

HWDSB

ELEMENTARY SCHOOL Design Guideline



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1.1 Executive Summary/Owner's Statement of Requirements

The development of new performance based Design Guidelines for transforming Hamilton Wentworth District School Board's elementary schools is both a timely and critical challenge. Many of HWDSB's aging schools require upgrades and costly repairs to meet curricular demands and day-to-day operations. Added to these significant financial and scheduling challenges are other critical and emerging issues of new curriculum and program delivery strategies, which need to be physically accommodated and resolved in each HWDSB school. These include: student engagement, wellness, universal design (accessibility); special education delivery for personalized learning; sustainability; and the integration of, and possibilities for, technological change to teaching and learning strategies. This guideline informs both new construction and renovations to existing schools.

The Board's elementary schools require change just to keep pace, let alone be exemplars of supportive environments for enhanced student achievement. The objective is to create exemplary learning environments that meet current and future student needs.



The purpose of the Architectural Design Guideline is two-fold: to create a framework and set of guiding principles to enable all of HWDSB's facilities, both new and existing, to better support new trends in educational delivery and enhance opportunities for student success; and to provide a guideline for the Board's new and improved school facilities to ensure that program strategies can meet the needs of all students in the 21st Century including providing students with safe, inclusive, innovative and engaging school environments.

The new elementary school design guideline aligns with key educational principles and values envisioned by the Board. The design guidelines respond to the current and future needs, unanticipated changes in pedagogy, curriculum, technology and learning expectations. The guideline accommodates a robust enough framework to adapt to specific programming requirements, the community needs and diverse existing site issues. School construction will align with Provincial funding parameters. The design guideline includes input from the school community including educators, caretaking and maintenance personnel. The concepts illustrated in the guidelines will demonstrate that new forms of learning will require new spatial conditions alongside the traditional teacher fronted rooms.

Flexibility in curriculum delivery, based on personalized learning, supported by appropriate technologies and quality learning environments are the basis for the design of the new schools and the alterations to existing schools for HWDSB. The guidelines describe learner centered settings which range from specialized to multi-purpose, from formal to informal and from physical to virtual. All new learning spaces will have access to natural light. Renovated spaces will have access to natural light where possible. Wireless network access will be available on demand.



1.2 Purpose of the Document

This guideline is written as a performance based statement of requirements which focuses on the planned educational activities in order to achieve the desired results. This allows for design flexibility which is essential for these facilities since it is meant to apply to both new and existing schools.

Although not written as a prescriptive statement of requirements which is directed more by mandatory codes, standards and regulations, and existing building structural or heritage constraints, these guidelines take into account the Ministry funding formula and will conform to the Ontario Building Code requirements.

The purpose of this guideline is to provide a framework and specific guidelines for the design of the new elementary schools in the HWDSB and to assist in the planning and development of the additions and alterations for the existing elementary schools. The goal is to provide consistent, clear information for the school Board and the design professionals as a new generation of schools are being created for HWDSB. The Design Guidelines establish a uniform level of quality and sustainability for all elementary school buildings. They apply to new school facilities and additions/renovations to existing buildings. The challenge will be to balance between broadly applicable standards and a program delivery for a particular demographic. Further stakeholder, community and student consultation is required in the design and renovation of each school to ensure that the design address specific community needs. The school facility must be responsive to a school district's educational program and demand. The intent of the Design Guideline is to allow the Board to develop building programs and spaces that respond to each school community's unique needs and therefore, the design guidelines will adapt based on the specific and unique characteristics and requirements of each school community and the existing building potential.



1.3 Design Guideline Organization

The purpose of the Design Guideline is to provide the Board and the design professional with design parameters for various program spaces including spatial relationships of programs, program activities and environmental considerations. The design guideline is organized to include a description of all the programs offered by the HWDSB for elementary schools.

The program space summaries provided in the guideline include all the programs offered in the Board and summarize the space requirements for each program space. They will assist the design professional in the placement of programs in relation to each other and in the detailed design of the various spaces. The work sheets include the following information:

- Area: Square foot area given for the room is the necessary area. The area is given in net square feet/square meters and is defined as the area within the walls of the room. Area may differ in renovation projects to suit space available.
- Program Activities: Includes a description of the types of activities that would occur in this space for the specific program.
- Spatial Relationships: Outlines the required or desired adjacencies that the program would have to other programs or spaces.
- Environmental Considerations: Describes what specific environmental considerations the space will need to accommodate the specific program activities, i.e. lighting, HVAC, etc.
- Finishes: Outlines what finishes should be considered for the floor, walls, base and ceilings. The finishes stated for the spaces have been developed based on the function of the room.
- Furniture: Provides general information regarding the furnishings that may be accommodated in each space. This information is provided only for the purpose of assisting the consultant in the layout of each program area. Furniture selection and procurement are not part of this Guideline.
- Fixed Equipment: Describes the casework and equipment to be provided in each space to support the specific program requirements.
- Plumbing, Electrical, HVAC and Technology Systems Infrastructure: Items listed in these sections are elements that are specific to the program space that other regular classrooms may not have. For example, the Construction Technology classroom will have special electrical requirements for specialized machinery as well as special exhaust required for dust, etc.
- Diagrams: Diagrams of the space have been developed to show how some of the features and loose furnishings may be organized. The space is not required to be designed in the configuration shown but shown as an example to assist the design professional with how the space might be organized.
- Casework and visual display boards should reflect the needs of the specific school and its program. The intent of this list is not to mandate casework or visual display boards that may not be needed by a particular program, but rather to be used as a guideline for items that are generally used in this type of space.

1.4 The Planning Process

The HWDSB is responsible for defining the educational mission and vision for the Board's elementary schools and creating learning environments that will meet the current and future needs of the students, parents, staff, teachers, administration and community members. The intent of this document is to take these findings and translate them into a guideline that will assist the design professional in designing the appropriate facilities to meet their needs.

1.5 Participants and Consultation

Through the process of information gathering, the Board's educators and key stakeholders were engaged in a dialogue where they discussed their concerns, aspirations, and their vision for the school facilities through a series of visioning sessions and workshops. Visioning sessions/workshops were held with program/department leaders from various schools where they were permitted the freedom to express their ideas and concerns.



The following Planning Concepts describe a fundamental philosophical approach to the design of all spaces within an exemplary learning environment.

2.1 Welcoming Entry

- The main entry to the school will be familiar and friendly to students, staff, parents and the wider community and should invite and encourage them into the school.
- The main entry should be exciting, inclusive, welcoming and open, light, safe, well maintained and demonstrate the values of the school community.
- The entry will be located in direct view of the General Office to provide direct supervision of all visitors to the school.
- A Separate Quiet and secure entrance should be designed to accommodate students with specific needs.
- Provide space for display of student work.

2.2 Comfort

- Student learning is improved in a comfortable, environment promoting engagement and connections with the other students and teaching staff as a community.
- Spatial configurations, noise, heat, cold, light and air quality directly bear on students' and teachers' ability to perform. The incorporation of environmentally sustainable strategies enhances the quality of the physical environment.
- Comfort is essential to the wellbeing and success of students and teachers.
- Individual seating must take into account different body sizes and the periods of time learners need to occupy seating. Seating should be comfortable and ergonomically amenable.
- Varying types of movable and reconfigurable seating will provide comfort for varying types of learners and pedagogues.
- Responsive heating and ventilation and variable lighting that can be controlled in individual spaces will accommodate different teaching modalities and user needs.
- Students require controlled natural and task-appropriate lighting and interesting room shapes and configurations. Spaces with multiple and accessible light levels help to create interest and engages learners.

2.3 Flexible/Adaptable/Robust

- Students and teachers require a variety of instructional space sizes in order to allow for flexible teaching and learning arrangements. The school environment needs to respond to the varying ways students learn. Both large collaborative group spaces and individual small group spaces need to be accommodated to allow students and teachers the flexibility to adapt to different learning and teaching styles.
- Adaptability and flexibility are critical to effective learning environments, therefore, buildings must be planned to adapt to inevitable changes at minimum expense and little disruption of the educational process. Approaches to learning vary over time and from one staff member to another. A robust design will be able to accommodate flexibility and change comfortably with minimal disruption to the educational process.
- There are a number of strategies that can be employed, such as: providing individual, small group and larger group learning spaces; grouping together teaching areas that can benefit from multiple uses; classroom designs which allow for a variety of layouts; and careful planning of community use facilities that can be easily accessed and secured from other school areas.



2.4 Daylight and Views

- Natural daylight contributes positively to the development and growth of student accomplishment.
- Lighting, day lighting and natural ventilation controls should be available to occupants to customize the comfort of spaces dependent on the current activity.
- Every new learning space will have access to natural daylight, either directly or indirectly.
- Views to the exterior are essential to assist with way finding, passive security and allows for visual stimulation.
- Views will be provided from learning spaces and circulation spaces.



2.5 Transparency

- Designs need to allow for passive supervision by employing transparent materials including glass while incorporating appropriate features for lockdown.
- Rooms that open to each other and allow a connection between learning spaces of different types will support team teaching and interdisciplinary program cross overs.
- Design strategies that address visibility and transparency include:
 - learning clusters which are home to smaller student groups;
 - creating collaborative staff work areas at strategic points with views of circulation routes;
 - interior glazing to teaching areas;
 - open areas providing visibility from one floor to another;
 - and avoiding alcoves that can be used for intimidating activity.

2.6 Wellness

- The buildings physical environment will contribute to the wellbeing of its occupants.
- The ability to control the temperature, lighting and furniture will improve the overall comfort level and encourage students to learn and concentrate and allow teachers to carry out their daily activities comfortably.

2.7 Display Space and Artwork

- Student display cases should be prominently located throughout the school to allow students the opportunity to exhibit their work.
- Display space and artwork is not specifically addressed in the OBC but is discussed in the Ontario Fire Code (OFC) which references decorative materials installed in an exit serving an assembly occupancy with an occupant load of more than 100 persons. Although the intent was meant to address draperies and tapestries, some authorities may view this as applicable to artwork and student displays. The quantity and location of display spaces and artwork needs to be reviewed with the local Municipal Authorities.

2.8 Technology

- Collecting, analyzing, displaying and disseminating knowledge, typically involves technology.
- Technology is an integral part of our lives and for students it is central to their way of thinking and learning.
- Technology must be dispersed throughout the school and be available anytime, anywhere.
- Seamless integration of technology with wireless capability available everywhere and for everyone.
- Abundant outlets must be provided for charging of portable devices.
- Surfaces that can be projected upon and written upon to be located throughout the facility.



2.9 Safety and Security (CPTED)

- Lockdown is the restriction of movement during the time of a potentially serious violent incident that would endanger the lives of students and staff.
- The safety, security and physical well-being of students is the Board's highest priority. Great care needs to be employed in the ensuring physical safety, employing design and planning strategies which incorporate the fundamental principles embodied in Crime Prevention Through Environmental Design [CPTED] — natural surveillance (visibility); natural access control; and territoriality.
- Refer to the HWDSB Lockdown, Hold and Secure, Shelter in Place Directive

2.10 Sustainability

- Solar, rain harvesting, recycling, natural ventilation, day-lighting, edible gardens, and other sustainable strategies may be integrated into the facility and become part of the curriculum strategy.
- Energy efficient features shall be incorporated into school facilities design.
- Promoting the design and construction of green schools will make a significant impact on student health, teacher retention, school operating costs and the environment.
- Provide solutions that effectively minimize negative impacts on the environment.
- Design concepts need to address durability, impact on operating costs and ease of maintenance.
- Reduced site impacts and off-site impacts.
- Reduced energy and water consumption.
- Improve indoor environmental quality.
- Increase construction waste diversion and recycling, material re-use and recycled content, improved durability, longevity and maintainability.
- Reduce both long term and ongoing environmental load of a building.
- Demonstrate the sustainable features of the school as an interactive learning experience for the students and a model for the community.



2.11 Universal Accessibility

- Provide a very high standard for barrier-free accessibility, accomplished in a seamless manner, to ensure that universal access, for all students and staff of all abilities, is fully integrated throughout the facility.
- Municipal codes and laws are in place to ensure that full accessibility will be incorporated throughout all the facilities.
- The design and planning must be all encompassing, accommodating people of all ages and all levels of ability.

2.12 Indoor/Outdoor Physical and Visual Connectivity

- Provide interior and exterior views and vistas.
- Provide interior window partitions to encourage collaboration and provide supervision.

2.13 School/Community Connections

- Designing with a focus on community involves components of the building having a clear identity that distinguishes it as a memorable presence.
- The facility should also clearly address the convenient use of the building's facilities securely and independently as required by each user. All of these factors will promote a sense of ownership and community shared between the many diverse users.



2.14 Heritage

- Alterations, additions or replacement of existing school communities require sensitivity to the culture, history and heritage of the school as both a building and an institution
- Strategies may include concepts to preserve, reintegrate and reintroduce important historical elements of the old school into the new design
- Building systems upgrades, Ontario Building Code compliance and retrofits for universal accessibility must be accommodated

2.15 Operations/Maintenance

- The selection of building materials and equipment will be easily maintained and selected in conjunction with the buildings operations and maintenance staff.

2.16 Hardware

- Refer to HWDSB Lockdown hardware standards.

2.17 All Spaces will be Learning Spaces

- All spaces within the school will promote and encourage socialization, learning and collaboration. Providing a variety of interior and exterior spaces for gathering will allow for multiple learning opportunities.

3.1 Site Design Criteria

A school is an important community institution and the site must reflect this. School sites accommodate a variety of activities which must be accommodated in a safe and secure manner. School sites are a gathering space for people and should not appear car-centric.

Outdoor activity is a critical element in learning, enabling students to develop self-confidence, use their imaginations, learn self-discipline and compromise, improve motor skills, while improving their physical fitness. Site design, including passive and active commons for student gathering, can provide for casual interactions, outdoor eating areas, structured learning, sports and physical activities, and quiet individual spaces for reading or reflection.

Site selection applies to new construction. A review of the site selection criteria is required for additions to existing facilities to determine if the existing site can accommodate the site design requirements. Factors to be used in judging the merits of a site include aesthetic considerations, City of Hamilton Site Design Guidelines, local Policy, Codes and Zoning, easements/right-of-way, provincially mandated Green Schools Resource Guide standards, best-practice in environmentally sustainable design, pedestrian-oriented (or human-scaled) design standards, and safe access routes for all modes of transportation.

HWDSB has signed an ASST Charter (Active & Sustainable School Transportation) with the City of Hamilton which emphasizes the importance of walking, cycling and public transit. School site design should, where possible, comply with the principles of the Charter.

3.1.1 Vehicular Access

- Bus loading area sized to meet the anticipated number of buses. (work with City for off-site bus drop-off/ bus lay-by)
- Schools with two frontages to locate bus lay-by at side of the school
- Locate the bus zone so that passengers do not need to cross any vehicular traffic.
- Locate the bus loading zone east of but not directly beside playgrounds, windows, and doors where students can be exposed to vehicle emissions.
- Separate student, bus, and staff vehicular traffic.



3.1.2 Parking

- Provide parking areas that are not only efficient, but safe, attractive, and environmentally responsible.
- Parking areas should be carefully designed to enhance the local urban design and environmental conditions, not detract or overwhelm them.
- Surface parking design should
 - Mitigate urban heat-island effect;
 - Manage stormwater runoff on-site;
 - Incorporate best-practice Low Impact Development techniques;
 - Create direct, legible, safe and comfortable pedestrian and bicycle routes;
 - Enhance the public realm.
- Provide no more than the minimum number of parking spaces as designated by the municipal by-laws and the Board's specific site requirements for staff, visitors, and students.
- Provide heavy duty paved surface in all fire route locations.
- Provide barrier free parking adjacent to the main entrance and so that people do not need to cross any vehicular traffic to enter the building.
- Anticipate the need for school expansion by way of future portables. With this in mind, provide flexible areas that may be converted into future parking as required..
- Where pedestrian and vehicular conflicts may arise, provide clear delineation by way of surface treatment variation, bollards, planting strips, or curbing whether flush, rolled or barrier.
- Locate curbs between pedestrian circulation and vehicular traffic.
- Provide landscaped islands and/or drainage swales to reduce heat island effect and mitigate stormwater runoff.
- Provide snow storage areas with appropriate site drainage.
- Reduce the number of driveway connections to the public street to strengthen streetscape and to minimize pedestrian-vehicle conflict points
- Locate driveways opposite existing or proposed driveways and streets to avoid offset intersections and traffic difficulties
- Provide a designated pathway through parking areas to building entrances for drivers
- Break-up large parking lots with landscaping to minimize the appearance of expansive impermeable surfaces
- Where walkways cross vehicular circulation routes, use alternative hard surface materials or raised crosswalks.
- Provide short-term parking spaces with anti-idling signage.

3.1.3 Service Vehicles Circulation

- Separate service vehicle circulation from other vehicular circulation, where possible.
- Provide direct access to the receiving, garbage/recycling, and loading areas.
- Meet the requirement of municipal by-laws.
- Provide heavy duty paved surfaces for access to loading, garbage and receiving areas.

3.1.4 Pedestrian Circulation

- Provide a clear, legible, and continuous pedestrian network throughout the site and parking areas.
- Provide minimum 2m AODA standard facility (multi-use path to separate active transportation circulation from vehicular traffic)
- All grade transitions are to be fully accessible, incorporating the City of Hamilton Urban Braille Standards.
- Clearly defined active transportation routes to be logically laid out and illuminated to allow students and visitors to navigate the entire site in a safe manner with convenient access to all doors around the perimeter of the building and parking area.
- Clearly define fully accessible routes to all areas of the school site through the application of the City of Hamilton's Urban Braille Standards.
- Link active transportation routes from building entrances to public sidewalks and bicycle network
- Provide multiple access points from the school site to the surrounding neighbourhood.
- All pedestrian routes within parking lots should include shade trees along one or both sides of the route.
- All pedestrian routes within parking lots should clearly delineate different user groups through a change in surface materials, a change in grade, soft landscaping, and/or bollards.

3.1.5 Bicycle Circulation

- Locate fixed, well-lit bicycle racks in a paved area that can be supervised from the interior of the school. Provide weather protection for bicycle racks where possible.
- Short-term bike parking range: 0.5 – 3 spaces/10 students (minimum 2 spaces) or 3 (+) 0.06-0.0 spaces/100m² of interior floor area

3.1.6 Transit

- Link active transportation routes from school site to nearby public transit stops.
- Enhance routes between main building entrances and school bus/transit stops.
- Provide weather-protected waiting areas, where possible.
- Provision of transit information on-site.

3.1.7 Garbage and Recycling Enclosures

- Locate garbage and recycling waste containers (semi-underground type) out of sightlines from the street.
- Locate garbage and recycling waste containers accommodate safe access by garbage truck and to minimize travel in reverse.
- Size and number of compartments will be determined by the HWDSB.
- The receiving area will have a reinforced concrete apron that slopes away from the building.
- Locate garbage and recycling waste containers adjacent to the custodial, loading and receiving areas.

3.1.8 Site Signage

- Clearly display the exterior school identification signage at the front of the building.
- Site signage to include visitor parking, barrier free parking, anti-idling, and fire route access .Provide painted or material changes on the driving and parking surfaces to delineate parking bays, drive aisles, and crosswalks.
- Exterior signage should be located throughout the site to direct traffic and active transportation modes.
- Provide pedestrian-oriented (human-scaled) signage
- Provide an illuminated pylon sign with digital read-out to HWDSB Standards.



3.1.9 Outdoor Amenity Spaces (active/passive)

- Attention to the design and functionality of outdoor spaces is vital and has the potential to be an extended learning environment.
- Design the exterior spaces around the school for passive supervision of spaces for social interaction.
- Provide a series of flexible hard and soft surface amenity areas to accommodate a range of uses over time.
- Provide a variety of shaded outdoor spaces including along active transportation pathways on the school site, and adjacent to large open areas for areas of reprieve. Provide playfield (soccer) where the site size permits. Portable soccer posts to be provided as FFE.
- The playfield should be located adjacent to the gym.
- Provide adequate paved area with a selection of basketball hoops depending on grade level, possibly including 3-toss, child-height, wall-mounted, etc. and pavement markings for games.

3.1.10 Fences/Gates/Barriers

- Perimeter fences must meet the requirements of Municipal by-laws
- Provide fences (5' chain link) to provide safety and security for the school yard as required by the specific site conditions
- School yards located adjacent to municipal parks may share facilities and a fence between the properties may not be necessary.

3.1.11 Exterior Lighting

- The site will be illuminated to create a safe and welcoming environment for students and visitors.
- Provide adequate lighting located on the walls of the school as high as possible to ensure the safety, security and discourage vandalism.
- Provide adequate lighting along active transportation paths at a human-scale/pedestrian level.
- Provide adequate LED lighting at the entrance of the school.
- Conform to municipal lighting guidelines for lighting levels and acceptable standards.
- Site lighting should be designed to take into consideration CPTED Principles.

3.1.12 Landscaping

- An integrated landscape strategy should incorporate Low Impact Development (L.I.D.) Standards
- The distribution of landscaping throughout the site can soften hardscapes, including parking areas, maximize shade and provide important storm water runoff mitigation measures.
- Landscape design can enhance the quality of the architecture and accommodate programmed activities such as visual arts, physical education and a safe exterior space for special education classes.
- Design landscaping to be low maintenance.
- Provide plant species with high particulate matter removal capacity, placed strategically on the school site.
- Plantings to be hardy, indigenous, and drought tolerant.
- Planters to incorporate a raised edge adjacent to hard landscape areas as a means of containing planting soil/mulch.
- The landscape design to be compliant with CPTED principles to maintain clear unobstructed views.
- Hard landscaping to be creative and incorporate patterns, colours and textures to enhance visual interest.
- Perimeter landscaping should visually screen parking areas, while not completely obstructing sightlines.
- Refer to the HWDSB Outdoor Design Manual for plant selection, outdoor classrooms, etc.

3.1.13 Site Furnishing

- Locate waste and recycling receptacles at all building entry points around the exterior perimeter of the building.
- Fixed and vandal resistant seating to be located at student and visitor entry and drop-off/pick up points and at student gathering spaces.
- Provide bike racks at a secure location where they are visible to staff.



3.1.14 Flag Pole

- Locate one flag pole near the main entrance of the building displaying the Canadian flag.

3.1.15 Site Drainage

- All site drainage to be self-contained on the site.
- Provide Low Impact Development techniques to improve the quality and quantity of stormwater on-site, through such measures as bio-retention, permeable paving, grass swales, raingardens, vegetated filter strips, dry swales etc.
- If natural techniques are not possible, provide adequate catch basins throughout the site.
- Do not install catch basins in close proximity to the play field. Install at edges of paved play areas.
- Meet or exceed municipal requirements for storm water management.

3.1.16 Site Security Provisions

- The safety, security and physical well-being of students and staff must be a priority. The appropriate selection of building materials, equipment, furniture and interior finishes minimizes building occupant's exposure to harmful elements. By employing design and planning strategies which incorporate the fundamental principles embodied in Crime Prevention Through Environmental Design (CPTED) the physical safety of students and staff is ensured.
- Natural Surveillance – the design shall facilitate natural surveillance from occupied or travelled areas of the building to the exterior and within the building.
- Opportunities for concealment should be minimized through the provision of sight lines by avoiding concealed building recesses.
- Ensure trees or landscape features do not offer hiding places.

3.1.17 Future Addition/Portables

- Designate area for future portables (up to six) on the site.
- Provision for future power and data, located convenient to potential location of future addition or portables.
- Provide washroom facilities and parking spaces for up to six portables.

3.2 Building Design Criteria

The physical surroundings that support learning matter. A strong correlation exists between design of a facility and student achievement and it is the role of educational designers to take every opportunity to enhance teaching and learning through purposeful design of school buildings and grounds. Spatial configurations, noise, heat, cold, light and air quality directly bear on students' and teachers' ability to perform, while the incorporation of environmentally sustainable strategies enhances the quality of the physical environment.

Each student learns differently and that individual learning styles must be accommodated in both the educational program and the design of the learning spaces. Not all learning takes place in a standard classroom. There is a need for a variety of types of learning spaces and for unanticipated learning outside formal teaching areas.

Facility conditions and functionality can affect the way students learn and the effectiveness of how teachers administer the program. If teachers do not have the proper facilities and resources, it is challenging to have the program delivered effectively. Good design has inherent value both socially and economically and it directly affects the well-being of the students, staff and visitors. The following criteria will assist the designer when looking at these areas:

3.2.1 Corridors

- Corridors are typically places of social interaction and communication among students and are therefore opportunities to create spaces for hanging out and socialization.
- Provide minimum corridor width 3000mm clear for circulation.
- Recess display cases, coat hooks, drinking fountains so as not to impede traffic flow.
- Consideration to be given to the acoustics in the corridors to reduce the amount of noise.
- Provide durable and easy to maintain floor surfaces.
- Provide emergency lighting and speakers, fire alarm and strobe lights on walls.
- Centrally locate drinking fountains and water bottle fillers.
- Incorporate views and natural light in the corridor design to provide visual cuing, visual stimulation and way finding.
- Avoid hidden corners and alcoves and ensure clear visibility in all directions.
- Provide coat hooks, in proximity to each classroom, in corridors. No lockers to be provided.

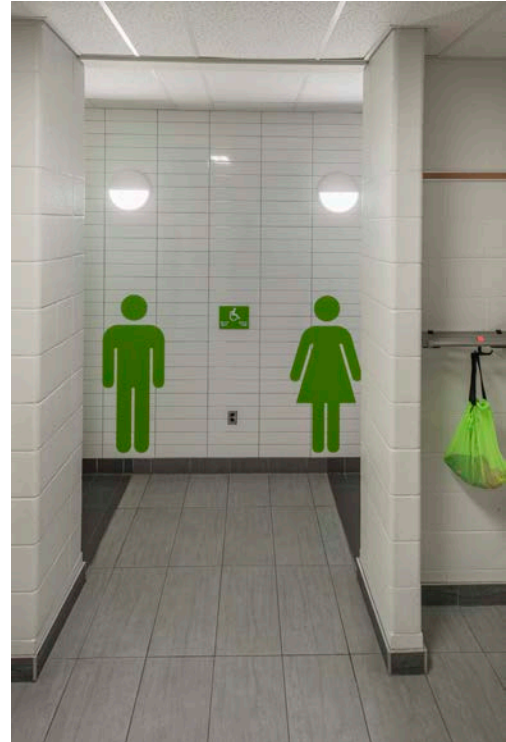


3.2.2 Stairways and Elevators

- Centrally locate elevator so that they are conveniently located off the main entrance of the building.
- Locate exit stairs for balanced student distribution throughout the school to prevent congestion.
- Exit stairs to exit directly to the play area at the exterior of the building.
- Provide area of refuge at the top of the stair landings.

3.2.3 Washrooms

- Washrooms are to be located on all floors, centrally located and accessible from the corridor.
- Size and quantity to be based on OBC requirements and occupant load
- Provide open access to the washrooms from the corridor with no doors- sight lines to be considered.
- Consider future additions and portables in the washroom count.
- Provide one barrier free stall in each student group washroom and universal washrooms as per OBC requirements.
- Provide floor drains at all washrooms.
- Urinals - allow for privacy partitions, infrared automatic operated.
- Provide universal washroom as per OBC requirements.
- Provide adequate student and staff washrooms distributed throughout the floor levels.
- Washroom accessories include:
 - Tilted mirror (one (1) for every four (4) stalls);
 - Hand dryer (one (1) for every four (4) stalls);
 - Toilet Tissue Holder (one (1) per stall);
 - Sanitary napkin and tampon dispenser (Girl's washroom); and sanitary napkin and tampon disposal (one (1) per stall).
- Recessed stainless steel garbage receptacle
- Barrier Free Stall:
 - Grab Bars as per Building Code;



3.2.4 Service Areas and Storage Rooms

- Custodial rooms to be located on every floor and positioned so that they can be easily accessible by custodial staff.
- Custodial rooms are to include:
 - a mop sink;
 - a mop holder;
 - power;
 - and adequate space and a dedicated electrical outlet for a floor scrubber.
- Locate custodial storage rooms adjacent to receiving and recycling areas.
- Academic storage rooms are to be distributed on each floor level near instructional areas.

3.2.5 Technology

- Technology is an integral part of our lives and for students it is central to their way of thinking and doing. Technology must be dispersed throughout the school and be available anytime, anywhere.
- Data closets to be logically dispersed and vertically stacked throughout the school to support the schools wireless infrastructure.
- Wireless access points to be located throughout the school. Consult with HWDSB IIT Department for latest standards.



3.2.6 Security

- Cameras to be installed only when specifically directed by the Board.
- The design will be conducive to passive security.
- Provide door contacts, glass break detectors and motion detectors as directed by the Board.
- Consult with HWDSB Facilities Management for latest security standards.

3.2.7 Drinking Fountains and Water Bottle Fillers

- Located throughout the school outside of washroom areas.
- Additional units should be located outside of physical activity spaces.
- All drinking fountains to be accessible and have water bottle fillers.

3.2.8 Coat hooks and Cubbies

- Provide cubbies at Kindergarten classrooms including open shelving above for bin storage, prefabricated coat rack as described below, and continuous bench at 300mm AFF.
- Provide prefabricated 4-tube steel coat hook shelf, with double pronged nylon hooks, staggered at 150mm OC, on each 2nd tube, mounted at 1,000mm AFF for primary grades and 1,300mm AFF for junior/intermediate grades.

3.2.9 Casework

- To be located throughout the school in corridors outside of classrooms to display student work and achievements.
- Classroom control panel, as per HWDSB Standards, should include:
 - the light switch, clock, data, thermostat, speakers, duplex receptacle, P.A. call switch, and a single gang box with cover plate from data run from the corridor.

3.2.10 White boards and Tack boards

- White boards & Tack boards should be located in every standard classroom.
- Refer to Appendix for Typical Teaching Wall configuration. Confirm with HWDSB for latest standards.

3.2.11 Interior Finishes

- Interior finishes for program spaces are included in the program data sheets and include information on: walls, flooring, base and ceilings.

3.2.12 Interior Signage

- All areas and circulation systems within the building are to be designed in such a way that way-finding is easy, reducing the reliance on excessive signage.
- Signage mounted perpendicular to the path of travel will assist in ease of wayfinding.
- Applicable codes for barrier free design are incorporated into the design of the way finding system.
- The signs in the facility to be surface mounted and not easily removed. The signage system should allow for changes at minimal cost.
- The types of signs used included:
 - Identification, directional, information and orientation, regulatory and warning, and commemorative and sponsored.
- Interior signage to conform to HWDSB Standard.

3.2.13 Window Treatments

- All windows are to be equipped with shading devices (3% Vision).
- Blackout shades are to be provided in the Gym, Cafeteria, Learning Commons and any large assembly rooms.
- Window coverings requiring access over one storey high to be motorized.
- No window coverings required at interior glazing and at exterior corridor/main entrance windows.

3.2.14 Materials and Finishes

- Refer to HWDSB Standard for interior and exterior glazing
- Materials and finishes to be vandal resistant and easy to maintain

3.3 Specific Program Area Considerations

3.3.1 Learning Commons

- The HWDSB envisions the library as a Learning Commons, at the heart of the school that supports learning and promotes collaboration.
- The function of the Learning Commons is for shared learning and resources, investigation, collaboration, presentation and relaxing. Connections to be provided throughout for laptops and wireless network access.
- Comfort, calmness, uplifting colours and warmth are key components of the Learning Commons use of materials such as carpet, upholstered seating, different lighting options and glass or translucent walls will contribute to achieving comfortable and welcoming spaces.
- Flexible furniture to allow for spaces to be changed will meet student needs and include movable round work tables, lounge type seating and booths.
- Allow for portable book shelving to allow for size of reading sections to be changed.

3.3.2 Special Education

- Every school has its own unique ways of addressing the specific needs of its students therefore it is the intent of the Design Guideline to address methods to accommodate the specific needs of all students, realizing that a large majority of those students identified with special needs may utilize a variety of spaces throughout the school day to address their educational goals.
- The facility requirements must provide the flexibility to address the changing demographics and accommodation for students with special needs.
- Specific program areas for students with special needs will be located in a calm and quiet area of the school integrated with the school population, but with its own sense of identity.
- Since the Design Guideline serves as a guide, it is necessary during the planning process to identify the specific needs of each school in meeting the special needs population and plan early in the process to ensure that those needs are being met through the design.
- Requirements for Quiet Rooms and Sensory Rooms to be reviewed with HWDSB staff at design phase.

4.0 OPERATIONS AND MAINTENANCE

4.1 Mechanical and Electrical

- Mechanical and Electrical systems to be designed to code requirements
- Systems to be coordinated with HWDSB Facility Department
- Energy efficiency and ease of maintenance to be prioritized
- Meet ANSI standard for Emergency Eyewash and Shower Equipment

4.2 Information Technology

- HWDSB Standard Control Panel to be located in all Instructional and Staff Areas.
- HWDSB Standard Teaching Wall to be incorporated in all typical Classroom Instructional spaces and Learning Commons.
- Consult with HWDSB IIT Department to incorporate current technology standards.

4.3 Security and Access Control

- Consult with HWDSB Facility Operations Division to incorporate current security requirements.

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

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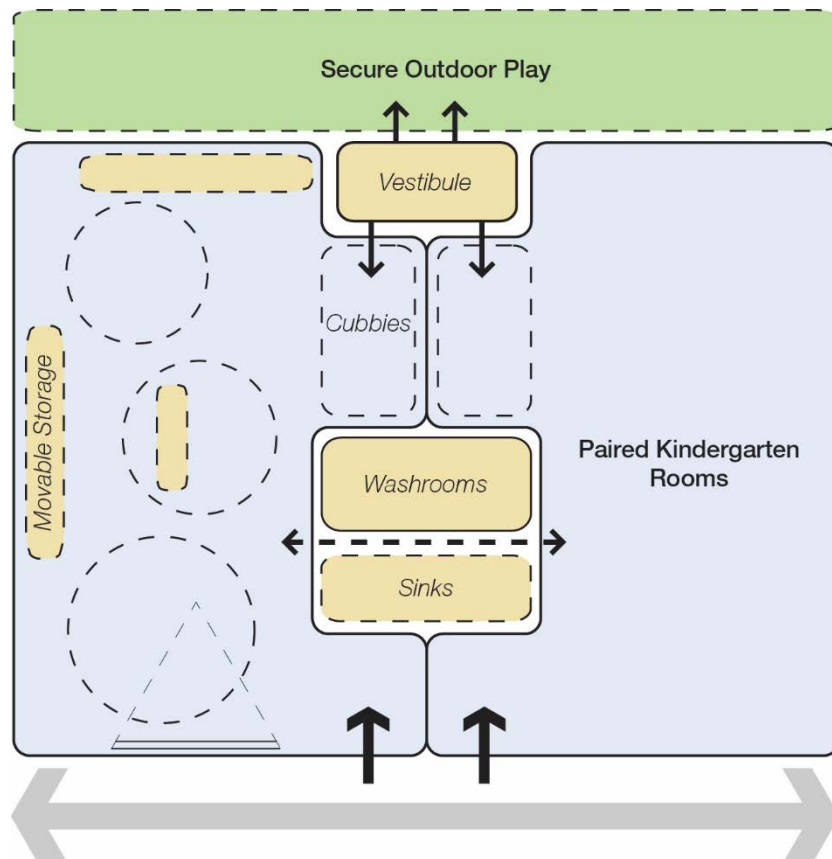
1.1

Program Area:	Instructional Spaces		
Room Name:	Kindergarten	Capacity:	26
		Area (sf):	1200
		Area (SM):	111
Program Activities:	<ul style="list-style-type: none"> • Large group, small group & individual instruction • Individual & group work • Play based learning stations 		
Spatial Relationships:	<ul style="list-style-type: none"> • Ground floor • Direct access to outdoor play (through shared vestibule where possible) • Shared washroom between kindergarten rooms, one washroom to be barrier-free 		
Environmental Considerations:	<ul style="list-style-type: none"> • Exterior windows required w/minimum 2 operable vents per room • STC rating (walls): 40 • Individual thermostat control (+/-3°C) 		
Finishes:			
Floor:	<ul style="list-style-type: none"> • Cushioned sheet flooring 	Base:	<ul style="list-style-type: none"> • Resilient
Walls:	<ul style="list-style-type: none"> • Concrete masonry units (painted) 	Ceiling:	<ul style="list-style-type: none"> • Suspended acoustical
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Variety of activity and guided reading tables • Variety of child scale chairs • Mobile low storage units • Teacher workstation & chair w/castors • Carpet area to create small group activity zones 	Fixed Equipment:	<ul style="list-style-type: none"> • White boards +/- 2 @ 2400mm x 1200mm, vertically mounted at baseboard level for student access • Tack boards +/- 2 @ 1800mm x 1200mm • Teaching wall with white board and interactive short throw projector • Teacher coat & book storage cabinet • Open bookshelves • Counter with sink (adult height) and upper cabinets • Wash-fountain style hand wash sink (3 font, mounted at child height) • Washroom partitions • 30 individual coat cubbies (metal cubbies with hooks, and wood slat bench) • Classroom control panel • Window coverings at all exterior windows
Plumbing:	<ul style="list-style-type: none"> • Stainless steel sink • Toilet • Wash-fountain style hand wash sink 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating • Independent temperature control

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

Electrical:	<ul style="list-style-type: none"> • 8 15A-1P duplex wall mounted perimeter receptacles for general/student use • Additional 15A-1P duplex receptacle (1) to be provided at each of the following: teacher's station, projector, and classroom control panel where applicable and locations mandated by CSA code requirements • LED lighting w/multi-level switching • Classroom control panel: <ul style="list-style-type: none"> ◦ PA system, speaker, thermostat, light switches, clock, power & data outlets • Fire alarm signalling device to be provided in accordance with ULC code requirements 	Technology:	<ul style="list-style-type: none"> • 1 data outlet for projector • 2 data outlets at teaching station w/conduit to ceiling • 1 data outlet at classroom control panel for general use • 1 data outlet at wireless access point (WAP)
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Notes:	<ul style="list-style-type: none"> • Window sill at maximum 600mm AFF • Outdoor play area to accommodate learning and play including: <ul style="list-style-type: none"> ◦ 1,500 mm high fence with double gate ◦ light-duty asphalt paving and artificial turf (50/50 split) ◦ one storage bunker ◦ shade structure or shade trees (if not shaded by building) ◦ Refer also to HWDSB Outdoor Design Manual
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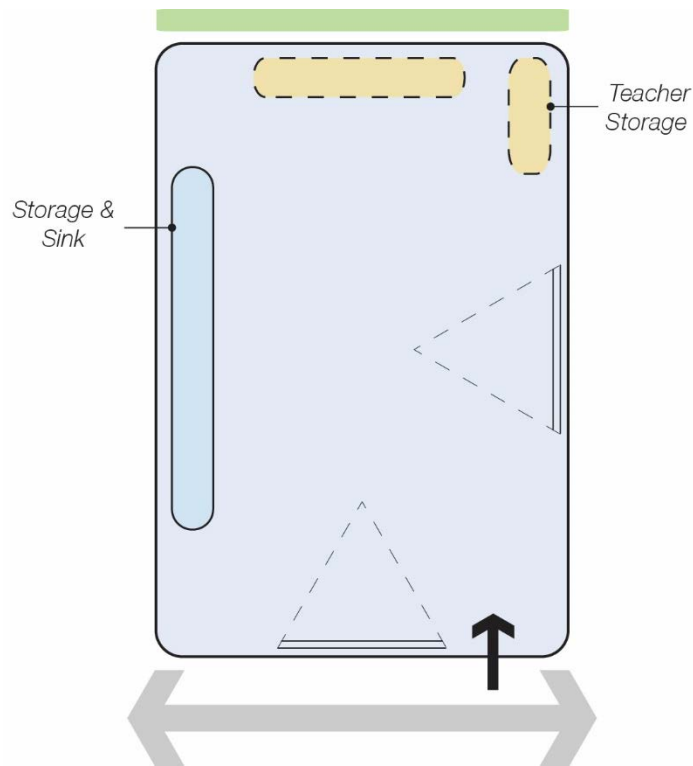
5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

1.2

Program Area:	Instructional Spaces		
Room Name:	Classroom	Capacity:	24 to 30
		Area (sf):	750
		Area (SM):	70
Program Activities:	<ul style="list-style-type: none"> • Large group, small group & individual instruction • Individual & group work • Presentations & demonstrations • Accommodates any core academic disciplines 		
Spatial Relationships:	<ul style="list-style-type: none"> • Near other core classrooms • Primary classroom to be located on ground floor close to music and gym • Near staff work rooms • Adjacent to collaborative learning space • Access to shared sinks • Proximity to student washrooms • Access to outdoor classroom/activity space • Access to shared storage room for shared art supplies, books, paper, etc. 		
Environmental Considerations:	<ul style="list-style-type: none"> • Exterior windows required w/minimum 2 operable vents per room • STC rating (walls): 40 • Individual thermostat control (+/-3°C) 		
Finishes:			
Floor:	• Resilient tile	Base:	• Resilient
Walls:	• Concrete masonry units (painted)	Ceiling:	• Suspended acoustical
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Variety of student work/activity tables (moveable, standing/sitting, group/individual) • Quiet individual carrel • Guided reading table • Variety of student chairs • Mobile low storage units • Teacher workstation & chair w/castors • Tablet charging station • Carpet area for gathering space in primary/junior classrooms 	Fixed Equipment:	<ul style="list-style-type: none"> • White boards +/- 5 @ 2400mm x 1200mm • Tack boards +/- 2 @ 1800mm x 1200mm • Teaching wall with white board and interactive short throw projector • Teacher coat & book storage cabinet • Lockable storage • Open bookshelves • Classroom control panel • Window coverings at all exterior windows
Plumbing:	<ul style="list-style-type: none"> • Stainless steel sink in each classroom (or access to shared sink) 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating • Independent temperature control
Electrical:	<ul style="list-style-type: none"> • 8 15A-1P duplex wall mounted perimeter receptacles for general/student use • Additional 15A-1P duplex receptacle (1) to be provided at each of the following: teacher's station, projector, and classroom control panel where applicable 	Technology:	<ul style="list-style-type: none"> • 1 data outlet for projector • 2 data outlets at teaching station w/conduit to ceiling • 1 data outlet at classroom control panel for general use

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

Electrical (continued):	<p>and locations mandated by CSA code requirements</p> <ul style="list-style-type: none"> • LED lighting w/multi-level switching • Classroom control panel: <ul style="list-style-type: none"> ◦ PA system, speaker, thermostat, light switches, clock, power & data outlets • Fire alarm signalling device to be provided in accordance with ULC code requirements • Power requirements for tablet charging station to be coordinated with HWDSB and manufacturer 	Technology (continued):	<ul style="list-style-type: none"> • 1 data outlet at wireless access point (WAP)
Notes:	<ul style="list-style-type: none"> • General classrooms required on all floors • Divide space into purposeful activity area that can be readily reshaped to meet changing needs 		



5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

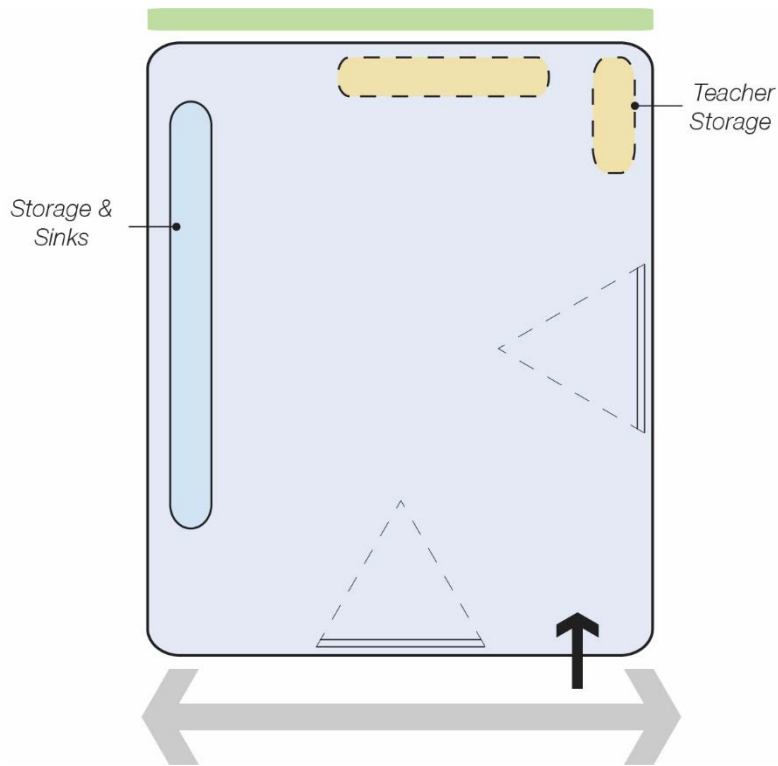
1.3

Program Area:	Instructional Spaces		
Room Name:	Art Room	Capacity:	24 to 30
		Area (sf):	1050
		Area (SM):	98
Program Activities:	<ul style="list-style-type: none"> • Large group, small group & individual instruction • Individual & group work • Presentations & demonstrations • Accommodates various grade levels 		
Spatial Relationships:	<ul style="list-style-type: none"> • Near other core classrooms, specifically intermediate classrooms • Second floor location, near Science and Technology • Near staff work rooms • Adjacent to collaborative learning space • Proximity to student washrooms 		
Environmental Considerations:	<ul style="list-style-type: none"> • Exterior windows required w/minimum 2 operable vents per room • STC rating (walls): 40 • Individual thermostat control (+/-3°C) 		
Finishes:			
Floor:	• Resilient tile	Base:	• Resilient
Walls:	• Concrete masonry units (painted)	Ceiling:	• Suspended acoustical
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Student work tables (moveable) & stand-up work tables • Student chairs w/castors & stools • Teacher workstation & chair w/castors 	Fixed Equipment:	<ul style="list-style-type: none"> • White boards +/-3 @ 2400mm x 1200mm • Tack boards +/-5 @ 2400mm x 1200mm • Teaching wall with white board and interactive short throw projector • Teacher coat & book storage cabinet • Lockable deep storage cabinets for paper storage & art supplies • Counter with two large sinks & cabinets over • Open full height bookshelves • Classroom control panel • Window coverings at all exterior windows
Plumbing:	• 2 large stainless steel sinks with sediment interceptor	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating • Independent temperature control
Electrical:	<ul style="list-style-type: none"> • 8 15A-1P duplex wall mounted perimeter receptacles for general/student use • Additional 15A-1P duplex receptacle (1) to be provided at each of the following: teacher's station, projector, and classroom control panel where applicable 	Technology:	<ul style="list-style-type: none"> • 1 data outlet for projector • 2 data outlets at teaching station w/conduit to ceiling • 1 data outlet at classroom control panel for general use

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

Electrical (continued):	and locations mandated by CSA code requirements <ul style="list-style-type: none">• LED lighting w/multi-level switching• Classroom control panel:<ul style="list-style-type: none">◦ PA system, speaker, thermostat, light switches, clock, power & data outlets• Fire alarm signalling device to be provided in accordance with ULC code requirements	Technology (continued):	<ul style="list-style-type: none">• 1 data outlet at wireless access point (WAP)
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Notes:



5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

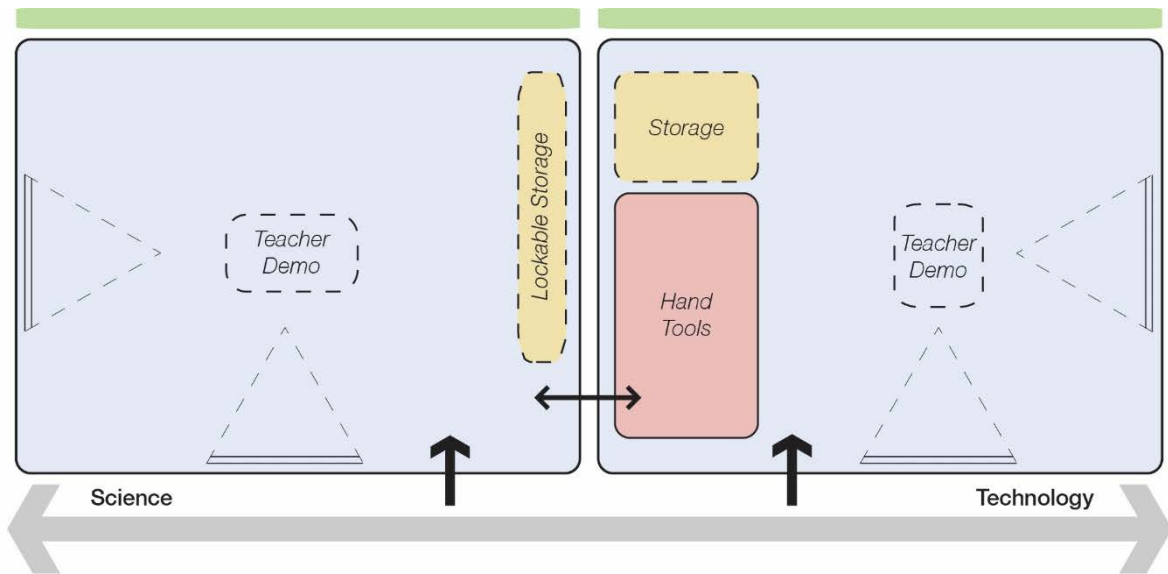
1.4

Program Area:	Instructional Spaces		
Room Name:	Science Room	Capacity:	24 to 30
		Area (sf):	1050
		Area (SM):	98
Program Activities:	<ul style="list-style-type: none"> • Large group, small group & individual instruction • Hands-on student experiments • Individual & group work • Presentations & demonstrations 		
Spatial Relationships:	<ul style="list-style-type: none"> • Near other core classrooms, specifically intermediate classrooms • Second floor location, near Technology and Art • Near staff work rooms • Adjacent to collaborative learning space • Proximity to student washrooms 		
Environmental Considerations:	<ul style="list-style-type: none"> • Exterior windows required w/minimum 2 operable vents per room • STC rating (walls): 40 • Individual thermostat control (+/-3°C) 		
Finishes:			
Floor:	• Resilient tile	Base:	• Resilient
Walls:	• Concrete masonry units (painted)	Ceiling:	• Suspended acoustical
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Student work tables (moveable), to accommodate groups of 4-5 students & stand-up work tables • Student chairs w/castors & stools • Teacher workstation & chair w/castors 	Fixed Equipment:	<ul style="list-style-type: none"> • White boards +/-5 @ 2400mm x 1200mm • Tack boards +/-2 @ 1800mm x 1200mm • Teaching wall with white board and interactive short throw projector • Teacher coat & book storage cabinet • Lockable deep storage cabinets for up to 20 microscopes, 4 scales, glass storage • Counter with two large sinks & cabinets over • Teacher demonstration station, located centrally in room, with sink and emergency eyewash • Open bookshelves • Classroom control panel • Window coverings at all exterior windows, full black out shades required
Plumbing:	<ul style="list-style-type: none"> • 2 large stainless steel sinks with sediment interceptors (1 student, 1 at teacher demonstration station) • Emergency eye wash 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating • Independent temperature control
Electrical:	<ul style="list-style-type: none"> • 8 15A-1P duplex wall mounted perimeter receptacles for general/student use 	Technology:	<ul style="list-style-type: none"> • 1 data outlet for projector • 2 data outlets at teaching station w/conduit to ceiling

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

Electrical (continued):	<ul style="list-style-type: none"> • Additional 15A-1P duplex receptacle (1) to be provided at each of the following: teacher's station, projector, and classroom control panel where applicable and locations mandated by CSA code requirements • LED lighting w/multi-level switching • Classroom control panel: <ul style="list-style-type: none"> ◦ PA system, speaker, thermostat, light switches, clock, power & data outlets • Fire alarm signalling device to be provided in accordance with ULC code requirements 	Technology (continued):	<ul style="list-style-type: none"> • 1 data outlet at classroom control panel for general use • 1 data outlet at wireless access point (WAP)
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Notes:



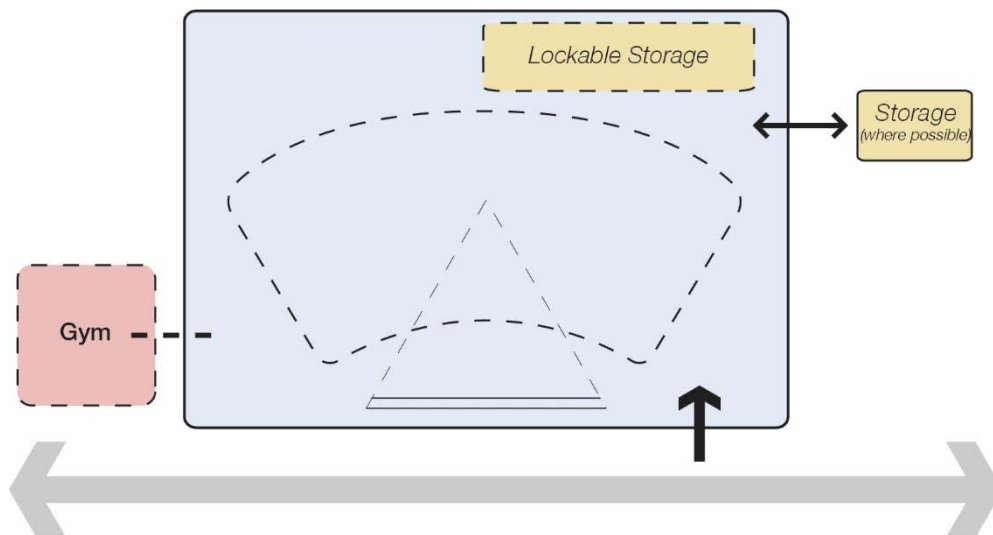
5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

1.5

Program Area:	Instructional Spaces		
Room Name:	Music Instrumental	Capacity:	24 to 30
		Area (sf):	1000
		Area (SM):	93
Program Activities:	<ul style="list-style-type: none"> • Large group, small group & individual practice • Music reading instruction, theory and history • Vocal music activities • Instrumental music activities 		
Spatial Relationships:	<ul style="list-style-type: none"> • Near other core classrooms • Connected to instrument storage room (where provided) • Ground floor near gym preferred, or second floor near intermediate classrooms • Located remotely from noise sensitive program areas, e.g. Special Education • Adjacent to collaborative learning space • Proximity to student washrooms 		
Environmental Considerations:	<ul style="list-style-type: none"> • Exterior windows required w/minimum 2 operable vents per room • STC rating (walls): 60 • Maximize ceiling height • Sound isolation from adjacent spaces • Acoustical control treatment on walls and ceilings • Individual thermostat control (+/-3°C) 		
Finishes:			
Floor:	• Resilient tile	Base:	• Resilient
Walls:	• Concrete masonry units (painted)	Ceiling:	• Suspended acoustical
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Individual desks with flip-up tablet arm • File cabinets for musical scores • Bins for primary level instruments • Teacher workstation & chair w/castors • Counter-top drying rack 	Fixed Equipment:	<ul style="list-style-type: none"> • White board on long wall of room (with blank music staff for notations) • Tack boards +/-2 @ 1800mm x 1200mm • Teaching wall with white board and interactive short throw projector • Teacher coat & book storage cabinet • Lockable full height cupboards with open adjustable shelving for instrument storage • Open bookshelves • Large stainless-steel sink for cleaning instruments & separate small sink for mouth piece sanitation • Classroom control panel • Window coverings at all exterior windows • Acoustic panels
Plumbing:	<ul style="list-style-type: none"> • Large stainless-steel sink • Small stainless-steel sink 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating • Independent temperature control

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

Electrical:	<ul style="list-style-type: none">• 8 15A-1P duplex wall mounted perimeter receptacles for general/student use• Additional 15A-1P duplex receptacle (1) to be provided at each of the following: teacher's station, projector, and classroom control panel where applicable and locations mandated by CSA code requirements• LED lighting w/multi-level switching• Classroom control panel:<ul style="list-style-type: none">◦ PA system, speaker, thermostat, light switches, clock, power & data outlets• Fire alarm signalling device to be provided in accordance with ULC code requirements	Technology:	<ul style="list-style-type: none">• 1 data outlet for projector• 2 data outlets at teaching station w/conduit to ceiling• 1 data outlet at classroom control panel for general use• 1 data outlet at wireless access point (WAP)• FM sound system
Notes:	<ul style="list-style-type: none">• Comply with Public Health requirements• Refer to Appendix for list of musical instruments and equipment		



5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

1.6

Program Area:	Instructional Spaces		
Room Name:	Experiential Learning	Capacity:	24 to 30
		Area (sf):	1200
		Area (SM):	111
Program Activities:	<ul style="list-style-type: none"> • Large group, small group & individual instruction • Individual & group work • Hands-on student experiments • Presentations & demonstrations • Accommodates any core academic disciplines 		
Spatial Relationships:	<ul style="list-style-type: none"> • Near other core classrooms, specifically intermediate classrooms • Second floor location, near Science and Art • Near staff work rooms • Adjacent to collaborative learning space • Proximity to student washrooms 		
Environmental Considerations:	<ul style="list-style-type: none"> • Exterior windows required w/minimum 2 operable vents per room • STC rating (walls): 40 • Individual thermostat control (+/-3°C) 		
Finishes:			
Floor:	• Resilient tile	Base:	• Resilient
Walls:	• Concrete masonry units (painted)	Ceiling:	• Suspended acoustical
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Robust student work tables (moveable), to accommodate groups of 4-5 students & stand-up work tables • Student chairs w/castors & stools • Teacher workstation & chair w/castors 	Fixed Equipment:	<ul style="list-style-type: none"> • White boards +/-5 @ 2400mm x 1200mm • Tack boards +/-2 @ 1800mm x 1200mm • Teaching wall with white board and interactive short throw projector • Teacher coat & book storage cabinet • Lockable storage for hand tools including drill, jigsaw, etc. • Open bookshelves • Classroom control panel • Window coverings at all exterior windows
Plumbing:	<ul style="list-style-type: none"> • Deep stainless-steel sink • Emergency eye wash 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating • Independent temperature control • Portable dust collection
Electrical:	<ul style="list-style-type: none"> • 8 15A-1P duplex wall mounted perimeter receptacles for general/student use • Additional 15A-1P duplex receptacle (1) to be provided at each of the following: teacher's station, projector, and classroom control panel where applicable 	Technology:	<ul style="list-style-type: none"> • 1 data outlet for projector • 2 data outlets at teaching station w/conduit to ceiling • 1 data outlet at classroom control panel for general use

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

Electrical (continued):	and locations mandated by CSA code requirements <ul style="list-style-type: none">• LED lighting w/multi-level switching• Classroom control panel:<ul style="list-style-type: none">◦ PA system, speaker, thermostat, light switches, clock, power & data outlets• Fire alarm signalling device to be provided in accordance with ULC code requirements• Power requirements for tablet charging station to be coordinated with HWDSB and manufacturer	Technology (continued):	<ul style="list-style-type: none">• 1 data outlet at wireless access point (WAP)
Notes:	<ul style="list-style-type: none">• Detailed requirements to be determined by HWDSB to suit each school's specific curriculum		

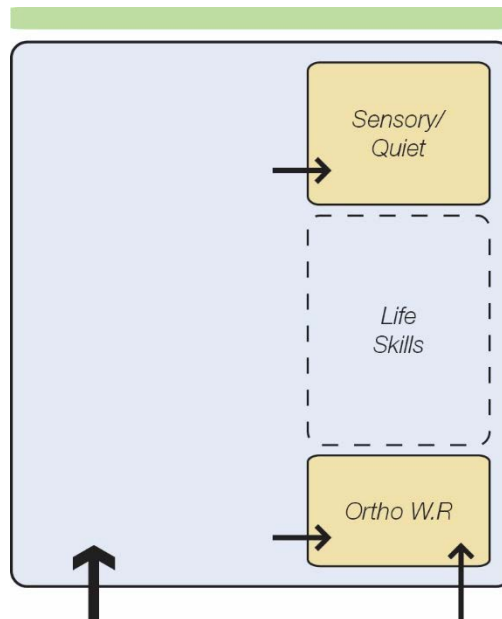
5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

1.7

Program Area:	Instructional Spaces		
Room Name:	Special Education Area	Capacity:	9
		Area (sf):	Varies, HWDSB
		Area (SM):	to confirm
Program Activities:	<ul style="list-style-type: none"> • Accommodates students who have special needs with cognitive disability, hearing impairment, visual impairment, emotional disturbance, orthopedic impairment, autism, learning-deaf-blindness disabilities • Variety of special services such as one-on-one instruction and small group instruction • Activities include, but are not limits to: group discussions, demonstrations, music activities, life skills, coping skills, speech, and visual and hearing support services • Help students develop independent living skills, social skills, vocational skills, behavior management, self-regulation skills 		
Spatial Relationships:	<ul style="list-style-type: none"> • Near other core classrooms • Near staff work rooms • Access to universal/orthopaedic washroom (including barrier free lift) • Full kitchen – HWDSB to confirm location • Access to small Sensory Room and Calming Room • Near Resource Room • Physio room – for body movements • Close to administration 		
Environmental Considerations:	<ul style="list-style-type: none"> • Exterior windows required w/minimum 2 operable vents per room • STC rating (walls): 40 • Individual thermostat control (+/-3°C) • To be located on a quiet corridor close to quiet building entrance 		
Finishes:			
Floor:	• Resilient tile	Base:	• Resilient
Walls:	• Concrete masonry units (painted)	Ceiling:	• Suspended acoustical
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Variety of worktables and chairs for individual and group work • Flexible/comfortable furnishings 	Fixed Equipment:	<ul style="list-style-type: none"> • White boards +/- 2 @ 2400mm x 1200mm • Tack boards +/- 2 @ 1800mm x 1200mm • Teaching wall with white board and ceiling mount projector • Teacher coat & book storage cabinet • Open bookshelves • Classroom control panel • Window coverings at all exterior windows • Fully accessible kitchen with double sink, stove, microwave, washer/dryer, storage cupboards (as determined by HWDSB)
Plumbing:	<ul style="list-style-type: none"> • Sink • Hot/cold water connection • Sanitary connection 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating • Independent temperature control

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

Electrical (continued):	<ul style="list-style-type: none"> • 8 15A-1P duplex wall mounted perimeter receptacles for general/student use • Additional 15A-1P duplex receptacle (1) to be provided at each of the following: teacher's station, projector, and classroom control panel where applicable and locations mandated by CSA code requirements • LED lighting w/multi-level switching • Classroom control panel: <ul style="list-style-type: none"> ◦ PA system, speaker, thermostat, light switches, clock, power & data outlets • Fire alarm signalling device to be provided in accordance with ULC code requirements • Dedicated 15A-1P duplex receptacle at kitchen for microwave (if required) • Dedicated 40A-2P 240V stove receptacle • Dedicated GFI 15A-1P duplex wall mounted receptacle at over kitchen counter • Dedicated 15A-1P duplex wall mounted receptacle at each fridge/freezer location • Dedicated 30A-2P 240V receptacle to service clothes dryer • Dedicated 20A-1P duplex wall mounted receptacle to service clothes washer 	Technology (continued):	<ul style="list-style-type: none"> • 1 data outlet for projector • 2 data outlets at teaching station w/conduit to ceiling • 1 data outlet at classroom control panel for general use • 1 data outlet at wireless access point (WAP)
Notes:	<ul style="list-style-type: none"> • Room layout and specific requirements for Sensory and Quiet rooms, kitchen and other specialty equipment for be reviewed with HWDSB for each location 		



5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

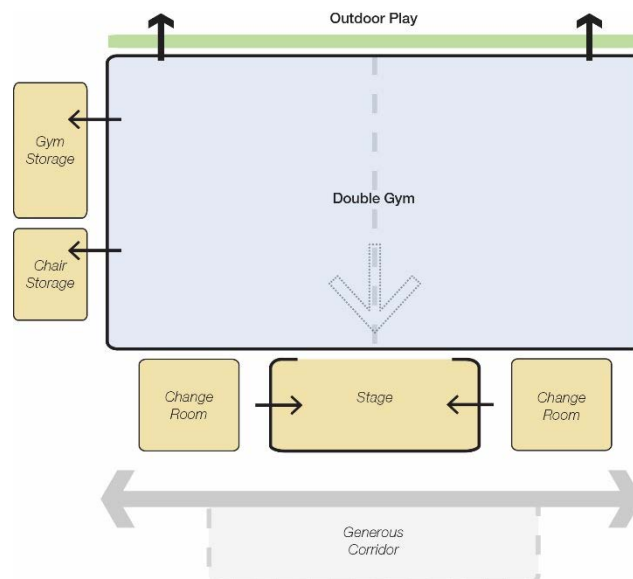
1.8

Program Area:	Instructional Spaces			
Room Name:	Gymnasium Area, Gym and Chair Storage	Capacity:	20 per side	Area (sf): Varies, see Area (SM): note below
Program Activities:	<ul style="list-style-type: none">Physical education classes and athletic competition and practice during non-school hoursUsed for physical education programs and support a range of curricular, co-curricular and community activitiesStudent assembliesCommunity useCompetition basketball and volleyball			
Spatial Relationships:	<ul style="list-style-type: none">Near front entry of school for controlled access after-hoursAdjacent to outdoor play areaAdjacent to student change roomsAdjacent to General Purpose/Community roomConnected to gym storage and chair storageFixed stage, included in assigned gym floor area			
Environmental Considerations:	<ul style="list-style-type: none">Natural daylighting (with limited glare)STC rating (walls): 60Sound isolation from adjacent spacesAcoustical control treatment on walls and ceilingsClear height of 22m from the floor to the nearest obstructionIndividual thermostat control (+/-3°C)			
Finishes:				
Floor:	<ul style="list-style-type: none">Resilient sports flooring	Base:	<ul style="list-style-type: none">Resilient	
Walls:	<ul style="list-style-type: none">Concrete masonry units (painted)Sound absorption concrete masonry units or abuse resistant acoustical wall treatment	Ceiling:	<ul style="list-style-type: none">Exposed (painted)	
Furnishings & Equipment:				
Furniture:	<ul style="list-style-type: none">N/A	Fixed Equipment:	<ul style="list-style-type: none">1 set competition (rectangular) basketball backstops, glass – fold up electrically operated2 sets practice (fan-shaped) basketball backstops, adjustable height, metal – side fold – manually operatedVolleyball sleeves (confirm diameter with Board), nets and storage stands on a cartBadminton sleeves (confirm diameter with Board), nets and storage stands on a cartGym divider curtain, double vinyl – electrically operatedWall padding to OPHEA standards behind all backstops and any other hazardsProjection screens (motorized)	

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

	Fixed Equipment (continued):	<ul style="list-style-type: none"> • 2 1200x1200mm White boards • Gym Storage to include: heavy duty shelving and floor sockets for storage of posts • Blackout shades for exterior windows • Scoreboard with remote controls
Plumbing:	<ul style="list-style-type: none"> • Drinking fountain outside the entrance with bottle filler 	HVAC: <ul style="list-style-type: none"> • Independent temperature control • Supply/return air system • Heating • Tempered air with stratification fans
Electrical:	<ul style="list-style-type: none"> • Fluorescent/LED gymnasium type lighting • Multi-level switching • 16 15A-1P duplex wall mounted receptacles for general use • Fire alarm devices to be provided in accordance with ULC code requirements • Electrical connections to P.E. equipment where necessary 	Technology: <ul style="list-style-type: none"> • 1 data/video outlets at each of 2 projectors • 2 data outlets to accompany wall receptacles on perimeter • 2 data/voice outlets for telephone

- Notes:
- Court markings including basketball, volleyball, badminton (to be confirmed with Board)
 - Provide wire guards on light fixtures and wall-mounted electrical devices
 - Ensure sufficient space around the court for deceleration
 - Allow for a separate entry into each gym section
 - Accommodate stage on long wall of gym for assemblies
 - All glazing to be shatterproof, impact resistant, safety glazing
 - All wall and door mounted devices to be fully recessed
 - Portable sound system to be purchased by school and coordinated with HWDSB IIT Department
 - Requirements for specialty equipment storage to be confirmed with HWDSB
 - Gym and Chair storage room areas are in addition to the allocated gymnasium GFA
 - Gym size to be confirmed by Board, approximate sizes: up to 349 pupil places – 4,500 sf, 350 to 599 pupil places – 5,500 sf, over 600 pupil places – 6,500 sf



5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

1.9

Program Area:	Instructional Spaces		
Room Name:	Stage	Capacity:	Area (sf): 750 Area (SM): 72
Program Activities:	<ul style="list-style-type: none"> • Large group, small group & individual instruction • Presentations and performances 		
Spatial Relationships:	<ul style="list-style-type: none"> • Open to large gymnasium • Near General Purpose Room • Requires dedicated storage room for chairs 		
Environmental Considerations:	<ul style="list-style-type: none"> • No windows • STC rating (walls): min. 60 • Individual thermostat control (+/-3°C) • Requires acoustic considerations between instructional spaces 		
Finishes:			
Floor:	• Sprung Masonite floor (black)	Base:	• Resilient
Walls:	• Concrete masonry units (painted black)	Ceiling:	• Exposed
Furnishings & Equipment:			
Furniture:		Fixed Equipment:	<ul style="list-style-type: none"> • Stage walk-drawn main curtain (to meet CAN/ULC for flame spread rating) • Folding panel partition to separate stage from gym
Plumbing:	• None required	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating
Electrical:	<ul style="list-style-type: none"> • Dedicated stage panel to service stage related loads only • 6 15A-1P duplex wall/mounted perimeter receptacles for general/housekeeping use • Theatre type central sound system complete with amplification, recording, playback and microphone interfacing capabilities, electrical requirements to be coordinated with HWDSB • Single pipe grid with LED specialized stage lighting in stage area – power requirements to be coordinated with HWDSB and stage lighting manufacturer • Power and control requirements for motorized display screen to be coordinated with HWDSB and manufacturer • Additional 15A-1P duplex receptacle (1) to be provided at each projector and locations mandated by CSA code requirements 		
		Technology:	<ul style="list-style-type: none"> • 1 data outlet for projector where applicable • 1 data outlet at wireless access point (WAP) • 1 data/television outlet at television location where applicable • 3 data outlets to accompany wall receptacles in theatre back stage area for general use • Spare conduit to be installed between stage electrical backboard/electrical closet and gym control location

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

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| Electrical
(continued): | <ul style="list-style-type: none">• Fire alarm signalling device to be provided in accordance with ULC code requirements• Classroom control panel:<ul style="list-style-type: none">◦ PA system, speaker, thermostat, light switches, clock, power & data outlets |
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| Notes: | <ul style="list-style-type: none">• Single pipe grid for lighting and curtain system• Provide barrier-free lift or ramp to stage• Large projection screen• Minimum 6 metres deep• Stage to be 900 to 1000mm high• No under-stage chair storage |
|--------|---|

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

1.9

Program Area:	Instructional Spaces		
Room Name:	Change Rooms	Capacity:	24 to 30
		Area (sf):	400
		Area (SM):	37
Program Activities:	<ul style="list-style-type: none"> Students change from their regular clothes into clothes appropriate for physical education 		
Spatial Relationships:	<ul style="list-style-type: none"> Adjacent to gymnasium on ground floor Direct access from corridor 		
Environmental Considerations:	<ul style="list-style-type: none"> STC rating (walls): 40 		
Finishes:			
Floor:	<ul style="list-style-type: none"> Resilient tile 	Base:	<ul style="list-style-type: none"> Resilient
Walls:	<ul style="list-style-type: none"> Concrete masonry units (painted) 	Ceiling:	<ul style="list-style-type: none"> Abuse and moisture resistant gypsum board
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> N/A 	Fixed Equipment:	<ul style="list-style-type: none"> Wood slat benches (fixed to the floor), with shelf & break-away hooks over Vandal resistant mirrors
Plumbing:	<ul style="list-style-type: none"> Washroom stalls and sink Floor drain 	HVAC:	<ul style="list-style-type: none"> Supply air system Exhaust air system Independent temperature control
Electrical:	<ul style="list-style-type: none"> Fluorescent lighting 4 15A-1P duplex wall mounted perimeter receptacles for general/student use GFCI protected receptacles to be provided within change room wet/splash areas in accordance with CSA code requirements Fire alarm signalling device to be provided in accordance with ULC code requirements 	Technology:	<ul style="list-style-type: none"> N/A
Notes:			

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

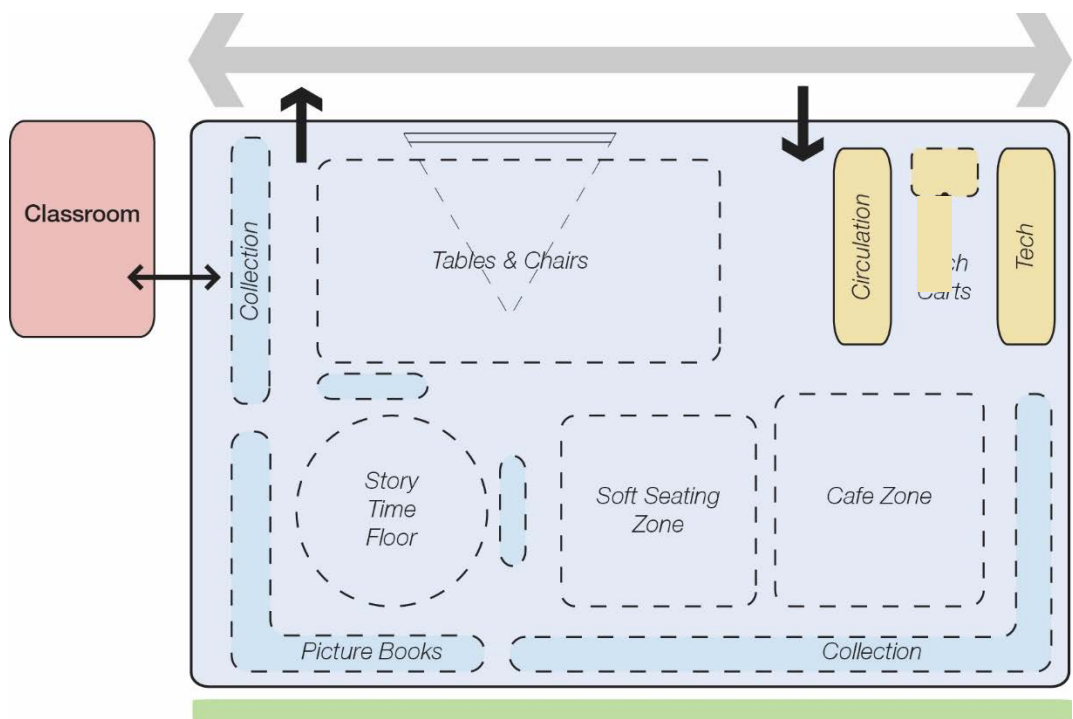
1.10

Program Area:	Instructional Spaces					
Room Name:	Learning Commons		Capacity:	2 classes	Area (sf):	Varies with
					Area (SM):	school size
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Program Activities:	<ul style="list-style-type: none">• Information centre that functions as a resource centre and quiet area for individual or group study• Individual, small group, and class reading and researching• Small computer area, small group study/collaboration rooms, research and general reading• Recreational reading, research, accessing information, using technology, storing, cataloging, and reproduction of materials and information• Used for all staff meetings					
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Spatial Relationships:	<ul style="list-style-type: none">• Centrally located and accessible to all areas of the school• Ground floor location preferred, near front entry for community access• If located on second floor, locate near main entry stair• Access off the main circulation system• Locate with access to academic core classrooms• Need quiet space for individual learning/studying• One entrance to control entry and access					
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Environmental Considerations:	<ul style="list-style-type: none">• Natural light• STC rating (walls): 40• Clear sightlines of entire space for security of students and resource materials• Individual thermostat control (+/-3°C)					
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Finishes:						
Floor:	<ul style="list-style-type: none">• Resilient tile• Carpet tile	Base:	<ul style="list-style-type: none">• Resilient			
Walls:	<ul style="list-style-type: none">• Concrete masonry unit (painted)• Acoustical wall treatment	Ceiling:	<ul style="list-style-type: none">• Suspended acoustical			
<hr/>						
Furnishings & Equipment:						
Furniture:	<ul style="list-style-type: none">• Mobile book carts• Shelving around perimeter of the room• Student group work tables & chairs• Café style tables & chairs• Casual seating chairs• Carpet reading area• Study carrels• Circulation desk task chair• Paperback book racks• Magazine display• Portable book shelves• Book carts (for shelving & sorting only)	Fixed Equipment:	<ul style="list-style-type: none">• Circulation desk casework with hard wired scanner and printer• Library bookshelves• Teaching wall with white board and interactive short throw projector• Lockable storage and charging stations for devices (to be confirmed by Board)• Lockable storage for after-school program materials• Tack board at circulation desk• Window coverings at all exterior windows (3% shade)			
Plumbing:	<ul style="list-style-type: none">• N/A	HVAC:	<ul style="list-style-type: none">• Standard ventilation• Air conditioning/heating			

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

		HVAC (continued):	<ul style="list-style-type: none"> Independent temperature control
Electrical:	<ul style="list-style-type: none"> LED lighting w/multi-level switching Power provisions for multiple (5-10) charging stations to recharge tablets (5-15 devices) to be coordinated with HWDSB and charger manufacturer Power provisions to service a large tablet/laptop/device charging station (40-60 devices) at each central staff desk, to be coordinated with HWDSB and charger manufacturer Additional 15A-1P duplex receptacle (1) to be provided at each of the following: projector, interactive boards/monitor, television and classroom control panel where applicable and locations mandated by CSA code requirements 1 15A-1P duplex wall/furniture mounted receptacle at each quiet student study carrel 1 15A-1P duplex wall mounted receptacle spaced every 15 linear feet throughout Learning Commons for general/housekeeping use 2 15A-1P duplex wall/furniture mounted receptacles at each circulation desk 1 15A-1P dedicated duplex wall/furniture mounted receptacle at printer station 4 15A-1P duplex wall mounted receptacles in each learning commons staff office and group study/collaboration room for general use Fire alarm signalling device to be provided in accordance with ULC code requirements Classroom sound amplification system Power to charging walls/stations for school devices Classroom control panel: <ul style="list-style-type: none"> PA system, speaker, thermostat, light switches, clock, power & data outlets 	Technology:	<ul style="list-style-type: none"> 1 data outlet at ceiling for projector 1 data outlet at each classroom control panel for general use 1 data outlet at each interactive boards/monitor where applicable 2 data outlets to accompany wall receptacles at each circulation desk 1 data/telephone outlet at circulation desk 1 data outlet at each wireless access point (WAP) 1 data/television outlet at television location where applicable 1 data outlet to accompany wall/furniture receptacle at each quiet student study carrel 1 data outlet at each tablet charging station for general use/communication 1 data outlet at printer station
Notes:	<ul style="list-style-type: none"> Locate book shelves on perimeter walls to allow open flexible main library space Welcoming and comfortable, distinct colours and character from the rest of the school Storage area for book bins for teachers 		

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS



5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

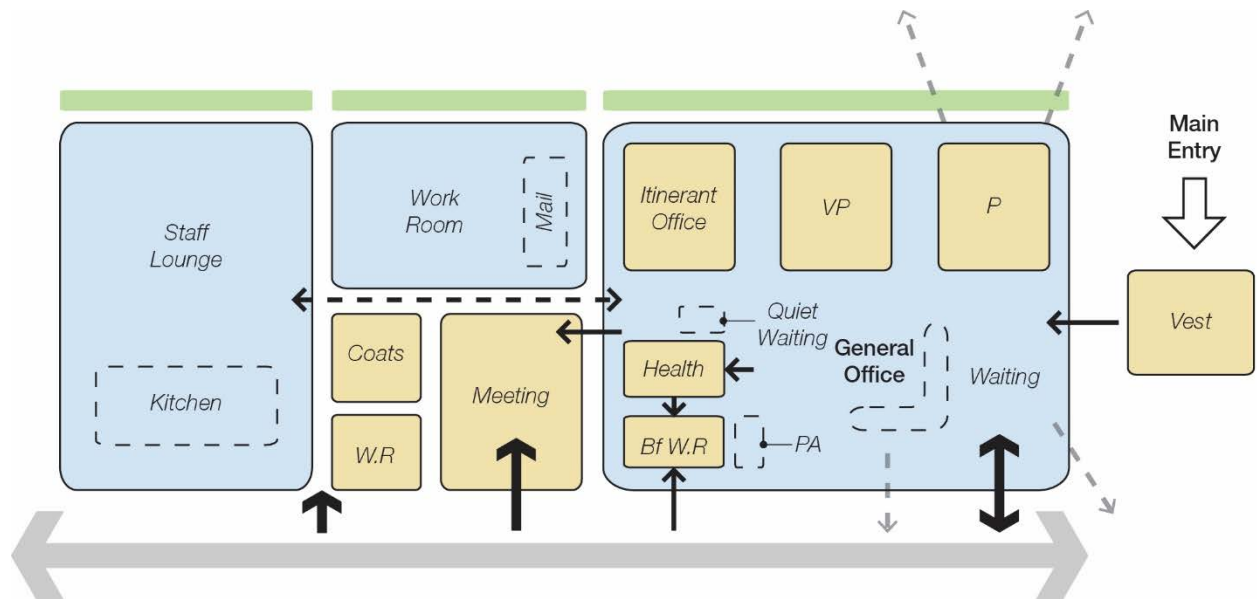
2.1

Program Area:	Operational Spaces		
Room Name:	General Office	Capacity:	4 to 6
		Area (sf):	Varies with
		Area (SM):	school size
Program Activities:	<ul style="list-style-type: none"> • Serves as the main entry to the building • Monitors all arrivals to building • Functions include: attendance, record storage and meeting space for the staff or administration with parents and students • Includes areas for the principal, vice principal and itinerant offices; health room; washroom; the Ontario Student Records storage area; and workroom • Visitors may wait or are directed to other areas of the building 		
Spatial Relationships:	<ul style="list-style-type: none"> • Adjacent to the main entrance of the building • Open to administrative staff area • Visual access to main entry and internal circulation • Near Staff Lounge and Teacher Work Room • Near staff mail boxes 		
Environmental Considerations:	<ul style="list-style-type: none"> • Exterior windows required w/minimum 2 operable vents per room • STC rating (walls): 40 • Individual thermostat control (+/-3°C) 		
Finishes:			
Floor:	<ul style="list-style-type: none"> • Resilient tile • Continue corridor flooring through entry/waiting area 	Base:	<ul style="list-style-type: none"> • Resilient
Walls:	<ul style="list-style-type: none"> • Concrete masonry units (painted) 	Ceiling:	<ul style="list-style-type: none"> • Suspended acoustical
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Visitor chairs/side tables • Work stations and chairs for support staff • Filing cabinets • Photocopier 	Fixed Equipment:	<ul style="list-style-type: none"> • Reception desk, including barrier-free height transaction counter • Millwork PA system cabinet • Window coverings at all exterior windows
Plumbing:	<ul style="list-style-type: none"> • None required 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating • Independent temperature control
Electrical:	<ul style="list-style-type: none"> • +/-8 15A-1P duplex wall mounted perimeter receptacles for general use • 2 15A-1P duplex wall/furniture mounted receptacle at each staff desk/workstation • 3 15A-1P duplex wall/furniture mounted receptacle at each staff office • Fire alarm devices to be provided in accordance with ULC code requirements • Minimum two (2) ceiling mounted PA speakers complete with provisions to support full PA system head end 	Technology:	<ul style="list-style-type: none"> • 1 data outlet at wireless access point (WAP) • 1 data/television outlet at television location, where applicable • 1 data/telephone outlet at each desk/workstation and in each office for telephone • 2 data outlets to accompany wall/furniture receptacle at each staff desk/workstation and in each office • PA system

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

Electrical (continued):	<ul style="list-style-type: none"> • Minimum one (1) clock hanger receptacle • Call for Assistance System connected to emergency call switch in Barrier Free Washrooms. • LED lighting w/multi-level switching 	Technology (continued):	<ul style="list-style-type: none"> • Security & safe arrival monitoring system
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Notes:	<ul style="list-style-type: none"> • Locate integrated audio/video intercom card reader system (to unlock front door at entry) in proximity to reception desk
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5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

2.2

Program Area:	Operational Spaces		
Room Name:	Staff Lounge	Capacity:	24 to 30
		Area (sf):	600 to 800
		Area (SM):	56 to 74
Program Activities:	<ul style="list-style-type: none"> • Quiet space for staff to meet, lounge, eat or work • Occasionally houses refrigerator for nutrition program • Occasional use for student teaching (baking, Special Education, etc.) 		
Spatial Relationships:	<ul style="list-style-type: none"> • Proximity to staff washrooms • Centrally located • Close to General Office • Includes Kitchen 		
Environmental Considerations:	<ul style="list-style-type: none"> • Exterior windows required w/minimum 2 operable vents per room • STC rating (walls): 40 • Individual thermostat control (+/-3°C) 		
Finishes:			
Floor:	• Resilient tile	Base:	• Resilient
Walls:	• Concrete masonry units (painted)	Ceiling:	• Suspended acoustical
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Variety of tables (to maximize flexibility) and chairs • Comfortable furniture and soft seating • Bar height stools at kitchen island (where provided) 	Fixed Equipment:	<ul style="list-style-type: none"> • Tack boards +/-2 @ 1800mm x 1200mm • Coat rack/shelf • Classroom control panel • Window coverings at all exterior windows • Kitchen equipment to include: <ul style="list-style-type: none"> • Refrigerator (2), additional refrigerator to support nutrition program if required • Microwave (2) • Oven • Kitchen cabinets with uppers for storage • Lockable cabinet for nutrition program, where required • Kitchen island (if desired)
Plumbing:	<ul style="list-style-type: none"> • Double stainless-steel sink • Hot/cold water connections • Sanitary connections 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating • Independent temperature control • Range hood above cooktop (if provided), exhaust directly to the exterior
Electrical:	<ul style="list-style-type: none"> • 8 15A-1P duplex wall mounted perimeter receptacles for general use • Fire alarm devices to be provided in accordance with ULC code requirements • LED lighting w/multi-level switching • Classroom control panel: 	Technology:	<ul style="list-style-type: none"> • 1 data outlet at classroom control panel for general use • 1 data/telephone outlet at classroom control panel for telephone • 1 data outlet at wireless access point (WAP)

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

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| Electrical
(continued): | <ul style="list-style-type: none">• PA system, handset, speaker, thermostat, light switches, clock, power & data outlets• 40A-2P 240V oven/stove receptacle• 1 15A-1P dedicated duplex receptacle for each refrigerator• 1 15A-1P dedicated duplex receptacles for each microwave• Electrical provisions for stove hood, if required• 2 20A-1P GFCI protected duplex counter height receptacles at each counter/kitchenette location – maximum 2 receptacles per 20A circuit |
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Notes:	Provide kitchenette with upper and lower cabinets and kitchen island
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5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

2.3

Program Area:	Operational Spaces		
Room Name:	Teacher Work Room	Capacity:	Area (sf): 300 Area (SM): 28
Program Activities:	<ul style="list-style-type: none"> • Meeting and preparation space for teaching staff • Shared workspace for teaching staff 		
Spatial Relationships:	<ul style="list-style-type: none"> • Near classrooms • Near staff washroom • Near instructional material storage • Near Staff Lounge • Access to photocopier • Access to staff mail boxes 		
Environmental Considerations:	<ul style="list-style-type: none"> • Exterior windows required w/minimum 2 operable vents per room • STC rating (walls): 40 • Individual thermostat control (+/-3°C) 		
Finishes:			
Floor:	• Resilient tile	Base:	• Resilient
Walls:	• Concrete masonry units (painted)	Ceiling:	• Suspended acoustical
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Work tables (moveable) • Chairs w/casters • Photocopier 	Fixed Equipment:	<ul style="list-style-type: none"> • 1 White board • 1 Tack board • Open bookshelves • Large work surface to accommodate collating, filing, paper cutter, laminator, etc. • Storage cabinets, with adjustable shelving, for supplies including oversize paper storage • Full height open bookshelves • Classroom control panel • Window coverings at all exterior windows
Plumbing:	• None required	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating • Independent temperature control
Electrical:	<ul style="list-style-type: none"> • 4 15A-1P duplex wall mounted perimeter receptacles for general use • 4 15A-1P duplex cabinet mounted receptacle at work counter • Additional 15A-1P duplex receptacles to be provided at locations mandated by CSA code requirements 	Technology:	<ul style="list-style-type: none"> • 1 data outlet at classroom control panel for general use • 2 data outlets to accompany wall receptacles for general use • 1 data outlet at wireless access point (WAP) • 1 data/telephone outlet at classroom control panel for telephone

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

Electrical (continued):	<ul style="list-style-type: none">• Fire alarm signalling device to be provided in accordance with ULC code requirements• LED lighting w/multi-level switching• Classroom control panel:<ul style="list-style-type: none">◦ PA system, handset, speaker, thermostat, light switches, clock, power & data outlets	Technology (continued):	<ul style="list-style-type: none">• 2 data outlets to accompany wall/furniture receptacle at each work station
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Notes:

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

2.4

Program Area:	Operational Spaces		
Room Name:	Custodial Areas	Capacity:	Area (sf): Area (SM):
Program Activities:	<ul style="list-style-type: none"> • Custodial office, including computer to monitor building services • Receiving/garbage and recycling • Storage for floor wash machine • Custodial storage 		
Spatial Relationships:	<ul style="list-style-type: none"> • Locate one custodial closet per floor level 		
Environmental Considerations:	<ul style="list-style-type: none"> • STC rating (walls): 40 • Individual thermostat control (+/-3°C) 		
Finishes:			
Floor:	<ul style="list-style-type: none"> • Sealed concrete • Resilient tile or sheet flooring (at office) 	Base:	<ul style="list-style-type: none"> • Resilient
Walls:	<ul style="list-style-type: none"> • Concrete masonry units (painted) 	Ceiling:	<ul style="list-style-type: none"> • Exposed (painted) • Suspended acoustical (at office)
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Metal shelving 	Fixed Equipment:	<ul style="list-style-type: none"> • 1 Tack boards +/- 2 @ 1800mm x 1200mm • Mop holders • Shelving for storage of dry goods
Plumbing:	<ul style="list-style-type: none"> • Mop sink • Floor drain 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating
Electrical:	<ul style="list-style-type: none"> • Electrical provisions for custodial equipment chargers (i.e. Floor scrubber, waxing machine, etc.) to be coordinated with HWDSB and equipment manufacturer & receptacles for floor scrubber throughout school • 2 15A-1P duplex wall/furniture mounted receptacle at each computer station • LED lighting throughout all janitorial spaces • Fire alarm devices to be provided in accordance with ULC code requirements 		
		Technology:	<ul style="list-style-type: none"> • 1 data outlets at each custodial office computer station to accompany wall receptacles
Notes:			

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

2.5

Program Area:	Operational Spaces		
Room Name:	Meeting Room	Capacity:	8 to 12
		Area (sf):	230
		Area (SM):	21
Program Activities:	<ul style="list-style-type: none"> • Large group, small group meetings & individual instruction • Individual & group work • Presentations & demonstrations 		
Spatial Relationships:	<ul style="list-style-type: none"> • Near General Office and main school entrance • Near staff work room 		
Environmental Considerations:	<ul style="list-style-type: none"> • Exterior windows required w/minimum 2 operable vents per room • STC rating (walls): 40 • Individual thermostat control (+/-3°C) 		
Finishes:			
Floor:	<ul style="list-style-type: none"> • Resilient tile 	Base:	<ul style="list-style-type: none"> • Resilient
Walls:	<ul style="list-style-type: none"> • Concrete masonry units (painted) 	Ceiling:	<ul style="list-style-type: none"> • Suspended acoustical
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Meeting tables (moveable) • Chairs w/castors 	Fixed Equipment:	<ul style="list-style-type: none"> • White board with interactive short throw projector • Tack boards 1 @ 1800mm x 1200mm • Classroom control panel • Window coverings at all exterior windows
Plumbing:	<ul style="list-style-type: none"> • None required 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating • Independent temperature control
Electrical:	<ul style="list-style-type: none"> • 4 15A-1P duplex wall mounted perimeter receptacles for general use • Additional 15A-1P duplex receptacle (1) to be provided at each of the following: projector, interactive boards/monitor, television and classroom control panel where applicable and locations mandated by CSA code requirements • Fire alarm signalling device to be provided in accordance with ULC code requirements • LED lighting w/multi-level switching • Classroom control panel: <ul style="list-style-type: none"> ◦ PA system, handset, speaker, thermostat, light switches, clock, power & data outlets 	Technology:	<ul style="list-style-type: none"> • 1 data outlet at for projector • 1 data outlet at classroom control panel for general use • 1 data outlet at interactive boards/monitor where applicable • 2 data outlets to accompany wall receptacles • 1 data outlet at wireless access point (WAP) • 1 data/telephone outlet at classroom control panel for telephone
Notes:			

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

2.6

Program Area:	Operational Spaces		
Room Name:	Academic Storage	Capacity:	24 to 30
		Area (sf):	600 to 900
		Area (SM):	56 to 84
Program Activities:	<ul style="list-style-type: none"> • Storage of supplies, textbooks, and equipment • Resource area for individual or small group instruction 		
Spatial Relationships:	<ul style="list-style-type: none"> • Near core classrooms • Near staff work rooms 		
Environmental Considerations:	<ul style="list-style-type: none"> • Individual thermostat control (+/-3°C) 		
Finishes:			
Floor:	<ul style="list-style-type: none"> • Resilient tile 	Base:	<ul style="list-style-type: none"> • Resilient
Walls:	<ul style="list-style-type: none"> • Concrete masonry units (painted) 	Ceiling:	<ul style="list-style-type: none"> • Suspended acoustical
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Adjustable shelving 	Fixed Equipment:	<ul style="list-style-type: none"> • N/A
Plumbing:	<ul style="list-style-type: none"> • None required 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Air conditioning/heating
Electrical:	<ul style="list-style-type: none"> • 2 15A-1P duplex wall mounted perimeter receptacles for general/student use • Additional 15A-1P duplex receptacle to be provided at locations mandated by CSA code requirements • LED lighting • Fire alarm signalling device to be provided in accordance with ULC code requirements 	Technology:	<ul style="list-style-type: none"> • 1 data outlet to accompany wall receptacle
Notes:	<ul style="list-style-type: none"> • Shelving to be provided by school 		

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

2.7

Program Area:	Operational Spaces		
Room Name:	Student Washrooms	Capacity:	24 to 30
		Area (sf):	600 to 900
		Area (SM):	56 to 84
Program Activities:	<ul style="list-style-type: none"> • N/A 		
Spatial Relationships:	<ul style="list-style-type: none"> • Near core classrooms • Near community use spaces, e.g. Gymnasium • Requires open access to corridor for supervision 		
Environmental Considerations:	<ul style="list-style-type: none"> • STC rating (walls): 40 		
Finishes:			
Floor:	<ul style="list-style-type: none"> • Ceramic tile • Slope floor slab to drains 	Base:	<ul style="list-style-type: none"> • Ceramic tile
Walls:	<ul style="list-style-type: none"> • Concrete masonry units (painted) • Ceramic tile at wet walls 	Ceiling:	<ul style="list-style-type: none"> • Moisture resistant gypsum board (painted)
Furnishings & Equipment:			
Furniture:		Fixed Equipment:	<ul style="list-style-type: none"> • Vandal resistant wall mirror • Tilted mirror (one for every 4 stalls) • Hand dryer (one for every 4 stalls) • Toilet tissue holder (1 per stall) • Sanitary napkin & tampon dispenser at girl's washroom • Sanitary napkin & tampon disposal at girl's washroom (1 per stall) • Toilet partitions • Grab bars at barrier free stall
Plumbing:	<ul style="list-style-type: none"> • Barrier-free multi-head wash fountain • Water closets as required by OBC • One (1) BF water closet per washroom • Urinals (Male only) • Floor Drains 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Exhaust • Air conditioning/heating
Electrical:	<ul style="list-style-type: none"> • 15A-1P GFCI protected duplex receptacles mounted at entrance at above counter for general use • Connections for hand dryers • One (1) PA speaker in the ceiling • LED lighting • Fire alarm signalling device to be provided in accordance with ULC code requirements 	Technology:	
Notes:	<ul style="list-style-type: none"> • Complete washroom count to ensure that adequate washrooms are provided on each floor and as per OBC requirements 		

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

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|--------------|---|
| Notes | • Include future portables in washroom count |
| (continued): | • Individual barrier free washroom required on each floor |
| | • Small groupings of washroom facilities preferred |
| | • Wash fountain to be hard-wired (not battery operated) |

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

2.8

Program Area:	Operational Spaces		
Room Name:	Barrier Free, Universal, Washrooms & Change Room	Capacity:	Area (sf): Area (SM):
Program Activities:	<ul style="list-style-type: none"> • N/A 		
Spatial Relationships:	<ul style="list-style-type: none"> • Near elevator • Near barrier-free entrance • Near Special Education classrooms • Near Gymnasium 		
Environmental Considerations:	<ul style="list-style-type: none"> • STC rating (walls): 40 		
Finishes:			
Floor:	<ul style="list-style-type: none"> • Ceramic tile • Slope floor slab to drain 	Base:	<ul style="list-style-type: none"> • Ceramic tile
Walls:	<ul style="list-style-type: none"> • Concrete masonry units (painted) 	Ceiling:	<ul style="list-style-type: none"> • Moisture resistant gypsum board (painted)
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> • Hydraulic change table 	Fixed Equipment:	<ul style="list-style-type: none"> • Tilted mirror • Hand dryer • Toilet tissue holder • Sanitary napkin & tampon dispenser • Sanitary napkin & tampon disposal • Grab Bars (straight and "L" shaped) • Convenience shelf • Two metal lockers • Ceiling mounted lift (as directed by HWDSB)
Plumbing:	<ul style="list-style-type: none"> • BF sink and faucet • BF water closets as required by OBC • Floor drain • Barrier-free shower 	HVAC:	<ul style="list-style-type: none"> • Standard ventilation • Exhaust • Air conditioning/heating
Electrical:	<ul style="list-style-type: none"> • 15A-1P GFCI protected duplex receptacles mounted above counter for general use • Connections for hand dryers • One (1) PA speaker in the ceiling • Call assistance system connected to the emergency call switch in the General Office • Corridor emergency dome light fixture • LED lighting • Fire alarm signalling device to be provided in accordance with ULC code requirements 	Technology:	

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

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|----------------------------|---|
| Electrical
(continued): | <ul style="list-style-type: none">• Auto door opener• 2 15A-1P GFCI protected receptacles to be provided in Orthopaedic washroom above counter and in areas deemed to be wet and/or a splash zone in accordance with CSA code requirements• Additional power requirements for lift and hydraulic change table in Orthopaedic washroom to be coordinated with HWDSB and manufacturer |
|----------------------------|---|

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- | | |
|--------|--|
| Notes: | <ul style="list-style-type: none">• Barrier free and Universal washrooms to be provided as per the provisions of the OBC• Orthopaedic washroom – lift, change table, storage cubbies for student supplies, shower (accessible off the corridor for the rest of the school to use) |
|--------|--|

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

2.9

Program Area:	Operational Spaces		
Room Name:	Corridors	Capacity:	Area (sf): Area (SM):
Program Activities:			
Spatial Relationships:			
Environmental Considerations:	<ul style="list-style-type: none">• Exterior windows required w/minimum 2 operable vents per room• STC rating (walls): 40• Individual thermostat control (+/-3°C)		
Finishes:			
Floor:	<ul style="list-style-type: none">• Porcelain tile (preferred)• Resilient tile or sheet flooring• Walk off mats at the entry	Base:	<ul style="list-style-type: none">• Porcelain tile• Resilient
Walls:	<ul style="list-style-type: none">• Concrete masonry units (painted)	Ceiling:	<ul style="list-style-type: none">• Suspended acoustical
Furnishings & Equipment:			
Furniture:		Fixed Equipment:	<ul style="list-style-type: none">• Display cases• Fire extinguishers as required by code• Coat racks
Plumbing:	<ul style="list-style-type: none">• Consultant to coordinate floor cleanout locations with Mechanical Engineer• Drinking fountains with bottle fillers	HVAC:	<ul style="list-style-type: none">• Standard ventilation• Air conditioning/heating
Electrical:	<ul style="list-style-type: none">• 15A-1P duplex wall mounted receptacles distributed every 20 linear feet along corridor for housekeeping/general/learning use• Power requirements for tablet charging station distributed every 60 linear feet along corridor to be coordinated with HWDSB and charger manufacturer• Fire alarm signalling device to be provided in accordance with ULC code requirements• PA speakers on approximately 10m centers• Exit signs as required• Fire alarm signalling and initiating device to be provided in accordance with ULC code requirements• LED fixtures• Accent lighting to be provided in display cases• Architectural lighting to be used at main entrances/foyers	Technology:	<ul style="list-style-type: none">• 1 data outlet at each tablet charging station• Data outlet at wireless access points (WAP) for full coverage as required

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

Notes:

- Provide barrier automatic door openers at Main Entrance and any other entrance vestibule as required by OBC
- Designed such that no rooms, doors, millwork or any other protrusion interferes with the required corridor width
- Easily accessible to barrier elevator and washrooms
- Minimum standard corridor width 3000mm
- Recessed sprinkler heads to prevent vandalism
- Where lockers are provided, provide masonry nib walls at each end
- Views to exterior - clear and simple circulation
- Corridor and circulation spaces are used as collaborative spaces - spaces of interaction and gathering to be considered

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

2.10

Program Area:	Operational Spaces		
Room Name:	Mechanical Spaces	Capacity:	Area (sf): Area (SM):
Program Activities:	<ul style="list-style-type: none"> Houses the mechanical systems of the facility 		
Spatial Relationships:	<ul style="list-style-type: none"> Located for efficient distribution of services 		
Environmental Considerations:	<ul style="list-style-type: none"> Mechanical equipment generates noise, therefore strategic placement in locating it away from classrooms is required 		
Finishes:			
Floor:	<ul style="list-style-type: none"> Sealed concrete 	Base:	<ul style="list-style-type: none"> None
Walls:	<ul style="list-style-type: none"> Concrete masonry units (painted) 	Ceiling:	<ul style="list-style-type: none"> Exposed (painted)
Furnishings & Equipment:			
Furniture:	<ul style="list-style-type: none"> N/A 	Fixed Equipment:	<ul style="list-style-type: none"> As per mechanical requirements
Plumbing:	<ul style="list-style-type: none"> Cold water connections as required by mechanical equipment Floor drains if required Hose bib at roof for maintenance Mop sink Eye wash station 	HVAC:	<ul style="list-style-type: none"> Standard ventilation
Electrical:	<ul style="list-style-type: none"> Electrical provision for all mechanical equipment (i.e. MCC, VFD, pumps, air handling units, boilers, etc.) Including all disconnects, fire alarm initiating device, etc. Fluorescent lighting to be provided throughout mechanical spaces (included several fixtures on night light circuit) 15A-1A duplex wall mounted receptacles to be provided for general use in mechanical room Outdoor receptacle at roof for maintenance 	Technology:	<ul style="list-style-type: none"> Provisions and conduit for equipment connection to Building Automation System (BAS)
Notes:	<ul style="list-style-type: none"> The size of the mechanical room will be dependent on the mechanical systems in place Roof top equipment to be screened as required by Municipality Provide over-size door opening for equipment access Provide stairs for roof access (no ships-ladders) 		

5.0 FUNCTIONAL PROGRAM AREAS/ADJACENCY DIAGRAMS

3.1

Program Area:	Community Use Spaces			
Room Name:	General Purpose/Community Room	Capacity:	24 to 30	Area (sf): 600 to 900 Area (SM): 56 to 84
Program Activities:	<ul style="list-style-type: none">• Large group, small group & individual instruction• Individual & group work• Presentations & demonstrations• Accessible after-hours for community use			
Spatial Relationships:	<ul style="list-style-type: none">• Near other core classrooms• Near gymnasium and main school entrance• Ground floor location• Controlled access to remainder of school			
Environmental Considerations:	<ul style="list-style-type: none">• Exterior windows required w/minimum 2 operable vents per room• STC rating (walls): 40• Individual thermostat control (+/-3°C)			
Finishes:				
Floor:	<ul style="list-style-type: none">• Resilient tile	Base:	<ul style="list-style-type: none">• Resilient	
Walls:	<ul style="list-style-type: none">• Concrete masonry units (painted)	Ceiling:	<ul style="list-style-type: none">• Suspended acoustical	
Furnishings & Equipment:				
Furniture:	<ul style="list-style-type: none">• Multi-purpose tables (moveable)• Chairs w/castors	Fixed Equipment:	<ul style="list-style-type: none">• Tack boards +/-2 @ 1800mm x 1200mm• Lockable storage cabinets• Cabinet with sink and lockable uppers• Classroom control panel• Window coverings at all exterior windows	
Plumbing:	<ul style="list-style-type: none">• Stainless steel sink	HVAC:	<ul style="list-style-type: none">• Standard ventilation• Air conditioning/heating• Independent temperature control	
Electrical:	<ul style="list-style-type: none">• 8 15A-1P duplex wall mounted perimeter receptacles for general use• Additional 15A-1P duplex receptacle (1) to be provided at projector, and classroom control panel where applicable and locations mandated by CSA code requirements• LED lighting w/multi-level switching• Classroom control panel:<ul style="list-style-type: none">◦ PA system, handset, speaker, thermostat, light switches, clock, power & data outlets• Fire alarm signalling device to be provided in accordance with ULC code requirements	Technology:	<ul style="list-style-type: none">• 1 data outlet for projector• 1 data outlet at classroom control panel for general use• 1 data/telephone outlet at classroom control panel for telephone• 1 data outlet at wireless access point (WAP)	

A.1 MOE Elementary School Template

**ELEMENTARY SCHOOL SPACE TEMPLATE
SAMPLE SCHOOL**

School Board: Sample District School Board
Grade Range: JK to 8
Program: English, French or Dual Track
School Name: Sample School

Table 17: Elementary Model Program Sheet			
		Expected Enrolment:	600
		Total Number of required classrooms	26

Instructional Space	#	Size		Floor Area		Load	OTG
		m ²	ft ²	m ²	ft ²		
Kindergarten	5	111	1,200	557	6,000	26	130
Classroom	19	70	750	1,324	14,250	23	437
Art Room	1	98	1,050	98	1,050	23	23
Science Room	1	98	1,050	98	1,050	23	23
Music Vocal		-	-	-	-	23	-
Computer Laboratory		-	-	-	-	23	-
Technical/Vocational		-	-	-	-	23	-
Special Education Area		-	-	-	-	9	-
Musical Instrumental		-	-	-	-	-	-
Resource Area - Loaded (400-699 sf)		-	-	-	-	12	-
Resource Area - Unloaded (<400 sf)		-	-	-	-	-	-
Gymnasium Area and Stage	1	557	6,000	557	6,000		
Change Rooms	2	37	400	74	800		
Library	1	279	3,000	279	3,000		
General Purpose		-	-	-	-		
Instructional Area Flexibility		-	-	418	4,500		

Total GFA and OTG of Instructional Area		3,405	36,650		613
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Operational Space	Per Pupil		Floor Area	
	m ²	ft ²	m ²	ft ²
General Office	0.29	3.1	149	1,600
Staff Room and Teacher Work Rooms	0.20	2.2	123	1,320
Kitchen			20	210
Custodial Areas	0.16	1.7	95	1,020
Meeting Room			21	230
Academic Storage	0.09	1.0	56	600
Washrooms	0.30	3.2	178	1,920
Gymnasium Storage			31	330
Chair Storage (in Gymnasium)			12	130
Mechanical Spaces	0.54	5.77	322	3,462

Total Operational Area		1,005	10,822
Total Instructional (from above)		3,405	36,650
Total Operational and Instructional		4,410	47,472

Gross Up Added	38%	1,676	18,039
Gross Floor Area		6,086	65,511

Area per Pupil for 600 pupils:	10.14	109.2
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Community Use Rooms	m ²	ft ²
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Child Care	-	-
Early Years Hub	-	-
Community Use	-	-
Other (please identify)	-	-
Other (please identify)	-	-
Other (please identify)	-	-
Total Community Use Rooms Area	-	-

Total Square Feet	6,086	65,511
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A.2. Music Program Start-up List

**Music Program Start-up List**

Grades 6-8	1 Conductor Stand	Triangles
10 Flutes	Woodwind Accessories (reeds, cleaning swabs, ligatures, cork grease, extra mouthpieces, – ideally to assign one per student	Sand blocks
10 Clarinets		Claves
2 Bass Clarinets		Wood block
3 Alto Saxophones	Brass Accessories (slide grease, valve oils, various sized mutes, mouthpieces – ideally to assign one per student)	Maracas (pairs and different sizes)
3 Tenor Saxophones		Egg shakers
5 Trumpets		Cluster Bells
4 Trombones	Sterisol and cleaning solutions	Tick tock block
2 French Horns		Cymbals
2 Baritones / Euphoniums	Tuner	Cowbells
1 Drum Set and throne	Brass Mouth Piece extractor	Ocean Drum
Concert Bass Drum and drum stand		25 note Tone Bells (soprano)
Extra snare	Primary/Junior	25 note Tone Bells (alto)
Cymbal Set	3 Soprano Glockenspiels	Shakers
Rhythm Set (wood block, claves, various hand percussion, tambourines, triangles, etc)	3 Alto Glockenspiels	Rain Makers
1 set of Orchestra Bells	1 Bass Metallophone	Rhythm kits – sticks etc...
1 Xylophone	1 Bass Xylophone	
1 bass guitar and amp	5 Alto Xylophone	
Band Methods, Standards of Excellence, Essential Elements, Accent on Achievement (music program)	5 Soprano Xylophone	
Concert Band Sheet Music	2 Alto Metallophone Studio	
Jazz Band Sheet Music	2 Soprano Metallophone	
Keyboard and /or Piano	Hand drums of various sizes	
25 – 30 Music Stands (stand cart)	Tambourines	
	Guiro	
	Cabassa	
	Buffalo Drum	
	Finger cymbals	