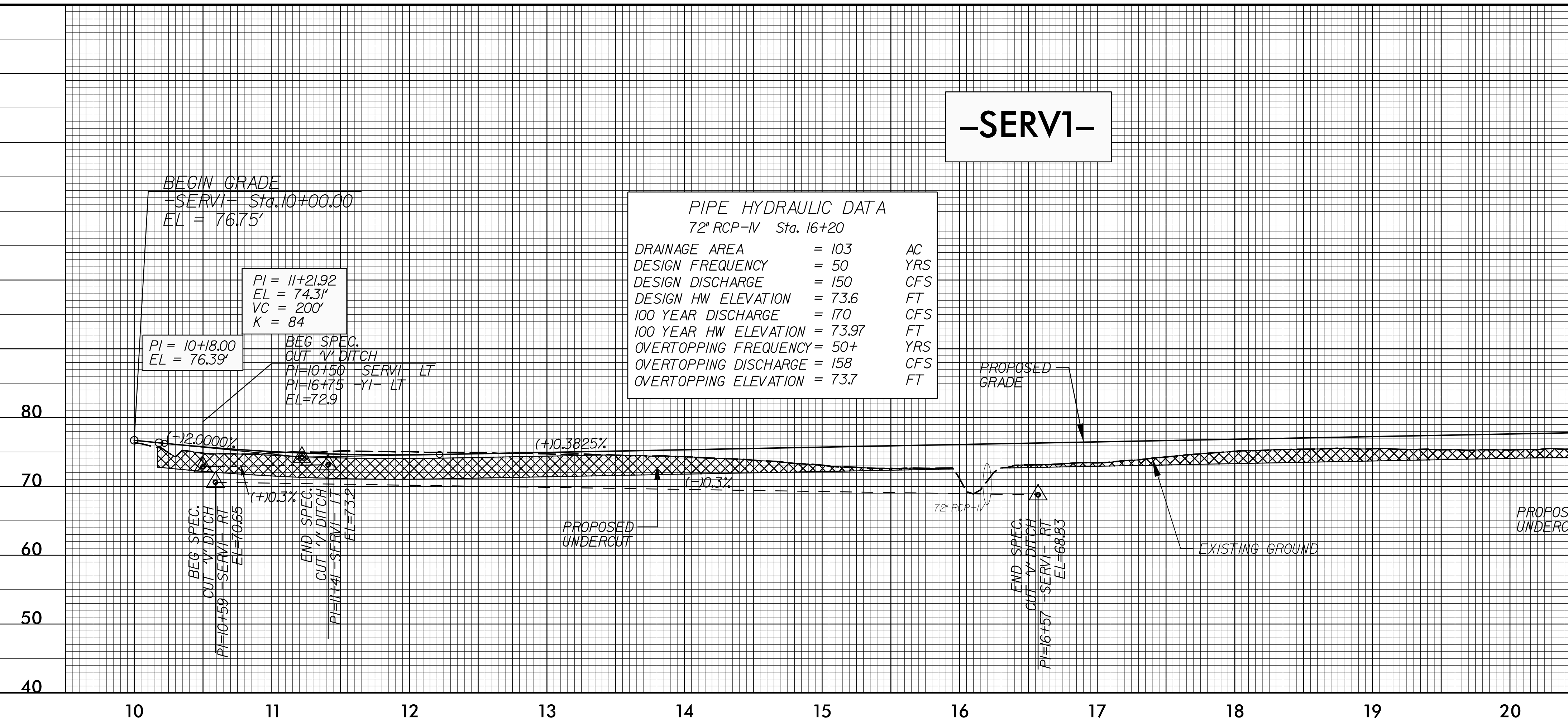
Michael Baker Engineering, Inc. SUNGATE DESIGN GROUP, P.A.
 8000 Regency Park
 Suite 600
 Cary, NC 27518
 NC License: F-1084



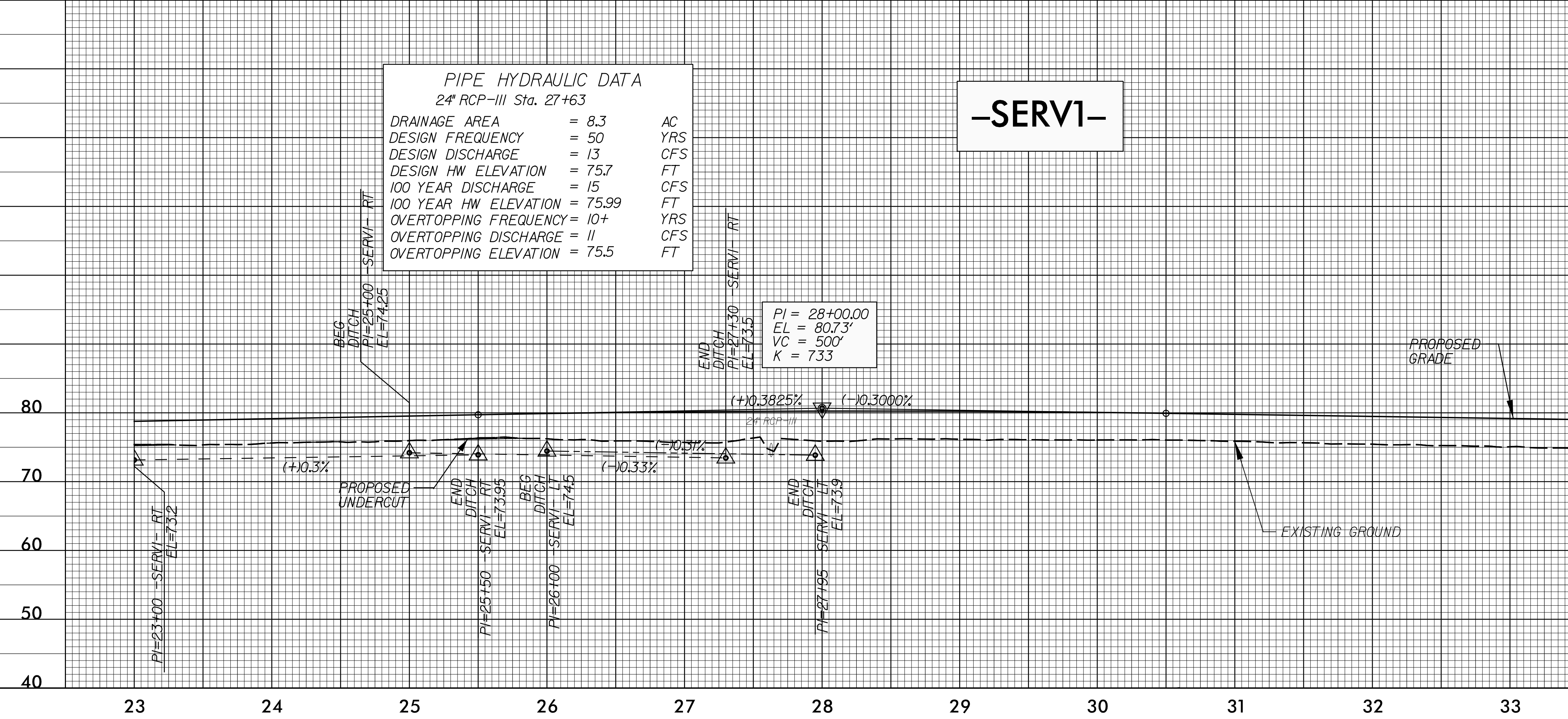
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DITCH LEGEND LEFT DITCH - - - - - RIGHT DITCH - - - - -	PROJECT REFERENCE NO. R-5703	SHEET NO. 54
	ROADWAY DESIGN ENGINEER SEAL 034367 JOSHUA G. DALTON ENGINEER 26971	HYDRAULICS ENGINEER SEAL 26971 JOSHUA G. DALTON ENGINEER 26971
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FOR -SERVI- PLAN SEE SHEETS 26 & 6



FOR -SERVI- PLAN SEE SHEETS 6 & 7

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5/28/19

DITCH LEGEND
 LEFT DITCH - - - - -
 RIGHT DITCH - - - - -

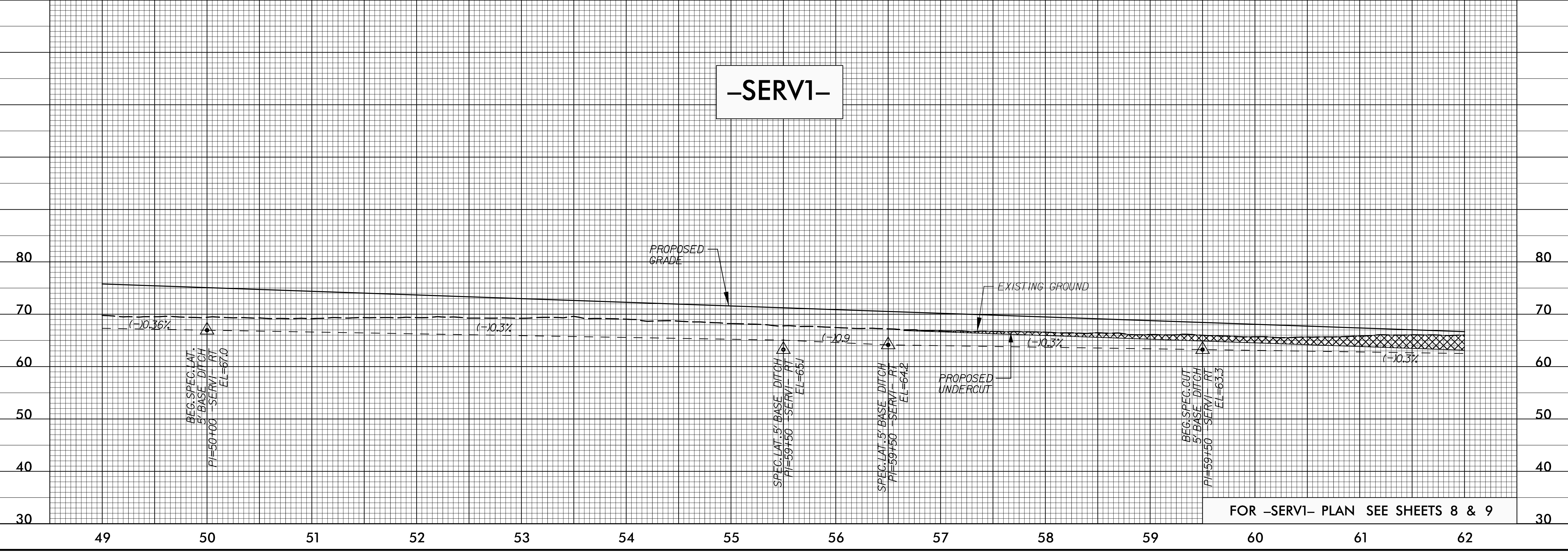
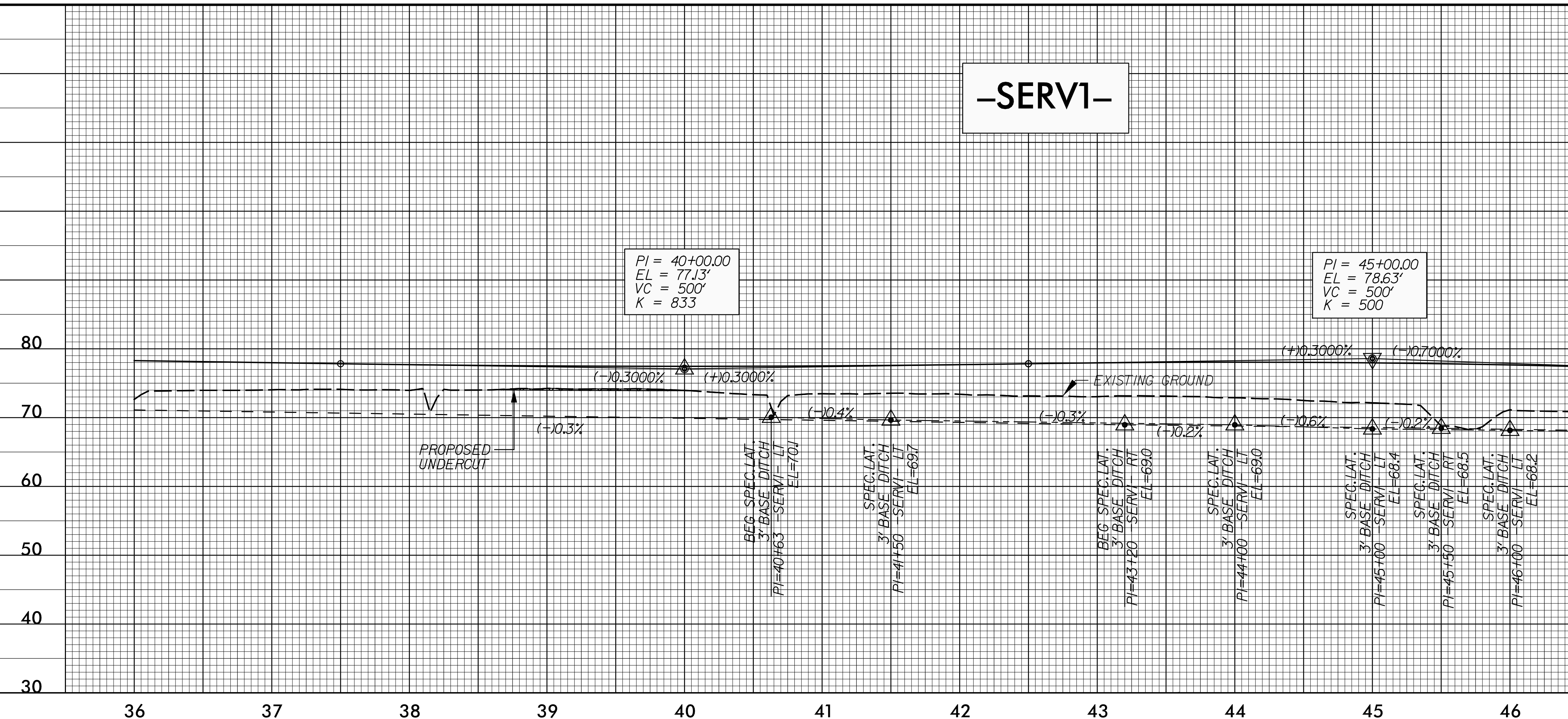
PROJECT REFERENCE NO. **R-5703** SHEET NO. **55**

ROADWAY DESIGN ENGINEER
 JOSHUA G. DALTON
 SEAL 034367
 H. BUCKNER
 9/14/2017

HYDRAULICS ENGINEER
 JOSHUA G. DALTON
 SEAL 26971
 9/14/2017

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5/28/19

DITCH LEGEND
 LEFT DITCH - - - - -
 RIGHT DITCH - - - - -

PROJECT REFERENCE NO. **R-5703** SHEET NO. **56**

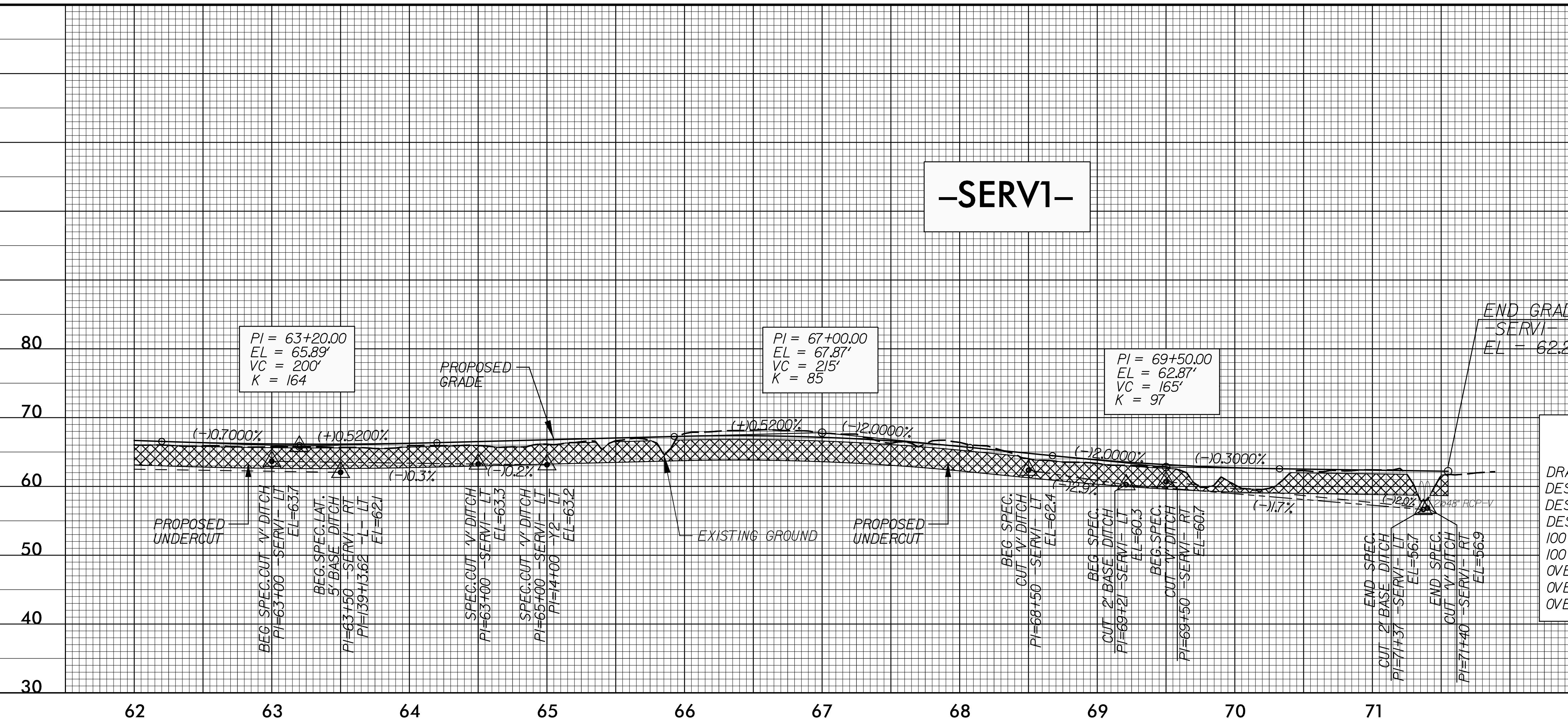
ROADWAY DESIGN ENGINEER
 JOSHUA G. DALTON
 SEAL 034367
 ENGINEER
 H. BUCKNER

HYDRAULICS ENGINEER
 JOSHUA G. DALTON
 SEAL 26971
 ENGINEER
 JOSHUA G. DALTON

9/14/2017 9/14/2017

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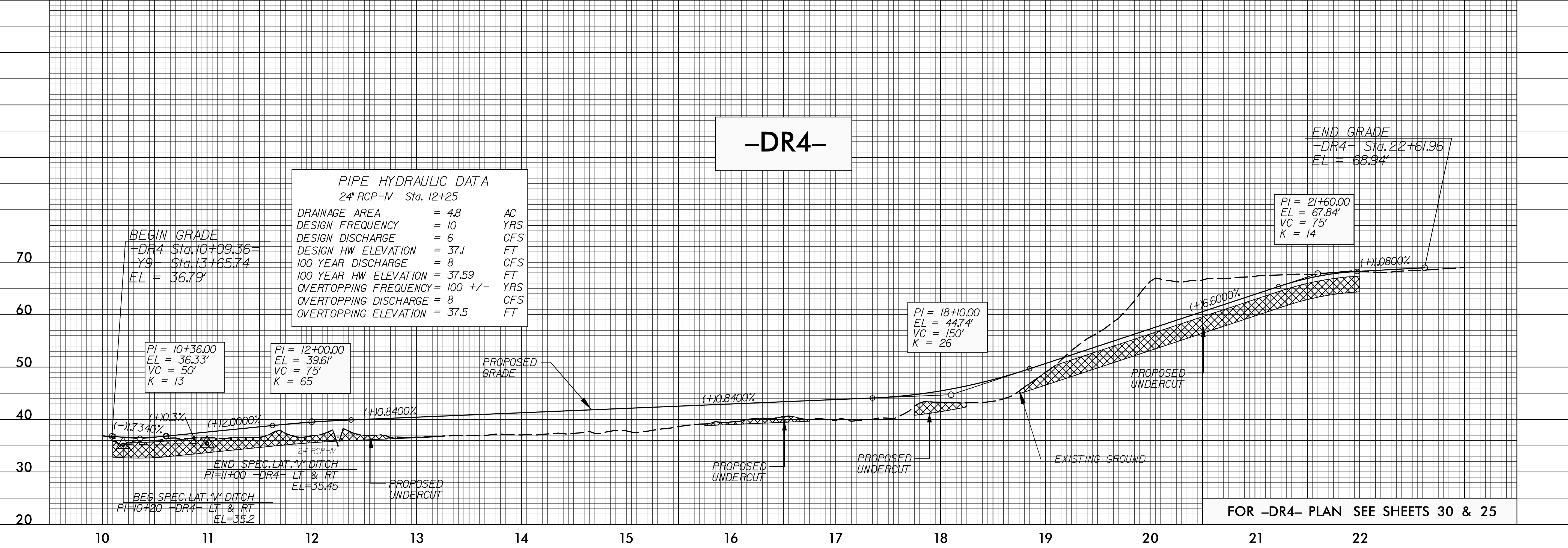
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PIPE HYDRAULIC DATA
 2@48" RCP-V Sta. 71+38

DRAINAGE AREA	= 134	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 180	CFS
DESIGN HW ELEVATION	= 63.4	FT
100 YEAR DISCHARGE	= 200	CFS
100 YEAR HW ELEVATION	= 64.02	FT
OVERTOPPING FREQUENCY	= 10 +/-	YRS
OVERTOPPING DISCHARGE	= 124	CFS
OVERTOPPING ELEVATION	= 61.8	FT

FOR -SERV1- PLAN SEE SHEET 9



PIPE HYDRAULIC DATA
 24" RCP-V Sta. 12+25

DRAINAGE AREA	= 4.8	AC
DESIGN FREQUENCY	= 10	YRS
DESIGN DISCHARGE	= 6	CFS
DESIGN HW ELEVATION	= 37.1	FT
100 YEAR DISCHARGE	= 8	CFS
100 YEAR HW ELEVATION	= 37.59	FT
OVERTOPPING FREQUENCY	= 100 +/-	YRS
OVERTOPPING DISCHARGE	= 8	CFS
OVERTOPPING ELEVATION	= 37.5	FT

FOR -DR4- PLAN SEE SHEETS 30 & 25

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