



## NCDOT Prioritization 3.0 Project Summary

**SPOT ID:** H129617

**Mode:** Highway

**Status:** Submitted

### NC-540 (New Route - Eastern Wake Freeway (Toll))

**From/Cross Street:** I-40

**Specific Improvement Type:** 5 - Construct Roadway on New Location

**To:** US 64/264 Bypass

**Project Category:** Statewide Mobility

**Length:** 10.61

**TIP#:** R-2829

**Fully Funded in Draft STIP?** No

**Cost to NCDOT:** \$284,784,000

#### Description:

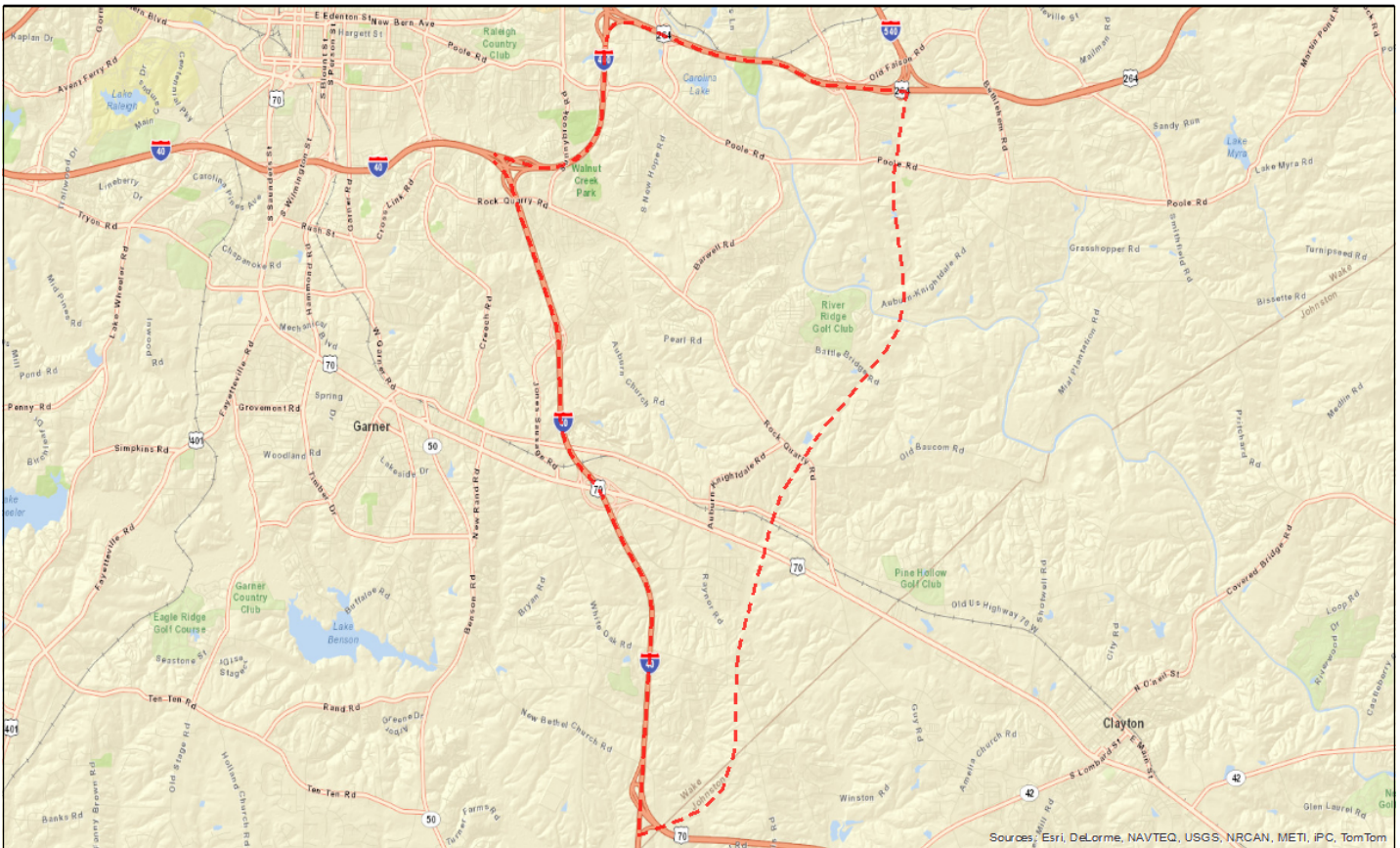
Construct Freeway on New Location (toll)

**Division(s):** Division 5, Division 4

**County(s):** WAKE, JOHNSTON

**MPOS(s)/RPO(s):** Capital Area MPO

#### Project Location



Sources: Esri, DeLorme, NAVTEQ, USGS, NRCAN, METI, IPC, TomTom

**Statewide Mobility Total Score: 44.6**

| <b>Quantitative Score</b>   | <b>Division Engineer<br/>Local Input Points</b> | <b>MPO/RPO Local<br/>Input Points</b> |
|---|---|---------------------------------------|
| Congestion (V/C) (30%) 75.42<br>Multimodal + [Freight & Military] (20%) 23.21<br>[Travel Time] Benefit/Cost (30%) 5.83<br>Economic Competitiveness (10%) 100.00<br>Safety (10%) 55.82 | N/A   | N/A                                   |
| <b>Totals: Weight: 100% Weighted Score: 44.6</b>  |   |                                       |

**Regional Impact Total Score: 0**

| <b>Quantitative Score</b>   | <b>Division Engineer<br/>Local Input Points</b> | <b>MPO/RPO Local<br/>Input Points</b> |
|---|---|---------------------------------------|
| Congestion (V/C) (25%) 75.42<br>Safety (10%) 55.82<br>[Travel Time] Benefit/Cost (25%) 5.83<br>Accessibility / Connectivity (10%) 41.24 | Percent: 15%<br>Points:                         | Percent: 15%<br>Points:               |
| <b>Totals: Weight: 70% Weighted Score: 35.89</b>  |   |                                       |

**Division Needs Total Score: 0**

| <b>Quantitative Score</b>   | <b>Division Engineer<br/>Local Input Points</b> | <b>MPO/RPO Local<br/>Input Points</b> |
|---|---|---------------------------------------|
| [Travel Time] Benefit/Cost (20%) 5.83<br>Safety (10%) 55.82<br>Congestion (V/C) (20%) 75.42 | Percent: 25%<br>Points:                         | Percent: 25%<br>Points:               |
| <b>Totals: Weight: 50% Weighted Score: 21.83</b>  |   |                                       |

**Project Data \*****Existing Conditions**

|   |            |
|---|------------|
| Existing Cross-Section:                     |            |
| Speed Limit:                                | 67         |
| Length (miles):                             | 15.66      |
| Facility Type:                              | Freeway    |
| Access Control:                             | Full       |
| Functional Classification:                  | Interstate |
| Terrain Type:                               | Rolling    |
| Lane Width:                                 | 12         |
| Paved Shoulder Width:                       | 10         |
| Roadway has Curb & Gutter?                  | No         |
| Volume (AADT):                              | 81723.68   |
| Capacity:                                   | 114759.69  |
| Volume/Capacity Ratio:                      | 0.71       |
| % Autos:                                    | 94%        |
| % Trucks:                                   | 6%         |
| Truck Volume:                               | 4641.34    |
| Crash Density:                              | 65.49      |
| Crash Severity:                             | 53.4       |
| Critical Crash Rate:                        | 48.59      |
| Crash Frequency:                            | 0          |
| Severity Index:                             | 0          |
| County Tier Designation:                    | 3          |
| Non-Interstate STRAHNET Route?              | No         |
| Average Commuting Time:                     | 27         |
| Existing Median Type (for Cost Estimation): | Divided    |
| Pavement Condition Rating:                  | 92         |
| Actual Congested Speed:                     | 37.78      |
| Travel Time Index:                          | 1.11       |

**Project Benefits**

|  |   |
|--|---|
| Project Cross-Section:                                 | 6A - 6 Lane Divided (46' Depressed Median) with Paved Shoulders |
| Speed Limit:   | 70  |
| Length (miles):  | 10.61   |
| Facility Type:   | Freeway   |
| Access Control:  | Full  |
| Functional Classification:                             | Interstate  |
| Terrain Type:  | Rolling   |
| DOT Design Lane Width:                                 | 12  |
| DOT Design Paved Shoulder Width:                       | 10  |
| Travel Time Savings for 30 Years (Total):              | 73707497.65   |
| Travel Time Savings for 30 Years (Autos):              | 69521421.35   |
| Travel Time Savings for 30 Years (Trucks):             | 4186076.3   |
| Long-Term Employment:                                  | 1913  |
| % Change in Economy:                                   | 0.00123936  |
| Provides Direct Connection to Transportation Terminal? | No  |
| Does project upgrade how the roadway functions?        | Yes   |
| In CTP or LRTP?  | No  |
| CTP/LRTP Name:   |   |
| CTP/LRTP Completion Year:                              |   |
| Submitted by:  | Division 5  |

\* Data reflects calculations which include weighted averages (where applicable) and represent raw output from the Department's SPOT On!line tool and associated databases.

**Project Ownership****Division**

| <b>Division</b>              | <b>Percent</b> | <b>Regional Impact</b> | <b>Division Needs</b> |
|------------------------------|----------------|------------------------|-----------------------|
| Division 5                   | 88%            | 0                      | 0                     |
| Division 4                   | 12%            | 0                      | 0                     |
|                              | 0%             | 0                      | 0                     |
| <b>TOTAL Division Points</b> |                | <b>0</b>               | <b>0</b>              |

**MPO/RPO**

| <b>MPO/RPO</b>              | <b>Percent</b> | <b>Regional Impact</b> | <b>Division Needs</b> |
|-----------------------------|----------------|------------------------|-----------------------|
| Capital Area MPO            | 100%           | 0                      | 0                     |
|                             | 0%             | 0                      | 0                     |
|                             | 0%             | 0                      | 0                     |
| <b>TOTAL MPO/RPO Points</b> |                | <b>0</b>               | <b>0</b>              |

**Project Cost and Source**

|                        |                      |   |
|------------------------|----------------------|---|
| Construction Cost:     | \$431,572,000        | TIP Unit  |
| Right-of-Way Cost:     | \$37,600,000         | TIP Unit  |
| Utilities Cost:        | \$3,100,000          | TIP Unit  |
| Total Project Cost:    | \$472,272,000        |   |
| Other Funding:         | \$187,488,000        | Toll Revenue less Roadway Maintenance & Financing |
| <b>Cost to NCDOT :</b> | <b>\$284,784,000</b> |   |