

<b>TOWNSHIP OF BYRAM</b>			<b>CAPITAL IMPROVEMENT PROGRAM 2023-2025</b>								
<b>2023 CAPITAL BUDGET</b>						5% Down Pymt					
				CAPITAL							
			2023	2023	Amounts	Capital	Grants and				
		Proposed	Budget	Budget	Reserved In	Improvement	Other	Debt	Other		
		Costs	O&E	Appropriation	Prior Years	Fund	Funds	Authorized	Funding	NOTES	
<b>Proposed Projects</b>	<b>DEPT</b>										
NJDOT Project - Stonehedge Lane	ROADS	\$352,500	\$212,770	\$0	\$0	\$0	\$139,730	\$0	\$0		\$352,500
Various Street and Road Projects - Mill & Pave - Birch Parkway \$90,000 - Cranberry Lake North Shore Area \$550,500 - Forest Lakes Area \$423,000 - Cranberry Lake South Shore Area \$300,500	ROADS	\$1,364,000	\$0	\$100,000	\$0	\$64,000	\$0	\$1,200,000	\$0		\$1,364,000
Roadway Crack Sealing, Roadway Striping and Roadway Repairs	ROADS	\$50,000	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0		\$50,000
East Brookwood Drainage Issues	ROADS	\$30,000	\$12,730	\$0	\$0	\$17,270	\$0	\$0	\$0		
DPW Equipment Replacement: - D-7 2008 International Dump \$130,000 - 2002 Kifco Water Canon \$18,000 - 1996 Hudson Tilt Bed Trailer \$6,000	DPW	\$154,000	\$100,000	\$0	\$0	\$54,000	\$0	\$0	\$0		\$154,000
DPW Salt Dome	BUILDING	\$120,000	\$0			\$120,000					\$120,000
DPW Facility	BUILDING	\$331,000	\$0	\$0	\$0	\$17,000	\$0	\$314,000		NEED TO GET BETTER ESTIMATES: - Storage/Recycling Building - DPW Breakroom - DPW Building Garage Doors - DPW Building Air Vent System - New well DPW Facilities	\$331,000
ALCOTEST - Alcohol Drug Testing	POLICE	\$20,000	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0		\$20,000
Holiday Lights	PARKS	\$20,000	\$0	\$0	\$0	\$20,000	\$0	\$0	\$0		\$20,000
COJ Park Improvements	PARKS	\$1,500,000	\$0	\$0	\$0	\$75,000	\$0	\$1,425,000	\$0	OS Trust	
Fire Truck	FIRE	\$820,000	\$0	\$0	\$0	\$45,000	\$0	\$775,000	\$0		\$820,000
Fire SCBA	FIRE	\$220,000	\$0	\$0	\$0	\$20,000	\$0	\$200,000	\$0		\$220,000
Drainage Improvements		\$5,000	\$0	\$5,000	\$0	\$0	\$0	\$0	\$0	Annual approp. to reserve	\$5,000
Capital Improvements		\$25,000	\$0	\$0	\$0	\$25,000	\$0	\$0	\$0	Annual approp. to fund projects/downpayments	\$25,000
<b>TOTAL</b>		<b>\$5,011,500</b>	<b>\$325,500</b>	<b>\$105,000</b>	<b>\$0</b>	<b>\$527,270</b>	<b>\$139,730</b>	<b>\$3,914,000</b>	<b>\$0</b>	<b>\$5,011,500</b>	<b>\$3,481,500</b>
<b>2024 CAPITAL BUDGET</b>						5% Down Pymt					
				CAPITAL							
			2024	2024	Amounts	Capital	Grants and				
		Proposed	Budget	Budget	Reserved In	Improvement	Other	Debt	Other		
		Costs	O&E	Appropriation	Prior Years	Fund	Funds	Authorized	Funding	NOTES	Total
<b>Proposed Projects</b>	<b>DEPT</b>										
Future Road Resurface Program - Including NJDOT Project (Mill & Pave, Cape Seal, Oil Stone)	ROADS	\$996,239	\$225,500	\$100,000	\$0	\$25,739	\$250,000	\$395,000	\$0		\$996,239
Roadway Crack Sealing and Roadway Striping	ROADS	\$50,000	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0		\$50,000
DPW Equipment	DPW	\$236,000	\$100,000	\$0	\$0	\$136,000	\$0	\$0	\$0		\$236,000
Drainage Improvements		\$5,000	\$0	\$5,000	\$0	\$0	\$0	\$0	\$0	Annual approp. to reserve	\$5,000
Capital Improvements		\$25,000	\$0	\$0	\$0	\$25,000	\$0	\$0	\$0	Annual approp. to fund	\$25,000
<b>TOTAL</b>		<b>\$1,312,239</b>	<b>\$325,500</b>	<b>\$105,000</b>	<b>\$0</b>	<b>\$236,739</b>	<b>\$250,000</b>	<b>\$395,000</b>	<b>\$0</b>	<b>\$1,312,239</b>	<b>\$1,312,239</b>

<b>2025 CAPITAL BUDGET</b>						<b>5% Down Pymt</b>					
				<b>CAPITAL</b>							
		<b>Proposed</b>	<b>2025</b>	<b>2025</b>	<b>Amounts</b>	<b>Capital</b>	<b>Grants and</b>				
		<b>Costs</b>	<b>Budget</b>	<b>Budget</b>	<b>Reserved In</b>	<b>Improvement</b>	<b>Other</b>	<b>Debt</b>	<b>Other</b>		
<b>Proposed Projects</b>			<b>O&amp;E</b>	<b>Appropriation</b>	<b>Prior Years</b>	<b>Fund</b>	<b>Funds</b>	<b>Authorized</b>	<b>Funding</b>	<b>NOTES</b>	<b>Total</b>
Future Road Resurface Program - Including NJDOT Project (Mill & Pave, Cape Seal, Oil Stone)	ROADS	\$1,205,158	\$225,500	\$100,000	\$0	\$35,658	\$250,000	\$594,000	\$0		\$1,205,158
Roadway Crack Sealing and Roadway Striping	ROADS	\$50,000	\$0	\$0	\$0	\$50,000	\$0	\$0	\$0		\$50,000
DPW Equipment	DPW	\$116,000	\$100,000	\$0	\$0	\$16,000	\$0	\$0	\$0		\$116,000
Drainage Improvements		\$5,000	\$0	\$5,000	\$0	\$0	\$0	\$0	\$0	Annual approp. to reserve	\$5,000
Capital Improvements		\$25,000	\$0	\$0	\$0	\$25,000	\$0	\$0	\$0	Annual approp. to fund	\$25,000
<b>TOTAL</b>		<b>\$1,401,158</b>	<b>\$325,500</b>	<b>\$105,000</b>	<b>\$0</b>	<b>\$126,658</b>	<b>\$250,000</b>	<b>\$594,000</b>	<b>\$0</b>	<b>\$1,401,158</b>	<b>\$1,401,158</b>

[illegible]

Alcotest	Police	\$20,000													New Alco test machine - the state dictates roll out and no plans of how the roll out will be accomplished (ie county by county, most DWI arrests etc). Continue to carry year to year until plan is known.
Sub Total for Police		\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
2023 NJDOT GRANT PROJECT (Mill & Resurface): Stonehedge Lane	Roads	\$352,500													2023 NJDOT Municipl Aid Grant - \$139,730
Mill and Resurface - Birch Parkway	Roads	\$90,000													
Mill and Resurface - Cranberry Lake North Shore Area (Frenche's Grove Road, North Shore Trail, Rose Trail, Laurel Trail, Meteor Trail, Bridge Trail, Grove Path, Dennis Hill Road, Overview, Cabin Spring Trail, Lakeview Trail, Tote Road, La-Bo-Ga Trail, Panther Pass, Wo-Ta-Ga Trail, High-To-Ga Trail, Ka-ton-Ah Trail, Opa Pass, Allamuchy Trail, and Greywood Lane)	Roads	\$550,500													Priority 1
Mill and Resurface - Forest Lake Roadways (Sherwood Forest Drive, The Retunda, Hemlock Road, Deer Run, and Harbor View Drive)	Roads	\$423,000													Priority 2
Mill and Resurface - Cranberry Lake South Shore Area (South Shore Trail, Saugtaug Trail, Weasaug Trail, Maugtaug Trail, Harding Road, and Hilltop Trail)	Roads	\$300,500													Priority 3
Annual Budget: Roadway Crack Sealing, Roadway Striping & Roadway Repairs	Roads	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	Roadway Repairs (asphalt): \$20,000 Crack Sealing: \$20,000 Striping: \$10,000
Future Mill Paving, Cape Seal and Oil Stone Projects - includes NJDOT Projects	Roads		\$996,239	\$1,205,158	\$955,187	\$1,073,232	\$1,295,224	\$960,815	\$1,101,816	\$1,269,986	\$739,909				
East Brookwood Drainage Issues	Roads and Drainage	\$30,000													Engineering Study - start process of addressing drainage issues throughout the Township (October 22, 2021 memo from Cory Stoner)
Sub Total for Roads		\$1,796,500	\$1,046,239	\$1,255,158	\$1,005,187	\$1,123,232	\$1,345,224	\$1,010,815	\$1,151,816	\$1,319,986	\$789,909	\$50,000	\$50,000	\$50,000	
New Holiday Lights	Recreation	\$20,000													
COJ Park Improvements	Recreation	\$1,500,000													Scope COJ of Park Improvements is still being defined. Preliminary estimate for improvements is from \$1.2 to \$1.5 million.
Sub Total for Recreation		\$1,520,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

Facilities	\$451,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
DPW	\$154,000	\$236,000	\$116,000	\$82,000	\$140,000	\$102,000	\$218,000	\$336,000	\$422,000	\$336,000	\$251,000	\$300,000	\$130,000		
FIRE	\$1,040,000	\$0	\$0	\$175,000	\$175,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Police	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Roads	\$1,796,500	\$1,046,239	\$1,255,158	\$1,005,187	\$1,123,232	\$1,345,224	\$1,010,815	\$1,151,816	\$1,319,986	\$789,909	\$50,000	\$50,000	\$50,000		
Recreation	\$1,520,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Totals	\$4,981,500	\$1,282,239	\$1,371,158	\$1,262,187	\$1,438,232	\$1,447,224	\$1,228,815	\$1,487,816	\$1,741,986	\$1,125,909	\$301,000				

Add: Annual CIF \$25,000 and Drainage \$5,000

\$30,000	\$30,000	\$30,000
\$5,011,500	\$1,312,239	\$1,401,158

**BYRAM TOWNSHIP - ROADWAY IMPROVEMENT PLAN  
10 YEAR PLAN - 2023 to 2032**

STREET NAME	Roadway Type	Area in Town	Year Last Paved	Year O/S or Cape Seal	Length (ft)	Width (ft)	Area (SY)	PCI	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Roseville Road - Section I - (CO to Tunnel #1)	Arterial	Roseville Road	2018		3,550	24	9,467	88.17									\$249,660.42	
Roseville Road - Section II - (Tunnel #1 to Amity)	Arterial	Roseville Road	2011/2018		3,350	24	8,933	90.83									\$235,595.05	
Roseville Road - Section II - (Amity to Tunnel #2)	Arterial	Roseville Road	2012		1,000	26	2,889	99.00									\$76,187.45	
Roseville Road - Section III - (Andover TWP to CO)	Arterial	Roseville Road	2012		6,050	24	16,133	84.67									\$425,477.62	
Roseville Road - Section IV - (Tunnel #2 to Lackawanna Dr.)	Arterial	Roseville Road	2013		4,025	24	10,733	88.33									\$283,065.69	
Tamarack Road - Section I (Johnson Lake to Route 206)	Arterial	Tamarack Road	2013		3,400	30	11,333	89.00							\$271,101.35			
Tamarack Road - Section II (Johnson Lake to Roseville)	Arterial	Tamarack Road	2022		4,485	30	14,950	84.00								\$375,495.30		
Amity Road - Section I - (Roseville Road End)	Arterial	Amity Road	2015		3,500	24	9,333	94.17										\$258,451.28
Amity Road - Section II	Arterial	Amity Road	2017		3,115	24	8,307	91.17										\$230,021.64
Amity Road - Section III - (Lee Hill Road End)	Arterial	Amity Road	2017		3,405	24	9,080	92.67										\$251,436.17
Continental Drive	Arterial	Continental Drive	2021		900	60	6,000	61.50										
Tomahawk Trail	Arterial	Tomahawk Trail	2011		3,500	24	9,333	88.83				\$192,860.33						
North Shore Road	Collector	Cranberry Lake NS	2020		8,670	24	23,120	100.00										
Brookwood Road - I - (Route 206 to Briar Lane)	Collector	East Brookwood	2009		2,000	28	6,222	92.67								\$148,839.96		
Brookwood Road - II - (Briar Lane to Ross Road)	Collector	East Brookwood	2017		2,000	28	6,222	94.00								\$148,839.96		
Brookwood Road - III - (Ross Road to Cul-de-sac)	Collector	East Brookwood	2005		2,400	28	7,467	86.67								\$178,607.95		
Acorn Street	Collector	West Brookwood	2010		2,555	22	6,246	90.33						\$142,283.91				
Whitehall Hill Road	Collector	Route 206	2020		2,065	24	5,507	99.33										
Mansfield Drive	Collector	Lake Lackawanna	2018		1,150	24	3,067	93.17										
South Shore Road - (Section 1 - 2005; Section 2 - 2011)	Collector	Cranberry Lake SS	2005 & 2011		5,610	20	12,467	82.00	\$233,355.00									
Lake Drive/Reis Avenue/Brown Dr	Collector	Lake Lackawanna	1999	2018	7,250	22	17,722	91.17										
Forest Lakes Drive	Collector	Forest Lakes	2003	2016	7,740	22	18,920	82.17				\$390,955.43						
Crecent Drive North	Collector	Forest Lakes	2021		3,085	24	8,227	89.50										
Crecent Drive South	Collector	Forest Lakes	2001	2015	2,455	24	6,547	96.00	\$122,700.90									
Sleepy Hollow Road	Collector	Forest Lakes	2000	2015	5,805	26	16,770	88.67			\$330,027.31							
Cranberry Ledge Road	Collector	Cranberry Lake NS	2020		3,275	20	7,278	100.00										
Fieldstone Trail	Collector	Lake Mohawk/Tomahawk Lake	2021		5,440	30	18,133	64.67										
Sandra lane	Collector	Lake Mohawk/Tomahawk Lake	Original		1,555	30	5,183	87.67		\$97,148.63								
Stone Hedge Lane	Collector	Lake Mohawk/Tomahawk Lake	Original		4,950	30	16,500	76.83	\$352,500.00									
Brookwood Drive	Collector	East Brookwood	2009		3,410	30	11,367	70.83					\$246,620.14					
Heminover Street	Local	Lake Lackawanna	1999	2018	860	22	2,102	87.00								\$52,800.97		
Bank Street	Local	Lake Lackawanna	1999	2018	800	20	1,778	65.17							\$42,525.70			
Carpenter Road - (Gravel 2018, Orig. Cape Seal 2018)	Local	Lake Lackawanna	2012 & 2018	2018	1,770	12	2,360	92.67								\$59,275.51		
Lake Drive - Loop Roads	Local	Lake Lackawanna	1999	2018	6,850	22	16,744	95.83								\$420,565.90		
Partridge Road	Local	Lake Lackawanna	2005	2018	200	12	267	95.33								\$6,697.80		
Richmond Road	Local	Lake Lackawanna	1999	2018	2,650	22	6,478	90.00							\$154,953.03	\$162,700.68		
Orchard Street	Local	Lake Lackawanna	Unknown	2013	400	15	667	74.50							\$15,947.14			
Pine Point	Local	Lake Lackawanna	Unknown	2013	338	10	376	76.83								\$9,432.73		
Lubbers Trail	Local	Lake Lackawanna	Unknown	2013	280	19	591	99.50								\$14,846.79		
Conrad Strasse	Local	Forest Lakes	2000	2015	720	24	1,920	96.17			\$37,784.88							
Crows Nest Road	Local	Forest Lakes	2000	2015	1,185	24	3,160	88.33			\$62,187.62							
Deer Run	Local	Forest Lakes	2002	2014	1,285	22	3,141	88.17	\$55,769.00									
Glen Clove Road	Local	Forest Lakes	2001	2015	1,335	22	3,263	87.67			\$64,221.18							
Harbor View Drive	Local	Forest Lakes	2001	2014	970	26	2,802	87.50	\$49,981.00									
Hemlock Road	Local	Forest Lakes	2001	2014	1,860	22	4,547	84.50	\$81,022.00									
Lake View Drive	Local	Forest Lakes	2001	2015	1,210	20	2,689	95.17		\$50,396.50								
Old Stage Coach Road	Local	Forest Lakes	2000	2015	2,980	20	6,622	89.67			\$130,322.85							
Peach Tree Street	Local	Forest Lakes	2000	2015	715	22	1,748	92.50			\$34,395.61							
The Rotunda	Local	Forest Lakes	2001	2014	1,645	24	4,387	90.67	\$78,392.00									
Sandy's Road	Local	Forest Lakes	2000	2015	1,025	22	2,506	96.67			\$49,308.39							
Sherwood Forest Drive	Local	Forest Lakes	2002	2014	3,590	22	8,776	83.33	\$157,836.00									
Sunset Way	Local	Forest Lakes	2000	2015	150	28	467	98.33			\$9,183.83							
Winding Way	Local	Forest Lakes	2021		2,160	20	4,800	87.67										
Woodlawn Drive	Local	Forest Lakes	2001	2014	185	20	411	92.17			\$8,090.51							
Woodland Road	Local	Forest Lakes	2001		1,111	20	2,469	80.67	\$46,273.15									
Frenche's Grove Road	Local	Cranberry Lake NS	2006		1,210	24	3,227	85.00	\$58,735.00									
North Shore Trail	Local	Cranberry Lake NS	2006		575	16	1,022	85.50	\$18,688.00									
Rose Trail	Local	Cranberry Lake NS	2006		805	16	1,431	83.67	\$26,163.00									
Laurel Trail	Local	Cranberry Lake NS	2006		775	16	1,378	90.67	\$25,096.00									
Meteor Trail	Local	Cranberry Lake NS	2006		1,480	17	2,796	79.33	\$50,725.00									
Bridge Trail	Local	Cranberry Lake NS	2006		215	10	239	85.17	\$4,272.00									
Grove Path	Local	Cranberry Lake NS	2006		215	10	239	0.00	\$4,272.00									
Dennis Hill Road	Local	Cranberry Lake NS	2006		880	19	1,858	80.67	\$33,639.00									
Overview	Local	Cranberry Lake NS	2005		175	14	272	96.00	\$5,339.00									
Cabin Spring Trail	Local	Cranberry Lake NS	2005		845	21	1,972	69.83	\$35,774.00									
Lakeview Trail	Local	Cranberry Lake NS	2006		1,095	14	1,703	87.83	\$30,969.00									
Tote Road	Local	Cranberry Lake NS	2005		1,290	20	2,867	88.50	\$52,327.00									

La-Bo-Ga Trail	Local	Cranberry Lake NS	2006		270	17	510	89.17	\$9,611.00									
Panther Pass	Local	Cranberry Lake NS	2005		495	17	935	87.00	\$17,086.00									
Wo-Ta-Ga Trail	Local	Cranberry Lake NS	2006		745	14	1,159	95.00	\$20,824.00									
High-To-Ga Trail	Local	Cranberry Lake NS	2005		480	15	800	92.00	\$14,417.00									
Ka-Ton-Ah Trail	Local	Cranberry Lake NS	2005		545	16	969	93.50	\$17,620.00									
Opa Pass	Local	Cranberry Lake NS	2005		140	12	187	93.33	\$3,738.00									
Allamuchy Trail	Local	Cranberry Lake NS	2006		1,290	18	2,580	81.17	\$46,987.00									
Greywood Lane	Local	Cranberry Lake NS	2006		165	16	293	89.33	\$5,339.00									
Saddle Lane	Local	Cranberry Lake NS	2020		180	22	440	100.00										
Oak Trail	Local	Cranberry Lake NS	2020		515	14	801	100.00										
Spring Trail	Local	Cranberry Lake NS	2020		190	16	338	100.00										
Hart Trail	Local	Cranberry Lake NS	2020		686	15	1,143	100.00										
Birch Trail	Local	Cranberry Lake NS	2020		605	16	1,076	100.00										
Spruce Trail	Local	Cranberry Lake NS	2020		495	17	935	100.00										
Weaver House Cove Road	Local	Cranberry Lake NS	2021		1,315	25	3,653	82.83										
Brook Trail	Local	Cranberry Lake NS	2021		320	14	498	78.00										
Hickory Trail	Local	Cranberry Lake NS	2021		215	12	287	86.00										
Fox Trail	Local	Cranberry Lake NS	2021		515	16	916	80.00										
Side Hill Trail	Local	Cranberry Lake NS	2021		450	19	950	80.67										
Boulder Trail	Local	Cranberry Lake NS	2021		260	17	491	93.33										
Hawthorne Trail	Local	Cranberry Lake NS	2021		785	18	1,570	85.00										
Landone Trail	Local	Cranberry Lake NS	2021		370	13	534	78.17										
Bald Rock Trail	Local	Cranberry Lake NS	2021		190	12	253	72.00										
Pathfinder Trail	Local	Cranberry Lake NS	2021		520	21	1,213	83.00										
Muchivo Trail	Local	Cranberry Lake NS	2021		200	13	289	81.67										
Parsons Road	Local	Cranberry Lake NS	2006		594	13	858	78.67	\$23,494.00									
Division Lane	Local	Cranberry Lake NS	2005		559	13	807	83.67	\$39,512.00									
Shon-Ga-Trail	Local	Cranberry Lake NS	2006		150	12	200	74.50	\$5,873.00									
Laurel Cove	Local	Cranberry Lake NS	2020		420	13	607	74.67										
Strawberry Point Drive	Local	Cranberry Lake NS	2020		2,840	24	7,573	100.00										
South Lake Trail	Local	Cranberry Lake NS	2021		400	12	533	100.00										
Raccoon Trail	Local	Cranberry Lake NS	2020		135	14	210	100.00										
Cliff Drive	Local	Cranberry Lake NS	2020		200	12	267	100.00										
Saugtaug Trail	Local	Cranberry Lake SS	2005		795	12	1,060	92.33	\$19,814.00									
Weasaug Trail	Local	Cranberry Lake SS	2005		380	12	507	76.17	\$9,356.00									
Maugtaug Trail	Local	Cranberry Lake SS	2005		345	12	460	79.67	\$8,255.00									
Harding Road	Local	Cranberry Lake SS	2005		610	12	813	87.00	\$15,410.00									
Hilltop Trail	Local	Cranberry Lake SS	2005		490	14	762	88.50	\$14,310.00									
Manu Trail	Local	Tamarack	2000	2019	1,375	30	4,583	92.50				\$90,198.28						
Hunters Lane	Local	Tamarack	2000	2019	1,465	26	4,232	92.83				\$83,288.55						
Colby Drive	Local	Tamarack	2002	2019	1,465	30	4,883	90.67				\$96,102.17						
Old Indian Spring Road	Local	Tamarack	2002	2019	3,050	18	6,100	83.67				\$120,045.71						
Ghost Pony Road	Local	Tamarack	2002	2019	1,960	21	4,573	64.33				\$90,001.49						
Knute Drive	Local	Tamarack	2002		375	19	792	90.33		\$14,837.81								
C. O. Drive	Local	Tamarack	2002		755	18	1,510	68.50		\$28,301.18								
Cross Trail	Local	Tamarack	2002	2013	220	21	513	89.83		\$9,621.15								
Little Paint Way	Local	Tamarack	2002		1,440	22	3,520	80.50		\$65,973.60								
Roger Drive	Local	Tamarack	2002		560	20	1,244	82.17		\$23,324.00								
Debbie Drive	Local	East Brookwood	2017		535	30	1,783	97.33										
Briar Lane	Local	East Brookwood	2019		1,775	30	5,917	100.00										
Joan Drive	Local	East Brookwood	2019		2,445	30	8,150	100.00										
Ross Road	Local	East Brookwood	2019		3,330	30	11,100	100.00										
Dogwood Lane Road	Local	East Brookwood	2009		185	16	329	91.17					\$7,135.83					
Mountain Avenue	Local	East Brookwood	2009		245	20	544	94.50					\$11,812.69					
Pleasant Hill Road	Local	East Brookwood	2009		170	17	321	84.83					\$6,967.08					
Sand Hill Road	Local	East Brookwood	2009		565	18	1,130	92.00					\$24,517.37					
Sandy Brook Road	Local	East Brookwood	2009		330	13	477	91.00					\$10,342.13					
Shady Brook Road	Local	East Brookwood	2009		320	22	782	94.83					\$16,971.71					
Stony Brook Road	Local	East Brookwood	2009		1,210	20	2,689	90.17					\$58,340.25					
Trout Brook Road	Local	East Brookwood	2009		355	17	671	88.00					\$14,548.90					
East Waterloo Road	Local	East Brookwood	2009		330	17	623	85.33					\$13,524.33					
White Birch Road	Local	East Brookwood	2009		690	22	1,687	87.17					\$36,595.25					
Wildwood Road	Local	East Brookwood	2009		445	22	1,088	88.83					\$23,601.28					
Woods Edge Road	Local	East Brookwood	2009		1,320	22	3,227	88.83					\$70,008.30					
Adair Street	Local	West Brookwood	2010		1,195	21	2,788	96.00					\$63,522.77					
Ash Street	Local	West Brookwood	2010		3,150	24	8,400	87.17					\$191,365.66					
Avon Street	Local	West Brookwood	2010		800	20	1,778	94.00					\$40,500.67					
Banker Drive	Local	West Brookwood	2010		620	18	1,240	94.67					\$28,249.22					
Beech Street	Local	West Brookwood	2009		1,675	22	4,094	78.83					\$93,278.10					
Belton Road	Local	West Brookwood	2011		3,600	20	8,000	80.67					\$182,253.01					
Broad Avenue	Local	West Brookwood	2010		1,500	20	3,333	92.17					\$75,938.75					
Byram Avenue	Local	West Brookwood	2010		330	24	880	93.67					\$19,093.17					
Cascade Avenue	Local	West Brookwood	2010		240	24	640	83.67					\$13,885.94					

Chestnut Street - Part I (River Road to River)	Local	West Brookwood	2008		500	22	1,222	93.17						\$27,844.21				
Chestnut Street - Part II (Mayne to Adair)	Local	West Brookwood	2009		1,100	22	2,689	93.67					\$58,340.25					
Chestnut Street - Part III (Ash to River)	Local	West Brookwood	2011		900	22	2,200	90.67						\$50,119.58				
Drain Way	Local	West Brookwood	2010		210	16	373	96.00						\$8,505.14				
Glen Brook Street	Local	West Brookwood	2011		250	20	556	93.33						\$12,656.46				
Lockwood Avenue	Local	West Brookwood	2008		1,725	20	3,833	95.00					\$83,171.02					
Mayne Avenue	Local	West Brookwood	2008		1,960	22	4,791	84.33					\$103,951.72					
Newton Avenue	Local	West Brookwood	2010		850	16	1,511	90.00					\$32,786.26					
River Road - Part I	Local	West Brookwood	2010		1,825	20	4,056	90.83						\$92,392.15				
River Road - Part II	Local	West Brookwood	2011		2,300	20	5,111	94.00						\$116,439.42				
River Road - Part III	Local	West Brookwood	2011		2,300	20	5,111	96.33						\$116,439.42				
Spring Brook Street	Local	West Brookwood	2011		275	18	550	95.33						\$12,529.89				
Sussex Street	Local	West Brookwood	2010		685	18	1,370	87.83					\$29,724.60					
Union Street	Local	West Brookwood	2009		1,010	16	1,796	98.33						\$40,905.67				
Lauren Court	Local	West Brookwood	Original	2012	1,010	30	3,367	86.50					\$73,045.85					
Robert Street	Local	West Brookwood	Original	2012	585	30	1,950	70.33					\$42,308.73					
Jefferson Lake Road	Local	West Brookwood	Unknown	2012	1,750	18	3,500	66.67					\$75,938.75					
Jans Way	Local	Route 206	2021		405	18	810	90.00										
Rosemaire Lane	Local	Route 206	2021		520	18	1,040	84.00										
Maple Road	Local	Route 206	2021		715	18	1,430	79.83										
Birch Road	Local	Route 206	2021		1,360	20	3,022	79.50										
Willor Drive	Local	Route 206	2021		700	20	1,556	90.67										
Drexel Drive	Local	Route 206	2021		710	23	1,814	88.33										
Francis Terrace	Local	Route 206	2021		370	22	904	92.33										
Hi Glen Drive	Local	Route 206	2021		320	31	1,102	82.83										
Pierson Drive	Local	Route 206	2021		700	22	1,711	88.50										
Ridge Place	Local	Route 206	2021		190	18	380	98.67										
Johnson Boulevard	Local	Route 206	2021		700	20	1,556	92.83										
Jones Lane	Local	Route 206	2021		690	18	1,380	87.83										
Louis Dr	Local	Route 206	2021		412	22	1,007	84.00										
Lynn Drive	Local	Lake Mohawk/Tomahawk Lake	2017		6,160	30	20,533	95.33										
Susan Lane	Local	Lake Mohawk/Tomahawk Lake	2017		635	30	2,117	94.67										
Douglas Terrace	Local	Lake Mohawk/Tomahawk Lake	2017		1,055	30	3,517	95.33										
Catherine Terrace	Local	Lake Mohawk/Tomahawk Lake	2017		620	30	2,067	94.17										
Carlisle Drive	Local	Lake Mohawk/Tomahawk Lake	2017		850	30	2,833	96.33										
Tartan Court	Local	Lake Mohawk/Tomahawk Lake	2018		400	30	1,333	96.67										
Braemar Court	Local	Lake Mohawk/Tomahawk Lake	2018		700	30	2,333	94.83										
Elizabeth Lane	Local	Lake Mohawk/Tomahawk Lake	2018		670	30	2,233	96.33										
Anderson Lane	Local	Lake Mohawk/Tomahawk Lake	Original		250	30	833	92.33					\$17,219.67					
Ascot Lane	Local	Lake Mohawk/Tomahawk Lake	Original		1,250	28	3,889	89.83					\$80,358.47					
Mara Lane	Local	Lake Mohawk/Tomahawk Lake	Original		185	28	576	76.50					\$11,893.05					
Matthew Drive	Local	Lake Mohawk/Tomahawk Lake	Original		720	28	2,240	87.83					\$46,286.48					
Carlson Lane	Local	Lake Mohawk/Tomahawk Lake	2004		480	22	1,173	85.67					\$24,245.30					
Mountain Heights	Local	Lake Mohawk/Tomahawk Lake	2004		2,400	24	6,400	86.33					\$132,247.08					
Mountain View Terrace	Local	Lake Mohawk/Tomahawk Lake	2004		300	24	800	81.17					\$16,530.89					
Circle Drive	Local	Lake Mohawk/Tomahawk Lake	2004		350	28	1,089	97.33					\$22,500.37					
Seneca Lake Road	Local	Lake Mohawk/Tomahawk Lake	2004		350	25	972	97.33					\$20,089.62					
Deer Hill Run North	Local	Lake Mohawk/Tomahawk Lake	2021		430	30	1,433	89.67										
Deer Hill Run South	Local	Lake Mohawk/Tomahawk Lake	2021		830	30	2,767	92.33										
Bridget Way	Local	Lake Mohawk/Tomahawk Lake	Original		1,415	30	4,717	81.83		\$88,402.13								
Catalina Drive	Local	Lake Mohawk/Tomahawk Lake	2015		1,753	27	5,259	96.67		\$98,566.81								
Manor Drive	Local	Lake Mohawk/Tomahawk Lake	2006		3,900	30	13,000	81.33		\$243,652.50								
Camelot Drive	Local	Lake Mohawk/Tomahawk Lake	Original		1,500	24	4,000	82.17		\$74,970.00								
Mayfair Lane	Local	Lake Mohawk/Tomahawk Lake	Original		700	22	1,711	76.50		\$32,070.50								
Birch Parkway	Local	Lake Mohawk/Tomahawk Lake	Unknown		1,200	24	3,200	66.00	\$90,000.00									
Stag Pond Road	Local	Lake Mohawk/Tomahawk Lake	Unimproved		365	14	568	79.50										
Windsor Lane	Local	Lake Mohawk/Tomahawk Lake	Original		1,732	29	5,581	83.83										
					TOTAL Length (ft)		TOTAL Area (SY)											
					275,640		717,500		\$1,716,500	\$996,239	\$1,205,158	\$955,187	\$1,073,232	\$1,295,224	\$960,815	\$1,101,816	\$1,269,986	\$739,909
									-\$139,730	-\$250,000	-\$250,000	-\$250,000	-\$250,000	-\$250,000	-\$250,000	-\$250,000	-\$250,000	-\$250,000
									\$1,576,770	\$746,239	\$955,158	\$705,187	\$823,232	\$1,045,224	\$710,815	\$851,816	\$1,019,986	\$489,909

52.20 Miles

2023

2024

2025

2026

2027

2028

2029

2030

2031

2032



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NJ – P.E., NJ – P.P., NJ – C.M.E.

October 4, 2022

Via Email (jsabatini@byramtwp.org)

**MEMORANDUM TO:** Mr. Joseph Sabatini, Byram Township Manager

**FROM:** Cory L. Stoner, P.E., C.M.E., Byram Township Engineer

**SUBJECT:** Engineering, Construction & Other Projects for 2023  
Byram Township, Sussex County

Dear Joe:

As requested, I have put together a list of projects and engineering activities that may be considered in the 2023 Byram Township Budget. Below is a list of projects for consideration in 2023:

**1. Improvements to Stonehedge Lane**

Stonehedge Trail is a major residential roadway in the northern section of Byram Township which is showing considerable deterioration. An application was submitted for the 2023 NJDOT Municipal Aid Grant program for Stonehedge Trail in the amount of \$250,000.00. With the success the Township has had in recent years in obtaining NJDOT Municipal Aid grants, it is anticipated that this roadway will receive grant funding for 2023. The estimated costs for this project are as follows:

Construction Costs .....	\$ 320,000.00
Surveying & Engineering Design .....	\$ 15,000.00
Construction Inspection & Management .....	\$ 15,000.00
Asphalt Cores & Testing .....	\$ 2,500.00
<b>Total Estimated Costs .....</b>	<b>\$ 352,500.00</b>

It should be noted that Elizabethtown Gas is currently performing gas main and service work along Stonehedge Lane that will extend into 2023. Depending on the schedule of the work by Elizabethtown Gas, the improvements to Stonehedge Lane may be delayed until the Spring of 2024 once all gas main and service work is properly completed.

**2. Improvements to Cranberry Lake Roadways (North)**

During 2020 and 2021, Strawberry Point Drive, North Shore Road and a number of roadways in the Cranberry Ledge section of Cranberry Lake were milled and resurfaced. In an effort to improve more of the roadways in Cranberry Lake, it is recommended that the following roadways be considered for resurfacing in 2023: Frenche's Grove Road, North Shore Trail,



Rose Trail, Laurel Trail, Meteor Trail, Bridge Trail, Grove Path, Dennis Hill Road, Overview, Cabin Spring Trail, Lakeview Trail, Tote Road, La-Bo-Ga Trail, Panther Pass, Wo-Ta-Ga Trail, High-To-Ga Trail, Ka-Ton-Ah Trail, Opa Pass, Allamuchy Trail, and Greywood Lane. These roadways were last resurfaced between 2004 and 2006. A review of the anticipated costs for improvements to these roadways is as follows:

Construction Costs ..... \$515,500.00

Frenche's Grove Road .....	\$55,000.00
North Shore Trail.....	\$17,500.00
Rose Trail .....	\$24,500.00
Laurel Trail.....	\$23,500.00
Meteor Trail.....	\$47,500.00
Bridge Trail .....	\$4,000.00
Grove Path.....	\$4,000.00
Dennis Hill Road .....	\$31,500.00
Overview .....	\$5,000.00
Cabin Spring Trail .....	\$33,500.00
Lakeview Trail.....	\$29,000.00
Tote Road .....	\$49,000.00
La-Bo-Ga Trail .....	\$9,000.00
Panther Pass.....	\$16,000.00
Wo-Ta-Ga Trail .....	\$19,500.00
High-To-Ga Trail.....	\$13,500.00
Ka-Ton-Ah Trail.....	\$16,500.00
Opa Pass .....	\$3,500.00
Allamuchy Trail.....	\$44,000.00
Greywood Lane .....	\$5,000.00
Parsons Road .....	\$22,000.00
Division Lane .....	\$37,000.00
Shon-Ga Trail .....	\$5,500.00

Engineering Design..... \$ 15,000.00

Construction Inspection & Management ..... \$ 20,000.00

**Total Estimated Costs..... \$ 550,500.00**

### 3. Improvements to Forest Lake Roadways

In 2021, Crescent Drive North and Winding Way were milled and resurfaced. In 2023, it is recommended that the milling and resurfacing program be continued in the Forest Lake Community. The roadways proposed to be improved in 2023 are as follows:

Construction Costs ..... \$ 402,000.00

Sherwood Forest Drive.....	\$ 150,000.00
The Rotunda .....	\$ 74,500.00
Hemlock Road .....	\$ 77,000.00

Deer Run.....	\$ 53,000.00
Harbor View Drive.....	\$ 47,500.00
Engineering Design.....	\$ 7,000.00
Construction Inspection & Management .....	\$ 14,000.00
<b>Total Estimated Costs.....</b>	<b>\$ 423,000.00</b>

4. **Improvements to Cranberry Lake Roadways (South)**

In an effort to continue the improvements to roadways in the Cranberry Lake community, it is recommended that the Township consider improving South Shore Road and the various side streets on the south side of the lake. These roadways were last resurfaced between 2004 and 2006 and are in need of resurfacing. A review of the anticipated costs for improvements to these roadways is as follows:

Construction Costs .....	\$ 273,000.00
South Shore Trail .....	\$ 212,000.00
Saugtaug Trail.....	\$ 18,000.00
Weausaug Trail .....	\$ 8,500.00
Maugtaug Trail .....	\$ 7,500.00
Harding Road .....	\$ 14,000.00
Hilltop Trail .....	\$ 13,000.00
Engineering Design.....	\$ 12,500.00
Construction Inspection & Management .....	\$ 15,000.00
<b>Total Estimated Costs.....</b>	<b>\$ 300,500.00</b>

5. **Improvements to Birch Parkway**

Birch Parkway is a residential roadway in the Lake Mohawk section of the Township that is showing considerable deterioration. This roadway is one of the few roadways in Lake Mohawk that fall under the Township's jurisdiction for maintenance. This roadway has recently received gas service and will have drainage improvements completed by Sussex County in 2023. Once those improvements are made, it is my recommendation that the Township consider resurfacing this roadway in 2023. The estimated costs for this project are as follows:

Construction Costs .....	\$ 80,000.00
Surveying & Engineering Design .....	\$ 5,000.00
Construction Inspection & Management .....	\$ 5,000.00
<b>Total Estimated Costs.....</b>	<b>\$ 90,000.00</b>

6. **General Roadway Repairs:**

It is noted that since the Township has obtained additional maintenance and paving equipment, the quality of roadway patch and repairs has increased within the Township. In order to continue and expand the maintenance of the roadways, it would be my recommendation that the Township look to increase budget allotted for this work in 2023. After reviewing this issue with the Township DPW Supervisor, it is recommended that the Township consider setting aside an additional **\$20,000** for general roadway maintenance and repairs in 2023.

7. **Roadway Crack Sealing:**

It is recommended that the Township continue to perform crack sealing on major roadways within the Township. An active crack sealing program will serve to extend the life of the Township's major roadways. Based on past experiences, it costs approximately \$10,000 per mile to have an outside contractor perform crack sealing on a typical municipal roadway. That being stated, I would recommend that the Township consider placing **\$20,000** for two miles of crack sealing in the 2023 budget. The recommended roadway for crack sealing in 2023 would be Roseville Road.

8. **Roadway Striping:**

In order to maintained the safety of the major roadways as the roadways age and the traffic stripes fade, I would again recommend that the Township consider implementing a striping plan. On an average, a newly paved roadway will last 12 to 15 years before needing to be resurfaced. The roadway stripes, however, will last about half of that period before the nighttime reflectivity deteriorates. That being said, I would recommend that striped roadways be restriped every 6 years as needed to maintain the nighttime safety of the major roadways within the Township. For budgeting purpose, I would recommend placing **\$10,000** in the 2023 budget for roadway striping. This will allow for the restriping of approximately 3 miles of double yellow centerline striping on the major roadways.

9. **Jet Vac Stormwater Cleaning Services:**

In past years, the Township had an outside company perform jet vac stormwater basin/pipe cleaning in order to remove silt and sediment from various drainage systems in the Township. The cleaning of these basins and pipes has allowed the Road Department to identify basins to be repaired and has helped reduced the silt and sediment that is washing into various streams and lakes within the Township.

With approximately 850 catch basins under Township jurisdiction, I recommend that this process be continued in 2023. Assuming 10 days of jet vac services similar to what was performed in the past, it is recommended that **\$15,000.00** be budgeted for this work.

10. **Engineering Study of East Brookwood Drainage Issues**

Last year, I prepared a memo regarding the need to study known drainage issues within the Township. In that memo (dated October 22, 2021), I discussed the various drainage conditions that exist within East Brookwood, West Brookwood, Forest Lake, Cranberry Lake and Lake Lackawanna. In 2023, the Council may want to consider beginning the study that I had recommended in that memo. If so, it is recommended that the Township begin by first studying the East Brookwood section of the Township which in my opinion has the largest concerns when it comes to drainage system capacity and impacts to private property when the system is inundated during large storm events.

Over the years, I have reviewed drainage conditions within the East Brookwood section of the Township a number of times and have found that the major issues in this community are related to the drainage system that begins along Joan Drive and leads down to Brookwood Road, Brookwood Drive and eventually Lubbers Run. This system is undersized, runs thru various private properties and is inundated during larger storm events. It is my belief that a portion of the drainage areas above Ross Road may be able to be redirected to other drainage discharge locations and not be concentrated to one general area.

The study of the East Brookwood community would review the existing drainage system to determine drainage areas and system capacities, determine whether redirecting stormwater would be practical or whether system capacity upgrades were warranted, outline impacts to private properties under existing and proposed conditions, outline what environmental permits may be required, determine what easements or land would be required for the installation of drainage pipes or detention facilities, and provide cost estimates for future work activities. In order to perform a proper study of the drainage systems within the East Brookwood community, I estimate that **\$30,000.00** would need to be set aside for engineering services in the 2023 budget.

11. **Miscellaneous Engineering & Surveying**

a. **NJDEP Municipal Stormwater Permit**

Work will be continued to aid the municipality in fulfilling the requirements of the Municipal Stormwater permit. It is estimated that work performed by HPA to aid the Township in fulfilling the permit requirements will be approximately **\$3,000.00**.

b. **Miscellaneous Roadway & Drainage Issues**

A number of roadway and drainage issues come up each year which I assist that Township Manager and the Road Department Supervisor with. It is recommended that **\$5,000.00** be set aside for miscellaneous work items that may come up during the year related to roadway and drainage problems in the Township.

Mr. Joseph Sabatini, Byram Township Manager  
RE: Engineering & Construction Projects for 2023  
October 4, 2022

Page 6

c. **Tax Map Maintenance**

In order to continue with the maintenance of the tax maps, it is recommended that **\$3,000.00** be budgeted in for miscellaneous tax map changes.

I trust this list that will aid the Mayor and Council in establishing the municipal budget for 2023. If you have any questions regarding any of the above listed items or would like to meet to discuss any of the proposed work activities in greater detail, please do not hesitate to contact me.

Very truly yours,



Cory L. Stoner, P.E., C.M.E.

**HAROLD E. PELLOW & ASSOCIATES, INC.**

Byram Township Engineer

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NJ – P.E., NJ – PP, NJ – C.M.E.

October 22, 2021

Via Email ([jsabatini@byramtwp.org](mailto:jsabatini@byramtwp.org))

**MEMORANDUM TO:** Mr. Joseph Sabatini, Byram Township Manager

**FROM:** Cory L. Stoner, P.E., C.M.E., Byram Township Engineer

**SUBJECT:** Study of Known Drainage Issues  
Byram Township, Sussex County

Dear Joe:

As we have discussed, there is an interest from the Township Mayor and Council to review stormwater issues that exist throughout the municipality. As you are aware, Byram Township is a mix of older plan developments (East Brookwood and West Brookwood), lake communities (Lake Lackawanna, Cranberry Lake, and Forest Lake), and newer communities (Fieldstone Trail, Lynn Drive, etc...) which all have varying types of issues. These issues include but are not limited to problems with wet and flooded residential properties, drainage pipe outfall soil erosion, siltation of the many community lakes, and the deterioration of municipal roadways.

The newer communities located in the northern portion of the Township have curbed lined roadways, significant roadway collection systems and stormwater management facilities that were designed to properly control stormwater runoff. These communities have isolated issues but were much better designed than the older plan communities that were developed decades ago. The older communities have little defined infrastructure and have drainage systems that are not complete. The majority of the drainage issues in the Township exist in these older communities.

Older plan developments such as the East Brookwood and West Brookwood communities were developed with a network of roadways. These roadways included little in the way of designed drainage system and often consist of stormwater being discharged directly onto private properties. Drainage structures and pipes have been added over the years to try to address the many problems that exist in these communities but a comprehensive system has not been implemented. An important note regarding these communities is that both communities have been expanded over the years. Examples of these expansions include Lauren Court and Robert Street in West Brookwood and Briar Lane, Joan Drive and Ross Road in the East Brookwood. These communities included drainage collection systems but the systems all tied into undersized drainage networks that existed with the original developments.

The lake communities within the Township were once mostly used during summer months by the population that came to the Township for the purpose of enjoying the lakes. Summer dwellings with seasonal water sources were mostly found in these areas. Over the years, these dwellings were converted to full time residences with larger footprints and increased impervious coverage. This increase in impervious coverage and

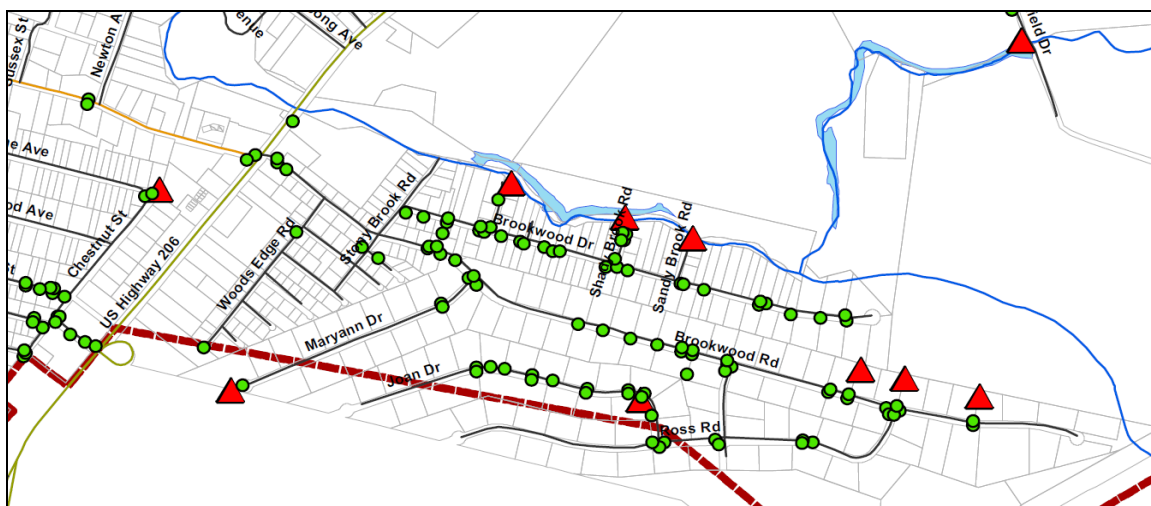
loss of natural vegetation have resulted in increased volumes of stormwater runoff. With roadways having no curbing and limited drainage systems, negative impacts to private properties have occurred. Over the years, the Township has added asphalt berms and drainage improvements to help control stormwater flow and address private property damage. These improvements have minimized the impacts of stormwater on private properties but have not fully addressed the inadequate system of undersized drainage pipes, drainage ditches that run thru private properties and direct discharge into the lakes.

In order to truly assess the drainage issues in the Township, a study needs to be performed. The goal of any study performed would be for the Township to have a clear picture of the problem drainage issues in the township and understand what corrective actions would need to be taken to address those issues. While there are many issues throughout the Township, it is my recommendation that the Township consider focusing a review/study on five (5) main areas in the Township. These areas would include: 1) East Brookwood, 2) West Brookwood, 3) Forest Lake, 4) Cranberry Lake and 5) Lake Lackawanna. A review of the known issues and a brief scope of the study needed in each area is included below.

### **East Brookwood:**

The main known drainage issues in the East Brookwood community are related to an existing drainage system that collects stormwater above Ross Road and conveys stormwater toward Lubbers Run below Brookwood Drive. I have reviewed the drainage issues in this area several times over the years and I have found that the major issue is the drainage system that begins along Joan Drive and leads down to Brookwood Road, Brookwood Drive and eventually Lubbers Run. This system is undersized, runs thru various private properties and is inundated during larger storm events.

It is my belief that a portion of the drainage areas above Ross Road may be able to be redirected to other drainage discharge locations to the east. The review of the East Brookwood community will need to determine whether redirecting stormwater will be practical, determine what impacts to other properties will occur, outline what environmental permits may be required, determine what easements or land would be required for the installation of drainage pipes or detention facilities, and provide cost estimates for future work activities. A map illustrating the location of catch basins (green circles) and outfall structures (red triangles) in this community is shown below.

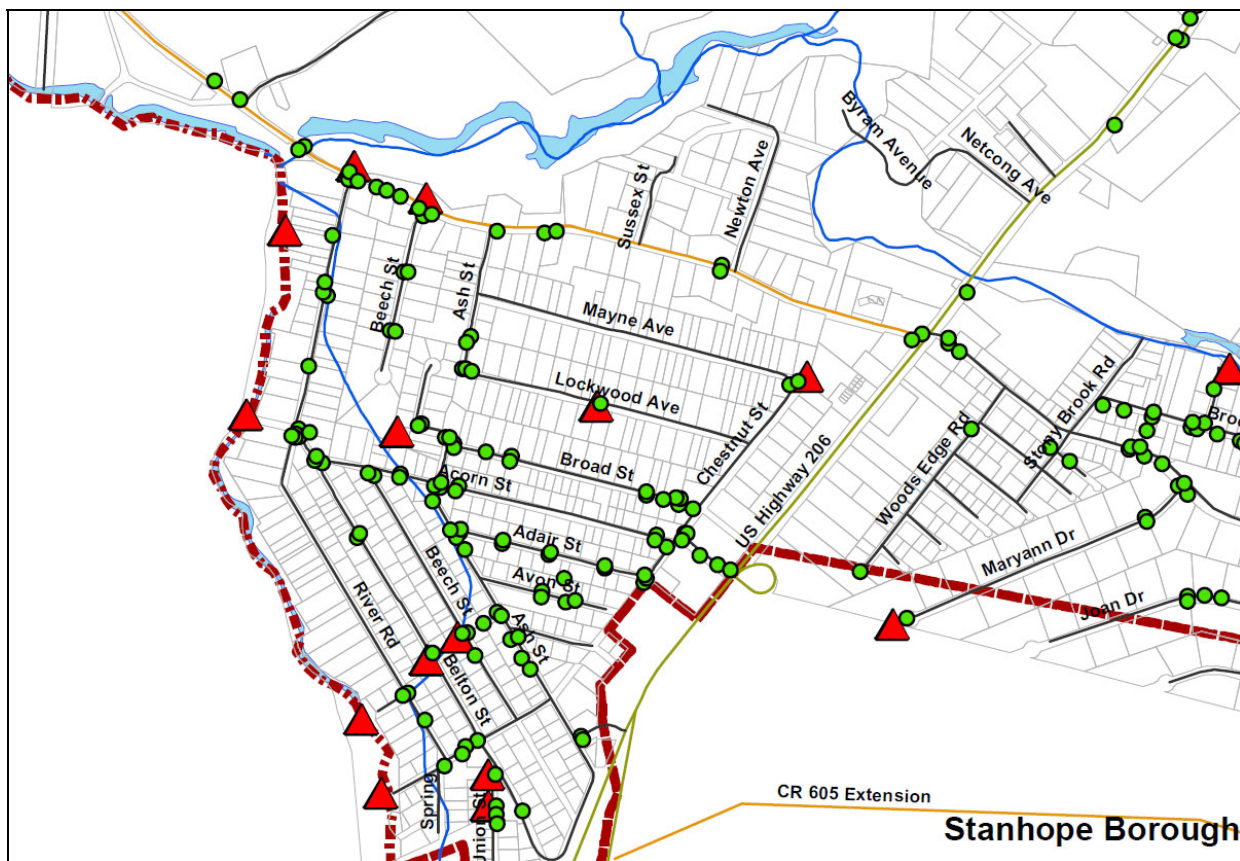




**West Brookwood:**

In West Brookwood, the drainage issues are much different than the issues in the East Brookwood community. In the West Brookwood community, there is a dense placement of homes that exist in relatively flat areas with minimal drainage systems to transport stormwater below River Road to the Musconetcong River. With areas with no major drainage systems and areas with undersized drainage pipes, stormwater lies in low areas adjacent and behind residences, ponds in vacant wetland areas, and floods properties that are low in elevation near River Road. The inadequate movement of stormwater combined with high water tables that are known to exist during the wet months of the year result in a large number of drainage issues in the West Brookwood community.

The review of the West Brookwood community would include the review and documentation of all known existing drainage networks, field visits to review drainage areas, deed research to ascertain location of dedicated easements, and preparation of potential improvement concepts and cost estimates for budgeting purposes.

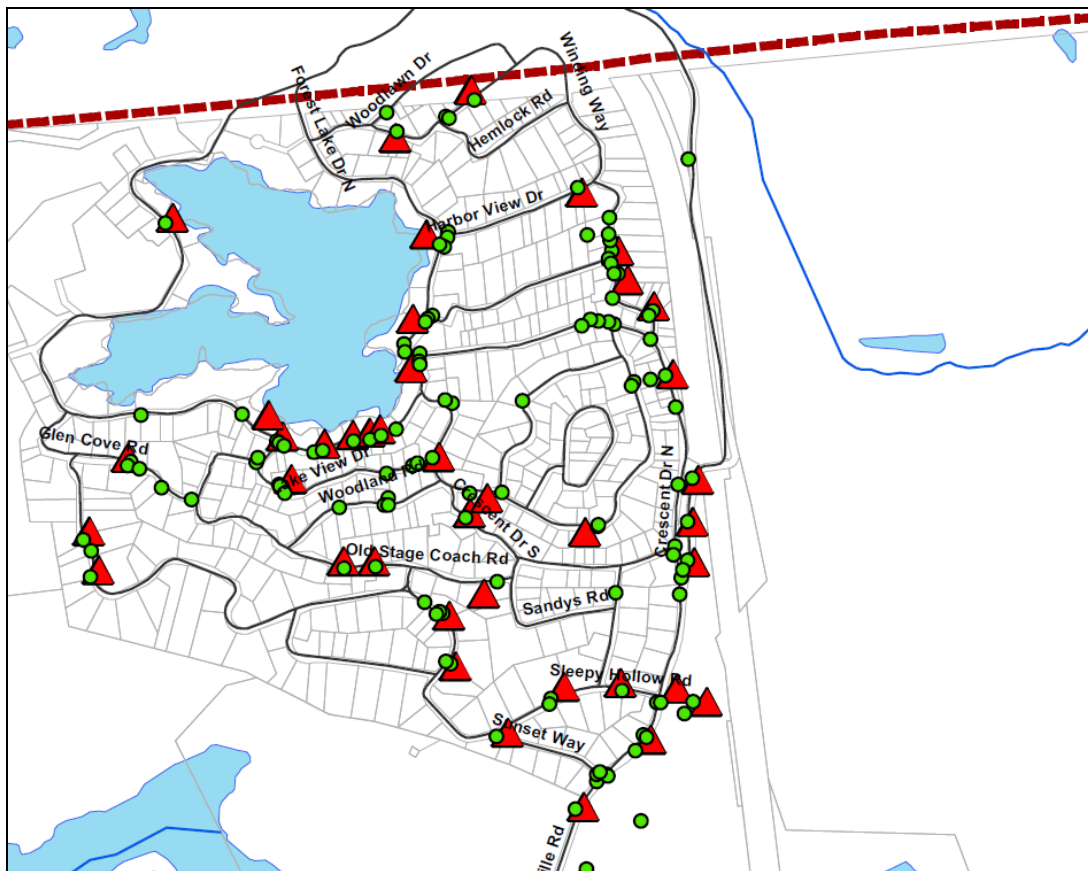




**Forest Lake:**

The Forest Lakes community is one that has unique drainage situations where stormwater is often collected along a roadway, discharged into open ditches, collected again into closed systems and then eventually discharged into Forest Lake. The drainage networks in this community are insufficient and result in wet conditions on various properties, erosion of roadway edges and outfall pipes, and contribute to the siltation of the lake itself.

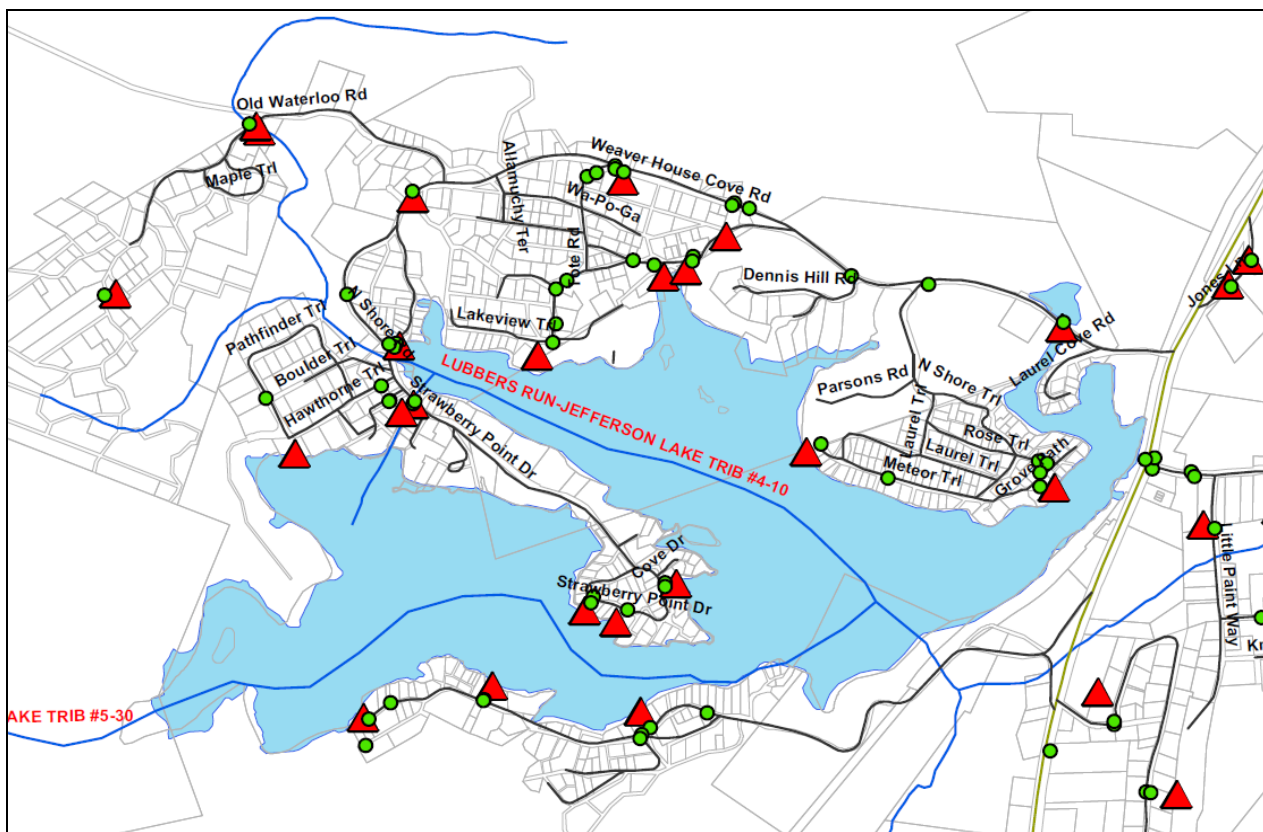
The review of the Forest Lake community would initially include the documentation of all known existing drainage networks. Our office currently has field location for most if not all drainage basins in this community but will need to field verify the location of drainage pipe and ditches that also serve to make up the complete drainage network. Upon determining the location of all pipes and ditches, tax maps and deeds will be reviewed to determine if drainage easements exist for the portions of the drainage network that are not located within the municipal roadway right-of-ways. It is anticipated that most of the drainage ditches that exist in this community are not documented as drainage easements belonging to the Township. Various concepts would need to be prepared and cost estimates for improvements that would be needed to address the various drainage issues.



**Cranberry Lake:**

The Cranberry Lake community is one of the communities which once consisted of summer dwellings with seasonal water sources. The conversion of these summer dwellings to full time residential properties, has resulted in enlarged building footprints and increases in impervious coverage. With little means of stormwater collection, stormwater often flows along the roadways and directly onto various residential properties. Where stormwater is collected, the collection is typically performed at isolated drainage inlets and is discharged directly into the lake or wetland areas associated with the lake. No means of stormwater quality exists with these discharges. The Township has added roadway berms at many locations within this community to minimize property damage but no major drainage improvements have been constructed.

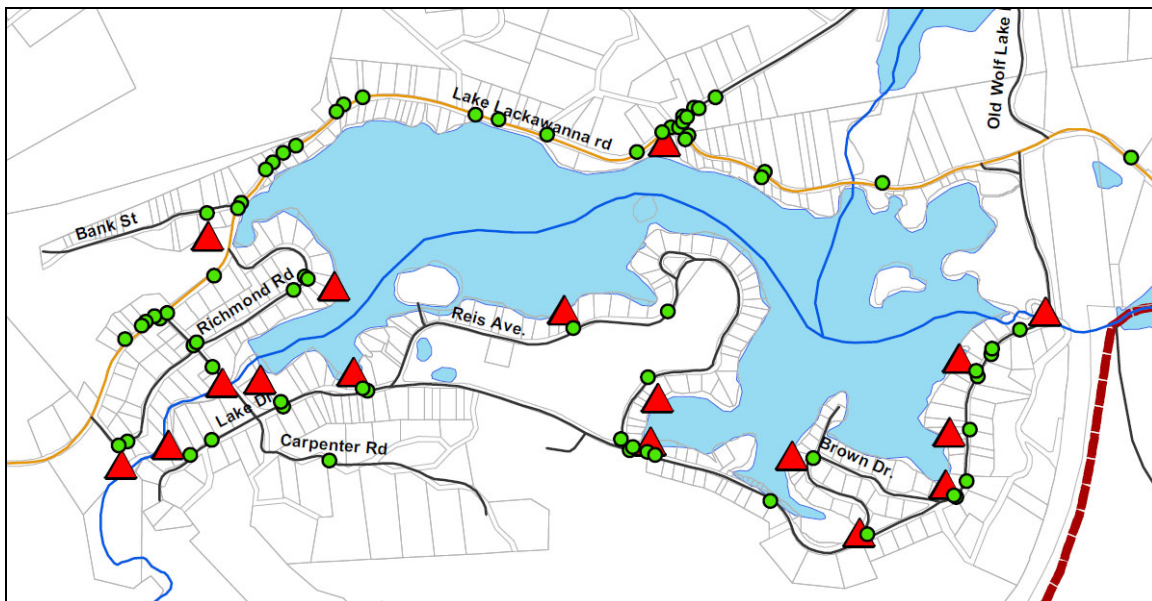
The review of the Cranberry Lake community would include the review and documentation of all known existing drainage networks, field visits to review drainage areas, document water quality measures and conditions at all outfalls, and preparation of potential improvement concepts and cost estimates for budgeting purposes.



**Lake Lackawanna:**

In the Lake Lackawanna community, stormwater is collected at isolated locations and is discharged directly into the lake with no means of water quality being provided. The discharge of stormwater into the lake has resulted in considerable amounts of silt being added to the lake. The siltation of the lake and the general health of the lake and the Category 1 Lubbers Run that flows from Lake Lackawanna is a major concern to the residents of the Township.

The review of the Lake Lackawanna community would include the review and documentation of all known existing drainage networks, field visits to review drainage areas, assessments of all drainage discharge locations and the preparation of potential improvement concepts that will properly handle the flow of stormwater while increasing the amount of water quality that is provided before discharge into the lake.



There are other areas of the Township with known drainage issues but the above five (5) areas are the major ones that I would recommend that the Township consider investigating at this time. If you have any questions regarding any of the information provided above or would like to discuss the scope of work in greater detail, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read "Cory L. Stoner".

Cory L. Stoner, P.E., C.M.E.  
**HAROLD E. PELLOW & ASSOCIATES, INC.**  
Byram Township Engineer

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# 2023 Department of Public Works Capital Requests

Michael Orgera

Superintendent of Public Works

# 2008 International Dump

- Truck was used every day for all functions of DPW, including plowing and salting.
- Truck has bad transfer case and electrical system.
- Rust issues.
- Would be adding this new truck to the fleet. It would also serve as a backup salting/plowing truck. Would allow department the ability rotate out trucks during winter months to prolong lifespan of the fleet. Furthermore, incase of a breakdown of a large dump truck this will fill the gap.
- Requesting \$130,000.00

# 2002 Kifco Water Cannon

- Used to water fields at CO Johnson Park
- Unit is becoming unreliable
- Repairing unit 2-3 times a month
- Parts are becoming obsolete
- Water discharge hose starting to degrade
- Requesting \$18,000.00 to replace





# 1996 Hudson Tilt Trailer

- Trailer is used to transport roller and other small equipment
- Heavy rust on frame, and fenders
- Decking needs to be replaced
- Lift cylinders need to be replaced
- Request \$6,000 to replace





# Ash Tree Removal

- Most ash trees on township properties have or will die
- Trees are averaging \$750-\$1000 to remove
- Significant impact on operating budget
- Lee Hill Emergency Building property has 5 trees alone that need to be removed totaling almost \$4000.00
- Requesting \$30,000.00 this year to get priority trees then an annual operating budget of \$10,000.00 for tree removal



21 Sunset Inn Road – Suite A  
Lafayette, NJ 07848

973-383-3632 office  
973-383-1975 fax

[www.GenesisEngLLC.com](http://www.GenesisEngLLC.com)

## **Memorandum**

TO: Michael Orgera, Superintendent of Public Works, Byram Township

FROM: Rick Kreppel, PE

RE: Salt Dome Evaluation, Byram Township



DATE: October 12, 2022

COPY TO: 22057 Project File

As requested, Genesis has developed an Engineer's Estimate for the repair project for the Salt Dome. Genesis had prepared an evaluation report for the structure dated March 28, 2022. We were subsequently selected by the Township in June 2022 to develop repair plans for the structure.

We met at the site on July 7, 2022 to further discuss the causes for the conditions found and the methods for repair. The primary contributing factor appears to be the mounding of salt against the wooden roof structure. The repair will involve cleaning and filling the existing cracks around the top on the concrete wall with an epoxy grout and the strapping the wall vertically on the inside with a carbon fiber product at the panel points, and then also wrapping the perimeter of the wall at the top of the wall with the same product. This will restore the wall to its original intended design condition. Road salt must be kept below, and never extend above, the top of the concrete wall and must never be place

against the wooden roof system. It can be permitted to dome up based upon its natural angle of repose of 32 degrees or less. That is to say less than 10' at the perimeter concrete ring wall and an additional 35' (45' max total) at the center of the dome cone.

Our investigation in our area of North Jersey has not found many contractors who do these types of repairs. However, based on our research we have developed a preliminary engineer's estimate of \$120,000 as follows:

Mobilization	\$ 10,000
Pressure Injection Crack Repair – 400 LF @ \$80 =	\$ 32,000
Interior 12" Wide Wall Straps – 250 LF @ \$40 =	\$ 10,000
Exterior 24" Wide Wall Straps – 720 LF @ \$60 =	\$ <u>43,200</u>
Subtotal:	\$ 95,200
Contingencies – If & Where – 25%	\$ <u>24,800</u>
 TOTAL BUDGET ESTIMATE	 \$120,000

I also happened to speak with Cory Stoner from Harold Pellow & Associates and he indicated we should budget about \$2000 for HPA assistance in preparing the up front "boilerplate" portion of the Specification package in preparation for bidding. Genesis will prepare the project specific technical specifications for the Special Provisions portion of the bid package.

Since the salt will need to be moved away from the walls of the dome in order to do the work, it was discussed to do this project in the spring when the salt stockpile would be lower and demand will have melted away. The actual work can be done in a three-week period once mobilized. Bidding and award would be done over the winter.

I trust the above is sufficient for your use and remain available if any other questions or concerns arise.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Richard C Kreppel, PE". The signature is stylized and includes a horizontal line at the end.

Richard C Kreppel, PE  
Principal  
Genesis Engineering LLC



## **Byram Township Fire Department**

225 Route 206 – PO Box 361  
Andover, NJ 07821

### **RE: CAPITAL PLAN**

08/26/2022

The Fire Department is looking at a 6 year Capital Plan.

#### **Replace Engine 1 1998 E-one Engine & Rescue 3 2000 Pierce – 2022 – \$820K**

Plan A: This plan and Spec were already submitted to the town in 2021. The goal of this plan is to reduce the fleet by one truck, saving money on repairs on an aging fleet, combining the equipment of the engine and the rescue. This would also add additional scene safety with having water and rescue operations in one vehicle. This plan has the potential to reduce the SCBA Replacement project. This will also allow the town to have a reset truck replacement program. Replacing both trucks individually would be around \$1,300,000.

Plan B: Replace Engine1 1998 E-One at the cost 650K+ (not sure where pricing is today). This would then allow to possibly refurb Rescue 3 (as long as it checks out on a review of the under carriage etc.)

#### **SCBA Replacement - End of Life 2023 - \$220K**

The Fire Department has an AFG Grant submitted from 2021 for full replacement. If we do not win, we will submit again. We currently have 14 Bottles with the end of life now through January of 2023. The cost of a bottle is \$1,500ea

#### **Rescue 3 REFURB - 2000 Pierce / Kenworth -2024 / 2025 – \$350K**

This project would be if Plan B above was chosen by the town. The Refurb would include paint, Gauge, mechanical, Pump undercarriage, Compartment configuration, Air System upgrade to 6000PSI, and whatever else is found during inspection.

#### **Tender 7 Refurb 2001 Pierce Kenworth 2026 - \$175K**

The Refurb would include paint, Gauge, mechanical, Pump undercarriage, Compartment configuration, Water dump maintenance and repair, and whatever else is found during inspection.

**Tender 5 Refurb 2007 Pierce Kenworth 2027 - \$175k**

The Refurb would include paint, Gauge, mechanical, Pump undercarriage, Compartment configuration, Water dump maintenance and repair, and whatever else is found during inspection.

Sincerely,

Todd Rudloff

Chief of Department

Byram Township Fire Department