

# BLAINE PUBLIC WORKS

Providing High Caliber Municipal Services to Develop a Quality Community



**Safety – Accountability – Communication  
Trust - Respect**



## **Council Work Session October 18, 2018**

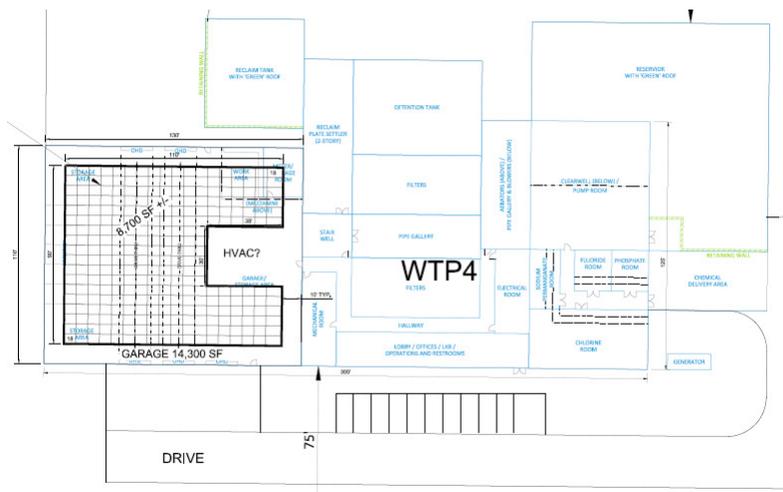
**Water Treatment Plant 4  
Options for Solar**



# Conceptual Design



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PRELIMINARY CONCEPT: SEPTEMBER 26, 2018



## Conceptual Output & Cost

CONCEPT DESIGN	
ROOF AREA	8,700 SF
PV PANEL AREA	6,000 SF
PV TYPE	poly-Si
NO. OF UNITS	288 @ 320 W/each
NAMEPLATE CAP.	92 kW
ANNUAL POWER GENERATION	96,000 kWh/yr, 96 MWh/yr
OPC (LOW), without incentives	\$230,000
OPC (HIGH), without incentives	\$350,000



## Conceptual Output

**Estimated Plant Power Needs: 3,000 MWh/yr**

**Basic installation would install ~6,000 sf of panels**

- Capital cost \$230,000 - \$350,000
- PV generation estimated at 92 kW
- Annual Power Generation ~96 MWh/yr
- 3% of our need
- Estimated power savings of \$7,000/yr

**ROI = 32-50 years**



## Conceptual Output

**Expanded installation: ~9,000 – 12,000sf of panels**

- **Some efficiency of capital cost**
  - **\$400k - \$600k**
  - **ROI = 28-42 years**

**Higher level of detail and cost at this time will require additional design funding.**



## Installation Options

**Contract with our design engineers to develop an RFP for a solar vendor to propose their best mix of:**

- **Power Purchase Agreement**
- **Incentives**
- **Tax Credits**
- **Financing Options**
- **Battery Storage Options**
- **Energy Savings**



## Direction Needed

1. Shall we pursue rooftop solar PV?
2. Do we want to stay with garage only size (96MWh/yr) or maximize the site ?



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