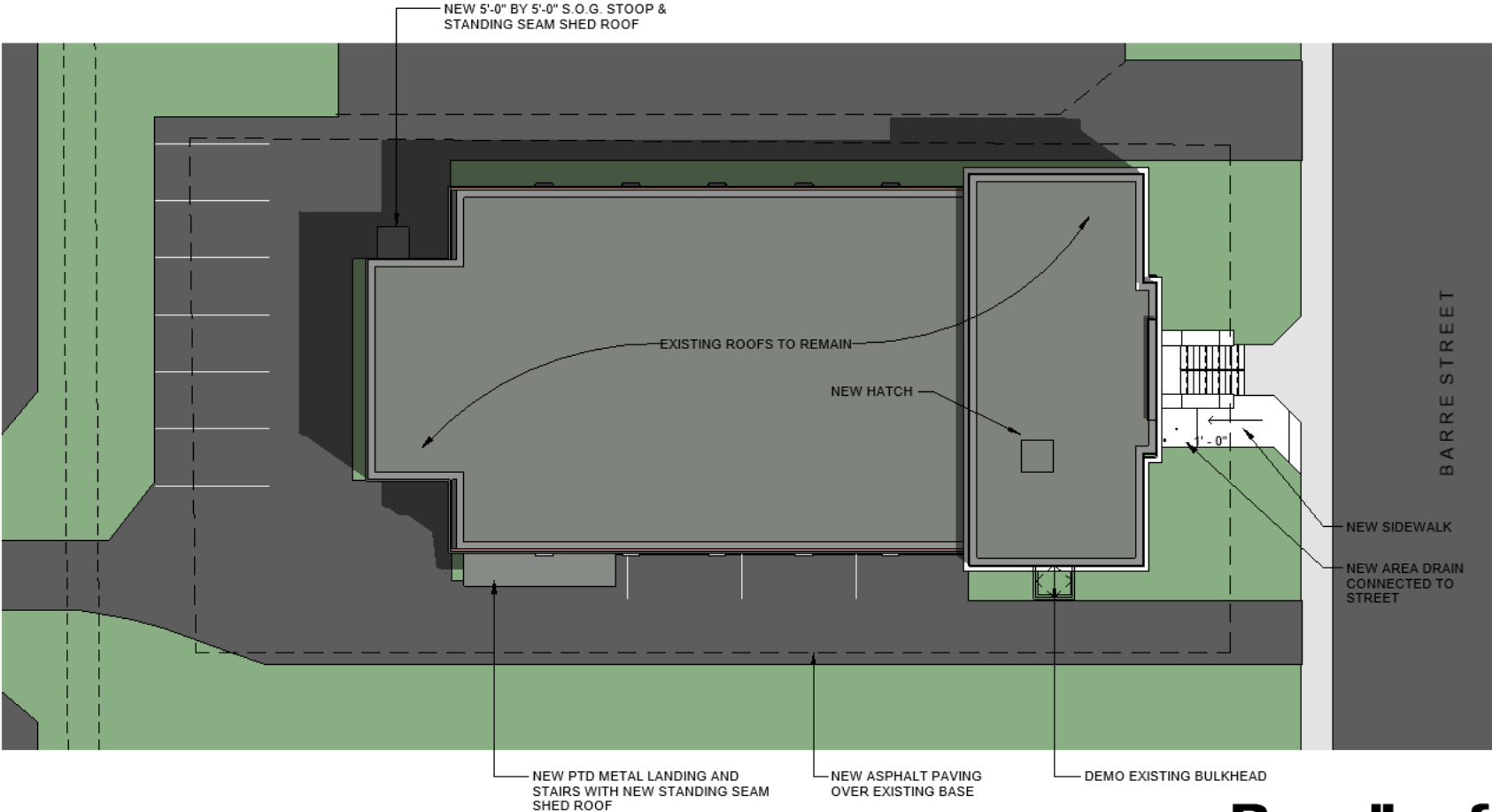


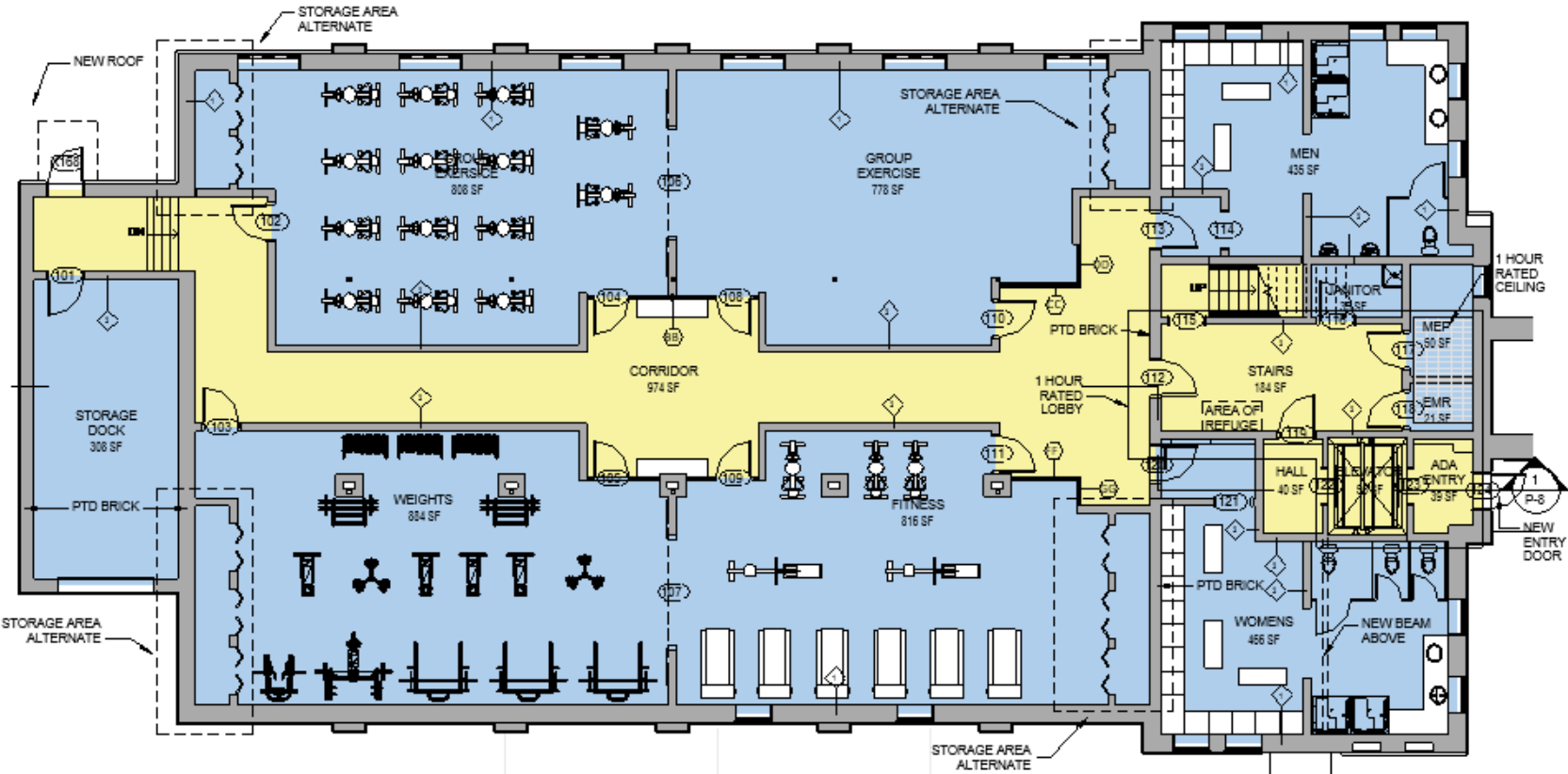
City of Montpelier Recreation Center Renovation Estimates

December 18, 2019

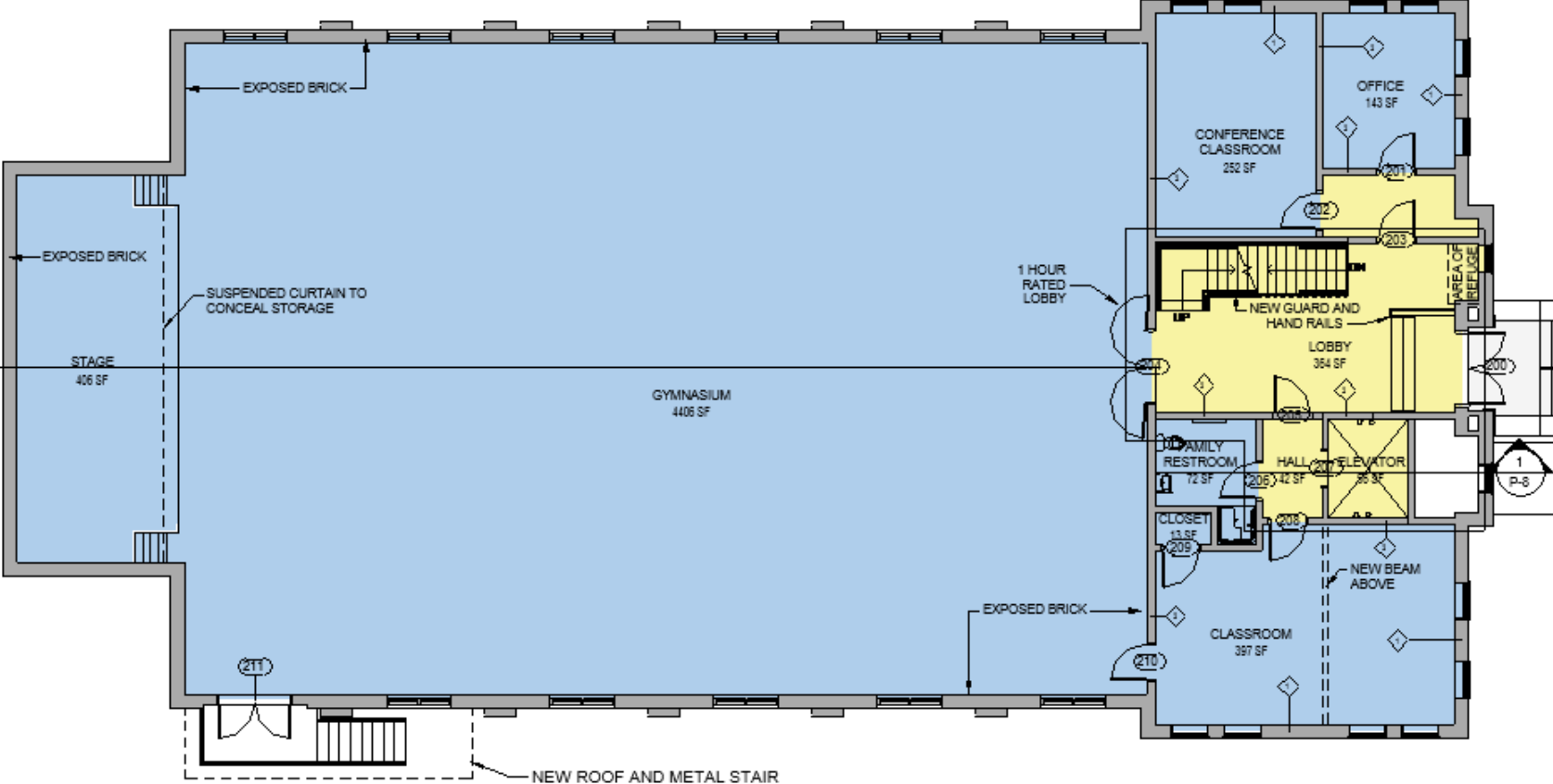
Proposed Site Plan



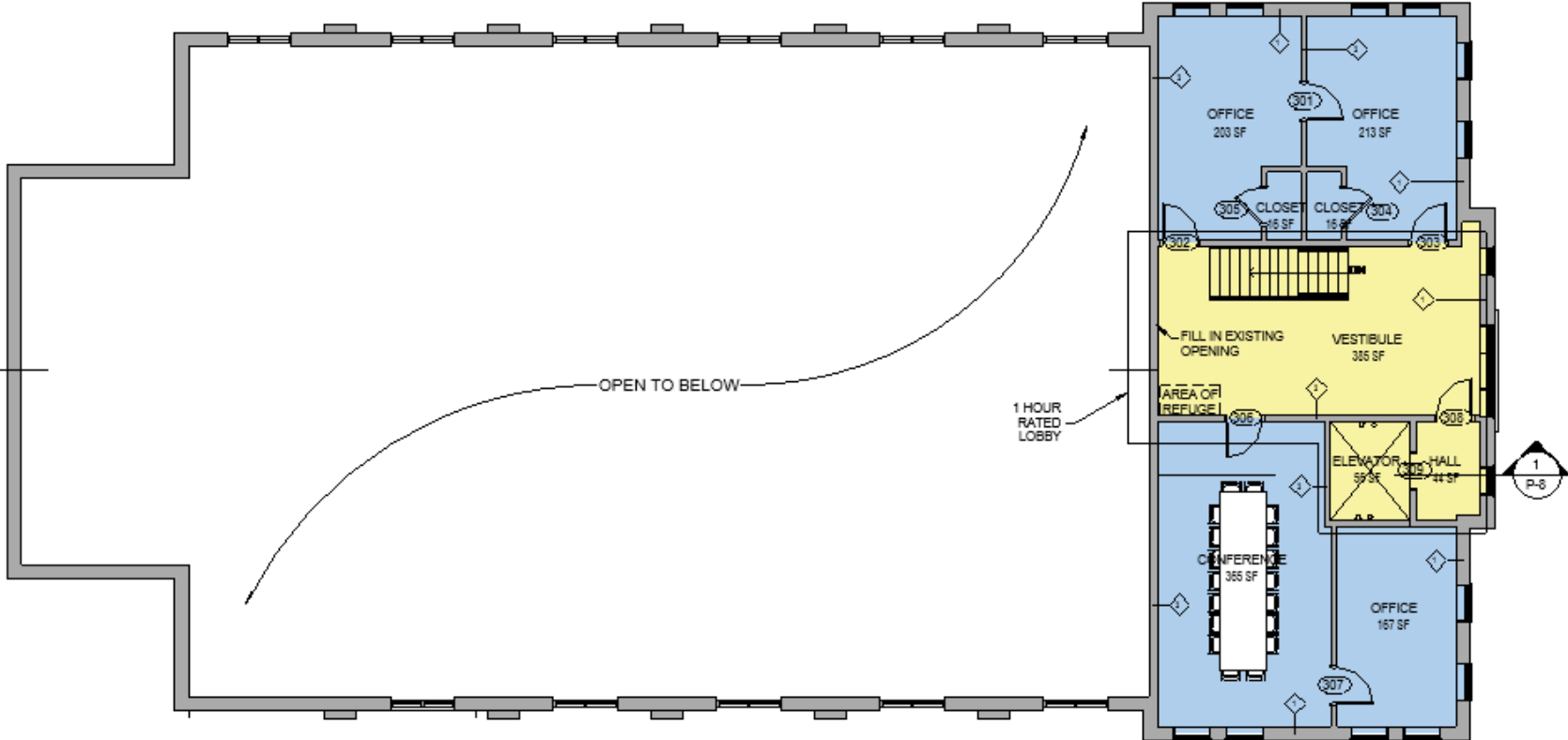
Proposed Basement Floor Plan



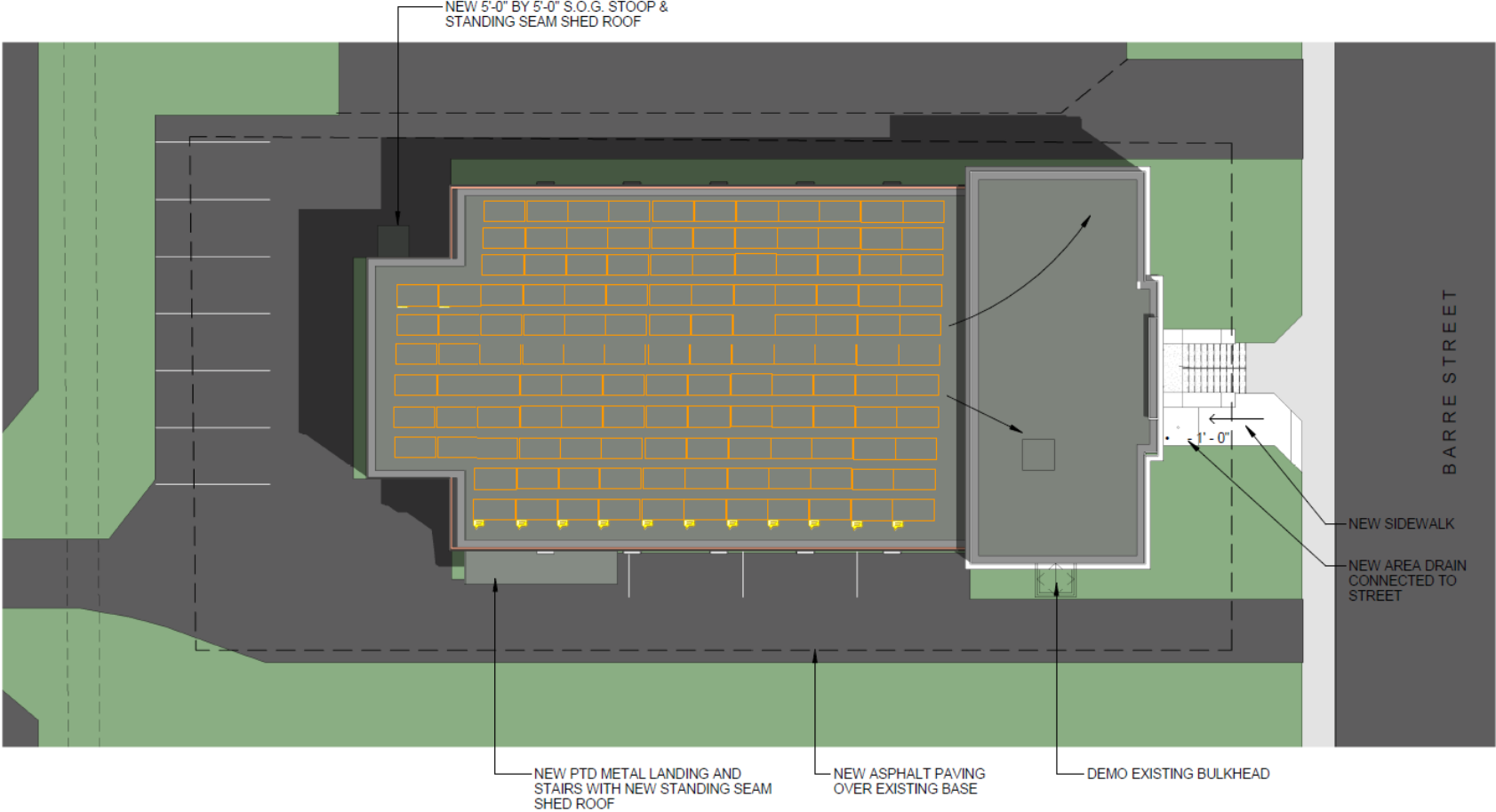
Proposed First Floor Plan



Proposed Second Floor Plan



Proposed Solar Panels



| Option 1: Base Project | Option 2: Upgraded Project | Option 3: Upgraded Project plus Eco-friendly Goals |
|--|--|---|
| Cost Estimate: \$ 3,909,000 | Cost Estimate: \$4 ,722,000 | Cost Estimate: \$ 5,200,000 |
| Full Renovation- Bring Building into Code and ADA Compliance (Fully Accessible) | Everything included under Base Project, Option 1 | Everything included under Upgraded Project, Option 2 |
| Includes: | Plus: | Plus: |
| All new Mechanical, Electrical, Lighting and Plumbing Systems | More Energy Efficient HVAC Units (heat pumps) with Propane backup heat | Upgrade HVAC system to fossil free (Air source heat pumps) |
| Renovation down to the Studs | Replace Full Basement Slab | Insulate Gym walls |
| Install new Elevator | Add Canopy to ADA and main entrance | Solar panels (48kw array on building roof) |
| East Wing: Insulation of perimeter walls and addition of interior storms to existing windows | Fitness & Weight Room Equipment Allowance | |
| Install new Windows in Gymnasium | Ceramic tile in bathrooms/showers | |
| New Women's and Men's Locker and Shower Rooms; and Family/Non-Gender Bathroom. | Improve electrical and lighting systems efficiency | |
| 4 New Fitness/Exercise Rooms in Lower Level | Emergency Generator | |
| New Flooring including: Sprung Maple Floor in Gym and Resilient Athletic Flooring in Fitness/Exercise Rooms. | New East-end roofing | |

Eco-friendly Proposed Responses

- **Fossil Free Proposal Scope:**
 - Revise the proposed base heating and cooling system to low temperature air source heat pumps.
 - Include a solar array on the roof to offset approximately 40% to 60% of the building electrical load (requires further detailed building modeling and analysis).
 - Install Variable Refrigerant Flow (VRF) Air source heat pump system capable of heating the building with outside air temperatures down to negative 22 °F.
 - This system will operate to -30 °F at reduced capacity and efficiency
- **Zone Heating:**
 - Different areas in the building will be put on different 'zones' for heating- ensuring that there is the most effective use of our energy
 - Example: the gym will be heated at a different temperature than the offices

Eco-friendly Alternative Responses

- **District Heat:**

- The building is approximately 1,400 feet or a quarter of a mile from the existing district heat lines currently ending at the Montpelier Parks Department building. Based on experience with underground piping costs, unless other users are found to serve from the line extension, then extending the system will be cost prohibitive.

Eco-friendly Alternative Responses

- **Biodiesel Fuel / Biodiesel Generators**
 - Other than for transportation, biodiesel applications are rarely used for commercial building systems in Vermont.
 - Biodiesel fuel sources and suppliers are limited.
 - Another expensive option would be to use biodiesel as the fuel source for generators for the building in conjunction with the solar array to fully power the building off grid (micro grid).
 - Costing a micro grid arrangement will take additional engineering analysis in conjunction with a complete electrical system design for the building.
 - However, we do not believe the building would be considered a good neighbor if the city were running biodiesel generators on a full time basis in the residential neighborhood due to noise and emission concerns on the very small footprint site.

Illustrative Debt Service Schedule

- Assuming an estimated 5 Million dollar Bond:

| SOURCES & USES | |
|--|--------------------|
| <i>Sources</i> | <u>Assumptions</u> |
| Par | \$5,000,000 |
| Equity | 0 |
| Total | \$5,000,000 |
| <i>Uses</i> | |
| Project | \$5,000,000 |
| COI | |
| Total | \$5,000,000 |
| Dated Date | 7/31/2020 |
| Principal Payment Date | 11/1/2021 |
| Term | 31 Years |
| Amortization Period | 30 Years |
| Final Maturity | 11/1/2050 |
| Avg Life | 15.84 Years |
| <i>Statistics</i> | |
| Net Interest Cost | 3.22% |
| [Note] NIC assumes no accrued interest & par bonds | |

| ANNUAL DEBT SERVICE SCHEDULE | | | |
|------------------------------|-----------|-----------|------------|
| | Principal | Interest | Series D/S |
| | 5,000,000 | 2,548,924 | 7,548,924 |
| 6/30/2020 | 0 | 0 | 0 |
| 6/30/2021 | 0 | 114,236 | 114,236 |
| 6/30/2022 | 166,667 | 135,486 | 302,152 |
| 6/30/2023 | 166,667 | 133,186 | 299,852 |
| 6/30/2024 | 166,667 | 130,836 | 297,502 |
| 6/30/2025 | 166,667 | 128,419 | 295,086 |
| 6/30/2026 | 166,667 | 125,936 | 292,602 |
| 6/30/2027 | 166,667 | 123,356 | 290,022 |
| 6/30/2028 | 166,667 | 120,649 | 287,316 |
| 6/30/2029 | 166,667 | 117,816 | 284,482 |
| 6/30/2030 | 166,667 | 114,856 | 281,522 |
| 6/30/2031 | 166,667 | 111,769 | 278,436 |
| 6/30/2032 | 166,667 | 108,390 | 275,056 |
| 6/30/2033 | 166,667 | 104,587 | 271,254 |
| 6/30/2034 | 166,667 | 100,423 | 267,089 |
| 6/30/2035 | 166,667 | 95,945 | 262,612 |
| 6/30/2036 | 166,667 | 91,194 | 257,861 |
| 6/30/2037 | 166,667 | 86,214 | 252,881 |
| 6/30/2038 | 166,667 | 81,044 | 247,711 |
| 6/30/2039 | 166,667 | 75,703 | 242,370 |
| 6/30/2040 | 166,667 | 70,209 | 236,876 |
| 6/30/2041 | 166,667 | 64,576 | 231,243 |
| 6/30/2042 | 166,667 | 58,819 | 225,485 |
| 6/30/2043 | 166,667 | 52,948 | 219,615 |
| 6/30/2044 | 166,667 | 46,974 | 213,641 |
| 6/30/2045 | 166,667 | 40,904 | 207,571 |
| 6/30/2046 | 166,667 | 34,761 | 201,428 |
| 6/30/2047 | 166,667 | 28,560 | 195,226 |
| 6/30/2048 | 166,667 | 22,301 | 188,967 |
| 6/30/2049 | 166,667 | 15,988 | 182,655 |
| 6/30/2050 | 166,667 | 9,625 | 176,292 |
| 6/30/2051 | 166,667 | 3,216 | 169,883 |
| 6/30/2052 | 0 | 0 | 0 |

Next Step Options

- Reminder: This is a feasibility study. This is not a designed building. These are recommended renovations.
 - All of these are estimates and are what Bread Loaf believes they can achieve
- Hosting a special meeting for Council and Montpelier residents to review all Rec Center Options and possible tour of the facility
 - January 7th Proposed Date
- Council schedules a time to approve moving forward with one of these plans
 - Will need to prepare and get specificity with a bond-vote presentation
 - Will be able to get to 15-20% of construction documents that take engineering into account