Attachment #3

ROCKINGHAM PLANNING COMMISSION
theRPC.org

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Memorandum

DATE: November 7, 2024
TO: MPO Policy Committee
FROM: David Walker, Assistant Director
RE: Project Selection for the Ten Year Plan

The next phase in the Ten Year Plan project prioritization process is for the MPO to identify a fiscally constrained list of candidate projects to submitted to NHDOT for engineering and cost review prior to the MPO setting final priorities in February/March next year.

At the July Policy Committee meeting, staff presented a list of thirteen projects vetted by the TAC for the development of scope and cost estimates by our consulting engineers (Hoyle Tanner Associates). After that meeting staff discussed the proposed projects with HTA and negotiated a scope of work for estimate development. A number of changes have been made and several projects removed from consideration largely due to limitations in the funding available to do the engineering work:

- Raymond 6383001 – NH 102/Blueberry Hill Rd Safety Improvements. This project remains in the queue for a Road Safety Audit and an updated costs is a low priority.
- Portsmouth 6379021 – Portsmouth Traffic Circle Improvements. No need to develop a scope and cost estimate as this project is in the Ten Year Plan as a study. Suggest advocating to advance this study as much as possible.
- Rye-New Castle 6397006/6323003 – Address low spots on NH1B based on analysis in New Castle Causeway Feasibility Study. There is no need to acquire a cost estimate as the improvements are being included in New Castle 42517 and New Castle-Rye 41713 which will be making shoulder bike lane and sidewalk improvements along NH 1B.
- Portsmouth 6379005 – Maplewood Avenue Culvert. The site is currently under construction and what was originally a repair project has grown into more of a rehabilitation of the structure. Based on the work being done, it is expected that the life of the current bridge will be extended by 40-50 years and, barring the need to address sea-level rise concerns, no substantial work should be needed until well beyond the horizon year of the Long Range Transportation Plan.

In addition, the following additional changes were made:

- Seabrook 6409006 - NH1A Bicycle and Pedestrian Improvements. The scope of this project was expanded to become a traffic calming project which would reduce the number of lanes to 1 in each direction with turn lanes and intersection improvements in addition to bicycle and pedestrian facilities.

- Coastal Communities 6001018 – Route 1A Evacuation ITS Improvements. This project will be scoped as a study as there is no clear indication of exactly what is needed for improvements.
- The engineers revisited the scope and needs for the Greenland NH33/Bayside/Winnicut Road project and revised the cost to include some costs that were overlooked in the first draft such as street lighting and stream restoration work.

The engineers completed draft scope and cost estimates for the nine remaining projects and the results are summarized in the table below with the more detailed estimates attached. The final page of each estimate includes the list of assumptions that form the basis of the costs and scope. The attached estimates calculate NHDOT Indirects as 10% of construction costs. They are intended to be calculated as 10% of the total of Construction, Engineering, and Right-of-Way. The tables in this memo will have slightly higher costs for projects than the estimates for that reason. We will be getting corrected estimates in the interim.

Group	Project	Est. Base Cost (Inc 10% DOT Indirect)	Est. Inflated Cost (2035)*
Local			
	Plaistow NH121A (Main St)/North Ave Intersection	$2,726,000	$4,070,000
	Portsmouth Avenue Bike/Ped (NH 108) in Stratham	$4,112,000	$6,130,000
	Local Sub-total	***$6,838,000***	***$10,200,000***
Regional			
	Epping 5 Corners Intersection Improvements (NH 27/ Blake/ Depot/ School/ Friend Streets)	$5,854,000	$8,730,000
	Greenland NH 33/ Winnicut Rd./Bayside Rd. Intersection	$10,404,000	$15,520,000
	Seabrook NH 1A Traffic Calming and bike/ped Improve	$11,476,000	$17,110,000
	Stratham Circle Reconfiguration (NH 108/NH 33)	$12,516,000	$18,670,000
	Regional Sub-total	***$40,250,000***	***$60,030,000***
Inter-Regional			
	Brentwood – NH 125/South Road RSA Long-Term Improve	$2,815,000	$4,200,000
	Hampton NH 101 Eastbound ramp to I-95 Improvements	$5,995,000	$8,940,000
	Coastal Communities Evacuation ITS Improvements	$220,000	$330,000
	Inter-Regional Sub-total	***9,030,000***	***$13,470,000***
	Total	***$56,118,000***	***$83,700,000***

*All costs inflated to 2035

Other important considerations:

- The inflated costs still need to be adjusted to some degree. All costs are currently inflated to 2035 but NHDOT review usually indicates a year that they would program construction and engineering and inflation will be adjusted accordingly at that time. This will likely reduce project costs slightly.
- Before being constructed, each project will go through an alternatives analysis and design process that will refine the scope and costs. Scopes listed could change considerably over the course of implementation and those listed are a starting point.

- Portsmouth Avenue in Stratham would be an eligible Transportation Alternatives Program project (possibly phased) and may also be an eligible CMAQ program project as it will likely result in some reduced auto trips that are replaced with bike/pedestrian trips.
- South Road/NH 125 in Brentwood is in the HSIP Program however the long-term improvements (what is scoped here) are not included in the Ten Year Plan.
- The NH 101 Eastbound Exit Ramp to I-95 project could potentially be a turnpike funded project. NHDOT GIS information indicates that the Turnpikes Bureau has jurisdiction on the ramp but not the NH 101 mainline. RPC has not had any conversations regarding this project with the Turnpikes Bureau and this would expect to be clarified as part of NHDOT review.
- With indirect costs and inflation included, five of the nine proposals are greater in cost than the regional target allocation of roughly $8.1 million. It is possible that some of the projects could be phased and funded in smaller pieces over time or through multiple programs and staff and HTA are looking into those options as well.

The TAC met on October 24 and selected projects to be forwarded to NHDOT for review. According to guidance, we can submit projects up to the region's allocation total (roughly $8,100,000) plus two additional projects. These priorities are included in the table below.

Rank	Project	Est. Base Cost (Inc 10% DOT Indirect)	Est. Inflated Cost (2035)*
Priorities within Regional Target			
1	Brentwood – NH 125/South Road RSA Long-Term Improve	$2,815,000	$4,200,000
2	Plaistow NH121A (Main St)/North Ave Intersection	$2,726,000	$4,070,000
		$5,541,000	$8,270,000
Additional Projects Submitted			
3	Greenland NH 33/ Winnicut Rd./Bayside Rd. Intersection	$10,404,000	$15,520,000
4	Hampton NH 101 Eastbound ramp to I-95 Improvements	$5,995,000	$8,900,000
		$16,400,000	$24,460,000
	Total	***$21,940,000***	***$32,730,000***

*All costs inflated to 2035

Recommended Action: Consider the draft Candidate Project List recommended by TAC and approve a list of priority Ten Year Plan projects to submit to NHDOT for scope and cost review.

Projects will be submitted to NHDOT by November 15, 2024 for NHDOT scope and cost review.

Memorandum

To:	David Walker Assistant Director Rockingham Planning Commission
From:	Stephen Haas, PE, PTOE
cc:	Tim Roache
Date:	October 23, 2024 (**Rev 11/6/2024**)
Re:	NHDOT Ten-Year Plan Conceptual Estimates

Hoyle, Tanner & Associates, Inc. (Hoyle Tanner) is pleased to submit this memorandum summarizing our services for the Rockingham Planning Commission (RPC) to prepare conceptual estimates for submission to the New Hampshire Department of Transportation (NHDOT) for inclusion in the State's Ten-Year Transportation Improvement Plan. The RPC selected ten transportation projects that are considered high priority to its member communities for Hoyle Tanner to evaluate. Six of these projects are updates of prior estimates prepared by Hoyle Tanner or other consulting firms, while four are for newly envisioned projects. Estimates were prepared utilizing prior planning and conceptual design efforts or project descriptions provided by the RPC. Hoyle Tanner evaluated these concepts to confirm general feasibility and determine required construction elements; however, engineering design and analysis were not requested or performed (unless otherwise noted below). To confirm key assumptions for each project, Hoyle Tanner met with the RPC on 8/15/24 for concurrence prior to estimate development. All estimates include construction costs, engineering costs, and right-of-way acquisition costs (if applicable) to provide a total project opinion of probable cost. A 3.7% per year inflation rate was utilized to project current construction costs to the potential 2035 construction year, as agreed in the project scope. A description of proposed improvements, estimate assumptions, and opinion of probable cost for each location are provided below. Detailed opinions of probable cost are included in Appendix A.

MAPLEWOOD AVENUE CULVERT REPLACEMENT – PORTSMOUTH, NH

The existing culvert on Maplewood Avenue over North Mill Pond in Portsmouth is in poor condition, is susceptible to sea level rise, and requires either repair or replacement. As such, it was included in the 2022 round of Ten-Year plan estimates that Hoyle Tanner prepared. Since that time, the design of a rehabilitation project for the bridge was completed and the construction efforts are currently underway. The project is expected to be completed in mid-2025 and is anticipated to have a service life of perhaps 40 to 50 years. Given this, the RPC decided to forgo updating the estimate for this round of the ten-year plan, but will continue to include the project estimate as is in the long range plan as future improvements to address sea level rise could be required.

NH 108 (PORTSMOUTH AVENUE) SIDEWALK AND SIDEPATHS – STRATHAM, NH

The Town of Stratham identified the need for sidewalks along NH 108 (Portsmouth Avenue) from the Shaw's Plaza driveway to the Municipal Center on Bunker Hill Road. Through coordination with the Town and RPC, it was determined that the project should include a 5.5' concrete sidewalk along the west side of the road from the Shaw's Plaza to Scamman's Home and Garden and a 10' asphalt side path from Shaw's to Municipal Center. Previously constructed sidewalk at the Subaru Dealership and Dermatologist will remain, as will existing side path at the Porsche/Audi dealership and Parkman Brook Shopping Center. A budget for midblock crossings of NH 108 with rectangular rapid flashing beacons at three locations, as well as pedestrian & bicycle accommodation at two traffic signals have also been included. Temporary and permanent easements are anticipated to be required. The project was included in the 2022 ten-year plan cost estimates prepared by Hoyle Tanner and has been updated for 2024. Updates include addressing NHDOT comments on additional closed drainage and inflation rate, updating unit costs, and adding additional budget for Stormwater Best Management Practices (BMPs) to meet the most recent New Hampshire Department of Environmental Services (NHDES) Alteration of Terrain Permit (AoT) requirements. **The opinion of probable cost for the NH 108 Sidewalk and Sidepath is $6,020,000.** Given the large cost of this pedestrian project, phasing construction of the project may be desirable. Constructing the sidewalk on the southbound side of NH 108 and the path on the northbound side as separate phases would likely be feasible and could break the cost nearly in half, depending on how much closed drainage is constructed with each project. A coordinated design and permitting effort would likely be beneficial to help minimize costs.

NH 108 AT NH 33 INTERSECTION IMPROVEMENTS – STRATHAM, NH

The Town of Stratham's long-term vision for the Town Center District is to make improvements to the NH 108 & NH 33 traffic circle to balance the needs of vehicular, pedestrian, and bicycle traffic. Potential alternatives to replace the traffic circle with a combination of conventional intersections and modern roundabouts were developed by Greenman-Pedersen, Inc. (GPI) in the 2010 Town Center District study. Although it is understood that a comprehensive study will be required to determine the preferred alternative, through coordination with the RPC, Conceptual Design Alternative 2 (Figure 12) from the GPI study was chosen as the improvement alternative for development of project cost. This improvement consists of a new single-lane roundabout at the northwest intersection of NH 108 & NH 33 along with right turn by-pass lanes on the south and east approaches. The southeast leg of the traffic circle will be converted to a cul-de-sac at the intersection of NH 108 and t-intersection at NH 33. As coordinated with the RCP, the intersection improvements at NH 33 and Winnicut Road are not included in the cost estimate. It is assumed the major profile revisions are not required and the step box widening and cold plane and overlay will be utilized for existing roadways. Removal of the two existing culverts and dam in the northwest quadrant of the traffic circle are anticipated to be required and replaced with a new dam and 150 linear foot box culvert just to the south of the new roundabout. The existing culvert on the southeast quadrant of the traffic circle is anticipated to remain and the roadway typical section adjusted to match its width. Property Acquisition and easements are anticipated to be required. Similar to the NH 108 Sidewalk project, this project was included in the 2022 ten-year plan cost estimates prepared by Hoyle Tanner and has been updated for 2024. Updates include addressing NHDOT comments on

additional closed drainage and inflation rate, updating unit costs, and adding additional budget for BMPs to meet the most recent NHDES AoT requirements. **The opinion of probable cost for the NH 108 at NH 33 Intersection Improvements is $18,400,000.**

NH 125 AT SOUTH ROAD SAFETY IMPROVEMENTS – BRENTWOOD, NH

The need for safety improvements at the intersection of NH 125 at South Road has been envisioned by the Town of Brentwood for many years. These concerns resulted in a Road Safety Audit (RSA); prepared by Hoyle Tanner in February 2024, which recommended near, intermediate, and long-term improvements at the intersection. Intermediate improvements to construct dedicated left turn lanes on NH 125 at the intersection, as well as portions of a two-way left turn lane, are currently being coordinated with NHDOT for construction in the near future. The RPC has asked that the long-term improvement at the intersection, a single lane roundabout as shown in the RSA, is included in the ten-year plan estimates. This roundabout, anticipated to have an approximate 150' inscribed circle diameter, will also construct raised medians on each roadway approach to help channelize and calm traffic. The cost estimate in the RSA was updated with current unit prices and projected out to 2035 with the annual 3.7% rate. **The opinion of probable cost for the NH 125 at South Road Safety Improvements is $4,200,000.**

NH 33 AT BAYSIDE ROAD AND WINNICUT ROAD CAPACITY IMPROVEMENTS – GREENLAND, NH

As part of the expansion of the Lonza Biologics facility on Pease Trade Port, the Town of Greenland asked Vanasse & Associates, Inc. (VAI) to evaluate potential improvements to the intersection of NH 33 with Bayside Road and Winnicut Road to address capacity concerns that have resulted in large queues and long delays. In 2020, VAI evaluated two alternatives; a 2-lane roundabout and a 5-lane signalized intersection, along with conceptual cost estimates. As part of the ten-year plan estimates, the RPC asked Hoyle Tanner to update the traffic signal alternative, as it was anticipated to have the higher cost given the amount of bridge work required. This alternative is anticipated to include 2,000 linear feet of widening to provide two 12' travel lanes and an 11' left turn lane in each direction, along with 8' shoulders and a 5.5' sidewalk. Traffic signal improvements with pedestrian signal equipment, ADA compliant curb ramps, and stormwater BMPs are also anticipated. Hoyle Tanner updated the VAI estimated quantities to utilize NHDOT construction items, updated unit prices, increased drainage budget to account for Stormwater BMPs and also added full replacement of the bridge over the Winnicut River; as NHDES has expressed concerns with ability of the existing structure to facilitate aquatic organism passage (AOP). **The opinion of probable cost for the NH 33 at Bayside Road and Winnicut Road Capacity Improvements is $17,970,000.** Phasing of this project to spread out the total cost may be possible and would be anticipated to consist of constructing the new bridge first, and then constructing the wider roadway as a future project. The total cost would be expected to increase if phasing is utilized. This is because the wider roadway cross section would not be constructed at the same time, which would aid in traffic control operations, and temporary widening would be required.

ROUTE 1A COASTAL EVACUATION ITS IMPROVEMENTS STUDY – VARIOUS COMMUNITIES, NH

The need for Intelligent Transportation System (ITS) infrastructure to support emergency evacuation and disaster recovery for Coastal New Hampshire Communities was identified in the June 2012 Strafford-Rockingham Region ITS Strategic Plan. To determine the desired components of this system, the plan recommended a $100,000 budget to prepare a formal study. For the RPC ten-year plan estimates, Hoyle Tanner has projected this budget to 2035 using an average annual escalation of engineering salaries of 5%. **The opinion of probable cost for the Route 1A Coastal Evacuation ITS Improvements Study is $310,000.** It should be noted that if the funding for this study was placed in the ten-year plan in the near future (say 2 years from now), the anticipated cost could be much smaller at around $200,000.

NH 121A AT NORTH AVENUE IMPROVEMENTS – PLAISTOW, NH

The Town of Plaistow and the RPC have been investigating improvements to address capacity concerns at the NH 121A at North Avenue intersection as far back as the 2011 Main Street Traffic Calming Plan prepared by the RPC. This plan recommended construction of a single lane roundabout that would address the capacity issues at the intersection and also serve as a "gateway" and traffic calming feature for the Main Street Corridor. A preliminary traffic analysis of a roundabout at this location using SIDRA Solutions analysis software indicates that the intersection could function at a level of service (LOS) A in the AM and LOS B in the PM when projected out to a potential 2053 design year if the improvements were made. Hoyle, Tanner has prepared a conceptual estimate for a 3-leg single lane roundabout with an inscribed circle diameter of 140' at this location. To provide sufficient space to construct the roundabout and provide separation from Chandler Avenue, the center of the intersection has been shifted to southwest along Main Street and will likely require right-of-way impacts to construct in the wooded area in this location. **The opinion of probable cost for the NH 121A at North Avenue Improvements is $4,000,000.**

NH 1A PEDESTRIAN AND BICYCLE INFASTRUCTURE–SEABROOK, NH

NH 1A from the Hampton Harbor Bridge to NH 286 provides access to densely populated Seabrook Beach, which has many residential properties for owners and renters vacationing on the seashore. Given the number of residences and its proximity to the recreational areas at Hampton Beach, this area has significant potential to generate pedestrian and bicyclist traffic. However, this stretch of roadway currently does not provide any pedestrian infrastructure or dedicated bicycle facilities. The RPC has requested that Hoyle Tanner prepare a conceptual estimate to provide sidewalks, dedicated bicycle lanes, and two midblock crossing locations with rectangular rapid flashing beacons along this stretch of roadway. To facilitate these improvements while limiting right-of-way takings and impacts to utilities and abutting parcels, it was agreed to utilize a road-diet to convert the existing roadway from a 4-lane cross section (two through lanes in each direction) to a 3-lane cross section (one 12' through lane in each direction and a 12' center turn lane). A new 6' sidewalk is proposed along the northbound side of

the road from Campton Street (where it meets the limits of Hampton Harbor bridge reconstruction project) to the existing walkway at New Hampshire Street. The 6' sidewalk along the southbound side of the roadway is also proposed to begin at Campton Street but will only extend to Cross Beach Road, which is the limits of significant development on the west side of the roadway. Dedicated 5' bicycle lanes are envisioned for the entire length of the project. The existing pavement is anticipated to be cold planed and overlaid (with a pavement shim as required) to establish the revised lane use and shift the roadway crown. Maintaining the existing lane use & queue storage space at the NH 286 and Hooksett Road traffic signals will likely be required. **The opinion of probable cost for the NH 1A Pedestrian and Bicycle Infrastructure is $16,800,000.** Given the large cost of this pedestrian and bicycle project, phasing construction of the project may be desirable. Performing the road diet and required pavement work as an initial phase (potentially as a separate project under NHDOT's Statewide or District resurfacing programs) could break off $2.5 million or more. Constructing the sidewalk along both sides of the roadway from Cross Beach Road to Campton Road as a second phase and along the southbound side of the road from Cross Beach Road to New Hampshire Street as a third phase could break the remaining project costs into pieces that are 60% and 40% of the total, respectively. A coordinated design and permitting effort would likely be beneficial to help minimize costs.

NH 27 AT BLAKE RD, FRIEND ST, DEPOT ST, AND SCHOOL ST IMPROVEMENTS – EPPING, NH

The unconventional layout of the intersection of Blake Road, Friend Street, Depot Street, and School Street (known locally as "5-Corners") poses a significant safety concern for traffic entering and exiting onto NH 27, which is a busy east-west roadway with a 45-mph posted speed limit. Adding to the challenge is the location of the West Epping Village Market which along with its parking lot, immediately abuts the intersection to the south. Given the angle and spacing of the intersecting side roads, a roundabout was envisioned to be a feasible solution. Hoyle Tanner has prepared a conceptual estimate for a single lane 5-leg roundabout with a 180' inscribed circle diameter to capture the extra roadway approach. Friend Street is anticipated to be realigned to intersect School Street at a 90-degree angle outside of the roundabout. Given the posted speed limit, long splitter islands on the NH 27 approaches are anticipated to be required. Full-depth reconstruction of these approaches is also envisioned to help reduce the incoming profile grades. A preliminary traffic analysis of a roundabout at this location using SIDRA Solutions analysis software indicates that the intersection could function at a LOS A in the AM and PM when projected out to a potential 2053 design year if the improvements were made. **The opinion of probable cost for the NH 27 at Blake Rd, Friend St, Depot St, and School St Improvements is $8,600,000.**

NH 101 EASTBOUND OFF RAMP AT I-95 INTERCHANGE IMPROVEMENTS – HAMPTON, NH

The NH 101 Eastbound off ramp to I-95 experiences capacity issues during peak travel times that have resulted in safety concerns. In the AM peak, the single lane ramp with sharp curvature requires motorists (especially large vehicles) to significantly reduce speed to negotiate the ramp resulting in long queues of traffic. These queues; when combined with travel speeds, solar glare, and a profile crest just to the east of the ramp that limits sight distance; have increased the potential for crashes. Hoyle Tanner

and the RPC met with NHDOT District 6 on 9/23/24 to discuss the potential solution. All agreed that converting the ramp to a two-lane exit and providing an auxiliary lane on NH 101 for deceleration would likely be the preferred improvement. Some specifics of the desired ramp and auxiliary design were further discussed with NHDOT Highway Design Bureau via email. Hoyle Tanner has prepared a conceptual estimate for an improvement to construct a 2-lane off-ramp which includes a 1,500 linear foot 12' auxiliary lane on NH 101 (not including a 300' taper to create the lane) and an assumed 36' wide ramp width connecting to the existing 2-lane ramp section at the NH 101 overpass bridge. Full reconstruction of about 2/3 of the existing single lane ramp length is assumed to be required in order to facilitate the two-lane exit and revised curvature. The remaining 1/3 is anticipated to be box widened with a cold plane and overlay. Box widening of NH 101, matching the existing select material and pavement depths, has been assumed to construct the auxiliary lane. Full depth pavement reconstruction and a crushed gravel shim for the low-speed shoulder have been assumed. An overlay of the adjacent eastbound travel lanes on NH 101 has not been included at this time, as discussed with NHDOT. Modifications to the ramp overpass bridge, abutments, and wingwalls are also assumed not to be required. **The opinion of probable cost for the NH 101 Eastbound Off Ramp at I-95 Interchange Improvements is $8,800,000.**

CONCLUSION AND RECOMMENDATIONS

The conceptual opinions of probable cost are provided for the RPC to determine which projects will be recommended to NHDOT for inclusion in the State's Ten-year transportation plan. The estimates are based on currently available project descriptions and conceptual layouts (if available). Further study is anticipated to be required for many of these project locations to determine the preferred alternative or what design elements will be included. Depending on the chosen design, additional construction, engineering, and right-of-way acquisition costs may be required. Costs have been developed utilizing current year (2024) unit prices and inflated to the 2035 build year at a 3.7% per year inflation rate. As the current inflation rate significantly exceeds this value, it is recommended that the RPC coordinate with NHDOT to determine if an adjustment in the rate or build year is desired.

APPENDIX A

Detailed Opinion of Probable Cost

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimates		
Project No.	22.144401.02		
Location:	02 NH 108 (Portsmouth Ave), Stratham NH		
Task:	Conceptual Estimate - Sidewalk and Side Path Construction		
Calculated By:	MAP	Date:	9/17/2024
Checked By:	JFMS	Date:	10/18/2024

CONCEPTUAL ESTIMATE

NH 108 (Portsmouth Avenue) Sidewalk and Side Path Construction

SECTION A - MAJOR ITEMS

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
203.1	COMMON EXCAVATION	CY	3900	$ 18.00	$ 70,200.00
203.6	EMBANKMENT-IN-PLACE (F)	CY	1850	$ 14.00	$ 25,900.00
304.3	CRUSHED GRAVEL (F)	CY	2700	$ 55.00	$ 148,500.00
403.12	HBP-HAND METHOD	TON	220	$ 220.00	$ 48,400.00
403.16	PAVEMENT JOINT ADHESIVE	LF	3200	$ 1.00	$ 3,200.00
606.1455	BEAM GUARDRAIL (TERMINAL UNIT TYPE EAGRT, TL 2) (STEEL POST)	U	2	$ 4,500.00	$ 9,000.00
606.18001	31" W-BEAM GUARDRAIL W/8" OFFSET BLOCK (STEEL POST)	LF	600	$ 35.00	$ 21,000.00
608.12	2" BITUMINOUS SIDEWALK (F)	SY	6500	$ 35.00	$ 227,500.00
608.24	4" CONCRETE SIDEWALK (F)	SY	1950	$ 60.00	$ 117,000.00
608.54	DETECTABLE WARNING DEVICES, CAST IRON	SY	35	$ 500.00	$ 17,500.00
609.01	STRAIGHT GRANITE CURB	LF	3200	$ 47.00	$ 150,400.00
628.2	SAWED BITUMINOUS PAVEMENT	LF	3200	$ 5.00	$ 16,000.00
	MISCELLANEOUS ROADWAY		10% OF ABOVE TOTAL		$ 85,460.00
			SUBTOTAL A		**$ 940,060.00**

SECTION B - MISCELLANEOUS ITEMS

SIGNS, MARKINGS, LOAM/HUMUS, ETC.	15%		$ 141,009.00
	SUBTOTAL B		**$ 1,081,069.00**

SECTION C - DRAINAGE ITEMS

PIPES, UNDERDRAIN, CB's, MH's, ETC.	45%		$ 486,481.05
	SUBTOTAL C		**$ 1,567,550.05**

SECTION D - TRAFFIC CONTROL

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
618.61	UNIFORMED OFFICERS WITH VEHICLE	$	8000	$ 1.00	$ 8,000.00
618.7	FLAGGERS	HR	1000	$ 50.00	$ 50,000.00
619.1	MAINTENANCE OF TRAFFIC	U	1	$ 25,000.00	$ 25,000.00
	MISCELLANEOUS TRAFFIC CONTROL		10% OF ABOVE TOTAL		$ 8,300.00
			SUBTOTAL D		**$ 1,658,850.05**

SECTION E - EROSION AND SEDIMENT CONTROL

EROSION, SEDIMENT, AND POLLUTION CONTROL (HAY BALES, SILT FENCE, SWPPP, TEMP. WATER POLL. CONTROL, ETC.)	30% OF DRAINAGE		$ 145,944.32
	SUBTOTAL E		**$ 1,804,794.37**

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimates		
Project No.	22.144401.02		
Location:	02 NH 108 (Portsmouth Ave), Stratham NH		
Task:	Conceptual Estimate - Sidewalk and Side Path Construction		
Calculated By:	MAP	Date:	9/17/2024
Checked By:	JFMS	Date:	10/18/2024

CONCEPTUAL ESTIMATE

NH 108 (Portsmouth Avenue) Sidewalk and Side Path Construction

SECTION F - ADDITIONAL ITEMS

Midblock Crossing RRFB's (x3)		$	75,000.00
Signal Modifications & Timing(x2)		$	80,000.00
Landscaping (Commercial Sites)		$	50,000.00
BMP		$	320,000.00
SUBTOTAL F		$	2,329,794.37

SECTION G - MOBILIZATION AND CONTINGENCIES

ROADWAY MOBILIZATION	10%	$	232,979.44
SUBTOTAL G		**$**	**2,562,773.80**
ROUNDED CONSTRUCTION SUBTOTAL:		$	2,563,000.00
CONTINGENCY	15%	$	385,000.00
ROUNDED CONSTRUCTION TOTAL		**$**	**2,950,000.00**
DESIGN ENGINEERING	15%	**$**	**443,000.00**
NHDOT PROJECT ADMINISTRATION	10%	**$**	**295,000.00**
CONSTRUCTION ENGINEERING	10%	**$**	**295,000.00**
RIGHT OF WAY ACQUISTION		**$**	**50,000.00**
INFLATION (11 YEARS)	3.7%	**$**	**1,981,430.94**
ROUNDED PROJECT TOTAL COSTS (CON, ROW, PE)		**$**	**6,020,000.00**

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimates		
Project No.	22.144401.02		
Location:	02 NH 108 (Portsmouth Ave), Stratham NH		
Task:	Conceptual Estimate - Sidewalk and Side Path Construction		
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CONCEPTUAL ESTIMATE - ASSUMPTIONS

This Conceptual Engineer's Estimate of Probable Construction Costs is based on the anticipated scope of work, as well as Hoyle Tanner's experience with similar projects and understanding of current industry trends. The estimate has not been based on a final design for this project, and as such, it is intended to be preliminary in nature. It should be ntoed that changes in material or labor costs in the construction industry could impact the project cost in either direction. Assumptions used for this estimate are listed below.

1. Approximately 3,050' of sidewalk construction along NH 108 SB from Shaw's intersection northward to Scamman's Home & Garden with the exception of previously constructed sidewalk along dermatologist office and Exter Subaru parcels, as depicted in 2008 Gateway District Master Plan
2. Approximately 5,600' of side path construction along NH 108 NB from from Shaw's intersection northward to Bunker Hill Road and along Bunker Hill Road to the Town Hall, including reconstrution of previously constructed sidewalk along Audi/Porsche Stratham and Parkman Brook Shopping Center parcels, as depicted in 2008 Gateway District Master Plan
3. Typical section for sidewalk is 5.5' wide from face of curb to back of sidewalk [7" reveal granite curb, 4" concrete sidewalk surface, 6" crushed gravel subbase]
4. Typical section for side path is 10' wide with no curb and avg 5' wide grass buffer to EP [2" bituminous sidewalk, 12" crushed gravel subbase]
5. All existing curb in proposed sidewalk areas will be removed and discarded; Curb cannot be reused
6. Existing side slopes in curbed areas are 5%; Proposed side slopes in these areas will not exceed 6:1
7. Existing side slopes in uncurbed areas without guardrail are 8:1; Proposed slopes will be 6:1
8. Existing side slopes behind guardrail are 3:1 and approximately 10' tall; Proposed slopes behind guardrail will be 2:1
9. Driveways are anticpated to be milled and overlayed to 12' from existing EP
10. No impacts to natural or cultural resources
11. Temporary and permanent R.O.W. impacts are anticipated; Anticipated costs are included
12. Existing closed drainage system will require modification as a result of new sidewalk curb
13. Utility pole relocation is anticipated; To be performed by others, no costs included
14. Two existing traffic signals within project limits will require modification for pedestrian crossings [Signal timing design; Curb ramps; Markings]
15. A midblock crosswalk will be installed near the River Road intersection, Anticipate needing RRFB
16. A midblock crosswalk will be installed near the Raeder Drive intersection, Anticipate needing RRFB
17. A midblock crosswalk will be installed near the northern sidewalk terminus (Scamman Home & Garden); Anticipate needing RRFB
18. No impacts to water are anticipated
19. Minimal traffic impact; Sidewalk and side path can be constructed with daily shoulder/lane closures
20. Existing guardrail along southbound EP will be replaced at back of sidewalk and extended as needed
21. ADA curb ramps/landings will be installed at the two existing traffic signals, at the three anticipated midblock crossings, at crosswalks on River Road and Frying Pan Lane, and additional areas where the fog line (white stripe) is broken accros a drive or side road
22. Topographic survey of the project limits will be required
23. ROW Impacts have the following costs: Takings = $10/SF, Perm Ease = $5/SF, Temp Ease = $1/SF
24. Stormwater BMP(s) will be required to comply with current AoT regulations

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimates		
Project No.	22.144401.02		
Location:	03 NH 108 @ NH 33, Stratham NH		
Task:	Conceptual Estimate - Intersection Reconfiguration to Remove Traffic Circle		
Calculated By:	MAP	Date:	9/17/2024
Checked By:	JFMS	Date:	10/18/2024

CONCEPTUAL ESTIMATE

NH 108 @ NH 33 Intersection Reconfiguration to Remove Traffic Circle

SECTION A - MAJOR ITEMS

ITEM NO.	DESCRIPTION	UNIT	QUANTIT	UNIT COST	COST
201.1	CLEARING AND GRUBBING (F)	A	1.25	$ 30,000.00	$ 37,500.00
203.1	COMMON EXCAVATION	CY	13900	$ 18.00	$ 250,200.00
203.6	EMBANKMENT-IN-PLACE (F)	CY	6550	$ 14.00	$ 91,700.00
304.1	SAND (F)	CY	3450	$ 38.00	$ 131,100.00
304.2	GRAVEL (F)	CY	3750	$ 45.00	$ 168,750.00
304.3	CRUSHED GRAVEL (F)	CY	5600	$ 55.00	$ 308,000.00
403.11###	HBP-VARIOUS, MACHINE METHOD, HIGH STRENGTH, QC/QA TIER 2	TON	4550	$ 115.00	$ 523,250.00
403.12	HBP-HAND METHOD (DRIVEWAYS)	TON	890	$ 220.00	$ 195,800.00
403.16	PAVEMENT JOINT ADHESIVE	LF	21000	$ 1.00	$ 21,000.00
410.22	ASPHALT EMULSION FOR TACK COAT	GAL	1300	$ 8.00	$ 10,400.00
417	COLD PLANING BITUMINOUS SURFACES	SY	17000	$ 6.00	$ 102,000.00
606.1455	BEAM GUARDRAIL (TERMINAL UNIT TYPE EAGRT, TL 2) (STEEL POST)	U	8	$ 4,500.00	$ 36,000.00
606.18001	31" W-BEAM GUARDRAIL W/8" OFFSET BLOCK (STEEL POST)	LF	900	$ 35.00	$ 31,500.00
608.24	4" CONCRETE SIDEWALK (F)	SY	7600	$ 60.00	$ 456,000.00
608.26	6" CONCRETE SIDEWALK (F)	SY	165	$ 65.00	$ 10,725.00
608.38	8" REINFORCED CONCRETE SIDEWALK	SY	275	$ 100.00	$ 27,500.00
609.01	STRAIGHT GRANITE CURB	LF	8475	$ 47.00	$ 398,325.00
609.01187	STRAIGHT GRANITE CURB, 18" HIGH WITH 3" ROUNDED EDGE	LF	665	$ 100.00	$ 66,500.00
609.216	STRAIGHT GRANITE SLOPE CURB 6" HIGH	LF	1600	$ 45.00	$ 72,000.00
628.2	SAWED BITUMINOUS PAVEMENT	LF	14850	$ 5.00	$ 74,250.00
	MISCELLANEOUS ROADWAY		10% OF ABOVE TOTAL		$ 301,250.00
			SUBTOTAL A		**$ 3,313,750.00**

SECTION B - MISCELLANEOUS ITEMS

SIGNS, MARKINGS, LOAM/HUMUS, ETC.	10%	$ 331,375.00
	SUBTOTAL B	**$ 3,645,125.00**

SECTION C - DRAINAGE ITEMS

PIPES, UNDERDRAIN, CB's, MH's, ETC.	25%	$ 911,281.25
	SUBTOTAL C	**$ 4,556,406.25**

SECTION D - TRAFFIC CONTROL

ITEM NO.	DESCRIPTION	UNIT	QUANTIT	UNIT COST	COST
618.61	UNIFORMED OFFICERS WITH VEHICLE	$	200000	$ 1.00	$ 200,000.00
618.7	FLAGGERS	HR	3000	$ 50.00	$ 150,000.00
619.1	MAINTENANCE OF TRAFFIC	U	1	$120,000.00	$ 120,000.00
	MISCELLANEOUS TRAFFIC CONTROL		10% OF ABOVE TOTAL		$ 47,000.00
			SUBTOTAL D		**$ 5,073,406.25**

SECTION E - EROSION AND SEDIMENT CONTROL

EROSION, SEDIMENT, AND POLLUTION CONTROL (HAY BALES, SILT FENCE, SWPPP, TEMP. WATER POLL. CONTROL, ETC.)	30% OF DRAINAGE	$ 273,384.38
	SUBTOTAL E	**$ 5,346,790.63**

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimates		
Project No.	22.144401.02		
Location:	03 NH 108 @ NH 33, Stratham NH		
Task:	Conceptual Estimate - Intersection Reconfiguration to Remove Traffic Circle		
Calculated By:	MAP	Date:	9/17/2024
Checked By:	JFMS	Date:	10/18/2024

CONCEPTUAL ESTIMATE

NH 108 @ NH 33 Intersection Reconfiguration to Remove Traffic Circle

SECTION F - ADDITIONAL ITEMS			
Landscaping (Commercial / Residential Sites)		$	55,000.00
Landscaping (Roundabout)		$	15,000.00
Demo 7' x 7' x 50' box culvert under NH 108 SB		$	55,000.00
Demo 9' x 8' x 64' box culvert under NH 33 WB		$	55,000.00
Dam Replacement & Relocation		$	260,000.00
Install 19' x 8' x 150' box culvert or rigid frame under southern approach to proposed roundabout		$	830,160.00
BMP's		$	550,000.00
SUBTOTAL F		$	7,166,950.63
SECTION G - MOBILIZATION AND CONTINGENCIES			
ROADWAY MOBILIZATION	10%	$	716,695.06
SUBTOTAL G		**$**	**7,883,645.69**
ROUNDED CONSTRUCTION SUBTOTAL:		$	7,884,000.00
CONTINGENCY	15%	$	1,183,000.00
ROUNDED CONSTRUCTION TOTAL		**$**	**9,070,000.00**
DESIGN ENGINEERING	15%	**$**	**1,361,000.00**
NHDOT PROJECT ADMINISTRATION	10%	**$**	**907,000.00**
CONSTRUCTION ENGINEERING	10%	**$**	**907,000.00**
RIGHT OF WAY ACQUISTION		**$**	**40,000.00**
INFLATION (11 YEARS)	3.7%	**$**	**6,035,675.44**
ROUNDED PROJECT TOTAL COSTS (CON, ROW, PE)		**$**	**18,400,000.00**

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimates
Project No.	22.144401.02
Location:	03 NH 108 @ NH 33, Stratham NH
Task:	Conceptual Estimate - Intersection Reconfiguration to Remove Traffic Circle
Calculated By:	MAP Date: 9/17/2024
Checked By:	JFMS Date: 10/18/2024

CONCEPTUAL ESTIMATE - ASSUMPTIONS

This Conceptual Engineer's Estimate of Probable Construction Costs is based on the anticipated scope of work, as well as Hoyle Tanner's experience with similar projects and understanding of current industry trends. The estimate has not been based on a final design for this project, and as such, it is intended to be preliminary in nature. It should be ntoed that changes in material or labor costs in the construction industry could impact the project cost in either direction. Assumptions used for this estimate are listed below.

1. Layout will match layout for Allternative #2 from 2010 Stratham Town Center District Study by GPI
   Limits of work along NH 108 are anticipated to be from 350' north of Millbrook Drive to 400' south of French Lane (total 2000'); Limits of work along NH 33 are anticipated to be from 350' north of Millbrook Drive to 500' west of Winnicutt Road; The Winnicutt Road intersection shown in the Alternative 2 will not be included
1. Full depth construction will be required for the roundabout and for approach work within 100' of it
2. Typical section for circulatory roadway and full depth approaches will be:
   1.5" High Strength Surface, QC/QA Tier 2
   2.5" High Strength Binder, QC/QA Tier 2
   2.5" Base, QC/QA Tier 2
   12" Crushed Gravel, 12" Gravel, 12" Sand
3. Truck apron will be 8" Reinforced Concrete Sidewalk
4. Center island will be landscaped
5. Center island and approach curbing will be straight granite curb;
   Circulatory roadway curbing will have rounded edge
6. Splitter islands will be raised using 6" high slope curb and will be surfaced with 6" Concrete Sidewalk
7. Step-Box Widening will be used to widen pavement as needed outside of full depth limits
   Step box materials for NH 108 & NH 33 will follow NHDOT 12'-4' typical
   [1.5" Surface Pave, 4.5" Binder Pave, 12" Crushed Gravel, 12" Gravel, 12" Sand]
   Step box materials for dead-end cul-de-sac will follow Stratham Road Cross Section
   [1.5" Surface Pave, 2.5" Binder Pave, 6" Crushed Gravel, 12" Gravel]
   Step Box will begin 3' in from existing EP
8. Minimal change in profile grade for existing road surfaces; Anticipate roundabout circulatory roadway will be average 1' above existing grade
9. Anticipate removal of two box culverts under roadway and existing dam in northern quadrant;
   New box culvert (19' x 8' x ~150' long) just south of roundabout and new dam
   The existing culvert on the southeast leg is anticipated to remain.
10. Existing asphalt not already being excavated for roundabout construction (including discontinued roadway) will be removed, and revegetated with loam and turf establishment; aggregate subbase will remain
11. Cold plane & overlay 1.5" existing pavement to remain to revise striping
12. New 8' curbed concrete sidewalk (4" concrete w/ 6" crushed gravel) will be installed along both sides of road within project limits including dead-end road
13. Environmental permitting is anticipated for impacts to Mill Brook and dam
14. Temporary and permanent R.O.W. impacts are anticipated; Anticipated costs are included
15. Topographic survey of the project limits will be required
16. Traffic cannot be detoured; Construction will be phased to maintain traffic throught duration
    No temporary signal anticipated
17. No utility (water/sewer/gas) adjustments or relocations are anticipated; No costs have been included
18. Utility pole relocation is anticipated; To be performed by others, no costs included
19. Intersection of NH 108 and dead-ended street will be stop-controlled, not signalized
20. Impacts to driveways are anticpiated to be limited to 10'
    [Residential Drives 3" hand method, 8" crushed gravel]
    [Commercial Drives 3" hand method, 12" crushed gravel]
21. ROW Impacts have the following costs: Takings = $10/SF, Perm Ease = $5/SF, Temp Ease = $3/SF

HOYLE TANNER

Project: Brentwood RSA
Project No. 22.144401.02
Location: 04 Intersection of NH 125 @ South Road
Task: Quantity Calculations
Calculated By: MAP Date: 9/17/2024
Checked By: JFMS Date: 10/18/2024

CONCEPTUAL ESTIMATE

NH 125 @ South Road Roundabout

SECTION A - MAJOR ITEMS

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
203.1	COMMON EXCAVATION	CY	4500	$ 18.00	$ 81,000.00
203.6	EMBANKMENT-IN-PLACE (F)	CY	1450	$ 14.00	$ 20,300.00
304.1	SAND (F)	CY	1900	$ 38.00	$ 72,200.00
304.2	GRAVEL (F)	CY	1600	$ 45.00	$ 72,000.00
304.3	CRUSHED GRAVEL (F)	CY	1500	$ 55.00	$ 82,500.00
403.11###	HOT BITUMINOUS PAVEMENT, MACHINE METHOD	TON	1400	$ 115.00	$ 161,000.00
417	COLD PLANING BITUMINOUS SURFACES	SY	3000	$ 6.00	$ 18,000.00
608.26	6" CONCRETE SIDEWALK (F)	SY	500	$ 65.00	$ 32,500.00
608.38	8" REINFORCED CONCRETE SIDEWALK (F)	SY	700	$ 100.00	$ 70,000.00
609.01	STRAIGHT GRANITE CURB	LF	1500	$ 47.00	$ 70,500.00
609.01187	STRAIGHT GRANITE CURB, 18" HIGH WITH 3" ROUNDED EDGE	LF	380	$ 100.00	$ 38,000.00
	MISCELLANEOUS ROADWAY		10% OF ABOVE TOTAL		$ 71,800.00
			SUBTOTAL A		**$ 789,800.00**

SECTION B - MISCELLANEOUS ITEMS

SIGNS, MARKINGS, LOAM/HUMUS, ETC.	10%		$ 78,980.00
	SUBTOTAL B		**$ 868,780.00**

SECTION C - DRAINAGE ITEMS

PIPES, UNDERDRAIN, CB's, MH's, ETC.	15%		$ 130,317.00
	SUBTOTAL C		**$ 999,097.00**

SECTION D - TRAFFIC CONTROL

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
606.417	PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL	LF	600	$ 30.00	$ 18,000.00
618.61	UNIFORMED OFFICERS WITH VEHICLE	$	$ 93,000.00	$ 1.00	$ 93,000.00
618.7	FLAGGERS	HR	2100	$ 50.00	$ 105,000.00
619.1	MAINTENANCE OF TRAFFIC	LS	1	$ 100,000.00	$ 100,000.00
	MISCELLANEOUS TRAFFIC CONTROL		10% OF ABOVE TOTAL		$ 31,600.00
			SUBTOTAL D		**$ 1,346,697.00**

SECTION E - EROSION AND SEDIMENT CONTROL

EROSION, SEDIMENT, AND POLLUTION CONTROL (HAY BALES, SILT FENCE, SWPPP, TEMP. WATER POLL. CONTROL, ETC.)	30% OF DRAINAGE		$ 39,095.10
	SUBTOTAL E		**$ 1,385,792.10**

HOYLE TANNER

Project:	Brentwood RSA		
Project No.	22.144401.02		
Location:	04 Intersection of NH 125 @ South Road		
Task:	Quantity Calculations		
Calculated By:	MAP	Date:	9/17/2024
Checked By:	JFMS	Date:	10/18/2024

CONCEPTUAL ESTIMATE

NH 125 @ South Road Roundabout

SECTION F - ADDITIONAL ITEMS

BMP's		$	150,000.00
	SUBTOTAL F	**$**	**1,535,792.10**

SECTION G - MOBILIZATION

ROADWAY MOBILIZATION	10%	$	153,579.21
	SUBTOTAL G	$	1,689,371.31
	ROUNDED CONSTRUCTION SUBTOTAL:	$	1,690,000.00
	CONTINGENCY 15%	$	254,000.00
	ROUNDED CONSTRUCTION TOTAL	**$**	**1,945,000.00**
	DESIGN ENGINEERING 20%	**$**	**389,000.00**
	NHDOT PROJECT ADMINISTRATION 10%	**$**	**195,000.00**
	CONSTRUCTION ENGINEERING 10%	**$**	**195,000.00**
	RIGHT OF WAY ACQUISTION	**$**	**30,000.00**
	INFLATION (11 YEARS) 3.7%	**$**	**1,353,052.52**
	ROUNDED PROJECT TOTAL COSTS (CON, ROW, PE)	**$**	**4,200,000.00**

Project:	Brentwood RSA		
Project No.	22.144401.02	NHDOT Project #:	0
Location:	04 Intersection of NH 125 @ South Road		
Task:	Quantity Calculations		
Calculated By:	MAP	Date:	9/17/2024
Checked By:	JFMS	Date:	10/18/2024

CONCEPTUAL ESTIMATE - ASSUMPTIONS

This Conceptual Engineer's Estimate of Probable Construction Costs is based on the anticipated scope of work, as well as Hoyle Tanner's experience with similar projects and understanding of current industry trends. The estimate has not been based on a final design for this project, and as such, it is intended to be preliminary in nature. It should be ntoed that changes in material or labor costs in the construction industry could impact the project cost in either direction. Assumptions used for this estimate are listed below.

1. NH 125 Roundabout, NB approach, and SB approach comprised of 6" HBP, 12" Cr Gravel, 12" Gravel, 18" Sand
2. South Road EB approach and WB approach comprised of 4" HBP, 8" Cr Gravel, 12" Gravel
3. NH 125 north and south of roundabout to tie into previously constructed three lane roadway section
5. Any one-way alternating operations will be limited to work hours; two travel lanes will be provided outside of Contractor working hours
6. No permanent easements or property takings will be required
7. No profile adjustments on NH 125
8. Roundabout layout is based on conceptual alternative prepared in 2/24 Road Safety Audit prepared by Hoyle Tanner.

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	05 Greenland @ NH33		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	9/23/2024
Checked By:	JFMS	Date:	10/18/2024

CONCEPTUAL ESTIMATE

NH 33 / Bayside Rd / Winnicut Road Intersection Improvements

SECTION A - MAJOR ITEMS

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
201.1	CLEARING AND GRUBBING (F)	A	0.6	$ 30,000	$ 18,000.00
203.1	COMMON EXCAVATION	CY	3500	$ 18.00	$ 63,000.00
203.6	EMBANKMENT-IN-PLACE (F)	CY	1500	$ 14.00	$ 21,000.00
304.1	SAND (F)	CY	3500	$ 38.00	$ 133,000.00
304.4	CRUSHED STONE (FINE GRADATION) (F)	CY	1330	$ 45.00	$ 59,850.00
304.5	CRUSHED STONE (COARSE GRADATION) (F)	CY	875	$ 42.00	$ 36,750.00
403.11###	HBP-VARIOUS, MACHINE METHOD	TON	3850	$ 115.00	$ 442,750.00
417	COLD PLANING BITUMINOUS SURFACES	SY	10800	$ 6.00	$ 64,800.00
606.1454	BEAM GUARDRAIL (TERMINAL UNIT TYPE EAGRT, TL 3) (STEEL P(	UNIT	4	$ 4,500.00	$ 18,000.00
606.18001	31" W-BEAM GUARDRAIL W/8" OFFSET BLOCK (STEEL POST)	LF	675	$ 35.00	$ 23,625.00
608.12	2" BITUMINOUS SIDEWALK (F)	SY	2070	$ 35.00	$ 72,450.00
609.01	STRAIGHT GRANITE CURB	LF	3775	$ 47.00	$ 177,425.00
	MISCELLANEOUS ROADWAY		10% OF ABOVE TOTAL		$ 113,065.00
			SUBTOTAL A		**$ 1,243,715.00**

SECTION B - MISCELLANEOUS ITEMS

SIGNS, MARKINGS, LOAM/HUMUS, ETC.	10%	$ 124,371.50
	SUBTOTAL B	**$ 1,368,086.50**

SECTION C - DRAINAGE ITEMS

PIPES, UNDERDRAIN, CB's, MH's, ETC.	30%	$ 410,425.95
	SUBTOTAL C	**$ 1,778,512.45**

SECTION D - TRAFFIC CONTROL

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
606.417	PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL				
618.61	UNIFORMED OFFICERS WITH VEHICLE				
618.7	FLAGGERS				
619.1	MAINTENANCE OF TRAFFIC				$ 400,000.00
	MISCELLANEOUS TRAFFIC CONTROL		10% OF ABOVE TOTAL		$ 40,000.00
			SUBTOTAL D		**$ 2,218,512.45**

SECTION E - EROSION AND SEDIMENT CONTROL

EROSION, SEDIMENT, AND POLLUTION CONTROL (HAY BALES, SILT FENCE, SWPPP, TEMP. WATER POLL. CONTROL, ETC.)	30% OF DRAINAGE	$ 123,127.79
	SUBTOTAL E	**$ 2,341,640.24**

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	05 Greenland @ NH33		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	9/23/2024
Checked By:	JFMS	Date:	10/18/2024

CONCEPTUAL ESTIMATE

NH 33 / Bayside Rd / Winnicut Road Intersection Improvements

SECTION F - ADDITIONAL ITEMS

Bridge Reconstruction		$	3,387,000.00
Traffic Signals		$	220,000.00
Roadway Lighting		$	75,000.00
Stream Restoration		$	1,000,000.00
	SUBTOTAL F	$	7,023,640.24

SECTION G - MOBILIZATION AND CONTINGENCIES

ROADWAY MOBILIZATION	10%	$	702,364.02
	SUBTOTAL G	$	7,726,004.26

	ROUNDED ROADWAY SUBTOTAL:	$	7,727,000.00
	CONTINGENCY: 15%	$	1,160,000.00
	ROUNDED CONSTRUCTION TOTAL	**$**	**8,887,000.00**
	DESIGN ENGINEERING: 15%	**$**	**1,334,000.00**
	NHDOT PROJECT ADMINISTRATION 10%	**$**	**889,000.00**
	CONSTRUCTION ENGINEERING: 10%	**$**	**889,000.00**
	RIGHT OF WAY ACQUISITION:	**$**	**50,000.00**
	INFLATION (11 YEARS) 3.7%	**$**	**5,919,727.59**
	ROUNDED PROJECT TOTAL COSTS (CON, ROW, PE)	**$**	**17,970,000.00**

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	05 Greenland @ NH33		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	9/23/2024
Checked By:	JFMS	Date:	10/18/2024

CONCEPTUAL ESTIMATE - ASSUMPTIONS

This Conceptual Engineer's Estimate of Probable Construction Costs is based on the anticipated scope of work, as well as Hoyle Tanner's experience with similar projects and understanding of current industry trends. The estimate has not been based on a final design for this project, and as such, it is intended to be preliminary in nature. It should be ntoed that changes in material or labor costs in the construction industry could impact the project cost in either direction. Assumptions used for this estimate are listed below.

1. Estimate is based on Scope and Assumptions from October 2020 Study prepared by VAI for 5-lane Traffic Signal alternative
2. Quantities taken from cost estimate for 5-lane traffic signal alternative prepared by VAI
3. in October 2020.
4. Quantities for Sand & Crushed Stone based on VAI full depth pavement area at noted depth.
5. Maintenance of Traffic item includes cost for flaggers, officers, and general MOT.
   Section C Drainage Item includes anticpated cost for Stormwater BMPs.
6. Proposed Bridge Assumptions
   - -No major profile or alignment changes anticipated
   - -Proposed span will be approx. 70' meeting NHDES Stream Crossing Guidelines for 1.2 times the natural bank full width
   - - Bridge will be pile supported with full height cantilever abutments
   - - Superstructure type will be NEXT Precast Prestressed Beams
   - - Staged Construction is anticipated
   - - 400 linear feet of Stream Restoration to provide fish passage has been included

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	07 Plaistow @ NH121A		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	10/10/2024
Checked By:	JFMS	Date:	10/17/2024

CONCEPTUAL ESTIMATE

NH 121A / North Avenue Proposed Roundabout

SECTION A - MAJOR ITEMS

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
201.1	CLEARING AND GRUBBING (F)	A	0.40	$ 30,000	$ 12,000.00
203.1	COMMON EXCAVATION	CY	4500	$ 18.00	$ 81,000.00
203.6	EMBANKMENT-IN-PLACE (F)	CY	350	$ 14.00	$ 4,900.00
304.1	SAND (F)	CY	1250	$ 38.00	$ 47,500.00
304.2	GRAVEL (F)	CY	1250	$ 45.00	$ 56,250.00
304.3	CRUSHED GRAVEL (F)	CY	1350	$ 55.00	$ 74,250.00
403.11###	HBP-VARIOUS	TON	880	$ 115.00	$ 101,200.00
403.12	HBP-HAND METHOD	TON	210	$ 220.00	$ 46,200.00
417	COLDPLANING BITUMINOUS SURFACES	SY	18	$ 6.00	$ 108.00
608.26	6" CONCRETE SIDEWALK (F)	SY	280	$ 65.00	$ 18,200.00
608.38	8" REINFORCED CONCRETE SIDEWALK (F)	SY	330	$ 100.00	$ 33,000.00
609.01	STRAIGHT GRANITE CURB	LF	1750	$ 47.00	$ 82,250.00
609.01187	STRAIGHT GRANITE CURB, 18" HIGH WITH 3" ROUNDED EDGE	LF	480	$ 100.00	$ 48,000.00
	MISCELLANEOUS ROADWAY		10% OF ABOVE TOTAL		$ 60,485.80
			SUBTOTAL A		**$ 665,343.80**

SECTION B - MISCELLANEOUS ITEMS

SIGNS, MARKINGS, LOAM/HUMUS, ETC.	15%		$ 99,801.57
	SUBTOTAL B		**$ 765,145.37**

SECTION C - DRAINAGE ITEMS

PIPES, UNDERDRAIN, CB's, MH's, ETC.	25%		$ 191,286.34
	SUBTOTAL C		**$ 956,431.71**

SECTION D - TRAFFIC CONTROL

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
618.61	UNIFORMED OFFICERS WITH VEHICLE	$	$ -	$ 1.00	$ -
618.7	FLAGGERS	HR	2800	$ 50.00	$ 140,000.00
619.1	MAINTENANCE OF TRAFFIC	U	1	$125,000.00	$ 125,000.00
	MISCELLANEOUS TRAFFIC CONTROL		10% OF ABOVE TOTAL		$ 26,500.00
			SUBTOTAL D		**$ 1,247,931.71**

SECTION E - EROSION AND SEDIMENT CONTROL

EROSION, SEDIMENT, AND POLLUTION CONTROL (HAY BALES, SILT FENCE, SWPPP, TEMP. WATER POLL. CONTROL, ETC.)	30% OF DRAINAGE		$ 57,385.90
	SUBTOTAL E		**$ 1,305,317.62**

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	07 Plaistow @ NH121A		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	10/10/2024
Checked By:	JFMS	Date:	10/17/2024

CONCEPTUAL ESTIMATE

NH 121A / North Avenue Proposed Roundabout

SECTION F - ADDITIONAL ITEMS

BMP's		$	150,000.00
Landscaping		$	20,000.00
	SUBTOTAL F	$	1,475,317.62

SECTION G - MOBILIZATION AND CONTINGENCIES

ROADWAY MOBILIZATION	10%	$	147,531.76
	SUBTOTAL G	$	1,622,849.38
	ROUNDED CONSTRUCTION SUBTOTAL:	$	1,623,000.00
	CONTINGENCY 15%	$	244,000.00
	ROUNDED CONSTRUCTION TOTAL:	**$**	**1,870,000.00**
	DESIGN ENGINEERING: 15%	**$**	**281,000.00**
	NHDOT PROJECT ADMINISTRATION 10%	**$**	**187,000.00**
	CONSTRUCTION ENGINEERING: 10%	**$**	**187,000.00**
	RIGHT OF WAY ACQUISITION	**$**	**140,000.00**
	INFLATION (11 YEARS) 3.7%	**$**	**1,309,326.42**
	ROUNDED PROJECT TOTAL COSTS (CON, ROW, PE)	**$**	**4,000,000.00**

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	07 Plaistow @ NH121A		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	10/10/2024
Checked By:	JFMS	Date:	10/17/2024

CONCEPTUAL ESTIMATE - ASSUMPTIONS

This Conceptual Engineer's Estimate of Probable Construction Costs is based on the anticipated scope of work, as well as Hoyle Tanner's experience with similar projects and understanding of current industry trends. The estimate has not been based on a final design for this project, and as such, it is intended to be preliminary in nature. It should be ntoed that changes in material or labor costs in the construction industry could impact the project cost in either direction. Assumptions used for this estimate are listed below.

1. Full depth reconstruction within project lmits consisting of: 6" HBP, 12" Cr Grav, 12" Grav, 12" Sand
2. Pedestrian sidewalks are not included; Sidewalk items used for estimate are for concrete medians
3. Utility pole relocation (by others) will be required
4. Driveway reconstruction, where necessary, will consist of 3" HBP hand method & 8" crushed gravel
5. Stormwater BMP(s) will be required to comply with current AoT regulations
6. Construction duration is one season - no winter shutdown
7. No utility work is included in the project
8. A 3-leg roundabout with a 140' ICD has been assumed.

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	08 Seabrook @ NH1A		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	9/30/2024
Checked By:	JFMS	Date:	10/16/2024

CONCEPTUAL ESTIMATE

NH 1A Sidewalks and Bicycle Shoulders

SECTION A - MAJOR ITEMS

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST		COST
203.1	COMMON EXCAVATION	CY	3450	$ 18.00	$	62,100.00
203.6	EMBANKMENT-IN-PLACE (F)	CY	2600	$ 14.00	$	36,400.00
304.3	CRUSHED GRAVEL (F)	CY	1950	$ 55.00	$	107,250.00
403.11###	HBP-VARIOUS, MACHINE METHOD	TON	3950	$ 115.00	$	454,250.00
403.12	HBP-HAND METHOD	TON	3100	$ 220.00	$	682,000.00
403.18	HBP-LEVELING COURSE	TON	1830	$ 125.00	$	228,750.00
417	COLD PLANING BITUMINOUS SURFACES	SY	24000	$ 6.00	$	144,000.00
608.24	4" CONCRETE SIDEWALK (F)	SY	5600	$ 60.00	$	336,000.00
609.01	STRAIGHT GRANITE CURB	LF	9200	$ 47.00	$	432,400.00
628.2	SAWED BITUMINOUS PAVEMENT	LF	12000	$ 5.00	$	60,000.00
	MISCELLANEOUS ROADWAY		10% OF ABOVE TOTAL		$	254,315.00
			SUBTOTAL A		**$**	**2,797,465.00**

SECTION B - MISCELLANEOUS ITEMS

SIGNS, MARKINGS, LOAM/HUMUS, ETC.	10%	$	279,746.50
	SUBTOTAL B	**$**	**3,077,211.50**

SECTION C - DRAINAGE ITEMS

PIPES, UNDERDRAIN, CB's, MH's, ETC.	50%	$	1,538,605.75
	SUBTOTAL C	**$**	**4,615,817.25**

SECTION D - TRAFFIC CONTROL

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST		COST
618.61	UNIFORMED OFFICERS WITH VEHICLE	$	$7,000.00	$ 1.00	$	7,000.00
618.7	FLAGGERS	HR	1700	$ 50.00	$	85,000.00
619.1	MAINTENANCE OF TRAFFIC	U	1	$ 80,000.00	$	80,000.00
	MISCELLANEOUS TRAFFIC CONTROL		10% OF ABOVE TOTAL		$	17,200.00
			SUBTOTAL D		**$**	**4,805,017.25**

SECTION E - EROSION AND SEDIMENT CONTROL

EROSION, SEDIMENT, AND POLLUTION CONTROL (HAY BALES, SILT FENCE, SWPPP, TEMP. WATER POLL. CONTROL, ETC.)	30% OF DRAINAGE	$	461,581.73
	SUBTOTAL E	**$**	**5,266,598.98**

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	08 Seabrook @ NH1A		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	9/30/2024
Checked By:	JFMS	Date:	10/16/2024

CONCEPTUAL ESTIMATE

NH 1A Sidewalks and Bicycle Shoulders

SECTION F - ADDITIONAL ITEMS

BMP's		$	1,200,000.00
RRFB (Two midblock crossings)		$	50,000.00
Signal Modificationss		$	35,000.00
	SUBTOTAL G	**$**	**6,551,598.98**

SECTION G - MOBILIZATION AND CONTINGENCIES

ROADWAY MOBILIZATION	10%	$	655,159.90
	SUBTOTAL G	**$**	**7,206,758.87**
	ROUNDED ROADWAY SUBTOTAL:	$	7,207,000.00
	CONTINGENCY: 15%	$	1,082,000.00
	ROUNDED CONSTRUCTION TOTAL:	**$**	**8,290,000.00**
	DESIGN ENGINEERING: 15%	**$**	**1,244,000.00**
	NHDOT PROJECT ADMINISTRATION 10%	**$**	**829,000.00**
	CONSTRUCTION ENGINEERING: 10%	**$**	**829,000.00**
	RIGHT OF WAY ACQUISITION	**$**	**70,000.00**
	INFLATION (11 YEARS) 3.7%	**$**	**5,533,070.97**
	ROUNDED PROJECT TOTAL COSTS (CON, ROW, PE)	**$**	**16,800,000.00**

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	08 Seabrook @ NH1A		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	9/30/2024
Checked By:	JFMS	Date:	10/16/2024

CONCEPTUAL ESTIMATE - ASSUMPTIONS

This Conceptual Engineer's Estimate of Probable Construction Costs is based on the anticipated scope of work, as well as Hoyle Tanner's experience with similar projects and understanding of current industry trends. The estimate has not been based on a final design for this project, and as such, it is intended to be preliminary in nature. It should be ntoed that changes in material or labor costs in the construction industry could impact the project cost in either direction. Assumptions used for this estimate are listed below.

1. In order construct sidewalk within existing edges of pavement, a reduction to 3-lanes is assumed.
2. Southbound sidewalk will be constructed from the pedestrian boardwalk at Campton Street south to the north side of Cross Beach Road; South of Cross Beach Road, with a 3-lane section and no sidewalk on the SB side, there is an excess 6 ft of pavement width - this width will be included in the cold plane and overlay work of NH1A given the SB drop lane requirements are unknown
3. Northbound sidewalk will be constructed from the pedestrian boardwalk at Campton Street south to the north side of New Hampshire Street
4. Proposed sidewalk will be 6' wide (curb inclusive) consisting of 4" concrete with 6" crushed gravel base
5. Sidewalk will not be constructed across driveways or side roads
6. Work on NH1A and side roads will be limited to cold plane and overlay
7. Driveways will be reconstructed to incorporate sidewalk panels; Driveway reconstruction assumed to be 25 ft wide x 10 ft long and include 3" of hand method paving and 8" of crushed gravel
8. Wide open driveways and parking areas will be reconfigured to use consoldiated driveway entrances
9. Roadway crown will be shifted approximately 6 ft west such that proposed crown will align with edge of proposed TWLTL; Crown shift will be accomplished by cold planing and inlaying NB side of the road, and shimming & overlaying the SB side (no cold plane).
10. Slopes behind sidewalks assumed at 6:1, tying in ~6 ft behind back of sidewalk
11. No utility work is included in project
12. Utility pole relocation will not be required
13. Stormwater BMP(s) will be required to comply with current AoT regulations.
    Type (underground infiltration) and cost for BMP(s) is based on bids prices for Hampton Harbor bridge reconstruction, extrapolated to account for the larger project footprint for the sidewalk project.

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	09 Epping @ NH27		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	10/11/2024
Checked By:	JFMS	Date:	10/17/2024

CONCEPTUAL ESTIMATE

NH 27 / Blake Rd / Friend St / Depot Rd / School St - Proposed Roundabout

SECTION A - MAJOR ITEMS

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
201.1	CLEARING AND GRUBBING (F)	A	1.00	$ 30,000	$ 30,000.00
203.1	COMMON EXCAVATION	CY	14300	$ 18.00	$ 257,400.00
203.6	EMBANKMENT-IN-PLACE (F)	CY	700	$ 14.00	$ 9,800.00
304.1	SAND (F)	CY	3900	$ 38.00	$ 148,200.00
304.2	GRAVEL (F)	CY	4000	$ 45.00	$ 180,000.00
304.3	CRUSHED GRAVEL (F)	CY	4100	$ 55.00	$ 225,500.00
403.11###	HBP-VARIOUS	TON	3000	$ 115.00	$ 345,000.00
403.12	HBP-HAND METHOD	TON	450	$ 220.00	$ 99,000.00
417	COLDPLANING BITUMINOUS SURFACES	SY	35	$ 6.00	$ 210.00
606.1454	BEAM GUARDRAIL (TERMINAL UNIT TYPE EAGRT, TL 3) (STEEL POST)	U	4	$ 4,500.00	$ 18,000.00
606.1455	BEAM GUARDRAIL (TERMINAL UNIT TYPE EAGRT, TL 2) (STEEL POST)	U	3	$ 4,500.00	$ 13,500.00
606.18001	31" W-BEAM GUARDRAIL W/8" OFFSET BLOCK (STEEL POST)	LF	525	$ 35.00	$ 18,375.00
608.26	6" CONCRETE SIDEWALK (F)	SY	900	$ 65.00	$ 58,500.00
608.38	8" REINFORCED CONCRETE SIDEWALK (F)	SY	530	$ 100.00	$ 53,000.00
609.01	STRAIGHT GRANITE CURB	LF	5100	$ 47.00	$ 239,700.00
609.01187	STRAIGHT GRANITE CURB, 18" HIGH WITH 3" ROUNDED EDGE	LF	800	$ 100.00	$ 80,000.00
	MISCELLANEOUS ROADWAY		10% OF ABOVE TOTAL		$ 177,618.50
			SUBTOTAL A		**$ 1,953,803.50**

SECTION B - MISCELLANEOUS ITEMS

SIGNS, MARKINGS, LOAM/HUMUS, ETC.	10%	$ 195,380.35
	SUBTOTAL B	**$ 2,149,183.85**

SECTION C - DRAINAGE ITEMS

PIPES, UNDERDRAIN, CB's, MH's, ETC.	8%	$ 171,934.71
	SUBTOTAL C	**$ 2,321,118.56**

SECTION D - TRAFFIC CONTROL

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
606.417	PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL	LF	1550	$ 50.00	$ 77,500.00
618.61	UNIFORMED OFFICERS WITH VEHICLE	$	$ 75,000.00	$ 1.00	$ 75,000.00
618.7	FLAGGERS	HR	3500	$ 50.00	$ 175,000.00
619.1	MAINTENANCE OF TRAFFIC	U	1	$125,000.00	$ 125,000.00
670.046##	CONSTRUCT AND REMOVE TEMORARY WIDENING	U	1	$125,000.00	$ 125,000.00
	MISCELLANEOUS TRAFFIC CONTROL		10% OF ABOVE TOTAL		$ 57,750.00
			SUBTOTAL D		**$ 2,956,368.56**

SECTION E - EROSION AND SEDIMENT CONTROL

EROSION, SEDIMENT, AND POLLUTION CONTROL (HAY BALES, SILT FENCE, SWPPP, TEMP. WATER POLL. CONTROL, ETC.)	30% OF DRAINAGE	$ 51,580.41
	SUBTOTAL E	**$ 3,007,948.97**

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	09 Epping @ NH27		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	10/11/2024
Checked By:	JFMS	Date:	10/17/2024

CONCEPTUAL ESTIMATE

NH 27 / Blake Rd / Friend St / Depot Rd / School St - Proposed Roundabout

SECTION F - ADDITIONAL ITEMS

BMP's		$	150,000.00
Landscaping		$	20,000.00
	SUBTOTAL F	$	3,177,948.97

SECTION G - MOBILIZATION AND CONTINGENCIES

ROADWAY MOBILIZATION	10%	$	317,794.90
	SUBTOTAL G	$	3,325,743.87
	ROUNDED CONSTRUCTION SUBTOTAL:	$	3,326,000.00
	CONTINGENCY 15%	$	499,000.00
	ROUNDED CONSTRUCTION TOTAL:	**$**	**3,825,000.00**
	DESIGN ENGINEERING: 15%	**$**	**574,000.00**
	NHDOT PROJECT ADMINISTRATION 10%	**$**	**383,000.00**
	CONSTRUCTION ENGINEERING: 10%	**$**	**383,000.00**
	RIGHT OF WAY ACQUISITION	**$**	**540,000.00**
	INFLATION (11 YEARS) 3.7%	**$**	**2,802,892.01**
	ROUNDED PROJECT TOTAL COSTS (CON, ROW, PE)	**$**	**8,600,000.00**

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	09 Epping @ NH27		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	10/11/2024
Checked By:	JFMS	Date:	10/17/2024

CONCEPTUAL ESTIMATE - ASSUMPTIONS

This Conceptual Engineer's Estimate of Probable Construction Costs is based on the anticipated scope of work, as well as Hoyle Tanner's experience with similar projects and understanding of current industry trends. The estimate has not been based on a final design for this project, and as such, it is intended to be preliminary in nature. It should be ntoed that changes in material or labor costs in the construction industry could impact the project cost in either direction. Assumptions used for this estimate are listed below.

1. Full depth reconstruction within project lmits consisting of: 6" HBP, 12" Cr Grav, 12" Grav, 12" Sand
2. Pedestrian sidewalks are not included; Sidewalk items used for estimate are for concrete medians
3. Utility pole relocation (by others) will be required
4. Driveway reconstruction, where necessary, will consist of 3" HBP hand method & 8" crushed gravel
5. Stormwater BMP(s) will be required to comply with current AoT regulations
6. Construction duration is one season - no winter shutdown
7. No utility work is included in the project
8. Minimal change in profile grade required
9. 5-leg roundabout with 180' ICD
10. Upstream dam to south of intersection will not be impacted; outlet will remain a closed conduit culvert

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	10 Hampton @NH 101		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	10/7/2024
Checked By:	JFMS	Date:	10/18/2024

CONCEPTUAL ESTIMATE

NH 101 Eastbound Off Ramp / I-95 Interchange

SECTION A - MAJOR ITEMS

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
201.1	CLEARING AND GRUBBING (F)	A	1.50	$ 30,000	$ 45,000.00
203.1	COMMON EXCAVATION	CY	23200	$ 18.00	$ 417,600.00
203.6	EMBANKMENT-IN-PLACE (F)	CY	2100	$ 14.00	$ 29,400.00
304.1	SAND (F)	CY	3950	$ 38.00	$ 150,100.00
304.2	GRAVEL (F)	CY	4700	$ 45.00	$ 211,500.00
304.3	CRUSHED GRAVEL (F)	CY	4700	$ 55.00	$ 258,500.00
403.11###	HBP-VARIOUS, MACHINE METHOD	TON	4900	$ 115.00	$ 563,500.00
417	COLD PLANING BITUMINOUS SURFACES	SY	1650	$ 6.00	$ 9,900.00
606.1454	BEAM GUARDRAIL (TERMINAL UNIT TYPE EAGRT, TL 3)	U	3	$ 4,500.00	$ 13,500.00
606.18001	31" W-BEAM GUARDRAIL W/8" OFFSET BLOCK (STEEL POST)	LF	1600	$ 35.00	$ 56,000.00
608.26	6" CONCRETE SIDEWALK (F)	SY	80	$ 65.00	$ 5,200.00
608.28	8" CONCRETE SIDEWALK (F)	SY	34	$ 70.00	$ 2,380.00
609.216	STRAIGHT GRANITE SLOPE CURB 6" HIGH	LF	2900	$ 45.00	$ 130,500.00
628.2	SAWED BITUMINOUS PAVEMENT	LF	4200	$ 5.00	$ 21,000.00
	MISCELLANEOUS ROADWAY		10% OF ABOVE TOTAL		$ 191,408.00
			SUBTOTAL A		**$ 2,105,488.00**

SECTION B - MISCELLANEOUS ITEMS

SIGNS, MARKINGS, LOAM/HUMUS, ETC.	10%		$ 210,548.80
	SUBTOTAL B		**$ 2,316,036.80**

SECTION C - DRAINAGE ITEMS

PIPES, UNDERDRAIN, CB's, MH's, ETC.	10%		$ 231,603.68
	SUBTOTAL C		**$ 2,547,640.48**

SECTION D - TRAFFIC CONTROL

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
606.417	PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL	LF	1750	$ 50.00	$ 87,500.00
618.61	UNIFORMED OFFICERS WITH VEHICLE	$	$ 162,000.00	$ 1.00	$ 162,000.00
618.7	FLAGGERS	HR	200	$ 50.00	$ 10,000.00
619.1	MAINTENANCE OF TRAFFIC	U	1	$220,000.00	$ 220,000.00
	MISCELLANEOUS TRAFFIC CONTROL		10% OF ABOVE TOTAL		$ 47,950.00
			SUBTOTAL D		**$ 3,075,090.48**

SECTION E - EROSION AND SEDIMENT CONTROL

EROSION, SEDIMENT, AND POLLUTION CONTROL (HAY BALES, SILT FENCE, SWPPP, TEMP. WATER POLL. CONTROL, ETC.)	30% OF DRAINAGE		$ 69,481.10
	SUBTOTAL E		**$ 3,144,571.58**

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	10 Hampton @NH 101		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	10/7/2024
Checked By:	JFMS	Date:	10/18/2024

CONCEPTUAL ESTIMATE

NH 101 Eastbound Off Ramp / I-95 Interchange

SECTION F - ADDITIONAL ITEMS			
BMP's		$	300,000.00
	SUBTOTAL F	$	3,444,571.58
SECTION G - MOBILIZATION AND CONTINGENCIES			
ROADWAY MOBILIZATION	10%	$	344,457.16
	SUBTOTAL G	$	3,789,028.74
	ROUNDED CONSTRUCTION SUBTOTAL:	$	3,790,000.00
	CONTINGENCY 15%	$	569,000.00
	ROUNDED CONSTRUCTION TOTAL:	**$**	**4,360,000.00**
	DESIGN ENGINEERING: 15%	**$**	**654,000.00**
	NHDOT PROJECT ADMINISTRATION: 10%	**$**	**436,000.00**
	CONSTRUCTION ENGINEERING: 10%	**$**	**436,000.00**
	RIGHT OF WAY ACQUISITION	**$**	**-**
	INFLATION (11 YEARS) 3.7%	**$**	**2,891,818.12**
	ROUNDED PROJECT TOTAL COSTS (CON, ROW, PE)	**$**	**8,800,000.00**

HOYLE TANNER

Project:	Rockingham Planning Commission: NHDOT Ten Year Plan Conceptual Estimate		
Project No.	22.144401.02		
Location:	10 Hampton @NH 101		
Task:	Conceptual Estimate		
Calculated By:	MAP	Date:	10/7/2024
Checked By:	JFMS	Date:	10/18/2024

CONCEPTUAL ESTIMATE - ASSUMPTIONS

This Conceptual Engineer's Estimate of Probable Construction Costs is based on the anticipated scope of work, as well as Hoyle Tanner's experience with similar projects and understanding of current industry trends. The estimate has not been based on a final design for this project, and as such, it is intended to be preliminary in nature. It should be ntoed that changes in material or labor costs in the construction industry could impact the project cost in either direction. Assumptions used for this estimate are listed below.

1. NH 101 widened using 1.5" wearing, 2.5" binder, 4" base, and 12" each crushed gravel, gravel, & sand
2. NH 101 box widening begins at existing EP and starts approx. 100' east of overhead sign structure
3. NH 101 existing shoulder will be reconstructed with 8" HBP & 6" Crushed Gravel shim
4. Off-Ramp typical section assumed to be 1.5" wearing, 2.5" binder, 3" base, and 12" each crushed gravel, gravel, and sand.
5. Off-Ramp will be box widened to 36', using above typical, beginning at existing EP
6. Where proposed off-ramp alignment differs from existing off-ramp alignment, existing pavement will be completely removed and ramp will be repaved with 7" HBP & 6" Crushed Gravel
7. Where proposed off-ramp alignment matches existing off-ramp alignment, existing pavement will be cold planed and overlaid
8. Off-Ramp limit of work approx. 225' before southern bridge abutment.
9. This estimate assumes no R.O.W. impacts
10. For earthwork and select material quantities, flatter side slopes of 4:1 to 6:1 were assumed, however assumed guardrail lengths account for potential steepening of side slopes to limit wetland impacts.
11. Construction duration is one season - no winter shutdown
12. Stormwater BMP(s) will be required to comply with current AoT regulations
13. Modifications to ramp bridge overpass, abutments, and wing walls are not required.
14. Cold plane and overlay of NH 101 EB travel lanes adjacent to ramp widening will not be required at this time.