



## Legislation Details (With Text)

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|----------------------|--|----------------------|-------------------|--------------|--|
| <b>File #:</b>       | 2019-0375  | <b>Version:</b>      | 0                 | <b>Name:</b> | John Humphrey Complex Renovation - V3 Contract Extension |
| <b>Type:</b>         | MOTION   | <b>Status:</b>       | PASSED            |              |  |
| <b>File created:</b> | 5/16/2019  | <b>In control:</b>   | Board of Trustees |              |  |
| <b>On agenda:</b>    | 5/20/2019  | <b>Final action:</b> | 5/20/2019         |              |  |
| <b>Title:</b>        | John Humphrey Complex Renovation - V3 Contract Extension |                      |                   |              |  |

### Code sections:

**Attachments:** 1. V3 Proposal\_Plan Revisions\_2019-05-15, 2. Existing Drainage Exhibit, 3. Memorandum\_Geotech-Engineering Summary JHC, 4. Proposed Drainage Exhibit

| Date      | Ver. | Action By                     | Action              | Result |
|-----------|------|-------------------------------|---------------------|--------|
| 5/20/2019 | 0    | Board of Trustees             |                     |        |
| 5/20/2019 | 0    | Recreation & Parks Department | INTRODUCED TO BOARD |        |

### Title/Name/Summary

John Humphrey Complex Renovation - V3 Contract Extension

### History

On March 18, 2019, the Village Board approved V3 Construction Group's (V3) contract for the John Humphrey Complex (JHC) Renovation. The approved contract value was \$1,608,377.

Geotechnical samplings of the JHC were discussed between Village staff and V3 in order to identify soil conditions that would assist the team in defining a longer term solution, especially settlement issues at Field 3. The geotechnical sampling and resulting soil improvements were not included in the original contract scope and costs.

### Geotechnical Study

Geotechnical samplings were collected and studied in the month of April and the results were reviewed by V3 and Village staff. The following is a summary of the Geotechnical Study:

1. Miscellaneous fill material was identified throughout the sports complex. Some of the soil borings indicate loose, organic fill and buried topsoil that will require removal and replacement and/or disking and drying during the mass grading operation. The majority of these areas can be addressed through typical grading operations and will not require specialty mitigation measures for completion of the proposed improvements.
2. Groundwater was encountered at depths ranging from 5.5 feet to as deep as 17.0 feet below existing ground surface.
3. Field 3 - very soft and wet peat was encountered in the outfield that will require consideration.
4. Field 3 - peat was encountered at depths ranging from approximately 8 feet to 13 feet below existing ground surface and extending to 22 to 27 feet below existing ground surface.
5. The existing conditions of Field 3 show significant grade differential from the outfield to home plate. The timeframe over which this perceived settlement has occurred has not been confirmed. Typically, the majority of settlement occurs shortly after the load is imparted on the soft soils and a decreasing amount of settlement is experienced over time. Peat remediation options as identified in the Geotechnical report are summarized in

the next section.

### **Peat Remediation Options**

The following remediation options were developed and presented by V3 and its geotechnical consultant.

#### **Option 1 - No Additional Fill on Field 3**

- a. Long term annual settlement of 1/8" to 1/4"
- b. Not a practical solution due to slopes that are required to provide adequate drainage. Some fill is still needed on Field 3.

#### **Option 2 - Raising Grade on Field 3**

- a. Estimated settlement under 13 feet of new fill; 3" to 6" over the first five years.
- b. Additional long term settlement at a rate on the order of 1/4" per year

#### **Option 3 - Remove and Replace Peat Material in Field 3**

- a. Water was encountered at depths varying from 5 to 17 feet below existing ground surface
- b. Removal of peat would require excavation to extend 27 feet below existing ground surface
- c. The logistics for removing buried peat to these depths would require significant dewatering, staging areas, truck access provisions and over excavation to account for slough of subsurface materials during excavation.
- d. Settlement would not be expected to exceed 12 inches if all work was achieved per recommendations.
- e. Cost of the excavation and removal is estimated to exceed \$1.5M for disposal of peat material at an off site location.

#### **Option 4 - Controlled Stiffness Columns in Field 3**

- a. Requires installation by specialty contractors (deep foundation contractors).
- b. Most common application of this installation is structure support. The retained geotechnical consultant has limited project experience for performance evaluation of ground support applications.
- c. Ground support requires excavation and removal of upper 35 feet of material and replacement with a combination of rock and geogrid to create a load platform to transfer loading to the columns
- d. Settlement expectations with proper installation are estimated at 12 inches.
- e. The cost varies significantly based on specific site conditions, earthwork constraints and spacing of columns. Estimated cost \$1.0M.

### **V3 Recommendation**

The mitigation method selected to address the peat underlying field 3 will have a significant impact on the overall improvement plan. Based on the information summarized above and in the Geotechnical Report of Soils Exploration, it is V3's recommendation to leave the peat in place and mitigate future settlement through grading and drainage improvements (Option 2). This does include the addition of fill material on Field 3.

It should be noted and understood clearly that the only method of sufficiently eliminating future settlement is to completely remove the peat and soft soils and replace with compacted aggregate and suitable fill soils. V3's recommendation is based on a value analysis on cost of mitigation versus the potential risk and future impact.

Staff has also reviewed the geotechnical report, met and discussed presented remediation options with V3 team and evaluated costs benefits of each option. Based on this effort, staff agrees with V3's recommendation. Additionally, the staff evaluated the impact of adding additional under drains to further enhance Field 3 drainage and reduce continued future settlement. The added cost for this enhancement is \$10,476.

Since, all the playing fields were getting a significant improvement; staff reviewed the condition of existing multi-use path around the JHC. It was determined that it is worth considering replacing the existing asphalt based path. Staff collected construction costs from V3 for replacing the path. The following two options and associated costs were presented by V3.

1. Remove and replace with 2-inch asphalt
2. Remove and replace with 4-inch asphalt

The 2-inch asphalt is typically used where paths are exclusively used by pedestrians. However, throughout the year and for various reasons; Village vehicles/pickup trucks use the path for maintenance of fields, pick up/drop off park and other materials/equipment, and other related reasons. For this reason, if the Village accepts this option, the staff recommends replacing the existing path with 4-inch asphalt (Option 2). The cost for this improvement is \$166,912.

### **Current Request**

Based on the above discussion, V3 is requesting \$380,754 to include Option 2 of Peat Remediation (not including the multi-use path replacement).

Additionally, V3 is requesting \$166,912 for removing and replacing the multi-use path with 4-inch asphalt.

In addition, Village staff is requesting the following contingency funds to manage unknown elements that come up during the construction process:

1. \$76,000 for peat remediation.
2. \$33,400 for multi-use path.

If all of the above requests are approved, the total additional cost is \$657,066.

Due to the limited time available to complete this project and cancellation of Committee meetings for the month of May 2019, the staff is bringing this request directly to the Board.

### **Financial Impact**

Funds for the additional amount needed for this project are available in the Capital Improvement Fund. Savings from the LaGrange Road Aesthetics Improvement Project will be utilized in the amount of \$120,000 and funds allocated to shared costs on IDOT projects in the amount of \$537,066 will also be utilized. These budgeted amounts were funded through line of credit proceeds; therefore, additional draws on the BMO Harris Bank line of credit will be required.

### **Recommended Action/Motion**

I move to approve expansion of V3's contract for the JHC renovations in an amount not to exceed \$380,754;

And

I move to approve expansion of V3's contract for the JHC renovations (removal and replacement of multi-use path with 4-inch asphalt) in an amount not to exceed \$166,912;

And

I move to approve staff's request of contingency fund for the JHC renovations (peat mitigation) in an amount not to exceed \$76,000;

And

I move to approve staff's request of contingency fund for the multi-use path in an amount not to exceed \$33,400.