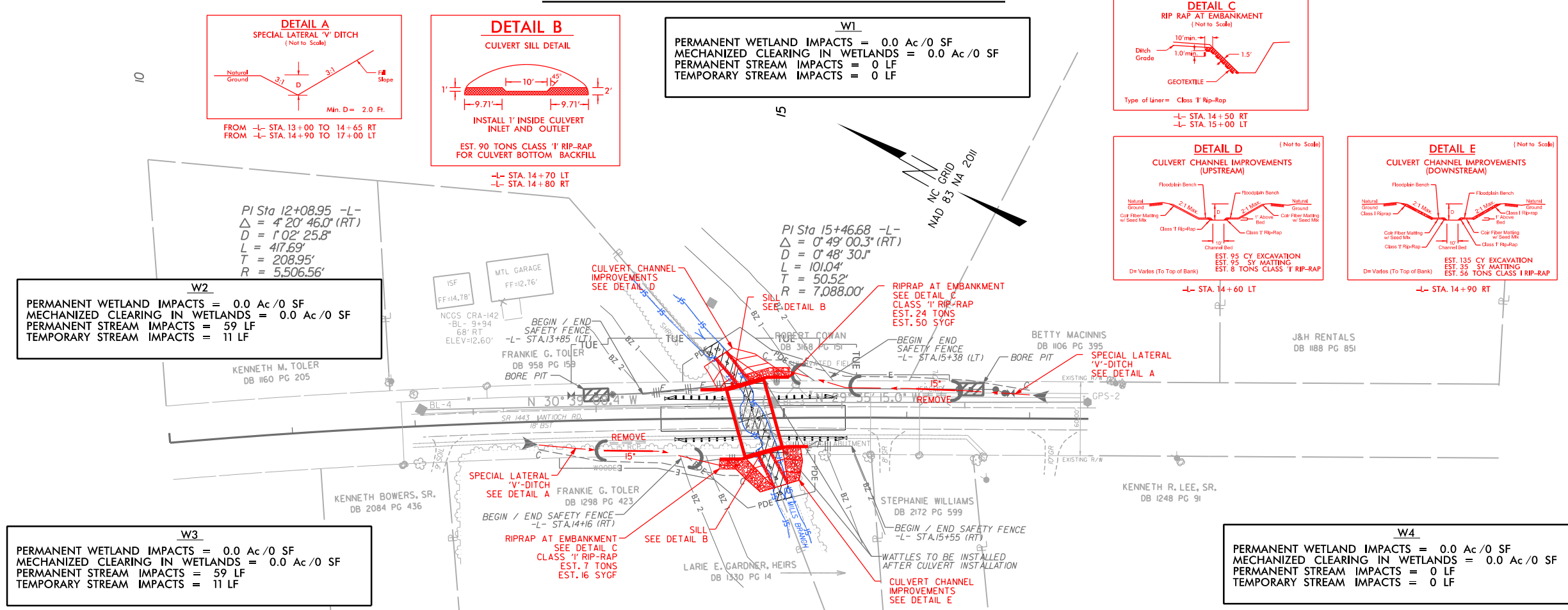


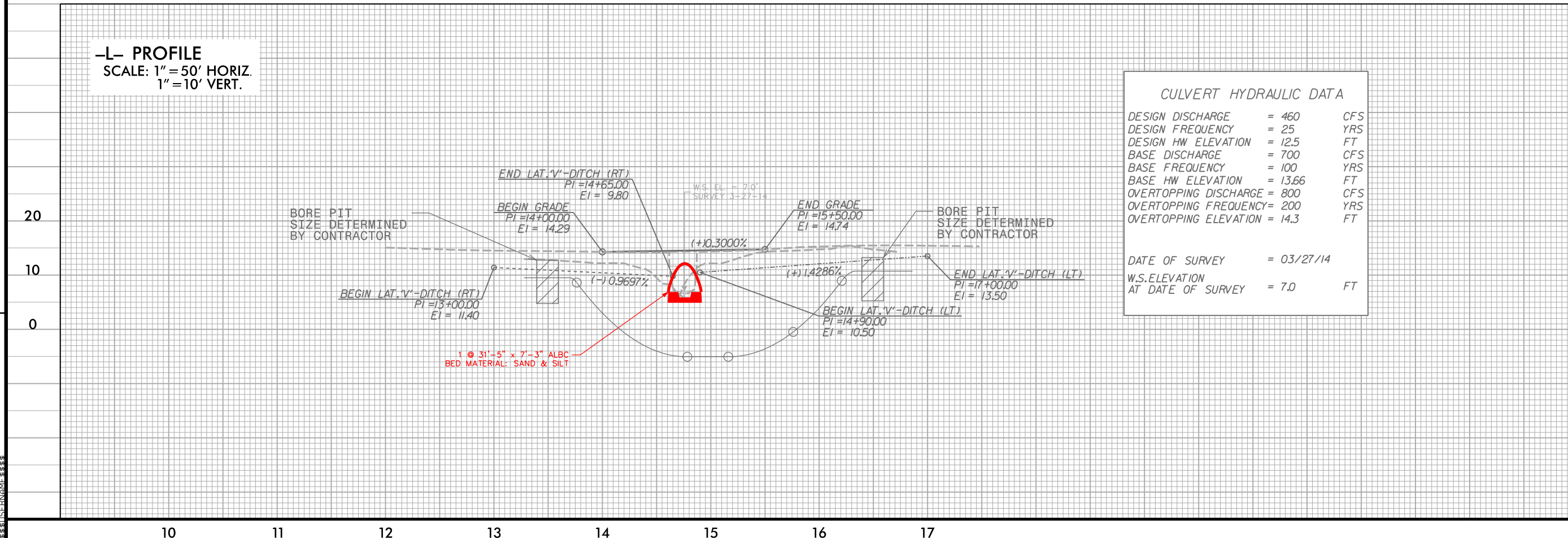
WETLAND & STREAM IMPACTS

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO. 17.BP.2.R.56	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



-L- PROFILE
SCALE: 1" = 50' HORIZ.
1" = 10' VERT.



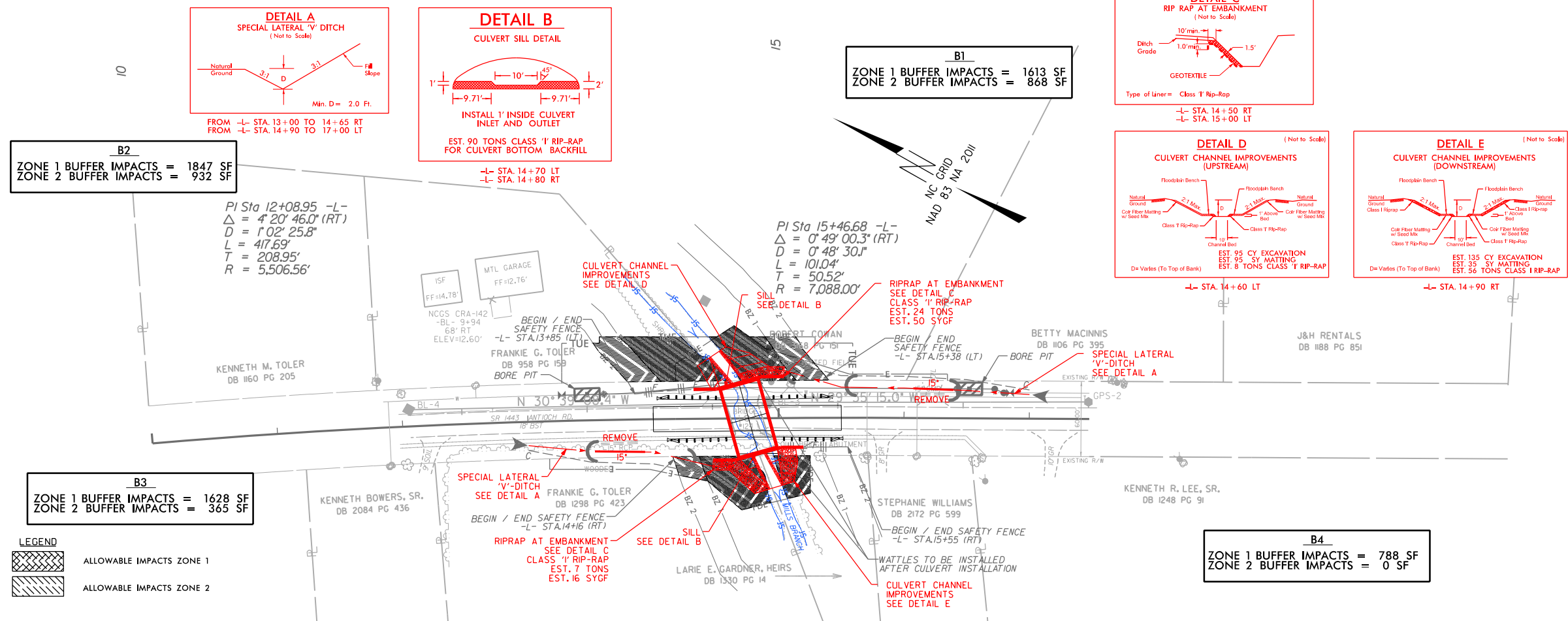
REVISIONS

6:37:48 PM 6/17/14 17.BP.2.R.56_hud_perm_01.dgn

BUFFER IMPACTS

HNTB HNTB NORTH CAROLINA, P.C.
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NC License No: C-1554

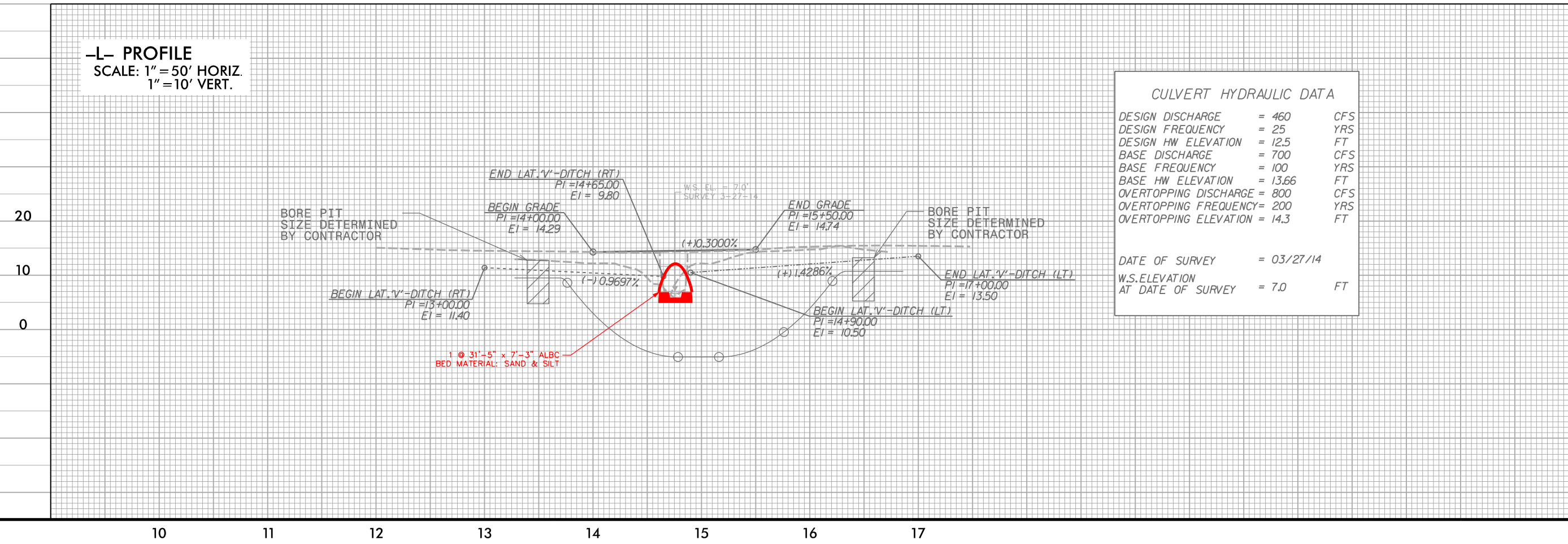
PROJECT REFERENCE NO. 17.BP.2.R.56	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



LEGEND

	ALLOWABLE IMPACTS ZONE 1
	ALLOWABLE IMPACTS ZONE 2

-L- PROFILE
SCALE: 1" = 50' HORIZ.
1" = 10' VERT.



CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 460	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 12.5	FT
BASE DISCHARGE	= 700	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 13.66	FT
OVERTOPPING DISCHARGE	= 800	CFS
OVERTOPPING FREQUENCY	= 200	YRS
OVERTOPPING ELEVATION	= 14.3	FT
DATE OF SURVEY	= 03/27/14	
W.S. ELEVATION AT DATE OF SURVEY	= 7.0	FT

REVISIONS

8.17/19

6:29:36 PM 17.BP.2.R.56_hud_buff_01.dgn