

To: The Village President and Board of Trustees

From: Chris Dopkins, P.E. Village Engineer

Re: Proposed Public Works Building

Date: July 14, 2022

Please allow this memorandum to follow up the discussions of the April 17, 2022 Board Meeting. To briefly recap, a geotechnical exploration and analysis is required to complete the preliminary foundation design and pavement design for the new Public Works Building. The Village retained Testing Service Corporation (TSC) to complete the investigation in April. We received the results on June 15th, and this memorandum will summarize the current project status.

The goals of the exploration were generally as follows:

- To help ensure that the soils are reasonable for spread foundations. In short, we wanted to determine if drastic changes will be required to the foundation design that will add expense to the project.
- To determine the amount topsoil/surface layer stripping that will be required.
- A considerable amount of fill is needed at the site, and therefore we wanted to determine if spoil materials from excavations could be used to help offset cost of fill materials. If native fill can be used it will save approximately \$75,000.
 - The Village owns approximately 14 acres of land, and if the soils are acceptable a borrow pit could be dug which will result in considerable construction cost savings.
- Make a preliminary determination if stabilization treatments such as lime or cement stabilization will be necessary.
- Update the opinion of probable construction cost for the site improvements and building construction.
- Use the results to provide a preliminary schedule of events for the construction of the building.

After reviewing the report, our opinion regarding the above captioned items is as follows:

- Footings: Footings will need to be slightly larger than planned, perhaps 10% +/- . Footings are still cost effective.
- Topsoil: There is less topsoil on the site than expected, which results in a small cost savings as there is a lesser amount of topsoil to strip from the site.
- Fill Material: It appears that the native soils could be used as fill materials, which again results in a cost savings as it is cheaper to move dirt on site vs. trucking dirt to the site. It will be necessary to dig a borrow pit in order to utilize soils, and that borrow pit will most likely be left below grade and may retain water after the project is complete. The Board should be aware that there are two (2) variables that can affect the final cost:
 - The soils throughout the site need to be substantially the same as those that were analyzed.

- Site grading will need to occur between mid-June to the end of August in order for the soils to dry to their optimum moisture content. Spring and fall months tend to be too wet and the days too short to dry the soils, so grading work must be completed when weather is optimal. Otherwise, soil stabilization measures or engineered fill material will be needed which will add cost.

I have attached a schematic site plan of the East Street location to this memo. As you will recall, it is necessary to extend sanitary sewer and water main in order to serve the proposed building location, and I have noted the same on the drawing. It is also necessary to pave Park Street between the Building and East Street which is also noted.

Should the Board wish to proceed with the project, we would reasonably expect the following schedule of events:

July 20th – September 9th: Design of the East Street Site, Design of the Water Main Extension and Sanitary Sewer Extension, Revisions to Building Design to Reflect New Site Conditions (mainly the utilities from the street to the building, and items such as dumpster enclosure location, genset location, etc.) Design costs are estimated at \$12,000 - \$13,000, and we are willing to start redesign immediately if the Board chooses to proceed. We'll present a contract amendment to the engineering agreement at the August 10th Board Meeting.

September 14th: Reauthorizing the bid letting in August since it has been some time since the Board approved public bidding. Formal approval of the plans by the Board.

September 16th – October 19th: Public Bid Letting. Open proposals on October 13th. Award contracts at October 19th meeting. Execute contract documents and bonds. Obtain IEPA permits for water and sewer concurrently with public bid letting. Begin coordination w/ NICOR, ComEd to extend utilities to the site.

October 19th – March 2023: Complete shop drawing reviews, final design of footings based on shop drawing reactions from building manufacturer, materials ordered such that they arrive to the site in summer of 2023. It should be noted that delivery times continue to be much longer than normal (especially for electrical equipment) and therefore it will be necessary to approve shop drawings as soon as practicable after the contract is awarded to have a reasonable chance of timely delivery to the site.

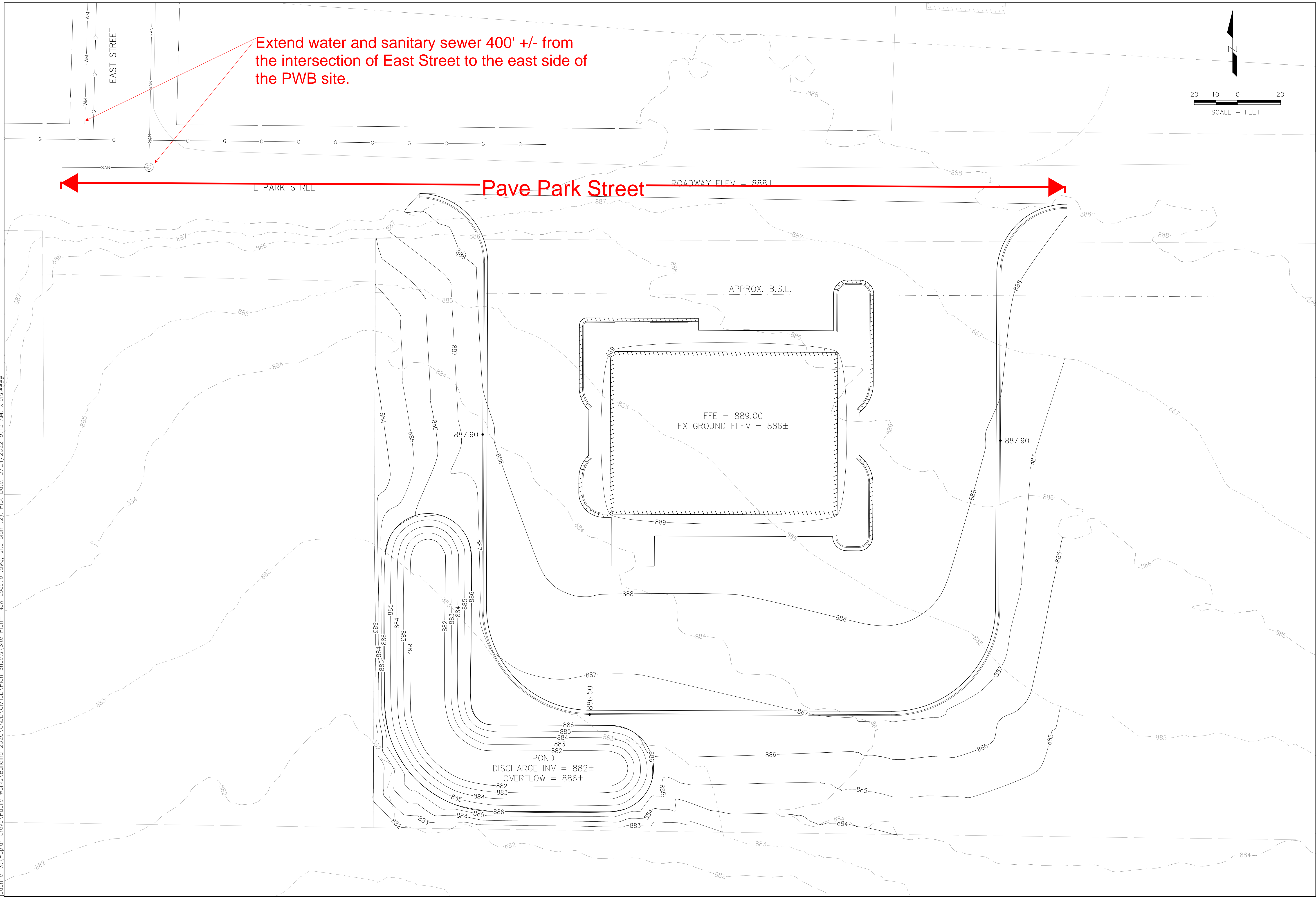
March 2023 – May 2023: Complete sanitary sewer and water main improvements.

June 2023 – February 2024: Complete the site and building improvements. Again, note that site grading improvements need to occur during the summer months.

At the time of this memorandum, it is our opinion that that construction costs will be \$2.45 to \$2.65 million dollars and those costs include the building, site improvements, extension of water and sewer to the building site, and repaving Park Street between East Street and the building. Engineering costs (site design, bidding and construction engineering) are estimated at \$90-95k.

I look forward to discussing the project with the Board. In the meantime, please do not hesitate to contact me at 636-9590 with any questions. Thank you.

\\naelme.X:\Poplar Grove\Public Works\Building 2020\CADD\Civil3D\Plan Sheets\Site Plan-- New Location.dwg, site plan (2), Plot Date: 3/24/2022 9:13 AM, xrefs:###



Extend water and sanitary sewer 400' +/- from the intersection of East Street to the east side of the PWB site.

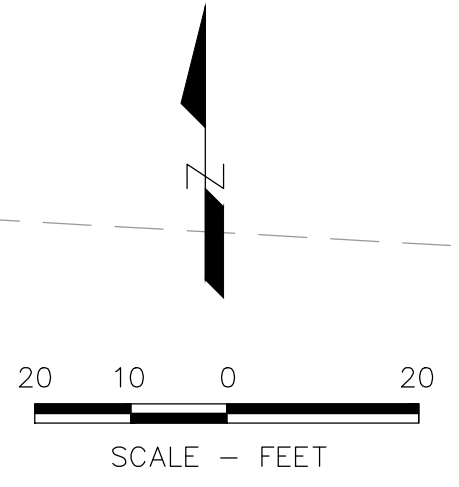
Pave Park Street

ROADWAY ELEV = 888±

APPROX. B.S.L.

FFE = 889.00
EX GROUND ELEV = 886±

POND
DISCHARGE INV = 882±
OVERFLOW = 886±



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NO.	DATE	REVISION

NEW PUBLIC WORKS BUILDING FOR
POPLAR GROVE, ILLINOIS
SITE PLAN

DESIGNED C.D.D.	DRAWN J.J.D.
PROJECT NO. P0013-07-20-00127	
DATE ---	
SHEET NO. C105	