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PROJECT REFERENCE NO.	SHEET NO.
14SP.20221.2	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 26960 ENGINEER Kelly E. Shoulder 11/1/2016

HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 12575 ENGINEER PAUL FISHER 11/1/2016

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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SILL DETAIL

2 @ 9'X10' RCBC BURIED 1' WITH 2' SILL IN EAST BARREL

NG, 2:1, 2' SILL, 2:1, NG

(NOT TO SCALE)

Backfill East barrel with class I Rip Rap to Sill height @ inlet and outlet.

DETAIL 1
LATERAL BASE DITCH (Not to Scale)

Natural Ground, d, 2:1, D, 2:1, 1'Ft., Fill Slope, Filter Fabric, B, b

Min. D = 1 Ft.
Max. D = 1 Ft.
B = 2 Ft.
b = 5 Ft.

Type of Liner = Est. 16 Tons CL B Rip-Rap
Est. 45 SY of Geotextile
DDE = 20 CY

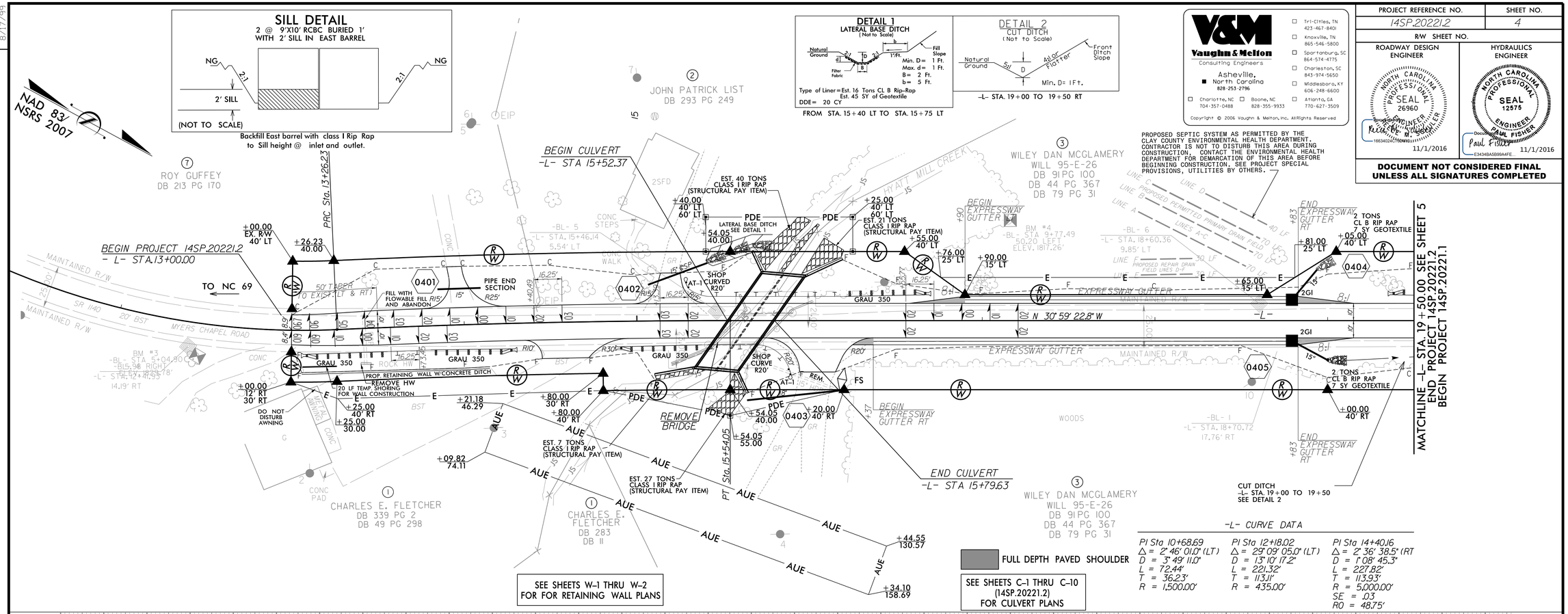
FROM STA. 15+40 LT TO STA. 15+75 LT

DETAIL 2
CUT DITCH (Not to Scale)

Natural Ground, 5:1, D, 4:1 or Flatter, Front Ditch Slope

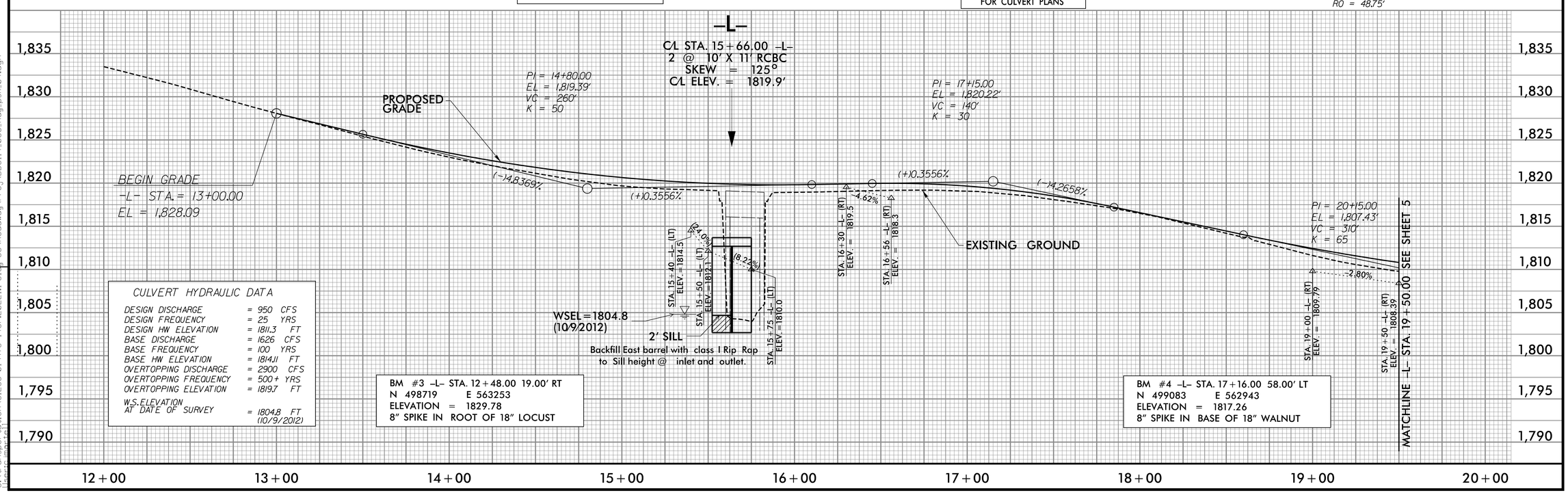
Min. D = 1Ft.

-L- STA. 19+00 TO 19+50 RT



-L- CURVE DATA

PI Sta 10+68.69	PI Sta 12+18.02	PI Sta 14+40.16
Δ = 2° 46' 01.0" (LT)	Δ = 29° 09' 05.0" (LT)	Δ = 2° 36' 38.5" (RT)
D = 3° 49' 11.0"	D = 13° 10' 17.2"	D = 1° 08' 45.3"
L = 72.44'	L = 221.32'	L = 227.82'
T = 36.23'	T = 113.11'	T = 113.93'
R = 1,500.00'	R = 435.00'	R = 5,000.00'
		SE = .03
		RO = 48.75'



CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 950	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 1811.3	FT
BASE DISCHARGE	= 1626	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 1814.11	FT
OVERTOPPING DISCHARGE	= 2900	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 1819.7	FT
W.S.ELEVATION AT DATE OF SURVEY	= 1804.8 (10/9/2012)	FT

BM #3 -L- STA. 12+48.00 19.00' RT
N 498719 E 563253
ELEVATION = 1829.78
8" SPIKE IN ROOT OF 18" LOCUST

BM #4 -L- STA. 17+16.00 58.00' LT
N 499083 E 562943
ELEVATION = 1817.26
8" SPIKE IN BASE OF 18" WALNUT

REVISIONS

8/17/99

11/1/2016
G:\Transportation\31236-01 MTC 14SP.20221.1 Clay 86\Roadway\Proj\B05114.086.Rdy_psh_04.dgn
(Basic_metric)