NCDOT Prioritization 4.0 Project Summary

SPOT ID: H150229 **Mode:** Highway **Status:** Draft

I-40, NC-147 (Durham Freeway)

From/Cross Street: NC 147 Durham Freeway
To:
Length: 2

Specific Improvement Type: 8 - Improve Interchange
Project Category: Statewide Mobility
TIP#:

Fully Funded in Draft STIP? No

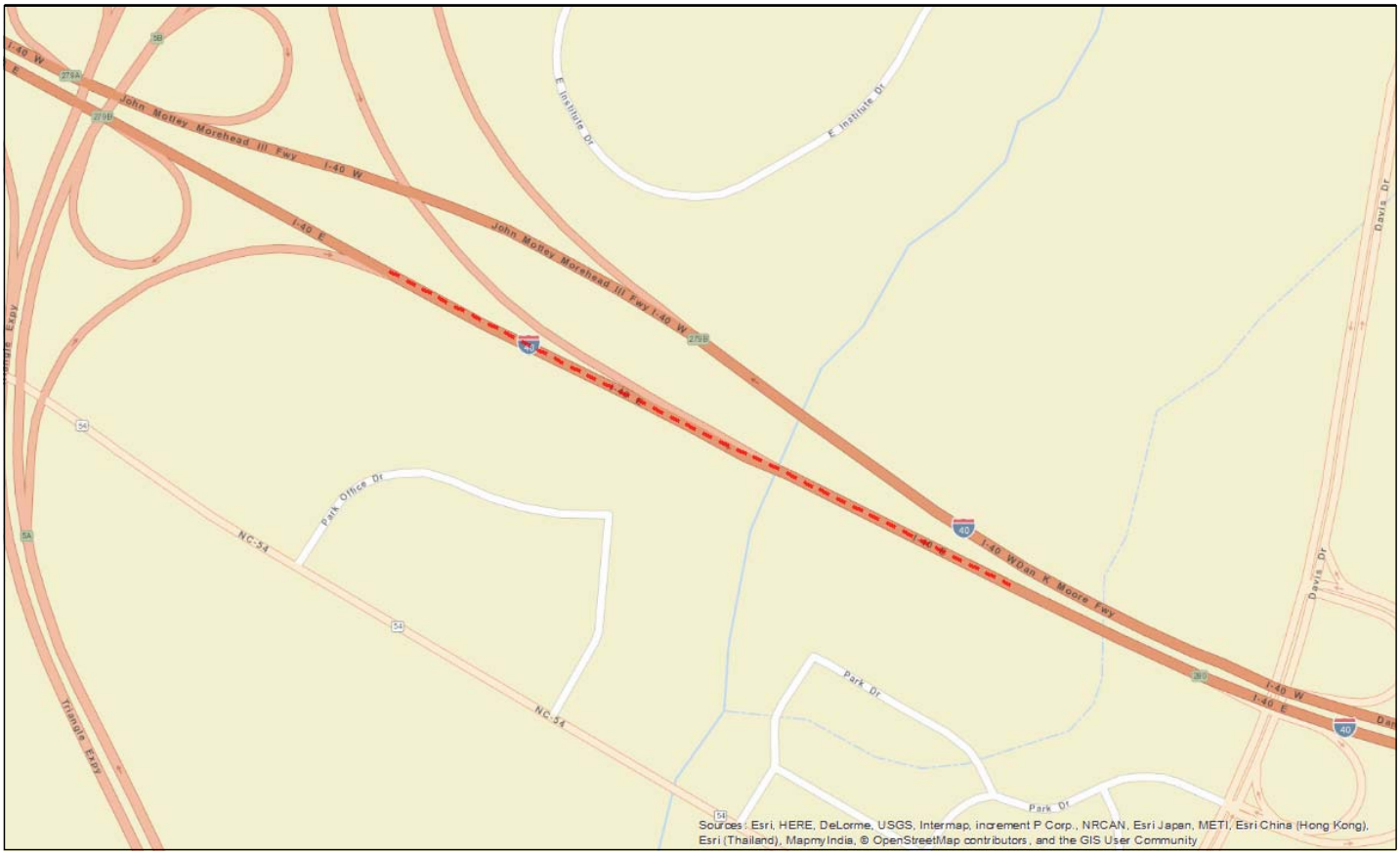
Cost to NCDOT: $79,980,000

Description:

Improve existing NC 147 Durham Freeway SE on-ramp to I-40 toward Raleigh. Ramp improvement only.

Division(s): Division 5
County(s): DURHAM
MPOS(s)/RPO(s): Durham Chapel Hill Carrboro MPO

Project Location



Statewide Mobility Total Score: 0

Quantitative Score		Division Engineer Points	MPO/RPO Points
Congestion SW (30%)	In Progress		
Safety (15%)	In Progress		
Economic Competitiveness (10%)	In Progress		
Multimodal (5%)	In Progress	N/A	N/A
Freight (15%)	In Progress		
Benefit-Cost SW & REG (25%)	In Progress		
Totals: Weight: 100% Weighted Score: 0			

Regional Impact Total Score: 0

Quantitative Score		Division Engineer Points	MPO/RPO Points
Safety (10%)	In Progress		
Accessibility / Connectivity (10%)	In Progress		
Congestion REG (20%)	In Progress	Percent: 15%	Percent: 15%
Freight (10%)	In Progress	Points:	Points:
Benefit-Cost SW & REG (20%)	In Progress		
Totals: Weight: 70% Weighted Score: 0			

Division Needs Total Score: 0

Quantitative Score		Division Engineer Points	MPO/RPO Points
Safety (10%)	In Progress		
Accessibility / Connectivity (5%)	In Progress		
Congestion DIV (15%)	In Progress	Percent: 25%	Percent: 25%
Freight (5%)	In Progress	Points:	Points:
Benefit-Cost DIV (15%)	In Progress		
Totals: Weight: 50% Weighted Score: 0			

Criteria measures

Creiteria	Measure	Raw Value	Scaled value
Congestion	Volume/Capacity (SW 60%, REG 80%, DIV 100%)	1.32	
	Volume (SW 40%, REG 20%, DIV 0%)	330000	
Benefit-Cost (SW/REG)	Benefit/Cost SW/REG (100%)		
Benefit-Cost (DIV)	Benefit/Cost DIV (100%)		
Safety (Segments)	Crash Density (33%)	45.66	
	Crash Severity (33%)	39.49	
	Critical Crash Rate (33%)	45.66	
Safety (Intersections)	Crash Frequency (50%)		
	Severity Index (50%)		
Economic Competitiveness	%Change in Economy (50%)		
	Long-term Jobs (50%)		

Creiteria	Measure	Raw Value	Scaled value
Accessibility / Connectivity	County Economic Indicator (50%)	337	
	Upgrade Roadway Travel Time Savings (50%)		
Freight	Truck Volume (50%)	14726.4	
	Volume/Capacity on Non-Interstate STRAHNET or Future Interstate (30%)		
	Distance to Freight Terminal (20%)	3.92	
Multimodal	Distance to Multimodal Terminal (60%)	2.02	
	Volume/Capacity on Route near Multimodal Terminal (40%)		
Lane Width	Lane Width Difference (100%)	0	
Shoulder Width	Paved Shoulder Width Difference (100%)	0	
Pavement Condition	Pavement Condition Rating (100%)	100	

Project Data*

Existing Conditions

Existing Cross-Section:	6 Lane with Median - Full Control
Speed Limit (mph):	65
Length (miles):	2
Facility Type:	Freeway
Access Control:	Full
Functional Classification:	Interstate
Terrain Type:	Rolling
Lane Width (ft):	12
Paved Shoulder Width (ft):	10
Roadway has Curb & Gutter?	No
Volume (AADT):	312000
Volume (PADT):	330000
Peak ADT (PADT) Factor:	1.06
Capacity (vpd):	250599.92
Volume (PADT)/Capacity Ratio:	1.32
% Autos:	95%
% Trucks:	5%
Truck Volume (AADTT):	14726.4
Crash Density (seg):	45.66
Crash Severity (seg):	39.49
Critical Crash Rate (seg):	45.66
Crash Frequency (int):	
Severity Index (int):	
Adjusted Property Tax Base Per Capita Rank:	
Population Growth Rank:	
Median Household Income Rank:	
12 Month Average Unemployment Rate Rank:	
Sum County Rank:	337
Non-Interstate STRAHNET Route?	No
Future Interstate Route?	No
Pavement Condition Rating:	100

Project Benefits

Project Cross-Section:	
Speed Limit (mph):	65
Length (miles):	2
Facility Type:	Freeway
Access Control:	Full
Functional Classification:	Interstate
TerrainType:	Rolling
DOT Design Lane Width (ft):	12
DOT Design Paved Shoulder Width (ft):	10
Travel Time Savings for 10 Years (NCSTM) - SW/REG:	0
Travel Time Savings in $ (NCSTM) - SW/REG:	
Travel Time Savings for 10 Years (CALC) - DIV:	
Travel Time Savings in $ (CALC) – DIV:	
Safety Benefits in $:	
Long-Term Employment:	
% Change in Economy:	
Nearest Freight Terminal:	Raleigh-Durham International Airport
Distance to Freight Terminal (miles):	3.92
Nearest Multimodal Passenger Terminal :	Triangle Transit Regional Transit Center
Distance to Multimodal Terminal (miles):	2.02
Does project upgrade how the roadway functions?	No
Travel Time Savings/User:	
In CTP or LRTP?	Yes
CTP/LRTP Name:	DCHC MPO 2040 MTP
CTP/LRTP Completion Year:	2013
Submitted by:	Durham Chapel Hill Carrboro MPO

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

Project Ownership

Division

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

MPO/RPO

MPO/RPO	Percent	Regional Impact Points	Division Needs Points
Durham Chapel Hill Carrboro MPO	100%	0	0
	0%	0	0
	0%	0	0
TOTAL MPO/RPO Points		**0**	**0**

Project Cost and Source

Construction Cost:	$67,080,000	Cost Estimation Tool
Right-of-Way Cost:	$12,900,000	Cost Estimation Tool
Utilities Cost:	$0	Cost Estimation Tool
Total Project Cost:	$79,980,000	
Other Funding:	$0	None
Cost to NCDOT :	**$79,980,000**	