Road Maintenance

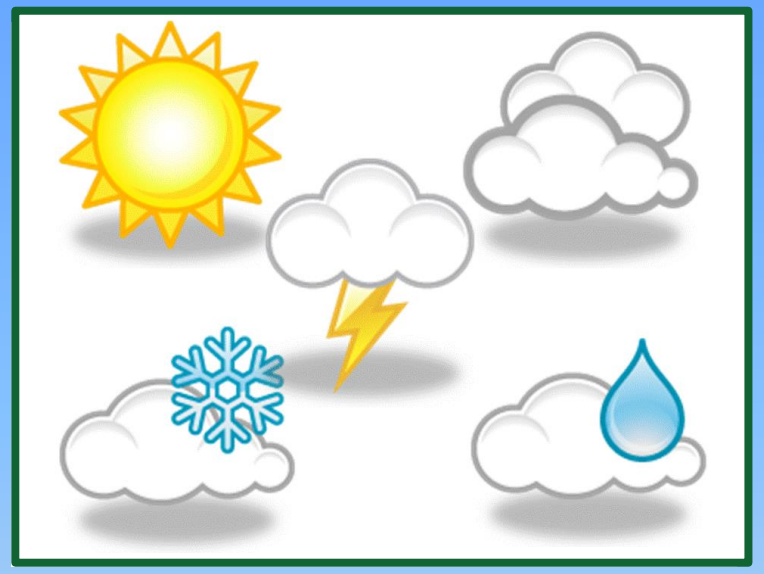
HOA President's Meeting

March 2, 2020

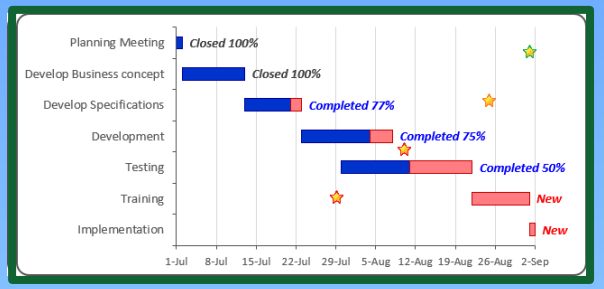
THE VILLAGE OF LONG GROVE

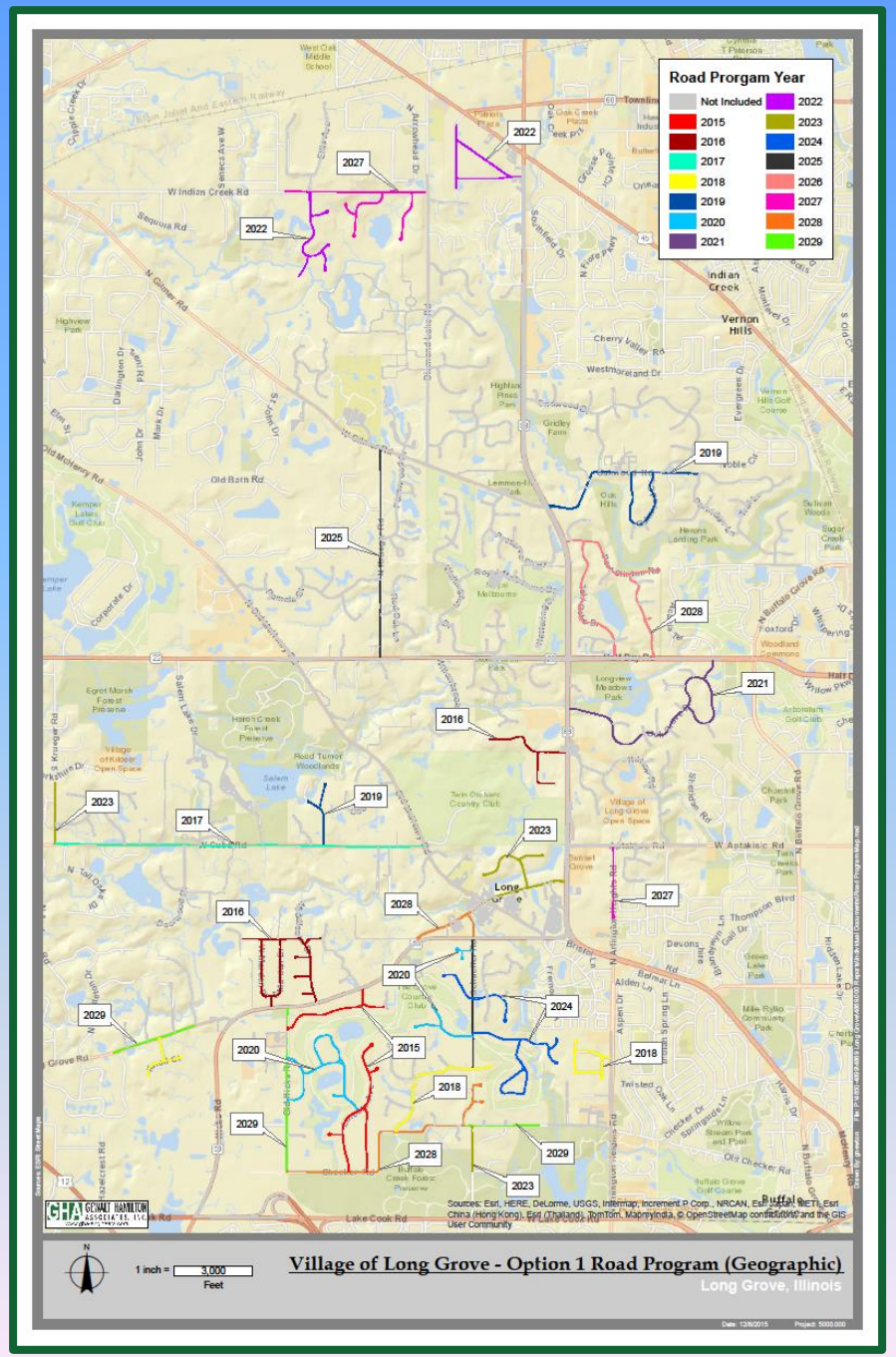
GHA GEWALT HAMILTON ASSOCIATES, INC.

Chicagoland weather impacts pavement life



Create a Plan and Budget





Pavement Condition Study

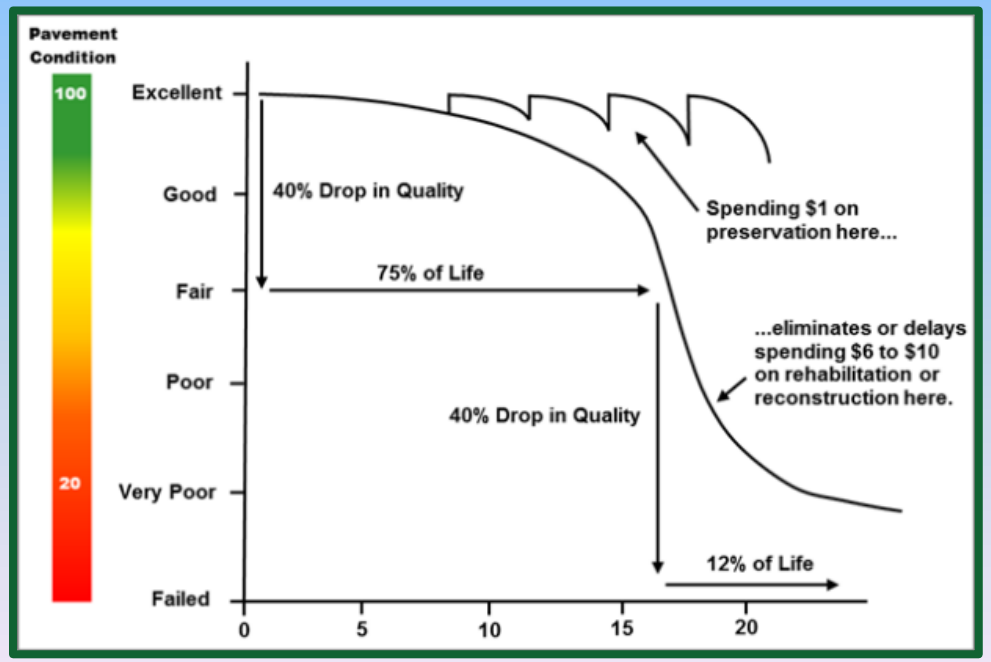
Establishing a plan

Remember the old adage…

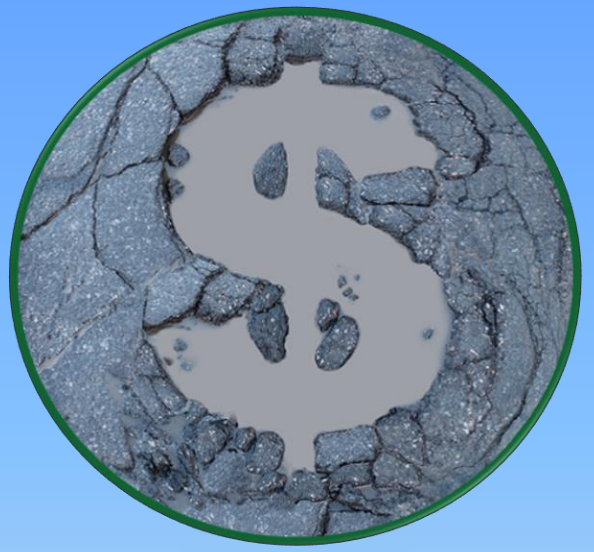
"Pay now, or pay later"

This typically holds true with pavement maintenance and construction

Pavement condition declines over time. Implementing a pavement maintenance plan will not only improve longevity but positively impact your bottom line.



Pavement Maintenance



Factors that affect cost:

- Material Cost
- Proximity of suppliers
- Proximity of contractor
- Project size

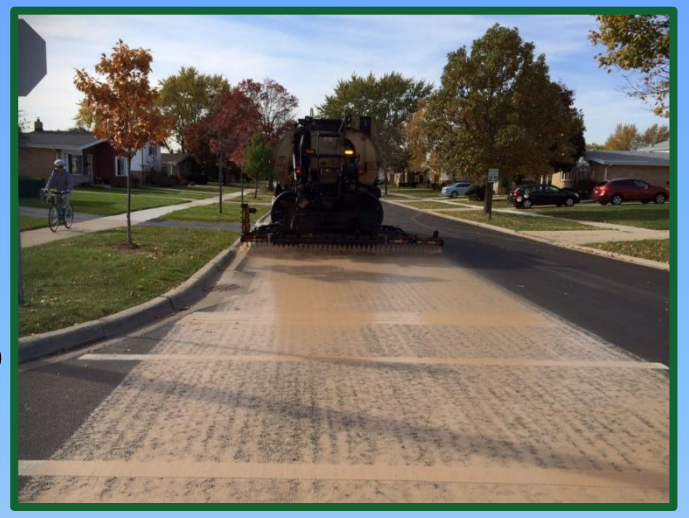
Pavement Maintenance Strategies

Reclamite & CRF

+/- $1.00 / Square Yard (Reclamite)
+/- $1.35 / Square Yard (CRF)

Purpose

These are proprietary preventative pavement maintenance treatments that are applied to new asphalt to help preserve the oils and delay oxidation. Reclamite is applied to pavements 1-2 years old and CRF is applied to pavements 3-7 years old.



Method

Pavement is swept and the material is spray applied. A sand blotter is immediately applied so roads can be immediately opened to traffic. The sand blotter is removed within 2 days and the product dries clear.

GHA TIP: This product does not address pavement cracks

Pavement Maintenance Strategies

Crack Routing and Filling

+/- $1.60 / Square Yard ($10.5k per lane mile)

Purpose

Filling pavement cracks helps prevent water intrusion to the existing aggregate subbase, and reduce further separation and pavement damage due to freeze/thaw cycles.

Method

Existing pavement cracks greater than ¼” in width are identified.

Cracks are routed, cleaned of debris, and filled with hot rubberized joint filler.

Pavement Maintenance Strategies

Sealcoating

+/- $1.60 / Square Yard ($10.5k per lane mile)

Purpose

Sealcoating helps prevent many of the factors that contribute to asphalt failure including oxidation, raveling, and minor water infiltration. Sealcoating can also help prevent damage for oils, road salts, and U.V. damage.

Method

Pavement is cleaned of debris and sealcoating material is applied by spraying or squeegee.

GHA TIPS:

There are many different products with different pros/cons

Contractor's may dilute mixture once onsite

Pavement Maintenance Strategies

Pavement Patching

+/- $55 / Square Yard (6” depth)

Purpose

Pavement patching may be considered to address isolated failures of the existing pavement.

Method

Pavement patching methods are typically separated into two options;

Full-depth patching - Extensive deterioration and/or failures are removed to a specified depth.

Surface patching - Distressed pavement surface areas are removed, surface is typically 1-½” to 2.”

Pavement Maintenance Strategies

Asphalt Overlay

+/- $28 / Square Yard
($180k per lane mile)

Purpose

An asphalt overlay of the pavement would be considered when pavement failures appear to be only in the surface layer of the existing pavement.

Method

The existing asphalt pavement will be overlaid with HMA leveling binder (avg. 1”) and asphalt surface course (approx. 2”), consequently raising the existing roadway elevation.

GHA TIP: Site drainage needs to be evaluated prior to raising any pavement elevation.

Pavement Maintenance Strategies

Asphalt Milling and Resurfacing

+/- $17 / Square Yard ($110k per lane mile)

Purpose

This strategy would be considered when failures are evident in the existing pavement surface, but the subbase is believed to be in suitable condition.

Method

The surface asphalt is milled (typically 2”), the milled surface is cleaned, sprayed with a tack coat, and paved with surface course.

GHA TIP: We would recommend a minimum of 2½” of existing pavement remain in place to provide adequate support for construction equipment.

Pavement Reconstruction Strategies

Partial Reconstruction

+/- $40 / Square Yard
($258k per lane mile)

Purpose

A partial reconstruction could be considered when failures of the existing pavement are evident, but the existing subbase is determined to be need minor repairs.

Method

This process includes removing the entire asphalt pavement section to existing subbase. Then the remaining aggregate subbase will be evaluated through a proof roll,

and reshaped to proposed alignment and adequately compacted. New pavement is then installed by paving the designed thickness of HMA binder and surface courses.

Pavement Reconstruction Strategies

Total Reconstruction (Conventional)

+/- $75 / Square Yard ($484k per lane mile)

Purpose

A total reconstruction of the pavement could be considered due to substantial failures of the existing pavement, existing subbase, or insufficient pavement cross section.

Method

With conventional reconstruction, the entire pavement section is removed. The subgrade is excavated to the design elevations and evaluated through a proof roll.

Drainage improvements, including storm sewer and underdrain, may be implemented, and appropriate geotextile fabrics should be considered.

A new aggregate base course would be installed, and HMA binder and surface courses would be paved to the designed thickness.

Pavement Reconstruction Strategies

Total Reconstruction (Pulverization)

+/- $45 / Square Yard ($290k per lane mile)

Purpose

Pavement pulverization is a method to reconstruct pavements in place, which reduces offsite disposal and is generally considered “green.” Pavement reconstruction is needed if subbase failures are observed.

Method

Existing asphalt and aggregate subbase materials are pulverized in place to the depth specified. The new pulverized aggregate subbase is reshaped, with additional stone as necessary, and compacted. The subbase is paved over with new hot-mix asphalt courses.

Typically this method would raise the existing pavement elevation, but there are options to counter this which would require an additional cost.

Summary

- Assess the Conditions of the Roads. Establish a baseline.
- Complete Necessary Safety Repairs Immediately
- Create Short and Long Term Plans & Budgets (Minimum 4% inflation rate)
- Develop Plans and Specifications to Maximize Return on Investment
- Try to Combine Projects with other HOA’s (aggregate bidding reduces costs)
- Make the Project Worthwhile for a Contractor (leery of HOA’s)
- Pay for Project Oversite and Testing
- Is an SSA an appropriate vehicle for your HOA?
- The Village is here to assist. Village Engineer will offer professional advice

Contact Information

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