

2015 Exhibition of School Planning + Architecture

# **NEW TRIER HIGH SCHOOL WINNETKA CAMPUS FACILITIES PROJECT**

New Trier Township High School District 203 | Winnetka, Illinois

**Category – Design Concept**



An architectural rendering of a modern high school campus. The main building is a large, multi-story structure with a combination of red brick and extensive glass windows. It features a prominent glass-enclosed section on the left side. In the foreground, a wide, paved walkway curves along a lush green lawn. Numerous students are depicted in various activities: some are walking, some are sitting on the grass, and a group is playing a sport (possibly soccer or basketball) on the right. The sky is clear and blue, and some green foliage is visible in the top left corner.

# **NEW TRIER HIGH SCHOOL WINNETKA CAMPUS FACILITIES PROJECT**

connected. forward. community.

**NEW TRIER'S MISSION STATEMENT:**

**Committing minds to inquiry, hearts to compassion, and lives to the service of humanity.**



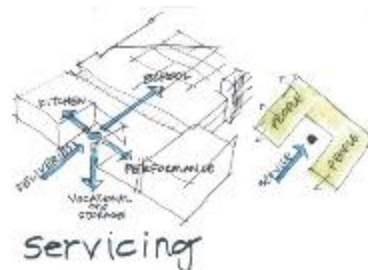
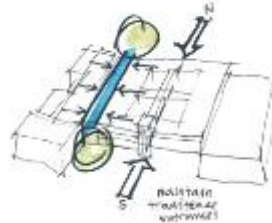
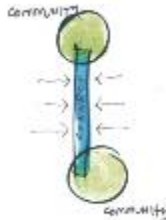
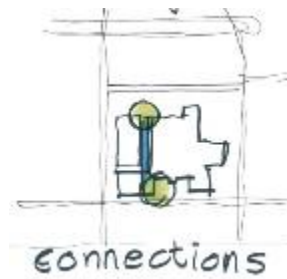
A bold glass entrance tower creates a welcoming gesture into the grand circulation concourse. This modern element echoes the image of New Trier's historic Art Deco entrance and acts as a contrasting expression joining both original and new masonry façades that are sympathetic to the tradition of the campus. Architecture can simultaneously respect the past and yet express the spirit of the present time.



## NEW TRIER HIGH SCHOOL WINNETKA CAMPUS FACILITIES PROJECT

## COMMUNITY ENVIRONMENT

The New Trier Winnetka Campus is located in an established residential neighborhood that required careful attention to a low impact design treatment of the proposed addition. Drawing inspiration from the historic masonry facades of the school dating as far back as the 1920's, the design team maintained the existing three-story parapet line on the new addition, but with a modern metal and glass fourth floor that sets back from the traditional masonry facades, providing exterior roof terraces accessible from the visual arts studios. **This blended expression of the past and future addresses the proud history of the school and community while also celebrating the modern educational experience contained within.**



Concourse – Lower Level

## COMMUNITY ENVIRONMENT {cont'd}

Public participation continues beyond the exterior environment of the new school campus.

**Major interior activities invite parents and residents as frequent guests to experience the life of New Trier.** Exciting venues such as a new 220-seat Drama Theater and an informal "Black-Box" performance space serve not only instruction purposes during the school day, but also evening and weekend entertainment and guest presentation events involving the larger New Trier community.



**Black-Box Theater**



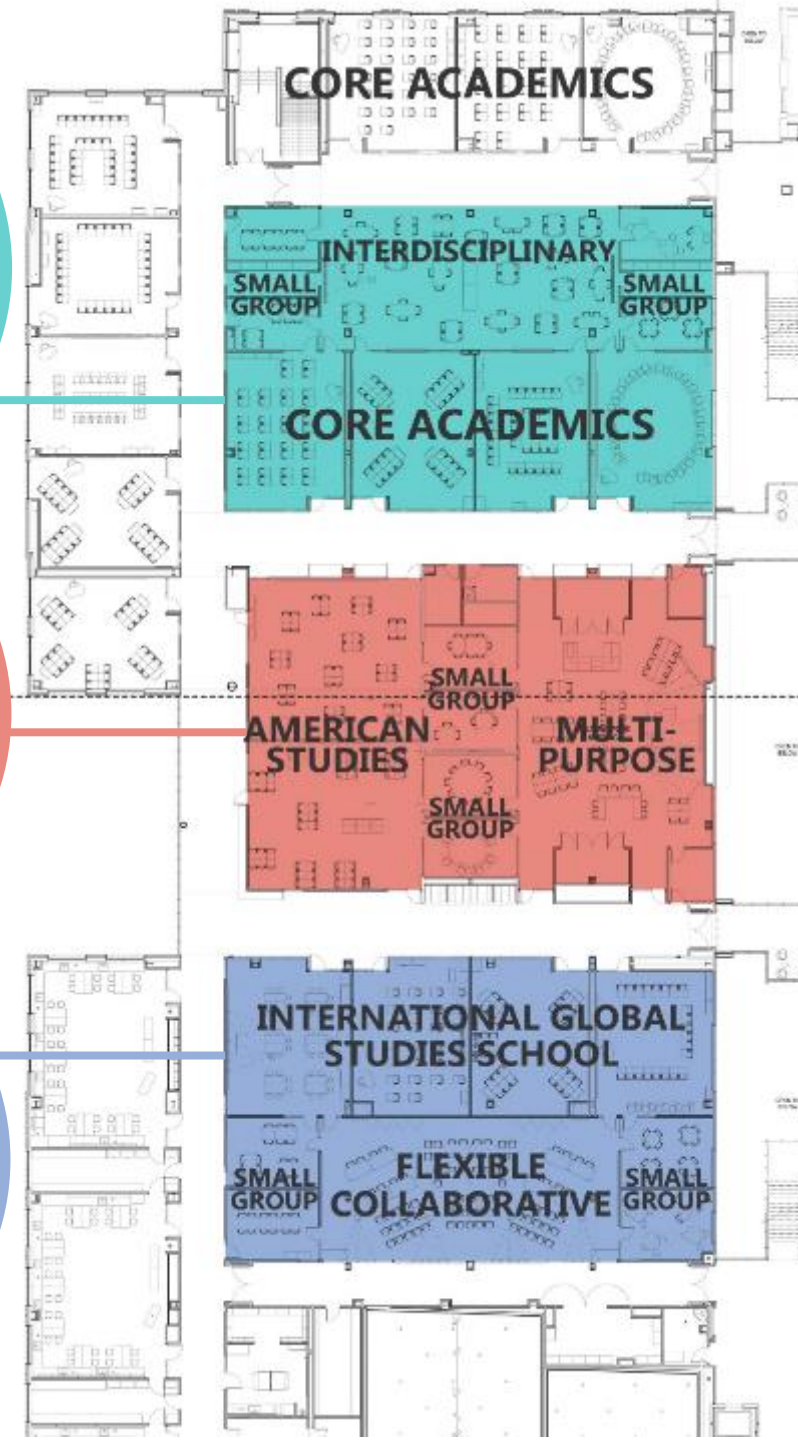
**Drama Theater**

## LEARNING ENVIRONMENT

The classroom is the core-teaching environment within the school. Sized at 900 sf, these **technology-enhanced spaces** are designed to continually adapt to various instructional delivery methods and student learning modalities.

The 3rd floor features a unique layout of instructional spaces that open onto **interdisciplinary collaboration** areas directly adjoining the classroom clusters. Flexible furniture and robust technologies equip these environments for continual **adaptation to changing learning activities** and collaborative group work.

The blend of disciplines demands the ability to move back and forth from enclosed classroom activity to project-based learning in cross-disciplinary curricula. **Folding glass walls** on the rear walls of classrooms can facilitate this **fluid movement from classroom to the collaborative “backyards”** where ideation and creative problem solving can be explored with fellow students.



## LEARNING ENVIRONMENT {cont'd}



**Black-Box Theater**



**Innovative Center for Engineering (ICE) Lab**



**Drawing/Media Arts Studio**

**Music** and **Performing Arts** are nested together adjacent to an existing 800-seat auditorium. A new studio black-box theater and 220-seat drama theater are located adjacent to the scene shops and dressing suites on the lowest level. Three large double-story rehearsal rooms for orchestra, band, and jazz band, are located on the ground level with two smaller venues for choral rehearsal and recital on the 3rd floor.

The **Applied Arts Labs** are situated on the lower level adjacent to the concourse. Large windows provide views into the auto shop, manufacturing lab, and STEM classrooms, as well as providing borrowed daylight from the concourse skylight. All materials and equipment are transported to this lower level via a large freight lift.

The **Visual Arts Programs** are housed on the 4th floor. Conceptually an “artist’s garret”, these loft studios for drawing, painting, sculpture, glassworks, and photography are daylight-filled with generous workspace and display. Access to green roof decks gives opportunity for outdoor studio work.

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## PHYSICAL ENVIRONMENT

The \$100M project replaces three older, inefficiently planned buildings with a new **280,000 sf addition that more than doubles available area for instruction**. The new facility provides quality-teaching environments for many core instruction programs. New provisions include:

### **New Suite of Applied Arts Labs**

#### **Music + Performing Arts**

- 220-seat drama theater
- black-box theater
- music rehearsal rooms

#### **6 Visual Arts Studios**

#### **4 Science Labs**

#### **25 New Classrooms**

#### **Student Dining + Media Café**

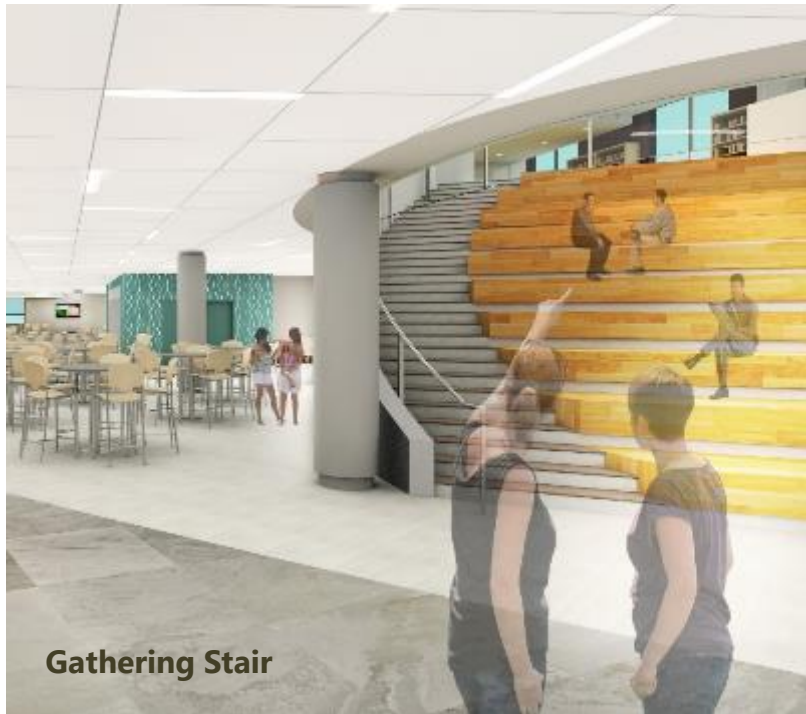
#### **New Library / Media Center**



Concourse – Window to Black-Box Theater

## PHYSICAL ENVIRONMENT {cont'd}

A sky-lit interior atrium/concourse provides access from the historic existing school to the new addition at each floor level. Moreover, this impressive open space **allows daylight penetration** deep into the interior of this large addition. Large glass openings into classrooms, library, applied arts labs, and even the black-box theater literally **puts learning “on display”** allowing students, parents, and visitors to participate in the expansive life of New Trier High School.



Gathering Stair



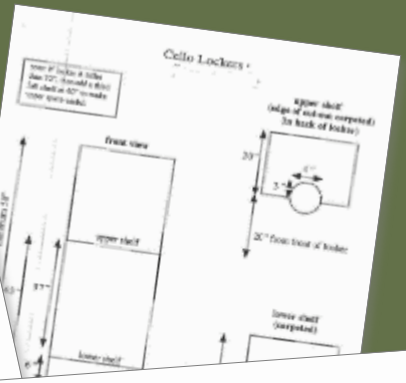
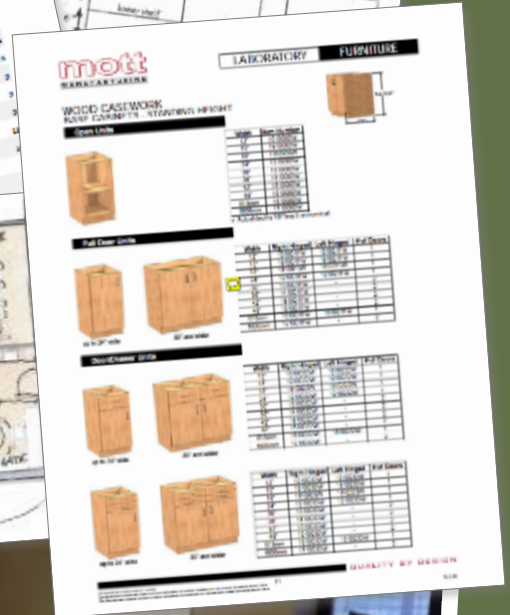
Concourse – Bridge Connection

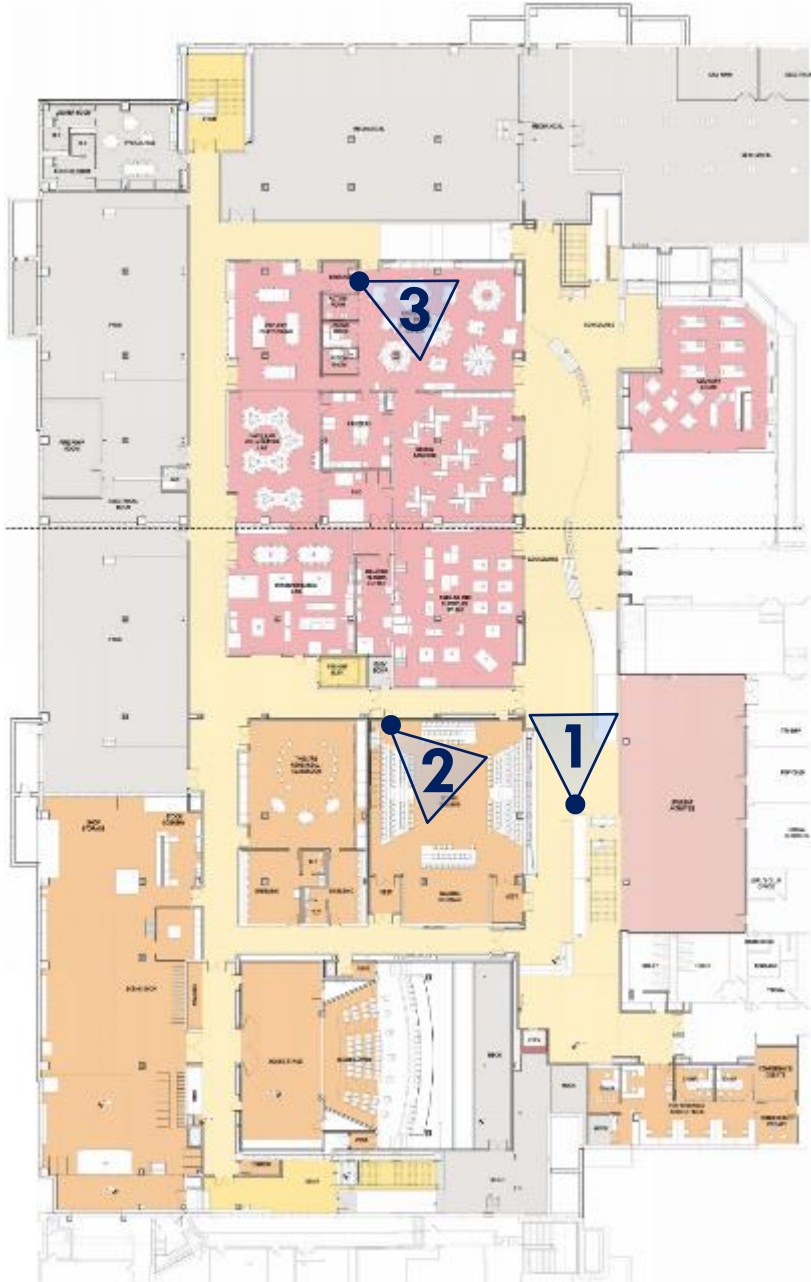
## PLANNING PROCESS

The design firm was selected in February of 2014 following a design competition for the expansion and renovation of New Trier High School. Known as one of the country's highest performing public high schools, New Trier's reputation for **student excellence and college preparation is widely recognized** despite aging facilities that do not ideally support their renowned curriculum.

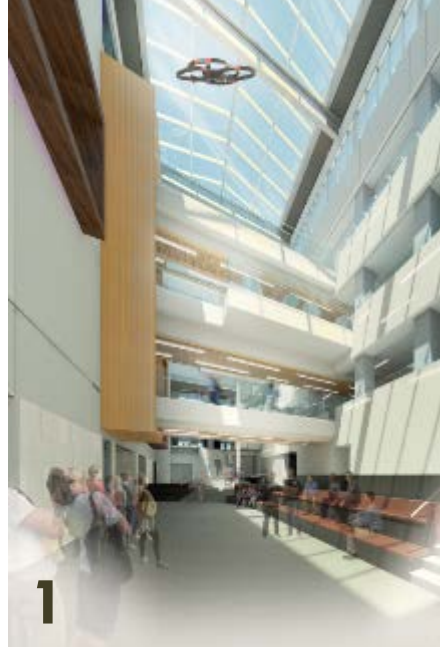
The design team has been working with New Trier faculty, administrators, students, and district residents to envision how a new expansion could bring the 3,000-student campus into better **alignment with 21st century teaching and learning practices**. In addition, consensus for the building's architectural appearance, as well as practical issues of traffic flow, parking, and concealment of service loading areas was determined in workshop sessions. Process highlights include:

- **Unanimous approval from three planning and zoning sub-committees and the Winnetka village council**
- **Extensive user participation in determining detailed space development**
- **Design team conducted Science Symposium to inform science lab development**
- **Frequent cost control meetings with District Administration and Construction Management firm during all design phases**

[illegible]



## Lower Level



1] Concourse



2



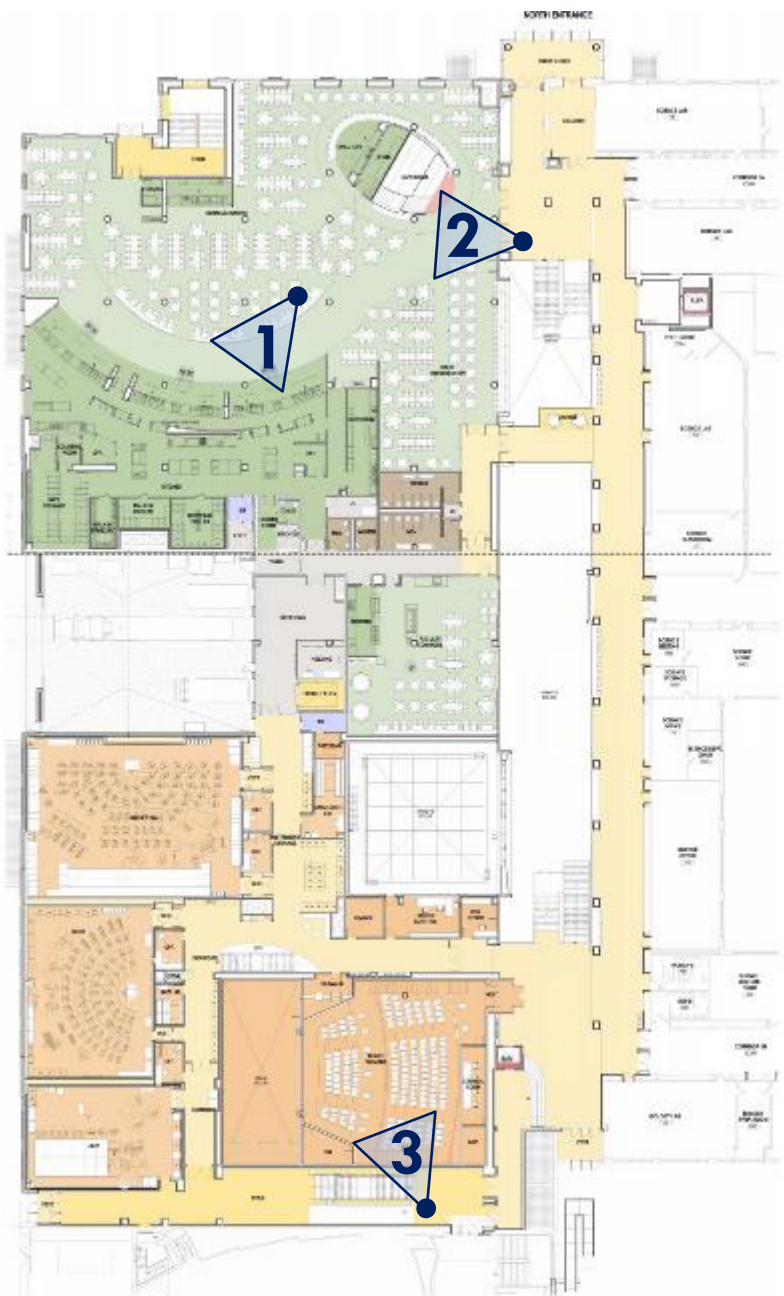
3

3] Innovative Center for Engineering (ICE) Lab

The **Applied Arts** program is facilitated in a cluster of interconnected STEM labs that support the interdisciplinary work of various engineering fields. These labs have been creatively named by faculty to inspire creative exploration of exciting fields of study:

- **Design Sandbox** (Architectural Studies)
- **Fab Lab** (Fabrication Technologies)
- **ICE Lab** (Innovative Center for Engineering)
- **Transportation Lab** (Vehicle Design and Engineering)
- **Hacker/Visualization Lab** (Computer Software/Hardware Exploration)
- **Project Playground** (Independent Student Work)

The Studio Theater or “**Black-Box**”, is the drama classroom and flexible performance venue for the Performing Arts program. Unique to the New Trier design, is the large glass window along the circulation Concourse. This opportunity makes visible the rehearsals and stagecraft activities of the theater. Black-out shades drop over the glass during performances. The idea of putting theater and dance “on-display” for students to observe is both unexpected and an exciting element in the school environment.



# Level 1



1] Food Court    2] Student Dining + Gathering Stairs    3] Drama Theater

The **Student Dining** venue has been reimagined as a collegiate quality experience featuring a food court presentation of culturally diverse and healthy cuisine. A variety of seating options allow students to choose between large group community tables, dining with a smaller group of friends, or joining a lunchtime presentation on the gather steps leading up to the Media Center on the second floor.

**Music Rehearsal** rooms and a new 220-seat **Drama Theater** occupy the southern portion of Level 1. Large volume spaces dedicated to Orchestra, Band, and Jazz Band are acoustically isolated and provide direct stage access to the large 800-seat auditorium. The Drama Theater features a tiered seating arrangement that is accessed by patrons from the first floor concourse, but connects the performance stage at the lower level adjacent to the scene shop, prop storage, and dressing room suite.



## Level 2



1] Concourse – View to Media Center    2] Media Café    3] Library – Fireplace Nook

The new **Media Center** is located on the 2nd floor directly above the Student Dining area. An inviting gathering stair entices students within the dining space to bring their lunch up to the “**Media Café**” area. This library anteroom is designed for social interaction and collaborative project work. It acts as expanded dining during lunch periods and continues throughout the school day as an informal study space that houses the library’s fiction collection.

Behind glass partitions and small group study rooms, are the formal library collections and media instruction classrooms. This area is designated as a quiet zone with distributed librarian workstations to assist student research. A reading nook is provided along the expansive concourse window feature and is anchored with the reconstruction of the **historic masonry fireplace** that adorned the original cafeteria since the 1920’s.



Level 3



1] Corridor – Transparency    2] Flexible Classroom    3] Corridor – Informal Gathering

Three central **Learning Suites** provide **core curriculum** spaces to support integrated and collaborative academic programs. Each suite accommodates a variety of group sizes including double classes, small groups, and large group activities. Even the circulation corridors provide opportunities for continued student interaction outside the formal classroom environment. Glass is strategically located in all classrooms to provide transparency for increased visibility, daylight, and line-of-sight security.

The Learning Suites provide three large meeting spaces for formal instruction, outside presenters, or after-school clubs. These Learning Suites reflect New Trier's tradition in **curriculum innovation**; creating spaces which enhance current programs while anticipating new programs and ideas.



1] Art Terrace    2] Digital Arts Studio    3] Drawing/Media Arts Studio

## Level 4



The **Visual Arts** program occupies the 4th floor and is expressed as an “artist garret” with abundant daylight and loft ceilings in each studio. The various art curriculums for drawing, painting, digital arts, ceramics, sculpture, and glassworks are arranged in a linear configuration that encourages interdisciplinary work by connecting studios via large overhead doors.

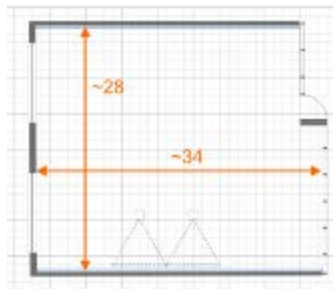
Direct access to two large **outdoor roof terraces** allows studio work to extend outside as the seasons allow. These terraces are available to the entire school population for alternative classroom experiences or project exhibition purposes.

# Classroom Flexibility

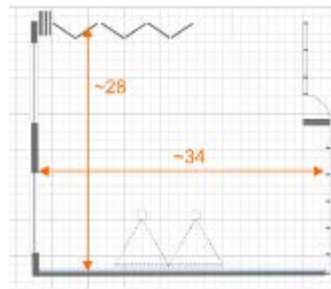
The classroom components of the Learning Suites were designed as **flexible environments that could be configured in numerous instructional modalities.**

Utilizing moveable tables, chairs, and storage units, these classrooms can be rapidly rearranged into many relationships that enhance any particular learning activity. Each room is equipped with technologies that empower multiple walls and even mobile storage units as active teaching surfaces. All rooms are designed to accommodate a laptop or tablet for every student.

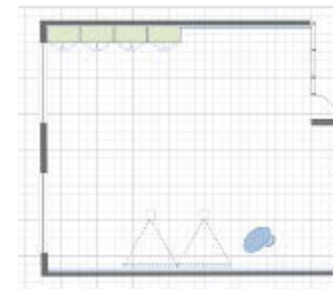
This **diagrammatic matrix illustrates the range of configurations for which each classroom can flexibly adapt.** Various modalities such as lecture, large group discussion, debate, small group work, project based learning, and presentation are readily accommodated.



Typical Classroom



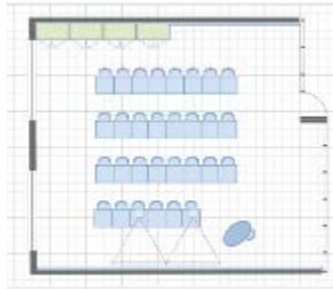
Typical Classroom



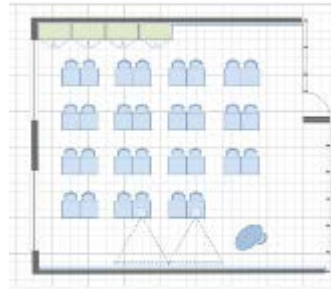
Potential Equipment



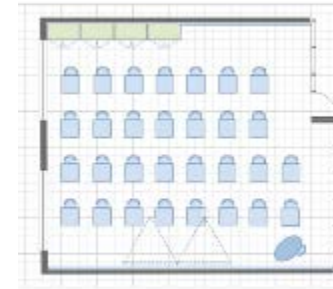
Student Furniture



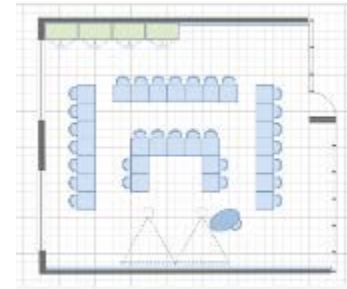
Direct Instruction – Rows



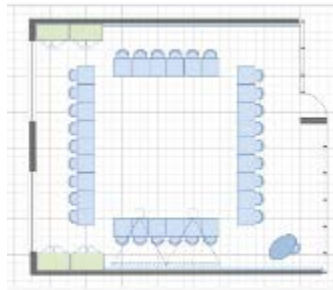
Direct Instruction – Tables/Pairs



Direct Instruction – Individuals



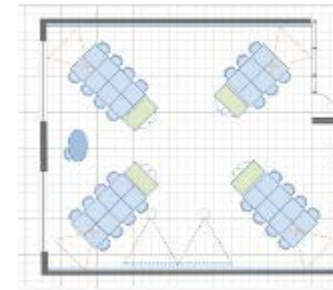
Direct Instruction – Double U



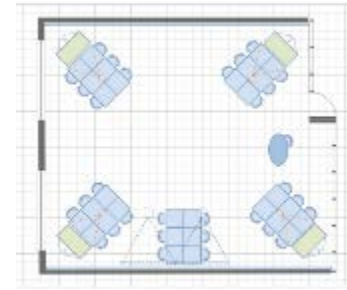
Discussion – Whole Group  
30 Students



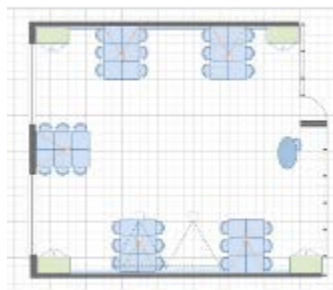
Discussion – Seminar  
U Shape for 24



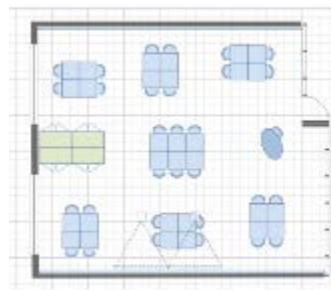
Small Group Discussions –  
4 Groups of 6 to 8



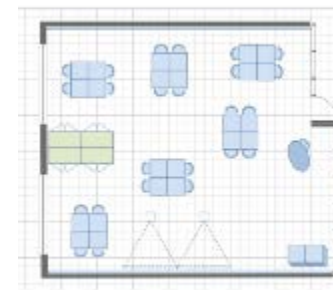
Small Group Discussions –  
5 Groups of 6



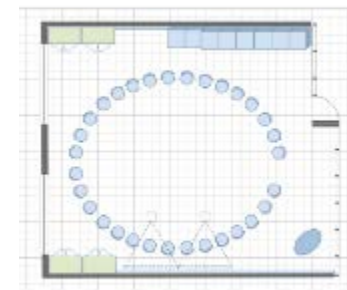
Project Work



Small Group Work –  
7 Groupings of 4-6



Small Group Work –  
6 Groupings of 4



Group Interaction – for 24-30

# Exhibition of School Planning + Architecture **Project Details**

Submitting Firm:	WIGHT & COMPANY
Project Role	Architect + Engineering
Project Contact	David Powell, AIA, LEED AP
Title	Senior Project Manager
Address	2500 North Frontage Road
City, State or Province, Country	Darien, Illinois USA
Phone	630.969.7000

Other Firm:	THRESHOLD ACOUSTICS
Project Role	Acoustics Analysis + Performance AV
Project Contact	Robin Glosemeyer Petrone
Title	Senior Acoustical Consultant
Address	53 W. Jackson Blvd., Suite 815
City, State or Province, Country	Chicago, Illinois USA
Phone	312.386.1400

Other Firm:	PETER BROWN ARCHITECTS
Project Role	Programming + Planning
Project Contact	Peter Brown
Title	Principal
Address	3304 Cole Avenue, Suite 171
City, State or Province, Country	Dallas, Texas USA
Phone	469.556.2381

Other Firm:	REITANO DESIGN GROUP
Project Role	Food Service Design
Project Contact	Scott Reitano
Title	President
Address	748 E. Bates Street, Suite 200
City, State or Province, Country	Indianapolis, Indiana USA
Phone	317.637.3204

Other Firm:	AMSCO ENGINEERING
Project Role	Mechanical Engineering
Project Contact	Dan Wesley
Title	Principal
Address	5115 Belmont Road, #A
City, State or Province, Country	Downers Grove, Illinois USA
Phone	630.515.1555

Other Firm:	TECHNICAL DESIGN GROUP, INC.
Project Role	Technology + Audio Visual
Project Contact	Frank J. Cerchio
Title	Principal
Address	1075 Shore Road, Suite A
City, State or Province, Country	Naperville, Illinois USA
Phone	630.983.9906

Other Firm:	SCHULER SHOOK THEATRE PLANNERS
Project Role	Theatre Design
Project Contact	Christopher Sprague
Title	Project Theatre Consultant
Address	750 N. Orleans, Suite 400
City, State or Province, Country	Chicago, Illinois USA
Phone	312.944.8230

Construction Firm:	PEPPER CONSTRUCTION
Project Role	Construction Manager
Project Contact	Jay Ripsky
Title	Senior Vice Manager
Address	411 N. Lake Zurich Road
City, State or Province, Country	Barrington, Illinois USA
Phone	847.381.2760

# Exhibition of School Planning + Architecture **Project Details**

Project Name	New Trier High School Winnetka Campus Facilities Project
City	Winnetka
State	Illinois
District Name	New Trier Township High School District 203
Supt/President	Dr. Linda Yonke
Occupancy Date	Phase I – August 2016; Phase II – August 2017
Grades Housed	9 <sup>th</sup> – 12 <sup>th</sup> grades
Capacity(Students)	1062 (Addition Only)
Site Size (acres)	N/A
Gross Area (sq. ft.)	280,000 (Addition Only)
Per Occupant(pupil)	260 SF Per Pupil
gross / net please indicate	280,000 / 177,215 – 1.58GF
Design and Build?	N/A
If yes, Total Cost:	
Includes:	
If no,	
Site Development:	\$5M
Building Construction:	\$82M
Fixed Equipment:	\$2M
Other:	
Total:	\$89M Hard Construction (\$100M Total Project)



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