



Arlington
Public
Schools



Fleet Elementary School Project Quarterly Construction Meeting

May 15, 2019

Quarterly Meeting Information

- Dates: final meeting will take place on Wednesday, 8/14/19.
- Time: 7:00pm – 8:30pm
- Location: TJMS library
- No building tours will be provided to the public prior to occupancy

- A Recovery Schedule has been submitted by the contractor in order to mitigate the delays realized early in the project due to unforeseen conditions.
- Schedule recovery is achieved by:
 - 1) Resequencing the schedule to start selected work earlier than originally envisioned and to work multiple areas concurrently (e.g. early structural steel start, working steel erection concurrent with garage concrete)
 - 2) Acceleration of the schedule by means of additional man hours (e.g. overtime hours, weekend/holiday work, additional crew size)
 - 3) Revised Substantial Completion Milestone from June 15, 2019 to August 10, 2019

Recovery schedule milestone dates:

- Wall close-in Inspections: 5/15/19
- Ceiling close-in inspections: 5/31/19
- Envelope complete: 5/31/19
- Final building inspection: 7/22/19
- Furniture and Equipment move in: 7/22 thru 8/10
- Occupancy inspection: 8/10/19
- Staff occupancy: 8/19/19
- Student occupancy: 9/3/19

- Given the above, the project is on schedule in accordance with the Recovery Schedule and for occupancy for the Fall 2019 school year.
- Reminder of modified construction work hours, per the Amendment to the Use Permit that was approved by the County Board on June 16, 2018:
- *On-site construction activity, including, by way of illustration and not limitation, delivery of materials and equipment, except for construction worker arrival to the site and indoor construction activity, shall commence no earlier than 7:00am and end by 9:00pm on weekdays, and shall commence no earlier than 9:00am and end by 9:00pm on Saturdays, Sundays, and holidays.*
- Goal is to use the extended hours judiciously and not continuously, however, we will increase use of weekend hours until completion.

Project Progress – Building Exterior

- Roofing – 90% complete, need to finish gym roof and some edge detailing at all roofs
- Solar panels - installation scheduled to commence on 5/15
- Metal stud and exterior drywall wall construction – 95% complete
- Exterior skin spray foam insulation and air/vapor barrier install - 95% complete
- Exterior facade finishes (masonry, terracotta, and fiber cement siding) - 80% complete
- Exterior glazing - 75% complete

Project Progress – Building Interior

- Interior walls – complete on floors 2, 3, and 4, drywall install has commenced on level 1
- Final painting – commenced on floors 2, 3, and 4
- Casework/cabinet installation - commenced on 3rd and 4th floors
- Bathroom tile – complete on floors 3 and 4, in progress on floor 2
- Stairs – all installed except for 3rd set of stairs between 3rd and 4th floors, which is currently being framed up
- Elevators – shafts are in place, elevator material is onsite
- Mechanical/Electrical/Plumbing (MEP) – 85%; heat pump start up for 3rd and 4th floor took place earlier this week

Project Progress – Utilities/Site

- Domestic water and fire service – complete
- Electrical Service - complete
- Verizon and Comcast service – underground conduit install complete, service providers scheduled for installation of their services in early June
- Site storm and sanitary piping and structures - 85% complete
- Retaining walls – segmented block retaining walls adjacent to TJMS and walls at north side property line scheduled to complete this week
- Bus loop curb and gutter and paving – scheduled to commence late this month or early in June

Project Progress – Right of Way



- Redevelopment at S. 2nd St and S. Old Glebe Rd – new southbound right turn lane
- Redevelopment at 1st Road S. and S. Old Glebe Rd – reorientation of 1st Road S., curb nubs, crosswalks
- New streetscape along the east side of S. Old Glebe Rd – new curb & gutter, planting strip with street trees, streetlights, and sidewalk
- Vehicle drop off/pick up zone
- Schedule for the above activities is being developed and will be sent out soon for information

What is Sustainability?

- The ability to be maintained at a certain rate or level for as long as is wanted
- Avoidance of the depletion of natural resources in order to maintain an ecological balance
- Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable Features

- Transportation
- Site
- Water Efficiency/Water Quality
- Energy and Atmosphere
- Material and Resources
- Indoor Environmental Quality

Transportation Demand Management (TDM) program – goal is to reduce vehicular traffic to the site with associated reduction in traffic congestion, energy use, and reduction in hardscape for parking.

1. Information - provided to staff for alternative transportation opportunities
2. Staff incentives - for carpooling, biking, or use of public transportation
3. Facilities - Secure bike storage and shower facilities for staff, bike racks for students, designated convenient spaces in garage for carpools

- Re-use of existing site – Fleet ES is built on the former TJMS parking lot
- No loss in greenspace - % of greenspace pre and post development is essentially the same
- Increase tree canopy – more trees will be planted on site than were removed for construction



Site plan prior to construction



Site plan after construction



- Water use efficiency
 1. Low flow fixtures
 2. Mechanically metered fixtures

- Stormwater Management
 1. Stormwater management during construction – silt fencing, inlet protection, on-site filtering of water
 2. Post construction stormwater quantity control – release of site stormwater into county is slowed down as stormwater slowly filters through bio-retention areas, which prevents downstream erosion
 3. Post construction stormwater quality control – Sand/Oil interceptor structure treats all water from garage drains, and bio-retention areas treat all other building roof and site stormwater

- Lighting
 1. LED lights – low energy consumption; LED lighting is used exclusively
 2. lighting controls – occupancy and daylighting sensors are used extensively

- HVAC
 1. geothermal heating and cooling – highly efficient system with low operational costs
 2. High efficiency equipment
 3. Controls – building scheduling and tuning, remote troubleshooting of issues

- Building Envelope energy savings measures
 1. High performance building envelope – highly insulated; air/vapor barrier results in a well sealed building
 2. passive solar devices to reduce solar heat gain in summer - large overhangs, sunshading devices, and fritted glazing
- Power
 1. Renewable Energy Generation – 500 KW solar panel array on roof
 2. Metering – of both power consumption and power generation
 3. All electric building

- Demolition and Construction Waste Management – recycle products of demolition and construction, minimize what is landfilled
- Recycled Content of Construction Materials – examples: steel, carpet, acoustical ceiling tiles
- Use of Renewable Resources in Construction Materials – examples: structural wood roof/ceiling over gym, ceiling tile is 98% bio-based product, interior wood doors



- low VOC emitting construction materials
- construction indoor air quality – no smoking in building during construction, temporary HVAC filtering media, site dust control, regular construction cleanup inside the building, as well as final pre-occupancy cleaning and building flushout prior to occupancy.
- post construction indoor air quality – no smoking allowed on APS sites, permanent HVAC filtering media and regular replacement of this media, dedicated fresh air system, CO2 sensors in all spaces

- thermal comfort – heat pumps for recycling and tempering air in all spaces, temperature sensors in all spaces
- interior lighting – lighting levels modulated with daylight sensors, indirect lighting
- daylight and views – exterior glazing in all teaching spaces
- acoustic performance – sound insulation in walls between classrooms, spray on insulation at ceilings above in common spaces, sound attenuation baffles at cafeteria

Sustainability Goals

- LEED (Leadership in Energy and Environmental Design) Silver certification
- LEED is a world wide green building certification program administered by the US Green Building Council (USGBC)
- Arlington County mandates new school construction to achieve LEED Silver certification or greater
- Currently we are tracking LEED Gold certification

Sustainability Goals

		 LEED v4 for BD+C: Schools Project Checklist Project Name: New Elementary School @ TJMS 125 S Old Glebe Rd, Arlington, VA 22204				VMDO Date: 1/26/2018	
Phase					Credit	Points	Responsible Party
	Y	?	?	N			
					Integrative Process	1	
		2	4	0	Location and Transportation	16	
				N	Credit: LEED for Neighborhood Development Location	15	
D		1			Credit: Sensitive Land Protection	1	VMDO
D				2	Credit: High Priority Site	2	VMDO
D		1			Credit: Surrounding Density and Diverse Uses	5	VMDO
D		1			Credit: Access to Quality Transit	5	VMDO
D		1			Credit: Bicycle Facilities	1	VMDO
D		1			Credit: Reduced Parking Footprint	1	VMDO
D		1			Credit: Green Vehicles	1	VMDO / APS
		6	1	0	Sustainable Sites	10	
C		Y			Prereq: Construction Activity Pollution Prevention	Required	Whiting-Turner
D		1			Credit: Site Assessment	1	Bowman
C		2			Credit: Site Development - Protect or Restore Habitat	2	VMDO
D		1			Credit: Open Space	1	Waterstreet / VMDO
D					Credit: Rainwater Management	3	Waterstreet / Bowman / VMDO
D		2			Credit: Heat Island Reduction	2	Waterstreet / VMDO
D		1			Credit: Light Pollution Reduction	1	CMTA
		5	2	1	Water Efficiency	11	
D		Y			Prereq: Outdoor Water Use Reduction	Required	Waterstreet / Bowman
D		Y			Prereq: Indoor Water Use Reduction	Required	CMTA / Kitchen
D		Y			Prereq: Building-Level Water Metering	Required	CMTA
D		2			Credit: Outdoor Water Use Reduction	2	Waterstreet / Bowman
D		2	2	1	Credit: Indoor Water Use Reduction	6	CMTA / Kitchen
D				0	Credit: Cooling Tower Water Use	2	
D		1			Credit: Water Metering	1	CMTA / Irrigation
		23	6	1	Energy and Atmosphere	33	
D		Y			Prereq: Fundamental Commissioning and Verification	Required	Reynolds
D		Y			Prereq: Minimum Energy Performance	Required	CMTA
D		Y			Prereq: Building-Level Energy Metering	Required	CMTA
D		Y			Prereq: Fundamental Refrigerant Management	Required	CMTA / EIS / Reitano
D		5			Credit: Enhanced Commissioning	6	Reynolds
D		16			Credit: Optimize Energy Performance	18	CMTA

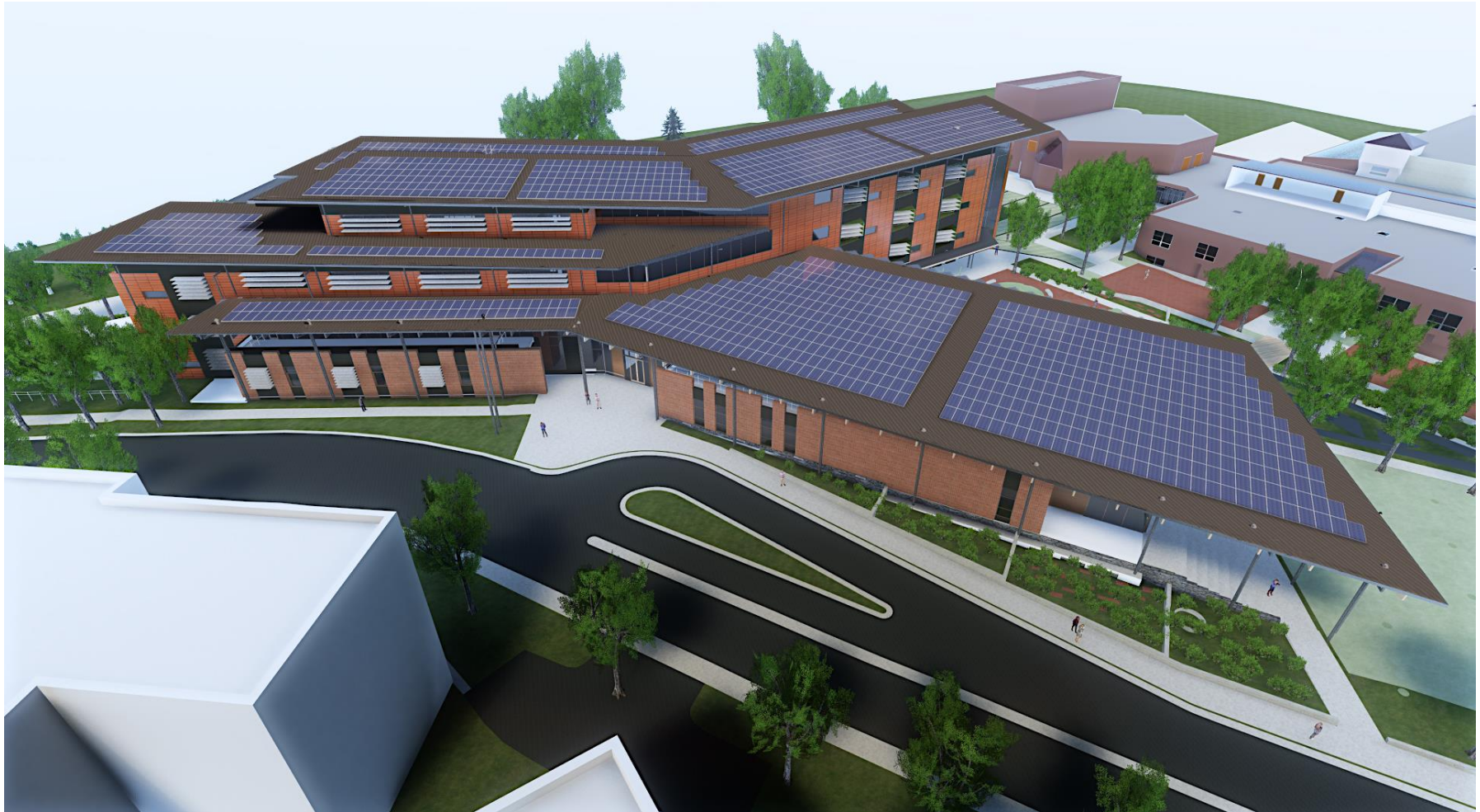
Sustainability Goals

D	1			Credit	Advanced Energy Metering	1	CMTA
D	1		1	Credit	Demand Response	2	CMTA
D	3			Credit	Renewable Energy Production	3	CMTA
D	1			Credit	Enhanced Refrigerant Management	1	CMTA / EIS / Reitano
D	2			Credit	Green Power and Carbon Offsets	2	CMTA
3 5 0 0 Materials and Resources 13							
D	Y			Prereq	Storage and Collection of Recyclables	Required	VMDO / APS
C	Y			Prereq	Construction and Demolition Waste Management Planning	Required	Whiting-Turner / VMDO
D	1			Credit	Building Life-Cycle Impact Reduction	5	VMDO / CMTA
D	1	1		Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2	VMDO
D	2			Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2	VMDO
D	2			Credit	Building Product Disclosure and Optimization - Material Ingredients	2	VMDO
C	2			Credit	Construction and Demolition Waste Management	2	Whiting-Turner / VMDO
13 2 1 0 Indoor Environmental Quality 16							
D	Y			Prereq	Minimum Indoor Air Quality Performance	Required	CMTA
D	Y			Prereq	Environmental Tobacco Smoke Control	Required	VMDO / APS
D	1	1		Credit	Enhanced Indoor Air Quality Strategies	2	VMDO / CMTA
C	3			Credit	Low-Emitting Materials	3	VMDO / Whiting-Turner
C	1			Credit	Construction Indoor Air Quality Management Plan	1	Whiting-Turner
C	2			Credit	Indoor Air Quality Assessment	2	Whiting-Turner / Reynolds?
D	1			Credit	Thermal Comfort	1	CMTA
D	1	1		Credit	Interior Lighting	2	CMTA / VMDO
D	3			Credit	Daylight	3	VMDO
D			1 0	Credit	Quality Views	1	VMDO
D	1			Credit	Acoustic Performance	1	VMDO / CMTA
4 2 0 0 Innovation 6							
D&C	3	2		Credit	Innovation	5	
D&C	1			Credit	LEED Accredited Professional	1	VMDO
2 4 0 0 Regional Priority 4							
	1	1		Credit	Regional Priority Optimize Energy Performance	1	CMTA
	1	1		Credit	Regional Priority Renewable Energy Production	1	CMTA
	1			Credit	Regional Priority: Specific Credit	1	
	1			Credit	Regional Priority: Specific Credit	1	
71 28 4 2 TOTALS Possible Points: 110							
Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110							

Sustainability Goals

- Net Zero Energy Facility – over the course of a year, the building produces as much energy as it uses
- Energy Production – 500 kW solar panel array, rooftop mounted
- Energy Use – very low building EUI (Energy Use Intensity), which measures the energy use per square foot of a building.
- Low EUI is achieved by:
 1. Well sealed and insulated building envelope
 2. Passive solar shading – large overhangs, window shading devices on southern exposure, fritted glass in key locations
 3. High efficiency HVAC equipment
 4. Geothermal heating and cooling
 5. All LED light fixtures

Sustainability Goals



- Other questions or concerns?



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