



NCDOT Prioritization 3.0 Project Summary

SPOT ID: H129615

Mode: Highway

Status: Submitted

NC-540 (New Route - Southern Wake Freeway/Triangle Expressway (Toll))

From/Cross Street: NC 55 (South)

Specific Improvement Type: 5 - Construct Roadway on New Location

To: US 401

Project Category: Statewide Mobility

Length: 16.8

TIP#: R-2721

Fully Funded in Draft STIP? Yes Statewide Mobility

Cost to NCDOT: \$158,598,000

Description:

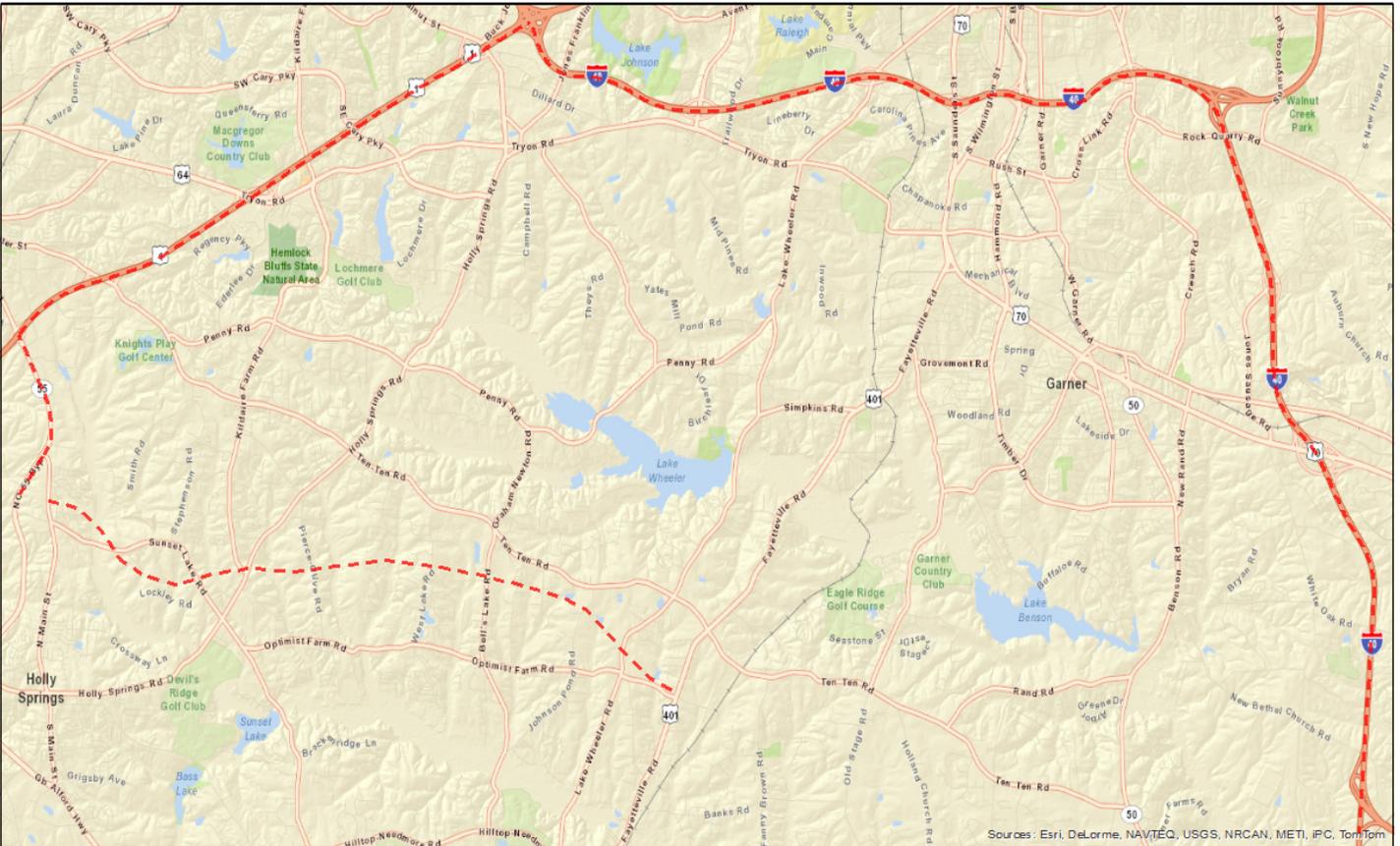
Construct Freeway on New Location (toll)

Division(s): Division 5

County(s): WAKE

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

Project Location



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

Statewide Mobility Total Score: 52.7

Quantitative Score	Division Engineer Local Input Points	MPO/RPO Local Input Points
Economic Competitiveness (10%) 100.00	N/A	N/A
Safety (10%) 69.35		
[Travel Time] Benefit/Cost (30%) 11.41		
Congestion (V/C) (30%) 89.31		
Multimodal + [Freight & Military] (20%) 27.73		
Totals: Weight: 100% Weighted Score: 52.7		

Regional Impact Total Score: 0

Quantitative Score	Division Engineer Local Input Points	MPO/RPO Local Input Points
Accessibility / Connectivity (10%) 44.26	Percent: 15% Points:	Percent: 15% Points:
Safety (10%) 69.35		
[Travel Time] Benefit/Cost (25%) 11.41		
Congestion (V/C) (25%) 89.31		
Totals: Weight: 70% Weighted Score: 42.11		

Division Needs Total Score: 0

Quantitative Score	Division Engineer Local Input Points	MPO/RPO Local Input Points
Congestion (V/C) (20%) 89.31	Percent: 25% Points:	Percent: 25% Points:
Safety (10%) 69.35		
[Travel Time] Benefit/Cost (20%) 11.41		
Totals: Weight: 50% Weighted Score: 27.08		

Project Data ***Existing Conditions**

Existing Cross-Section:	
Speed Limit:	65
Length (miles);	26.25
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):	90784.92
Capacity:	102782.5
Volume/Capacity Ratio:	0.88
% Autos:	94%
% Trucks:	6%
Truck Volume:	5545.89
Crash Density:	84.97
Crash Severity:	52.4
Critical Crash Rate:	70.71
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:	89
Actual Congested Speed:	52.53
Travel Time Index:	1.12

Project Benefits

Project Cross-Section:	6A - 6 Lane Divided (46' Depressed Median) with Paved Shoulders
Speed Limit:	70
Length (miles):	16.8
Facility Type:	Freeway
Access Control:	Full
Functional Classification:	Interstate
TerrainType:	Rolling
DOT Design Lane Width:	12
DOT Design Paved Shoulder Width:	10
Travel Time Savings for 30 Years (Total):	224178222.11
Travel Time Savings for 30 Years (Autos):	210483581.02
Travel Time Savings for 30 Years (Trucks):	13694641.09
Long-Term Employment:	5644.17
% Change in Economy:	0.00376279
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!ine tool and associated databases.

Project Ownership

Division

Division	Percent	Regional Impact	Division Needs
Division 5	100%	0	0
	0%	0	0
	0%	0	0
TOTAL Division Points		0	0

MPO/RPO

MPO/RPO	Percent	Regional Impact	Division Needs
Capital Area MPO	100%	0	0
	0%	0	0
	0%	0	0
TOTAL MPO/RPO Points		0	0

Project Cost and Source

Construction Cost:	\$297,336,000	TIP Unit
Right-of-Way Cost:	\$45,200,000	TIP Unit
Utilities Cost:	\$11,550,000	TIP Unit
Total Project Cost:	\$354,086,000	
Other Funding:	\$195,487,500	Toll Revenue less Roadway Maintenance & Financing
Cost to NCDOT :	\$158,598,000	