

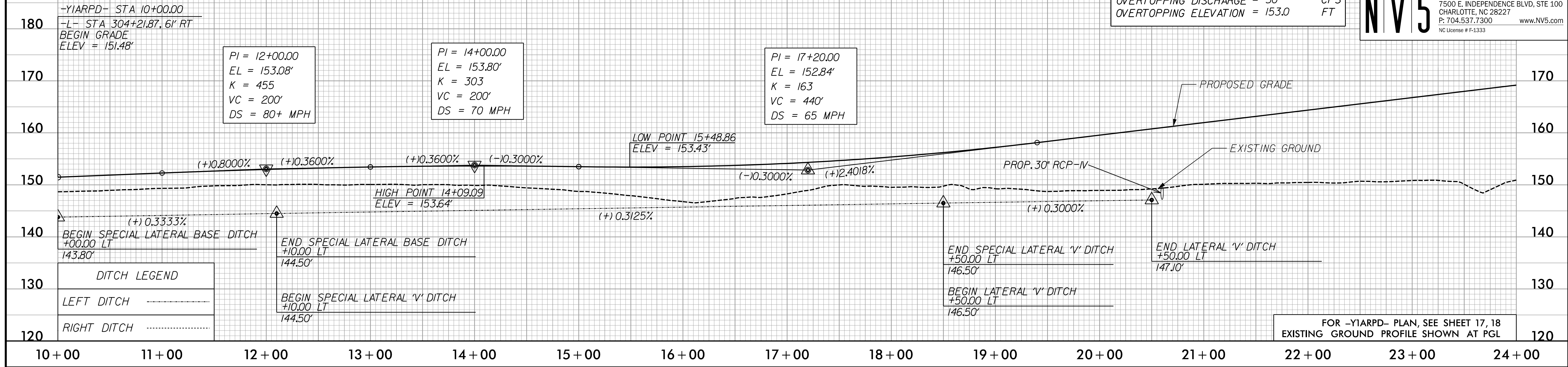
5/28/22

-Y1ARPD-

PROJECT REFERENCE NO. 1-5987A	SHEET NO. 87
ROADWAY DESIGN ENGINEER 5/18/2022 	HYDRAULICS ENGINEER 5/19/2022
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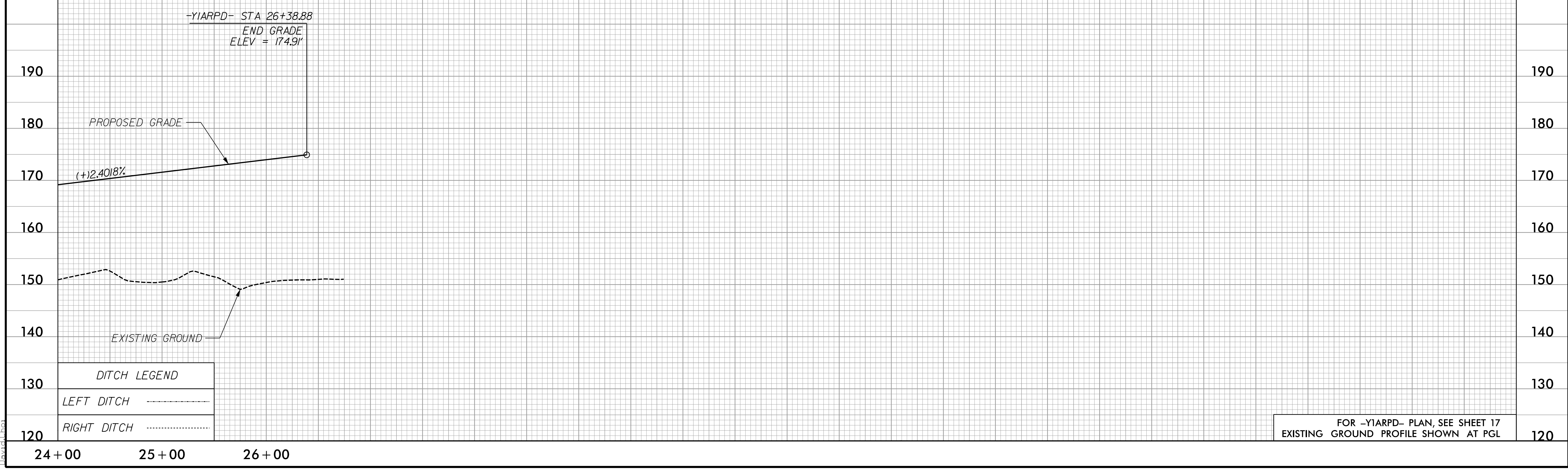
PIPE HYDRAULIC DATA
-Y1ARPD- Sta. 20+60 30" RCP-IV

DRAINAGE AREA	= 4.2	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 17	CFS
DESIGN HW ELEVATION	= 149.5	FT
100 YEAR DISCHARGE	= 18	CFS
100 YEAR HW ELEVATION	= 149.5	FT
OVERTOPPING FREQUENCY	= 200+	YRS
OVERTOPPING DISCHARGE	= 50	CFS
OVERTOPPING ELEVATION	= 153.0	FT



FOR -Y1ARPD- PLAN, SEE SHEET 17, 18
EXISTING GROUND PROFILE SHOWN AT PGL

-Y1ARPD-



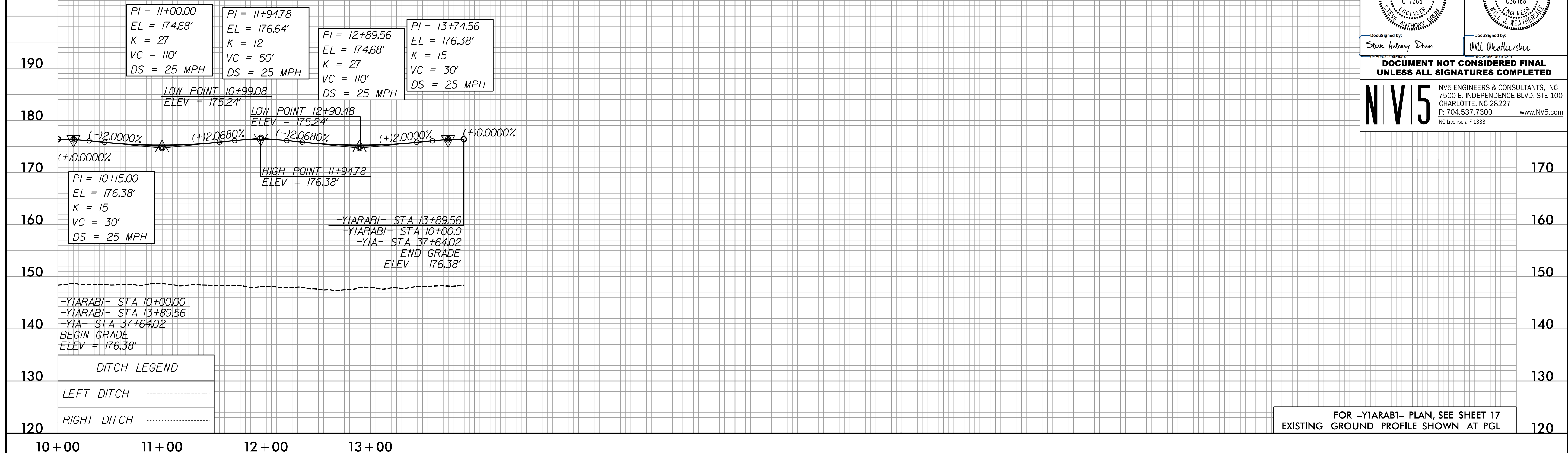
FOR -Y1ARPD- PLAN, SEE SHEET 17
EXISTING GROUND PROFILE SHOWN AT PGL

3/10/2022
 P:\Projects\15987A\RDY_PSH_PFL_87.dgn
 David

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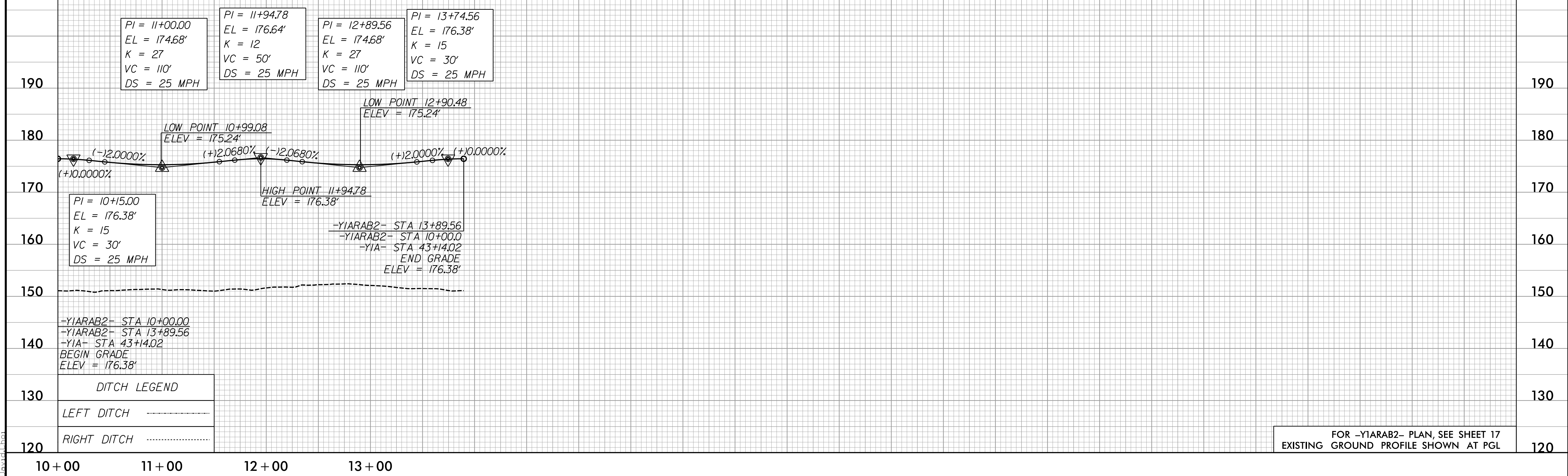
-Y1ARAB1-

PROJECT REFERENCE NO. 1-5987A	SHEET NO. 88
ROADWAY DESIGN ENGINEER 5/18/2022	HYDRAULICS ENGINEER 5/19/2022
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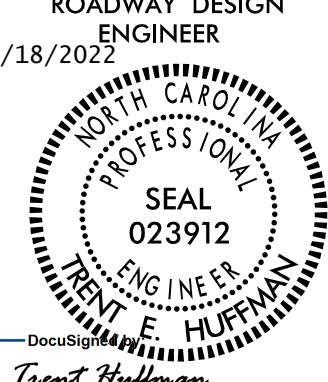
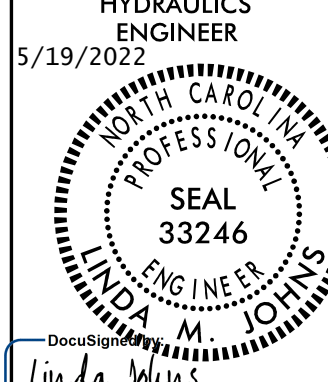


-Y1ARAB2-

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David J. Duan



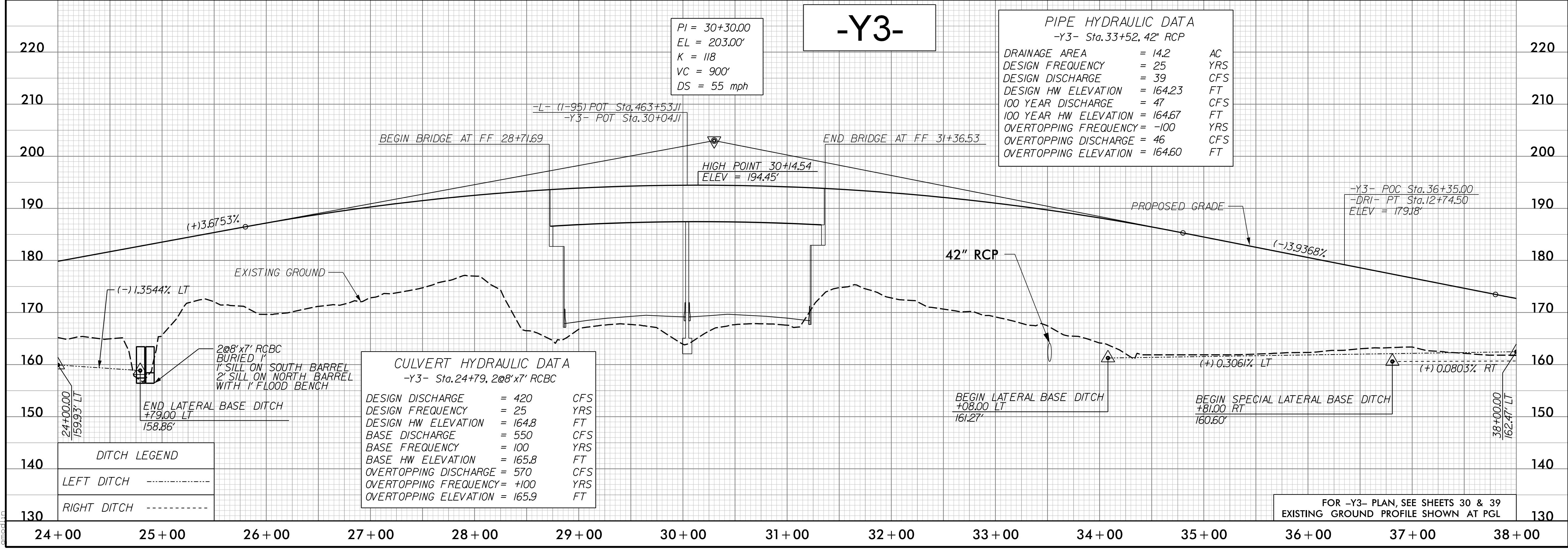
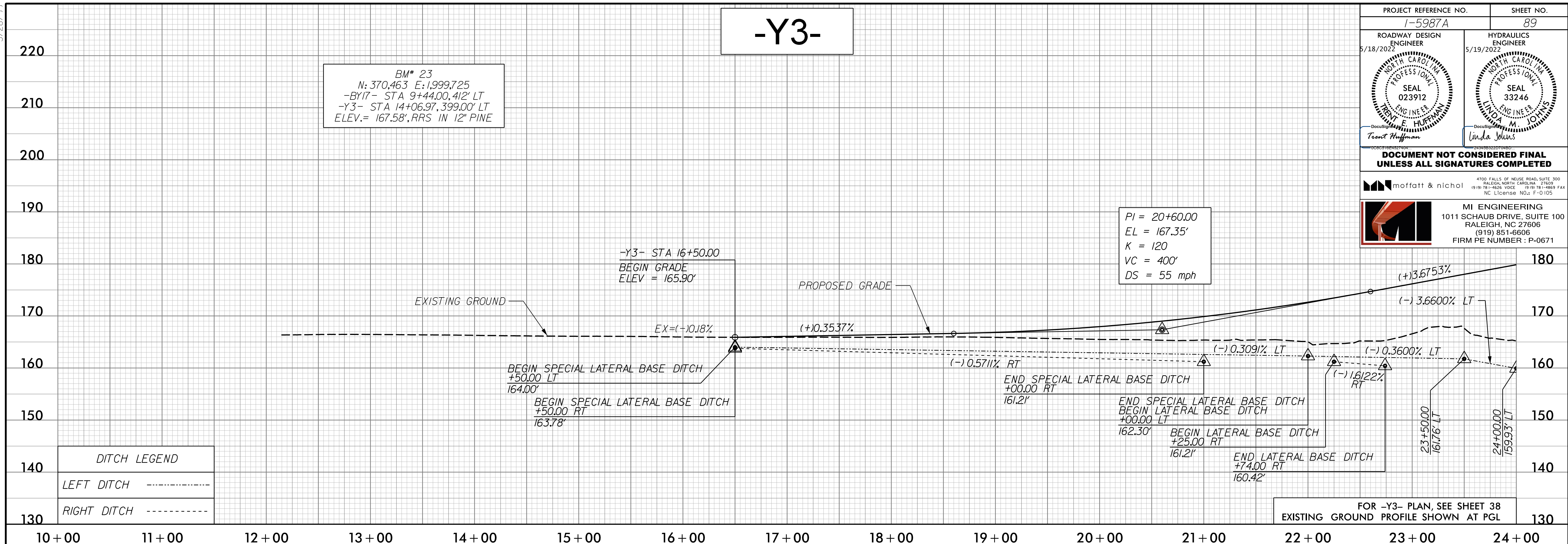
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PROJECT REFERENCE NO. 1-5987A	SHEET NO. 89
ROADWAY DESIGN ENGINEER 5/18/2022 	HYDRAULICS ENGINEER 5/19/2022 

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(919) 851-6606
NC License No.: F-0105

MI ENGINEERING
1011 SCHAUB DRIVE, SUITE 100
RALEIGH, NC 27608
(919) 851-6606
FIRM PE NUMBER: P-0671



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

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

CULVERT HYDRAULIC DATA		-Y3- Sta. 24+79, 2ø8"x7" RCBC	
DESIGN DISCHARGE	= 420	CFS	
DESIGN FREQUENCY	= 25	YRS	
DESIGN HW ELEVATION	= 164.8	FT	
BASE DISCHARGE	= 550	CFS	
BASE FREQUENCY	= 100	YRS	
BASE HW ELEVATION	= 165.8	FT	
OVERTOPPING DISCHARGE	= 570	CFS	
OVERTOPPING FREQUENCY	= +100	YRS	
OVERTOPPING ELEVATION	= 165.9	FT	

PIPE HYDRAULIC DATA		-Y3- Sta. 33+52, 42" RCP	
DRAINAGE AREA	= 14.2	AC	
DESIGN FREQUENCY	= 25	YRS	
DESIGN DISCHARGE	= 39	CFS	
DESIGN HW ELEVATION	= 164.23	FT	
100 YEAR DISCHARGE	= 47	CFS	
100 YEAR HW ELEVATION	= 164.67	FT	
OVERTOPPING FREQUENCY	= +100	YRS	
OVERTOPPING DISCHARGE	= 46	CFS	
OVERTOPPING ELEVATION	= 164.60	FT	

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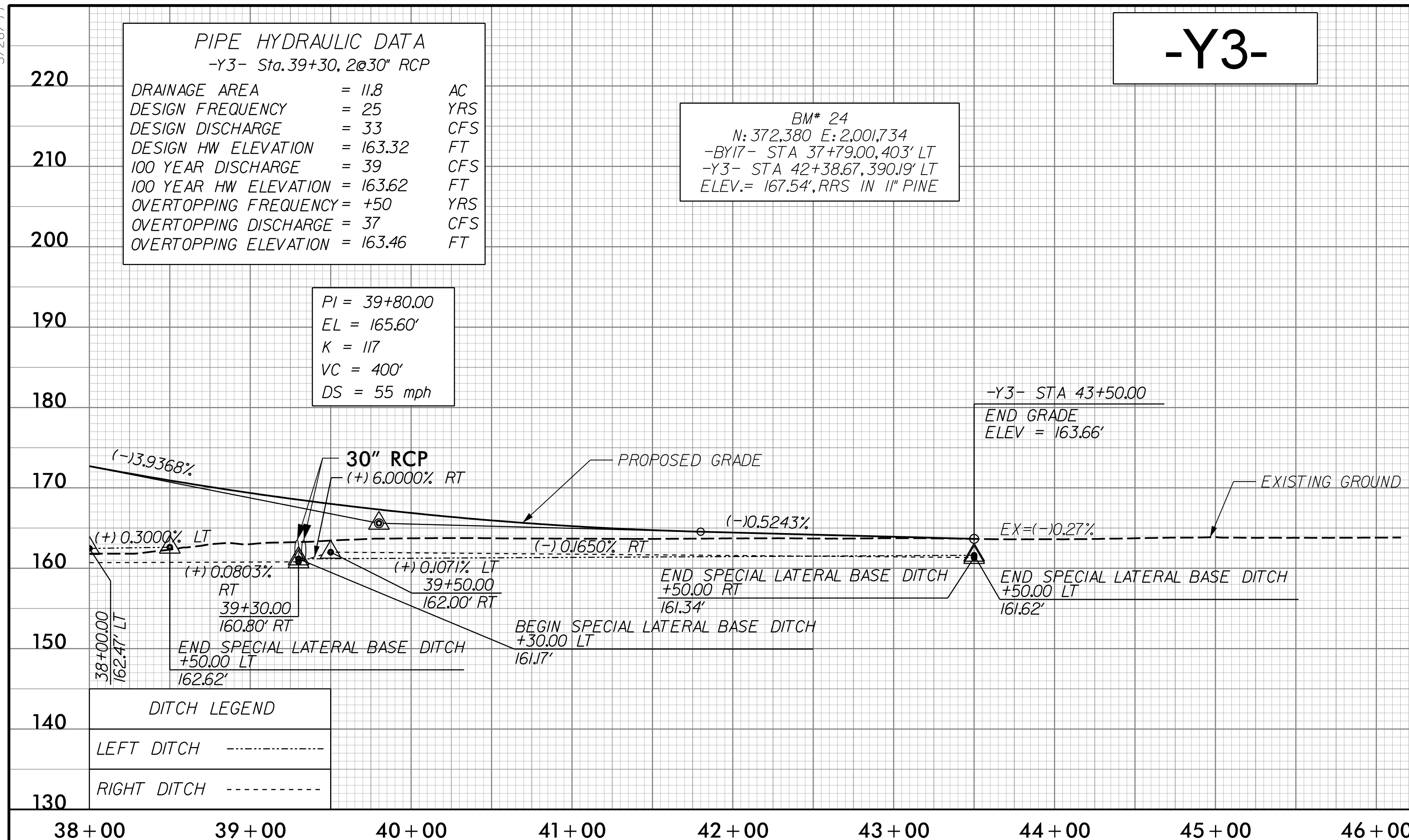
PIPE HYDRAULIC DATA
-Y3- Sta. 39+30, 2@30" RCP

DRAINAGE AREA	= 11.8	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 33	CFS
DESIGN HW ELEVATION	= 163.32	FT
100 YEAR DISCHARGE	= 39	CFS
100 YEAR HW ELEVATION	= 163.62	FT
OVERTOPPING FREQUENCY	= +50	YRS
OVERTOPPING DISCHARGE	= 37	CFS
OVERTOPPING ELEVATION	= 163.46	FT

BM# 24
N: 372,380 E: 2,001,734
-BY17- STA 37+79.00, 403' LT
-Y3- STA 42+38.67, 390.19' LT
ELEV. = 167.54', RRS IN 11" PINE

-Y3-

PI = 39+80.00
EL = 165.60'
K = 117
VC = 400'
DS = 55 mph



DITCH LEGEND

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

PROJECT REFERENCE NO. 1-5987A	SHEET NO. 90
ROADWAY DESIGN ENGINEER 5/18/2022 Trent Hoffman	HYDRAULICS ENGINEER 5/19/2022 Linda Johns

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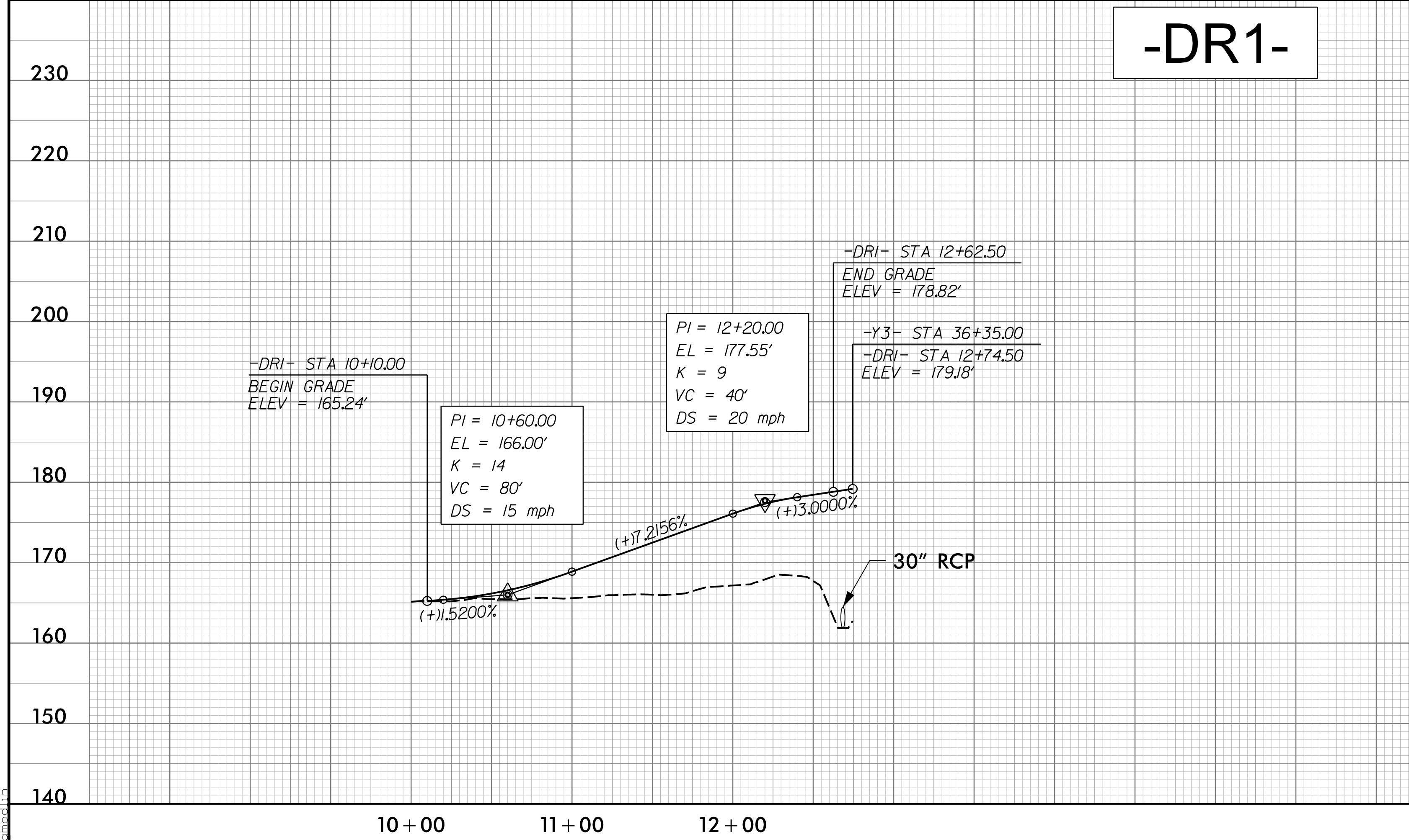
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4700 FALLS OF WELLS ROAD, SUITE 100
RALEIGH, NORTH CAROLINA 27615-9100
(919) 851-6600 VOIC (919) 851-6606 FAX
NC License No.: F-0105

MI ENGINEERING
1011 SCHAUB DRIVE, SUITE 100
RALEIGH, NC 27608
(919) 851-6606
FIRM PE NUMBER : P-0671

FOR -Y3- PLAN, SEE SHEET 39

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-DR1-



PI = 10+60.00
EL = 166.00'
K = 14
VC = 80'
DS = 15 mph

PI = 12+20.00
EL = 177.55'
K = 9
VC = 40'
DS = 20 mph

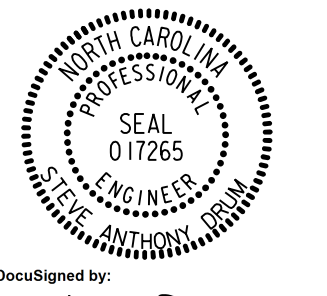
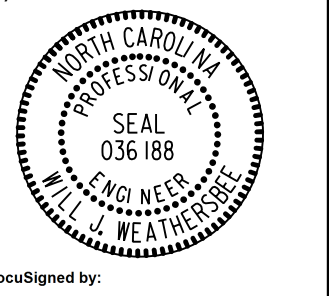
-DR1- STA 12+62.50
END GRADE
ELEV = 178.82'

-Y3- STA 36+35.00
-DR1- STA 12+74.50
ELEV = 179.18'

FOR -DR1- PLAN, SEE SHEETS 30 & 39

5/28/22

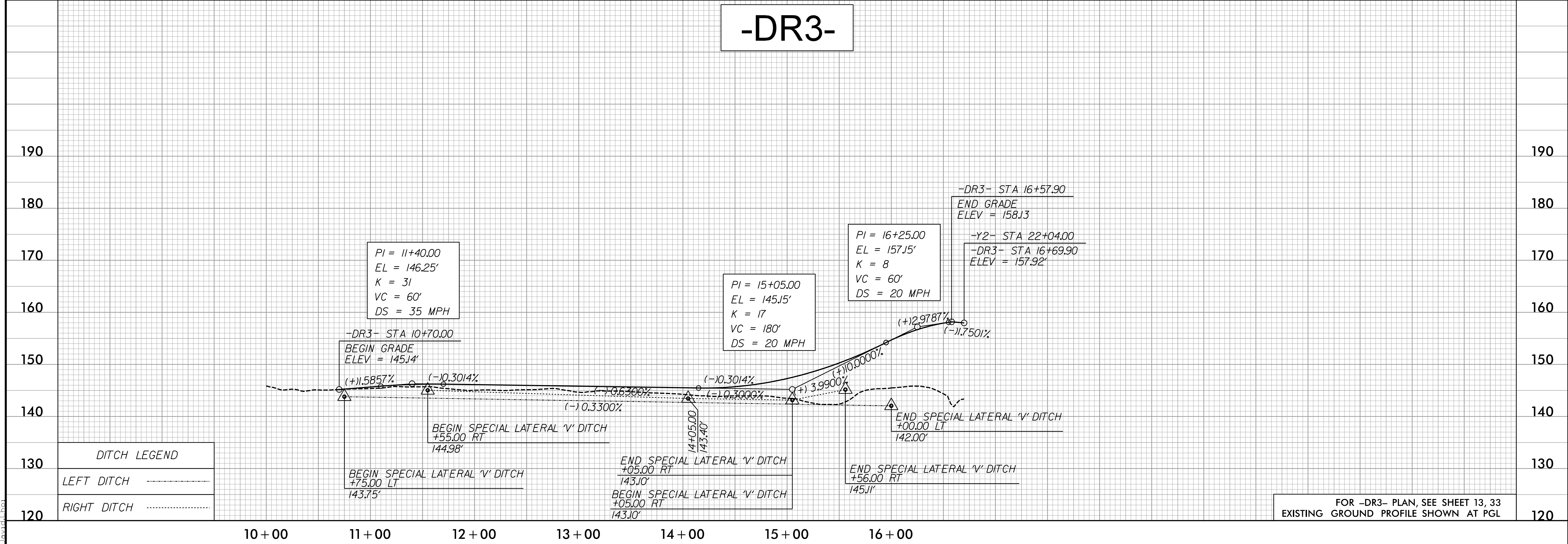
-DR2-

PROJECT REFERENCE NO. 1-5987A	SHEET NO. 91
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FOR -DR2- PLAN, SEE SHEET 33
EXISTING GROUND PROFILE SHOWN AT PGL

-DR3-



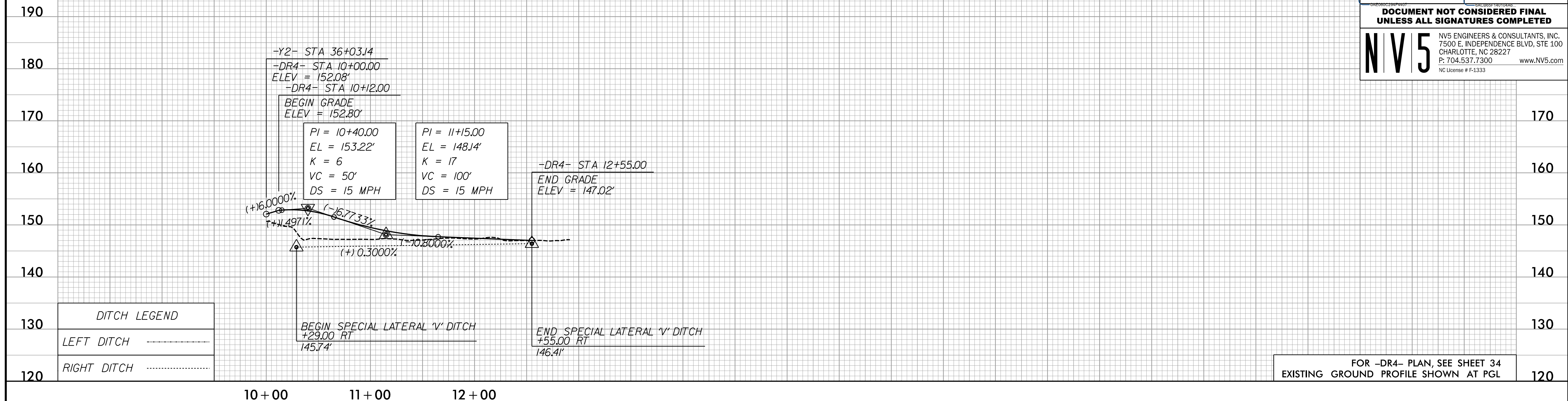
FOR -DR3- PLAN, SEE SHEET 13, 33
EXISTING GROUND PROFILE SHOWN AT PGL

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David

5/28/22

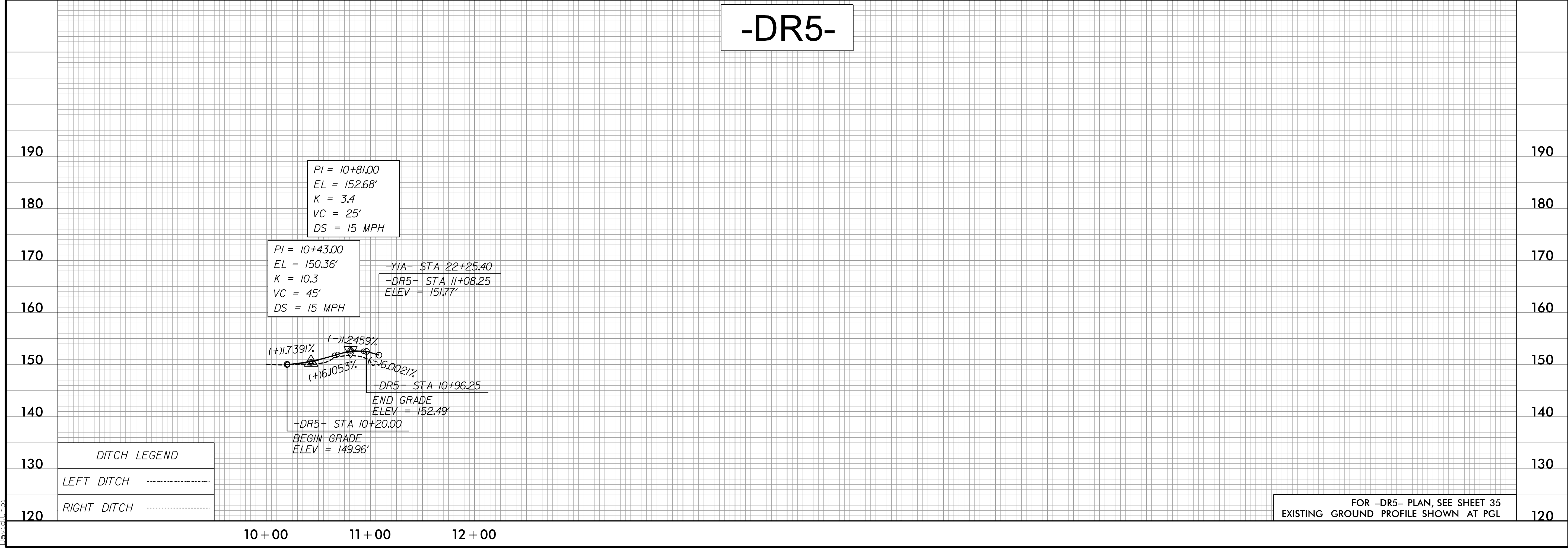
-DR4-

PROJECT REFERENCE NO. 1-5987A	SHEET NO. 92
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-DR5-

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David Chio



5/28/2022

-DR6-

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

FOR -DR6- PLAN, SEE SHEET 35
EXISTING GROUND PROFILE SHOWN AT PGL

-DR7-

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David



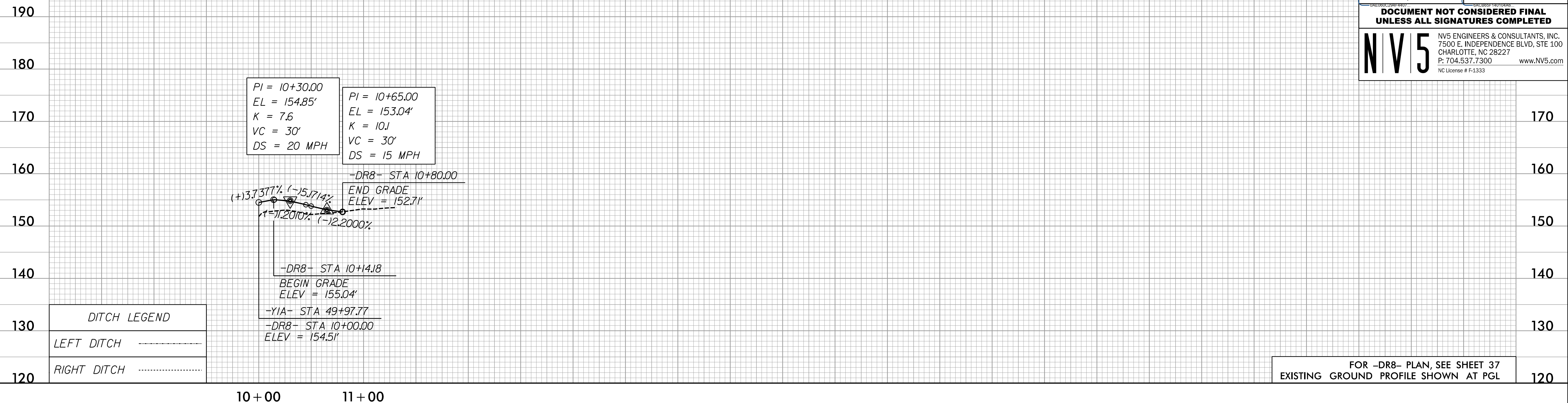
DITCH LEGEND	
LEFT DITCH	-----
RIGHT DITCH	-----

FOR -DR7- PLAN, SEE SHEET 17
EXISTING GROUND PROFILE SHOWN AT PGL

5/28/22

-DR8-

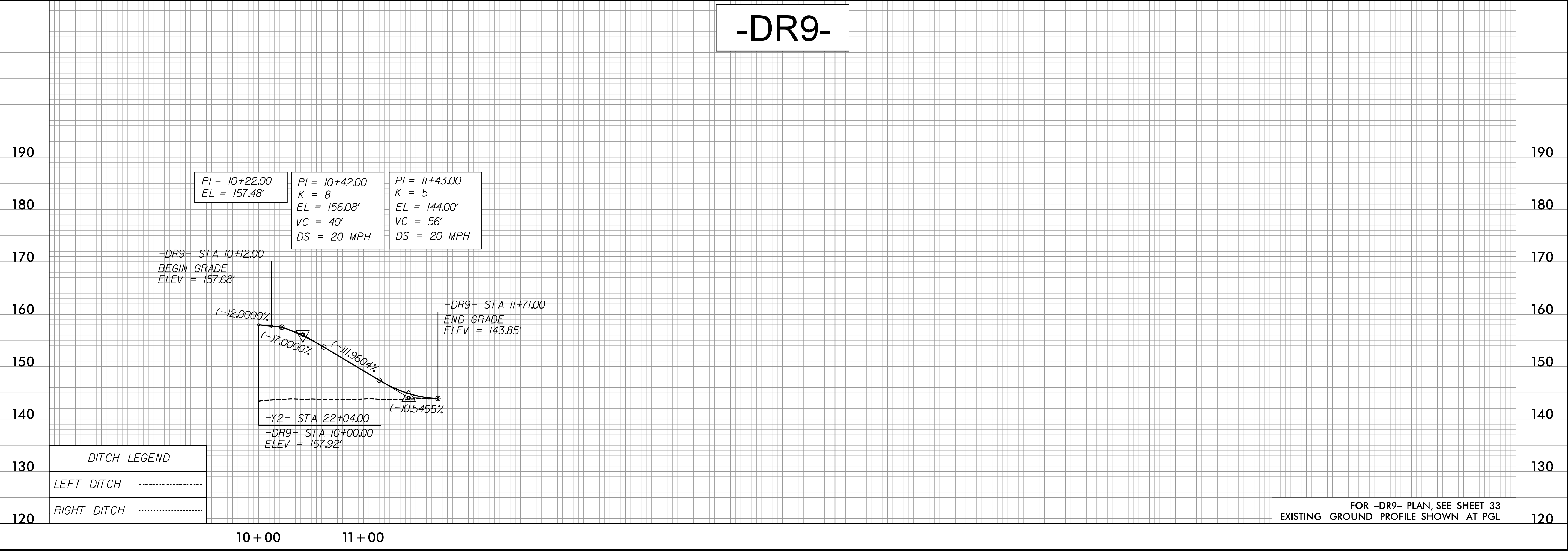
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FOR -DR8- PLAN, SEE SHEET 37
EXISTING GROUND PROFILE SHOWN AT PGL

-DR9-

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FOR -DR9- PLAN, SEE SHEET 33
EXISTING GROUND PROFILE SHOWN AT PGL

5/28/22

-DR10-

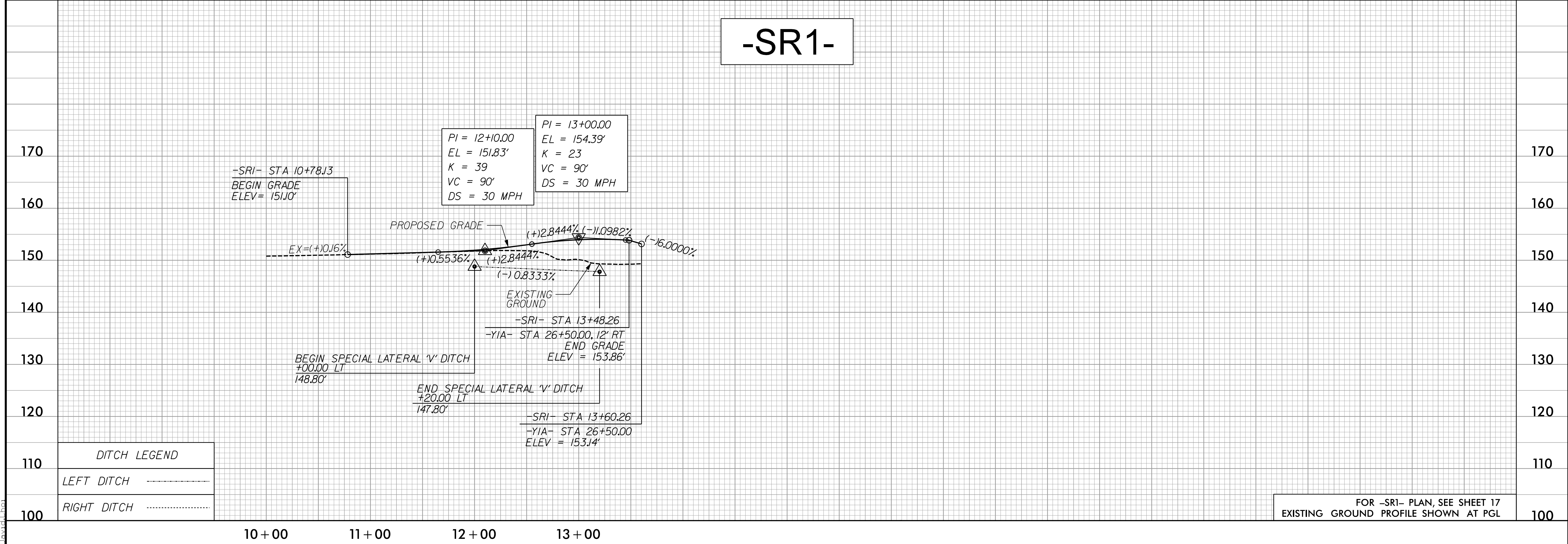
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ROADWAY DESIGN ENGINEER 5/18/2022	HYDRAULICS ENGINEER 5/19/2022
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DITCH LEGEND	
LEFT DITCH	-----
RIGHT DITCH	-----

FOR -DR10- PLAN, SEE SHEET 17
EXISTING GROUND PROFILE SHOWN AT PGL

-SR1-



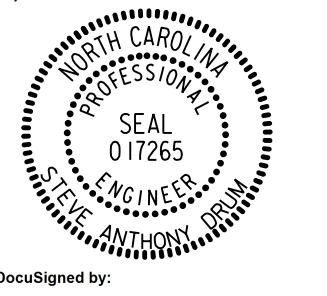
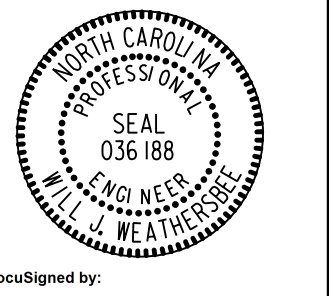
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LEFT DITCH	-----
RIGHT DITCH	-----

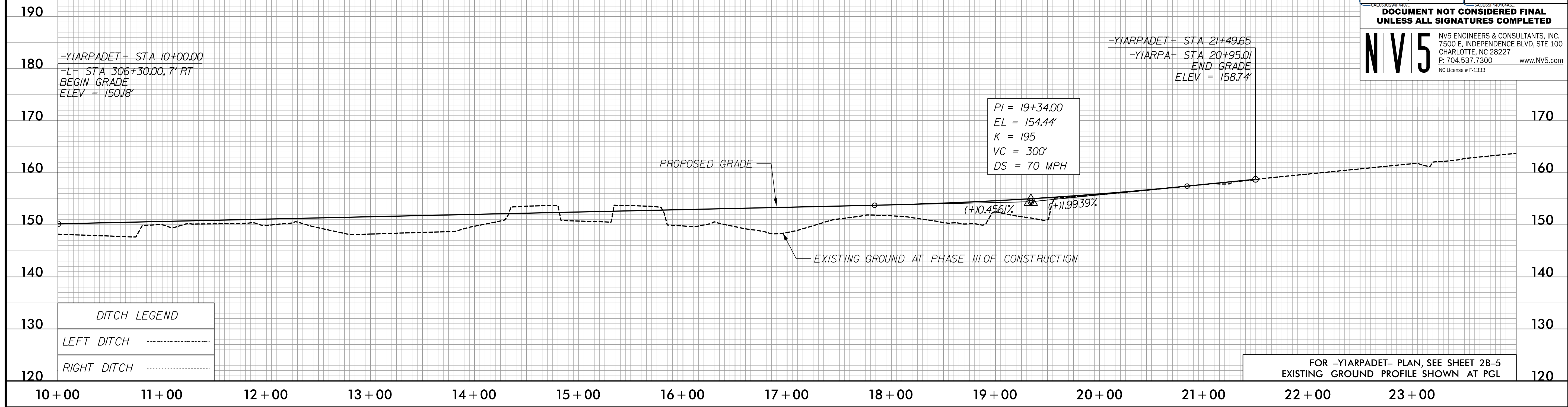
FOR -SR1- PLAN, SEE SHEET 17
EXISTING GROUND PROFILE SHOWN AT PGL

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David

5/28/99

-Y1ARPADET-

PROJECT REFERENCE NO. 1-5987A	SHEET NO. 97
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DITCH LEGEND	
LEFT DITCH	-----
RIGHT DITCH	-----

FOR -YIARPADET- PLAN, SEE SHEET 2B-5
EXISTING GROUND PROFILE SHOWN AT PGL

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