PROJECT REFERENCE NO. R-2514D | SHEET NO. 36

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033871 DANIEL W. GARDNER, JR. 3/24/… DocuSigned by: Daniel W. Gardner, Jr.

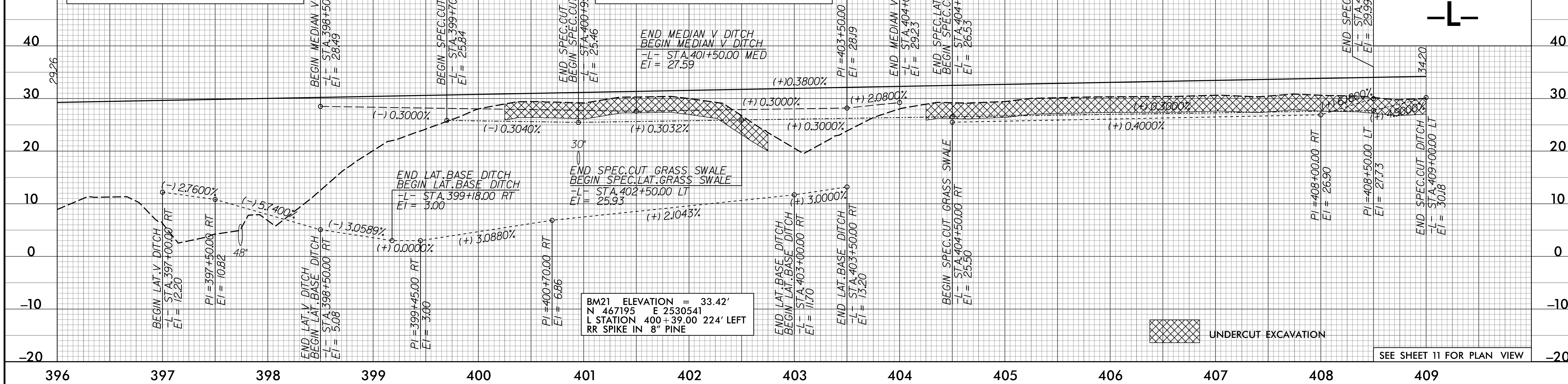
HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039745 Jonathan Lyle Moore 3/23/… DocuSigned by: Jonathan L. Moore

PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO.1105

DRAINAGE AREA	= 38	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 86	CFS
DESIGN HW ELEVATION	= 7.4	FT
100 YEAR DISCHARGE	= 93	CFS
100 YEAR HW ELEVATION	= 7.6	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 220	CFS
OVERTOPPING ELEVATION	= 17.3	FT

PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO.1101

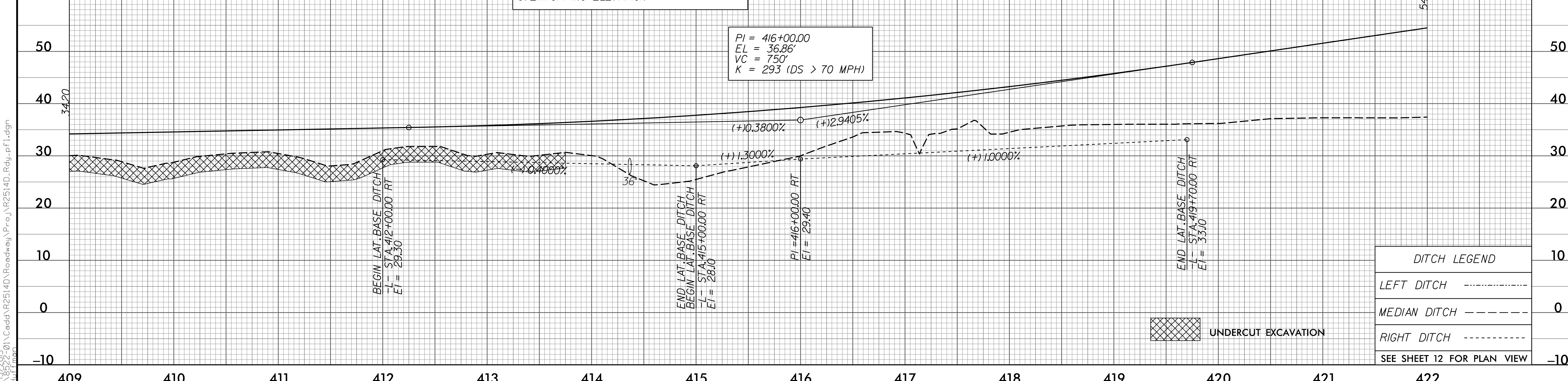
DRAINAGE AREA	= 6	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 18	CFS
DESIGN HW ELEVATION	= 27.7	FT
100 YEAR DISCHARGE	= 20	CFS
100 YEAR HW ELEVATION	= 27.8	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= 45	CFS
OVERTOPPING ELEVATION	= 30.9	FT



-L-
BEGIN MEDIAN V DITCH -L- STA.398+50.00 MED El = 28.49
BEGIN SPEC.CUT GRASS SWALE -L- STA.399+70.00 LT El = 25.84
END SPEC.CUT GRASS SWALE BEGIN SPEC.CUT GRASS SWALE -L- STA.400+95.00 LT El = 25.46
END MEDIAN V DITCH BEGIN MEDIAN V DITCH -L- STA.401+50.00 MED El = 27.59
PI =403+50.00 MED El = 28.19
END MEDIAN V DITCH -L- STA.404+00.00 MED El = 29.23
END SPEC.LAT.GRASS SWALE BEGIN SPEC.CUT DITCH -L- STA.404+50.00 LT El = 26.53
END SPEC.CUT GRASS SWALE -L- STA.408+50.00 RT El = 29.99
29.26
34.20
(+)0.3800%
(−) 0.3000%
(−) 0.3040%
(+) 0.3032%
(+) 0.3000%
(+) 2.0800%
(+) 0.3000%
(+) 0.4000%
(−) 2.7600%
(−) 5.7400%
(−) 3.0589%
(+) 0.0000%
(+) 3.0880%
(+) 2.1043%
(+) 3.0000%
30"
48"
END LAT.BASE DITCH BEGIN LAT.BASE DITCH -L- STA.399+18.00 RT El = 3.00
END SPEC.CUT GRASS SWALE BEGIN SPEC.LAT.GRASS SWALE -L- STA.402+50.00 LT El = 25.93
BEGIN LAT.V DITCH -L- STA.397+00.00 RT El = 12.20
PI =397+50.00 RT El = 10.82
END LAT.V DITCH BEGIN LAT.BASE DITCH -L- STA.398+50.00 RT El = 5.08
PI =399+45.00 RT El = 3.00
PI =400+70.00 RT El = 6.86
END LAT.BASE DITCH BEGIN LAT.BASE DITCH -L- STA.403+00.00 RT El = 11.70
END LAT.BASE DITCH -L- STA.403+50.00 RT El = 13.20
BEGIN SPEC.CUT GRASS SWALE -L- STA.404+50.00 RT El = 25.50
PI =408+00.00 RT El = 26.90
PI =408+50.00 LT El = 27.73
END SPEC.CUT DITCH -L- STA.409+00.00 LT El = 30.18
BM21 ELEVATION = 33.42' N 467195 E 2530541 L STATION 400+39.00 224' LEFT RR SPIKE IN 8" PINE
UNDERCUT EXCAVATION
SEE SHEET 11 FOR PLAN VIEW
50 40 30 20 10 0 −10 −20
396 397 398 399 400 401 402 403 404 405 406 407 408 409

PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO.1210

DRAINAGE AREA	= 20	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 46	CFS
DESIGN HW ELEVATION	= 31.55	FT
100 YEAR DISCHARGE	= 49	CFS
100 YEAR HW ELEVATION	= 31.76	FT
OVERTOPPING FREQUENCY	= 50	YRS
OVERTOPPING DISCHARGE	= 45	CFS
OVERTOPPING ELEVATION	= 31.5	FT



-L-
54.50
34.20
PI = 416+00.00 EL = 36.86' VC = 750' K = 293 (DS > 70 MPH)
(+)0.3800%
(+)2.9405%
(+) 1.3000%
(+) 1.0000%
(−) 0.4000%
36"
BEGIN LAT.BASE DITCH -L- STA.412+00.00 RT El = 29.30
END LAT.BASE DITCH BEGIN LAT.BASE DITCH -L- STA.415+00.00 RT El = 28.10
PI =416+00.00 RT El = 29.40
END LAT.BASE DITCH -L- STA.419+70.00 RT El = 33.10
UNDERCUT EXCAVATION
DITCH LEGEND
LEFT DITCH
MEDIAN DITCH
RIGHT DITCH
SEE SHEET 12 FOR PLAN VIEW
60 50 40 30 20 10 0 −10
409 410 411 412 413 414 415 416 417 418 419 420 421 422

5/28/99

3/15/2015 R:\8522-01\Cadd\R2514D\Roadway\Proj\R2514D_Rdy_pfl.dgn