



Peter Kirk Elementary School

Modernization vs. New-in-lieu of Modernization Report

January 2016

Summary

In consideration for a potential 2016 Bond measure for the Capital Facilities Program, Kirk Elementary School was evaluated to determine whether modernization/addition or building New-in-lieu (i.e., rebuild) of the existing school on site was the better approach to meeting the district's long-range educational and facilities goals. Based on enrollment projections, the 30 classroom (550 students) Educational Specification standard was applied to both modernization and rebuild new approaches; with a building program of 78,000 square feet. The process included on-site visits, physical condition analysis, evaluation of the existing school's program fit with the District's educational delivery standards, review of OSPI guidelines, construction-phase logistics and comparative cost estimates.

To most effectively meet the District goals, it is recommended that Kirk Elementary School be rebuilt new rather than modernized.

Considerations	Modernization	New in Lieu (Rebuild)
Temporary Housing	Requires temporary housing during construction	Temporary housing is not required
Moving & Disruption	Greater disruption to the educational process - requires movement of functions because of multiple phases	Less disruption to the educational process with current building in use during construction
Phasing	Complicated with temporary housing	Least impact
Schedule	Longer construction schedule	No impact
Bus and Parking	Limited improvement	Greater potential for improvement
Program	Does not fully meet current Educational Specification due to existing building constraints	Fully meets current Educational Specification
Maintenance, Operations and Resource Impact	Less efficient and more impactful on resources due to building configuration	More efficient and less impactful on resources, meeting current performance standards
Site Safety	Building built to outdated safety standards	More safety improvements with rebuild
Future Expansion	Few expansion options due to existing layout and site constraints	Includes future expansion options

Construction Cost Estimate Comparison Chart (2016\$)

	Modernization/Addition	New-In-Lieu
New Construction	-	\$21,060,000
Addition	\$11,650,500	-
Modernization	\$9,963,000	-
Demolition	\$485,235	\$539,150
Site Construction	\$2,750,000	\$2,753,500
Temporary Housing	\$800,000	-
General Conditions	\$2,172,000	\$2,172,000
Totals	\$27,820,000	\$26,520,000

The Cost Model illustrated above demonstrates that the cost to modernize Kirk Elementary School exceeds the cost of building new in lieu of modernization. Actual bond program costs will reflect inflation to year of construction and other considerations.

Phasing Narrative

Following describes the general sequence of activities associated with each approach.

Modernization/Addition Project

1. Mobilize contractor to site—fence off work area, establish site safety perimeter
2. Construct addition adjacent to existing school
3. Establish temporary housing
4. Relocate students to new addition and temporary housing
5. Complete renovation of existing school
6. Relocate students to completed structure
7. Complete site work, restore site

New-in-Lieu Project

1. Mobilize contractor to site—fence off work area, establish site safety perimeter
2. Construct new school
3. Relocate students to new school
4. Demolish existing school
5. Complete site work, restore site

Analysis of Conditions and Considerations for Kirk Elementary School

Existing Conditions

Original Bldg. Construction	1975
Site Area	12.52 acres (includes newly acquired 3.5 acres Arndt property)
Building Area, GSF	41,395 sf (Per District 2011 inventory of permanent school facilities report to Superintendent of Public Instruction)
	3 Existing Portable Classrooms
Student Capacity	414 permanent capacity/483 total capacity with portable classrooms
2012 Enrollment	528 (2012-13 enrollment)
Proposed Ed Specification Capacity	30 classroom model (550 students)

The Kirk Elementary School site is located at 1312 - 6th St., Kirkland and is approximately 12.5 acres, including a newly acquired parcel NE of the school. The existing elementary school facility is located in the central portion of the site. Drop-off and parking is located along the western portion of the school site along 6th Street with site access and circulation looped around a residential property located on 6th at the front of the school. There are currently 3 portable classroom buildings and a portable storage unit on site.

The school houses students in grades K-5. The existing facility is 7 separate buildings that are connected by covered outdoor walkways and does not have a controlled access point for entry. It is a one-story, predominately masonry structure, organized into 3 pods of six classrooms. Each pod has a shared entry vestibule at each group of three classrooms serving as a coat and backpack storage area and limited pull-out instruction area. Flex space in the center of each pod is currently used for Student Support services (Counselor, OT/SLP, Safety net). Movable partitions, which separate teaching areas, present acoustical and program issues. Three Kindergarten learning

settings and support spaces are located at the SW corner of the building providing direct access for kindergarten student drop-off and pickup at front of school.

School circulation occurs through covered walkways and open courts located outside of each pod. Administration and Library spaces are centrally located in the middle of the pod clusters. The campus has a small gymnasium space but no multi-purpose space, which impacts the food service, gym and music/performing arts programs.

Site Considerations

The site is located in Kirkland on 6th Street in a residential neighborhood with established residential development across the street to the north and west of the site. District has acquired the contiguous 3.5 acre lots located to the northeast corner of the site. Residential properties to the south of the site abut the property line and a single residential property notches into the middle of the 6th Street frontage at the west side of the site. A railroad track right of way/greenway follows the eastern boundary of the site with additional residential development beyond. A wooded wetland area is located on the southeast corner of the site.

The only pedestrian and vehicular access to the site at present is a one-way loop from 6th Street around the residential lot at the front of the site. Present limited circulation configuration presents a congested traffic layout for bus loading, drop-off, parking, pedestrian and bike circulation crossing paths creating an unsafe condition. Modernization goal should be to separate these different circulation elements. Existing hard surface ball court at northwest corner of site is currently being used for additional (staff) onsite parking. Acquisition of property to the NE of the site may open up use of 14th Place, a residential street located along northern edge of site, for additional access to the site.

The site slopes from northeast to west with a play field and an all-weather field located on a slightly elevated terrace at the back and north side of site. An undeveloped woodland area is located at the SE portion of the site, screening residential and railroad corridor located to the east of the site.

Hard court play areas wrap around three sides of the school breaking play area into smaller, less effective areas and making supervision difficult. Covered play areas are located adjacent to Kindergarten and at north of the school, adjacent to the gym. Covered play area near gym is undersized and dark.

Modernization/Replacement Considerations

Site area to build either rebuild a new-in-lieu school onsite or modernization/additions school or with a temporary portable campus phased with ongoing school operations is difficult with limited additional building area, site access and terrain constraints. Addition of property to the NE of the site may help with this condition - opening up 14th Place access along the northern edge of site for a replacement building site in the vicinity of the existing all-weather playfield.

Application of the Education Specification

The current enrollment number indicates the campus should be modernized to house a permanent capacity of 550 students, depending on District enrollment projections and enrollment boundaries. Current school building area of 47,135 sf is less than current District standard 78,000 sf for a 30 classroom (550 student) elementary school. Current classrooms are in a cluster configuration of 6 classrooms with little shared activity and learning support space. Support space areas are typically undersized or missing - for instance no separate Cafeteria/Commons Area exists, which impacts Gymnasium space usage and other program elements. Currently food serving is done in circulation space near the gym, and students typically eat in classroom spaces. Currently there is no Art/Science lab classroom

and the Music program is located in a portable classroom. Adding missing program area to the current plan would be difficult and desired program adjacencies would be difficult to provide.

Core Instruction/Learning Clusters

The LWSD Education Specifications for the elementary school level incorporates a shared learning space in a learning suite, which incorporates 4-5 learning settings (classrooms), small group areas, teacher prep and storage areas, and toilet room facilities. The current layout and utilization of Kirk Elementary does not support this model. Classrooms are grouped in clusters of 6, accessed through shared entry areas via exterior covered walkways and open courtyard areas. A vestibule at each end of the cluster provides entry and storage area for 3 classes typically, but is undersized for pull-out or group activity spaces. Flex space located in each cluster currently houses classrooms or student support programs and is too small to provide the required shared learning, small group and teacher prep area for a 6 classroom cluster. Given the current plan configuration footprint and circulation, it would be difficult to add or create shared instructional space in the existing configuration in line with the current education specification.

Existing classroom spaces are acoustically challenged due to moveable partition systems originally installed between classroom spaces but not currently used. Natural lighting and ventilation is also compromised and inadequate due to classroom configuration and layout. It would be difficult to correct these conditions given the existing structure and plan configuration.

Specialized Instruction

Art/Science Studio - The existing Kirk Elementary does not have an Art/Science instructional studio lab as required in the Education Specification. While an existing classroom could be converted to the Art/Science studio in the conversion to the 24 classroom program, the space would be undersized per the current program requirements.

Music Room

The Music program is currently housed in a portable classroom which is undersized and does not provide the proper room acoustics, storage space or adjacency to the gym or commons with the possibility of opening up to the area as a performance stage.

Resource Room

Space adjacent to Library currently used as Resource Room is dividable by 3, but undersized by current Ed Spec requirements. Shared provider space is also not adequate by current Ed Spec standards.

Library/Media Center

The current Library/Media Center is approximately the right size for the elementary program and the adjacent former computer lab area could be utilized for expanding the Library program. Although the central campus location works well for student access, its location at the center of the campus limits its visibility from the main entry. Per the Education Specifications, the Library entry should be visible, easily identified and accessed from the main entry by parents and the community for non-school hour meetings.

Food Service/Commons

Currently the campus has no commons or cafeteria space and meals are served from serving carts in the exterior walkway area near the existing Gym. Scheduling of PE activities does not allow the Gymnasium space to be set up for food service and lunch activities. Students currently return to their classrooms to eat after picking up food at

this location. The existing kitchen adjacent to gymnasium is undersized per current standards. A new Cafeteria/Commons and upgraded kitchen area are needed per the current education specifications.

Administration and Student Services

Entry to the existing Administration area is not clear and the location, although at the front of the campus, does not meet the goal of visually monitoring the front 'public' side of the school due to the recessed location at the center of the building. Student services programs are typically undersized, sprinkled throughout the existing campus, and are not located in spaces designed for these programs.

Adaptability/Flexibility

Extensive alteration and additions to the existing building would be required for the facility to meet the current Education Specification's building area and educational goals, as well as meeting community expectations. Reconfiguration of the masonry building and systems will be costly and disruptive to the ongoing education program. Phased construction activity and additions will also incur the cost of temporary housing of programs on or off-site. Program support areas such as Gym/Commons, Admin and Library/Media area will need larger areas not easily accommodated within the existing building footprint. Existing building mechanical and technology systems will need extensive updating or replacement. It is not clear whether the existing building can be successfully altered to meet these current building system and educational standards.

Long Term Operating Cost – Sustainability

Given the age of the existing school building (1979) it is likely that it is performing well below current energy standards for both building envelope and systems. Kirk Elementary School consumes approximately 47% more energy per month than modern Lake Washington School District elementary schools. This incurs an added cost of \$13,000 per year to the district operational budget.

The Latest Study & Survey and ICOS scores place Kirk ES at the bottom of Phase 3 facility building evaluation scores. Recent upgrades have been made to the mechanical system, however, building reconfiguration will probably require new mechanical, electrical and communication/data systems to meet current energy standards. The building envelope is also a challenge given the predominant concrete and masonry construction and will require an insulation layer added to the exterior or interior walls (reducing program area). Increasing natural daylighting levels for a typical classroom cluster is also problematic, given plan configuration and existing window layout. Enclosing existing open corridor circulation will also add a large ratio of heated/ventilated circulation space to the overall campus area.

School Use During Modernization/Replacement

Modernizing the Existing Facility

Modernizing the existing facility creates difficulties in housing existing programs during this effort. Whether phased or completed all at once, temporary housing will need to be provided for the current student enrollment. The access, circulation and area constraints on the Kirk Elementary School site make it difficult to provide temporary on-site portable classrooms for the construction period and maintain a safe separation between the construction and education activities.

Additions will also be required with the Modernization approach in order to provide the correct amount of program area.

The modernization effort may not fully meet the intent of the District Ed Specs and the Design Standards and Guidelines for program spaces, goals and relationships. In addition, the modernized facility may not meet stakeholder and community expectations. The opportunity to dramatically improve the school in function and appearance is more likely in a replacement scenario.

Constructing a New School Building in Lieu of Existing

Constructing a new replacement school on-site with the current school building in-use solves the phasing/temporary housing issue. There are also benefits with respect to site access and staging for construction activities, as well as providing safe circulation and outdoor play/activity areas for students and staff during the construction period. Access from 14th along the north edge of the site may help these circulation issues.

Conclusion

As stated at the beginning of this report, to most effectively meet the District goals, the findings of this study recommend that Kirk Elementary School be rebuilt new rather than modernized.

Report Preparation

This study and report was prepared by: McGranahan Architects; OAC Services (construction management); and, RLB – Rider Levett Bucknall (cost estimating)