

Cardinal Wuerl North Catholic High School

Cranberry Township, PA

Alec Hanley

Construction Management

Advisor: Ray Sowers



Background Information

- 180,000 Total SF
- June 2012 – June 2014
- \$72.5 million
- Design-Bid-Build
- LEED Silver
- Multiple Prime, GC Lead w/ CM Agency
- Phase II → Chapel
- 27 Classrooms
- 1,500 person gymnasium
- 1,000 person auditorium



Photos: Property of Mascaro Construction

Prefabricated Wall Panels

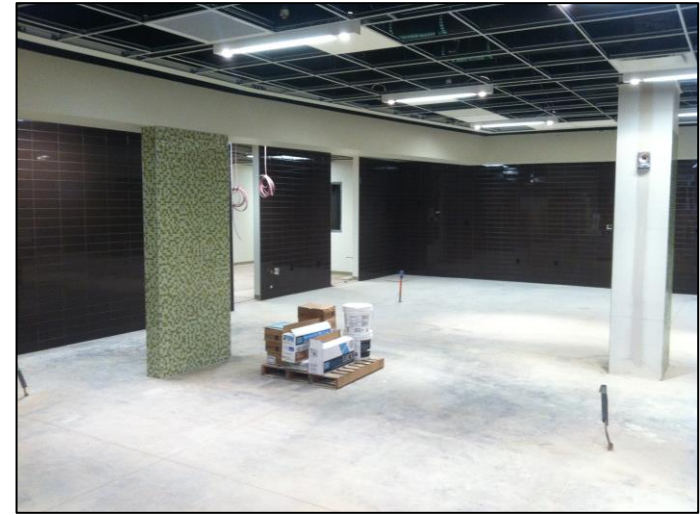


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- Prefabricated Insulated Metal Panels were a success at CWNCHS
- Trouble with subcontractor productivity on air barrier & brick
- Interior finishes could have occurred more quickly and possibly early
- Increased quality due to warehouse production
- Schedule reduction and possible cost savings
- Analyze site logistics, erection plan and crane costs
- Structural/Architectural Breadth possibilities

Lifetime Cost Analysis of VE & Finish Materials

- Finishes were a big focus of VE
- High cost/SF may be attributed to high finish costs
- Polished concrete, carpet, paint, tile, acoustical ceiling tile/drywall/wood ceiling, reclaimed lumber, etc.
- Materials/systems that require maintenance
- Initial costs in addition to lifecycle maintenance and replacement costs
- Schedule & aesthetic impacts
- Alternatives compared for best choices



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Efficient & Effective Delivery of Facility Management Information

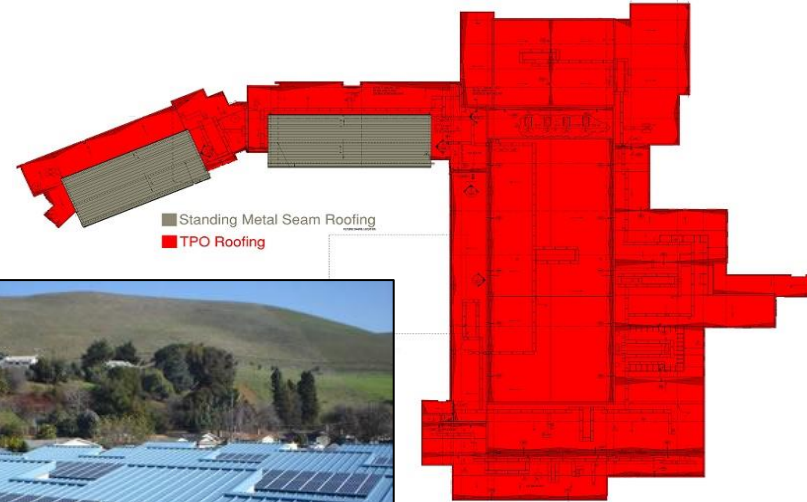
- Critical Industry Issue
- High priority of the owner & BIM Execution Plan
- Project nearing substantial completion without a Facility Manager yet
- Avoid paper dump
- Analyze most effective means & methods (BIM?)
- Incurred costs from early hire and training of FM



Photo: Property of Alec Hanley

Photovoltaic Installation at Roof Level

- Highest elevation in Cranberry Township, very large roof area, few surrounds structures
- Was not considered in original design
- Reduction in building electrical loads
- LEED benefits
- Size Solar Energy Conversion System
- Payback, constructability, feasibility analysis
- Electrical Breadth w/ Structural checks



Photos: Property of Google Images, Astorino



QUESTIONS??