MINUTES FOR STUDY SESSION
ASHLAND PARKS & RECREATION COMMISSION
February 3, 2021
Electronic Meeting

Present: Commissioners Gardiner (Chair), Landt (Vice-Chair), Bell (joined the meeting at 6:05 p.m.), Eldridge, Lewis; Director Black; Recreation Superintendent Dials; Senior Services Superintendent Glatt, Manager Flora, Analyst Kiewel, Assistant Sullivan

Absent: None

I. CALL TO ORDER

The meeting was called to order at 6:00 p.m.

II. PUBLIC INPUT

None

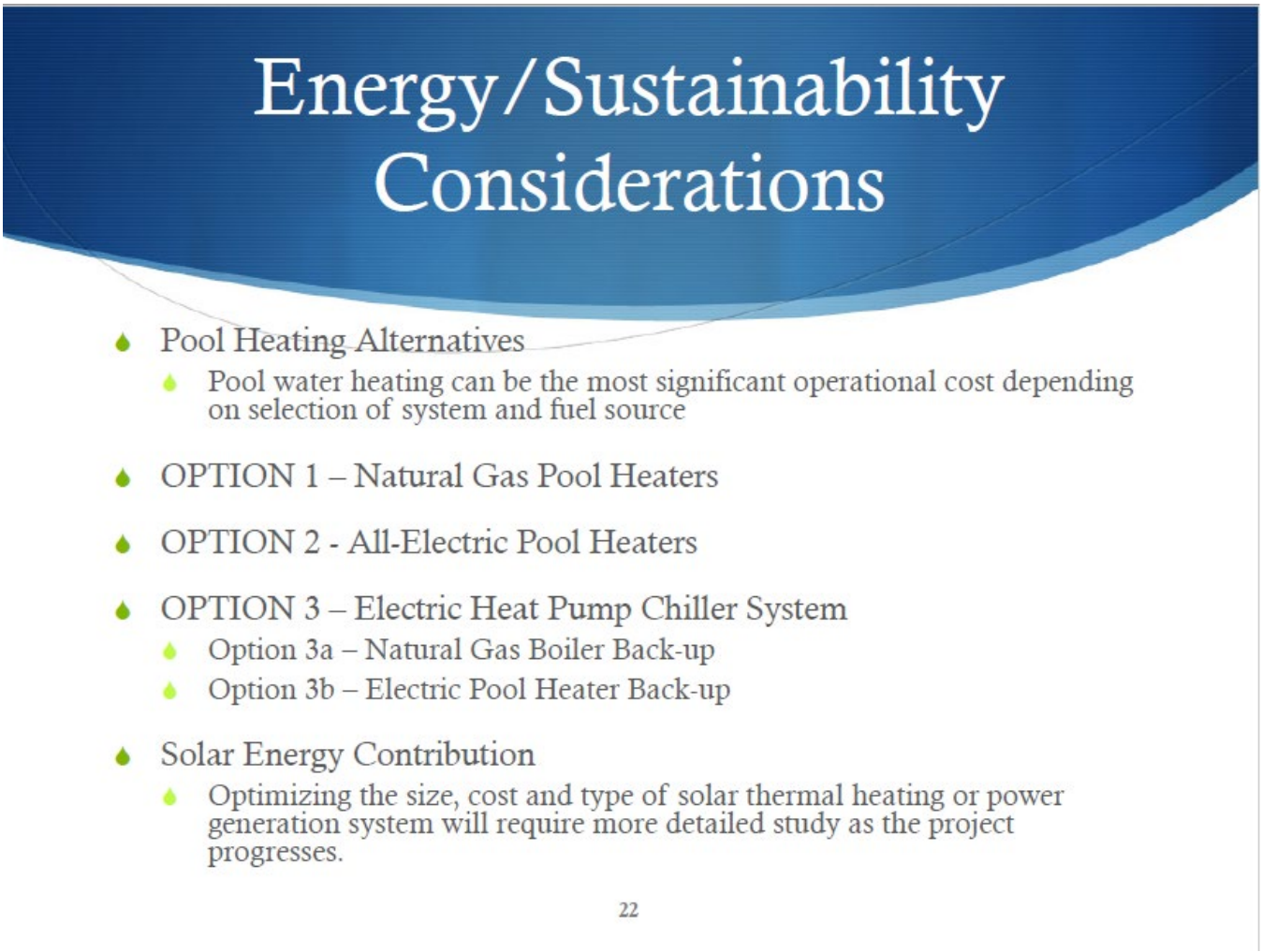
III. DANIEL MEYER POOL REPLACEMENT DRAFT DESIGN REPORT PRESENTATION

Various aspects of the pool design were discussed in detail. The minutes below include a summary of some of the highlights. The presentation included slides displaying specific site design concepts and other information. The full presentation and meeting discussions can be viewed online.

Black reviewed the staff report included in the meeting packet and stated that funding for the pool will not be discussed at this meeting. Black provided a verbal report of the history of the pool replacement process and stated the meeting will not include discussions about funding. Black introduced Carl Sherwood from Robertson Sherwood Architects, P.C., who have been contracted to complete the design, and gave a presentation on the pool design.

- The pool design includes a 25ydx25m pool that will have more lanes and have a greater depth. The design supports water polo and competitive lap swimming. The design does not include a diving board. The design includes accessibility features
- The pool design calls for PVC coated panels and membrane system that carries a limited 25-year warranty at a $500,000 value
- Other key components of the design include heating, water circulation, filtration, and sanitation equipment
- The parking lot will be reconfigured to increase available space for the pool design
- There is a state requirement for publicly funded projects to invest a minimum of 1.5% in green energy technology, which is currently included in the budget
- Black stated that the Site Development slide displayed by Sherwood (in the video at 17:05) does not show the walkway directly from the pool grounds to the Senior Center and noted this walkway is still part of the design plan
    - Black later clarified (in video at 27:15) the entrance near the Senior Center is included to facilitate programming and classes organized by the Senior Service Division. Sherwood added that code requires perimeter emergency exit points and this access point will help meet code requirements
- Improvements to the bathhouse are necessary per code (in video at 21:00)
- The existing tree within the pool fence is maintained in the design plan
- The planned depth allows for training and certification programs to be held at the pool
- Code requires the pool to have a blanket system that is deployed when the pool is not in use to act as an insulator
- Sherwood clarified that after a period of 25 years the PVC liner on the bottom of the pool would likely need to be repaired or replaced. The other components of the pool would likely last for a longer period of time
- The section of the presentation on Energy/Sustainability Considerations begins at 37:20 in the video. The relevant slides for this section of the presentation can be found online.

- Heating the water can be the most significant operational cost depending on the selection of the system and fuel source. Sherwood presented the following options for heating sources:



- Natural gas provides the lowest cost for annual operations at this point in time. Environmental issues are often taken into consideration as well as cost
- All Electric Pool Heaters (no natural gas)
- Electric Heat Pump Chiller System (efficiency drops below 35 degrees and would require a back-up heating source – Some components of this system would not fit within the existing bathhouse and would need to sit outside)
    - Option a: Natural Gas Boiler Back-up
    - Option b: Electric Pool Heater Back-up
- There is a requirement to use a minimum 1.5% of the budget (approximately $75,000). Sherwood stated that this investment is typically made through a solar water heater array or photovoltaic solar systems when new pools are constructed

Sherwood provided the following heating System Comparison Chart that displays annual operating costs

Energy/Sustainability Considerations

	POOL WATER HEATING SYSTEM COMPARISON CHART			
	All systems are to are assumed to have a peak capacity of 3,000,000 BTU per hour, and will meet pool water heating load requirements of 8,640,000,000 BTU over the course of one year			
	OPTION 1	**OPTION 2**	**OPTION 3A**	**OPTION 3B**
	Description			
	New natural-gas fired 3MBH pool heater with 97% efficiency proposed by the pool contractor to replace the older heater.	Four (4) new 300kW all-electric pool heaters at 97% efficiency, with new 1400amp 480v electrical service upgrade.	New 268kW Heat Pump Chiller unit requiring a new 600amp 480v Electrical service upgrade, with new back-up natural-gas fired 3MBH boiler.	New 268kW Heat Pump Chiller unit with back-up from (4) new 300kW all-electric pool heaters at 97% efficiency, with new 1400amp 480v electrical
	Annual Power/Fuel Requirements			
Power		2,610,556 kWh	738,182 kWh	738,182 kWh
Nat. Gas	89,072 Therms		13,732 Therms	402,417 kWh
	Power/Fuel Rates			
Power		Use & Demand Charges	Use & Demand Charges	Use & Demand Charges
Nat. Gas	$0.90184/Therm		$0.90184/Therm	
	Annual Power/Fuel Costs			
Power		$274,188	$88,056	$88,056
Nat. Gas	$80,329		$12,384	$50,149
	TOTAL Annual Power/Fuel Costs			
	$80,329	**$274,188**	**$100,440**	**$138,205**

Information/discussion on the comparison slide include the following

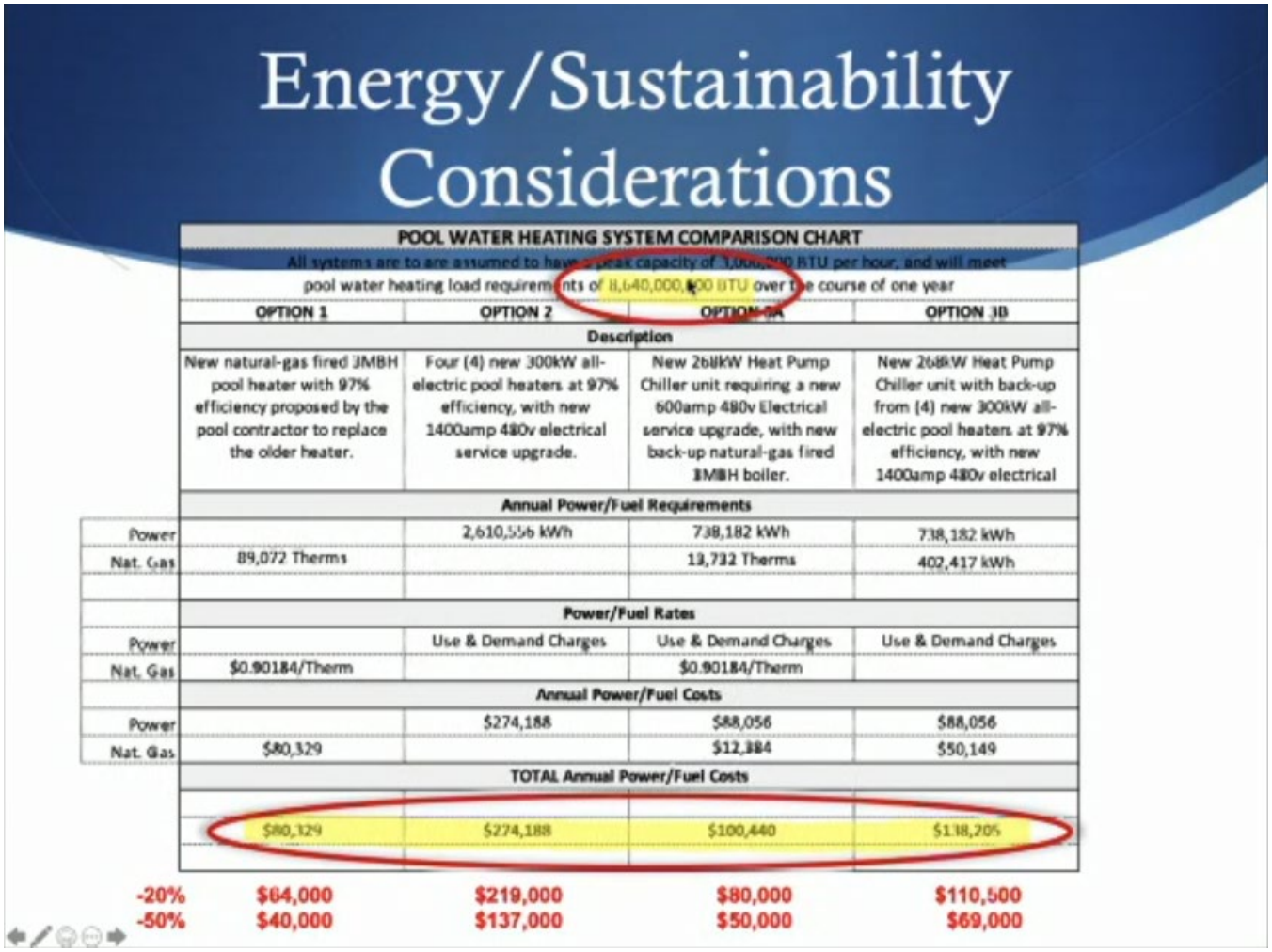
- Assumptions on costs include the geographical climate and covering the pool for at least 8 hours a night when not in use
    - Potential offsets from solar energy generation are not included in the assumptions
    - Solar power would not impact Option 1, but would lower costs for the remaining options

Sherwood provided the following heating System Comparison Chart that displays annual operating costs plus the added capital and project costs if Option 1 is not chosen.

Energy/Sustainability Considerations

POOL WATER HEATING SYSTEM COMPARISON CHART			
All systems are to are assumed to have a peak capacity of 3,000,000 BTU per hour, and will meet pool water heating load requirements of 8,640,000,000 BTU over the course of one year			
OPTION 1	**OPTION 2**	**OPTION 3A**	**OPTION 3B**
TOTAL Annual Power/Fuel Costs			
$80,329	**$274,188**	**$100,440**	**$138,205**
Added Capital Costs and Project Costs			
$0.00	$101,844	$534,441	$599,748
Equipment priced in Base Estimate and Project Budget	Equipment cost differential and electrical service	Equipment cost differential and electrical service	Equipment cost differential and electrical service
Simple Payback			
Lowest Cost	**240% Energy Cost Increase**	**25% Energy Cost Increase**	**74% Energy Cost Increase**
No Payback	**No Payback**	**2.7yr Payback over Option 2**	**4.4yr Payback over Option 2**
Gas Only Heating	All-Electric Heating	Elec./Gas Back-up Heating	Elec./Elec. Back-up Heating

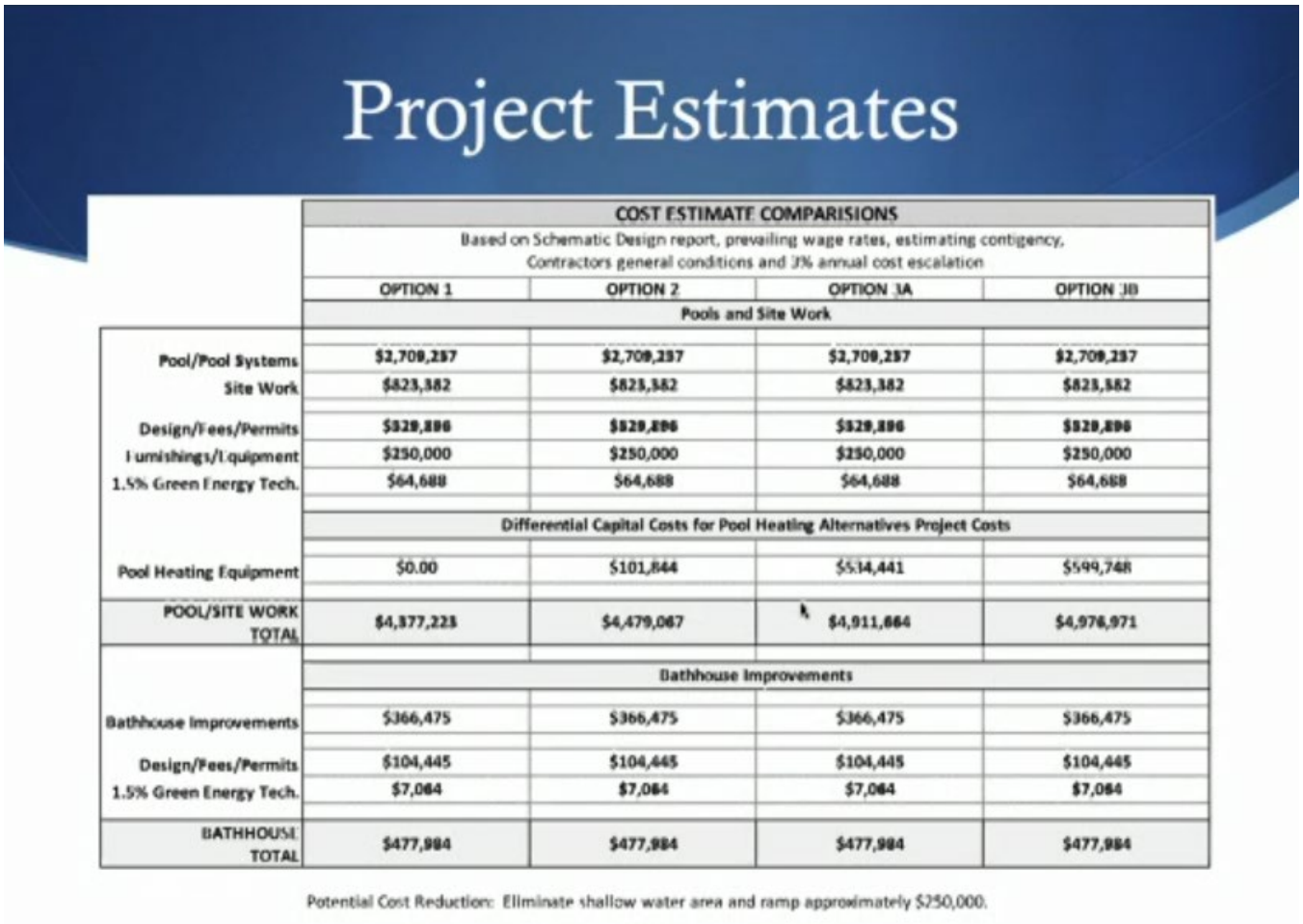
Sherwood provided the following slide that includes assumptions on solar offsets:



- The percentage (displayed in red above) are for illustrative purposes. It is unknown how much solar energy can be generated on the site or how much it would cost. A solar site analysis has not been ordered at this time
- Solar is not a standalone option, but could reduce annual operating costs
- Capital Costs for the installation of a solar array are not included in the slide above. This would be an additional one-time cost
- The following options for the construction of a solar array were discussed
    - Senior Center roof
    - Build a structure over the parking lot and or tennis courts
    - An off-site, larger array in coordination with the City of Ashland for general energy needs that would include the pool
    - Potential to partner with Walker School that could benefit APRC and the Ashland School District
    - Sherwood stated the bathhouse roof is not aligned properly and could not be utilized for solar
- Eldridge suggested staff proceed with a solar consult for the site so decisions can be better informed
    - Black stated staff can move forward on this with direction from the Commissioners
    - Commissioners supported moving forward with a consult

- Black stated the current design does not include the pool to be enclosed because of the associated costs. The pool design allows for the possibility to retrofit the space to provide a cover in the future if funds become available
    - Black added that if the pool were fully enclosed with HVAC it could provide a space when smoke does not allow outside recreation

Sherwood provided the following cost estimates and stated that if the shallow pool and ramp were eliminated it would save approximately $250,000.



	COST ESTIMATE COMPARISIONS Based on Schematic Design report, prevailing wage rates, estimating contigency, Contractors general conditions and 3% annual cost escalation			
	OPTION 1	OPTION 2	OPTION 3A	OPTION 3B
	Pools and Site Work			
Pool/Pool Systems	$2,709,257	$2,709,257	$2,709,257	$2,709,257
Site Work	$823,382	$823,382	$823,382	$823,382
Design/Fees/Permits	$529,896	$529,896	$529,896	$529,896
Furnishings/Equipment	$250,000	$250,000	$250,000	$250,000
1.5% Green Energy Tech.	$64,688	$64,688	$64,688	$64,688
	Differential Capital Costs for Pool Heating Alternatives Project Costs			
Pool Heating Equipment	$0.00	$101,844	$534,441	$599,748
POOL/SITE WORK TOTAL	$4,377,223	$4,479,067	$4,911,664	$4,976,971
	Bathhouse Improvements			
Bathhouse Improvements	$366,475	$366,475	$366,475	$366,475
Design/Fees/Permits	$104,445	$104,445	$104,445	$104,445
1.5% Green Energy Tech.	$7,064	$7,064	$7,064	$7,064
BATHHOUSE TOTAL	$477,984	$477,984	$477,984	$477,984

Potential Cost Reduction: Eliminate shallow water area and ramp approximately $250,000.

- Design and permitting is projected to take 4-6 months
- Construction is projected to take 5-6 months
    - Subject to factory and delivery limitations and construction season

- A member of the design team from Aquatic Design Group gave a detailed report on insulation and the 25-year Myrtha warranty, and the potential lifetime of the pool (in video at 1:19:45)
- A detailed report of the filtration and sanitation systems was provided by the representative from Aquatic Design Group (in video at 1:28:20)
    - Chlorine or salt water/saline
        - Chlorine
            - Liquid cheaper but less available
            - Tablet easier to clean and longer shelf life
        - Salt
            - Creates chlorine within the system rather than in a factory
            - Main benefit is softer water for swimmers
            - Downside is introducing increased electrolysis in system, which requires an upgrade to metal components and use sacrificial anode; the costs is five times more than a chlorine system; There is no ability to quickly ramp-up chlorine levels when use increases, so a chlorine back-up is required so the pool does not get intermittently shut down

        - Both systems require the same PPM of chlorine in the pool
        - There are no differences between the systems in terms of human health impacts aside from a decreased potential for hazardous spills if a liquid chlorine system is used
    - Ultraviolet is considered a secondary sanitation system and primarily used for indoor pools
        - The pool can be designed to accommodate this system in the future if the pool is retrofitted in the future to fully enclosed
- Natural gas heaters typically last 6-8 years before needing to be rebuilt
- Electric heaters have varying lifespans depending on the quality of the heater chosen, but 3-4 years is a typical lifespan before needing to be rebuilt, which is not time consuming or expensive to complete
- Sherwood will provide more detailed information on the lifespans and maintenance needs for the different heating source options

Landt stated he continues to be 100% supportive of getting a new pool, but it needs to be built in the context of the current situation with global warming and climate change. Therefore, to greatest extent possible be carbon neutral even it means extra costs.

Black stated staff will move forward with a solar consult for the site and will present it to Commissioners once completed.

IV. ADJOURNMENT

The meeting adjourned at 7:52 p.m.

Respectfully Submitted
Sean Sullivan, Executive Assistant