

Daniel Meyer Pool

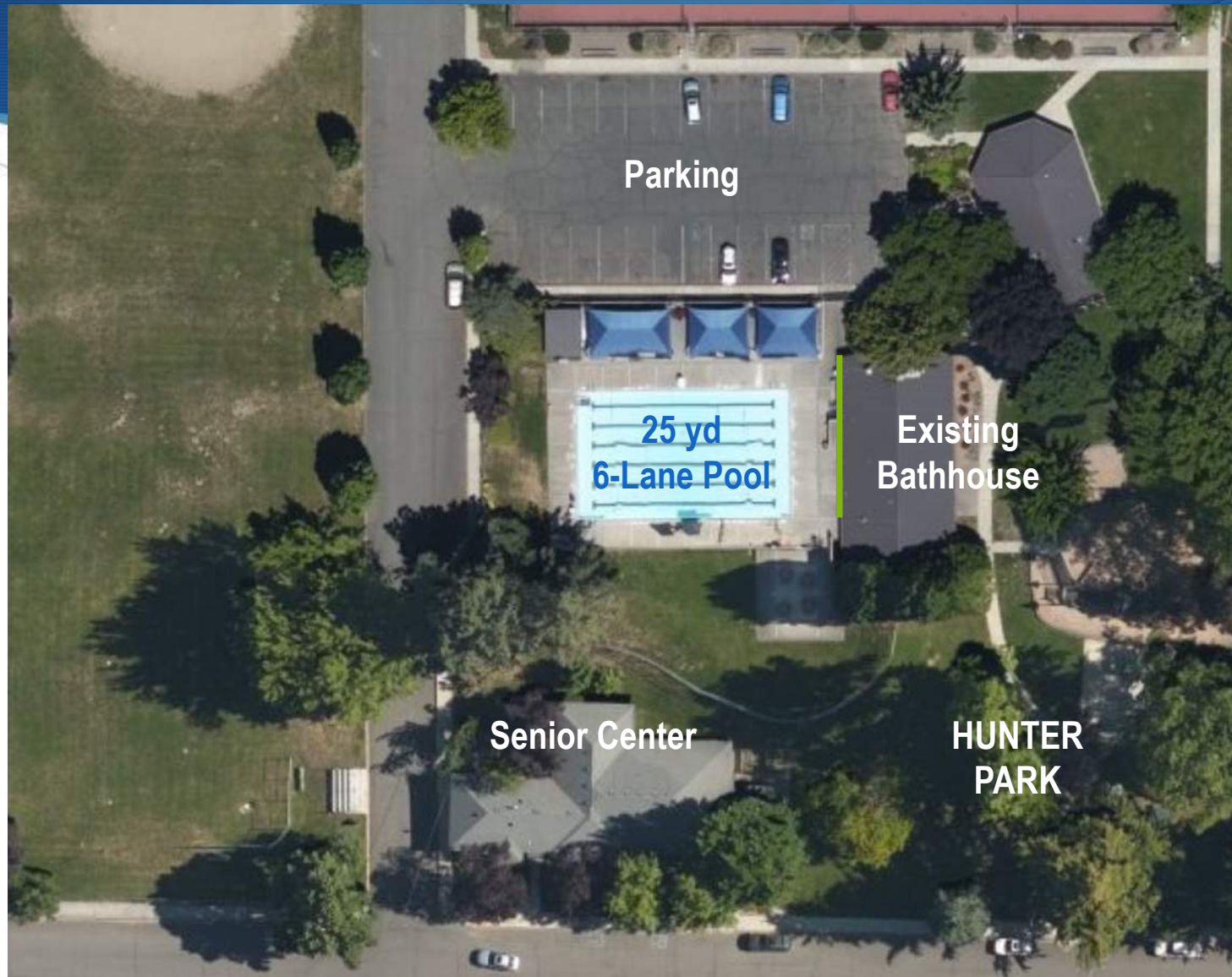
Ashland Parks and Recreation Commission



December 2020



Existing Pool



Key Features

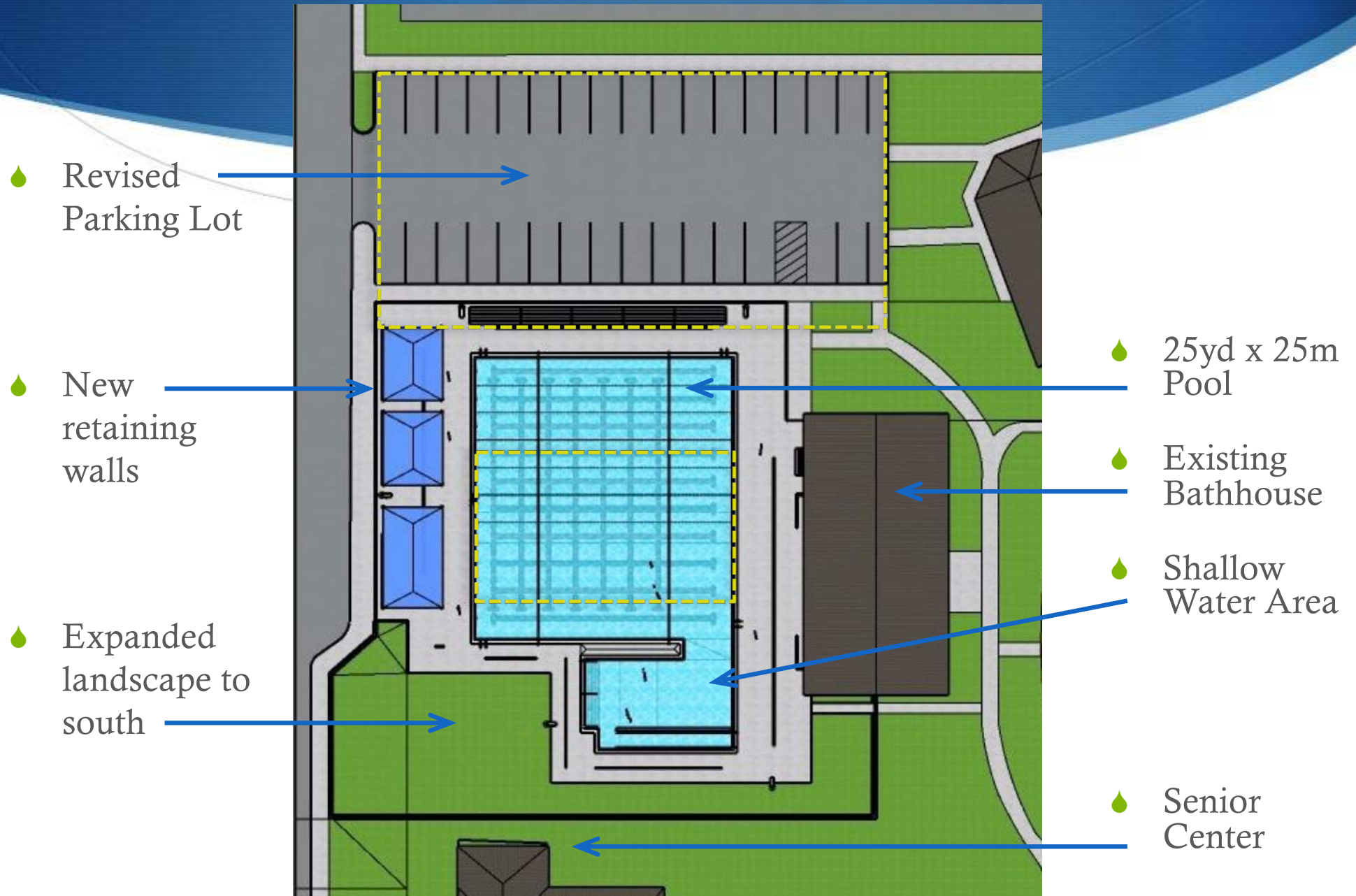
- ◆ Replacement Pool 25yd x 25m pool
 - ◆ Depths from 3'-6" to 8'-0"
 - ◆ Recreation/therapy alcove 2'-0" to 3'-6" depth
 - ◆ 10 lanes at 25yds
 - ◆ 7 lanes at 25m
 - ◆ Water Polo course at 7' depth
 - ◆ Steps and ramped entry
- ◆ Myrtha Pool construction
 - ◆ PVC coated panels and membrane system
 - ◆ Limited 25-year warranty which can save one resurfacing (\$500,000 value)
 - ◆ Modular assembly saves time and money during construction
 - ◆ Same pool system as US Olympic Trials, World Championships, and the Olympics



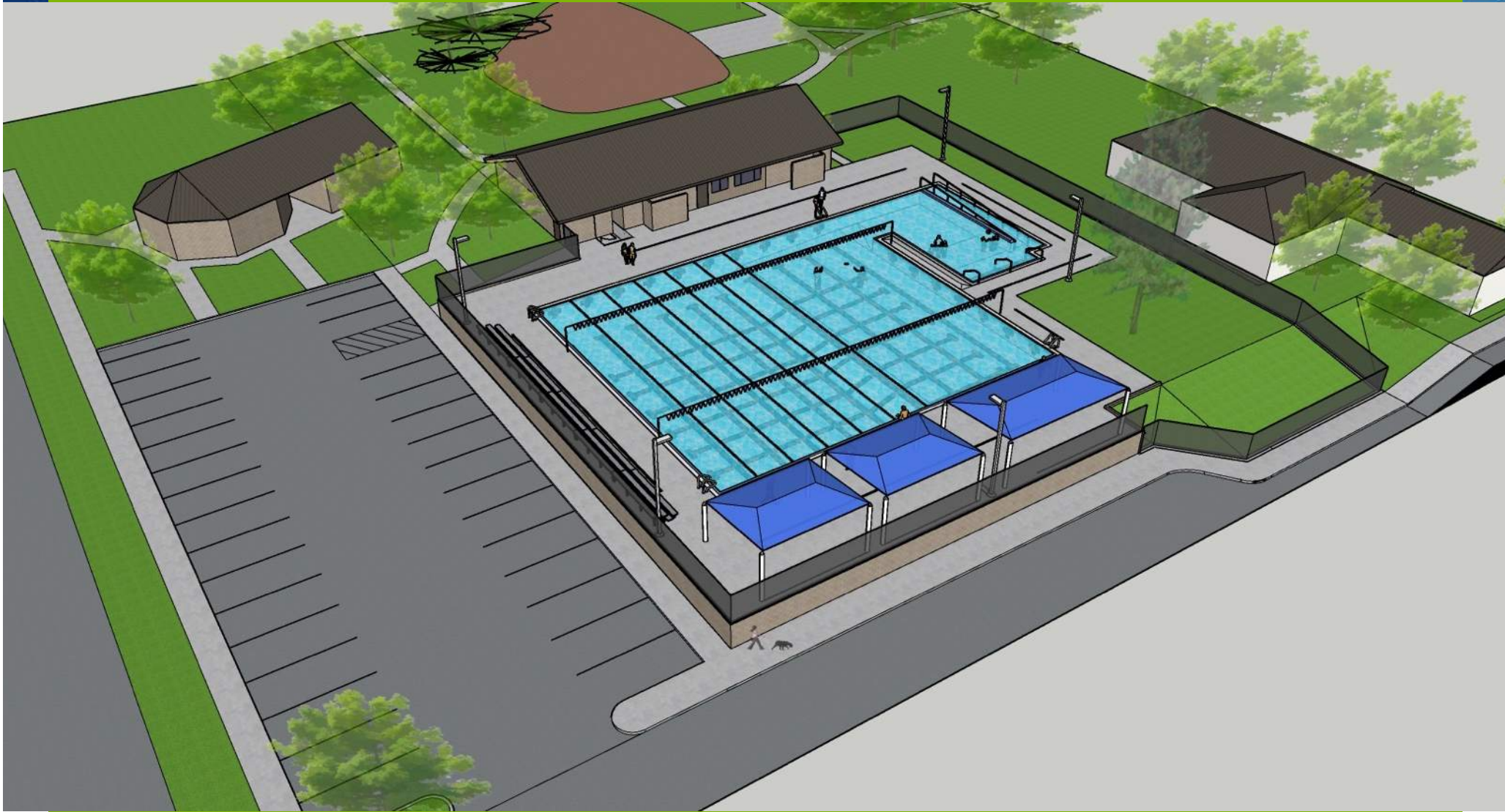
Key Project Components

- ◆ All new pool and pool systems
 - ◆ Pool heating
 - ◆ Water circulation
 - ◆ Water filtration and sanitation
- ◆ Site improvements to increase buildable area,
 - ◆ Reconstructed south edge of parking
- ◆ Bathhouse improvements required for increased pool size
- ◆ Green Energy Technology investment

Pool and Site Development



Pool Concepts



Energy/Sustainability Considerations

- ◆ Pool Heating Alternatives
 - ◆ Pool water heating can be the most significant operational cost depending on selection of system and fuel source
- ◆ OPTION 1 – Natural Gas Pool Heaters
- ◆ OPTION 2 - All-Electric Pool Heaters
- ◆ OPTION 3 – Electric Heat Pump Chiller System
 - ◆ Option 3a – Natural Gas Boiler Back-up
 - ◆ Option 3b – Electric Pool Heater Back-up
- ◆ Solar Energy Contribution
 - ◆ Optimizing the size, cost and type of solar thermal heating or power generation system will require more detailed study as the project progresses.









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	

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

Project Estimates

💧 Project Estimate Components

- 💧 Pool Replacement including Heating Systems
- 💧 Site Work
- 💧 Design, Permits, Fees and Construction Testing
- 💧 Pool Furnishings and Equipment Allowance
- 💧 1.5% GET Allowance
- 💧 Bathhouse Improvements (Estimated separately)

Project Estimates

	COST ESTIMATE COMPARISONS			
	Based on Schematic Design report, prevailing wage rates, estimating contingency, 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.

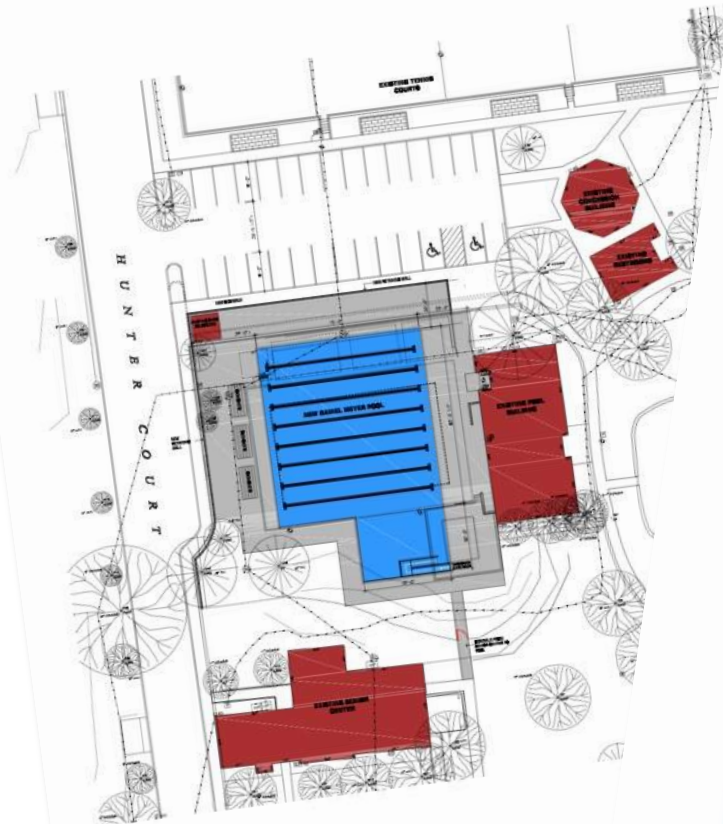
Questions?



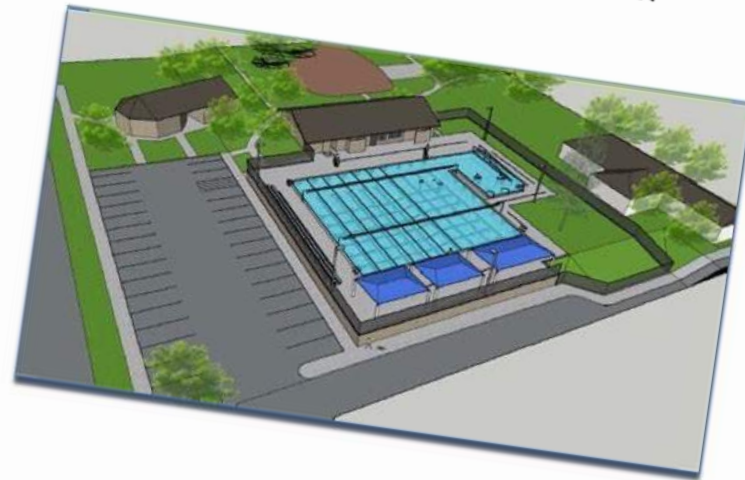
SD and Energy Reports



SCHEMATIC DESIGN REPORT – DRAFT – 12/08/2021 Daniel Meyer Pool Replacement & Renovation



DANIEL MEYER POOL RENEWABLE ENERGY ASSESSMENT



City of Ashland
Daniel Meyer Pool
Ashland, OR

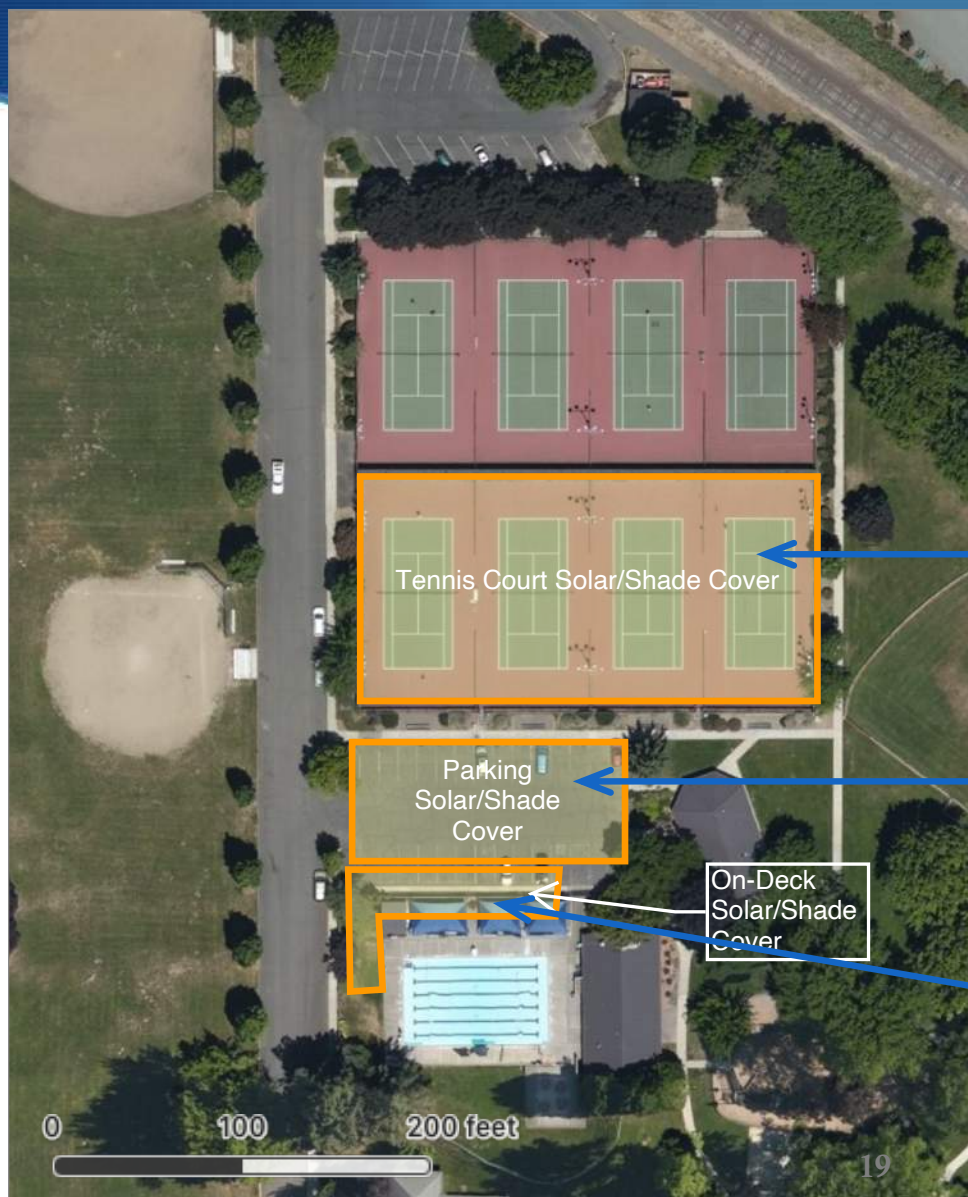
Version 2.0
April 14, 2022

Submitted to:
City of Ashland
Robertson Sherwood Architects

Prepared by:
Systems West Engineers
725 A St.
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Solar Array Structure Options

near Ashland — Jackson



Min. GET Solar Array/Structure

1,650sf = \$75,000/\$122,793

Tennis Court Cover Array/Struct.

20,000sf = \$977,000/\$2,562,000

Parking Lot Cover Array/Struct.

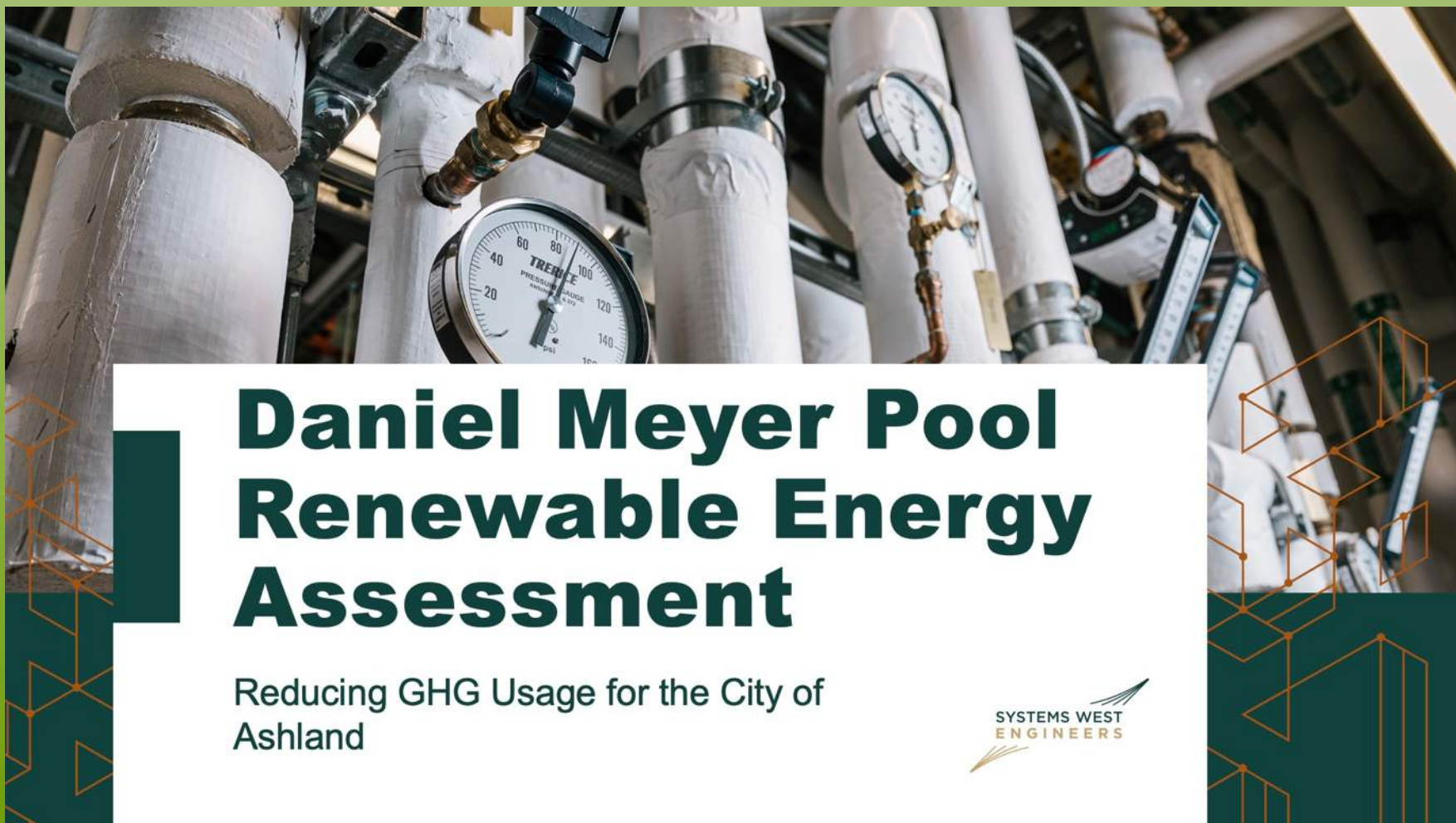
9,000sf = \$421,000/\$823,500

Pool Deck Array/Structure

2,200sf = \$145,000/\$163,724

Joe M. Iaccarino

Systems West Engineers



Daniel Meyer Pool Renewable Energy Assessment

Reducing GHG Usage for the City of
Ashland

