DocuSign Envelope ID: A6666DF7-F0B3-4172-B8FB-6F34EB07BC0D

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

MI ENGINEERING
1011 SCHAUB DRIVE, SUITE 100
RALEIGH, NC 27606
(919) 851-6606
FIRM PE NUMBER : P-0671

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| 17BP.8.R.118 | 5 |

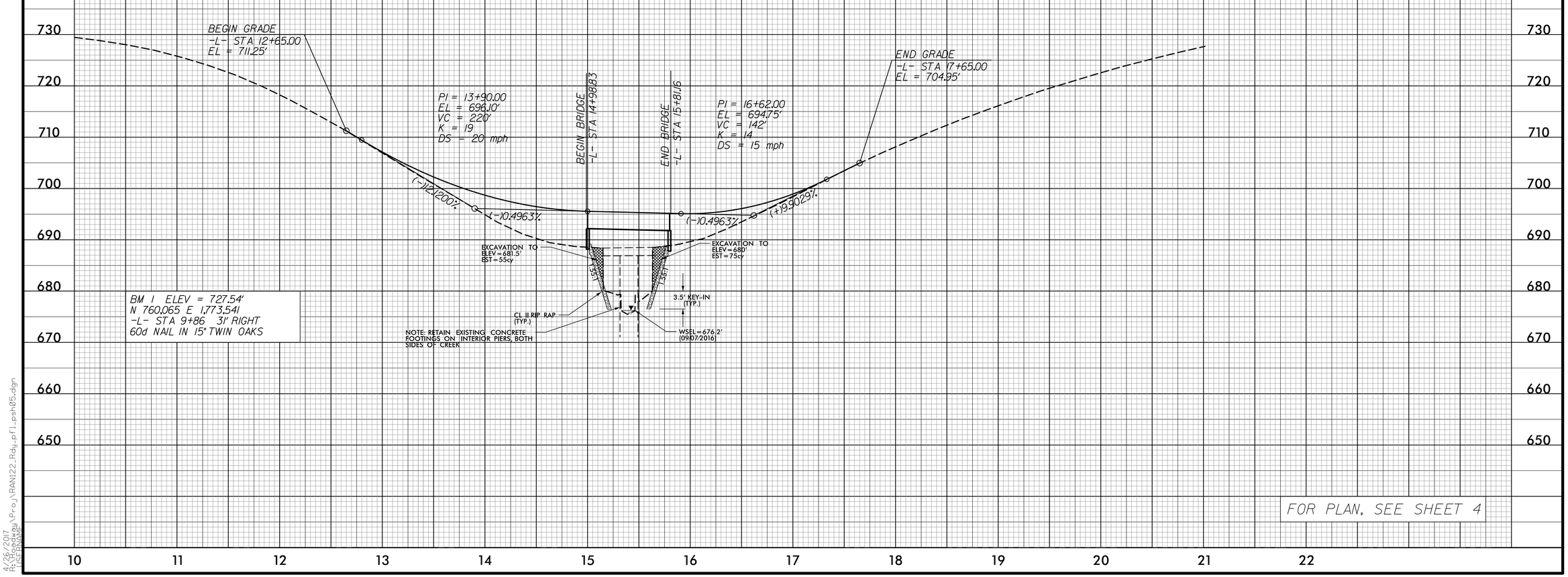
ROADWAY DESIGN ENGINEER 4/27/2017
NORTH CAROLINA PROFESSIONAL SEAL 16689 ENGINEER BRIAN ALLEN WILES
DocuSigned by: Brian A Wiles
B8900DFEA2E34DE...

HYDRAULICS ENGINEER 4/27/2017
NORTH CAROLINA PROFESSIONAL SEAL 18533 ENGINEER ANDREW NOTTINGHAM
DocuSigned by: Andrew Nottingham
E3C2049940424B1...

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

## BRIDGE HYDRAULIC DATA

| | | |
|---|---|---|
| DESIGN DISCHARGE | = 1100 | CFS |
| DESIGN FREQUENCY | = 25 | YRS |
| DESIGN HW ELEVATION | = 682.6 | FT |
| BASE DISCHARGE | = 1600 | CFS |
| BASE FREQUENCY | = 100 | YRS |
| BASE HW ELEVATION | = 683.82 | FT |
| OVERTOPPING DISCHARGE | = 10000 | CFS |
| OVERTOPPING FREQUENCY | = 500+ | YRS |
| OVERTOPPING ELEVATION | = 695.48 | FT |
| DATE OF SURVEY | = 9-7-16 | |
| W.S.ELEVATION AT DATE OF SURVEY | = 676.2 | FT |




FOR PLAN, SEE SHEET 4

5/14/99
4/26/2017
R:\Roadway\Proj\RAN122_Rdy_pf1_psh05.dgn
USER: 0UZ