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North Elevation

Executive Summary

In this Proposal, you will find the four analyses that are to be conducted on various aspects of the Columbia Heights Community Center. This document is intended to give the reader a detailed view of these analyses, how they are to be conducted, and what tools will be utilized in the process. Since Columbia Heights Community Center is LEED® Silver Rated, the overall theme for the analyses will follow this topic. Outside of the research component, the other investigations will look at ways of improving the performance and constructability of several systems in the Columbia Heights Community Center while also reducing the amount of material needed for its construction. Below is a quick preview of each analysis:

Analysis 1 – LEED® Point Alignment

This will include research to develop a tool that can be used to align building owner's goals with LEED® points that are both functional and achievable.

Analysis 2 – Precast Brick Façade

This will look to use a Precast Architectural Brick façade in lieu of Norman Bricks on the south wall. The precast assembly will increase the productivity as well as allow for the ease of construction since the south wall is extremely close to an existing apartment building.

Analysis 3 – Alternate Structural Systems for the gymnasium

An investigation will be performed that will look at alternate systems to replace the current structural steel system in the gymnasium, which includes large members such as a W40x215x60'. Ideally, the new system should reduce the quantity of steel and costs.

Analysis 4 – Foundation Placement Method

It will analyze the option of pouring the foundations into excavated pits instead of excavating to the bottom elevation, using forms, and then backfilling around them with stone. It is to be expected that the quantity of stone fill and the quantity of soil removed will be reduced through the proposed method.