



Northwest High School

Waukee Community School District

2023 James D. MacConnell Awards



Executive Summary

Forward-thinking leadership combined with thoughtful community input formed the growth plan for Iowa’s fastest-growing school district, creating Waukee’s new Northwest High School. As the already expanded existing high school was projected to run out of space quickly, the district engaged the design team to facilitate the planning of a second facility.

The team led the district’s planning committee through a comprehensive visioning and programming co-creation process that culminated in a final design that is Future-Ready for tomorrow’s curriculum while maintaining an equitable relationship of spaces with the existing Waukee High school.

Northwest High School is situated on a jointly developed property formed out of a land-sharing agreement between the city and school to maximize funds and provide better value for tax payers. The new school is organized and oriented to maximize natural views while creating safe and functional relationships between amenities on this comprehensive campus. The building utilizes a student commons as a central hub, creating a compact design that encourages community and interaction while providing views through these spaces to connect

uses to the outside. In addition, educational spaces within the building are enhanced with collaborative “living room” areas for students and staff to promote organic learning opportunities.

The commons also serves as the lobby and gathering space for more public functions in the athletic and performing arts areas. The athletic area features a top-loaded gymnasium, using the running track for circulation onto the bleachers. The performing arts auditorium features an upper balcony accessed from the circulation of the upper commons. Adjacent to the auditorium is a black-box theater and multi-use teaching area. Music instruction areas are adjacent to the auditorium and stage for easy access. A visual and digital art suite on the lowest floor opens onto a sculpture garden, allowing additional experiential opportunities.

In addition to the 395,000 SF High School that serves 1800 students in grades 10-12, the campus also features a 5000-seat football stadium and team building that was sunken into the site’s topography to give prominence to the High School. To the site’s east side, a new baseball and softball complex rounds out the new school’s activity areas. Carefully planned circulation on the site separates functions, creates safe traffic flow, and protects pedestrian traffic.

The Details

Waukee Community School District
Owner

Waukee, Iowa
Project Location

1800
Student Capacity

10-12
Grades Served

395,000 SF
High School Building Area

219 SF
Area Per Student

\$103 M
Construction Cost

2021
Completion Date



School + Community Engagement

Community

The community that is served by the district is the City of Waukee, and the outer edges of three first-tier suburbs that make up the western edge of Iowa's capital city, Des Moines. West Des Moines, Urbandale, Clive, and Waukee all add unique elements to the district, but mostly they've added growth in its population base. Four once-small rural Iowa towns have turned into today's bustling city and their shared backgrounds and histories make up the school community giving it an identity that goes beyond that of a single town. Melding these backgrounds into a single vision for the school community has always been the focus and challenge.

With metropolitan Des Moines being a hub for worldwide insurance and financial-based companies, these four communities attract families from all over the world, making the area more culturally diverse than most of the state. Represented in this diversity are students whose families represent over 22 different countries from around the globe. This mix of cultures, growing population, and being that interface between the agricultural landscape of Iowa and that of the urban one gives rise to opportunities for tremendous success.

School District

Waukee Community School District is currently the sixth-largest school district in Iowa, serving more than 13,000 students from Clive, Urbandale, Waukee, and West Des Moines, as well as open-enrolled students from other communities outside the 55 square miles of our district boundaries. Averaging a yearly growth of nearly 500 students for each of the last twenty-plus years, the district has benefited from leaders who have successfully planned and scaled their operations to maintain the highest standards in education.

For more than 100 years, the district has been committed to delivering a curriculum that is rigorous, relevant, and promotes high levels of engagement. Their student body ranks high nationally on every measure of academic progress. They have one of the highest graduation rates in the state at 98%, and more than 89% of the graduates go on to some form of postsecondary education. Every employee, volunteer, and community partner associated with the district works to deliver our mission and vision each day. Specifically, to partner with families to prepare every child for success after high school. Learning and doing what's best for students is always the primary focus.

Project Genesis

In 2010 the district was already planning to set the stage for an eventual new high school. Growth projections from their demographic planning firm had proved very accurate up to this point, and showed the need coming soon. Forming broad-based planning committee to study and give recommendations, it was determined the best path for Waukee Schools was to create a feeder system that would lead to a second high school. After building additional middle schools, additions for capacity onto the existing high school, and even a career and technology center, the number of students projected for the 2022 school year was going to be the point at which a new facility would be needed.

Since the City of Waukee was experiencing similar growing pains, the district saw an opportunity to pool resources and create a joint development that could maximize tax dollars for both entities. Waukee City Council and Waukee Community School District approved a 28e agreement in May of 2016, which allowed the city and district to share green space. A total of 160 acres of land north of Hickman Road and east of 10th Street in Waukee was used to build Northwest High School and City of Waukee-owned sports complex. Approximately 2/3 of the land includes the new high school building, parking, track, four ball fields, practice fields, and a pond. The City's 1/3 portion of the property includes 12 softball/baseball fields and parking.

*Inspiring Learners Who Feel Valued, Challenged, And Prepared
To Embrace Tomorrow's Opportunities.*



School + Community Engagement

Process

The evolution of the Waukee Community School District from a small rural district to one of the leaders in the state was one that has involved organic growth over time. Splitting the district into two sides to serve two separate high schools was not to be taken lightly. Careful consideration and deliberate planning need to lead this change for the future. The district started off by forming a committee that represented the best in the community that would lead the charge.

After forming a planning committee of staff, community leaders, parents, and students, the design team facilitated an engaging process of discovery and reinvention to create a new vision for the future high school. Because this was to be a second and equal facility to the existing one, the challenge for the group was to re-imagine how to deliver future education, while providing equity with what is already in place, a set of guide rails really.

Step One – Open everyone’s eyes to what has been done in the last twenty years since they last built a high school. The planning team led the district on tours of six recent facilities in regional markets in a four to five-hour proximity to the Des Moines metro. Engaging with those owners and talking about lessons learned was invaluable to the process of envisioning what’s next.

Step Two – Engage the community committee to set overarching goals and priorities to move forward with. What are the shared values that will give shape to this new educational environment?

Step Three – Create what the future looks like together through an engaging charrette process with the final result able to support the five key elements of a Waukee graduate; Academics, Inquiry, Future Ready Skills, Wellness, and Connection.



*We believe every individual’s unique background
and culture enhance our schools.*



School + Community Engagement

Future Ready Vision

Students will be prepared to navigate a complex, ever-changing global society and economy. The following skills will be demanded by employers across industries and sectors:

- **Critical Thinking** – The ability to reason and analyze information to come up with new solutions to a problem. It's one skill that can't be automated.
- **Creativity** – With the constant influx of new products and services, employers need creative minds that can apply these new tools to their product and industry.
- **Collaboration** – The ability to work with others is a timeless skill, but as processes move faster and become more complex, the ability to understand others, be sensitive to their needs and find a way to work together will be more important than ever.
- **Communication** – Communicating clearly in multiple modes is a much-desired skill across industries.
- **Technology/Media Literacy** – Being able to understand how to work with the most up-to-date tools is a crucial skill in the constantly changing landscape of work. As automated services become more prevalent, the ability to speak the language of these tools becomes a necessity for all employees.
- **Leadership** – The ability to interact with employees, clients and other stakeholders and unite them behind a single purpose is an age-old skill that shows no signs of losing importance.



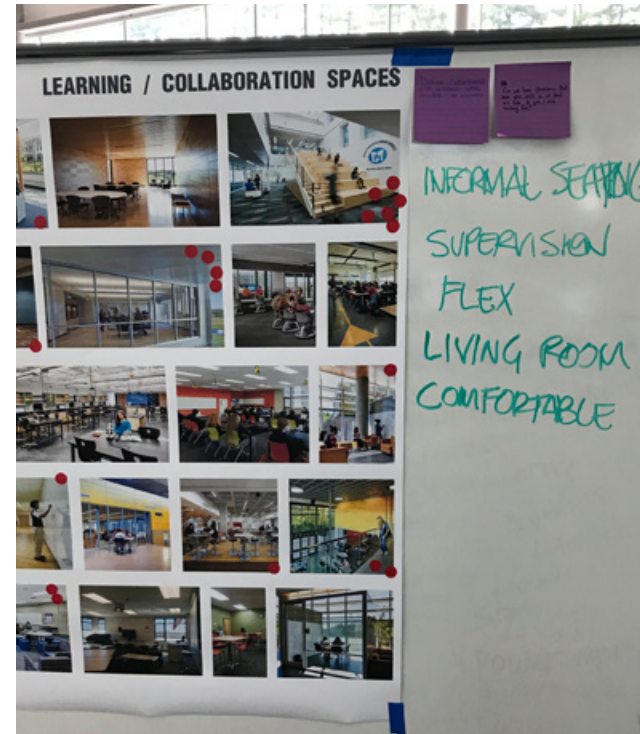
School + Community Engagement

Co-Creation

To represent the best of the community within the new high school design, the planning team engaged the committee in an intensive three-day hands-on charrette process to create their future together. Involving virtual tours, learning styles discovery, and exploring how academic pedagogy is reflected in today's designs all over the world, a common ground was laid to start the discovery together. In forming the basis of what makes a successful Waukee graduate, a future-ready vision was defined to outline a successful outcome. Guided by a set of core values and beliefs for what education is for Waukee, the committee started their work to define how a new high school would reflect this.

Through a series of interactive feedback exercises and hands-on manipulative exercises, the committee was able to reflect their thoughts on the future high school design. Over the course of the three meetings, spaced roughly two weeks apart, the planning team was able to take the ideas of the group and reflect them in a design concept that represented the vision of the community.

With additional feedback through a series of meetings with existing high school staff, the final design was able to be developed to represent both the vision and user experience desired for the new school and its future occupants. Having the full feedback from both the community and the staff and students gave the final high school design the opportunity to have the greatest acceptance in the future.



Core Values

We believe in keeping students our priority.

We approach our work with an open, curious mindset, committed to learning and relentlessly focused on our students' needs and interests. We make decisions and measure progress based on how well we are supporting our staff and improving outcomes for our students. Our passion for the success of our students motivates us to do what is needed to accomplish our goals.

We believe in equity and belonging.

We believe that equity and inclusion in our schools will require a healthy culture based on a foundation of dignity and belonging. We strive to build partnerships and community within these beliefs. We seek to affirm uniqueness and difference, create a culture of acceptance and growth, amplify student voice, & support the social-emotional needs of students.

We believe in developing people.

We know that we are only as strong as our team and that as each person develops as a learner and a leader, our district becomes stronger. We are committed to investing in the development of our people through coaching, feedback, and training, as well as by fostering an environment that encourages personal development and professional growth. We believe that by supporting the growth of our team members will we all achieve our maximum potential.

We believe in integrity.

We strive to do the right thing, recognizing that what is right is not always what is easy. We operate with respect and kindness and are honest, transparent and responsive in our communication and actions. We collaborate openly and hold ourselves and each other accountable.

We believe in joy.

We see our work as much more than a job and we are here because we love what we do. We take pride in doing great work and celebrate our collective and individual successes. We cultivate positive relationships, express gratitude, and support and uplift one another.

We believe in inclusivity.

We respect and value the individual differences within our community, recognizing that the genuine embracing of those differences can increase our performance and create a culture in which everyone can (safely/openly) be themselves. We are committed to building a welcoming and encouraging environment that supports all stakeholders, gives them voice, and allows us to learn from one another.

We believe in innovative problem solving.

We seek excellence and learn from our challenges and successes as we evolve beyond the traditional notion of K-12 education. We do not shy away from struggles and are resilient in our approach to problems because we know that effort and perseverance lead to success. We are courageous and intellectually curious in our search for new ways to overcome obstacles and move ourselves forward. We work together, take initiative, and innovate, all in an effort to produce positive outcomes for ourselves, our students, and our community. and our community.



Educational Environment



Design to accommodate informal and organic learning

Emphasized early on by the planning committee was the need for the design to incorporate places for constructive social interaction and to accommodate informal learning interactions. Throughout the building, designers created places for small gatherings, social crossroads, and places for students to find spots for individual study. Several open and enclosed study areas surround the commons hub, and a student coffee shop with café seating is tucked under the learning stair to get a snack and study if you have an open block.

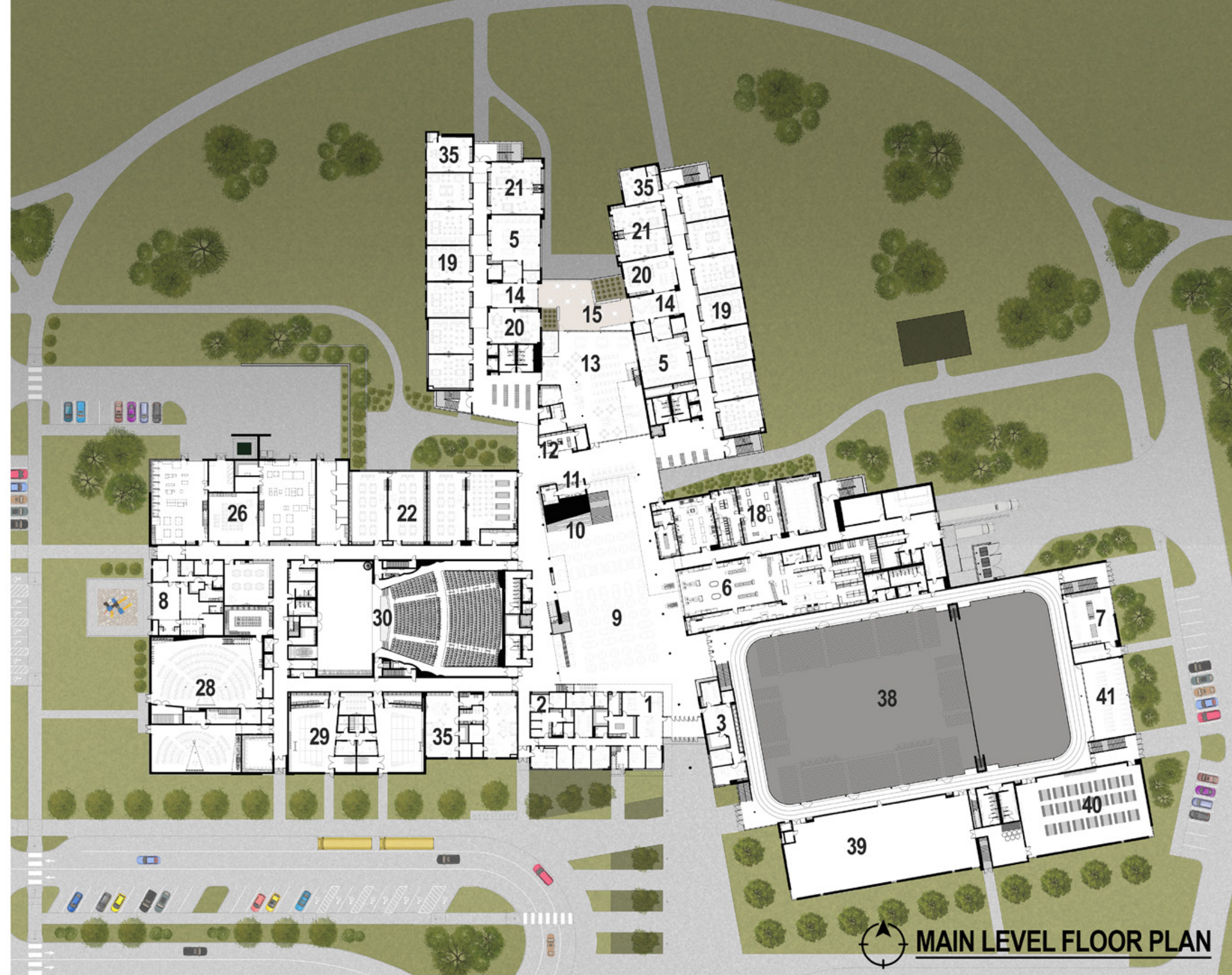
Educational Environment

Learning spaces should be comfortable and inviting

Learning environments with ample natural light and views were a priority in the planning of the school to create a places that promote wellness and wellbeing for those that occupy them. Connection to and the display of the learning process was also a key driver for the design and when ever possible, transparency throughout the building was included to academic areas .

PLAN INDEX

- 1. ADMINISTRATIVE SUITE
- 2. HEALTH SERVICES
- 3. STUDENT ACTIVITIES SUITE
- 4. STUDENT GUIDANCE SUITE
- 5. FACULTY OFFICE & COLLABORATION SUITE
- 6. FOODSERVICE
- 7. DISTRICT PRINT SERVICES
- 8. DISTRICT STAFF CHILDCARE CENTER
- 9. STUDENT COMMONS
- 10. LEARNING STAIR
- 11. STUDENT CAFÉ / COFFEE SHOP
- 12. STUDENT STORE
- 13. MEDIA CENTER
- 14. STUDENT LIVING ROOM
- 15. LAKE VIEW STUDY TERRACE
- 16. GROUP STUDY
- 17. LARGE GROUP / COMMUNITY ROOM
- 18. FCS / CULINARY ARTS SUITE
- 19. GENERAL EDUCATION CLASSROOMS
- 20. TECH LAB
- 21. FLEX CLASSROOM
- 22. BIOLOGY & LIFE SCIENCES
- 23. PHYSICS & EARTH SCIENCES
- 24. CHEMISTRY LABS
- 25. GREENHOUSE
- 26. CAREER TECHNICAL EDUCATION SUITE
- 27. JOURNALISM & MEDIA PRODUCTION SUITE
- 28. INSTRUMENTAL MUSIC SUITE
- 29. VOCAL MUSIC SUITE
- 30. PERFORMING ARTS AUDITORIUM
- 31. PERFORMING ARTS BLACK-BOX THEATER
- 32. ORCHESTRA PIT
- 33. VISUAL & DIGITAL ARTS SUITE
- 34. SCULPTURE GARDEN
- 35. SPECIAL EDUCATION
- 36. SPECIAL EDUCATION – LIFE SKILLS LAB
- 37. GYMNASIUM / AUXILIARY GYMNASIUM
- 38. UPPER GYMNASIUM / RUNNING TRACK
- 39. MULTI-PURPOSE ATHLETIC
- 40. WEIGHT TRAINING
- 41. FITNESS TRAINING
- 42. HEALTH EDUCATION
- 43. WRESTLING
- 44. ATHLETIC & PHYSICAL EDUCATION LOCKER ROOMS
- 45. ATHLETIC & BUILDING STORAGE



MAIN LEVEL FLOOR PLAN



NORTHWEST
WOLVES

Learning happens everywhere

Inquiry, self-paced learning, and collaboration are fostered through project rooms and informal learning spaces throughout the building. Corridors throughout the building also have bench and booth areas in nooks for students to find a place to sit and gather their thoughts.

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- 6. FOODSERVICE
- 7. DISTRICT PRINT SERVICES
- 8. DISTRICT STAFF CHILDCARE CENTER
- 9. STUDENT COMMONS
- 10. LEARNING STAIR
- 11. STUDENT CAFÉ / COFFEE SHOP
- 12. STUDENT STORE
- 13. MEDIA CENTER
- 14. STUDENT LIVING ROOM
- 15. LAKE VIEW STUDY TERRACE
- 16. GROUP STUDY
- 17. LARGE GROUP / COMMUNITY ROOM
- 18. FCS / CULINARY ARTS SUITE
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- 20. TECH LAB
- 21. FLEX CLASSROOM
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- 23. PHYSICS & EARTH SCIENCES
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- 26. CAREER TECHNICAL EDUCATION SUITE
- 27. JOURNALISM & MEDIA PRODUCTION SUITE
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- 29. VOCAL MUSIC SUITE
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- 31. PERFORMING ARTS BLACK-BOX THEATER
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- 33. VISUAL & DIGITAL ARTS SUITE
- 34. SCULPTURE GARDEN
- 35. SPECIAL EDUCATION
- 36. SPECIAL EDUCATION – LIFE SKILLS LAB
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- 39. MULTI-PURPOSE ATHLETIC
- 40. WEIGHT TRAINING
- 41. FITNESS TRAINING
- 42. HEALTH EDUCATION
- 43. WRESTLING
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 LOWER LEVEL FLOOR PLAN

Educational Environment

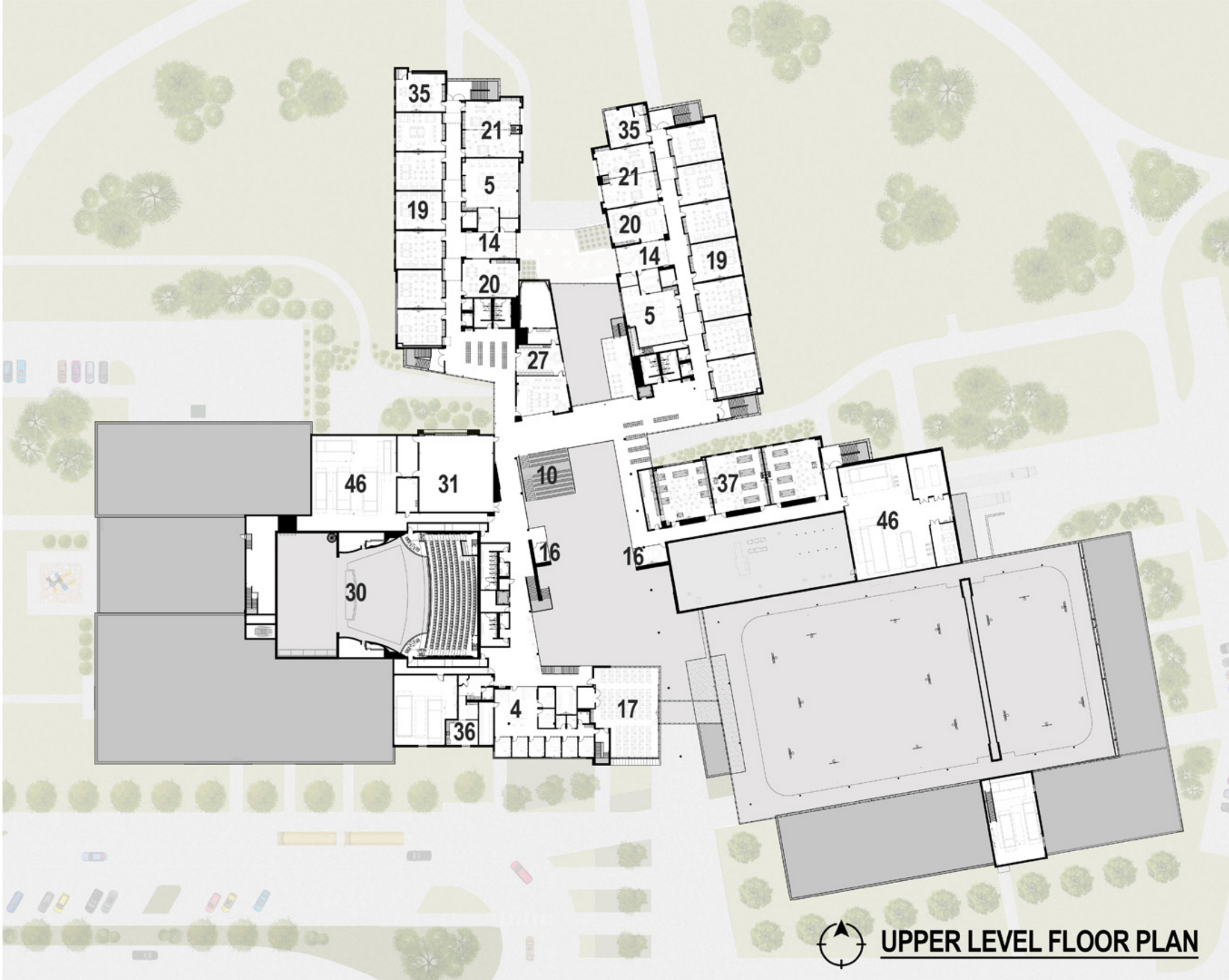


Students should feel comfortable, like there at home

A project goal was to create an home-like environment for students to feel comfortable in, which allows informal social engagement and self-paced learning activities. The roof terrace overlooking the lake connects the “living rooms” on each floor of the academic towers, creating a connected space for learners. The centralized student “living room” provides different seating options that can be customized. These spaces are adjacent to small group study rooms and visually connected to the faculty offices for supervision and access to additional resources.

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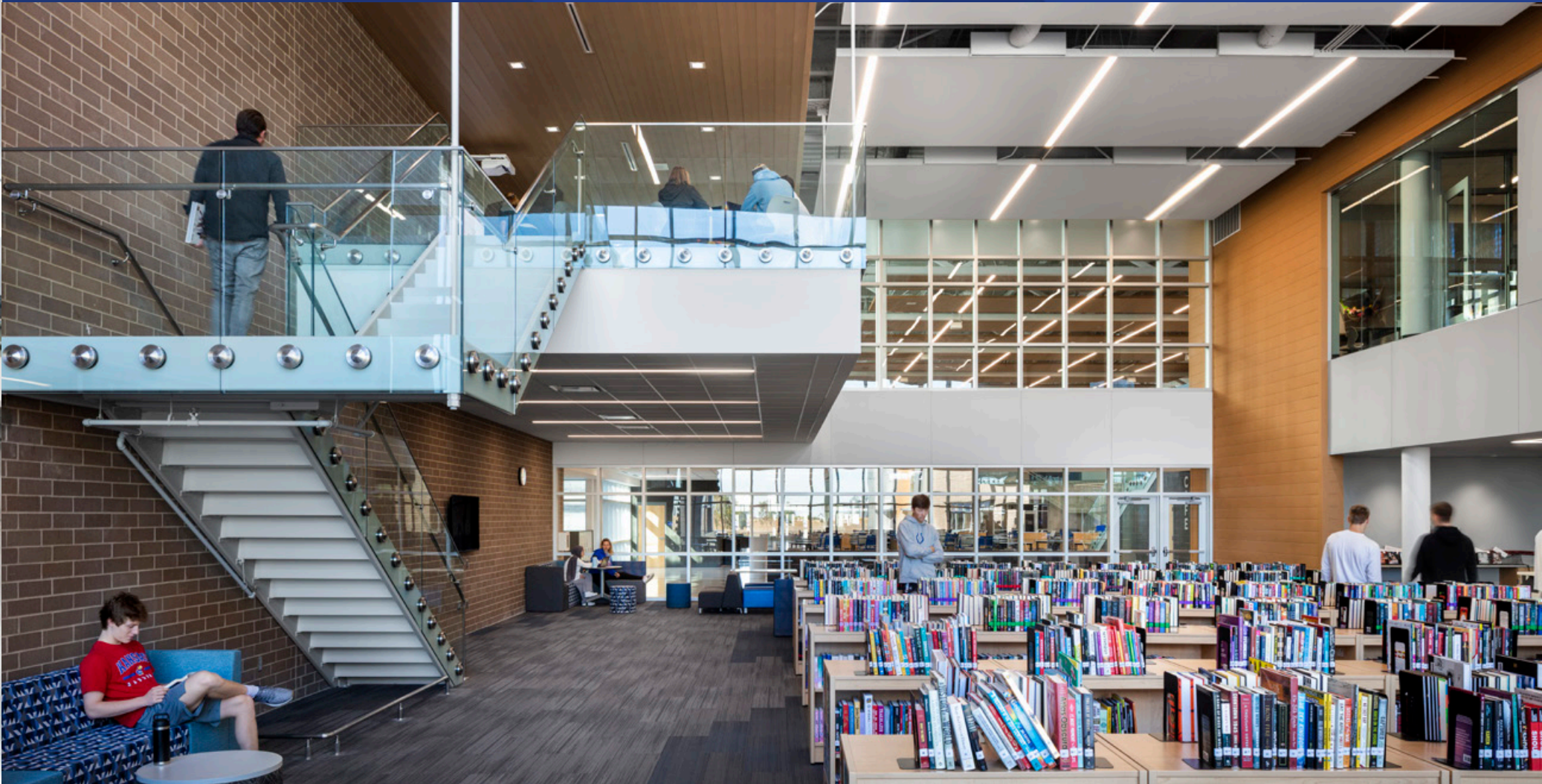
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- 3. STUDENT ACTIVITIES SUITE
- 4. STUDENT GUIDANCE SUITE
- 5. FACULTY OFFICE & COLLABORATION SUITE
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- 7. DISTRICT PRINT SERVICES
- 8. DISTRICT STAFF CHILDCARE CENTER
- 9. STUDENT COMMONS
- 10. LEARNING STAIR
- 11. STUDENT CAFÉ / COFFEE SHOP
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- 28. INSTRUMENTAL MUSIC SUITE
- 29. VOCAL MUSIC SUITE
- 30. PERFORMING ARTS AUDITORIUM
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- 33. VISUAL & DIGITAL ARTS SUITE
- 34. SCULPTURE GARDEN
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- 40. WEIGHT TRAINING
- 41. FITNESS TRAINING
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UPPER LEVEL FLOOR PLAN

Educational Environment

Transparency and connection were key drivers in the design in order to foster an environment of community cohesiveness. Spaces like the community room (left) and Media Center (below) created a visual connection from the entry through to the lake.



Educational Environment

Visual and performing arts are well supported in the building and include:

- *Two Vocal Music Rooms*
- *Three Instrumental Music Rooms*
- *1000 Seat Auditorium w/ Orchestra Pit*
- *Black Box Theater*
- *Four Visual and Digital Art Studios*
- *Media Production Studio*



Educational Environment

Health & Wellness Areas In the Building Include:

- *Main Performance Gymnasium w/ 2500 Seats*
- *Auxiliary Gymnasium w/ Raised Track on Main Level*
- *Weight Training Room*
- *Cardio Fitness Room*
- *Multi-Sport Training Room*
- *Wrestling Room*
- *Athletic Locker & Support Areas*



Educational Environment

Technical Training Areas in the Building Include:

- Metals Shop
- Wood Shop
- Robotics Lab
- CAD Lab
- FCS Textiles Lab
- FCS Food Lab
- Culinary Arts Commercials Foods Lab



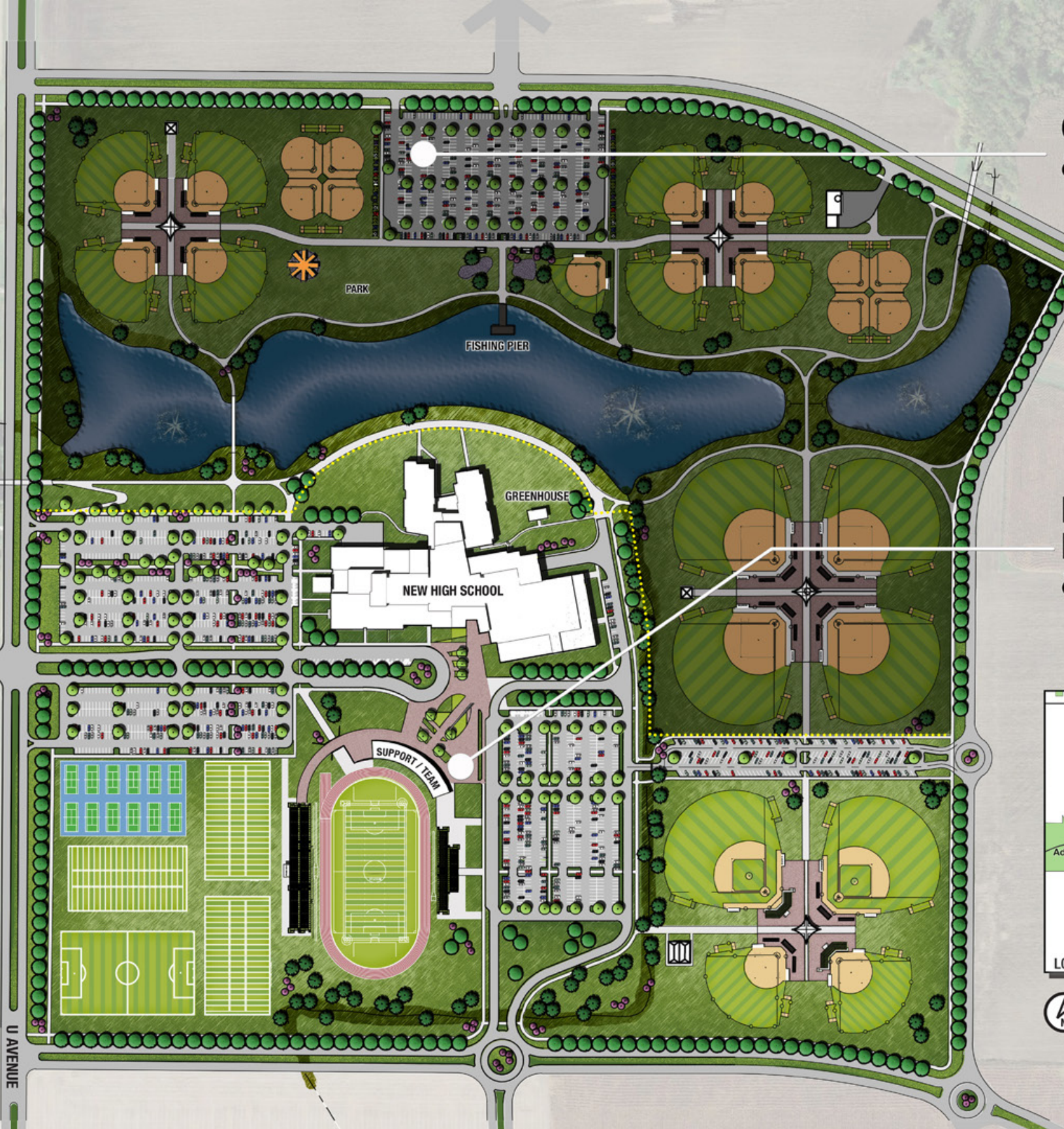
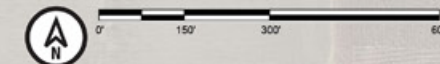
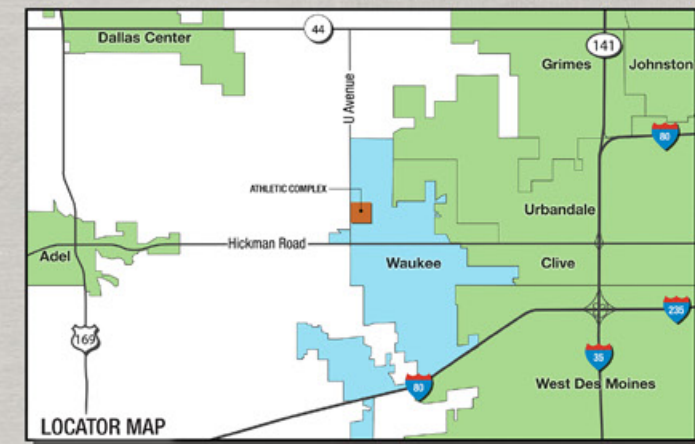
Physical Environment

Since most of the 160 acre site would have some sort of development, the academic areas and school itself, were oriented to the lake, and the less developed nature areas, to maximize connections, both visual and physical, with nature. The academic towers point to the lake and take advantage of the drop in topography to lessen the height of the school and keep the development more scaled to its surroundings.



**CITY OF WAUKEE PARK
& ATHLETIC COMPLEX**

**NEW WAUKEE CSD
NORTHWEST HIGH SCHOOL
& ATHLETIC COMPLEX**



Physical Environment

Between the towers, a roof terrace, accessed off the Media Center and academic Living Rooms, overlooks the lake and gives a secure place for students to study outside. A lower-level sculpture plaza connects the visual arts suites to the outdoors, allowing them opportunities for nature study and work with outdoor kilns. Additionally, the natural science areas are connected to outside on the lower level allowing them access to the lake and shoreline for expanded curriculum and agricultural study opportunities.



Physical Environment



Physical Environment



Complete Sport Amenities

The 5000-seat football and soccer stadium was dished into the site to give more prominence to the school from the street and separated from the main entry through a pedestrian plaza. A separate team building holds locker rooms, meeting areas, and concessions for outdoor sports activities. Additionally, on the southeast corner of the site, the Baseball/Softball complex has four fields and its own concession and indoor batting facility. The southwest corner includes practice fields, a tennis complex and a marching band practice field.



Sustainability

The design team worked closely with the owner and the local energy company to do energy modeling and system lifecycle payback analysis of the proposed systems for the building. Through evaluations of systems for initial cost, lifecycle paybacks, and owner maintainability, Northwest High School was built at a verified 35% reduction in Energy Use Intensity (EUI) over a code-level building, resulting in a yearly savings of about \$140,000 per year operationally to the owner. Through rebate systems in place through the energy company, the building also received a \$231,000 rebate to help offset initial cost increases for the system.

