

5/14/19

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| PROJECT REFERENCE NO.<br><i>B-5626</i>   | SHEET NO.<br><i>5</i>  |
| ROADWAY DESIGN ENGINEER<br><i>Michael Roberts</i><br>SEAL 27391<br>2/19/2016   | HYDRAULICS ENGINEER<br><i>James Dalzell</i><br>SEAL 24971<br>2/19/2016 |
| MOTT MACDONALD I & E, LLC<br>LICENSE NO. F-0669  |  |
| <b>DOCUMENT NOT CONSIDERED FINAL<br/>UNLESS ALL SIGNATURES COMPLETED</b>   |  |
| Prepared in the Office of:<br><b>M</b> MOTT MACDONALD<br>PO Box 700<br>Fayetteville, NC 27526<br>www.mottmac.com/americas                        |  |
| <b>SUNGATE DESIGN GROUP, P.A.</b><br>905 JONES FRANKLIN ROAD<br>RALEIGH NORTH CAROLINA 27609<br>TEL (919) 859-2443<br>ENG FIRM LICENSE NO. C-699 |  |

**BRIDGE HYDRAULIC DATA**

DESIGN DISCHARGE = 2600 CFS  
 DESIGN FREQUENCY = 50 YRS  
 DESIGN HW ELEVATION = 35.0 FT  
 BASE DISCHARGE = 3100 CFS  
 BASE FREQUENCY = 100 YRS  
 BASE HW ELEVATION = 35.5 FT  
 OVERTOPPING DISCHARGE = 5500 CFS  
 OVERTOPPING FREQUENCY = 500+ YRS  
 OVERTOPPING ELEVATION = 37.5 FT

DATE OF SURVEY = 4/15/2016  
 W.S. ELEVATION AT DATE OF SURVEY = 30.1 FT

**-L-**

**BENCH MARKS**  
 BM: TIE IN 18" OAK  
 -L- STA 24+12.72 OFF 129.62'  
 N=326089 E=2416119  
 EL. = 33.53'

**BEGIN GRADE**  
 -L- STA 19+00.00  
 EL. = 37.76'

**END GRADE**  
 -L- STA 27+50.00  
 EL. = 38.12'

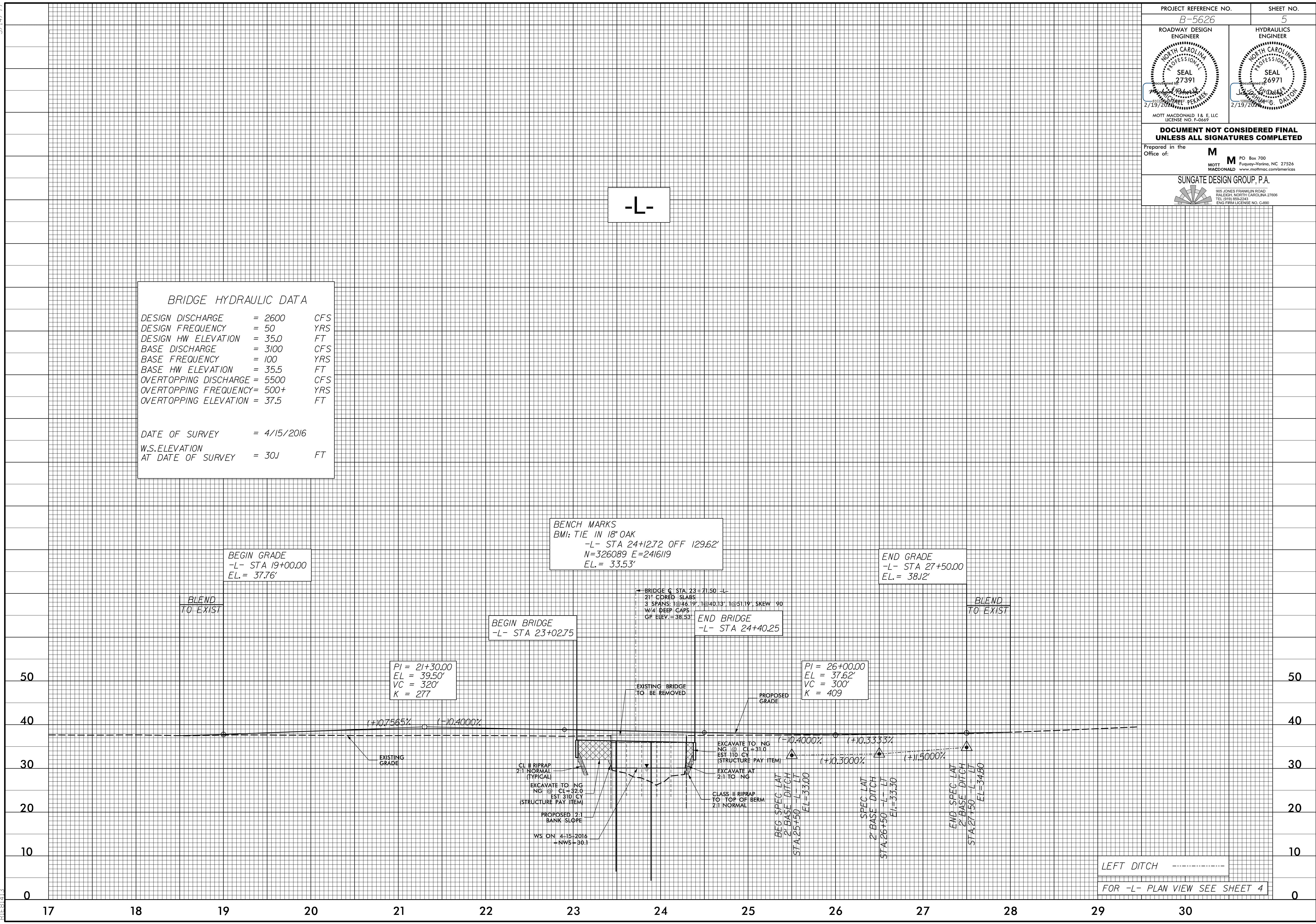
**BEGIN BRIDGE**  
 -L- STA 23+02.75

**END BRIDGE**  
 -L- STA 24+40.25

PI = 21+30.00  
 EL = 39.50'  
 VC = 320'  
 K = 277

PI = 26+00.00  
 EL = 37.62'  
 VC = 300'  
 K = 409

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LEFT DITCH -----  
 FOR -L- PLAN VIEW SEE SHEET 4