



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

October 23, 2017

MEMORANDUM TO: John Conforti, REM
Central Project Delivery Team

FROM: Keith G. Dixon
Transportation Planning Division

SUBJECT: Traffic Estimate for STIPs R-2544 & R-2545
US 64 Widening between Columbia and US 264
Dare and Tyrrell Counties

Please find attached the 2016 / 2045 traffic estimate for STIPs R-2544 & R-2545 in Dare and Tyrrell Counties. R-2544 concerns the widening of US 64 from east of SR 1153-Old Ferry Landing Rd to US 264. R-2545 concerns the widening of US 64 from east of Columbia to east of the Alligator River and the replacement of Tyrrell County bridge #7 over the Alligator River.

This project does not fall within an MPO. This project is located within the Albemarle RPO.

Due to the lack of substantial capacity constraints along US 64 within the project area, and the lack of parallel roads, the widening of US 64 is not judged to cause an increase in traffic. Thus, the 2016 and 2045 traffic estimates may be used for both No Build and Build alternatives.

A previous traffic forecast for R-2544 and R-2545 was delivered to PDEA on July 25, 2006. That forecast shows similar growth rates as this traffic estimate, however it was not used as a source of information during the production of this Traffic Estimate.

Methodology

The 2016 AADT estimate is based upon the 2016 AADT estimate published by the NCDOT Traffic Survey Unit and ATR Station A2702 located 0.60 miles west of SR 1153-Old Ferry Landing Rd just east of the Alligator River Bridge. The 2045 AADT estimate is based upon growth rates derived from historic AADT published between 1996 and 2016.

Straight-line interpolation may be used to estimate AADT between 2016 and 2045.

Seasonal Variation

US 64 in this area experiences substantial variations in seasonal traffic volumes. See the Notes of Seasonal Variation section below.

If you have any questions please call me at (919) 707-0984 or e-mail me at kgdixon@ncdot.gov.

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1554 MAIL SERVICE CENTER
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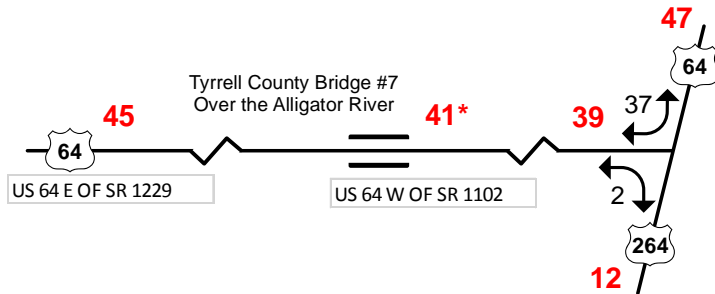
Telephone: (919) 707-0900
Fax: (919) 733-9794
Customer Service: 1-877-368-4968

Location:
1 S. WILMINGTON STREET
RALEIGH, NC 27601

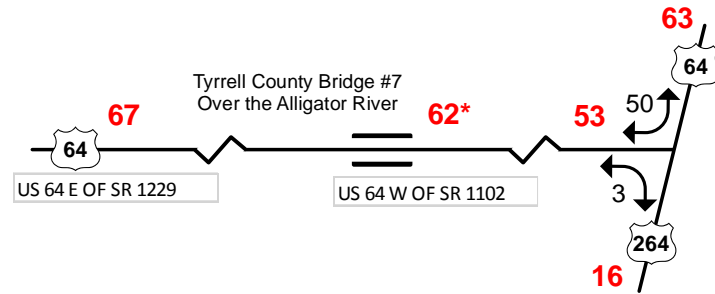
Website: www.ncdot.gov

CC: Mike Surasky, PE, PTOE, WSP

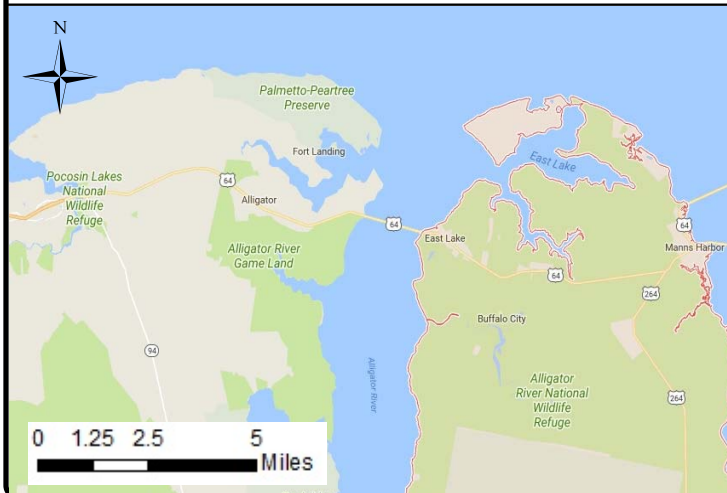
2016



2045



* ATR Station A2702:
0.60 Miles West of Old Ferry Landing Rd (SR 1153) -
East End of Tyrrell County Bridge #7 Over the Alligator River



2016 / 2045 AADT Traffic Estimate

SHEET 1 - 1

LEGEND

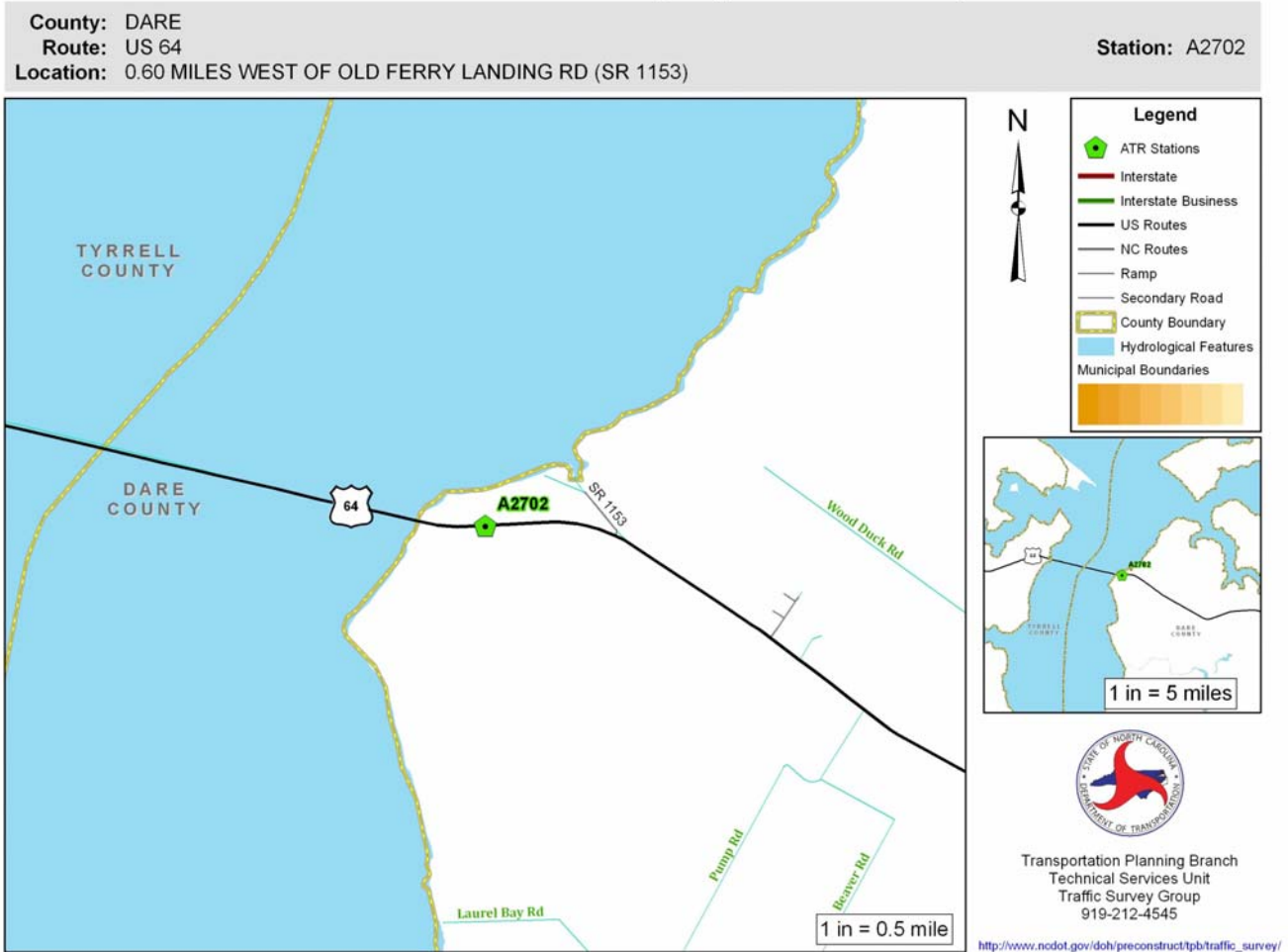
- ### No. of Vehicles Per Day in 100s
- 1- Less than 50 vpd
- X Movement Prohibited
- $K \frac{PM}{(d, t)} \rightarrow D$
- K Design Hour Factor (%)
- PM PM Peak Period
- D Peak Hour Directional Split (%)
- \rightarrow Indicates Direction of D
- (d, t) Duals, TT-STs (%)

| | |
|--|-----------------------------|
| TIP: R-2544 R-2545 | WBS: 35487.1.1 35492.1.1 |
| COUNTY: Dare/Tyrrell | DIVISION: 1 |
| DATE: 10/25/2017 | |
| PREPARED BY: Keith Dixon | |
| LOCATION: US 64 between Columbia and US 264 and Tyrrell Cnty Bridge #7 | |
| PROJECT: Widen to Multi-lanes | |

Notes on Seasonal Variation

ATR Station A2702

Automatic Traffic Recorder (ATR) Site Location Map

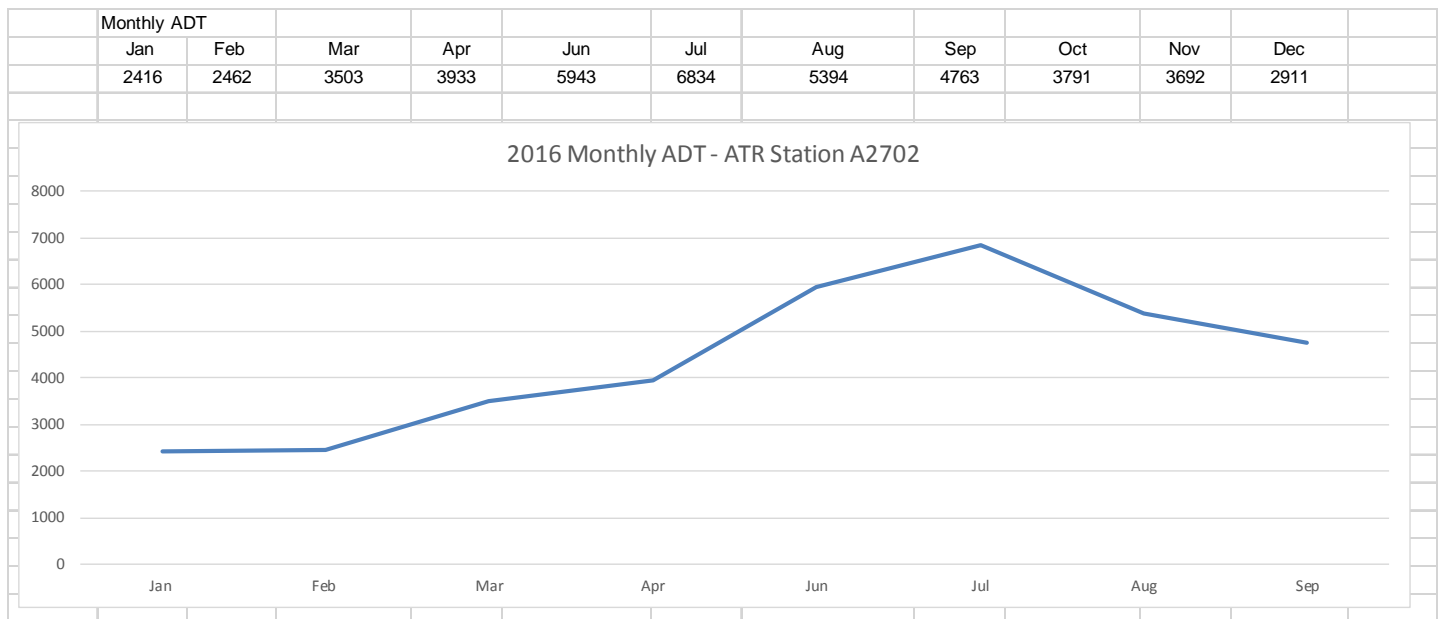


| | |
|--------------------------------|--------|
| AADT: | 4100 |
| 2016 Annual Mean Daily Peak %: | 9% |
| 2016 High Daily Peak %: | 12% |
| 2016 Low Daily Peak %: | 8% |
| 2016 Median Daily Peak %: | 9% |
| Average Weekday (Mon-Thu) D% | 53% WB |

2016 June, July and August monthly ADT, average weekday (Mon-Thu) ADT, average weekend day (Fri-Sun) ADT, and average Saturday ADT are shown in the table below:

| Month | Monthly ADT | % of AADT | Avg Weekday (Mon-Thu) ADT | % of AADT | Avg Weekend Day (Fri-Sun) ADT | % of AADT | Avg Saturday ADT | % of AADT |
|--------|-------------|-----------|---------------------------|-----------|-------------------------------|-----------|------------------|-----------|
| June | 5943 | 143.8% | 4323 | 104.6% | 8372 | 202.6% | 10699 | 258.9% |
| July | 6834 | 165.4% | 4663 | 112.8% | 9316 | 225.4% | 12457 | 301.4% |
| August | 5394 | 130.5% | 4084 | 98.8% | 7469 | 180.7% | 9421 | 228.0% |

Based upon this data an average Saturday in July 2016 averaged 301.4% of the 2016 AADT. And an average weekday in July 2016 averaged 112.8% of the 2016 AADT.



The table below shows the Max Weekday Hourly Volume Per Month and the K-factors and Directional Percentage (D%) shown in those hours.

| Month | Max Weekday (Mon-Thu) Hourly Volume | Date | Time | Eastbound | Westbound | K-Factor | D% | |
|-------|-------------------------------------|------------|-------|-----------|-----------|----------|-----|-----|
| Jan | 242 | 1/14/2016 | 17:00 | 95 | 147 | 6% | 61% | WB |
| Feb | 241 | 2/25/2016 | 16:00 | 109 | 132 | 6% | 55% | WB |
| Mar | 412 | 3/24/2016 | 15:00 | 182 | 230 | 10% | 56% | WB |
| Apr | 379 | 4/21/2016 | 16:00 | 179 | 200 | 9% | 53% | WB |
| May | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Jun | 415 | 6/16/2016 | 16:00 | 206 | 209 | 10% | 50% | WB |
| Jul | 521 | 7/5/2016 | 11:00 | 185 | 336 | 13% | 64% | WB |
| Aug | 407 | 8/4/2016 | 16:00 | 183 | 224 | 10% | 55% | WB |
| Sep | 370 | 9/15/2016 | 16:00 | 195 | 175 | 9% | 53% | EB |
| Oct | 376 | 10/5/2016 | 10:00 | 123 | 253 | 9% | 67% | WB |
| Nov | 547 | 11/23/2016 | 15:00 | 350 | 197 | 13% | 64% | EB |
| Dec | 359 | 12/26/2016 | 15:00 | 228 | 131 | 9% | 64% | EB |