



# #Build25

## Kindergarten Expansion Update

December 13, 2022



# Topics

- Timeline
- Floor Plans
- Renderings
- Additional Considerations
  - Potential Patton Gym Expansion
  - Solar Study
  - Stormwater

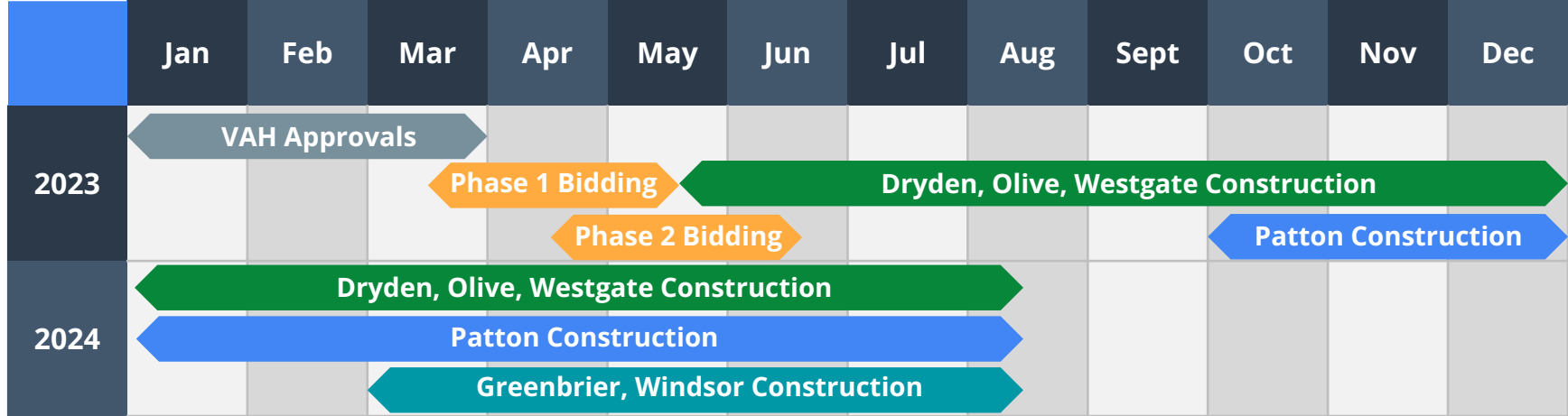
# VAH Meeting Schedule



| School     |         | Neighborhood Meeting | Conceptual Design Review | Design Commission | Plan Commission | Village Board of Trustee Meeting #1 | Village Board of Trustee Meeting #2 |
|------------|---------|----------------------|--------------------------|-------------------|-----------------|-------------------------------------|-------------------------------------|
| Dryden     | Phase 1 | COMPLETE             | COMPLETE                 | 1/10/23           | 1/25/23         | TBD                                 | TBD                                 |
| Olive      |         | COMPLETE             | COMPLETE                 | TBD               | 2/8/23          | TBD                                 | TBD                                 |
| Westgate   |         | COMPLETE             | COMPLETE                 | 1/10/23           | 1/25/23         | TBD                                 | TBD                                 |
|            |         |                      |                          |                   |                 |                                     |                                     |
| Patton     | Phase 2 | COMPLETE             | 12/14/22                 | TBD               | TBD             | TBD                                 | TBD                                 |
| Greenbrier |         | COMPLETE             | 12/14/22                 | TBD               | TBD             | TBD                                 | TBD                                 |
| Windsor    |         | COMPLETE             | 12/14/22                 | TBD               | TBD             | TBD                                 | TBD                                 |

- Phase 2 Design and Plan Commission Application submitted on 12/9/22

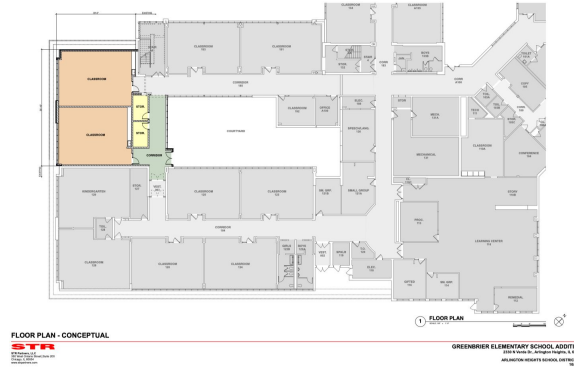
# Preliminary Timeline



- VAH Approvals currently anticipated to be complete by April 2023. Schedule is fluid based on VAH review capacity.
- **Dryden, Olive, and Westgate** construction to commence late spring 2023
- **Patton** - Potentially construction start fall of 2023. Possibility construction will not begin until spring of 2024.
- **Greenbrier and Windsor** commence construction spring of 2024.



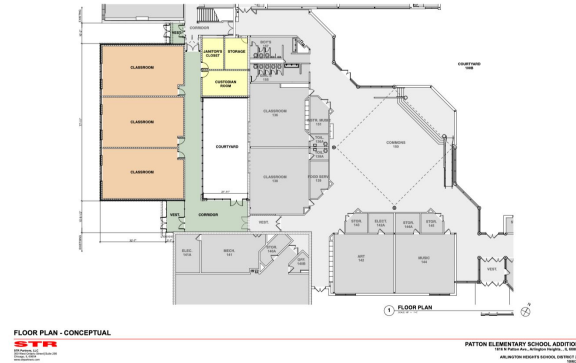
## Dryden



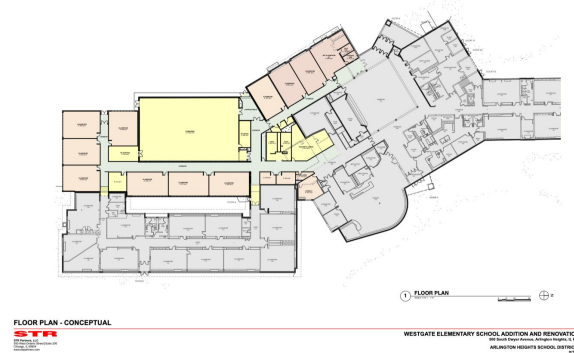
## Greenbrier



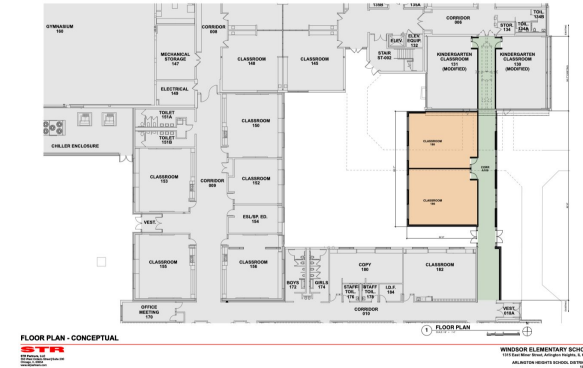
## Olive



# Patton



## Westgate



## Windsor

# Renderings



1 SOUTHEAST VIEW



2 SOUTHWEST VIEW

**Dryden**



VIEW 2



**Greenbrier**

# Renderings



**Olive**



VIEW 1



VIEW 2

**Patton**



# Renderings



VIEW 1

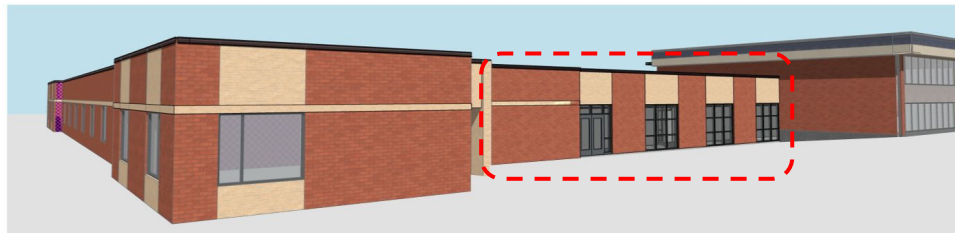


VIEW 2

**Westgate**



VIEW



VIEW

**Windsor**





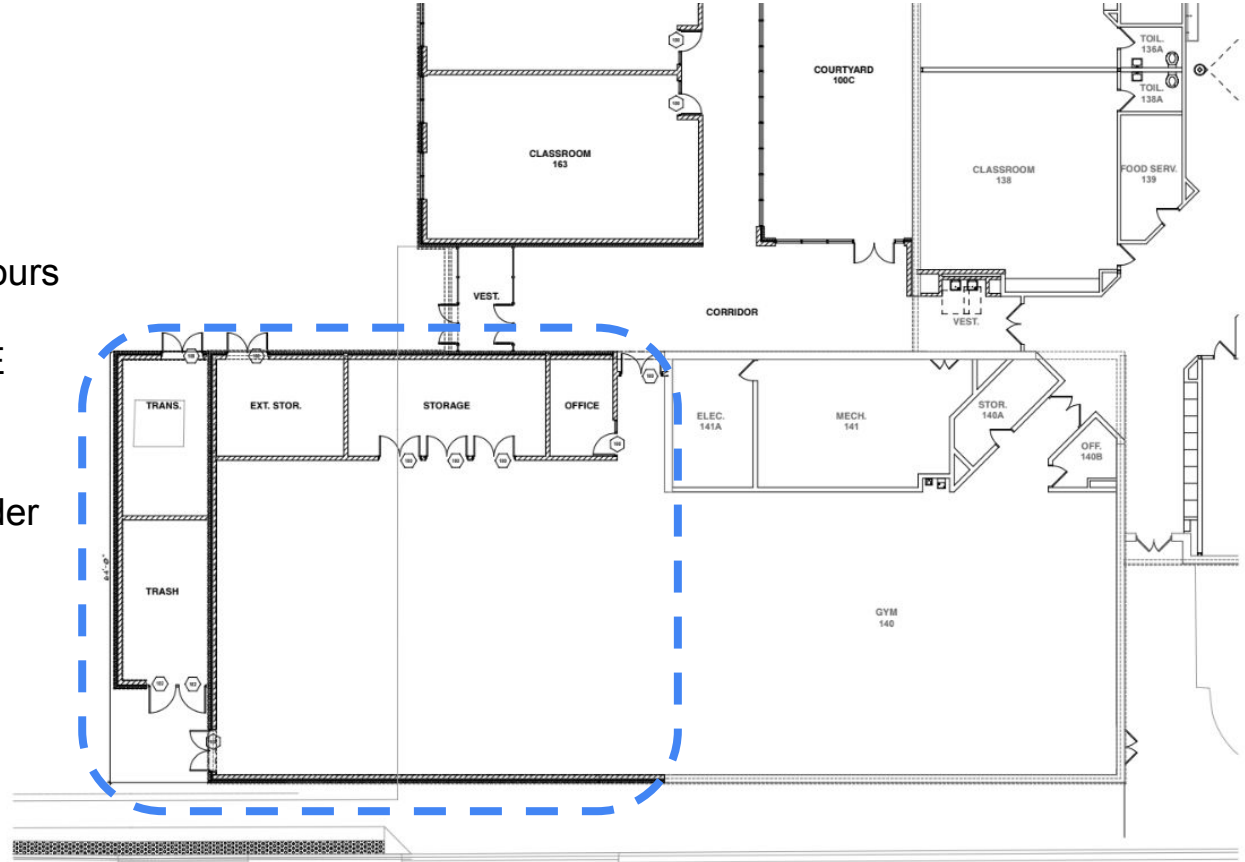
# Additional Considerations



# Patton Potential Gym Expansion



- A potential increase in PE hours will require additional gym space to support multiple PE sections at the same time.
- Potential to expand gym towards the southwest in order to provide additional gym space.
- ROM Estimate \$2.5 - \$3.3M



## Analysis Results for the 50 kW PV System

- **Initial System Cost \$ 120,000**
- ComEd Incentive \$ 10,000
- Inflation Reduction Act (IRA) Payment \$ 36,000
- **Cost after incentives: \$74,000**
- Year-one generation 59,750 kWh
- Year-one CO2 Equivalent reduction 25 tons
- Simple payback period 7.6 Years
- Year 25 Cumulative Positive Cash Flow \$147,227



| Month     | Solar Generation (kWh) | School Use (kWh) | Use after Solar (kWh) | Share Solar |
|-----------|------------------------|------------------|-----------------------|-------------|
| January   | 1,697                  | 32,581           | 30,884                | 5%          |
| February  | 2,099                  | 30,645           | 28,545                | 7%          |
| March     | 5,015                  | 30,551           | 25,536                | 16%         |
| April     | 6,493                  | 29,048           | 22,554                | 22%         |
| May       | 7,159                  | 29,850           | 22,691                | 24%         |
| June      | 7,778                  | 27,719           | 19,941                | 28%         |
| July      | 7,811                  | 26,999           | 19,188                | 29%         |
| August    | 7,117                  | 36,132           | 29,015                | 20%         |
| September | 5,910                  | 33,094           | 27,184                | 18%         |
| October   | 4,035                  | 29,463           | 25,428                | 14%         |
| November  | 2,782                  | 27,481           | 24,699                | 10%         |
| December  | 1,832                  | 28,831           | 26,999                | 6%          |
| Total     | 59,730                 | 362,394          | 302,665               | 16%         |

- 50kW system was selected as a baseline to offset the anticipated electricity needs from the new addition.
- PV system modeled life: 25 years
- PV system output degradation: 0.5%/year
- Panels have a 30 year production warranty that is pro rated
- System will offset between 5% - 29% of School's total electricity needs

## Pros:

- Solar panels can provide a clean, renewable source of energy for the school.
- Using solar panels can help the school reduce its carbon footprint.
- A solar panel system can provide a learning opportunity for students, who can learn about renewable energy and how it works.
- A solar panel system can save the school money on energy costs in the long run.
- Panel provide an added layer of protection to the roof membrane from UV.

## Cons:

- The initial cost of installing a solar panel system can be significant.
- Solar panels may not be suitable for all schools, depending on the size and orientation of the school's roof.
- Solar panels require regular maintenance and cleaning to continue operating efficiently. If a roof leak occurs, panels may need to be disconnected, removed, and reinstalled
- Solar panels may not provide enough energy to meet the school's energy needs, particularly if the school is located in an area with limited sunlight.
- End of Life Replacement needs to be closely coordinated with roof replacement

# Stormwater Update



- **Dryden** - Currently plan to install new underground detention structure south of existing building. A potential project with VAH detention does not appear to be feasible per Civil Engineer review.
- **Greenbrier** - Current stormwater detention contains enough volume per Civil Engineer review. Pending VAH / MWRD approval.
- **Olive-Mary Stitt** - Current onsite stormwater detention installed in 2016 contains enough volume per Civil Engineer review. Pending VAH / MWRD approval.
- **Patton** - Currently intend to install new underground Stormtrap detention structure under existing parking lot to meet required stormwater detention volume.
- **Westgate** - Currently intend to install new underground Stormtrap detention structure in field south of school. There remains a potential option to expand the detention facility on Park District property at Wilke / Kirchoff where Westgate has permitted detention from 1977.
- **Windsor** - Current underground Stormtrap detention structure contains enough volume per Civil Engineer review. Pending VAH / MWRD approval.



Windsor Stormtrap Installed in 2017

