PROJECT REFERENCE NO.	SHEET NO.
R-2514B	30

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 033871 ENGINEER DANIEL W. GARDNER, JR. — 4/16/ — DocuSigned by: Daniel W. Gardner, Jr.

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 019660 ENGINEER PAUL ATKINSON — 4/16/ — DocuSigned by:

—L—

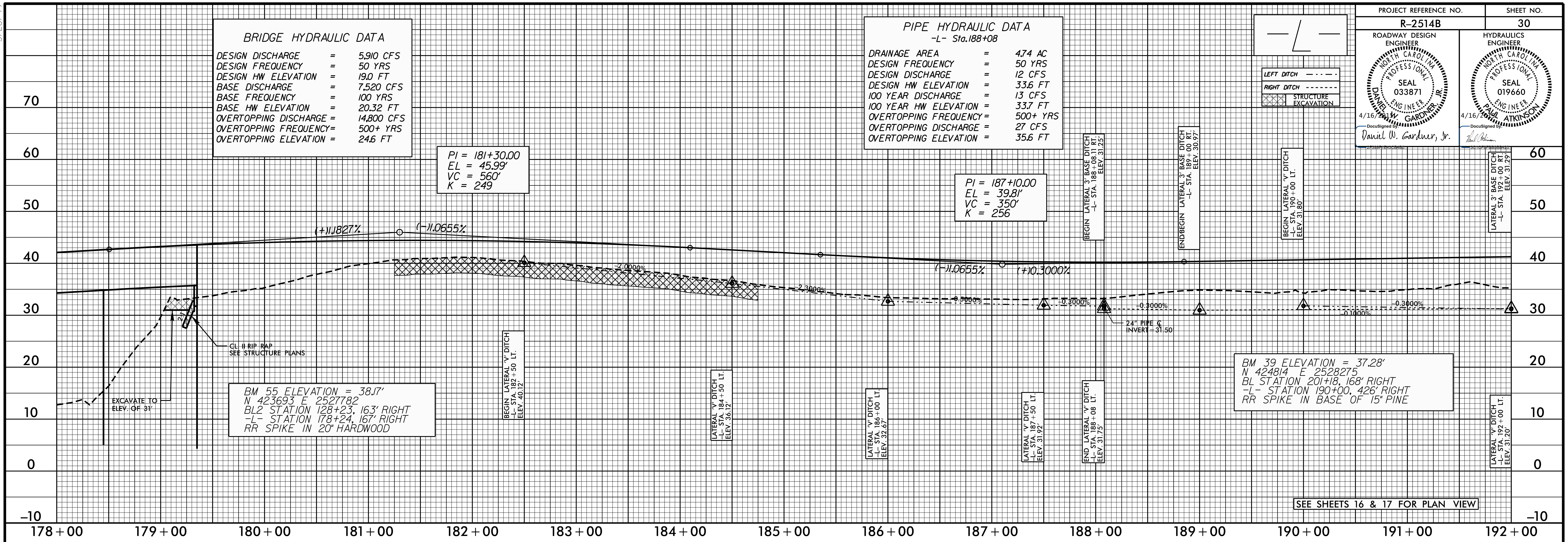
LEFT DITCH
RIGHT DITCH
STRUCTURE EXCAVATION

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	5,910 CFS
DESIGN FREQUENCY	=	50 YRS
DESIGN HW ELEVATION	=	19.0 FT
BASE DISCHARGE	=	7,520 CFS
BASE FREQUENCY	=	100 YRS
BASE HW ELEVATION	=	20.32 FT
OVERTOPPING DISCHARGE	=	14,800 CFS
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING ELEVATION	=	24.6 FT

PIPE HYDRAULIC DATA
-L- Sta.188+08

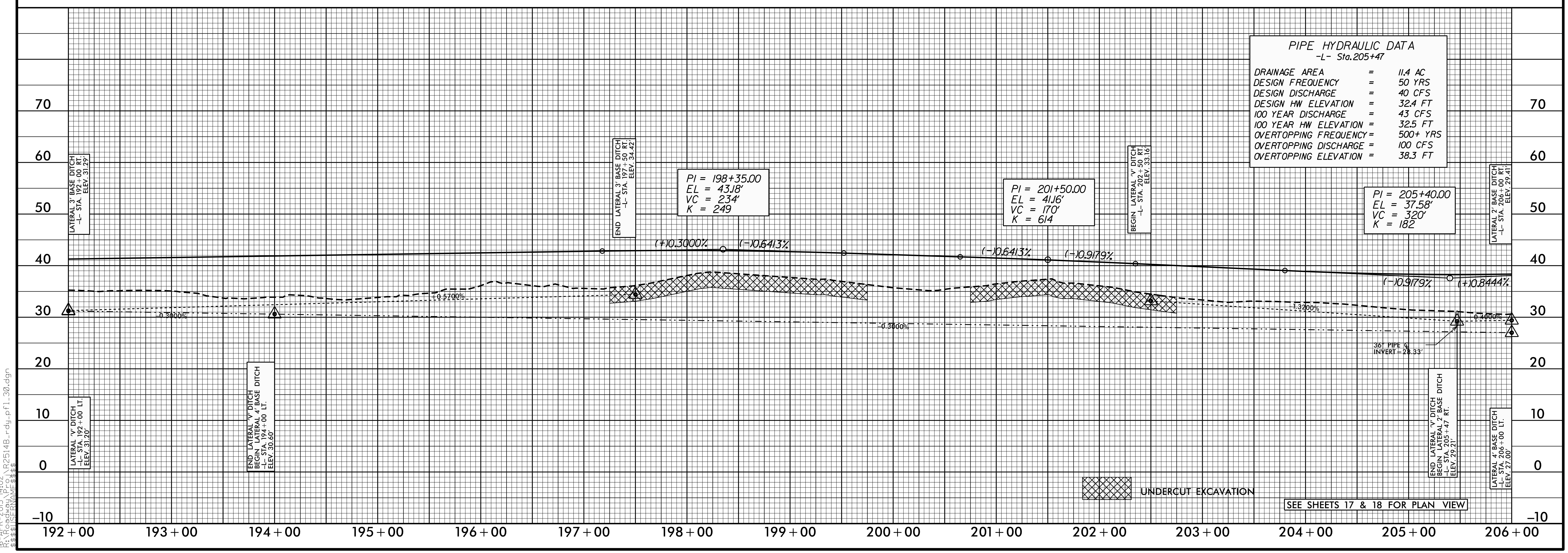
DRAINAGE AREA	=	4.74 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	12 CFS
DESIGN HW ELEVATION	=	33.6 FT
100 YEAR DISCHARGE	=	13 CFS
100 YEAR HW ELEVATION	=	33.7 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	27 CFS
OVERTOPPING ELEVATION	=	35.6 FT



PI = 181+30.00
EL = 45.99'
VC = 560'
K = 249
PI = 187+10.00
EL = 39.81'
VC = 350'
K = 256
(+)1.1827%
(-)1.0655%
(-)1.0655%
(+)0.3000%
CL II RIP RAP SEE STRUCTURE PLANS
EXCAVATE TO ELEV. OF 31'
24" PIPE ℄ INVERT=31.50
BM 55 ELEVATION = 38.17'
N 423693 E 2527782
BL2 STATION 128+23, 163' RIGHT
-L- STATION 178+24, 167' RIGHT
RR SPIKE IN 20" HARDWOOD
BM 39 ELEVATION = 37.28'
N 424814 E 2528275
BL STATION 201+18, 168' RIGHT
-L- STATION 190+00, 426' RIGHT
RR SPIKE IN BASE OF 15" PINE
BEGIN LATERAL 'V' DITCH -L- STA. 182+50 LT. ELEV. 40.12'
LATERAL 'V' DITCH -L- STA. 184+50 LT. ELEV. 36.12'
LATERAL 'V' DITCH -L- STA. 186+00 LT. ELEV. 32.67'
LATERAL 'V' DITCH -L- STA. 187+50 LT. ELEV. 31.92'
END LATERAL 'V' DITCH -L- STA. 188+08 LT. ELEV. 31.75'
BEGIN LATERAL 3' BASE DITCH -L- STA. 188+08.11 RT. ELEV. 31.25'
ENDBEGIN LATERAL 3' BASE DITCH -L- STA. 189+00 RT. ELEV. 30.97'
BEGIN LATERAL 'V' DITCH -L- STA. 190+00 LT. ELEV. 31.80'
LATERAL 3' BASE DITCH -L- STA. 192+00 RT. ELEV. 31.29'
LATERAL 'V' DITCH -L- STA. 192+00 LT. ELEV. 31.20'
SEE SHEETS 16 & 17 FOR PLAN VIEW
178+00
179+00
180+00
181+00
182+00
183+00
184+00
185+00
186+00
187+00
188+00
189+00
190+00
191+00
192+00

PIPE HYDRAULIC DATA
-L- Sta.205+47

DRAINAGE AREA	=	11.4 AC
DESIGN FREQUENCY	=	50 YRS
DESIGN DISCHARGE	=	40 CFS
DESIGN HW ELEVATION	=	32.4 FT
100 YEAR DISCHARGE	=	43 CFS
100 YEAR HW ELEVATION	=	32.5 FT
OVERTOPPING FREQUENCY	=	500+ YRS
OVERTOPPING DISCHARGE	=	100 CFS
OVERTOPPING ELEVATION	=	38.3 FT



PI = 198+35.00
EL = 43.18'
VC = 234'
K = 249
PI = 201+50.00
EL = 41.16'
VC = 170'
K = 614
PI = 205+40.00
EL = 37.58'
VC = 320'
K = 182
(+)0.3000%
(-)0.6413%
(-)0.6413%
(-)0.9179%
(-)0.9179%
(+)0.8444%
36" PIPE ℄ INVERT=28.33'
LATERAL 3' BASE DITCH -L- STA. 192+00 RT. ELEV. 31.29'
LATERAL 'V' DITCH -L- STA. 192+00 LT. ELEV. 31.20'
END LATERAL 'V' DITCH BEGIN LATERAL 4' BASE DITCH -L- STA. 194+00 LT. ELEV. 30.60'
END LATERAL 3' BASE DITCH -L- STA. 197+50 RT. ELEV. 34.42'
BEGIN LATERAL 3' BASE DITCH -L- STA. 202+50 RT. ELEV. 33.16'
END LATERAL 'V' DITCH BEGIN LATERAL 2' BASE DITCH -L- STA. 205+47 RT. ELEV. 29.21'
LATERAL 2' BASE DITCH -L- STA. 206+00 RT. ELEV. 29.41'
LATERAL 4' BASE DITCH -L- STA. 206+00 LT. ELEV. 27.00'
UNDERCUT EXCAVATION
SEE SHEETS 17 & 18 FOR PLAN VIEW
192+00
193+00
194+00
195+00
196+00
197+00
198+00
199+00
200+00
201+00
202+00
203+00
204+00
205+00
206+00

5/28/99

16-APR-2015 14:02 R:\Roadway\Pro\R2514B_rdy_pfl_30.dgn $$$$USERNAME$$$$