

2.0 Executive Summary

This report is intended to provide an in-depth analysis of the background information relating to the Marymount University 26th Street Project. Areas of investigation include client information, project delivery system, project milestones, key project team members, existing conditions, and major building systems. In addition to the background information, three detailed analysis topics have been investigated.

The analysis topics that were performed during the competition of this senior thesis project include the development of a Short Interval Production Schedule, MEP coordination techniques, and the implementation of a green roof. All of the research topics have been chosen to revolve around the critical industry issue relating to increasing efficiencies.

Analysis I:

The first analysis involves implementing Short Interval Production Scheduling into the interior finishes of the Residential Facility. The repetitive nature of the activities involved with this phase of the project provides a perfect opportunity to attempt to bring the efficiencies of the “manufacturing process” to the construction industry. The results of this analysis have determined that the duration for this particular activity could be reduced by ten working days. This shortened duration has the potential to generate a savings of \$70,000 in general conditions costs.

Analysis II:

The second analysis involves the investigation into the MEP coordination process. All of the MEP coordination on the Marymount University Project was done “traditionally” with two-dimensional composite drawings. The rise of three-dimensional coordination has introduced another option but has yet to become widely accepted. The acceptance of the 3D MEP coordination process will be evaluated through a survey of the General Contractor and their subcontractors. The results of this analysis reinforce the fact that the General Contractor is remaining at the forefront of technological advances within the AEC Industry. They have maintained this status through the creation of a new position within their organization that helps to ensure that the 3D MEP Coordination process is managed successfully.

Analysis III:

The third analysis involves incorporating a green roof into the design of the facilities at Marymount University. This will require supplementary evaluations on both the structural and mechanical systems of the building. In addition to satisfying both of the structural and mechanical breadth requirements, Analysis III will serve as the M.A.E. requirement. Through the completion of this analysis, it has been determined that the university could potentially see an annual energy savings of \$2,700, increase the durability of their roofing membrane, and improve their LEED status from Certified to Silver.