



















Board of Directors

Finance Committee

January 15, 2020

Complete 540 Construction Update

Rodger Rochelle, P.E. Chief Engineer

Complete 540

Three Contracts



COMPLETE
540
Triangle Expression
Southeast Extension

STIP Segments

R-2721 (A&B) and R-2828

Design-Build Contracts

R-2828

- The Lane Construction Corporation / Blythe Construction, Inc. JV
- Lead design firm WSP USA Inc.
- \$403.2M

R-2721B

- Flatiron Constructors, Inc. / Branch Civil, Inc. JV
- Lead design firm HDR Engineering, Inc. of the Carolinas
- \$160.0M

R-2721A

- Flatiron Constructors, Inc. / Branch Civil, Inc. JV
- Lead design firm Gannett Fleming, Inc.
- \$183.5M

Complete 540 Design

R-2828

- 8.6 miles
- 239 design submittals, including final roadway design plans, hydraulics design plans, MOT plans, structure design plans
- Construction plans roughly 70% complete

R-2721B

- 4.9 miles
- 89 design submittals, including final roadway design plans, hydraulics design plans, structure design plans
- Construction plans roughly 50% complete

R-2721A

- 4.3 miles
- 102 design submittals, including preliminary roadway plans, culvert survey reports
- Construction plans roughly 30% complete

Complete 540 Right of Way

R-2721A

- 212 parcels
- 144 parcels settled
- 68 parcels remaining

R-2721B

- 221 parcels
- 155 parcels settled
- 66 parcels remaining

R-2828

- 209 parcels
- 42 parcels settled
- 167 parcels remaining



Complete 540 Permitting

401 Water Quality Certification

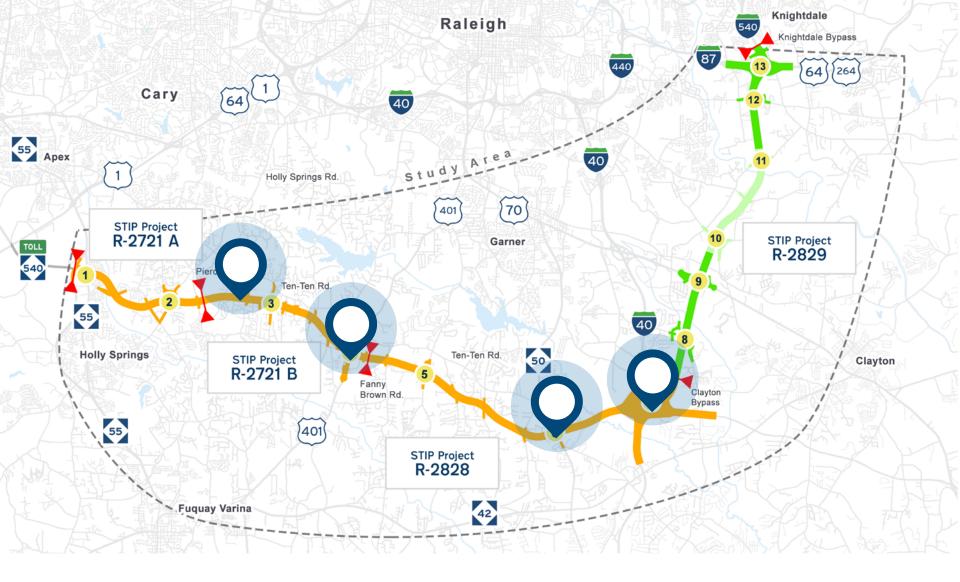
- NC Department of Environmental Quality-Division of Water Resources
- Issued February 15, 2019

404 Permit

- US Army Corps of Engineers
- Issued October 24, 2019

Permit Modifications

- Frequent agency coordination meetings
- Permit modification will reflect final design details and result in reduced environmental impacts
- Submitted permit modification package for R-2828 and R-2721B early December 2019
- Anticipate submittal of permit modification package for R-2721A in February 2020



Interchange Locations

- 1 N.C. 55 Bypass
- 5 Old Stage Rd. (S.R. 1006)
- 9 U.S. 70 Business
- 13 U.S. 64 / 264 (I-87)
- 2 Holly Springs Rd. (S.R. 1152)
- 6 N.C. 50 / Benson Rd.
- 10 Rock Quarry Rd. (S.R. 2542)
- 3 Bells Lake Rd. (S.R. 1386)
- 7 I-40 and U.S. 70 Clayton Bypass
- 11 Auburn Knightdale Rd. (S.R. 2555)
- 4 Fayetteville Rd. (U.S. 401)
- 8 White Oak Rd. (S.R. 2700)
- 12 Poole Rd. (S.R. 1007)

Complete 540 Closing Summary

David Roy

Director of Finance & Budget



Complete 540 Funding Sources*

- \$499,461,980 TIFIA Loan (NR/BBB/BBB)**
 - Gross toll revenue pledge subordinate to the senior lien TriEx system toll revenue bonds
 - DSRF funded to 100% of the lesser of three test, provided the 125% of average annual debt service is calculated on a forward basis resulting in on-going deposits
- \$370,975,000 Senior Lien Toll Revenue Bonds (NR/BBB/BBB)**
 - Gross toll revenue pledge on parity with Series 2009, Series 2017 and Series 2018
 Toll Revenue Bonds
 - Common DSRF funded to 50% of the standard lesser of three test
- \$115,979,250 Senior Lien State Appropriation Revenue Bonds (Aa1/AA+/AA+)**
 - Gross appropriation revenue pledge on parity with Series 2009B, Series 2018A and Series 2018B State Appropriation Bonds
- \$243,000,000 NCDOT GARVEE Bonds & \$81,000,000 State Match



Sources & Uses of the 2019 Financing

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total
Sources:							
2019 TIFIA Loan	-	279,462,939	219,999,041	-	-	-	499,461,980
Proceeds of 2019 Toll Revenue Bonds	387,655,409	40,650,439	-	-	-	-	428,305,849
Proceeds of 2019 State Appro. Bonds	104,971,678	11,007,572	-	-	-	-	115,979,250
NCDOT GARVEE Bonds	-	-	82,469,132	157,846,168	2,684,700	-	243,000,000
GARVEE State Match Funds	-	-	27,489,711	52,615,389	894,900	-	81,000,000
General Reserve Contribution	-	-	-	27,576,008	-	-	27,576,008
Total Sources	492,627,087	331,120,951	329,957,884	238,037,564	3,579,600	-	1,395,323,086
Uses:	-						
Costs of Complete 540 - Phase 1	420,316,838	331,120,951	329,957,884	210,461,557	3,579,600	-	1,295,436,829
Costs of Issuance	5,378,173						5,378,173
Series 2019 Capitalized Interest	66,932,076						66,932,076
TIFIA DSRF		-	-	27,576,008	-	-	27,576,008
Total Uses	492,627,087	331,120,951	329,957,884	238,037,564	3,579,600	-	1,395,323,086



\$370,975,000 Triangle Expressway System Senior Lien Turnpike Revenue Bonds, Series 2019

- Sold via negotiated sale on November 20, 2019
- Purpose of Issue:
 - Pay for certain costs of Complete 540 Phase 1,
 - Provide funds to pay interest on certain Series 2019 Bonds,
 - Pay the premiums for a bond insurance policy and for the portion of the Reserve alternative Instrument relating to the amount of the increase in the Senior Lien Parity Reserve Account Requirement, and
 - Pay costs of issuance
- Optional Redemption:
 - The Toll Revenue Bonds, Series 2019 are subject to optional redemption by NCTA in whole or in part at any time on or after January 1, 2030.
- All-In True Interest Cost of 3.761%
- Payments:
 - Principal is due annually on January 1, 2042 to January 1, 2055
 - Interest is due semi-annually January 1 and July 1, commencing July 1, 2020
- Ratings:
 - "BBB" by Fitch
 - "BBB" by S&P



\$115,979,250 Triangle Expressway System Appropriation Revenue Bonds, Series 2019

- Sold via negotiated sale on November 20, 2019
- Purpose of Issue:
 - Pay certain costs of the Complete 540 Phase 1 Project
 - Pay costs of issuance
- Optional Redemption:
 - The State Appropriation Bonds, Series 2019 are subject to optional redemption by NCTA in whole or in part at any time on or after January 1, 2030.
- All-In True Interest Cost of 3.194%
- Payments:
 - Principal is due annually on January 1, 2040 to January 1, 2049
- Ratings:
 - •"AA+" by Fitch
 - •"AA+" by S&P
 - "Aa1" by Moodys



\$499,461,980 TIFIA Loan

- On December 17, 2019, NCTA successfully closed a \$499,461,980 loan with the USDOT TIFIA Program
- The Loan interest rate was set at 2.27%
 - NCTA Anticipates drawing on the loan in FY 2021 and 2022 in the following amounts:

FY 2021: \$279,462,939 FY 2022: \$219,999,041

- Interest on the loan accrues fully until the first semi-annual payment date of January 1, 2026.
- Principal is paid semi-annually beginning January 1, 2029 through January, 1, 2058
- Ratings:
 - "BBB" by Fitch
 - "BBB" by S&P
- The TIFIA Loan was issued on the junior lien



Market Conditions for Sale – Historic Yields

The following graph shows the ten year historic rates for the 5, 10, and 30-year AAA
 MMD

Market Violds: Nevember 2000 to Nevember 2010



	5 Year AAA MMD	10 Year AAA MMD	30 Year AAA MMD
Avg 11/20/2009 - Present	1.30%	2.19%	3.24%
Sale Date: 11/20/2019	1.17%	1.50%	2.09%
Difference	13 bps	69 bps	115 bps

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15



Market Conditions for Sale – Historic Yields

The following graph shows the ten year historic rates for the 30 Year UST



	30 Year UST
Avg: 12/17/2019 - Present	3.20%
TIFIA Loan Closing Date	2.31%
Difference	89 bps



Order Summary – 2019 Bonds

- Based on the initial interest rate scale outlined on the prior page, orders were received until 12:00 PM ET which are summarized below
- Subscription levels ranged from 320% to as high as 1466% the amount of bonds offered

Toll Revenue Bonds								
Maturity	Coupon	Amount (\$000's)	Retail (\$000's)	Institutional (\$000's)	Priority Orders (\$000's)	Priority Subscription		
1/1/2042	3.000%	24,350	2025	354,900	356,925	1466%		
1/1/2043	5.000%	27,645	-	206,425	206,425	747%		
1/1/2044	5.000%	31,105	-	189,420	189,420	609%		
1/1/2049	5.000%	207,890	250	1,694,810	1,695,060	815%		
1/1/2055	4.000%	109,050	765	1,429,600	1,430,365	1312%		
Totals		400,040	3,040	3,875,155	3,878,195	4948.50%		

State Appropriation Revenue Capital Appreciation Bonds									
Maturity	Coupon	Amount (\$000's)	Retail (\$000's)	Institutional (\$000's)	Priority Orders (\$000's)	Priority Subscription			
1/1/2040	0.000%	25,000	-	157,000	157,000	628%			
1/1/2041	0.000%	25,000	-	132,000	132,000	528%			
1/1/2042	0.000%	25,000	50	190,000	190,050	760%			
1/1/2043	0.000%	25,000	-	240,000	240,000	960%			
1/1/2044	0.000%	25,000	-	187,000	187,000	748%			
1/1/2045	0.000%	25,000	-	117,500	117,500	470%			
1/1/2046	0.000%	25,000	-	114,500	114,500	458%			
1/1/2047	0.000%	25,000	-	105,000	105,000	420%			
1/1/2048	0.000%	25,000	-	80,000	80,000	320%			
1/1/2049	0.000%	25,000	500	94,000	94,500	378%			
Totals		250,000	550	1,417,000	1,417,550	5670.00%			



Pricing Worksheet – 2019 Final Scale

- Based on the investor interest during the order period, JPM proposed lowering the yields on the State Appropriation Bonds by up to 8 bps, and lowering yields on the Toll Revenue Bonds by up to 14 bps.
- Final pricing of the 2019 Bonds along with the noted adjustments are presented below:

	Final Scale													
	State Appropriation Bonds (CABs)					Toll Revenue Bonds								
							Uninsu	red		Insured				
Maturity				Preliminary					Preliminary					Preliminary
			Spread to AAA	vs				Spread to AAA	VS				Spread to AAA	vs
	Amount	Yield	MMD	Final	Amount	Coupon	Yield	MMD	Final	Amount	Coupon	Yield	MMD	Final
1/1/2040	25,000,000	3.03%	104 bps	-6 bps	-	-	-	-	-		-	-	-	-
1/1/2041	25,000,000	3.08%	106 bps	-6 bps	-	-	-	-	-		-	-	-	-
1/1/2042	25,000,000	3.12%	107 bps	-7 bps	-	-	-	-	-	23,030,000	3.00%	3.04%	99 bps	-13 bps
1/1/2043	25,000,000	3.15%	107 bps	-8 bps	25,600,000	5.00%	2.71%	63 bps	-7 bps	-	-	-	-	-
1/1/2044	25,000,000	3.17%	108 bps	-7 bps	28,760,000	5.00%	2.72%	63 bps	-7 bps	-	-	-	-	-
1/1/2045	25,000,000	3.20%	110 bps	-5 bps	18,725,000*	5.00%	-	-	-	13,380,000*	5.00%	-	-	-
1/1/2046	25,000,000	3.21%	110 bps	-5 bps	20,575,000*	5.00%	-	-	-	14,725,000*	5.00%	-	-	-
1/1/2047	25,000,000	3.23%	111 bps	-4 bps	22,300,000*	5.00%	-	-	-	15,970,000*	5.00%	-	-	-
1/1/2048	25,000,000	3.25%	112 bps	-3 bps	24,090,000*	5.00%	-	-	-	17,270,000*	5.00%	-	-	-
1/1/2049	25,000,000	3.26%	112 bps	-3 bps	25,990,000*	5.00%	2.77%	63 bps	-7 bps	18,655,000*	5.00%	2.65%	51 bps	-9 bps
1/1/2050	-	-	-	-	6,780,000*	4.00%	-	-	-	7,470,000*	4.00%	-	-	-
1/1/2051	-	-	-	-	7,175,000*	4.00%	-	-	-	8,100,000*	4.00%	-	-	-
1/1/2052	-	-	-	-	7,590,000*	4.00%	-	-	-	8,770,000*	4.00%	-	-	-
1/1/2053	-	-	-	-	8,015,000*	4.00%	-	-	-	9,470,000*	4.00%	-	-	-
1/1/2054	-	-	-	-	8,445,000*	4.00%	-	-	-	10,200,000*	4.00%	-	-	-
1/1/2055	-	-	-	-	8,900,000*	4.00%	3.11%	97 bps	-10 bps	10,990,000*	4.00%	2.97%	83 bps	-14 bps

AAA MMD**
11/20/2019
1.99%
2.02%
2.05%
2.08%
2.09%
2.10%
2.11%
2.12%
2.13%
2.14%
2.14%
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2.14%
2.14%

^{*}Term Bonds

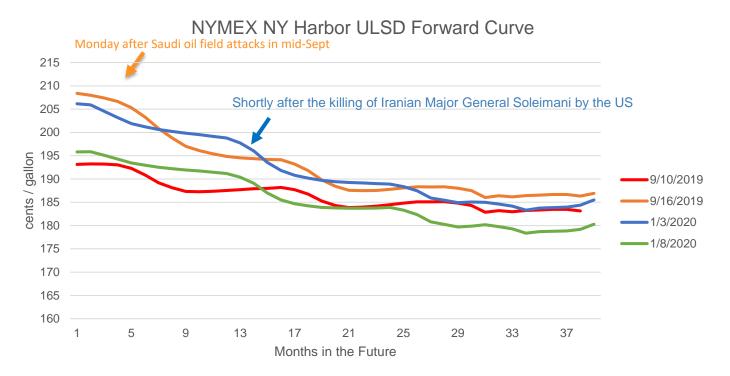
^{**}Interpolated MMD

Fuel Cap Overview

George Hu
PFM Swap Advisors LLP

Diesel Fuel Cap Update

- Aside from Cargill who participated in the 2016 bid and has executed ISDA documents with NCTA, both JP Morgan and BofA have also provided draft documents in preparation for the potential bid and addressed our comments on the draft documents
- The NYMEX NY Harbor ULSD forward curve, used to price diesel fuel caps, shows volatilities associated events in the Middle East



Diesel Fuel Cap Update

• Using market data as of January 8, 2020, below is a table of indicative costs for the three different strike prices and the estimated reserve levels

Strik	e (\$/gal)	Prem	nium (\$/gal)*	Tota	al Premium (\$)	Tota	al Reserve Needed (\$)
\$	2.10	\$	0.151	\$	826,380	\$	92,598
\$	2.40	\$	0.090	\$	492,544	\$	1,101,589
\$	2.66	\$	0.067	\$	366,672	\$	2,524,495

A breakdown of the reserve requirement by projects and strikes is detailed below:

Project	Base P	rice (\$/gal)	Total Fuel (gal)	rve Needed for strike (\$)	 erve Needed for 0 strike (\$)	 erve Needed for 6 strike (\$)
R-2721A	\$	2.09	1,505,939	\$ 8,132	\$ 459,914	\$ 851,458
R-2721B	\$	2.04	1,436,494	\$ 84,466	\$ 515,414	\$ 888,902
R-2828	\$	2.35	2,530,282	\$ - *	\$ 126,261	\$ 784,134

*zero reserve due to strike < base price

 Based on this market data, NCTA has decided to move forward with a strike price of \$2.40/gallon

Next Steps

- Provide authorizing resolution to bidders done
- Decide on the strike price done
- Finalize draft cap documents with JPMorgan and BofA and any other required documentation (documentation already in place with Cargill) – 98% done
- Monitor the market and prepare for the bid
- Conduct the live bid
- Be ready to make the cap premium within two business days after the bid
- Execute/sign the cap confirmation

Underwriter Pool Procurement

David Roy

Director of Finance & Budget

Prior Precedent

An Underwriter Procurement Process is completed for each transaction via a competitive Solicitation via a Request for Proposal ("RFP")

- The RFP process takes approximately 8 weeks, or longer depending on prescheduled meetings required for approval
- For refunding transactions, adding an additional 2 months to the start of a transaction limits the Authority's ability to quickly enter the market when rates are attractive
- All transactions would still go to the finance committee and board for approval

Alternate Option

Establish a pre-approved and qualified pool of underwriting firms via a competitive solicitation

- As transactions arrive, NCTA staff, per direction of the finance committee, may establish an underwriting syndicate from the firms within the pool
- The established pool will include firms pre-approved to serve as both the Senior Underwriter and co-managers

The Senior Underwriter for a transaction may be determined based on a variety of factors, including but not limited to:

- Results from the most recent pool solicitation/selection
- Firm's contribution to development of strategies for the transaction
- Demonstrated qualifications of firm to successfully underwrite similar transactions
- Previous work assigned to firm by NCTA
- Results of a transaction specific "mini" request for proposals distributed to all members and/or pre-approved senior-members of the pool

Initial Establishment of "Underwriting Pool"

A formal procurement process, similar to prior processes, will be completed

- PFM Financial Advisors will draft the RFP and summarize responses
- Responses will be evaluated by a selection committee and interviews will be arranged if determined to be beneficial by the selection committee
- Following interviews, the final selection will be made and all proposing firms will be notified

RFP Content:

- Firm Overview
- Experience with: (1) North Carolina Municipal Bonds, (2) Toll Revenue Bonds, (3) State Appropriation Bonds, and (4) Capital Appreciation Bonds and Convertible Capital Appreciation Bonds
- Rating Agency & Credit Enhancement Approach for Toll Revenue Bonds
- Marketing Strategy
- Indicative Pricing (takedowns)

Sample Schedule

February 6	RFQ circulated
February 21, 2020	Deadline for Questions
March 4, 2020	Proposals due to the Authority and PFM prior to 2PM
March 11, 2020	Selection Committee review proposals and shortlist
Week of March 30 or April 6	Interviews
April 15, 2020	NCTA Finance Committee Meeting – Approval of selected firms
May 7, 2020	Authority's Governing Board Selection of Investment Banking Firm(s)

Thank You!