

# TRAFFIC FORECAST COVER LETTER

**MEMORANDUM TO:** Craig A. Midgett (NCDOT Highway Division 1)

**FROM:** Shashank Shekhar, PE (Arcadis)

**DATE:** November 28, 2022

**SUBJECT:** **Traffic Forecast for STIP Project R-5807 (H090869)**  
*Camden County*  
Modernization of NC 343 from east of US 158 to SR 1119 (S Trotman Rd)

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This forecast has been reviewed and approved by NCDOT Transportation Planning Division on November 21, 2022.

Please find attached the 2022 (Base Year) and 2045 (Future Year) Traffic Forecast for project R-5807 located in Camden County. Project R-5807 includes modernization of NC 343 from east of US 158 in Camden, NC to SR 1119 (S Trotman Rd) in Shiloh, NC.

The project lies within Albemarle Rural Planning Organization (RPO). R-5807 is in the current NCDOT 2020-2029 STIP and in the draft NCDOT 2024-2033 STIP with construction year of 2026 and Right of Way (ROW) year of 2024.

North Carolina Statewide Travel Demand Model Gen 4.5 (NCSTMGen4.5) was utilized for this forecast.

Following staff from NCDOT and local officials were consulted during the development of this forecast:

- Saman T. Jeffers, EI - Contact for Albemarle RPO, NCDOT Transportation Planning Division
- Craig A. Midgett, EI - Division Planning Engineer, NCDOT Highway Division 1
- Angela Welsh, CFM - Planning Director / RPO Coordinator, Albemarle RPO

This is the first forecast for this project.

R-5807 includes modernization of NC 343 with replacement of two bridges and is not expected to affect travel demand. Hence, the forecast represents project No-Build and Build conditions. The following two (2) scenarios are provided in the forecast:

- 2022 Base Year No Build | Build (BY NB | B)
- 2045 Future Year No Build | Build (FY NB | B)

**Certain assumptions were made in the development of the forecast**

**Fiscal Constraint:** For projects that fall outside of a Metropolitan Planning Organization's (MPO) area, forecasts are fiscally constrained to the NCDOT STIP. This means that in the future year, any project which has some construction money scheduled in the STIP is considered constructed by the future year. The current NCDOT 2020-2029 STIP does not have any other project in vicinity affecting this traffic forecast.

**Development Activity:** Except for Camden County High School, which is currently under construction at a new site, there is no land development currently under construction, nor is any substantial future development or site-specific development anticipated within the immediate area of the project assumed within the traffic forecast.

**Methodology:** The 2022 Base Year estimate is based on recent traffic count data collected for the project and historic AADT data.

The 2045 Future Year forecast is based on growth rates determined from projected population growth, historical traffic growth rates, and model growth rates.

The AM and PM peak factors are provided separately.

**Interpolation:** To determine any intermediate years, straight-line interpolation may be used. AADT volumes may be extrapolated for up to two years immediately following 2045. If it is determined that any of these assumptions have become inconsistent with the project and surrounding area activity, please request updated information.

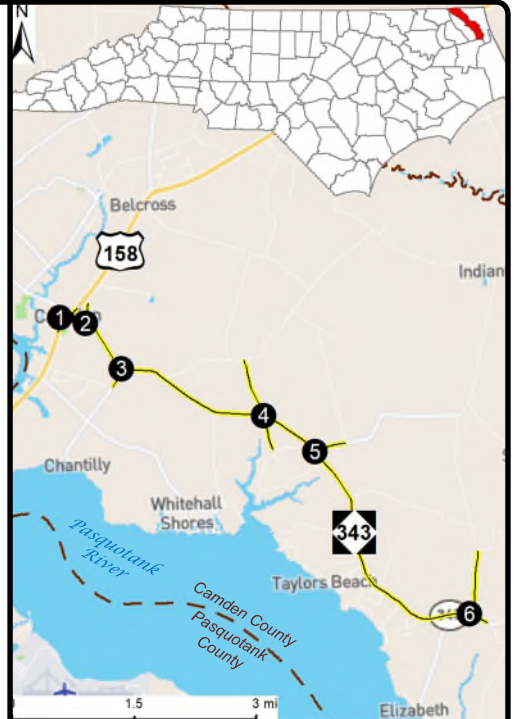
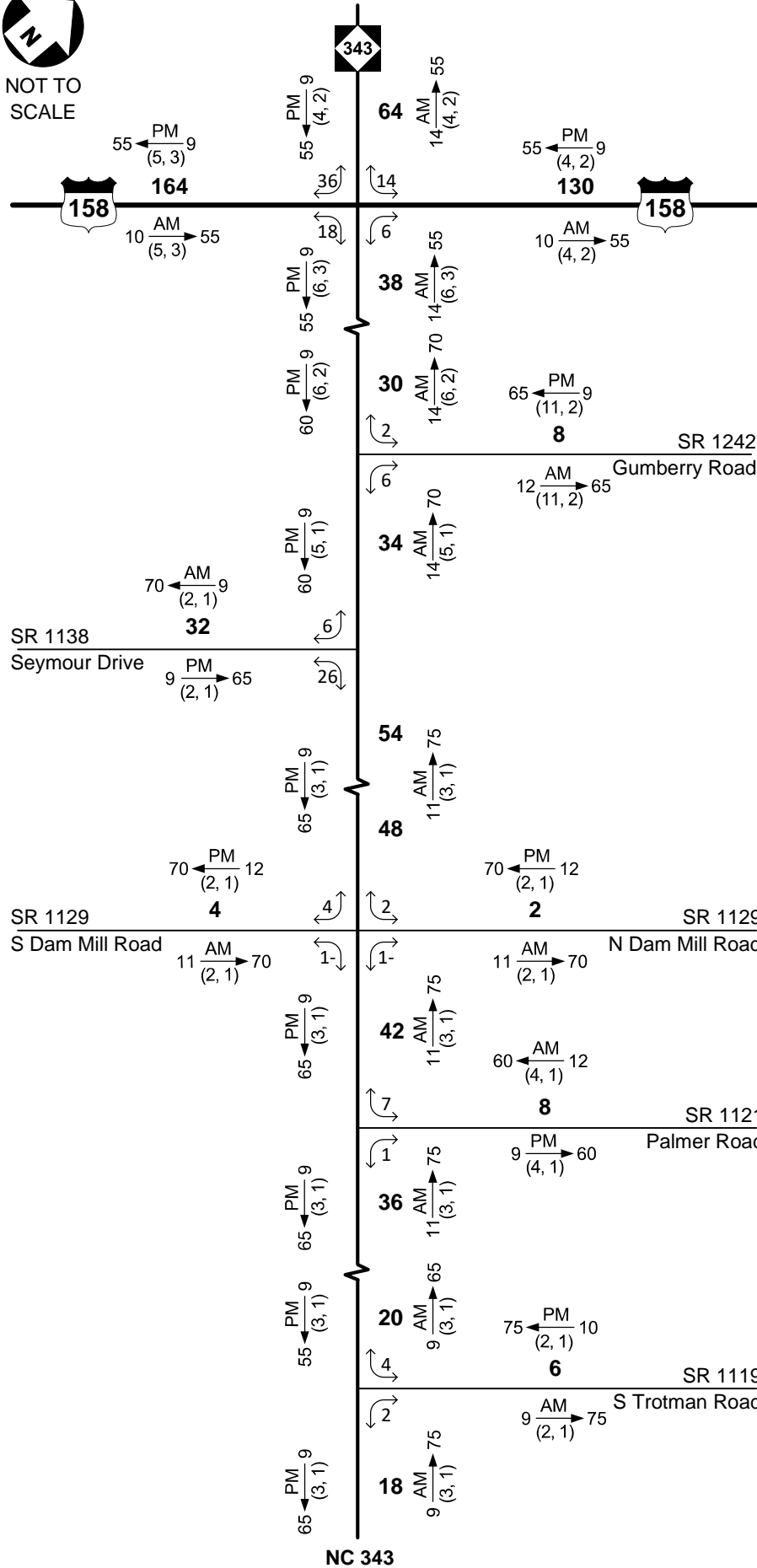
If you have any questions, please do not hesitate to contact Shashank Shekhar (919-328-5563, shashank.shekhar@arcadis.com). Thank you.

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cc: *TrafficForecast@ncdot.gov (via email as pdf attachments)*



NOT TO SCALE



# 2022

## BASE YEAR No Build | Build

AVERAGE ANNUAL DAILY TRAFFIC

SHEET 1 OF 2

### LEGEND

### Vehicles Per Day (VPD) in 100s

1- Less than 50 VPD

X Movement Prohibited

— Roadway

$$K \xrightarrow{\text{PM}} D$$

(d, t)

**K** Design Hour Factor (%)

**PM** PM Peak Period

**D** Peak Hour Directional Split (%)

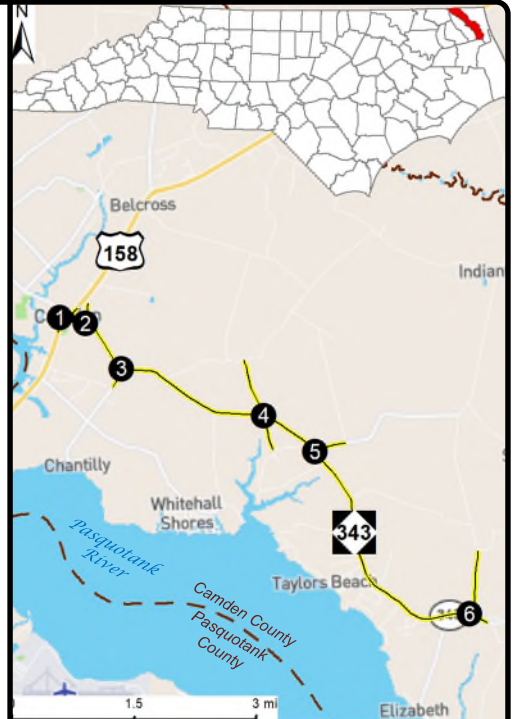
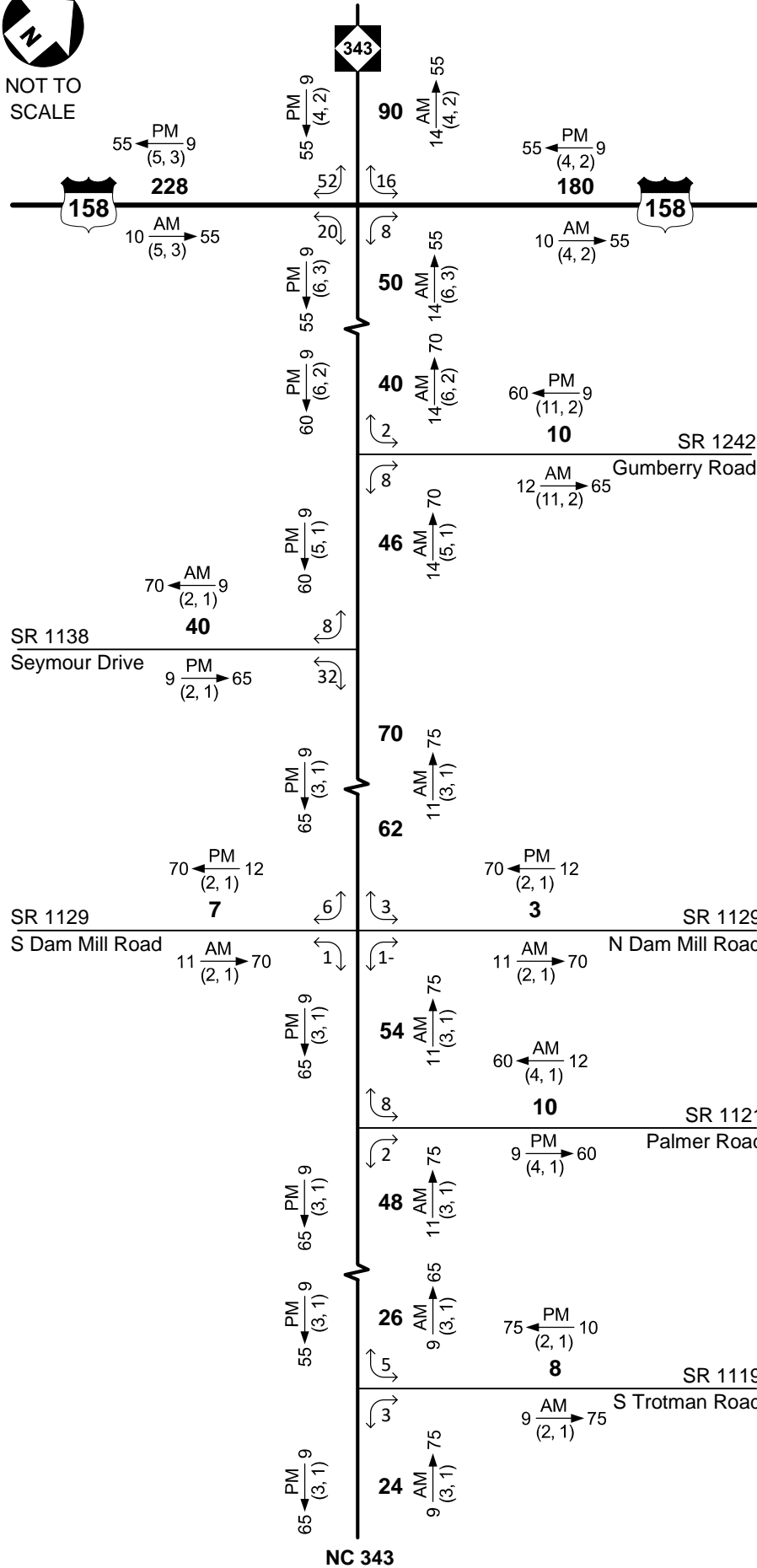
**→** Indicates Direction of D

**(d,t)** Duals, TT-STs (%)

|   |                       |
|---|-----------------------|
| <b>TIP:</b> R-5807  | <b>WBS:</b> 46969.1.1 |
| <b>COUNTY:</b> Camden   | <b>DIVISION:</b> 1    |
| <b>DATE:</b> November 21, 2022  |                       |
| <b>PREPARED BY:</b> <b>ARCADIS</b>                                    |                       |
| <b>LOCATION:</b> NC 343 from east of US 158 to SR 1119 (S Trotman Rd) |                       |
| <b>PROJECT:</b> Modernization of NC 343                               |                       |



NOT TO SCALE



# 2045

## FUTURE YEAR

### No Build | Build

AVERAGE ANNUAL DAILY TRAFFIC

SHEET 2 OF 2

### LEGEND

- ### Vehicles Per Day (VPD) in 100s
- 1- Less than 50 VPD
- X Movement Prohibited
- Roadway

$K \xrightarrow{\text{PM}} D$   
 (d, t)

- K** Design Hour Factor (%)
- PM** PM Peak Period
- D** Peak Hour Directional Split (%)
- Indicates Direction of D
- (d,t)** Duals, TT-STs (%)

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