

Technical Memorandum

NCTA Toll NC-540 / Old Holly Springs-Apex Road Interchange Toll Schedule Recommendation

1. Introduction

This document presents CDM Smith's recommended toll rate schedule for the new interchange at Toll NC-540 (Triangle Expressway) and Old Holly Springs-Apex Road. The interchange will be located between the existing US 1 and NC 55 interchanges, and will consist of one toll location with two toll zones located on the ramps to-and-from the north (Figure 1). The full-access interchange is expected to open by December 1, 2016.

2. Toll Schedule Review

In December 2010 and September 2013, CDM Smith examined the traffic and revenue impacts of the proposed Old Holly Springs-Apex Road interchange. Toll schedule recommendations for the proposed interchange were developed as part of those efforts. CDM Smith conducted a review of those prior recommendations as part of this current effort.

CDM Smith also reviewed the current Triangle Expressway toll rate schedule along with NCTA planned future toll rate adjustments. Segment distances were confirmed and per-mile toll rates were identified for all possible movements on the Triangle Expressway. The recommended toll rate schedule for the proposed Old Holly Springs-Apex Road interchange was then compared to existing rates for consistency.

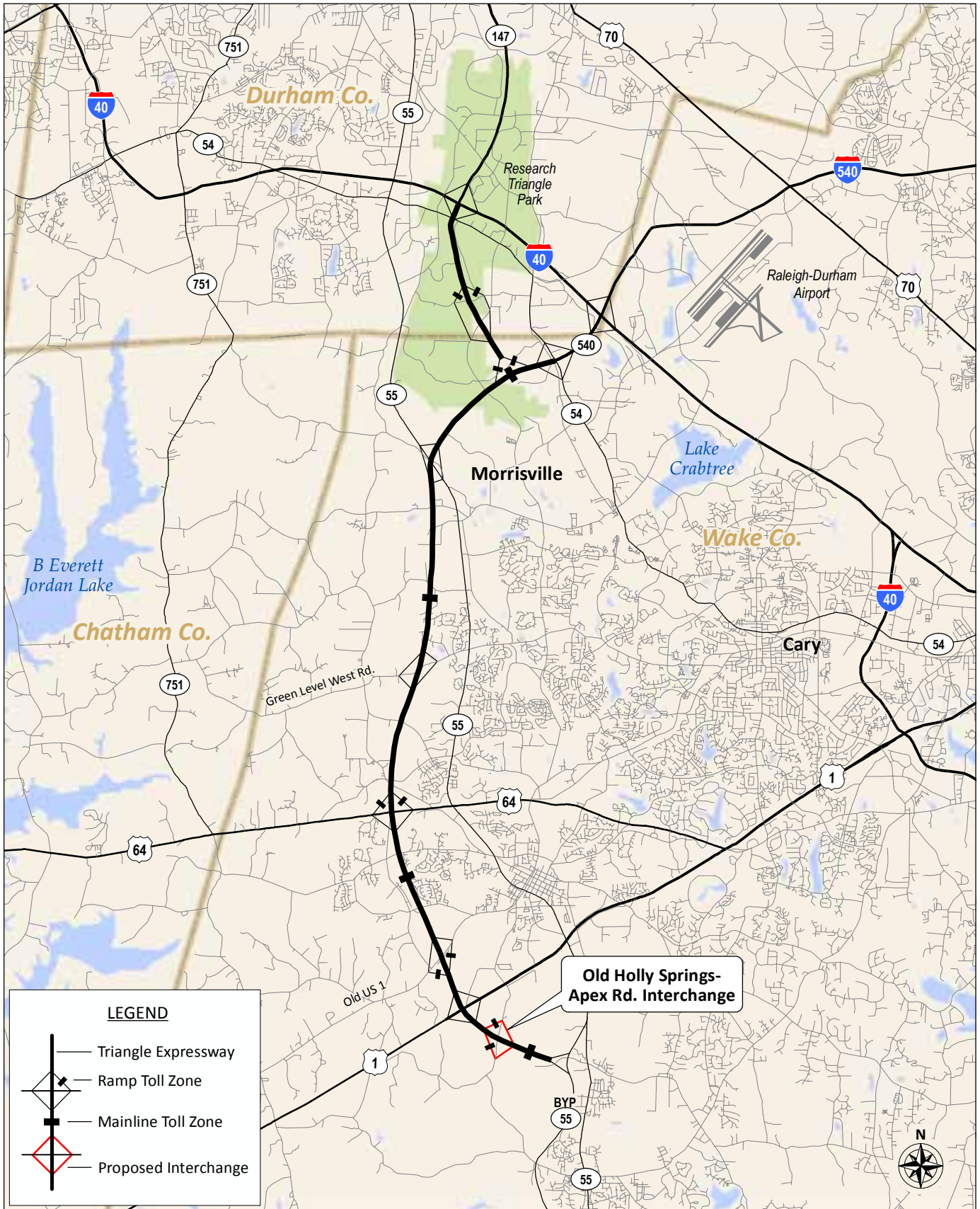
3. Toll Schedule Recommendations

Table 1 presents CDM Smith's recommended Old Holly Springs-Apex Road interchange toll schedule, by payment method and vehicle class, for calendar years 2016 through 2051. The recommended rates are consistent with the current tolling conventions on the Triangle Expressway in that:

- Class 2 toll rates will equal two times the Class 1 toll rates.
- Class 3 toll rates will equal four times the Class 1 toll rates.
- Electronic toll collection (ETC) toll rates will be discounted by 35 percent of the Bill by Mail toll rates for each of the three toll classes.

The recommended rates for the new toll zones were selected so motorists accessing the Triangle Expressway via the Old Holly Springs-Apex Road interchange will pay the same per-mile toll rate whether traveling north to US 1 or south to NC 55. This relationship is maintained through 2051 as recommended future toll rate increases align with the rate of annual increases planned for the existing Triangle Expressway toll zones. The addition of the proposed Old Holly Springs-Apex Road interchange and the new toll zones will not affect the current toll rate schedule for existing Triangle Expressway toll zones.

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These recommendations represent a small increase over the Old Holly Springs-Apex Road interchange toll rate schedule presented in CDM Smith’s 2013 submission. The Old Holly Springs-Apex Road interchange toll rate schedule recommended in that document was designed to match the per-mile toll rate at the South Salem Street toll zones. The primary purpose of the change is to minimize the potential for motorists currently accessing the Triangle Expressway via NC 55 to shift to the Old Holly Springs-Apex Road interchange. This change does not negatively affect the projected toll revenue impacts contained in CDM Smith’s 2013 submission.

**Table 1
Recommended Toll Rate Schedule for
Old Holly Springs-Apex Road Interchange Ramps**

Calender Year (1)	Class 1 (2-axles)		Class 2 (3-axles)		Class 3 (4 or more axles)	
	ETC	Video	ETC	Video	ETC	Video
2016	\$ 0.26	\$ 0.40	\$ 0.52	\$ 0.80	\$ 1.04	\$ 1.60
2017	0.27	0.41	0.54	0.82	1.08	1.64
2018	0.28	0.43	0.56	0.86	1.12	1.72
2019	0.29	0.44	0.58	0.88	1.16	1.76
2020	0.30	0.46	0.60	0.92	1.20	1.84
2021	0.31	0.47	0.62	0.94	1.24	1.88
2022	0.32	0.49	0.64	0.98	1.28	1.96
2023	0.33	0.50	0.66	1.00	1.32	2.00
2024	0.34	0.52	0.68	1.04	1.36	2.08
2025	0.35	0.53	0.70	1.06	1.40	2.12
2026	0.36	0.55	0.72	1.10	1.44	2.20
2027	0.37	0.57	0.74	1.14	1.48	2.28
2028	0.38	0.58	0.76	1.16	1.52	2.32
2029	0.39	0.60	0.78	1.20	1.56	2.40
2030	0.40	0.62	0.80	1.24	1.60	2.48
2031	0.42	0.64	0.84	1.28	1.68	2.56
2032	0.43	0.66	0.86	1.32	1.72	2.64
2033	0.44	0.68	0.88	1.36	1.76	2.72
2034	0.45	0.70	0.90	1.40	1.80	2.80
2035	0.47	0.72	0.94	1.44	1.88	2.88
2036	0.48	0.73	0.96	1.46	1.92	2.92
2037	0.49	0.75	0.98	1.50	1.96	3.00
2038	0.49	0.76	0.98	1.52	1.96	3.04
2039	0.50	0.77	1.00	1.54	2.00	3.08
2040	0.51	0.79	1.02	1.58	2.04	3.16
2041	0.52	0.80	1.04	1.60	2.08	3.20
2042	0.52	0.81	1.04	1.62	2.08	3.24
2043	0.53	0.81	1.06	1.62	2.12	3.24
2044	0.53	0.82	1.06	1.64	2.12	3.28
2045	0.54	0.83	1.08	1.66	2.16	3.32
2046	0.54	0.83	1.08	1.66	2.16	3.32
2047	0.55	0.84	1.10	1.68	2.20	3.36
2048	0.55	0.85	1.10	1.70	2.20	3.40
2049	0.55	0.85	1.10	1.70	2.20	3.40
2050	0.56	0.86	1.12	1.72	2.24	3.44
2051	0.56	0.87	1.12	1.74	2.24	3.48

(1) Toll rate adjustments are assumed to increase on or around January 1st of each year.