WISCONSIN CONCRETE PAVEMENT ASSOCIATION

2423 American Lane, Suite 2
Madison, WI 53704
Phone: 608-240-1020
Fax: 608-240-1019
www.wisconcrete.org

*Moving forward with concrete results*

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Dear Property Owner:

As part of the construction project on your city street the Wisconsin Concrete Pavement Association member contractor has installed a new concrete driveway, driveway approach slab, sidewalk, curb and gutter, pavement or a combination of these items. Please trust that the contractor has made every effort to produce or purchase quality concrete and has made every attempt to conduct the highest quality concrete construction. The combination of these two things should provide worry free, durable, long lasting concrete.

As a property owner there are some things you should know and do to protect your concrete early in its life to assure that it will have a long life.

1. The concrete is in the process of curing and gaining strength. This is a chemical reaction that occurs between the cement in the concrete and the mixing water. The more water available to the cement, the more complete the reaction and the result will be stronger less permeable concrete. The contractor has applied a white pigmented curing compound to retain as much water in the concrete as possible to get the initial set and strength gain in the concrete. We encourage you, if possible, to regularly wet the surface during the first 30 days. This can be very critical to success in periods where no rain occurs.

2. Many property owners ask us if it is OK to seal their concrete. Our answer is yes. But, the surface must be cleaned and all of the white wax based curing compound needs to be removed to get a 100 percent effective seal. This is normally accomplished with a high pressure washer. Be careful not to damage the surface with the high pressure. We recommend the use of a silane or siloxane based concrete sealing product.

3. Sealing is not needed if the contractor used a linseed oil based curing compound on the concrete at the time of placement. This product is classified as a curing agent and a sealing agent.

4. The first winter is critical to long term durability of the concrete. In a perfect world, we recommend that no deicing chemicals be used on the concrete. However, we know that winters in Wisconsin make this very difficult and in many cases impossible for public safety reasons. We have the following rules of thumb for safe deicing salt usage:

    a. Minimize the use of salt as much as possible. Apply as much sand as you feel is needed.

    b. Research recently conducted by Michigan Tech University shows the safest salt to use is sodium chloride (NaCl). The bags of salt crystals sold for use in water softeners is the best example of salt to use.

c. The same research shows the Magnesium Chloride (MgCl), Calcium Chloride (CaCl) and Potassium Chloride (KCl) based salts can be extremely destructive to concrete. This is particularly true in the first year and even the second year of the concrete's life. Most of the bagged deicing salts sold in Home Depot, Menards, etc produced for the purpose of removing ice contain these chemicals or a combination of them and can be very destructive to new concrete. They will usually have a warning on the back of the bag. We need to stress that these salts will chemically react with your concrete and may cause the surface to scale.

d. Completely remove all snow and ice from the concrete each weather event. Consistent moisture through the freeze-thaw cycles we experience in Wisconsin drives water into the air void structure of the concrete. Water expands when it freezes and can be destructive when combined with aggressive deicing salts.

e. Do not use fertilizers such as ammonium sulfate or ammonium nitrate as deicing chemicals.

5. Popouts are common in new concrete. It is when they become excessive that you should be concerned. Stone sources in Wisconsin naturally contain contaminations of chert or shale. A chert popout will have a porous white stone in the bottom. Shales can be many colors. It is impossible to prevent popouts completely. It is a very acceptable process to fill these voids in the surface to prevent further damage to the concrete. There are epoxy based concrete patch materials that you can purchase to fill these holes. A thorough cleaning of the area is required to assure bond.

Following these points will assure that your concrete will look good and have the long life that you expect. We are available to answer any questions that you may have on your new concrete, please feel free to contact us directly or through your contractor.

Sincerely
Wisconsin Concrete Pavement Association

Kevin W. McMullen, P.E.
President