



## CITY COUNCIL AGENDA

**November 21, 2023**

***THE CITY COUNCIL SHALL HOLD ITS REGULAR MEETINGS IN THE COUNCIL CHAMBER  
IN THE CITY HALL, LOCATED AT 121 S. MERIDIAN, BEGINNING AT 7:00 P.M.***

- 1. CALL TO ORDER**
- 2. ROLL CALL**
- 3. INVOCATION: MINISTERIAL ALLIANCE**
- 4. PLEDGE OF ALLEGIANCE**
- 5. APPROVAL OF AGENDA p 4**
- 6. ADMINISTRATION AGENDA p 5**
  - A. City Council Meeting Minutes – November 7, 2023
- 7. PRESENTATIONS / PROCLAMATIONS p 12**
  - A. Rustin Lingbeek, SEH- Wastewater Treatment Plant Aeration Basin Study
- 8. PUBLIC FORUM (Citizen input and requests) p 12**
- 9. APPOINTMENTS p 12**
- 10. OLD BUSINESS p 30**
  - A. Ordinance 1399-23; Re-zoning land SE of 93<sup>rd</sup> St. and Meridian Ave. p 30
  - B. Ordinance 1400-23; Re-zoning land SE of 85<sup>th</sup> St. and Ridge Rd. p 35
- 11. NEW BUSINESS p 38**
  - A. DAR-Wreaths across America p 38
  - B. From the Ground Up p 41
  - C. Wastewater Treatment Plant Aeration Basin Study p 44
- 12. CONSENT AGENDA p 88**
  - A. Appropriation Ordinance – November 21, 2023 p 88
  - B. Cereal Malt Beverage License Approval p 98
- 13. STAFF REPORTS p 99**
- 14. GOVERNING BODY REPORTS p 100**
- 15. ADJOURN**

*All items listed on this agenda are potential action items unless otherwise noted. The agenda may be modified or changed at the meeting without prior notice.*

*At any time during the regular City Council meeting, the City Council may meet in executive session for consultation concerning several matters (real estate, litigation, non-elected personnel, and security).*

*This is an open meeting, open to the public, subject to the Kansas Open Meetings Act (KOMA). The City of Valley Center is committed to providing reasonable accommodations for persons with disabilities upon request of the individual. Individuals with disabilities requiring an accommodation to attend the meeting should contact the City Clerk in a timely manner, at [cityclerk@valleycenterks.org](mailto:cityclerk@valleycenterks.org) or by phone at (316)755-7310.*

*For additional information on any item on the agenda, please visit [www.valleycenterks.org](http://www.valleycenterks.org) or call (316) 755-7310.*

**CALL TO ORDER**

**ROLL CALL**

**INVOCATION – MINISTERIAL ALLIANCE**

**PLEDGE OF ALLEGIANCE**

## **APPROVAL OF AGENDA**

### **RECOMMENDED ACTION:**

**Staff recommends motion to approve the agenda as presented / amended.**

## **ADMINISTRATION AGENDA**

### **A. MINUTES:**

Attached are the Minutes from the November 7, 2023, regular City Council Meeting as prepared by the City Clerk.

REGULAR COUNCIL MEETING  
November 7, 2023  
CITY HALL  
121 S. MERIDIAN

Mayor Cicirello called the council meeting to order at 7:00 p.m. with the following members present: Matt Stamm, Chris Evans, Clint Bass, Ben Anderson, Gina Gregory, Dale Kerstetter and Robert Wilson.

Members Absent: Ronald Colbert

Staff Present: Ryan Shrack, Community Development Director  
Lloyd Newman, Public Safety Director  
Rodney Eggleston, Public Works Director  
Barry Arbuckle, City Attorney  
Gage Scheer, City Engineer  
Barry Smith, Assistant City Administrator  
Brent Clark, City Administrator  
Kristi Carrithers, City Clerk

Press present: Ark Valley News

**APPROVAL OF AGENDA**

Anderson moved to approve the agenda as presented, seconded by Gregory. Vote Aye: unanimous. Motion carried.

**ADMINISTRATION AGENDA –**

**OCTOBER 12, 2023, SPECIAL CITY COUNCIL MINUTES-**

Gregory moved to approve the minutes of the October 12, 2023, Special City Council meeting as presented, seconded by Kerstetter. Vote Aye: Unanimous Motion Carried.

**OCTOBER 17, 2023, CITY COUNCIL MINUTES-**

Wilson moved to approve the minutes of the October 17, 2023, City Council meeting as presented, seconded by Kerstetter. Vote Aye: Unanimous Motion Carried.

**PRESENTATIONS/PROCLAMATIONS –**

**LONGEVITY EMPLOYEE AWARDS**

The League of Kansas Municipalities recognizes long term city employees each year at the annual meeting. Administrator Clark recognized Neal Owings, Parks and Public Building Director, for his 25 years of service. Public Safety Director Lloyd Newman recognized 25-years of service to Police Sargeant JC Kirk, Public Works Director Eggleston presented award to Katherine Lechner for 10-years of service to the City of Valley Center.

**MILITARY APPRECIATION MONTH PROCLAMATION**

Mayor Cicirello read a proclamation declaring November as Military Appreciation Month and recognizing November 11<sup>th</sup> as Veterans Day

**NATIONAL AMERICAN INDIAN HERIAGE MONTH PROCLAMATION**

Mayor Cicirello read a proclamation for National American Indian Heritage Month to be observed in the month of November.

**FROM THE GROUND UP PRESENTATION**

Robin Scriven, presented information about the non-profit organization “From the Gound Up” She talked about the great need for children and families in the Valley Center school district. They plan to serve 80 families this Christmas. Donations for clothing and toys are a minimum of \$50-\$100 for each child. More information regarding donations can be found at [fromthegroundupvc.com](http://fromthegroundupvc.com). Council directed staff to add this to the November 21<sup>st</sup> agenda for further discussion.

**PUBLIC FORUM –**

Mike Miller, 650 Scott St. addressed Council with many concerns on his perception of citizen distrust with City Officials. Mayor Cicirello did stop his comments when references to Facebook postings were made. After a short period, Miller continued and finished with his public comments.

Jerry Hawkins, 401 N Fiddlers Creek, thanked the council for the continued development of sidewalks in Valley Center. He sees many residents running, jogging and using the sidewalks throughout the day.

Tim Mullen and Leroy Bosch, Colwich residents, addressed Council regarding solar panel development in Sedgwick County. They are opposed to the development of large-scale solar facilities and urged council members to educate themselves regarding utility scale solar in Sedgwick County. They stated that the Metropolitan Area Planning Commission is looking at regulations within the county.

**APPOINTMENTS –****VALLEY CENTER PUBLIC LIBRARY**

The Public Library Board requested appointment of Michael Vo to serve until April 2026. Mayor Cicirello recommended Council approve the appointment.

Anderson moved to approve the appointment of Michael Vo to the Library Board. Motion seconded by Kerstetter. Vote Aye: unanimous. Motion carried.

**OLD BUSINESS – None****NEW BUSINESS-****A. GOLD STAR AWARD**

The Gold Star award is received from the Kansas Municipal Trust for safety procedures and low workman's comp claims. City Administrator Clark recommended Mayor and Council recognize the hard work employees have done to earn the Gold Award by granting one additional paid day off on December 26, 2023, and a \$100.00 after tax bonus be paid to full time employees and a \$50.00 bonus be paid to less than full-time employees who have worked at least 100 hours. Kerstetter requested that staff explore funding in the 2025 budget to increase the bonus amount to \$150.00.

Kerstetter moved to approve granting one additional paid day off on December 26, 2023, and a \$100.00 after tax bonus be paid to full time employees and a \$50.00 bonus be paid to less than full-time employees who have worked at least 100 hours, seconded by Evans. Vote Aye: unanimous. Motion carried.

**B. APPROVAL TO AWARD CONTRACT AND COMMITMENT OF FUNDS FOR MERIDIAN STREET**

City Administrator Clark presented bid and contractor information received from the Kansas Department of Transportation regarding the Meridian Street Project. He reminded Council that this is a joint project with funding from KDOT and Sedgwick County. The lowest bid received by KDOT was from Pearson Construction LLC in the amount of \$9,382,058. The City of Valley Center matching funds for the project is \$2,437,000.

Wilson moved to approve Resolution for contract and commitment of matching funds in the amount of \$2,437,000. for the Meridian Street Project and authorize Mayor to sign. Motion seconded by Stamm. Vote Aye: unanimous. Motion carried.

C. APPROVAL OF BID FROM SARGENT DRILLING FOR WELL #10 MAINTENANCE

Public Works Director Eggleston stated that his department will only be able to complete cleaning and maintenance on one well per year based on budgeted dollars. He requested approval of bid from Sargent Drilling for maintenance and cleaning of well #10. Funds for this project are included in the well maintenance line item within the water budget. Kerstetter verified that the number of City owned wells is three.

Stamm moved to approve bid from Sargent Drilling in the amount of \$16,390.00 for well #10 rehabilitation and cleaning. Seconded by Evans. Vote Aye: unanimous. Motion carried.

D. REQUEST TO SOLICIT BIDS FOR SALE OF CITY FIRE ENGINE

Public Safety Director Newman stated that the new fire engine has been fully equipped. It will in the parking lot after the meeting for inspection. He is now requesting authorization to solicit bids for the sale and disposal of the City's 1995 fire engine. He would like to limit bids to political subdivisions (cities, municipalities or fire districts) in the State of Kansas. This will keep a private individual or company from purchasing and reselling it for profit.

Kerstetter made a motion to authorize solicitation of bids from political subdivisions in the State of Kansas for the sale of 1995 Fire Engine. Motion seconded by Wilson. Vote Aye: unanimous. Motion carried.

E. MAIN STREET CLOSURE FOR CHRISTMAS EVENTS REQUEST

Main Street Valley Center President Chris Strunk requested Council approval to close the 100 block of West Main Street on December 1, 2023, for the annual Hometown Christmas tree-lighting ceremony. It will be from 6:00-9:00pm.

Evans moved to approve request for street closure of the 100 block of West Main Street on December 1, 2023, between 6:00-9:00pm for Hometown Christmas tree-lighting ceremony. Seconded by Bass. Vote Aye: unanimous. Motion carried.

F. DISCUSSION OF SPEED HUMPS/BUMPS

City Engineer Scheer presented information gathered regarding the installation of speed humps/bumps in a residential area. He explained that while they do reduce vehicle speeds, he doesn't recommend their use in the Ridgefield area. The close spacing of driveways would not allow the minimum 15-foot distance from the speed hump. Also, the curve of streets in the neighborhood is not recommended for humps. Scheer stated that cities that have humps were planned and installed in areas during the development stage. Anderson commented that speed humps in the Old Town area in Wichita is not always effective and he has observed vehicles take it at high rates of speed. Eggleston stated that quick research of cost of "speed indicators" was approximately \$2,000.00 per signal. No action taken.

G. ORDINANCE 1398-23; AMENDING ORDINANCE 1396-23

City Attorney Arbuckle requested approval of Ordinance 1398-23. Ordinance 1396-23 was approved on October 3, 2023. It was determined that an error in the legal description on Ordinance 1396-23 was made in the final approval process. As Ordinance 1396-23 was previously passed, Mr. Arbuckle requests waiver of 1st reading and final approval.

Bass moved to waive 1<sup>st</sup> reading of Ordinance 1398-23, seconded by Evans. Vote Aye: unanimous. Motion carried.

Bass moved to approve Ordinance 1398-23 amending Ordinance 1396-23, seconded by Kerstetter. Vote Aye: unanimous. Motion carried.

H. ORDINANCE 1399-23; RE-ZONING LAND SE OF 93<sup>RD</sup> ST. AND MERIDIAN AVE

Comm. Dev. Director Shrack presented Ordinance No. 1399-23, which rezones property from RR-1 (suburban residential district) to C-2 (general business district) / R-2 (two-family residential district). This property is located south of the Valley Center High School and north of the Middle School and Valley Point

Golf Course. Schrack stated that the Valley Center Planning and Zoning Board approved this request at the October 25, 2023, meeting.

Stamm moved to approve Ordinance 1399-23 for 1<sup>st</sup> reading. Motion seconded by Evans. Vote Aye: unanimous. Motion carried.

I. ORDINANCE 1400-23; RE-ZONING LAND SE OF 85<sup>TH</sup> ST. AND RIDGE ROAD

Comm. Dev. Director Shrack requested approval of Ordinance No. 1400-23, which rezones property from RR-1 (suburban residential district) to A-1 (agricultural district) for 1<sup>st</sup> reading. At the request of the property owners the Valley Center Planning and Zoning Board approved this request at the October 25, 2023, meeting. This property is located southeast of the intersection of Ridge Road and 85<sup>th</sup> St. Shrack explained that this Ordinance only re-zones the property, any changes to land use must have a site plan reviewed and approved by the Planning and Zoning Board.

A large group opposed to the re-zoning of the property were in attendance. Mayor Cicirello reminded those wishing to speak please remember that the Council is only considering the Ordinance which will re-zone the property, not possible future land use. Mayor requested comments be limited to 3 minutes. The following individuals voiced their opposition to re-zoning and the possible sand pit operation.

Gary Lee, 5335 W 81<sup>st</sup> St.

Deana Bushell, 8020 N 63<sup>rd</sup>. St W

Jon Freund, 3901 Palos Verdes Cir.

Jerri Truman 8959 Ross St.

Chris McElgunn, 301N. Main St.

Tammy Miller, 650 Scott St.

Jerry Hawkins, 401 N Fiddlers Creek

A petition from those living in the notification area was submitted with 22 signatures. With this petition, Council will be required to approve Ordinance with super majority of 6 person.

Many of those opposed expressed frustration that land use isn't considered as the owners have already submitted a site plan to be considered at the next Planning and Zoning Meeting. Discussion was also held regarding maintenance of roads and right of way. Administrator Clark stated in response to inquiries that road maintenance does not cost 2 million per mile, and that water and sewer infrastructure is not requested. However, at such a time it might be needed, the developers would be responsible for the biggest share. It is possible a new water well with a line directly to the proposed water treatment plant can be installed.

Phil Meyer, Baughman & Co. encouraged Council to proceed with approval of 1<sup>st</sup> reading.

Gregory moved to approve Ordinance 1400-23 for 1<sup>st</sup> reading. Motion seconded by Kerstetter. Vote Aye: unanimous. Motion carried.

**CONSENT AGENDA**

- A. APPROPRIATION ORDINANCE – NOVEMBER 7, 2023
- B. DELINQUENT ACCOUNT REPORT-AUGUST 2023
- C. PLANNING AND ZONING BOARD MINUTES – OCTOBER 25, 2023
- D. STORMWATER CITIZENS ADVISORY COMMITTEE MINUTES – OCTOBER 25, 2023
- E. PUBLIC LIBRARY 3<sup>RD</sup> QUARTER REPORTS
- F. ALCOHOL WAIVER REQUEST – DECEMBER 8, 2023, CITY HOLIDAY PARTY

Wilson moved, seconded by Kerstetter to approve the Consent Agenda as presented. Vote Aye: unanimous. Motion carried.

**STAFF REPORTS**

PUBLIC WORKS DIRECTOR EGGLESTON

Reported that a leak at a fire hydrant caused a water outage on October 26<sup>th</sup>. Staff installed an isolation line to the hydrant. In response to question from Stamm regarding a cement slab at 69<sup>th</sup> and Meridian. This work is in anticipation of utility work needed prior to the roundabout installation on Meridian.

**CITY ADMINISTRATOR CLARK**

Announced an open house regarding the Meridian project will be held Thursday, November 9, 2023. He encouraged residents to install the city app for updates and notifications.

The foundations are installed for the rec center.

The Community Pie Auction will be held November 27<sup>th</sup>.

**GOVERNING BODY REPORTS-**

**COUNCILMEMBERS EVANS, KERSTETTER AND WILSON**

Thanked citizens for coming to meeting and sharing their concerns. They encouraged citizens to consider serving on boards. Also get facts, not just rumors.

**COUNCILMEMBER BASS**

Encouraged everyone to support the Pie Auction. The Rent a Chef will be preparing food for the event, in addition to the pies.

Thanked City staff for their tremendous job securing grants for projects and saving taxpayer dollars. The Meridian Street project is an excellent example.

Bass also pushed back against people who say that the city is not transparent.

**COUNCILMEMBER GREGORY**

Thanks for the lights installed on 5<sup>th</sup> Street. She also announced a local emergency planning meeting will be held November 16<sup>th</sup>. On November 18<sup>th</sup>, Valley Center will host the Sedgwick County Association of Cities.

Wilson moved to adjourn, second by Kerstetter. Vote Aye: Unanimous.

**ADJOURN -**

**The meeting adjourned at 9:31 PM.**

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**Kristi Carrithers, City Clerk**

**ADMINISTRATION AGENDA**  
**RECOMMENDED ACTION**

**A. MINUTES:**

**RECOMMENDED ACTION:**

**Staff recommends motion to approve the minutes of the November 7, 2023, Regular Council Meeting as presented/ amended.**

**PRESENTATIONS / PROCLAMATIONS**

Rustin Lingbeek, SEH- Wastewater Treatment Plant Aeration Basin Study

**PUBLIC FORUM**

**APPOINTMENTS**

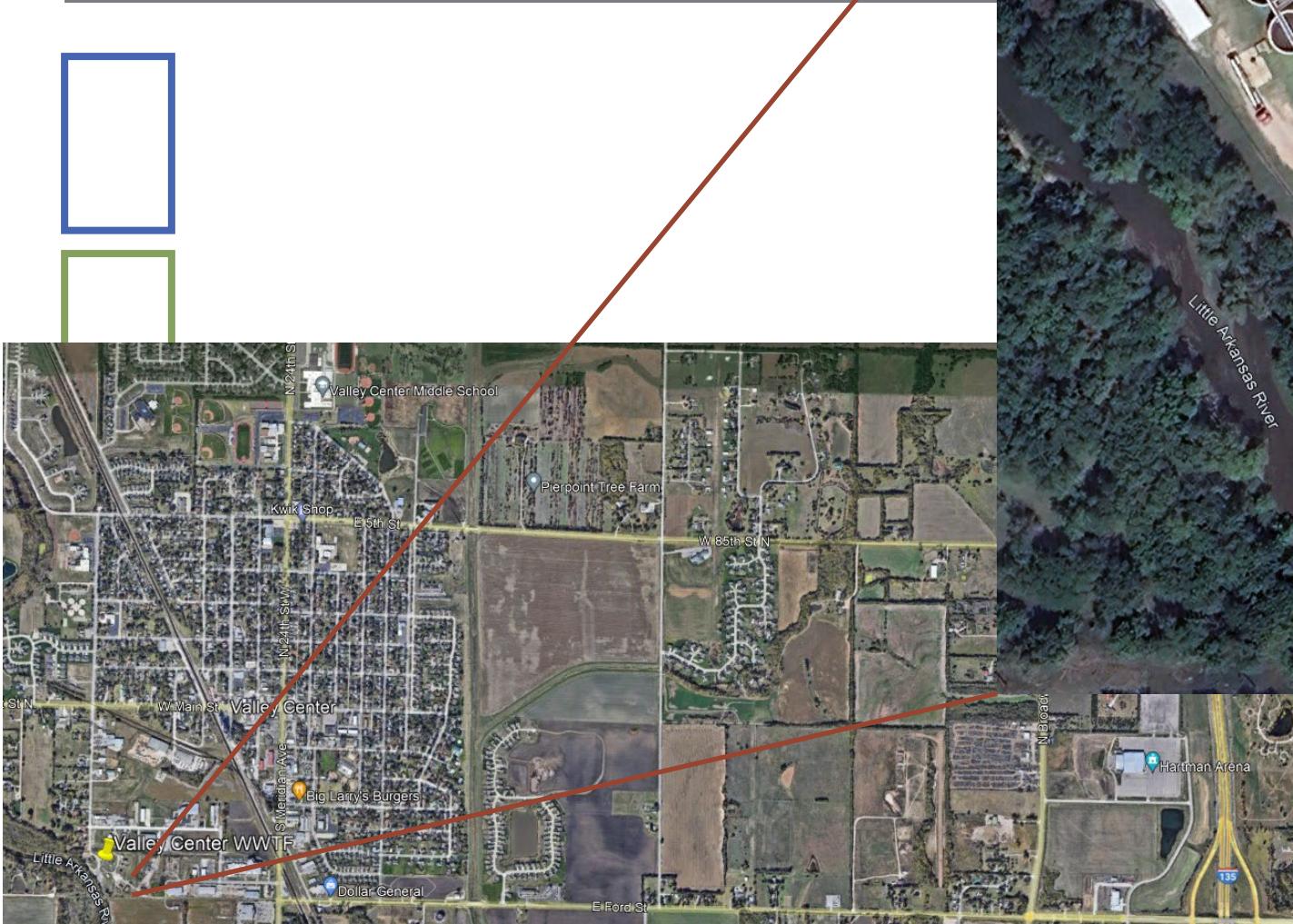
# WWTP Aeration Evaluation Technical Memorandum

City of Valley Center

November 2023



# WWTP Location



# Background

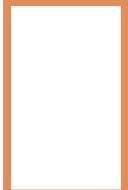
## Existing aeration basin

- Westech Orbital style loop configuration oxidation ditch.
- Disc rotor aeration and mixing equipment
- Originally constructed in 1979
- Upgrades: '93, '97, '01, '07
- Staff looking for future improvements

## Existing aeration



# Current WWTF



# Current Conditions

Characteristic	Annual Average <sup>A</sup>	Max Month <sup>B</sup>	Capacity <sup>C</sup>	Units
<b>Wastewater Flow</b>	0.372	0.471	0.700	MGD
<b>Biochemical Oxygen Demand (BOD)</b>	713.4	1,446	1,460	lb/day
	230.0	368.0	250	mg/L
<b>Total Suspended Solids (TSS)</b>	422.2	1,120	1,360	lb/day
	136.1	285.0	233	mg/L
<b>Total Kjeldahl Nitrogen (TKN)</b>	169.2	310.5	--	lb/day
	54.5	79.0	--	mg/L
<b>Total Phosphorus (TP)</b>	20.2	34.1	44	lb/day
	6.51	8.68	7.5	mg/L

- A. Corresponds to the average of the yearly averages from 2019-2022.
- B. Corresponds to the absolute maximum of the monthly average characteristics.
- C. Plant capacity values came from basis of design sheet from most recent plant improvements project drawings.

# Current Conditions

**Aeration basin is one tank**

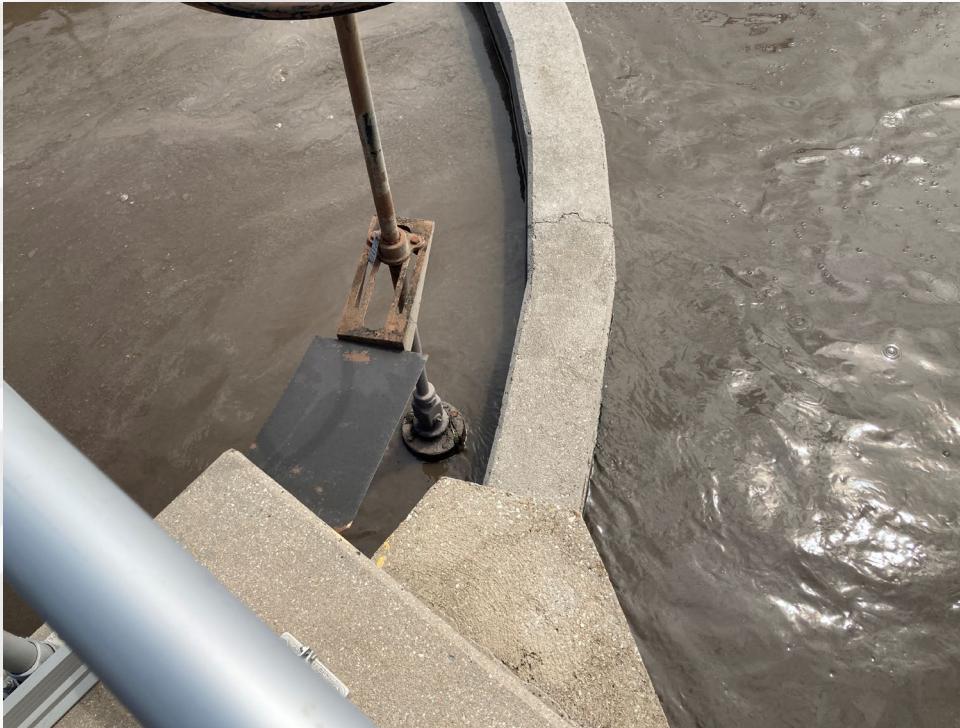


**Bushing connectors are a wear point and maintenance**



# Current Conditions

Cannot drain tank and has inoperable valves

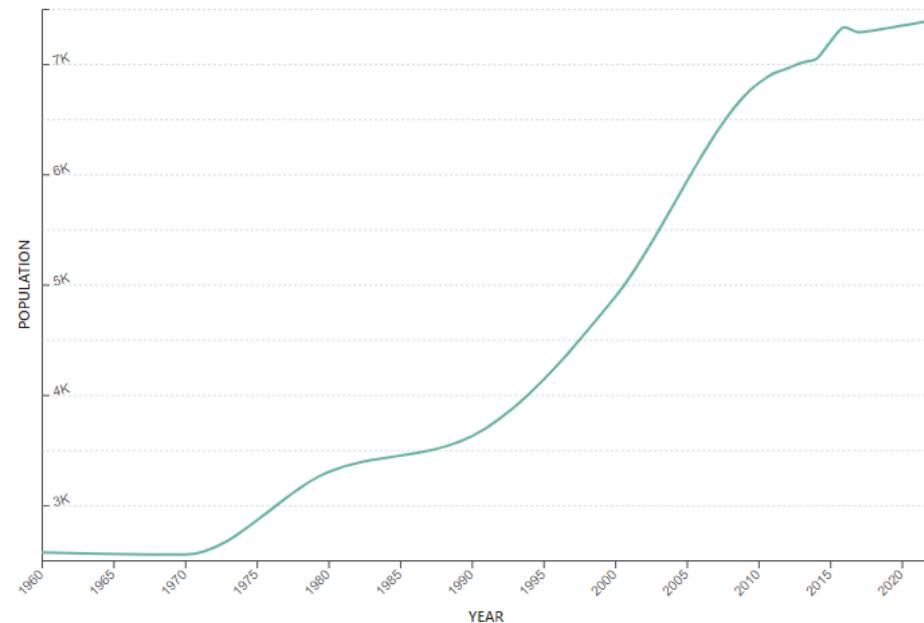


Inability to isolate



# Projections

## Valley Center historical pop.



## Projected population

- 2021 census = 7,419
- 2045 projection = 9,500

# Projected loadings

Characteristic	Annual Average <sup>A</sup>	Max Month <sup>B</sup>	Units
Wastewater Flow	0.476	0.700	MGD
Biochemical Oxygen Demand (BOD)	913.5	1,852	lb/day
	229.97	317	mg/L
Total Suspended Solids (TSS)	540.6	1,434	lb/day
	136.1	245	mg/L
Total Kjeldahl Nitrogen (TKN)	216.6	397.5	lb/day
	54.5	68.0	mg/L
Total Phosphorus (TP)	25.86	43.68	lb/day
	6.51	7.48	mg/L

# Aeration Alternatives – 1a

- Option 1a – update existing with new Evoqua Orbital
  - Same system as is existing
  - Increase Hp and assemblies for projected flow/loadings
  - Install VFD control for energy optimization
  - Operator comfort



# Aeration Alternatives - 1b

- Option 1b – update existing with new Aeration Industries
  - Can reuse basin
  - Aeration and mixing is separated
  - All maintenance is from walkway
  - Greater dissolved oxygen control

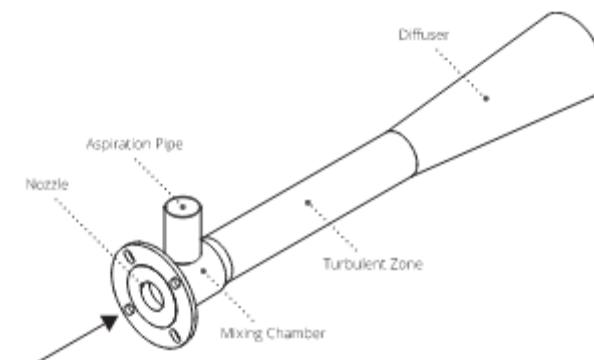


# Aeration Alternatives - 1c

- Option 1c – update existing with new Landia AirJet
  - Can reuse basin
  - Typically used in sludge storage
  - Limited installations and design data
  - Good for adding supplemental aeration to another system
  - Proposed as a trial process from vendors



Submersible AirJet



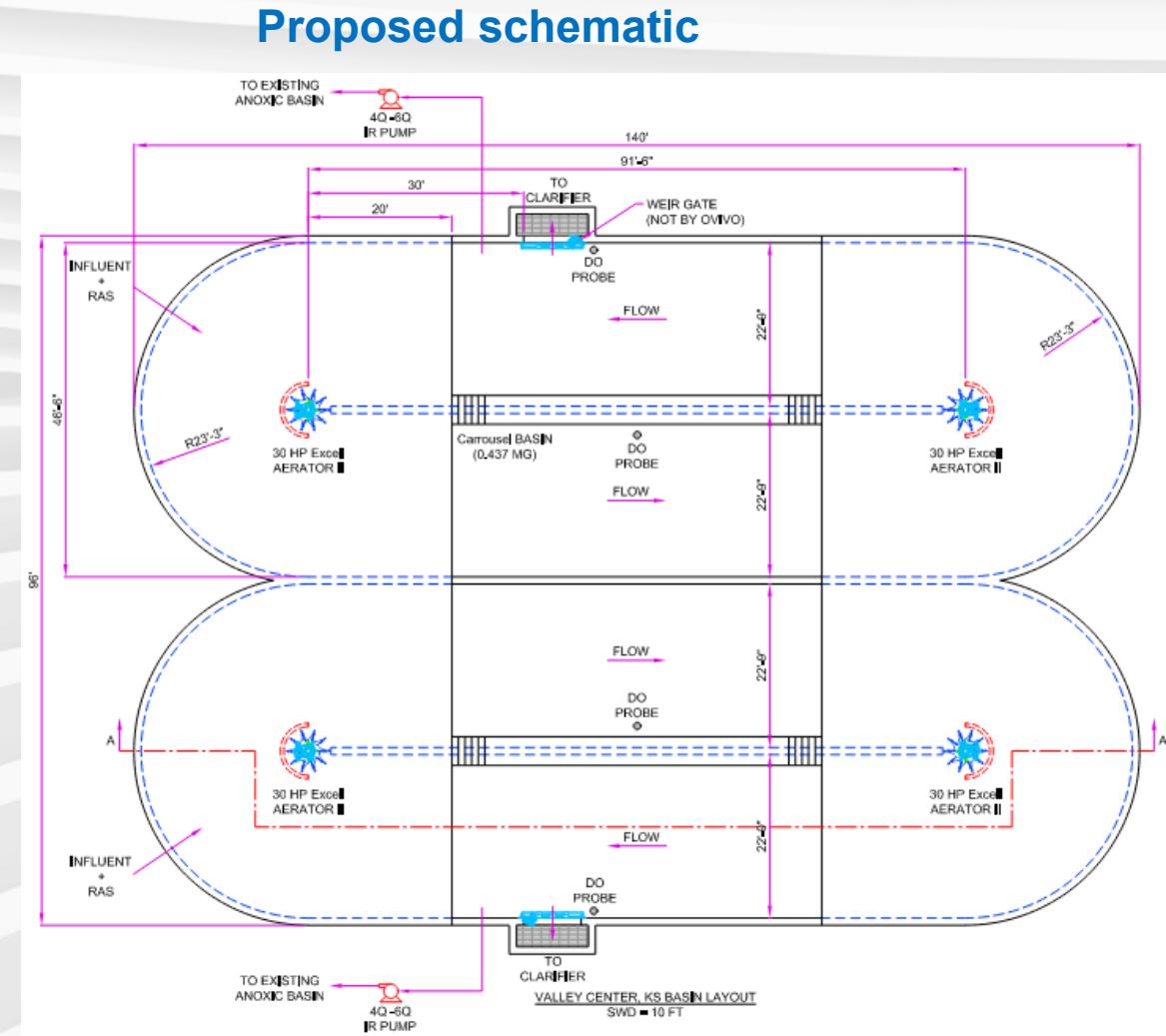
# Aeration Alternatives - 2

- Option 2 – Construct new Ovivo Carousel
  - Propose two ditches for redundancy and maintenance
  - VFD control for energy efficiency
  - New construction for longer useful life
  - Could be installed with limited impact on operations
  - Ease of maintenance
  - Higher capital cost due to new concrete basins

# Ovivo Carousel



## Carrousel aerator



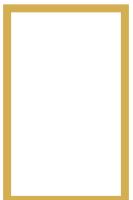
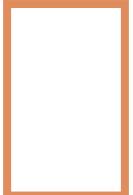
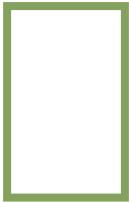
# Present value summary

		Option 1		Option 2
		Evoqua (1a)	Aeration Industries (1b)	Landia (1c)
<b>Equipment costs</b>	\$700,000	\$620,000	\$450,000	\$870,00
<b>Total Capital Costs</b>	\$2,030,500	\$1,798,000	\$1,441,500	\$7,471,000
<b>Estimated maintenance, \$/yr<sup>1</sup></b>	\$1,000.00	\$2,558.80	\$1,500	\$1,500
<b>Electrical consumption, kW</b>	111.86	90.00	91.12	88.00
<b>Estimated Electrical Cost, \$/yr<sup>2</sup></b>	\$73,000.00	\$59,000.00	\$60,000.00	\$58,000.00
<b>Equipment Life (yrs)</b>	20	20	20	20
<b>Interest (percent)</b>	4.0%	4.0%	4.0%	4.0%
<b>Engineering Economy Weight (P/A)</b>	13.6	13.6	13.6	13.6
<b>Construction Cost Estimate</b>	<b>\$2,030,000</b>	<b>\$1,798,000</b>	<b>\$1,441,500</b>	<b>\$7,471,000</b>
<b>Present Worth Maintenance Cost</b>	\$14,000	\$35,000	\$20,000	\$20,000
<b>Present Worth Electrical Cost</b>	\$994,000	\$800,000	\$810,000	\$782,000
<b>Present Worth Staffing Cost<sup>3</sup></b>	\$2,000,000	\$1,500,000	\$1,000,000	\$1,500,000
<b>2045 Salvage Value<sup>4</sup></b>	\$40,000	\$40,000	\$40,000	(\$1,200,000)
<b>Net Present Value</b>	<b>\$ 5,078,500</b>	<b>\$ 4,173,000</b>	<b>\$3,311,500</b>	<b>\$8,573,000</b>

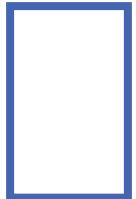
See TM for detail

# Conclusions

- Funding dependent for all options
- New oxidation ditch provides longer useful life
- All options would improve DO control and energy efficiency



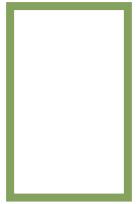
# Thank you!



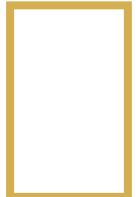
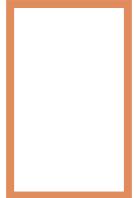
Short Elliott Hendrickson, Inc. (SEH®)

Rustin Lingbeek, PE (IA, MN, KY, KS)

[rлингbeek@sehinc.com](mailto:rлингbeek@sehinc.com)



641.243.3797



## **OLD BUSINESS**

### **A. ORDINANCE 1399-23; RE-ZONE LAND SE OF 93<sup>RD</sup> ST AND MERIDIAN AVE.:**

City Administrator Clark will present for second reading Ordinance No. 1399-23, which rezones property from RR-1 (suburban residential district) to C-2 (general business district) / R-2 (two-family residential district). The Valley Center Planning and Zoning Board approved this request at the October 25, 2023, meeting.

- Ordinance 1399-23

**ORDINANCE NO. 1399-23**

**AN ORDINANCE CHANGING THE ZONING DISTRICT  
CLASSIFICATION OF CERTAIN PROPERTY LOCATED IN THE CITY  
OF VALLEY CENTER, KANSAS, UNDER THE AUTHORITY GRANTED  
BY THE ZONING REGULATIONS OF THE CITY.**

**NOW THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE  
CITY OF VALLEY CENTER, KANSAS:**

**SECTION 1.** Having received a recommendation from the Valley Center City Planning and Zoning Board on Case No. RZ-2023-05, and proper notice having been given and hearing held as provided by law and under authority and subject to the provisions of the amended Zoning Regulations of the City as approved by Ordinance No. 1279-14, the zoning district classification of the property legally described herein is changed as follows:

Change of zoning district classification from RR-1 (Suburban Residential District) to C-2 (General Business District) and R-2 (Two-Family Residential District).

Legal Description: Rezone to C-2: A TRACT OF LAND IN THE NORTHWEST QUARTER OF SECTION 30, TOWNSHIP 25 SOUTH, RANGE 1 EAST OF THE SIXTH PRINCIPAL MERIDIAN, CITY OF VALLEY CENTER, SEDGWICK COUNTY, KANSAS, MORE PARTICULARLY DESCRIBED BY JOHN R. SOMMERS, P.S. 1542, ON OCTOBER 4, 2023, AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER, THENCE S88°02'12"E ON THE NORTH LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 454.29' FEET; THENCE SOUTH S01°57'48"W, A DISTANCE OF 256.60 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 2446.36 FEET, AN ARC LENGTH OF 305.70 FEET, A CHORD BEARING OF S05°55'59"W AND A CHORD DISTANCE OF 305.50 FEET; THENCE S09°22'37"W, A DISTANCE OF 301.99 FEET; THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 965.00 FEET, AN ARC LENGTH OF 176.36 FEET, A CHORD BEARING OF S04°08'28"W AND A CHORD DISTANCE OF 176.12 FEET; THENCE S01°05'40"E, A DISTANCE OF 60.91 FEET; THENCE S88°54'20"W, A DISTANCE OF 35.00 FEET; THENCE S01°05'40"E, A DISTANCE OF 362.54 FEET; THENCE S89°52'18"W, A DISTANCE OF 321.53 FEET TO THE WEST LINE OF SAID NORTHWEST QUARTER; THENCE N00°07'42" W ON THE WEST LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 1474.26 FEET TO THE POINT OF BEGINNING; TOGETHER with A TRACT OF LAND IN THE NORTHWEST QUARTER OF SECTION 30, TOWNSHIP 25 SOUTH, RANGE 1 EAST OF THE SIXTH PRINCIPAL MERIDIAN, CITY OF VALLEY CENTER, SEDGWICK COUNTY, KANSAS, MORE PARTICULARLY DESCRIBED BY JOHN R. SOMMERS, P.S. 1542, ON OCTOBER 4 2023, AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER; THENCE S00°07'42" E ON THE WEST LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 1559.26 FEET TO THE POINT OF BEGINNING; THENCE N89°52'18"E, A DISTANCE OF 496.87 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1000.00 FEET, AN ARC LENGTH OF 98.39 FEET, A CHORD BEARING OF S87°18'35"E AND A CHORD DISTANCE OF 98.35 FEET; THENCE S84°29'27"E, A DISTANCE OF 278.07 FEET; THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 600.00 FEET, AN ARC LENGTH OF 219.85

FEET, A CHORD BEARING OF N85°00'43"E AND A CHORD DISTANCE OF 218.62 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 505.00 FEET, AN ARC LENGTH OF 144.42 FEET, A CHORD BEARING OF N82°42'27"E AND A CHORD DISTANCE OF 143.93 FEET; THENCE S89°06'00"E, A DISTANCE OF 11.13 FEET; THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 40.00 FEET, AN ARC LENGTH OF 65.99 FEET, A CHORD BEARING OF S49°47'51"E AND A CHORD DISTANCE OF 58.76 FEET; THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 500.00 FEET, AN ARC LENGTH OF 157.17 FEET, A CHORD BEARING OF S08°03'16"E AND A CHORD DISTANCE OF 156.53 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1200.00 FEET, AN ARC LENGTH OF 564.66 FEET, A CHORD BEARING OF S03°34'47"E AND A CHORD DISTANCE OF 559.46 FEET; THENCE S09°54'02"W, A DISTANCE OF 52.41 FEET; THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 1200.00 FEET, AN ARC LENGTH OF 211.14 FEET, A CHORD BEARING OF S04°51'36"W AND A CHORD DISTANCE OF 210.87 FEET; THENCE S00°10'51"E, A DISTANCE OF 129.65 FEET TO THE SOUTH LINE OF SAID NORTHWEST QUARTER; THENCE N87°57'58"W ON THE SOUTH LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 1317.25' TO THE SOUTHWEST CORNER OF SAID NORTHWEST QUARTER; THENCE N00°07'42"W ON THE WEST LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 1089.02' FEET TO THE POINT OF BEGINNING.

Rezone to R-2: A TRACT OF LAND IN THE NORTHWEST QUARTER OF SECTION 30, TOWNSHIP 25 SOUTH, RANGE 1 EAST OF THE SIXTH PRINCIPAL MERIDIAN, CITY OF VALLEY CENTER, SEDGWICK COUNTY, KANSAS, MORE PARTICULARLY DESCRIBED BY JOHN R. SOMMERS, P.S. 1542, ON OCTOBER 4, 2023, AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER, THENCE S88°02'12"E ON THE NORTH LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 454.29' FEET TO THE POINT OF BEGINNING; THENCE SOUTH S01°57'48"W, A DISTANCE OF 256.60 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 2446.36 FEET, AN ARC LENGTH OF 305.70 FEET, A CHORD BEARING OF S05°55'59"W AND A CHORD DISTANCE OF 305.50 FEET; THENCE S09°22'37"W, A DISTANCE OF 301.99 FEET; THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 965.00 FEET, AN ARC LENGTH OF 176.36 FEET, A CHORD BEARING OF S04°08'28"W AND A CHORD DISTANCE OF 176.12 FEET; THENCE S01°05'40"E, A DISTANCE OF 60.91 FEET; THENCE S88°54'20"W, A DISTANCE OF 35.00 FEET; THENCE S01°05'40"E, A DISTANCE OF 362.54 FEET; THENCE S89°52'18"W, A DISTANCE OF 321.53 FEET TO THE WEST LINE OF SAID NORTHWEST QUARTER; THENCE S00°07'42"E ON THE WEST LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 85.00 FEET; THENCE N89°52'18"E, A DISTANCE OF 496.87 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1000.00 FEET, AN ARC LENGTH OF 98.39 FEET, A CHORD BEARING OF S87°18'35"E AND A CHORD DISTANCE OF 98.35 FEET; THENCE S84°29'27"E, A DISTANCE OF 278.07 FEET; THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 600.00 FEET, AN ARC LENGTH OF 219.85 FEET, A CHORD BEARING OF N85°00'43"E AND A CHORD DISTANCE OF 218.62 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 505.00 FEET, AN ARC LENGTH OF 144.42 FEET, A CHORD BEARING OF N82°42'27"E AND A CHORD DISTANCE OF 143.93 FEET; THENCE S89°06'00"E, A DISTANCE OF 11.13 FEET; THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 500.00 FEET, AN ARC LENGTH OF 157.17 FEET, A

CHORD BEARING OF S08°03'16"E AND A CHORD DISTANCE OF 156.53 FEET; THENCE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1200.00 FEET, AN ARC LENGTH OF 564.66 FEET, A CHORD BEARING OF S03°34'47"E AND A CHORD DISTANCE OF 559.46 FEET; THENCE S09°54'02"W, A DISTANCE OF 52.41 FEET; THENCE ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 1200.00 FEET, AN ARC LENGTH OF 211.14 FEET, A CHORD BEARING OF S04°51'36"W AND A CHORD DISTANCE OF 210.87 FEET; THENCE S00°10'51"E, A DISTANCE OF 129.65 FEET TO THE SOUTH LINE OF SAID NORTHWEST QUARTER; THENCE S87°57'58"E ON THE SOUTH LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 1161.81 FEET TO THE WEST LINE OF THE WICHITA VALLEY CENTER FLOOD CONTROL RIGHT OF WAY; THENCE N00°23'07"W ALONG SAID WEST RIGHT OF WAY LINE, A DISTANCE OF 876.65 FEET; THENCE CONTINUING ON SAID WEST RIGHT OF WAY LINE ON A CURVE TO THE LEFT, HAVING A RADIUS OF 1824.87 FEET, AN ARC LENGTH OF 902.63' FEET, A CHORD BEARING OF N14°33'51"W AND A CHORD DISTANCE OF 893.46 FEET; THENCE N28°35'51"W ON SAID WEST RIGHT OF WAY LINE, A DISTANCE OF 1065.06 FEET TO THE NORTH LINE OF SAID NORTHWEST QUARTER; THENCE N88°02'12"W ON THE NORTH LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 1289.79 FEET TO THE POINT OF BEGINNING

Legal Address: Currently unaddressed, but located southeast of the intersection of 93<sup>rd</sup> Street and Meridian Avenue, Valley Center, KS 67147

**SECTION 2.** Upon the taking effect of this Ordinance, the above zoning change shall be entered and shown on the Official Zoning Map(s) as previously adopted by reference and said map(s) is hereby reincorporated as a part of the Zoning Regulations as amended.

**SECTION 3.** This ordinance shall take effect and be in force from and after its passage, approval, and publication once in the official city newspaper.

**PASSED** by the Governing Body and signed by the Mayor of the City of Valley Center, Kansas, on this 21<sup>st</sup> day of November, 2023.

First Reading:	November 7, 2023
Second Reading:	November 21, 2023

(SEAL)

/s/

Louis Cicirello, Mayor

ATTEST:

/s/ \_\_\_\_\_  
Kristi Carrithers, City Clerk

**OLD BUSINESS**  
**RECOMMENDED ACTION**

**A. ORDINANCE 1399-23; RE-ZONE LAND SE OF 93<sup>RD</sup> ST AND MERIDIAN AVE.:**

Should Council choose to proceed,

**RECOMMENDED ACTION:**

Staff recommends approval of Ordinance 1399-23 which re-zones property southeast of the intersection of Meridian Ave and 93<sup>rd</sup> St. Based on the Planning and Zoning Board findings and recommendation we adopted them as our findings herein.

## **OLD BUSINESS**

### **B. ORDINANCE 1400-23; RE-ZONE LAND SE OF 85<sup>TH</sup> AND RIDGE RD.:**

City Administrator Clark will present for 2<sup>nd</sup> reading, Ordinance No. 1400-23, which rezones property from RR-1 (suburban residential district) to A-1 (agricultural district). The Valley Center Planning and Zoning Board approved this request at the October 25, 2023, meeting.

- Staff Report
- Ordinance 1400-23
-



**Date:** October 18, 2023

**Present Zoning:** RR-1 (Suburban Residential District)

**Proposed Zoning:** A-1 (Agricultural District)

**Rezoning Application Case Number:** RZ-2023-06

**Applicant:** David Leeker, Leeker Real Estate Partnership, LP, and Steven and Sherryl Simon

**Property Address:** Currently unaddressed, but located southeast of the intersection of Ridge Road and 85<sup>th</sup> St. (in between 85<sup>th</sup> St. and 77<sup>th</sup> St.), Valley Center, KS 67147 (outlined in red below)



**Applicants' Reasons for Rezoning:** The applicants are requesting a rezoning from RR-1 to A-1 in preparation for the submission of a special use application in the near future. If the rezoning is approved by the Planning and Zoning Board and City Council, the applicants will submit a special use application to allow for the construction of a mineral extraction (sand pit) operation on the subject property. Mineral extraction is classified as a special use on A-1 zoned property. The special use application is required to be approved by both the Planning and Zoning Board and City Council.

**Review Criteria for a Zoning Amendment per 17.11.01.H (criteria in *italics*)**

- 1. What is the character of the subject property and the surrounding neighborhood in relation to existing uses and their condition?*

The subject property is currently used for agricultural purposes. This property is located in a primarily rural residential area, with single-family houses, farms, and agricultural fields. There are both paved and gravel roads in the surrounding area.

- 2. What is the current zoning of the subject property and that of the surrounding neighborhood in relationship to the requested change?*

The current zoning of the subject property is RR-1 (Suburban Residential District). The surrounding zoning and land uses are as follows:

- North: RR (Sedgwick Co. jurisdiction, Rural Residential District)
- South: RR (Sedgwick Co. jurisdiction, Rural Residential District)
- East: RR (Sedgwick Co. jurisdiction, Rural Residential District)
- West: RR (Sedgwick Co. jurisdiction, Rural Residential District)/GC (Sedgwick Co. jurisdiction, General Commercial District)

- 3. Is the length of time that the subject property has remained undeveloped or vacant as zoned a factor in the consideration?*

No

- 4. Would the request correct an error in the application of these regulations?*

No

- 5. Is the request caused by changed or changing conditions in the area of the subject property and, if so, what is the nature and significance of such changed or changing conditions?*

The rezoning request is the direct result of the applicants' plan to construct a mineral extraction operation on the subject property. Before this operation can start, the property needs to be zoned correctly to allow for a subsequent special use application to be submitted to the City for review/approval. Mineral extraction is an allowed special use activity on A-1 zoned property.

- 6. Do adequate sewage disposal and water supply and all other necessary public facilities including street access exist or can they be provided to serve the uses that would be permitted on the subject property?*

Currently, public water and sewer services are not available to the subject property. Street access does exist to the area. Public water and sewer services would not be required as part of the proposed mineral extraction operation. Again, should this rezoning be approved and a special use application submitted, the applicants will be required to submit a site plan showing how the subject property will be safely accessed during the mineral extraction operation period.

7. *Would the subject property need to be platted or replatted or in lieu of dedications made for rights-of-way, easements, and access control or building setback lines?*

No

8. *Would a screening plan be necessary for existing and/or potential uses of the subject property?*

A screening plan will be required as part of the future special use application.

9. *Is there suitable vacant land or buildings available or not available for development that currently has the same zoning?*

The extraction of minerals, including sand, must take place where the resources exist. The subject property has been identified as an area that contains available sand and could be extracted by professional excavating companies.

10. *If the request is for business or industrial uses, are such uses needed to provide more services or employment opportunities?*

While the request is not to rezone this area to a commercial or industrial designation, the requested A-1 designation will allow for a special use application to be submitted which, if approved, will allow for the construction of a new sand pit. This new sand pit would provide a new source of this material that is needed in the local/regional construction industry and, possibly, provide new employment opportunities to the surrounding area.

11. *Is the subject property suitable for the uses in the current zoning to which it has been restricted?*

In its current zoning of RR-1, the subject property has the following permitted uses:

- Single-family detached dwellings, modular, and residential-design manufactured homes and group homes as defined in Section 17.02.09
- Religious Institution (see Section 17.02.09 for definition)
- Golf courses, including accessory clubhouses, but not driving ranges and miniature golf courses operated for commercial purposes
- Existing Airports

12. *To what extent would the removal of the restrictions, i.e., the approval of the zoning request detrimentally affect other property in the neighborhood?*

The rezoning request should not have a negative impact on the surrounding properties. The permitted uses on A-1 zoned property include the following:

- Single-family detached dwellings, modulars, and residential-design manufactured homes
- Religious Institution
- Wind Energy Conversion Systems (subject to approval by the City's Board of Zoning Appeals)
- Golf courses, including accessory clubhouses, but not driving ranges and miniature golf courses operated for commercial purposes

Even if the future special use application is not approved, the permitted uses should not have a negative impact on the surrounding property owners. Religious institutions and golf courses would be required to go through the site plan review process with the City Staff Review Team and Planning and Zoning Board before any construction could commence on said facilities. The continuance of agricultural activities on the subject property will not be detrimental to the surrounding property owners.

13. *Would the request be consistent with the purpose of the zoning district classification and the intent and purpose of these regulations?*

Yes

14. *Is the request in conformance with the Comprehensive Plan and does it further enhance the implementation of the Plan?*

The subject property, along with a larger surrounding area, was added to the City's designated Urban Growth Area/Area of Influence with Sedgwick County and the Future Land Use Map (part of the City's Comprehensive Plan) in 2020. The recent annexation of the subject property into Valley Center shows that the City is growing in this area and desires to see it developed.

15. *What is the nature of the support or opposition of the request?*

- City staff support this rezoning request. The standard public notice was published in *The Ark Valley News* and notices were sent out to surrounding property owners within 1,000 feet of the subject property. Five responses have been received as of the date of this report and are all opposed to this rezoning request due to its connection with the future sand pit special use application. One written response has been received and is attached to this staff report.
- Other public comments in support or opposition will not be known until the public hearing. All written responses received after the agenda packet is officially published will be given to each member of the Planning and Zoning Board prior to the start of the October 25, 2023 board meeting.

16. *Is there any information or are there recommendations on this request available from professional persons or persons with related expertise which would be helpful in its evaluation?*

No

17. *By comparison, does the relative gain to the public health, safety and general welfare outweigh the loss in value or the hardship imposed upon the applicant by not approving the request?*

No, the approval of this rezoning application will not negatively impact the public health, safety, and general welfare of the surrounding property owners. The potential impacts of the proposed sand pit will be considered during the review of the special use application. Approval of the rezoning application does **not** mean the special use application for the proposed sand pit will be approved.

**City staff recommend approval of this rezoning application.**

CONCEPTUAL  
**DEVELOPMENT PLAN**  
**NORTH RIDGE ESTATES**

85TH STREET NORTH

OFFSITE DRAINAGE TO BE  
DIVERTED AROUND SITE

6'-8' TALL BERMS TO REMAIN

Residential Development Notes

- 280 lots
- 12,600 sq. ft. average lot area
- This development plan depicts one re-development option that can be used. Final development plan may vary, based on industry standards and City of Valley Center regulations at that time.
- Potential municipal water wells may be located somewhere on this property.

RIDGE ROAD

RES

BOAT RAMP

77TH STREET NORTH

6'-8' TALL BERMS TO REMAIN

63RD STREET WEST



SCALE: 1" = 400'

OCTOBER 30, 2023



**BAUGHMAN COMPANY**  
315 Ellis St. Wichita, KS 67211 316-262-7271  
BaughmanCo.com



## Adjacent Property Values Analysis

<b>Property Address/Tax Class</b>	7759 N. Tyler Rd., Valley Center, KS 67147/Farm Homesite
<b>Distance to Sand Pit Property</b>	76 feet
<b>2014 Appraised Property Value</b>	\$141,330
<b>2023 Appraised Property Value</b>	\$169,870
<b>Change in Valuation</b>	<b>+\$28,540 (+17%)</b>

<b>Property Address/Tax Class</b>	5256 N. Hoover Rd., Wichita, KS 67205/Residential
<b>Distance to Sand Pit Property</b>	65 feet
<b>2014 Appraised Property Value</b>	\$80,500
<b>2023 Appraised Property Value</b>	\$121,800
<b>Change in Valuation</b>	<b>+\$41,300 (+34%)</b>

<b>Property Address/Tax Class</b>	6415 W. 53 <sup>rd</sup> St., Wichita, KS 67205/Residential
<b>Distance to Sand Pit Property</b>	0 feet
<b>2014 Appraised Property Value</b>	\$171,000
<b>2023 Appraised Property Value</b>	\$226,900
<b>Change in Valuation</b>	<b>+\$55,900 (+25%)</b>

<b>Property Address/Tax Class</b>	7500 W. Hidden Acres St., Maize, KS 67101/Residential
<b>Distance to Sand Pit Property</b>	0 feet
<b>2014 Appraised Property Value</b>	\$529,860
<b>2023 Appraised Property Value</b>	\$967,600
<b>Change in Valuation</b>	<b>+\$437,740 (+45%)</b>

<b>Property Address/Tax Class</b>	6017 N. Ridge Rd., Maize, KS 67101/Farm Homesite
<b>Distance to Sand Pit Property</b>	0 feet
<b>2014 Appraised Property Value</b>	\$70,310
<b>2023 Appraised Property Value</b>	\$83,170
<b>Change in Valuation</b>	<b>+\$12,860 (+15%)</b>

<b>Property Address/Tax Class</b>	6049 N. Ridge Rd., Maize, KS 67101/Farm Homesite
<b>Distance to Sand Pit Property</b>	0 feet
<b>2014 Appraised Property Value</b>	\$105,610
<b>2023 Appraised Property Value</b>	\$141,950
<b>Change in Valuation</b>	<b>+\$36,340 (+26%)</b>

<b>Property Address/Tax Class</b>	7535 W. 61 <sup>st</sup> St. N., Maize, KS 67101/Residential
<b>Distance to Sand Pit Property</b>	0 feet
<b>2014 Appraised Property Value</b>	\$11,300
<b>2023 Appraised Property Value</b>	\$573,180
<b>Change in Valuation</b>	<b>+\$561,880 (+98%)<sup>1</sup></b>

<sup>1</sup> A single-family house was constructed on this property in 2017-2018.

## Maps of Adjacent Sand Pit Properties

- Sand pit properties are outlined/highlighted in red
- Adjacent residential properties are outlined in black
- Aerial screenshots generated on Sedgwick County GIS map (2021 aerial data)







**ORDINANCE NO. 1400-23**

**AN ORDINANCE CHANGING THE ZONING DISTRICT  
CLASSIFICATION OF CERTAIN PROPERTY LOCATED IN THE CITY  
OF VALLEY CENTER, KANSAS, UNDER THE AUTHORITY GRANTED  
BY THE ZONING REGULATIONS OF THE CITY.**

**NOW THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE  
CITY OF VALLEY CENTER, KANSAS:**

**SECTION 1.** Having received a recommendation from the Valley Center City Planning and Zoning Board on Case No. RZ-2023-06, and proper notice having been given and hearing held as provided by law and under authority and subject to the provisions of the amended Zoning Regulations of the City as approved by Ordinance No. 1279-14, the zoning district classification of the property legally described herein is changed as follows:

Change of zoning district classification from RR-1 (Suburban Residential District) to A-1 (Agricultural District).

Legal Description: The West Half of the Northwest Quarter of Section 34, Township 25 South, Range 1 West of the 6<sup>th</sup> P.M., Sedgwick County, Kansas; TOGETHER with the East Half of the Northwest Quarter of Section 34, Township 25 South, Range 1 West of the 6<sup>th</sup> P.M., Sedgwick County, Kansas; TOGETHER with the Southwest Quarter of Section 34, Township 25 South, Range 1 West of the 6<sup>th</sup> P.M., Sedgwick County, Kansas, EXCEPT a tract described as beginning at the Southwest corner of the Southwest Quarter of said Section; thence East 800 feet; thence North 545 feet; thence West 800 feet to the West line of Section 34; thence South 545 feet to the point of beginning.

Legal Address: Currently unaddressed, but located southeast of the intersection of 85<sup>th</sup> Street and Ridge Road, Valley Center, KS 67147

**SECTION 2.** Upon the taking effect of this Ordinance, the above zoning change shall be entered and shown on the Official Zoning Map(s) as previously adopted by reference and said map(s) is hereby reincorporated as a part of the Zoning Regulations as amended.

**SECTION 3.** This ordinance shall take effect and be in force from and after its passage, approval, and publication once in the official city newspaper.

**PASSED** by the Governing Body and signed by the Mayor of the City of Valley Center, Kansas, on this 21<sup>st</sup> day of November, 2023.

First Reading: November 7, 2023  
Second Reading: November 21, 2023

(SEAL)

/s/ \_\_\_\_\_  
Louis Cicirello, Mayor

ATTEST:

/s/ \_\_\_\_\_  
Kristi Carrithers, City Clerk

**OLD BUSINESS**

**RECOMMENDED ACTION**

**B. ORDINANCE 1400-23; RE-ZONE LAND SE OF 85<sup>TH</sup> AND RIDGE RD.:**

Should Council choose to proceed,

**RECOMMENDED ACTION:**

Staff recommends approval of Ordinance 1400-23, which re-zones land southeast of the intersection of Ridge Road and 85<sup>th</sup>. St. Based on the Planning and Zoning Board findings and recommendation we adopted them as our findings herein. In addition, we adopt as our findings the statements put forth by City Administrator Clark as supportive of the decision to rezone this land.

## **NEW BUSINESS**

### **A. DAR-WREATHS ACROSS AMERICA:**

The city received a request from the Daughters of the American Revolution to hold a ceremony honoring those veterans buried in the Valley Center cemetery on December 16<sup>th</sup> at 11:00am. They are also requesting a donation to purchase wreaths. The city has donated \$300.00-\$400.00 in past years.

- Letter of Request from the Little Arkansas DAR



Little Arkansas Chapter c/o Pamela Brillhart 7101 W 49<sup>th</sup> St N, Wichita, KS 67205-9170  
LittleArkansasChapterDAR@gmail.com

November 15<sup>th</sup>, 2023

City of Valley Center Kansas  
City Clerk  
121 S Meridian  
Valley Center, KS 67147

Dear Mayor and City Council,

The Little Arkansas Chapter, NSDAR honors each December the veterans buried in several cemeteries with a live Maine balsam Remembrance Wreath on their graves. With your permission again this year, we will hold our ceremony in the Valley Center cemetery on December 16<sup>th</sup> at 11am to correspond with the ceremony at Arlington National Cemetery in Washington, D.C.

Your donations have helped us purchase these Remembrance Wreaths in the past. Each wreath this year is \$17.00. There are approximately 1,550 veterans' graves in our 5 sponsored cemeteries.

The Little Arkansas Chapter carries on the belief that a Veteran is not yet deceased if their name is still spoken. Each year, the Scouts help lay the wreaths and say each Veterans name to honor them. Family members are encouraged to honor their Veterans with grave specific wreaths also.

Thank you for being a part of this community project. Your donation for wreaths is greatly appreciated. Please make checks payable to Little Arkansas Chapter and mail them no later than November 25<sup>th</sup> to:

7101 W 49<sup>th</sup> St N  
Wichita, KS 67205-9170

Thank you very much,

*Pamela Brillhart*

Pamela Brillhart, Service to Veterans Wreaths Across America Chair

**NEW BUSINESS**  
**RECOMMENDED ACTION**

**A. DAR-WREATHS ACROSS AMERICA**

Should Council choose to proceed

**RECOMMENDED ACTION**

Staff recommends motion to approve donation to the DAR for the wreaths across America program in the amount of \$\_\_\_\_\_ and allow a ceremony to be held on December 16<sup>th</sup> at 11:00am.

## **NEW BUSINESS**

### **B. FROM THE GROUND UP:**

Robin Scriven, with the non-profit organization “From the Gound Up” will be present to answer questions and request support. The organization provides for children and families in the Valley Center school district. They plan to serve 80 families this Christmas.

- Organization information letter

# From the Ground Up Nonprofit

A nonprofit focused on supporting the families of Valley Center

PO Box 31  
Valley Center, Ks, 67147

fromthegroundupvc.com

To Whom It May Concern,

I am writing to you today to tell you more about our nonprofit in hopes of receiving a donation to help fund one of our community projects. From the Ground Up is located in the town of Valley Center Kansas and serves over 1,000 people during the year through a variety of projects. Declared a 501(c)(3) in 2020, this nonprofit was started when the local school had a need for immediate access to clothing during the school day. Community members stepped up and started the Hornets' Hanger clothing closet to fill that need. The closet provides anyone in the community with gently used clothing, coats and shoes of all sizes at no cost anytime during the year.

In order to open the clothing closet to the community the founding team put together a Back-to-School Fair that has now become an annual event. Typically held on the first Saturday in August, families are able to shop for clothing, receive haircuts, sports physicals, school supplies as well as visit with other community agencies to find more programs to support their family. In 2022 a sensory hour was added to support families that have children with sensory processing disorder. In 2023 we had 400 children in attendance and all received everything free of charge.

Our largest project aims to help families provide gifts for their children during the holiday season who may not otherwise be able to afford them. The Hornets' Holidays program began in 2021 when a similar community project closed their doors. Families are able to request assistance for their children who are 18 and younger and enrolled in the Valley Center district. The families go through a verification process and the children are then anonymously matched with generous community members willing to purchase gifts for the children in a process similar to a virtual angel tree.

On the second Saturday in December, families are able to pick up their gifts, shop the clothing closet, have their gifts wrapped by our volunteers and go through our Stuff-a-Sock area to put together a stocking for each child. When they leave, each family is also given a gift certificate for groceries at the local grocery store. In 2022 the project served 185 kids. At the close of 2023 signup there were 269 children requesting assistance for the holiday season.

We appreciate you taking the time to learn more about us and our heart for our community. We truly couldn't do it without generous grants, funding, and gifts from people like you. If you have any questions please don't hesitate to reach out.

Sarah Warren  
From the Ground Up Nonprofit  
President

**NEW BUSINESS**  
**RECOMMENDED ACTION**

**B. FROM THE GROUND UP:**

Should Council choose to proceed

**RECOMMENDED ACTION**

**Staff recommends motion to approve donation to “From the Ground Up” program in the amount of \$\_\_\_\_\_**

**NEW BUSINESS**

**C. WASTEWATER TREATMENT PLANT AERATION BASIN STUDY:**

Rustin Lingbeek, SEH engineer presented the final findings and report from the Wastewater Treatment Plant Aeration Basin Study. Council is requested to accept and file the study.

- Study



Building a Better World  
for All of Us®

## TECHNICAL MEMORANDUM

TO: Wade Gaylord, Utilities Manager City of Valley Center

FROM: Rustin Lingbeek, PE  
Brendan Wolohan, PE

DATE: November 15, 2022

RE: WWTF Aeration Evaluation Technical Memorandum  
SEH No. VALCT 167714 4.00

### BACKGROUND

The Valley Center Wastewater Treatment Facility (WWTF) operates an Orbal® style concentric loop configuration oxidation ditch utilizing disc rotor aeration and mixing equipment. The oxidation ditch was originally constructed in 1979, and the disc rotor aeration equipment is aging and in need of replacement. One section of the disc rotor has been removed due to the bearing wear and limited ability to repair. This study evaluates options for replacing the aging aeration equipment with disc rotors, alternative aeration equipment that is suitable for retrofit applications, as well as construction of a new oxidation ditch and associated aeration equipment.

Figure 1A: Orbal Oxidation Ditch with Disc Aerators



Engineers | Architects | Planners | Scientists

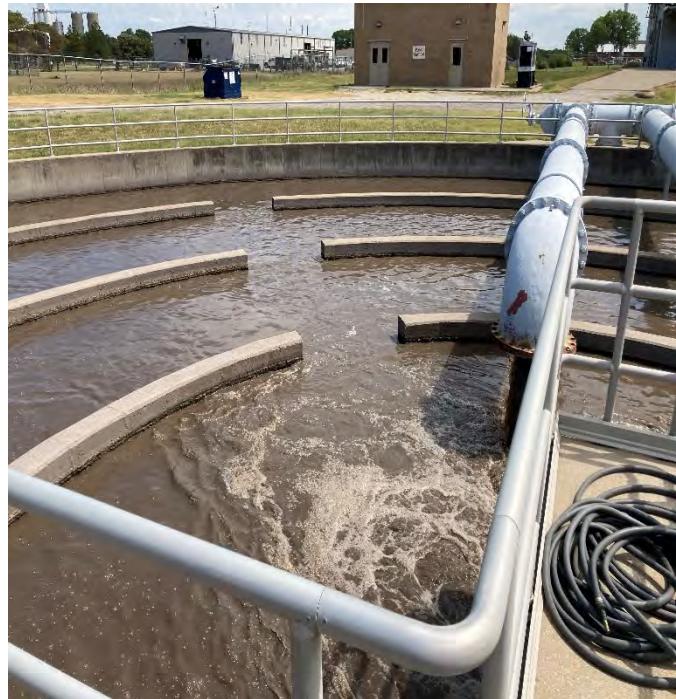
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Figure 1B: Ex. Feed Lines and Notches



## CURRENT CONDITIONS

The City provided SEH with influent and effluent wastewater flow and concentration data for the Valley Center WWTF months of January 2019 through May 2022. The wastewater characteristics were based on monthly averages of the composite samples that were reported. In evaluating the current conditions of the WWTF, the annual average and max month flow rates and organic loadings were calculated based on the data provided for each month. The current flows, loadings, and concentrations are summarized in Table 1.

Table 1: Current Wastewater Conditions

Characteristic	Annual Average <sup>A</sup>	Max Month <sup>B</sup>	Capacity <sup>C</sup>	Units
Wastewater Flow	0.372	0.471	0.700	MGD
Biochemical Oxygen Demand (BOD)	713.4	1,446	1,460	lb/day
	230.0	368.0	250	mg/L
Total Suspended Solids (TSS)	422.2	1,120	1,360	lb/day
	136.1	285.0	233	mg/L
Total Kjeldahl Nitrogen (TKN)	169.2	310.5	--	lb/day
	54.5	79.0	--	mg/L
Total Phosphorus (TP)	20.2	34.1	44	lb/day
	6.51	8.68	7.5	mg/L

- A. Corresponds to the average of the yearly averages from 2019-2022.
- B. Corresponds to the absolute maximum of the monthly average characteristics.
- C. Plant capacity values came from basis of design sheet from most recent plant improvements project drawings.

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Currently the City does not have a tremendous amount of “wet industry” and is primarily residential flows. This creates a very wide range of incoming wastewater flow throughout the course of the day. This is typical for large residential areas and flows are typically low overnight.

The current aeration system was visually reviewed to determine its condition based on limited scoping. The current oxidation ditch cannot be isolated or drained without significant pumping or bypassing due to the “notches”, as seen in Figure 1. The aeration basin has had notches cut into the wall sections allowing the structure no isolation, and essentially it is one bioreactor. This does not allow draining for maintenance without taking the entire structure offline.

It was anticipated that slide gates could be installed over these notches to allow maintenance to individual trains. The preliminary estimated total construction cost of installing slide gates in these notches is \$106,000. After speaking with wastewater staff there appears to be no other means of diverting flow as the piping and valves were rendered inoperable after the last rehab project when the notches were cut, even though they were not removed. If this option was pursued, bypass pumps would need to be on standby to allow pumping all flow from one train to another.

Upon review it was noted that the structure is generally in very good structural condition above the water level. The areas near the bearing plates have become deteriorated and would need rehabilitation for upgrades. Figure 2 shows the general condition of the concrete in the existing oxidation ditch.

Figure 2: Current Oxidation Ditch

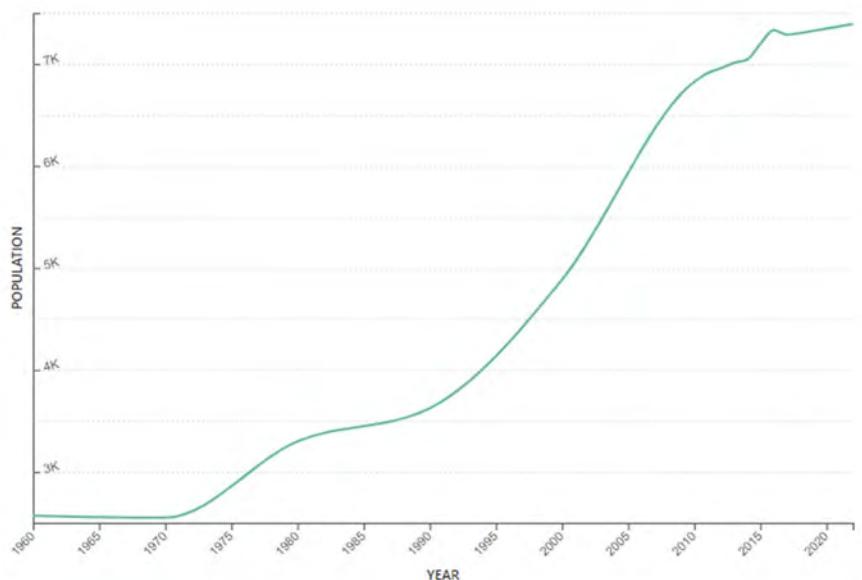


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## POPULATION PROJECTIONS

2045 is the assumed design year for the purpose of evaluating aeration systems in this study. According to a 2021 US Census, Valley Center, Kansas had an estimated population of 7,419. Assuming Valley Center will continue to grow at a similar rate as years prior, and no large industries will be added to the sanitary sewer system, the 2045 projected population assumed for the purposes of evaluating aeration alternatives is 9,500. This also considers the anticipated residential subdivision additions currently slated for the next two years. Figure 3, from *World Population Review*, shows the change in population from 1960 to 2020. The percent change in population from 2021 to the projection year of 2045 was then used to estimate design wastewater conditions used in preliminary aeration equipment sizing.

Figure 3: Valley Center, Kansas Population



Source: Valley Center, Kansas Population 2022 (Demographics, Maps, Graphs) ([worldpopulationreview.com](http://worldpopulationreview.com))

## PRELIMINAY AERATION SIZING CONDITIONS

The 2045 projected population of 9,500 was used to calculate the future aeration system design conditions. The current flows and loadings per capita were assigned to the projected population to calculate the future wastewater characteristics. The design wastewater conditions used for the evaluation of aeration system alternatives are summarized in Table 2.

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Table 2: 2045 aeration system preliminary sizing conditions

Characteristic	Annual Average <sup>A</sup>	Max Month <sup>B</sup>	Units
Wastewater Flow	0.476	0.700	MGD
Biochemical Oxygen Demand (BOD)	913.5	1,852	lb/day
	229.97	317	mg/L
Total Suspended Solids (TSS)	540.6	1,434	lb/day
	136.1	245	mg/L
Total Kjeldahl Nitrogen (TKN)	216.6	397.5	lb/day
	54.5	68.0	mg/L
Total Phosphorus (TP)	25.86	43.68	lb/day
	6.51	7.48	mg/L

A. Corresponds to the average of the yearly averages from January 2019- May 2022.

B. Corresponds to the absolute maximum of the reported characteristics.

## AERATION SYSTEM IMPROVEMENT ALTERNATIVES

Below are summaries of the aeration equipment alternatives which represent solutions that could be pursued further to address the current systems aging equipment. Each alternative is described along with an estimated cost and a brief summary of the advantages and disadvantages.

The Association of the Advancement of Cost Engineering International (AACE) prepared guidelines for many classifications of cost estimates in the industry. A class 5 cost estimate is known as a rough order of magnitude estimate. It is used for the initial screening of projects for capital expenditure planning. Class 5 estimates are drawn from incomplete information which amounts to about 2% of project definition and is common practice for reports such as this evaluation technical memorandum. The cost estimate includes contractor's overhead, profit and labor estimates for installation as well as sales tax where applicable. The below opinion of probable cost tables summarizes the cost estimates for constructing the aeration improvements in 2022 dollars. The cost range depicted at the bottom of the table aligns with the AACE class 5 cost estimate accuracy rage given the level of information known at the time the cost estimate was prepared.

### Option 1 – Update Existing Oxidation Ditches

This option involves retrofitting the existing concentric loop style oxidation ditch with replacement aeration and mixing equipment to meet the projected future demands of the WWTF. Option 1 includes three sub-options, including replacing the equipment in kind, with surface-mounted fine bubble mechanical aeration and with submerged air jet style equipment.

#### Option 1a – Evoqua Orbital® Equipment (In kind replacement)

This first scenario of retrofitting the existing oxidation ditch would be to remove and replace the existing disc rotor aeration equipment in kind, with equipment designed for the projected wastewater characteristics. The two existing 50-HP motors and disc rotor assemblies would be removed and replaced with two 75-HP disc rotor assemblies and associated equipment. Each new disc rotor assembly will span four channels as currently configured. The electrical controls, variable frequency drives (VFD's) and process instrumentation would be replaced with new equipment to prolong its useful life and utilize energy efficiency.

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Figure 4: Evoqua OX™ Disc Aerators



***Capital Cost Estimate:***

Table 3: Preliminary engineers' opinion of probable cost estimate for Orbital® disc aeration equipment

Description	Opinion of Cost
Aeration and Mixing Equipment	\$700,000
Contractors Overhead and Profit (15%)	\$110,000
Installation (35%)	\$250,000
Electrical	\$250,000
<b>Capital Cost Subtotal</b>	<b>\$1,310,000</b>
Mobilization (5%)	\$65,500
Engineering: planning, design, construction services (25%)	\$327,500
Contingency (25%)	\$327,500
<b>Capital Cost Total</b>	<b>\$2,030,500</b>
Estimated Accuracy Range (-20% to +50%)	\$1,630,000 \$3,050,000

Opinions of probable costs provided herein are made on the basis of SEH's experience and qualifications representing SEH's best judgment at the time of preparing this cost estimate. However, since SEH has no control of labor, materials, equipment or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions, SEH cannot and does not guarantee that proposals, bids or actual construction costs will not vary from opinions of probable costs prepared by SEH.

***Advantages***

- This is the same type of technology that the facility has been operating since its construction.
- It has been proven to be effective in complying with permit limits.
- Minimal routine maintenance cost and long motor service life (manufacturer claims past the 20-year design period).
- Utilize existing aeration basin structure.

***Disadvantages***

- If one of the two motors fail, the entire length of discs becomes offline.

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- There have been no notable improvements in the disc rotor technology
- Requires weekly maintenance checks.
- Structural improvements to bearing locations needed.

**Option 1b – Aeration Industries Aire-O<sub>2</sub> Triton®**

A second potential solution for retrofitting the existing oxidation ditch would be to install Aeration Industries' surface mounted fine bubble mechanical aeration and mixing equipment in place of the existing disc rotor equipment. The proposed equipment consists of a 4 HP regenerative blower supplying air to a 20 HP mixer with hollow shaft and propeller to achieve oxygen transfer. Six of these units have been proposed by the equipment manufacturer, the inner two channels would receive one Triton® unit each where the outer three channels have two Triton® units each to maintain a dissolved oxygen concentration of 2 mg/L and provide sufficient mixing velocity to keep solids in suspension. A layout drawing provided by the manufacturer is attached to this memo.

The surface mounted, horizontal mixing equipment provides oxygen dispersion and directional control of each unit with no splashing. Each aerator/mixer allows for decoupling of mixing and aeration, which means the regenerative blower can be shut down and mixing can be provided for total nitrogen removal or to control dissolved oxygen set points. Thus, allowing a very energy efficient system with appropriate controls. Added benefit of surface mounted equipment is that all maintenance work is easily done from the walkway and does not require dewatering the basin for maintenance.

Figure 5: Aeration Industries Triton Aerators



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*Capital Cost Estimate:*

Table 4: Preliminary engineers' opinion of probable cost estimate for Aeration Industries equipment

Description	Opinion of Cost
Aeration and Mixing Equipment	\$620,000
Contractors Overhead and Profit (15%)	\$100,000
Installation (35%)	\$220,000
Electrical	\$220,000
<b>Capital Cost Subtotal</b>	<b>\$1,160,000</b>
Mobilization (5%)	\$58,000
Engineering: planning, design, construction services (25%)	\$290,000
Contingency (25%)	\$290,000
<b>Capital Cost Total</b>	<b>\$1,798,000</b>
Estimated Accuracy Range (-20% to +50%)	\$1,440,000 \$2,700,000

Opinions of probable costs provided herein are made on the basis of SEH's experience and qualifications representing SEH's best judgment at the time of preparing this cost estimate. However, since SEH has no control of labor, materials, equipment or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions, SEH cannot and does not guarantee that proposals, bids or actual construction costs will not vary from opinions of probable costs prepared by SEH.

*Advantages*

- Each Triton® unit is self-contained; there are no channel spanning drive shafts and if one unit is out of service, it does not affect operation of the other units.
- Fine bubble aeration with a mixing only option for biological nutrient removal.
- The units (including blowers and mixers) run on VFD's and can be turned down or off as needed by dissolved oxygen control set points to reduce electricity costs.
- Easy maintenance of components.

*Disadvantages*

- This is a newer technology to the operations staff and training will be required to learn how to operate and maintain the equipment.
- The water lubricated lower bearing at the propeller/shaft interface is designed to wear to protect the equipment components and is a wear item that requires replacement every 3-5 years.

**Option 1c – Landia Submersible Airjet Equipment**

Another potential solution to retrofit the existing oxidation ditch aeration equipment would be to install submersible AirJet equipment provided by Landia. WWTF staff had recommended looking at this type of equipment. The AirJet system is an economical approach to providing aeration and mixing in wastewater applications but has limited field installations. The system is widely known in sludge storage or aerobic digestion applications and has recently been implemented in oxidation ditch retrofit applications, especially when supplemental aeration is required or during emergency situations.

Throughout the process of preparing this aeration system evaluation, Landia has provided incomplete proposal information and untimely responses. The original proposal was presented as a trial operation by Landia, with options to provide more or different sizes if needed. Aeration calculations were provided to Landia requesting an updated proposal to meet the future aeration demand and this proposal has yet to be provided by Landia. It appears there has been limited nationwide installations and none in Kansas completed of this new technology. While this appears to be a potential option for the future of oxidation ditch retrofits, there is still more information required by Landia to be an appropriate option.

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The capital cost estimate summarized in Table 5 consists of the original proposal from Landia that appears to be short of the calculated aeration demand. Due to the incomplete information provided, the Landia AirJet system was not investigated further.

Figure 5: Landia Submersible AirJet Aerator



Submersible AirJet

***Capital Cost Estimate:***

Table 5: Preliminary engineers' opinion of probable cost estimate for Landia Airjet equipment

Description	Opinion of Cost
Aeration and Mixing Equipment	\$450,000
Contractors Overhead and Profit (15%)	\$70,000
Installation (35%)	\$160,000
Electrical	\$250,000
<b>Capital Cost Subtotal</b>	<b>\$930,000</b>
Mobilization (5%)	\$46,500
Engineering: planning, design, construction services (25%)	\$232,500
Contingency (25%)	\$232,500
<b>Capital Cost Total</b>	<b>\$1,441,500</b>
Estimated Accuracy Range (-20% to +50%)	\$1,160,000 \$2,170,000

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***Advantages***

- Low capital costs due to simple submersible chopper pump design.
- Ease of installation will reduce capital costs and provide easy access for maintenance.
- Maintenance items consistent with submersible chopper pumps.

***Disadvantages***

- Limited applications with long term success in oxidation ditch applications at the time of this evaluation.
- Untimely responses during the evaluation does not give confidence in customer support during implementation and operation of the system.
- Separate mixing equipment recommended to maintain minimum velocity during low loading periods operating on DO control.
- Trial and error process can be timely and expensive.
- Several other unknowns could surface.

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### Option 2 – Construct New Oxidation Ditches with Ovivo Carrousel System

The Orbital® oxidation ditch in Valley Center was originally constructed in 1979, with modifications made to the basin in 2007. Visually, the concrete appears to be in fair condition however the basin would be over 60 years old at the 2045 design year. With that in mind an alternative option to retrofitting the existing oxidation ditch with new aeration equipment would be to consider constructing two new oxidation ditches to replace the old system, allowing for redundancy. This option would provide an opportunity to have the aeration basins be at a similar age to the most recent facility improvements. For the sake of evaluating a new oxidation ditch system, Ovivo was contacted for a proposal to construct a new Carrousel oxidation ditch system. The new oxidation ditches would be installed in a separate location to the existing aeration basin to allow for operations to continue during the construction phase of the project.

Two parallel trains of oxidation ditches, each fitted with two 30 HP dual impeller aerators were proposed by Ovivo. Since the facility already has separate anaerobic and anoxic basins, the proposal consists of an aerobic zone only. (Most of these new installations have an anoxic zone built on to the new ditch to save on pumping cost.) Ovivo is offering a complete controls package with dissolved oxygen instrumentation for optimizing aeration efficiency on variable frequency drives to maintain dissolved oxygen setpoints.

Figure 6: Ovivo Carrousel Oxidation Ditch Aeration Equipment



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*Capital Cost Estimate:*

Table 6: Preliminary engineers' opinion of probable cost estimate for new oxidation ditches

Description	Opinion of Cost
Groundwater Dewatering	\$100,000
Excavation	\$100,000
Concrete	\$2,000,000
Carrousel Aeration and Mixing Equipment	\$870,000
Process Piping and Valves	\$280,000
Contractors Overhead and Profit (15%)	\$510,000
Installation (35%)	\$480,000
Electrical	\$480,000
<b>Capital Cost Subtotal</b>	<b>\$4,820,000</b>
Mobilization (5%)	\$241,000
Engineering: planning, design, construction services (25%)	\$1,205,000
Contingency (25%)	\$1,205,000
<b>Capital Cost Total</b>	<b>\$7,471,000</b>
Estimated Accuracy Range (-20% to +50%)	\$5,976,800
	\$11,206,500

Opinions of probable costs provided herein are made on the basis of SEH's experience and qualifications representing SEH's best judgment at the time of preparing this cost estimate. However, since SEH has no control of labor, materials, equipment or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions, SEH cannot and does not guarantee that proposals, bids or actual construction costs will not vary from opinions of probable costs prepared by SEH.

*Advantages*

- New concrete basins provide longer useful life than retrofitting the existing oxidation ditch.
- Parallel oxidation ditch configuration provides redundancy that is not currently provided with the existing Orbal® oxidation ditch system.
- 20 plus year life for aeration basins.
- Ease of maintenance.

*Disadvantages*

- High capital costs when compared to the retrofit options due to constructing new concrete basins.
- Internal recycle pumping required between existing anoxic zone and oxidation ditches, whereas the Carrousel system benefits from configuring the basin with anoxic zone nearby to prevent the need for pumping.

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*Net Present Value Cost Summary:*

A summary of the 20-year net present value costs incorporating annual maintenance, electricity, staffing and capital costs is presented in Table 7. This information is useful in evaluating the various options over the course of the 20-year equipment life period. Option 2 has the added benefit of providing new concrete basins, which would have an approximate structure life of at least 50 years, whereas the existing structure is toward the end of its useful life. Salvage value of the existing oxidation ditch was not taken into account in this analysis, however if considered this will likely bring option 2 net present value closer to the option 1 total net present value.

Table 7: Summary of 20-year net present value analysis of the aeration equipment replacement options

	Option 1			Option 2
	Evoqua (1a)	Aeration Industries (1b)	Landia (1c)	New Oxidation Ditches
Equipment costs	\$700,000	\$620,000	\$450,000	\$870,00
<b>Total Capital Costs</b>	<b>\$2,030,500</b>	<b>\$1,798,000</b>	<b>\$1,441,500</b>	<b>\$7,471,000</b>
<b>Estimated maintenance, \$/yr<sup>1</sup></b>	<b>\$1,000.00</b>	<b>\$2,558.80</b>	<b>\$1,500</b>	<b>\$1,500</b>
Electrical consumption, kW	111.86	90.00	91.12	88.00
<b>Estimated Electrical Cost, \$/yr<sup>2</sup></b>	<b>\$73,000.00</b>	<b>\$59,000.00</b>	<b>\$60,000.00</b>	<b>\$58,000.00</b>
Equipment Life (yrs)	20	20	20	20
Interest (percent)	4.0%	4.0%	4.0%	4.0%
Engineering Economy Weight (P/A)	13.6	13.6	13.6	13.6
<b>Construction Cost Estimate</b>	<b>\$2,030,000</b>	<b>\$1,798,000</b>	<b>\$1,441,500</b>	<b>\$7,471,000</b>
Present Worth Maintenance Cost	\$14,000	\$35,000	\$20,000	\$20,000
Present Worth Electrical Cost	\$994,000	\$800,000	\$810,000	\$782,000
Present Worth Staffing Cost <sup>3</sup>	\$2,000,000	\$1,500,000	\$1,000,000	\$1,500,000
2045 Salvage Value <sup>4</sup>	\$40,000	\$40,000	\$40,000	(\$1,200,000)
<b>Net Present Value</b>	<b>\$ 5,078,500</b>	<b>\$ 4,173,000</b>	<b>\$3,311,500</b>	<b>\$8,573,000</b>

Opinions of probable costs provided herein are made on the basis of SEH's experience and qualifications representing SEH's best judgment at the time of preparing this cost estimate. However, since SEH has no control of labor, materials, equipment or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions, SEH cannot and does not guarantee that proposals, bids or actual construction costs will not vary from opinions of probable costs prepared by SEH.

Notes:

1. Based on information provided by the equipment manufacturers.
2. Based on assumed \$0.08/kW-hr energy costs.
3. For the purposes of evaluating the different types of aeration equipment, the staffing costs were calculated based on an assumed staffing ratio based on equipment requirements and an assumed \$42/hr staffing cost. The staffing ratio estimates the approximate portion of time the aeration equipment requires for process control, maintenance, inspection, etc. per day. This is not meant to be an estimation of total staffing cost requirements for the WWTF.
4. Salvage value was estimated using depreciation calculation of the new oxidation ditches for Option 2 at the year 2045 based on engineers' opinion of probable cost estimates in this technical memorandum. In the design year of 2045, the existing concentric loop oxidation ditch will be approximately 66 years old, 16 years over the typical 50 year useful life of concrete structures. Therefore, a positive salvage value was calculated assuming that repairs will be required to the structure throughout the years above the 50 year estimated concrete structure life.

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## RECOMMENDATION

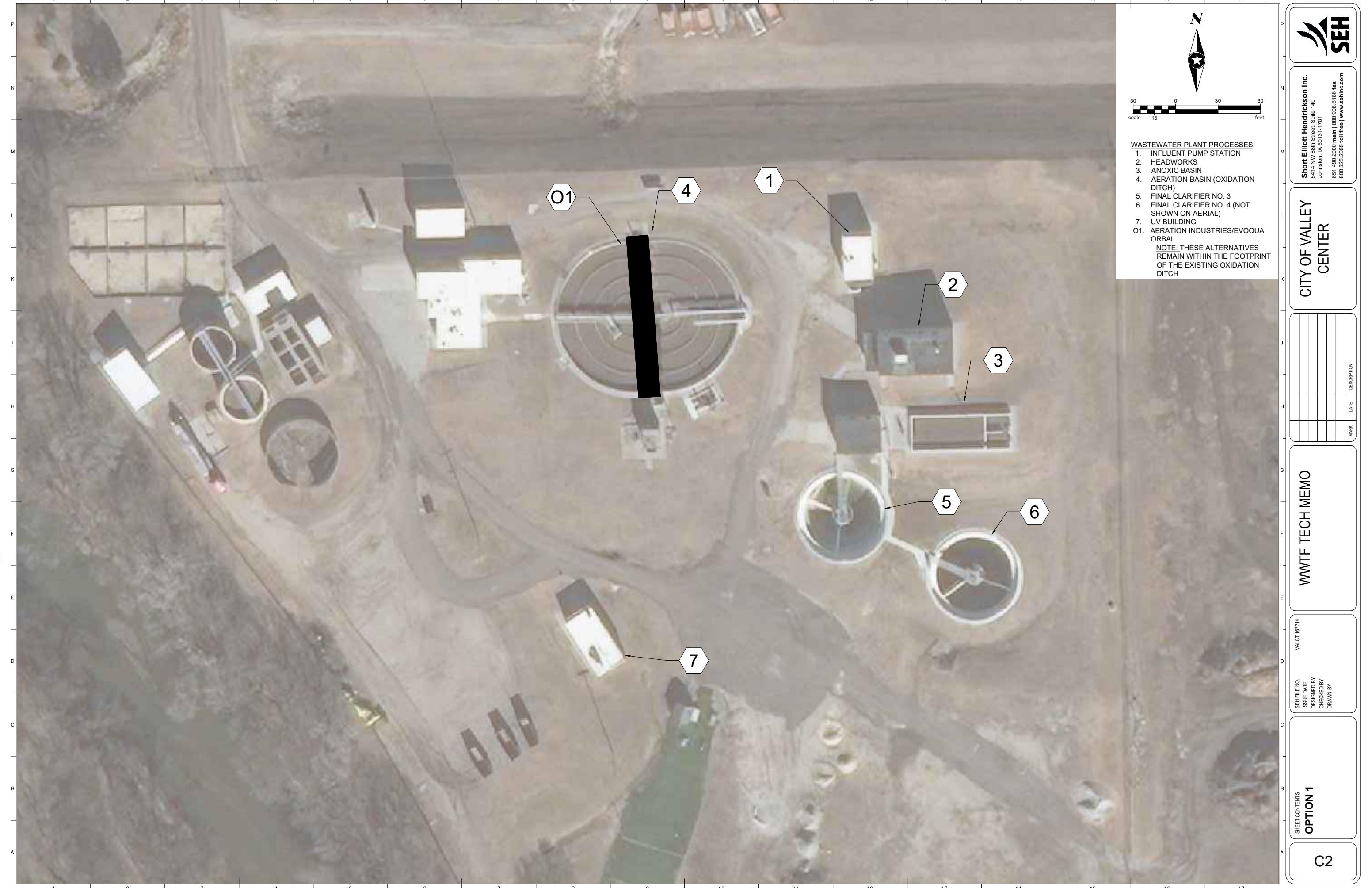
The options presented above provide solutions that all have distinctive advantages and disadvantages. Depending on when funds may be available and the priority of stakeholders, constructing new oxidation ditch structures will prolong the useful life of the facility but comes at a higher capital cost. The new oxidation ditch construction option does have the opportunity to be more energy efficient, by designing the structures to be incorporated with optimized conditions for energy efficient aeration equipment. It also allows for multiple basins for ease of operation and maintenance. The existing concentric loop configuration oxidation ditch and shallow water depth limits the options for aeration equipment retrofit. A deeper basin will provide more options for energy efficient equipment in the future. Furthermore, the construction of new oxidation ditch structures provides a higher salvage value at the 2045 design year compared to the retrofit options. The retrofit options utilizing the existing structure will exceed the structure's estimated 50-year useful life, typical of concrete structures at wastewater treatment facilities, and will likely require concrete repairs within the useful design life of the replacement aeration equipment.

Of the retrofit options, the Aeration Industries equipment provides the lowest 20-year net present value of the other options considered when not taking the Landia option into consideration, due to incomplete information provided. The Aeration Industries equipment provides the ability to control dissolved oxygen by reducing equipment speed and/ or turning individual units off during periods of low influent organic loading. Landia would appear to be the lowest net present value cost based on the limited information provided, however SEH has a difficult time recommending this equipment for the application based on the incomplete information provided during the process of preparing this aeration equipment evaluation and limited installations. If the City would like SEH to attempt to fully vet this equipment option, a substantial amount of time would need to be allowed.

bcw

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**WASTEWATER PLANT PROCESSES**

---

- 1. INFLUENT PUMP STATION
- 2. HEADWORKS
- 3. ANOXIC BASIN
- 4. AERATION BASIN (OXIDATION DITCH)
- 5. FINAL CLARIFIER NO. 3
- 6. FINAL CLARIFIER NO. 4 (NOT SHOWN ON AERIAL)
- 7. UV BUILDING
- 02. EVOQUA OVIVO

NOTE: THIS ALTERNATIVE REPLACES THE EXISTING OXIDATION DITCH

## CITY OF VALLEY CENTER

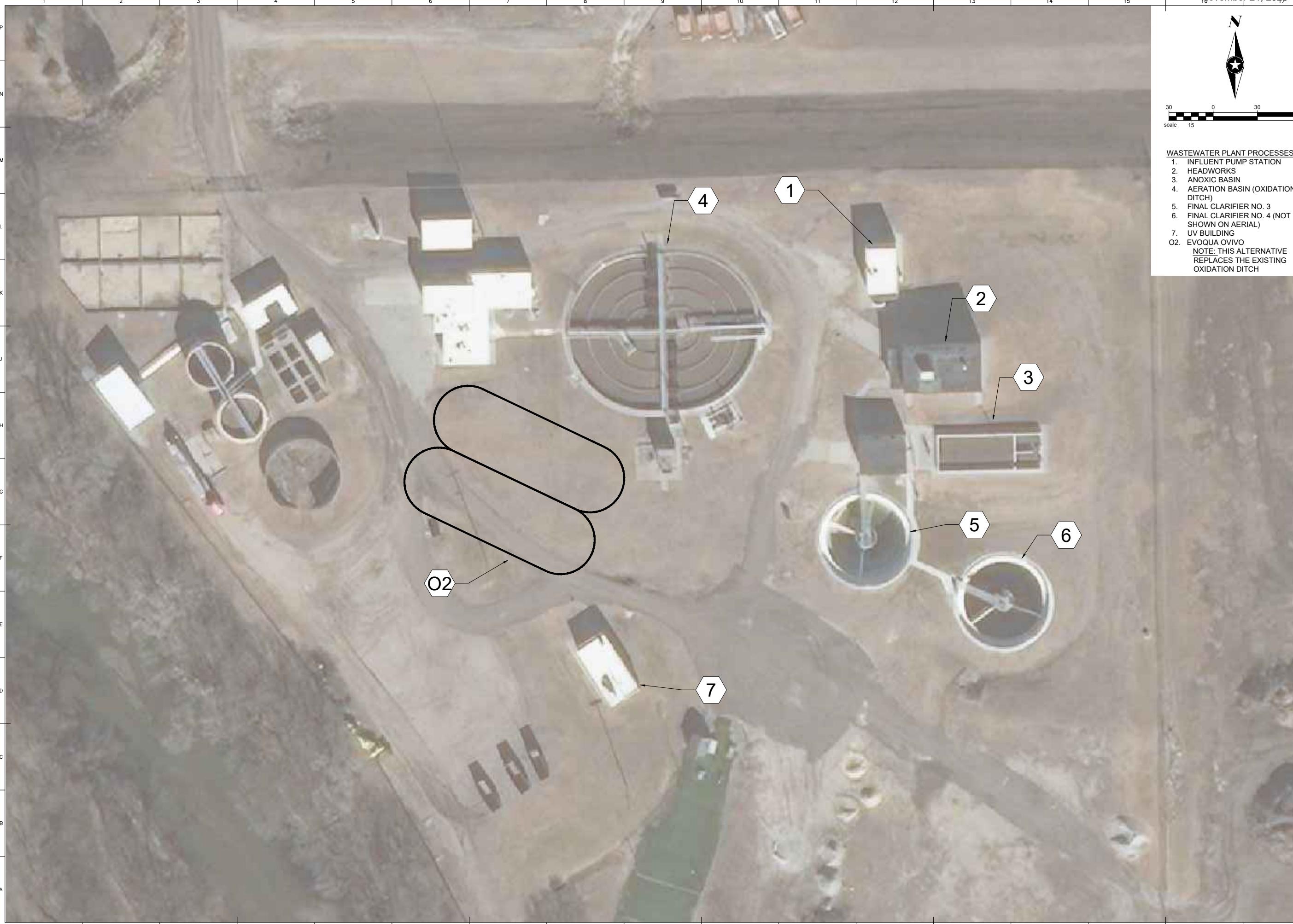
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WWTF TECH MEMO

SEARCH FILE NO. \_\_\_\_\_  
ISSUE DATE \_\_\_\_\_  
DESIGNED BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
DRAWN BY \_\_\_\_\_

## OPTION 3

C3





## THE ORBAL® SYSTEM FOR BIOLOGICAL TREATMENT

SIMULTANEOUS NITRIFICATION-DENITRIFICATION

**Envirex®**  
an evoqua brand



## THE ORBAL SYSTEM

The Orbital system was first introduced in 1968 and there are now over 800 installations. It is an important part of the Envirex® product line of Evoqua. The Orbital® system is a reliable solution for enhanced nutrient removal, Stormflow and energy management. It provides process flexibility to meet today's stringent effluent requirements.

## SERIES OPERATION ENABLES SIMULTANEOUS NITRIFICATION-DENITRIFICATION (SND)

The Orbital® system from Evoqua is an activated sludge process designed to address the nutrient and Stormflow issues of today. The Orbital system has been on the leading edge of implementing SND plant designs for over 50 years. With over 800 installations it has been proven to deliver results.

### NUTRIENT REMOVAL

The simultaneous nitrification-denitrification (SND) process is the backbone of the design. The Orbital system incorporates a unique concentric loop configuration that creates dedicated zones for specific treatment purposes. These treatment zones operate in series which is essential to the SND process. The volume split of the concentric loop configuration naturally applies the correct volume to oxygen input ratio required in the design of a SND plant.

The concentric loops also save on concrete and construction costs of the aerobic basin volume by using common wall construction. The SND design allows for the elimination of a dedicated anoxic zone, which saves further on construction costs.

### STORMFLOW

Operating tanks in series allows for diverting the Stormflow downstream of the first reactor, preventing clarifier washout of biomass and storing it in the first reactor of the system. This mode of operation has been proven effective in treating greater than seven times peak flow.

### SYSTEM DESIGN

The concentric loop configuration of a typical Orbital system operates in series. The unique design has channels varying in size with the outer channel having 50% of the volume. Influent and return activated sludge enter the outer channel which is operated under an oxygen deficit (anoxic) condition to promote simultaneous nitrification-denitrification.

By design, the aeration discs placed in the outer channel supply approximately 50% of the system's total oxygen requirement. The design ensures a constant oxygen deficit condition throughout this channel with the DO set-point below zero. The oxygen deficit environment of the outer channel delivers an overall denitrification performance rate of 80% without internal recycle. The majority of the system's nitrification takes place in the outer channel where the anoxic condition also drives denitrification.

The mixed liquor then flows hydraulically to the middle channel where DO conditions swing depending on daily load variation. Finally the mixed liquor flows to the inner channel where the DO is designed to operate at 2.0 mg/l. Final nitrification is completed in the inner channel (or oxygenation zone) in surplus oxygen conditions.

The center island of the Orbital system houses the effluent structure that maintains the water level throughout the channels of the basin. This structure can also serve the purpose of a clarifier splitter box.

### KEY BENEFITS OF ORBAL SYSTEMS

#### Biological Treatment

SND in the same zone results in 80% denitrification without the need for an internal recycle pump.

#### Eliminate Structures

Allows for elimination of a dedicated anoxic zone typically used in biological nutrient removal processes. This design saves the associated treatment footprint, concrete cost, mechanical mixers and operational energy cost for the mechanical mixer in the anoxic zone.

#### Energy Efficient

Operating a majority of the system volume at a strong oxygen deficit allows for much higher oxygen transfer efficiency in comparison with operating a system with a 2mg/l DO or greater throughout the process.

#### Process Adaptability/Flexibility

Adaptable to achieve lower TN or TP as regulations change. Typically, only minor mechanical or setpoint changes are required.

#### Stormflow Treatment Operation

In Stormflow treatment operation, solids are stored in the outer channels, reducing solids loading on clarifiers and preventing any loss of biological treatment during the storm event.

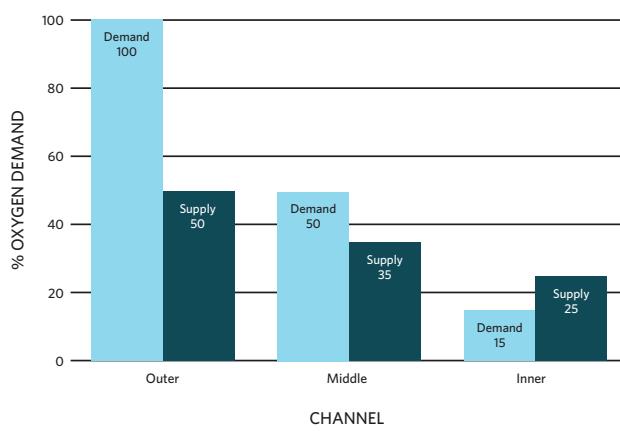
#### Process Knowledge

Evoqua process engineers have been designing SND biological treatment systems for more than 50 years meeting the most stringent effluent quality requirements.

## ORBAL® SYSTEM REQUIRES LESS OXYGEN

Oxygen is introduced at multiple points in each channel resulting in low intensity oxygen delivery and higher oxygen transfer efficiency. An important part of the process is operating the outer channel at an oxygen deficit. This deficit creates an environment where specific nitrifying bacteria thrive. The chart below shows how the oxygen supply does not match the demand in the first two channels which corresponds to a low DO. In the inner channel the supply is greater than the demand and results in a positive DO.

### SND OXYGEN DEMAND VS. SUPPLY



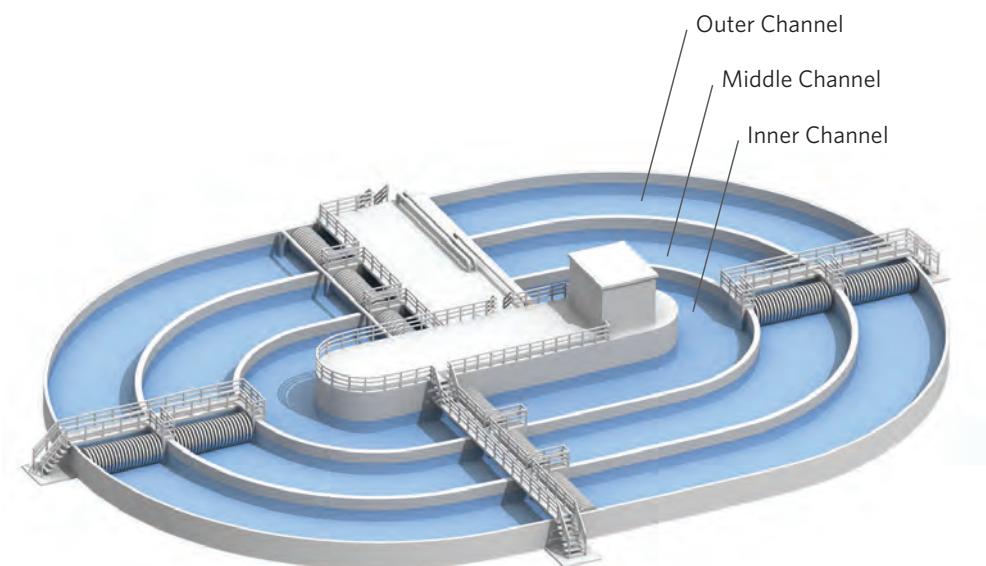
## PROCESS FLEXIBILITY

The Orbital system can be easily modified to meet a large variation of effluent limits. The chart below explains the typical configurations of the Orbital system. Typically only a simple process setpoint or mechanical change is needed to meet more stringent nitrogen or phosphorus effluent limits.

## EFFLUENT QUALITY

Typical effluent of an Orbital system provides  $BOD < 10 \text{ mg/l}$  and  $NH3-N < 1 \text{ mg/l}$ . Effluent quality can be further improved with the configuration of the Orbital system outlined below.

CONFIGURATION	EFFLUENT (MG/L)
2-channel Orbital	60% TN removal TN<15
3-channel Orbital	80% TN removal TN<10
3-channel Orbital w/ internal recycle	90% TN removal TN<5 TP<1
3-channel Orbital w/ internal recycle & Anaerobic zone	90% TN removal TN<5 TP<1
3-channel Orbital w/ internal recycle, Anaerobic zone & Post Anoxic zone	90% TN removal TN<5 TP<0.5



Orbital system including its unique Concentric Loop design

## WHAT DOES THE SND SYSTEM PROVIDE?

SND provides a highly efficient aeration process. It is efficient in several parameters.

- **Total tank volume.** The Orbital system counts the oxygen deficient zone as part of the total aerobic SRT. Conventional systems with a separate anoxic zone will not account for the anoxic zone as aerobic SRT and require additional tank volume. The Orbital system accounts for this volume because it is truly being aerated. Approximately 80% of the air is applied in such conditions.
- **Energy.** The SND in the Orbital system typically results in a 35% reduction in power over a conventional system due to oxygen recovery from the inherent denitrification process.
- **Alkalinity.** Approximately 50% of alkalinity consumed by the nitrification process is recovered. This helps control the pH level in the system and eliminates the need to add alkalinity for typical municipal wastewater plants.

## DESIGNS FOR TN LIMIT

Orbal® plants designed for TN removal will usually split the oxygen delivery equally across all three channels. Adding an internal recycle will increase denitrification from 80% to above 90%. Additional considerations and design features are offered to plants where carbon to nitrogen ratios is reduced due to primary clarification or industrial waste factors. For enhanced TN removal, an internal recycle pump is introduced to achieve effluent total nitrogen levels less than 5.0mg/l.

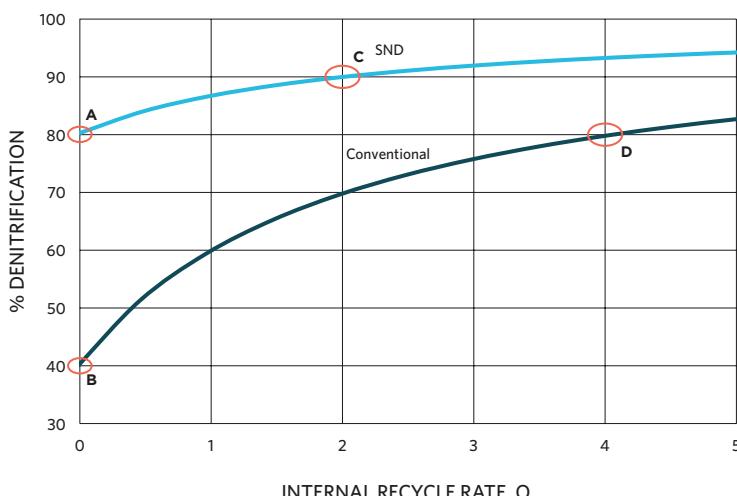
## DESIGNS FOR TP LIMIT

Orbal plants designed for biological phosphorus removal are set for a low oxygen delivery in the outer channel. Typically, 20% is applied to the outer channel with the remaining oxygen demand being satisfied in remaining channels. Envirex® Disc Aerators provide sufficient mixing and oxygen delivery in the outer channel without need for supplemental mixing.

## ORBAL SYSTEM INTERNAL RECYCLE PUMP DESIGN

Conventional plant designs rely entirely on an internal recycle pump for denitrification. The recycle pump for the Orbital system is a polishing step as SND takes place in the basin.

## RECYCLE PUMP ADVANTAGE



The Orbital system process achieves 80% denitrification without internal recycle (circle A) where a conventional plant will have 40-50% (circle B). The internal recycle pump is a polishing step for lower nitrogen limits. Adding a 2Q internal recycle will increase the denitrification to 90% (circle C) in the Orbital system, where as a 4Q recycle is typically used to achieve 80% denitrification (circle D) in a conventional plant.

The SND biological treatment system eliminates the need for a nitrate recycle pump compared to a conventional activated sludge process saving capital and energy costs.

## STORMFLOW TREATMENT OPERATING MODE

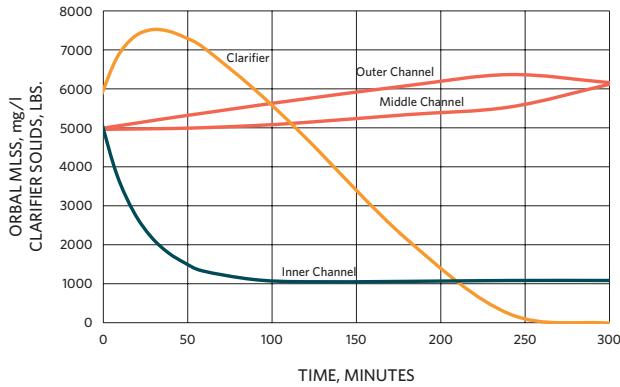
When the Orbital® system operates in Stormflow treatment mode, the influent flow is directed from the outer channel to the inner channels for treatment. The return activated sludge from the clarifier continues to be pumped to the outer channel.

The Stormflow treatment mode represents an adjustment in solids inventory to the outer channel of the Orbital system to prevent solids washout during peak hydraulic events.

When flows return to normal, the influent flow is simply returned to the outer channel and treatment proceeds routinely.

This operating mode eliminates the need for an equalization basin. The conversion of normal to Stormflow mode can be manually controlled or automatic through the SmartBNR™ control system.

## STORMFLOW TREATMENT MODE ADVANTAGE



The chart above shows the activities of the Orbital system and clarifier biological solids during a Stormflow event. Influent is diverted to the inner channel. The MLSS for the inner channel drops as the dilute influent displaces a portion of the solids to the clarifier (blue line). The clarifier solids will initially increase, but decrease (yellow line) as the RAS pumps transfer the solids to the outer channel. This action will increase the MLSS in the outer and middle channel thus storing solids (red lines).

Activated sludge treatment will take place in the inner channel as there are biological solids and oxygen in contact with the influent. The RAS contacts the influent through the displacement of liquid in the outer and middle channel and flowing into the inner channel.

This operating mode eliminates the need for an equalization basin. In many applications the use of this mode can also reduce the size and/or number of clarifiers.

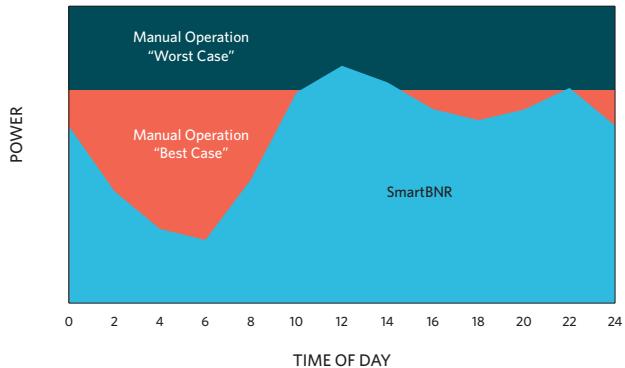
## SMARTBNR CONTROLS

The biological aeration system typically consumes the most power in a wastewater treatment plant. Evoqua process engineers work closely with electrical engineers to optimize power consumption and process effluent quality for the Orbital system. The SmartBNR controls utilize a touch screen operator interface with ORP and DO analyzers to continuously monitor and adjust the aerator speed based upon the actual wastewater conditions and characteristics of the disc. The controls also adjust for long-term variations or sudden surges in demand by turning on/off individual assemblies.

To meet strict ENR limits, the SmartBNR control system optimizes TN and TP levels through ammonia probes and phosphate analyzers. The control system has standard control options for Stormflow treatment mode of operation, nitrate recycle pumps, RAS pumps, SRT control, and chemical feed.

The SmartBNR control system from Evoqua provides remote access to the system control screens for process analysis and adjustments.

## AERATION POWER WITH TYPICAL DIURNAL FLOW PATTERN



SmartBNR control systems save operating costs by only providing the aeration power required to match the diurnal load throughout the day.

## THE OX™ DISC AERATOR ENABLES SND

The mechanical backbone of the Orbital® system is the unique and \*patented aeration disc. It delivers a high oxygen transfer rate and unmatched mixing efficiency.



The non-metallic OX™ Disc Aerator provides a longer, more cost-effective life when compared to galvanized or painted carbon steel brush rotor designs.

Aeration and mixing are provided by nodules on the face of the disc, with oxygen delivery and energy consumption varying with changes in speed and immersion depth.

The disc is split into two half sections and can be directly attached to the aerator shaft at any location. The number of discs allotted for each channel is a function of the oxygen delivery requirements. In a typical 3-channel Orbital system, the outer disc aerator assembly spans the outer channel. The inner aerator assembly spans the inner and middle channel.

## REDUCED SPEED IMPROVES MIXING EFFICIENCY

Mixing efficiency, defined as the number of gallons mixed per 1 hp to maintain a 1 fps channel velocity, is an extremely important feature of the Orbital system. The disc is designed so that mixing efficiency improves as speed is reduced. This characteristic is beneficial to the Orbital basin as it allows the process to keep a DO deficit in the outer channel during underloaded conditions, while still keeping a velocity sufficient to keep solids in suspension. Independent mixing devices are not needed to maintain anoxic conditions in the outer channel.

The mixing efficiency of the aeration discs in an Orbital system basin is unmatched by any other aerator device. As an example, an outer channel with 1 million gallons of volume requires only 10 hp of disc aerators to maintain a 1 fps channel velocity. The high mixing efficiency of Envirex aeration discs ensures unparalleled biological process performance under all load conditions.



Evoqua's OX™ Disc Aerators provide superior aeration and mixing without creating unwanted aerosols and sprays.

## FLOWSCHEET SOLUTIONS: TECHNOLOGY COMBINATIONS CREATE GREATER VALUE

Evoqua draws on its leading biological wastewater portfolio and applications experts to support projects where multiple technologies can be combined into a high performing cost effective solution. The Orbital® system, for example, can be combined with:

- Tow-Bro® high performance clarifiers to achieve stringent nutrient levels and handle peak flow rates
- A Forty-X™ Disc Filter for low TP applications
- The innovative CoMag® Magnetite Ballasted Treatment System to produce near MBR quality effluent in a small footprint
- TIW® Control System Solutions that deliver seamless controls across technologies without costly redundancy

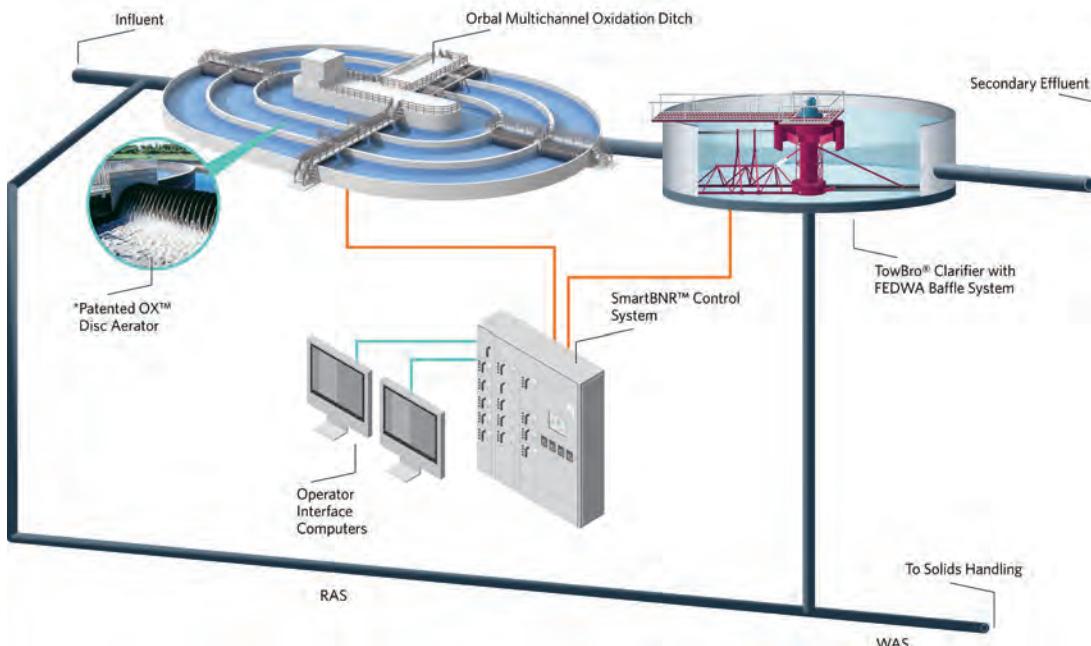
Evoqua Flowsheet Solutions are supported with a dedicated single technical point of contact who assures coordinated, timely, and accurate project execution, along with a comprehensive upfront evaluation of alternatives.

### Ready to put the technology, experience, and expertise of Evoqua to work?

Learn more how the Orbital system creates a simultaneous nitrification - denitrification environment and addresses nutrient and Stormflow issues.

Connect with an expert at [www.evoqua.com/orbal](http://www.evoqua.com/orbal).

Flowsheet Solutions from Evoqua provide expertise and project support across technologies.



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+1 (978) 614-7233 (toll)

[www.evoqua.com/orbal](http://www.evoqua.com/orbal)

\*patented in some countries

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## Aire-O<sub>2</sub>® Triton® 2.0



*Your ultimate solution to high efficient aeration and mixing*

Innovations in mechanical designs allow the Aire-O2 Triton 2.0 (patents pending) to provide better aeration efficiency, mixing capacity, and power consumption savings, as well as more seamless and flexible installation, operation and maintenance.

### WHY CHOOSE TRITON 2.0?

- Mixing capacity increased by up to 54%
- Aeration efficiency increased by up to 20%
- Power consumption lowered by more than 18%
- Keyed connection enables easier installation and maintenance
- Fine bubble aeration with a mixing only option for BNR applications
- Easy retrofits and maintenance: no need to drain the tank or remove the equipment from the basin
- Performs in challenging, heavy debris conditions
- Operates for years with minimal maintenance
- Surface mounted, horizontal mixing provides better dispersion and directional control with no splashes or aerosols
- Certified by 3<sup>rd</sup> party oxygen transfer test following ASCE procedure



**Aeration Industries® International, LLC.**

4100 Peavey Road Chaska, MN | +1.952.448.6789 | [aireo2.com](http://aireo2.com) | [aii@aireo2.com](mailto:aii@aireo2.com)

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# The Trusted Way to Deliver Oxygen



## Keyed Connection

Keyed connected between the atomizer, propeller, and sleeve for easier installation and maintenance, as well as stronger connection and better longevity.



## Optimized Propeller\*

Fully optimized propeller for better aeration efficiency and higher mixing capacity.



## Enhanced Atomizer\*

Newly enhanced atomizer for optimized oxygen transfer.

\* Patent pending

## FLEXIBLE MOUNTING SOLUTIONS



Wall Mount



Universal Mount



Bridge Mount

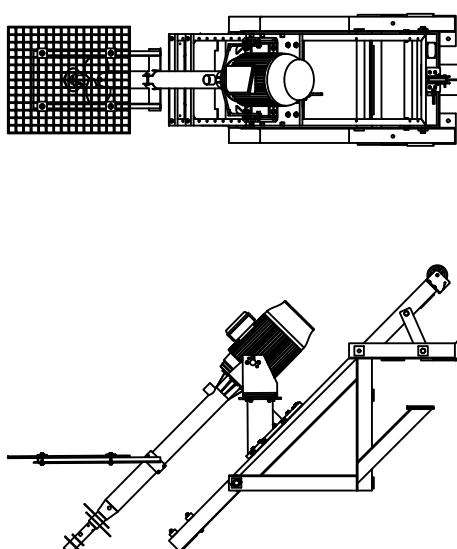


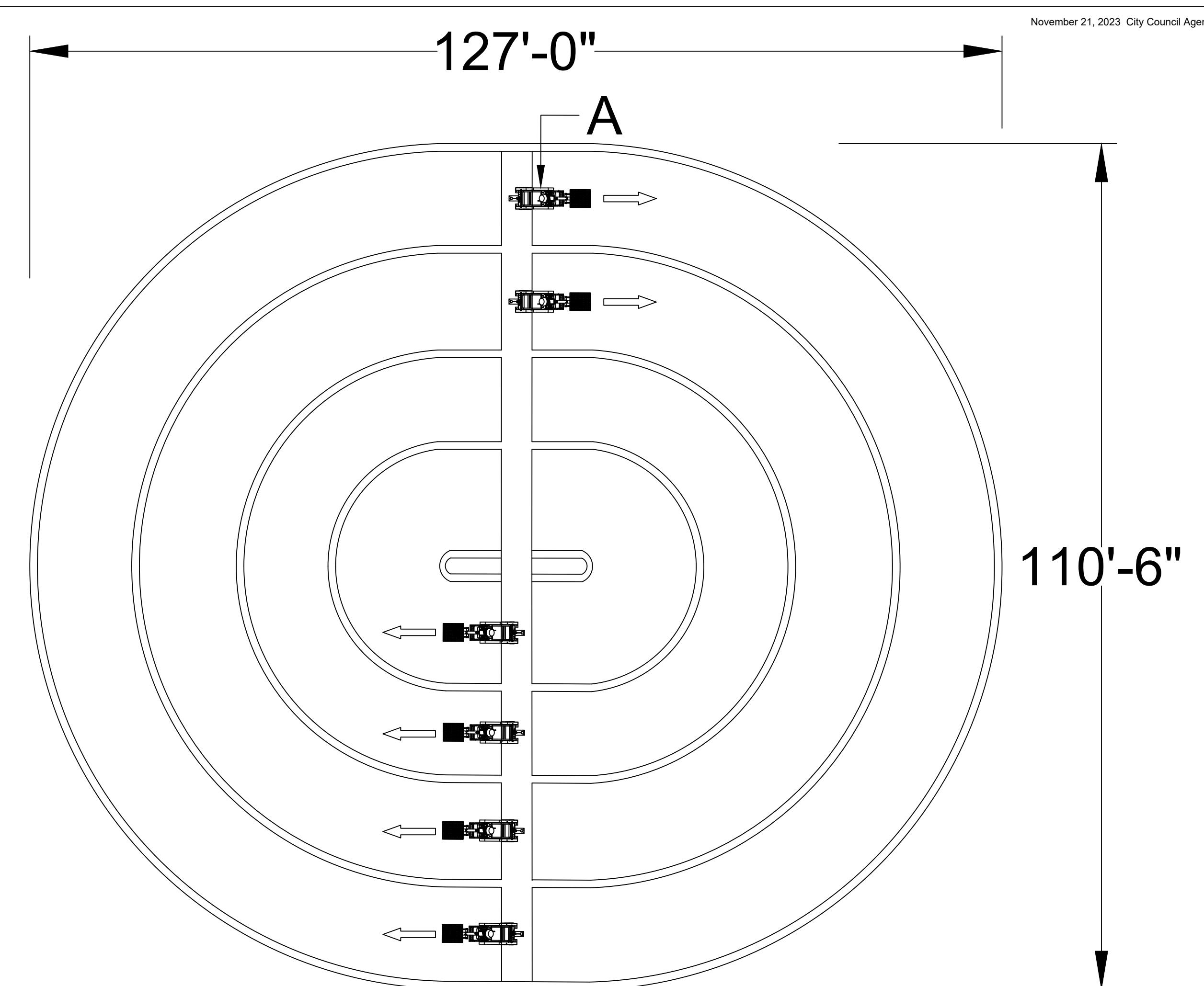
Float Mount

## ADDITIONAL ACCESSORIES

- Anti-Erosion Baffle
- Swing Arm
- Guide Rail
- Davit Crane
- Vortex Shield
- Maintenance Platform
- Winch Mooring
- Float Support

\*Consult your sales representative for selection assistance

LABEL	EQUIPMENT	QTY
A	TRITON 2.0 20HP ON UBM	6
BASIN INFORMATION:		
5.25 FEET MAX WATER DEPTH		
UNIT REPRESENTATION		
		
INSTALLATION NOTES:		
STRUCTURAL ENGINEERING BY OTHERS.		
DRAWING IS PRELIMINARY AND NOT FOR CONSTRUCTION		
UNITS IN FEET AND INCHES		

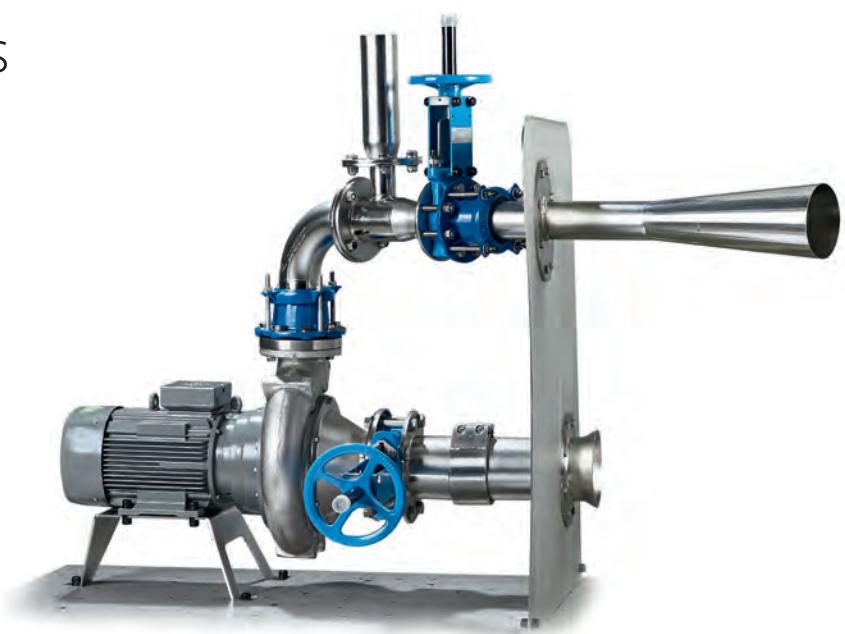


TITLE: VALLEY CENTER KANSAS, USA		DRAWING STATUS:	Aeration Industries' International, LLC.	
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		<input type="checkbox"/> PROPOSAL	Phone: +1-651-448-6769 • Fax: +1-651-448-7285	
		<input type="checkbox"/> APPROVAL	dineo2.com	
		<input type="checkbox"/> AS-BUILT		
REV.	PROJECT NUMBER	SHEET	1 OF	1
A1	22-7-12033			
<small>           Aeration Industries' International, LLC.            4100 Peony Rd, Chaska, MN 55318 USA <a href="http://www.dineo2.com">www.dineo2.com</a>            Phone: +1-651-448-6769 • Fax: +1-651-448-7285            dineo2.com            DRAWN BY: MKW DATE: 7/14/22            CHECKED BY: MKW DATE: 7/14/22            DO NOT SCALE DRAWING REV. DATE: BY:            RELEASE OF DRAWING DESCRIPTION:   </small>				



# AirJet

The answer to your  
aeration requirements



**Landia**<sup>®</sup>  
ENGINEERED TO LAST

# AirJet systems

- ideal for both industrial and municipal applications

The Landia AirJet provides an economical and effective approach to the aeration and mixing of wastewater.

The AirJet is ideal for highly polluted wastewater due to the non-clogging construction, which includes a heavy-duty Landia chopper pump.

Over the past two decades, Landia has installed AirJet aerators in numerous municipal and industrial wastewater treatment plants around the world. Due to their flexibility, solids handling capability and efficiency, the AirJet is commonly used in equalization tanks, aerobic digesters, aeration tanks, sludge holding tanks, stormwater basins, and for the aeration of leachate.

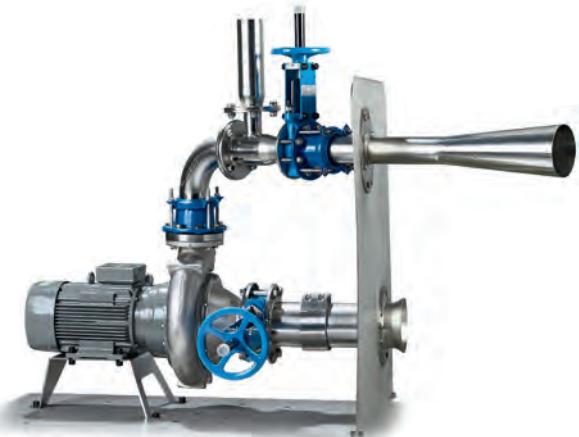
By working closely together and understanding the requirements of the application, we can ensure you that the AirJet will perform to its optimum level, helping bring about benefits throughout the whole process.

*"A bonus from replacing the existing diffuser system with Landia AirJet was a 30% lowering of the energy costs"*

Rob Decker, Roquette America.

*"We have been using the Landia AirJet for over a decade, for mixing and aerating our wastewater EQ tank. The AirJet is a strong and reliable system that works very well for us"*

James Blodgett, Operations Manager, Gun Barrell City, TX



**Externally mounted Airjet**  
For above-ground tanks



**Submersible Airjet**  
Free-standing on bottom of tank or lagoon



**Submersible Airjet**  
Guide rail-mounted, horizontally and vertically adjustable



**Floating Airjet**  
Suspended on pontoons, suitable for lagoons adjusting to liquid levels

# Unique advantages

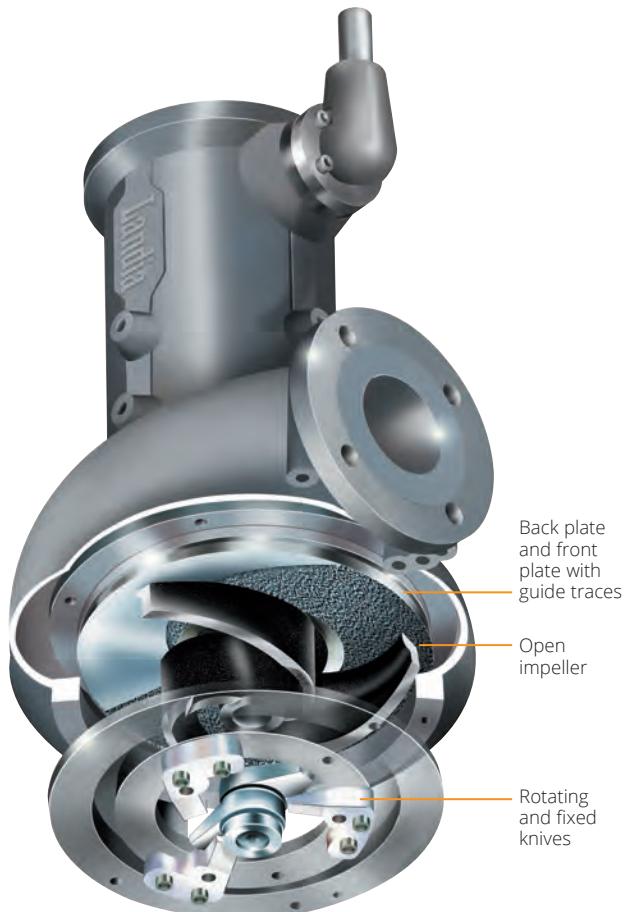
- Self-aspirating - no need for compressed air supply
- Easy installation - even in a full tank
- Combined aeration and mixing
- Non-clogging aeration system – no cleaning of system is required
- The integrated chopper pump is available in stainless steel for aggressive wastewater
- Low noise level compared to other systems
- Odor reduction by preventing septicity
- Very low maintenance costs – only the pump needs to be serviced

## The Chopper Pump – the heart of the AirJet

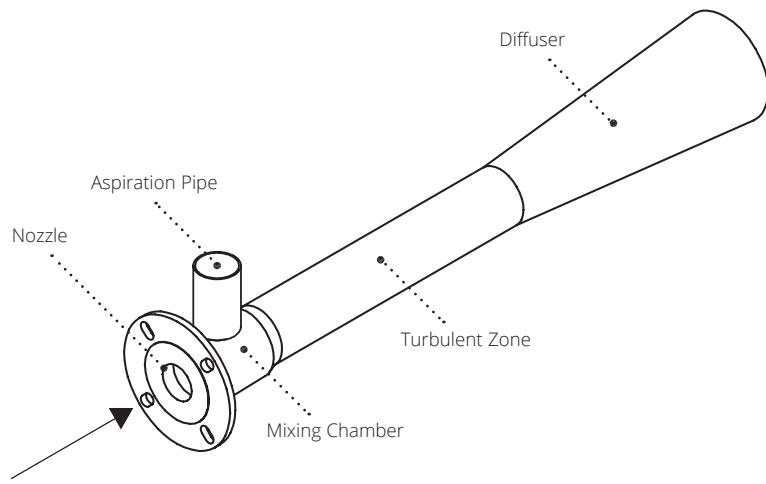
The Landia chopper pump is an integral part of every Landia AirJet system.

The chopper pump is designed for use under severe conditions and can pump sludges and other difficult to handle substrates with higher solids content and viscosity than almost all other pumps. The pump's ability to cut large particles ensures that the AirJet system never stops and contributes to improved oxygen transfer efficiency.

The Landia chopper pump is simple and robust in its construction, easy to service and with proven low life-time costs.



# How it works



The liquid is pumped through the nozzle into the mixing chamber. Passing the nozzle, liquid velocity is increased significantly. This creates a stable negative pressure resulting in the air being drawn through the aspiration pipe.

In the mixing chamber, air and liquid are mixed thoroughly. The mixing is enhanced in the ejector's high turbulent zone after which the liquid/air mix is flushed out through the diffuser by means of the pressure created by the pump.

## Landia AirJet product range and performances

### ➔ Models

The AirJet is available as submersible, floating, and for dry installation. According to process and application requirements the AirJet can be supplied with single or dual ejectors.

### ➔ Pumps

A comprehensive range of AirJets with chopper pumps from 5 HP to 30 HP rated motor power is available. Pump material of construction is acid-resistant stainless steel, cast iron, ductile iron, or combined versions depending on the application.

### ➔ Material of construction

The air ejector is manufactured from stainless steel. Please see above for pump material of construction.

### ➔ Flexibility

The submersible AirJet, including a stainless steel guide rail system, makes adjustment of horizontal and vertical positioning of the aerator possible. Inspection and maintenance is simple due to the integrated lifting device.

### ➔ Performance

Oxygen transfer rates according to SOTR (ANSI/ASCE 2-91) up to 60 lbs O<sub>2</sub>/h.

Complete technical data and performance documentation are available on request. Contact us for sizing and process optimized solutions to your application.

# Landia AirJet systems

## - recommended by satisfied customers



### ► Hutto South WWTP, Texas

#### Design Parameters:

Tank Type: Sludge Holding Tanks

Tank Sizes: One 12 ft. diameter x 12 ft. deep; one 58 ft. diameter x 21 ft. deep

Tank Types: One fiberglass tank; one concrete tank

Sludge characteristics: Municipal WAS and TWAS; from 1% to 5% total solids

Application: Mixing and aeration of sludge prior to dewatering

AirJet Pumps: One model MPTK-I 80 6.5 HP; two model MPTK-I 105 30.2 HP

Year: 2015

Landia was selected as the sole-source supplier for this project due to the AirJet offering the most cost-effective solution, in addition to its completely external installation, which requires no blowers and no diffusers in the tanks.



### ► Laita, Landernau, France

#### Design Parameters:

Tank diameter: 74 ft.

Volume: 528,000 gallons

Substrate characteristics: Storage tank for wastewater from dairy factory

Dry matter content: 2-3%

Type of tank: Concrete

AirJet Pumps: Three model MPTKR-I 105 25 HP

Year: 2015

Landia was selected as the supplier for this project due to our stainless steel pumps and the capability to supply a customized solution.

#### The AirJet pump

The model MPTKR-I AirJet pump is a highly efficient chopper pump made of acid-resistant stainless steel. It is ideal for aggressive liquids with a low or high PH level, as well as liquids with a high dry matter content.

All MPTKR-I pumps can be equipped with a knife system at the inlet to the pump, which can ensure problem-free operation under conditions where many other pumps experience problems with clogging.



## ► Dairy Crest, United Kingdom

Dairy Crest, makers of some of the UK's best-loved food brands, has upgraded its wastewater treatment process by investing in a new mixing system from Landia.

Four new stainless steel AirJets, which incorporate the chopper pump that Landia invented back in 1950, have been installed in balance tanks that require thorough mixing.

Dai Williams, Project Manager at Dairy Crest, said: "Initially we did a try-before-you buy with Landia, renting an AirJet unit at low cost to put it through its paces. It proved robust, reliable and effective".

He added: "As demand for our products has increased, so has the need to increase our production capacity, so it is important that we invest in top quality equipment with a long lifespan and low maintenance.

Landia's AirJet very much meets these requirements – and removes the cost of adding chemicals or using energy-intensive blowers".

Supplied on free-standing frames for easy servicing, the Landia AirJet (consisting of a Landia chopper pump and an ejector system) is designed with a highly effective knife system that stops the aerator from being clogged by solids.

Producers of household-name brands such as Cathedral City, Clover and Vitalite, Dairy Crest work in close partnership with farmers to help their businesses grow and become more successful.

# Landia is much more - than AirJet!

Landia's experience with wastewater goes back to the mid 80's. Since then numerous wastewater projects have been completed throughout the world. Landia has proven to be not only a supplier of high quality products but also to be a company dedicated to the wastewater industry and with extensive knowledge and experience. Below please find examples of other products suitable for your wastewater treatment plant.

## ► Submersible Chopper Pump Model DG-I

All Landia chopper pumps are equipped with a knife system at the inlet to the pump, which ensures hassle-free operation under conditions in which many other pumps have problems with clogging. The submersible DG-I pump is ideal for pumping highly polluted wastewater such as in lift stations and septic sludge tanks but is also superior for the pumping of high viscosity sludge.



## ► Dry Installed Chopper Pump Model MPTK-I

The MPTK-I pump with a unique combination of fixed and rotating knives, is the optimal solution for chopping and pumping sludges with a high dry matter concentration.



## ► Submersible Mixer Model POP-I

The Landia POP-I is a versatile and efficient submersible mixer that is available with propeller speeds from 140 to 360 rpm. The three-blade propeller and the low propeller rpm make it ideal for the mixing of wastewater and sludge with high TS concentration and viscosity.

Many sizes, fittings and hoisting systems are available. Easy to install - even in a tank already containing slurry.



## ► Recirculation Pumps/Propeller Pumps

Landia offers a range of low head recirculation pumps

- 12", 20" or 30". Capacity up to 45 MGD.

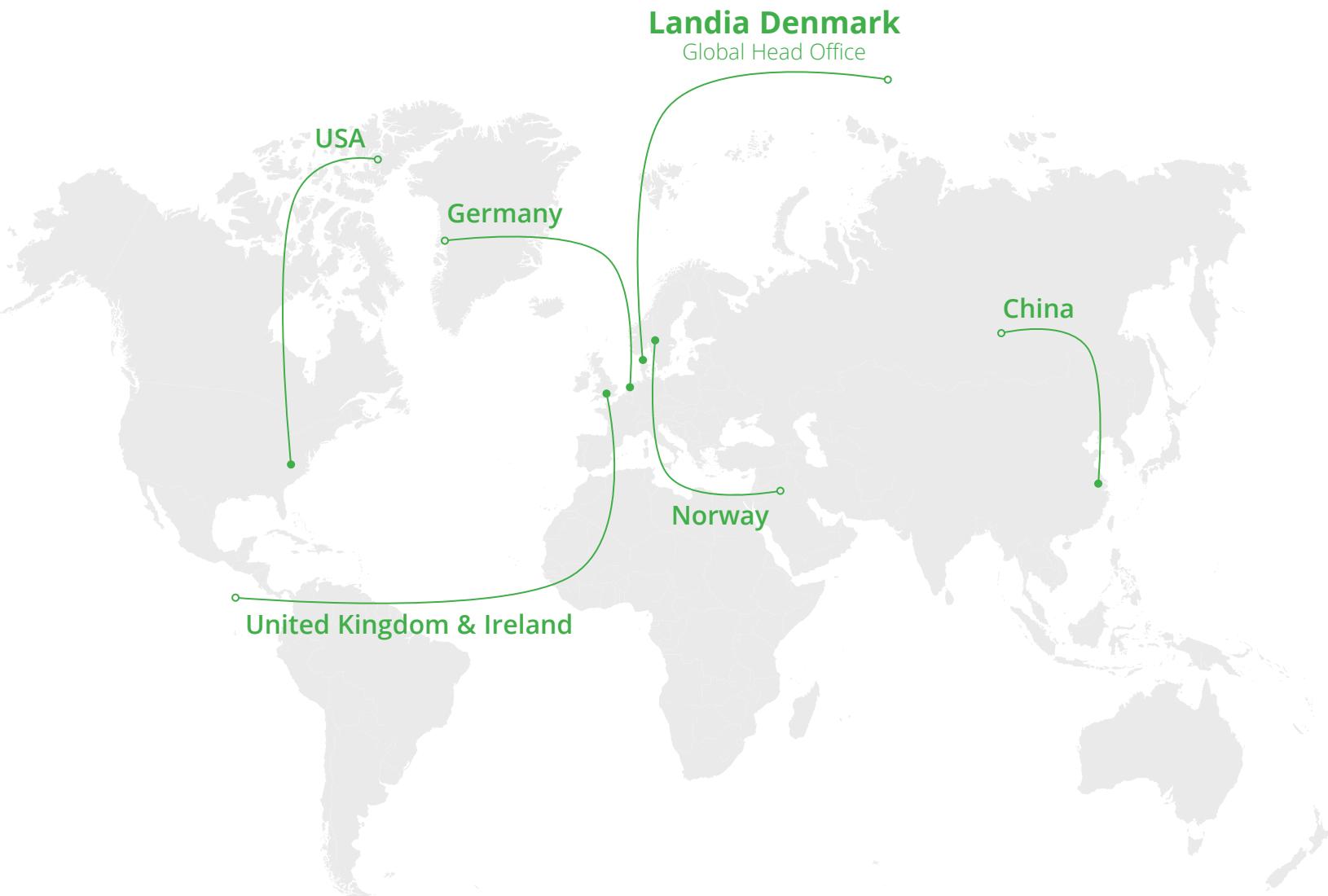
Also available in AISI 316 stainless steel construction upon request.



Landia was founded in 1933 and is today a modern, successful manufacturer of a comprehensive range of chopper pumps, propeller mixers and aerators, offering customized solutions and systems for difficult to handle liquids with high dry matter content, liquid biomass and other organic waste.

Our customers are involved in the conception and construction of biogas plants, municipal and industrial wastewater treatment, processing of by-products and waste from the food industry, agricultural slurry handling and much more.

We support our customers through our subsidiaries and offices in the US, Germany, Norway, the UK and China – plus a worldwide network of professional distributors.



**Landia A/S** (Headquarter) . Industrievæj 2 . DK-6940 Lem St. . tel +45 97 34 12 44 . [www.landia.dk](http://www.landia.dk)

**Landia, Inc.** . 111 Triangle Trade Drive . Cary, North Carolina 27513 . USA . Tel. +1 (919) 466-0603 . [www.landiainc.com](http://www.landiainc.com)



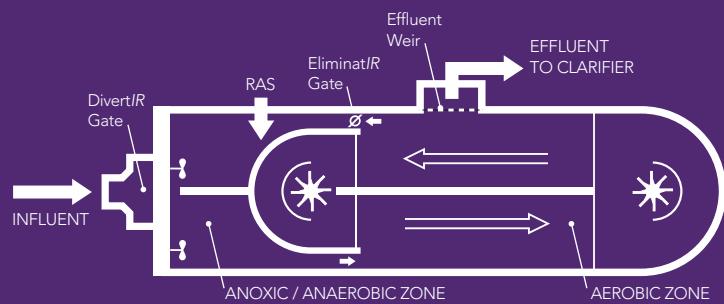
Worldwide Experts  
in Water Treatment

# MAXIMUM TREATMENT, MINIMUM EFFORT

Meet Stringent Nutrient Limits

Reduce Chemical and Energy Usage

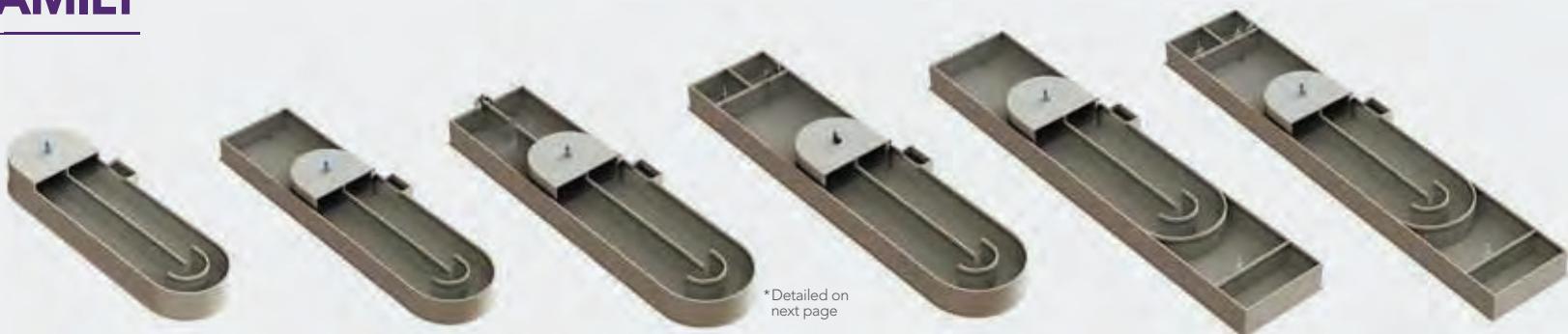
Construct, Operate and Maintain Easily



# CARROUSEL® SYSTEMS

OVIVO | NUTRIENT REMOVAL

# THE CARROUSEL® PROCESS FAMILY



	1-STAGE	2-STAGE	3-STAGE	3-STAGE	4-STAGE	5-STAGE	
	BASIC CARROUSEL® SYSTEM	denit/R® CARROUSEL® SYSTEM	Alternat/R™ SYSTEM	A <sup>2</sup> C™ SYSTEM	BARDENPHO® CARROUSEL® SYSTEM	BARDENPHO® CARROUSEL® SYSTEM	
<b>ANAEROBIC</b>			✓	✓		✓	
<b>1<sup>ST</sup> ANOXIC</b>		✓	✓	✓	✓	✓	
<b>AEROBIC</b>	✓	✓	✓	✓	✓	✓	
<b>2<sup>ND</sup> ANOXIC</b>					✓	✓	
<b>RE-AERATION</b>					✓	✓	
<b>EFFLUENT (mg/L)</b>	BOD≤5 NH3-N≤0.5	BOD≤5 NH3-N≤0.5 TN≤5-8	BOD≤5 NH3-N≤0.5 TN≤5-8 TP≤0.3*	BOD≤5 NH3-N≤0.5 TN≤5-8 TP≤0.3*	BOD≤5 NH3-N≤0.5 TN≤5-8 TP≤0.3*	BOD≤5 NH3-N≤0.5 TN≤3	BOD≤5 NH3-N≤0.5 TN≤3 TP≤0.3*

\*May require trim doses of metal salts

## OVIVO: AN ENGINEERING PROCESS POWERHOUSE

The Ovivo Carrousel Process Team, which consists of decades of biological wastewater treatment plant design and innovation, has provided expertise and design assistance for wastewater treatment plants of all shapes, sizes, and effluent requirements.

## CAPABILITIES:

- Detailed Design Support
- Process Modeling (Biowin)
- Equipment Sizing
- Effluent Guarantees
- Water Expert Compatible
- Retrofits and Upgrades
- Automated Controls and SCADA
- Process Training and Workshops
- 3-D Modeling and CAD Support

# THE CARROUSEL® ALTERNATIR™ SYSTEM

In the denitIR® Carrousel System an integral anoxic basin is added for Total Nitrogen removal without supplemental carbon addition. The internal recycle (IR) is large (6-15Q) and requires no additional pumping.

The automatically controlled EliminatIR™ Gate can be used to create anaerobic cycles in the anoxic zone to achieve phosphorus removal. This is called the AlternatIR System.

In the aerobic (Carrousel) zone, BOD and ammonia oxidation (nitrification) proceed to completion. The Excell® Aerator provides all aeration, velocity, and internal recycle pumping required at all influent loading conditions.



EXCELL® AERATOR



MIXER



OCULUS™ CONTROLLER



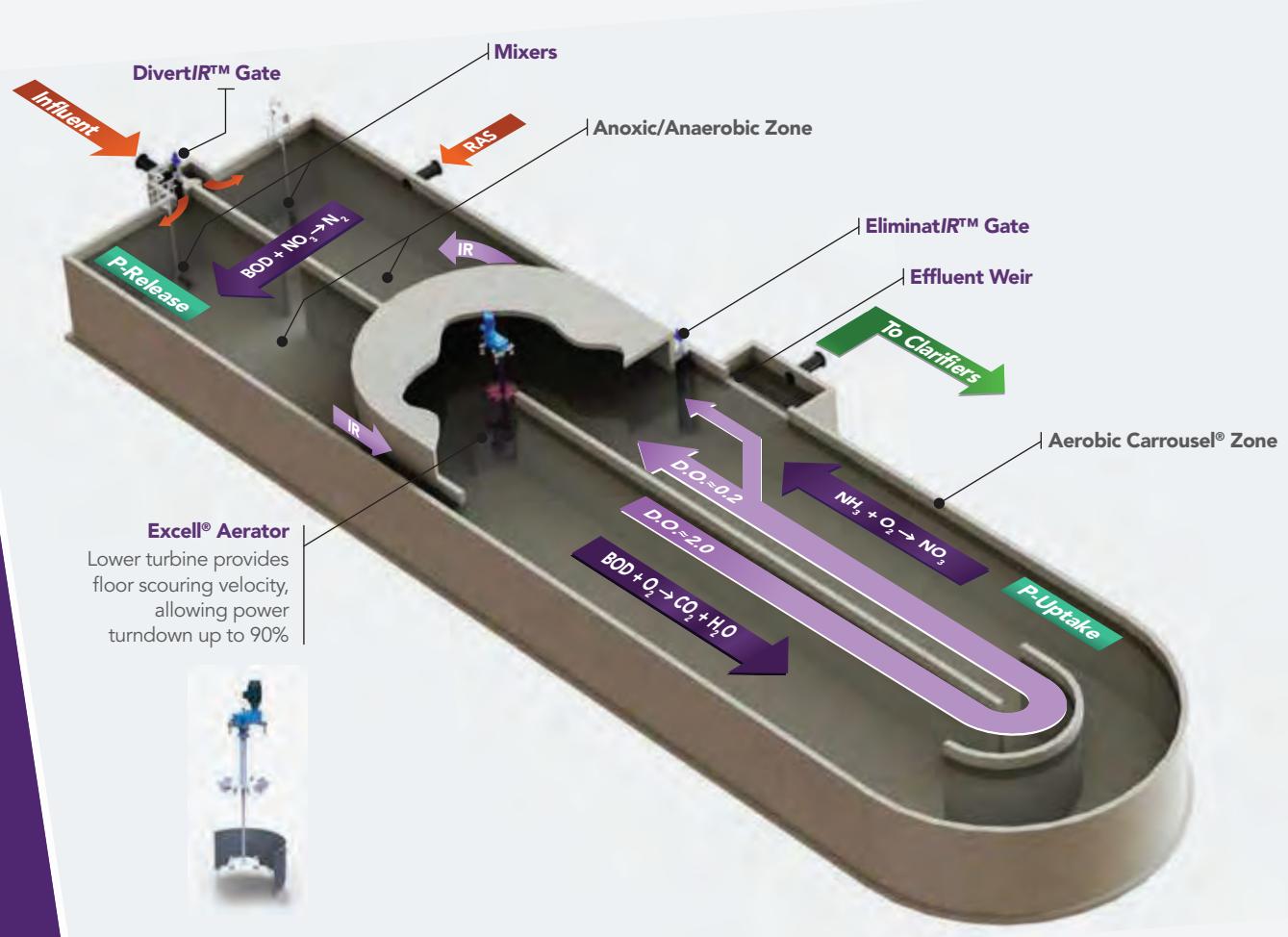
ELIMINATIR™ GATE



DIVERTIR™ GATE



EFFLUENT WEIR



**OVIVO:**  
A HISTORY OF  
EXCELLENCE

Installs 1<sup>st</sup> Carrousel® System

1979

Develops and installs 1<sup>st</sup> denitIR® Carrousel® System

1983

Installs 1<sup>st</sup> BNR System

1988

Develops and installs 1<sup>st</sup> Dual-Impeller Aerator

Develops and installs 1<sup>st</sup> ACE™ Control System to conserve energy

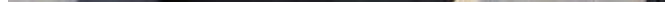
1991

1998

ALL AERATOR MAINTENANCE FROM A CLEAN CONCRETE DECK

SYSTEM FULLY AUTOMATED TO REDUCE ENERGY AND MEET TIGHT N AND P LIMITS

NO IR PUMPS REQUIRED. IR CHANNEL DELIVERS 12Q OR HIGHER.



Installs 600<sup>th</sup> Carrousel® System

Introduces the Excell® Aerator II: Our most efficient Dual-Impeller Aerator for BNR Systems to date!

Introduces the EliminaIR™ Gate to maximize, optimize and automate BNR

Introduces Ovivo® Connect<sup>SM</sup> Asset Management System

Introduces new ExcellAerator PRO for improved mixing

2001

2006

2007

2009

2010

2012

2013

2014

2019

Develops and installs 1<sup>st</sup> Deep Tank Carrousel® System: 23 ft-SWD

Introduces the Oculus™ BNR Control System

Develops and installs the first Full BNR optimization Oculus™ MCC

Introduces Carrousel® SwingIR™ System

# CARROUSEL® SYSTEMS:

## A FORWARD LOOKING APPROACH

The Carrousel® System is a leading technology in wastewater treatment and biological nutrient removal. With over forty years of experience and more than 800 installations in North America, the Carrousel system has proven to be the most rugged, reliable and forgiving treatment system available. Each Carrousel System is engineered to achieve the highest quality effluent with the lowest cost of operation and maintenance. The Carrousel is universally praised for operational simplicity and dependable performance from start up to the most demanding situations.

Carrousel Systems offer the lowest number of aerators per basin compared to other oxidation ditch systems, such as those that use horizontal shaft aerators. This greatly simplifies installation and maintenance requirements.

At a minimum, a Carrousel System consists of a "racetrack" style reactor basin with at least one vertical shaft, low-speed mechanical aerator, the Excell® Aerator, installed in the center of one of the turns. The basic Carrousel System is capable of full BOD and Ammonia reduction. Nutrient removal is easily added to a Carrousel System via the addition of anoxic and anaerobic selector zones, or even with simple, optimized operational strategies.

The Carrousel System utilizes the Modified Lutzack-Ettinger (MLE) configuration for highly efficient denitrification. This process is known as the denit/R® System, where internal recycle (IR) flow is directed into the anoxic zone via a slip-stream channel using propulsion generated by the Excell Aerator. No additional energy for IR pumping is required. IR flowrate is varied by the EliminatIR™ Gate. The Oculus™ Control System automatically controls the aeration rate and IR flow.

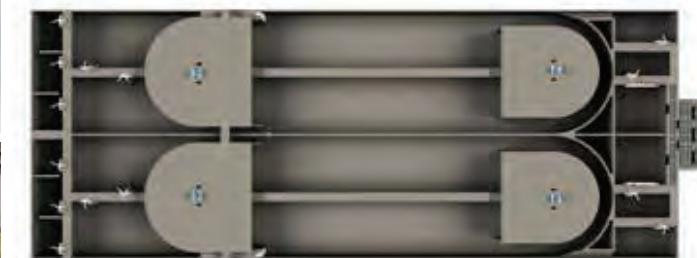


**Top:** The Excell® Aerator is installed at one or more of the channel turns and provides all aeration and mixing required for full nitrification and BOD removal.

**Bottom:** Anoxic and anaerobic basins are easily added for Total Nitrogen and Total Phosphorus removal in Ovivo's denit/R® configuration.

## ACTIVATED SLUDGE TREATMENT AND BIOLOGICAL NUTRIENT REMOVAL

**40** YEARS OF  
**CARROUSEL® SYSTEMS**  
1979 - today



## RETROFITS:

OVIVO OFFERS COMPETITIVE TURNKEY AND TRADITIONAL UPGRADE AND RETROFIT PATHWAYS FOR YOUR EXISTING SYSTEMS, EVEN IF YOU DON'T ALREADY HAVE A CARROUSEL SYSTEM.

Upgrading your existing Carrousel System has never been easier or more worthwhile. Improve your efficiency, reduce your maintenance, or automate your process.

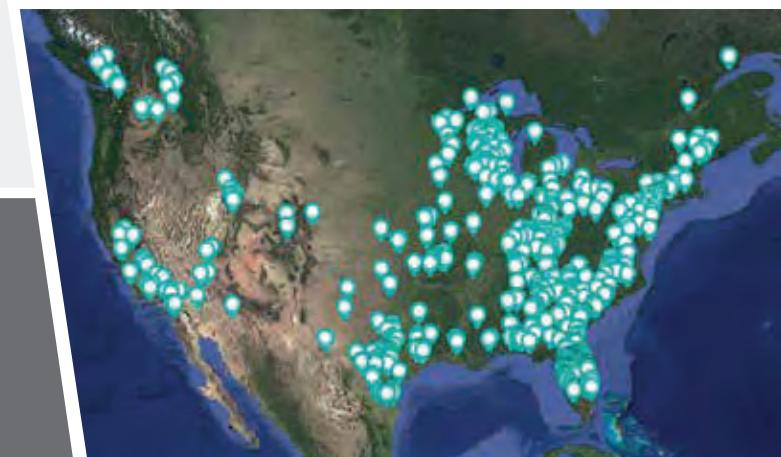
Ovivo provides estimates for services and return on investment with a custom-made appraisal of your existing infrastructure.



**ALL OF YOUR MANUALS,  
ALL OF YOUR KNOWLEDGE,  
ALL IN ONE PLACE.**

Get your team on the same page.  
Upload and share documents & media.  
Create and manage service logs and maintenance schedules.

Learn more at [WaterExpert.com](https://WaterExpert.com)



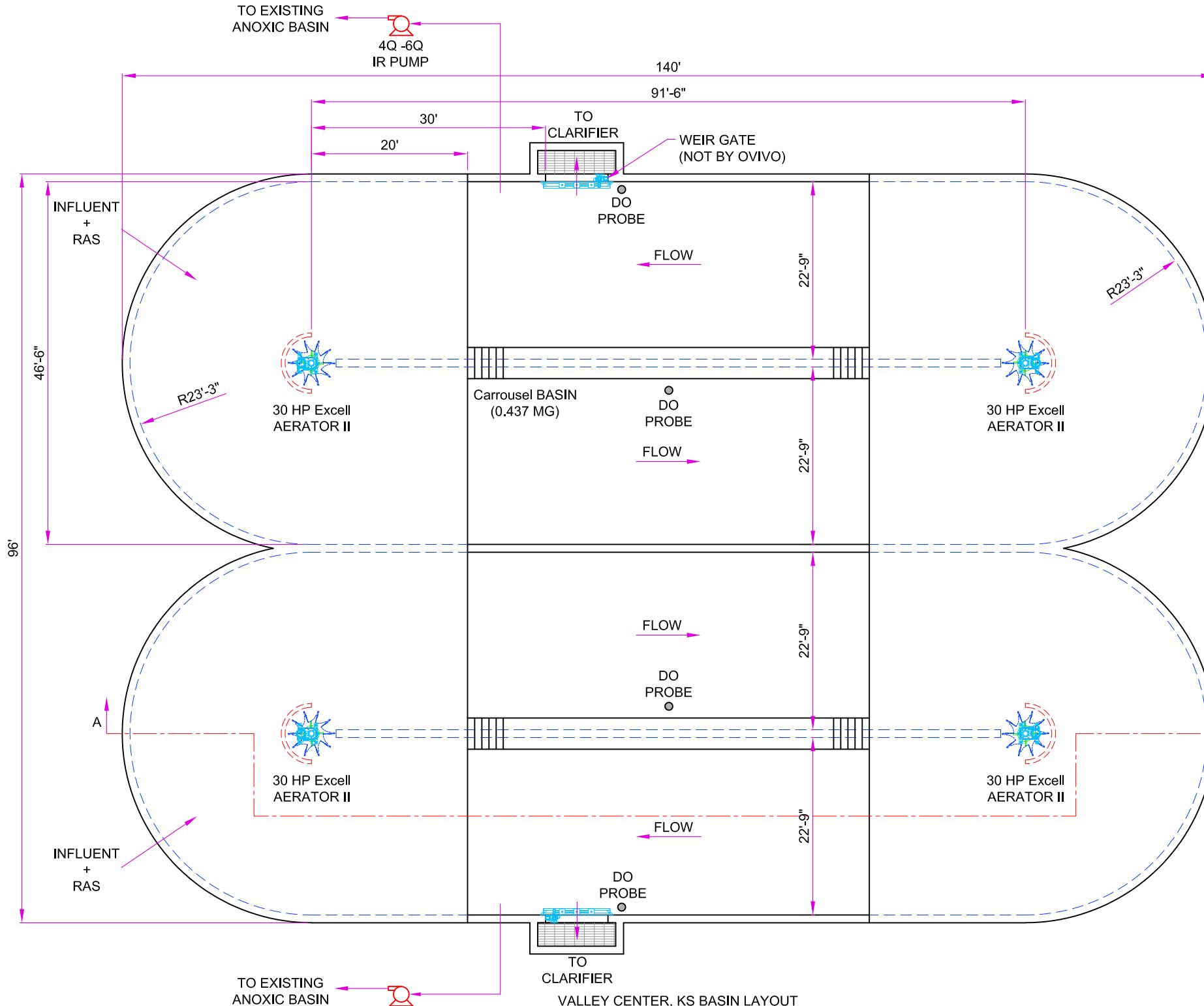
FIND US ON YOUTUBE!  
SEARCH CARROUSEL® SYSTEM

Carrousel® is a registered trademark  
of HaskoningDHV Nederland B.V.



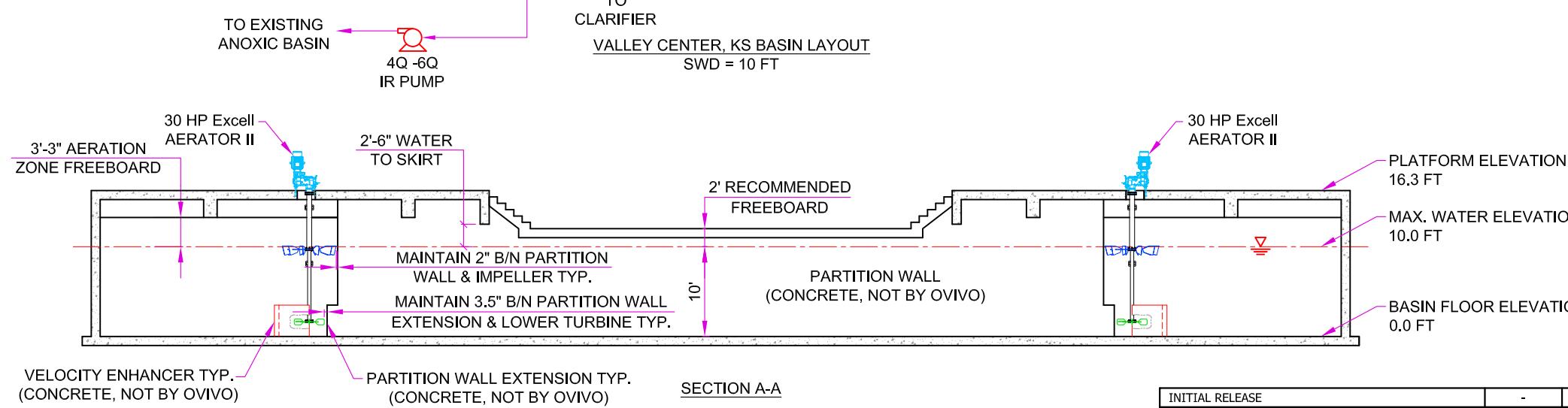
**1-855-GO-OVIVO**

[info@ovivowater.com](mailto:info@ovivowater.com)  
[ovivowater.com](http://ovivowater.com)



Carousel®	
Volumes	Carousel® Basin
Volume Per Train	0.437 MG
No Trains	2 ea
Total Volume	0.874 MG

Concrete	Outer Wall Thickness	Inner Wall Thickness	Floor Slab Thickness	Footings	Bridges and Covers
Size of Component	12 inches	12 inches	12 inches	2.0 feet by 3.5 feet	12 inches
Concrete Volumes	165 CY	46 CY	214 CY	98 CY	129 CY
Concrete volumes are per basin.					Total Per Basin
					652 CY



INITIAL RELEASE	-	-	-	-/--		REF	UNLESS OTHERWISE AUTHORIZED IN WRITING BY OVIVO. UNCONTROLLED COPY IF PRINTED.	SHEET 1 OF 1	-
REVISION	EN/ECO	BY	CHECK'D	DATE		© 2021 OVIVO. ALL RIGHTS RESERVED. WORKMANSHIP STANDARD E5001 APPLIES	DWG NO.	-	REVISION

**NEW BUSINESS**  
**RECOMMENDED ACTION**

**C. WASTEWATER TREATMENT PLANT AERATION BASIN STUDY:**

**Should Council choose to proceed,**

**RECOMMENDED ACTION:**

**Staff recommends motion to receive and file study.**

**CONSENT AGENDA**

- A. APPROPRIATION ORDINANCE – NOVEMBER 21, 2023**
- B. CEREAL MALT BEVERAGE LICENSE APPROVAL**

**RECOMMENDED ACTION:**

**Staff recommends motion to approve the Consent Agenda as presented.**

## **CONSENT AGENDA**

## **A. APPROPRIATION ORDINANCE:**

Below is the proposed Appropriation Ordinance for November 21, 2023, as prepared by City Staff.

## November 21, 2023, Appropriation

**Total** \$ 4,280,630.47

VENDOR SET: 02 City of Valley Center

BANK: \* ALL BANKS

DATE RANGE: 0/00/0000 THRU 99/99/9999

VENDOR I.D.	NAME	STATUS	CHECK	INVOICE	CHECK	CHECK	CHECK
			DATE	AMOUNT		DISCOUNT	NO
1261	MSA PROFESSIONAL SERVICES, INC						
C-CHECK	MSA PROFESSIONAL SERVICEVOIDED	V	10/27/2023		055954		1,400.00CR

\* \* T O T A L S \* \*

	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
REGULAR CHECKS:	0	0.00	0.00	0.00
HAND CHECKS:	0	0.00	0.00	0.00
DRAFTS:	0	0.00	0.00	0.00
EFT:	0	0.00	0.00	0.00
NON CHECKS:	0	0.00	0.00	0.00
VOID CHECKS:	1	VOID DEBITS 0.00		
		VOID CREDITS 1,400.00CR	1,400.00CR	0.00

TOTAL ERRORS: 0

	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
VENDOR SET: 02 BANK: *	TOTALS: 1	1,400.00CR	0.00	0.00
BANK: *	TOTALS: 1	1,400.00CR	0.00	0.00

VENDOR SET: 02 City of Valley Center

BANK: APBK INTRUST CHECKING

DATE RANGE: 0/00/0000 THRU 99/99/9999

VENDOR I.D.	NAME	STATUS	DATE	AMOUNT	DISCOUNT	CHECK	CHECK	CHECK
						NO	STATUS	AMOUNT
1261	MSA PROFESSIONAL SERVICES, INC							
	I-202310250962	MSA PROFESSIONAL SERVICES, INC	V	10/27/2023	1,400.00		055954	1,400.00
1261	MSA PROFESSIONAL SERVICES, INC							
	M-CHECK	MSA PROFESSIONAL SERVICEVOIDED	V	10/27/2023			055954	1,400.00CR
1270	SCHAEFER ARCHITECTURE, INC.							
	I-202310230948	SCHAEFER ARCHITECTURE, INC.	R	10/27/2023	186,766.96		055955	186,766.96
1286	MCCOWNGORDON CONSTRUCTION, LLC							
	I-202310260964	MCCOWNGORDON CONSTRUCTION, LLC	R	10/27/2023	1,182,523.28		055956	1,182,523.28
1297	BURNS & MCDONNELL/CAS CONSTRUC							
	I-202310230949	BURNS & MCDONNELL/CAS CONSTRUC	R	10/27/2023	30,000.00		055957	30,000.00
1298	AUTOMATION DESIGNS LLC							
	I-202310240955	AUTOMATION DESIGNS LLC	R	10/27/2023	5,748.00		055958	5,748.00
1370	AT&T MOBILITY-CC							
	I-202310230950	AT&T MOBILITY-CC	R	10/27/2023	10.50		055959	10.50
1371	SUPERIOR EMERGENCY RESPONSE VE							
	I-202310240951	SUPERIOR EMERGENCY RESPONSE VE	R	10/27/2023	1,950.00		055960	1,950.00
1372	FELLOWS ELECTRIC INC.							
	I-202310260963	FELLOW ELECTRIC INC.	R	10/27/2023	968.24		055961	968.24
1	BROWN, CHANNON							
	I-000202310270971	BROWN, CHANNON:	R	11/03/2023	750.00		055962	750.00
1	CARRILLO, CERAPIO							
	I-000202311021005	CARRILLO, CERAPIO:	R	11/03/2023	31.50		055963	31.50
1	MITCHELL, TREVA							
	I-000202311021006	MITCHELL, TREVA:	R	11/03/2023	1.50		055964	1.50
0035	BARRY ARBUCKLE							
	I-202310310987	BARRY ARBUCKLE	R	11/03/2023	800.00		055965	800.00
0042	LARRY LINN							
	I-202310310983	LARRY LINN	R	11/03/2023	1,700.00		055966	1,700.00
0091	MIES CONSTRUCTION INC							
	I-202310310992	MIES CONSTRUCTION INC	R	11/03/2023	272,605.11		055967	272,605.11

VENDOR SET: 02 City of Valley Center  
 BANK: APBK INTRUST CHECKING  
 DATE RANGE: 0/00/0000 THRU 99/99/9999

VENDOR I.D.	NAME	STATUS	DATE	AMOUNT	DISCOUNT	CHECK	CHECK	CHECK
						NO	STATUS	AMOUNT
0113	VALLEY PRINT LOGISTICS							
	I-202311021003	VALLEY PRINT LOGISTICS	R 11/03/2023	1,539.43		055968		1,539.43
0126	HACH COMPANY							
	I-202310310972	HACH COMPANY	R 11/03/2023	1,871.65		055969		1,871.65
0156	BEALL & MITCHELL, LLC							
	I-202310310985	BEALL & MITCHELL, LLC	R 11/03/2023	1,850.00		055970		1,850.00
0183	KANSAS ONE-CALL SYSTEM, INC							
	I-202311010995	KANSAS ONE-CALL SYSTEM, INC	R 11/03/2023	442.80		055971		442.80
0196	P E C (PROFESSIONAL ENGINEERIN							
	I-202310310991	P E C (PROFESSIONAL ENGINEERIN	R 11/03/2023	31,884.15		055972		31,884.15
0224	SUMNERONE, INC.							
	I-202310310978	SUMNERONE, INC.	R 11/03/2023	157.73		055973		157.73
0226	RURAL WATER DISTRICT #2							
	I-202311010997	RURAL WATER DISTRICT #2	R 11/03/2023	59.39		055974		59.39
0457	CHRISTOPHER MICHAEL LEE DAVIS,							
	I-202310310984	CHRISTOPHER MICHAEL LEE DAVIS,	R 11/03/2023	125.00		055975		125.00
0542	GIANT COMMUNICATIONS							
	I-202310310981	GIANT COMMUNICATIONS	R 11/03/2023	2,086.49		055976		2,086.49
0801	MID-CONTINENT SAFETY							
	I-202310310977	DXP ENTERPRISES, INC.	R 11/03/2023	71.28		055977		71.28
0601	JOY K. WILLIAMS, ATTORNEY AT L							
	I-202310310986	JOY K. WILLIAMS, ATTORNEY AT L	R 11/03/2023	1,350.00		055978		1,350.00
0656	DRAGONFLY LAWN & TREE CARE LLC							
	I-202311010999	DRAGONFLY LAWN & TREE CARE LLC	R 11/03/2023	4,872.01		055979		4,872.01
0799	ELITE FRANCHISING INC DBA JANI							
	I-202310310979	ELITE FRANCHISING INC DBA JANI	R 11/03/2023	1,946.78		055980		1,946.78
0815	KONICA MINOLTA BUSINESS SOLUTI							
	I-202311011000	KONICA MINOLTA BUSINESS SOLUTI	R 11/03/2023	101.25		055981		101.25
0824	GALLS, LLC							
	I-202311021004	GALLS, LLC	R 11/03/2023	659.72		055982		659.72

VENDOR SET: 02 City of Valley Center  
 BANK: APBK INTRUST CHECKING  
 DATE RANGE: 0/00/0000 THRU 99/99/9999

VENDOR I.D.	NAME	STATUS	CHECK	INVOICE	DISCOUNT	CHECK	CHECK	CHECK
			DATE	AMOUNT		NO	STATUS	AMOUNT
0898	GREATER WICHITA YMCA							
	I-202310310980	GREATER WICHITA YMCA	R 11/03/2023	37.50		055983		37.50
0961	PINNACLE FIRE & AUTOMATION							
	I-202310310990	PINNACLE FIRE & AUTOMATION	R 11/03/2023	337.00		055984		337.00
1004	IMAGINE IT, INC.							
	I-202311010994	IMAGINE IT, INC.	R 11/03/2023	1,534.00		055985		1,534.00
1056	WEX BANK							
	I-202311021001	WEX BANK	R 11/03/2023	8,108.60		055986		8,108.60
1075	RED EQUIPMENT LLC.							
	I-202310310973	RED EQUIPMENT LLC.	R 11/03/2023	2,224.60		055987		2,224.60
1082	T-MOBILE							
	I-202310310982	T-MOBILE	R 11/03/2023	105.00		055988		105.00
1149	MUNICIPAL SUPPLY INC. OF WICHI							
	I-202311021007	MUNICIPAL SUPPLY INC. OF WICHI	R 11/03/2023	121.40		055989		121.40
1261	MSA PROFESSIONAL SERVICES, INC							
	I-202310310974	MSA PROFESSIONAL SERVICES, INC	R 11/03/2023	1,167.50		055990		1,167.50
1373	KANSAS TURF FOUNDATION							
	I-202310310993	KANSAS TURF FOUNDATION	R 11/03/2023	250.00		055991		250.00
1374	BERAN CONCRETE INC							
	I-202311010996	BERAN CONCRETE INC	R 11/03/2023	32,057.60		055992		32,057.60
1	THIEBAUD, DORIS LOUI							
	I-000202311071017	US REFUND	R 11/10/2023	10.87		055997		10.87
0077	KANSAS OFFICE OF THE TREASURER							
	I-202311061014	KANSAS OFFICE OF THE TREASURER	R 11/10/2023	1,727.08		055998		1,727.08
0088	DONDLINGER & SONS CONSTRUCTION							
	I-202311071026	DONDLINGER & SONS CONSTRUCTION	R 11/10/2023	9,003.00		055999		9,003.00
0113	VALLEY PRINT LOGISTICS							
	I-202311061008	VALLEY PRINT LOGISTICS	R 11/10/2023	1,903.16		056000		1,903.16
0133	MAYER SPECIALTY SERVICES							
	I-202311071024	MAYER SPECIALTY SERVICES	R 11/10/2023	2,200.00		056001		2,200.00

VENDOR SET: 02 City of Valley Center  
 BANK: APBK INTRUST CHECKING  
 DATE RANGE: 0/00/0000 THRU 99/99/9999

VENDOR I.D.	NAME	STATUS	CHECK	INVOICE	DISCOUNT	CHECK	CHECK	CHECK
			DATE	AMOUNT		NO	STATUS	AMOUNT
0153	ARK VALLEY NEWS							
	I-202311061011	ARK VALLEY NEWS	R 11/10/2023	337.72		056002		337.72
0306	SEDWICK COUNTY							
	I-202311071019	SEDWICK COUNTY	R 11/10/2023	951.35		056003		951.35
0535	NORTHRIDGE SAND, L.L.C.							
	I-202311071022	NORTHRIDGE SAND, L.L.C.	R 11/10/2023	172.68		056004		172.68
0784	MERIDIAN ANALYTICAL LABS, LLC							
	I-202311061016	MERIDIAN ANALYTICAL LABS, LLC	R 11/10/2023	730.50		056005		730.50
0801	MID-CONTINENT SAFETY							
	I-202311071021	MID-CONTINENT SAFETY	R 11/10/2023	680.30		056006		680.30
0887	FERRELLGAS							
	I-202311071020	FERRELLGAS	R 11/10/2023	12.00		056007		12.00
1089	LOGIC INC.							
	I-202311071025	LOGIC INC.	R 11/10/2023	660.00		056008		660.00
1137	WASTE CONNECTIONS OF KANSAS, I							
	I-202311071018	WASTE CONNECTIONS OF KANSAS, I	R 11/10/2023	44,893.91		056009		44,893.91
1190	THE YARD							
	I-202311061015	THE YARD	R 11/10/2023	719.27		056010		719.27
1375	KDOT-BUREAU OF LOCAL PROJECTS							
	I-202311081027	KDOT-BUREAU OF LOCAL PROJECTS	R 11/10/2023	2,437,000.00		056011		2,437,000.00

\* \* T O T A L S \* \*

	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
REGULAR CHECKS:	53	4,281,217.81	0.00	4,279,817.81
HAND CHECKS:	0	0.00	0.00	0.00
DRAFTS:	0	0.00	0.00	0.00
EFT:	0	0.00	0.00	0.00
NON CHECKS:	0	0.00	0.00	0.00
VOID CHECKS:	0	0.00		
	VOID DEBITS	0.00		
	VOID CREDITS	1,400.00CR	1,400.00CR	0.00

TOTAL ERRORS: 0

	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
VENDOR SET: 02 BANK: APBK TOTALS:	53	4,279,817.81	0.00	4,279,817.81

VENDOR SET: 03 City of Valley Center  
 BANK: APBK INTRUST CHECKING  
 DATE RANGE: 0/00/0000 THRU 99/99/9999

VENDOR I.D.	NAME	STATUS	CHECK	INVOICE	DISCOUNT	CHECK	CHECK	CHECK
			DATE	AMOUNT		NO	STATUS	AMOUNT
0033	NEAL OWINGS							
I-202311010998	NEAL OWINGS	R	11/03/2023	41.70		055993		41.70
0074	KRISTI CARRITHERS							
I-202310310976	KRISTI CARRITHERS	R	11/03/2023	66.53		055994		66.53
0110	BRENT CLARK							
I-202310310975	BRENT CLARK	R	11/03/2023	62.88		055995		62.88
0117	WILLIAM ANDREWS							
I-202311061009	WILLIAM ANDREWS	R	11/10/2023	58.95		056012		58.95
0146	DALTON STINEMAN							
I-202311061012	DALTON STINEMAN	R	11/10/2023	61.00		056013		61.00

** T O T A L S * *	NO	INVOICE	AMOUNT	DISCOUNTS	CHECK	AMOUNT
REGULAR CHECKS:	5		291.06	0.00		291.06
HAND CHECKS:	0		0.00	0.00		0.00
DRAFTS:	0		0.00	0.00		0.00
EFT:	0		0.00	0.00		0.00
NON CHECKS:	0		0.00	0.00		0.00
VOID CHECKS:	0	VOID DEBITS	0.00			
		VOID CREDITS	0.00	0.00	0.00	

TOTAL ERRORS: 0

VENDOR SET: 03 BANK: APBK TOTALS:	NO	INVOICE	AMOUNT	DISCOUNTS	CHECK	AMOUNT
	5		291.06	0.00		291.06

VENDOR SET: 04 City of Valley Center  
 BANK: APBK INTRUST CHECKING  
 DATE RANGE: 0/00/0000 THRU 99/99/9999

VENDOR I.D.	NAME	STATUS	CHECK	INVOICE	DISCOUNT	CHECK	CHECK	CHECK
			DATE	AMOUNT		NO	STATUS	AMOUNT
0225	ALAN CLUBB							
I-202311021002	ALAN CLUBB	R	11/03/2023	521.60		055996		521.60

\* \* T O T A L S \* \*

	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
REGULAR CHECKS:	1	521.60	0.00	521.60
HAND CHECKS:	0	0.00	0.00	0.00
DRAFTS:	0	0.00	0.00	0.00
EFT:	0	0.00	0.00	0.00
NON CHECKS:	0	0.00	0.00	0.00
VOID CHECKS:	0	0.00	0.00	0.00
	VOID DEBITS	0.00		
	VOID CREDITS	0.00	0.00	0.00

TOTAL ERRORS: 0

VENDOR SET: 04	BANK: APBK	TOTALS:	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
			1	521.60	0.00	521.60
BANK: APBK	TOTALS:		59	4,280,630.47	0.00	4,280,630.47
REPORT TOTALS:			59	4,280,630.47	0.00	4,280,630.47

## SELECTION CRITERIA

---

VENDOR SET: \* - All  
VENDOR: ALL  
BANK CODES: All  
FUNDS: All

---

## CHECK SELECTION

CHECK RANGE: 055954 THRU 056013  
DATE RANGE: 0/00/0000 THRU 99/99/9999  
CHECK AMOUNT RANGE: 0.00 THRU 999,999,999.99  
INCLUDE ALL VOIDS: YES

---

## PRINT OPTIONS

SEQUENCE: CHECK NUMBER

PRINT TRANSACTIONS: YES  
PRINT G/L: NO  
UNPOSTED ONLY: NO  
EXCLUDE UNPOSTED: NO  
MANUAL ONLY: NO  
STUB COMMENTS: NO  
REPORT FOOTER: NO  
CHECK STATUS: NO  
PRINT STATUS: \* - All

---

## **CONSENT AGENDA**

### **B. CEREAL MALT BEVERAGE LICENSE APPROVAL:**

The following businesses have made application for a Cereal Malt Beverage License for the year 2024.

Applications were received by the Assistant City Administrator and recommended for approval by the Public Safety Director, Lloyd Newman.

Package Sales:

- Casey's General Store, 222 S. Meridian, Valley Center, KS
- Kwik Shop, 110 E. 5th, Valley Center, KS
- Dollar General Store, 220 E. Ford, Valley Center, KS

## **STAFF REPORTS**

- A. Community Development Director Shrack**
- B. Parks & Public Buildings Director Owings**
- C. Public Safety Director Newman**
- D. Public Works Director Eggleston**
- E. City Engineer- Scheer**
- F. City Attorney Arbuckle**
- G. Asst. City Administrator of Finance Smith**
- H. City Administrator Clark**

## **GOVERNING BODY REPORTS**

- A. Mayor Cicirello**
- B. Councilmember Stamm**
- C. Councilmember Evans**
- D. Councilmember Bass**
- E. Councilmember Anderson**
- F. Councilmember Gregory**
- G. Councilmember Kerstetter**
- H. Councilmember Wilson**
- I. Councilmember Colbert**

**ADJOURN**