1.0 Executive Summary

In the final report, four depth analyses for the Inova Fairfax Hospital South Patient Tower have been performed. Many new strategies and new technologies are addressed into these analyses in order to improve the constructability and efficiency of the project.

Analysis #1: Increase Building Information Modeling(BIM) servies for the Owner.

The first Analysis topic is the critical industry issue that will be pursued based on the experience, interests at the PACE Roundtable meeting. So far, the only usage of BIM into the South Patient Tower is the coordination of the MEP system. The purpose of this analysis is to maximize the implementation of BIM into the project to benefit the owner in terms of cost and time savings by reducing the change orders and coordinating the work at an early stage of the process and also through out the whole construction process.

Analysis #2: Short Interval Production Schedules (SIPS)-Schedule Acceleration

Base on the previous study and research, since the South Patient Tower is located on the Inova Fairfax Hospital campus tying to the existing building tower and is surrounded by other buildings such as Heart and Vascular Institue, Emergency Department, Women's center and Children's Hospital. This results the expectation of minimum impact to the neighborhood. For this reason, a more accurate and efficient schedule is expected to avoid the potential mistakes, delays and unforeseen changes of the project. SIPS is the main study focus for this Patient Tower to smooth the construction process, maintain and even accelerate the schedule.

Analysis #3: Net Zero Energy Building- Sustainability

The design and project team for South Patient Tower are striving to achieve LEED silver certification on this project. The major sustainable features include green roof, rain gardens, water cisterns and so on. A higher level of sustainability can be pursued to achieve the Net Zero Energy goal which is becoming a more and more popular issue in building construction industry.

Analysis #4: Integrated Project Delivery (IPD)

Integrated Project Delivery (IPD) is a project delivery approach which integrated people, system, business structures and practices into one process that collaboratively harnesses the talents and insights of all participants to optimize the project results. There is a potential possibility to accelerate the schedule and increase the constructability of the South Patient Tower by implement the IPD principles. A study on the IPD Guide from The American Institute of Architects was done to help complete the analysis on IPD.