Research exercise: Madison County Equestrian Facility Renovation

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Title: Madison County Equestrian Facility Renovation
Andrew Spirk (PM); Nathan DeCamp; Reid Fuente; Jesse Hester; Matthew Soto
Advisor: Professor Rebecca Blust

Background
This project is a continuation of a previous project that took place last semester. The previous team was challenged with developing the project scope. They attempted to provide an improvement plan for the Equine Facilities of Madison County Fairgrounds including: recommended upgrades concerning equine arenas, stables, guest seating, and wash stations. This plan was presented to the Fair Board and they have now requested more detailed information regarding the much needed arena renovations.

- 1846 the Clark and Madison County Agricultural Society was organized.
- On April 14, 1890 the new location was purchased.
- 12,000 attending

Approach

<table>
<thead>
<tr>
<th>Date</th>
<th>Duration</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 14th</td>
<td>1 day</td>
<td>Created Final Report</td>
</tr>
<tr>
<td>March 1st</td>
<td>1 day</td>
<td>Developed To Finish up Plans</td>
</tr>
<tr>
<td>March 3rd</td>
<td>1 week</td>
<td>Technical Research vs Observations</td>
</tr>
<tr>
<td>March 6th</td>
<td>1 week</td>
<td>Detailed Schematic of Grounds</td>
</tr>
<tr>
<td>March 9th</td>
<td>1 week</td>
<td>Conducted Surveys for Arena Design Preparations</td>
</tr>
<tr>
<td>March 12th</td>
<td>2 days</td>
<td>Address Factors Affected by Design</td>
</tr>
<tr>
<td>April 1st</td>
<td>1 day</td>
<td>Present Designs for Review</td>
</tr>
<tr>
<td>April 12th</td>
<td>1 day</td>
<td>Final Presentation</td>
</tr>
</tbody>
</table>

For the duration of this project the team will follow the Deming or the Plan, Do, Check, Act Cycle. This section will provide the guidelines to each major step in the project to be complete. Each step will be broken into phases and will include research, design concepts, as well as a detailed explanation of each phase.

- Phase I – Research current Equine facilities in Ohio area
- Phase II – Observations and Analysis of Madison County Equine Facility
- Phase III – Technical Research for Documented Information
- Phase IV – Dimensional Schematic of Grounds
- Phase V – Cost Estimates for Arena Design Preparation
- Phase VI – Construct Conceptual Designs
- Phase VII- Address Factors Affected by Conceptual Designs
- Phase VIII – Cost Estimates for Conceptual Designs
- Phase IX – Present Conceptual Designs for Review
- Phase X – Present Final Designs and Project

Deliverables

Engineering Deliverables
- Research and Analysis
- Information Regarding Drainage
- Three Alternative Layouts
- Detailed Drawings
- List of Potential Changes to the Facility due to Arena Placement
- One Optimal Final Conceptual Layout
- Cost Estimates

Administrative Deliverables
- Defined scope
- Have a contact for footing estimation
- Decided what type of footing and fencing to be used
- Established that drainage issue will be resolved in refooting of the arena
- Verified all distances and created an accurate aerial
- Drew is desired dimensions
- Downloaded global positioning information from Madison County’s website
- Aerial to scale according to the coordinate system NAD83 Ohio State Planes, South Zone, US Foot
- Building file that shows size and position of every structure

Results/Conclusion