



TOWN COUNCIL – AGENDA REQUEST FORM

THIS FORM WILL BECOME PART OF THE BACKGROUND INFORMATION USED BY THE COUNCIL AND PUBLIC

Please submit Agenda Request Form, including back up information, 8 days prior to the requested meeting date. **Public Hearing requests must be submitted 20**

days prior to the requested meeting date to meet publication deadlines (exceptions may be authorized by the Town Manager, Chairman/Vice Chair).

MEETING INFORMATION

Date Submitted: January 20, 2021 Date of Meeting: January 28, 2021
Submitted by: Dawn Tuomala Time Required: 15 minutes
Department: DPW-Admin Background Info. Supplied: Yes No
Speakers: Dawn Tuomala

CATEGORY OF BUSINESS (PLEASE PLACE AN "X" IN THE APPROPRIATE BOX)

Appointment: Recognition/Resignation/Retirement:
Public Hearing: Old Business:
New Business: Consent Agenda:
Nonpublic: Other:

TITLE OF ITEM

Baboosic Lake Road & Turkey Hill Road Roundabout

DESCRIPTION OF ITEM

Review of projected costs for the roundabout.

REFERENCE (IF KNOWN)

RSA: Warrant Article:
Charter Article: Town Meeting:
Other: N/A: X

EQUIPMENT REQUIRED (PLEASE PLACE AN "X" IN THE APPROPRIATE BOX)

Projector: Grant Requirements:
Easel: Joint Meeting:
Special Seating: Other:
Laptop: None:

CONTACT INFORMATION

Name: **Dawn Tuomala** Address: **Town Hall**
Phone Number: **424-5137** Email Address: **dtuomala@merrimacknh.gov**

APPROVAL

Town Manager: Yes No Chair/Vice Chair: Yes No

Hold for Meeting Date:



**TOWN OF MERRIMACK
INTER-DEPARTMENT COMMUNICATION**

DATE: January 20, 2021
AT (OFFICE): Department of Public Works

FROM: Dawn B. Tuomala, PE, LLS, CWS
Deputy Director/Town Engineer

To: Eileen Cabanel, Town Manager

SUBJECT: **Baboosic Lake Road and Turkey Hill Road Intersection
Engineering Estimates**

The final design for the Baboosic Lake Road and the Turkey Hill Road Roundabout has been completed. The engineer also was asked to produce an estimate of Construction Costs. The roundabout estimate exceeded the original estimate amount. After a review of the numbers the estimate was revised.

The engineering company was then asked to produce a preliminary construction cost estimate on the Preliminary Design of the Tee-Intersection intersection. Their estimate to finish the Tee-Intersection Engineering Design will be around \$8,000.

Project Budget (CRF Funded) \$ 300,000

The Construction Cost Estimates are as follows:

Roundabout: Estimate \$ 660,000

Tee-Intersection: Estimate \$ 406,000

Should you have any questions please let me know,

Dawn

CC: Kyle Fox; Director
File

Estimate of Construction Costs - Roundabout

Baboosic Lake Road & Turkey Hill Road Roundabout; Merrimack, New Hampshire

Last Revised: January 12 2021

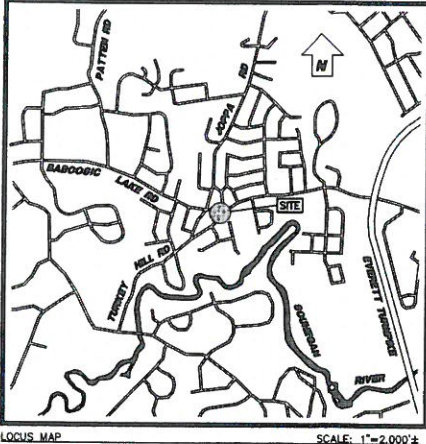
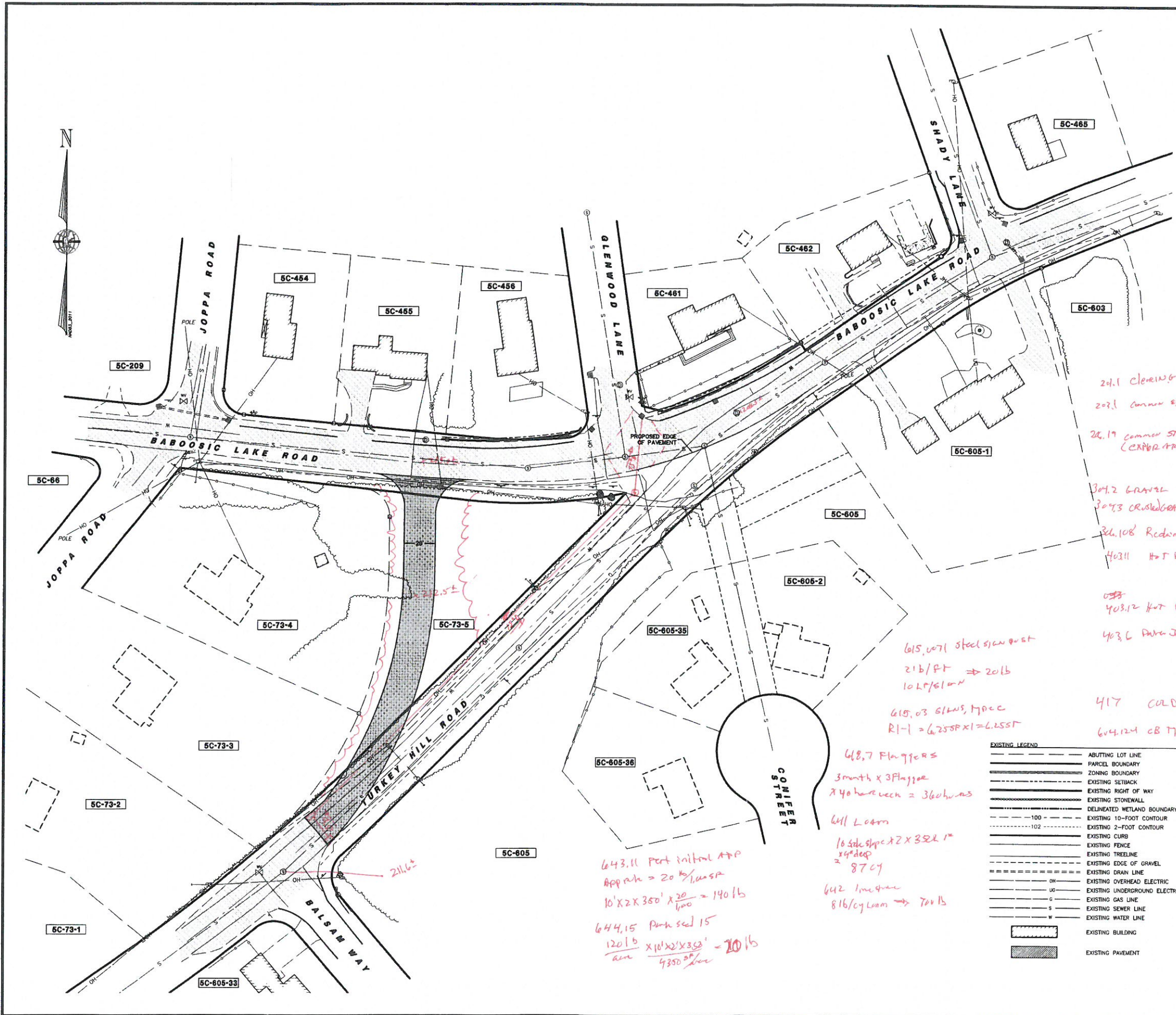
Engineer Estimate

ITEM #	DESCRIPTION	ITEM CODE	QUANTITY	UNIT PRICE	EXTENDED COST
201.1	Clearing and Grubbing (F)	Acre	0.45	\$ 32,500.00	\$ 14,625.00
203.1	Common Excavation	Cubic Yard	1767	\$ 10.75	\$ 18,995.25
203.2	Rock Excavation	Cubic Yard	1	\$ 750.00	\$ 750.00
203.6	Embankment-in-Place (F)	Cubic Yard	95	\$ 6.00	\$ 570.00
203.61	Embankment-in-Place Surplus	Cubic Yard	1672	\$ 6.00	\$ 10,032.00
206.19	Common Structure Excavation – Exploratory	Cubic Yard	108	\$ 50.00	\$ 5,400.00
214	Fine Grading	Unit	1	\$ 3,000.00	\$ 3,000.00
304.1	Sand (F)	Cubic Yard	10	\$ 27.00	\$ 270.00
304.2	Gravel (F)	Cubic Yard	1,506	\$ 32.00	\$ 48,192.00
304.3	Crushed Gravel (F)	Cubic Yard	753	\$ 37.00	\$ 27,861.00
306.112	Reclaimed Stabilized Base Processed in Place, 12" Deep (F)	Square	3,755	\$ 1.50	\$ 5,632.50
403.11	Hot Bituminous Pavement, Machine Method	Ton	606	\$ 132.00	\$ 79,992.00
403.12	Hot Bituminous Pavement, Hand Method	Ton	56	\$ 150.00	\$ 8,400.00
403.6	Pavement Joint Adhesive	Linear Foot	4,378	\$ 0.50	\$ 2,189.00
417	Cold Planing Bituminous Surfaces	Square	78	\$ 22.00	\$ 1,716.00
520.01	CONCRETE CLASS AA (TRUCK APRON, STAMPED RUMBLE STRIP)	CY	46	\$ 1,187.50	\$ 54,625.00
520.1	CONCRETE CLASS A (CONCRETE ISLANDS)	CY	12	\$ 975.00	\$ 11,700.00
534.3	WATER REPELLENT (SILANE/SILOXANE)	GAL	24	\$ 82.14	\$ 1,971.36
593.321	GEOTEXTILE; STABILIZATION CL.2, NON-WOVEN	SY	30	\$ 7.00	\$ 210.00
603.0001	VIDEO INSPECTION (SEWER, PRE & POST CONSTRUCTION)	LF	2,710	\$ 1.00	\$ 2,710.00
603.00315	15" R.C. PIPE, 3000D	LF	352	\$ 97.00	\$ 34,144.00
603.00318	18" R.C. PIPE, 3000D	LF	7	\$ 100.00	\$ 700.00
603.00324	24" R.C. PIPE, 3000D	LF	17	\$ 103.00	\$ 1,751.00
604.0007	POLYETHYLENE LINER	EA	6	\$ 225.00	\$ 1,350.00

604.124	CATCH BASINS TYPE B, 4-FOOT DIAMETER	U	8.5	\$	3,250.00	\$	27,625.00
604.324	DRAINAGE MANHOLES, 4-FOOT DIAMETER	U	1.2	\$	3,550.00	\$	4,260.00
604.4	RECONSTRUCTING/ADJUSTING CATCH BASIN & DROP INLET	LF	4	\$	610.00	\$	2,440.00
604.51	RECONSTRUCTING/ADJUSTING SEWER MANHOLES	LF	5	\$	492.50	\$	2,462.50
604.52	RECONSTRUCTING/ADJUSTING DRAINAGE MANHOLES	LF	1	\$	455.00	\$	455.00
608.12	2" BITUMINOUS SIDEWALK (F)	SY	30	\$	45.00	\$	1,350.00
608.34	4" REINFORCED CONCRETE SIDEWALK (F)	SY	7.5	\$	75.00	\$	562.50
608.54	DETECTABLE WARNING DEVICES, CAST IRON	SY	2.3	\$	450.00	\$	1,035.00
609.01123	STRAIGHT GRANITE CURB, 12" HIGH WITH 3" X 3" MOUNTABLE	LF	252	\$	40.00	\$	10,080.00
609.02	CURVED GRANITE CURB	LF	126	\$	42.00	\$	5,292.00
609.21	STRAIGHT GRANITE SLOPE CURB	LF	1,318	\$	28.00	\$	36,904.00
609.22	STRAIGHT GRANITE SLOPE CURB WITH RADIAL JOINTS	LF	72	\$	35.00	\$	2,520.00
611.50007	3/4" COPPER SERVICE PIPE	LF	10	\$	82.00	\$	820.00
611.51007	3/4" CORPORATION STOP	EA	1	\$	960.00	\$	960.00
611.52007	3/4" CURB STOP WITH BOX	EA	1	\$	425.00	\$	425.00
611.90001	ADJUSTING WATER GATES AND SHUTOFFS SET BY OTHERS	EA	1	\$	200.00	\$	200.00
613.90001	ADJUSTING GAS GATES AND SHUTOFFS SET BY OTHERS	EA	1	\$	200.00	\$	200.00
615.0071	STEEL SIGN POSTS	LB	432	\$	0.50	\$	216.00
615.0301	TRAFFIC SIGN TYPE C	SF	93	\$	45.00	\$	4,185.00
618.7	FLAGGERS	HR	1,680	\$	35.00	\$	58,800.00
619.1	MAINTENANCE OF TRAFFIC	U	1	\$	15,000.00	\$	15,000.00
622.1	STEEL WITNESS MARKERS	EA	14	\$	45.00	\$	630.00
622.4	STONE BOUNDS	EA	1	\$	550.00	\$	550.00
628.2	SAWED BITUMINOUS PAVEMENT	LF	117	\$	2.25	\$	263.25
632.0104	RETROREFLECTIVE PAINT PAVE. MARKING, 4" SOLID LINE	LF	4,146	\$	0.50	\$	2,073.00
632.0106	RETROREFLECTIVE PAINT PAVE. MARKING, 6" SOLID LINE	LF	30	\$	20.00	\$	600.00
632.0108	RETROREFLECTIVE PAINT PAVE. MARKING, 8" BROKEN LINE	LF	60	\$	25.00	\$	1,500.00
641.	LOAM	CY	246	\$	25.00	\$	6,150.00
642.	LIMESTONE	TON	1.0	\$	400.00	\$	400.00
643.11	FERTILIZER FOR INITIAL APPLICATION	LB	400	\$	1.60	\$	640.00
644.15	PARK SEED TYPE 15	LB	55	\$	7.50	\$	412.50
645.111	MULCH	SY	2,200	\$	0.25	\$	550.00

645.12	TEMPORARY MULCH	A	0.1	\$	1,150.00	\$	115.00
645.3	EROSION STONE	TON	50	\$	26.00	\$	1,300.00
645.4	TEMPORARY SLOPE STABILIZATION TYPE A	SY	33	\$	30.00	\$	990.00
645.51	HAY BALES FOR TEMPORARY EROSION CONTROL	EA	20	\$	15.00	\$	300.00
645.512	COMPOST SOCK FOR PERIMETER BERM	LF	700	\$	4.25	\$	2,975.00
645.513	COMPOST SOCK FOR INLET CONTROL	LF	220	\$	4.25	\$	935.00
645.699	SILT SACK FOR INLET PROTECTION	EA	12	\$	75.00	\$	900.00
645.52	RYEGRASS FOR TEMPORARY EROSION CONTROL	LB	25	\$	7.50	\$	187.50
645.531	SILT FENCE (PERIMETER CONTROL IN LIEU OF COMPOST SOCK)	LF	1	\$	2.75	\$	2.75
645.7	STORM WATER POLLUTION PREVENTION PLAN	U	1	\$	2,750.00	\$	2,750.00
645.71	MONITORING SWPPP AND EROSION AND SEDIMENT CONTROLS	HR	15	\$	150.00	\$	2,250.00
692.	MOBILIZATION	U	1	\$	35,000.00	\$	35,000.00
699.1.	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL	\$	1	\$	1,000.00	\$	1,000.00
699.2.	TEMPORARY TRAFFIC CONTROL PLAN	U	1	\$	750.00	\$	750.00
1010.3	QUALITY CONTROL QUALITY ASSURANCE (QC/QA) ASPHALT	\$	1	\$	2,500.00	\$	2,500.00
1010.41	QUALITY CONTROL QUALITY ASSURANCE (QC/QA) FOR CONCRETE	\$	1	\$	500.00	\$	500.00
1030.	CONSTRUCTION ENGINEERING	\$	1	\$	20,000.00	\$	20,000.00
	TOTAL ALL WORK						598,802.11
	CONTINGENCIES (10%)						59,880.21
	PROJECT TOTAL						658,682.32

Plotted: 10/11/2019 3:38 PM By: TTY
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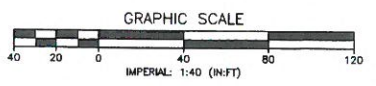
20.1 Clearing & Grubbing 0.4 AC
 20.1 Common EXCA Rechen Pavement Removal = 167CY
 Common EX = (28+2+2) x (6+4+2+4) x 352LF = 760CY
 20.19 Common STR EXCAV (EXP. 17.74) = 354' x 18CY/STR = 4.6CY
 + 2' x 18CY/STR = 4.6CY
 304.2 GRAVEL 32' width x 350LF x 2' depth = 415CY
 304.3 CRUSHED GRAVEL 32' width x 350LF x 2' depth = 208CY
 304.108 Reclaimed SHALTED BASE
 403.11 HOT BIT MATCHING = 350LF x 28' x 4' depth x 0.052 TONS/ST-YD = 248 TONS x 1 = 248 TONS
 403.12 HOT BIT SAND 5% = 141 TONS
 403.6 PARADISE ADDRESS = 250' x 350' x 2' x 2.41 TONS/2100 L.P.
 417 COLD PLANT 6' x 35' x 2' = 475Y
 604.124 CB TPOC 8 1/8" = 2 CB / DAY = 1

615,0071 steel girder
 216/FT = 2016
 10 LF/61000
 610,03 SLSW, TPOC
 RI-1 = 6255P x 1 = 6255P

68.7 Flaggers
 3 months x 3 Flaggers
 x 40 hours each = 360 hours
 411 Loom
 10 side slope x 2 x 352 x 1' x 4' deep = 87CY
 642 lime
 816/cy Loom = 7015

643.11 Port initial ATP
 App rate = 20 lb/acre
 10' x 2 x 350' x 20 / 400 = 140 lb
 644.15 Park seal 15
 120 lb / acre x 10' x 2 x 350' = 2015
 4350' / 200'

EXISTING LEGEND		PROPOSED LEGEND	
[Symbol]	ABUTTING LOT LINE	[Symbol]	PROPOSED SLOPED CURB
[Symbol]	PARCEL BOUNDARY	[Symbol]	PROPOSED VERTICAL CURB
[Symbol]	ZONING BOUNDARY	[Symbol]	PROPOSED FENCE
[Symbol]	EXISTING SETBACK	[Symbol]	PROPOSED TREELINE
[Symbol]	EXISTING RIGHT OF WAY	[Symbol]	PROPOSED 10-FOOT CONTOUR
[Symbol]	EXISTING STONEWALL	[Symbol]	PROPOSED 2-FOOT CONTOUR
[Symbol]	DELINEATED WETLAND BOUNDARY	[Symbol]	PROPOSED SWALE CENTERLINE
[Symbol]	EXISTING 10-FOOT CONTOUR	[Symbol]	PROPOSED DRAIN LINE
[Symbol]	EXISTING 2-FOOT CONTOUR	[Symbol]	PROPOSED EROSION CONTROL
[Symbol]	EXISTING CURB	[Symbol]	PROPOSED OVERHEAD ELECTRIC
[Symbol]	EXISTING FENCE	[Symbol]	PROPOSED UNDERGROUND ELECTRIC
[Symbol]	EXISTING TREELINE	[Symbol]	PROPOSED GAS LINE
[Symbol]	EXISTING EDGE OF GRAVEL	[Symbol]	PROPOSED SEWER LINE
[Symbol]	EXISTING DRAIN LINE	[Symbol]	PROPOSED WATER LINE
[Symbol]	EXISTING OVERHEAD ELECTRIC	[Symbol]	PROPOSED BUILDING
[Symbol]	EXISTING UNDERGROUND ELECTRIC	[Symbol]	PROPOSED PAVEMENT
[Symbol]	EXISTING GAS LINE	[Symbol]	PROPOSED STONE RIPRAP
[Symbol]	EXISTING SEWER LINE		
[Symbol]	EXISTING WATER LINE		
[Symbol]	EXISTING BUILDING		
[Symbol]	EXISTING PAVEMENT		



MERRIDIAN
LAND SERVICES, INC.
 ENGINEERING | SURVEYING | PERMITTING
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 31 OLD NASHUA ROAD, AMHERST, NH 03001
 TEL: 603-493-1441
 MERRIDIAN@MERRIDIANLSC.COM
 FAX: 603-493-1384

MERRIMACK DEPARTMENT OF PUBLIC WORKS
 TURKEY HILL ROAD & BABOOSIC LAKE ROAD
 MAP 5C LOT 73-5
 MERRIMACK, NEW HAMPSHIRE

PROPOSED TEE INTERSECTION
 CONCEPT PLAN #3

OCTOBER 11, 2019
 SCALE: 1" = 40'

SHEET
 Q-3

FILE: 11051000-01.dwg
 PROJECT: 11051.00
 SHEET NO. 2 OF 2

Estimate of Construction Costs - [T-Intersection Option]

Baboosic Lake Road & Turkey Hill Road; Merrimack, New Hampshire

Last Revised: January 12, 2021		Last Revised: D		TOWN ENGINEER ESTIMATE		
ITEM #	DESCRIPTION	ITEM CODE	QUANTITY	UNIT PRICE	EXTENDED COST	
201.1	Clearing and Grubbing {F}	Acre	0.6	32,500.00	\$20,144.63	
203.1	Common Excavation	Cubic Yard	1,185	10.75	\$12,740.74	
203.2	Rock Excavation	Cubic Yard	1	750.00	\$750.00	
203.61	Embankment-in-Place Surplus	Cubic Yard	1,185	6.00	\$7,111.11	
206.19	Common Structure Excavation - Exploratory	Cubic Yard	5	50.00	\$250.00	
214	Fine Grading	Unit	1	3,000.00	\$3,000.00	
304.1	Sand {F}	Cubic Yard	10	27.00	\$270.00	
304.2	Gravel {F}	Cubic Yard	593	32.00	\$18,962.96	
304.3	Crushed Gravel {F}	Cubic Yard	296	37.00	\$10,962.96	
403.11	Hot Bituminous Pavement. Machine Method	Ton	660	132.00	\$87,120.00	
403.12	Hot Bituminous Pavement. Hand Method	Ton	10	150.00	\$1,500.00	
403.6	Pavement Joint Adhesive	Linear Foot	2,250	0.50	\$1,125.00	
417	Reclaim Bituminous Surfaces	Square Yard	1,418	22.00	\$31,196.00	
593.321	GEOTEXTILE; STABILIZATION CL.2. NON-WOVEN	SY	30	7.00	\$210.00	
603.0001	VIDEO INSPECTION (SEWER. PRE & POST CONSTRUCTION)	LF	1,350	1.00	\$1,350.00	
603.00315	15" HDPE PIPE	LF	450	97.00	\$43,650.00	
604.0007	POLYETHYLENE LINER	EA	2	225.00	\$450.00	
604.124	CATCH BASINS TYPE B. 4-FOOT DIAMETER	u	2	3,250.00	\$6,500.00	
604.324	DRAINAGE MANHOLES. 4-FOOT DIAMETER	u	0	0.00	\$0.00	
609.01123	STRAIGHT GRANITE CURB. 12" HIGH WITH 3" X 3" MOUNTABLE BEVELED	LF	120	40.00	\$4,800.00	
609.02	CURVED GRANITE CURB	LF	50	42.00	\$2,100.00	
615.0301	TRAFFIC SIGN TYPE C	SF	7	45.00	\$315.00	
618.7	FLAGGERS	HR	360	35.00	\$12,600.00	
619.1	MAINTENANCE OF TRAFFIC	u	1	15,000.00	\$15,000.00	
622.1	STEEL WITNESS MARKERS	EA	3	45.00	\$135.00	
622.4	STONE BOUNDS	EA	1	550.00	\$550.00	
628.2	SAWED BITUMINOUS PAVEMENT	LF	100	2.25	\$225.00	
632.0104	RETROREFLECTIVE PAINT PAVE. MARKING. 4" SOLID LINE	LF	5,625	0.45	\$2,531.25	
633.0118	RETROREFLECTIVE PAINT PAVE. MARKING. 8" SOLID LINE	LF	20	20.00	\$400.00	
641	LOAM	CY	385	25.00	\$9,625.00	

643.11	FERTILIZER FOR INITIAL APPLICATION	LB	140	1.60	\$224.00
644 .15	PARK SEED TYPE 15	LB	20	7.50	\$150.00
645.111	MULCH	SY	3,425	0.25	\$856.25
645.12	TEMPORARY MULCH	A	1	1,150.00	\$1,150.00
645.3	EROSION STONE	TON	50	26.00	\$1,300.00
645.512	COMPOST SOCK FOR PERIMETER BERM	LF	1,100	4.25	\$4,675.00
645.513	COMPOST SOCK FOR INLET CONTROL	LF	40	4.25	\$170.00
645.699	SILT SACK FOR INLET PROTECTION	EA	2	75.00	\$150.00
645 .52	RYEGRASS FOR TEMPORARY EROSION CONTROL	LB	20	7.50	\$150.00
645 .7	STORM WATER POLLUTION PREVENTION PLAN	u	1	2,750.00	\$2,750.00
645 .71	MONITORING SWPPP AND EROSION AND SEDIMENT CONTROLS	HR	15	150.00	\$2,250.00
692 .	MOBILIZATION	u	1	35,000.00	\$35,000.00
699 .1.	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL	\$	1	1,000.00	\$1,000.00
699.2.	TEMPORARY TRAFFIC CONTROL PLAN	u	1	750.00	\$750.00
1010.3	QUALITY CONTROL QUALITY ASSURANCE (QC/QA) ASPHALT	\$	1	2,500.00	\$2,500.00
1010.41	QUALITY CONTROL QUALITY ASSURANCE (QC/QA) FOR CONCRETE	\$	1	500.00	\$500.00
1030.	CONSTRUCTION ENGINEERING	\$	1	20,000.00	\$20,000.00
	TOTAL ALL WORK				\$369,149.91
	CONTINGENCIES (10%)				\$36,914.99
	PROJECT TOTAL				\$406,064.90

Approved: January 23, 2020

Posted: January 24, 2020

Director Fox stated the four options are available for consideration, and would not represent a great magnitude of difference in the budget. However, he is of the belief we should do anything we can to keep recycling and making the products viable.

Another option is that we only recycle items that generate revenue. We could send all paper and glass to the trash stream and just take the cans and plastics. We could keep the operation the same logistically hoping the current situation is temporary, and move the recyclables to the transfer station building ourselves so that visually it looks the same, but we would really be doing option 3.

Councilor Rothhaus questioned why we would not just retain glass (a non-pollutant) in the back 40. Director Fox stated another program the NRRA does with communities is take the glass and that of other towns, stockpile it (they pay us), and then NRRA can bring a crusher down a few times a year to crush it up and make a product out of it. That model only works if there is someone to buy the product. They do that with a couple of communities. There are all sorts of things in this new world that will be explored.

Ms. Bissonnette stated there to be two different options for managing glass; both involve communities that either have enough volume to store the glass onsite until having sufficient material to either ship 30 tons of glass to the vendor in Quebec that will then clean it and crush it, and send it back to the U.S. to be made into fiberglass insulation or store glass onsite until having 1,000 tons at which point a mobile crushing unit can be brought in to crush the glass, or you can take the glass to one of the host sites where the glass is combined with the glass of other communities and then crushed once there is 1,000 tons. The host site has the option of selling the aggregate or utilizing it in road and infrastructure projects or can ask the contributing communities to take the material back.

Town Manager Cabanel spoke of the available options noting the belief they are not all equally viable. The recommendation of the Administration is to continue with the recycling program as is, and going with the quote provided for a short period of time (perhaps 2-3 year contract) while looking at the issue of glass.

Councilor Rothhaus stated agreement with the recommendation. He does not believe a drastic change would be widely accepted, and believes pricing will settle into a position. Chairman Koenig stated agreement. He believes it would be a much easier transition to remove glass.

Councilor Albert stated agreement with the recommendation of the Administration. Councilor Woods cautioned a decision that has to do with formulating the coming budget. He spoke of the difficulties of changing people's habits. Councilor Albert requested the presentations provided the Council be placed on the Town's website. Vice Chairman Boyd commented on having received the level of assurance from NRRA that it is worth riding out the storm.

3. Turkey Hill Road / Baboosic Lake Road Intersection Improvements Discussion

Submitted by Public Works Director Kyle Fox and Deputy Public Works Director / Town Engineer Dawn Tuomala

The Town Council to be presented with the options for the Turkey Hill Road / Baboosic Lake Road intersection.

Approved: January 23, 2020

Posted: January 24, 2020

Dawn Tuomala, Deputy Public Works Director/Town Engineer, stated traffic goes east and west on Baboosic Lake Road and turns in and out of Glenwood Lane. The largest issue is coming in from Turkey Hill Road. In order to head east on Baboosic Lake Road, motorists would have to turn their head all the way around to look to the back. Heading west on Baboosic Lake Road, wanting to make a left-hand turn, there is a fence and other obstacles in the way that make it difficult to have a good line of sight.

Traffic data indicates from 2005-2012 there were 13 accidents, 10 of which resulted in property damage and 2 in personal injuries. Twelve were due to driver error and 1 to weather. From 2012-2019, there were 20 accidents 19 of which resulted in property damage and 1 in personal injury. There were no fatalities at the intersection. There was 1 involving a school bus, but it was not reported. When that occurs, it is not investigated.

Deputy Director Tuomala noted both concepts being presented are at approx. 30% design. The desire is to have a direction to move forward in before expending funding towards engineering.

One option is a T intersection (approx. \$100,000). A diagram was provided showing Town owned property. A section of land was requested when the subdivision to the west was done so that something could be done to the intersection.

With regard to traffic flow through that intersection, there would be 3 lanes on Baboosic Lake Road; through lane going east and west, turn lane to make the left-hand turn to get onto Turkey Hill Road, and a third lane from west to east. There would be a stop sign at the location. This would not stop any T-bone crashes. There is close proximity of Joppa Road to the west. It just makes the distance required. It will be very busy in that area, and this design would not stop the accidents. Accidents could have a higher injury rate because traffic will be moving at a higher speed.

The next option is that of a roundabout (approx. \$310,000). The problem with that is Glenwood Ave. It is very hard to get a large enough diameter roundabout. If moving it to the Glenwood, it would only be 90' wide and trucks, buses, and fire trucks might have a bit more difficulty maneuvering. The diagram shows a roundabout with a 120' diameter that is suitable for fire trucks, etc. All traffic would come into the roundabout at a 90 degree angle and at the same speed. All directions would have yield signs.

Concord has a similar situation and addressed it through a roundabout about 10 years ago. It is working for them.

Chairman Koenig questioned if entering at a 90 degree angle is an important factor. Deputy Director Tuomala responded no, but it makes everyone equal as they are coming into the roundabout. Director Fox noted the feature and benefits of the roundabout concept are sharing the intersection, controlling speeds and giving each leg of the roundabout equal access. Having each leg come in similarly aids in how it functions.

With a T intersection there remains the opportunity for T-bone accidents. With roundabouts, it is the geometry that makes it safe. By having that kind of geometry where it is a 90 degree entrance and

Approved: January 23, 2020

Posted: January 24, 2020

forces the cars to make that right-hand turn through that triangle island, is what keeps cars at a maximum speed of 15 mph. If you do get those accidents they will be side swipe and fairly low speed.

Councilor Albert remarked if you look at a regular weekday morning, with motorist traffic and school buses, there is a backup coming out of Turkey Hill Road every morning. That T intersection will force motorists to stop and will create a longer backup. At the end of the school day traffic will be trying to make the left-hand turn. With traffic coming and trying to make left-hand turns, there is delay and risks for accidents with cross traffic. With a roundabout traffic continues to move. It will be at a slower rate, but will continue to move. There will be less of a risk. He stated support of the roundabout option.

Vice Chairman Boyd noted if on Glenwood Lane wanting to exit onto Baboosic Lake Road to travel east, motorists will have to make a right-hand turn into the rotary to wrap around to go east towards Town Hall. The option for motorists would be to access Shady Lane through the neighborhood or get onto Joppa Road and come through the roundabout.

Councilor Rothhaus remarked Joppa Road from a different direction is a nuisance getting onto Baboosic Lake Road, but the traffic flow and line of sight going westbound is difficult. The backup of the vehicles on Turkey Hill Road is substantial in the morning. He believes that will all be calmed with the roundabout. With a 90 degree turn, he suspects it will slow traffic down enough to allow traffic from Turkey Hill Road to blend in with the flow much more easily.

Deputy Director Tuomala remarked she did not do traffic counts on Baboosic Lake, but there was one done a little further down on Turkey Hill Road this year. Flows per day were around 5,000 - 6,000.

Chairman Koenig remarked that indicates the T intersection could back up on Turkey Hill Road dramatically if people are flying down Baboosic Lake Road because there is nothing to slow them down. It would make it similar to the Amherst Street/Turkey Hill Road intersection at the other end where we have to have an officer there in the morning to allow traffic to get off Turkey Hill Road. Councilor Rothhaus stated agreement. He had been prepared to support the concept of a T intersection because of cost, but the roundabout would be a greater benefit for the investment into that intersection.

Councilor Healey commented on having read an article on how transportation is moving away from roundabouts as motorists don't know how to maneuver around them. That can result in accidents. She stated her preference for the T intersection, but without the stop sign. She would put a light there with the blinking yellow left.

Town Manager Cabanel remarked it is not a multi-lane configuration being discussed in terms of a roundabout. It is a very simplistic roundabout, and the only thing motorists need to understand is if you are in the roundabout you have the right of way. It is as simple as that.

Councilor Albert questioned if the PWD has spoken with the Town of Bedford to see how the roundabout they placed by the country club has worked out. Deputy Director Tuomala responded she has not. She was looking for intersections having the same issues as experienced here. She will look into the statistics on the Bedford roundabout.

Approved: January 23, 2020

Posted: January 24, 2020

Vice Chairman Boyd stated his support of the concept of a roundabout. The definitive entry to the Town Center is something he is pleased with. From the standpoint of safety, slowing traffic at that stretch of road will allow a better ease of traffic from people using Joppa Road to get down to Bedford Road.

Councilor Harrington remarked although she is not pleased with the cost, she believes the option of the roundabout improves safety and flow of traffic.

Councilor Woods stated his opinion the roundabout makes the most sense. He spoke of the lifespan of the road.

Director Fox commented one of the big difficulties with the roundabout concept is Glenwood Lane. The Council could make the decision to make Glenwood a one-way road, which would ease the geometry of the roundabout tremendously.

Asked about public input, Director Fox stated the desire to get the thoughts of the Council, move forward with a more detailed design, and reach out to the Planning Board to receive feedback. A more developed concept will be brought before the Council. Generally, for these kind of projects, public information meetings are conducted. They will look to get feedback from the Fire Department, school bus company, etc. It will require a great deal of education and emphasis on the positives of a roundabout.

Minutes

December 19, 2019

The following amendments were offered:

Page 6, Line 31; replace “serviced” with “services”

Page 6, Line 44; replace “readied” with “ready”

MOTION made by Vice Chairman Boyd and seconded by Councilor Woods to approve the meeting minutes of the Town Council meeting of December 19, 2019, as amended. MOTION CARRIED 7-0-0

Comments from the Press - None

Comments from the Public

Rosemarie Rung, 21 Ministerial Drive

Suggested the Council appoint an Ad Hoc Communications Committee that could begin educating the public on the issue of recycling.