KELLY WALSH HIGH SCHOOL
Natrona County School District, Casper, Wyoming
Executive Summary

History of Kelly Walsh
Dedicated in 1963, Kelly Walsh High School (KWHS) is located in Casper, WY and first opened its doors 50 years ago for grades 10-12. In recent years, Natrona County School District (NCSD, or “the District”) added ninth grade to the high school system. The facility had been expanded several times and, at the project’s onset, seven modular classroom buildings were housed on the site. However, the school had never seen a major renovation and most spaces that existed were as originally constructed.

Understanding the “Need”
After decades of deferred maintenance, KWHS was in poor condition, appearing near the top of the list on the Facility Needs Index by the Wyoming School Facilities Commission (or WSFC, established in 2002). To address the building’s deficiencies, the State appropriated funding for a major renovation to the school. However, through a District-wide charrette process, it was determined the existing spaces were educationally inadequate and constructing a completely new facility on the same site would better serve students for the long-term and more prudently manage the client’s funds.

The Charrette Process
The District undertook a comprehensive approach to reimagine the way high school education would be delivered District-wide (see more in the School & Community Engagement section). To support this approach, the re-design of Kelly Walsh took place alongside three other building projects within NCSD: a major renovation/addition for its other comprehensive high school, a new specialized high school, and a replacement project for its alternative high school. This approach helped to establish the framework needed for a District-wide transformation of education at the high school level.

In contrast to a traditional design charrette typically held for a single project, these charrettes were not meant to address conceptual design and spatial organization within each individual school. Rather, this District-wide charrette process focused on two primary outcomes:

1. Identifying how education would be delivered throughout the District as a whole, and
2. Clarifying how each of these new facilities would fit into the larger picture of education in NCSD.

It was at the conclusion of this District-wide planning process that the decision was made to change the scope of the KWHS project from a major renovation to a full replacement school.

The KWHS Program
Following the charrettes, the program was clarified for Kelly Walsh. NCSD identified that KWHS was to be designed as a new, 336,000-square-foot, comprehensive high school that would both support the District’s Career Pathways curriculum (see more on Career Pathways in the Scope of Work section) while also maintaining a full-spectrum, diverse offering of educational opportunities for its students.

The Design and construction of the new Kelly Walsh High School spanned seven years and navigated numerous political challenges in regards to educational programming, project funding, and owner-initiated pauses in work. The new building responded to the difficult challenge of replacing the existing school on its existing site while keeping the current high school in operation, while also retaining and renovating a theater and indoor pool from the original facility. In a school of choice District—a District in which all three high schools were either completely renovated, expanded or replaced entirely—Kelly Walsh is enjoying the District’s highest enrollment (in excess of design capacity) due to community support for its educational vision and the implementation of a design that supports the school’s ability to uphold its unique spirit.
School & Community Engagement

The Casper Community
Casper is a city in central Wyoming, home to around 60,000 in population. It is nicknamed “The Oil City” and has a long history of being an oil boomtown with a cowboy culture. The community is practical-minded, values self-sufficiency, and emphasizes the value of hard work. Casper is located in east-central Wyoming at the foot of Casper Mountain, along the north end of the Laramie Mountain Range and adjacent to the North Platte River. The city is accessed primarily by Interstate I-25 and has a semi-arid climate with long, cold (but dry) winters and dry summers. High wind is also typical.

Casper remains a hot spot for mining and petroleum exploration industries. Cattle and sheep ranching on the outskirts of town is still strong. Its medical industry is strong with some of the largest hospitals in the surrounding area. Tourism is growing due to Casper’s proximity to outdoor activities such as hiking and fishing, as well as community events like rodeos. All of these attributes make KWHS’s programs (in particular, Career and Technical Education) important for retaining citizens in the Casper community.

Overview of District-wide Projects
Before the project began, NCSD determined that the existing Kelly Walsh was inadequate in a number of ways, both educationally as well as physically. While there was plenty of space within the building, it was organized inefficiently, lacked clarity, and had fallen into disrepair.

The District determined that four major design and construction projects would occur concurrently throughout the District:

1. Demolition, Replacement, and Renovation (of retained Auditorium and Aquatic Center) scope on Kelly Walsh High School (KWHS) campus.
2. Demolition, Renovation, and Addition scope on historic Natrona County High School (NCHS) campus.
3. Replacement of Roosevelt Alternative High School (RHS) on a new, third high school campus.
4. A new Center for Advanced Professional Studies (CAPS) on a new third high school campus—a facility to be attached to, but compartmentalized from, RHS, and shared by students of KWHS and NCHS. KWHS, NCHS, and RHS would support intermediate exploration in each of the District’s four Career Pathways in a comprehensive high school setting, and CAPS would support advanced “capstone” coursework in each Career Pathway in a shared setting at a separate location.

Image Sources: Above Left: Downtown Casper Business Association. Above Right: washingtonpost.com

Source: (1) Paraphrased from city-data.com

Map of Natrona County SD High School Facilities Projects
Existing KWHS Site Plan
School & Community Engagement

A Complex Set of Stakeholders
Funding for the project was delivered by two entities—the Wyoming School Facilities Department (WSFD) and the Natrona County School District (NCSD). Additional constituents comprised the rest of the Design Advisory Team and included teachers, administrators, the District Curriculum Team and Maintenance Departments, as well as the NCSD Board of Trustees and the State’s Value Engineering Team. Managing the interests of this complex set of stakeholders required a delicate balance of listening skills, as well as discernment, and, ultimately, a great deal of consensus-building.

KWHS Staff and Student Culture
When the Design Team first visited KWHS, they stopped several students in a hallway and asked them, “Who is Kelly Walsh?” They replied, “We are Kelly Walsh.” The Principal would often leave design meetings during class changes to stand in the hallway to connect with each of the students passing by. During the commencement ceremony each year, he mentions every student in the graduating class by name and tells a brief story about each. Having worked on dozens of educational projects, the sense of community, belonging, and pride is palpable in this school.

Input for the New Kelly Walsh High School

**What is a Project Design Advocate?**
The KWHS Administration identified two individuals employed at KWHS who served as liaisons between staff, students, administrators, and Design Team. They were critical to enabling this project to achieve such success. The Advocates successfully translated “Architectural-Speak” into “Educational-Speak” and vice versa to ensure the spaces the Design Team were developing supported the activities the Educational Team were envisioning for kids. They kept the Design Team grounded and managed Educator expectations. While this is not a traditional approach to school design, it turned out to be very successful at KWHS. For more on this role, see page 11.
It was most challenging to assure people that they were being “heard” and their concerns and needs were finding their way into the building design. I found that one of the main contributions I could make to the project was evaluating the suitability of the design. Was it going to work? Could I teach in this space? Could I coach in this space? What issues are there that I can identify and correct that a designer could not identify as a non-educator? I spent a great deal of time asking questions of staff to better understand how they function. What does this space need to do? How do you do XX? I felt I was very beneficial to the project as the liaison between construction issues and educational issues.”

- Kelly Walsh HS
Project Design Advocate
Overview of District-wide Planning & Design Charrettes

Purposes, Methods, Outcomes

During April and May of 2011, a Pre-Charrette and two Design Charrettes were first held to explore the Natrona County School District’s vision “to conceptualize a fundamentally different learning experience for 21st century high school students, one that engages and inspires every learner to become a champion.” These charrettes took place to explore how education would be delivered district-wide, and how the building projects for each school played a unique role in supporting this vision.

The KWHS project (as well as the additional projects in the District) represent the implementation of this District-wide vision. Since these projects were viewed as one program being implemented in three locations, the combined Planning and Design charrettes were planned and executed collaboratively by the three project design teams with a third party charrette facilitator. They took place in three “Sessions,” outlined next.

Session #1: Pre-Charrette

Purpose: The non-public, two-day Pre-Charrette served as a single, large group forum for all involved in the three projects to get to know each other and discuss District-wide project goals, parameters, and inter-dependencies around the common District vision. This pre-charrette also served as a planning meeting for the two design charrettes that followed.

Method: A work session with representatives of the WSFD, District Administration, School Administration, the three Architectural Planning and Design Firms, and the two pre-selected Construction Firms. This group discussed the District’s vision and designed a process to implement that vision, defining key stakeholder groups and forums for input, lines of communication, decision-making protocols, and a timeline to define a path forward.

Pre-Charrette Outcomes:

- NCSD presented their vision and key documents guiding the future of District Education.
- WSFD and NCSD commitment to enrollment numbers and confirming square footage and enrollment for each project. KWHS will have 1,600 enrolled with seats for 1,450 because 150 will be at CAPS at any given time. Square footage allotment will be based on 1,450 seats.
- WSFD and NCSD commitment to support creation of Steering Committee, Program Leadership Group, Principals Group, and Core Design Team Group to facilitate timely decision making.
- Total project budget appropriation of $110 million for KWHS.
- Directive that outdoor public pool can be demolished at KWHS.
- Requirement that students shall remain on their home campuses during construction.
- Requirement that modular classroom buildings shall not be utilized during construction.

The Intent of the Charrettes

The planning and design charrettes all centered on the original project scope—that KWHS would undergo a “major renovation.” The more clearly the District’s vision came into focus during the charrette process, the more clear the disparity became between KWHS as it is today and KWHS as it needed to be, ultimately leading to the decision to replace, rather than to renovate.
Session # 2:  
“BIG PICTURE” Charrette  

**Purpose:** The public, three-day, “Big Picture” Charrette was a community relations event for the District to explain their District-wide vision to the community as well as a time for the design teams to challenge the community’s assumptions about educational spaces and to share their knowledge of current trends in educational facility design.

**Method:** The charrette opened with an evening “Movie Night,” during which a series of video prompts on educational trends was shown and discussed. The subsequent two days were filled with both large group and small group activities to stimulate discussion and ideas. The charrette culminated in a discussion of how the three high schools might be conceived as a holistic system of education, and development of a list of “Guiding Principles” to be used for future design direction.

**Charrette Outcomes:**
- Community exposure to current trends in education.
- List of “Guiding Principles” for all three design projects, including important concepts like, “the inclusion of professional work settings,” “flexibility,” and, “inclusion of a variety of teaching settings.”
- Specific guidelines around NCHS and CAPS projects (not KWHS project).

Session #3:  
“EXPLORE THE DETAILS” Charrette  

**Purpose:** The public, three-day, “Explore the Details” Charrette was a time for:
- the three project teams to meet individually to discuss project specific issues.
- the three project teams to meet simultaneously so the Owner and design teams were able to gather as a large group periodically to discuss District-wide issues as they came to light.

The charrette culminated in a public presentation by each project team.

**Method:** Since at this time the KWHS project was still on track to be a major renovation, during this charrette, the KWHS design team presented a technical assessment of the existing facility and led the KWHS stakeholders through a discussion of “Losers and Keepers” to determine aspects of the facility that were central to the KWHS identity (see next page). The design team also led a discussion and exploration of organizing the overall school around multiple smaller Professional Learning Communities (PLCs), each of which could align with a Career Pathway. In preparation for the public presentation on the final day, the design team facilitated small group development of their ideas around PLCs, site planning, and overall building planning.

**Charrette Outcomes:**
- District revision of enrollment numbers.
- District presentation of high school system diagram to define roles of each school.
- District statement that building organization is up to the individual school administrations, but should be flexible enough to accommodate a departmentalized or multi-disciplinary approach.

(Specific to Kelly Walsh)
- List of KWHS “Losers and Keepers.” The design team did a great job at keeping all the things KWHS listed as important. For example, the exterior “courtyard” ended up turning into an interior “courtyard,” which actually became more practical considering Wyoming’s weather.
- Expansion of KWHS staff and administration project thinking.
- Unified KWHS vision of a “Professional Learning Community” within the Comprehensive High School model, such that students would be in their own learning community to facilitate more personal relationships with peers and teachers while feeling more like a higher education setting with departmentalized organization.
- Exposure of KWHS students to the design process and student involvement in the early design process, including exposure to massing tools and computer software.

---

**Planning Process Outcome:**
How did this major renovation turn into a replacement?

Heavily phased renovation work would have negatively impacted the students’ high school experience. Logistically, the only way to accommodate the large number of displaced kids during renovation work would have been to set up a modular village onsite. This was neither a practical nor an acceptable solution. Educationally, a total replacement would better serve students. Financially, a total replacement would better manage funds. In the end, keeping in mind all of these parameters, a total replacement made more sense.
School & Community Engagement

“Losers”
(Things that could go away in the new building.)

- Cafeteria Location
- Exterior Aesthetic
- Plumbing, HVAC
- Underground Storage
- Site Traffic Congestion
- Scattered Programs
- Windowless Spaces
- Hallways
- Ceiling Tile
- Wrestling Room
- Wayfinding
- Bizarre Small Spaces
- Combined Choir and Orchestra
- Lockers
- Shop Systems
- Entry
- Lack of Technology
- PE Locker Rooms
- Sprawl
- Pool Configuration
- Main Gym Configuration
- Bathrooms
- Number of Exterior Doors
- Portables
- Administration Wing

“Keepers”
(Features the new building should retain.)

- Courtyard
- Having a Green Area
- Intercom
- Traffic Circle
- Stadium
- Gym
- Having a Pool
- Wall Paintings
- Theater
- Principal Diller
- Weight Room
- Orchestra Program
- Shop Spaces
- Theater Program
- Large Learning Spaces
- Art Room
- Library
- Fine Arts Program
- Cafeteria Flow
- Trophy Cases
- Departments

Top to Bottom: Existing Courtyard, Existing Wood Shop
**Scope of Work & Budget**

**Design Challenges**

While the primary driver of designing the new school was based on improving the deficiencies presented by an aging facility, several additional challenges were common threads throughout the design process:

1. **Stakeholder Involvement**
   In lieu of one Ownership Entity directing the Design Team, the Design Team was relied upon to interface with and assimilate design direction from a diverse group of Ownership stakeholders (see diagram on page 4), including the Wyoming School Facilities Commission (WSFC), WSFD, State Value Engineering Team, Natrona County School District (NCSD) Board of Trustees, District Curriculum Department, District Facilities and Maintenance Departments, existing school site Administration, Staff, Students, and the Casper Community.

   The District-wide initiatives also necessitated collaboration with peer Design and Construction firms during the visioning and charrette phases.

2. **Scope Transformation**
   The scope evolved throughout early design, beginning as a major renovation, transforming to a complete new build, and finally, defined as a mostly new build integrating some retained elements (pool and theater). At various points during this journey, the design team was called upon to fundamentally re-imagine the project. Each time, working with the Construction Manager at Risk (CMAR), the team rose to the occasion to keep the project moving forward.

3. **Complex Phasing**
   Perhaps one of the most complex pieces of the project was to implement a construction phasing plan for this building on the current site that allowed for the existing building to remain fully operational through construction, neither relocating students for any part of construction nor employing the use of modular classrooms. In addition to these challenges, vehicular delivery and parking necessary to keep the existing school in operation was to remain on site, and the existing grade change was significant—approximately 100 vertical feet from corner to corner. Lastly, a requirement was for the remaining site open space to stay in use as a large athletic and activity complex throughout the duration of the project.

4. **More Efficient Use of Space**
   For reference, the enrollment of the existing KWHS matched the design enrollment for the new building (1,600 students). However, it was desired to develop a more efficient building that would maintain that capacity while reducing the overall square footage of the facility by 17,000 square feet from the existing building’s size.

---

The concept for the school’s replacement included designing a new facility for the existing site, retaining and integrating the existing theater and indoor pool, both to be renovated.

Early in design, several concepts to renovate the existing facility were explored (above). Once it was determined a full replacement school would be the best solution and most prudent management of the client’s funds, site parameters primarily dictated the form of the new building (right).
Scope of Work & Budget

Understanding the District’s vision for the overall educational ecosystem, our attention turned to optimizing the KWHS learning environment—to understanding the day-to-day activities that should be occurring at KWHS, and creating the spaces and arrangements of spaces to support those activities.

Insufficiencies at the Existing Kelly Walsh High School
Several key deficiencies in Kelly Walsh were identified from the project’s beginning:

**Organization of the Space**
The existing building had more than 100 exterior doors entering into the facility. It was difficult to identify where the front door was located, there was no clear entry to the site, and the campus itself felt like a sprawling, confusing set of spaces that lacked effective wayfinding.

**Aging Facilities in Disrepair**
The existing building was full of asbestos, had moving soils leading to walls that bowed in classrooms, and the site had challenges with occupants parking in obscure places between the many wings of the building. Overall the campus felt like a “free for all.” Modular classrooms were onsite housing excess students, and the HVAC system was not working properly and leading to extreme temperature fluctuations within the building.

**Lack of Accessibility**
Because the grade changed 100 feet from corner to corner of the site, there were many level changes within the building. The existing facility was difficult to navigate and exterior access for deliveries, as well as those with disabilities, was poor.

**Lack of Security**
Because of the many entrances into the building, it was difficult for administration to monitor and control access of both students and the public.

**Access to Mechanical Systems**
The school’s original mechanical systems were located in numerous places throughout the building, including a penthouse in the gymnasium, a sunken boiler room off the loading dock, and an old tunnel system that housed high voltage and hydronic piping. In addition to being confusing, inefficient, and difficult to maintain, systems were at the end of their service life.

Left to Right: Existing crowded hallway, existing main entry, existing theater, existing pool
Keys to Success of the Project
In a project of this scale, many factors led to the success of the project. Three major factors included:

A Thorough, Engaging, Collaborative, Planning and Design Process. High quality communication ensured expectations were met, and that the process was fun and rewarding. Clearly articulating project constraints and opportunities to all project Stakeholders, as well as “defining the role” of each Stakeholder, and then incorporating Stakeholder input in a meaningful way, led to a successful project.

Development of Clear Guiding Principles to ensure this specific project reflected the unique perspective and values of this unique group of Stakeholders. Guiding Principles ensured that the project was intimately bonded with its place (See page 14).

The Inclusion of A “Design Advocate” Role
Managing such a diverse group of stakeholders with competing visions and requests was challenging to navigate. The inclusion of Design Advocates—two individuals employed at KWHS who served as liaisons between staff, students, administrators, and design team—were critical to enabling this project to achieve such success. The Advocates successfully translated “Architectural-Speak” into “Educational-Speak” and vice versa to ensure the spaces the Design Team were developing supported the activities the Educational Team were envisioning for kids. They kept the Design Team grounded and managed Educator expectations.
Student Enrollment: 1,600

Site Size in Acres: 50

Construction Cost: $86,600,000

Number of Construction Phases: 6

Completion: August 2018

Existing Facilities Repurposed Onsite: 2

Theater & Pool

Attendees at Typical Charrette: 100+

Pre-Charrettes: 16 Hours

Design Charrettes: 48 Hours

Focus Group Meetings: 48+ Hours

Funding Sources: 3
Design & Construction Schedule

**Concept & Design Milestones**

2012
- **JULY**: Project Re-start Meeting 7/2012
- **OCT**: 3 Preliminary Design Concepts Submitted 11/2012
- **NOV**: Conceptual Design Direction Selected 11/2012
- **DEC**: Site Master Plan with Phasing Approved 11/2012

2013
- **JULY**: Ground-breaking 7/2013

**Design Phases**

**Phase 1**: Demo existing parking lots, existing outdoor pool, build temporary parking lot (Summer 2013 - Fall 2013)

**Phase 2**: Build new building (Fall 2013 - Summer 2016)

**Phase 3**: Theater renovation and Aquatic Center (Summer 2016 - Winter 2016/17)

**Phase 4**: Demo old building (Summer 2016 - Spring 2017). Kids move over to new building for Fall 2016 semester.

**Phase 5**: Music wing renovation (Winter 2016/17 - Fall 2017)

**Phase 6**: Build new parking lots over existing building site (Spring 2017 - Fall 2018)

*Exterior view looking towards the main entry.*
Educational Environment

Guiding Principles & Parameters

While a list of Guiding Principles was developed during the design charrettes, it was originally focused on a building renovation. Several parameters were better clarified once the project became a replacement school. The complete list of Guiding Principles is below.

Collaborative Learning Communities
- Professional Work Settings
- Relationship-Based Learning Settings
- Global Connections
- Transparency

Inventive Learning Settings
- Flexibility to Support Differentiated Learning and Teaching
- Variety of Settings to Serve Diverse Needs
- Furnishings that are Adaptable and Agile
- Ubiquitous and Flexible Technology

Meaningful Community Partnerships
- Welcoming Space for Mentorship
- Lifelong Learning Opportunities
- Stewardship of our Planet and its Resources
- Service to our Community

A Culture of Empowerment
- Shared Ownership of Learning Settings
- Personalized Learning Settings
- Services Distributed to Serve Students
- Celebration of Student Achievement
- Safe and Secure Environments

Planning Process Outcome: Identifying the New Building’s Form

The new building’s footprint integrated requirements from the Guiding Principles; however, it was also heavily dictated by real-world constraints. The building’s linear form was the result of limited options for placement on the site. The level changes within the building worked with the contours of the land, and placement of the building had to work such that the existing facility could remain in operation during construction while also preserving the athletic fields.
Spatial Organization
In concept, the building is organized in a linear fashion around an interior court or commons, reminiscent of the existing school’s large—and much beloved—exterior courtyard. The athletic and industrial arts areas anchor the west end of the building, performing arts and common areas make up the center of the building, and core academic areas anchor the east end of the building. The large athletic areas were located on the west for their proximity to existing play fields and to take advantage of the grade change across the site to reduce the massing prominence of these “big box” spaces.

The new building has three primary floor levels. One enters in the center of the building on the middle level, the largest of the levels. Traveling west, one descends a grand staircase to a lower athletics and industrial arts level. Traveling east, one is in the core academic area and may ascend to an upper level, on which the core academic area is largely repeated from the middle level. A two-story tall media center located in the center of the core academic area serves as a sub-commons anchoring this area. Previously a wing of the existing school, the existing indoor pool was transformed into a free-standing aquatic center.

Pathways & General Studies
The district indicated a desire to architecturally express the idea of the school’s four learning academies (see more on page 18). This resulted in the form of two sets of stacked learning communities (four in total). The idea of “four” also aligns with the KWHS “four pillars of learning.”

Educational Mission of KWHS
This 21st century learning environment supports the District’s educational mission by offering learners varied scales of space, flexible space configurations, daylighting, and specialty labs to better prepare students for occupations as practiced in the “real world.” Notable aspects of the design support the educational environment:

- **KWHS has very few traditional hallways.** Instead, learning communities use circulation paths as an opportunity to create varying sizes of small group spaces.
- **Studio spaces on north side of building feature a lot of glass** to showcase art, engineering, robotics, and journalism projects to spark curiosity from other students. Glazed studio spaces also function as large windows for interior classrooms (interior classrooms without exterior windows can still have a view outside).
- **Teachers do not own their rooms,** similar to a higher education setting. They share a multi-purpose work room, lounge, and collaboration space with other teachers that also serves as their home base. These are located in the center of each learning community which allows for more flexibility of space when it comes to scheduling and opportunities for collaboration.
- **The main commons serves many purposes.** It’s a gathering area before school, a breakout classroom during the day, a lunchroom midday, and a place for after school functions.
- **The focus on Career and Technical Education is a strong feature of Kelly Walsh** and a direct response to its community. This emphasis on CTE and specialty labs is to help encourage youth to stay in Wyoming and to help elevate Casper’s industries to be on par with other major metropolitan areas. Wyoming is the fastest depopulating state and it’s disproportionately young people leaving. The “brain drain” is very real in Wyoming. In response, KWHS was designed to offer a variety of vocational training and strives to expose kids to many different industries with the hope that they will remain in Wyoming [1].

Source: (1) https://www.forbes.com/sites/jennaarnold/2018/02/13/wyomings-next-frontier-computer-science/#73288c4a3252
1. Administration
2. Performing Arts - Music
3. Performing Arts - Theater (Retained + Renovated)
4. Performing Arts - Drama (Retained + Renovated) and scene shop (4b)
5. Legacy Learning Stair
6. Indoor Dining Commons
7. Outdoor Dining Commons
8. Culinary Arts Studio
9. Student-Run Coffee Shop
10. Student Tech Support
11. Production Kitchen + Building Receiving
12. Core Academics (4 Thus)
13. Pathway Studio (Applied Electives)
14. Pathway Studio (Applied Science)
15. Student-Run Store
16. Outdoor Kiln
17. Learning Commons
18. Wrestling + Dance
19. Auxiliary Gymnasium
20. Main Gymnasium
21. Locker Rooms
22. Fabrication Lab (Automotive)
23. Fabrication Lab (Woods)
24. Fabrication Lab (Welding + Metals)
25. Fabrication Lab + Greenhouse (Agriculture)
26. Building Storage
27. Indoor Track + Field Practice
28. Workout Studio (Weight + Cardio Equipment)
29. Boiler Room
30. Full-Height Crawl Space (Building Infrastructure)
Program for the New KWHS

Overall Program

Kelly Walsh was designed to serve as a comprehensive high school that would both support the District’s Career Pathways curriculum while maintaining a full-spectrum, diverse offering of educational opportunities for its students.

At the District level, exploration in the District’s four Career Pathways begins in junior high school. Intermediate and advanced exploration is supported in the three comprehensive high schools, and advanced certificate-level exploration is supported in highly specialized, shared spaces at CAPS—an opportunity for students desiring to head directly into the workforce after high school the opportunity to graduate from certificate programs and be equipped to work immediately.

At the individual school level, KWHS had a long and proud history of providing advanced coursework in Career and Technical Education (CTE) long before the District formalized its Career Pathways program and the CAPS concept emerged. KWHS leadership desired to retain and improve their current set of comprehensive offerings, including their career specialties. This required a bit of a balancing act from the design team, as the school sought to retain and improve their existing Pathways programming and the District sought to shift some of the more advanced programming to CAPS.

NCSD’s Definition of a Career Pathway:

A career pathway is a course of study available to students that includes college–preparatory curriculum, industry certifications, portfolio development, and internships. Coursework is delivered in the 11th and 12th grades which builds on introductory experiences in previous grades. Experiences are aligned to student interests which fulfill community needs. The Career Pathways courses enable students to graduate high school with professional certificates (or be well on their way towards obtaining professional certificates) and enter the workforce sooner than those planning to attend college.
Organized Around Learning Academies

The core academic spaces within the new KWHS plan are organized into four units of similar configurations, for several reasons.

First and foremost, they are representative of the District’s four "Career Pathways", which the District formalized into four Learning Academies within Kelly Walsh:

1. Academy for Creative Arts, Communication and Design (CACD)
2. Academy of Business, Agriculture and Natural Resources (BANR)
3. Academy of Architecture, Construction, Manufacturing, and Engineering (ACME)
4. Academy of Health Sciences and Health Services (HSHS)

Being an academic construct and not a physical construct, coursework for all of the Academies occurs throughout the facility. Beyond representing the four Academies, the four units serve to break the overall facility down into smaller communities of learners, an approach educators know to be effective in engaging students by fostering student-student and student-teacher relationships. Science is distributed across all four of the units for flexibility; each unit contains applied science spaces, direct instruction spaces of varying sizes, collaboration spaces of varying size and configuration, teacher support areas, and student support areas. This flexibility enables administrators to potentially organize their school by Academy, or by grade level, or by another construct, with the intent the facility provide high quality support as educational approaches shift.

Specialized Spaces

In addition to core academic spaces, many specialized, purposefully-designed spaces are included to support a comprehensive high school program.

Theater

The major need for the renovated theater was to address the aging space as well as inadequate acoustics and seating that had fallen into disrepair.

Athletics

While the culture at KWHS was phenomenal, their existing athletics facilities were lacking. Five new basketball courts can be used simultaneously and interior space (allotted to accommodate Casper’s climate) includes a practice running track, a practice pole vault area, and a practice long jump area.

Aquatic Center

The existing pool was adequate in size but very old and had major system issues including inability to properly circulate water, flooding in some spaces when it rained, and a non-compliant pool deck that drained back into the pool. The primary need for the new Aquatic Center was to provide a code compliant pool with adequate support spaces for swim meets (including locker rooms, staging rooms, and concessions). The existing spectator seating was retained (350 spectators). The new pool was actually reduced in size from 25-meters to 25-yards to better accommodate US High School Competition Standards.

Shops/Career and Tech Ed

The new KWHS includes a Wood Shop, Welding Shop, and Automotive Shop of sufficient size to support hands-on student learning through the use of full-size equipment to create full-size projects.
Typical Learning Community/Core Academic Area

- Applied Learning & Science
- Teacher Collaboration/Work Room
- Direct Instruction (Single)
- Enclosed Collaboration Space
- Direct Instruction (Double)
- Open Collaboration
- Direct Instruction (Medium)
- Open Collaboration
- Learning Commons/Media Center
- Intervention (SPED, Credit Recovery, Tutoring)
- Applied Learning & Pathways Studios
**Physical Environment**

**Identity**
While some groups struggle to explain who they are, on many occasions, the Design Team found ourselves negotiating with the Project Design Advocates to exercise restraint in expressing their identity on every available surface (in a few cases, they simply waited patiently to move forward with an inspiration until we returned to our office). Whether fostered by a more intense than usual cross-town rivalry or by incredibly insightful administrative leadership, Kelly Walsh High School is a true community of learners; interacting with this group, one can feel the strong sense of belonging that has been created through their shared educational experience. Referencing community and continuity became important throughout the facility.

**Spatial Organization**
The new KWHS features a simple and elegant exterior facade. Intricate spacial relationships occur on the interior of the building rather than the exterior, which results in an efficient and economical building facade.

As opposed to the existing school’s disjointed and confusing floor plan, the new KWHS places an emphasis on clear organization and wayfinding. The central commons is a hinge point between typical classrooms, larger scale shops, athletics, and performing arts.

Traditionally, teachers are assigned to a specific teaching space. Square footage and space utilization parameters required a design approach where teachers share teaching spaces and “office” elsewhere in the building.

“We were concerned about building a connection between the old building and the new for our alumni. The grand staircase has been the crucial link. The alumni groups love the floor from the old gym and express enthusiastically that “this IS Kelly Walsh” when they see it on the grand staircase. The grand staircase has become the focal point of lunch and after school activities. It is magnetic. There is almost no time of day when it is not full of kids.”

- Kelly Walsh HS Project Design Advocate
District Equity
Equity with other schools came through in several ways.
• Providing ample performing arts spaces. The existing theater was retained and renovated.
• New music learning spaces were constructed north of the Theater.
• The existing indoor swimming pool was retained and renovated into an independent, free-standing aquatic center.

• Featuring three full-size basketball courts, the Main Gymnasium is sized to hold the entire student body for all-school events. Look down into the gym from the window by the Grand Stair.
• Many a KWHS student athlete spent time in the Underground Gym and running laps in the corridors looping the courtyard. The Indoor Practice Track is a blending of the two with a modern spike friendly running surface.

Inspiring Spaces
Abundant natural light, visual connectivity (between both spaces and levels as well as the interior and exterior), spatial variety, and a simple and elegant material and color palette, create an educational environment that says, “we trust you and we support you as an individual.” This stands in stark contrast to more traditional opaque and repetitive educational environments in which one feels one is one of many and directed as if one cannot be trusted to direct oneself.

“Noise is well managed throughout the building. Students in the hallway spaces can work and interact without disturbing the classrooms or other spaces down the same hall. If the acoustics were not controlled, the spaces would be unusable.”

- Kelly Walsh HS
Project Design Advocate
Our tutoring and literacy teachers have taken informal spaces and turned them into very effective intervention areas for extra help or enrichment.”

- Kelly Walsh HS Project Design Advocate

Things are constantly moving. A small group of kids may occupy a space in the hallway for 20 minutes and then adjourn back to the classroom. Multiple classes meet together in the lecture hall for a guest speaker or special project. The breakout room doors are opened into the larger classroom and then closed again for a small group. These spaces allow teachers to try things, be creative, and create new lessons to utilize these spaces in new ways. Students with special needs such as small group or individual accommodations are easily accommodated due to these designs.

- Kelly Walsh HS Project Design Advocate
I would also reference a quote by a school board member after touring [KWHS] late in the construction process: “Your building reflects your values”. In the end, I think what makes our design, and especially our final product, is the focus of the team. Collaboration, input, inclusiveness. Nobody, or few, got everything they wanted, but everyone got something. No one program or class or sport was emphasized over others. All parties had their needs met. All Trojans were considered.”

- Kelly Walsh HS Representative
Physical Environment

“The flexibility of space: large group rooms, lecture halls, movable walls, small group rooms, informal spaces...all of these have become routinely used learning spaces in our building.”

- Kelly Walsh HS Representative

Clockwise from Top: Second floor commons space, science classroom, Aquatic Center lobby, media center.
Physical Environment

Clockwise from Top: Gymnasium, Aquatic Center, Theater, Indoor Track and Weight Facility
In its first year open, the new KWHS exceeded enrollment capacity by 330 students. In a school of choice district, this is an astounding achievement. Its unique culture, tight-knit student community, and history were all incorporated into this new facility.

When the Design Team was retained to renovate KWHS, a thriving community of learners was discovered inside a sprawling, aging facility rumored to have been designed for the temperate California climate and imported to the highlands of Wyoming. Hastily and poorly constructed during a boom cycle in a boom-bust city, the existing facility neither supported nor reflected the values and aspirations of its current occupants. Initially picturing a renovated outcome within the confines of the existing facility, the District soon realized their vision was larger; through the design process, they came to imagine the “do over” opportunity of bringing their facility into full alignment with their vision. While their facility would be new, and new is nice, more importantly it would support activities that it previously limited.

With a variety of sizes, the educational space supports the traditional grouping of a single class, but also individuals, pairings, small groups, and large groups, in a variety of settings—formal lecture, applied lab, and open and unstructured spaces—to provide choice and agency for students.

Daylight is plentiful throughout the building, creating more natural learning conditions. Strong visual connections through transparent design promote community, security, and curiosity—“I want to do what those people are doing.”

Sized to seat the entire student body, the gym fosters community. Additional gym court space gets students back home with their families sooner (practices were running until 10 PM or later at night in the existing facility). An indoor practice running track gets the Cross Country Team out of the hallways during inclement weather and extends their training through the harsh winters.

New, larger music spaces better support an already thriving performing arts program with better acoustics and additional practice rooms. The existing theater was retained and renovated, adding accessibility and contemporary theatrical equipment.

New applied learning labs for automotive, wood, and welding safely accommodate more students with improved infrastructure to serve the large waiting list of students drawn to these opportunities, but who could not participate previously due to facility restrictions. Labs for agriculture and culinary arts were added to further expand opportunities.

Books are now be stored centrally in a high density storage system to reduce clutter. A high density storage system was also be deployed for athletic equipment, maximizing expensive new square footage for higher purposes. Clutter was further reduced by equipping found space in the crawl space with fire sprinklers for long-term storage.

The magic of this project lies in the clarity with which the KWHS Design Advocates understand who Kelly Walsh wanted to be and articulating that to a Design Team, who then harnessed the power of Architecture to support this District’s grand vision for educational design.
Results of the Process & Project

Several programs have grown (some of them brand new programs that only exist due to a new facility). Agriculture, indoor track, JROTC, wrestling, power lifting, culinary arts, and film/TV have all grown significantly due, in no small part, to having a state-of-the-art new facility.”

- Kelly Walsh HS Project Design Advocate

KWHS has a rich Career and Technical Education tradition. This tradition continues uninterrupted in four new shop spaces: Agriculture, Wood, Welding, and Automotive. Culinary Arts is also an important career prep program.
We continue to set enrollment records. In a school of choice district, this means that kids continue to choose to come the Kelly Walsh in record numbers. We got our money’s worth, wrung every cent out of our project, got the most bang for our buck, spent our money wisely, lived our values, built lasting friendships, and had the time of our lives. We had no idea what we were signing on for when the process started. Nobody told us how to do it, so we just did it like everything else: have a ton of fun and take care of the people.”

- Kelly Walsh HS Representative
Our test scores have moved from next to last in Wyoming to 4th... a huge, huge jump. For the first time in years, other schools are visiting KWHS to find out what we are doing to create such growth. The role of the new building in all of this cannot be quantified, but it also cannot be dismissed. Our bricks finally match the quality of our people.

- Kelly Walsh HS Representative