VILLAGE OF LIBERTYVILLE
BOARD OF TRUSTEES
STREETS COMMITTEE

April 26, 2016
7:00 pm
Village Hall

Agenda

1) Call to Order
2) Minutes of Tuesday, February 23, 2016 Meeting
3) 2016 Road Project Updates
4) 2017 Pavement Rehabilitation Program Update
5) Flashing Pedestrian Crossing Beacon Update at ILL Route 176 & Dymond Road
6) Sunnyside Avenue Speeding Concerns and Electronic Vehicle Display Sign Update
7) Sidewalk Snow Removal Update
8) Impact of Continued E. Ellis Avenue New Home Construction on Sub-Surface Drainage
9) Adjournment

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STREETS COMMITTEE

February 23, 2016
7:00 pm
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Agenda

Present: Trustee Donna Johnson, Trustee Scott Adams, Trustee Pete Garrity, Mayor Terry Weppler, Village Administrator Kevin Bowens, Director of Public Works Paul Kendzior, Police Chief Clint Herdegen, Assistant to the Director Laura Ditanto, Fire Chief Rich Carani, Deputy Village Administrator Kelly Amidei, Finance Director Pat Wesolowski

Absent: None

Call to Order at 7:05 pm

1) Minutes of Tuesday, January 26, 2016 Streets Committee Meeting

The minutes were approved as written.

2) 2016 Road Program Updates

Pavement Rehabilitation Project: The bids were opened on February 4th, 2016. The contract award is on tonight's Village Board agenda for approval. Staff is recommending awarding the contract Alamp Concrete Contractors for an amount not to exceed $3,585,771.11. Alamp is using Peter Baker & Sons Co as their asphalt contractor.

FAU Resurfacing Project (Fourth/Greentree/Red Top): The project has received Phase 1 approval from IDOT. The finals plans were submitted to IDOT in late January. The project is scheduled for the April 22nd IDOT bid letting. Construction for this project will be 80% Federal and 20% Village funded.

3) 2017 Pavement Rehabilitation Program Update

The list of streets for the 2017 Pavement Rehabilitation Program was approved at the January 26, 2016 Streets Committee Meeting. The engineering services contract with Christopher B. Burke Engineering, Ltd. Is on tonight's Board meeting agenda for approval.

4) Flashing Pedestrian Crossing & School Zone Establishment (Rte 176 & Dymond)

The Village submitted the formal Permit materials to the Illinois Department of Transportation (IDOT) on February 2nd. The submittal included a cover letter, engineering drawings and a description of the proposed work. The IDOT Permit review process can typically take between 60-90 days before either approval is granted or written review comments are provided. The Village has IDOT District I approval for this project.

5) Sidewalk Snow Removal Update

Following the January Streets Committee meeting, Community Development staff sent out 14 letters to residents/businesses along Park Avenue requesting that they clear snow from the sidewalks and not obstruct the sidewalks per Municipal Code Section 21-3.

The Village Administrator has also contacted the High School staff to remind them of their sidewalk snow removal obligations along the north side of Illinois Route 176 (Park Avenue) between the new Brainerd Ave. parking lot and the school. The high school indicated that they will comply with clearing snow from the sidewalks. The high school was on winter break when the slushy, heavy snowstorm occurred when the snow froze on the sidewalks and that is why they did not clear the sidewalks at that time.

Public Works Staff also added a section to their Snow & Ice Control Operations webpage encouraging residents to clear the sidewalks adjacent to their home and mentioning the Illinois Compiled Statutes Snow & Ice Removal Act that notes a person clearing the snow is exempt from liability except when acts amount to a clear wrongdoing.

A previous survey (February 2014) conducted by the Northwest Municipal Conference inquiring on member communities' fronting property owner sidewalk snow removal requirements along with some additional survey information was presented to the Committee. Ten of the communities have an Ordinance requiring snow removal from sidewalks. The responses varied as to whether the Ordinance is enforced. Some communities have not issued a ticket to date and a few have fines if a ticket is issued. Director Kendzior stated that Staff will continue to contact property owners near schools and busy intersections to remove the snow from sidewalks and to not pile up on sidewalks at intersections. Staff will continue to enforce the locations where snow gets piled up with snow by the Police and Code Enforcement.

Trustee Garrity requested staff contact Libertyville High School, Carmel High School and the local Boy Scouts to assist with sidewalk snow removal for the elderly and disable people. Ms. Ditanto will contact the high schools and the Boy Scouts.

6) Sunnyside Avenue Traffic Concerns Update

Chief Herdegen has been in contact with resident Mr. Eric Frank after he expressed concerns about an apparent ongoing vehicle speeding problem, as well as concerns that he and his neighbors have with local car dealerships using Sunnyside Avenue as a "cut through" route when providing test drives of their vehicles. Mr. Frank helped the Village narrow down specific time frames for extra speed enforcement details. Since discussing the matter with Mr. Frank extra speed enforcement has been conducted on Sunnyside Avenue during the times Mr. Frank recommended. The statistics are not available as of this writing, but sufficient data should be available by next month. In addition, a letter was sent to every auto dealership in the Village, asking for their cooperation with using an alternate route to Sunnyside Avenue for test drives. Director Kendzior contacted IDOT about adjusting the timing of the signals at 176 & 21. IDOT has allocated an additional 3 seconds for the eastbound left turn movement from Route 176 to Milwaukee Avenue for the morning rush period. The storage bay for the westbound left turn lane on Route 176 at Milwaukee Avenue will be extended by approximately 50-feet.

7) **Update for Electronic Vehicle Speed Display Sign**

As mentioned at a previous meeting, the Police Department received an anonymous donation from a resident to cover the cost of a set of semi-permanent (portable) flashing speed signs. During discussions with the Streets Committee, staff recommended utilizing these funds to purchase the signs and use them at select locations throughout the Village. The locations will be determined by the Police and Public Works Departments to help increase awareness and education of speeding motorists in the area.

Staff has researched available equipment from several vendors and decided upon one product that is best suited for our needs here in Libertyville. The signs have been ordered, delivery is expected in 10-14 days. A webinar is being scheduled in the near future, where the vendor will train personnel from each department on how to remotely program the equipment, as well as produce management reports from the data collected. We anticipate these signs will be installed within 30-45 days after we receive them. Staff will "pilot" the program on Sunnyside Avenue.

8) **School Street at Milwaukee Avenue Update**

As mentioned at a previous meeting, the Public Works Department installed new signage on School Street (just east of Milwaukee Avenue), which reduces the time vehicles are allowed to be parked in certain spaces down to 15 minutes and prohibits stopping or dropping off of passengers in the roadway. Since the signs have been posted, the Police Department has been monitoring the location for violations. Police Department staff also visited the Dance Studio and Starbucks Coffee to meet with management there and educate them about the new signs and expectations of their patrons. Each business advised us that they would work to educate their respective patrons about the new signage and gain their cooperation when dropping off/picking up passengers. To date, no citations have been issued, but Police Officers are noting violations and educating drivers about the new prohibitions there. Officers are also monitoring the segment of School Street that is signed as "one way" for violations of that regulation. Their presence at this location has helped to improve the situation and we will continue to monitor for violations moving forward. Police will give a warning ticket for the first violation and give a fine thereafter.

Trustee Adams requested that if this problem persists, can we mark the pavement that there is no stopping or dropping off allowed.

9) **Pedestrian Crossing over Milwaukee for Metra**

Mayor Weppler requested that flashing signal signs be put at this location. The Mayor stated that he has received several phone calls about crossing Milwaukee Avenue at this intersection. Director Kendzior stated that this would involve the ICC, FHA and IDOT to approve this sign. Mayor Weppler stated that he want to exhaust all options at this intersection.

10) **Adjournment at 7:30 pm**

Respectfully Submitted,
Laura Ditanto,
Assistant to the Director

Memorandum

To: Streets Committee

From: Public Works Staff

Date: April 19, 2016

Re: Staff Report

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. Work started on March 21st with curb & gutter and sidewalk removal/replacement in the Wineberry subdivision. The curb & gutter and sidewalk removal/replacement work has now started on Claridge Dr., Sussex Ln., Wellington Ave.

FAU Resurfacing Project (Fourth/Greentree/Red Top): The project is on the April 22nd Illinois Department of Transportation (IDOT) bid letting. Construction funding for this project will be 80% Federal and 20% Village. Work should begin sometime in mid to late June.

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) Update for Flashing Pedestrian Crossing & School Zone Establishment (Route 176 at 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 (please see attached letter) and plan to re-submit very soon.

6) Sunnyside Avenue Speeding Concerns & Electronic Vehicle Display Sign Update

In response to concerns with vehicle speeds, Public Works and Police Department Staff have just recently installed the electronic vehicle display signs on Sunnyside Avenue. Please see the picture at the end of the Staff Report. 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 (1-2 months) 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.

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

Please refer to the attached Memorandum prepared by Staff.

Electronic vehicle seed display sign on Sunnyside Avenue.

Illinois Department of Transportation

Division of Highways/Region One / District One
201 West Center Court/Schaumburg, Illinois 60196-1096

PERMITS
Location: IL 176 (Park Ave.) e/o Butterfield Road
Municipality: Village of Libertyville, Lake County
Re: Libertyville Community H.S. District 128 Access Modifications
Reference No.: 049-69466

March 8, 2016

Mr. Frederick Chung
Senior Project Engineer
Village of Libertyville
200 E. Cook Avenue
Libertyville, IL 60048

Dear Mr. Chung:

We have completed our review of your preliminary Signage and Striping plans for the subject location. Our comments are marked in red on the enclosed plan set, which must be returned with your next submittal, and are detailed below:

PARK AVENUE WEST ACCESS ROAD MODIFICATION PLANS

1. Clearly show and label State right of way lines on all plan sheets.
2. Redesign your access driveway modifications per the enclosed IDOT standard in regards to the driveway channelizing island. Additionally, clearly dimension all widths, radii, etc. for our review.
3. Clearly show and label all pavement markings colors, widths, lengths, etc.
4. Remove the skip dash lane line extensions leading from the eastbound left turn lane into the proposed access road.
5. Provide three (3) copies of final engineering plans when available signed & sealed by a licensed P.E. registered in the State of Illinois.

PEDESTRIAN CROSSING INSTALLATION PLANS

1. Signs S1-I / W16-9p and S4-5a cannot be combined at the same location; additionally, signs S4-5a need to be located at least 200' west of the location currently shown.
2. Replace sign S4-2 with SSL20 signs (S4-I100 24"x48").
3. SL35 and "End School Zone" signs should be located together with the SL35 placed above.
4. R1-6a signs can only be installed during daylight hours and must be removed at the end of each day.
5. Remove the proposed signs at Downes Avenue, as these are currently in place.
6. The school sign series for Dymond Road need to be the same in the westbound direction as in the corrected eastbound direction per the enclosed markups.
7. Repaint the school crosswalks and stop bars at the intersection of IL 176 and Dawes Street.
8. Please refer to all enclosed markups for clarification on the above comments.

Please revise your plans in accordance with the above comments and resubmit two (2) revised full size copies along with a written disposition to all comments to continue the review process.

If you have any questions regarding this matter, please contact Jonathan Karabowicz at (847) 705-4149.

Very truly yours,

John A. Fortmann, P.E.
Deputy Director of Highways
Region One Engineer

By:

Thomas G. Gallenbach, P.E.
Traffic Permit Engineer

Cc: Louis Wehrspann, Roake and Associates, Inc.
Paul Kendzior, Village of Libertyville Public Works

Libertyville
spirit of independence

MEMORANDUM

Date: April 26, 2016

To: Streets Committee

From: Paul Kendzior, P.E., C.F.M., Director of Public Works

Subject: Impact of Continued East Ellis Avenue New Home Construction on Sub-Surface Drainage

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Background: 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 particular 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 also be noted that there are three additional vacant lots on East Ellis Avenue that new single family homes could also be constructed. In addition, there is the possibility of future "teardowns" on the street.

Current Surface Drainage Problems: The neighborhood has a history of chronic 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. An exhibit indicating the limits of the Ellis Avenue Drainage Basin is attached. 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 first 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, the area's 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 are shown below:

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, we 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. 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. We might 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.

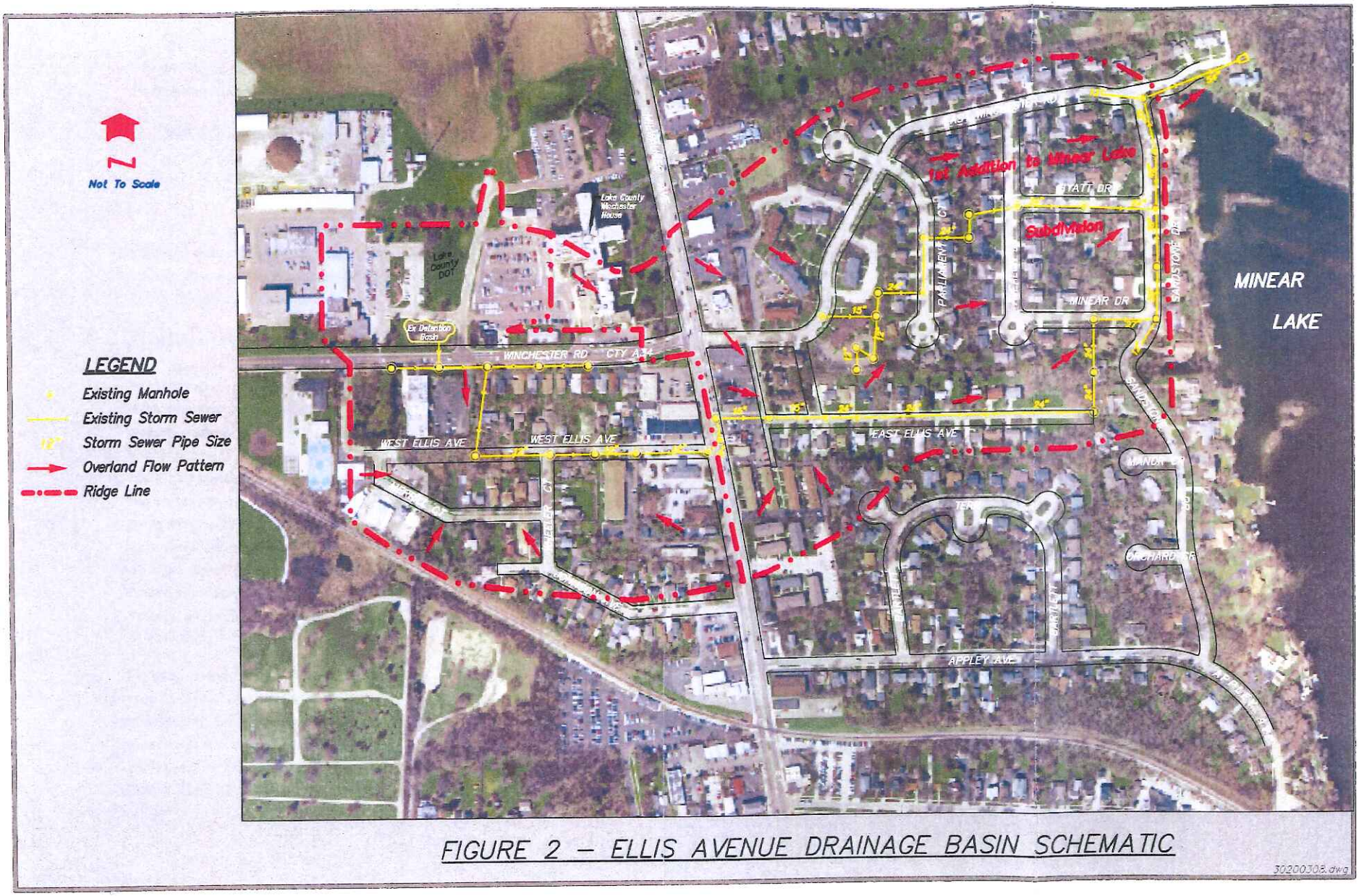
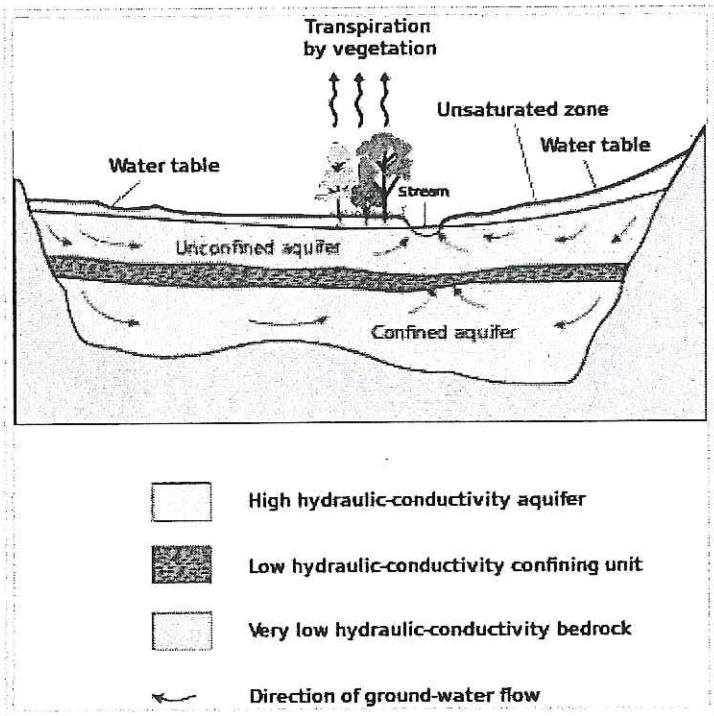


FIGURE 2 – ELLIS AVENUE DRAINAGE BASIN SCHEMATIC

Aquifer

From Wikipedia, the free encyclopedia

An **aquifer** is an underground layer of water-bearing permeable rock, rock fractures or unconsolidated materials (gravel, sand, or silt) from which groundwater can be extracted using a water well. The study of water flow in aquifers and the characterization of aquifers is called hydrogeology. Related terms include **aquitard**, which is a bed of low permeability along an aquifer,[1] and **aquiclude** (or *aquifuge*), which is a solid, impermeable area underlying or overlying an aquifer. If the impermeable area overlies the aquifer, pressure could cause it to become a confined aquifer.



Typical aquifer cross-section

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