



Education • Research • Preschool

## *We make the Difference*

With over 50 years of experience, CMA Architects & Engineers LLC has provided multi-disciplinary services to schools, preschools, universities and research facilities throughout Puerto Rico, in both private and the public sector.

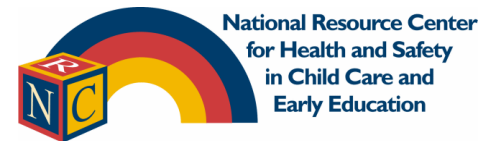
Our services range from planning to project close-out, CMA provides a myriad of services, support, and expertise that gives the Clients confidence that the result will be in quality solutions to the ever evolving learning environments.





## Expertise

Through the years, CMA Architects and Engineers LLC has developed facilities that meet both federal and local regulations, with special focus in providing safe and engaging environments that promote the development and enhance the experiences of both students, researchers and staff.





## **Our Services**

*We are your one-stop shop for planning, assessments, design, permitting, construction management bid support and project administration.*

## Education

From the macro to the micro, we can assist you to achieve the results you need when designing higher learning facilities.

If you are aiming towards designing a large scale facility, or a specific modifications an existing campus, we can assist you all the way to ensure the end product responds to the end user necessities as well as the administration goals.

We are up to date with the new and emerging tendencies and teaching technologies to enhance diversity and collaboration. Adaptability and providing safe environments while allowing for fast project execution and cost savings are key elements on every design.

Listening, understanding and documenting the needs of client's is one of our tools for successful project delivery. Quality control through the design process is another reason why our clients trust us and help us develop long lasting working relationships.





## Research

Today's laboratories need to adapt and be able to evolve as per users and industry demands. Laboratories tend to be areas in constant use, and thus, adapting them to new need and requirements after operation have historically been ineffective as has economical and operational repercussions.

Designs that promote effective collaboration and interaction among different groups are what we focus on to create more inviting environments. It has been proven that happy employees work more, and by creating connections both with other indoor and outdoor areas we can work towards that.

Maximizing space utilization by sharing work surface among various equipment and sharing equipment among a lab zone or the entire lab are just some of the strategies we can contribute to maximize and make more effective the lab square footage.



## Preschool

Early childhood development is crucial in the emotional, social and physical development of young children has a direct effect on their overall development and on the adult they will become. That is why our expertise plays a crucial role in the development of these environments to maximize their experience and potential both to students as well as teachers.

For years CMA has provided architectural and engineering services to preschool center, specializing in current local and federal requirements for head start program and early head start programs.





## Schools

Science and technology have become a driving force for the design and construction of the new generation of schools where children roles are not limited to input of information; but to explore and develop solutions to specific situations.

Flexible and adaptable areas are key functions in today education designs allowing the spaces to fulfill both educational and administrative activities.

Furthermore, implementing sustainable design and operational strategies in the project planning and execution help clients manage energy, control operational costs and reduce the environmental impact while complying with local, federal and safety regulations.





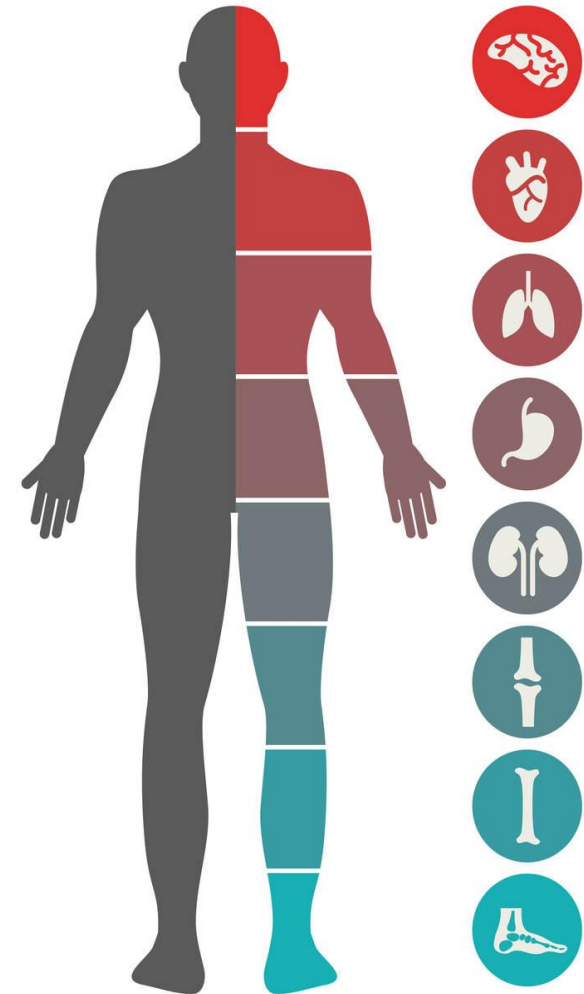
## Support & Assistance

Environmental factors contribute both in the student performance and their overall health. In addition to design services and permits acquisition, we also provide our clients with the alternative to assist with environmental studies. Sample of such are as follows:

- Lead Inspections
- Asbestos Inspections
- Studies for Lead and Asbestos Containing Materials.
- Environmental Impact Assessment
- Air Emissions
- Solid Waste

Other related services that can be provided are as follows:

- Tree Pruning.
- Tree Cutting and Removal
- Wastewater and Storm Water NPDES





## **Sample Projects**

*Excellence through value services and commitment to our clients, the community and our children.*

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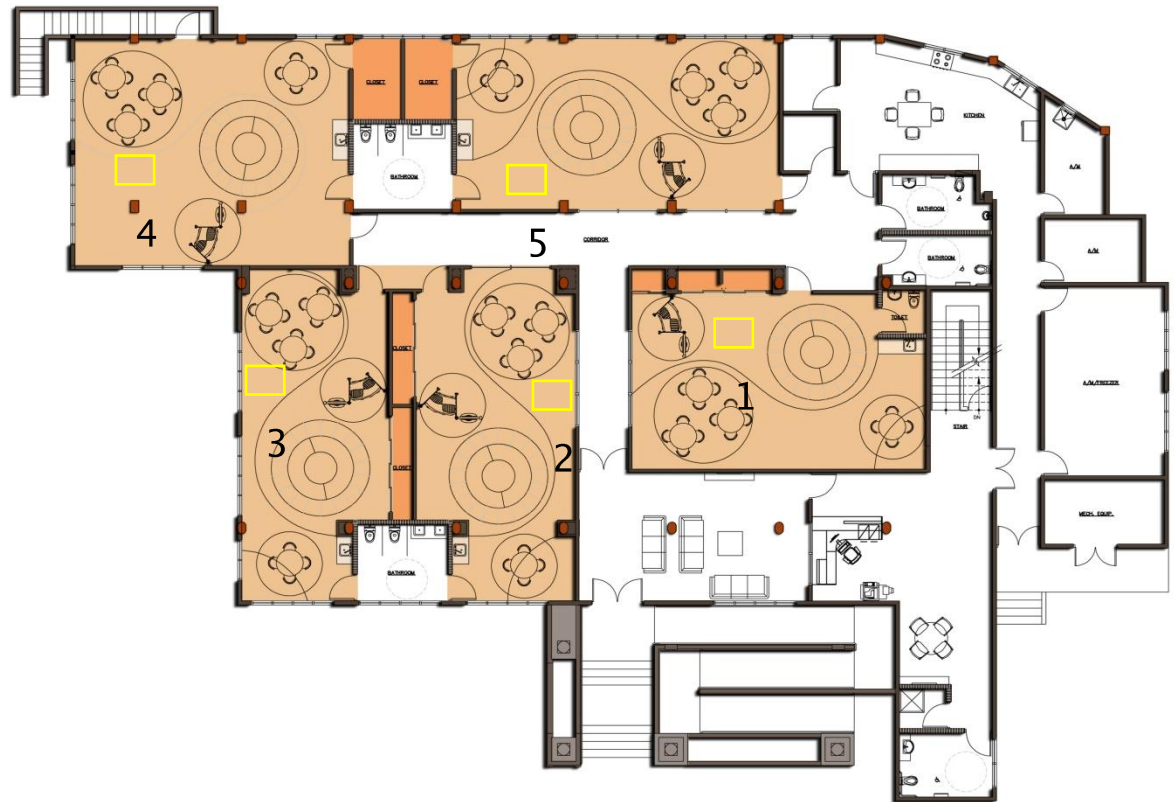
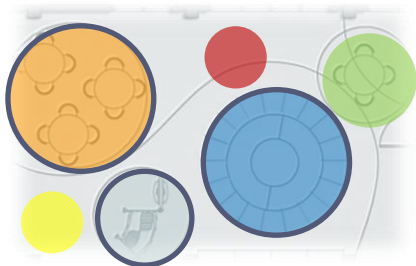
**CMA**  
ARCHITECTS &  
ENGINEERS LLC

## Yolanda Guerrero Head Start Guaynabo, PR

Development of a 9,500 square foot head start center that could accommodate five (5) classrooms for 16 children each.

Each classroom incorporated four (4) main areas: motor activity, discovery, art/drama, reading/listening.

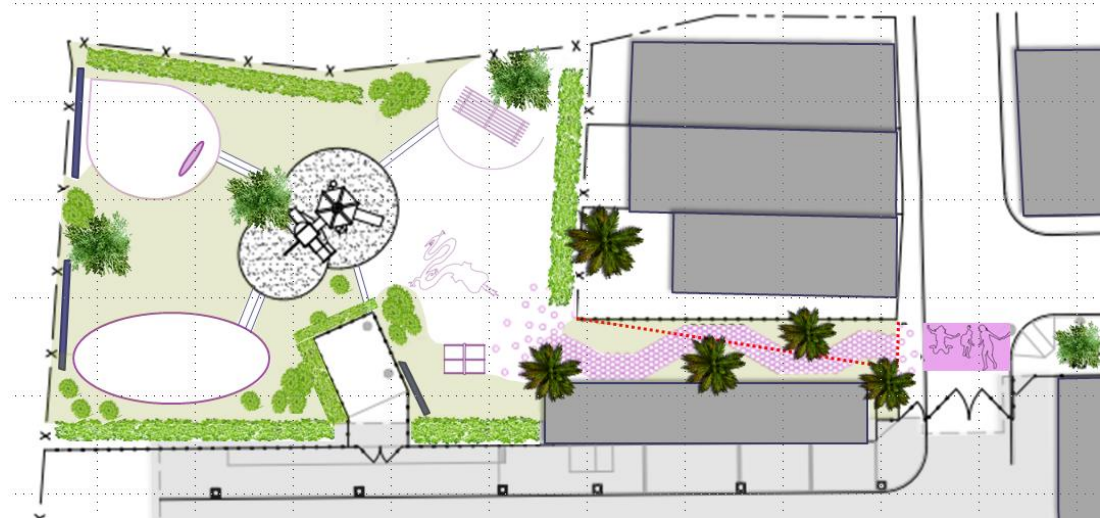
Additional to the main areas each room also incorporated an in-room eating area and a direct access to and from the restroom area to promote teacher oversight of both classroom and toilets.



## Pueblo Terminal Head Start Guaynabo, PR

Master Plan and Design for Playground Area. Guaynabo, Puerto Rico. Project architect for the development of a 1,200 square meter parcel into an outdoor learning environment to be used by 60 children attending the center concurrently.

The design followed the Performance Standards Guidelines and provided programmed areas for children development such as: reading/listening, gardening, play, exploration/music, outdoors house, art, water/sand, and environmental awareness among others. To ensure a safety environment for the children, environmental studies for lead and polychlorinated biphenyl (PCB) were taken into consideration. Project currently on design process

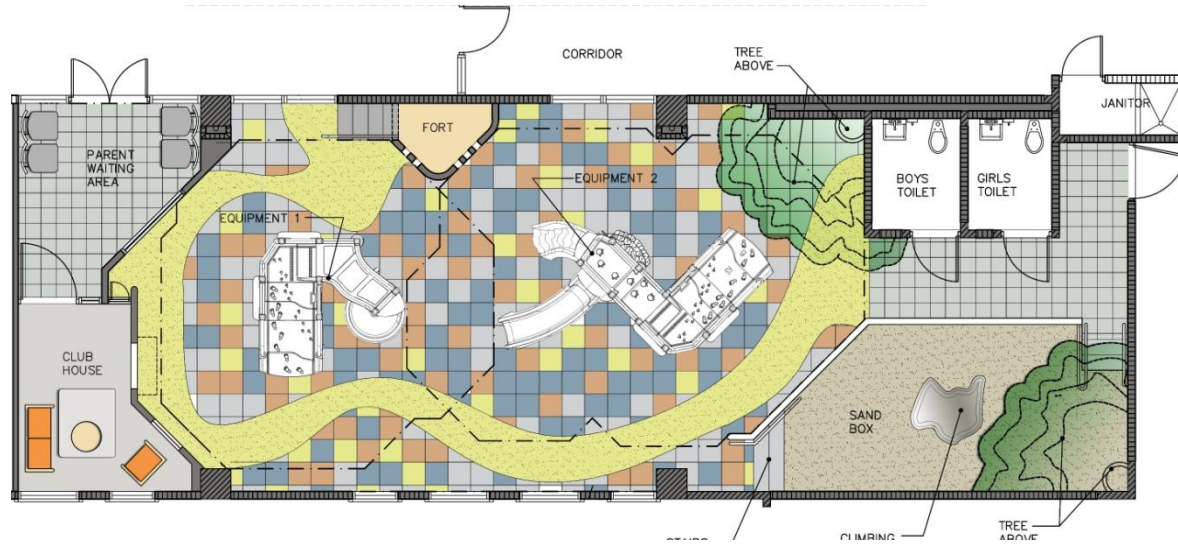


## City Hall Head Start Guaynabo, PR

Design of an indoor learning/play environment to supplement the exterior areas present at the center and become the focal point of the center entrance.

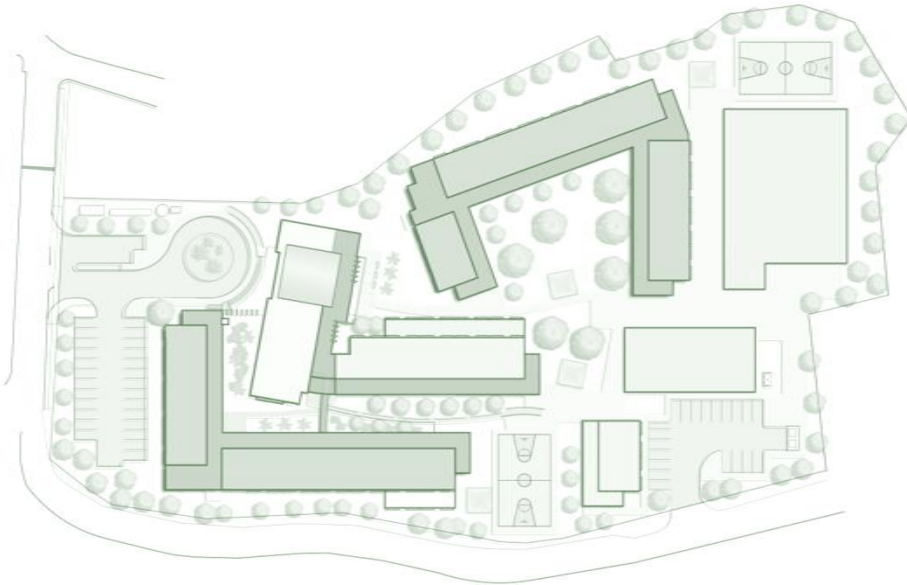
The program required the incorporation of a waiting area, club house, water and sand area, and child restrooms.

The center has a capacity of 60 children.



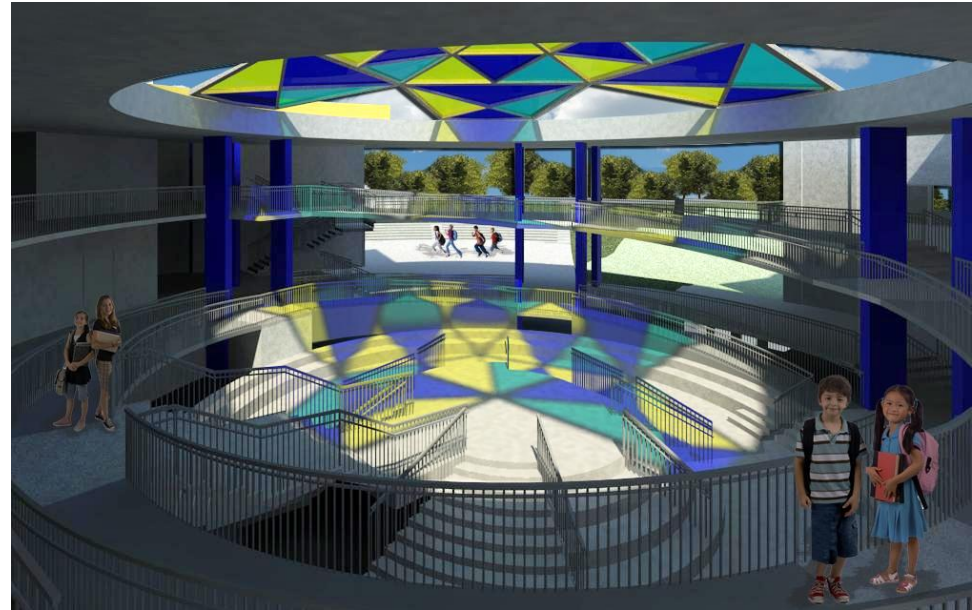
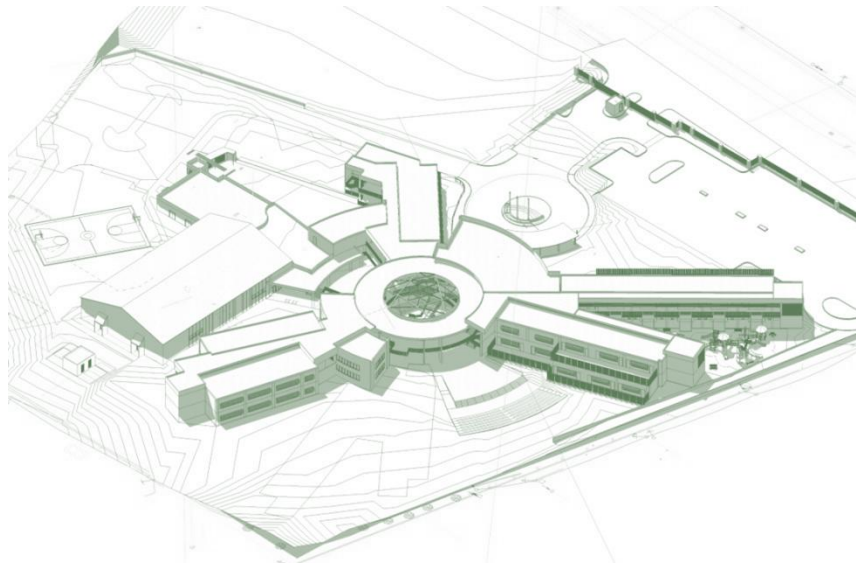
## *Ciales School Proposal* *Escuelas Siglo 21*

Design of a elemental and middle school for a total of 950 students. The proposal incorporated both interior and exterior areas to complement the school curriculum. Site enhancements such as access control and recycling areas were incorporated. Classrooms areas included science and language laboratories, visual arts, industrial design, music and performance studios.



## *New School of San Juan Proposal San Juan, PR*

Design of a k-12 grade school that will incorporate among other features a sports facility and amphitheater that would hold the school capacity. Due to site limitations and the necessity to maintain control among the interactions between the high school students and the elementary school students the design was organized among a common center that housed the shared amenities while provide the necessary control points to supervise and manage access.



*Marista Catholic School  
Guaynabo, PR*

Marista is a private school with an enrollment of 1,400 students from kinder to grade twelve.

Design and develop construction documents for the school's chapel and a 100 ft x 130 ft open plan covered multi purpose area gymnasium with a basketball court.

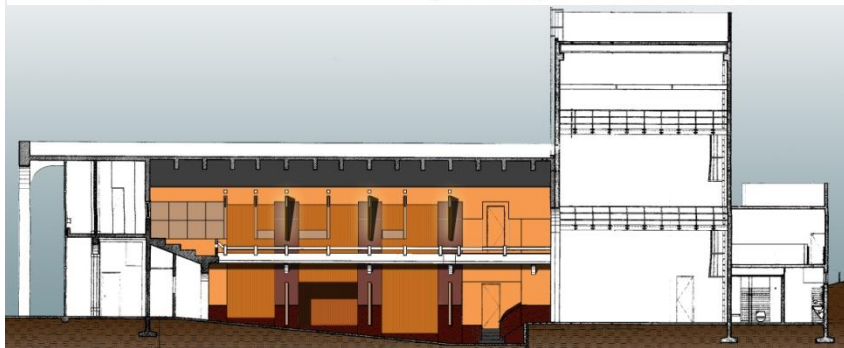
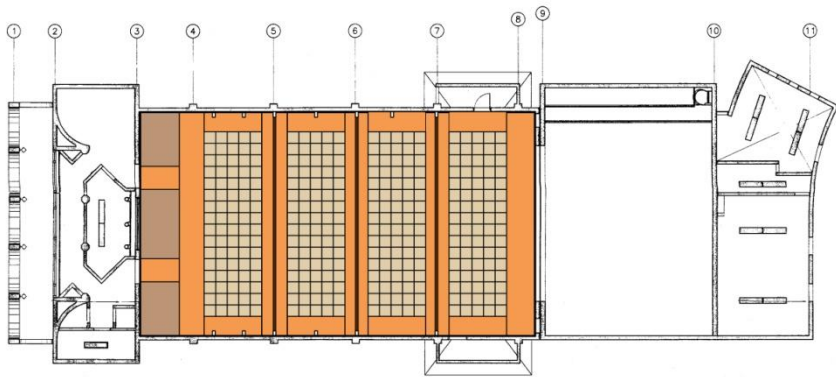




## Sacred Heart University Santurce, PR

Sacred Heart University in Puerto Rico is a catholic university of 6,100 students.

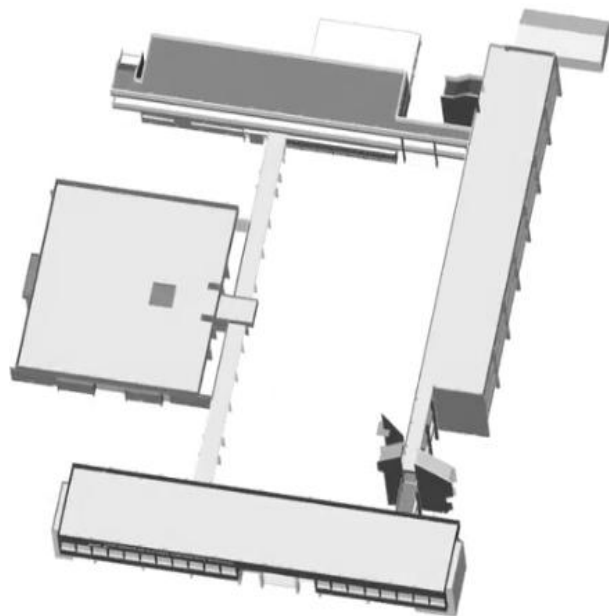
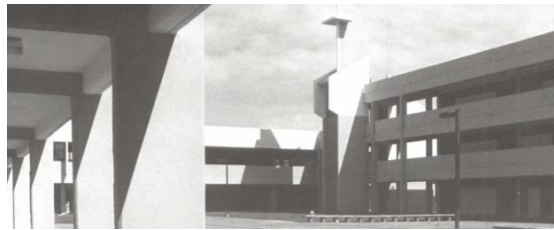
Engineering and architectural services for acoustical improvements to the existing Emilio S. Belaval Theater.



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## Pontifical Catholic University of Puerto Rico - Arecibo, PR

Design and develop construction documents for the Arecibo Campus. This encompasses a series of buildings ordered together forming a central courtyard. Buildings express the architectural nature of its components, with special interest in exposed concrete.



## Bioprocess Training & Development Complex Mayaguez, PR

The Bioprocess Development and Training Complex was a joint effort between Puerto Rico's Industrial Development Company (PRIDCO), the University of Puerto Rico and the Puerto Rico Science, Technology and Research Institute Trust, to improve the Island's potential in biotechnology and bioprocess manufacturing, education and research.

### Focus:

- Promote interaction between academia and industry.
- Provide the grounds for investigative communication.
- Strengthen Puerto Rico's capacity research, development, manufacturing and bioprocess engineering.

### Features:

- 30,000 square feet facilities
- \$19M investment
- 10,000 square feet of research and development laboratories
- conference room
- lecture room
- training laboratory
- amphitheater with a capacity of 150 people





## Bioprocess Training & Development Complex

The project's design organized the program into two distinct wings joint together by a common walkway: the manufacturing-research wing and the education-training wing. Common areas, such as cafeteria, sitting areas and conference rooms were located in between these two wings to provide the means through which users of both wings could share information and experiences, in both formal and casual settings.