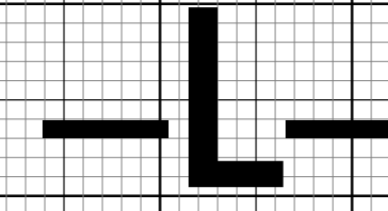


5/14/19

CH ENGINEERING
 3220 GLEN ROYAL RD. RALEIGH, NC 27617
 TELE 919.788.0224 FAX 919.788.0232
 NC LICENSE #P-0189

PROJECT REFERENCE NO. <i>B-5398</i>	SHEET NO. 5
ROADWAY DESIGN ENGINEER <i>Brian A. Williams</i>	HYDRAULICS ENGINEER <i>Joshua G. Dalton</i>

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



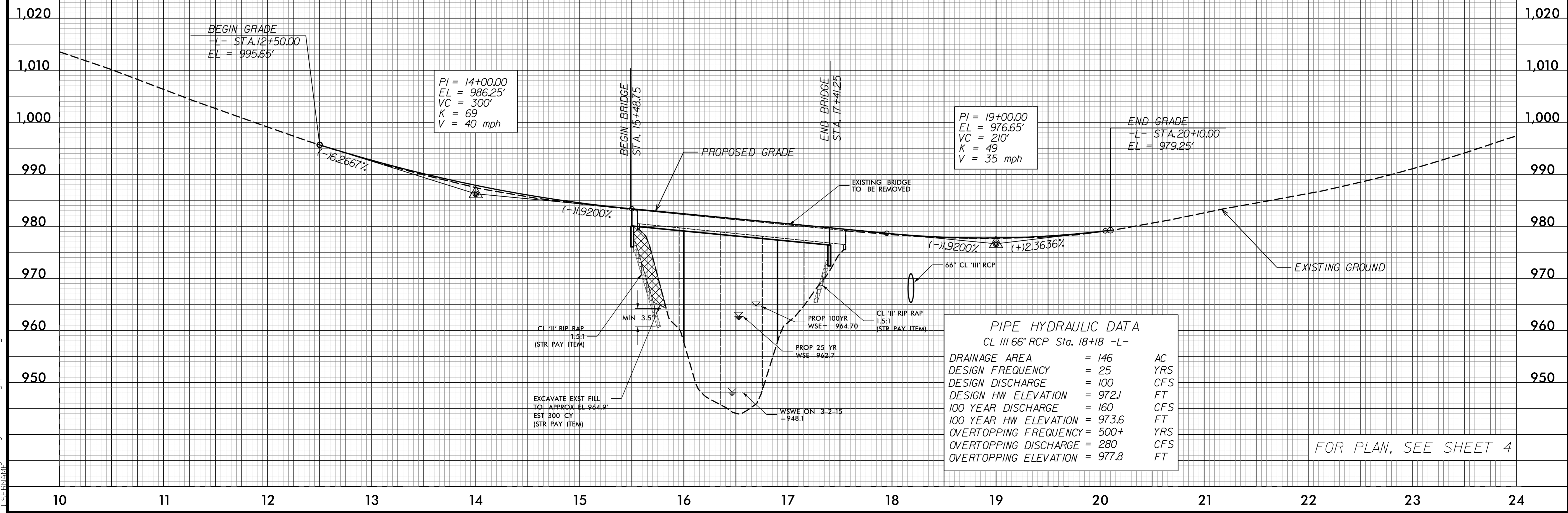
BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE = 8,300 CFS
 DESIGN FREQUENCY = 25 YRS
 DESIGN HW ELEVATION = 962.7 FT
 BASE DISCHARGE = 11,000 CFS
 BASE FREQUENCY = 100 YRS
 BASE HW ELEVATION = 964.70 FT
 OVERTOPPING DISCHARGE = 40,000 CFS
 OVERTOPPING FREQUENCY = 500+ YRS
 OVERTOPPING ELEVATION = 977.8 FT

DATE OF SURVEY = 3-2-15
 W.S. ELEVATION AT DATE OF SURVEY = 948.1 FT

BM 1 ELEV = 998.94'
 N 714,382 E 1,272,559
 -L- STA 11+92.62 18.83' LEFT
 MARKED (WESTERN MOST) BOLT ON BOTTOM
 FLANGE ON FIRE HYDRANT, SOUTH OF BRIDGE

BM 2 ELEV = 988.73'
 N 715,456 E 1,272,715
 -L- STA 22+80.29 18.37' LEFT
 MARKED (WESTERN MOST) BOLT ON BOTTOM
 FLANGE ON FIRE HYDRANT, NORTH OF BRIDGE



PIPE HYDRAULIC DATA
 CL III 66" RCP Sta. 18+18 -L-

DRAINAGE AREA = 146 AC
 DESIGN FREQUENCY = 25 YRS
 DESIGN DISCHARGE = 100 CFS
 DESIGN HW ELEVATION = 972.1 FT
 100 YEAR DISCHARGE = 160 CFS
 100 YEAR HW ELEVATION = 973.6 FT
 OVERTOPPING FREQUENCY = 500+ YRS
 OVERTOPPING DISCHARGE = 280 CFS
 OVERTOPPING ELEVATION = 977.8 FT

FOR PLAN, SEE SHEET 4

10/19/2016
N:\Projects\B5398_Rdy.p1_05.dgn