

**VILLAGE OF LIBERTYVILLE
BOARD OF TRUSTEES
STREETS COMMITTEE**

April 26, 2016

7:00 pm

Village Hall

Minutes

Attendance

Committee: Trustee Donna Johnson, Trustee Scott Adams, Trustee Pete Garrity

Board: Mayor Terry Wepler

Staff: Village Administrator Kevin Bowens, Director of Public Works Paul Kendzior, Police Chief Clint Herdegen, Finance Director Patrice Sutton, Community Development Director John Spoden, Fire Chief Rich Carani, Assistant to the Director Laura Ditanto

Residents: Barbara Schafer - 315 Minear Drive, Sally Bauer - 1007 Sandstone Drive, Susan Kelly - 945 Sandstone Drive, Robert Gerber - 321 Minear Drive, Kelly Richter - 249 E. Ellis Avenue

Agenda

1) CALL TO ORDER

The meeting was called to order at 7:00 pm

2) MINUTES OF TUESDAY, FEBRUARY 23, 2016 MEETING

The minutes were approved as written.

3) 2016 ROAD PROJECT UPDATES

Pavement Rehabilitation Project: The construction contract was awarded to Alamp Concrete Contractors for an amount not to exceed \$3,585,771.11 at the February 23rd Board meeting. The contractor is currently doing curb and sidewalk work on Walnut Street, Carriage Hill Street, and Lake Street; and grinding the road on Lake Street, Wellington Ave, Sussex Lane, Claridge Drive, Oxford Court, Ashley Lane, Trinity Place, Blackberry Court, Checkerberry Court, Elderberry Court, Hackberry Court, Lingonberry Court, Mulberry Drive, Newcastle Court, Plumwood Drive, Portwine Court, Portwine Drive, Ronan Court, Vineyard Lane, Sunnyview, and Kildare.

FAU Resurfacing Project (Fourth/Greentree/Red Top): The project has received Phase 1 approval from IDOT. Construction for this project will be 80% Federal and 20% Village funded. Bids for this project were opened on the April 22, 2016 IDOT letting. There were two bids received, Peter Baker & Sons \$932,127.00 and J.A. Johnson Paving Company \$1,020,898.39. After IDOT awards contract, IDOT will set up a preconstruction meeting. This will likely be in about 45 days.

4) 2017 PAVEMENT REHABILITATION PROGRAM UPDATE

The list of streets for the 2017 Pavement Rehabilitation Program was approved at the January

26th Streets Committee Meeting. The engineering services contract with Christopher B. Burke Engineering, Ltd. was approved at the February 23rd Board meeting. Preliminary work (surveying, pavement cores, etc.) will begin soon.

5) FLASHING PEDESTRIAN CROSSING BEACON UPDATE AT ILL ROUTE 176 & DYMOND ROAD

The Village submitted the formal Permit materials to the IDOT on February 2nd. The submittal included a cover letter, engineering drawings and a description of the proposed work. Engineering Division Staff is in the process of responding to IDOT's comments. Staff resubmitted to IDOT on April 19, 2016.

6) ELECTRONIC VEHICLE DISPLAY SIGNS

In response to concerns with vehicle speeds, Public Works and Police Department Staff have recently installed the electronic vehicle display signs on Sunnyside Avenue. As mentioned in previous discussions with the Streets Committee, the signs were purchased with funds from an anonymous donor and will be rotated on a monthly or bi-monthly basis to pre-determined locations within the Village where speeding is a concern. Past studies have shown that electronic vehicle speed display signs have been effective in speed calming, but over time (45-60 days) lose their effectiveness. This is why Staff desires to rotate them. The next location where the signs will be installed is on Fourth Avenue between Golf and Red Top.

The electronic signs have technology in them that allow the Police Department to run customized reports for eastbound traffic, westbound traffic and certain dates/times of the month. These reports allow the Police department to better allocate their resources for speeding enforcement. The westbound traffic for the first three weeks of April has an average mile per hour reading of 18.67 MPH. The eastbound traffic for the first three weeks of April had an average mile per hour of 22 MPH. The Police Department is continuously working with the car dealerships to keep their test drives off residential streets.

7) SIDEWALK SNOW REMOVAL UPDATE

Snow removal operations for public sidewalks was discussed at the January and February Streets Committee meetings. One of the concerns was with the removal of snow along the frontages of elderly and handicapped residents. Public Works Administrative Staff has been in contact with the Recreation Department to get a list of addresses needing assistance through coordination with the Civic Center. Libertyville and Carmel High School, along with the local Boy Scout Troop, have indicated that volunteers should be available to clear snow when needed. This is a new program that will be started with the next snow season and we will report on its effectiveness after one or more events.

8) IMPACT OF CONTINUED E. ELLIS AVENUE NEW HOME CONSTRUCTION ON SUB-SURFACE DRAINAGE

During public comment at the November 23, 2015 Plan Commission meeting for proposed homes on two vacant lots at the end of East Ellis Avenue, concerns were raised by one resident regarding possible impacts to underground aquifers and sub-surface drainage. These concerns were reiterated during public comment at the January 12, 2016 Board Meeting, where Mayor Weppler directed that further discussion relating to the impacts to aquifers and sub-surface drainage as a result of new home construction on East Ellis Avenue be undertaken at a future

Streets Committee. It should be noted that there are three additional vacant lots on East Ellis Avenue that new single family homes could be constructed. In addition, there is the possibility of future teardowns on the street.

Current Surface Drainage Problems: The neighborhood has a history of surface drainage problems, in which the neighbors have previously contacted the Village about. Drainage is from west to east, with a significant change in elevation between Milwaukee Avenue and Sandstone Drive of approximately 35-feet. The factors most contributing to the surface drainage problems of the neighborhood are an undersized storm sewer system (inadequate intake & conveyance capacity) and the absence of suitable overland flow routes. The current storm sewer system has an approximate 5-year frequency storm capacity following some improvements in 2003. Current Village design standards for new storm sewer systems is that the 10-year frequency storm is safely conveyed and that suitable overland flow routes are established and maintained for storm events that exceed the 10-year frequency up to the 100-year event. When the existing storm sewer system reaches capacity, previous engineering studies indicate that the overflow point is at the east end of East Ellis Avenue.

Impact to Aquifers and Sub-Surface Drainage: General knowledge and understanding of sub-surface drainage, which includes the groundwater table and aquifers, is still rather ambiguous and ever changing. Borings can be taken, however, the information obtained from the boring can only be directly attributed to the exact location of the boring and for that particular moment in time; conditions can greatly vary, even for a few feet away and over time. An aquifer is defined as an underground permeable (water bearing) rock formation. Aquifers are a source of water in which a well can be drilled to extract the water. Another component of the sub-surface drainage system is the groundwater table, which is closer to the surface, generally in the 10-15 foot range. Aquifers are usually much deeper.

In an attempt to address the concerns of possible impacts to the sub-surface drainage system, Staff reviewed historical information and noted that there is a history of aquifers, most notably the Albana Spring. The original well for Albana Spring was located on Newberry Avenue in the 1800's, but went dry around 1910. At that time, a second well was drilled on Park Place. We do not know the depth of the wells, but both appear to be "artesian," where no pumping is required because the water flows to the surface under pressure. It was noted in the late 1800's that "wells drilled in Libertyville hit cool underground reservoirs at a depth of 60-70 feet where water flowed to the surface with no pumping required."

Since the late 1800's and before the switch to Lake Michigan water (1992), the areas shallow and deep wells that were drilled into the aquifers were utilized as the primary source for potable water, which significantly lowered their levels. The current depths for the Village's four operational wells:

- Well #1 (Second Street): 251-feet – Silurian dolomite Aquifer
- Well #5 (Newberry Ave.): 227-feet – Silurian dolomite Aquifer
- Well #11 (Garfield Ave.): 1,485-feet – Silurian dolomite, St. Peter and Ironton-Galesville sandstone Aquifers
- Well #12 (Greentree Pkwy): 1,926-feet – St. Peter, Ironton-Galesville and Mt. Simon sandstone Aquifers

Given the current depth of the wells to the aquifers in the area, staff can reasonably conclude that the greatest impact that new home construction on East Ellis Avenue, which would also include "teardowns," would be on the groundwater table (10 feet down). The groundwater

table is much shallower and the actual level can vary dramatically given wet/dry conditions, the time of year and location. A “perched” (higher than normal) water table is also a possibility. It is now the norm for new construction to provide very deep basements, usually 9 to 10-feet deep. The foundation footing is required to have a perforated perimeter drain tile to relieve hydrostatic pressure from ground water. The tile is encased in stone backfill, which will collect the ground water and drain it to a storm sump pump.

Usually the basements for the newly constructed homes are deeper than the basements for the adjacent existing homes. The deeper perimeter footing drain tiles become a conduit for the ground water, which is then pumped into the Village’s fronting storm sewer lines. This tends to occur very frequent, even in dryer conditions and becomes a concern because this “base flow” detracts from the available conveyance capacity of the storm sewer. Staff may want to consider limiting the basement depth for these new homes to the previous traditional 8-feet, which should somewhat limit the continuous ground water pumping into the storm sewer system. Even if newer homes are only constructed with the 8-feet deep basement, additional groundwater may still be pumped to the storm sewer system because these new basements may still be deeper than the existing basements of the adjacent existing homes and far more efficient and newer drain tile collection systems.

Conclusions: The construction of new homes on and around East Ellis Avenue does not have a direct impact on the area’s aquifers because of their significant depth in relation to the ground surface. The more immediate impact that new home construction would have would be on the water table, which is closer to the surface, especially during wet periods, or if it is “perched.” In order to not reduce the conveyance capacity of the Village’s receiving storm sewer system, it is recommended to not allow deeper basements than the traditional 8-foot depth.

There were several residents in the audience that wanted to speak with the Committee:

Barbara Shafer - 315 Minear Drive

- Ms. Shafer is the resident who spoke at the November 2015 Plan Commission meeting.
- Shafer stated that she represents over 100 residents on this issue.
- Ms. Shafer stated that the new homes will lessen the tree canopy interception and add to overland flow of stormwater.
- The new construction basements are disrupting the water table and will impede water flow and that basements shouldn’t be allowed for new construction.
- Ms. Shafer stated that she is not anti-development.
- Ms. Shafer suggested that the open lots on E. Ellis Avenue be left as green space.
- Due to lack of an overland flow route and storm sewers that are too small; new construction is not going to make this better.

Sally Bauer - 1007 Sandstone Drive

- Ms. Bauer would like to know who will pay for basement repairs when her basement floods.
- Ms. Bauer suggested that it may be cheaper for the Village to buy the lots on E. Ellis Avenue and create a drainage swale.

Susan Kelly - 945 Sandstone Drive

- The E. Ellis Avenue lots acts as a retention pond due to the insufficient storm sewers.

Robert Gerber - 321 Minear Drive

- Mr. Gerber stated that there is standing water in his backyard 50% to 75% of the year.

- He has lived in this house for two years.
- If the soil at the end of E. Ellis Avenue is removed, his yard or basement will flood.

Kelly Richter - 249 E. Ellis Avenue

- Ms. Richter has the newest home on E. Ellis Avenue.
- The undeveloped lots on E. Ellis are owned by two brothers. The owners have not been agreeable to working with neighbor to keep the land undeveloped.

Trustee Johnson stated that the Committee appreciates the residents bringing this to their attention. It is an expensive solution to upgrade the storm sewer. The Committee and Staff will deliberate the options and alternatives about this land.

9) TIMBER CREEK TRAFFIC NOISE

Residents in Timber Creek subdivision have made complaints about noise caused by traffic on Route 137. They would like some sound abatement measures installed. IDOT will not provide sound abatement (usually sound walls) unless they are the cause of the noise. Staff will ask IDOT about installing “No Engine Breaking Signs” on Route 137.

10) ADJOURNMENT

The meeting adjourned at 7:56 pm.

Respectfully Submitted,

Laura Ditanto,
Assistant to the Director
Department of Public Works