Executive Summary

The 41, 520 square foot project is located off Cold Spring Lane just north of Baltimore, MD and is owned by Loyola University in Maryland. It is a multi-venue facility providing field space for a diverse range of outdoor athletics including lacrosse, soccer, rugby, and track and field. The athletes will have a brand new stadium which will provide the training facilities to compete at the Division 1 level.

The following report contains an overview of the project including the buildings systems, construction schedule, estimated cost, and three analyses of the Loyola IAC that could have been implemented during construction or as an opportunity for improvement. These areas will be researched and analyzed in this report.

The first analysis looked making the Loyola IAC a LEED Certified building. A project checklist was created to demonstrate that this goal was indeed achievable. It was determined that the schedule was not drastically affected and the costs were difficult to determine because they vary from project to project and it depends on the design. With the current design, LEED would not be very costly.

The second analysis looked changing out the hand laid brick with a precast concrete wall system. This will allow for schedule acceleration but turns out being very costly. This change will also affect the structural and mechanical systems of the building. The structural system ended up needing to resize the exterior beam. The mechanical system was not drastically affected.

The last analysis will research Building Information Modeling (BIM) in hopes of understanding possible impacts it may have had on the Loyola Intercollegiate Athletic Complex (IAC). The use of BIM to improve the overall construction methods of projects throughout the world is becoming extremely popular. The growth of BIM in the market has established it as a critical issue of research for this study. Different software will be researched to determine which will benefit the project the best.