Nelson Place Elementary School
35 Nelson Place, Worcester, MA 01605

MSBA
Final PSR Supplement
(In response to MSBA PSR comments dated July 10, 2014)

SEPTEMBER 11, 2014

MSBA
Massachusetts School Building Authority
40 Broad Street, Suite 500, Boston, MA 02109

OWNER
City of Worcester, MA
Architectural Services Division
50 Skyline Drive, Worcester, MA 01605

OPM
Tishman Construction Corporation of Massachusetts
84 State Street, Boston, MA 02108

DESIGNER
Lamoureux Pagano & Associates, Inc.
108 Grove Street, Suite 300, Worcester, MA 01605

Prepared by:

LAMoureux • Pagano
Architecture Project Managers
11 September 2014

Mary Pichetti, Director of Capital Planning
Massachusetts School Building Authority
40 Broad Street, Suite 500
Boston, MA 02109

Re: City of Worcester, MA
Nelson Place Elementary School
Final PSR Supplement

Dear Ms. Pichetti:

This Final PSR Supplement addresses items not included in the initial July 23, 2014 PSR Supplement. All items are in response to MSBA’s PSR Review Comments received via email from Nicholas Milano on July 10, 2014. To help clarify that all items have been addressed, the initial responses included in the July 23, 2014 PSR Supplement are in red font and the final responses included in this September 11, 2014 Final PSR Supplement are in blue font.

Attachment “A” Module 3 Preferred Schematic Report Review Comments

Items Requiring Immediate Action:

Based on MSBA staff’s review of the Preferred Schematic submittal, MSBA believes this project would benefit from further development of the Preferred Schematic scheme. Among items the MSBA would like to see addressed are the following:

- Provide a Preferred Schematic Supplement that includes the requirements of sections “3.3.2.4 Preferred Solution” and “3.3.2.9 Local Actions and Approvals” of Module 3 – Feasibility Study by August 18, 2014. If the District and its consultants believe additional time is required beyond August 18, 2014 please notify the MSBA assigned PM when this work could be complete and the impact to the District’s project schedule. The MSBA is available to answer any questions the District and its consultants may have regarding the supplement.

- Per subsequent conversation with MSBA, LPA to submit site and building development drawings on September 11th.

- Site and building plans are attached. These graphics are as reviewed and approved by the school, and meet the program requirements as developed.

- Development of a schedule for land acquisition proceedings.

- Please refer to the attached letter from the City of Worcester DPW&P dated July 19, 2014.

- Site plan attached shows additional detail on the proposed land acquisition, Eminent Domain taking. The City has requested that the land takings for the residences be minimized without compromising the site/building program. The plans indicate a combination of temporary grading easements and land transfer/acquisitions.
An updated project schedule to accommodate further development of the Preferred Schematic.
Please refer to the attached revised Project Schedule dated July 18, 2014.

Completion of civil evaluation of existing conditions.
Please see responses as outlined for the specific questions later in this letter.

Further plan development, see comments below.
LPA to submit site and building development drawings on September 11th.
Site and building plans are attached.

Further definition of proposed enhanced energy conservation methods and coordination of values within the proposed project construction budget.
In the PSR narrative, LPA noted that the enhanced energy features will be developed during the schematic design process, and are currently being developed for the Preferred Solution. Grants for super-insulation, Geothermal systems, Biomass boilers will be filed by August 24, 2014. Response to the grant applications is expected within 3 to 4 weeks after filing. LPA has developed a schedule outlining what decisions are required, and when, in order to develop, design and cost as part of the Schematic Design submission. LPA will report on progress as part of the September 11th PSR Supplement.

Three grant applications have been filed: one for enhanced insulation of the roof and wall systems plus triple glazing window systems, one for biomass boilers, and one for geothermal. Cost, payback analyses and energy usage matrixes have been filed with the applications. The City has authorized the team to proceed with the enhanced insulation as part of the design, and energy calculations, systems designs, and envelope design are proceeding accordingly. Once the biomass and geothermal grant funding opportunities have been finalized, the owner will determine the extent of the proposed systems to be included in the final project.

3.3 Preferred Schematic Report

Preferred Schematic Report shall include the following:

- OPM certification of completeness & conformity - Complete.
- Table of Contents - Complete.
- Introduction - Complete, see comments.
- Evaluation of Existing Conditions - Incomplete, see comments.
- Final Evaluation of Alternatives - Complete.
- Preferred Solution - Complete, see comments below.
- Local Actions and Approvals - Complete.

3.3.1 Introduction including the following:

Overview of the process undertaken since submittal of the Preliminary Design Program including any new information and changes to previously submitted information;
The submittal indicates that the most significant change since the submission of the Preliminary Design Program (PDP) was the City’s negotiation with Assumption College regarding an expanded site plan alternate. Following discussions with the college, the City decided to modify the parameters of site development. The City provided MSBA with a proposed alternate scheme (04/08/14) in lieu of what was presented in the PDP utilizing the rear land of abutting private property and a right of way and grading easements on a limited portion of the Assumption property. The PDP was amended to incorporate this option. The modified parameter of site development has become the basis for the preferred scheme identified within this Preferred Schematic submittal.

3.3.2 Evaluation of Existing Conditions

Describe any changes resulting from new information that informs the conclusions of the evaluation of the existing conditions.

- Please provide anticipated completion of open items from the existing conditions study – civil as prepared by Nitsch Engineering (dated: May 2014 - Revised):
  - Final determination if any underground tanks exist on the site.
  - Please refer to Phase I environmental site assessment, filed with the PDP -3.1.4 H, attachment A, Worcester Fire Department permit to remove the tank, and attachment B photographs of the tank removal. To the best of our knowledge, based on the environmental consultant’s review, the underground tank was removed from the site.
  - Provide updated information for completion of the scheduled test pits, borings and site percolation analysis scheduled to be completed during the summer of 2014.
  - The ANRAD was filed with the Conservation Commission, and the wetland borders were approved at meeting on July 14, 2014. With the wetland boundaries confirmed by the commission, and the test pit/boring locations reviewed and input from the commission, the test pit locations will be laid out in the field by the surveyor, Nitsch, between July 30 and August 1, reviewed in the field with the owner the week of August 4th, and the test pits conducted the week of August 18th.
  - Test pits, soils borings, soils sampling, infiltration testing, etc. were conducted, and report is underway. In short, the findings were consistent with the previous record information.
  - The “Abbreviated Notice of Resource Area Delineation” as prepared by CR Environmental as part of the Nitsch Engineering submittal notes a requested approval of Isolated Land Subject to Flooding (ISLF) boundary and verification that the identified western isolated wetland is not a state or local wetland resource area. Please provide conclusions to these issues.
  - The ANRAD was filed with the Conservation Commission and the wetland borders and wetland designations were approved at site meeting on July 14th. LPA will include the findings of the Conservation Commission in the Schematic Design filing.
  - The eastern ILSF is identified as regulated by the state and Worcester Wetland Protection Regulations. The submitted site plans identify these two ISLF areas
and indicate a required 30-foot no build zone and a 15-foot no disturbance zone at their locations. Please provide recommended construction environmental protection procedures to be implemented to meet the requirement.

- The recommended protection will be filed with the commission as part of the NOI filing, and will be included as part of the specifications at the schematic phase, and be developed in future phases. The order of conditions are also to be included as part of the contract documents, and submissions to MSBA when obtained. Please also refer to PSR section 3.3.2.3 B matrix of permitting, where necessary filings and requirements are noted.

3.3.4 Preferred Solution – Provide the following:

- **Building Plans**
  - Provide conceptual floor plans of the preferred solution, in color that are clearly labeled to identify educational spaces in the preferred solution.
  
  - As requested, updated plans will be submitted for the September 11th PSR Supplement. To the greatest extent possible, all elements listed below will be addressed.
    
    - Programmed Administration area development to provide security and control of building access for each academic wing.
    
    - 9/11/14 plans show the main lobby area, and doors separating the academic wings from the core facilities for secure after school use. Security consultant has reviewed the building and site plans, and their recommendations were reviewed with the City. More comprehensive proposed security system scope will be included in the Schematic Design submission.
    
    - The proposed Media Center is also planned to serve as satellite facility for the Worcester Public Library. The proposed floor plan does not locate the Media Center with direct access from the exterior. Please indicate how the proposed Media Center will be used by the public while maintaining separate controlled access to the new facility.
    
    - 9/11/14 plans show separate entrance to the Media Center through the main entry vestibule. There have been subsequent meetings with the Library and School department, the submitted plan reflects their input including a Media Center suite with a rest room so that the Public Library can function after hours without impacting the balance of the school.
    
    - Development of interior circulation and egress.
    
    - 9/11/14 plans show circulation, stairs and egress.
    
    - Definition of room adjacencies and egress.
    
    - 9/11/14 plans show adjacent rooms, and layouts
    
    - Please indicate the location for the 1,000 NSF Stage identified within the Space Summary.
    
    - 9/11/14 plans show the stage and accessible route solution.
    
    - Please indicate the location for the 1,000 NSF Greenhouse identified within the Space Summary.
- 9/11/14 site plans show the proposed greenhouse location on site separate from the main school facility. Understanding that the MSBA is not participating in this program, the City is pursuing separate funding for the greenhouse—see attached summary.

- Determination of Common Area locations and confirmation that Common spaces will be assumed within the Gross Floor Area calculation.

- 9/11/14 plans show the common areas, and the space is included within the gross square footage calculation.

- Please indicate the proposed locations for the 65,000 square feet required for a planned solar photovoltaic system as identified within the ART Engineering recommendation (3.3.1.3.D.4).

- For comparative study purposes, the 60,000sf area of PV arrays was the benchmark for the PSR options analysis. During schematic design, the proposed PV array area and locations will be refined. Factors will include grant funding availability and site and building orientation opportunities. Regardless, the roof support capabilities, locations for power connections, inverter locations for the future panel installations will be included in the scope of this contract work. Further information on this topic will be included in the September 11 submission.

- The photovoltaic panels/system is not included in the current scope, but is planned to be included in ongoing grant programs established in the City as funding allows. Studies for the PV array location options on the building roof are underway and will be further developed for the Schematic Design submission. As noted, the roof area will be planned for panel location and coordinated with the equipment locations.

- **Site Plans** - Provide clearly labeled site plans of the preferred solution including, but not limited to:
  - Site access and circulation;
    - Land Taking Site Plan indicates 5 portions of abutting residential properties totaling +/- 1.04 acres and +/- 1.26 acres for a grading and access easement from Assumption College are required to accommodate the preferred schematic site plan. An undated letter from Paul Moosey, Commissioner of the City of Worcester DPW&P states “Upon approval of the project by the Massachusetts School Building Authority (MSBA), and completion of a project funding agreement, the City of Worcester will commence with the process of eminent domain.” Please note that the MSBA will not issue a Project Funding Agreement without the City of Worcester providing written confirmation of full control of the identified properties. Please provide MSBA with a schedule of land taking procedures.
    - Please refer to the attached letter from the City of Worcester DPW&P dated July 19, 2014.
  - Discussion with the landowners is ongoing, and the City is proceeding as outlined in the referenced document.
  - The preferred site plan (3.3.2.4) locates a potential pedestrian/bicycle access path from the site to Romola Road and notes its inclusion as “to be
reviewed”. Please provide confirmation if the access route which is also identified to be used for emergency use will be included within the project. The land indicated for this access route is part of the identified Grading Easement eminent domain land taking from Assumption College.

- Please refer to the attached letter from the City of Worcester DPW&P dated July 19, 2014.

- Parking and paving;
  - The preferred site plan (3.3.2.4.E) indicates 78 parking spaces and a potential for an additional 120 spaces. Please provide a description of how the number of parking spaces was determined.
  - The program calls for 140 parking spaces, ongoing discussions with the City (with consideration of neighborhood concerns) as to the final location of the parking, is being determined. These locations will be shown as part of the PSR Supplement filing on September 11th.
  - Parking locations are indicated on the included site plans and meet the program requirements.
  - Please confirm location(s) for handicapped parking with access to the building.
  - These locations will be shown as part of the PSR Supplement filing on September 11th.
  - Accessible spaces are indicated on the included site plan.

- Easements and environmental buffers;
  - Please confirm planned construction and site mitigation efforts to protect identified Isolated Land Subject to Flooding areas.
  - The recommended protection will be filed with the Conservation Commission as part of the NOI filing, and will be included as part of the specifications at the schematic phase, and be developed in future phases, the order of conditions are also to be included as part of the contract documents, and submissions to MSBA when obtained. Please also refer to PSR section 3.3.2.3 B matrix of permitting, where necessary filings and requirements are noted.

- Site orientation.
  - The design team should provide further development of the Preferred Solution to coordinate plan development and building orientation to support the proposed solar photovoltaic system.
  - This development will be shown as part of the PSR Supplement filing on September 11th.
  - The building orientation is established based on the site development and site opportunities, the panels will be installed on the roof as area allows. Further development is underway, as noted earlier, the photovoltaic installation is part of a separate project, and will be coordinated.

- **Budget** - Provide an overview of the Total Project Budget and local funding including the following:
  - Estimated total construction cost;
• The submitted estimate prepared by A.M. Fogarty identifies a total construction cost for Scheme C.2 (preferred scheme) of $40,552,818. The Total Project Budget list the total construction cost as $41,250,000. Please evaluate the total construction cost estimate and provide coordinated values.

• The Total Project Budget showing total construction cost as $41,250,000 was included as part of the PDP Supplement #1. The Total Construction Cost for Preferred Solution scheme C-2 was refined at the PSR phase to be $40,552,818.

  o District’s not-to-exceed Total Project Budget;
    • Section 3.3.2.4.F includes a letter dated June 5, 2014 from Thomas Zidelis, City of Worcester CFO which identifies a total project estimate for the Preferred Schematic in the amount of $54,563,819 with indication that the City Administration is prepared to recommend for City Council to approve a loan authorization for this amount. The submitted Total Project Budget identifies a different total project estimate value of $55,036,000. Please provide a coordinated Total Project Budget and confirmation from the City that they support the coordinated value.
    • The Total Project Budget showing total project cost as $55,036,000 was included as part of the PDP Supplement #1. The Total Project Budget for Preferred Solution scheme C-2 was refined at the PSR phase to be $54,563,819 and was confirmed by the City of Worcester in a letter dated 06/05/14, submitted with the PSR.

  o Estimated impact to local property tax, if applicable;
    • Not provided. Please address any anticipated impact.
    • City of Worcester response: There will be no local property tax increase as a result of this project. The Nelson Place School will be funded within the current City budget.

• Schedule - Provide an updated project schedule including the following projected dates
  o Summary of updated project schedule;
    • MSBA proposes a revision to the schedule to accommodate further development of the Preferred Schematic submittal. Include the additional milestones and activities as part of the Preferred Schematic Supplement:
      • Submittal of Preferred Schematic Supplement.
      • Potential MSBA FAS Meeting date of August 18, 2014 or September 10, 2014.
      • Potential MSBA Board of Directors presentation: September 24, 2014.
      • Schematic Design Submittal date.
      • MSBA Project Scope & Budget conference.
    • Please provide an updated project schedule and identify a proposed date for a Design Development document progress submittal to MSBA.
    • The proposed date for the Design Development submission is April 30, 2015. Please refer to the attached revised Project Schedule dated July 18, 2014.
Attachment “B” Module 3 Preferred Schematic Space Summary Review

The MSBA review comments are as follows:

- **Core Academic** – The District is proposing to provide a total of 21,900 net square feet (nsf) which is 4,050 nsf below the MSBA guidelines. The proposed area in this category has not changed since the Preliminary Design Program submittal. *The MSBA accepts this variation to the guidelines. No further action required.*
- **Noted**

- **Special Education** – The District is proposing to provide a total of 20,085 net square feet (nsf) which exceeds the MSBA guidelines by 13,545 nsf. The proposed area in this category has increased by 300 nsf since the Preliminary Design Program submittal *with the addition of a 300 nsf programmed office for a Board Certified Behavior Analyst associated with the Special Education program.* While the Special Education category increased, the total building area remains as per the Preliminary Design submittal. Please note that the Special Education program is subject to approval by the Department of Elementary and Secondary Education (DESE). The District should provide the information required with its Schematic Design submittal. Formal approval of the District’s proposed Special Education program by the DESE is a prerequisite for executing a Project Funding Agreement with the MSBA.
- **Noted**

- **Art and Music/ Voc-Tech** – The District is proposing to provide a combined total of 5,000 nsf which meets the MSBA guidelines. The proposed area in this category has not changed since the Preliminary Design Program submittal. *The MSBA accepts this variation to the guidelines. No further action required.*
- **Noted**

- **Health and Physical Education** – The District is proposing to provide a total of 6,300 nsf which meets the MSBA guidelines. The proposed area in this category has not changed since the Preliminary Design Program submittal. *The MSBA accepts this variation to the guidelines. No further action required.*
- **Noted**

- **Media Center** – The District is proposing to provide a total of 3,370 nsf which meets the MSBA guidelines. The proposed area in this category has not changed since the Preliminary Design Program submittal. *The MSBA accepts this variation to the guidelines. No further action required.*
- **Noted**

- **Dining and Food Service** – The District is proposing to provide a total of 8,950 nsf which exceeds the MSBA guidelines by 900 nsf. The proposed area in this category has not changed since the Preliminary Design Program submittal. *Please confirm proper accounting of net educational spaces and gross areas are consistent with MSBA policy and reduce the overall area to conform to MSBA guidelines.*
• **This will be addressed in the Schematic Design submission.**

• **Medical** – The District is proposing to provide a total of 840 nsf which exceeds the MSBA guidelines by 230 nsf. The proposed area in this category has not changed since the Preliminary Design Program submittal. **MSBA will participate in the support of space as included within the guidelines in this category, all areas in excess of MSBA guidelines will be considered ineligible for reimbursement.**
  
  • **This will be addressed in the Schematic Design submission.**

• **Administration and Guidance** – The District is proposing to provide a total of 2,970 nsf which exceeds the MSBA guidelines by 385 nsf. The proposed area in this category has not changed since the Preliminary Design Program submittal. **The variance narrative states there will be one administration area per each of the two programmed classroom clusters (Primary cluster grades Pre-K–2 and Intermediate cluster grades 3-6).** The Preliminary Design Program review request of a description of how the administration areas will be programmed, designed and staffed to provide security and control of building access for each academic cluster, was not provided. **Further development of the Preferred Schematic scheme should address these concerns in order for the MSBA to consider the variation to the overall area of the proposed space.**
  
  • **This will be addressed in the September 11th PSR Supplement.**

• **Per the program requirements, the plan features and Main Administration area at the main entrance to the building and centrally located for the entire facility population. A satellite administration is located on the lower level of the Grade 3 – 6 wing to address the special requirements of the older student population including guidance and psychology functions. In addition, Teaching Planning areas are included to support the individual wings. In terms of security, the intent is that all visitors will enter the main entry vestibule once school is in session and access to the balance of the school will be through the main administration suite.**

• **Custodial and Maintenance** – The District is proposing to provide a total of 2,200 nsf which meets the MSBA guidelines. The proposed area in this category has not changed since the Preliminary Design Program submittal. **The MSBA accepts this variation to the guidelines. No further action required.**
  
  • **Noted**

• **Other** - The District is proposing to provide a total of 2,900 nsf which exceeds the MSBA guidelines by 2,900 nsf. The proposed area in this category has not changed since the Preliminary Design Program submittal.
  
  - **The proposed program includes two Computer Labs each at 950 nsf. The MSBA does not object to two Computer Labs being included in the proposed project, but based on the review of the educational program, anticipated utilization rates and our experience with other elementary schools, MSBA will consider the space associated with the second Computer Lab as ineligible for reimbursement.**
  
  - **The City would like the opportunity to discuss the second computer lab reimbursement qualification further and plans to submit further information supporting the need for this second Computer Lab in the September 11 submission.**
- Refer to the attached memo.
- The Space Summary identified inclusion of a 1,000 nsf Greenhouse to be included in the proposed project. The MSBA does not object to this space being included in the project but will consider this space ineligible for reimbursement. Note: the Greenhouse is not identified on the submitted Preferred Schematic submittal drawings and only noted on the submitted Space Summary.
- The owner would like to maintain the Greenhouse in the program, but develop it as a freestanding building, and as a bid alternate within the project pending pursuit of grant funding.
- Refer to the attached memo.

- Total Building Net Floor Area – The District is proposing to provide a total of 74,515 nsf which exceeds the MSBA guidelines by 13,910 nsf. The proposed area has increased by 300 nsf since the Preliminary Design Program submittal, refer to specific comments above.
- Noted

- Total Building Gross Floor Area – The District is proposing to provide a total of 110,000 gsf which exceeds the MSBA guidelines by 23,000 gsf. The proposed area has not changed since the Preliminary Design Program submittal. As noted in the categories above and within Attachment ‘A’, The District and design team must address the comments provided to facilitate a better understanding and allow for further review of the proposed project.
- Noted

Please note that upon moving forward into subsequent phases of the proposed project, the Designer will be required to confirm in writing, with each submission, that the design remains in accordance with the MSBA guidelines and that they have not deviated from the allowable gross square footage and educational program approved in the previous submittals.
- Noted

If you have any questions or comments, please contact me.

Sincerely,

Robert Para, Jr., AIA

RP/aw

Enclosures:  Memo from City of Worcester
            Computer Schedules
            Site and Building Plans

Copies:      Tishman, OPM
            City of Worcester
MSBA Comment

- Other - The District is proposing to provide a total of 2,900 nsf which exceeds the MSBA guidelines by 2,900 nsf. The proposed area in this category has not changed since the Preliminary Design Program submittal.

City of Worcester Response

COMPUTER LABS

- The proposed program includes two Computer Labs each at 950 nsf. The MSBA does not object to two Computer Labs being included in the proposed project, but based on the review of the educational program, anticipated utilization rates and our experience with other elementary schools, MSBA will consider the space associated with the second Computer Lab as ineligible for reimbursement.

- The City would like the opportunity to discuss the second computer lab reimbursement qualification further and plans to submit further information supporting the need for this second Computer Lab in the September 11 submission.

The Preliminary Design Program (PDP) Response Supplement 1, Attachment “A” Module 3 Preliminary Design Program Review Comments, submitted on May 16, 2014 to the MSBA stated in section, 3.1.2 that, “To thrive in today’s global economy, students need to develop technology skills to succeed in their adult lives. Technology skills will help students function effectively in the world where new technologies continue to emerge and enhance the grade level curriculum. Nelson Place teachers will follow the Massachusetts Technology Literacy standards and utilize the computer labs to teach these standards in kindergarten through grade 6. The skills students will learn begin with developing basic computer literacy skills and mastering these skills prior to beginning middle school. Students at each grade level will demonstrate proficiency in the use of computers and applications, be responsible with the use of technology, understand the ethics and safety issues, and basic keyboarding skills. Teachers will utilize the lab weekly to teach these vital skills. Teachers will receive professional development from our district technology coach to further develop their own technology skills.”

Simply put, if we as educators and policy makers are committed to providing students with the skills they need to compete in today’s economy, then we understand that students are required to develop learning habits that are integrated with and supported by technology. Worcester understands that the MSBA is proposing that ideally this need be performed with 1 to 1 technologies and that one computer lab suffice for student use. However, Worcester Public School District is comprised of 49 schools, including the new Nelson Place School, and has not adopted 1 to 1 technology for several reasons. In the event that budgetary constraints allowed the district to supply devices for every student, it would be unable to purchase replacement devices every 3 to 4 years, as would be required. In addition, a 1 to 1 initiative would require a significantly larger IT support staff than the district can afford. Moreover, 1 to 1 devices are generally under powered relative to desktop PCs, have a shorter life cycle than desktops, and are limited in the number and type of applications they can run. Additionally, the district has observed students using tablets and netbooks during the PARCC pilot struggled with the smaller screen size and worked much slower than students at regular desktops.
Implementation of technology carts have been proposed as a possible alternative to an additional computer lab, but realistically should not be considered as a workable solution in place of computer labs or a 1 to 1 initiative. A lockable cart usually stores 30 tablets or iPads. Staff would plug a cart into an outlet and all the devices recharge overnight. Staff would roll a cart from classroom to classroom as needed. The teacher then has the students each take a device and boot the device up and login as necessary. If the devices are new and have extended battery capacities, they don’t need to be plugged in during the school day. But overtime the battery life diminishes and they don’t make it through the end of the day. As a result, you now have 30 devices that need to be plugged in while in use in a space not designed with 30 plugs resulting in unwanted electrical wiring across the classroom. A final issue with mobile devices is they are self-contained. A desktop is comprised of a keyboard, mouse, monitor, and tower. If one part breaks, you swap it out. If a laptop keyboard breaks for instance, the laptop is down until it is fixed. So in this case, self-contained is a liability. Finally, carts require significant setup time, all day battery life becomes an issue, the devices are expensive to repair and are single points of failure, and use in regular classrooms provides a less than ideal testing and computer use environment. A school the size of the proposed Nelson Place requires a minimum of two computer labs if not three to meet the educational needs of all its students.

Due to these constraints and the fact that Worcester is striving to provide technology access to all students, many from families of limited means, as well as implement required testing in a manner that is the least disruptive to the learning schedule and environment, we are requesting that the MSBA consider our proposed second computer lab to be in the best interest of our students, and as an essential part of their education.

We have attached as well, updated schedules that reflect the Nelson Place School’s proposed use of these labs. Regarding these schedules, Principal Monica Poitras notes:

A block of time has been left open on these schedules for the following reasons:

1. Testing: by providing an open time block we do not have to interrupt the lab schedule or close the lab during district based assessments. The lab will be closed and utilized during state required assessments (MCAS or PARCC).

2. The open blocks also allow for classrooms to use the lab for additional time as required for example for research, or for unscheduled group use such as preschool. It also allows for the lab to be utilized for staff development by our instructional focus coach during the day.

3. The schedule additionally reflects times for each SAIL class.

GREENHOUSE

- The Space Summary identified inclusion of a 1,000 nsf Greenhouse to be included in the proposed project. The MSBA does not object to this space being included in the project but will consider this space ineligible for reimbursement. Note: the Greenhouse is not identified on the submitted Preferred Schematic submittal drawings and only noted on the submitted Space Summary.

- The owner would like to maintain the Greenhouse in the program, but develop it as a freestanding building and as alternate within the project pending pursuit of grant funding.

The Worcester Public School Wellness Program (see PDP Appendix D) and the Massachusetts Farm to School Project (see PDP Appendix F) are intended to support students in becoming independent and self-directed learners, responsible for meeting their own health and nutritional needs, with the belief
that healthy students make successful students. Worcester foresees the proposed greenhouse at the new Nelson Place School to be an opportunity for students, their families and the Nelson Place School staff to participate in the production of year round produce to be incorporated into the nutritional, academic, and after school programs, as well as to provide surplus produce for other schools or family and community consumption.

The growing rate of obesity and diabetes in school children and our society today is due in part to a lack of understanding of and exposure to fresh healthy foods. The Nelson Place School is ideally structured to support a greenhouse which could provide year round produce for Nelson Place School student meal program, as well as science based curriculum for all age groups. It is Worcester’s plan for this program that Nelson Place School students, a strong and active Parent Teacher Organization, dedicated NPS staff and administration, and Worcester Public Schools Nutritional Services facilitate the growth and production processes of the greenhouse, as well as provide financial support for supplies and operational costs.

The City is pursuing grants to contribute to the cost of construction of this proposed greenhouse which will provide support and structure to the existing and proposed programs supporting student health. Worcester is as well, once again requesting that the MSBA consider this space for partial reimbursement in light of the short and long term educational and health benefits it would offer students and the community.

**SCIENCE LAB**

- *The Space Summary identified inclusion of a 1,204 nsf Science Lab to be included in the proposed project.*

As districts plan and build new schools for the 21st Century, designers must take into consideration the expectations and requirements for College and Career Readiness of our students along with efficient use of resources. The WPS district recommends that students in grades 3 and 4 spend 2 hours per week while students in grades 5 and 6 are required to spend 3 hours per week “doing” science investigations and experiments, or actively working with the engineering design process. Active investigation, collaboration, testing, designing and redesigning requires space for students to collaborate at tables and benches and safely spread out for investigations, “testing” and evaluation of experiments and engineering designs. Often students create products (such as a balsa wood bridges) in one class period and then need to test and redesign in another period. Students need shelves and/or cabinets dedicated to the temporary storage of “projects” week to week, as well as work surfaces both durable and large enough to support a variety of activities.

Massachusetts Frameworks standards require that students use the “tools” of science as well as discipline-specific equipment when conducting standards based activities, investigations, and experiments. This equipment is costly and needs to be stored in safe, locked areas for use by all of the students no matter where their “classroom” is located. It is most efficient when buildings can consolidate resources and purchase, for example, a set of 25 microscopes to be used by all sixth graders instead of stocking every sixth grade classroom with microscopes.

*College and Career Readiness* begins in elementary school and is supported by students learning how to behave and function safely in a laboratory setting. Exposing students to both informal hands on investigations, as well as training them to develop their ideas and discoveries in a formal laboratory setting, encourages free thinking and exploration while disciplining and preparing students for the program specific challenges of middle and high school science programs.
# COMPUTER SCHEDULE

## 2017-2018 Proposed

### K-2

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<td>2 (C)</td>
<td>2 (D) SAIL</td>
<td></td>
</tr>
<tr>
<td>11:30 – 1:00 Testing or additional computer lab time if needed for classrooms</td>
<td>11:30 – 1:00</td>
<td>11:30 – 1:00</td>
<td>11:30 – 1:00</td>
<td>11:30 – 1:00</td>
</tr>
<tr>
<td>1:00 -1:45 K (A)</td>
<td>1:00 -1:45 K (B)</td>
<td>1:00 -1:45 K (C)</td>
<td>1:00 -1:45 K (D) SAIL</td>
<td>1:00 -1:45</td>
</tr>
<tr>
<td>2:00 – 2:45 1 (A)</td>
<td>2:00 – 2:45 1 (B)</td>
<td>2:00 – 2:45 1 (C)</td>
<td>2:00 – 2:45 1 (D) SAIL</td>
<td>2:00 – 2:45</td>
</tr>
</tbody>
</table>
## COMPUTER SCHEDULE
### 2017-2018 Proposed
#### 3-6

<table>
<thead>
<tr>
<th></th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:45-10:30</td>
<td>6 (A)</td>
<td>6 (B)</td>
<td>6 (C)</td>
<td>6 (D) SAIL</td>
<td></td>
</tr>
<tr>
<td>10:45-11:30</td>
<td>5 (A)</td>
<td>5 (B)</td>
<td>5 (C)</td>
<td>5 (D) SAIL</td>
<td>10:45-11:30</td>
</tr>
<tr>
<td>11:30-1:00</td>
<td>Testing or additional computer lab time if needed for classrooms</td>
<td>11:30-1:00</td>
<td>11:30-1:00</td>
<td>11:30-1:00</td>
<td>11:30-1:00</td>
</tr>
<tr>
<td>1:00-1:45</td>
<td>4 (A)</td>
<td>4 (B)</td>
<td>4 (C)</td>
<td>4 (D) SAIL</td>
<td>1:00-1:45</td>
</tr>
<tr>
<td>2:00-2:45</td>
<td>Open for classrooms to sign up as needed</td>
<td>2:00-2:45</td>
<td>2:00-2:45</td>
<td>2:00-2:45</td>
<td>2:00-2:45</td>
</tr>
</tbody>
</table>