

BLAINE PUBLIC WORKS

Providing High Caliber Municipal Services to Develop a
Quality Community



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



Council Work Session October 18, 2018

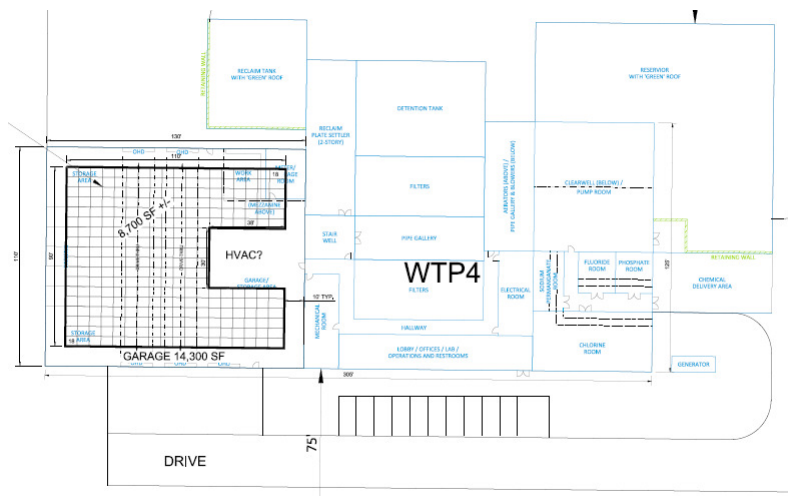
Water Treatment Plant 4 Options for Solar



Conceptual Design



Conceptual Design



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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