Executive Summary

The Overall summary of the Pottruck Center cover basic information covering all major aspects of building construction and design. Much of this summary is dedicated to a general building description which covered the basic attributes of the building, including structural, mechanical, electrical, and the building envelope. Details of these systems included some equipment types, and general materials used in the system. Various architectural features of the building were also described a general detail. Construction details such as Project Team, Dates and costs of construction, what project delivery system is used, were discussed focusing mainly one the delivery system. Categories of Fire protection, Transportation, Telecommunication, and other special uses were also discussed.

DAVID S. POTTRUCK HEALTH AND FITTNESS CENTER

PILADELPHIA, PENNSYLVANIA

Jason A. Reece
Construction Management
September 12, 2002

Overall Existing Conditions Summary

- Project Team:
  - Construction Manager: Sordoni Skanska Construction Company
  - Architect: Richard Dattner & Partners
  - Structural Engineer: Severud Associates
  - Mechanical Engineer: Jaros Baum and Bolles
  - Landscape Architect: Lager Raabe
  - Owner: University of Pennsylvania
  - Owner's Representative: Michael Swiszcz

- Dates of construction:
  - Pre-construction: March 2000 – December 2000
  - Construction: March 2001 – December 2002

- Cost Information:
  - Building Cost: $14,954,061
  - CM Services/Contingency/Fees: $1,760,740
  - Temporary Facilities: $1,168,066
  - Total Budget: $18,959,629

- Building Function and Primary Uses:
  - Health and Fitness Center for University students, faculty, and surrounding community
    - Weight Training, Aerobics, Cardiovascular equipment, Golf Simulator, recreation facilities main offices, locker rooms.

- Location and Site:
  - University of Pennsylvania Campus – 3701 Walnut Street; Philadelphia, PA
  - Site requires demolition of part of Gimble Gymnasium/Natatorium

- Architecture:
  - Unlike the traditional brick Penn building, the exterior façade of the building will feature a terra cotta panel system that has never been used in the United States. The second floor is cantilevered 12 feet over the first, and each successive floor extends

further away from the building. The main entrance is a four story atrium with granite tile floors, a curved glass ceiling along with glass curtain walls, and features a full four story stair case the length of the atrium. Beyond traditional exercise and aerobic facilities, the Pottruck Center will house a climbing wall, and a golf simulator. In order to fully integrate Gimbel Gymnasium/Natatorium with the Pottruck Center, the second level of each building will be connected by a bridge.

- Major National Model Codes:
  - All codes refer to in each CSI Division calls out some codes, then has a general disclaimer to refer to all applicable codes for that system; making the sub-contractor responsible to follow the appropriate standard codes.
  - The City of Philadelphia Building Code must also be adhered to.
- Zoning and Historical:
  - Zoning laws are per the City of Philadelphia, and no special circumstances exist for this site

- Project Delivery System:
  - Sordoni Skanska Construction Company will act as a Construction Manager for pre-construction and construction services through out the project.
    - Sordoni will be active in the design review stage, and revisions to design will take place throughout the project duration.
    - Sordoni provide the services of a Sr. project manager, assistant project manger, superintendent, and project engineer for its construction services
    - The contract with University of Penn is a negotiated contract, and the owner's representative's time and efforts will be almost solely dedicated to this project. Furthermore, the representative for the recreation facilities will also have the ability to request various degrees of changes as the project progresses.
    - Revisions to the building cost will happen through out the project, and savings will be returned to the owner
    - The architect will be involved throughout construction, on site and through meetings.

- Building Envelope:
  - The building envelope is a combination of glass, insulated terra cotta panels, and some brickwork.
  - A large section of the building is an open 3-story atrium, with glass curtain walls north and south, as well as a curved glass ceiling.
  - The brickwork encases the two stair towers, more of an architectural feature with limited exterior exposure.
  - The main elements of the North, South, and West curtain walls are close to equal parts terra cotta panels, and glass/aluminum picture windows.

- Terracotta panels are a special system designed specifically for this building, and has had very limited use in the U.S. Each panel is constructed of many terra cotta tiles, insulation, weatherproofing, and structural bracing. The system is not weather tight, and is made to allow rainwater to penetrate behind the tiles, but be drained away from the insulation with in the panel, defying conventional wisdom.

- Electrical/Lighting:
  - Temporary Electrical Service will be required – One 15V//480/277V – 500kVA – 800A Unit, and distribution panels.
  - Temporary Lighting will be fluorescent fixtures.
  - Permanent Power in the form of a 15V//480/277V – 500kVA – 800A substation, with 1,000kVA and 1,500A service.
  - An Emergency Generator will be installed
  - Branch and circuit wiring is type MC cable, with EMT conduit used primarily except in area exposed to water and corrosive elements and underground, which will all be PVC conduit.
  - Lighting is a mixture of droplights and several kinds of recessed lighting, depending on the area of the building.
  - Telephone and Networking systems are included under the electrical system.
  - Fire alarm system wiring, Class B, is also a large part of the electrical system.

- Mechanical:
  - All Areas use and air variable volume system supplied by rooftop air handling units
  - Although the original design was for a custom mechanical system, revisions specified Carrier AHU's.
  - All areas serviced by VAV boxes, with some having electric reheat capability
  - There is an atrium rooftop smoke exhaust system
  - Steam will be supplied from the adjacent Gimbel Gymnasium
  - Chilled water will be brought in from the existing chilled water plant servicing the Penn campus
  - Hot water will be produced by a steam-to-hot water converter system
  - Medium pressure ductwork limited to 2,500-3,000 FPM; Low pressure ducts limited to 1,200 FPM air velocity
  - Mechanical system needs to be compliant with university standards to be controlled from a central university control room.
  - A natural gas line will have to be relocated from the South corner of Gimbel Gym, to the north side of the Pottruck Center. Gas pressure in this area of Philadelphia will not meet specifications of the commercial dryers, and a pressure pump will need to be installed.

- Structural:

- Steel framing with Concrete foundations
- Framing of Pottruck Center must tie in with that of Gimbel Gymnasium
- Each floor above the first level is cantilevered out from the main building structure, with each floor extending further than the previous floor
- Foundations/slabs will require control joints where the two buildings meet
- Concrete roof slab needed to support rooftop AHU's

- Fire Protection:
  - Active fire protection will be a sprinkler system servicing the ground to fourth floors, and low overhangs in the atrium.
  - Sprinkler heads are semi-recessed
  - Passive fire protection is spray on fireproofing in accordance with NFPA, UL, Uniform Fire Code, and BOCA codes

- Transportation:
  - Two hydraulic elevators are specified for the building. One will be for building patrons, and maintenance of equipment, and run from the ground floor to the fourth floor, while the other will be a utility elevator only running from the ground floor to the first.
  - 3500 lb. and 4500 lb. capabilities specified

- Telecommunications:
  - Standard phone lines will be installed
  - Certain areas of the building will be networked for computer terminals. A telecommunications room in the Pottruck basement will be for use by other Penn campus buildings.
  - A closed circuit TV monitor system will be distributed throughout the building, and will show various cable programming in the workout areas.

- Special Uses:
  - There will be a climbing wall installed in the atrium, requiring special steel support structure that will need to be anchored into the Gimbel Gym Steel framing structure.
  - Part of the construction of the Pottruck center will be the required renovation of Gimbel Gym. Parts of the Gimbel Gym renovation are not integrated onto the cost of building Pottruck, but the separate renovation is minor changes.
  - Temporary Facilities will need to be constructed in the Gimbel Gym as a result of the demolition of locker areas and some fitness facilities that need to be removed to construct the new Pottruck facility.

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