



AGENDA
Committee of the Whole
Board Room
33 S. Arlington Heights Rd
September 9, 2024
7:00 PM

I. CALL TO ORDER

II. PLEDGE OF ALLEGIANCE

III. ROLL CALL OF MEMBERS

IV. APPROVAL OF MINUTES

A. Committee of the Whole 8/12/2024

V. NEW BUSINESS

A. 2025 Budget Ceiling Update Discussion

B. Credit Card Service Charges

C. Proposed Water and Sewer Rate Adjustment

D. Proposed Solar Panel Installation at Public Works Garage - Discussion

VI. OTHER BUSINESS

VII. PUBLIC COMMENT

Anyone wishing to speak on a subject not on the Agenda may speak at this time. Please limit your comments to three minutes.

VIII. ADJOURNMENT

Persons with disabilities requiring auxiliary aids or services, such as an American Sign Language interpreter or written materials in accessible formats, should contact Erin Mercado, at 33 S. Arlington Heights Road, Arlington Heights, IL 60005, emercado@vah.com or 847/368-5793.



MINUTES

President and Board of Trustees
Village of Arlington Heights
Committee-of-the-Whole
Board Room
Arlington Heights Village Hall
33 S. Arlington Heights Road
Arlington Heights, IL 60005
August 12, 2024
7:00 PM

I. CALL TO ORDER

II. PLEDGE OF ALLEGIANCE

III. ROLL CALL

President Hayes and the following Trustees responded to roll: LaBedz, Tinaglia, Schwingbeck, Bertucci, Shirley, Baldino, Dunnington, and Grasse.

Also present were: Randy Recklaus, Cris Papierniak, Briget Schwab and Becky Hume.

IV. NEW BUSINESS

A. Proposed Windsor Drive Road Diet & Resurfacing Update

Mr. Recklaus said the proposed Windsor Drive Road Diet was presented to the Board in March. After some questions from the Board and residents, more research was done with follow ups sent to the Board in April and May. Stakeholder interviews, online surveys and an existing condition report were conducted.

Briget Schwab, Village Senior Civil Engineer, summarized the history of the project as part of the Bicycle & Pedestrian Plan going back to 2013. Public meetings were held in April of 2017 through September 2017, after which the Plan was adopted by the Village Board. Some of the Windsor Rd. Diet project was identified in the Bike Plan and it was noted as a high priority project by the Bicycle & Pedestrian Advisory Commission in July of 2019. The Village Board set strategic goals to pursue projects that improve walkability and enhance life friendly initiatives. Staff then went to the Bicycle & Pedestrian Commission and in October 2019 the Commission made a

recommendation for Village Staff to pursue Phase I funding for it in the 2021 Budget. In 2022 the Board approved an application to cover the 20% local match for the Illinois Technical Enhancement Program Grant, which we successfully received. Later, we found out this project, along with the resurfacing project, was awarded funding.

Ms. Schwab showed mapping of the current bike route framework and how the Windsor path would connect to it. Staff used Strava data as part of its planning efforts for the bike plan which showed that it was heavily used by cyclists. The Community Survey also showed that there was a lot of public interest this. In the online survey, residents said they want to see bikes here, but many said they can't travel here because of the Palatine Road hazard. The Village was denied Bike Friendly status, and one of the biggest takeaways from that application process was that we don't have a way to get across Palatine Rd. safely. That's why this was a high priority project for the Bike Commission.

Most recently the Village received a \$480,000 Community Congressional Spending grant to pursue a ComEd bike path connection that has been in the Plan since the 1996 version. This is the closest we've ever been to actually building it so this corridor would be a direct connection to a regional bike connection. This connection allows cyclists to get all the way from Mount Prospect to Deer Grove.

Future traffic projections do not support a four-lane highway on Windsor. Traffic counts of 20 - 25,000 vehicles require four lanes. Windsor is well below that threshold. Historically, minutes from a Finance Committee meeting in 1988 estimated traffic to grow on Windsor exponentially. At that time, the traffic count was 9,100 vehicles per day, there's been a very slight increase since then to 10,000. From this data, those traffic projections were not supported. People noted in the Community Survey that they want to get to Lake Arlington, but don't want to cross Palatine Rd.

Ms. Schwab described the lane tapering, the left-hand turn lane and the queuing at Rosehill Dr. The lanes will taper just north of Rosehill Dr. She said staff looked at other roadways that taper down from 4 lanes. Data was gathered on Euclid Ave. and Kensington Rd. Euclid had no major crashes caused by the taper. There was a total of 82 accidents along the entire corridor and there were only four crashes related to merging in four years. Those accidents were minor there was no major injuries or damages reported. Kensington didn't have anything notable related to merging either.

The Board asked staff to look at the potential option for a shared use path. The way the project is being proposed, that would create a wider sidewalk, not a design for bikes. If it's going to be a shared use path, we would have to provide cross section design data for the horizontal and vertical alignment and there are many other steps that we would have to go through in order to make that happen without including the road changes. The current sidewalk would have to be widened to the full 8 feet. This idea would mean the loss of the Valley Lane upgrade and a turn lane. The Village would add 12 months to

the project timeline. The Village would not be able to keep the funding, but we could reapply for the ITEP grant for a shared use path. That application is due September 30th if we change the scope. Right now, a grant is paying for Phase II but the Village would have to pay for it if we changed the plan in order to keep the STP money, as we have to stay on the timeline for that funding.

Ms. Schwab presented the five options staff developed:

Option #1 – Proceed with submitting the PDR to IDOT that reduces the number of vehicular lanes from four to two to provide on-street bicycle lanes, and have Staff begin the selection process for Phase II and Phase III consultants. Estimated construction is late 2026 or early 2027. Total estimated total cost of the project for Option #1 for all phases is around \$4,600,000. Village total participation is estimated near \$900,000.

Option #2 – Eliminate the road diet specific elements of the proposed project. Leave Windsor Drive a four-lane roadway, with no dedicated on-street bicycle facilities, but provide a consistent 8-foot shared-use path on both sides of Windsor Rd. This option does not include a west leg crossing at Palatine Rd or RRFBs at Crabtree Dr and Suffield Dr. We would have to rescind the ITEP and TAP-L grants and approve Supplement # 4 in the amount of \$130,914 to complete the necessary Phase I work efforts for the off-street shared-use paths on the east and west side of Windsor Dr, and Phase II would be all locally funded. Staff would seek new grant funding, with consultant assistance, for the construction costs of the shared use path. Construction could start in late 2027 or early 2028, but that schedule is dependent on the additional Phase I approval timeline. Total estimated total cost of the project for Option #2 for all phases is roughly \$4,300,000. Village total participation would be \$1,400,000, if the Village has a successful ITEP application, or approximately \$2,800,000 if the Village does not receive ITEP funds.

Option #3 – Maintain the existing cross section with no road diet elements, but still include the west leg pedestrian crossing at Palatine Rd and the RRFBs at Crabtree Dr and Suffield Dr. This option leaves Windsor Drive a four-lane roadway, maintains the existing variable width (five to eight feet) sidewalk, and does not include on-road or off-road bicycle accommodations. Staff would proceed with resurfacing, ADA ramp improvements as outlined in the STP grant application, and pursue the design and installation of the west leg pedestrian crossing at Palatine Rd and the RRFBs at Crabtree Dr and Suffield Dr. Due to the project scope change, we would have to rescind the ITEP and TAP-L grants. Some additional Phase I funding may be needed to adjust the Project Development Report, and Phase II would be all locally funded. Construction would start in late 2027 or early 2028, but that schedule is dependent on the additional Phase I approval timeline. Total estimated total cost of the project for Option #3 all phases is roughly \$3,000,000 Village total participation is estimated at around \$1,500,000.

Option #4 – Is a hybrid and would eliminate the road diet specific elements

of the proposed project. It leaves Windsor Drive a four-lane roadway, with no dedicated on-street bicycle facilities, but provides a consistent 8-foot shared-use path on both sides of Windsor Rd. It would also include the west leg pedestrian crossing at Palatine Rd and the RRFBs at Crabtree Dr and Suffield Dr. The Village would need to rescind the ITEP and TAP-L grants and approve Supplement # 4 in the amount of \$130,914 to complete the necessary Phase I work efforts for the off-street shared-use paths on the east and west side of Windsor Dr, and Phase II would be all locally funded. Staff could seek new grant funding, with consultant assistance, for the construction costs of the shared use path. Construction could start late in 2027 or early 2028, but that schedule is dependent on the additional Phase I approval timeline. Total estimated total cost of the project for Option #4 for all phases is roughly \$4,600,000. Village total participation would be \$1,500,000, if the Village has a successful ITEP application, or approximately \$3,200,000 if the Village does not receive ITEP funds.

Option #5 - Staff proceeds with resurfacing and existing ADA ramp improvements only, as outlined in the STP grant application. This option would not include on-road or off-road dedicated bicycle facilities. There would be no west leg of Palatine pedestrian crossing and RRFBs would not be installed at Crabtree Dr. and Suffield Dr. The Village would need to rescind the ITEP and TAP-L grants, and approve local funds in Phase II. Estimated construction is late 2026 or early 2027. Total estimated total cost of the project for Option #5 for all phases is around \$2,200,000. Village total participation is estimated at near \$700,000.

Mr. Recklaus said the road was widened in anticipation of a traffic increase in the late 80's related to what the retail world was doing. The traffic patterns that were anticipated never really materialized. We're not seeing a fundamentally different amount of traffic now than what we saw prior to the widening being done. The big news is that we got the grant to facilitate the ComEd bike path which is going to be a significant bike path for the region and it is immediately adjacent to this property. Staff thinks that helps make this project a little bit more compelling, but we know that there are tradeoffs and considerations.

President Hayes asked if the \$480,000 for the ComEd path was contingent on the Windsor Road project. The answer was no. A deadline may exist for building the path, and Ms. Schwab said she will report back on that. President Hayes asked if under Option #2 where there was a shared pathway, would that be delineated between pedestrians and bicyclists. Ms. Schwab said that striping has not been planned right now, but could be looked at in Phase II. We are just looking at it as a wider sidewalk. Mr. Recklaus said it is designed as a shared wider sidewalk. President Hayes noted that Option #1 separates bicyclists and pedestrians for safety purposes, he likes the separation.

Trustee Tinaglia asked if we do this exactly as you propose, and it doesn't work out like we expected, would we have to rebuild the road, or could we just restripe it? Ms. Schwab said it could be restriped except for the raised

medians and the pedestrian refuge islands. Those would have to be taken out to put it back to a four-lane road. The signal at Valley Lane would have to be redone too.

Trustee Shirley asked for clarity on the curbs. The curbs of the road are not changing. The striping and crosswalk are the changes at Palatine Road. He said he didn't think it would become safer for people getting to Lake Arlington. Palatine Road is eight lanes and it's intimidating for good reason. He is struggling to see how the bikers are going to be safer crossing Palatine Rd. Ms. Schwab explained that as a driver you're alerted that there's a biker potentially around you because of the striping which changes your thoughts when you're driving. You most likely would go slower and proceed more cautiously. There will be an enhanced crosswalk which alerts the driver that there are other users in this walkway.

Trustee Shirley asked if the path along the parkway would preclude bikers, because he didn't think families and children would use the street bike lanes. He saw the bike lanes for professional bikers. No responsible person would put their family on the street, he thinks this project caters to a very slim group of people who are professional bikers. With the two lanes now, they already have safe passage.

Trustee LaBedz asked for more information on the pedestrian refuges at the crosswalks. Ms. Schwab said a pedestrian space in the median would be cut out so if you're a pedestrian and started to move across, and there were cars coming in the other direction, you could make it halfway across the road. Trustee LaBedz said she liked the idea of having some dedicated bike lanes, shared lanes are a problem. She believes it enhances safety. There are a variety of types of bikers that would use this.

Trustee Bertucci said crossing Palatine Road is an issue. He liked the addition of an extra signaled crosswalk on the west leg of Palatine that options #1, #3 and #4 have.

Trustee Dunnington said she was in support of Option #1 as it follows the Complete Streets Plan which makes our roadway safer for everyone and offers the most from a financial perspective. She said the Village would get the greatest number of improvements in the area and actually costs \$900,000 whereas in Options #2, #3 and #4 the Village would be spending a lot more money. The only one that is less is Option #5 but that doesn't give us the improvement on Palatine Rd. She said staff showed that the traffic volume isn't there on Windsor, so it makes sense to decrease the lanes, and we know that by decreasing the lanes it's also going to make the traffic calmer. At the March meeting people said there was a lot of excess speeding, so this is going to calm the traffic and lower the speed on that road. It's the best option for the environment and meets the Board's strategic priority for more biking paths.

Trustee Baldino asked about the Strava data which indicated how much bicycle traffic we have in this area. He didn't really get a sense of which

streets the bicycles were using, is it the cross streets or are they actually using Windsor? Ms. Schwab said the data indicated that and Windsor Road was where many people were going, via Dryden and Douglas.

Trustee Baldino said he was struggling with how much is this bike lane was going to get used. He was curious if there's any information that indicates this is a main thoroughfare for the professional bike riders. He didn't think it made sense that kids and families who are going to Lake Arlington are going to use it. He said he was undecided. What is the problem we are trying to solve? Mr. Recklaus said there aren't a lot of places people can ride their bikes safely. The space needs to exist in order for people to use it. The recommendation is being made not based solely on current bike traffic, it's out of anticipation of there's going to be more. More people are interested in these bike friendly areas. Trustee Baldino said he would not be in favor of any option include doesn't include enhanced bicycle access. Whether that's widened sidewalks for shared use, because most of the traffic is small kids and families, or if there's a lot of dedicated cyclists that want to use this passage. That's his struggle.

Trustee Schwingbeck asked if is it just striping that is separates the bikes from the cars. The answer was yes, there's no raised pavement. He said he gets concerned riding a bike or running up to Lake Arlington with cars right next to him. He said he didn't see a lot of road bikes here like you do at Busse Woods. He said he sees more people using the sidewalk. The ComEd path could potentially add to the bike traffic. If there's going to be a bike path that people can connect with from Lake Arlington, then it might be an "if we build it, they will come" situation. The road diet seems to improve safety. Options #2, #3 and #4 don't gain us a whole lot but add a tremendous amount of cost to what we would have to pay. He said he was focusing on #1 and #5. He doesn't like getting cars that close together because drivers don't pay attention to bikers.

Trustee Schwingbeck asked if we could do a test for a period of time to see the impact of the backups on Windsor turning onto Palatine. Cris Papierniak, Director of Public Works, said it is something we could do. The traffic modeling is clear that we are not close to the volume for 4 lanes. It's clear that cars go slower with fewer lanes and you get less cars through when you go slower which will cause back up, but it's not because of the volume. Since we are not changing the curbs, it could be resurfaced.

Trustee Grasse said she trusts the traffic research and data. There was probably not as large a community of people who biked in the 1980's. Our world is changing and she really appreciated the ways that the Board is trying to adapt with their strategic priorities. She said the recent Village surveys show increased public desire for pedestrian and bicycle accessibility.

Trustee Bertucci asked for more clarification on how the bikes and cars merge approaching Palatine Road. Ms. Schwab explained how the bike lanes flow to in-between the right turn lane and the through lane. This is so cars turning right (drivers looking left for traffic) will not hit cyclists on their

right-hand side. It is a design requirement, is best practice in the industry, and approved by IDOT. We would forgo some grant funding if we did not do it this way. Signs will be looked at in Phase II. Trustee Bertucci warned that many people will not know what the green markings mean. He said it reminds him of the crisscross of the I-90 merge at Cumberland which he thought was dangerous.

Trustee Shirley questioned the safety difference between #1 and #4. Ms. Schwab said #1 is safer for road bikes because you are providing a space for them. They are traveling at a higher rate of speed than pedestrians making it complicated on a shared sidewalk. The design recommendation is to be on the street because of drivers backing out of their driveways. Drivers don't anticipate bikes on the sidewalk, but do look for traffic on the street. The impact factor of the driveways is a serious issue for the cyclists.

The following residents spoke in support of the project: Richard Lenski, Jurgen Juffa, Michael Scheffler, Anne Marie Lundstrom, Brian Larson, and Gabriel Nagy. These residents noted the reduction in traffic speed, safety, better access, and getting bikes off the sidewalk.

The following residents spoke against the project: Alan Kaminsky, Donna Campobasso, Rich Brunner, Brian Chicoine, Herb Stefan, Kelly O'Neil, Jon Raslawski, Dave Wunderle, Barbara Whiteside, Karen Doran, Carl Nito, Joy Alberti, Jack Morrissey and Ray Geise. These residents were concerned about: the traffic back up blocking Rosehill Drive, increased traffic, truck traffic, skate boards and electric scooters on the path, driver insensitivity to cyclists, delivery trucks blocking the roadway, and the safety of bikes on the streets.

Trustee Tinaglia said the biggest disaster is that we have this massive highway which runs right through the middle of our community making it really hard for anybody to get across. So now you throw in the idea that maybe it's a good idea to move forward with a society that wants to do more than just drive cars. We want to bike and have a safe way to do it. This is not about family biking, everyone in this room understands this is about bikers riding at faster rates. These are serious focused bikers that are not on a casual ride. We want to have a space for them somewhere so they can move in that fashion separate from the moms and dads who are pushing the strollers on the sidewalks. This is a pathway to connect riders up further to continue on their trek. Commingled uses are unsafe. How can residents make that left hand turn from the subdivision if they're aren't two lanes anymore? He said he was completely unsure of the way forward. Is this the right place? What's going to happen with the truck stop up north? How are these folks that live in this neighborhood actually get in and out to work every day? He said he could not vote on this when there is too much at stake.

Trustee Shirley said he didn't support Option #1, but supports option #4 because it offers quite a bit of safety features that are necessary when it comes to crossings and pedestrian movements. Improving the left leg of Palatine Rd. makes good sense. The two legs each direction affords the

professional bikers plenty of safety to be on the pavement next to the curb. It's still within the keeping of the strategic goals and meets some of the goals of the Pedestrian and Bicycle Commission.

President Hayes said he supports Option #1 for all the reasons that the staff has enumerated in terms of the Strategic Plan and the recommendation of the Bicycle & Pedestrian Advisory Commission. He sees the safety reasons as one of the primary benefits from the is the traffic calming. He also sees the benefit of reducing the number of lanes in order to reduce speeds on Windsor Dr. There will be a benefit to for safety for bicyclists and pedestrians as well because they will not be commingled.

Trustee Dunnington moved to direct staff to pursue Option #1 and to proceed with submitting the Project Development Report to IDOT that reduces the number of vehicular lanes from four to two to provide on-street bicycle lanes, including the addition of the rectangular rapid flashing beacon at Suffield Dr., and have staff begin the selection process for Phase II and Phase III consultants, for an estimated total cost of \$4,600,000 for all phases of Option No.1 with the Village total participation estimated near \$900,000. Trustee Grasse seconded the motion.

Trustee Schwingbeck said without truly understanding how it's going to affect this neighborhood he couldn't support Option #1. There are a lot of good reasons to support Option #4, if we could get that ITP grant because he wouldn't want to spend \$3.2 million.

Trustee Bertucci said he agreed with Trustees Tinaglia and Schwingbeck. He does not like the bikes crisscrossing with cars and coming into the street. He's seen some of those drivers on Rosehill trying to get onto Windsor and doesn't think the situation is being accounted for. He will vote against Option #1. He would like further study of the situation to develop a better option.

Trustee Grasse said there is one unifying theme, and that is the need for safety for the bikers, walkers and drivers. She said she heard it's hard to maneuver getting out of the streets even without this. She suggested the Village can look into solving that issue. Regardless of which Option is chosen, it sounds like there's a problem. She said she supports Option #1 because of the safety factors. She has seen other areas where there has been a road diet and it has a calming effect. It will make it easier crossing to Windsor with the diet. She said she supports increased pedestrian and bicycle pathways saying our world is changing. She said she believed the data of the traffic engineers regarding the location of the bike path crossing. For children, it's best to use the sidewalk. She said she trusts staff to figure out a response that can help with the egress issue at Rosehill.

Trustee LaBedz said she supports Option #1. She thinks, although difficult, this is a good change. The fact that young families and children can still ride on the sidewalk is helpful. As a pedestrian and one who lives in an area where there's a lot of sidewalks and near the downtown, a lot of people ride bikes on the sidewalks. It doesn't exactly make it easier for pedestrians. She

thinks this is a good proposal and would like to see it happen. She realizes there'll be people are shaking their heads and saying no but that's what they said about a lot of stuff that's happened here in Arlington Heights.

President Hayes called for the vote to be taken.

Ayes: Dunnington, LaBedz, Baldino, Grasse, Hayes
Nays: Tinaglia, Schwingbeck, Bertucci, Shirley

The motion: Passed

President Hayes recognized those in the audience who were dismayed by the outcome, and thanked staff for their hard work.

V. OTHER BUSINESS

VI. PUBLIC COMMENTS

Melissa Cayer asked for the light at International Plaza be deactivated as the Plaza has been demolished. She also said there is a similar bike lane as was discussed this evening on Central Road near Oakton Community College that works very well.

VII. ADJOURNMENT

Trustee LaBedz moved to adjourn the meeting at 9:24 p.m. Trustee Baldino Seconded the motion. The motion passed and the meeting was adjourned.

Becky Hume
Village Clerk



VILLAGE OF
ARLINGTON HEIGHTS
INC. 1887

Committee of the Whole
9/9/2024

Item: 2025 Budget Ceiling Update Discussion

Department: Finance

Item Description:

Background

During the 2025 Budget Ceiling discussion at the June 24, 2024, COW Meeting, there were two competing issues that the Village Board directed Staff to pursue:

1. Develop a plan to implement the new 5th Ambulance service.
2. Work to lower the proposed 2024 property tax levy below the estimated 3.51% increase.

The need for a new 5th ambulance service has been clearly identified by the Fire Department and approved by the Village Board. In September 2023, a proposal was presented by the Fire Department to implement the staggered rollout of a multi-year plan to fully staff a 5th ambulance by 2026. This request was made due to increasing call volume and excessive reliance on our mutual aid partners. In 2023, the Village experienced a total of 11,311 calls for service, our highest on record. As of the end of June 2024, we are 161 calls ahead of where we were at the same time last year. Emergency medical services accounts for nearly 78% of our total call volume, or a total of 8,802 calls in 2023.

Based on these needs and per the Village Board's direction in June, Staff has taken a second look at the budget to find a way to include the originally planned 5th ambulance implementation schedule. As previously reported, the staggered initiation of this new 5th ambulance program began in 2024 when the Fire Department committed to 100 days of 5th ambulance coverage during peak weekday hours, and in 2025, the plan has been to expand the 5th ambulance coverage to 260 days. Through 2024 and 2025, the program utilizes current staff at overtime rates when necessary. It should be noted that the Fire Department has indicated that this level of overtime would only be sustainable for a year or two before concerns of burn out may be raised. The full implementation of the 5th ambulance service would then occur in 2026, when six additional Paramedics (two per shift) are hired and an additional ambulance is purchased.

Attachment A provides an outline of the phased-in cost for the 5th ambulance service, and a projection of a two-year sustainable funding plan for this new service. The phased-in cost follows the plan outlined by the Fire Department in September 2023. In 2025, the additional overtime required to cover 260 days of 5th ambulance service would be about \$292,000. In 2026, the implementation of the full-time 5th ambulance service would cost about \$1.12 million to cover the wage and benefits for six new Paramedic/Firefighters. To fully implement

this plan will require new projected additional revenues. One of the key proposed new revenues is the imposition of an internet streaming fee. Over the years, cable franchise fees have stagnated, as a number of our residents have chosen internet streaming services over regular cable or premium channels. Streaming services still require the use of public rights-of-way for cable lines or repeater stations to deliver entertainment to Village businesses and residents. Based on a recent survey, it is estimated that the Village could generate about \$500,000 per year from a 5% streaming fee, which is the same percentage charged for cable franchise fees. By imposing a streaming fee around mid-year of 2025, the Village would be able to cover the projected overtime costs for 260 days of 5th ambulance service during 2025 as projected. As the full 5th ambulance service is implemented in 2026, the new 5th ambulance service cost could be covered by the streaming fee and a modest property tax increase for the tax levy payable in 2026.

The Fire Department currently has six new ambulances on order, two of which are due for delivery by the end of calendar year 2024 and the remaining four by the end of calendar 2025. The purchase of a new ambulance for the expanded 5th ambulance service is estimated to cost about \$400,000. Staff recommends that other funds available in the Capital Project Fund due to the upcoming bond issue, be transferred to the Fleet Fund to cover this expense. It is anticipated that this new ambulance would need to be ordered by next year in order to receive it in 2028. Thereafter, the Fire Department's annual vehicle service charge will increase by about \$40,000 per year. As a reminder, the Fire Department is now purchasing Braun ambulances, and after their original 10-year service life is complete, the Village can re-use the cabin through a re-chassis. This will provide a savings of about \$150,000 per ambulance in today's dollars, when it's time to replace the current fleet of ambulances.

How Does This Fit in With the Village's 2025 General Fund Plans and the Proposed 2024 Tax Levy?

Since the Budget Ceiling meeting last June, the Village's 2025 health insurance increase came in higher than estimated, an increase of 11.3% versus the projected 10% increase. This resulted in a 2025 General Fund expenditure increase of about \$100,000. Staff is also planning on including the additional \$292,000 in Fire Department overtime costs to cover the planned 260 days of 5th ambulance service in 2025. To help offset this combined \$392,000 2025 General Fund expenditure increase, and to work toward lowering the estimated 2024 levy increase, Staff is taking the following actions:

1. General Fund revenue projections are being refreshed based on more current data.
2. After the Village Board approved the 2025 budget ceilings, the Village Manager directed staff from all Departments to work toward developing budget proposals that come in 5% below the General Fund ceiling level. This type of belt-tightening exercise can't be realistically completed every year, but in an effort to incorporate the new 5th ambulance 2025 overtime costs and increased health insurance costs, all Departments are being asked to assist with this endeavor.
3. If the credit card fee recommendation is approved by the Village Board, this would result in an expenditure reduction of about \$100,000 for each of the General and Water & Sewer Funds.

It is too early to tell how all of these pieces will fit into the proposed 2025 Budget at this time. However, as the proposed budget is completed over the next two months, Staff will continue to work hard to develop a budget plan that addresses the Village Board's competing goals of implementing the new 5th ambulance and lowering the projected 2024 property tax levy increase as much as possible.

Recommendation

To provide a sustainable revenue stream to cover the cost of the new 5th ambulance service, it is recommended that the Village Board direct Staff to incorporate the plan outlined above into the proposed 2025 budget, including a proposed mid-year 2025 implementation of a new internet streaming fee, and the Village's future plan to cover the remaining cost of this new program through a modest property tax increase payable in 2026.

ATTACHMENTS:

1. New 5th Ambulance Service Cost Projection

New 5th Ambulance Service Projections

Attachment A

Additional Expenditures

	2024 (100 Days - Peak Hours)	2025 (260 Days - Peak Hours)	2026 (Full-Time Program)
Additional O.T. (Temporary Staffing)	80,000	292,000	(292,000)
Six Additional Full-Time Paramedics	0	0	1,122,000
Additional Ambulance Maintenance Costs	0	15,000	15,000
Increased Vehicle Service Charge - New Ambulance (order new ambulance in 2025, receive in 2028)	0	0	0
Total Expenditures	80,000	307,000	845,000

New Projected Additional Revenues

5th Ambulance Mutual Aid Call Recapture	(45,000)	(75,000)	(175,000)
NEW Implement New Streaming Fee	0	(232,000)	(500,000)
NEW Additional Property Tax Revenue Required (2025 Levy for 2026 Budget)	0	0	(170,000)
Total New Projected Additional Revenues	(45,000)	(307,000)	(845,000)
Net New Program Cost	35,000	0	0



VILLAGE OF
ARLINGTON HEIGHTS
INC. 1887

Committee of the Whole
9/9/2024

Item: Credit Card Service Charges

Department: Finance

Item Description:

Background

Over the past few years, the Village Board has discussed the possibility of charging our customers a fee for credit card transactions, rather than having the Village absorb these costs. In October 2022, Village Staff prepared a memo to the Board outlining the cost of these charges, and provided the results of a Northwest Municipal Conference survey of what other communities were doing. At that time, based on the fact that the Village's General Fund was in a very favorable financial position, Staff recommended that consideration of passing along the cost of using a credit or debit card when transacting business in the Village should be revisited in 2024.

Overview

In an effort to provide more convenient methods for our residents to remit payments, the Village has been accepting Credit card Payments at the front counter, online and also E-Check payments. Since the inception of accepting these alternative payment methods, the Village has been absorbing the fees that are charged by credit card companies. The credit card transaction fees the Village has been responsible for have been increasing each year to over \$200,000 per year. These fees are split between the General Fund and the Water & Sewer Fund.

Customers have the ability to pay for Building Permits and Business Licenses online, which can be costly. Consequently, the convenience for these types of payments increase the Credit card fees charged to the Village. The Village currently limits credit card payments to less than \$10,000 per transaction, to suppress even larger fees. Prior to this change a number of years ago, we had also found that some customers were purposely using certain credit cards for higher cost transactions, in order to take advantage of their credit card rewards programs.

Below is a table of the prior three years credit card payments and associated fees.

Credit Card Payments	2021	2022	2023
Number of Payments	72,568	94,904	93,053
Total Payments	\$ 8,799,787	\$ 9,561,983	\$ 7,935,105
Total Fees	\$ 197,045	\$ 224,146	\$ 224,671
Average Fee%	2.24%	2.34%	2.83%

Over the Counter Credit card payments are charged on a percentage basis through Paymentech, a third-party card processor. The higher the payment amount, the higher the fee. Charges may vary by credit card type, and higher fees are incurred for American

Express and Discover card payments. Credit card payments that are made online are paid through Paymentech or Paymentus, another third-party processor. Payments that are made online vary between a fixed per transaction fee and a percentage basis per transaction fee.

The attached survey completed by Northwest Municipal Conference, shows that 54% of the surrounding communities are fully or partially assessing a fee for the convenience of utilizing a credit card for payment transactions. A number of the Village's small businesses are also starting to transfer their credit card fees to their customers.

Our Tyler ERP software, has an option available which would allow the Village to designate Tyler as our credit card payment facilitator. As such, Tyler would charge all credit card payors a total fee of 3.75% (with a minimum \$2.50 flat fee for lower payments), to pay for all credit card charges and a facilitator fee. The credit card/facilitator fee would be paid directly to Tyler by the credit card users, and the Village would no longer incur any credit card fee expenses.

As more Village transactions are completed online, we would likely see an increase in credit card fees paid by the Village. If the Village passed through the credit card fees to our customers, we would also be able to eliminate the \$10,000 credit card transaction limit. Charges for Building Permits can be significant, and this would allow these customers the ability to use the convenience of a credit card payment.

Customers that do not want to pay a credit card fee can still avoid fees by:

1. Paying with cash or check at the Front Counter or via the drop box
2. By mailing in a check
3. Electing autopayment for Utility Bills

Recommendation

Based on the Village's current credit card fee costs, and the potential for increased fees from the addition of accepting Building Permits online, it would be advantageous for the Village to pass on credit card fees to the customer, saving the Village over \$200,000 annually. Finance Staff recommends that the Village charge residents a credit card fee for payments to the Village by utilizing our new software provider Tyler as our credit card facilitator.

ATTACHMENTS:

1. Combined CC survey 2024

Municipality	1. Do you charge a convenience fee when a credit card is used to pay for municipal services?
Arlington Heights	No.
Buffalo Grove	Yes.
Des Plaines	No.
Elk Grove Village	No.
Evanston	No.
Fox Lake	No, but plan to use localgov for municipal taxes.
Glencoe	No.
Hanover Park	Yes.
Highland Park	No.
Kenilworth	Yes.
Lake Forest	Yes, for Development related Fees.
Lake Zurich	Yes.
Libertyville	No.
Morton Grove	Yes, for large Building Permits and Property Escrows.
Mount Prospect	Yes, for online Police Tickets.
Northbrook	No.
Northfield	No.
Palatine	Yes, for online Utility Payments.
Rolling Meadows	No.
Schaumburg	Yes.
Wheeling	No.
Barrington	Yes.
Bartlett	Yes.
Hoffman Estates	Yes.
Lincolnshire	Yes.

Park Ridge	Yes, for Building Permits and Business Licenses.
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VILLAGE OF
ARLINGTON HEIGHTS
— INC. 1887 —

Committee of the Whole
9/9/2024

Item: Proposed Water and Sewer Rate Adjustment
Department: Finance

Item Description:

Overview

The Village of Arlington Heights owns and operates its Water Storage, Distribution, and Sanitary and Combined Sewer Collection Systems. The Village purchases treated water from Lake Michigan through the Northwest Water Commission (NWC) transmission lines. The Village receives, monitors, and redistributes the Lake water into the water distribution system through our pumping stations. The Water System is comprised of emergency water wells, potable water booster pumps, water storage tanks, water mains, hydrants, meters and a Supervisory Control and Data Acquisition (SCADA) system.

The sanitary sewer system is comprised of both combined sewer mains and sanitary-only mains. Combined sewers handle residential and commercial waste as well as storm water, while sanitary-only systems handle only residential and commercial waste. The sanitary system is comprised of lift stations and sewer mains with their associated structures. The SCADA system also monitors the operation of all sanitary sewer lift stations.

Background

In October 2019, Staff presented the Village Board with alternatives for a five-year Water and Sewer rate plan. A key goal of that plan was to help put the Village on a path to replace over \$4 million, or 1% of our watermains on an annual basis. Water main breaks are used as an indicator of system condition. According to the American Water Works Association, water utilities should strive for no more than 25 to 30 water main breaks per 100 miles of water main per year. In 2018, the six-year average for Village water main breaks was 88 breaks per 100 miles of water main, but as of 2022 that average decreased to 80 breaks per 100 miles of water main. Beyond the water main replacement program, the Village has also developed several preventive programs over the years which are designed to help decrease water main breaks. These include an aggressive leak detection program and a surge suppressor program. The Village has also installed variable frequency drives at our booster stations to reduce strain caused by pumps turning on within the system.

In 2015, the Village was spending about \$500,000 per year on its watermain replacement program. Due to the prior five-year rate plan increase, the \$9 million in 2020 bond proceeds, the \$2.5 million allocation of ARPA Federal grant funds, and the planned use of \$2 million in 2024 bond issue proceeds, the Village has been able to maintain the replacement of 1% of our watermains on an annual basis. The current plan includes spending \$4.34 million on the program in 2025, and increasing this amount by 3% each year to account for cost increases.

The 2024 and 2025 Water and Sewer Fund budget also includes a plan to replace the Automated Meter Reading (AMR) system, and the residential water meters. The current system is 17 years old, and as meters age they slow down and start to under-read actual

usage. After the residential meters are replaced, it is expected that the ratio of gallons pumped to gallons sold will increase from the current 79% level to at least 85%, or a 7.5% increase. It is still too early in the current meter change-out process that started in March 2024 to measure this effect, but based on the increase in revenues the last time meters were replaced, this appears to be a reasonable projection.

PROPOSED WATER AND SEWER RATE ALTERNATIVES

To cover the cost of the Village's significant planned investments in its water and sewer infrastructure, a number of water and sewer rate alternatives were developed for the Board's consideration. As shown **Exhibit A - Water Sales Revenue (Base)**, revenue projections are based on 2.7 billion gallons of water pumped per year, and gallons sold increasing from 79% of gallons pumped in 2024 to 85% of gallons pumped by 2026. 2024 was the final year of the Village's previous water and sewer rate plan that included increasing rates by 8.5, 5, 5, 5, and 5% over five years.

The 2024 Five-Year Water & Sewer Rate projections include the transfer-in of \$2 million from the Capital Projects Fund as part of the 2024 bond issue plan which was included in the Village Board approved 2025-2029 CIP. Water & Sewer Funds are typically self-sufficient, which would include the fund paying the debt service on the portion of a bond issue allocated to water infrastructure needs. However, Staff recommends that the Water and Sewer Fund not pay principal and interest costs, in order to keep the Village on a sustainable funding path to maintain the 1% watermain replacement schedule.

Exhibit B shows the results of the Village's recent Water & Sewer Rate Survey of area communities. As shown in this attachment, the Village's current combined rate of \$10.61 per 1,000 gallons is much lower than the current average combined rate for comparable communities of \$12.48 per 1,000 gallons. Beyond their normal water and sewer rates, the City of Des Plaines also charges a separate fixed facility fee of \$4.30/month, and the Village of Buffalo Grove charges a bi-monthly capital fee of \$34.78. The proposed five-year water and sewer rate alternatives and annual combined rates for each alternative are detailed in the attached **Alternatives 1 through 5**, which are summarized below:

Alternative 1: 0% increase per year over 5 years (2025 – 2029) + \$2 million transfer-in - Alternative 1 would clearly not be a sustainable long-term option, and would draw working cash reserves down to (7%) by 2029.

Alternative 2: 3.0% increase per year over 5 years + \$2 million transfer-in - Alternative 2 would allow the Village to maintain the required 1% water main replacement level through 2029. The projected surplus in 2029 would be \$376,600, and the working cash reserve would be at 32%.

Alternative 3: 2.75% increase per year over 5 years + \$2 million transfer-in - Alternative 2 would allow the Village to maintain the required 1% water main replacement level through 2029. The projected surplus in 2029 would be \$34,900, and the working cash reserve would be at 29%.

Alternative 4: 2.50% increase per year over 5 years + \$2 million transfer-in - Alternative 3 would allow the Village to maintain the required 1% water main replacement level through 2029. The projected deficit in 2029 would be (\$303,500), and the working cash reserve would be at 26%.

Alternative 5: 2.25% increase per year over 5 years + \$2 million transfer-in - Alternative 4 would allow the Village to maintain the required 1% water main replacement

level through 2029. The projected deficit in 2029 would be (\$638,600), and the working cash reserve would be at 22%.

RECOMMENDATION

Due to the advanced age of the Village's water and sanitary sewer systems, a higher number of annual water main breaks, and the need to maintain the annual water and sewer infrastructure improvements: **Staff recommends Alternative 3, or an increase of 2.75% per year from 2025 through 2029.** This alternative presents the most sustainable long-term plan to fund the recommended improvements. Reaching this level of replacement will not automatically decrease the high incidence of the Village's water main breaks. However, when combined with improved leak detection efforts, water meter change-outs, and the installation of surge suppressors, the Village is on a sustainable path to reduce our water loss and the number of water main breaks over time.

It should also be noted that the 2024 Water and Sewer Rate Survey shows the average combined water and sewer rate for area communities is currently \$12.48 per 1,000 gallons. After five years, the Village's combined rate under **Alternative 3** would still be lower than this current average level, coming in at \$12.15 per 1,000 gallons by 2029. It could also easily be assumed that the other area communities listed in the survey will increase their water and sewer rates further over the next five years.

ATTACHMENTS:

1. Attachment A - Water Revenue Projections 25
2. Attachment B - Water Sewer Rate Survey 2024 updated 8-23-2024
3. Alternatives 1 - 5 Water and Sewer Rate Scenarios - TK Revised

WATER SALES REVENUE FY2005 - 2029

		GALLONS PUMPED	GALLONS SOLD	% BILLED	WATER RATE	SEWER RATE	TOTAL RATE	REVENUE			
								WATER SALES	SEWER CHARGE	TOTAL	
FY2005	Actual	3,061,453,800	2,720,209,000	89%	3.68	0.32	4.00	\$10,010,372	\$856,398	\$10,866,770	
FY2006	Actual	3,367,027,800	2,989,144,000	89%	3.68	0.32	4.00	\$11,000,050	\$945,487	\$11,945,537	
FY2007	Actual	3,068,023,700	2,753,010,000	90%	3.68	0.32	4.00	\$10,131,079	\$851,581	\$10,982,660	
FY2008	Actual	3,060,495,400	2,798,325,000	91%	3.68	0.32	4.00	\$10,297,835	\$881,290	\$11,179,125	
FY2009	Actual	3,004,517,500	2,590,607,000	86%	3.79	0.38	4.17	\$9,818,401	\$976,094	\$10,794,495	
FY2010	Actual	2,938,992,000	2,500,534,000	85%	3.90	0.46	4.36	\$9,752,083	\$1,160,038	\$10,912,121	
FY2011	Actual	2,912,509,000	2,560,758,000	88%	4.03	0.55	4.58	\$10,319,857	\$1,392,361	\$11,712,218	
FY2012	Actual	2,826,183,700	2,468,574,000	87%	4.14	0.67	4.81	\$10,223,983	\$1,654,606	\$11,878,589	wet
FY2013	Actual	3,020,832,700	2,625,364,000	87%	4.25	0.80	5.05	\$11,157,800	\$2,100,300	\$13,258,100	dry
FY2014	Actual	2,848,611,900	2,452,807,000	86%	4.35	0.95	5.30	\$10,669,700	\$2,330,200	\$12,999,900	wet
FY2015	Actual	2,729,590,200	2,321,132,000	85%	4.42	1.14	5.56	\$10,259,400	\$2,646,100	\$12,905,500	wet
2016	Actual	2,755,922,700	2,305,838,000	84%	5.52	1.42	6.94	\$12,728,223	\$3,289,570	\$16,017,793	wet spring
2017	Actual	2,705,355,000	2,369,248,000	88%	5.80	1.50	7.30	\$13,146,983	\$3,413,202	\$16,560,185	wet spring
2018	Actual	2,705,217,000	2,205,253,000	82%	6.09	1.57	7.66	\$13,489,654	\$3,515,289	\$17,004,943	wet spring
2019	Actual	2,706,157,000	2,101,505,000	78%	6.39	1.65	8.04	\$13,782,973	\$3,511,548	\$17,294,521	wet spring
2020	Actual	2,683,620,700	2,184,466,000	81%	6.93	1.79	8.72	\$15,020,704	\$3,879,119	\$18,899,823	dry
2021	Actual	2,675,421,200	2,196,630,000	82%	7.28	1.88	9.16	\$16,137,571	\$4,206,643	\$20,344,214	normal
2022	Actual	2,765,707,400	2,060,894,000	75%	7.64	1.97	9.61	\$15,873,142	\$4,117,895	\$19,991,037	normal
2023	Actual	2,612,872,200	2,071,841,000	79%	8.03	2.07	10.10	\$16,724,408	\$4,320,556	\$21,044,964	normal
Nineteen Year Average		2,865,711,100	2,435,586,263	85%							
2024	Projected	2,700,000,000	2,125,000,000	79%	8.43	2.18	10.61	\$17,913,800	\$4,632,500	\$22,546,300	normal/wet
2025	Projected	2,700,000,000	2,225,000,000	82%	8.43	2.18	10.61	\$18,756,800	\$4,850,500	\$23,607,300	normal/wet
2026	Projected	2,700,000,000	2,300,000,000	85%	8.43	2.18	10.61	\$19,389,000	\$5,014,000	\$24,403,000	normal/wet
2027	Projected	2,700,000,000	2,300,000,000	85%	8.43	2.18	10.61	\$19,389,000	\$5,014,000	\$24,403,000	normal/wet
2028	Projected	2,700,000,000	2,300,000,000	85%	8.43	2.18	10.61	\$19,389,000	\$5,014,000	\$24,403,000	normal/wet
2029	Projected	2,700,000,000	2,300,000,000	85%	8.43	2.18	10.61	\$19,389,000	\$5,014,000	\$24,403,000	normal/wet

Gallons pumped provided by M. Saundle (Finance) and Public Works/Gallons sold calculated using actual audited water revenues.

UPDATE EACH YEAR - ADD NEW YEAR OF ACTUALS TO ROLLING AVERAGE

Water & Sewer Rate Survey - 2024

Municipality	Combined Water/Sewer	Water Rate (per 1,000 gallons)	Sewer Rate (per 1,000 gallons)	Capital & Fixed Facility Fees	Access/Service Charges	Storm Sewer Charges	Comments
Mt. Prospect	\$17.67	\$14.48	\$3.19	N/A	\$8.48/month - water \$5.71/month - sewer	N/A	Increase every January Some of Mount Prospect gets serviced and billed by Illinois American Water
Rolling Meadows	\$15.98	\$12.36	\$3.62	N/A	\$6.00/month - water \$3.00/month - sewer	\$5.71 monthly	Water & Sewer Rates increase for 15,000 to 100,000 gallons and over 100,000 gallons
Des Plaines	\$15.63	\$14.05	\$1.58	\$4.30 monthly Fixed Facility Charge	N/A	\$.57 per 100 Cu. Ft. for Storm Sewer Fee	Fees based on usage are included in Water Rate calculation. Fixed facility fee varies depending on meter size. Water rates increase yearly because of increases from Chicago
Hoffman Estates	\$14.57	\$12.74	\$1.83	N/A	\$7.08/month	\$2.00 monthly	Effective January 1, 2022. Storm water fees are between \$1.50 and \$2.50 based on square footage.
Schaumburg	\$14.53	\$12.03	\$2.50	N/A	\$8.00/month	N/A	Increases every May
Elk Grove*	\$12.00	\$9.75	\$2.25	N/A	N/A	\$5.00 for 3/4" meter size	*Combined rate was given by Elk Grove No planned increases at this time Stormwater Fee based on meter size
Park Ridge	\$11.72	\$9.81	\$1.91	N/A	\$10.16 bi-monthly - water \$4.08 bi-monthly - sewer	N/A	Meter sizes vary - Water is based on 3/4" water meter size No planned increases at this time
Arlington Heights	\$10.61	\$8.43	\$2.18	N/A	\$5.20 bi-monthly	\$6.25 monthly	
Wheeling	\$9.21	\$7.38	\$1.83	N/A	\$1.35 per month SWANCC Fee	\$4.00 monthly	Minimum bill based on 3,000 gallons usage / cycle SWANCC Fee \$1.35 Monthly
Buffalo Grove	\$8.25	\$6.61	\$1.64	\$34.78 bi-monthly	N/A	\$5.08 monthly	
Palatine	\$7.13	\$5.68	\$1.45	N/A	\$7.50 monthly - water \$7.50 monthly - sewer	\$3.75 monthly	\$7.30 for Water consumption over 74,810 gallons

Average Combined	Average Water Rate	Average Sewer Rate
\$12.48	\$10.30	\$2.18

WATER & SEWER FUND (505)

Alternative 1 - 0%

5 YEAR CAPITAL IMPROVEMENT PROGRAM (CIP)

ACCOUNT DESCRIPTION	PROJ	2024									
		2022 ACTUAL	2023 ACTUAL	ESTIMATED ACTUAL	2024 BUDGET	2025 BUDGET	2026 BUDGET	2027 BUDGET	2028 BUDGET	2029 BUDGET	
REVENUES											
Combined Rate Increase						100.00%	100.00%	100.00%	100.00%	100.00%	
WATER SALES		15,873,142	16,724,408	17,913,800	18,335,000	18,756,800	19,389,000	19,389,000	19,389,000	19,389,000	
SEWER CHARGE		4,117,895	4,320,556	4,632,500	4,742,000	4,850,500	5,014,000	5,014,000	5,014,000	5,014,000	
SERVICE CHARGE		790,237	789,592	790,000	790,000	780,000	780,000	780,000	780,000	780,000	
OTHER CHARGES & FEES		379,983	364,976	317,000	317,000	317,000	317,000	317,000	317,000	317,000	
INTEREST INCOME		213,937	695,925	645,000	645,000	500,000	400,000	250,000	150,000	50,000	
SALES/REIMB./RENTS		60,575	24,942	58,000	58,000	58,000	58,000	58,000	58,000	58,000	
OTHER		32,750	12,194	30,000	30,000	20,000	20,000	20,000	20,000	20,000	
GRANTS					0	0	0	0	0	0	
OPERATING TRANSFER IN		1,200,000	0	2,000,000	5,000,000	0	0	0	0	0	
NWWC REVENUE		1,218,602	1,392,216	0	0	0	0	0	0	0	
TOTAL REVENUES		23,887,121	24,324,809	26,386,300	29,917,000	25,282,300	25,978,000	25,828,000	25,728,000	25,628,000	
EXPENDITURES											
OPERATING EXPENDITURES											
Personal Services		6,838,613	6,954,829	7,555,500	7,634,500	7,682,800	8,091,700	8,504,800	8,759,900	9,022,700	
Contractual Services		2,825,378	2,944,279	3,110,900	3,110,856	3,376,500	3,479,200	3,585,400	3,692,300	3,802,400	
Northwest Water Commission		4,177,840	4,319,242	4,432,300	4,432,300	4,565,300	4,702,300	4,843,400	4,988,700	5,138,400	
Commodities		977,017	985,237	887,500	887,453	903,400	930,400	958,200	986,900	1,016,500	
Other Charges		662,231	1,213,908	1,194,400	1,194,400	1,194,900	1,195,400	1,195,900	1,195,900	1,231,800	
IMET Expense		0	0	0	0	0	0	0	0	0	
SUBTOTAL - OPERATING EXPENDITURES		15,481,079	16,417,495	17,180,600	17,259,509	17,722,900	18,399,000	19,087,700	19,623,700	20,211,800	
BUILDING & LAND											
Overhead Door Replacement	BL9004	4,772	0	20,000	20,000	20,000	42,500	47,500	82,500	82,500	
Public Works Annex Improvements	BL9302	0	1,069	19,000	33,100	19,000	19,000	19,000	169,000	19,000	
SUBTOTAL - BUILDING & LAND		4,772	1,069	39,000	53,100	39,000	61,500	66,500	251,500	101,500	
EQUIPMENT											
Operational Equipment - Public Works	EQ9401	107,227	70,306	135,000	135,000	154,000	254,500	135,000	103,000	110,000	
Office Equipment	EQ9503	13,881	4,526	15,000	15,000	15,000	15,000	15,000	15,000	15,000	
Emergency Generator Upgrades/Replacement	EQ9902	74,015	37,000	983,800	983,828	900,000	0	0	0	0	
SCADA Enhancements	EQ1525	60,371	61,050	30,000	30,000	75,000	30,000	30,000	30,000	30,000	
Pumps & Motor Controls Rehab/Replacement	EQ1530	53,869	6,026	184,600	184,599	100,000	60,000	200,000	350,000	90,000	
SUBTOTAL - EQUIPMENT		309,363	178,908	1,348,400	1,348,427	1,244,000	359,500	380,000	498,000	245,000	
SEWER											
Sewer Rehab/Replacement Program	SW9001	395,239	401,165	0	0	0	500,000	600,000	750,000	750,000	
Manhole Rehabilitation	SW2004	0	0	50,000	50,000	50,000	50,000	75,000	75,000	75,000	
S AH Rd Development Sewer	SW2401	0	0	1,000,000	1,000,000	1,000,000	0	0	0	0	
Sanitary Lift Station Maintenance/Replacement	SW2502	0	0	0	0	75,000	1,200,000	0	75,500	1,000,000	
SUBTOTAL - SEWER		395,239	401,165	1,050,000	1,050,000	1,125,000	1,750,000	675,000	900,500	1,825,000	
WATER											
Watermain Replacement Program	WA9001	3,895,882	4,079,631	4,313,200	4,313,233	4,340,000	4,470,000	4,604,000	4,742,000	4,885,000	
Residential Meter & AMR System Repl.	WA0302	9,180	0	4,090,300	6,612,298	2,612,900	0	0	0	0	
Water Tank Repainting	WA1101	478,165	1,766,174	1,604,100	1,604,105	2,196,400	1,578,800	2,400,000	0	850,000	
Deep Well Rehabilitation	WA1102	0	1,400	27,200	27,240	20,000	20,000	20,000	20,000	20,000	
Commercial Meter Replacement	WA2001	0	317,514	559,500	559,461	300,000	400,000	400,000	400,000	400,000	
Risk & Resiliency Plan	WA2101	12,971	47,161	219,000	219,000	250,000	230,000	280,000	280,000	250,000	
Water Valve/Hydrant Replacement Program	WA2501	0	0	0	0	50,000	50,000	50,000	50,000	50,000	
SUBTOTAL - WATER		4,396,198	6,211,880	10,813,300	13,335,337	9,769,300	6,748,800	7,754,000	5,492,000	6,455,000	
TOTAL CAPITAL EXPENDITURES		5,105,572	6,793,022	13,250,700	15,786,864	12,177,300	8,919,800	8,875,500	7,142,000	8,626,500	
OPERATING CONTINGENCY		0	0	300,000	300,000	300,000	300,000	300,000	300,000	300,000	
TOTAL EXPENDITURES		20,586,651	23,210,517	30,731,300	33,346,373	30,200,200	27,618,800	28,263,200	27,065,700	29,138,300	
BEGINNING WORKING CASH		11,773,533	15,074,003	16,188,295	16,188,295	11,843,295	6,925,395	5,284,595	2,849,395	1,511,695	
REVENUES OVER (UNDER) EXPENDS.		3,300,470	1,114,292	(4,345,000)	(3,429,373)	(4,917,900)	(1,640,800)	(2,435,200)	(1,337,700)	(3,510,300)	
ENDING WORKING CASH		15,074,003	16,188,295	11,843,295	12,758,922	6,925,395	5,284,595	2,849,395	1,511,695	(1,998,605)	
Working Cash as % of Expenditures							23%	19%	10%	6%	-7%
Combined Rate					10.61	10.61	10.61	10.61	10.61	10.61	

WATER & SEWER FUND (505)

Alternative 2 - 3%

5 YEAR CAPITAL IMPROVEMENT PROGRAM (CIP)

ACCOUNT DESCRIPTION	PROJ	2022	2023	2024	2024	2025	2026	2027	2028	2029
		ACTUAL	ACTUAL	ESTIMATED ACTUAL	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET
REVENUES										
Combined Rate Increase						103.00%	103.00%	103.00%	103.00%	103.00%
WATER SALES		15,873,142	16,724,408	17,913,800	18,335,000	19,319,500	20,569,800	21,186,900	21,822,500	22,477,200
SEWER CHARGE		4,117,895	4,320,556	4,632,500	4,742,000	4,996,000	5,319,400	5,479,000	5,643,400	5,812,700
SERVICE CHARGE		790,237	789,592	790,000	790,000	780,000	780,000	780,000	780,000	780,000
OTHER CHARGES & FEES		379,983	364,976	317,000	317,000	317,000	317,000	317,000	317,000	317,000
INTEREST INCOME		213,937	695,925	645,000	645,000	500,000	400,000	250,000	150,000	50,000
SALES/REIMB./RENTS		60,575	24,942	58,000	58,000	58,000	58,000	58,000	58,000	58,000
OTHER		32,750	12,194	30,000	30,000	20,000	20,000	20,000	20,000	20,000
GRANTS					0	0	0	0	0	0
OPERATING TRANSFER IN		1,200,000	0	2,000,000	5,000,000	0	0	0	0	0
NWWC REVENUE		1,218,602	1,392,216	0	0	0	0	0	0	0
TOTAL REVENUES		23,887,121	24,324,809	26,386,300	29,917,000	25,990,500	27,464,200	28,090,900	28,790,900	29,514,900
EXPENDITURES										
OPERATING EXPENDITURES										
Personal Services		6,838,613	6,954,829	7,555,500	7,634,500	7,682,800	8,091,700	8,504,800	8,759,900	9,022,700
Contractual Services		2,825,378	2,944,279	3,110,900	3,110,856	3,376,500	3,479,200	3,585,400	3,692,300	3,802,400
Northwest Water Commission		4,177,840	4,319,242	4,432,300	4,432,300	4,565,300	4,702,300	4,843,400	4,988,700	5,138,400
Commodities		977,017	985,237	887,500	887,453	903,400	930,400	958,200	986,900	1,016,500
Other Charges		662,231	1,213,908	1,194,400	1,194,400	1,194,900	1,195,400	1,195,900	1,195,900	1,231,800
IMET Expense		0	0	0	0	0	0	0	0	0
SUBTOTAL - OPERATING EXPENDITURES		15,481,079	16,417,495	17,180,600	17,259,509	17,722,900	18,399,000	19,087,700	19,623,700	20,211,800
BUILDING & LAND										
Overhead Door Replacement	BL9004	4,772	0	20,000	20,000	20,000	42,500	47,500	82,500	82,500
Public Works Annex Improvements	BL9302	0	1,069	19,000	33,100	19,000	19,000	19,000	169,000	19,000
SUBTOTAL - BUILDING & LAND		4,772	1,069	39,000	53,100	39,000	61,500	66,500	251,500	101,500
EQUIPMENT										
Operational Equipment - Public Works	EQ9401	107,227	70,306	135,000	135,000	154,000	254,500	135,000	103,000	110,000
Office Equipment	EQ9503	13,881	4,526	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Emergency Generator Upgrades/Replacement	EQ9902	74,015	37,000	983,800	983,828	900,000	0	0	0	0
SCADA Enhancements	EQ1525	60,371	61,050	30,000	30,000	75,000	30,000	30,000	30,000	30,000
Pumps & Motor Controls Rehab/Replacement	EQ1530	53,869	6,026	184,600	184,599	100,000	60,000	200,000	350,000	90,000
SUBTOTAL - EQUIPMENT		309,363	178,908	1,348,400	1,348,427	1,244,000	359,500	380,000	498,000	245,000
SEWER										
Sewer Rehab/Replacement Program	SW9001	395,239	401,165	0	0	0	500,000	600,000	750,000	750,000
Manhole Rehabilitation	SW2004	0	0	50,000	50,000	50,000	50,000	75,000	75,000	75,000
S AH Rd Development Sewer	SW2401	0	0	1,000,000	1,000,000	1,000,000	0	0	0	0
Sanitary Lift Station Maintenance/Replacement	SW2502	0	0	0	0	75,000	1,200,000	0	75,500	1,000,000
SUBTOTAL - SEWER		395,239	401,165	1,050,000	1,050,000	1,125,000	1,750,000	675,000	900,500	1,825,000
WATER										
Watermain Replacement Program	WA9001	3,895,882	4,079,631	4,313,200	4,313,233	4,340,000	4,470,000	4,604,000	4,742,000	4,885,000
Residential Meter & AMR System Repl.	WA0302	9,180	0	4,090,300	6,612,298	2,612,900	0	0	0	0
Water Tank Repainting	WA1101	478,165	1,766,174	1,604,100	1,604,105	2,196,400	1,578,800	2,400,000	0	850,000
Deep Well Rehabilitation	WA1102	0	1,400	27,200	27,240	20,000	20,000	20,000	20,000	20,000
Commercial Meter Replacement	WA2001	0	317,514	559,500	559,461	300,000	400,000	400,000	400,000	400,000
Risk & Resiliency Plan	WA2101	12,971	47,161	219,000	219,000	250,000	230,000	280,000	280,000	250,000
Water Valve/Hydrant Replacement Program	WA2501	0	0	0	0	50,000	50,000	50,000	50,000	50,000
SUBTOTAL - WATER		4,396,198	6,211,880	10,813,300	13,335,337	9,769,300	6,748,800	7,754,000	5,492,000	6,455,000
TOTAL CAPITAL EXPENDITURES		5,105,572	6,793,022	13,250,700	15,786,864	12,177,300	8,919,800	8,875,500	7,142,000	8,626,500
OPERATING CONTINGENCY		0	0	300,000	300,000	300,000	300,000	300,000	300,000	300,000
TOTAL EXPENDITURES		20,586,651	23,210,517	30,731,300	33,346,373	30,200,200	27,618,800	28,263,200	27,065,700	29,138,300
BEGINNING WORKING CASH		11,773,533	15,074,003	16,188,295	16,188,295	11,843,295	7,633,595	7,478,995	7,306,695	9,031,895
REVENUES OVER (UNDER) EXPENDS.		3,300,470	1,114,292	(4,345,000)	(3,429,373)	(4,209,700)	(154,600)	(172,300)	1,725,200	376,600
ENDING WORKING CASH		15,074,003	16,188,295	11,843,295	12,758,922	7,633,595	7,478,995	7,306,695	9,031,895	9,408,495
Working Cash as % of Expenditures						25%	27%	26%	33%	32%
Combined Rate					10.61	10.93	11.26	11.59	11.94	12.30

WATER & SEWER FUND (505)

Alternative 3 - 2.75%

5 YEAR CAPITAL IMPROVEMENT PROGRAM (CIP)

ACCOUNT DESCRIPTION	PROJ	2024								
		2022 ACTUAL	2023 ACTUAL	ESTIMATED ACTUAL	2024 BUDGET	2025 BUDGET	2026 BUDGET	2027 BUDGET	2028 BUDGET	2029 BUDGET
REVENUES										
Combined Rate Increase						102.75%	102.75%	102.75%	102.75%	102.75%
WATER SALES		15,873,142	16,724,408	17,913,800	18,335,000	19,272,600	20,470,100	21,033,000	21,611,400	22,205,700
SEWER CHARGE		4,117,895	4,320,556	4,632,500	4,742,000	4,983,900	5,293,600	5,439,200	5,588,800	5,742,500
SERVICE CHARGE		790,237	789,592	790,000	790,000	780,000	780,000	780,000	780,000	780,000
OTHER CHARGES & FEES		379,983	364,976	317,000	317,000	317,000	317,000	317,000	317,000	317,000
INTEREST INCOME		213,937	695,925	645,000	645,000	500,000	400,000	250,000	150,000	50,000
SALES/REIMB./RENTS		60,575	24,942	58,000	58,000	58,000	58,000	58,000	58,000	58,000
OTHER		32,750	12,194	30,000	30,000	20,000	20,000	20,000	20,000	20,000
GRANTS					0	0	0	0	0	0
OPERATING TRANSFER IN		1,200,000	0	2,000,000	5,000,000	0	0	0	0	0
NWWC REVENUE		1,218,602	1,392,216	0	0	0	0	0	0	0
TOTAL REVENUES		23,887,121	24,324,809	26,386,300	29,917,000	25,931,500	27,338,700	27,897,200	28,525,200	29,173,200
EXPENDITURES										
OPERATING EXPENDITURES										
Personal Services		6,838,613	6,954,829	7,555,500	7,634,500	7,682,800	8,091,700	8,504,800	8,759,900	9,022,700
Contractual Services		2,825,378	2,944,279	3,110,900	3,110,856	3,376,500	3,479,200	3,585,400	3,692,300	3,802,400
Northwest Water Commission		4,177,840	4,319,242	4,432,300	4,432,300	4,565,300	4,702,300	4,843,400	4,988,700	5,138,400
Commodities		977,017	985,237	887,500	887,453	903,400	930,400	958,200	986,900	1,016,500
Other Charges		662,231	1,213,908	1,194,400	1,194,400	1,194,900	1,195,400	1,195,900	1,195,900	1,231,800
IMET Expense		0	0	0	0	0	0	0	0	0
SUBTOTAL - OPERATING EXPENDITURES		15,481,079	16,417,495	17,180,600	17,259,509	17,722,900	18,399,000	19,087,700	19,623,700	20,211,800
BUILDING & LAND										
Overhead Door Replacement	BL9004	4,772	0	20,000	20,000	20,000	42,500	47,500	82,500	82,500
Public Works Annex Improvements	BL9302	0	1,069	19,000	33,100	19,000	19,000	19,000	169,000	19,000
SUBTOTAL - BUILDING & LAND		4,772	1,069	39,000	53,100	39,000	61,500	66,500	251,500	101,500
EQUIPMENT										
Operational Equipment - Public Works	EQ9401	107,227	70,306	135,000	135,000	154,000	254,500	135,000	103,000	110,000
Office Equipment	EQ9503	13,881	4,526	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Emergency Generator Upgrades/Replacement	EQ9902	74,015	37,000	983,800	983,828	900,000	0	0	0	0
SCADA Enhancements	EQ1525	60,371	61,050	30,000	30,000	75,000	30,000	30,000	30,000	30,000
Pumps & Motor Controls Rehab/Replacement	EQ1530	53,869	6,026	184,600	184,599	100,000	60,000	200,000	350,000	90,000
SUBTOTAL - EQUIPMENT		309,363	178,908	1,348,400	1,348,427	1,244,000	359,500	380,000	498,000	245,000
SEWER										
Sewer Rehab/Replacement Program	SW9001	395,239	401,165	0	0	0	500,000	600,000	750,000	750,000
Manhole Rehabilitation	SW2004	0	0	50,000	50,000	50,000	50,000	75,000	75,000	75,000
S AH Rd Development Sewer	SW2401	0	0	1,000,000	1,000,000	1,000,000	0	0	0	0
Sanitary Lift Station Maintenance/Replacement	SW2502	0	0	0	0	75,000	1,200,000	0	75,500	1,000,000
SUBTOTAL - SEWER		395,239	401,165	1,050,000	1,050,000	1,125,000	1,750,000	675,000	900,500	1,825,000
WATER										
Watermain Replacement Program	WA9001	3,895,882	4,079,631	4,313,200	4,313,233	4,340,000	4,470,000	4,604,000	4,742,000	4,885,000
Residential Meter & AMR System Repl.	WA0302	9,180	0	4,090,300	6,612,298	2,612,900	0	0	0	0
Water Tank Repainting	WA1101	478,165	1,766,174	1,604,100	1,604,105	2,196,400	1,578,800	2,400,000	0	850,000
Deep Well Rehabilitation	WA1102	0	1,400	27,200	27,240	20,000	20,000	20,000	20,000	20,000
Commercial Meter Replacement	WA2001	0	317,514	559,500	559,461	300,000	400,000	400,000	400,000	400,000
Risk & Resiliency Plan	WA2101	12,971	47,161	219,000	219,000	250,000	230,000	280,000	280,000	250,000
Water Valve/Hydrant Replacement Program	WA2501	0	0	0	0	50,000	50,000	50,000	50,000	50,000
SUBTOTAL - WATER		4,396,198	6,211,880	10,813,300	13,335,337	9,769,300	6,748,800	7,754,000	5,492,000	6,455,000
TOTAL CAPITAL EXPENDITURES		5,105,572	6,793,022	13,250,700	15,786,864	12,177,300	8,919,800	8,875,500	7,142,000	8,626,500
OPERATING CONTINGENCY		0	0	300,000	300,000	300,000	300,000	300,000	300,000	300,000
TOTAL EXPENDITURES		20,586,651	23,210,517	30,731,300	33,346,373	30,200,200	27,618,800	28,263,200	27,065,700	29,138,300
BEGINNING WORKING CASH		11,773,533	15,074,003	16,188,295	16,188,295	11,843,295	7,574,595	7,294,495	6,928,495	8,387,995
REVENUES OVER (UNDER) EXPENDS.		3,300,470	1,114,292	(4,345,000)	(3,429,373)	(4,268,700)	(280,100)	(366,000)	1,459,500	34,900
ENDING WORKING CASH		15,074,003	16,188,295	11,843,295	12,758,922	7,574,595	7,294,495	6,928,495	8,387,995	8,422,895
Working Cash as % of Expenditures						25%	26%	25%	31%	29%
Combined Rate					10.61	10.90	11.20	11.51	11.83	12.15

WATER & SEWER FUND (505)

Alternative 4 - 2.50%

5 YEAR CAPITAL IMPROVEMENT PROGRAM (CIP)

ACCOUNT DESCRIPTION	PROJ	2024					2025	2026	2027	2028	2029
		2022	2023	ESTIMATED	2024						
		ACTUAL	ACTUAL	ACTUAL	BUDGET		BUDGET	BUDGET	BUDGET	BUDGET	BUDGET
REVENUES											
Combined Rate Increase							102.50%	102.50%	102.50%	102.50%	102.50%
WATER SALES		15,873,142	16,724,408	17,913,800	18,335,000		19,225,700	20,370,600	20,879,900	21,401,900	21,936,900
SEWER CHARGE		4,117,895	4,320,556	4,632,500	4,742,000		4,971,800	5,267,800	5,399,500	5,534,500	5,672,900
SERVICE CHARGE		790,237	789,592	790,000	790,000		780,000	780,000	780,000	780,000	780,000
OTHER CHARGES & FEES		379,983	364,976	317,000	317,000		317,000	317,000	317,000	317,000	317,000
INTEREST INCOME		213,937	695,925	645,000	645,000		500,000	400,000	250,000	150,000	50,000
SALES/REIMB./RENTS		60,575	24,942	58,000	58,000		58,000	58,000	58,000	58,000	58,000
OTHER		32,750	12,194	30,000	30,000		20,000	20,000	20,000	20,000	20,000
GRANTS					0		0	0	0	0	0
OPERATING TRANSFER IN		1,200,000	0	2,000,000	5,000,000		0	0	0	0	0
NWWC REVENUE		1,218,602	1,392,216	0	0		0	0	0	0	0
TOTAL REVENUES		23,887,121	24,324,809	26,386,300	29,917,000		25,872,500	27,213,400	27,704,400	28,261,400	28,834,800
EXPENDITURES											
OPERATING EXPENDITURES											
Personal Services		6,838,613	6,954,829	7,555,500	7,634,500		7,682,800	8,091,700	8,504,800	8,759,900	9,022,700
Contractual Services		2,825,378	2,944,279	3,110,900	3,110,856		3,376,500	3,479,200	3,585,400	3,692,300	3,802,400
Northwest Water Commission		4,177,840	4,319,242	4,432,300	4,432,300		4,565,300	4,702,300	4,843,400	4,988,700	5,138,400
Commodities		977,017	985,237	887,500	887,453		903,400	930,400	958,200	986,900	1,016,500
Other Charges		662,231	1,213,908	1,194,400	1,194,400		1,194,900	1,195,400	1,195,900	1,195,900	1,231,800
IMET Expense		0	0	0	0		0	0	0	0	0
SUBTOTAL - OPERATING EXPENDITURES		15,481,079	16,417,495	17,180,600	17,259,509		17,722,900	18,399,000	19,087,700	19,623,700	20,211,800
BUILDING & LAND											
Overhead Door Replacement	BL9004	4,772	0	20,000	20,000		20,000	42,500	47,500	82,500	82,500
Public Works Annex Improvements	BL9302	0	1,069	19,000	33,100		19,000	19,000	19,000	169,000	19,000
SUBTOTAL - BUILDING & LAND		4,772	1,069	39,000	53,100		39,000	61,500	66,500	251,500	101,500
EQUIPMENT											
Operational Equipment - Public Works	EQ9401	107,227	70,306	135,000	135,000		154,000	254,500	135,000	103,000	110,000
Office Equipment	EQ9503	13,881	4,526	15,000	15,000		15,000	15,000	15,000	15,000	15,000
Emergency Generator Upgrades/Replacement	EQ9902	74,015	37,000	983,800	983,828		900,000	0	0	0	0
SCADA Enhancements	EQ1525	60,371	61,050	30,000	30,000		75,000	30,000	30,000	30,000	30,000
Pumps & Motor Controls Rehab/Replacement	EQ1530	53,869	6,026	184,600	184,599		100,000	60,000	200,000	350,000	90,000
SUBTOTAL - EQUIPMENT		309,363	178,908	1,348,400	1,348,427		1,244,000	359,500	380,000	498,000	245,000
SEWER											
Sewer Rehab/Replacement Program	SW9001	395,239	401,165	0	0		0	500,000	600,000	750,000	750,000
Manhole Rehabilitation	SW2004	0	0	50,000	50,000		50,000	50,000	75,000	75,000	75,000
S AH Rd Development Sewer	SW2401	0	0	1,000,000	1,000,000		1,000,000	0	0	0	0
Sanitary Lift Station Maintenance/Replacement	SW2502	0	0	0	0		75,000	1,200,000	0	75,500	1,000,000
SUBTOTAL - SEWER		395,239	401,165	1,050,000	1,050,000		1,125,000	1,750,000	675,000	900,500	1,825,000
WATER											
Watermain Replacement Program	WA9001	3,895,882	4,079,631	4,313,200	4,313,233		4,340,000	4,470,000	4,604,000	4,742,000	4,885,000
Residential Meter & AMR System Repl.	WA0302	9,180	0	4,090,300	6,612,298		2,612,900	0	0	0	0
Water Tank Repainting	WA1101	478,165	1,766,174	1,604,100	1,604,105		2,196,400	1,578,800	2,400,000	0	850,000
Deep Well Rehabilitation	WA1102	0	1,400	27,200	27,240		20,000	20,000	20,000	20,000	20,000
Commercial Meter Replacement	WA2001	0	317,514	559,500	559,461		300,000	400,000	400,000	400,000	400,000
Risk & Resiliency Plan	WA2101	12,971	47,161	219,000	219,000		250,000	230,000	280,000	280,000	250,000
Water Valve/Hydrant Replacement Program	WA2501	0	0	0	0		50,000	50,000	50,000	50,000	50,000
SUBTOTAL - WATER		4,396,198	6,211,880	10,813,300	13,335,337		9,769,300	6,748,800	7,754,000	5,492,000	6,455,000
TOTAL CAPITAL EXPENDITURES		5,105,572	6,793,022	13,250,700	15,786,864		12,177,300	8,919,800	8,875,500	7,142,000	8,626,500
OPERATING CONTINGENCY		0	0	300,000	300,000		300,000	300,000	300,000	300,000	300,000
TOTAL EXPENDITURES		20,586,651	23,210,517	30,731,300	33,346,373		30,200,200	27,618,800	28,263,200	27,065,700	29,138,300
BEGINNING WORKING CASH		11,773,533	15,074,003	16,188,295	16,188,295		11,843,295	7,515,595	7,110,195	6,551,395	7,747,095
REVENUES OVER (UNDER) EXPENDS.		3,300,470	1,114,292	(4,345,000)	(3,429,373)		(4,327,700)	(405,400)	(558,800)	1,195,700	(303,500)
ENDING WORKING CASH		15,074,003	16,188,295	11,843,295	12,758,922		7,515,595	7,110,195	6,551,395	7,747,095	7,443,595
Working Cash as % of Expenditures							25%	26%	23%	29%	26%
Combined Rate					10.61		10.88	11.15	11.43	11.71	12.00

WATER & SEWER FUND (505)

Alternative 5 - 2.25%

5 YEAR CAPITAL IMPROVEMENT PROGRAM (CIP)

ACCOUNT DESCRIPTION	PROJ	2024					2025	2026	2027	2028	2029
		2022	2023	ESTIMATED	2024						
		ACTUAL	ACTUAL	ACTUAL	BUDGET		BUDGET	BUDGET	BUDGET	BUDGET	BUDGET
REVENUES											
Combined Rate Increase							102.25%	102.25%	102.25%	102.25%	102.25%
WATER SALES		15,873,142	16,724,408	17,913,800	18,335,000		19,178,800	20,271,300	20,727,400	21,193,800	21,670,700
SEWER CHARGE		4,117,895	4,320,556	4,632,500	4,742,000		4,959,600	5,242,200	5,360,100	5,480,700	5,604,000
SERVICE CHARGE		790,237	789,592	790,000	790,000		780,000	780,000	780,000	780,000	780,000
OTHER CHARGES & FEES		379,983	364,976	317,000	317,000		317,000	317,000	317,000	317,000	317,000
INTEREST INCOME		213,937	695,925	645,000	645,000		500,000	400,000	250,000	150,000	50,000
SALES/REIMB./RENTS		60,575	24,942	58,000	58,000		58,000	58,000	58,000	58,000	58,000
OTHER		32,750	12,194	30,000	30,000		20,000	20,000	20,000	20,000	20,000
GRANTS					0		0	0	0	0	0
OPERATING TRANSFER IN		1,200,000	0	2,000,000	5,000,000		0	0	0	0	0
NWWC REVENUE		1,218,602	1,392,216	0	0		0	0	0	0	0
TOTAL REVENUES		23,887,121	24,324,809	26,386,300	29,917,000		25,813,400	27,088,500	27,512,500	27,999,500	28,499,700
EXPENDITURES											
OPERATING EXPENDITURES											
Personal Services		6,838,613	6,954,829	7,555,500	7,634,500		7,682,800	8,091,700	8,504,800	8,759,900	9,022,700
Contractual Services		2,825,378	2,944,279	3,110,900	3,110,856		3,376,500	3,479,200	3,585,400	3,692,300	3,802,400
Northwest Water Commission		4,177,840	4,319,242	4,432,300	4,432,300		4,565,300	4,702,300	4,843,400	4,988,700	5,138,400
Commodities		977,017	985,237	887,500	887,453		903,400	930,400	958,200	986,900	1,016,500
Other Charges		662,231	1,213,908	1,194,400	1,194,400		1,194,900	1,195,400	1,195,900	1,195,900	1,231,800
IMET Expense		0	0	0	0		0	0	0	0	0
SUBTOTAL - OPERATING EXPENDITURES		15,481,079	16,417,495	17,180,600	17,259,509		17,722,900	18,399,000	19,087,700	19,623,700	20,211,800
BUILDING & LAND											
Overhead Door Replacement	BL9004	4,772	0	20,000	20,000		20,000	42,500	47,500	82,500	82,500
Public Works Annex Improvements	BL9302	0	1,069	19,000	33,100		19,000	19,000	19,000	169,000	19,000
SUBTOTAL - BUILDING & LAND		4,772	1,069	39,000	53,100		39,000	61,500	66,500	251,500	101,500
EQUIPMENT											
Operational Equipment - Public Works	EQ9401	107,227	70,306	135,000	135,000		154,000	254,500	135,000	103,000	110,000
Office Equipment	EQ9503	13,881	4,526	15,000	15,000		15,000	15,000	15,000	15,000	15,000
Emergency Generator Upgrades/Replacement	EQ9902	74,015	37,000	983,800	983,828		900,000	0	0	0	0
SCADA Enhancements	EQ1525	60,371	61,050	30,000	30,000		75,000	30,000	30,000	30,000	30,000
Pumps & Motor Controls Rehab/Replacement	EQ1530	53,869	6,026	184,600	184,599		100,000	60,000	200,000	350,000	90,000
SUBTOTAL - EQUIPMENT		309,363	178,908	1,348,400	1,348,427		1,244,000	359,500	380,000	498,000	245,000
SEWER											
Sewer Rehab/Replacement Program	SW9001	395,239	401,165	0	0		0	500,000	600,000	750,000	750,000
Manhole Rehabilitation	SW2004	0	0	50,000	50,000		50,000	50,000	75,000	75,000	75,000
S AH Rd Development Sewer	SW2401	0	0	1,000,000	1,000,000		1,000,000	0	0	0	0
Sanitary Lift Station Maintenance/Replacement	SW2502	0	0	0	0		75,000	1,200,000	0	75,500	1,000,000
SUBTOTAL - SEWER		395,239	401,165	1,050,000	1,050,000		1,125,000	1,750,000	675,000	900,500	1,825,000
WATER											
Watermain Replacement Program	WA9001	3,895,882	4,079,631	4,313,200	4,313,233		4,340,000	4,470,000	4,604,000	4,742,000	4,885,000
Residential Meter & AMR System Repl.	WA0302	9,180	0	4,090,300	6,612,298		2,612,900	0	0	0	0
Water Tank Repainting	WA1101	478,165	1,766,174	1,604,100	1,604,105		2,196,400	1,578,800	2,400,000	0	850,000
Deep Well Rehabilitation	WA1102	0	1,400	27,200	27,240		20,000	20,000	20,000	20,000	20,000
Commercial Meter Replacement	WA2001	0	317,514	559,500	559,461		300,000	400,000	400,000	400,000	400,000
Risk & Resiliency Plan	WA2101	12,971	47,161	219,000	219,000		250,000	230,000	280,000	280,000	250,000
Water Valve/Hydrant Replacement Program	WA2501	0	0	0	0		50,000	50,000	50,000	50,000	50,000
SUBTOTAL - WATER		4,396,198	6,211,880	10,813,300	13,335,337		9,769,300	6,748,800	7,754,000	5,492,000	6,455,000
TOTAL CAPITAL EXPENDITURES		5,105,572	6,793,022	13,250,700	15,786,864		12,177,300	8,919,800	8,875,500	7,142,000	8,626,500
OPERATING CONTINGENCY		0	0	300,000	300,000		300,000	300,000	300,000	300,000	300,000
TOTAL EXPENDITURES		20,586,651	23,210,517	30,731,300	33,346,373		30,200,200	27,618,800	28,263,200	27,065,700	29,138,300
BEGINNING WORKING CASH		11,773,533	15,074,003	16,188,295	16,188,295		11,843,295	7,456,495	6,926,195	6,175,495	7,109,295
REVENUES OVER (UNDER) EXPENDS.		3,300,470	1,114,292	(4,345,000)	(3,429,373)		(4,386,800)	(530,300)	(750,700)	933,800	(638,600)
ENDING WORKING CASH		15,074,003	16,188,295	11,843,295	12,758,922		7,456,495	6,926,195	6,175,495	7,109,295	6,470,695
Working Cash as % of Expenditures							25%	25%	22%	26%	22%
Combined Rate					10.61		10.85	11.09	11.34	11.60	11.86



VILLAGE OF
ARLINGTON HEIGHTS
INC. 1887

Committee of the Whole
9/9/2024

Item: Proposed Solar Panel Installation at Public Works Garage - Discussion

Department: Public Works & Engineering

Item Description:

The Village of Arlington Heights owns and maintains the municipal building at 222 N. Ridge Avenue, also known as Public Works. In accordance with Strategic Priorities #2 and #3, Public Works has planned and is currently in the process of the full replacement of the roof, providing a unique opportunity for the installation of solar panels.

Strategic Priority #2

Continue to maintain good fiscal stewardship of Village resources, ensuring ethical and efficient financial decision-making on behalf of taxpayers (tied with #3).

Strategic Priority #3

Pursue environmentally sustainable programs and business practices within the Village, including the encouragement and facilitation of alternative transportation options such as pedestrian and bicycle access (tied with #2).

Staff from Public Works and Verde Solutions will be in attendance to explain the proposed solar installation, costs, benefits and the possible next steps

ATTACHMENTS:

1. REVISED_PWE08302024 Proposed Solar Panel Installation on PW Garage at 222 N Ridge Avenue - MEMO ATTACHMENTS A B C D



VILLAGE OF ARLINGTON HEIGHTS

INC. 1887

Date: August 30, 2024

To: Randy Recklaus, Village Manager

From: Cris Papierniak, Director of Public Works and Engineering

Subject: Proposed Solar Panel Installation on Public Works Garage –
Located at 222 N. Ridge Avenue

Attachments Attachment's "A", "B", "C", and "D"

Overview

The Village of Arlington Heights owns and maintains the municipal building at 222 N. Ridge Avenue, also known as Public Works. In accordance with Strategic Priorities #2 and #3, Public Works has planned and is currently in the process of the full replacement of the roof, providing a unique opportunity for the installation of solar panels.

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Continue to maintain good fiscal stewardship of Village resources ensuring ethical and efficient financial decision making on behalf of taxpayers (tied with #3).

Strategic Priority #3

Pursue environmentally sustainable programs and business practices within the Village, including the encouragement and facilitation of alternative transportation options such as pedestrian and bicycle access (tied with #2).

Background

The Public Works building was built in 2006. The construction of the building enclosed several older garages into one large structure with the addition of an Administrative section. During routine inspections, Staff identified several failures within the membrane. In 2018, the Public Works roof was earmarked for replacement in a phased approach starting in 2021.

In 2021, in accordance with Strategic Priorities, Staff began exploring options for solar installation and meeting with consultants. Staff discussed one of the most significant drawbacks to solar installation was the impacts the installation of the panels has on roof maintenance; experts recommend panel installation only on newer roofs to reduce the potential expense of removing panels to perform any needed maintenance.

The phased approach to the Public Works roof replacement was now an obstacle to solar panel installation. Staff initially spread the replacement of the 87,828 sq. ft. roof over three years to reduce the single project's impact on the Capital Improvement budget.

In 2022, through short-term maintenance activities and cooperation with the Finance Department, Staff was successful of re-programming the entire roof replacement into a single year; 2024.

After Staff research, Verde Solutions was selected to develop the best opportunity for solar panel installation. Verde Solutions has a long history with public partners having completed projects for Lake County and most recently University of Illinois – Champaign. Chris Gerch, founder of Verde Solutions, is a local resident and Rolling Meadows High School graduate.

Although solar panels have been around for decades, new technologies and federal incentives have made them more durable, longer lasting, and affordable. New panels come with 30-year guarantees for electrical energy production and most components are warrantied for 20 years.

The Village of Arlington Heights Public Works complex is unique, because it consists of a municipal operations garage and water/well pumping station with reservoirs. Through the analysis of the opportunities available to the Village, Verde staff found the most advantageous approach to solar panel installation would be to connect the solar panel energy production to the water/well pumping station electric meter. The electrical use of this site is estimated to be 608,945 kWh/year or equivalence of 60 homes average annual use.

The benefit of connected solar panels to the water meter is that this approach provides an immediate savings to the Enterprise Fund (Water & Sewer) and also does not impact the Village's Franchise Account with ComEd.

The proposed panel installation will offset 100% of the pumping station's annual electrical use. The system will consist of 861 modules capable of producing 613,785 kWh/year of electrical energy. Attachment "A" shows a proposed aerial view of the panels on the garage, and Attachment "B" shows a similar installation of the panels on a roof. As you will see in Attachment "A", Staff ensured that the panel installation did not affect the numerous HVAC and utility protrusions through the roof. Although the panel system is significant, the Building Maintenance Division has approved the layout and feels there will be limited impacts on their HVAC maintenance.

Proposed Solar Panel Alternative

Through the help of Verde Solutions, ComEd, and other partners, Staff feels the following two options are most advantageous to the Village:

1. Village-owned
2. Purchase Power Agreement (PPA)

Village-Owned

Under this option, the Village would be responsible for the upfront cost and installation of the solar panels. The panel installation would be paid at prevailing wage and follow all Federal and State – "Made in America" requirements under the IRA. The estimated cost of the panels and installation is \$1,200,000. Due to the Inflation Reduction Act (IRA) the Village is eligible for direct payment of Federal incentives covering 90% of the total upfront project costs. The cumulative cash flow analysis shows the Village will save approximately \$1,173,740 in the first 20 years of the expected 30+ year lifetime of the panels. The payback of the panels is estimated to be 5.5 years as the Renewable Energy Credits (RECS) are paid over time. The direct payment to municipalities is a new incentive in the IRA. In this scenario, the Village is responsible for the maintenance and eventual removal of the system. Maintenance is minimal and the removal costs are estimated to be \$184,000.

The analysis of this scenario is represented in Attachment "C".

Purchase Power Agreement (PPA)

Under the PPA, the Village would partner with a financing company through Verde to contract the installation of the panels. The panel installation would be paid at prevailing wage and follow all Federal and State – “Made in America” requirements under the IRA. This approach is the most common approach for government-entity installation since Federal tax incentives historically did not benefit municipal partners. The Village would enter a PPA for a static reduced rate energy cost for a 20-year period. Under this scenario, the Village would not have any upfront costs, beyond roof installation, would have a positive cash flow year one, and would have a payback of 0 years.

A 3rd party would finance the panels, and receive the Federal grants and be responsible for the warranty period of the panels. The cumulative cash flow shows the Village would save approximately \$807,997 in the first 20 years of use.

After the term of the contract, the Village will have three options available:

- A. The terms of the contract are extended in increments of five years.
- B. The Village will be offered to buy the system with an estimated 90% productivity rate.
- C. The 3rd Party will remove the panels at no cost to the Village.

The analysis of this option is represented in Attachment “D”.

The current rate paid by the Village is .0094/kWh. Under both scenarios, it is assumed a 4% utility annual inflation rate for future energy costs and Staff feels this is conservative. Attachment “A” also shows the expected environmental impacts solar installation will have.

Staff and members of Verde Solutions will present this information and recommendation for discussion at the September 9th Committee-of-the Whole meeting.

Recommendation

After careful consideration of the maintenance and operational responsibilities, Staff from both Public Works & Engineering and Finance recommend the Village-owned option. This option provides a significant return on investment, lowers utility costs for the Water & Sewer Fund and provides an excellent opportunity for the Village to meet its sustainability goals. Net savings over the life of the panels are expected to exceed \$2,000,000.

tw

Sustainability Report



The proposed system has a peak power rating of 503.7 kW-DC. The system is estimated to produce **17,078,568 kWh** over its 30 year lifespan.



17,078,568 kWh is equivalent to 12,104 metric tons of CO₂.

Greenhouse Gases from:



2,608 Passenger vehicles driven for one year

CO₂ Emissions from:



1,358,675 gallons of gasoline consumed

Carbon Sequestered by:



201,242 tree seedlings grown for 10 years

Greenhouse Gas Emissions Avoided by:



4,107 tons of waste recycled instead of landfilled

Calculations were obtained from the EPA Greenhouse Gas Equivalencies Calculator



**Prepared by:**

Verde Solutions, LLC
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 leads@verdesolutions.com

Prepared for:

Arlington Heights Public Works
 222 N Ridge Ave
 Arlington Heights, IL 60005

Verde Solutions is pleased to present this solar PV proposal for your review. This proposal is based on preliminary information to provide an initial suggested system configuration, size, and budgetary estimate. A final proposal with sizing and firm pricing will be provided after all required information has been received and validated.

Input Parameters & Assumptions

Current Annual Energy Consumption	608,945 kWh / year
Avoided Utility Cost	\$0.094 /kWh

System Overview

Based on review of your usage information, available space for installation, and utility constraints, the proposed system has a peak power rating of 503.7 kW-DC. The system is estimated to produce 613,785 kWh/year which will offset approximately 101% of your current annual energy consumption. Solar production estimates were made using Helioscope, published by Folsom Labs.

System Size	861 modules
System Module Power Capacity	503.7 kW-DC
Projected Annual Energy Production	613,785 kWh / year
Ratio of Current Consumption Offset with Solar System	101%
Mounting Style	Ballasted Flat Roof
Labor Type Assumed	Union

Investment Overview

Currently there are two federal tax credit programs, the Investment Tax Credit (ITC) and the Federal MACRS, Bonus Depreciation, which significantly reduce the net after-tax cost of the system investment. The ITC also contains a "direct pay" provision that enables certain tax-exempt customers to receive a direct cash payment in lieu of an ITC. All applicable state and utility incentives have been included.

System Investment	\$1,198,770 <i>turnkey installation cost (\$2.38/Wp)</i>
Smart Inverter Incentive	(\$125,921)
Illinois Shines REC 2024-2025 - Group B	(\$463,407)
Direct Pay, Investment Tax Credit (ITC) - 40%	(\$479,508)
Net Investment After Incentives	\$129,934 <i>net after-tax investment</i>

Economic Summary

Internal Rate of Return (IRR)	15.7% per year
Annual Energy Savings	\$57,463 year 1
Reduction in Energy Bill	62.5% reduction
Payback Period	5.1 Years

- **Internal Rate of Return (IRR)** - Used to estimate profitability of investment. An effective "interest rate" equal in value to the after-tax cash flows the system is projected to generate. If the IRR is greater than the business cost of capital, the investment may be attractive.
- **Annual Energy Savings** - The amount of money saved on utility bill the first year the system is installed. This value is expected to increase over time as the cost of energy increases.
- **Reduction in Energy Bill** - The expected average percentage an electric bill will decrease the first year. Due to seasonal variance, this value will change month to month.
- **Payback Period** - The length of time required to recover the cost of the investment.

Project Installation

The project will commence with a detailed site assessment from one of our field engineers moving into full engineering and design. Concurrently, Verde Solutions will work with you and handle all required building & electrical permits, utility interconnection applications, incentive applications (if applicable), and any other needs as they arise.

Materials will be ordered after the design is finalized. Each project is designed and built to suit. Installation begins when materials are delivered on site. Once installed, the system undergoes testing and commissioning upon permission to operate (PTO) from the electric utility.

Disclaimer

This proposal includes forecasts, projections and other predictive statements resulting from an analysis by Verde Solutions of the information provided by the prospective client as well as information from Verde Solutions' operations and what is available within the marketplace. Prospective clients should recognize that the forecasts, projections and other predictive statements stated herein, although based upon information and assumptions that Verde Solutions believes to be viable and accurate, are projections and that Verde Solutions does not provide any guarantees for the achievement by the prospective client of the projections noted herein. The prospective client must realize that in the development of any projection there are certain factors that are unforeseen at the time the projection is made and thereby there are certain risks involved that provide for uncertainty. The prospective client's actual performance results may differ from those projected in this proposal. Therefore, there is no guarantee presented or implied as to the accuracy of any specific forecast, projection or predictive statement contained herein.

Calculations illustrating tax savings and deductions are estimates only. Please consult your tax expert regarding tax advantages specifically available for your organization.

Solar Renewable Energy Credits (SRECs) are administered on the state level and are subject to availability based on state specific program limits and participation.

Ground based systems may require additional investments in fencing and/or landscaping.

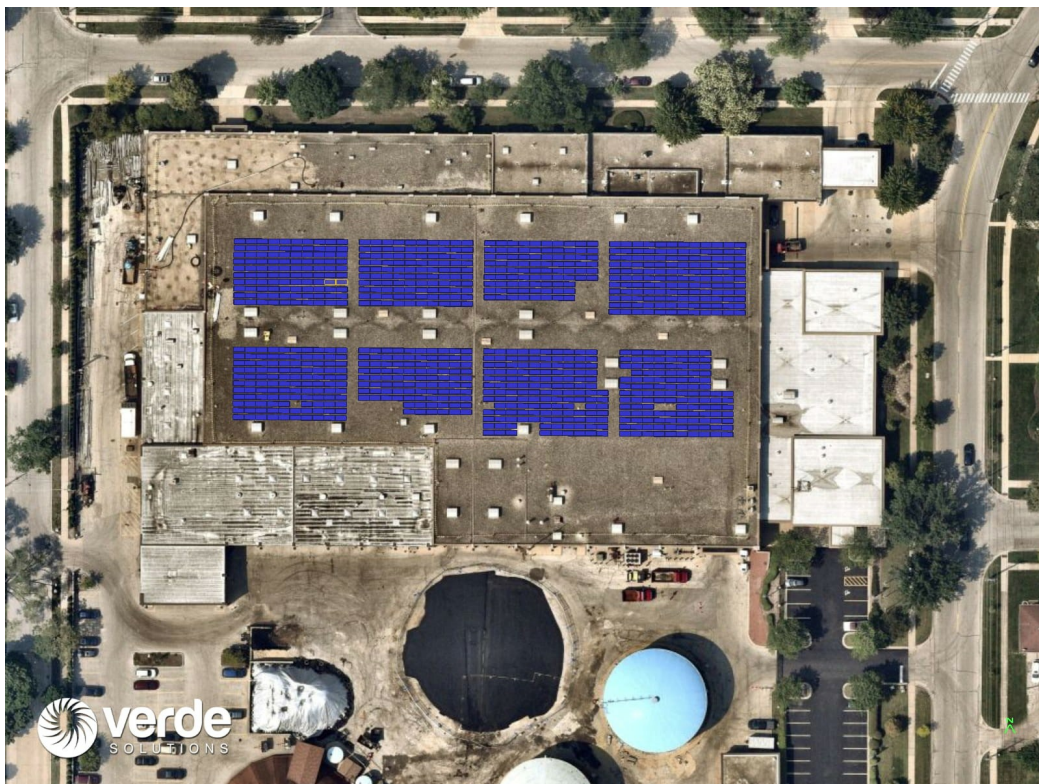
The cost of fencing is included: 7 foot tall standard chainlink fence is assumed.

Ballasted rooftop systems are assumed to be fully ballasted. The final racking design is subject to change based on, but not limited to, structural capacity, wind loading, and Authority Having Jurisdiction (AHJ) code requirements.

System Configuration

Verde Solutions has adopted a modular approach to project sizing by scaling projects with pre-engineered and proven subsystems. This approach leads to highly repeatable results, maximizes cost efficiency and offers the greatest value. Detailed engineering will occur upon project acceptance. Final engineering analysis may alter the following system outline; however, the final system will be equivalent or superior to what is presented below.

System Size & Configuration	375.0 kW-AC power capacity (grid) 503.7 kW-DC power capacity (solar modules) 1.34 DC/AC ratio
Solar PV Modules (Panels)	Tier 1 commercial monocrystalline silicon panels 585 Watt/module power capacity 861 modules in system 30-year performance warranty
Inverter(s)	25 / 50 kW-AC inverter capacity 1 / 7 inverters in system 20-year extended warranty
Mounting System	All necessary structural engineering included 25-year warranty
Production Monitoring	Solar Log, with online monitoring & smartphone access Complimentary flat screen display provided for on-site showcase of energy



The above image is a preliminary concept based on initial information and satellite imagery

Cash Flow Analysis

Years	Cash					PV Generation (kWh)	Total Cash Flow	Cumulative Cash Flow
	Project Costs	Electric Bill Savings	Utility Incentive	IL Shines REC	Direct pay - 40% ITC			
Upfront	-\$1,198,770	-	-	-\$31,774	-	-	-\$1,230,544	-\$1,230,544
1	-	\$57,463	\$125,921	\$33,983	\$479,508	613,785	\$696,876	-\$533,668
2	-	\$59,463	-	\$68,775	-	610,716	\$128,238	-\$405,430
3	-	\$61,531	-	\$68,775	-	607,647	\$130,306	-\$275,124
4	-	\$63,669	-	\$68,775	-	604,578	\$132,444	-\$142,680
5	-	\$65,880	-	\$68,775	-	601,509	\$134,655	-\$8,025
6	-	\$68,165	-	\$68,775	-	598,440	\$136,940	\$128,915
7	-	\$70,528	-	\$68,775	-	595,371	\$139,303	\$268,218
8	-	\$72,971	-	-	-	592,302	\$72,971	\$341,189
9	-	\$75,497	-	-	-	589,233	\$75,497	\$416,686
10	-	\$78,108	-	-	-	586,164	\$78,108	\$494,794
11	-	\$80,807	-	-	-	583,096	\$80,807	\$575,601
12	-	\$83,597	-	-	-	580,027	\$83,597	\$659,198
13	-	\$86,481	-	-	-	576,958	\$86,481	\$745,678
14	-	\$89,461	-	-	-	573,889	\$89,461	\$835,140
15	-	\$92,542	-	\$48,547	-	570,820	\$141,090	\$976,229
16	-	\$95,727	-	-	-	567,751	\$95,727	\$1,071,956
17	-	\$99,018	-	-	-	564,682	\$99,018	\$1,170,973
18	-	\$102,419	-	-	-	561,613	\$102,419	\$1,273,392
19	-	\$105,933	-	-	-	558,544	\$105,933	\$1,379,325
20	-	\$109,565	-	-	-	555,475	\$109,565	\$1,488,890
21	-	\$113,318	-	-	-	552,406	\$113,318	\$1,602,209
22	-	\$117,196	-	-	-	549,337	\$117,196	\$1,719,405
23	-	\$121,203	-	-	-	546,268	\$121,203	\$1,840,608
24	-	\$125,343	-	-	-	543,200	\$125,343	\$1,965,952
25	-	\$129,621	-	-	-	540,131	\$129,621	\$2,095,572
26	-	\$134,039	-	-	-	537,062	\$134,039	\$2,229,612
27	-	\$138,604	-	-	-	533,993	\$138,604	\$2,368,216
28	-	\$143,320	-	-	-	530,924	\$143,320	\$2,511,536
29	-	\$148,191	-	-	-	527,855	\$148,191	\$2,659,728
30	-	\$153,223	-	-	-	524,786	\$153,223	\$2,812,951
Totals:	-\$1,198,770	\$2,942,884	\$125,921	\$463,407	\$479,508	17,078,561	\$2,812,951	-

Inputs & Assumptions

Project Price	\$1,198,770
Avoided Utility Cost	\$0.094 /kWh
Annual Energy Consumption (kWh)	608,945 kWh
Energy Consumption Inflation Rate	0.0%
Year 1 Energy Savings	\$57,463
kW-DC	503.7 kW-DC
Projected Annual Energy Production	613,785 kWh
Utility Inflation Rate	4.0%
Solar Degradation Rate	0.50%
Investment Tax Credit (ITC)	40% of system value
Effective Federal Tax Rate	0.0%
Average Soiling Losses	5% of annual production

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Verde Solutions is pleased to present this renewable energy proposal for your review. This proposal is based on preliminary information to provide an initial suggested system configuration, size, and budgetary estimate. A final proposal with sizing and firm pricing will be provided after all required information has been received and validated.

Input Parameters & Assumptions

Current Annual Energy Consumption	608,945 kWh / year
Avoided Utility Cost	\$0.094 /kWh

System Overview

Based on review of your usage information, available space for installation, and utility constraints, the proposed system has a peak power rating of 503.7 kW-DC. The system is estimated to produce 613,785 kWh/year which will offset approximately 101% of your current annual energy consumption. Solar production estimates were made using Helioscope, published by Folsom Labs.

System Size	861 modules
System Module Power Capacity	503.7 kW-DC
Projected Annual Energy Production	613,785 kWh / year
Ratio of Current Consumption Offset with Solar System	101%
Mounting Style	Ballasted Flat Roof
Labor Type Assumed	Union

Investment Overview

A Power Purchase Agreement (PPA) may be the right option for you if you are a non-taxable entity or wish to pay zero money out of pocket. By having a third party investor take on the installation cost, they can take advantage of the government tax credits and incentives, and you can see a reduction in your energy bill when they sell you the energy from the system at a reduced rate.

PPA Rate	\$0.0411/kWh
	0% escalator

Economic Summary

Annual Energy Savings	\$57,463 year 1
Reduction in Energy Bill	62.5% reduction
Payback Period	0.0 Years

- **Annual Energy Savings** - The amount of money saved on utility bill the first year the system is installed. This value is expected to increase over time as the cost of energy increases.
- **Reduction in Energy Bill** - The expected average percentage an electric bill will decrease the first year. Due to seasonal variance, this value will change month to month.
- **Payback Period** - The length of time required to recover the cost of the investment.

Project Installation

The project will commence with a detailed site assessment from one of our field engineers moving into full engineering and design. Concurrently, Verde Solutions will work with you and handle all required building & electrical permits, utility interconnection applications, incentive applications (if applicable), and any other needs as they arise.

Materials will be ordered after the design is finalized. Each project is designed and built to suit. Installation begins when materials are delivered on site. Once installed, the system undergoes testing and commissioning upon permission to operate (PTO) from the electric utility.

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Calculations illustrating tax savings and deductions are estimates only. Please consult your tax expert regarding tax advantages specifically available for your organization.

Solar Renewable Energy Credits (SRECs) are administered on the state level and are subject to availability based on state specific program limits and participation.

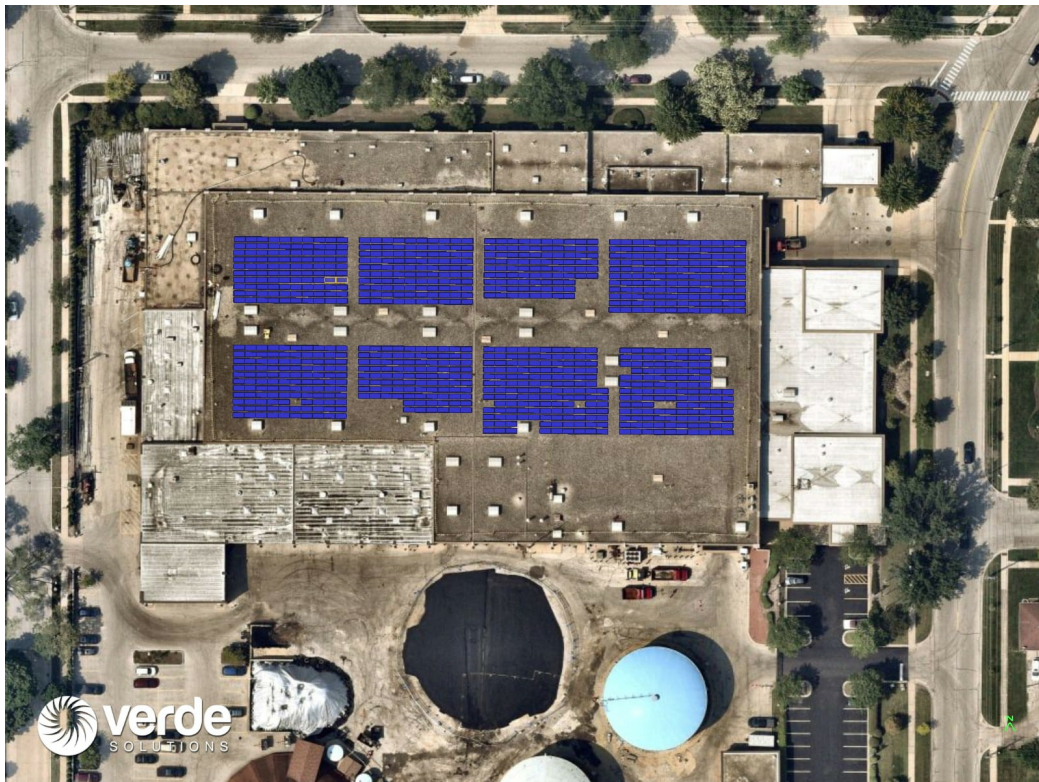
Ground based systems may require additional investments in fencing and/or landscaping. The cost of fencing is included.

Upon conclusion of the PPA contract term, the PPA can either be extended, or the system may be purchased at the greater value of the Fair Market Value or the value outlined in the termination schedule of the provided PPA contract. These costs may not be reflected in the cash flow provided below.

System Configuration

Verde Solutions has adopted a modular approach to project sizing by scaling projects with pre-engineered and proven subsystems. This approach leads to highly repeatable results, maximizes cost efficiency and offers the greatest value. Detailed engineering will occur upon project acceptance. Final engineering analysis may alter the following system outline; however, the final system will be equivalent or superior to what is presented below.

System Size & Configuration	375.0 kW-AC power capacity (grid) 503.7 kW-DC power capacity (solar modules) 1.34 DC/AC ratio
Solar PV Modules (Panels)	Tier 1 commercial polycrystalline silicon panels 585 Watt/module power capacity 861 modules in system
Inverter(s)	50 & 25 kW-AC inverter capacity 7 & 1 inverters in system 3-phase output
Mounting System	All necessary structural engineering included
Production Monitoring	Solar Log, with online monitoring & smartphone access Flat panel display monitor can be added for in-building showcase of energy



The above image is a preliminary concept based on initial information and satellite imagery

Cash Flow Analysis

Years	Cash		PV Generation (kWh)	Total Cash Flow	Cumulative Cash Flow
	PPA Payments	Electric Bill Savings			
Upfront	-	-	-	-	-
1	-\$25,227	\$57,463	613,785	\$32,237	\$32,237
2	-\$25,100	\$59,463	610,716	\$34,363	\$66,599
3	-\$24,974	\$61,531	607,647	\$36,557	\$103,156
4	-\$24,848	\$63,669	604,578	\$38,821	\$141,977
5	-\$24,722	\$65,880	601,509	\$41,157	\$183,134
6	-\$24,596	\$68,165	598,440	\$43,569	\$226,703
7	-\$24,470	\$70,528	595,371	\$46,058	\$272,762
8	-\$24,344	\$72,971	592,302	\$48,628	\$321,389
9	-\$24,217	\$75,497	589,233	\$51,279	\$372,669
10	-\$24,091	\$78,108	586,164	\$54,016	\$426,685
11	-\$23,965	\$80,807	583,096	\$56,842	\$483,527
12	-\$23,839	\$83,597	580,027	\$59,758	\$543,285
13	-\$23,713	\$86,481	576,958	\$62,768	\$606,052
14	-\$23,587	\$89,461	573,889	\$65,875	\$671,927
15	-\$23,461	\$92,542	570,820	\$69,082	\$741,009
16	-\$23,335	\$95,727	567,751	\$72,392	\$813,401
17	-\$23,208	\$99,018	564,682	\$75,809	\$889,210
18	-\$23,082	\$102,419	561,613	\$79,336	\$968,546
19	-\$22,956	\$105,933	558,544	\$82,977	\$1,051,523
20	-\$22,830	\$109,565	555,475	\$86,735	\$1,138,258
21	-	\$113,318	552,406	\$113,318	\$1,251,577
22	-	\$117,196	549,337	\$117,196	\$1,368,773
23	-	\$121,203	546,268	\$121,203	\$1,489,976
24	-	\$125,343	543,200	\$125,343	\$1,615,320
25	-	\$129,621	540,131	\$129,621	\$1,744,940
26	-	\$134,039	537,062	\$134,039	\$1,878,980
27	-	\$138,604	533,993	\$138,604	\$2,017,584
28	-	\$143,320	530,924	\$143,320	\$2,160,904
29	-	\$148,191	527,855	\$148,191	\$2,309,095
30	-	\$153,223	524,786	\$153,223	\$2,462,318
Totals:	-\$480,566	\$2,942,884	17,078,561	\$2,462,318	-

Inputs & Assumptions

PPA Rate	\$0.0411/kWh
Annual PPA Escalator	0%
Avoided Utility Cost	\$0.094 /kWh
Annual Energy Consumption (kWh)	608,945 kWh
Energy Consumption Inflation Rate	0.0%
Year 1 Energy Savings	\$57,463
kW-DC	503.7 kW-DC
Projected Annual Energy Production	613,785 kWh
Utility Inflation Rate	4.0%
Solar Degradation Rate	0.50%
Investment Tax Credit (ITC)	40% of system value
Effective Federal Tax Rate	0.0%
Average Soiling Losses	5% of annual production