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October 8, 2021

Updated: October 22, 2022

Updated: March 14, 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 2022
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 2022 Byram Township Budget. This list of these projects and activities has been updated to reflect anticipated fuel and asphalt price increases for the 2022 construction period and includes the following:

1. Improvements to Tamarack Road

Tamarack Road is a major arterial roadway in Byram Township which is showing signs of deterioration. In an effort to continue to maintain the major roadways in the Township, a NJDOT Municipal Aid Grant application was submitted for FY2022 for the completion of improvements to the section of Tamarack Road between Johnson Lake and Roseville Road. The application was submitted for this project in the amount of \$235,000.00. The estimated costs for this project are as follows:

Construction Costs	\$ 290,000.00
Surveying & Engineering Design	\$ 10,000.00
Construction Inspection & Management	\$ 15,000.00
Asphalt Cores & Testing	\$ 2,500.00
Total Estimated Costs	\$ 317,500.00

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 2022: 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..... \$ 12,500.00

Construction Inspection & Management \$ 12,500.00

Total Estimated Costs..... \$ 540,500.00

3. Improvements to Forest Lake Roadways

In 2021, Crescent Drive North and Winding Way were milled and resurfaced. In 2022, it is recommended that the milling and resurfacing program be continued in the Forest Lake Community. The roadways proposed to be improved in 2022 are as follows:

Construction Costs \$ 402,000.00

Sherwood Forest Drive.....	\$ 150,000.00
The Retunda	\$ 74,500.00
Hemlock Road	\$ 77,000.00
Deer Run.....	\$ 53,000.00
Harbor View Drive.....	\$ 47,500.00

Engineering Design.....	\$ 5,000.00
Construction Inspection & Management	\$ 7,500.00
Total Estimated Costs.....	\$ 414,500.00

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.....	\$ 5,000.00
Construction Inspection & Management	\$ 10,000.00
Total Estimated Costs.....	\$ 288,000.00

5. **Roadway Crack Sealing:**

In 2022, I recommend that the Township consider restarting a crack seal program for the major roadways within the Township. I believe it would be beneficial to add a crack sealing program to further 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 2022 budget.

6. **Roadway Striping:**

As roadways age, the roadway striping fades and the night time visibility of a roadway diminishes. In order to maintain the safety of the major roadways as the roadways age and the traffic stripes fade, I would 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 striping, 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 2022 budget for roadway striping. This will allow for the restriping of approximately 3 miles of double yellow centerline striping on the major roadways.

7. **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 2022. 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.

8. **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**

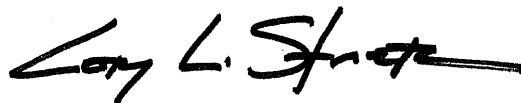
A number of roadway and drainage issues come up each year which I assist that Township Manager and the Road Department Supervisor with. It is recommended that **\$5,000.00** be set aside for miscellaneous work items that may come up during the year related to roadway and drainage problems in the Township.

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 2022. 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