Appeal documentation for 461 McKnight.
Owners: Patty McDonald & Carl Anderson

Fire Inspection Correction Notice lists:

Exterior – SPLC 34.08 (7) – All parking spaces shall be paved with asphalt, concrete, or durable dustless surfacing. Before any existing spaces may be paved, site plan approval must be obtained as specified in the St. Paul Zoning Code. Contact DSI Zoning at 651-266-9090. – Finish paving the driveway.

We are asking for a variance on this. This driveway is half paved and half class 5 crushed aggregate. (*Photo 1 & 2*) It is crushed aggregate for a reason—to help keep the garage from flooding. It does this by percolation and directing the water to the side.

Every time it rains there are flooding issues. (*Photo 3*) This is due to the inadequate storm sewer system which sends massive amounts of water flow over the end of the driveway, down the driveway in toward the house/garage (see *Diagram 4* for information on storm sewer issues). By making the driveway paved and not Class 5 it will increase the volume of water that flows towards the house/garage/backyard.

Photo 1: 461 McKnight: Right portion of drive is Class 5

Photo 2: View from steps (after snow melt). Photo 3: View from steps during a big rain.

History:
This has been an ongoing issue for years. Before the garage was there the water flowed straight down into and across the backyard. The flow was of such high volume and with such force that it washed away the new septic field. (*Diagram 1*) It was so sever that the city made the owners hook up to the city sewer—which involved installing a small pumping station to pump the septic sewage the 50+ yards to the where the septic ends two houses down.

Around that time someone purchased the house and built the garage—neighbors encouraged the person to build the garage higher than the house, but he didn't. So the flow of water, if unchecked now floods the garage and the backyard. We added more Class 5 to increase the volume of space for the water to stand as it percolates down. This permeable surface and the fact that we can make troughs to direct the water to flow around to the side of the garage saves it.

The next phase of the water issue was that the water would go around the back and across the backyard—taking mud across the patio and yard (*Diagram 2*). We have worked on that (with landscaping, berms and directing water flow) and now have the water flowing only to the side of the yard and into a green space where the water percolates down— eventually. (*Diagram 3*)

Now:
By adding a blacktop/cement surface that we can not work with and adjust as needed we will be increasing the volume of water and speed/force of flow—which will increase the likelihood of two things happening:
1. Flooding the garage
2. Increasing the water flow problem in the backyard.

The flow of water changes seasonally and year to year—we would like to continue to have the class 5 driveway so that:
a. We have a permeable surface for some of the water to percolate down into.
b. We can adjust the surface as needed to keep the flow of water away from the house and garage.
c. We can continue to keep our tenants happy and dry.

Dust in our neighborhood hasn't been an issue – even with a Class 5 Road and long driveways near by. Mailand Road is just 45 yards south of 461 McKnight (*Photo 4*) and is a 1200' long Crushed Aggregate Road. (*Diagram 5 & 6, Photo 5*) Neither of the neighbors or the tenants have an issue with the driveway as it is now (see *Appendix A, B & C*). There are no neighbors across the street, across the street is actually the storm water run off holding pond (which does nothing to alleviate the situation) (*Photo 7 and all Diagrams, but Diagram 6 shows what the pond looks like recently*).

We feel like the bigger issue is the water problem due to the storm water run off. We have been working on the issue since we purchased the property—and continue to do so. We feel that the current driveway is a big part of the solution to the problem and we ask for a variance to be able to keep it that way.

Photo 4: You can see Mailand Road is just past 475 McKnight and the fire hydrant, which is 45 yards away from the driveway at 461 McKnight.

Photo 5: Mailand Road. The road just down the street 45 yards.

Photo 6: Another view of the storm sewer run off drain near the driveway at 461 McKnight.

*Photo 7: Across the street from 461 McKnight.
You can see the storm sewer run off drain in the foreground and the holding pond (in Maplewood) on the other side of the street.*

Diagram 1: water flow washing out septic

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Water flow

Brown area under flow is the septic field, or what was the septic field.

Diagram 2: water flow after garage

──────── Water flow

▇ Garage

Water flow cuts into earth along the wall of the south side of the garage creating a mud flow that covers the patio and part of the yard.

Diagram 3: current water flow since we've been working on the problem

━━━━━━━ Water flow

▮ Garage

A big part of this happy solution is the current class-5 driveway. The water now flows around the garage and along side of the yard into the back where it eventually percolates down.

Diagram 4: storm sewer contribution to the problem.

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461 McKnight

Watershed
boundaries for
storm water
system

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Storm sewer pipe

32.5 Acres (mostly from Maplewood) flow into the storm sewer drain, then into the pond, under the street and into our yards. The holding pond doesn't actually hold much-- it just directs a large volume of water into this storm drain--which frequently still overflows the system.

The street drains in front of 461 McKnight are part of this system--which means the water on the street backs up to the point of least resistance and flows down that path. That path is the driveway at 461 McKnight. (see Photo 6)
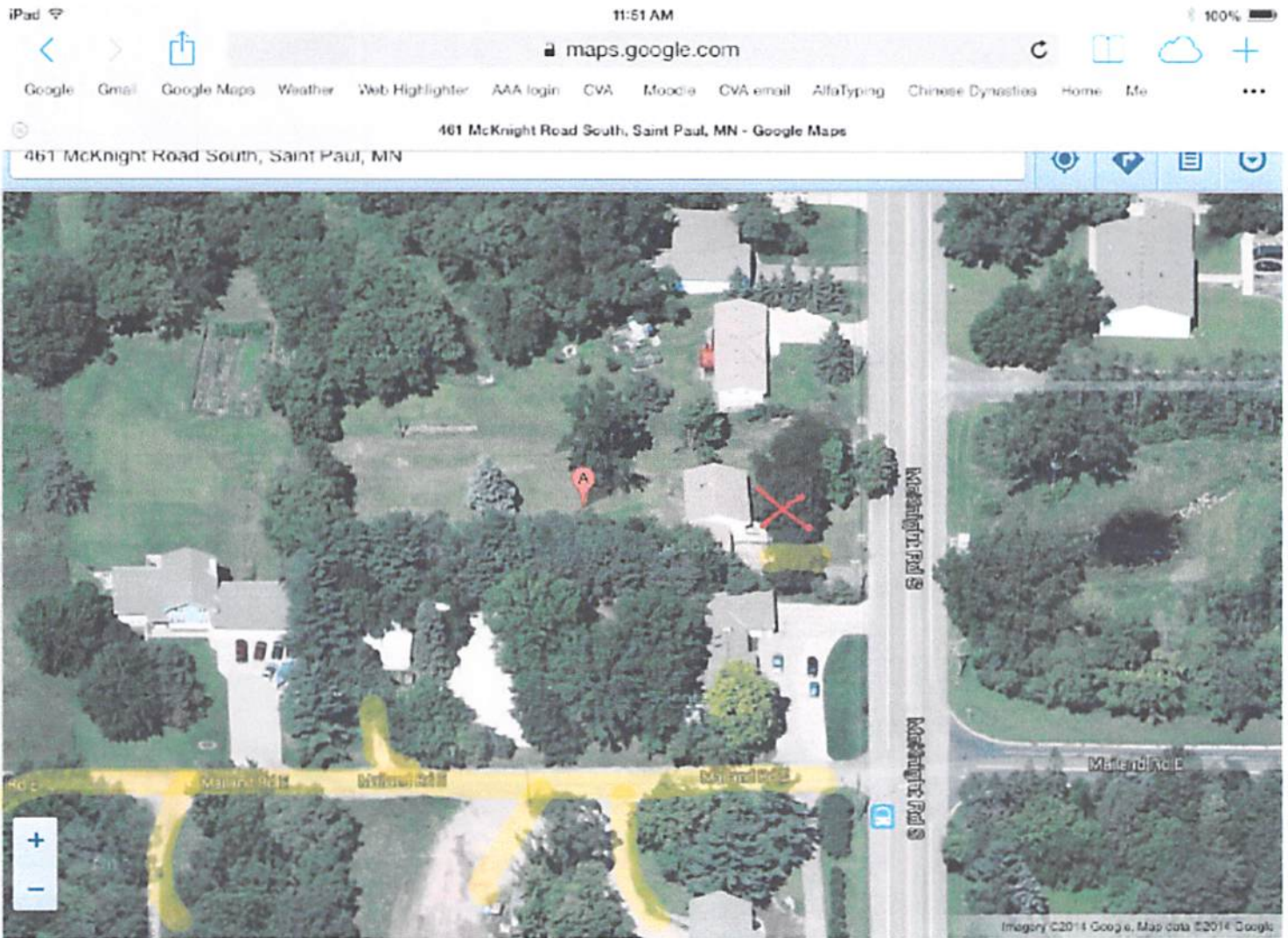
Diagram 5: class 5 road & neighbors
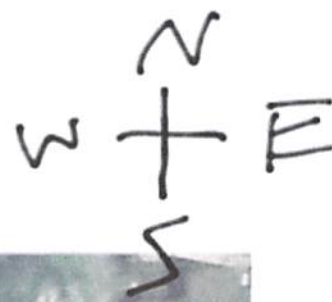
──────── Class 5 road and driveways

✕   461 McKnight

Diagram 6: current view – with Garage

Class 5 road and driveways

461 McKnight