

# MEMORANDUM

May 2018

TO: Jacquelyn Bowles, PE  
Structures Management Unit

FROM: Ivo Dernev, PE  
AECOM, Technical Services of North Carolina, Inc.

SUBJECT: Replace Bridge #20 over the CSX Railroad Tracks on W Grantham St

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Please find attached the 2018/2040 Traffic Forecast for the above mentioned project. It was requested by Jacquelyn Bowles, PE of NCDOT's Structures Management Unit on 03/22/2018 in support of the project design and development. The final forecast was reviewed and approved by NCDOT Transportation Planning Division on 05/23/2018.

TIP project B-4838 proposes to replace Bridge No.20 over CSX transportation railroad tracks on W Grantham St in northwest Goldsboro in Wayne County, NC. The study area for this forecast contains W Grantham St between US 117 and N George St. The project subject to the forecast analysis is located within the Goldsboro Urban Area Metropolitan Planning Organization (GMPO) and is part of the Goldsboro Travel Demand Model (GTDM) roadway network.

Included in the traffic forecast is the analysis for two scenarios, one 2018 Base Year and one 2040 Future Year scenarios:

- **Base Year 2018 No-Build / Build** - Existing Conditions US 70 (Grantham St)
- **Future Year 2040 No-Build / Build**- Existing Conditions US 70 (Grantham St)

**Certain assumptions were made in the development of this traffic forecast:**

Fiscal Constraint: The subject project is located within the boundaries of a MPO; therefore, the travel demand model and traffic forecasts are fiscally-constrained to match the assumptions of the Goldsboro Metropolitan Planning Organization (GMPO) 2040 Metropolitan Transportation Plans (MTP).

The following TIP projects included in the 2040 MTP were considered as projects anticipated to have possible impact on traffic volumes and patterns in the traffic forecast vicinity:

- Project U-5997 (Widen West Ash St to multi-lanes from US 117/I-795 to Virginia St.
- U-3609B – US 13 (Berkley Blvd) from SR 1003 (New Hope Rd) to north of SR 1705 (Hood Swamp Rd) on new location

If it is determined that any of these assumptions have become inconsistent with the project and surrounding area, please request updated traffic projections at this location.

**Travel Demand Model:** The Goldsboro Travel Demand Model was used as a tool in the development of this forecast.

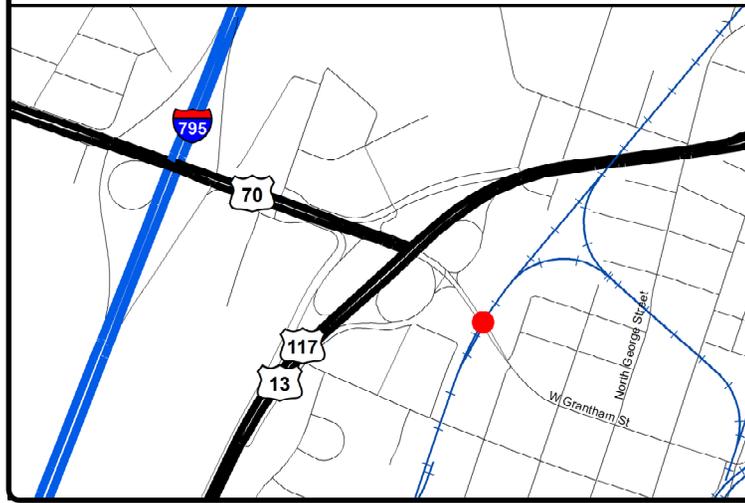
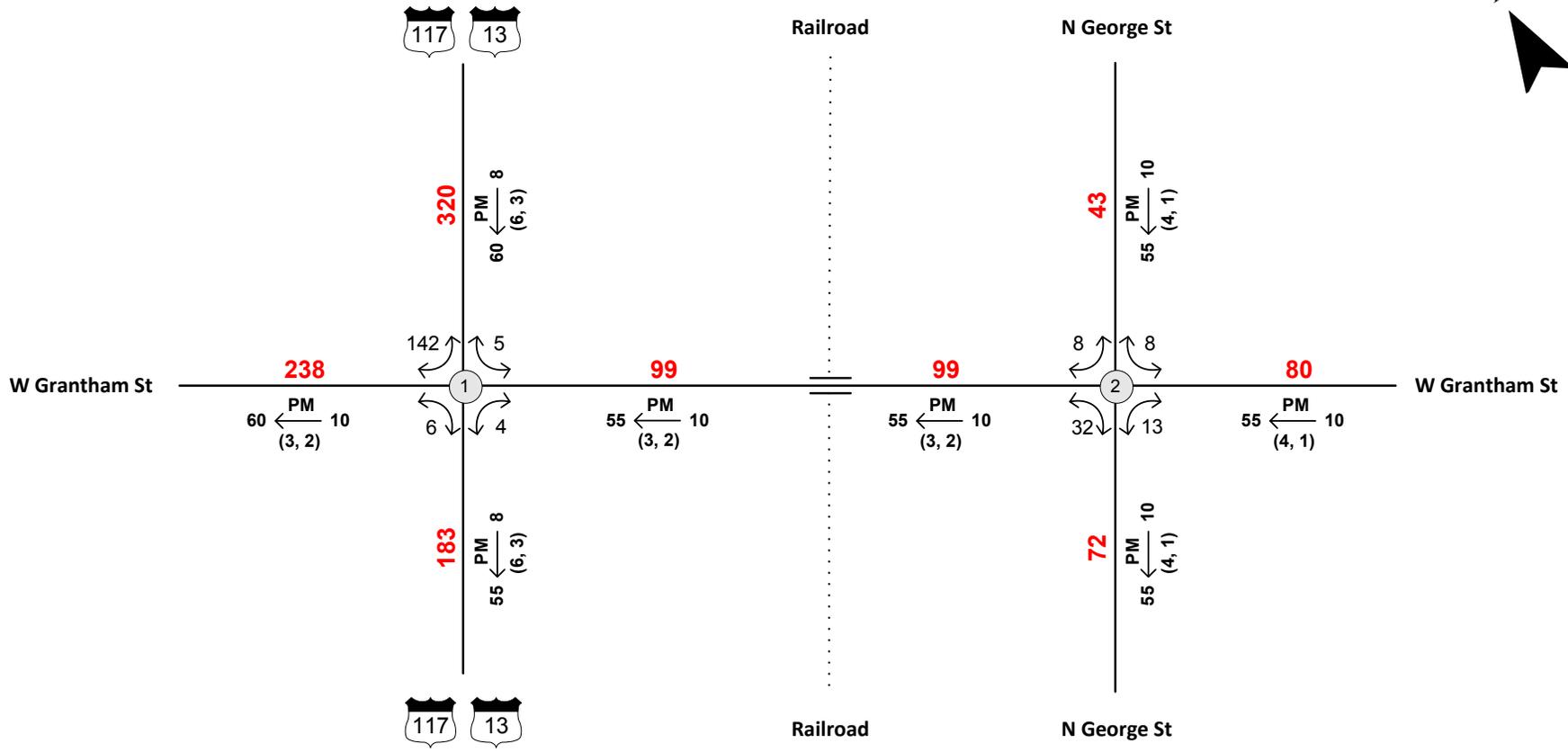
**Traffic Forecast Methodology:** The 2018 traffic volumes and design factors were developed based upon current counts, historic AADT trend projections and previous forecasts.

The GTDM was relied upon in the calculation of the 2040 Future Year traffic volumes. Historic growth trends were analyzed and compared to modeled growth rates. Engineering judgment adjustments were applied as needed in finalizing the volumes in order to develop a balanced forecast.

If you have any questions or if I can be of further assistance, please do not hesitate to call me at (919) 239-7203, or e-mail me at [ivo.dernev@aecom.com](mailto:ivo.dernev@aecom.com).

cc: FILE (Wayne County TIP Project B-4838)

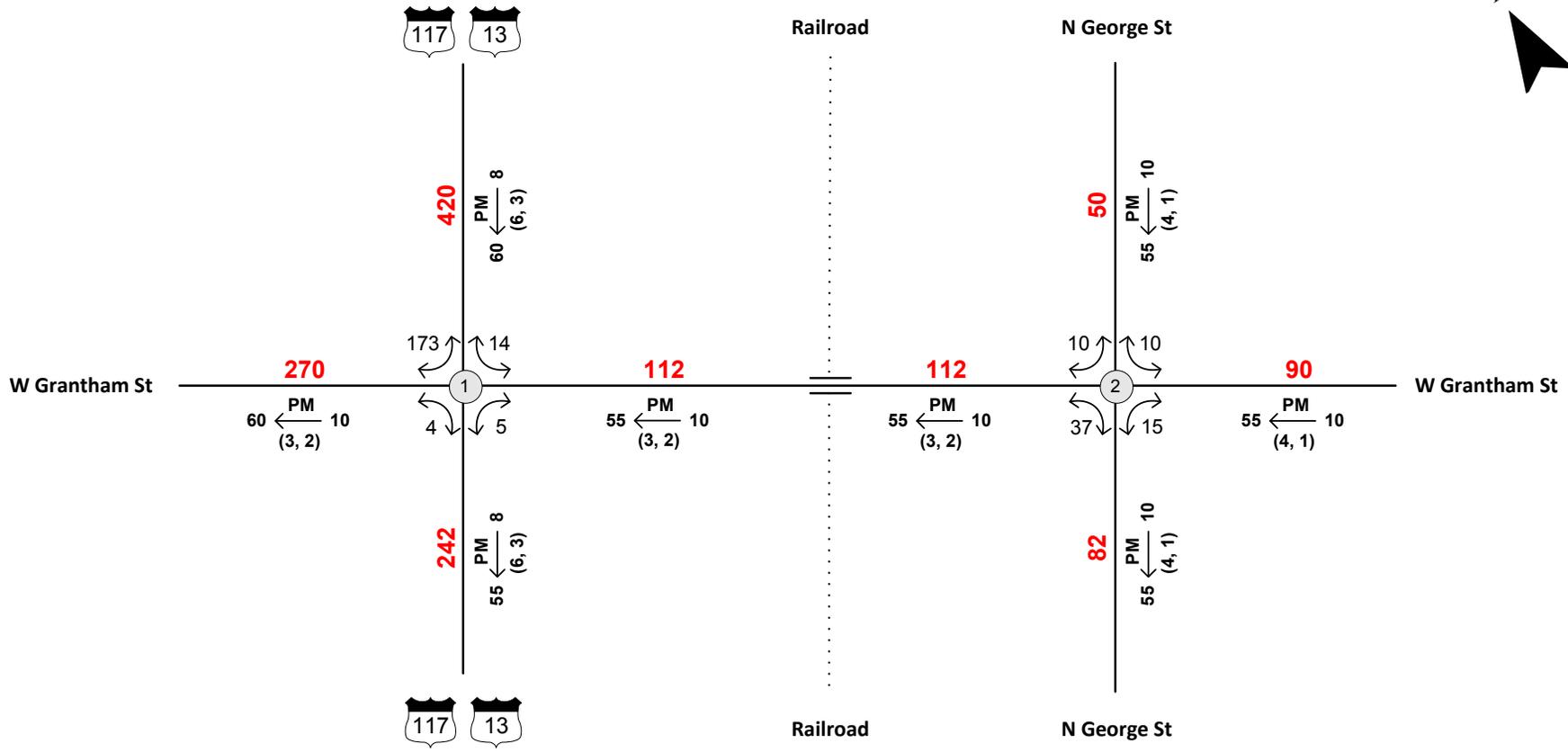
cc: *(via e-mail as PDF attachments)*  
Keith G. Dixon, State Traffic Forecast Engineer  
Jim Dunlop, Congestion Management Section  
Brenda Moore, PE, Roadway Design Unit  
Clark Morrison, PE, Pavement Management Unit  
Andy Brown, PE, Highway Division 4 Traffic Engineer  
James Rowe, Goldsboro MPO Planning Director  
Scott Walston, PE, TPB Triangle Group Supervisor



# 2018 AVERAGE ANNUAL DAILY TRAFFIC

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

<b>TIP:</b> B - 4838	<b>WBS:</b> 38608.1.1
<b>COUNTY:</b> Wayne	<b>DIVISION:</b> 4
<b>DATE:</b> May 2018	
<b>PREPARED BY:</b> AECOM	
<b>LOCATION:</b> W Grantham Bridge No 20 over CSX RR in Goldsboro	
<b>PROJECT:</b> Bridge Replacement	



# 2040 AVERAGE ANNUAL DAILY TRAFFIC

## FUTURE YEAR NB/B SHEET 2 OF 2

### LEGEND

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