



City of Lawton

City Council

Lawton City Hall
212 SW 9th Street
Lawton, Oklahoma
73501-3944

Agenda

Tuesday, November 4, 2025

6:00 PM

Lawton City Hall
Wayne Gilley Auditorium

Meeting Called to Order with Invocation and Pledge of Allegiance

"Official action can be taken only on items which appear on the agenda. The Council may adopt, approve, ratify, deny, defer, recommend, or continue any agenda item. The Council may also propose and enact floor amendments to any matter presented before them. When more information is needed to act on an item, the Council may refer the matter to the City Manager or the City Attorney. The Council may also refer items to standing committees of the Council or a board, commission, or authority for additional study. Under certain circumstances, items are deferred to a specific later date or stricken from the agenda entirely."

Roll Call

Presentation

1. Citizen of the Month- Mary Fountain
2. True North Award Recipient

Reports: Mayor/City Council/City Manager

Consent Agenda

The following items are considered to be routine by the City Council and will be enacted with one motion. Should discussion be desired on an item, that item will be removed from the Consent Agenda prior to action and considered separately.

3. Consider adopting a resolution and approving a joint petition settlement in the amount of \$9,504.00 in the Workers' Compensation case of Chad Meyer.
4. Consider approving a Resolution rescinding Resolution No. 24-169, which declared the structure(s) located at 1308 SW Pennsylvania Avenue a dilapidated structure.
5. Approve a resolution ratifying all action taken by the City Council during its October 28th, 2025, City Council meeting, including all matters approved by the City Council during said meeting.
6. Consider and take action in approving Change Order no. 1 reducing the contract by \$203,240, accepting the project in the final contract amount of \$1,714,285, and placing the maintenance bond into effect for the Industrial Water Main Phase II Project PU2412 for waterline as constructed by Southwest Water Works, LLC.

7. Consider authorizing staff to utilize \$37,500.00 from the Fire Cost Recovery fund for the purchase of self-contained breathing apparatus (SCBA) cylinders.
8. Consider and take action in accepting the Green Sand Pilot Project PU2421 in the final amount of \$463,213 and accept the final report.
9. Consider approving a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Ring Closure 1) to serve a Lawton Public School facility, and authorizing the Mayor and City Clerk to execute the permit.
10. Consider approving a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Ring Closure 2) to serve a Lawton Public School facility, and authorizing the Mayor and City Clerk to execute the permit.
11. Consider approving a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Ring Closure 3) to serve a Lawton Public School facility, and authorizing the Mayor and City Clerk to execute the permit.
12. Consider approving a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Ring Closure 4) to serve a Lawton Public School facility, and authorizing the Mayor and City Clerk to execute the permit.
13. Consider approving a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Media Tech Center) to serve a Lawton Public School facility, and authorizing the Mayor and City Clerk to execute the permit.
14. Consider approving the traffic signal at 50th and Cache to be placed with the north and southbound signals onto flashing red, and east and west signals to flashing yellow until such a time that development of properties in which the signals are required are fully developed and ready to open to the public.
15. Consider approving a First Amendment Professional Services Agreement between the City of Lawton and the Honorable Jari Askins for the position of Interim City Attorney.
16. Consider ratifying the City Manager's decision to co-sponsor a Resource Fair with the Fires Innovation Science and Technology Accelerator (FISTA) to support furloughed government civilians, scheduled for November 5 from 10 a.m. to 2 p.m. at FISTA Innovation Park.
17. Consider approving 105 in 25 Mill and Overlay Project Management Task Order for WSB in the amount of \$382,670.00.

18. Consider determining the actual costs of the dismantling and removal of dilapidated buildings and other expenses that may be necessary in conjunction with same by approving invoices for demolition of properties as required by State Statue 11-22-112.4 for properties located at 1008 SW Roosevelt Avenue, 2031 SW Dr Charles W Whitlow Avenue and 1805 NW Lawton Avenue.
19. Consider approving proposed appointments to boards and commissions.
20. Consider approving the minutes of the October 22, 2025 Special Meeting.

Business Items

21. Consideration and action upon a resolution of the City of Lawton, Oklahoma, (the “City”) approving and authorizing the incurring of indebtedness by the trustees of the Lawton Industrial Development Authority (the “Authority”) to be accomplished by the issuance of its Sales Tax Revenue Bonds, or other evidences of indebtedness in one or more series either in series names or others determined as needed on a tax-exempt or taxable basis, at a premium or discount, in the aggregate principal par amount of not to exceed Eighty-Five Million and No/100 Dollars (\$85,000,000.00) (the “Bonds”) for the purpose of financing all or a portion of the costs of acquisition, construction, equipping, renovating and improving certain streets and capital improvement projects which are expected to include, but are not limited to, a portion of or all of the costs of the improvements to the Lawton Youth Sports Facility, Elmer Thomas Park, the discovery zone, and other acquisitions, repairs and improvements relating to City capital projects all for the benefit of the City; and pay costs of issuance related thereto; providing that the organizational document creating the Authority is subject to the provisions of the Bond Indenture authorizing the issuance of said Bonds; approving the award of the sale of said Bonds on a negotiated basis, approving the waiver of competitive bidding with regard to the sale of said Bonds; and approving the proceedings of the Authority pertaining to the sale of said Bonds; approving and authorizing a sales tax agreement (the “Sales Tax Agreement”) by and between the City and the Authority pertaining to a year-to-year pledge of certain sales tax revenues; and all matters related thereto, including execution of all related documents thereto.
22. Consider adopting a resolution proposing that the improvement district entitled Willow Springs Neighborhood Water Main Improvement District be created upon setting a public hearing date and instructing the City Clerk to give notice of such hearing on the proposed district to the property owners of record within the proposed district boundary.
23. Consider approving an ordinance pertaining to Utilities, Amending Sections

22-4-1-410 And 22-4-1-412 , both in Division 22-4-1, Article 22-4, Chapter 22, Lawton City Code 2015 by adding provisions for abandoned shopping carts to be considered bulk waste and setting fees as such, providing for severability and establishing an effective date.

24. Consider approving an ordinance pertaining to Nuisance and Health, amending Divisions 15-1-101, 15-1-118, and 15-1-119, and creating Division 15-1-120, all in Article 15-1, Chapter 15, Lawton City Code 2015 by adding definitions, changing numbering, and requiring retailers to play an active role in the public nuisance of abandoned shopping carts within the city, providing for codification, providing for severability and establishing an effective date.

Executive Session

25. Pursuant to Section 307B.3, Title 25, Oklahoma Statutes, consider convening in executive session to discuss the potential purchase of real property, and if necessary, take appropriate action in open session.
26. Pursuant to Section 307B.4, Title 25, Oklahoma Statutes, consider convening in executive session to discuss the pending action in the Court of Civil Appeals titled Julie Magness v. City of Lawton, Case No. 123509 and, if necessary, take appropriate action in open session.

Audience Participation

Lawton citizens who have completed a Request to Speak Form and wish to address business not listed on the agenda may step forward at this time.

To ensure compliance with the Oklahoma Open Meeting Act, the Mayor and Council will receive comments but will NOT engage in direct responses. However, they may refer matters to the appropriate department or individual for further consideration and follow-up action.

To participate, speakers must submit a Request to Speak Form to the City Clerk and reside within the Lawton city limits. Each speaker is allotted 3 minutes, with a maximum of 9 minutes per topic, and Audience Participation is limited to 30 minutes total. All participants are expected to follow the Rules of Decorum as outlined in Council Policy 1-6.

Adjournment

The City of Lawton encourages participation from all of its citizens. If participation at any public meeting is not possible due to a disability, notification to the City Clerk at (580) 581-3305 at least 48 hours prior to the scheduled meeting is encouraged to make the necessary accommodations. The City may waive the 48 hour rule if interpreters for the deaf (signing) is not the necessary accommodation."

Item Title:

Citizen of the Month- Mary Fountain

Initiator: Stan Booker, Mayor

Information Source: Stan Booker, Mayor

Background:

The Citizen of the Month Award is presented by the Mayor's Commission on the Status of Women to recognize individuals or organizations that demonstrate outstanding community service, leadership, and dedication to improving the quality of life in Lawton–Fort Sill. Recipients are selected for their meaningful contributions that support the Commission's mission of promoting civic engagement, volunteerism, and the well-being of all citizens. Each month's honoree serves as an example of the positive impact that commitment and compassion can have within the community.

The Citizen of the Month for November 2025 is Mary Fountain.

Correlation to the True North Statement:

A Community of Choice Where Families Thrive.

Exhibit:

None

Key Issues:

N/A

Funding Source:

N/A

Recommended Action:

Presentation Only: no action needed.

ATTACHMENTS:

None

Item Title:

True North Award Recipient

Initiator: John Ratliff, City Manager

Information Source: John Ratliff, City Manager

Background:

The True North Award is presented to a City of Lawton employee who exemplifies the core principles outlined in the City's True North Culture Statement-dedication to service, commitment to excellence, and a focus on citizen-centered outcomes. This recognition honors those who go above and beyond in their daily responsibilities, contribute to a culture of teamwork and accountability, and consistently make a positive difference in the lives of Lawton residents. The selected recipient demonstrates what it means to live out the City's mission and values, not just in words, but in action.

Correlation to the True North Statement:**Exhibit:****Key Issues:****Funding Source:****Recommended Action:**

Presentation of Award.

ATTACHMENTS:

None

Item Title:

Consider adopting a resolution and approving a joint petition settlement in the amount of \$9,504.00 in the Workers' Compensation case of Chad Meyer.

Initiator: Timothy Wilson, Interim City Attorney

Information Source: Garrett Lam, Assistant City Attorney

Background:

This matter involves the workers' compensation claim of Chad Meyer, a Lawton Fire Department Captain who alleges injury to his right foot on July 23, 2025. Subject to City Council approval, settlement has been reached with the claimant and his attorney, agreeing to accept the City's offer of \$9,504.00, which includes an attorney fee of \$1,900.80, and a Multiple Injury Trust Fund assessment payment to the Oklahoma Tax Commission in the amount of \$285.12.

Correlation to the True North Statement:**Exhibit:**

Resolution

Key Issues:

N/A

Funding Source:

Sinking Fund

Recommended Action:

Adopt a resolution approving the joint petition settlement of \$9,504.00 and making payments in the pending workers' compensation claim of Chad Meyer.

ATTACHMENTS:

1. Meyer, Chad, Resolution

RESOLUTION NO. 2025-

A RESOLUTION APPROVING THE JOINT PETITION SETTLEMENT AND MAKING PAYMENT OF THE SETTLEMENT IN THE WORKERS' COMPENSATION CASE OF CHAD MEYER FOR THE AMOUNT OF NINE THOUSAND FIVE HUNDRED FOUR AND NO/100 DOLLARS (\$9,504.00) INCLUDING AN ATTORNEY'S FEE PAYMENT IN THE AMOUNT OF ONE THOUSAND NINE HUNDRED AND 80/100 DOLLARS (\$1,900.80); DIRECTING THREE PERCENT (3%) OF SAID JUDGMENT, IN THE AMOUNT OF TWO HUNDRED EIGHTY-FIVE AND 12/100 DOLLARS (\$285.12), TO BE PAID DIRECTLY TO THE OKLAHOMA TAX COMMISSION AS A MULTIPLE INJURY TRUST FUND TEMPORARY ASSESSMENT IN ACCORDANCE WITH 85A OKLA. STAT. SECTION 31.A.7; AND FILING A FOREIGN JUDGMENT IN THE DISTRICT COURT OF COMANCHE COUNTY FOR PURPOSE OF PLACING SAID JUDGMENT ON THE TAX ROLLS.

WHEREAS, Chad Meyer has filed an injury claim with the Workers' Compensation Commission for disability benefits as a result of an injury to his right foot, which occurred on July 23, 2025, while on duty as a Fire Captain for the City of Lawton, Fire Department; and,

WHEREAS, a Joint Petition Settlement has been reached in the amount of Nine Thousand Five Hundred Four and No/100 Dollars (\$9,504.00), including an attorney's fee payment in the amount of One Thousand Nine Hundred and 80/100 Dollars (\$1,900.80); and,

WHEREAS, pursuant to Title 85A Okla. Stat. Section 31.A.7., for injuries occurring on or after July 1, 2019, the Oklahoma Tax Commission shall assess and collect from claimants a Multiple Injury Trust Fund temporary assessment in the amount of three percent (3%) of the total award or settlement for permanent partial disability or permanent total disability; and,

WHEREAS, in the Joint Petition Settlement filed with the Workers' Compensation Commission, the claimant agreed that said assessment, representing three percent (3%) of the joint petition settlement amount attributable to permanent partial disability or permanent total disability, shall be deducted from the settlement amount and paid by the employer; and,

WHEREAS, the above referenced Multiple Injury Trust Fund Assessment representing three percent (3%) of the joint petition settlement amount attributable to permanent partial disability or permanent total disability is Two Hundred Eighty-Five and 12/100 Dollars (\$285.12); and,

WHEREAS, the amount due to Chad Meyer will be Nine Thousand Five Hundred Four and No/100 Dollars (\$9,504.00), including an attorney's fee payment in the amount of One Thousand Nine Hundred and 80/100 Dollars (\$1,900.80) and including a Multiple Injury Trust Fund Assessment to be paid to the Oklahoma Tax Commission in the amount of Two Hundred Eighty-Five and 12/100 Dollars (\$285.12).

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Lawton, that the City Council approves the Joint Petition Settlement and filing of a foreign judgment for

purposes of placing said judgment on the tax rolls and making payment of Nine Thousand Five Hundred Four and No/100 Dollars (\$9,504.00), including an attorney's fee payment in the amount of One Thousand Nine Hundred and 80/100 Dollars (\$1,900.80) and a Multiple Injury Trust Fund Assessment to be paid to the Oklahoma Tax Commission in the amount of Two Hundred Eighty-Five and 12/100 Dollars (\$285.12), in the workers' compensation case of Chad Meyer.

PASSED and APPROVED by the Mayor and Council of the City of Lawton, Oklahoma this 4th day of November 2025.

STANLEY BOOKER, MAYOR

ATTEST:

DONALYNN BLAZEK-SCHERLER, CITY CLERK

 APPROVED as to form and legality this 24th of October 2025.

GARRETT LAM, ASSISTANT CITY ATTORNEY

Item Title:

Consider approving a Resolution rescinding Resolution No. 24-169, which declared the structure(s) located at 1308 SW Pennsylvania Avenue a dilapidated structure.

Initiator: Larry Parks, Director

Information Source: Jonathan Jernigan, Neighborhood Services - Supervisor

Background:

Resolution No. 24-169 declares the structure at 1308 SW Pennsylvania Avenue a dilapidated structure. The resolution was passed on July 23, 2024. The structure has been remodeled and is a mobile home. The building division is unable to issue a Certificate of Occupancy because mobile homes are not regulated under the Property Maintenance Code or under the International Residential Code. Mobile homes are constructed to the Federal Manufactured Home Construction and Safety Standards. The property owner has made repairs to the exterior of the structure and has replaced the windows for the structure. Staff is asking you to rescind the resolution because it is no longer a dilapidated structure.

Correlation to the True North Statement:

Safe Community

Exhibit:

Resolution
Photos

Key Issues:

Does Council wish to re-consider declaring the structure(s) located at 1308 SW Pennsylvania a dilapidated structure?

Funding Source:

None

Recommended Action:

Approve Resolution No. 25-____ that rescinds Resolution No. 24-169 declaring the structure(s) located at 1308 SW Pennsylvania a dilapidated structure.

ATTACHMENTS:

1. 1308 SW Pennsylvania
2. 1308 SW Pennsylvania



Dilapidated and Dangerous Structures Remodel October 14, 2025

1308 SW Pennsylvania Avenue Ward 7



1308 SW Pennsylvania Avenue Ward 7



1308 SW Pennsylvania Avenue Ward 7



1308 SW Pennsylvania Avenue Ward 7



1308 SW Pennsylvania Avenue Ward 7



1308 SW Pennsylvania Avenue Ward 7



1308 SW Pennsylvania Avenue Ward 7



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1308 SW Pennsylvania Avenue Ward 7



1308 SW Pennsylvania Avenue Ward 7



1308 SW Pennsylvania Avenue Ward 7



1308 SW Pennsylvania Avenue Ward 7



RESOLUTION NO. 25-_____

A RESOLUTION RESCINDING RESOLUTION NO. 24-169, ADOPTED JULY 23, 2024, WHICH DECLARED THE PROPERTY LOCATED AT 1308 SW PENNSYLVANIA AVENUE, LAWTON, OKLAHOMA, TO BE DILAPIDATED, DETRIMENTAL TO THE HEALTH, SAFETY, OR WELFARE OF THE CITY OF LAWTON AND ITS INHABITANTS, A BLIGHTING INFLUENCE, AND A PUBLIC NUISANCE.

WHEREAS, on July 23, 2024, the City Council of the City of Lawton adopted Resolution No. 24-169 declaring the structure(s) located at 1308 SW Pennsylvania Avenue, Lawton View Addition, Block Eighty-Seven (87), Lot Eight (8), Comanche County, Oklahoma, to be dilapidated, detrimental to the health, safety, or welfare of the City and its inhabitants, a blighting influence, and a public nuisance; and

WHEREAS, subsequent to the adoption of that resolution, the property owner(s) have [choose one – completed substantial repairs and brought the structure into compliance with Chapter 6 of the Lawton City Code and all applicable standards / provided evidence showing the property was not dilapidated at the time of the prior action / otherwise corrected the conditions that led to the declaration]; and

WHEREAS, upon review of updated inspections and staff findings, the City Council finds that the conditions constituting a nuisance no longer exist and that it is in the best interest of the City to rescind the prior declaration of dilapidation;

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF LAWTON, STATE OF OKLAHOMA:

That Resolution No. 24-169, adopted July 23, 2024, declaring the property located at 1308 SW Pennsylvania Avenue to be dilapidated, is hereby rescinded in its entirety.

That the property located at 1308 SW Pennsylvania Avenue shall no longer be classified as dilapidated or a public nuisance under Chapter 6 of the Lawton City Code.

That the City Clerk is directed to update all official records to reflect this rescission and notify the appropriate city departments accordingly.

That this resolution shall take effect immediately upon its adoption and approval.

ADOPTED and APPROVED by the Mayor and Council of the City of Lawton, Oklahoma, this 4th day of November, 2025.

ATTEST:

Stanley Booker, Mayor

Donalynn Blazek-Scherler, City Clerk

APPROVED as to form and legality this 4th day of November, 2025.

Timothy Wilson, Acting City Attorney

Item Title:

Approve a resolution ratifying all action taken by the City Council during its October 28th, 2025, City Council meeting, including all matters approved by the City Council during said meeting.

Initiator: Timothy Wilson, Interim City Attorney

Information Source: Timothy Wilson, Interim City Attorney

Background:

The October 28, 2025 City Council meeting had to reconvene in the banquet hall from the regularly scheduled auditorium due to unexpected power outages resulting in no auditorium lighting. This resolution ratifies all action taken during said meeting.

Correlation to the True North Statement:**Exhibit:**

Resolution

Key Issues:

N/A

Funding Source:

N/A

Recommended Action:

Approve the resolution.

ATTACHMENTS:

1. Ratify Resolution

RESOLUTION NO. 25-__

A RESOLUTION RATIFYING ALL ACTION TAKEN BY THE CITY COUNCIL DURING ITS OCTOBER 28, 2025, CITY COUNCIL MEETING, INCLUDING ALL MATTERS APPROVED BY THE CITY COUNCIL DURING SAID MEETING.

WHEREAS, on the afternoon of October 28, 2025, city hall experienced power surges and outages affecting the building; said power surges occurring just a few hours before the regularly scheduled council meeting set to begin at 6pm that day in the auditorium of city hall.

WHEREAS, at the 6pm scheduled time of the City Council meeting was to be held in the auditorium of city hall, the lighting in the auditorium was not functional.

WHEREAS, pursuant to the Oklahoma Open Meeting Act, the meeting convened at 6pm in the regularly scheduled location (auditorium) of city hall where it was publicly announced the meeting would reconvene at 6:15 pm in the banquet hall room of city hall where there was proper lighting.

WHEREAS, at 6:15 pm the council meeting was subsequently reconvened in the banquet hall room of the city hall building.

WHEREAS, the purpose of this resolution is to formally ratify all action taken by the city council during its October 28, 2025 council meeting, to include all matters approved by the city council during said meeting.

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Council of the City of Lawton, Oklahoma that the City hereby adopts this resolution ratifying all action taken by the city council during its October 28, 2025 council meeting, including all matters approved by the city council during said meeting.

PASSED and APPROVED by the Mayor and Council of the City of Lawton, Oklahoma, this ____ day of _____, 2025.

STANLEY BOOKER, MAYOR

ATTEST:

DONALYNN BLAZEK-SCHERLER, CITY CLERK

APPROVED as to form and legality this ____ day of _____, 2025.

JARI ASKINS, INTERIM CITY ATTORNEY

Item Title:

Consider and take action in approving Change Order no. 1 reducing the contract by \$203,240, accepting the project in the final contract amount of \$1,714,285, and placing the maintenance bond into effect for the Industrial Water Main Phase II Project PU2412 for waterline as constructed by Southwest Water Works, LLC.

Initiator: Willie Whisenhunt, Director

Information Source: Willie Whisenhunt, Director

Background:

The City Council entered into a redevelopment agreement on February 23, 2023, later modified by City Council to support the development of the site as refinery of Cobalt and other elements for Westwin Elements, INC. As part of the agreement, the City of Lawton is required to bring utilities to the project site to support the industry. Garver was contracted to do the design of Phase I, approved by council on May 9th, 2023, to extend the waterline services in the industrial park area. The Council approved plans and specification and authorized advertising on November 7th, 2023. The City of Lawton pre-purchased the 20" PVC pipe, large diameter fittings and 20" valve to expedite construction. Council Awarded the Phase I construction contract in the amount of \$2,440,772.28 to M&T Septic & Backhoe Service, INC, of Blanchard, OK, on December 5th, 2023. The project was completed and accepted by council on March 26, 2024.

On February 13, 2024, City Council approved Amendment No. 1 to the Industrial Water Main Phase I Project PU2306 contract with Garver, LLC, for Phase II-a design to include a 12" waterline loop from the industrial site along 112th St from Bishop Rd to Lee Blvd and back to 97th St. and design of a lift station and force main to connect the West Industrial Site to the City's sanitary sewer system in the not to exceed amount of \$677,150.00.

Phase II of this project includes the waterline loop as well as the sewer lift station and force main. To accommodate the cost for this project, the constructions plans have been split into PU2412 for the waterline loop and PU2420 for the lift station and force main. The total estimated cost for all of Phase 2 is approximately \$7.2 million, based upon the engineer's estimate.

City Council approved the plans, specifications and authorized advertisement on October 8, 2024.

The project advertised for construction on October 9th & 16th, 2024, with a non-mandatory pre-bid conference held at 10:30 am on October 25, 2024, in the Public Utilities conference room. A bid opening was publicly held at 2:00 pm on November 12, 2024, at City Hall. A total of nine (9) bids were received, however one (1) bid was deemed non-responsive due to incomplete bid packet submission.

City Council awarded a contract in the amount of \$1,917,525.00 to Southwest Water Works, LLC, for the construction of the Industrial Water Main Extension Phase II Project PU2412 to provide water service for additional growth in the industrial park area on December 2, 2024.

The project is now complete and ready for acceptance.

Correlation to the True North Statement:

This project benefits the citizen by promoting the Open for Business value in accordance with the True North Culture Statement.

Exhibit:

Change Order No. 1 PU2412, Engineer's Recommendation Letter

Key Issues:

Does City Council wish to approve Change Order no. 1 reducing the contract by \$203,240, accept the project in the final contract amount of \$1,714,285, and place the maintenance bond into effect for the Industrial Water Main Phase II Project PU2412 for waterline replacement as constructed by Southwest Water Works, LLC?

Funding Source:

LIDA loan S2024C funded project account

Recommended Action:

Approve Change Order no. 1 reducing the contract by \$203,240, accept the project in the final contract amount of \$1,714,285, and place the maintenance bond into effect for the Industrial Water Main Phase II Project PU2412 for waterline as constructed by Southwest Water Works, LLC.

ATTACHMENTS:

1. Industrial Waterline Phase II Change Order no. 1
2. Engineer's Recommendation to Acceptance

CITY OF LAWTON, OKLAHOMA PUBLIC UTILITIES DEPARTMENT CONTRACT CHANGE ORDER			DATE: 11/4/2025
To: Southwest Water Works, LLC		Industrial Water Main Phase II Project PU2412	
You are hereby requested to comply with the following changes from the contract plans and specifications:		Change Order No. 1	
Item # (1)	Description of changes-quantities, units, unit prices, change in completion schedule, etc. (2)	Decrease in contract price (3)	Increase in contract price (4)
1	Reduction of Contract amounts for unused quantities and allowances	\$203,240.00	XXXXXXXXXX
Change in contract price due to this Change Order:			
	Total decrease	\$203,240.00	XXXXXXXXXX
	Total increase	XXXXXXXXXX	XXXXXXXXXX
	Difference between Col. (3) & (4)		
	Net (increase) decrease contract price	\$203,240.00	
The sum of <u>\$203,240.00</u> is hereby (added to) deducted from the total contract price <u>\$1,917,525.00</u> and the total adjusted contract price to date thereby is <u>\$1,714,285.00</u>. <u>One million seven hundred fourteen thousand two hundred eighty five---Dollars (\$1,917,525.00 - \$203,240.00 = \$1,714,285.00)</u>			
The time provided for completion in the contract is unchanged (increased) (decreased) by <u>0</u> calendar days. This document shall become an amendment to the contract and all provisions of the contract will apply hereto.			

JUSTIFICATION FOR CHANGE:		
1. Necessity for change: This project is now complete and this change reflects the unused quantities and allowances.		
2. Is proposed change an alternate bid? Yes _____ No <u>X</u>		
3. Will proposed change alter the physical size of the project? Yes _____ No <u>X</u> If "Yes," explain.		
4. Effect of this change on other prime contractors: _____ N/A		
5. Has consent of surety been obtained?	Yes _____	No <u>X</u>
6. Will this change affect expiration of extent of insurance coverage?	Yes _____	No <u>X</u>
7. Effect of operation and maintenance costs: None _____ Maintenance costs will be reduced due to the full replacement of the additional dilapidated waterlines.		
Authorized by: _____ Date: _____ <u>Rusty Whisenhunt, Director of Public Utilities</u> Name and Title		

(FOR CORPORATIONS AND LLC)

Accepted by:

Southwest Water Works LLC

Name of Corporation

By:

[Signature]

Title:

G.O.O.

Attest:

[Signature]
Manager

Title:

(FOR PARTNERSHIPS AND PROPRIETORSHIPS)

Accepted by:

Date:

Name

Title

STATE OF OKLAHOMA)
COUNTY OF COMANCHE)

Before me the undersigned, a Notary Public in and for said State, on this ____ day of _____, 2025, personally appeared _____, a member of the partnership _____, to be known to be the identical person who executed the within and foregoing instrument on behalf of said partnership and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed, and as the free and voluntary act and deed of said partnership for the uses and purposed therein set forth.

Notary Public

My Commission expires:

Approved by:

Stan Booker, Mayor
City of Lawton, Oklahoma

Date: _____.

Attest:

Donalynn Blazek-Scherler, City Clerk

APPROVED as to form and legality on the _____ day of _____, 2025.

Tim Wilson, Acting City Attorney

I, Chandra Young, Finance Director, of the City of Lawton, Oklahoma, do hereby certify that I have entered the amount for this encumbrance against appropriation Account Number 4400000-54030 or the PU2412-Water

After this **decreased** encumbrance in the amount of \$203,240, there is an unencumbered balance in said appropriation account of \$ _____.

Dated this _____ day of _____, 2025.

Chandra Young, Finance Director



www.GarverUSA.com

October 28, 2025

Rusty Whisenhunt
Director of Public Utilities
2100 SW 6th St,
Lawton, OK 73501

Re: Lawton Industrial Water Main Phase 2 Improvements
PU2412

Rusty,

The Industrial Water Main Phase 2 Improvements project had an underrun of materials following the completion of the project. The total contract amount left on the project is \$203,240.00.

We concur with the recommendation to accept the project as constructed by Southwest Water Works as the scope of work has been completed as outlined in the Contract Documents. We recommend accepting the reduction of cost through Change Order No. 1 in the amount of \$203,240.00. This Change Order No. 1 would reduce the contract price from \$1,917,525.00 to \$1,714,285.00.

Sincerely,

GARVER
Collin Bellmer

Item Title:

Consider authorizing staff to utilize \$37,500.00 from the Fire Cost Recovery fund for the purchase of self-contained breathing apparatus (SCBA) cylinders.

Initiator: Jared Williams, Operations - Chief

Information Source: Jared Williams, Operations - Chief

Background:

The Lawton Fire Department utilizes SCBA in response to a multitude of hazardous incidents, and its use is essential in providing life safety to our citizens and employees. These cylinders have a shelf life of 15 years, after which, they are rendered useless. This life span is mandated by regulations issued by the Department of Transportation (DOT).

Correlation to the True North Statement:

Use of these funds correlates with the tenet of transparency and trust through accountable decision-making.

Exhibit:**Key Issues:**

Does the council wish to approve this purchase utilizing the Fire Cost Recovery fund?

Funding Source:

4357501-51000

Recommended Action:

Authorize staff to utilize \$37,500.00 from the Fire Cost Recovery fund for the purchase of self-contained breathing apparatus (SCBA) cylinders.

ATTACHMENTS:

None

Item Title:

Consider and take action in accepting the Green Sand Pilot Project PU2421 in the final amount of \$463,213 and accept the final report.

Initiator: Willie Whisenhunt, Director

Information Source: Willie Whisenhunt, Director

Background:

The Alternate Water Supply (AWS) project was identified as use of ground water by drilling wells into the Arbuckle-Timber Aquifer, conveyance system and plant upgrade at the SEWTP. The AWS project was authorized to proceed with phase one of project to produce a minimum of 5MGD potable water for the City of Lawton the first project the Lawton Groundwater Supply - Well Site K (Well No. 1) received bids and on June 8, 2023, City Council awarded the Project. The well #1 after it was completed, produces 1.2 MGD of raw water per day. The Lawton Groundwater Supply - Treatment Pilot Project #PU2002 advertised to a bid and on April 13, 2023, City Council approved awarding of the project to Worth Hydrochem. The pilot was completed and proved that the reverse osmosis would work, but that use of a polymer coagulant would not provide the required treatment. Bids for the Lawton Groundwater Supply — Test Well and Production Well Project PU2301 that included drilling of 7 test holes with conversion of 4 test holes to production wells. A bid opening was held December 5, 2023, and a total of 3 bids were received, a construction contract for PU2301 Groundwater Supply Well Installation 2023 was awarded to Associated Environmental Industries. Corp on January 9, 2024, in the amount of \$9,223,500. Bench analysis was conducted on the well water and ODEQ requires that the treatment process proposed by bench analysis be piloted. The requirement also requires that the same RO system be used in conjunction with the green sand filtration system. Worth Hydrochem is the only vendor that can provide the same RO system and do the engineering report. The Professional Services Agreement with Worth Hydrochem of Oklahoma was approved by City Council on 6/11/2024.

The Green Sand Pilot Project PU2421 is now complete, and the final report has been received. The pilot report shows that by keeping the water from oxidizing, that the life of the RO membranes could be extended. The pilot also showed that the Green Sand filter system did provide a good treatment for the high fluorides in the raw ground water.

Correlation to the True North Statement:

This project is imperative as we strive to create efficiency and provide a Safe Community for our citizen's as stated in the True North Culture

Exhibit:

Recommendation to Accept, Final Report

Key Issues:

Does City Council wish to accept the Green Sand Pilot Project PU2421 in the final amount of \$463,213.00 and accept the final report?

Funding Source:

Project was completely funded through the FAP Loan.

Recommended Action:

Accept the Green Sand Pilot Project PU2421 in the final amount of \$463,213.00 and accept the final report.

ATTACHMENTS:

1. Worth Hydro Pilot Report 12750GPR1006



Lawton, Oklahoma – GSF and RO PILOT TEST REPORT

Project Name: Lawton, Oklahoma GSF-RO Pilot Project

Proposal Number: 12750PS24

Project Number: 12750

Revision Number: 01

Date: October 6, 2025

Submitted To

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APPENDICES

- Appendix A: GSF Pilot GSP Media Technical Data Sheet
- Appendix B. RO-21-7M Pilot Unit Technical Data Sheet
- Appendix C. RO-21-7M Pilot Unit Process & Instrumentation Diagram (P&ID)
- Appendix D. GSF Site Pilot Operating Data - Anthracite Capped Greensand*Plus*
- Appendix E. RO Site Pilot Operating Data - Toray 4-inch TMG10D
- Appendix F. GSF Pilot GreensandPlus Pilot Process Logsheet
- Appendix G. RO Pilot Toray TMG10D Process Logsheet
- Appendix H. Toray TMG(D) Low-Pressure Brackish RO Data Sheet
- Appendix I. RO Membrane Element Data Sheet - Toray 4-inch TMG10D
- Appendix J. ODEQ Permit Variance for GSF - Example
- Appendix K. GSF Intellogx Pilot Operating Data - Anthracite Capped Greensand*Plus*
- Appendix L. RO Intellogx Pilot Operating Data - Toray 4-inch TMG10D
- Appendix M. Well Start-Stop Turbidity Effect Evaluation
- Appendix N. Pilot Membrane Autopsy Report
- Appendix O. Pilot Operations Report
- Appendix P. Greensand + RO Pilot System P&ID

Section 1 – Introduction and Objectives

1.1 Introduction

Lawton, Oklahoma intends to install a new RO system with either UF or GSF pretreatment. This phase of testing evaluated GSF pretreatment over a range of hydraulic loading rates which varied from 3-gpm/ft² to 10-gpm/ft² as delineated in the table immediately below. The GSF treatment would be implemented in lieu of the UF pretreatment to RO.

H2O Innovation supplied its RO piloting equipment to Worth Hydro. Worth Hydro conducted the testing for the Lawton's pilot study. The pilot system operation was completed during the four month interval of January 2025 through April 2025.

The pilot study collected data to compare the performance of both the GSF and RO at the varied GSF hydraulic loading rates:

Initial Date	Final Date	Phase
January 5, 2025	April 21, 2025	GSF - RO Pilot Evaluation
January 5, 2025	January 12, 2025	3-gpm/ft ² GSF Hydraulic Loading Rate
January 12, 2025	January 20, 2025	4-gpm/ft ² GSF Hydraulic Loading Rate
January 20, 2025	January 24, 2025	5-gpm/ft ² GSF Hydraulic Loading Rate
January 24, 2025	February 3, 2025	7-gpm/ft ² GSF Hydraulic Loading Rate
February 3, 2025	February 11, 2025	8-gpm/ft ² GSF Hydraulic Loading Rate
February 11, 2025	February 17, 2025	9-gpm/ft ² GSF Hydraulic Loading Rate
February 17, 2025	March 20, 2025	10-gpm/ft ² GSF Hydraulic Loading Rate
March 20, 2025	March 24, 2025	6-gpm/ft ² GSF Hydraulic Loading Rate
March 24, 2025	March 25, 2025	7-gpm/ft ² GSF Hydraulic Loading Rate
March 25, 2025	April 9, 2025	6.3-gpm/ft ² GSF Hydraulic Loading Rate
April 9, 2025	April 21, 2025	10-gpm/ft ² GSF Hydraulic Loading Rate

The Oklahoma Department Of Environmental Quality, ODEQ, evaluates individual applications for a variance from Oklahoma Administrative Code ("OAC") 252:626-9-

7(a)(3)(C), which requires a maximum filtration rate of three (3) gallons per minute per square foot ("gpm/ft²") for manganese green sand filtration for iron and manganese control.

Appendix J of this report provides an example of an ODEQ Permit Variance for GSF.

The following RO membrane modules were piloted:

- RO - Toray 4-inch TMG10D

The RO pilot operated at an average permeate flux of 17.45 gfd, and a recovery of 82 percent. The pilot RO had and the quantity of 21, Toray nominal 4-inch TMG10D membrane elements were operated in an effective 2:1 array of 7-element pressure vessels via partial loadings of the first two stages. The two pilot RO stages each performed well and reliably through out the pilot study, maintaining stable performance

This report is written to primarily provide a summary description of the test equipment and the salient operating events throughout the pilot study.

1.2 Objectives

The broad objectives of the pilot were to demonstrate the following:

1. Performance criteria for full scale GSF-RO system design including: instantaneous flux, recovery, chemical cleaning, filtered and permeate water quality and membrane integrity.
2. Stable performance of the GSF media filtration and RO membrane elements.
3. Confirm GSF service and backwash parameters.
4. Confirm required GSF pretreatment RO chemical cleaning protocol for the application.
5. Evaluate GSF and RO performance through incremental hydraulic loading rates for the GSF in the range of 3 to 10-gpm/f².

Throughout the piloting, the customer and H2O Innovation's Intellogx™ SPMC™ provided data logging and trending capability for major process parameters.

1.3 Summary of Findings

1.3.1 Overall Pilot Performance

The pilot ran smoothly and met the performance expectations of both Lawton and Garver. There were no operational upsets, and the data—both online and laboratory—remained consistent and within acceptable parameters.

1.3.2 Greensand Flow Rate (gpm/ft²)

ODEQ regulations limit GS filter loading rates to 3 gpm/ft². A major goal of this pilot, as Garver has highlighted, was to demonstrate effective iron removal at significantly higher rates—up to 10 gpm/ft². The GS filters consistently removed iron effectively at all tested flow rates, including the maximum rate of 10 gpm/ft².

1.3.3 RO-Only Iron Removal

During parallel operation, the pilot tested whether the RO system could remove iron without upstream GS filtration. The system was operated in an anaerobic configuration to prevent iron oxidation and fouling. This included eliminating the raw water break tank and instead feeding well water directly to the RO system, controlled via VFD to reduce turbulence and associated turbidity. Importantly, raw water iron concentrations during this pilot were significantly lower than the previous pilot, typically under 0.1-mg/L Fe.

1.3.4 Pilot RO Element Autopsy

Visual inspection, weight comparisons, and performance data (pressure/flow) indicate no signs of fouling or damage.

1.3.5 Well Start/Stop Testing

Although this test was not part of the original Pilot Protocol, testing was conducted as a supplemental exercise near the end of the pilot. The results were shared with Garver and Lawton (including graphs, data spreadsheets, and a summary email). Given its design implications for the full-scale (6 MGD?) system, we reference this testing in this report.

Section 2 – Terminology

Feedwater: The influent stream to a water treatment process.

Filtrate: The treated water passed through the GSF media to the filtered water effluent side.

Flux: Volumetric flowrate of the water passing through a membrane expressed in volume per unit membrane area per unit time (e.g., gallons per square foot per day (gfd) or liters per hour per square meter (Lmh)).

Concentrate: One of two effluent streams from an NF or RO module that comprises the effluent stream not permeating the membrane (also referred to as the retentate stream).

Foulant: Any substance that causes fouling.

Fouling: The accumulation of contaminants on a membrane surface that inhibits the passage of water thereby decreasing productivity.

Permeate: One of two effluent streams from an NF or RO module that comprises the effluent stream permeating the membrane.

Recovery: The percent of feed water that is converted to permeate (calculated through volume) in the treatment process

Retentate: One of two effluent streams from an NF or RO module that comprises the effluent stream not permeating the membrane (also referred to as the concentrate stream).

Total Organic Carbon (TOC): A measure of the amount of organic materials suspended or dissolved in water.

Turbidity: Turbidity is a measure of the light scattered by particles in the water, or in simpler terms, a measurement of the clarity of the water. The typical units of turbidity are nephelometric turbidity units (NTUs).

Section 3 – Pilot Equipment Description

3.1 GSF Pilot System

3.1.1 General:

Appendix A provides a GSF Pilot Technical Data Sheet that describes guidelines for operation of The Inversand Company proprietary Greensand^{Plus} media.

3.1.2 Equipment:

MGA-30G-2 CR TWIN PARALLEL IRON FILTER SYSTEM

- Qty (2) 30" Diameter x 72" FRP Pressure Vessels
- Non-Code Pressure Vessels, 150 psig Rating
- NO FILTER MEDIA IS SUPPLIED
- Washed Gravel Sub-Fill for Media Support
- 2" Fleck Model 3150 Top-Mounted Control Valves for Automatic Operation
- **Separate Source Backwash Connections**
- Automatic Backwash Flow Controller (50 gpm)
- No Raw Water By-Pass during regeneration
- Pentair 'NXT2' Microprocessor/Digital Display Controller
- 120/24 VDC, 60 Hz Electrical Power Rating
- Parallel Flow Control Configuration for Continuous Treated Water Supply
- Estimated Shipping Weight, lbs: 3,640

BACKWASH PUMP

- Qty (1) 304 SS Single Stage Centrifugal Pump (100 GPM @ 50 PSI)
- 5 HP, TEFC, 460V, 3 Phase, 60 Hz Motor
- Nema-4 Motor Starter/Control Panel with Disconnect

3.2 RO-421-6M Pilot System

The RO-421-6m Specification Sheet and Process & Instrumentation Diagram (P&ID) for the pilot equipment are provided in Appendices C and D, respectively. The RO-421-6m unit was fitted with a quantity of 21, Toray TMG10D elements, arranged in an effective 2:1, two-stage 7-element array by partial membrane loading of the first two stages of the pilot unit vessels.

The RO-421-6M pilot unit includes the following features (excerpted from Appendix B):

3.2.1 Equipment:

1. 4-2-1 or 4-2 Array, 6M vessels
2. Interstage Boost (not used in this pilot)

3. Seven (7) 450 psi pressure vessels
4. Dosing pumps for pre-treatment and cleaning chemicals
5. Feed and Booster Pump VFD
6. CIP cartridge filter & pump
7. 75 gallon CIP tank
8. Heater
9. Fully automated operation

3.2.2 Instrumentation:

1. Feed, Reject and Permeate Conductivity
2. Feed Turbidity, ORP
3. Feed, Reject and Permeate Pressure
4. Permeate Temperature
5. Feed, Reject and Permeate Flow
6. Remote Access and Control

Toray's TMG series membrane elements are classified as low-pressure, brackish water reverse osmosis (RO) membrane element with enhanced chemical tolerance, manufactured under ISO 9001.

As indicated in the table below excerpted from the appended RO membrane specification sheet, the piloted TMG10D 4-inch membrane elements are equivalent in every respect except membrane area to the TM720-400 membrane elements.

Critically this includes the feed spacer thickness of 31 mil; that is 0.031 inches (where a mil is 1/1,000th of an inch).

RO Pilot Membrane Element Relationship to Production Elements (From attached Appendix I)

Product Specifications	Unit	TMG	TMG
Size		10D	20D
Membrane Area	ft ² (m ²)	87 (8)	40037
Nominal Salt Rejection	%	99.7	99.7
Minimum Salt Rejection	%	99.5	99.5
Product Flow Rate	gpd (m ³ /d)	2,850 (10.8)	12,100(45.8)

Minimum Product Flow Rate	gpd (m ³ /d)	2,400 (9.1)	10,300 (39.0)
Feed spacer thickness	mil	34	34

Test Conditions: Feed water pressure 150 psi (1.03 MPa); Feed water temperature 77 °F (25°C);
Feed water concentration 2,000 mg/L as NaCl; Recovery rate 15%; Feed water pH 7

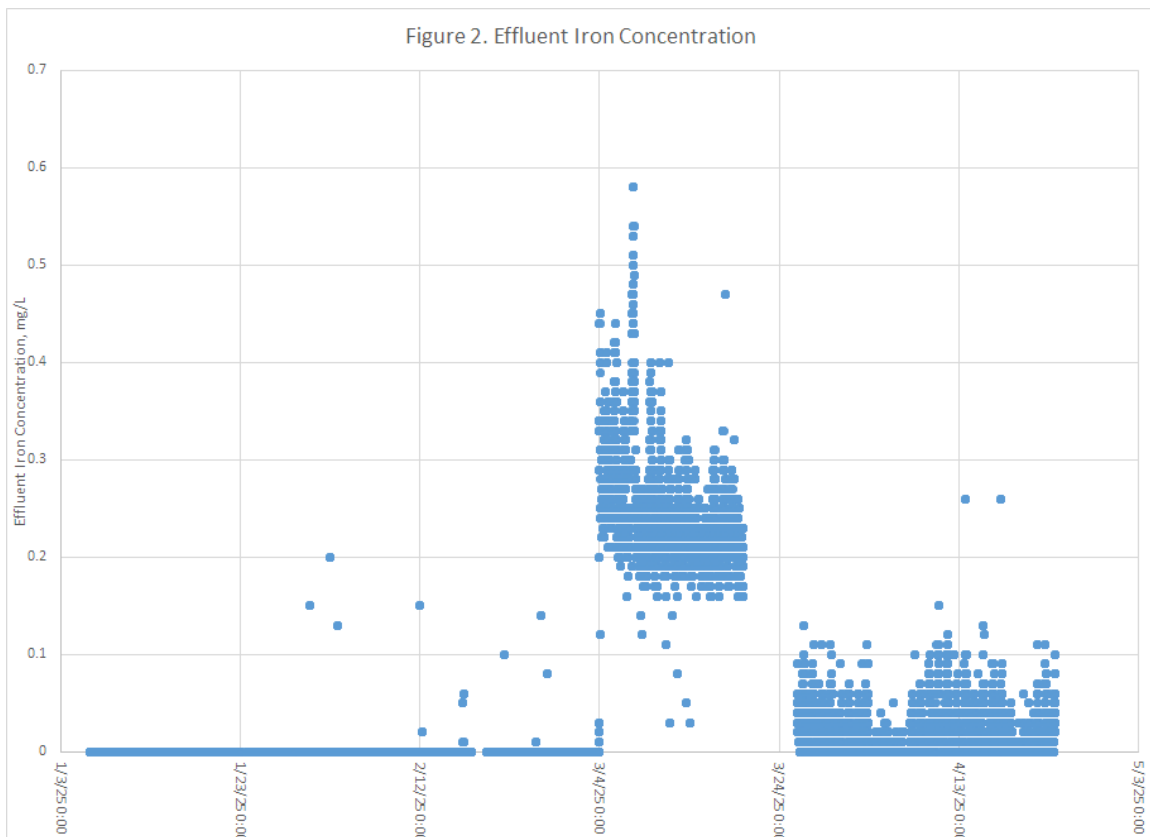
Section 4 – Membrane Operation Summary

As outlined in Section 1, the 4-month study was performed by Worth Hydro from January 2025 through April 2025.

A chronology of salient events that occurred throughout the pilot study is provided in the following appendices for the GSF pilot unit and the RO pilot unit; these chronologies include, test conditions, chemical cleaning events, and other events that occurred during the four month pilot study:

1. Appendix F. GSF Pilot GreensandPlus Pilot Process Logsheet
2. Appendix G. RO Pilot Toray TMG10D Process Logsheet

The period of operation of the GSF at 10-gpm/ft² hydraulic loading rate corresponded to the period of greatest GSF filtrate iron reported, greater than 0.15-mg/L iron. Figures below are based on data presented or directly excerpted from Appendix D and F.



4.1 Flux Rate, Recovery Rate, and Backwash Flow Rate Set points

Throughout the 4-month GSF operation the individual filters were backwashed at the rate of 50 gpm.

Though out the duration of the pilot study the two-stage RO unit was operated at 27-gpm feed flow rate.

The RO pilot unit recovery was at 82 percent throughout the duration of the pilot test.

Module	Flux Rate, gfd	Recovery, %	Feed Flow Rate, gpm
Toray RO	17.45	76 - 87.5	27

RO Pilot Unit Overall Permeate Recovery

The RO pilot unit was held at 82-perent permeate recovery throughout the 4-month test period.

Based on the surface area of 87 ft² for the quantity of 21, Toray RO TMG10D, the corresponding permeate flux rate for the RO was reported as follows:

Module	Flux Rate, gfd	Recovery, %	Permeate Flow Rate, gpm
Toray RO TMG10D	17.45	82	22.14

4.2 Pretreatment Conditions

PWT SpectraGuard™ 360 threshold inhibitor was dosed to the RO pilot unit feed stream at a rate of 5 mg/L of as received commercial solution through out the seven month duration of pilot testing.

No other pretreatment (such as, chloramination, etc.) was utilized through the pilot program.

4.3 Chemical Cleaning

4.3.1 RO Cleaning Event

On January 22, 2025 the two RO stages were cleaned in series, the only cleaning reported for the four-month duration of the pilot test. The cleaning was quite effective, in lowering the RO unit feed pressure from 218 psig to 150 psig.

4.4 Other Operating Conditions

Throughout the pilot program, RO permeate temperature and raw water turbidity were monitored using online instrumentation. Refer to Appendix E, Figure 20, for the RO permeate temperature reported throughout the test:

4.5 Well Start-Stop Turbidity Effect Evaluation

A 24-hrs off, 12-hrs off and 6-hrs off test was conducted, and then another 24-hrs off test to provide another data point. Both GS filters were flowing and the well pump was running at 100% capacity, with about a 30-second ramp up to speed in the VFD. A summary of results of these tests follows:

1st 24 hrs Off Data:

Average Flow: 67.9, Minutes to Normal: 215, Gallons Pumped: 14,588

12 hrs Off Data:

Average Flow: 69.3, Minutes to Normal: 198, Gallons Pumped: 13,730

6 hrs Off Data:

Average Flow: 69.3, Minutes to Normal: 163, Gallons Pumped: 11,303

2nd 24 hrs Off Data:

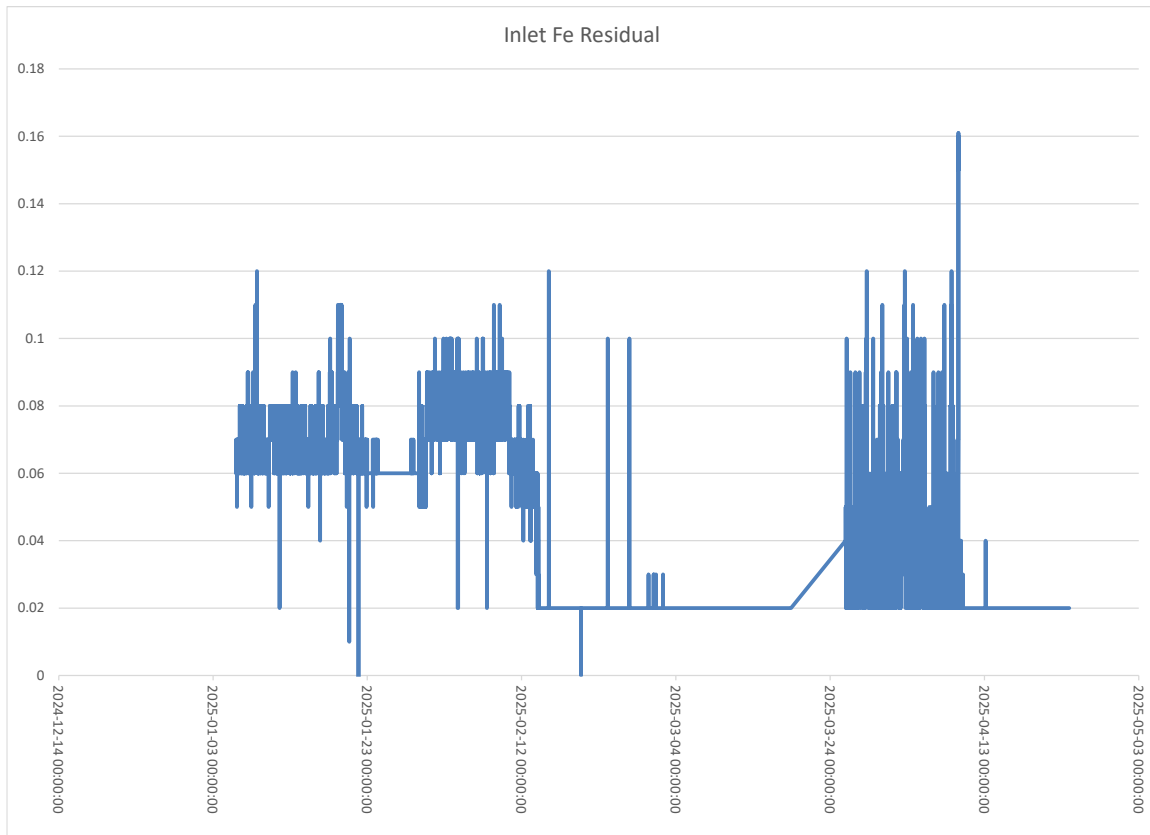
Average Flow: 68.4, Minutes to Normal: 179, Gallons Pumped: 12,252

The "Minutes to Normal:" above are the minutes from when the well is turned back on until the turbidity had come back down to "normal." Normal is a little subjective - when the turbidity got below 0.50 or so and stayed there was the criterion for 'normal'.

The results of these tests are not exactly what was expected, The turbidity was expected to go up by some amount just when the well was started, but was expected to then go back down quickly and stay there. Instead, the turbidity tended to vary much more than expected, and stayed high for longer than expected.

4.6 Influent Raw Water Iron Concentration

The iron concentration data plotted below indicates that the inlet iron concentration is nearly always less than 0.1 mg/L:



Section 5 – Pilot Membrane Autopsy Report

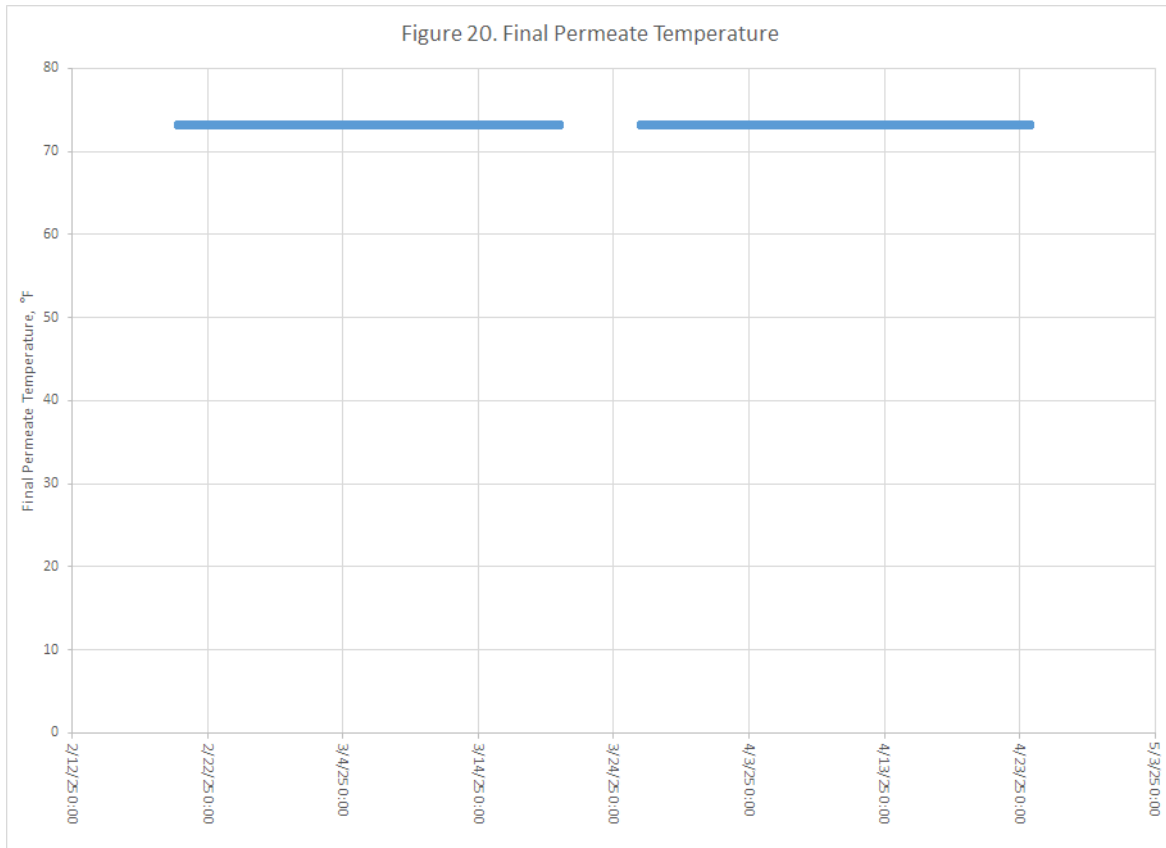
5.1 Summary Of Results And Conclusions

Reference	PA250601	PA250602
Element Information	Manufacturer: Toray Type/Model: TMG10D Serial number: 2230825210 Plant position: LEAD, 1 ST Stage	Manufacturer: Toray Type/Model: TMG10D Serial number: 2240924691 Plant position: LEAD, 2 nd Stage
External conditions	Fiberglass wrap and ATDs in good condition. No signs of damage to external housing. Some particle deposits observed on feed scroll end.	Fiberglass wrap and ATDs in good condition. No signs of damage or fouling observed. Scrollends in good condition, but some particle despoits observed along with a lighterbrown/green film.
Internal conditions	Visual inspection: Membrane leaves appear clean. Feed spacer net was clean, and its imprints were detected on the membrane surface. SEM-EDX inspection: Inorganic foulant accumulation was localized primarily at contact points with the spacer material. Surface abrasion marks were evident. At high magnification, the membrane surface remained largely visible, indicating minimal foulant coverage.	Visual inspection: Like the 1 st stage lead membrane, the 2 nd stage membranes also appears clean, spacer prints are observed on the membrane surface (deeper imprints). Blisters are observed on the glue line near the concentrate side. SEM-EDX inspection: Inorganic foulant accumulation was localized primarily at contact points with the spacer material. Diatoms and surface abrasion marks were evident. At high magnification, the membrane surface remained largely visible, indicating minimal foulant coverage.
Foulant identification	Loss on Ignition (LOI) analysis could not be performed due to insufficient foulant accumulation, which prevented collection of a representative scraped sample. Organic Component: No organic material was detected. Inorganic Component: Qualitative analysis confirmed the presence of iron, aluminosilicates, and metallic particles including copper and zinc.	Loss on Ignition (LOI) analysis could not be performed due to insufficient foulant accumulation, which prevented collection of a representative scraped sample. Organic Component: No organic material was detected. Inorganic Component: Qualitative analysis confirmed the presence of iron, aluminum silicates and Calcium/Magnesium particles were verified. Copper and Zinc are also present.
Operational parameters	Flow rate: 4.6% lower than manufacturer specifications but within the specified range. Salt rejection: Lower than manufacturer specifications.	Flow rate: 8.7% lower than manufacturer specifications but within the specified range. Salt rejection: Lower than manufacturerspecifications.
Cleaning tests	Optimal cleaning results were achieved using Lavasol 9 (high pH), followed by Lavasol 1 (low pH), which is the recommended cleaning sequence.	

Autopsied membranes exhibited minimal foulant accumulation, localized primarily at points of contact with the spacer material. SEM analysis revealed the presence of aluminosilicates, iron, and metallic particles (e.g., copper and zinc) in these areas. Abrasion marks observed on the membrane surface are likely related to the presence of these abrasive particles, indicating potential mechanical damage.

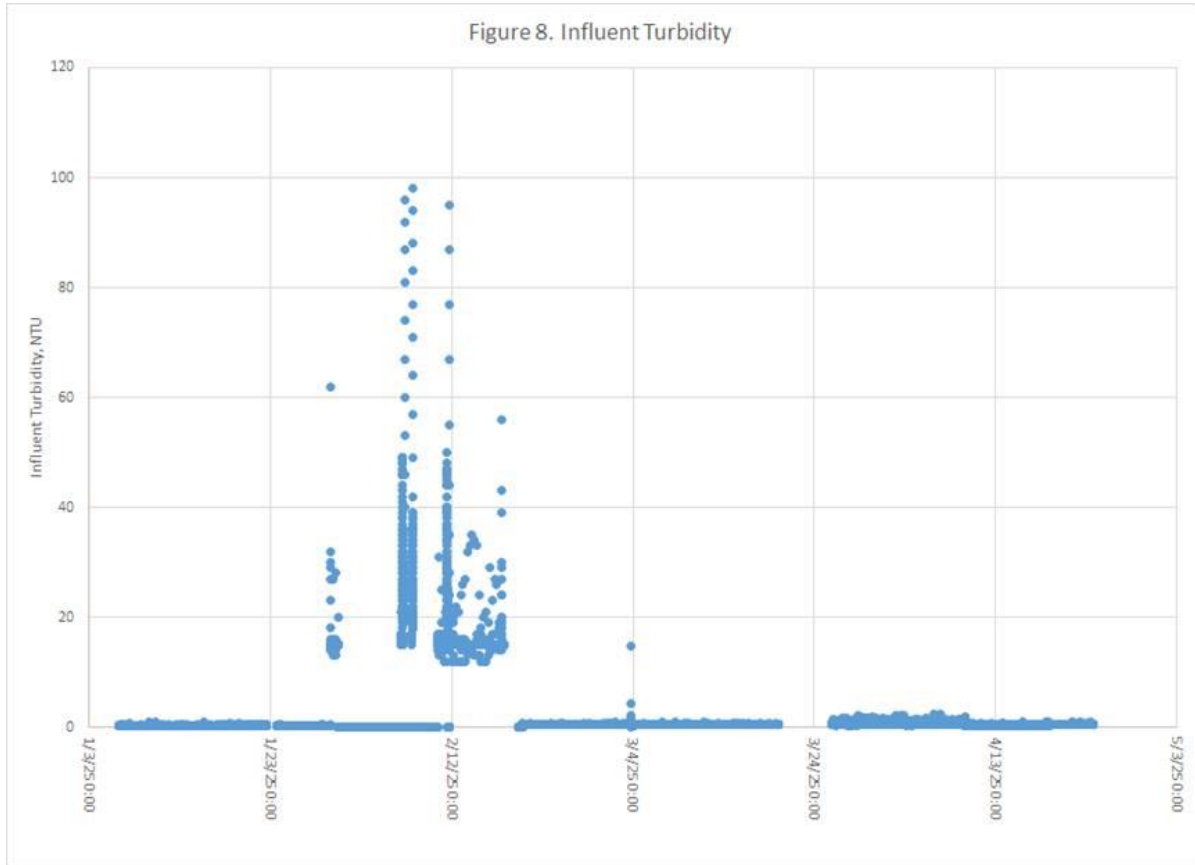
Flat-sheet test rig characterization showed permeate flux values close to reference levels; however, salt rejection was notably lower than manufacturer specifications, confirming suspected membrane degradation.

Appendix E. RO Site Pilot Operating Data - Toray 4-inch TMG10D, Table 20, process temperature throughout the testing period is excerpted below:



The above typical process temperature data consistently remained between approximately 73 and 74 degrees F.

The GSF raw water influent turbidity data are provided in Appendix D, Figure 8, GSF Site Collected Operating Data excerpted below:



Appendix A: GSF Pilot GSP Media Technical Data Sheet



GREENSAND^{plus}[™] TECHNICAL DATA SHEET



Performance Media for Water Filtration
removes iron, manganese, hydrogen sulfide,
arsenic and radium

Greensand^{Plus}[™] is a black filter media used for removing soluble iron, manganese, hydrogen sulfide, arsenic and radium from groundwater supplies.

The manganese dioxide coated surface of Greensand^{Plus} acts as a catalyst in the oxidation reduction reaction of iron and manganese.

The silica sand core of Greensand^{Plus} allows it to withstand waters that are low in silica, TDS and hardness without breakdown.

Greensand^{Plus} is effective at higher operating temperatures and higher differential pressures than standard manganese greensand. Tolerance to higher differential pressure can provide for longer run times between backwashes and a greater margin of safety.

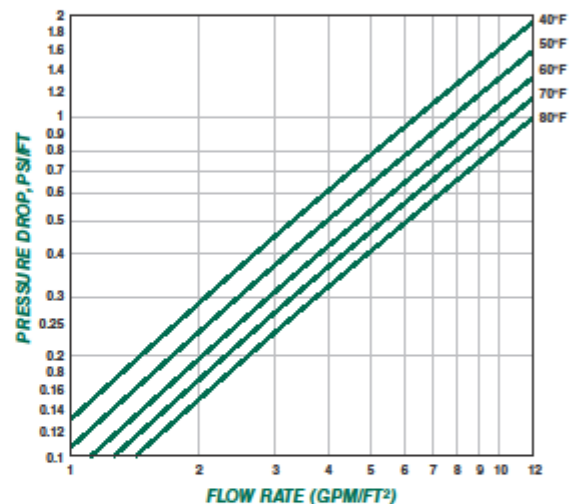
Systems may be designed using either vertical or horizontal pressure filters, as well as gravity filters.

Greensand^{Plus} is a proven technology for iron, manganese, hydrogen sulfide, arsenic and radium removal. Unlike other media, there is no need for extensive preconditioning of filter media or lengthy startup periods during which required water quality may not be met.

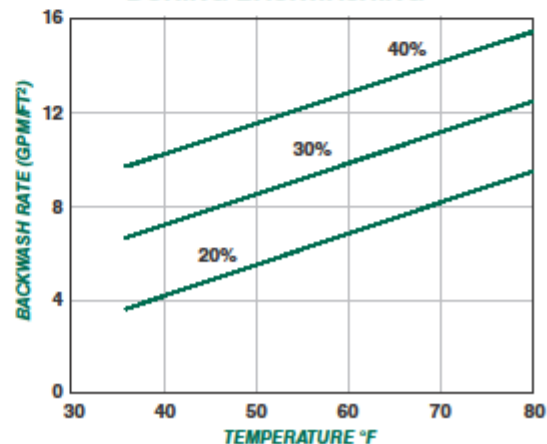
Greensand^{Plus} is an exact replacement for manganese greensand. It can be used in CO or IR applications and requires no changes in backwash rate or times or chemical feeds.

Greensand^{Plus} has the WQA Gold Seal Certification for compliance with NSF/ANSI 61. Packaging is available in 1/2 cubic foot bags or 1 metric ton (2,205 lbs) bulk sacks.

GREENSAND^{Plus} PRESSURE DROP (CLEAN BED)



BED EXPANSION DURING BACKWASHING



Appendix B: RO-21-7M Pilot Unit Technical Data Sheet



RO-421-6M Pilot



General

- 4-2-1 or 4-2 Array, 6M vessels
- Interstage Boost (if required)
- Seven (7) 450 psi pressure vessels
- CIP cartridge filter & pump
- 75 gallon CIP tank
- Heater
- Fully automated operation

Installation and Utility Requirements

- 460 VAC, 3 Ph, 80A
- Inlet: 1 1/2" (38 mm) FNTF
- Permeate Outlet: 1 1/2" (38 mm) FNTF
- Reject Outlet: 1" (25 mm) FNTF

Pumps and Motors

- Feed Pump : 30 gpm, 3 HP
- Pressure pump : 30 gpm, 15 HP
- Booster pump : 15 gpm, 5 HP
- CIP Pump : 15 gpm, 7.5 HP
- Dosing pumps for pre-treatment and cleaning chemicals
- Feed and Booster Pump VFD

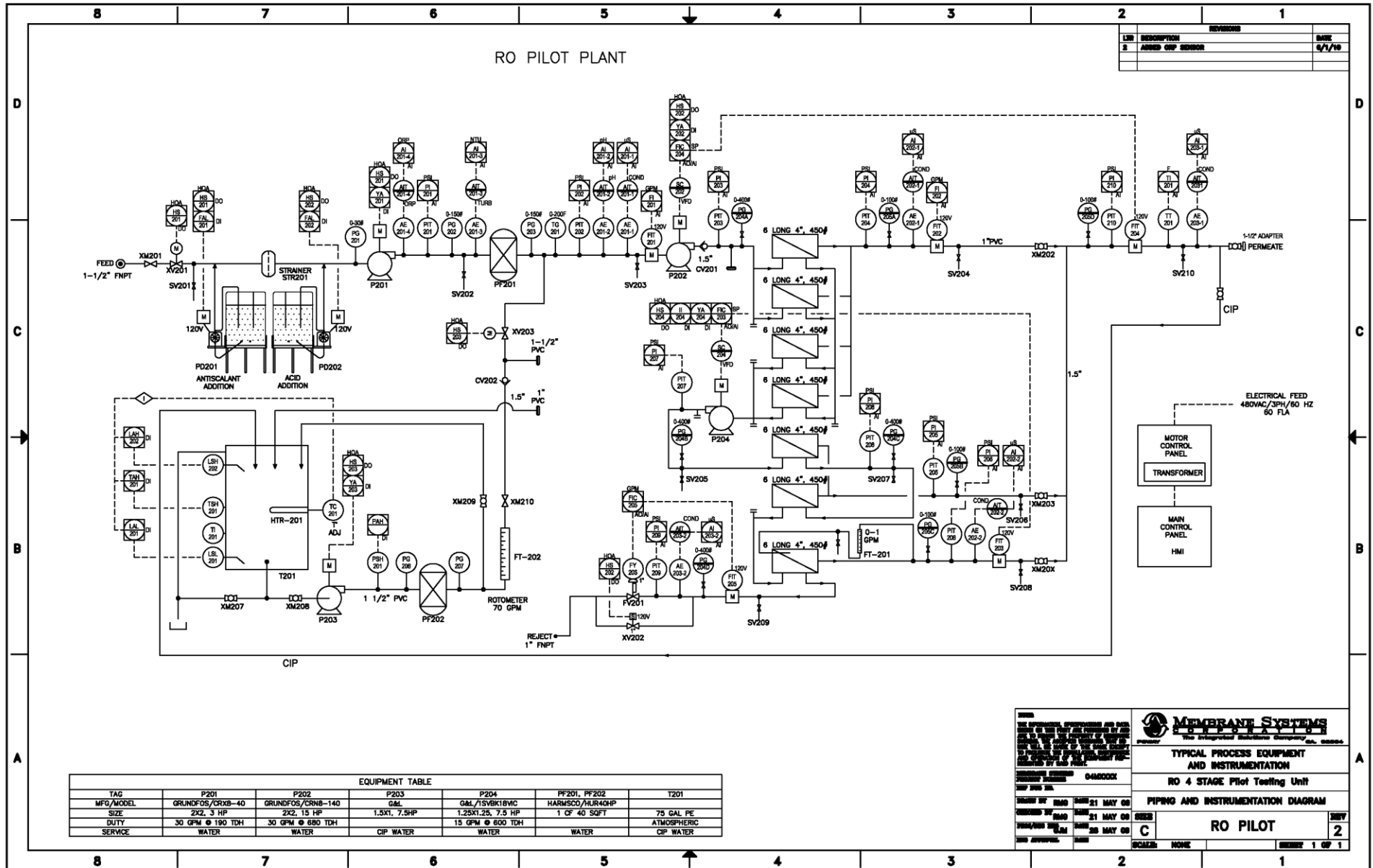
Instrumentation

- Feed, Reject and Permeate Conductivity
- Feed Turbidity, ORP
- Feed, Reject and Permeate Pressure
- Permeate Temperature
- Feed, Reject and Permeate Flow
- Remote Access and Control

Dimension and weight

- Dimensions: 264" L x 48" W x 86" H
- Weight : 4500 lbs

Appendix C. RO Pilot Unit Process & Instrumentation Diagram (P&ID)



Appendix D. GSF Site Pilot Operating Data - Anthracite Capped GreensandPlus

GSF Pilot Unit Operating Data Figure List

Title

- Figure 1. Influent Iron Concentration
- Figure 2. Effluent Iron Concentration
- Figure 3. Effluent Manganese Concentration
- Figure 4. Effluent Chlorine Concentration
- Figure 5. Influent Flow
- Figure 6. Effluent Flow
- Figure 7. Backwash Flow
- Figure 8. Influent Turbidity
- Figure 9. Influent Pressure
- Figure 10. Effluent Pressure
- Figure 11. Service Flow Setpoint
- Figure 12. Backwash Flow Setpoint
- Figure 13. Effluent Tank Level

Figure 1. Influent Iron Concentration

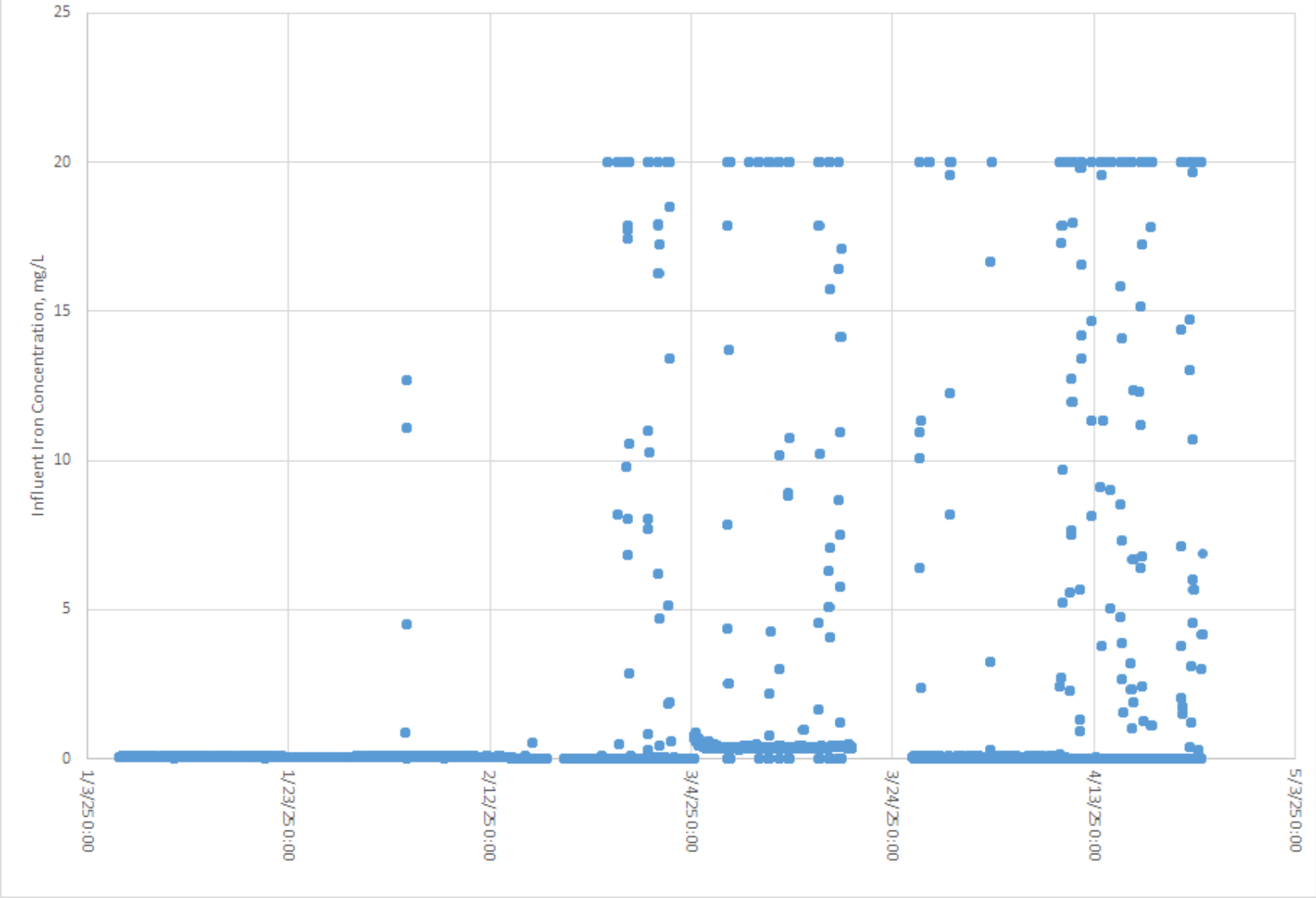


Figure 2. Effluent Iron Concentration

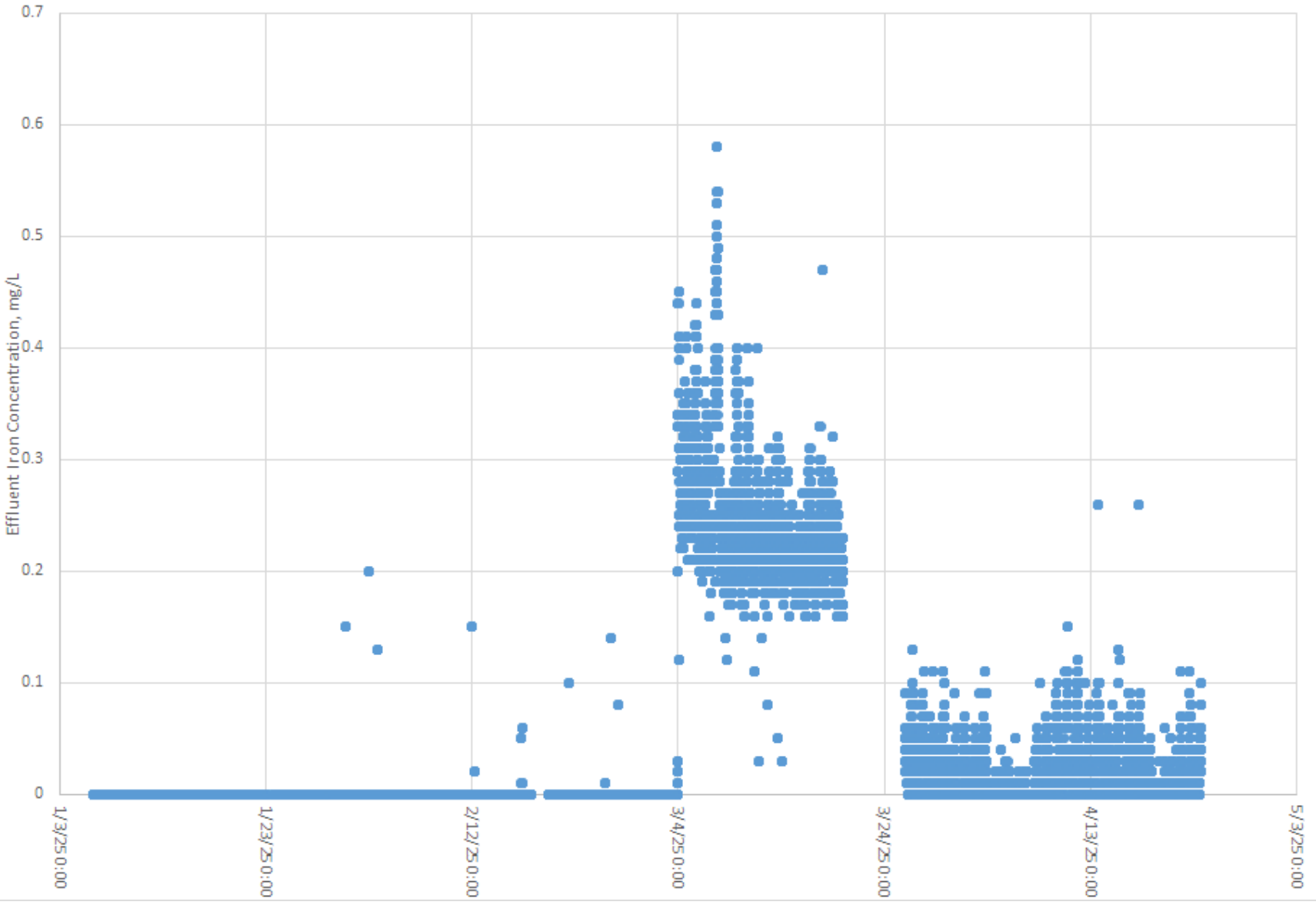
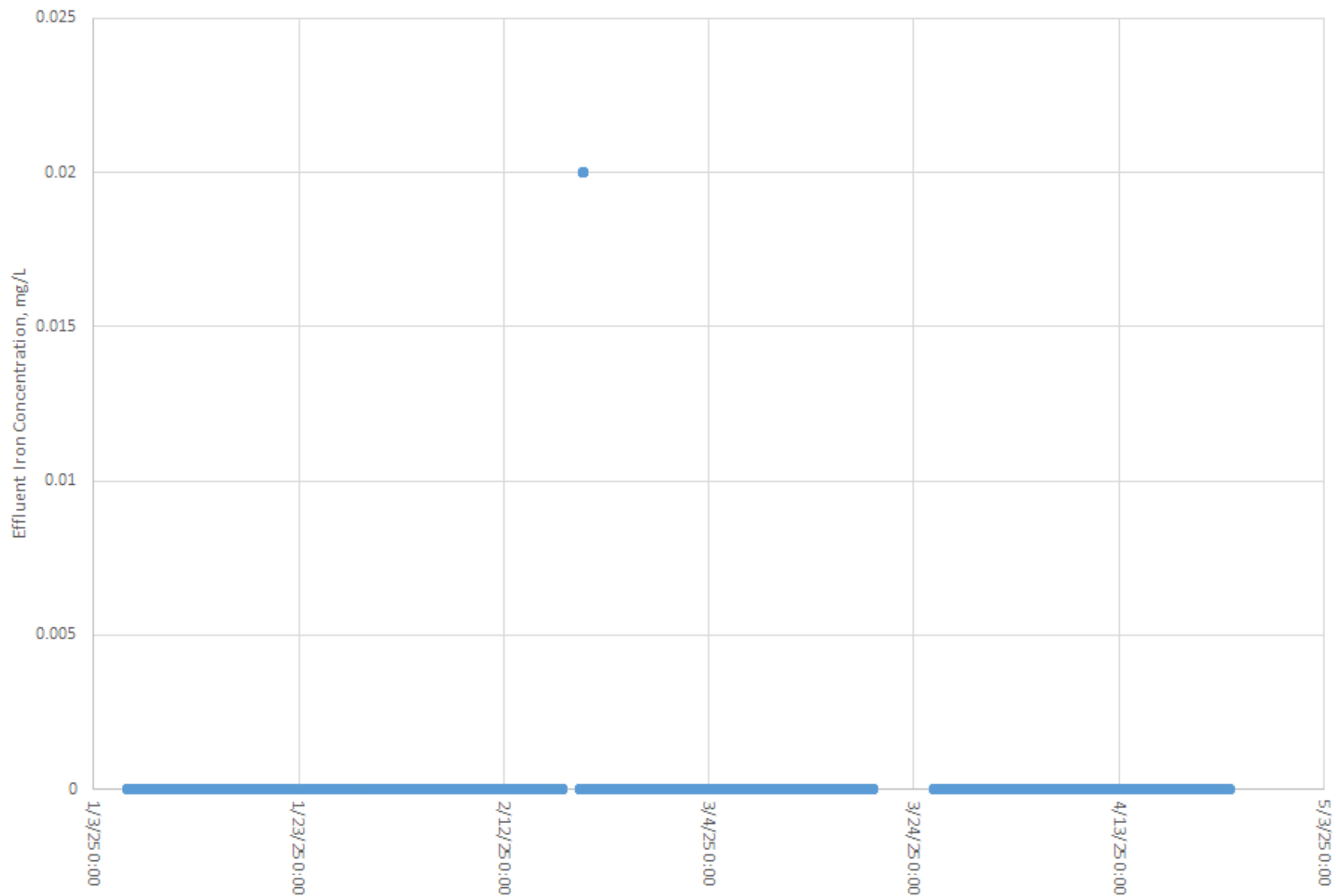
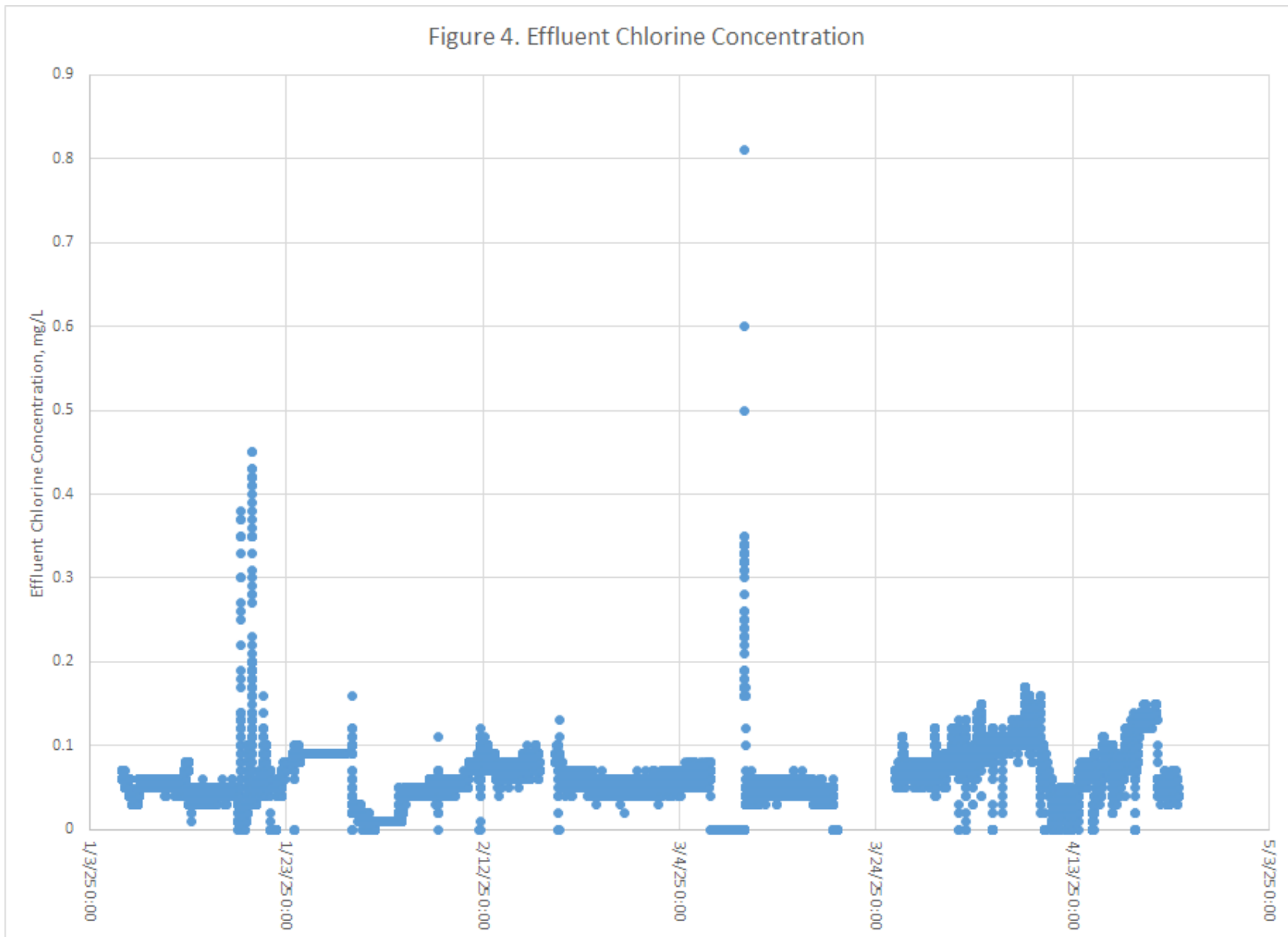


Figure 3. Effluent Manganese Concentration





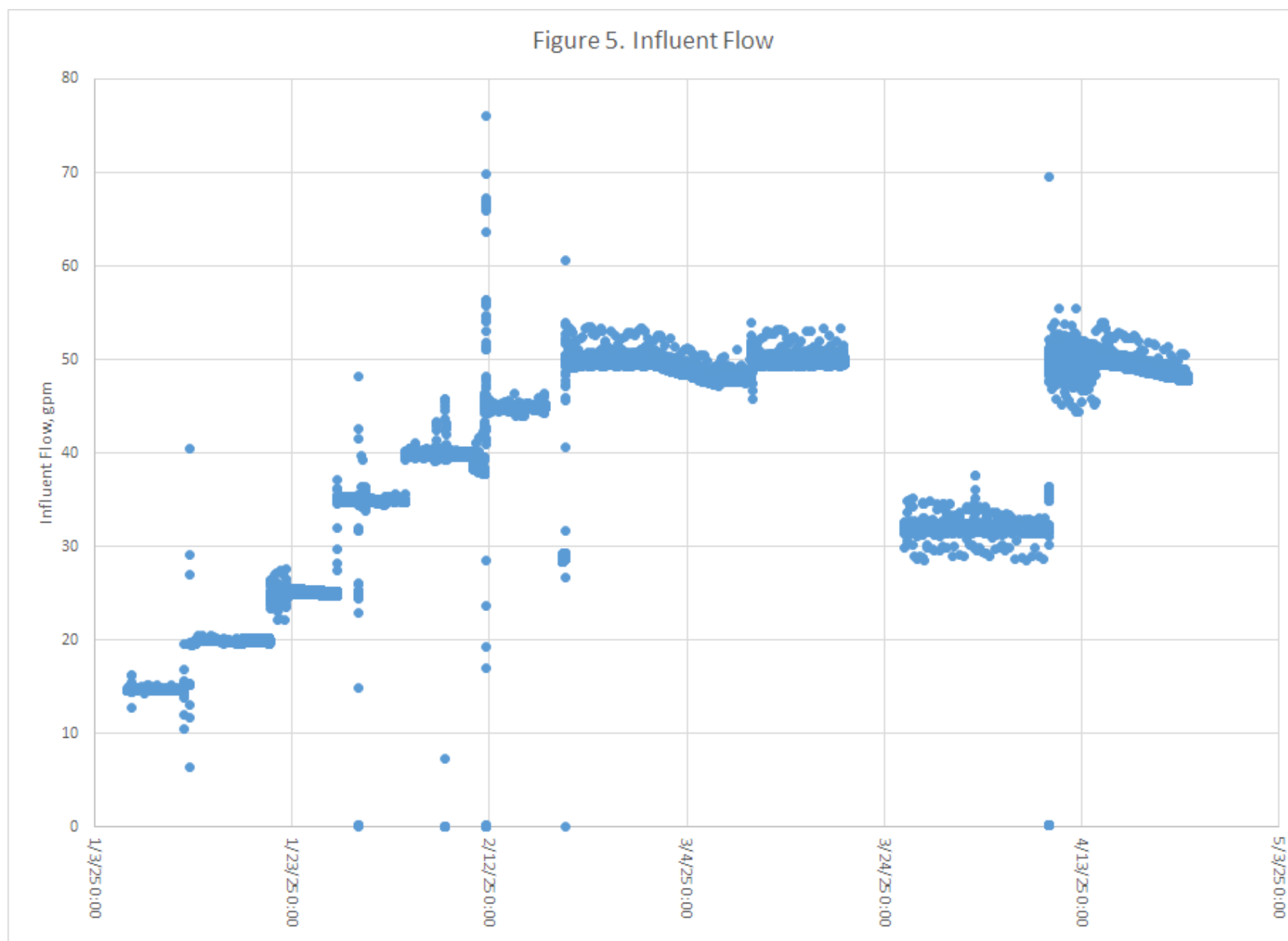


Figure 6. Effluent Flow

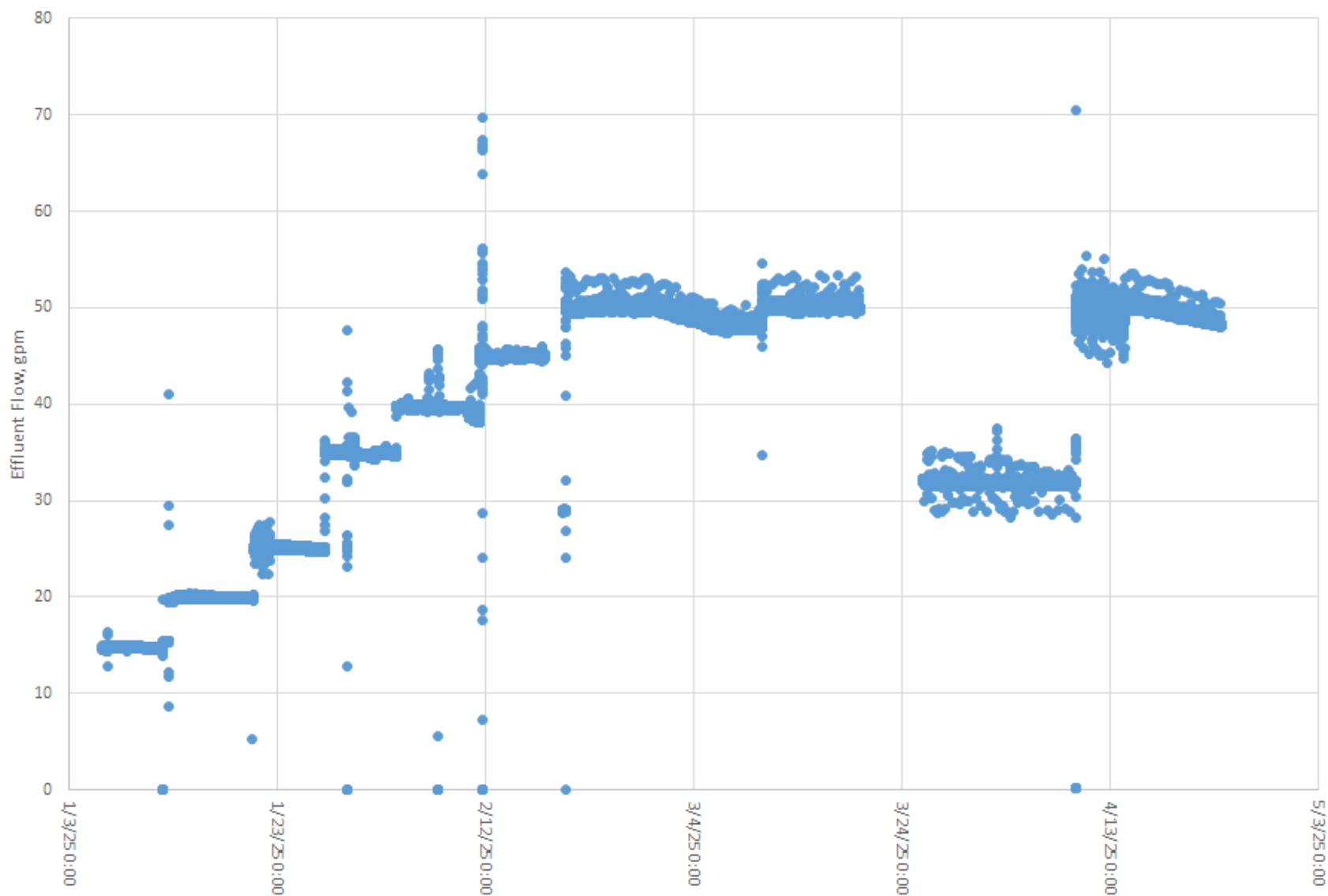
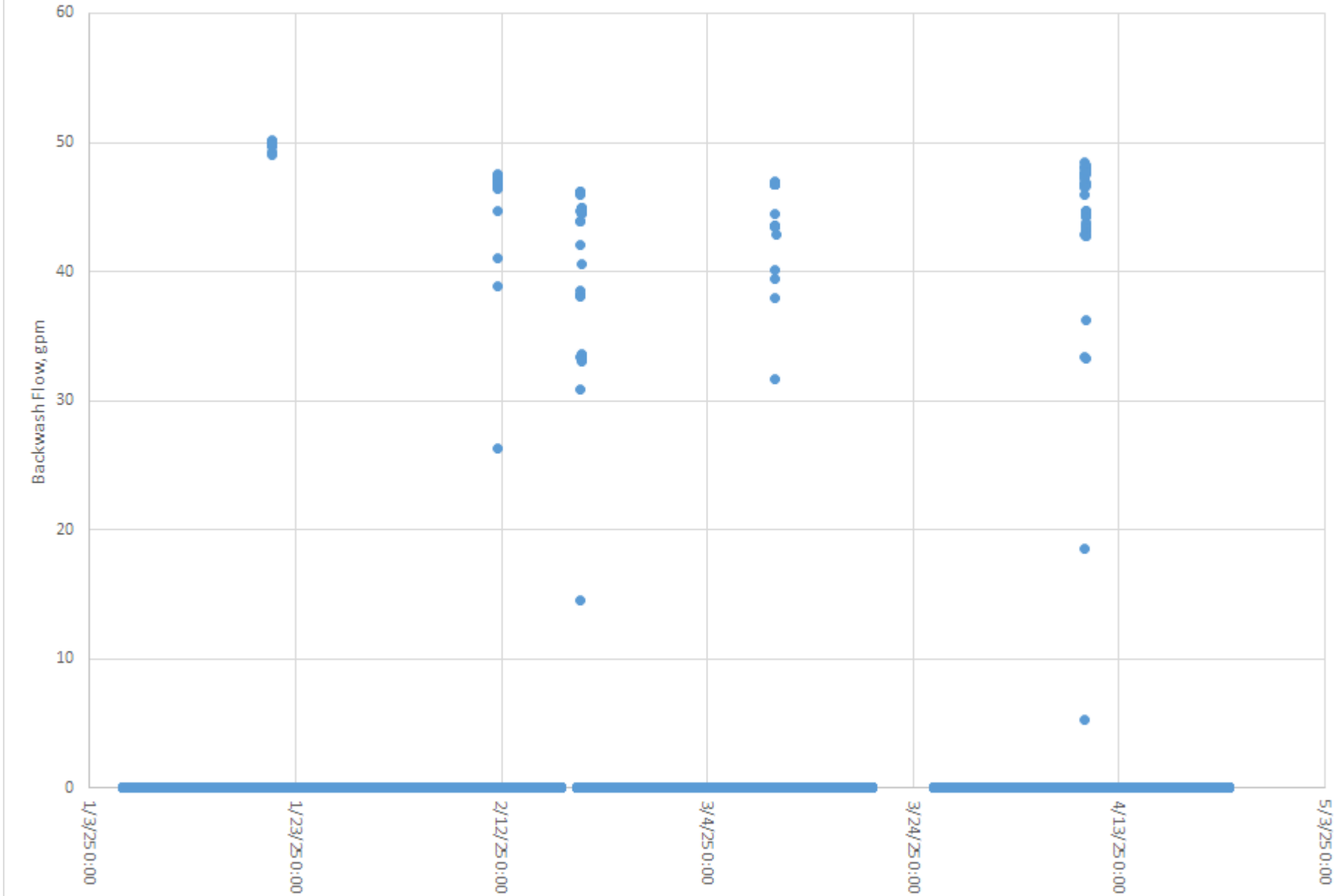


Figure 7. Backwash Flow



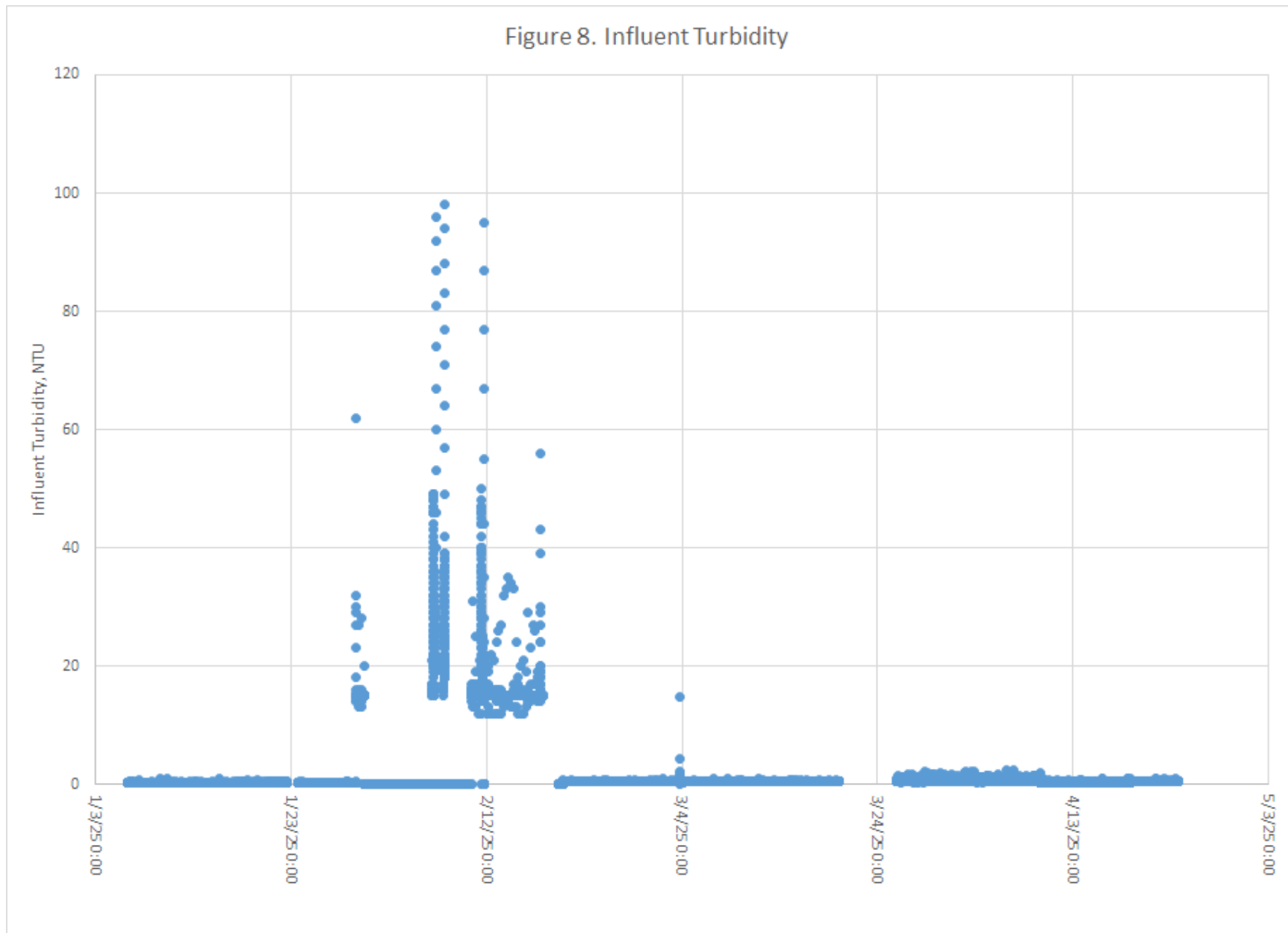
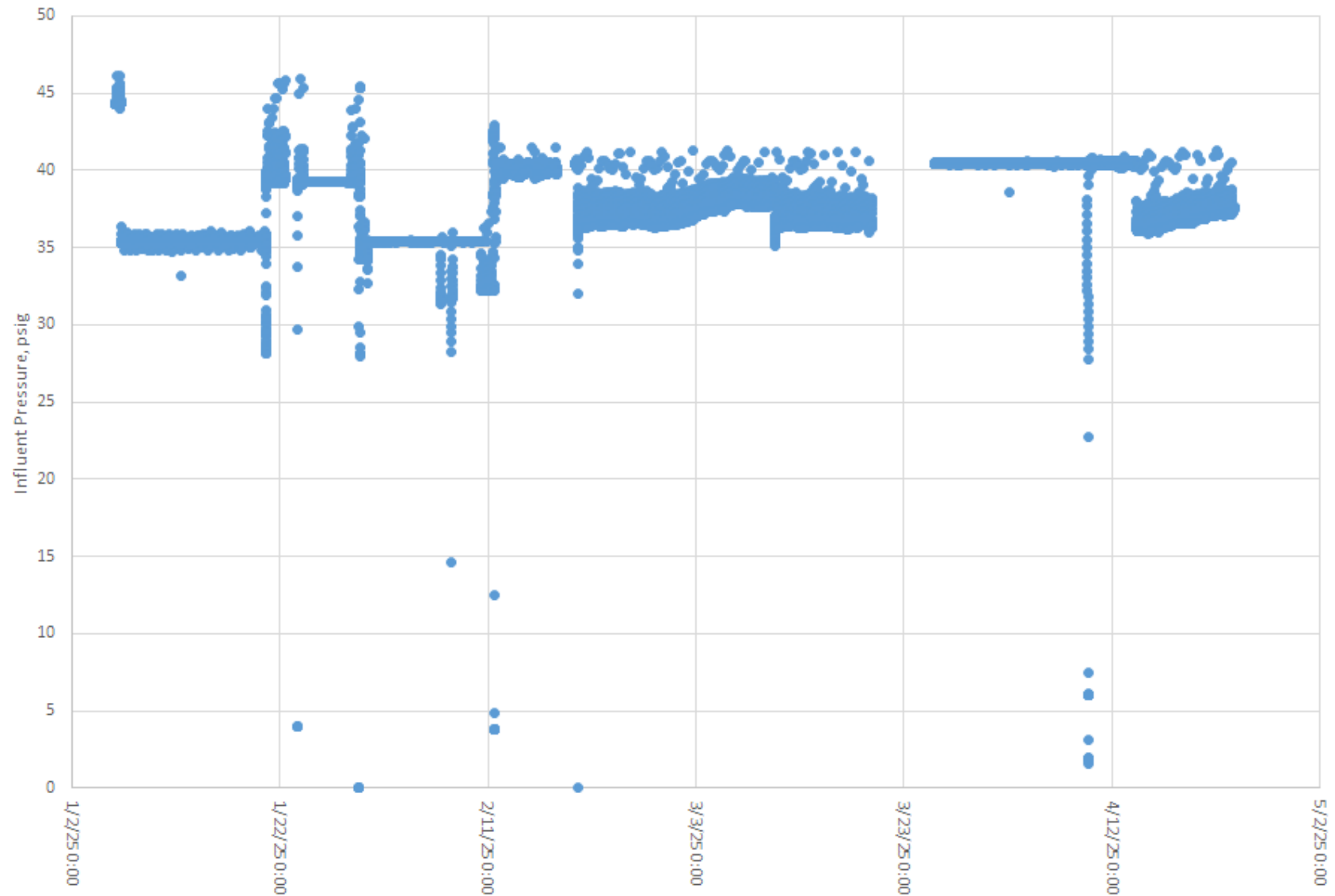


Figure 9. Influent Pressure



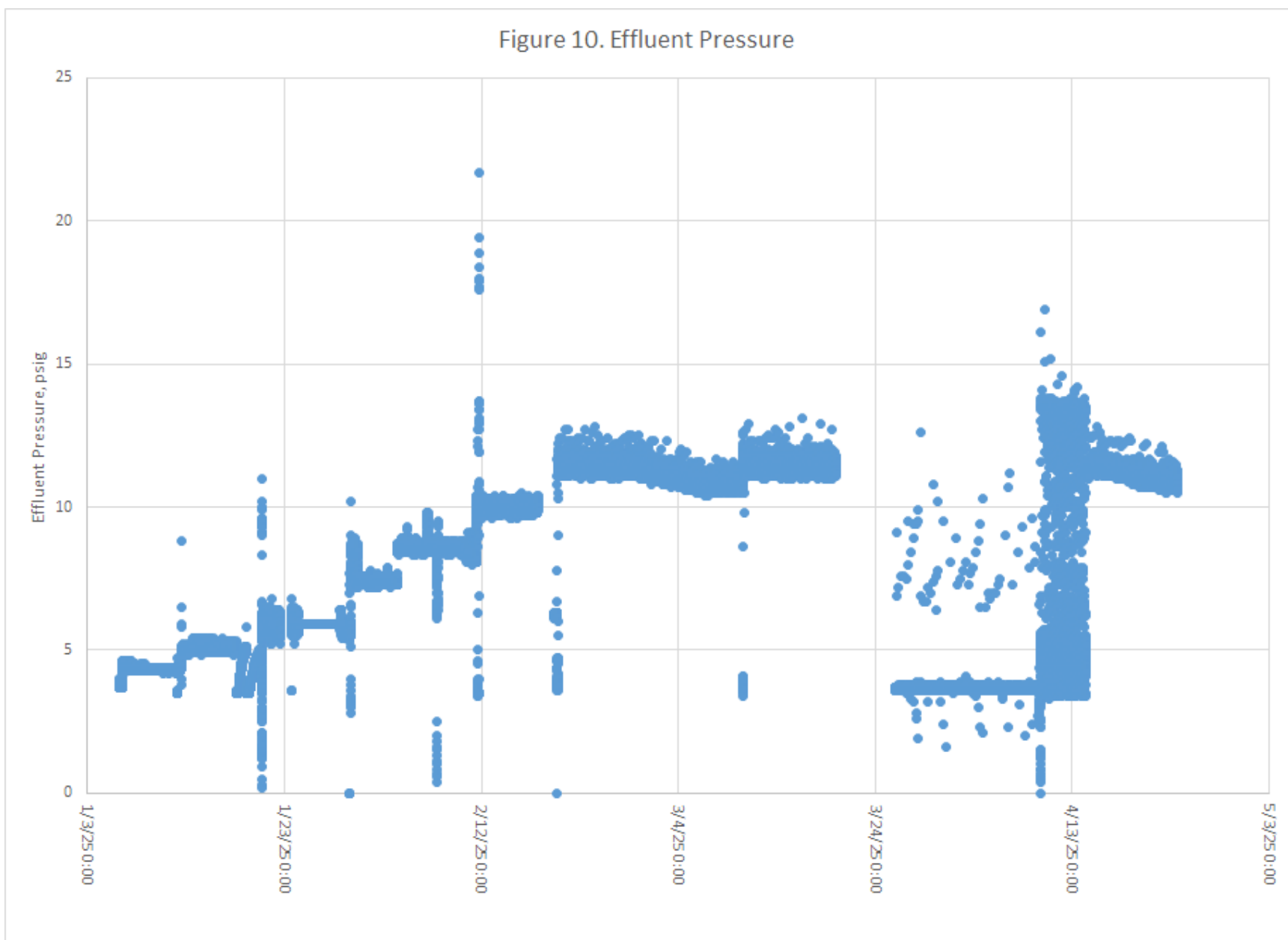


Figure 11. Service Flow Setpoint

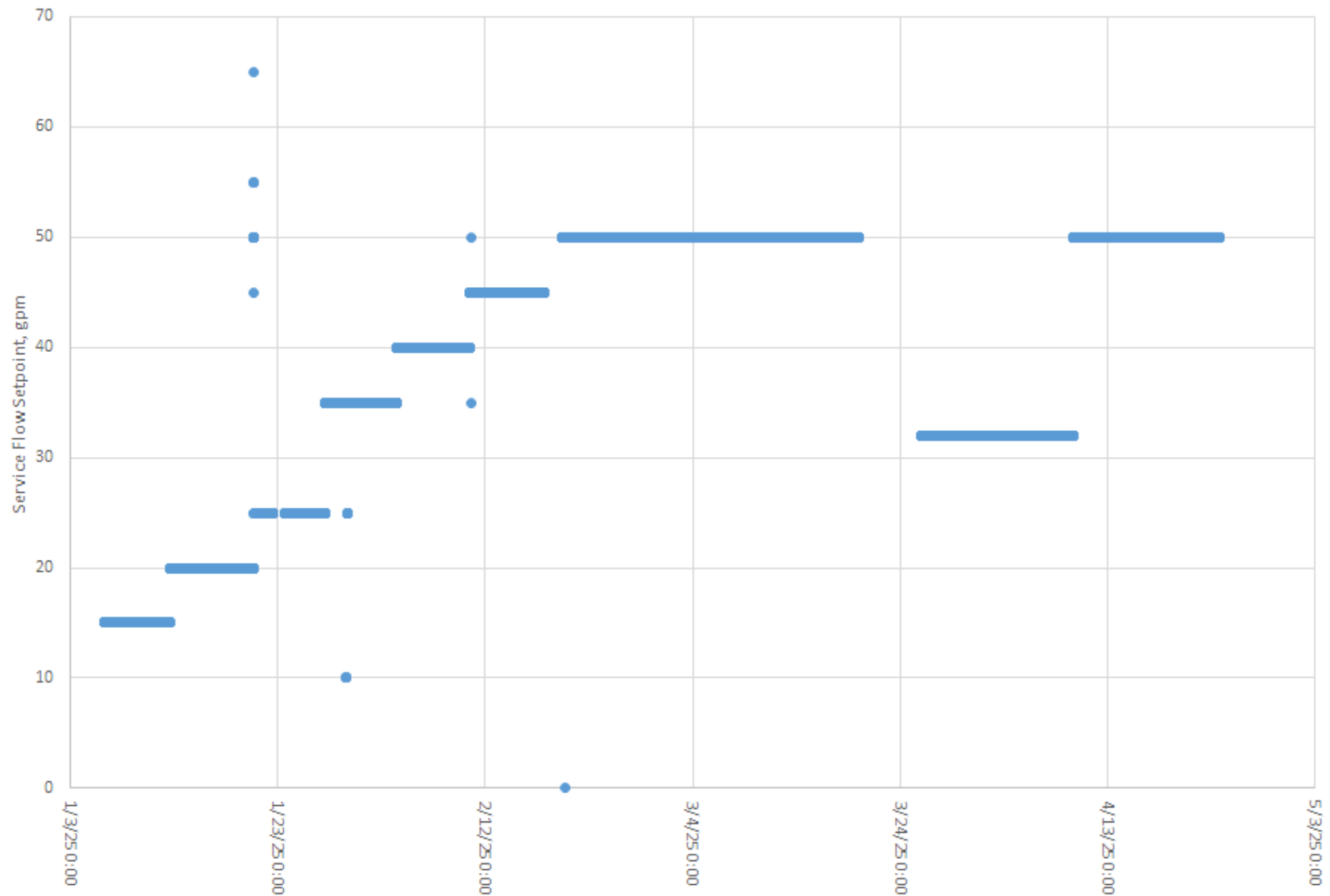


Figure 12. Backwash Flow Setpoint

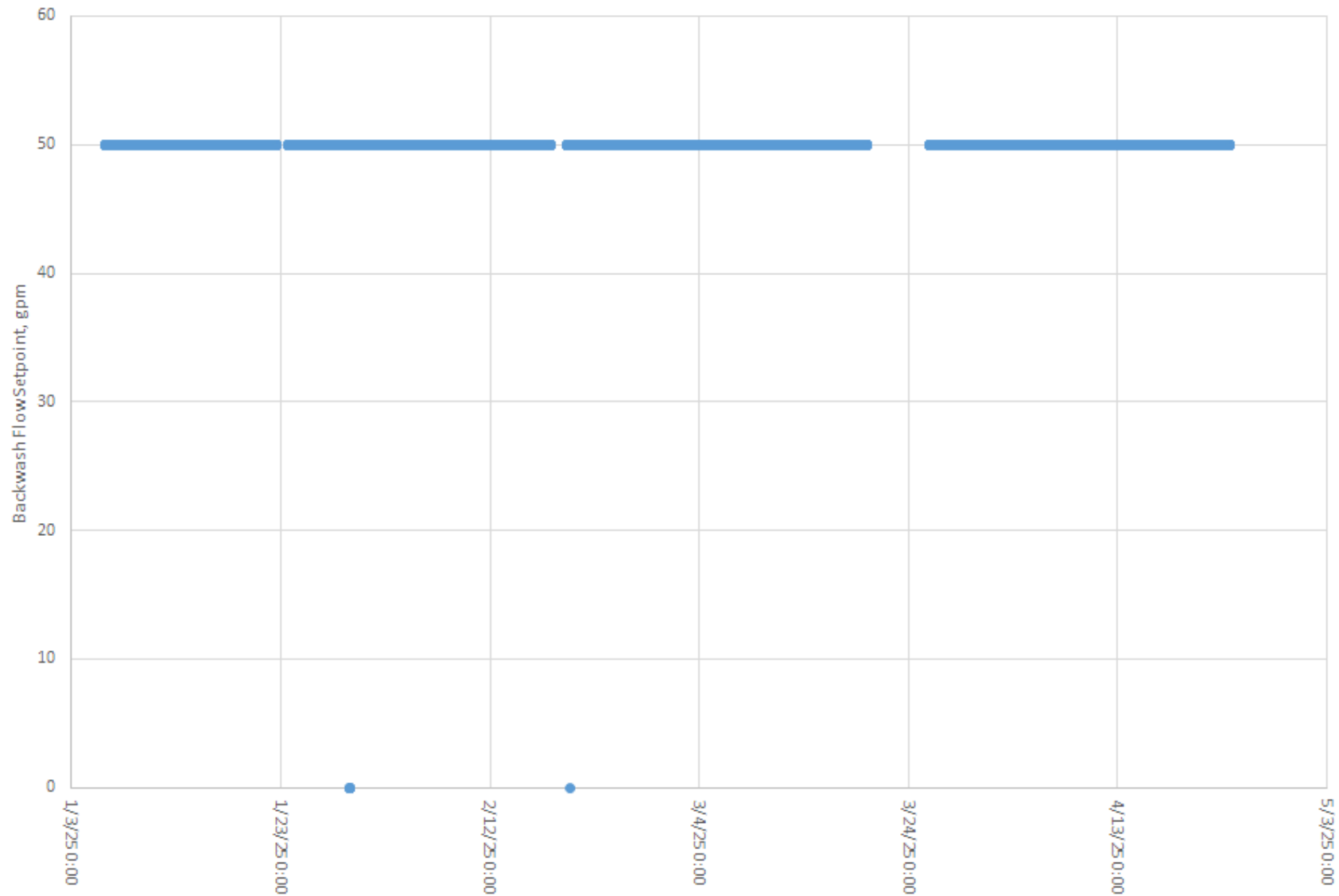
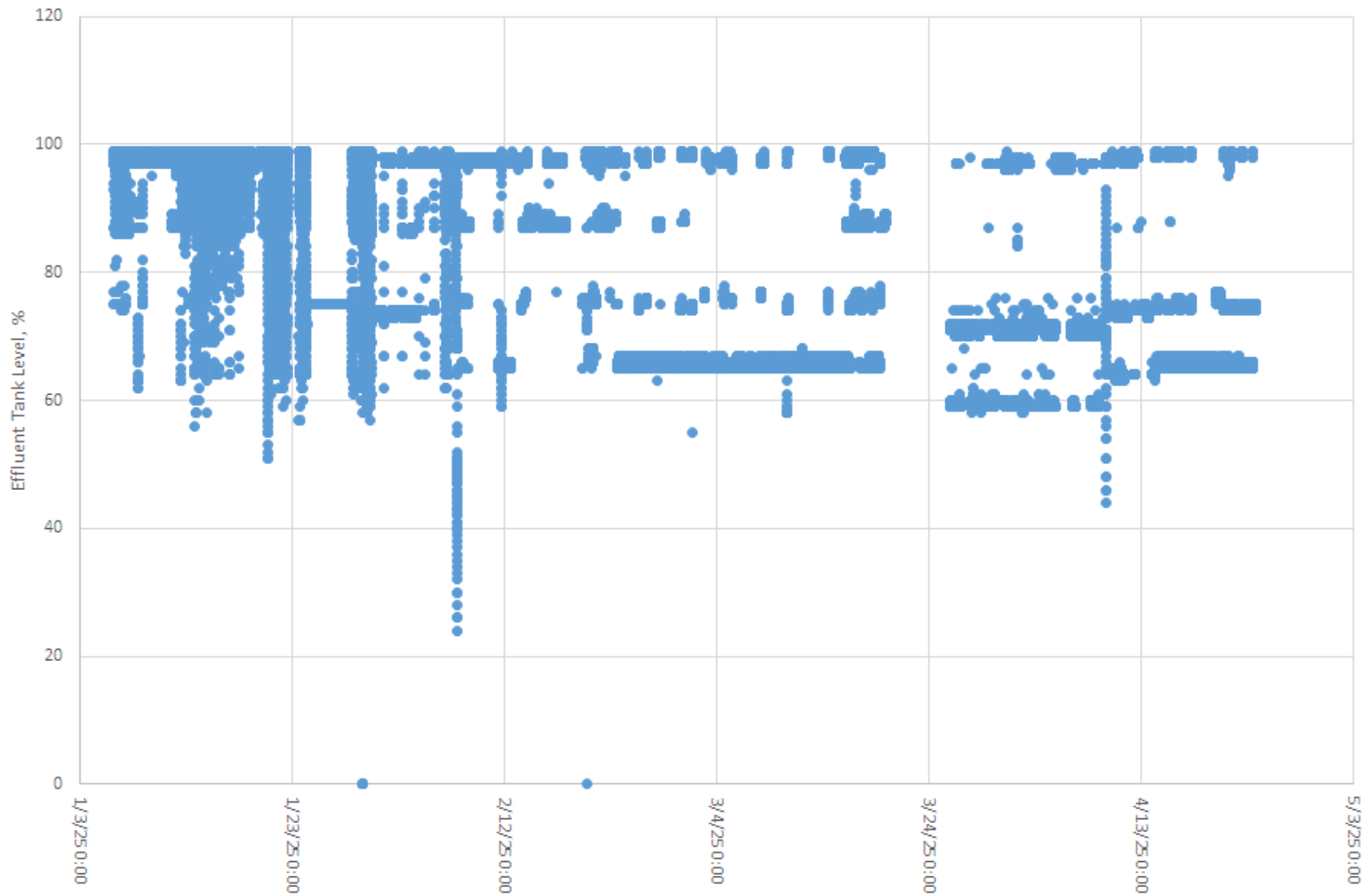


Figure 13. Effluent Tank Level



Appendix E. RO Site Pilot Operating Data - Toray 4-inch TMG10D

RO Pilot Unit Operating Data Figure List

Title	Title
Figure 1. RO Feed Flowrate	Figure 12. Stage 2 Differential Pressure
Figure 2. Stage 1 Permeate Flowrate	Figure 13. Stage 1 Permeate Pressure
Figure 3. Stage 2 Permeate Flowrate	Figure 14. Stage 2 Concentrate Pressure
Figure 4. Total Permeate Flowrate	Figure 15. Final Permeate Pressure
Figure 6. Filter Influent Pressure	Figure 16. Final Concentrate Pressure
Figure 5. Stage 2 Concentrate Flowrate	Figure 17. Stage 1 Feed Conductivity
Figure 7. Filter Effluent Pressure	Figure 18. Stage 1 Permeate Conductivity
Figure 8. Filter Differential Pressure	Figure 19. Final Permeate Conductivity
Figure 9. Stage 1 Feed Pressure	Figure 20. Final Permeate Temperature
Figure 10. Stage 2 Feed Pressure	Figure 21. Stage 1 Feed pH
Figure 11. Stage 1 Differential Pressure	Figure 22. Stage 1 Feed Turbidity

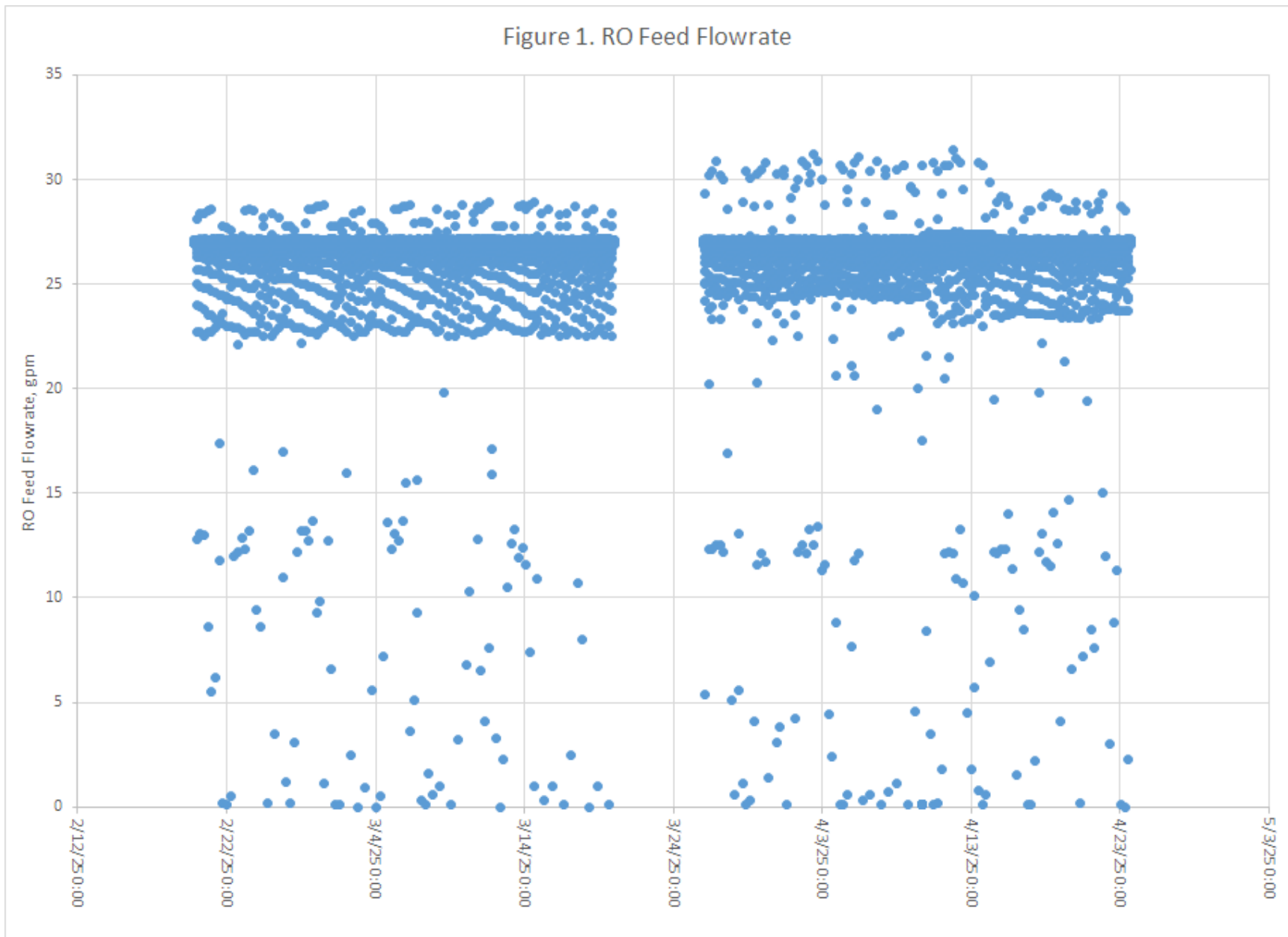


Figure 2. Stage 1 Permeate Flowrate

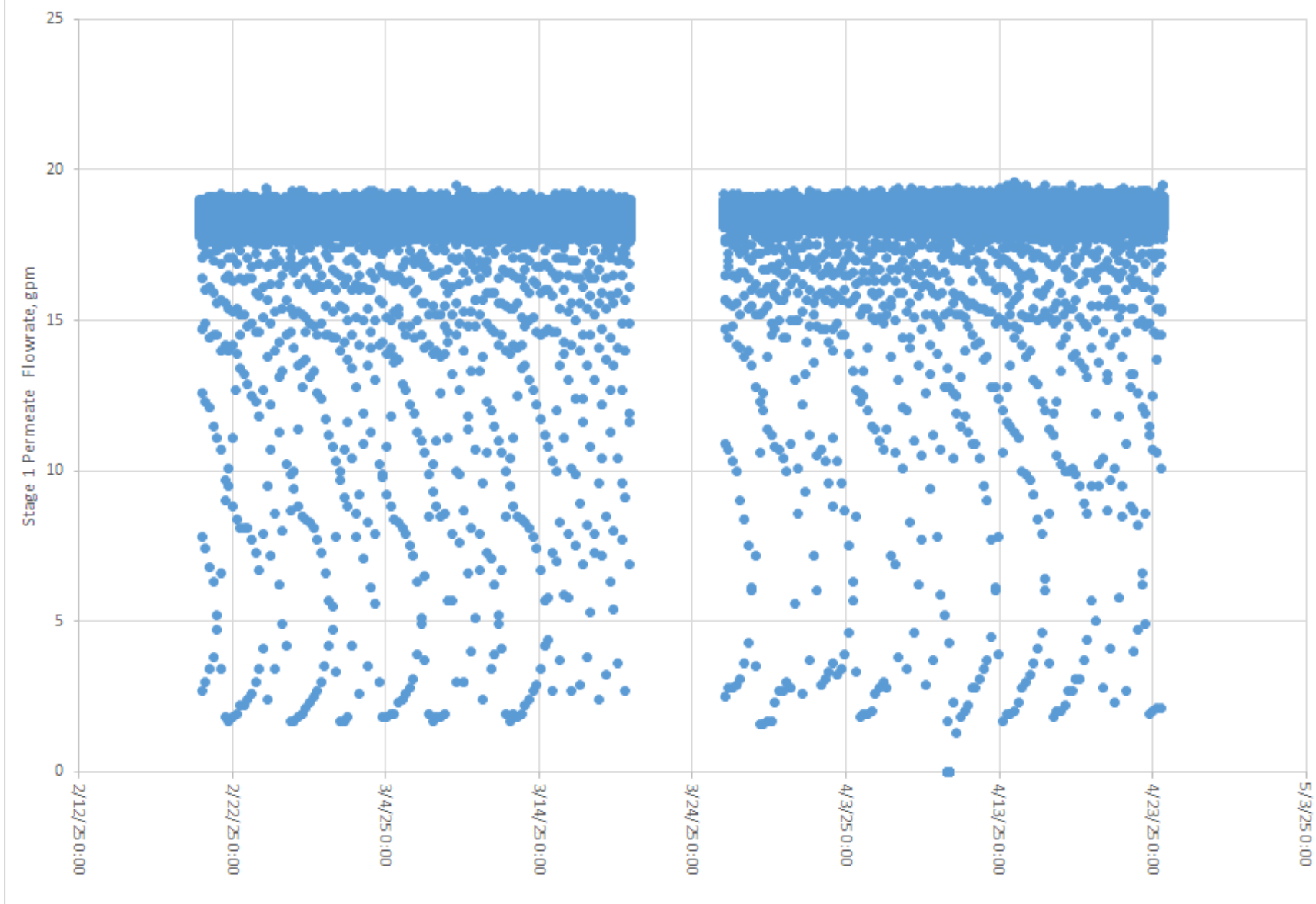


Figure 3. Stage 2 Permeate Flowrate

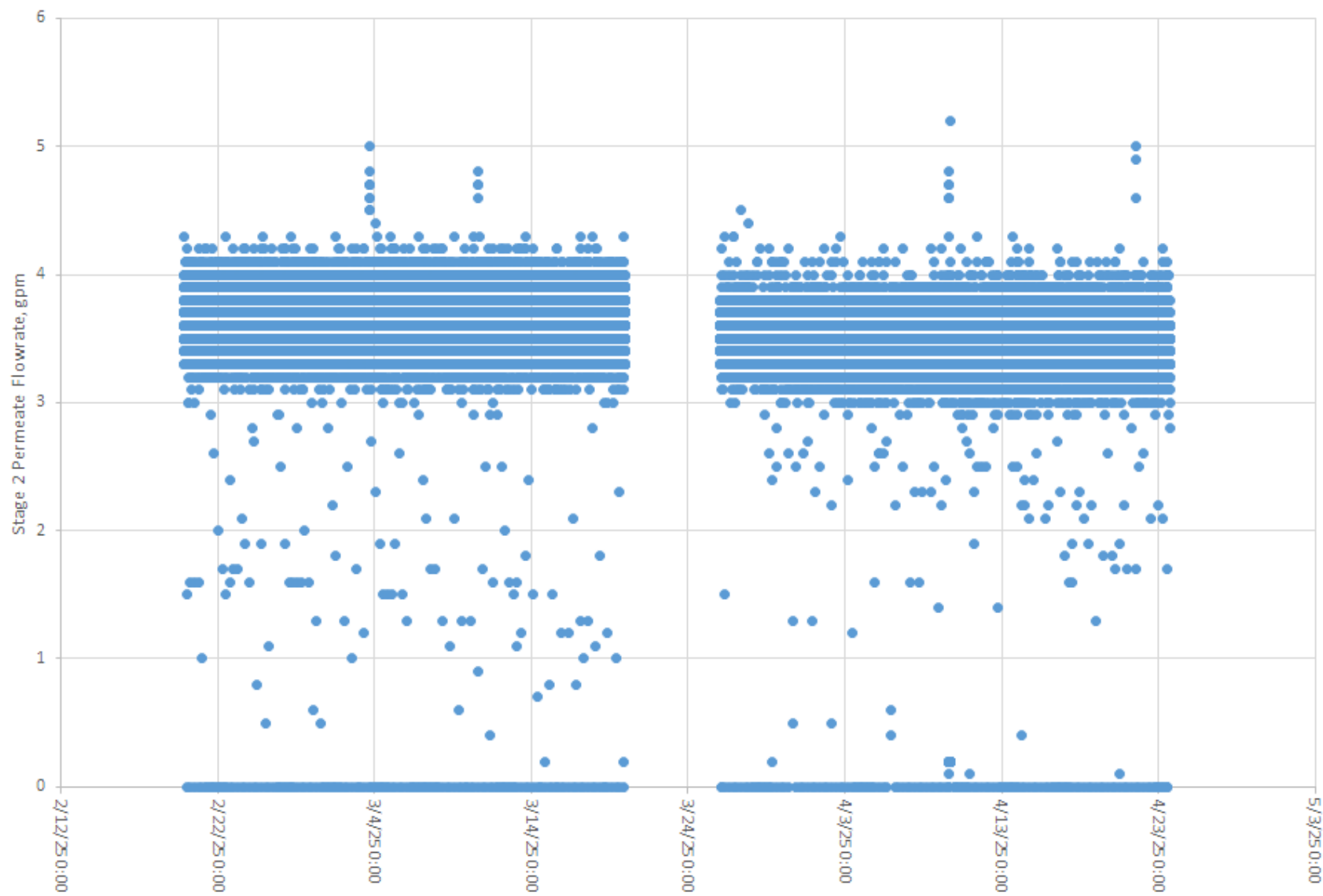


Figure 4. Total Permeate Flowrate

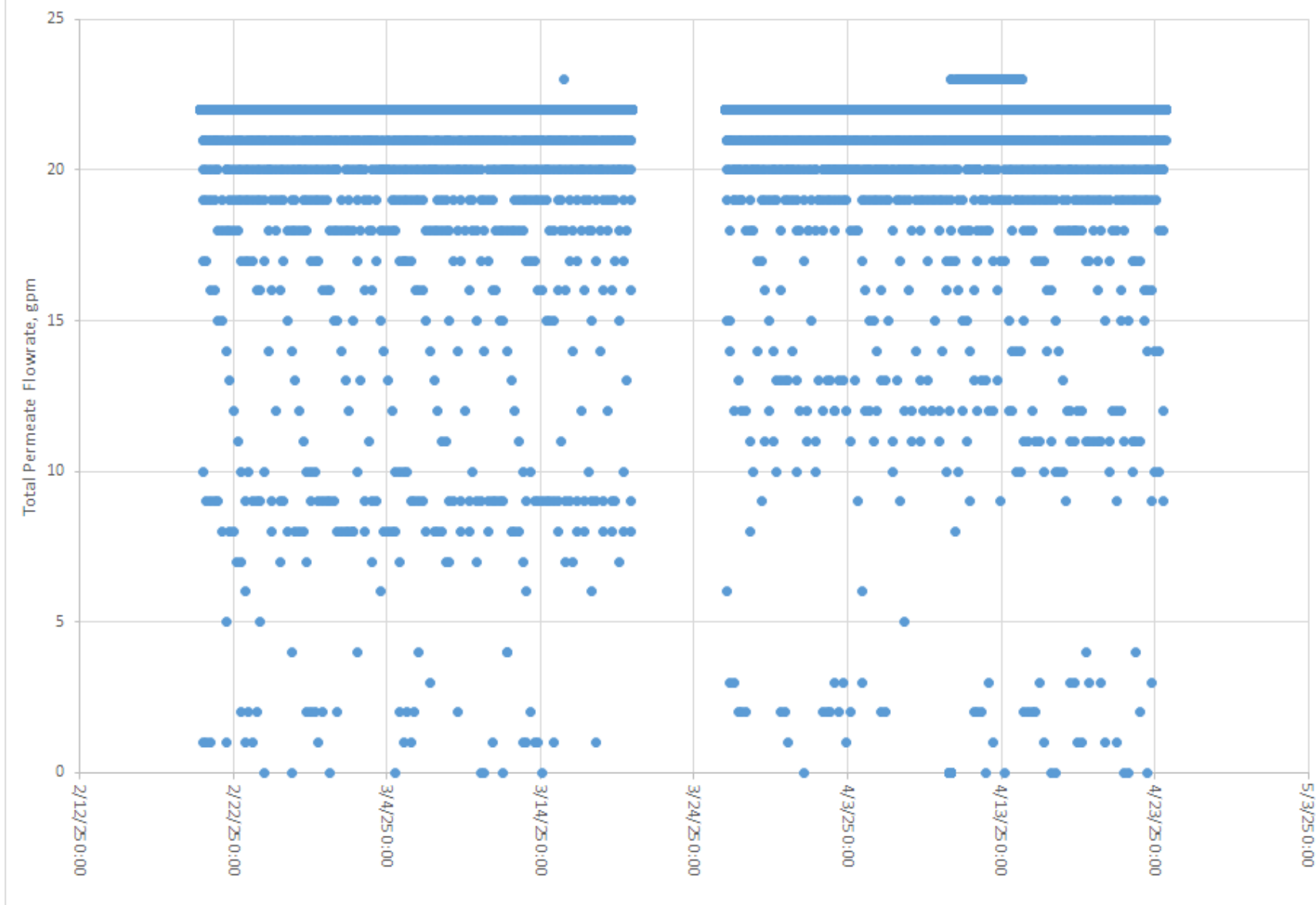


Figure 5. Stage 2 Concentrate Flowrate

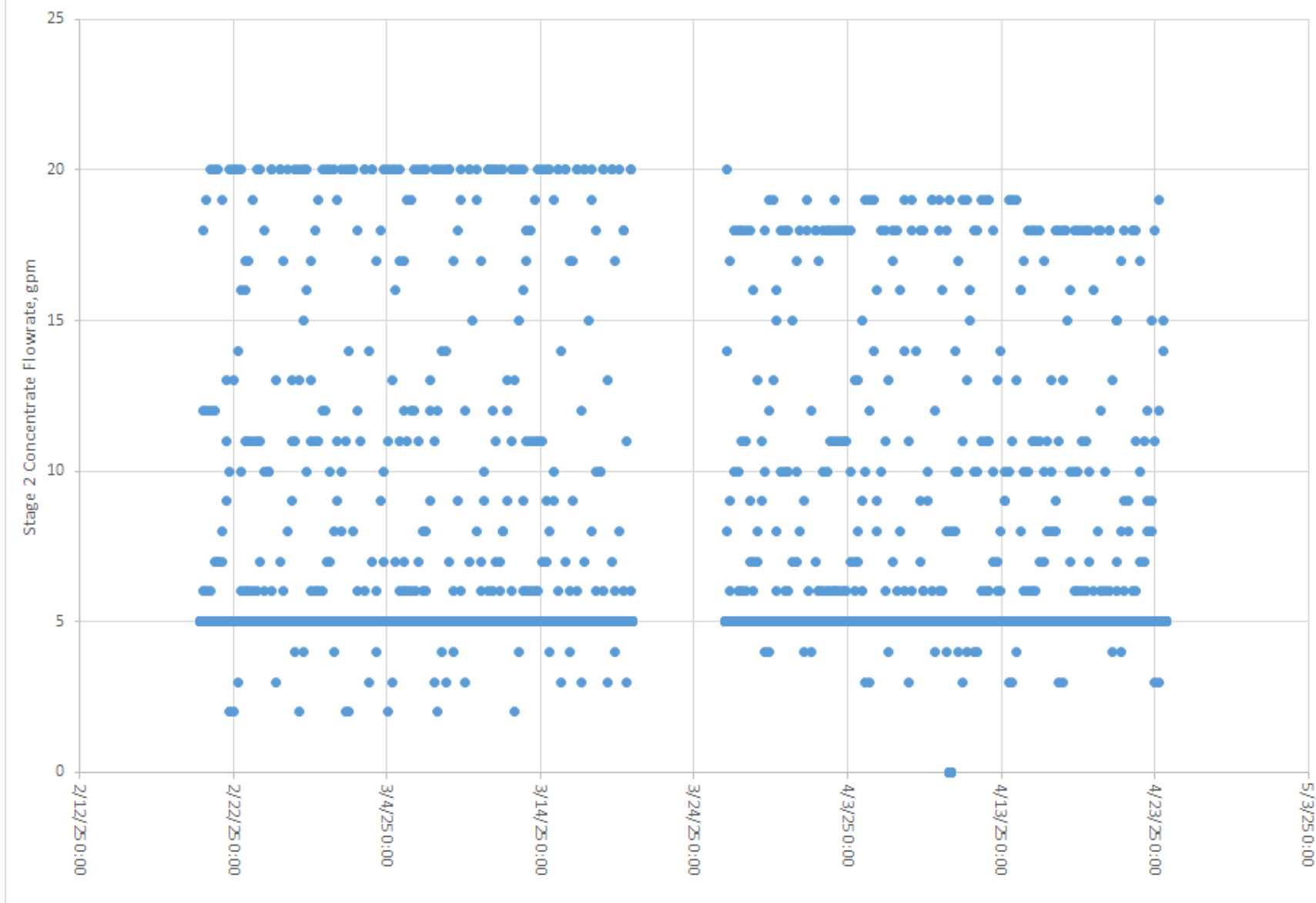


Figure 6. Filter Influent Pressure

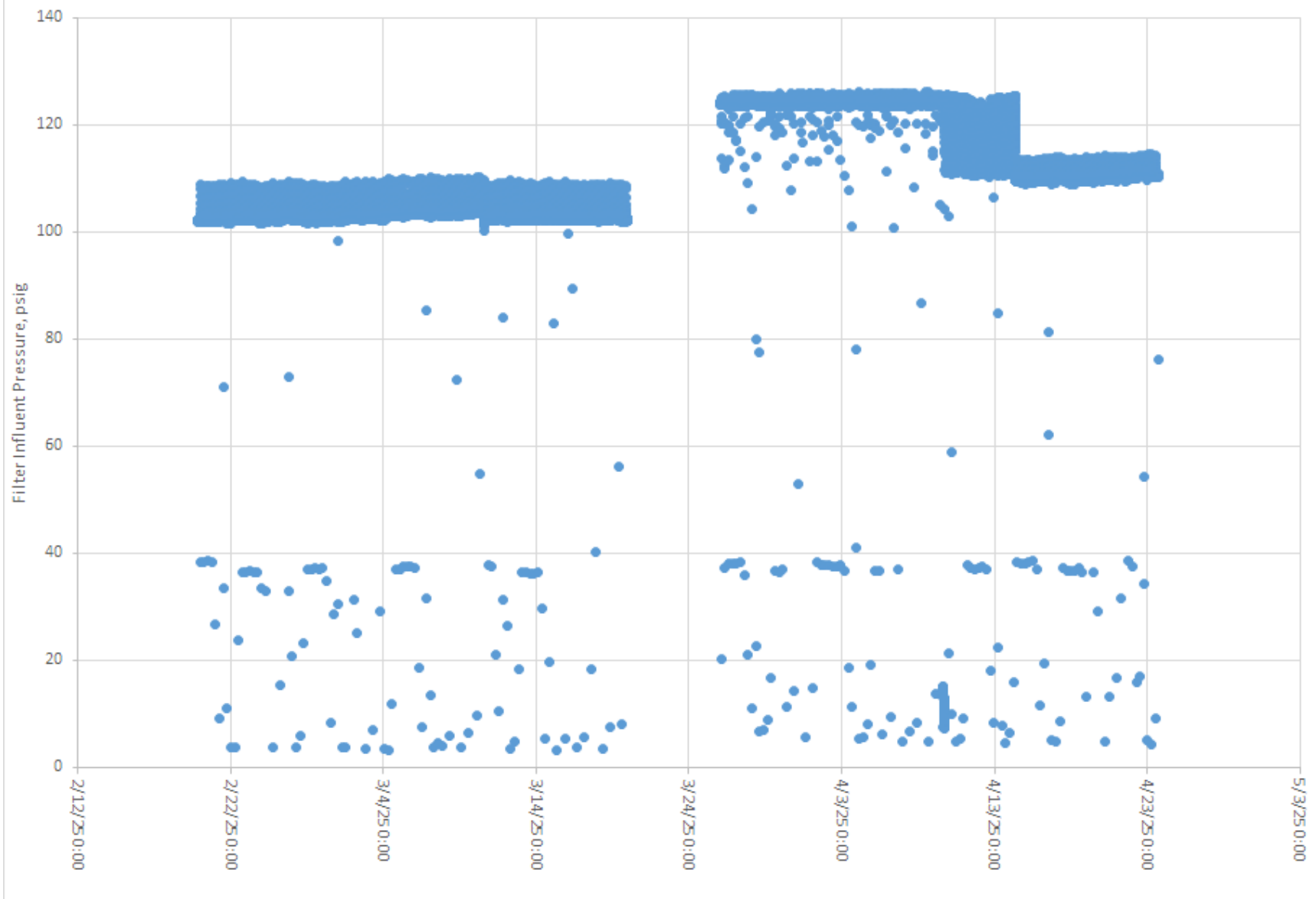


Figure 7. Filter Effluent Pressure

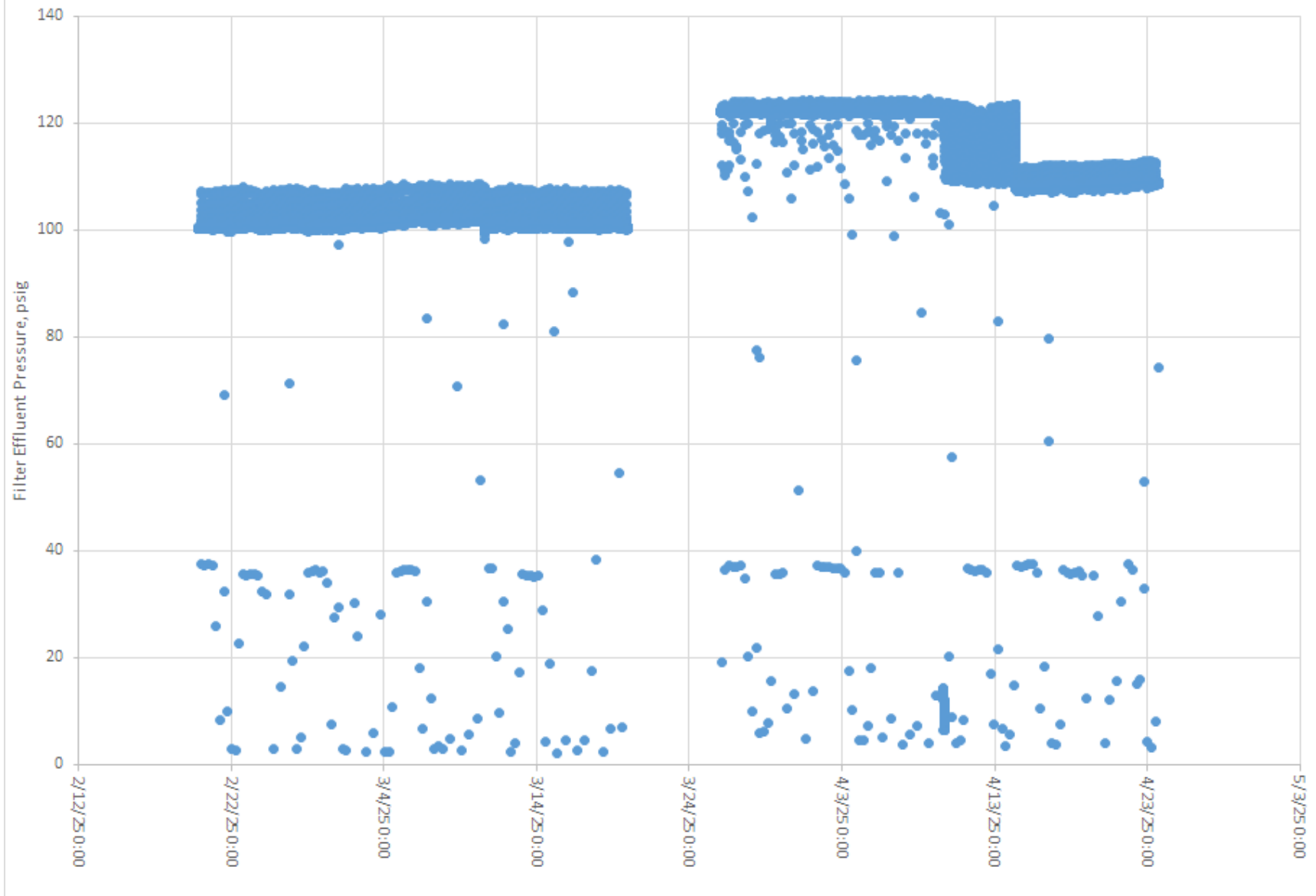


Figure 8. Filter Differential Pressure

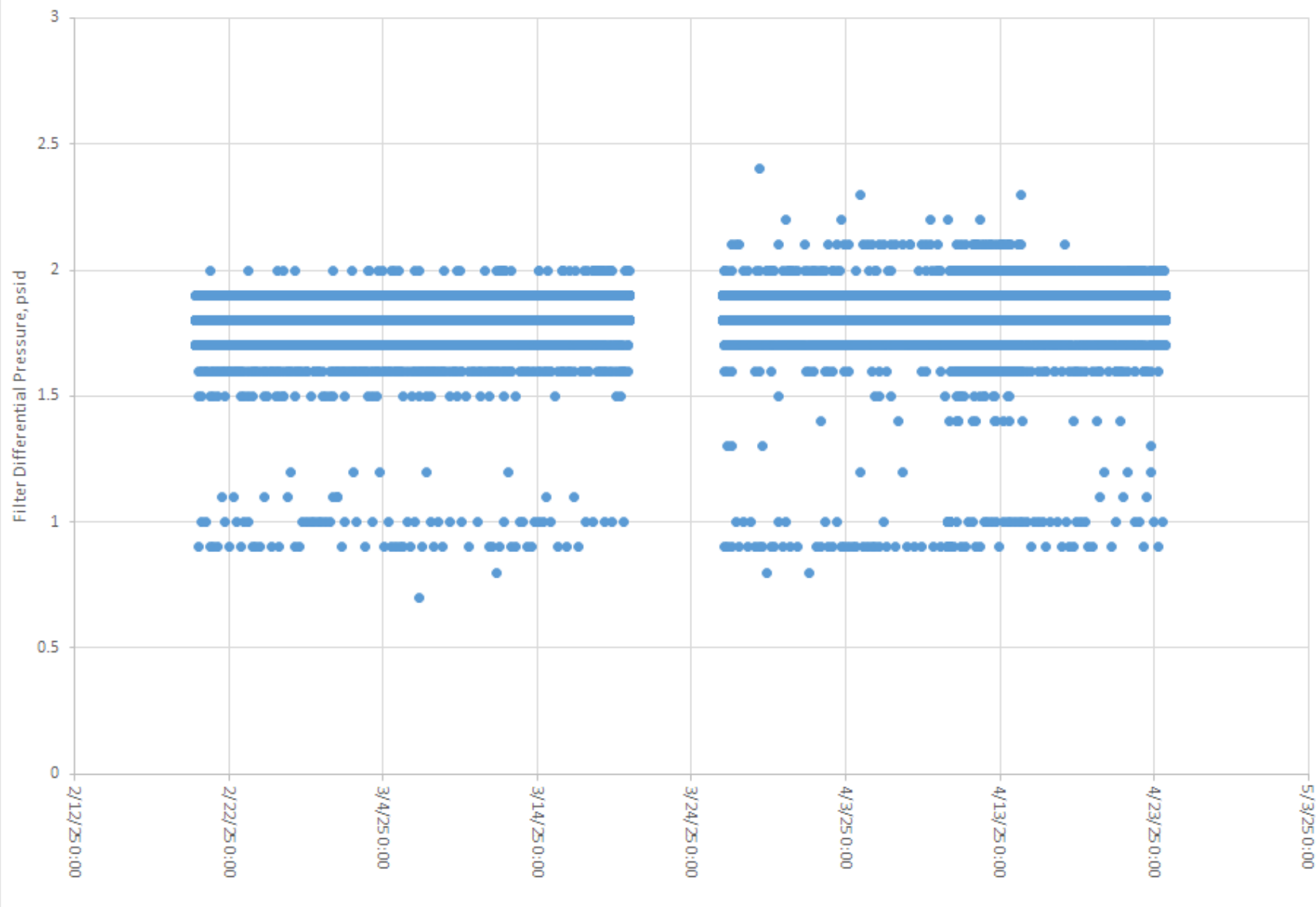


Figure 9. Stage 1 Feed Pressure

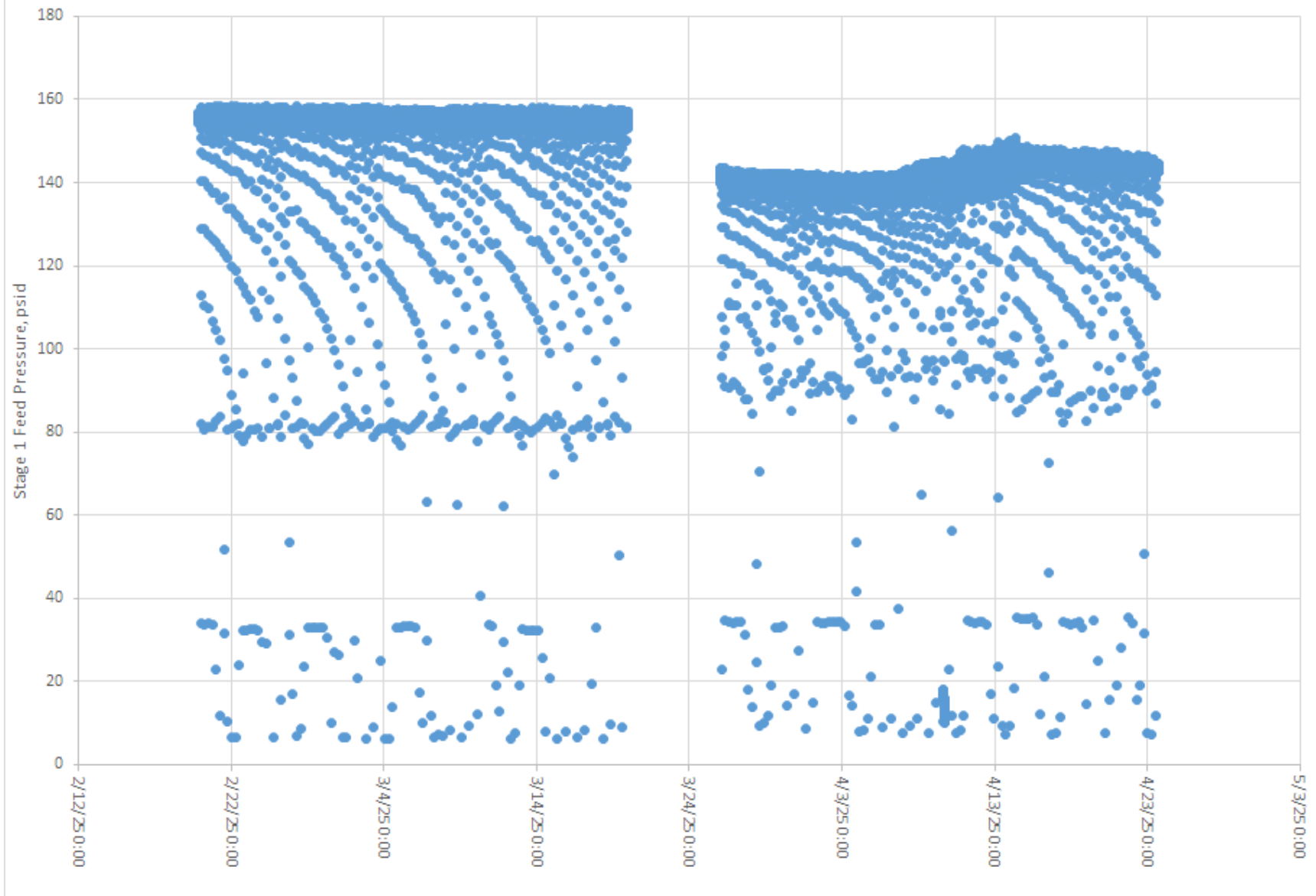


Figure 10. Stage 2 Feed Pressure

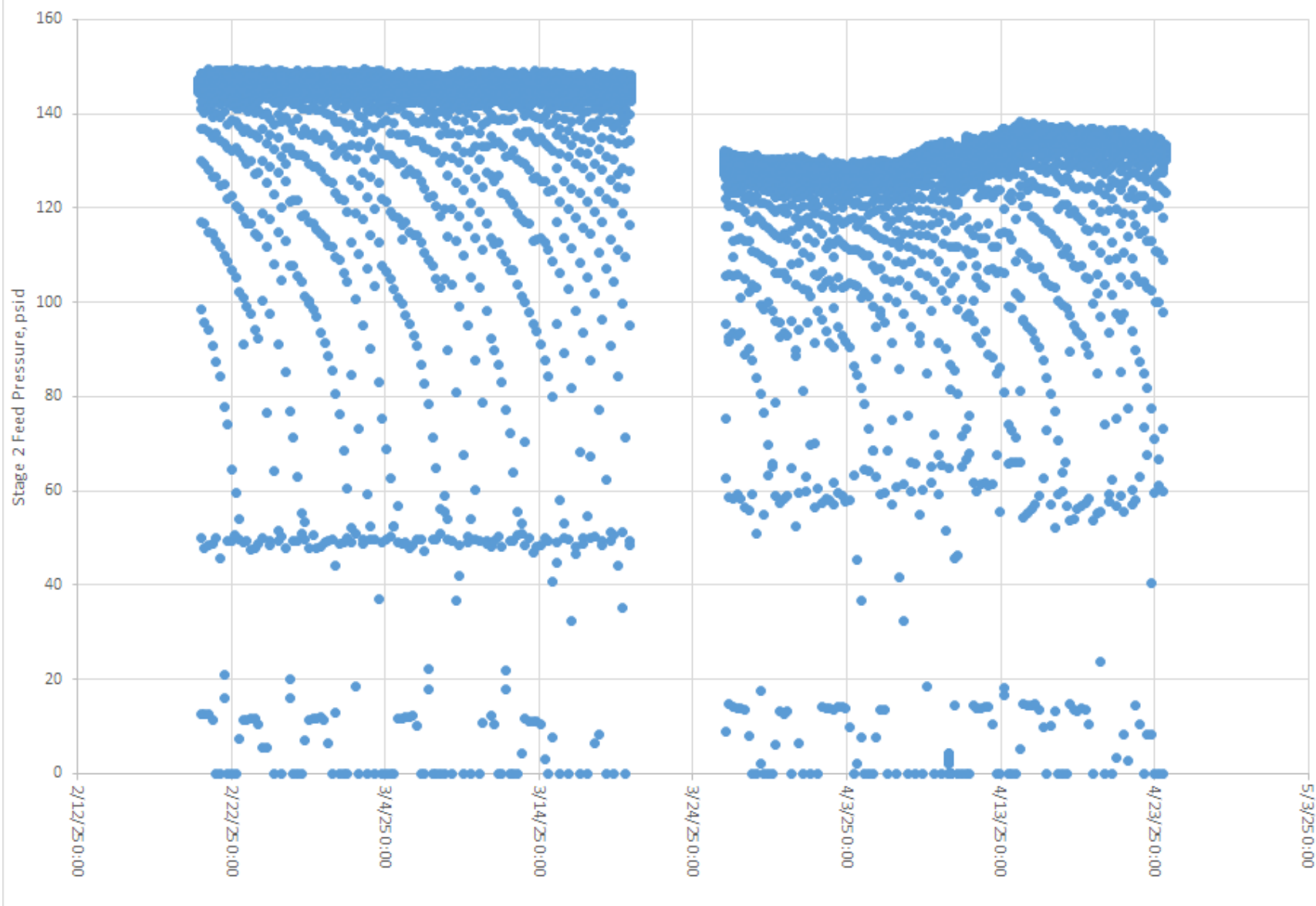


Figure 11. Stage 1 Differential Pressure

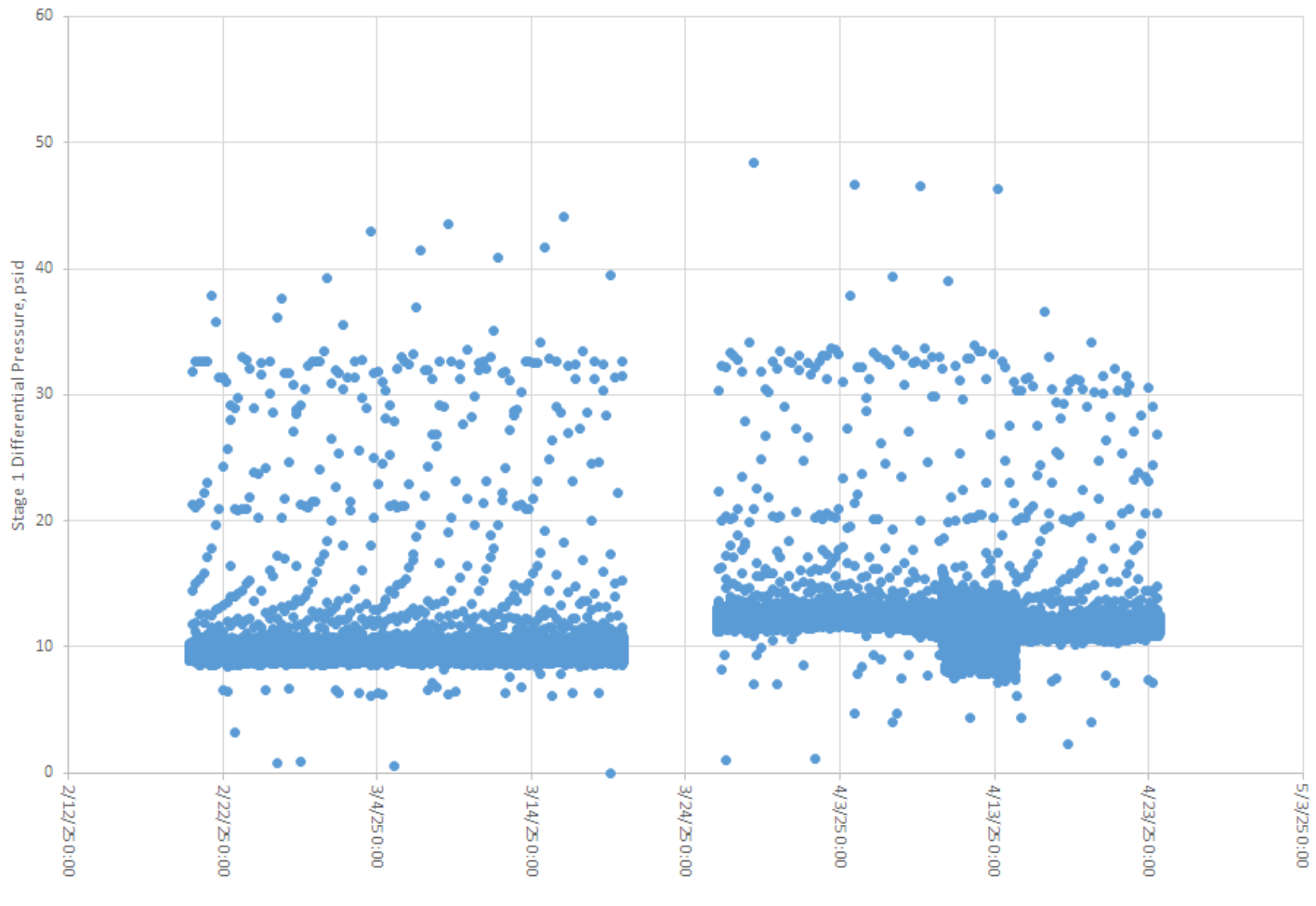


Figure 12. Stage 2 Differential Pressure

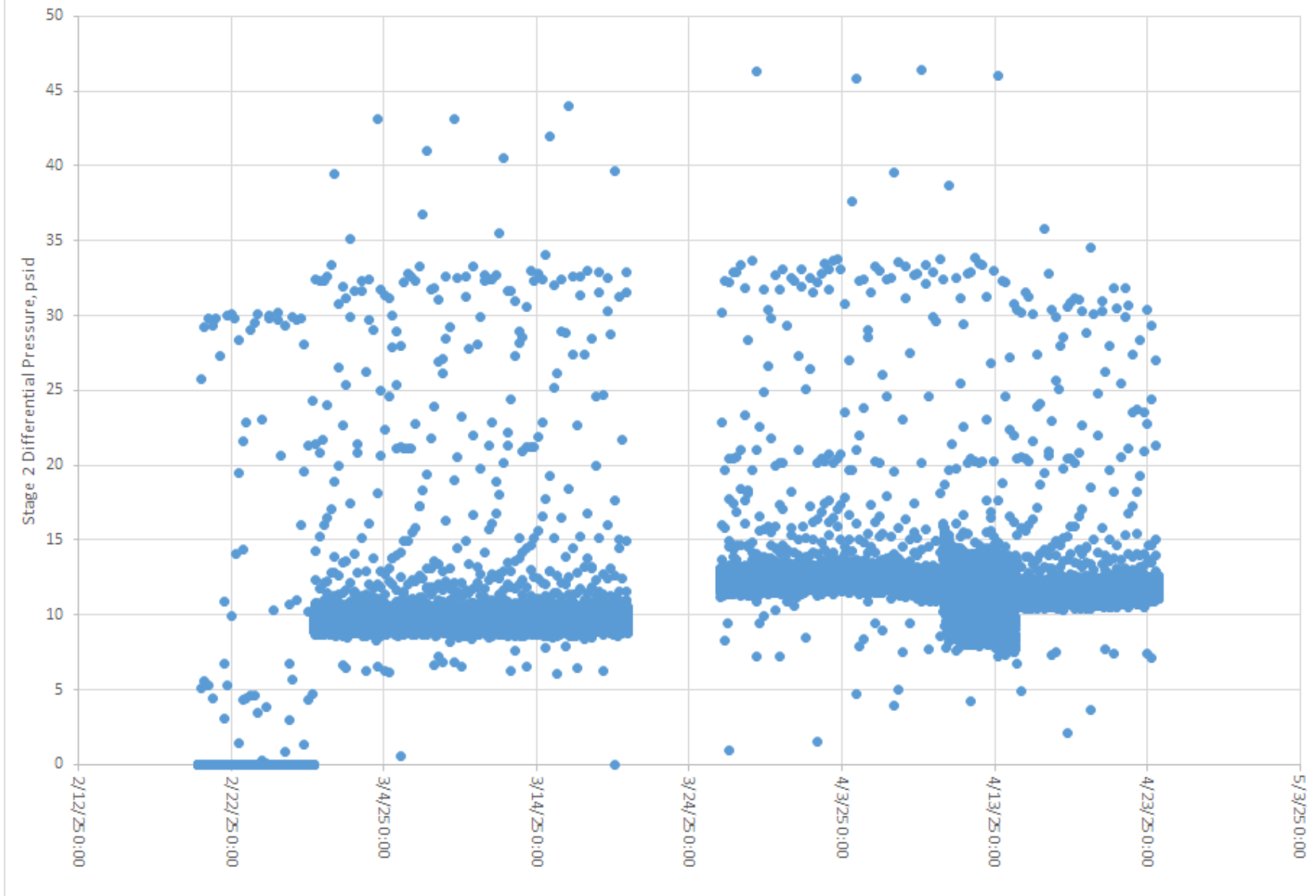


Figure 13. Stage 1 Permeate Pressure

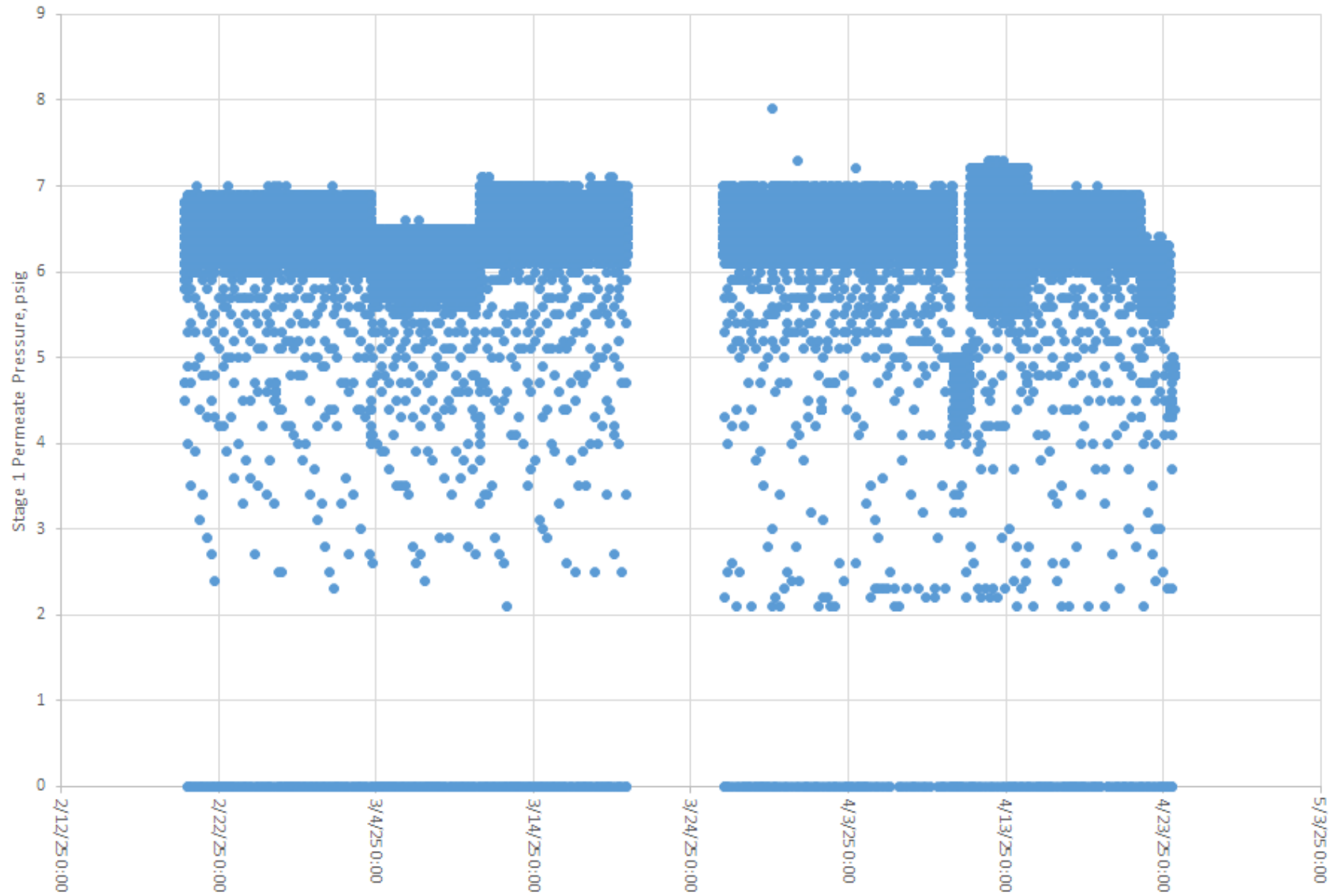


Figure 14. Stage 2 Concentrate Pressure

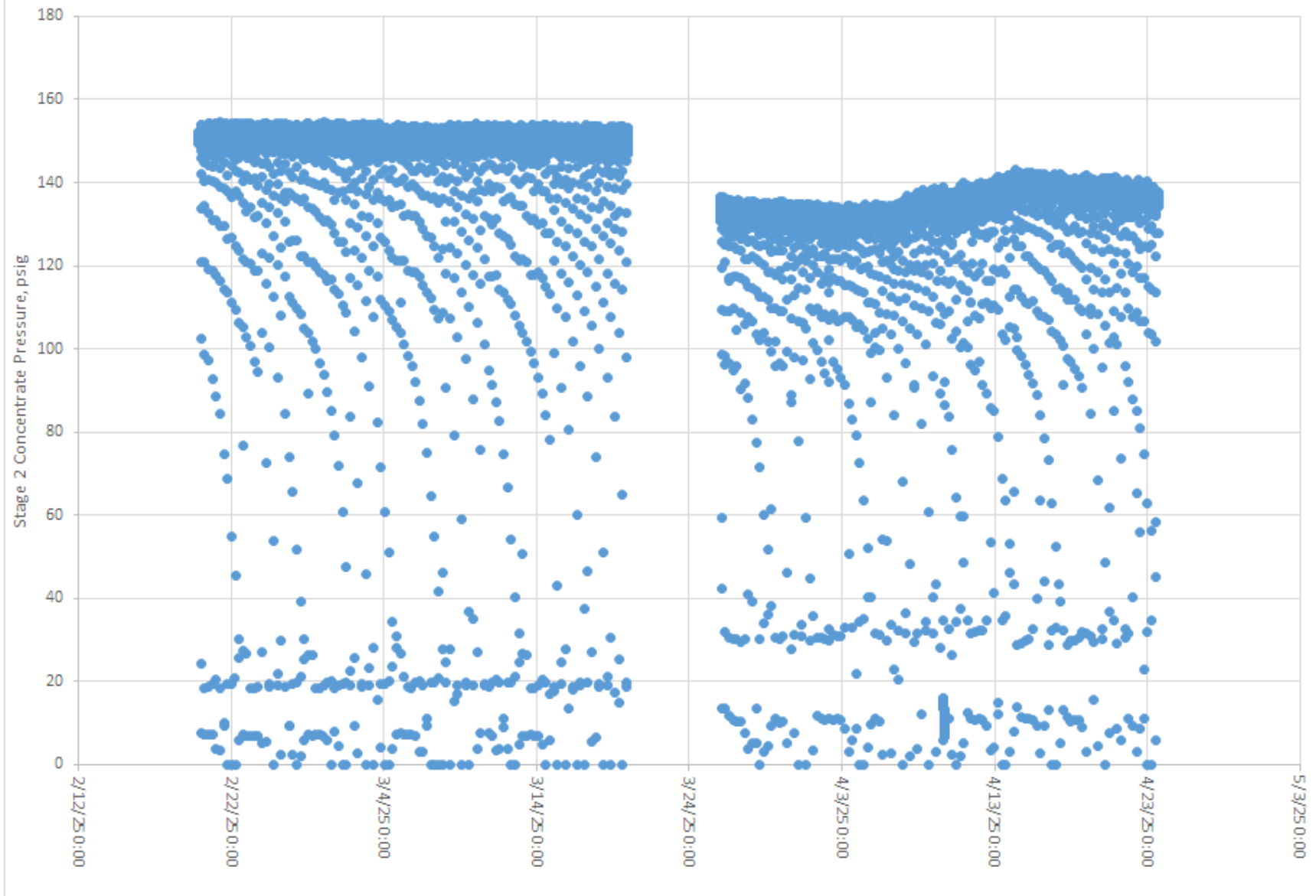


Figure 15. Final Permeate Pressure

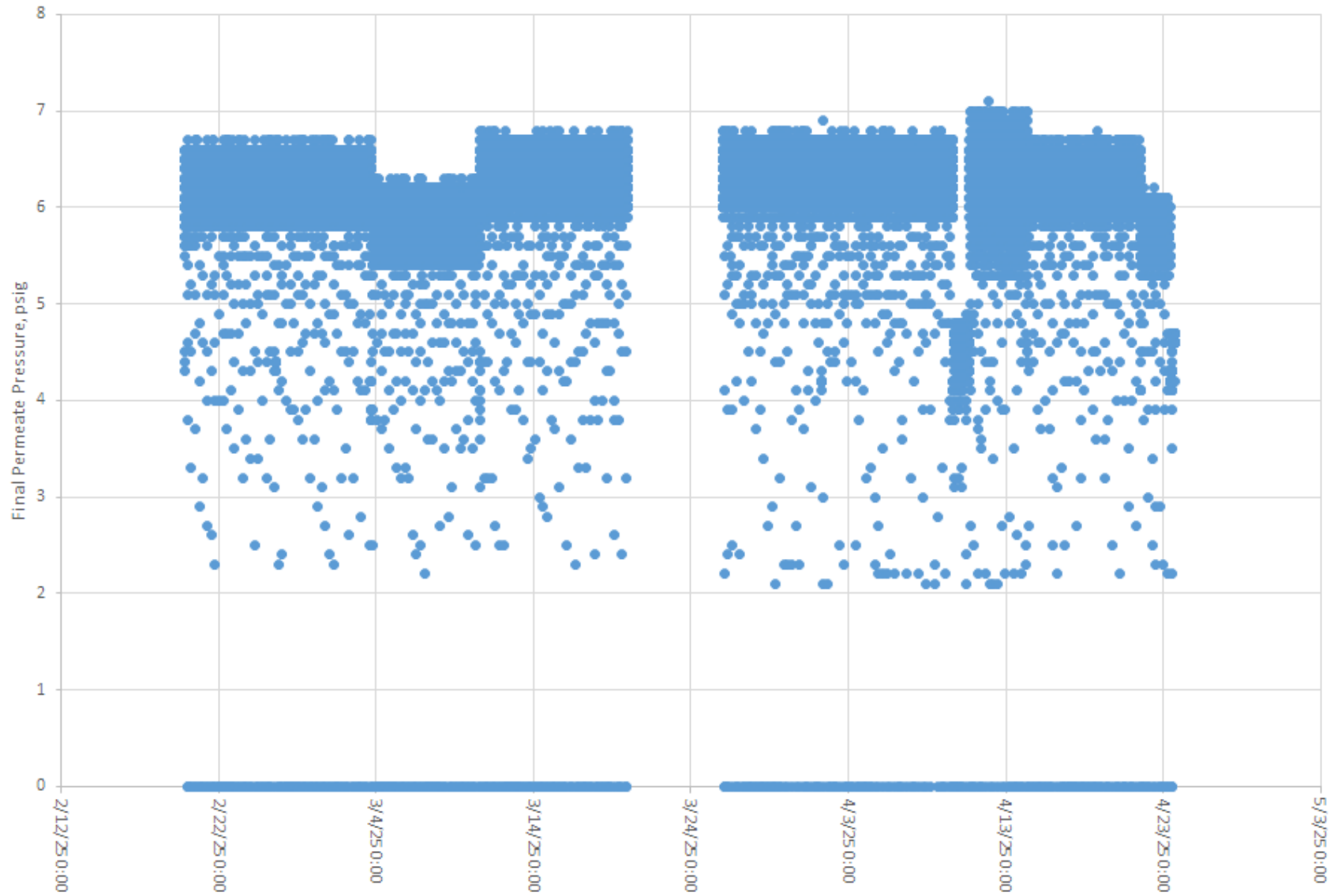


Figure 16. Final Concentrate Pressure

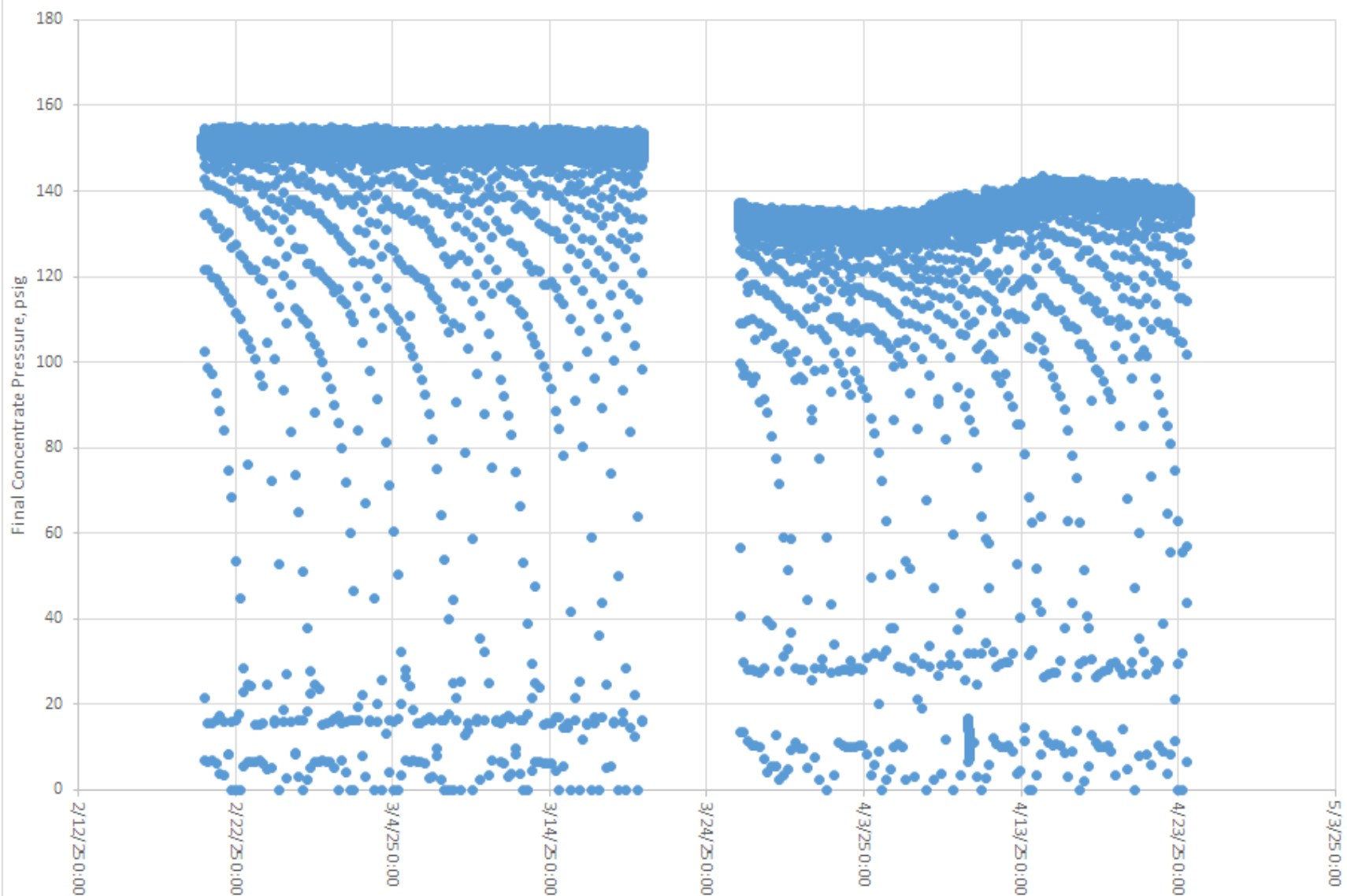
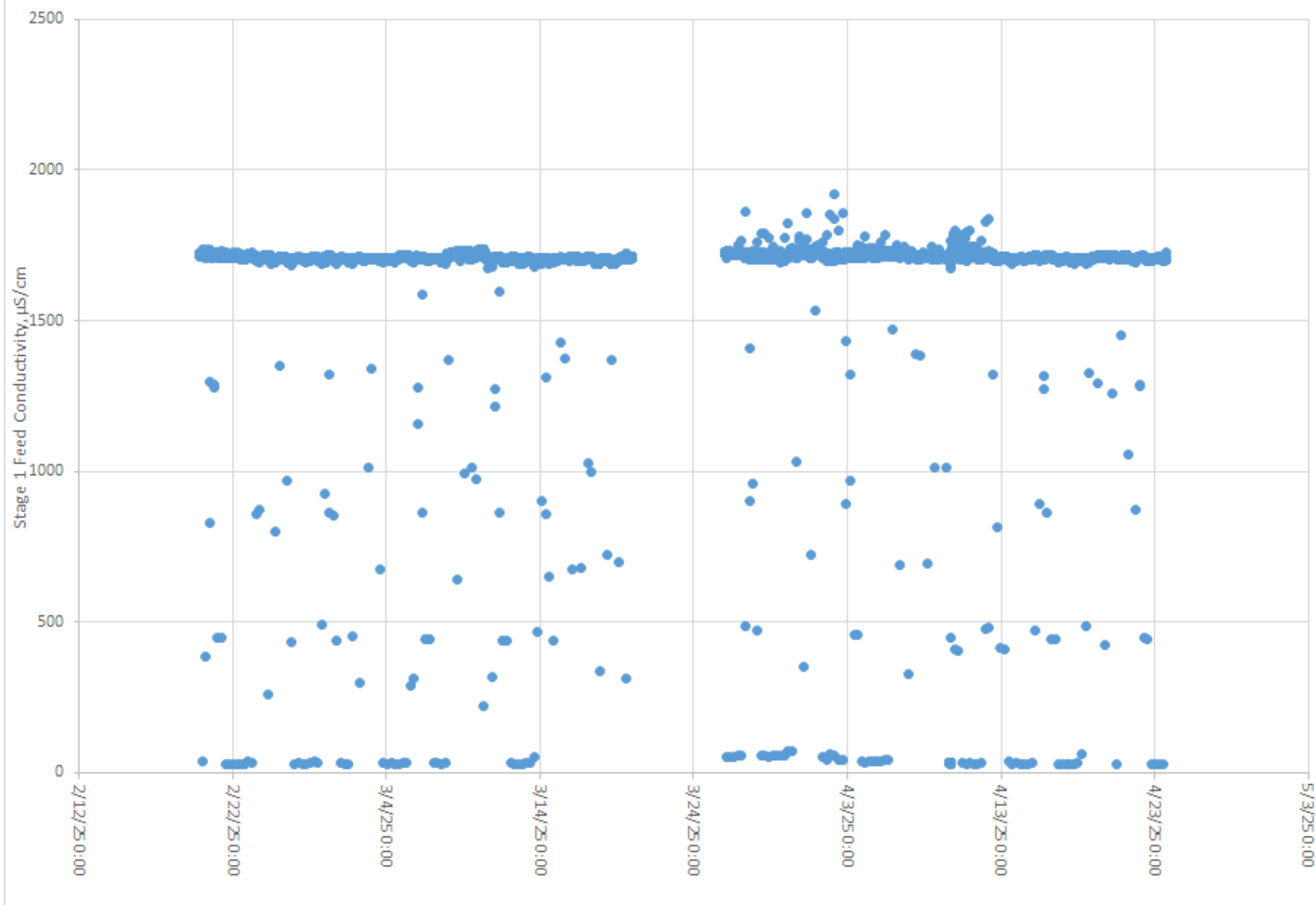
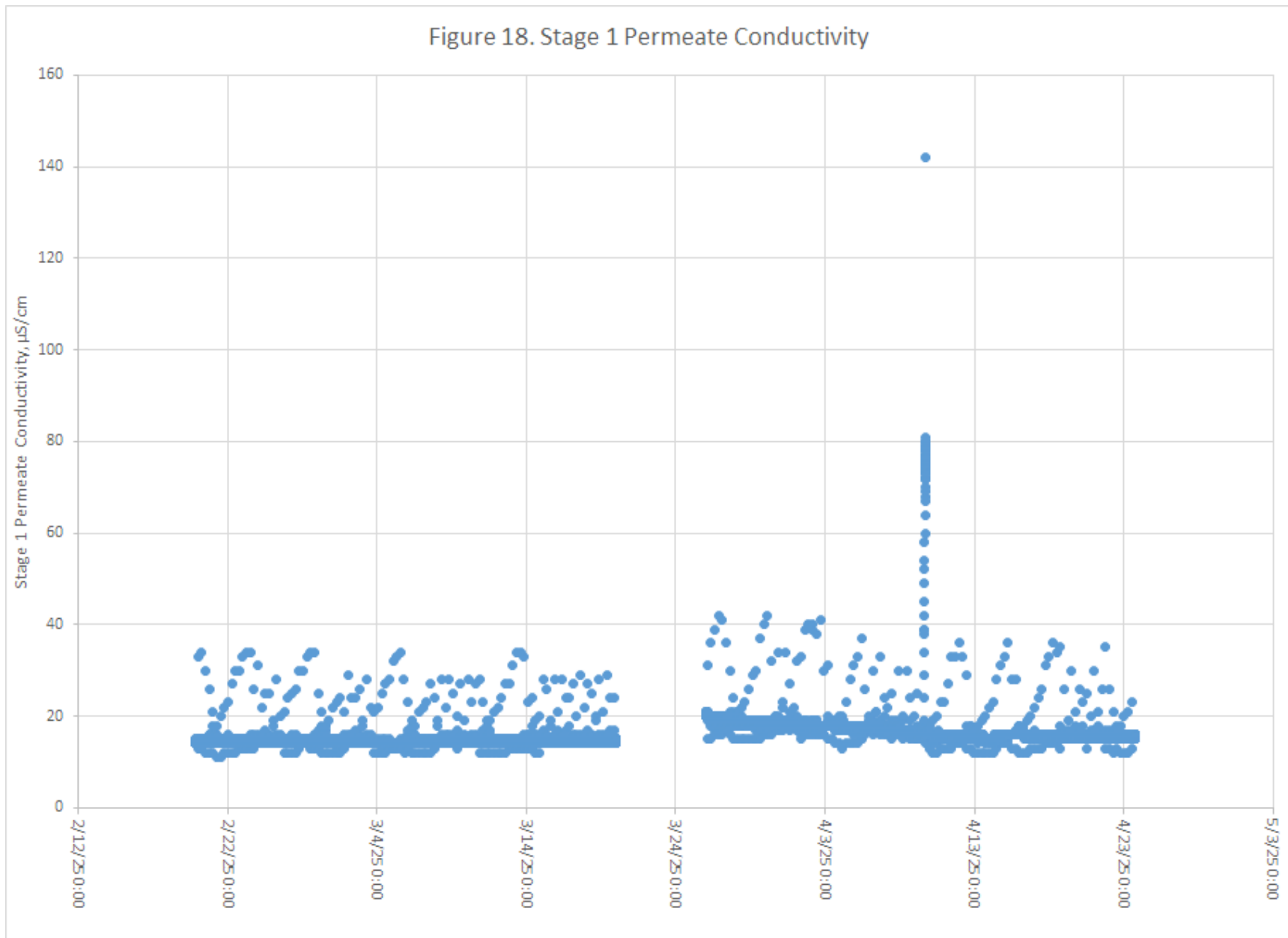


Figure 17. Stage 1 Feed Conductivity





Figure

Figure 19. Final Permeate Conductivity, $\mu\text{S}/\text{cm}$

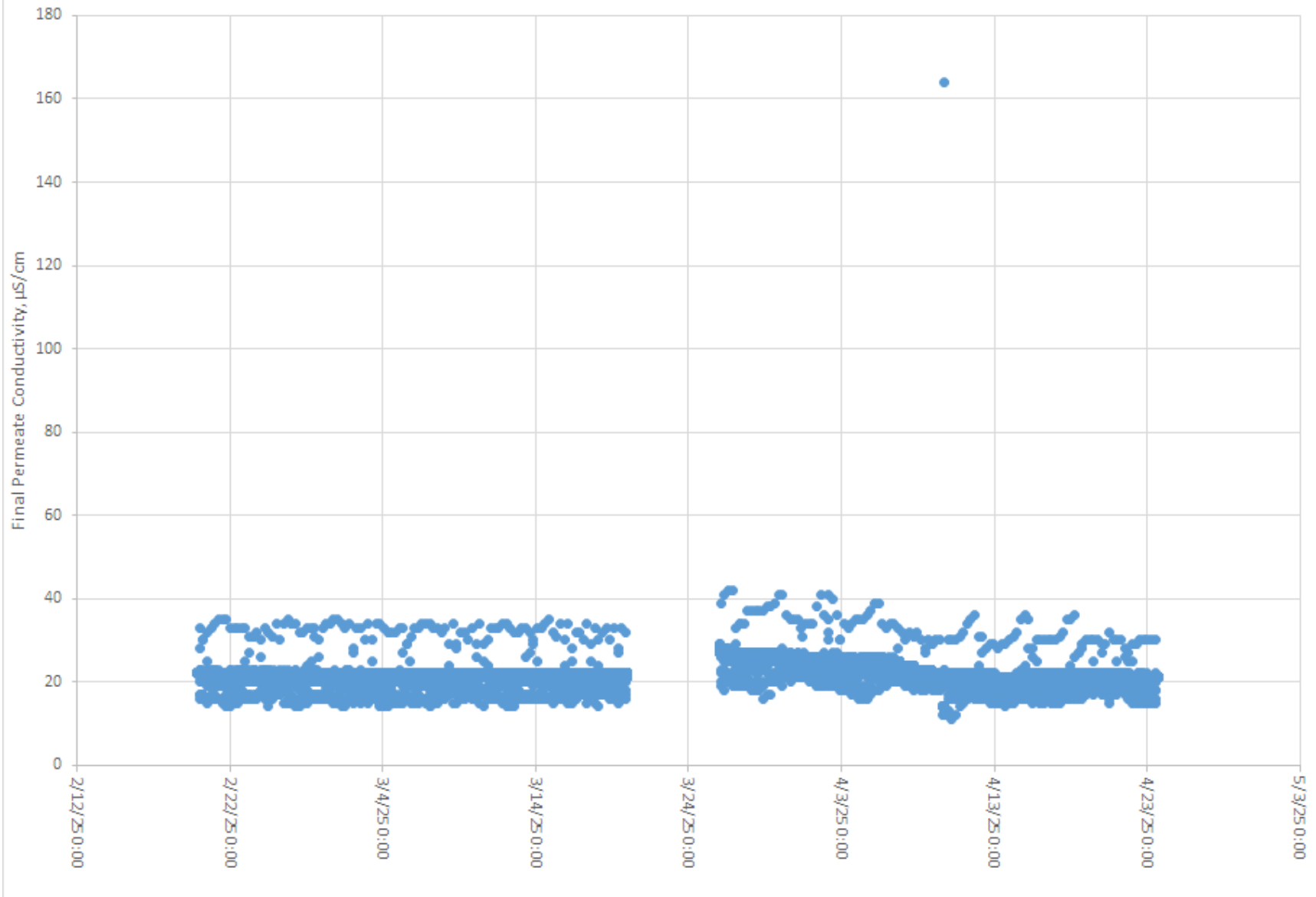


Figure 20. Final Permeate Temperature

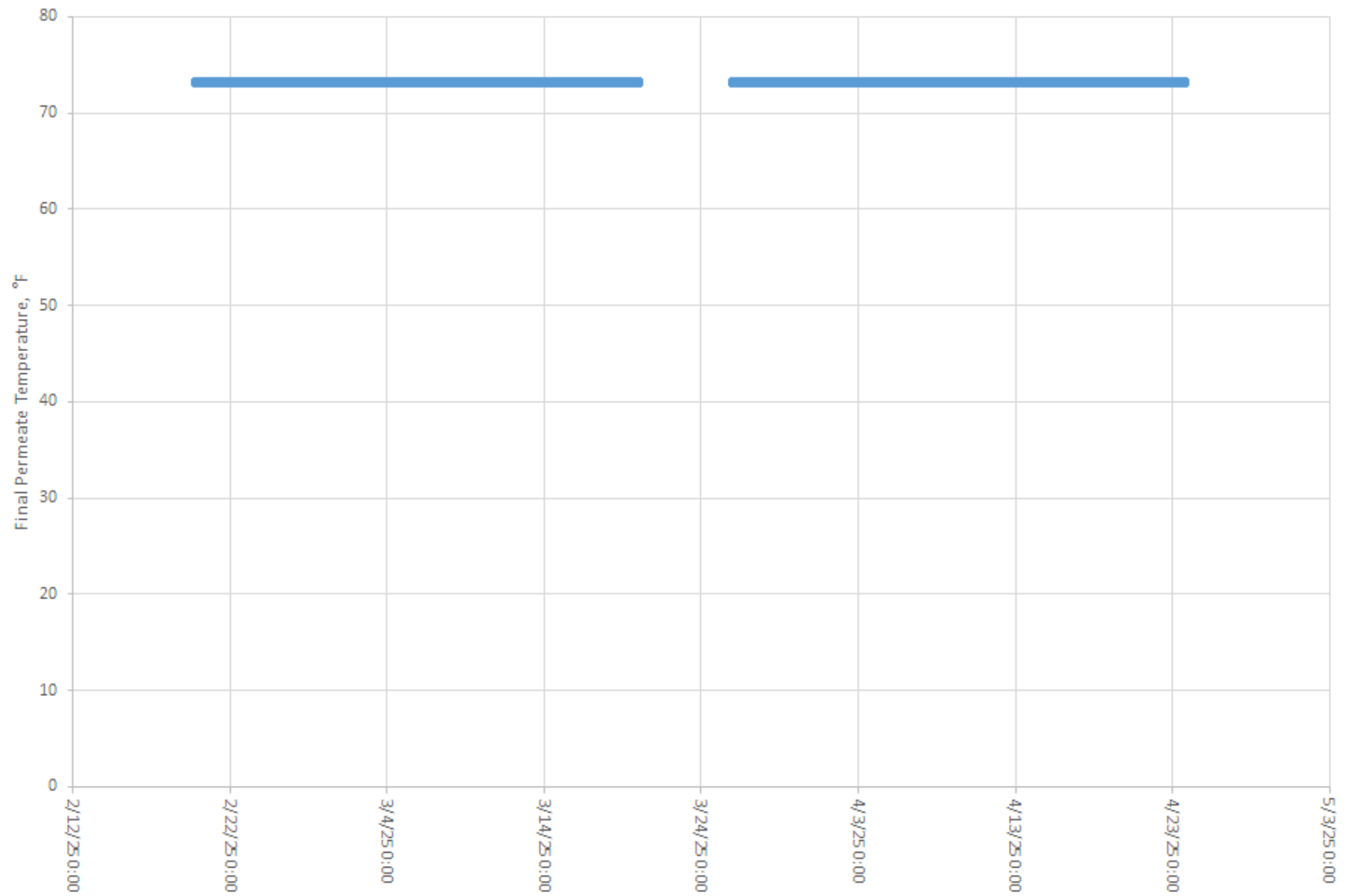


Figure 21. Stage 1 Feed pH

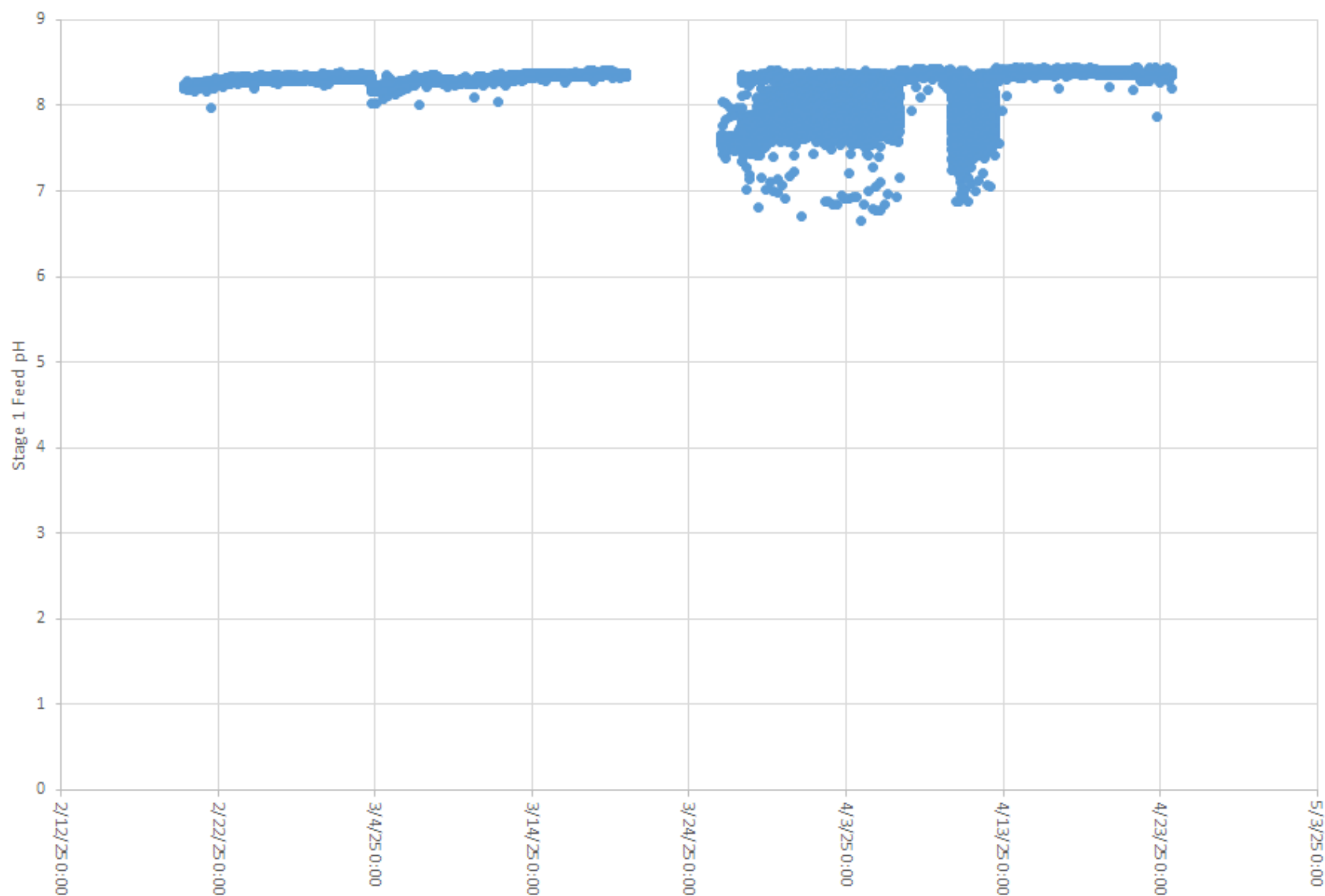
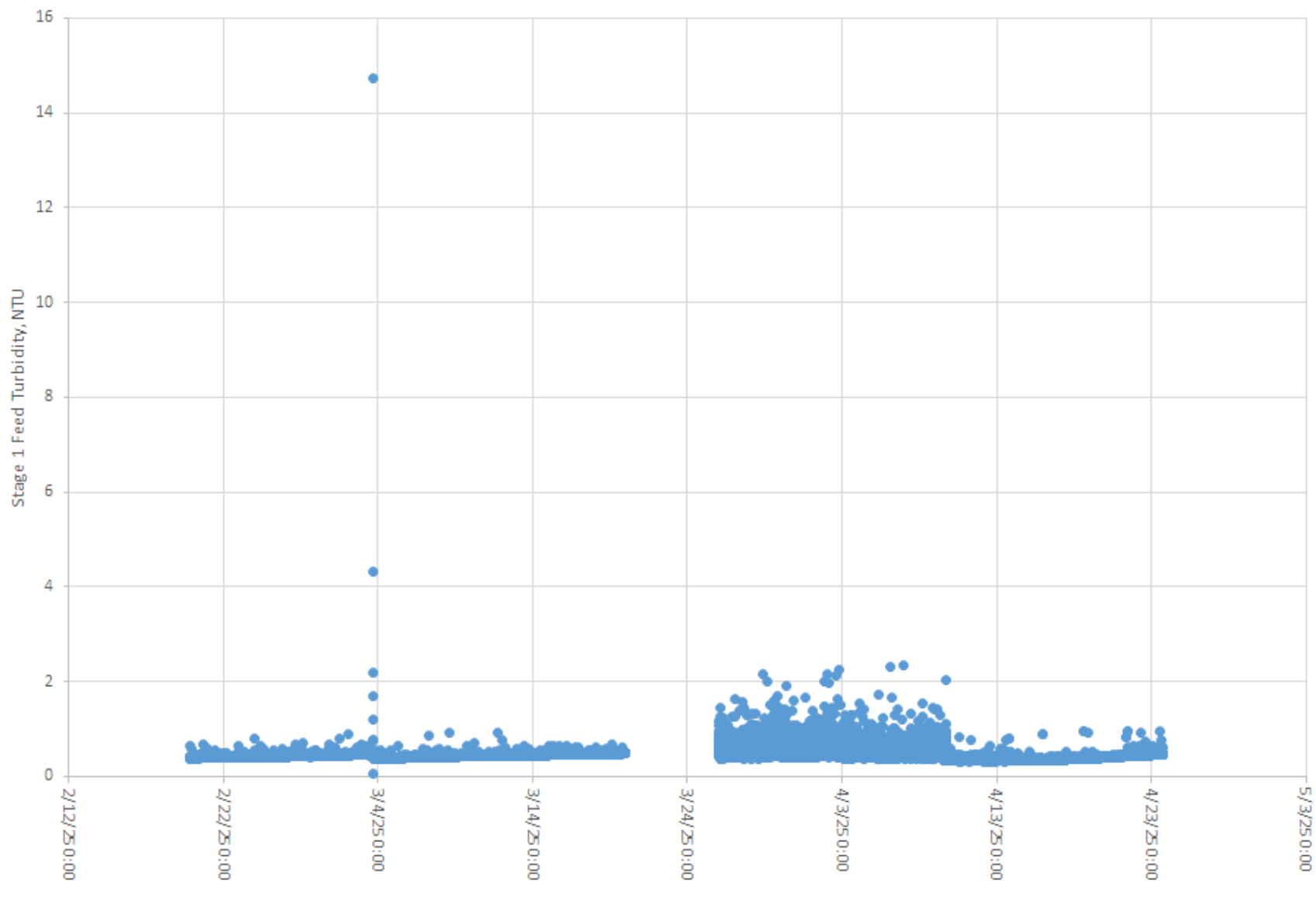


Figure 22. Stage 1 Feed Turbidity



Appendix F. GSF Pilot GreensandPlus Pilot Process Logsheet

Lawton Greensand Pilot Process Logsheet											
			System	Greensand							
Date	Time	Technician	Accurate Labs sampling	Flowrate	Loading (gpm/ft2)	Backwash Flow	Bleach Feedrate	Cl2 residual	Filter Configuration	Backwashed (X)	Other
1/5/25	18:06	TM		15	3	50	2 ml/L	0.06	N - standby, S - running	Both	Backwashed both filters
1/8/25	16:14	TM	X - TM	15	3	50	2 ml/L	0.06	N - standby, S - running		
1/12/25	13:27	TM		20	4	50	2 ml/L	0.02	N - running, S - standby		
1/15/25	15:15	CW	X - CW	20	4	50	2 ml/L	0.06	N - running, S - standby		
1/20/25	16:10	TM		25	5	50	2 ml/L	0.05	N - standby, S - running	Both	Backwashed both filters
1/22/25	15:50	TM	X - TM	25	5	50	2 ml/L	0.06	N - standby, S - running		
1/24/25	16:15	TM	X - TM	35	7	50	2 ml/L	0.02	N - running, S - standby		
2/5/25	14:54										
2/3/25	13:30	TM		40	8	50	2.4 mg/L	0.06	N - running, S - standby		
2/11/25	16:20	TM		45	9	50	2.4 mg/L	0.07	N - running, S - standby	North	N: max = 47 gpm before BW, S: max = 52 gpm before BW
2/13/25	15:00	TM	X - TM	45	9	50	2.2 mg/L	0.06	N - running, S - standby		N: max = 57 gpm after BW
2/17/25	15:58	TM		50	10	50	2.1 ml/L	0.08	N - running, S - standby		N and S: max flow = 76 gpm after BW
2/19/25	18:30	TM		50	10	50	2.1 ml/L	0.07	N - running, S - standby	Both	Low flow after 2:04 am
3/10/25	15:10	TM		50	10	50	2.1 ml/L	0.33	N - standby, S - running	North	GS flow dropped to 48 gpm, valve 100% open
3/20/25	13:00	TM		30	6	50	2.1 ml/L	0.09	N - standby, S - running		Flow good, low DP
3/24/25	19:30	TM		35	7	50	2.1 ml/L	0.07	N - running, S - standby	South	Changed to series flow
3/25/25	16:30	TM		32	6.3	50	2.1 ml/L	0.02	N - running, S - standby		
4/9/25	18:30	TM		50	10	50	2.1 ml/L	0.06	N - standby, S - running	Both	
4/21/25	14:15	TM		50	10	50	2.1 ml/L	0.06	N - standby, S - running		Fixed drain piping. Went to 50 gpm on fresh filter to study plugging

Appendix G. RO Pilot Toray TMG10D Process Logsheet

Lawton RO Pilot Process Logsheet									
			System	Reverse Osmosis					
Date	Time	Technician	Accurate Labs sampling	Flowrate	Recovery Rate	Antiscalant Dose	Sodium Bisulfite Dose	CIP (X)	Other
1/5/25	18:06	TM		27	82%	5 mg/L	0		
1/8/25	16:14	TM	X - TM	27	82%	5 mg/L	0		
1/12/25	13:27	TM		27	82%	5 mg/L	0		
1/15/25	15:15	CW	X - CW	27	82%	5 mg/L	0		
1/20/25	16:10	TM		27	82%	5 mg/L	0		
1/22/25	15:50	TM	X - TM	27	82%	5 mg/L	0	X - high pH	RO CIP - high feed pressure, 218 psi, 150 psi after CIP
1/24/25	16:15	TM	X - TM	27	82%	5 mg/L	0		
2/5/25	14:54								
2/3/25	13:30	TM		27	82%	5 mg/L	0		
2/11/25	16:20	TM		27	82%	5 mg/L	0	158 psi feed	
2/13/25	15:00	TM	X - TM	27	82%	5 mg/L	0		
2/17/25	15:58	TM		27	82%	5 mg/L	0		Changed RO inlet filter.
2/19/25	18:30	TM		27	82%	5 mg/L	0		Low flow after 2:04 am
3/10/25	15:10	TM		27	82%	5 mg/L	0		GS flow dropped to 48 gpm, valve 100% open
3/20/25	13:00	TM		RO Shutdown					Flow good, low DP
3/24/25	19:30	TM		27	82%	5 mg/L	5 mg/L		Changed RO membranes
3/25/25	16:30	TM		27	82%	5 mg/L	5 mg/L		Replaced RO booster pump
4/9/25	18:30	TM		27	82%	5 mg/L	5 mg/L		
4/21/25	14:15	TM		27	82%	5 mg/L	5 mg/L		

Appendix H. Toray TMG(D) Low-Pressure Brackish RO Data Sheet

TORAY

Small system Brackish Water RO Elements

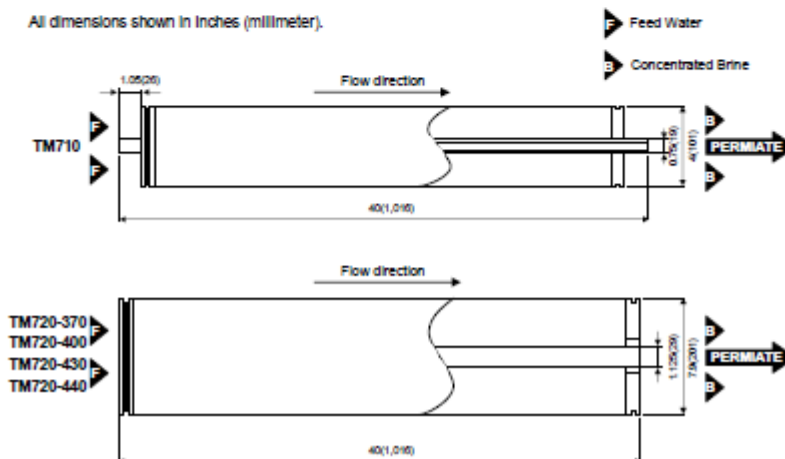
TM710

Type	Diameter Inch	Membrane Area ft ² (m ²)	Salt Rejection %	Product Flow Rate gpd(m ³ / d)	Feed Spacer Thickness mil
TM710	4"	87(8)	99.7	2,400(9.1)	31
TM720-370	8"	370(34)	99.7	9,500(36.0)	31
TM720-400	8"	400(37)	99.7	10,200(38.6)	31
TM720-430	8"	430(40)	99.7	11,000(41.6)	28
TM720-440	8"	440(41)	99.7	11,300(42.6)	28

1. Membrane Type	Cross Linked Fully Aromatic Polyamide Composite	
2. Test Conditions	Feed Water Pressure Feed Water Temperature Feed Water Concentration Recovery Rate Feed Water pH	225 psi(1.55MPa) 77° F(25°C) 2,000 mg/l NaCl 15% 7
3. Minimum Salt Rejection	99.0%	
4. Minimum Product Flow Rate	2,000gpd(7.6m ³ /d)(TM710) 7,500gpd(28.4m ³ /d)(TM720-370) 8,200gpd(31.0m ³ /d)(TM720-400) 8,800gpd(33.3m ³ /d)(TM720-430) 9,000gpd(34.1m ³ /d)(TM720-440)	

Dimensions

All dimensions shown in Inches (millimeter).



Appendix I. RO Membrane Element Data Sheet - Toray 4-inch

TORAY

Innovation by Chemistry

Ultra low pressure BWRO, enhanced chemical tolerance

TMG (D)

Type	Diameter Inch	Membrane Area ft ² (m ²)	Salt Rejection %	Product Flow Rate gpd(m ³ / d)	Feed Spacer Thickness mil
TMG10D	4"	87(8)	99.7	2,850(10.8)	34
TMG20D-400	8"	400(37)	99.7	12,100(45.8)	34
TMG20D-440	8"	440(41)	99.7	13,300(50.3)	28

* Above two types of TMG20D are with 29mm centerpipe as described in below "Dimensions".
Please note that while TMG20 series with 29 mm centerpipe are distinguished by "C style",
TMG20D series are only with 29 mm centerpipe and not distinguished by "C style".

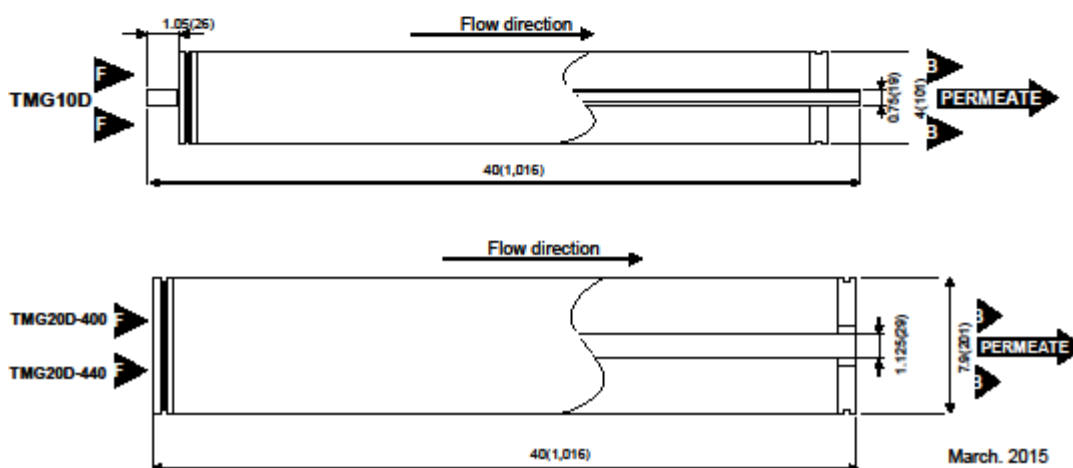
1. Membrane Type		Cross Linked Fully Aromatic Polyamide Composite
2. Test Conditions	Feed Water Pressure Feed Water Temperature Feed Water Concentration Recovery Rate Feed Water pH	150 psi(1.03MPa) 77° F(25°C) 2000 mg/l NaCl 15% 7
3. Minimum Salt Rejection		99.5%
4. Minimum Product Flow Rate		2,400gpd(9.1m ³ /d)(TMG10D) 10,300gpd(39.0m ³ /d)(TMG20D-400) 11,200gpd(42.4m ³ /d)(TMG20D-440)

Dimensions

All dimensions shown in Inches (millimeter).

F Feed Water

B Concentrated Brine



Appendix J. ODEQ Permit Variance for GSF - Example

Appendix K. GSF Intellogx Pilot Operating Data - Anthracite Capped GreensandPlus

GSF Pilot Unit Operating Data Figure List

Title

- Figure 1. Influent Iron Concentration
- Figure 2. GSF Influent pH
- Figure 3. GSF Effluent Cl₂
- Figure 4 GSF Effluent Iron
- Figure 5. GSF Effluent pH
- Figure 6. GSF Influent Flow
- Figure 7. GSF Filtrate Flow
- Figure 8. GSF Backwash Flow

Figure 1. GSF Influent Iron

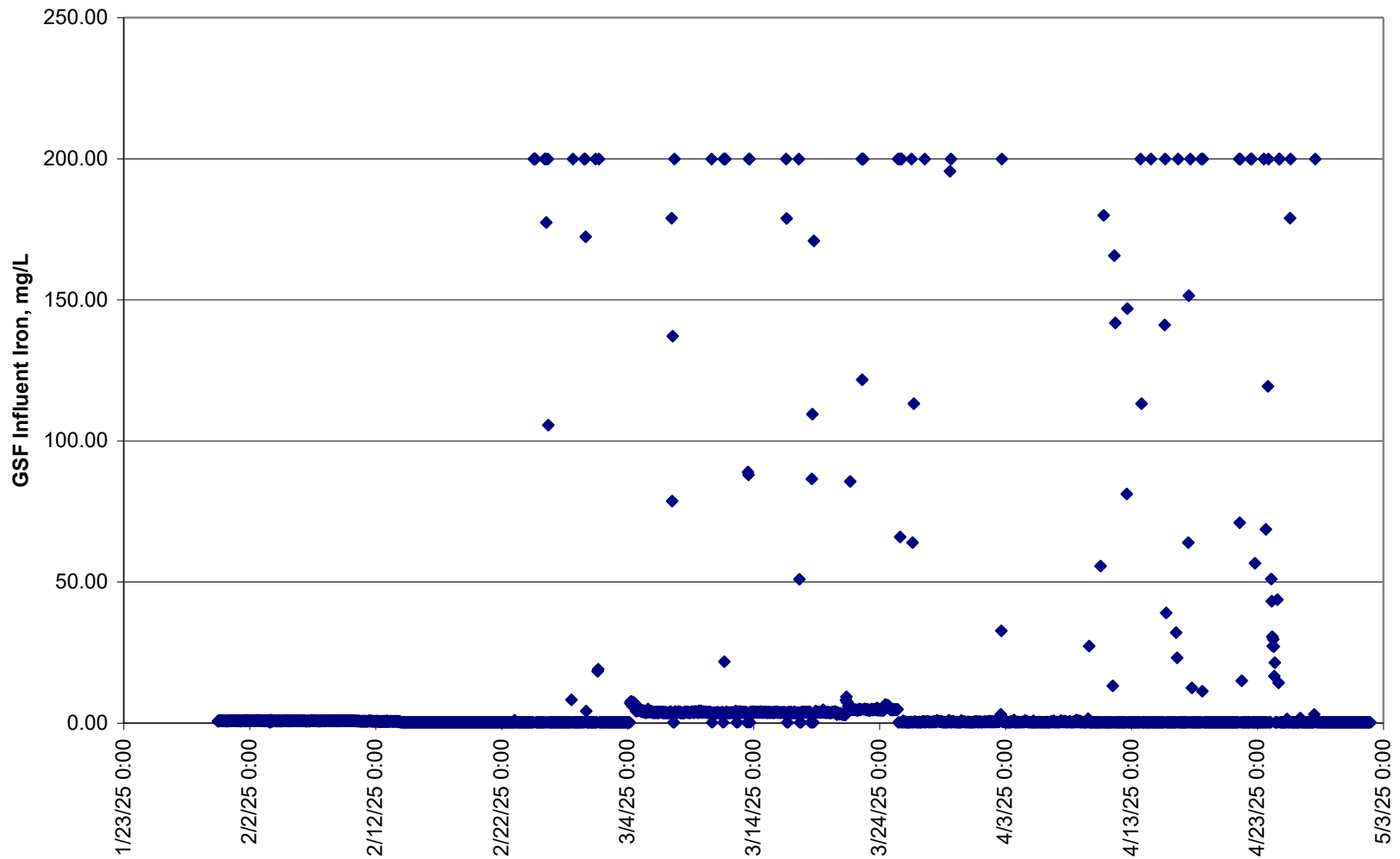


Figure 2. GSF Influent pH

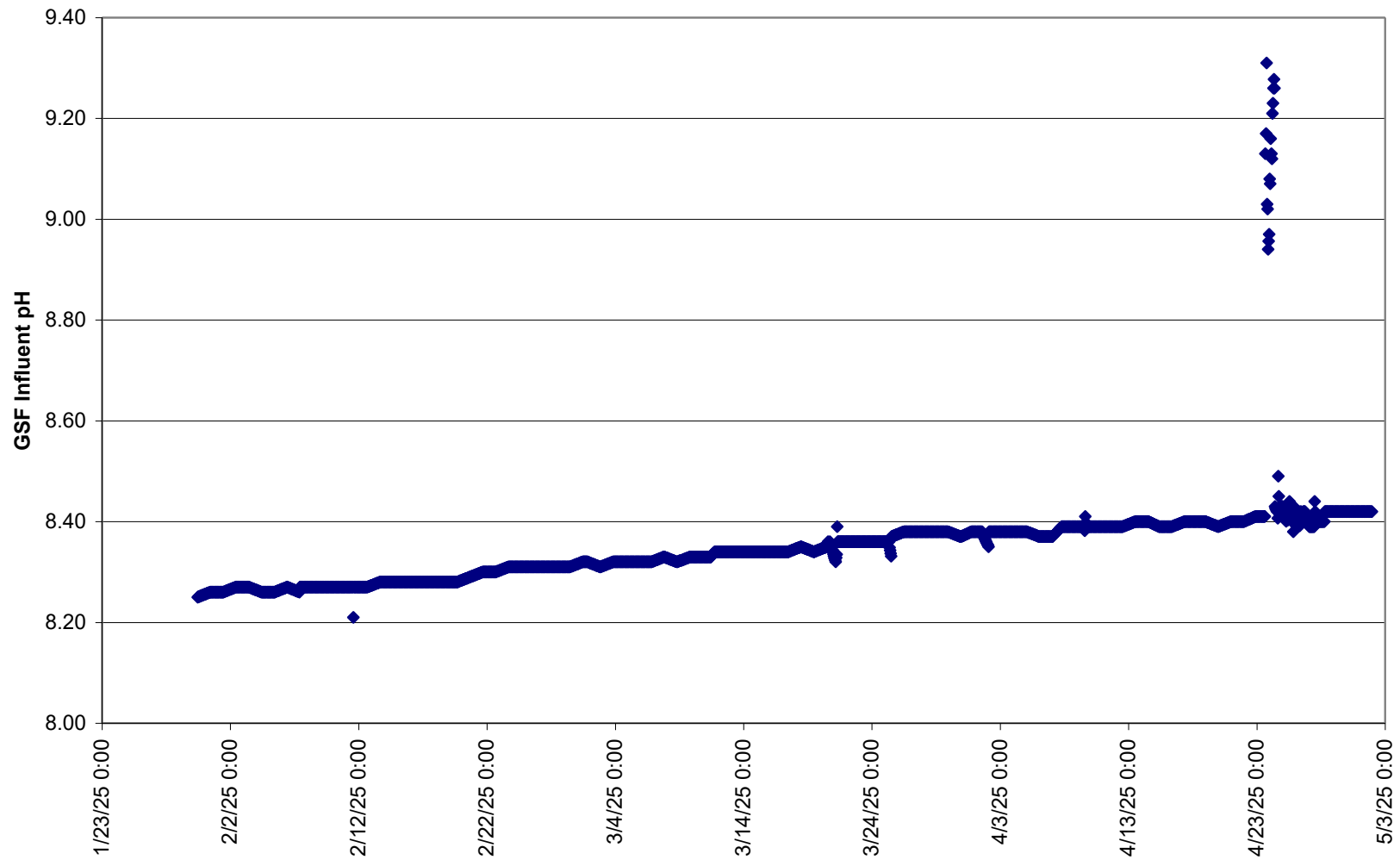


Figure 3. GSF Effluent Cl2

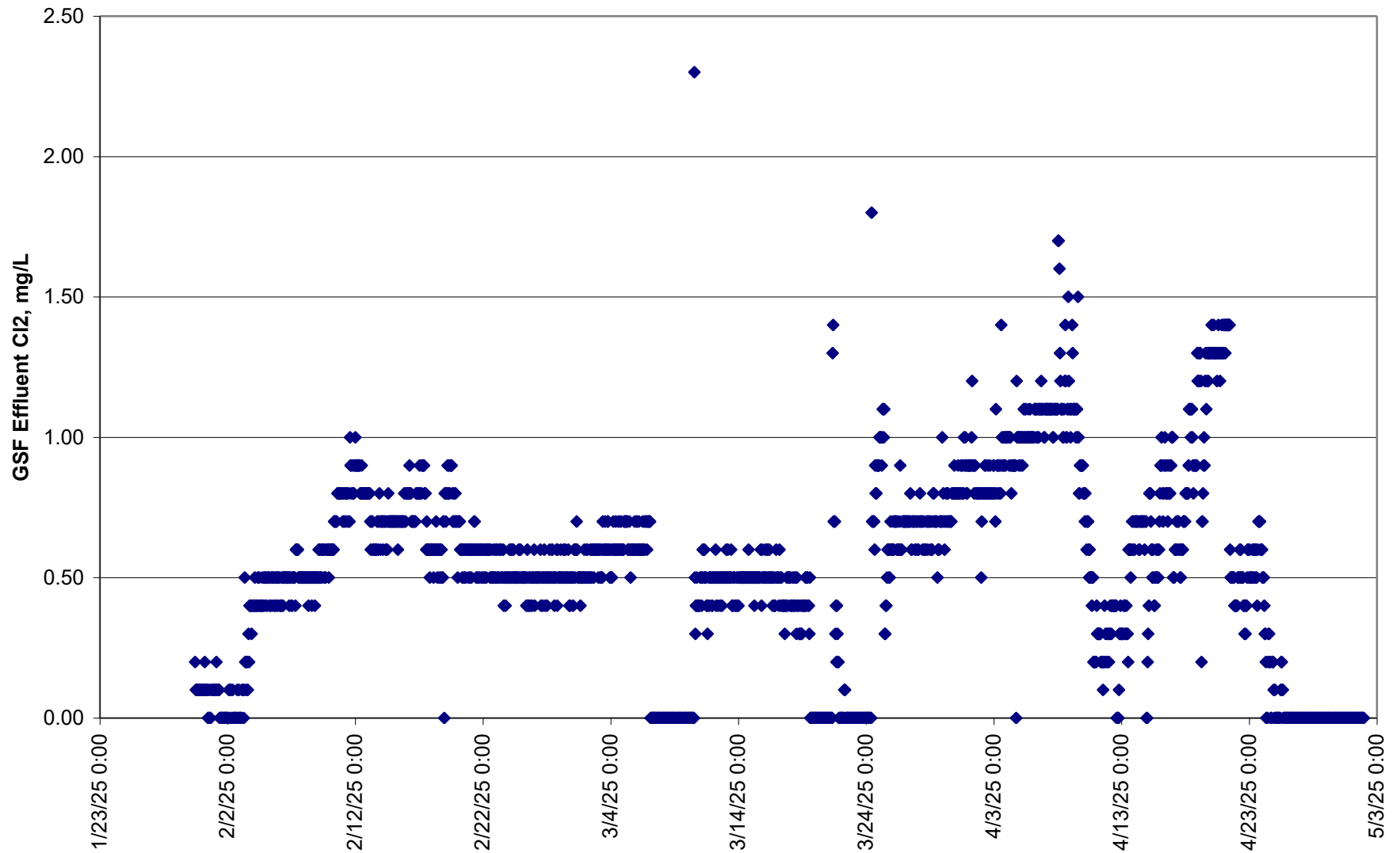


Figure 4 GSF Effluent Iron

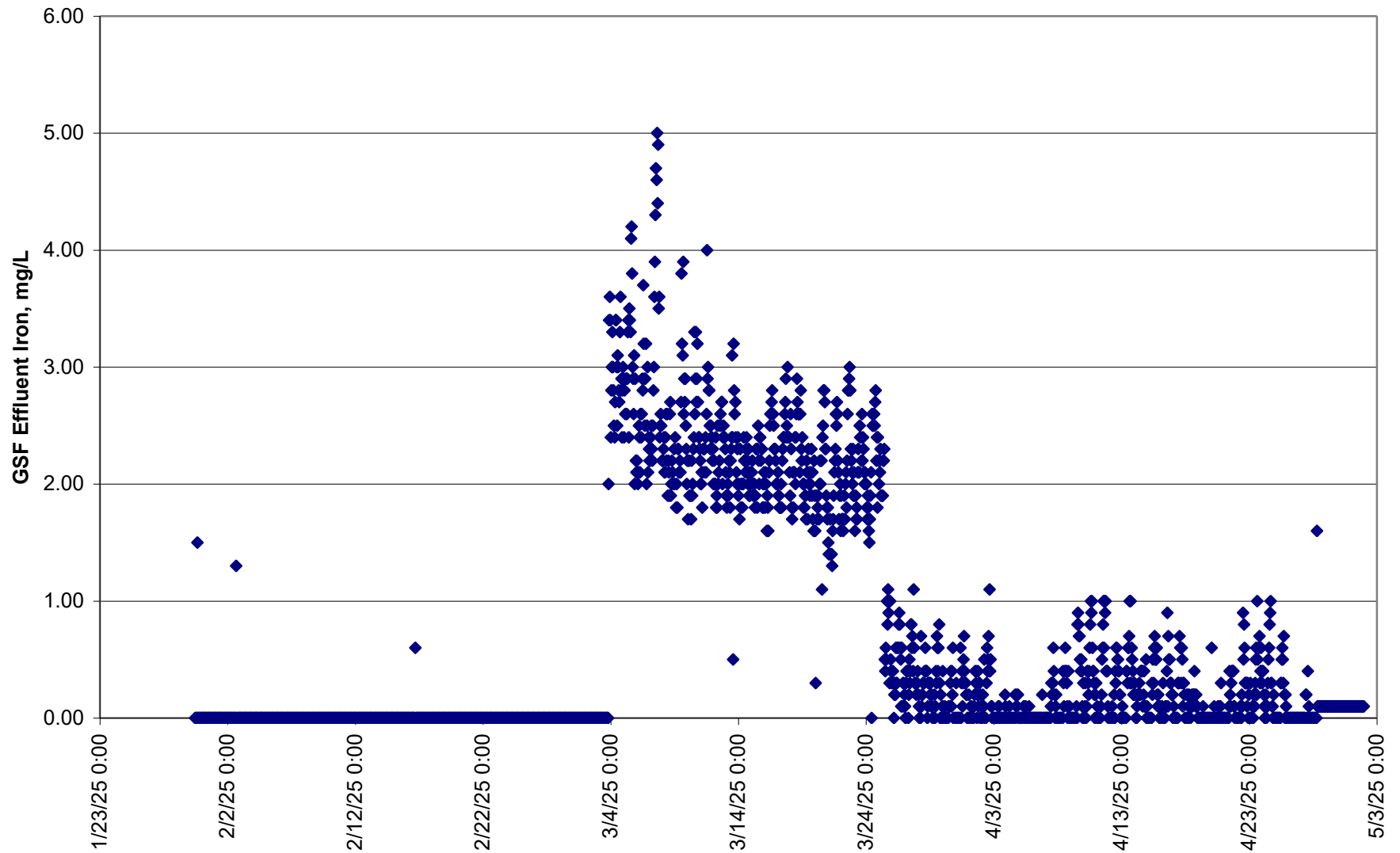


Figure 5. GSF Effluent pH

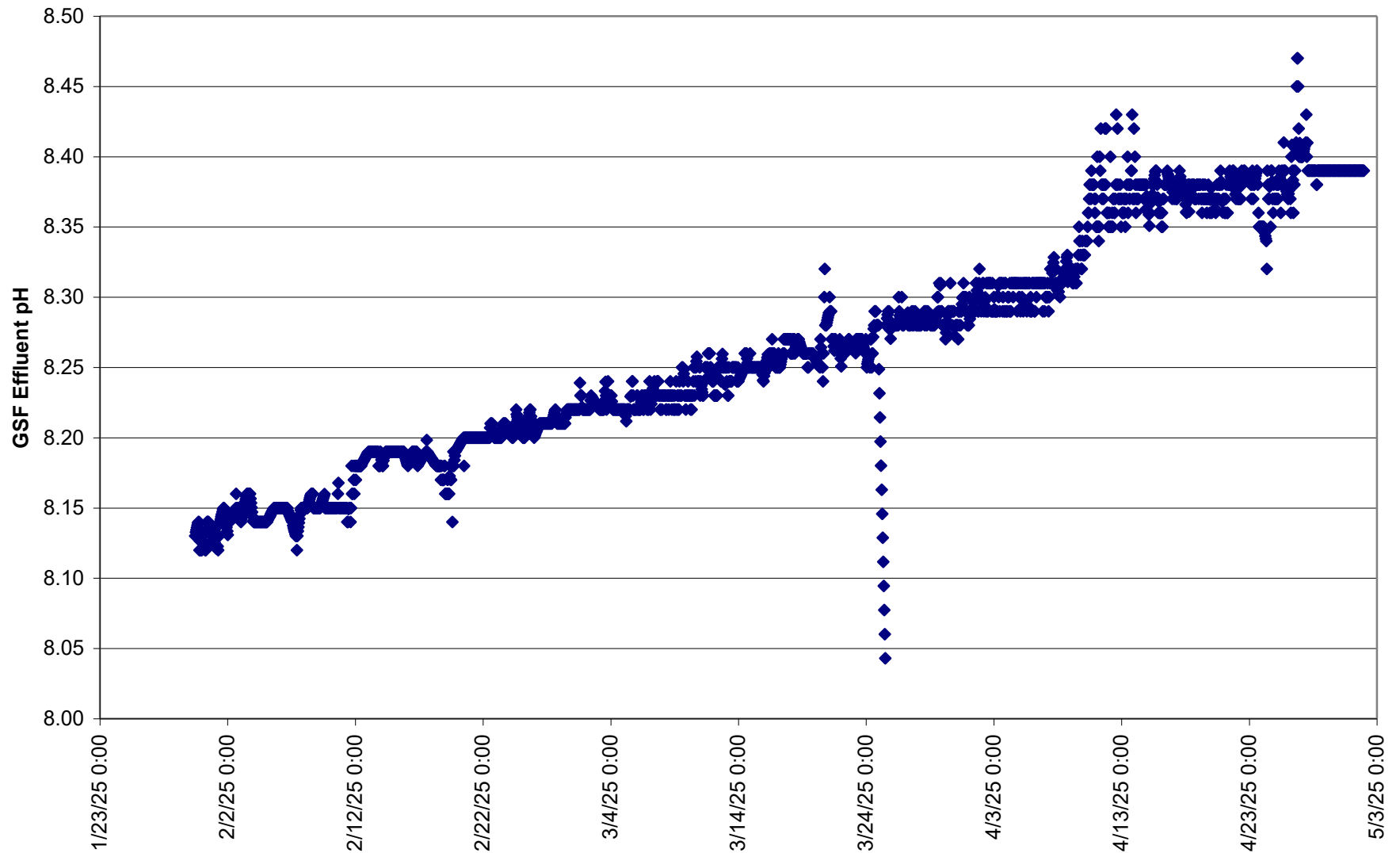


Figure 6. GSF Influent Flow

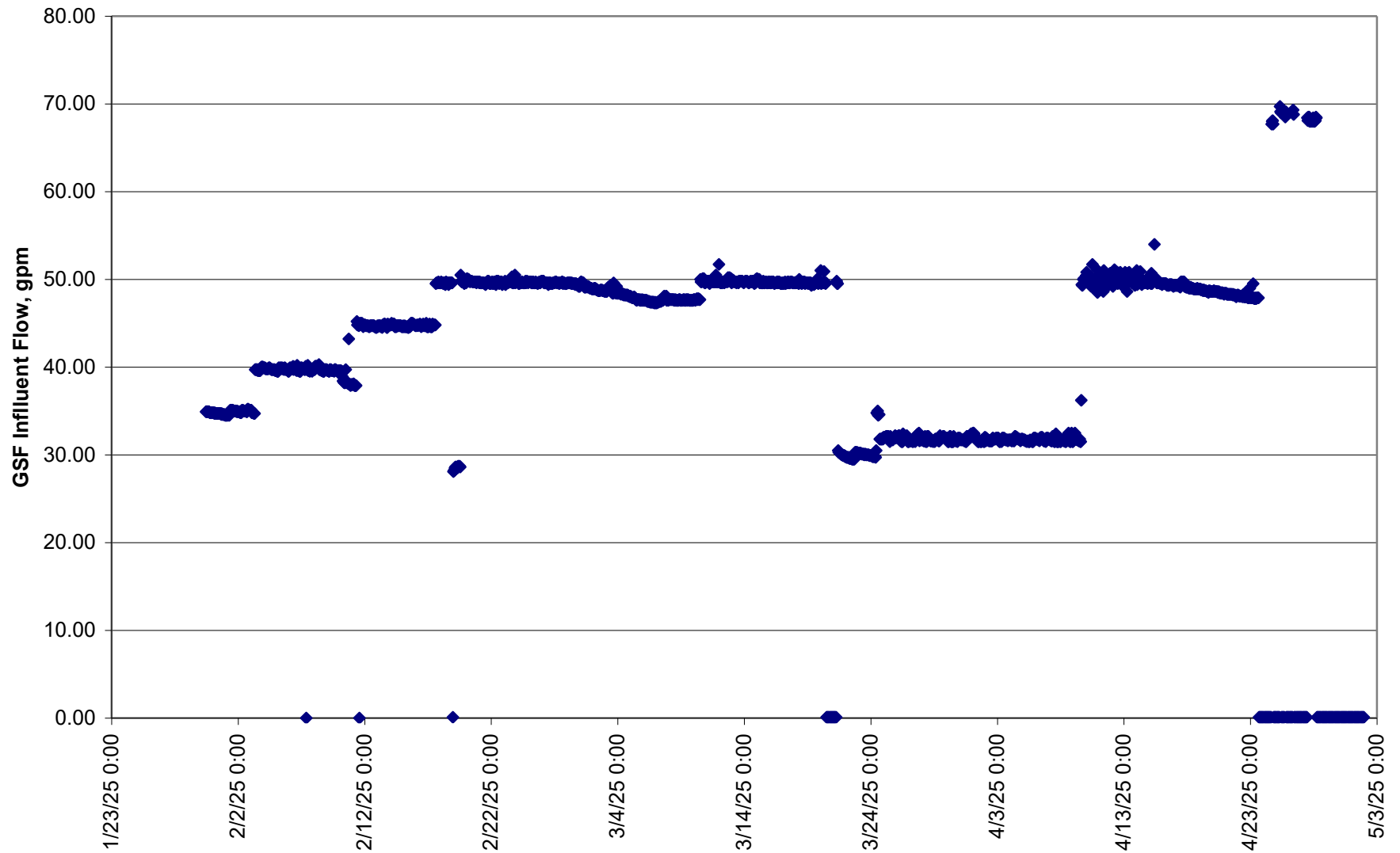


Figure 7. GSF Filtrate Flow

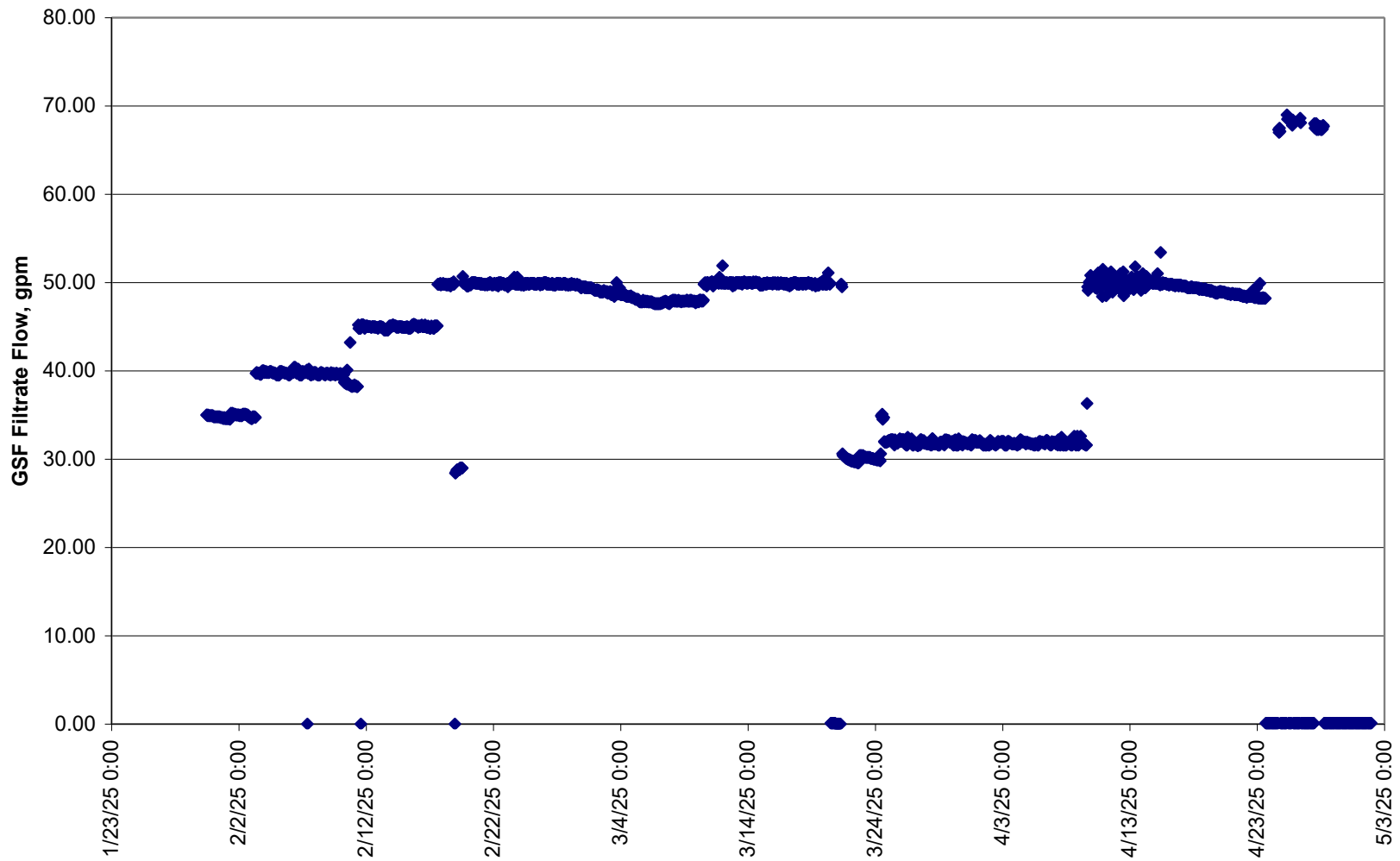
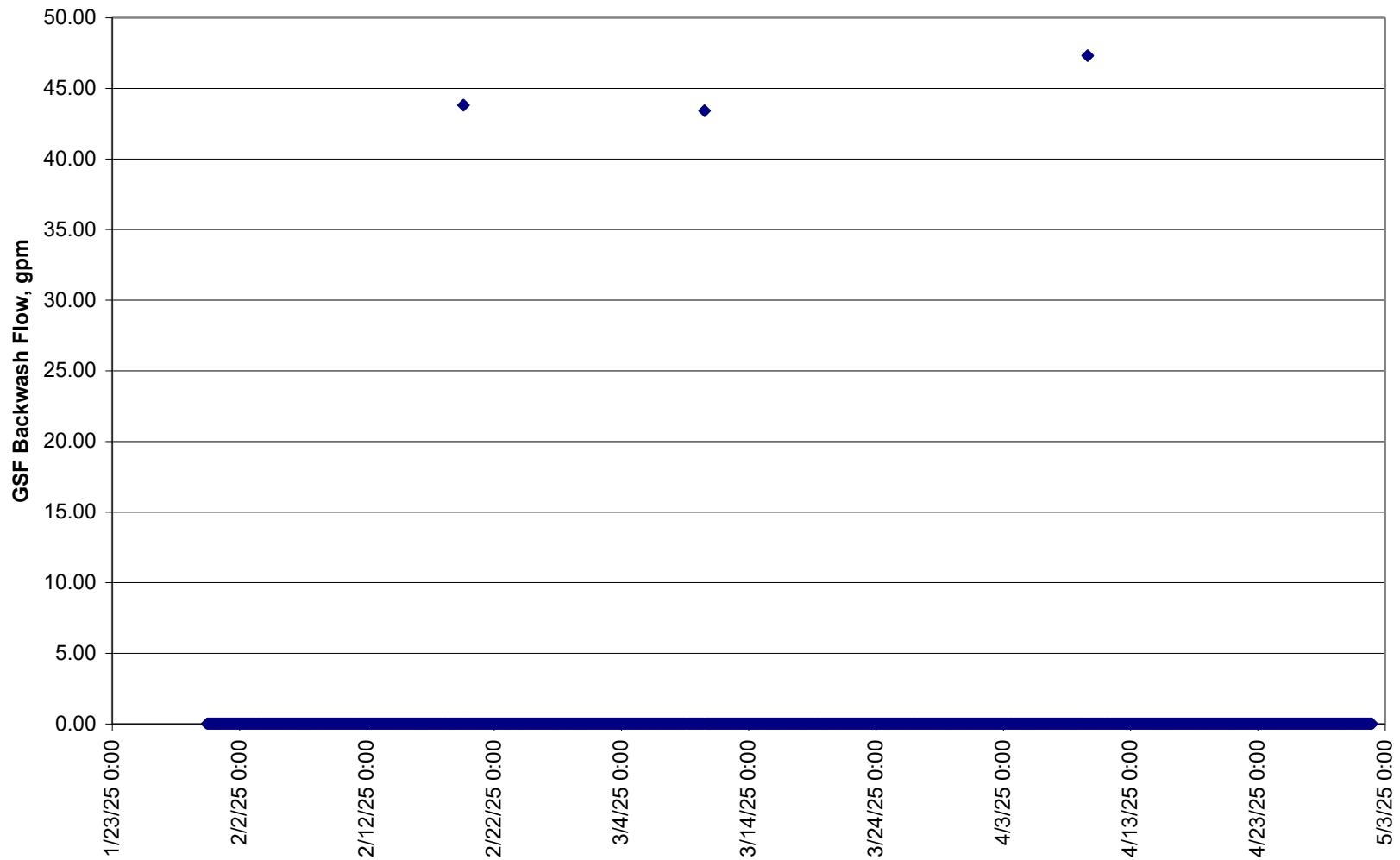


Figure 8. GSF Backwash Flow



Appendix L. RO Intellogx Pilot Operating Data

RO Pilot Unit Operating Data Figure List

Title	Title
Figure 1. RO Forwarding Pump Discharge Pressure	Figure 10. Final Permeate Pressure
Figure 2. RO Feed Pump Suction Pressure	Figure 11. Final Permeate Final Temperature
Figure 3. Stage 1 Feed Pressure	Figure 12 RO Feed pH
Figure 4. Stage 1 Permeate Pressure	Figure 13. RO Feed EC
Figure 5. Stage 2 Permeate Pressure	Figure 14. Stage 1 Permeate EC
Figure 6. Stage 3 Permeate Pressure	Figure 15. Stage 2 Permeate EC
Figure 7. Stage 2 Feed Pressure	Figure 16. Stage 3 Permeate EC
Figure 8. Stage 3 Feed Pressure	Figure 17. Train Final Permeate EC
Figure 9. Final Concentrate Pressure	

Figure 1. RO Forwarding Pump Discharge Pressure

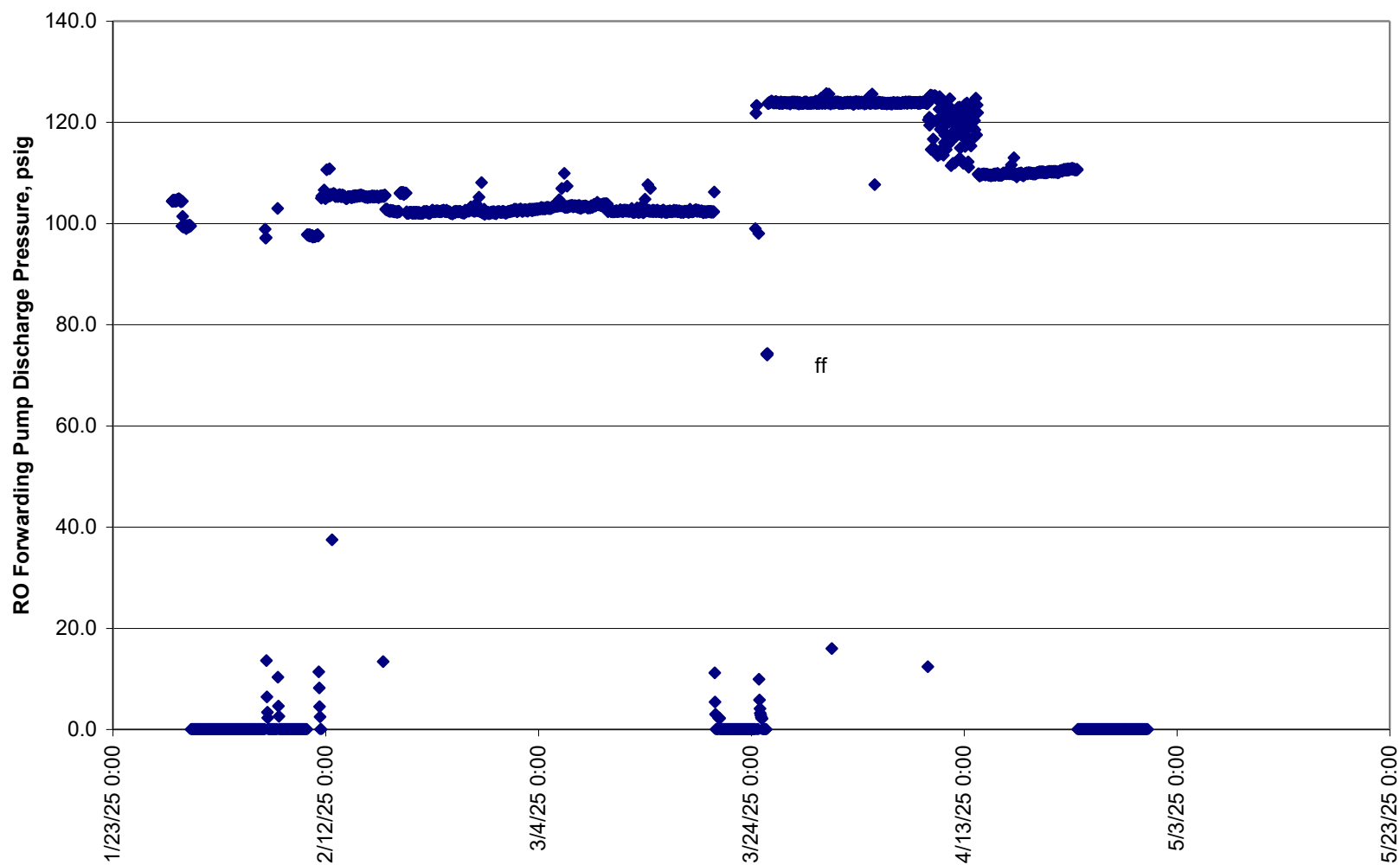


Figure 2. RO Feed Pump Suction Pressure

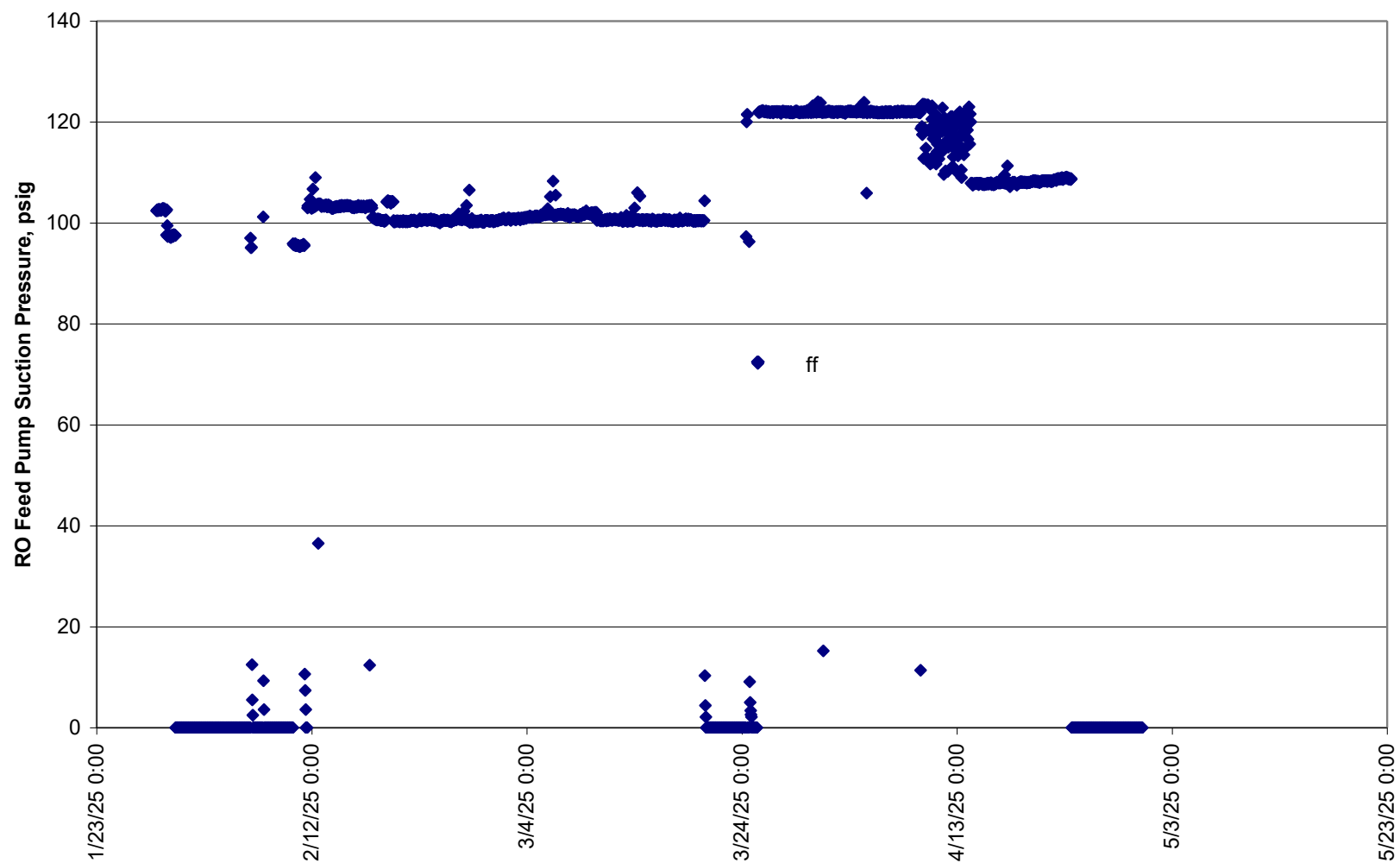


Figure 3. Stage 1 Feed Pressure

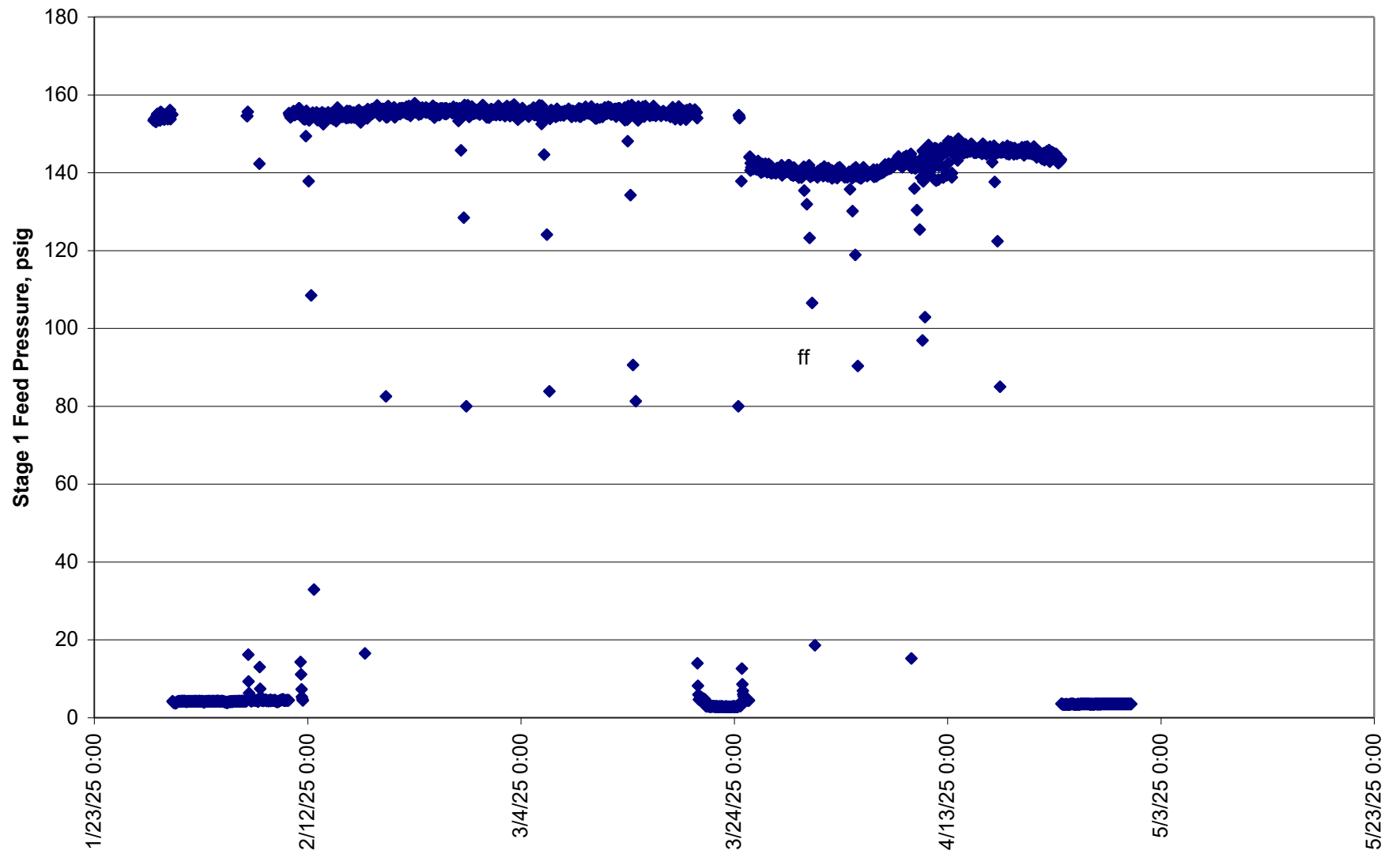


Figure 4. Stage 1 Permeate Pressure

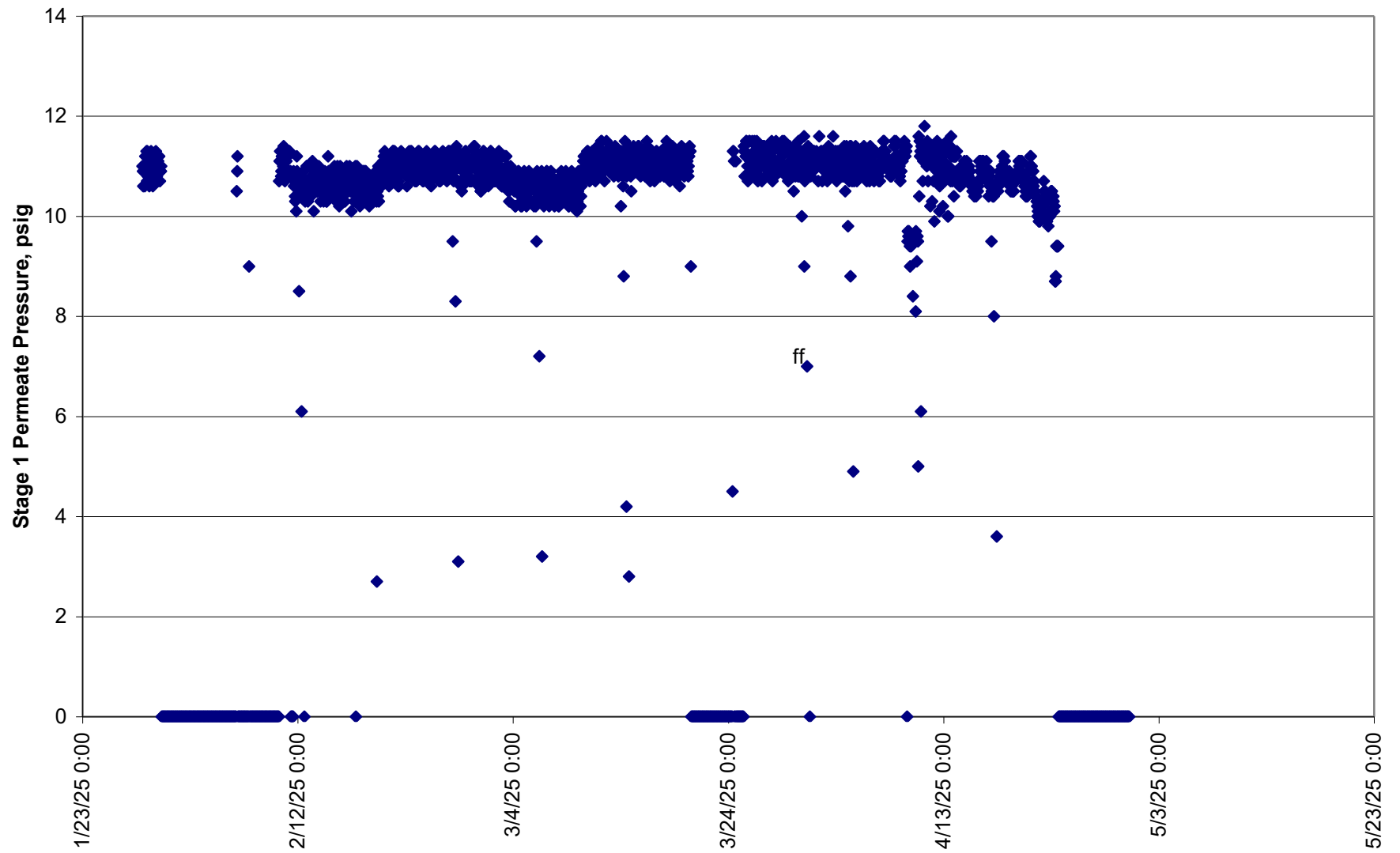


Figure 5. Stage 2 Permeate Pressure

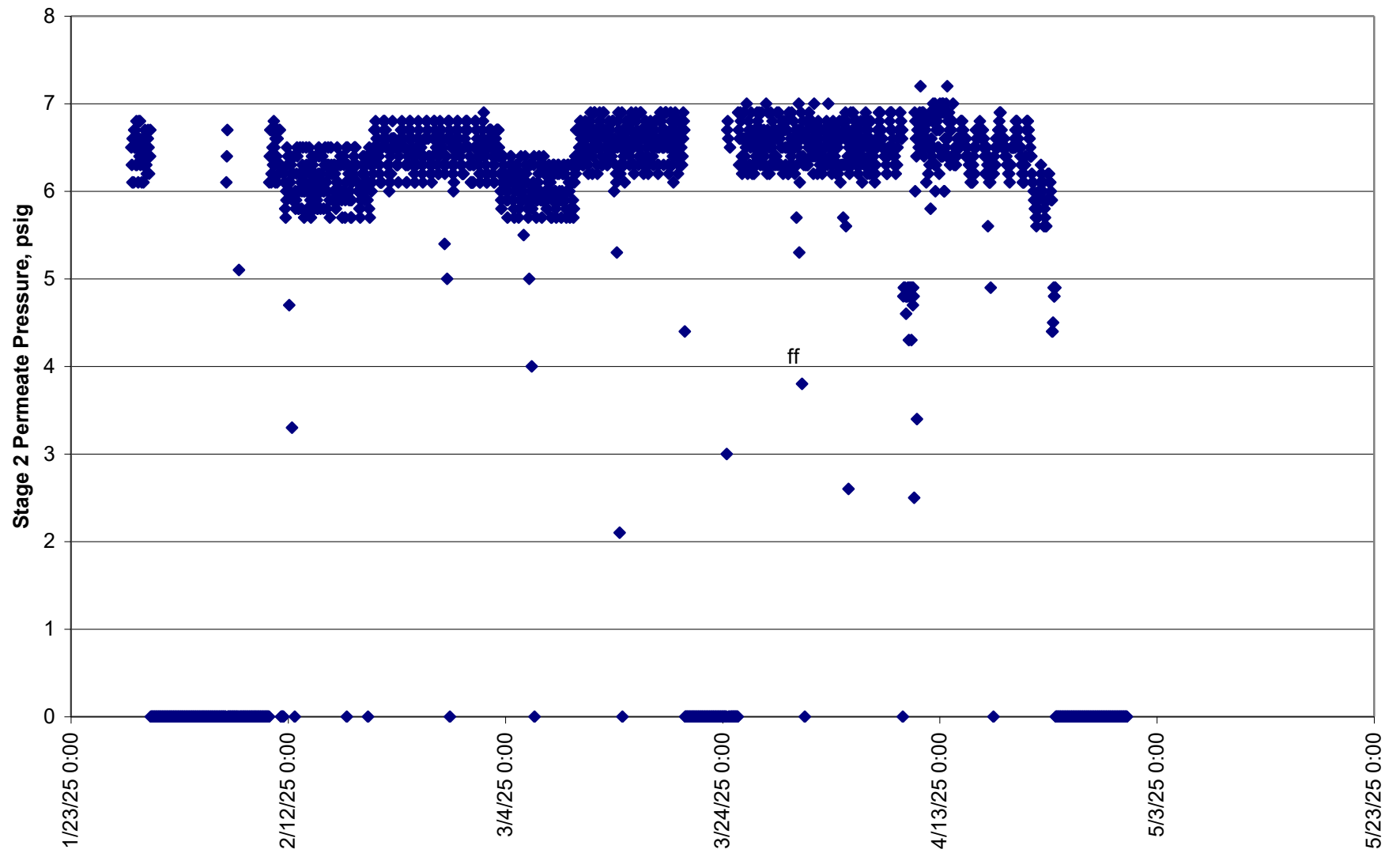


Figure 6. Stage 3 Permeate Pressure

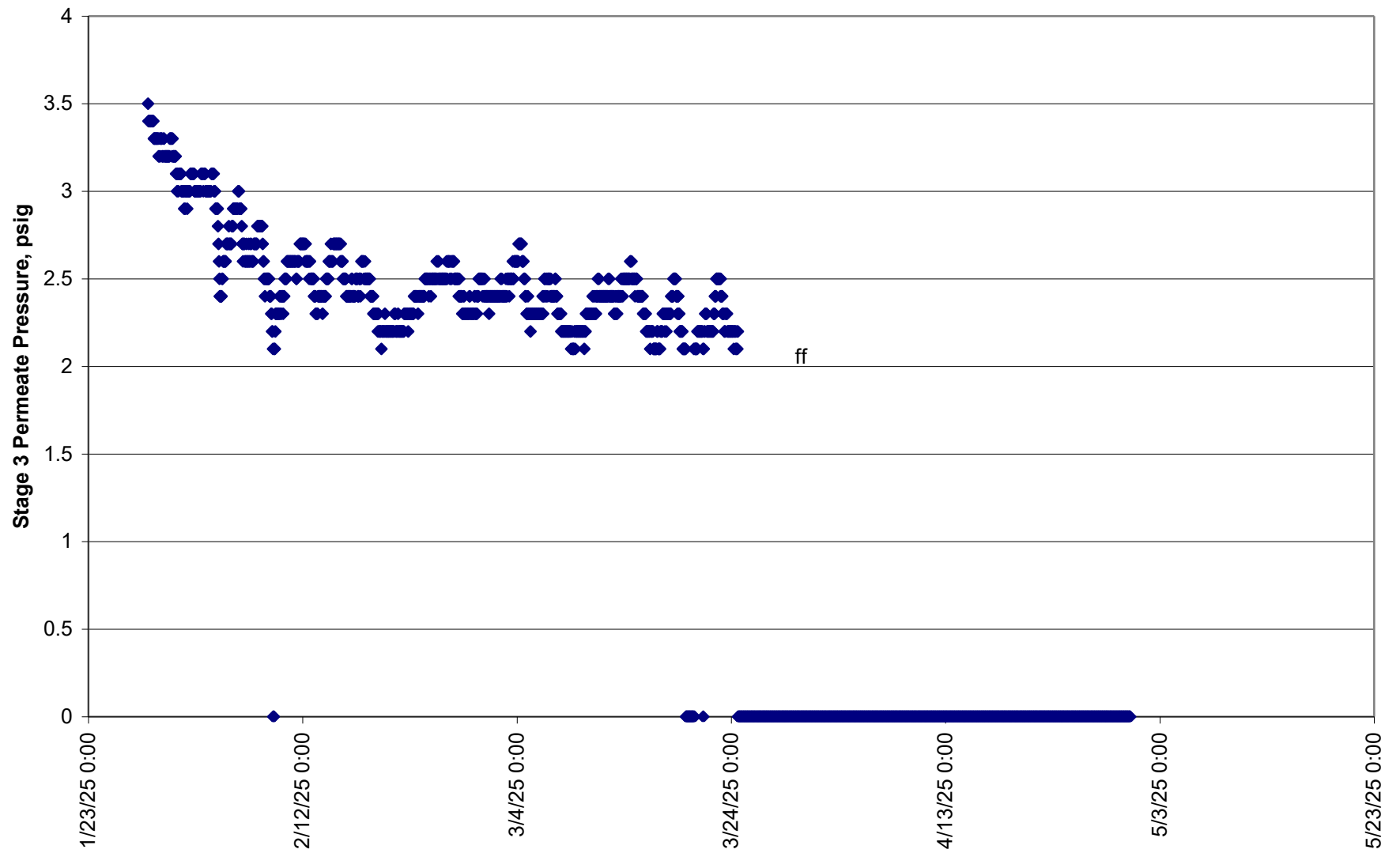


Figure 7. Stage 2 Feed Pressure

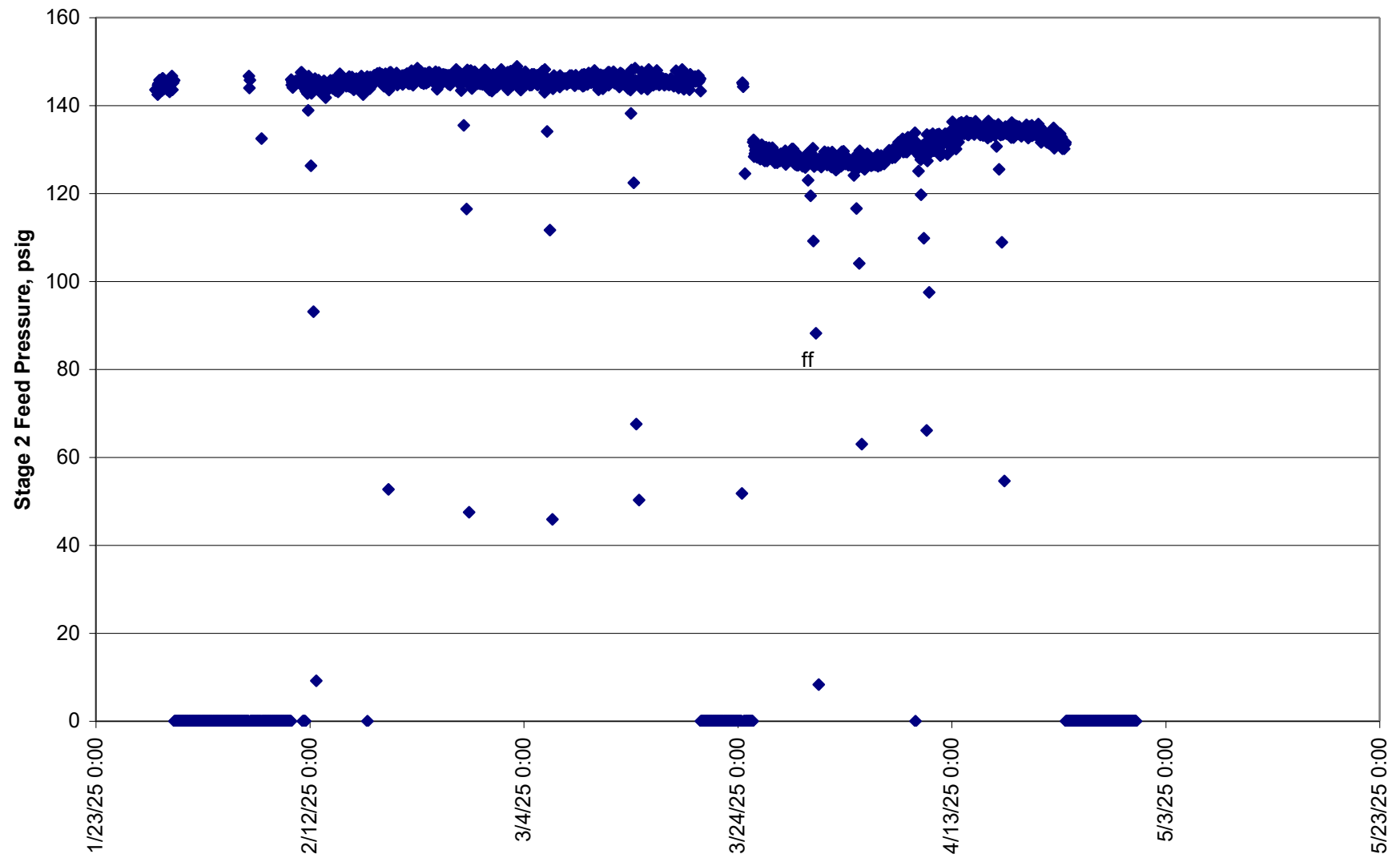


Figure 8. Stage 3 Feed Pressure

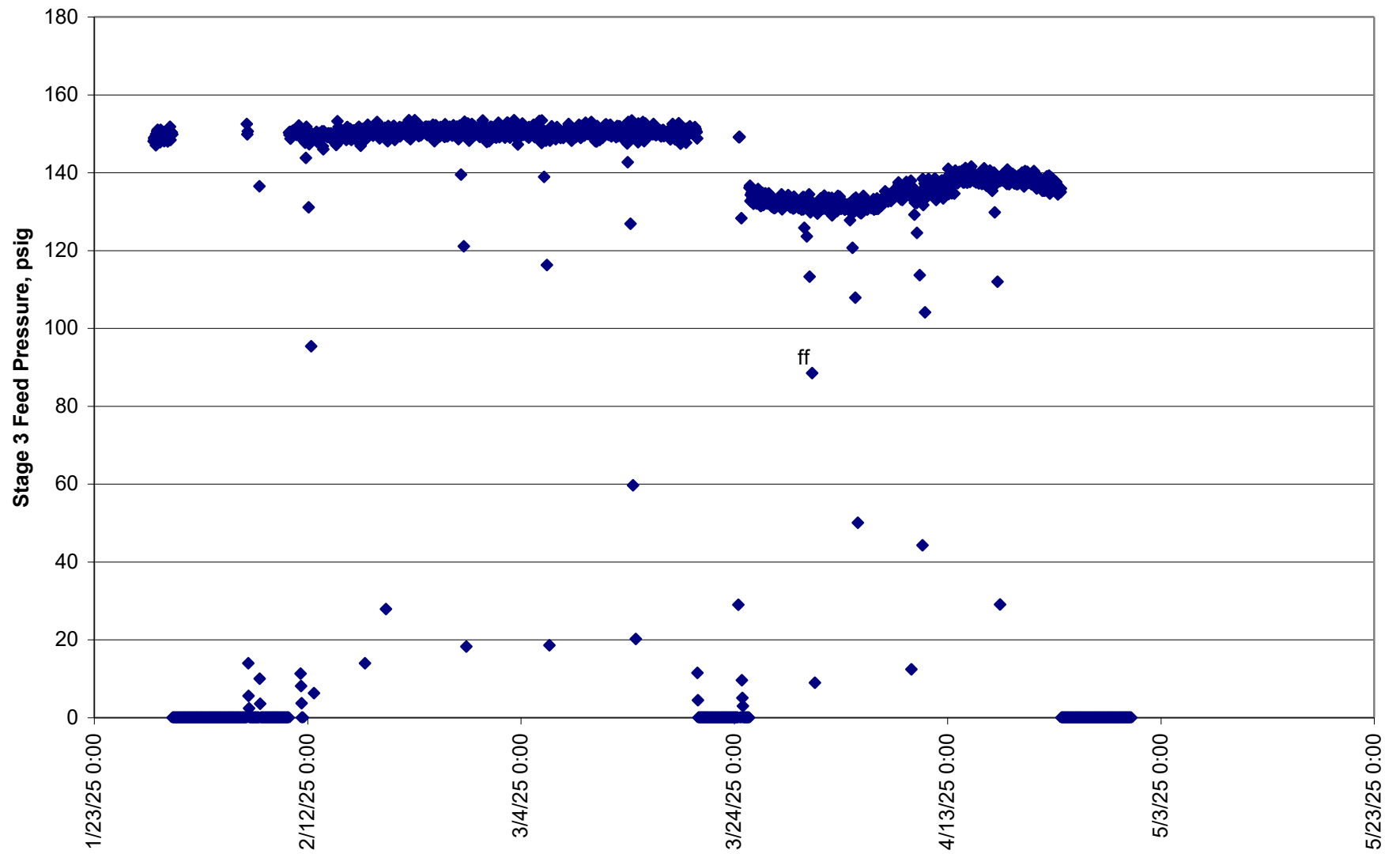


Figure 9. Final Concentrate Pressure

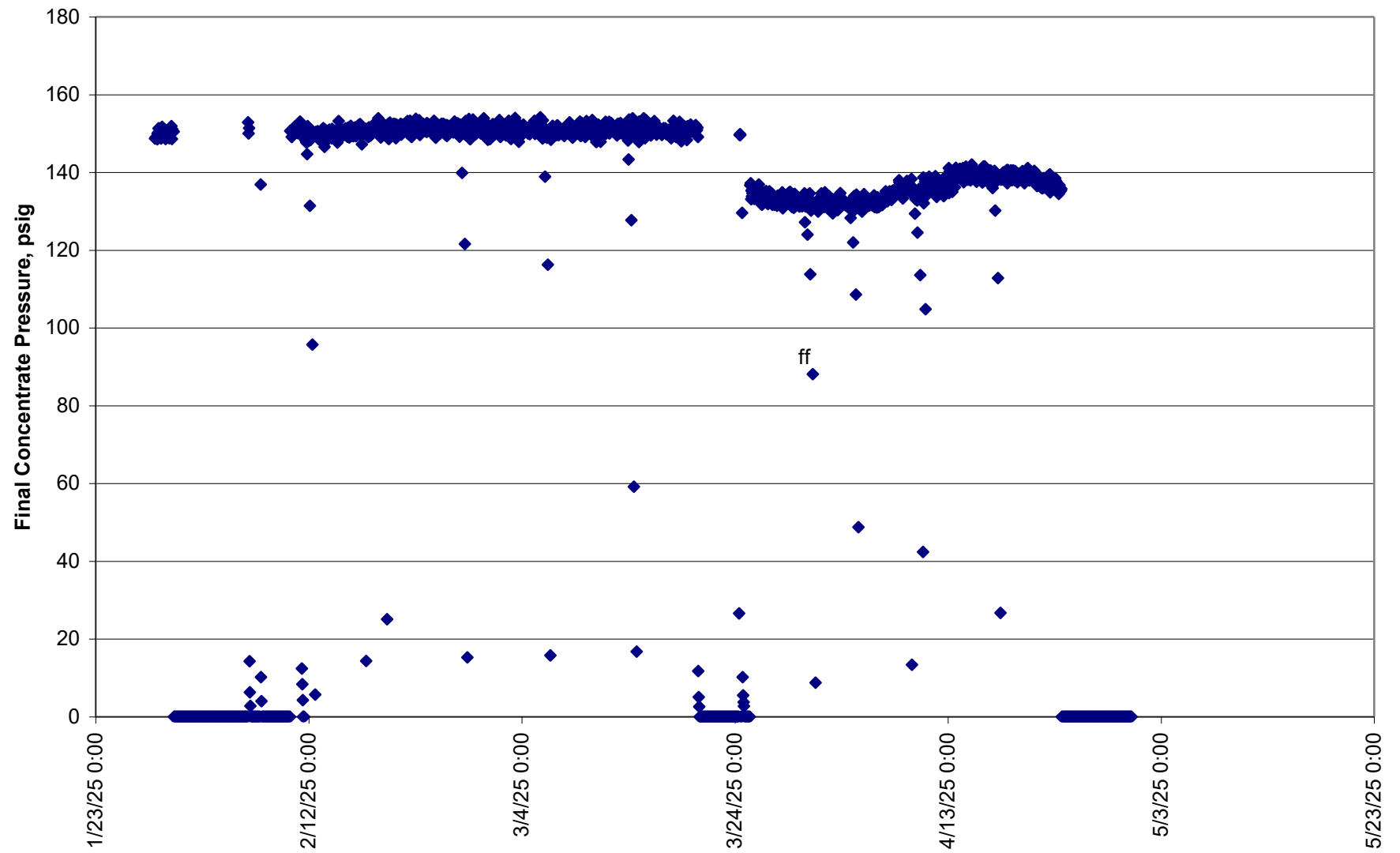


Figure 10. Final Permeate Pressure

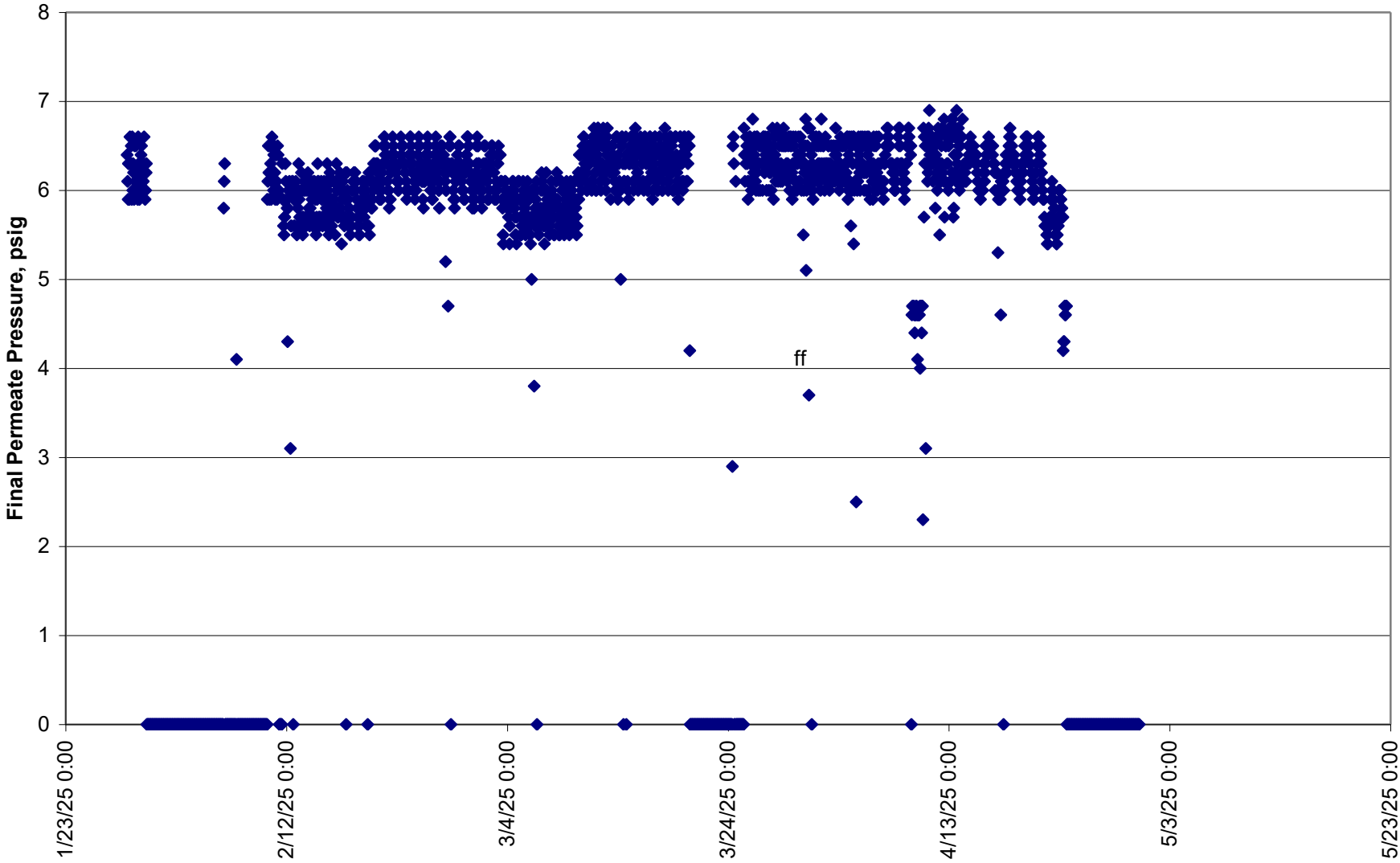


Figure 11. Final Permeate Final Temperature

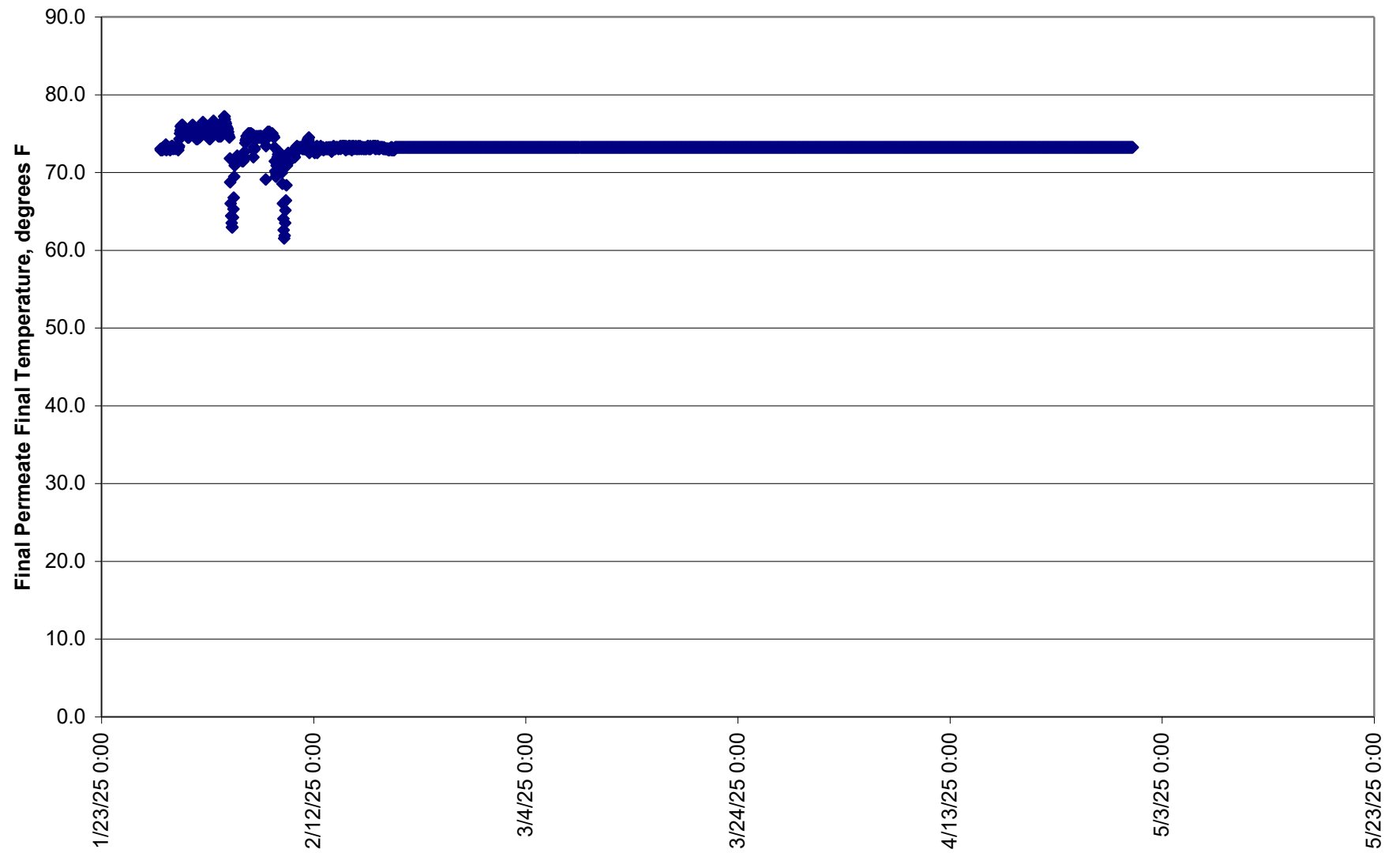


Figure 12. RO Feed pH

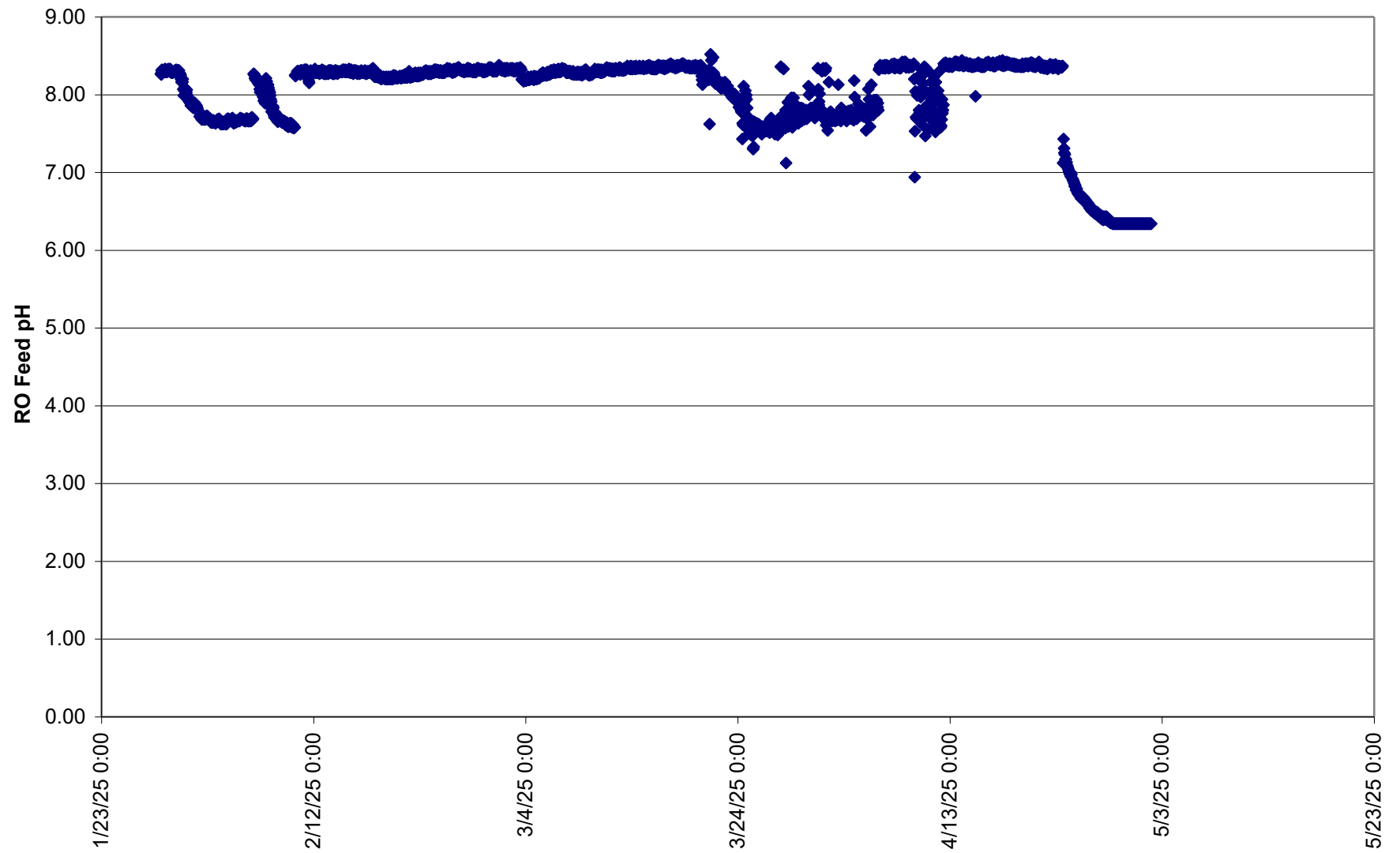


Figure 13. RO Feed EC

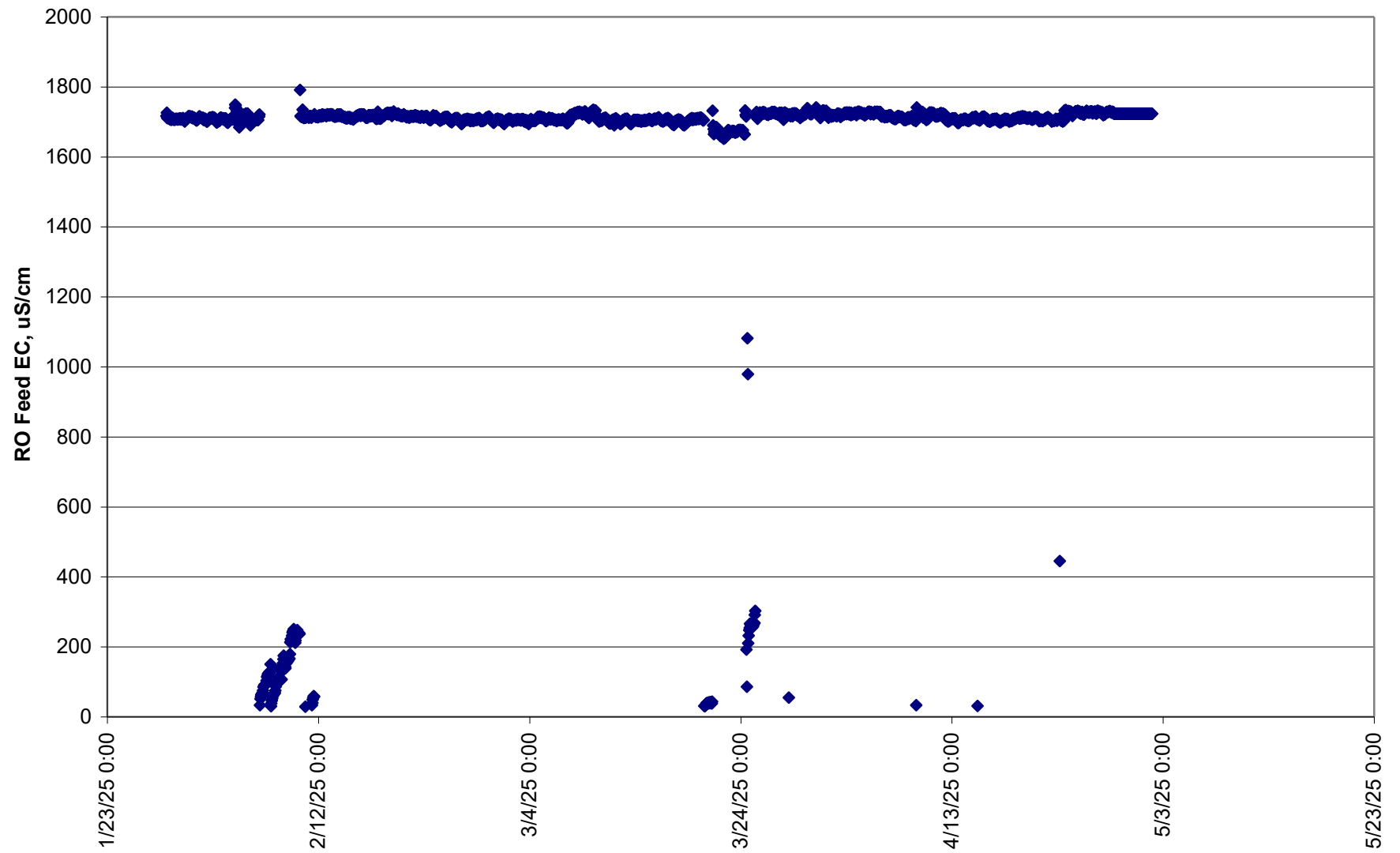


Figure 14. Stage 1 Permeate EC

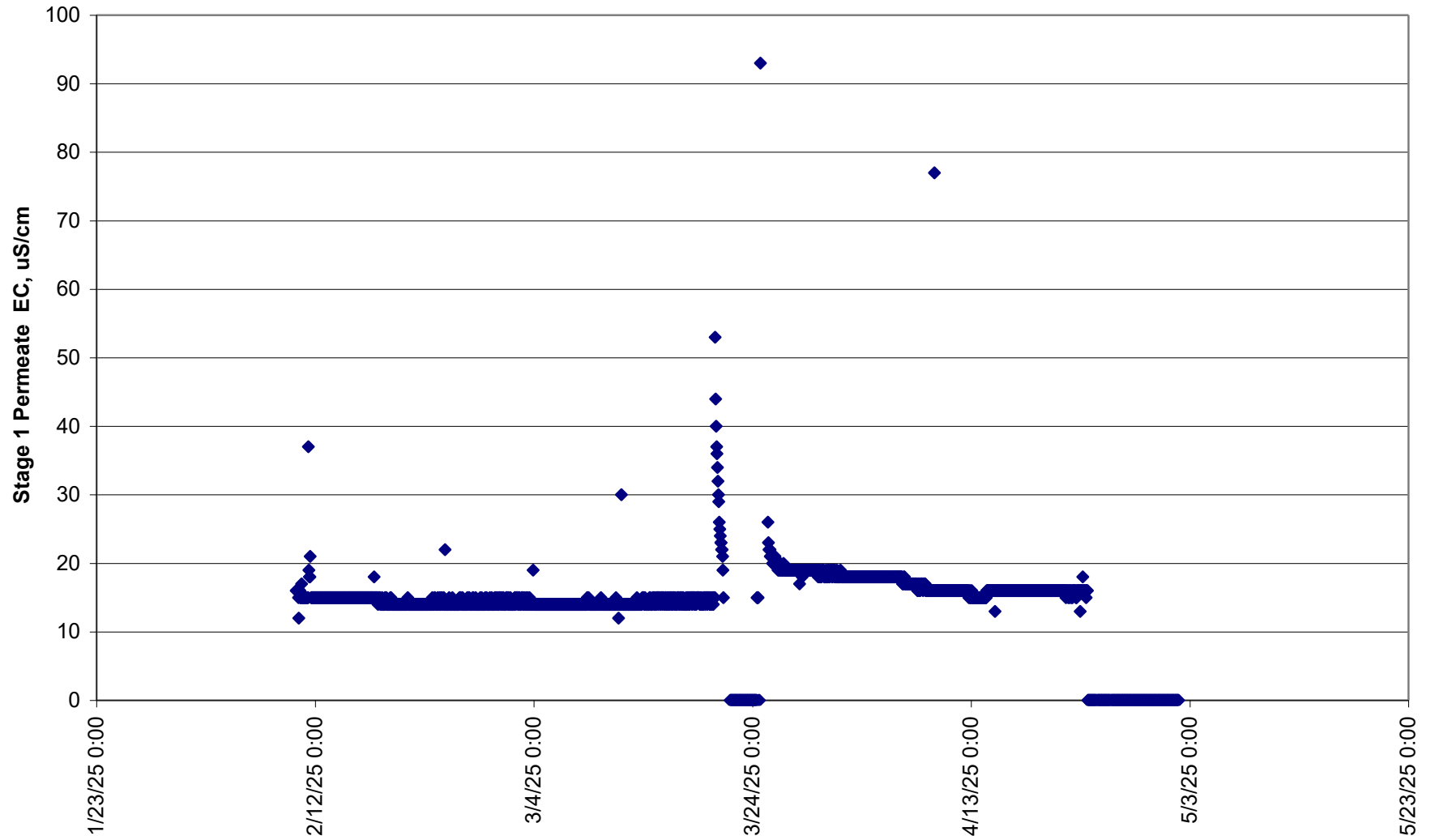


Figure 15. Stage 2 Permeate EC

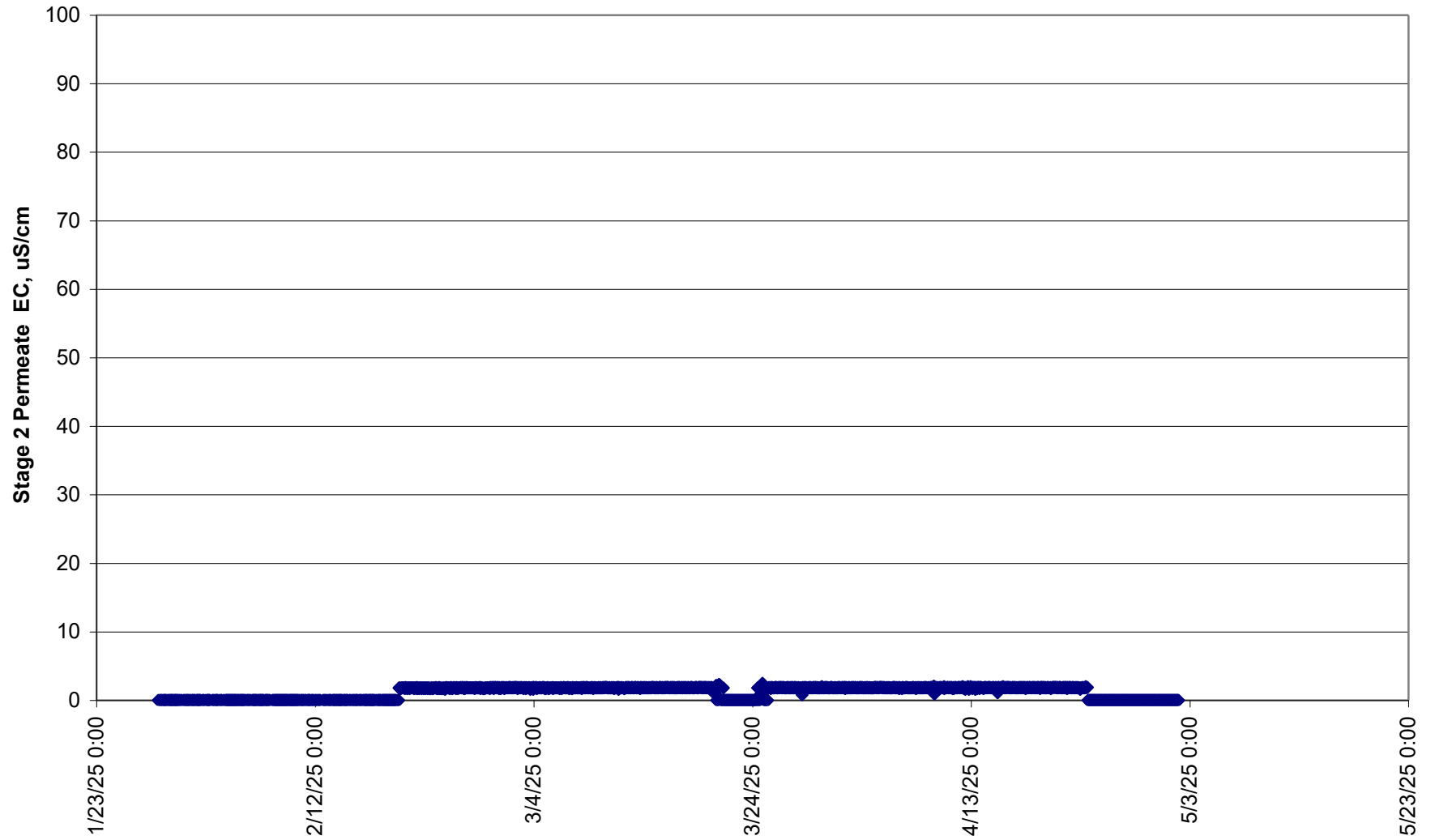


Figure 16. Stage 3 Permeate EC

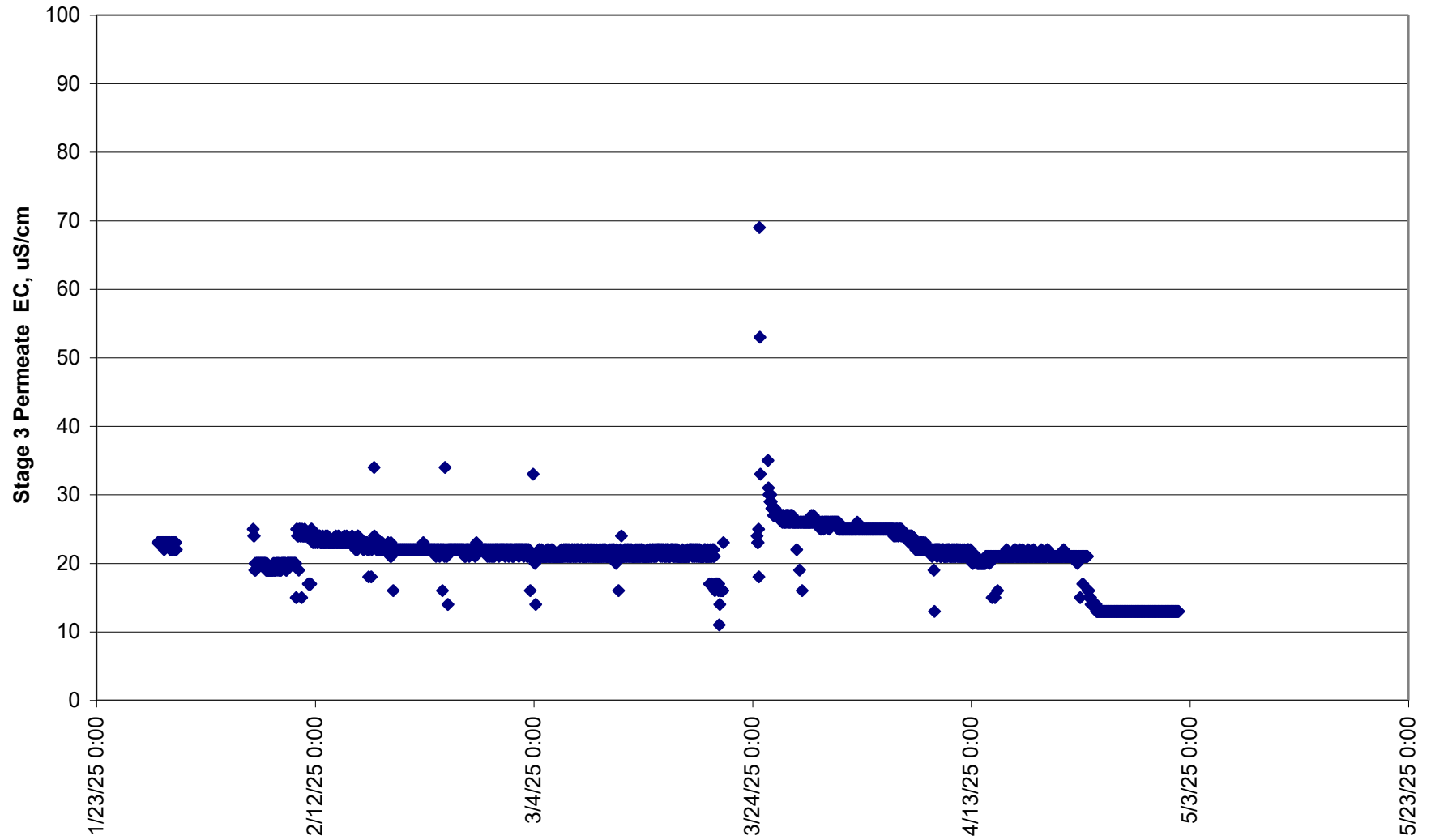
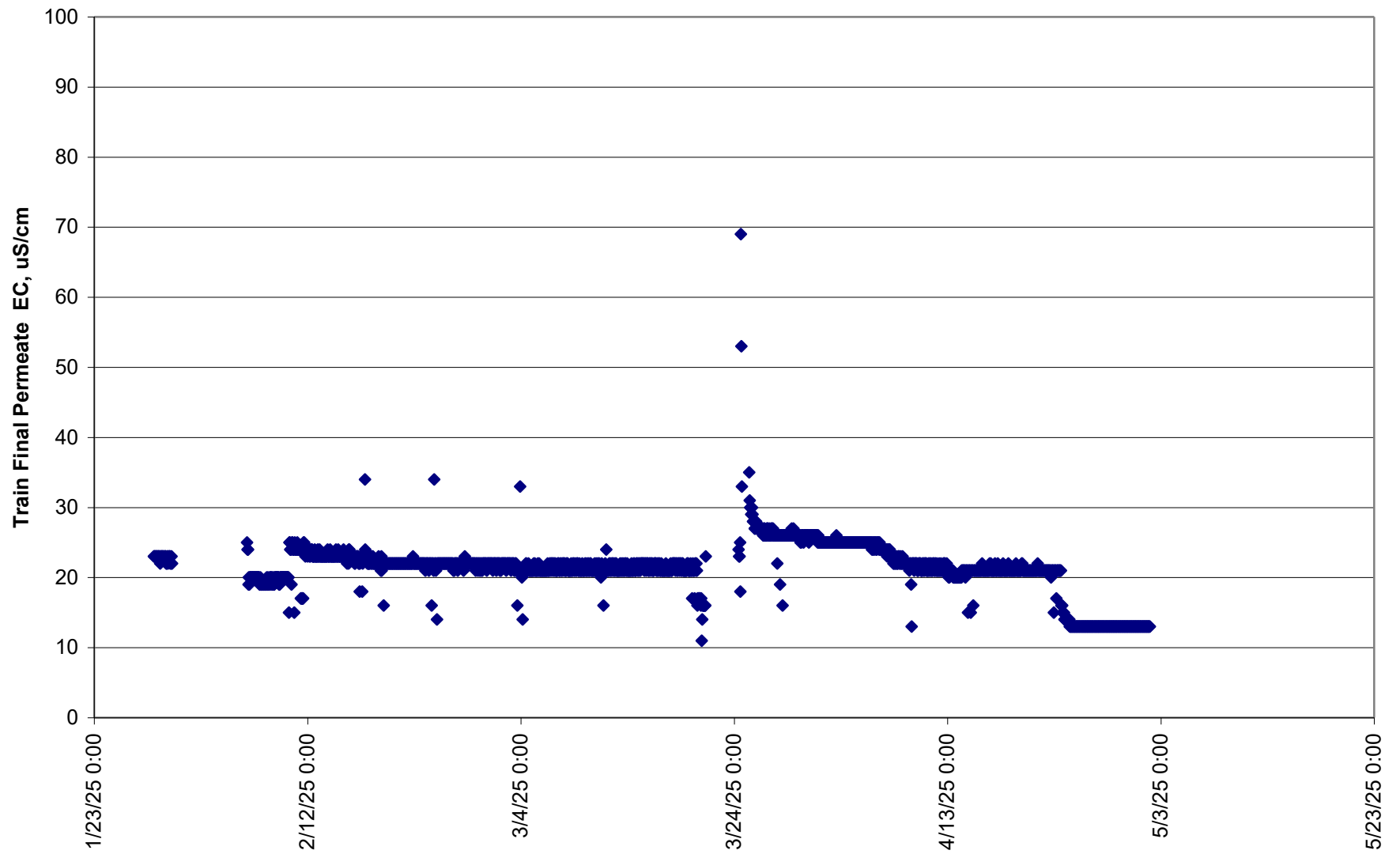
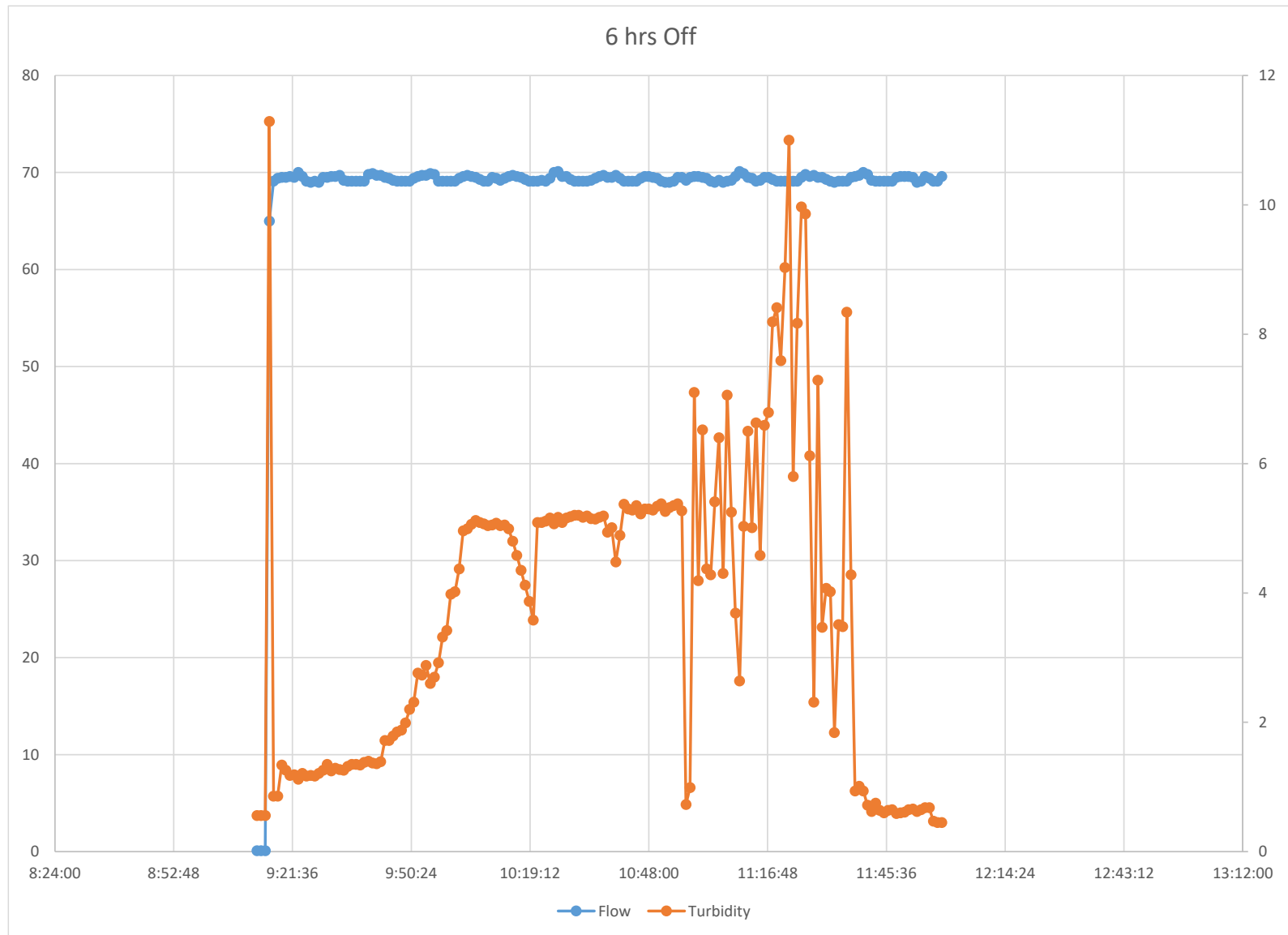


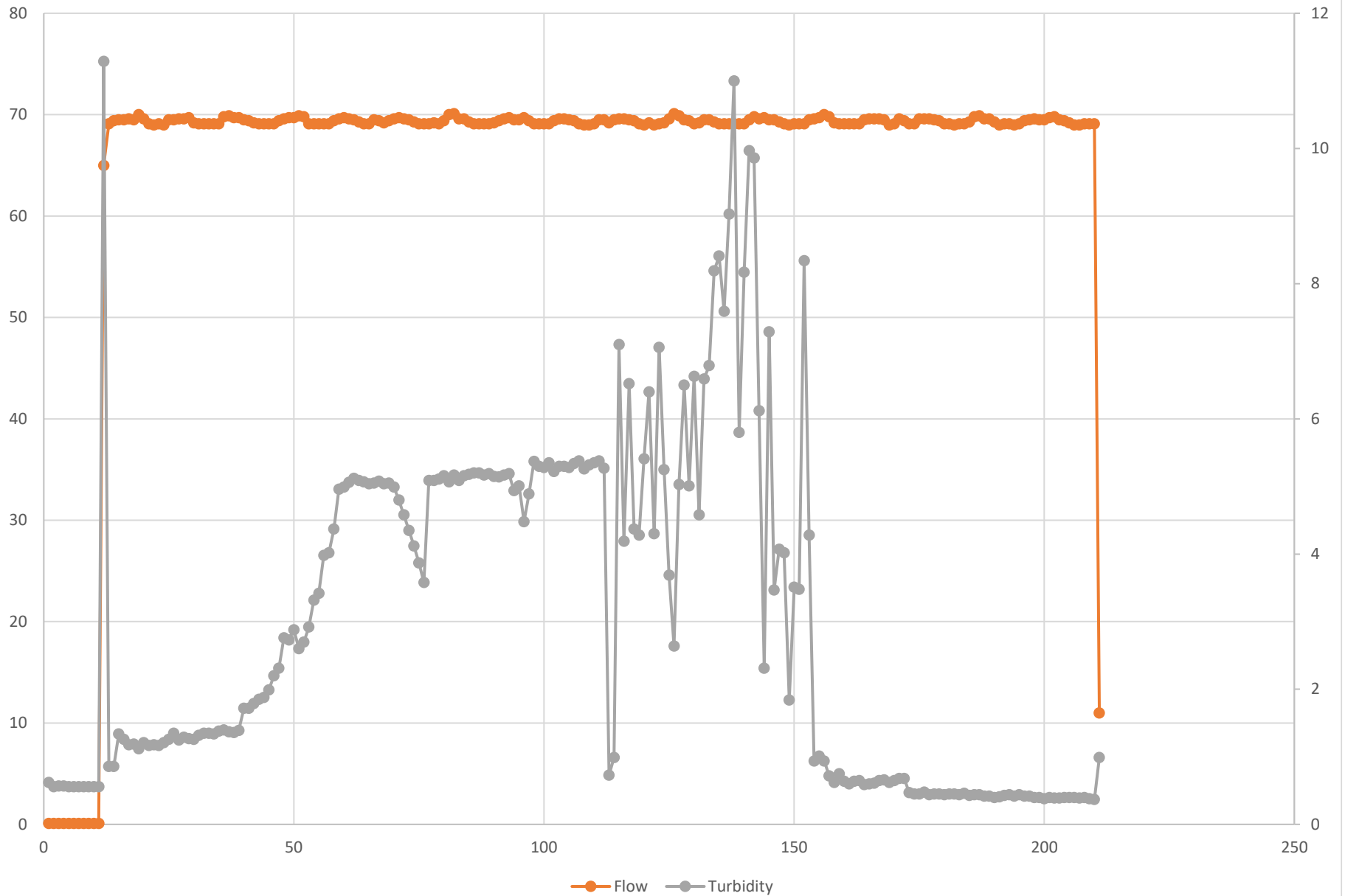
Figure 17. Train Final Permeate EC

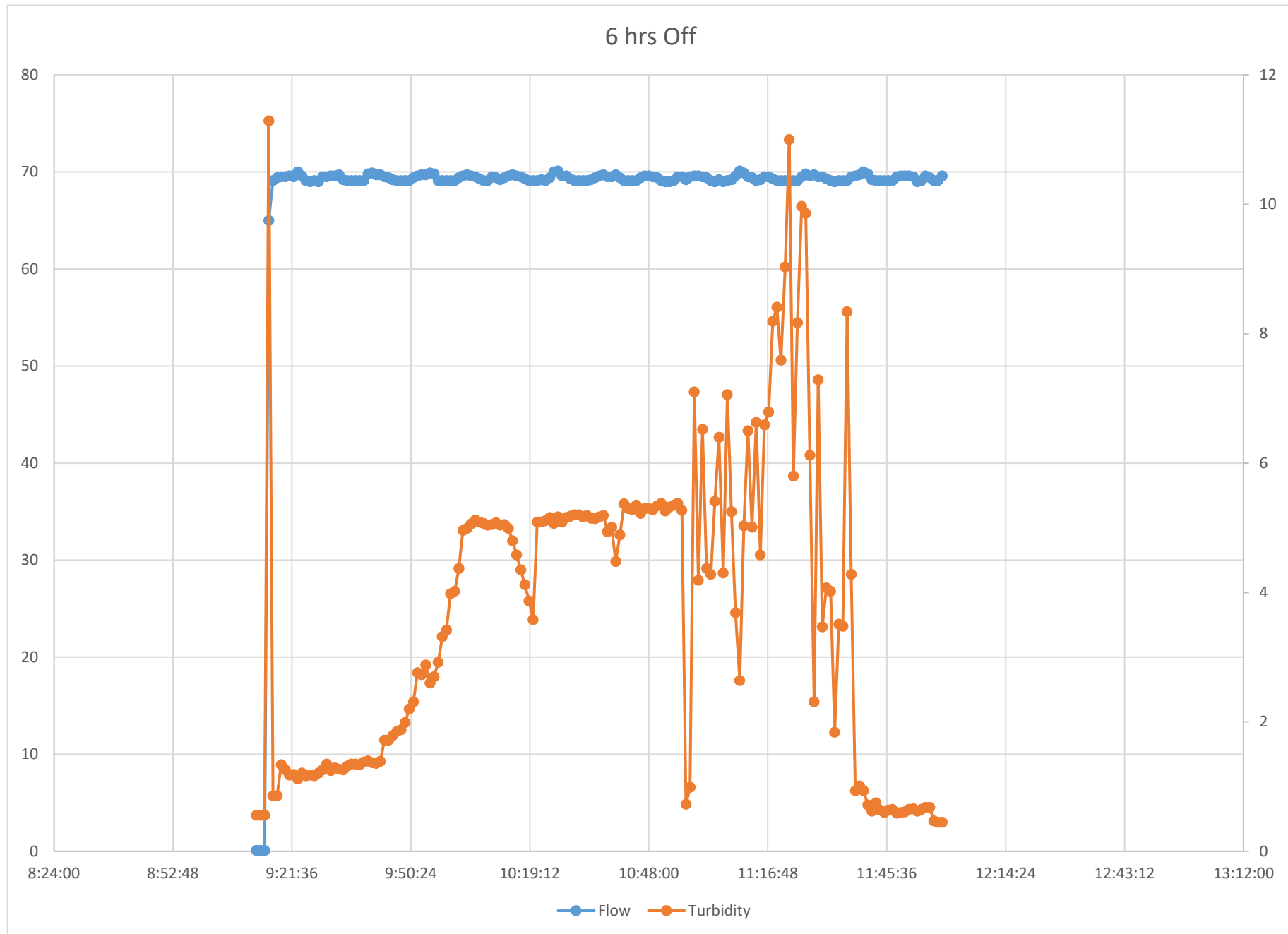


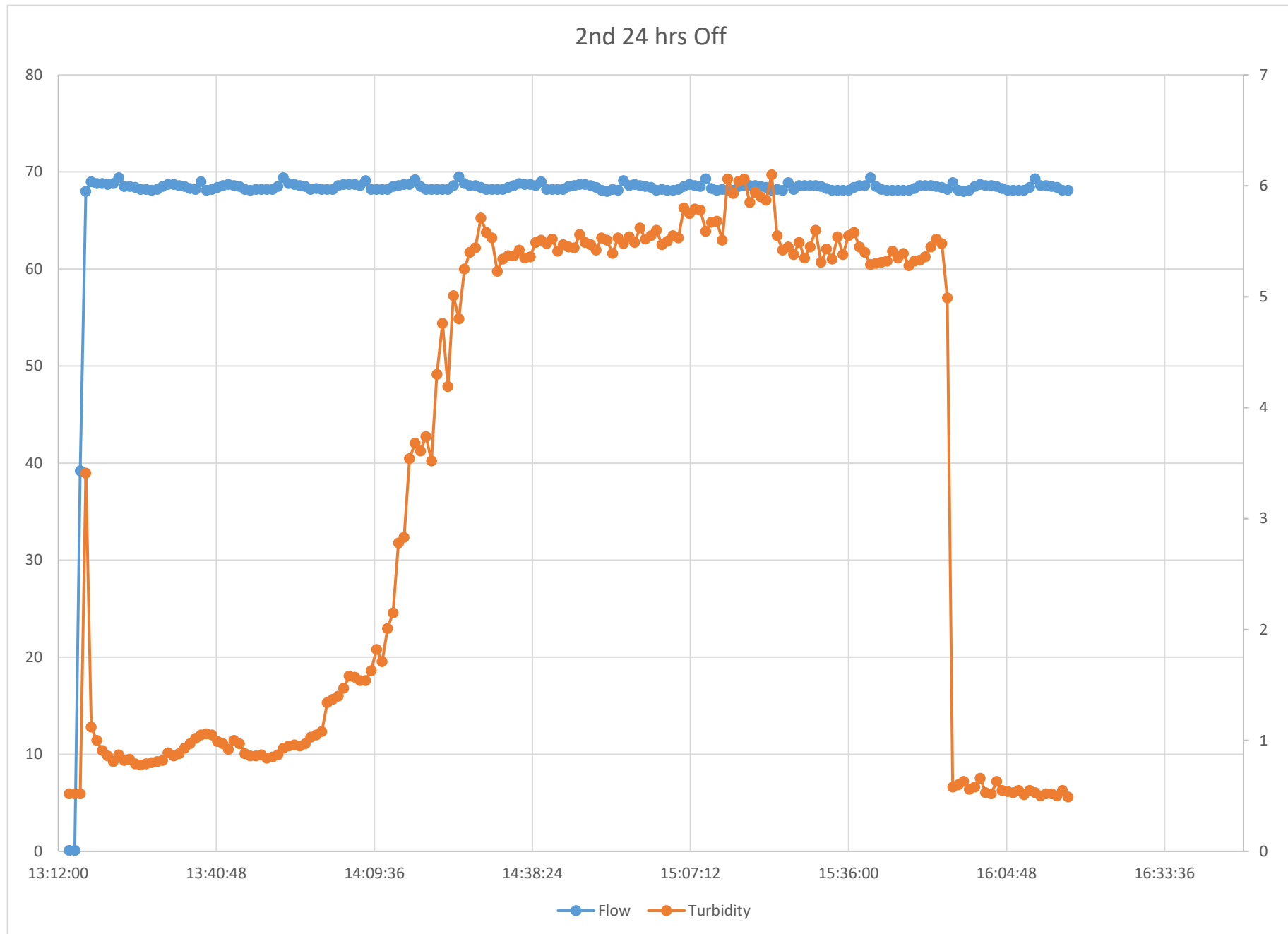
Appendix M. Well Start-Stop Turbidity Effect Evaluation



12 hrs Off







Appendix N. Pilot Membrane Autopsy Report

GLOBAL RESEARCH AND SCIENTIFIC SERVICES - H₂O Innovation

MEMBRANE AUTOPSY REPORT

Report reference: PA250601 & PA250602Worth

HydroChem

Plant reference: LAWTON PILOT

Report delivery date: 7/03/2025

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SUMMARY OF RESULTS AND CONCLUSIONS

Reference	PA250601	PA250602
Element Information	Manufacturer: Toray Type/Model: TMG10D Serial number: 2230825210 Plant position: LEAD, 1 ST Stage	Manufacturer: Toray Type/Model: TMG10D Serial number: 2240924691 Plant position: LEAD, 2 nd Stage
External conditions	Fiberglass wrap and ATDs in good condition. No signs of damage to external housing. Some particle deposits observed on feed scroll end.	Fiberglass wrap and ATDs in good condition. No signs of damage or fouling observed. Scroll ends in good condition, but some particle despoits observed along with a lighterbrown/green film.
Internal conditions	Visual inspection: Membrane leaves appear clean. Feed spacer net was clean, and its imprints were detected on the membrane surface. SEM-EDX inspection: Inorganic foulant accumulation was localized primarily at contact points with the spacer material. Surface abrasion marks were evident. At high magnification, the membrane surface remained largely visible, indicating minimal foulant coverage.	Visual inspection: Like the 1 st stage lead membrane, the 2 nd stage membranes also appears clean, spacer prints are observed on the membrane surface (deeper imprints). Blisters are observed on the glue line near the concentrate side. SEM-EDX inspection: Inorganic foulant accumulation was localized primarily at contact points with the spacer material. Diatoms and surface abrasion marks were evident. At high magnification, the membrane surface remained largely visible, indicating minimal foulant coverage.
Foulant identification	Loss on Ignition (LOI) analysis could not be performed due to insufficient foulant accumulation, which prevented collection of a representative scraped sample. Organic Component: No organic material was detected. Inorganic Component: Qualitative analysis confirmed the presence of iron, aluminosilicates, and metallic particles including copper and zinc.	Loss on Ignition (LOI) analysis could not be performed due to insufficient foulant accumulation, which prevented collection of a representative scraped sample. Organic Component: No organic material was detected. Inorganic Component: Qualitative analysis confirmed the presence of iron, aluminum silicates and Calcium/Magnesium particles were verified. Copper and Zinc are also present.
Operational parameters	Flow rate: 4.6% lower than manufacturer specifications but within the specified range. Salt rejection: Lower than manufacturer specifications.	Flow rate: 8.7% lower than manufacturer specifications but within the specified range. Salt rejection: Lower than manufacturerspecifications.
Cleaning tests	Optimal cleaning results were achieved using Lavasol 9 (high pH), followed by Lavasol 1 (low pH), which is the recommended cleaning sequence.	

Autopsied membranes exhibited minimal foulant accumulation, localized primarily at points of contact with the spacer material. SEM analysis revealed the presence of aluminosilicates, iron, and metallic particles (e.g., copper and zinc) in these areas. Abrasion marks observed on the membrane surface are likely related to the presence of these abrasive particles, indicating potential mechanical damage.

Flat-sheet test rig characterization showed permeate flux values close to reference levels; however, salt rejection was notably lower than manufacturer specifications, confirming suspected membrane degradation.

Although the foulant load was low, cleaning trials were performed to assess the effectiveness of targeted cleaning protocols. Alkaline cleaning with **Lavasol 9** proved most effective for removing the identified foulants. Due to the presence of iron and other metals, a follow-up cleaning step with a mild acid such as **Lavasol 1** is recommended to optimize results.

Recommendations:

- Implement pretreatment strategies to reduce the presence of metals and aluminosilicates in the feed water.
- Establish **preventive cleaning protocols**, as early intervention is essential to avoid foulant compaction and aging, and to mitigate irreversible membrane damage.
- Initiate cleaning procedures **when membrane performance deviates by more than 10–15%** from baseline values to maintain system efficiency and prolong membrane life.

1.0 INTRODUCTION

2 membranes were received at our facility in Vista for a Tier 3 autopsy. This level of autopsy includes the following steps:

External Inspection

Inspection of element for physical damage to the casing, deposits on outer casing, telescoping, scale on ends of element, dimensions, etc.

Internal Inspection

Inspection of element for extent of fouling, damage to the membrane surface, glue lines condition, spacer material condition, carrier material condition, etc.

Fouling identification

- **Scanning Electron Microscopy – Energy Dispersive X-ray analysis (SEM-EDX):** Is the most powerful analytical tool to get an elemental determination of fouling composition.
- **Infrared spectroscopy (ATR/FTIR):** By identifying characteristic functional groups, identification of both organic and inorganic components of fouling can be achieved.

Membrane surface conditions

- **Scanning Electron Microscopy– Energy Dispersive X-ray analysis (SEM-EDX)** is used to obtain both a general overview and detailed visualization of the membrane surface, including fouling extent, abrasion marks, and other surface features.
- **Infrared spectroscopy (ATR/FTIR)** It allows for the verification and identification of fouling even when the sample quantity is insufficient for bulk analysis.

Operating parameters

Determination of permeate flow and salt retention of different coupons/membrane samples. These parameters are measured in a flow cell considering conditions set by the membrane manufacturer.

Cleaning tests

Attempt to remove the foulant with a range of products and see impact of cleaners on membrane performance.

2.0 VISUAL INSPECTION

		PA250601 s/n 2230825210	PA250602 s/n 2240924691	Toray TMG10D
External inspection				Reference values
External housing integrity		Ok	Ok	Ok
Weight		7.18 lbs.	7.30 lbs.	Unknown
Presence of particles/deposits on module ends		Yes, few particles on feed scroll end	Yes, some particles and lighter green/brown film	No
ATD condition		Ok	Ok	Ok
Permeate Tube condition		Ok	Ok	Ok
ATD central positioning, mm	Ok	Ok	Ok	Ok
	Ok	Ok	Ok	Ok
Telescoping		No	No	No
Spacer protrusion		No	No	No
Internal inspection				Reference values
Odor		Absent	Absent	Absent
Presence of fouling/particles		Absent	Absent	Absent
Defects on membrane surface		Absent	Imperfections on the polyamide layer near concentrate end	Absent
Spacer prints		Presence	Presence	Absent
Spacer material condition		Good Absent of fouling	Good Absent of fouling	Good Absent of fouling
Permeate carrier material condition		Good	Good	Good
Membrane color		White	White	White
Membrane leaves insertion		Good	Good	Good
Glue lines condition		Good	Blisters at concentrate end	Good

ATD: Anti-telescoping devices

2.1 EXTERNAL INSPECTION

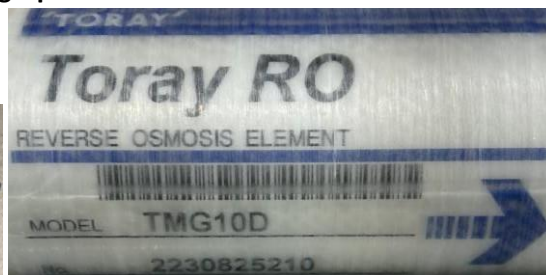
EXTERNAL INSPECTION S/N 2230825210

Membrane reference: PA250601



Photograph 1. PA250601 full membrane view.

Lawton Pilot 12750
1st stage Feed Membrane
Autopsy



Photograph 2. Detail of membrane labels.



Photograph 3. Feed side of membrane with ATD.

Photograph 4. Concentrate side of membrane with ATD.



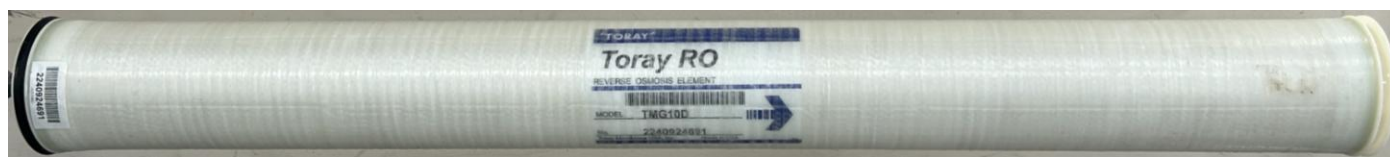
Photograph 5. Detail of feed scroll end.



Photograph 6. Detail of concentrate scroll end.

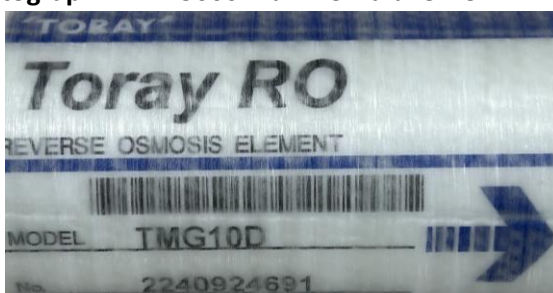
EXTERNAL INSPECTION S/N 2240924691

Membrane reference: PA250602



Photograph 7. PA250602 full membrane view.

Lawton Pilot 12750
2nd Stage Feed membrane
Autopsy



Photograph 8. Detail of membrane labels.

Photograph 9. Feed side of membrane with ATD.

Photograph 10. Concentrate side of membrane with ATD.



Photograph 11. Detail of feed scroll end.

Photograph 12. Detail of concentrate scroll end.

2.2 INTERNAL INSPECTION

INTERNAL INSPECTION s/N 2230825210

Membrane reference: PA250601



Flow →



Photograph 13. Full membrane view of PA250601 (unrolled). Detail of spacer prints on the membrane surface.



Photograph 14. Feed side of membrane leaf.



Photograph 15. Concentrate side of membrane leaf.



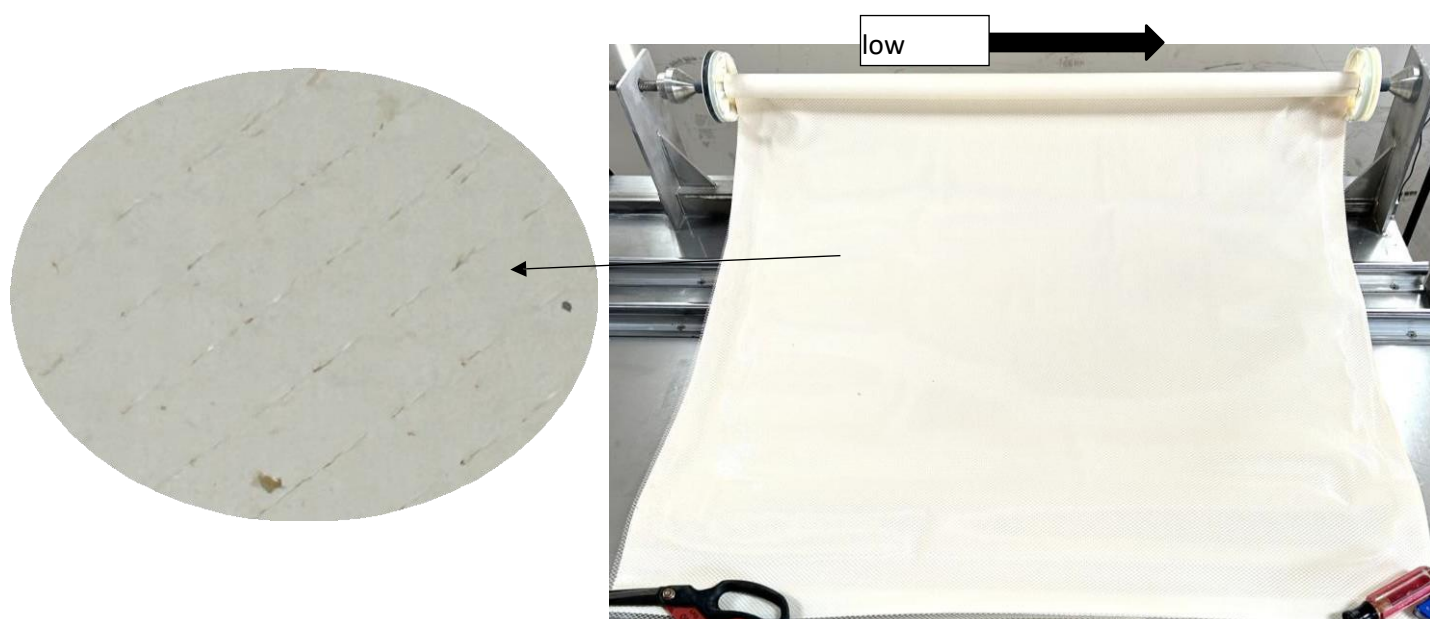
Photograph 16. Detail of feed spacer material.



Photograph 17. Detail of permeate spacer.

INTERNAL INSPECTION S/N 2240924691

Membrane reference: PA250602



Photograph 18. Full membrane view of PA250602 (unrolled). Detail of spacer prints on the membrane surface.



Photograph 19. Feed side of membrane leaf.



Photograph 20. Concentrate side of membrane leaf.



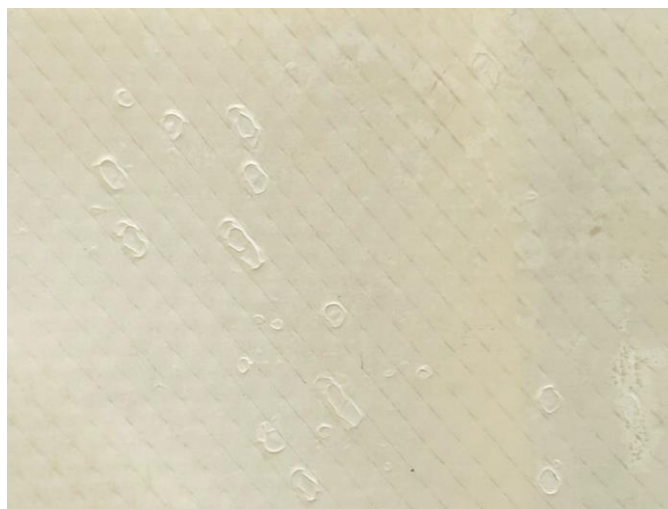
Photograph 21. Detail of feed spacer material.



Photograph 22. Detail of permeate spacer.



Photograph 23. Detail of membrane surface at feed end.
Some dark particles are observed.



Photograph 24. Detail of blisters on glue line.

3.0 MEMBRANE/FOULANT ANALYSIS

3.1 SEM-EDX ANALYSIS RESULTS

SEM-EDXA is based on the detection of X-rays emitted from a sample when it is excited by an electron beam. This technique enables localized elemental analysis by focusing on specific regions of the sample. Its limited penetration depth (typically a few microns) and high spatial resolution make it ideal for identifying compositional variations on the membrane surface.

A computerized multichannel analyzer identifies and quantifies individual peak intensities in the X-ray spectrum, providing elemental composition data. However, since the results are elemental, compound identification is generally not possible—unless the atomic percentages show clear stoichiometric relationships.

SEM-EDXA was used in this study to evaluate and verify the elemental composition of foulants, and deposits observed on the membrane surfaces.

- **Key Insight:** The data showed high sulfur content—consistent with the membrane's intrinsic material—and only trace levels of chloride, sodium, and silicon. This confirms the minimal presence of external foulants, aligning with the visual inspection results.

The table below summarizes the microphotographs, spectra, and observations for each sample analyzed. **Figure 1** presents a comparative graph of weight percentages obtained from general EDX analyses for all autopsied membranes.

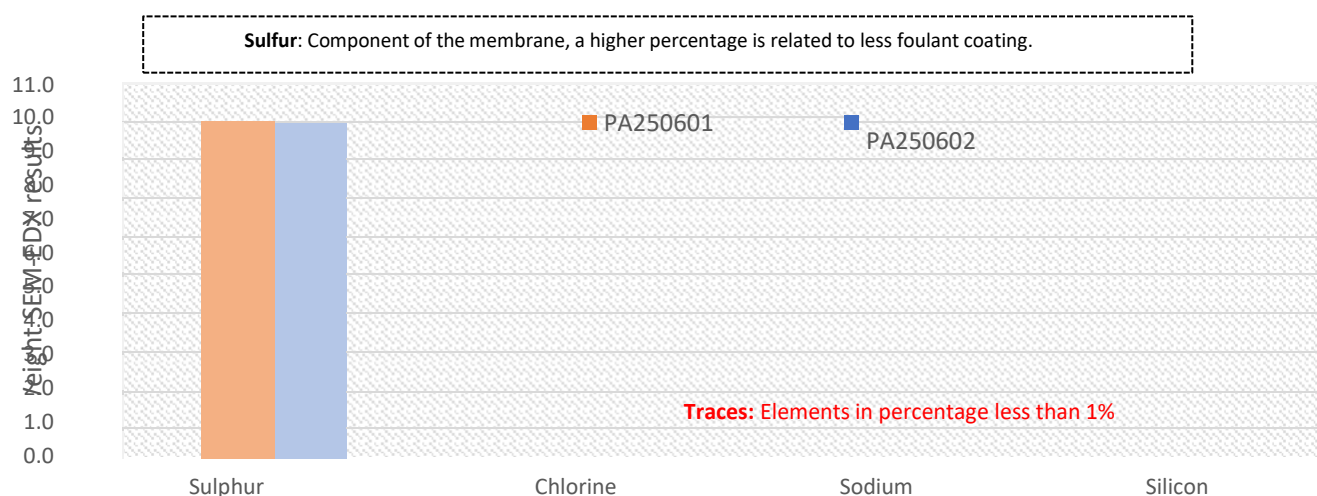


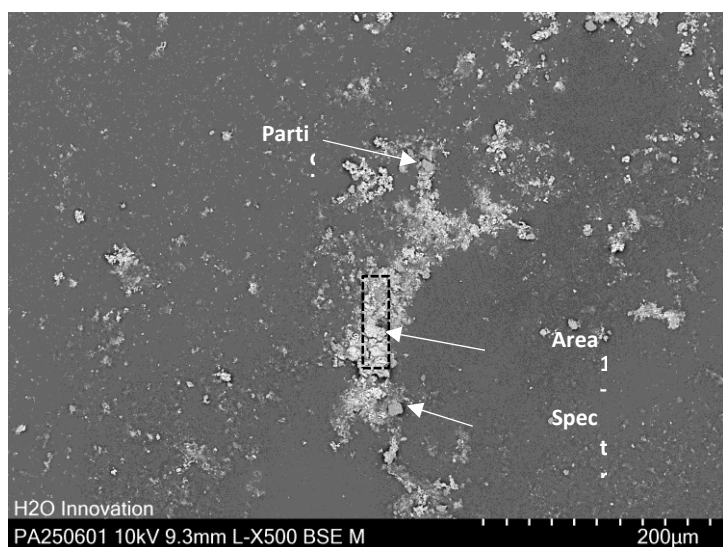
Figure 1. % by weight of the main elements detected in the autopsied membranes.

Table 1. SEM-EDX Analysis results obtained from autopsied Membranes Surface

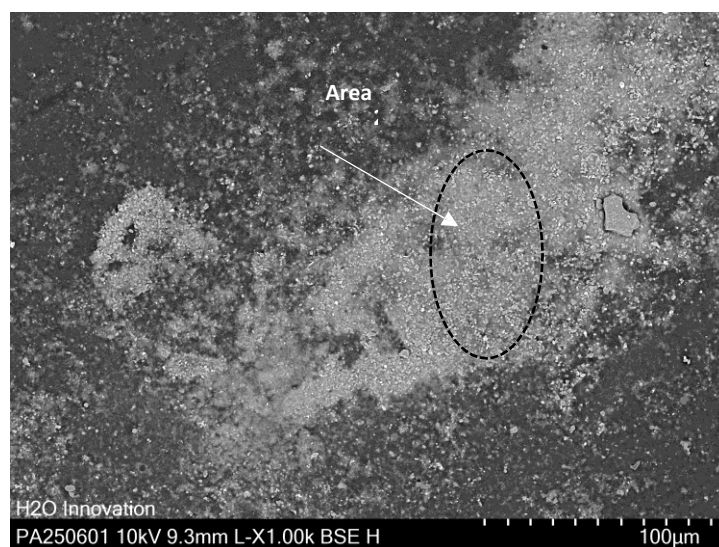
Membrane Sample	Micro- photograph	Spectra	Comments
PA250601	1 to 7	1 to 5	The membrane surface exhibited brighter regions at the spacer contact points, indicating a higher concentration of inorganic material in those areas. Abrasion marks were also observed, suggesting mechanical damage to the membrane surface. At high magnification, the membrane structure remained clearly visible, confirming a lack of significant surface coverage by foulants. General EDX analysis primarily detected membrane-related elements— carbon, oxygen, and sulfur—with only trace amounts of sodium, chloride, and silicon present. Additional localized EDX analysis at the spacer support areas revealed the presence of iron, aluminum silicates, and metallic particles such as copper and zinc, suggesting localized deposition in these regions.
PA250602	8 to 12	6 to 8	As with the previous membrane, the surface appeared mostly clean, with inorganic foulant accumulation limited to spacer contact areas. At high magnification, the membrane structure was clearly visible, indicating minimal surface coverage. However, microorganisms/diatoms and abrasion marks were observed in isolated regions. General EDX analysis confirmed the presence of typical membrane components— carbon, oxygen, and sulfur—with only trace levels of chloride and silicon. Additional analysis at spacer support zones revealed iron, aluminum silicates, and metallic particles including copper and zinc, along with calcium and magnesium deposits, indicating localized inorganic contamination.



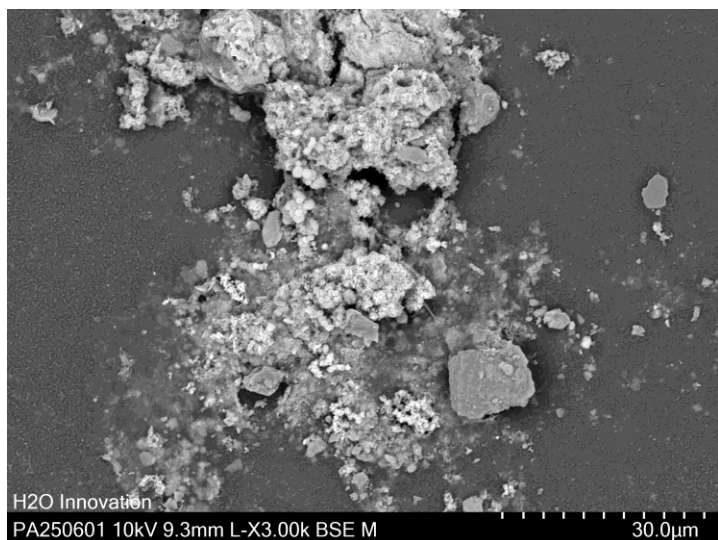
Microphotograph 1. General view of PA250601 membrane surface.
General Analysis: Spectrum 1.



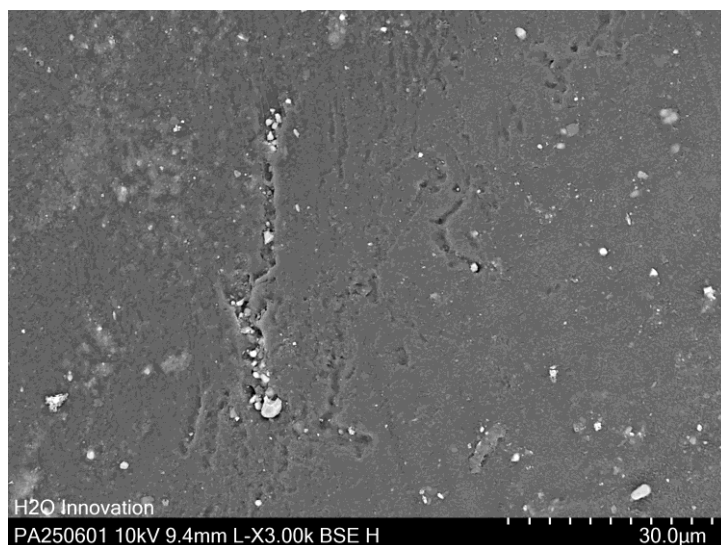
Microphotograph 2. Detail of foulant in support area of the spacer material on PA250601 membrane surface. In this zone there is a concentration of bright areas.



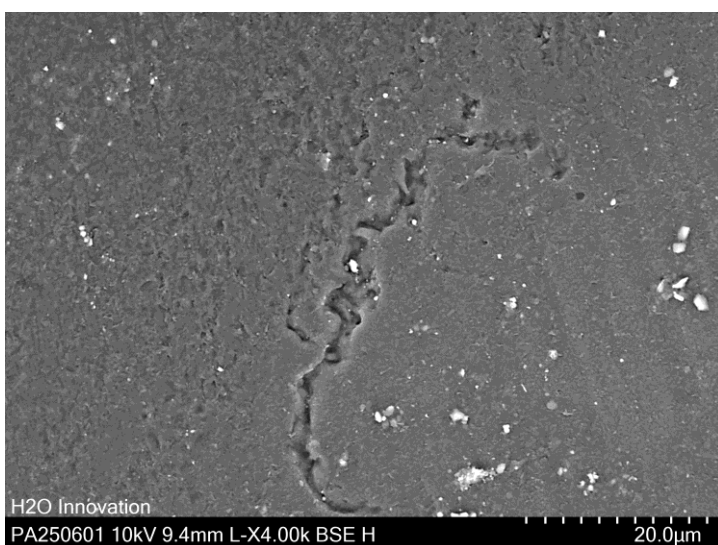
Microphotograph 3. Detail of foulant in support area of the spacer material on PA250601 membrane surface. Analysis of brighter zone: mainly iron and aluminosilicates.



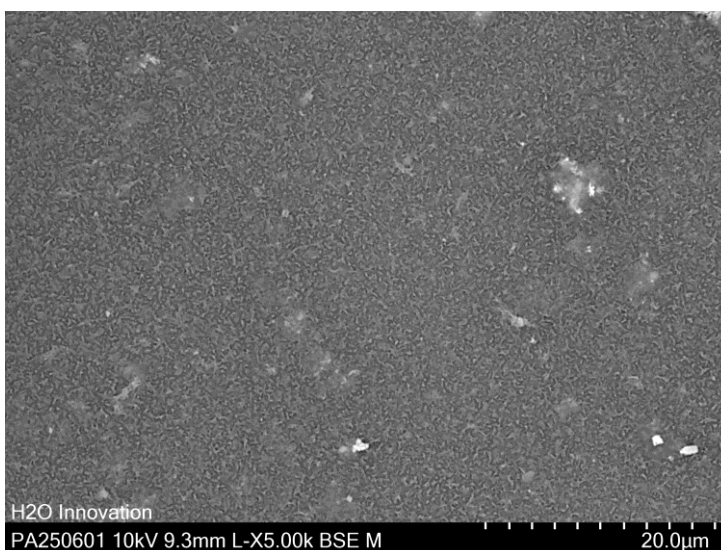
Microphotograph 4. Detail of foulant on PA250601 membranesurface. Mixture of inorganic particles.



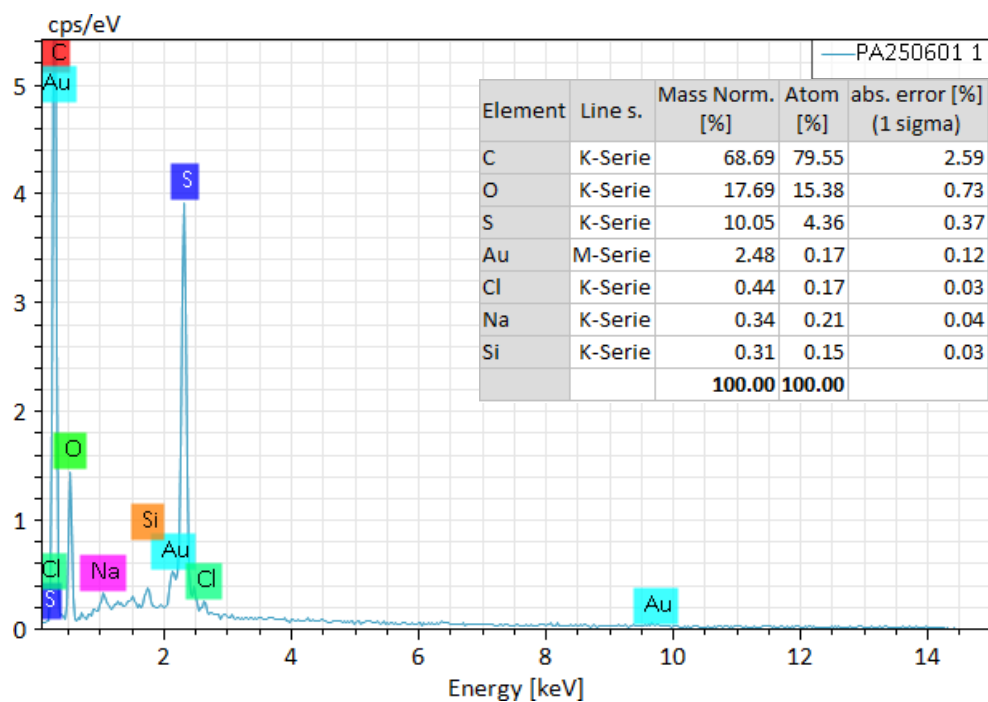
Microphotograph 5. Detail of abrasion marks (damage) onPA250601 membrane surface at high magnification.



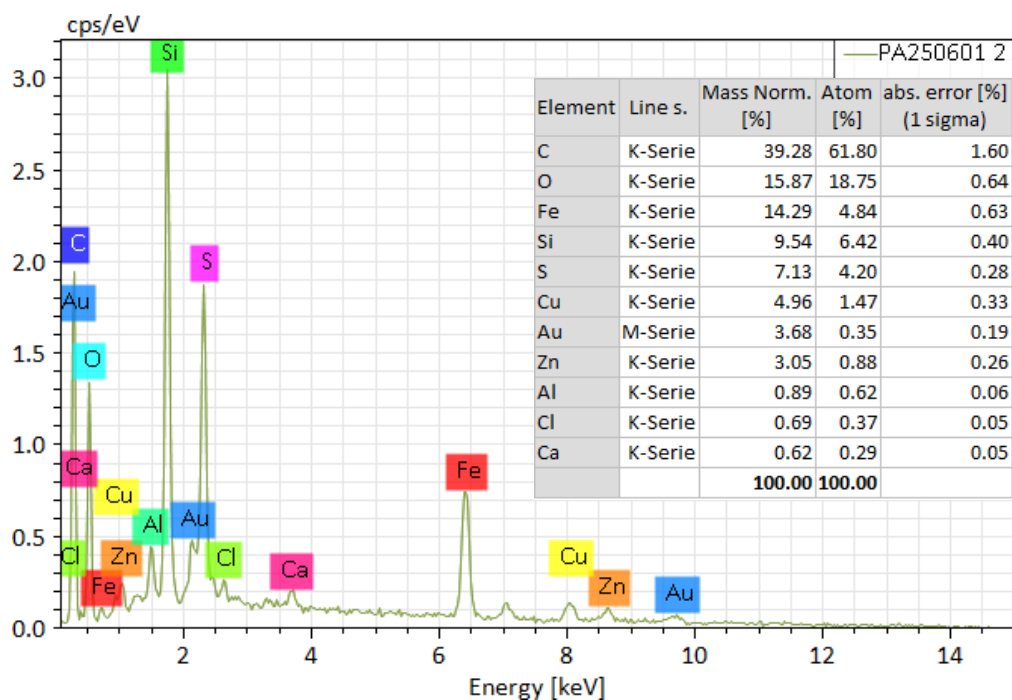
Microphotograph 6. Detail of abrasion marks (damage) onPA250601 membrane surface at high magnification.



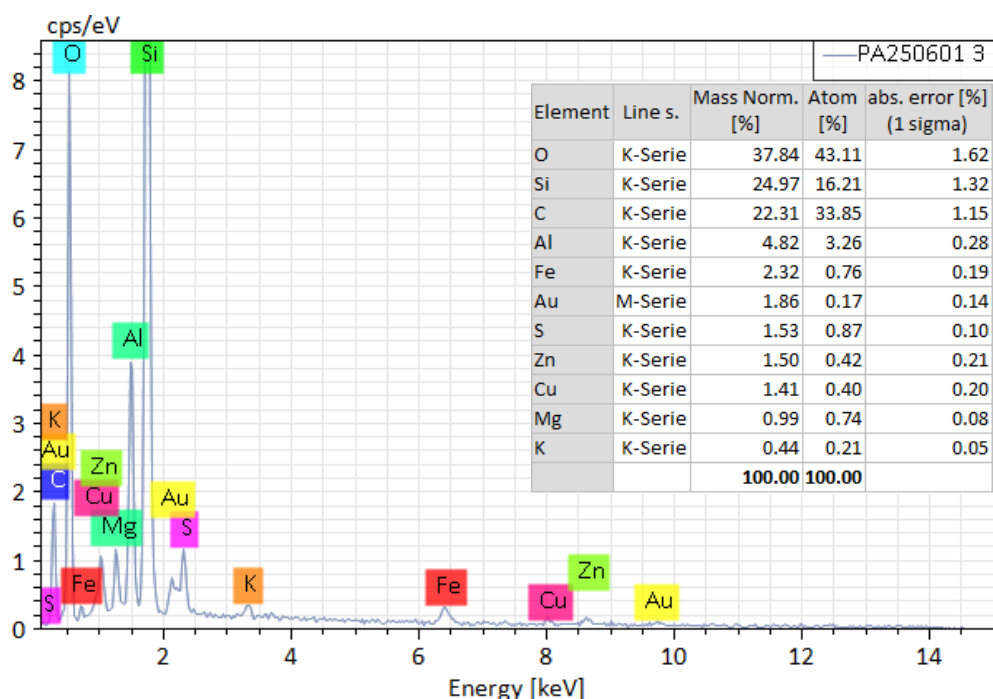
Microphotograph 7. High magnifications of PA250601 membranesurface. It is possible to distinguish the characteristic structure of this type of membrane.



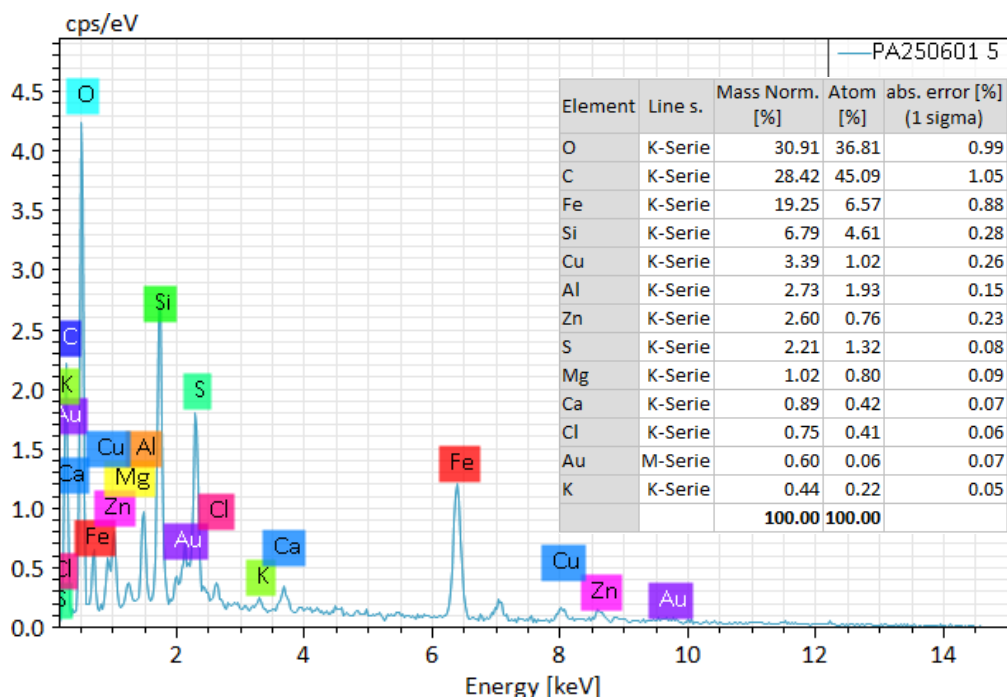
Spectrum 1. General analysis of PA250601 membrane surface. Presence of membrane components (Carbon, Oxygen and Sulfur) with traces of Sodium Chloride and Silicon.



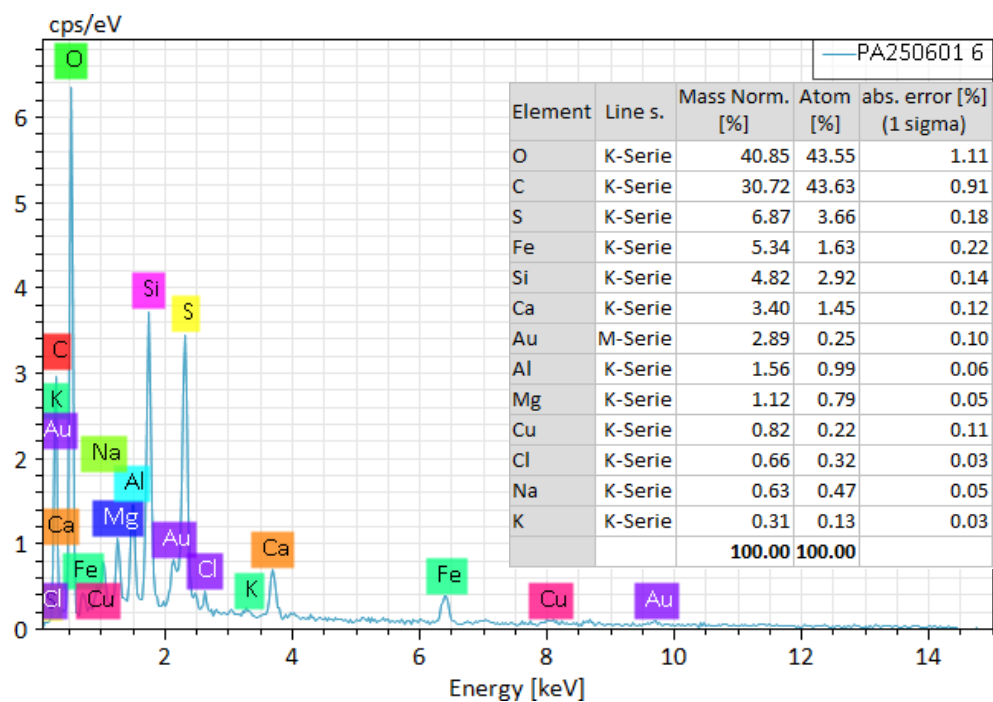
Spectrum 2. Analysis of particle 1 on PA250601 membrane surface. Iron with the presence of Silicon, Copper and Zinc.



Spectrum 3. Analysis of particle 2 on PA250601 membrane surface.
Silicon, Aluminosilicates, Iron, Zinc and Copper.



Spectrum 4. Analysis of area 1 on PA250601 membrane surface.
Iron with Aluminosilicates, Copper, Zinc and Magnesium.

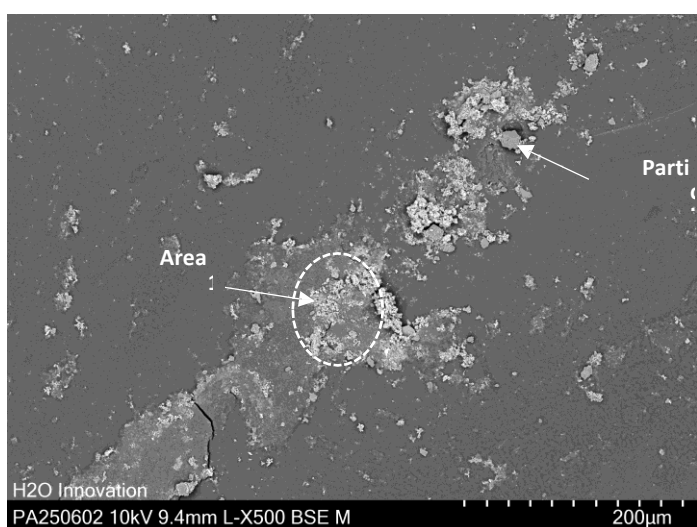


Spectrum 5. Analysis of area 2 on PA250601 membrane surface.

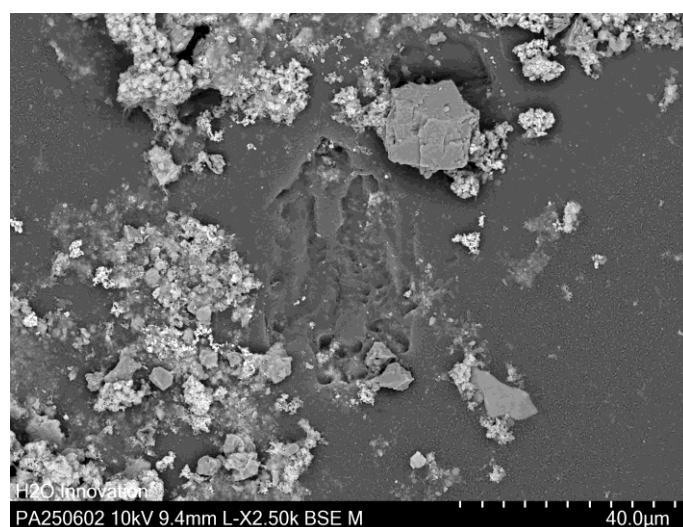
Iron, aluminosilicates, Calcium and Magnesium. Traces of other elements such as copper or sodium chloride.



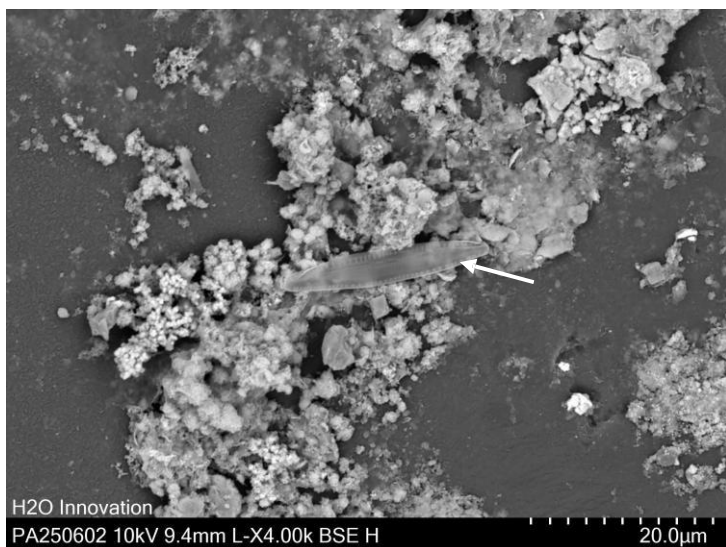
Microphotograph 8. General view of PA250602 membrane surface. General Analysis: Spectrum 6.



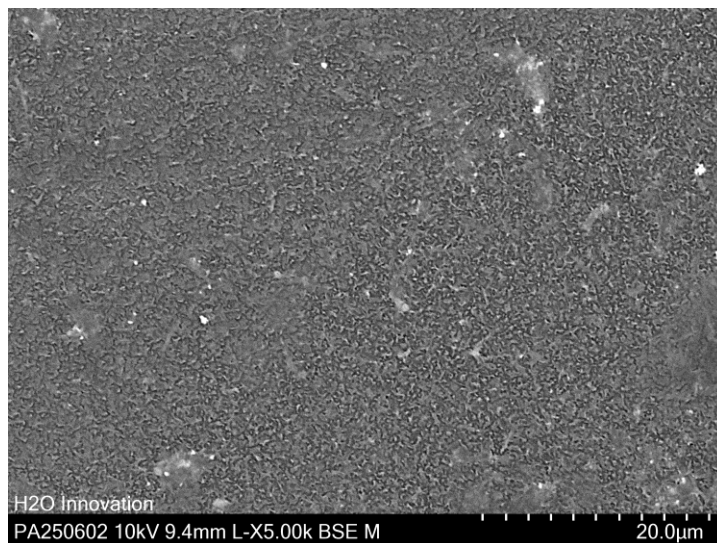
Microphotograph 9. Detail of foulant in support area of the spacer material in PA250602 membrane surface.



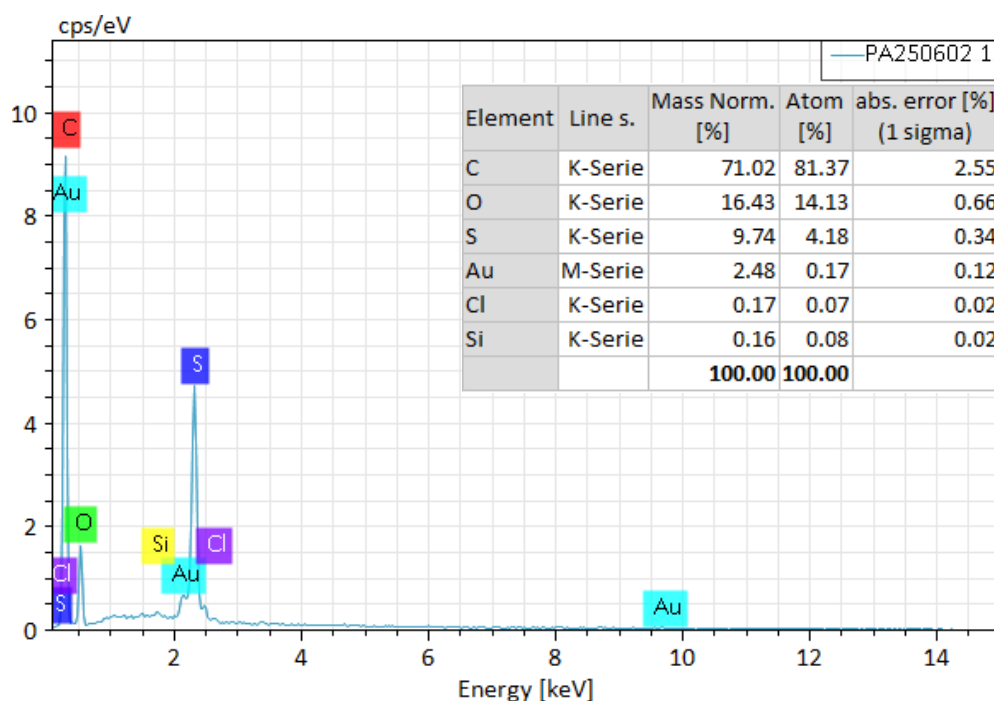
Microphotograph 10. Detail of foulant and abrasion marks on PA250602 membrane surface. Presence of brighter structures/particles.



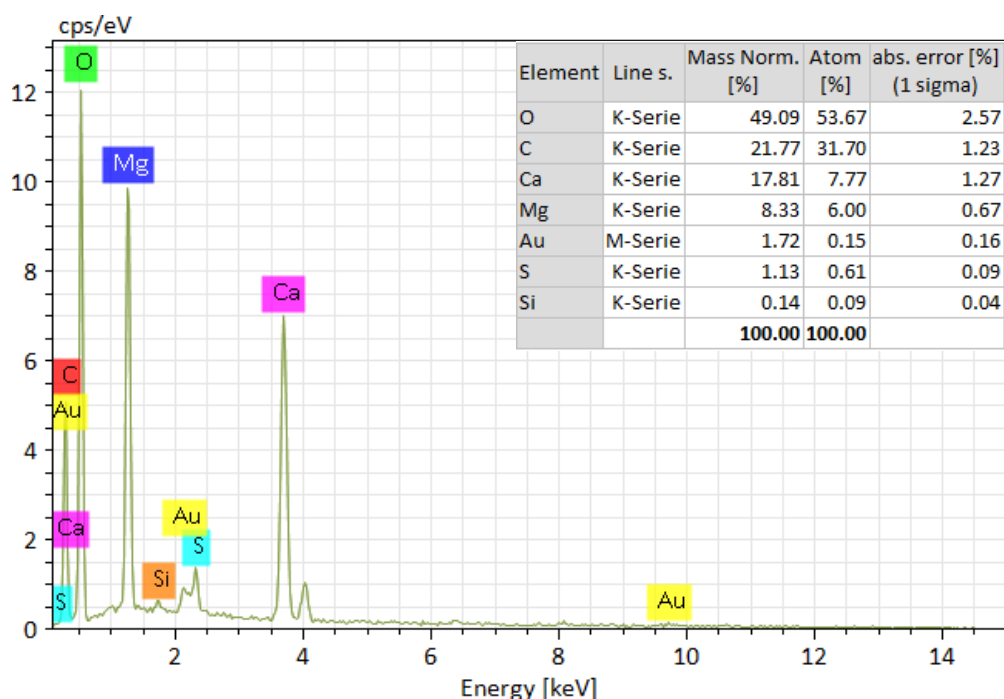
Microphotograph 11. Detail of diatom on PA250602 membrane surface.



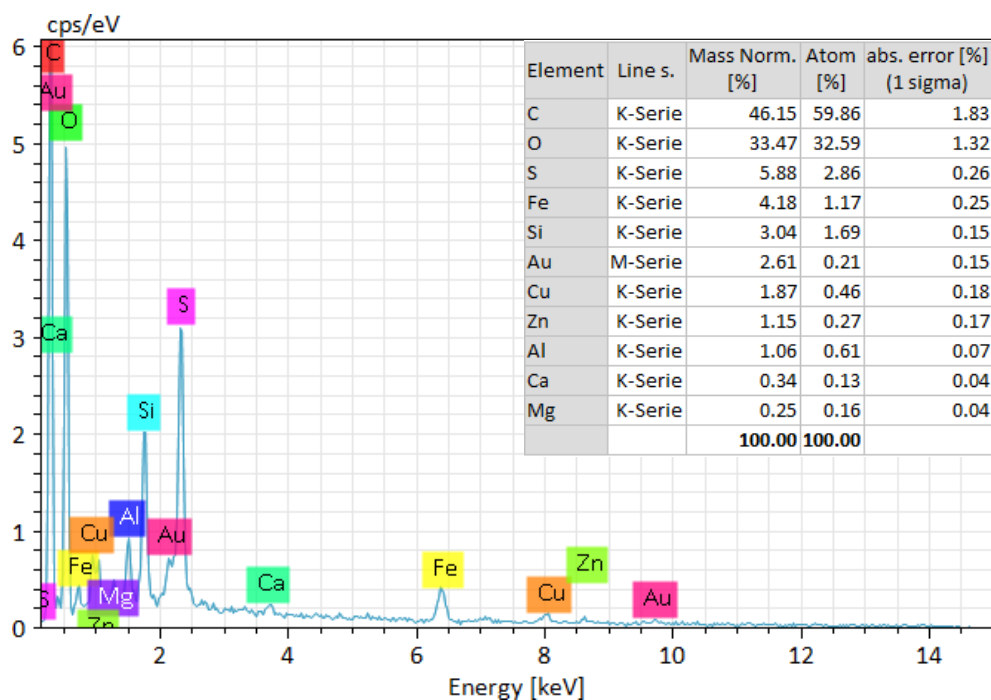
Microphotograph 12. Detail of PA250602 membrane surface at high magnification. It is possible to distinguish the characteristic structure of the membrane.



Spectrum 6. General analysis of PA250602 membrane surface. Presence of membrane material (Carbon, Oxygen, and Sulfur) with traces of Chloride and Silicon.



Spectrum 7. Analysis of particle 1 in the support area of the spacer material on PA250602 membrane surface. Calcium/Magnesium particles and traces of Silicon.



Spectrum 8. Analysis of area 1, area with more coating on PA250602 membrane surface. Membrane components (Oxygen, Carbon, and Sulfur) with Iron, Aluminosilicates, Copper, Zinc and traces of Calcium and Magnesium.

3.2 ATR/FTIR ANALYSIS RESULTS

Fourier-Transform Infrared (FTIR) Spectroscopy is a powerful analytical technique used to detect the presence or absence of specific functional groups by measuring the absorbance of infrared radiation across a range of wavelengths. When applied to membrane autopsy analysis, it offers valuable insight into the chemical nature of surface deposits or foulants, if present. In this study, the Attenuated Total Reflectance Infrared (ATR-IR) Spectroscopy method was utilized. ATR-IR is especially useful in surface analysis as it enables rapid, non-destructive characterization of materials directly at the membrane surface without the need for extensive sample preparation. This technique is particularly effective in identifying organic functional groups, biofoulants, or specific chemical compounds that may form a fouling layer.

Figures 1 and 2 show the IR spectra obtained from membranes PA250601 and PA250602. These spectra were compared against a reference spectrum from an unused membrane (blank) of the same make and model, to help distinguish between native membrane peaks and any potential foulant-related signals. In both cases, the spectra revealed characteristic absorption bands consistent with the base membrane material, specifically the polyamide layer. The detected peaks corresponded to known functional groups such as:

- Amide I and II bands ($\sim 1650\text{ cm}^{-1}$ and $\sim 1540\text{ cm}^{-1}$), associated with C=O and N-H bending
- Aromatic ring vibrations
- Aliphatic C-H stretching

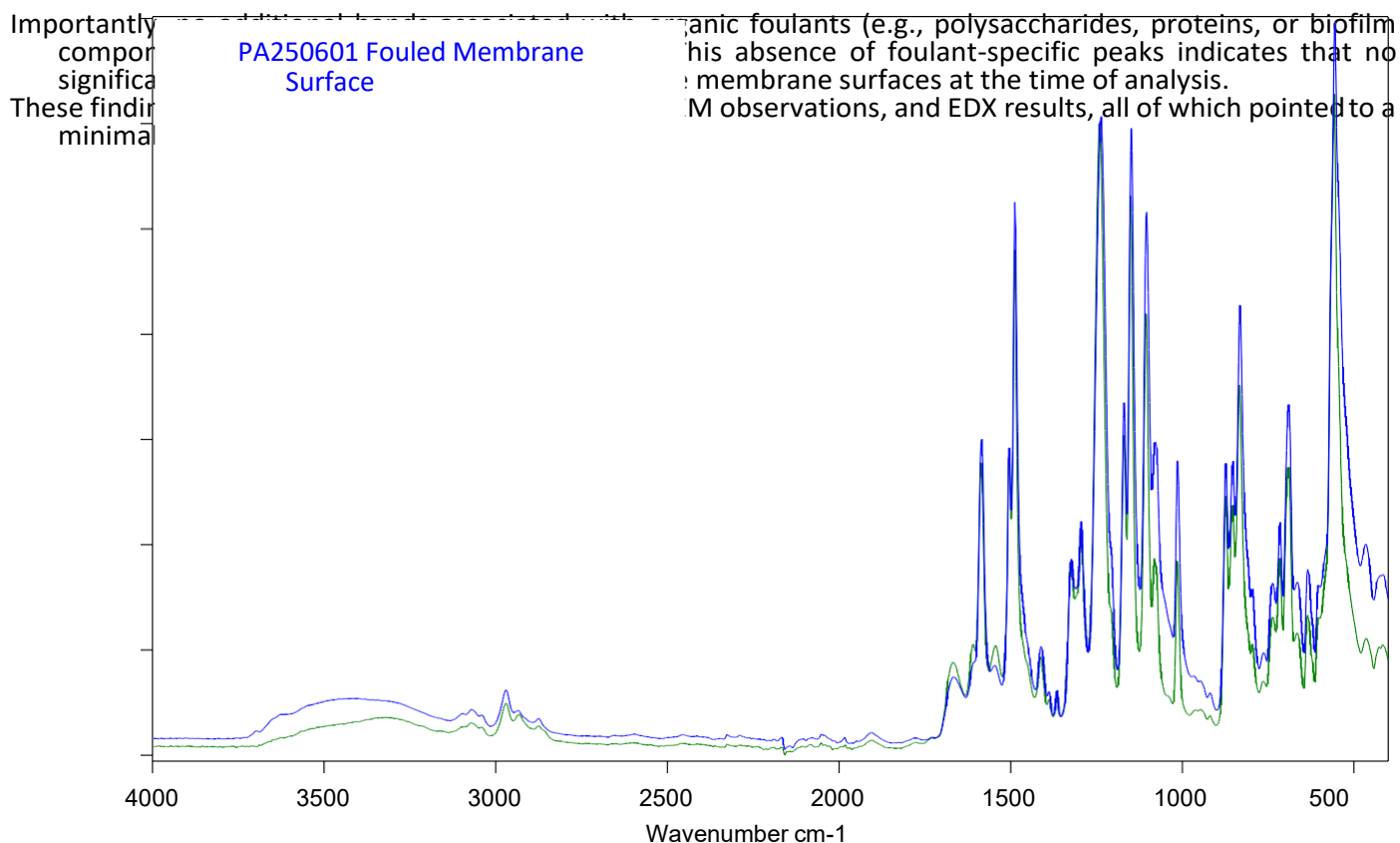


Figure 1. Comparison of PA250601 fouled membrane IR spectrum (blue line) and the IR spectrum of membrane blank (green line).

PA250602 – FOULED MEMBRANE

SURFACEMEMBRANE **BLANK**

Figure 2. Comparison of PA250602 fouled membrane IR spectrum (red line) and the IR spectrum of membrane blank (greenline).

4.0 MEMBRANE CHARACTERIZATION (FLAT SHEET TEST-RIG)

Membrane coupons were taken from autopsied membrane and permeate flux and salt rejection performance parameters were characterized at flat test rig following standard conditions established by the membrane manufacturer. The following table and figures include the individual and average results obtained from these tests.

TABLE 1. Performance Parameter Values Obtained from Flat Sheet Test-Rig.

Toray TMG10D Reference values	Permeate flux, gal/ft ² d at 25°C	Salt Rejection (EC), %
	30.46 gal/ft²d (minimum 24.37 gal/ft ² d for individual elements)	99.7 % Minimum 99.5 %
Reference values established according to membrane manufacturer technical sheet/guidelines. These specifications are based on a 2,000 mg/l NaCl characterization solution at 150 psi pressure and 25°C.		
Membrane Coupons PA250601	Permeate flux gal/ft ² d (25° C)	Salt Rejection (EC) %
Coupon 1	29.76	99.49
Coupon 2	27.46	96.20
Coupon 3	29.96	99.31
Average	29.06 gal/ft²d (25° C)	98.0 %
Membrane Coupons PA250602	Permeate flux gal/ft ² d (25° C)	Salt Rejection (EC) %
Coupon 1	28.16	99.53
Coupon 2	26.75	98.79
Coupon 3	28.49	99.48
Average	27.80 gal/ft²d (25° C)	99.0 %

As the results included in the table show, salt rejection values were quite variable. This is presumably related to the abrasion marks that were observed on the membrane surface in the SEM-EDX analyses. Although some membrane coupons provided salt rejection values close to the minimum value established by the membrane manufacturer, variability in the distribution of damage across the membrane yielded an average salt rejection that is lower than the manufacturer's specifications. The observed permeate fluxes for each coupon were within the manufacturer's reference values.

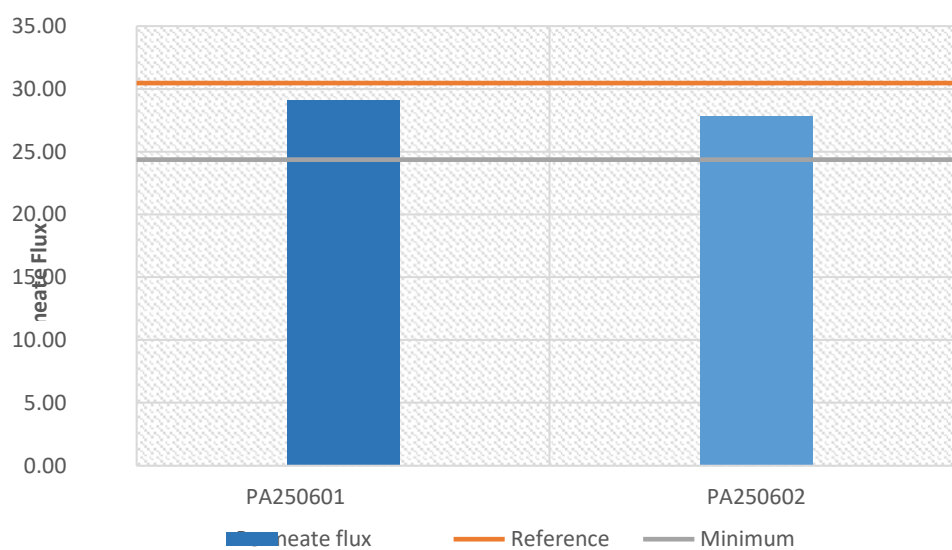


Figure 1. Average of permeate flux values obtained from autopsied membranes.

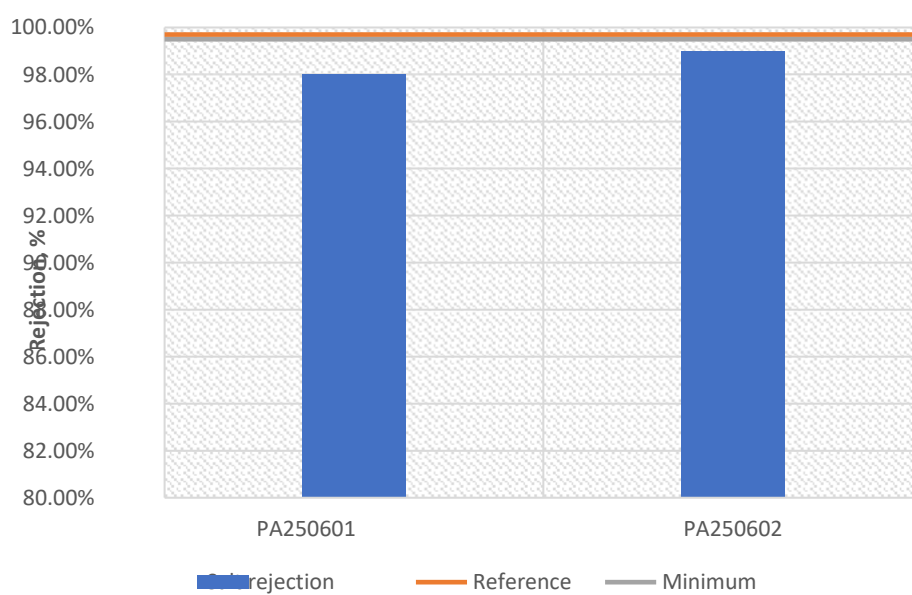


Figure 2. Average of salt rejection values obtained from autopsied membranes.

5.0 CLEANING TESTS

Although the permeate flux values obtained from the autopsied membranes were comparable to reference values, cleaning trials were conducted to assess the effectiveness of targeted cleaning protocols and to evaluate potential improvements in salt rejection performance.

Initial cleaning tests were carried out on membrane PA250601, using chemical formulations selected based on the inorganic foulant composition identified in previous SEM-EDX and FTIR analyses. The most effective cleaning protocol from these trials was subsequently applied to PA250602 to validate its performance across multiple samples.

During each cleaning test, salt rejection and permeate flow rates were measured before and after cleaning, under controlled test conditions in accordance with the membrane manufacturer's specifications for this model. The cleaning procedures employed, along with a summary of the test results, are provided in Table 1. This table includes data on cleaning steps, chemical types, and performance changes. Corresponding graphical representations of flux recovery following each cleaning sequence are presented in Figures 1 and 2, illustrating the effectiveness of the cleaners evaluated.

TABLE 1. Cleaning Test Summary Results.

Flow rate Salt Rejection		30.46 gal/ft ² d (< 24,37 gal/ft ² d for individual elements)99.7% (Minimum 99.5%) (Reference values established according to membrane manufacturer technical sheet/guidelines. These specifications are based on a 2,000 mg/l NaCl characterization solution at 150 psi pressure and 25°C)					
MEMBRANE PA250601-1 st Stage		Flow rate (gal/ft ² d 25 °C)			% Salt Rejection		
Characterization conditions: 150 psi, 2,000 mg/l NaCl		Before	After	%	Before	After	
Clean 1	1% OptiClean B (2 Hours, 35°C)	2976	30.05	+1,00	99.49	99.48	≈
Clean 2	2% Genesol 704 (2 Hours, 35°C)	27.46	28.36	+3.27	96.20	98.80	↑
Clean 3	2% Lavasol 9 (2 Hours, 35°C)	29.96	34.16	+14.0	99.31	99.12	↓
Clean 4	2% Lavasol 6 (1 Hour, Room Temp)	27.33	25.91	-5.21	98.82	90.10	↓
Clean 5	2% Lavasol 1 (1 Hour, Room Temp)	28.98	27.58	-4.83	98.81	98.98	↑
MEMBRANE PA250602-2 nd Stage		Flow rate (gal/ft ² d 25 °C)			% Salt Rejection		
Characterization conditions: 150 psi, 2,000 mg/l NaCl		Before	After	%	Before	After	
Clean 1	2% Lavasol 9 (2 Hours, 35°C)	28.49	31.71	+11.3	99.48	99.39	↓

Conclusions

As the results show, even though the permeate flux values of membrane PA250601 were very close to the reference value, it was possible to achieve a higher flux by applying alkaline cleaners. Among the different alkaline cleaners tested, **Lavasol 9** provided the greatest improvement. No improvement was observed in salt rejection.

The same behavior was observed with membrane PA250602.

Although no improvement in flux was seen with acid cleaners, it is recommended to apply a second step using a mild acid, to ensure the removal of all foulant components susceptible to acid dissolution (e.g., metallic compounds).

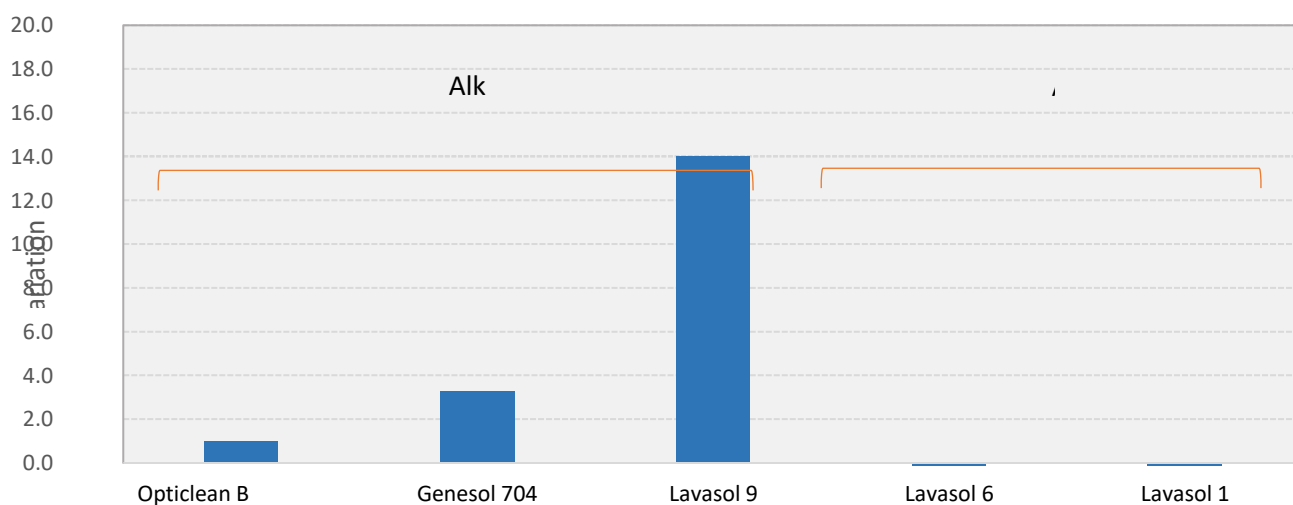


Figure 1. % change in flux during multistep cleaning tests membrane PA250601-1st ST.

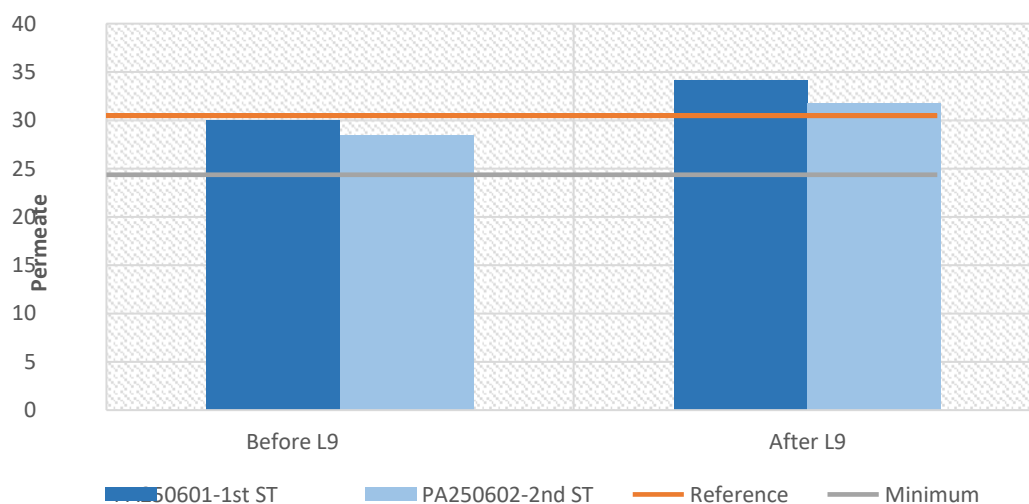
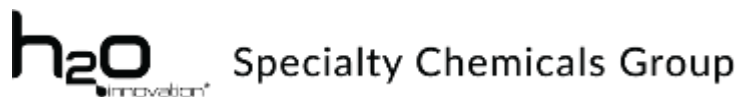


Figure 2. Flux values of both autopsied membranes before and after applying Lavasol 9.



CHESHIRE – MADRID – VISTA

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H₂O Innovation – Global Research and Scientific Service
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1048 LA MIRADA CT, VISTA, CA 92081
Tel. +1 (760) 639-4400, lab.vista@h2oinnovation.com

Report prepared by:

A handwritten signature in black ink, appearing to read "Victoria Velasco".

Report revised by:

A handwritten signature in blue ink, appearing to read "Nuria Peña García".

Victoria Velasco – Lab Technical Support
of Global Scientific Services

Nuria Peña García –Director

Appendix O. PILOT OPEARTIONS REPORT



Appendix P. GREENSAND AND RO PILOT SYSTEM P&ID

PILOT OPERATIONS REPORT		
	CUSTOMER REFERENCE	REPORT DATE
	Lawton Greensand + RO Pilot	04.25.25
	SERVICES TECHNICIAN	SERVICES LOCATION
	Terry McCracken tmccracken@worthok.com (405) 366-7729	City of Lawton Pilot J. Hendeson Park 5013 SE Avalon Ave Lawton, OK 73501

GREENSAND OPERATIONS REPORT					
WEEK	START DATE	END DATE	LOADING (GPM/SF)	RATE (GPM)	
1	1.6.25	1.13.25	3	15	
2	1.13.25	1.20.25	4	20	
-	1.20.25	1.27.25	5	25	
3	1.27.25	2.03.25	7	35	
4	2.03.25	2.11.25	8	40	Accurate Lab did not pull samples due to RO not running and "miscommunication".
5	2.11.25	2.18.25	9	45	Lab Test Profile per Sample Location Changed Sample Date moved to Thursday, 2.13.25 (weather)
6	2.18.25	2.26.25	10	50	Greensand Only Pilot Protocol Concludes 02.26.25
"BONUS" GREENSAND OPERATIONS DURING RO DIRECT "MAKE-UP" PILOT					
7	2.26.25	TBD	7-8	35-40	Fe Breakthrough is not Expected
8	TBD	TBD	7-8	35-40	Greensand Fouling is Predicted to be Runtime Limit
9	TBD	3.19.25	7-8	35-40	Final Week Backwash (min) for Fe evaluation. Phase 1 Pilot Protocol Concluded on 0.3.19.25
CHLORINE RESIDUAL in FILTRATE			OPERATION		PILOT PHASE
<0.1 ppm (or equal)			Direct Feed Greensand Direct Feed RO		Phase 1
NOTES:					
1. Worth Hydro has determined that the actual Well Capacity is 75 GPM @ 40 psi.					
2. The Greensand Vessel media Surface Area is 5.0 (Nominal) Square Feet per Vessel.					
3. Greensand operated with single vessel to accelerate "fouling" and/or breakthrough.					
4. Greensand fouling determined Backwash required on Tuesday afternoon, 2.11.25. Backwash increased Greensand flowrate resulting by 10 GPM versus pre-backwash flowrate.					
5. Greensand Pilot System will run with Single Vessel until Backwash is Required. Greensand Pilot will switch to 2 nd Vessel while 1 st Vessel Backwashes. Greensand Pilot will switch back to 1 st Vessel when Backwash is complete to record and evaluate Backwash impact. Worth will develop a Backwash Procedure to record backwash and evaluate backwash water content (i.e. Iron).					
6. Backwash procedure is 47 GPM for 15 Min. Total Backwash Volume equals 705 gal.					
7. Pilot Phase 1 to Phase 2 Setup Conversion on 3.19.25 thru 3.21.25.					

[REPORT CONTINUED NEXT PAGE]

PILOT OPERATIONS REPORT		
	CUSTOMER REFERENCE	REPORT DATE
	Lawton Greensand + RO Pilot	04.25.25
	SERVICES TECHNICIAN	SERVICES LOCATION
	Terry McCracken tmccracken@worthok.com (405) 366-7729	City of Lawton Pilot J. Hendeson Park 5013 SE Avalon Ave Lawton, OK 73501

REVERSE OSMOSIS OPERATIONS REPORT					
WEEK	START DATE	END DATE	RECOVERY RATE	RATE (GPM)	
i	1.6.25	1.13.25	82%	22	RO Pilot System operated, but data not recorded
ii	1.13.25	1.20.25	82%	27	RO Pilot System operated, but data not recorded
1	1.20.25	1.27.25	82%	27	
2	1.27.25	2.03.25	82%	27	
3	2.03.25	2.11.25	82%	27	Greensand Filtrate Tank Discharge Manifold changes installed for Backwash Tank Bypass/Pumping
-	2.11.25	2.18.25	82%	22	Lab Test Profile per Sample Location Changed. Reduced RO Feed due to Well Capacity Limits.
4	2.18.25	2.26.25	82%	22	Reduced RO Feed due to Well Capacity Limits.
5	2.26.25	3.5.25	82%	27	
6	3.5.25	3.12.25	82%	27	
"BONUS" RO SYSTEM OPERATION WITH WELL CYCLING OPERATION FOR TURBIDITY ASSESSMENT					
7	3.12.25	3.19.25	82%	27	Phase 1 Pilot Protocol Concluded on 0.3.19.25
ANTISCALANT			OPERATION		PILOT PHASE
PWT SpectraGuard 360			Direct Feed Greensand Direct Feed RO		Phase 1
NOTES:					
1. Worth Hydro has determined that the actual Well Capacity is 75 GPM @ 40 psi. 2. RO Membranes cleaned on 2.11.25 using PWT High pH Cleaner, Lavasol 9. Cleaning returned membranes to "like new" performance and pressure drop. 3. Upon completion of Phase 1 Protocol, Worth Hydro will perform an RO membrane changeout. The Lead Element and Tail Element RO membranes from the Phase 1 Group will be sent to PWT for Tier 1 RO Membrane Autopsy. These are the only membrane autopsies included in the scope for this Pilot. 4. Pilot Phase 1 to Phase 2 Setup Conversion on 3.19.25 thru 3.21.25.					

[REPORT CONTINUED NEXT PAGE]

PILOT OPERATIONS REPORT		
	CUSTOMER REFERENCE	REPORT DATE
	Lawton Greensand + RO Pilot	04.25.25
	SERVICES TECHNICIAN	SERVICES LOCATION
	Terry McCracken tmccracken@worthok.com (405) 366-7729	City of Lawton Pilot J. Hendeson Park 5013 SE Avalon Ave Lawton, OK 73501

GREENSAND + REVERSE OSMOSIS OPERATIONS REPORT							
WEEK	START DATE	END DATE	GREENSAND PROTOCOL		REVERSE OSMOSIS PROTOCOL		
			LOADING (GPM/SF)	RATE (GPM)	RECOVERY RATE	RATE (GPM)	
10	03.24.25	03.31.25	6 to 7	30 to 32	82%	27	
11	03.31.25	04.07.25	6 to 7	30 to 32	82%	27	
12	04.07.25	04.14.25	7 to 10	30 to 32	82%	27	
13	04.14.25	04.21.25	7 to 10	35 to 50	82%	27	
14	04.21.25	04.25.25	7 to 10	35 to 50	82%	27	Phase 2 Pilot Protocol Concludes on 04.23.25
ANTISCALANT				OPERATION		PILOT PHASE	
PWT SpectraGuard 360				Direct Raw Water Feed Greensand Greensand Filtrate to RO Feed (Series)		Phase 2	
CHLORINE RESIDUAL in FILTRATE							
<0.1 ppm (or equal)							
NOTES:							
1. Greensand to be operated at Flowrate to (i) insure Anaerobic operation of RO System and (ii) attempt to achieve Backwash required by Fe Breakthrough or media fouling. 2. Greensand Pilot System will run with Single Vessel until Backwash is Required. Greensand Pilot will switch to 2nd Vessel while 1st Vessel Backwashes. Greensand Pilot will switch back to 1st Vessel when Backwash is complete to record and evaluate Backwash impact. 3. With adequate data and performance in weeks 10-12, Garver may approve increases Greensand Loading. This may be a Step Change for Week 4 and additional Step for Week 5. Goal would be to try to experience Fe breakthrough for Fouling for Backwash. 4. Final Week (Week 14) Backwash (min) for Fe evaluation. 5. Final Week (Week 14) “officially” concluded after Accurate Sampling on Wed, 4.23.25. Worth Hydro continued to operate the Pilot on 4.24.25 and 4.25.25 per the Garver Protocol for “Stopping and Starting the Well”.							

[END OF REPORT]



End of appendices, ending report intentionally left blank

	Conductivity		Flow Transmitter
	Chlorine Analyzer		Potential of Hydrogen
	Iron Analyzer		Sample Port
	Manganese Analyzer		Temperature
	Pressure Transmitter		Turbidity Meter



WORTHHYDRO.COM

The diagram illustrates a water treatment process. It begins with a **Well** at the bottom left, which feeds into a **Bladder Tank**. From the bladder tank, water flows through a **VFD** (Variable Frequency Drive) and a pump (M) to a **Reverse Osmosis System**. The RO system has two main outputs: **RO Permeate** and **RO Concentrate/Waste**. The **RO Permeate** line includes a flow transmitter (FT), temperature (T), pressure transmitter (PT), conductivity (C), and pH (pH) sensors, along with a setpoint (SP 03) and a pump (M). The **RO Concentrate/Waste** line includes a flow transmitter (FT), pressure transmitter (PT), conductivity (C), and a setpoint (SP 04) with a pump (M). Both RO streams feed into an **RO Discharge Tank (RO-DT-01)**, which has a **Pump to Sewer**. The **Reverse Osmosis System** also receives **RO CIP and Flush** water from a tank at the bottom. The main water line from the bladder tank passes through a pump (M) and a setpoint (SP 01) before entering the **Reverse Osmosis System**. This line also receives inputs from **Sodium Hypo Feed**, **Antiscalant**, and **Sodium Bi-Sulfite** feed tanks. The output of the RO system goes to a **Greensand Filtrate to RO Feed** tank. This tank feeds into two **Greensand Filters (GSF-001 and GSF-002)**. Each filter has a **Backwash Supply** line with a pump (M) and a setpoint (SP 02). The backwash from both filters goes to a **Backwash and Analyzer Drain Tank (BW-AW-DT-01)**. This tank also receives **Backwash Drain to BW-AW-DT-01** from the filters. The **Backwash and Analyzer Drain Tank** has a **Pump to Sewer** and a **Pump to BX-AW-DT-01**. The **Backwash and Analyzer Drain Tank** also has a **Pump to Sewer** and a **Pump to BX-AW-DT-01**. The **Backwash and Analyzer Drain Tank** also has a **Pump to Sewer** and a **Pump to BX-AW-DT-01**.

[illegible]

WH-PID-12750-003:
GREEN SAND + RO
PILOT SCHEMATIC

JOB NO.: 12750
DATE: 01/07/2025
DESIGNED BY: MIKE GIRDNER | TERRY MCCracken
DRAWN BY: MATT GREEN | ERBERT BENEDICTO

DRAWING NUMBER	WH-PID-12750-003
SHEET NUMBER	01
REVISION NUMBER	003

Item Title:

Consider approving a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Ring Closure 1) to serve a Lawton Public School facility, and authorizing the Mayor and City Clerk to execute the permit.

Initiator: Christine James, Director

Information Source: Christine James, Director, Kameron Good, Planning - Senior Planner

Background:

Unite Private Networks, LLC dba Segra has been hired by Lawton Public Schools to run fiber to several of their facilities. The Public Utilities Department has reviewed and approved the proposed route. Since the route will be within the street right-of-way or public easement, a Council approved Revocable Communications Cable Permit is required. The applicant has paid the construction fee of \$24.15 for each proposed rod, or portion thereof, to be installed underground, and they will pay an annual fee of \$2.50 for each rod, or portion thereof, until such time the fiber is no longer needed and all fiberoptic cable, conduit, and associated facilities are removed from the City's streets right-of-way or public easements at the applicant's own cost.

Ring Closure 1 is approximately 6,694 feet or 405.7 rods

Correlation to the True North Statement:**Exhibit:**

Revocable Permit_Ring Closure 1

Key Issues:

N/A

Funding Source:

Revenue Source

Recommended Action:

Approve a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Ring Closure 1) to serve a Lawton Public School facility, and authorize the Mayor and City Clerk to execute the permit.

ATTACHMENTS:

1. Ring Closure 1_RP

REVOCABLE COMMUNICATIONS CABLE PERMIT

This Revocable Communications Cable Permit is made and entered into this ____ day of _____, 2025, by and between the City of Lawton, Oklahoma, a municipal corporation (hereinafter called "City") and Unite Private Networks, LLC dba Segra (hereinafter called "Permittee").

SECTION 1. GRANT OF PERMIT. The City hereby grants unto Permittee a Revocable Communications Cable Permit for the right and privilege to lay 6,694 feet (405.7) rods of communication cable along and under certain streets, alleys, easements and public rights-of-way within the corporate limits of said City, said cables being located in Sections 30, 31 and 32, T2N, R11W, more particularly described below:

A location beginning approximately 150 feet south and approximately 20 feet west of the NW/C of Block 31, Lawton Original Townsite to the City of Lawton, Comanche County, Oklahoma, according to the recorded plat thereof, which is located in the east street right-of-way of NW 9th Street at an existing hand hole; thence south along the eastern portion of the street right-of-way of NW 9th Street a distance of approximately 101 feet to an existing pole;

A location beginning approximately 30 feet north and 20 feet west of the SW/C of Lot 9, Block 36, North Addition to the City of Lawton, Comanche County, Oklahoma, according to the recorded plat thereof, which is located in the eastern street right-of-way of NW 9th Street at an existing hand hole; thence south under NW Bell Avenue to a point approximately 6 feet north and 6 feet west of the NW/C of Lot 8, Block 53, North Addition; thence running east along the southern street right-of-way of NW Bell Avenue adjacent to Lots 1-8, Block 53, Lots 1-8 of Block 52, Lots 1-8, Block 51, Lots 1-8, Block 50, Lots 1-8, Block 49 and Lots 1-8, Block 48 all of North Addition to a point approximately 6 feet north and 15 feet west of the NW/C of Lot 8, Block 47, North Addition; thence south along the eastern street right-of-way of NW 3rd Street adjacent to Lots 8-9, Block 47 and Lots 8-9, Block 64, North Addition to a point in the north street right-of-way of W Gore Blvd; thence south under W Gore Blvd to a point approximately 6 feet west and 6 feet north of the NW/C of Lot 8, Block 3, Lawton Original Townsite to the City of Lawton, Comanche County, Oklahoma, according to the recorded plat thereof, which is located in the eastern street right-of-way of SW 3rd Street; thence running south along the eastern street right-of-way of SW 3rd Street adjacent to Lots 8-9, Block 3, and Lots 8-9, Block 20 Lawton Original Townsite and under SW B Avenue to a point 15 feet north of the NW/C of Lot 16, Block 25, Lawton Original Townsite; thence running east along the southern street right-of-way of SW B Avenue adjacent to Lots 1-16, Block 25, Lots 1-16, Block 24, Lots 1-14, Block 23 all of Lawton Original Townsite and across the abandoned railroad right-of way to an existing pole located approximately 15 feet west of the NW/C of Lot 32, Industrial Addition to the City of Lawton, Comanche County, Oklahoma, according to the recorded plat thereof;

hereinafter referred to as the “permitted premises”.

SECTION 2. PERMIT FEES AND AUDIT.

A. The Permittee agrees that it will pay the City a construction fee of TWENTY-FOUR DOLLARS AND FIFTEEN CENTS (\$24.15) for each rod, or portion thereof, of fiberoptics cable laid within the permitted premises. The construction fee has been paid to the City prior to the effective date of this permit.

B. The Permittee also agrees that it will pay the City an annual fee of TWO DOLLARS AND FIFTY CENTS (\$2.50) for each rod, or portion thereof, or, at the election of the City, five percent (5%) of the gross income earned by Permittee for the operation of its communications system within the corporate limits of the City. Gross income is defined as rental or lease proceeds, or any other proceeds derived from the use of the permitted premises within the corporate limits of the City.

C. Unless the Permittee is notified in writing by the City Manager, the annual fee will be based on the cost of rods laid within the permitted premises; provided, however, that the City, at its sole discretion, has the right to elect either the per rod method, gross income method, or combination thereof in determining the annual fee to be paid by Permittee. If the City elects to change from the per rod method to the gross income method, adjustments or credits will be made to the payments previously made by the Permittee.

1. If the annual use fee is based on a per rod method, the fee shall be paid to the City within thirty (30) days of the yearly anniversary date after approval by the city council.
2. If the annual use fee is based on a percentage of gross income, the fee shall be paid to the City on a monthly basis no later than fifteen (15) days following the close of Permittee's billing cycle. Each payment will be accompanied by an accurate statement of the gross revenues earned from which the fee is based.

D. At the request of the City, the Permittee shall provide the City an accurate supplemental statement of its monthly gross revenues.

E. The Permittee shall provide the City a copy of its annual financial audit or certified statement of its revenue which would include the gross income earned by Permittee from the operations of its communications system within the permitted premises within one hundred twenty (120) days after the end of the Permittee's fiscal year. Further, the City, through its employees or agents, after a ten (10) day written notice by the City to Permittee, has the right of access to review

all of Permittee's financial statements, records, accounts, bank accounts and statements to verify the gross income earned by Permittee from its operation of its communications system within permitted premises. Such review will be made at Permittee's principal place of business at 120 W 12th Street, 11th Floor, Kansas City, MO 64105, or other places as agreed to by the City and the Permittee. Permittee, its employees, agents, and officials shall cooperate fully with City of Lawton representatives conducting the financial review.

SECTION 3. TERM OF PERMIT. This Permit shall be in effect from and after the date first written above and shall expire upon termination of either party. The City, through its City Council, may revoke this permit at any time by giving Permittee a ninety (90) day written notice of revocation. Upon termination or revocation of this Permit, Permittee shall immediately and no later than ninety (90) days from termination or revocation, at its own cost, remove all its fiberoptic cables, conduit, and associated facilities from the permitted premises.

SECTION 4. COMPLIANCE WITH RULES AND REGULATIONS.

A. Permittee agrees that it will comply with the following conditions:

1. The Permittee, by installation of the fiberoptic cable(s) or associated facilities, shall not interfere with vehicular traffic or public or private utilities. If a street closure is required, Permittee will make a street closure notification in accordance with City policy.
2. The Permittee shall be responsible for any damage that occurs due to the Permittee's installation, use, or maintenance of its fiberoptic cable(s) and associated facilities to any other utility or facility that is permitted to be located in the public land, right-of-way, or easement.
3. The Permittee agrees to relocate said fiberoptic cable(s) or associated facilities at the Permittee's expense, within a reasonable time which shall be agreed to by both the City and the Permittee, if the same might interfere with any proposed installation of public utilities.
4. Unless and until revoked, this Revocable Communications Cable Permit described herein is and shall be for the sole use and benefit of Permittee only.
5. This permit shall not be transferred to any successor, lessee, or assign without approval and written consent of the City.
6. The Permittee agrees that it will at all times indemnify, protect, and hold harmless the City, its officials and employees from and against any and all

damages, claims, demands, suits, actions, and causes of action arising from any injury or death to persons, or loss or destruction of or damage to property, caused by or contributed to by the negligence of the Permittee, its contractors, agents and employees.

7. It is expressly understood that the permit conveys no property interest of any kind in or to any public land, rights-of-way, or easements to the Permittee.
 8. The Permittee shall provide written notice to the City's designated office twenty (20) days prior to commencement of any routine construction, installation, or maintenance operation conducted in the public land, rights-of-way or easements. If such routine construction, installation, or maintenance operation will be interrupt, impede or restrict vehicular traffic, the Permittee shall provide advance public notice of same and shall provide on-site safeguard and traffic warnings. In emergency situations arising at other than regular business hours, notice of the work undertaken shall be given by the Permittee to the City's designated office the following business day.
 9. The Permittee shall notify the City in writing upon the termination of said fiberoptic cable(s) and all fiberoptic cables, conduit, and associated facilities shall be removed from the right-of-way or public easement within ninety (90) days of termination and said right-of-way and/or easement shall be returned to substantially the same condition existing prior to the installation.
 10. The Permittee agrees to comply with all ordinances now in force or hereafter enacted by said City.
 11. Permittee covenants and agrees that its use of the permitted area shall be restricted to the requirements of this permit for the installation and maintenance of 405.7 rods of communications cable(s).
- B. The following construction and methods shall apply to the installation of the communications cable:
1. The method of construction of said communications cable and facilities over and across the property in the permitted premises shall be subject to the approval of the City.
 2. The communications cable shall be installed at such grade that the top thereof shall not be less than thirty-six (36) inches below the surface of said

property and shall thereafter be maintained at such grade unless special permission is received from the City, but in no case shall the cable be less than thirty inches (30") below the surface.

3. The communications cable and associated facilities shall be constructed, repaired, replaced, and maintained by the Permittee at the Permittee's own cost and expense in a safe, proper, and workmanlike manner and at such times and in such a manner as not to prevent or interfere with the safe, proper, and convenient movement of traffic along, over, and across said permitted property.
4. All communications cables installed crossing from one side of a public right-of-way to the other shall be encased in a steel pipe having a minimum wall thickness of 0.250 inches or HDPE Schedule 40 conduit. If considered necessary, the City Engineer may require pressure grouting of the voids on any size encasement. This shall include private driveways located on the public rights-of-way.
5. The Permittee shall backfill all trenches, in accordance with city standards, fill all holes caused by shrinkage, remove all excess dirt, and leave the permitted premises in a solid and safe condition. The Permittee shall restore all sodded areas to its original condition by placing slab sod on all disturbed areas and subject to the inspection and approval of the City. If the Permittee shall fail to make any repairs or do any work required of said Permittee by the provisions of this permit within ten (10) working days after receipt of written notice from the City calling attention thereto and requesting such repairs or work to be done, then the City shall have the right to make such repairs or do such work at the expense of the Permittee and the Permittee shall reimburse the City for cost and expense of such repairs or work promptly upon receipt of a bill thereof by the City to the Permittee.
6. All communications cables installed crossing from one side of the public right-of-way to the other or crossing any City underground facilities, such as water, sewer or drainage lines, shall require pre-bore potholing of City facilities and an inspection. When openings are made adjacent to any street or alley, or within any street right-of-way or public easement, the Permittee shall, at its expense, furnish barricades, fences, lights, and danger signals and shall take all precautionary measures for the protection of the public. Permittee will be charged, in accordance with the Fee Schedule, for any requested or required inspections conducted by the City.

7. No materials or equipment used in the construction of the work shall be placed so as to endanger the work or prevent free access to all water valves, gas valves, manholes, electric, and telephone in the vicinity. The City reserves the right to remedy any neglect, on the part of the Permittee as regards the protection of the work, at the Permittee's expense.
8. No use of private owned property without prior written consent from the property owner of record. Use includes the storage of any materials or equipment. City is only granting use of public rights-of-way and public easements within the area described in SECTION 1 of this permit.
9. It is expressly agreed that in the event that the City revokes the permit or directs the Permittee to relocate all or a portion of the communications cable and/or associated facilities authorized by this permit, the Permittee will at its sole expense, remove or relocate its cable and associated facilities as the City directs within ninety (90) days of such revocation.
10. All street crossings will require dry boxing and/or tunneling at a minimum depth of forty-eight inches (48") below the street surface unless special permission is received from the City to open cut.
11. The Permittee shall place handhole lids with permanent labels on all handholes within the street right-of-way or public easement. The label shall include the company's name and be made of material sturdy enough to resist weather and normal wear and tear so that the label can be easily read until such time the handhole is removed. Label shall be permanently affixed to said lid or made as part of the lid.
12. The Permittee shall provide the City's designated office with a set of record surveyed as-built drawings of the cable facilities installed within any street right-of-way or public easement within forty-five (45) days of installation which shall be reviewed by the City Engineer for compliance with this permit and the City Code.
13. The Permittee shall obtain and maintain during the term of this permit and any renewal term a general liability insurance covering property damage and bodily injury, including death, in the following amounts: \$1,000,000 aggregate; \$100,000 per person; and \$25,000 property damage. The City of Lawton is to be shown on the certificate as additional insured. The City shall receive proof of said insurance prior to any excavation/installation under this permit.

14. Permittee will place no additional structures, encroachments, or improvements in or upon the permitted property without approval of the City.

15. Permittee will restore grounds to their preexisting condition and restore infrastructure to City Code standards following excavation in the permitted area.

SECTION 5. INDEMNIFICATION. Permittee covenants and agrees, at its expense, to defend, indemnify, and save the City, its officials and employees harmless of, from and against any and all claims, damages, expenses, liabilities, taxes and losses of every conceivable kind, character and nature whatsoever asserted by or on behalf of any person, firm, corporation or governmental authority arising out of, resulting from, or in any way connected with the issuance of this permit, the leased premises or the condition, occupancy, use, possession, conduct, operation or management, or any work done in or about the leased premises granted under the permit issued by City to Permittee.

SECTION 6. SEVERABILITY. If any phase of this permit described in SECTION 1 is disconnected, terminated, or ruled invalid by a court of competent jurisdiction, said phase shall be deemed separate, distinct, and independent from the remaining phases and such disconnection, termination, or ruling shall not affect the validity of the remaining phases of this permit.

SECTION 7. POINTS OF CONTACT. The points of contact for the administration of this Revocable Communications Cable Permit are:

City Planning
City of Lawton
212 SW 9th Street
Lawton, Oklahoma 73501
(580) 581-3375

City Public Utilities
City of Lawton
212 SW 9th Street
Lawton, Oklahoma 73501
(580) 581-3324

Unite Private Networks, LLC dba Segra
Charlene White, VP & AGC, Real Estate
120 W 12th Street, 11th Floor
Kansas City, MO 64105
816-591-5095

IN WITNESS WHEREOF, the parties hereto have caused the above and foregoing instrument to be duly executed in duplicate originals, the day and year first written.

CITY OF LAWTON, OKLAHOMA
a municipal corporation

BY: _____
STANLEY BOOKER, MAYOR

ATTEST:

DONALYNN BLAZEK-SCHERLER, CITY CLERK

APPROVED as to form and legality the _____ day of _____, 2025.

TIMOTHY WILSON, INTERIM CITY ATTORNEY

PERMITEE

BY: _____
Charlene White, VP & AGC, Real Estate

ATTEST:

Name & Title

STATE OF MISSOURI)
) SS
COUNTY OF _____)

Before me, the undersigned, a Notary Public in and for said County and State, on this _____ day of _____, 2025, personally appeared Charlene White, to me known to be the identical person who executed the within and foregoing instrument as its VP & AGC, Real Estate and acknowledged to me that she executed the same as her free and voluntary act and deed and as the free and voluntary act and deed of such corporation for the uses and purposes therein set forth.

Given under my hand and seal the day and year last written.

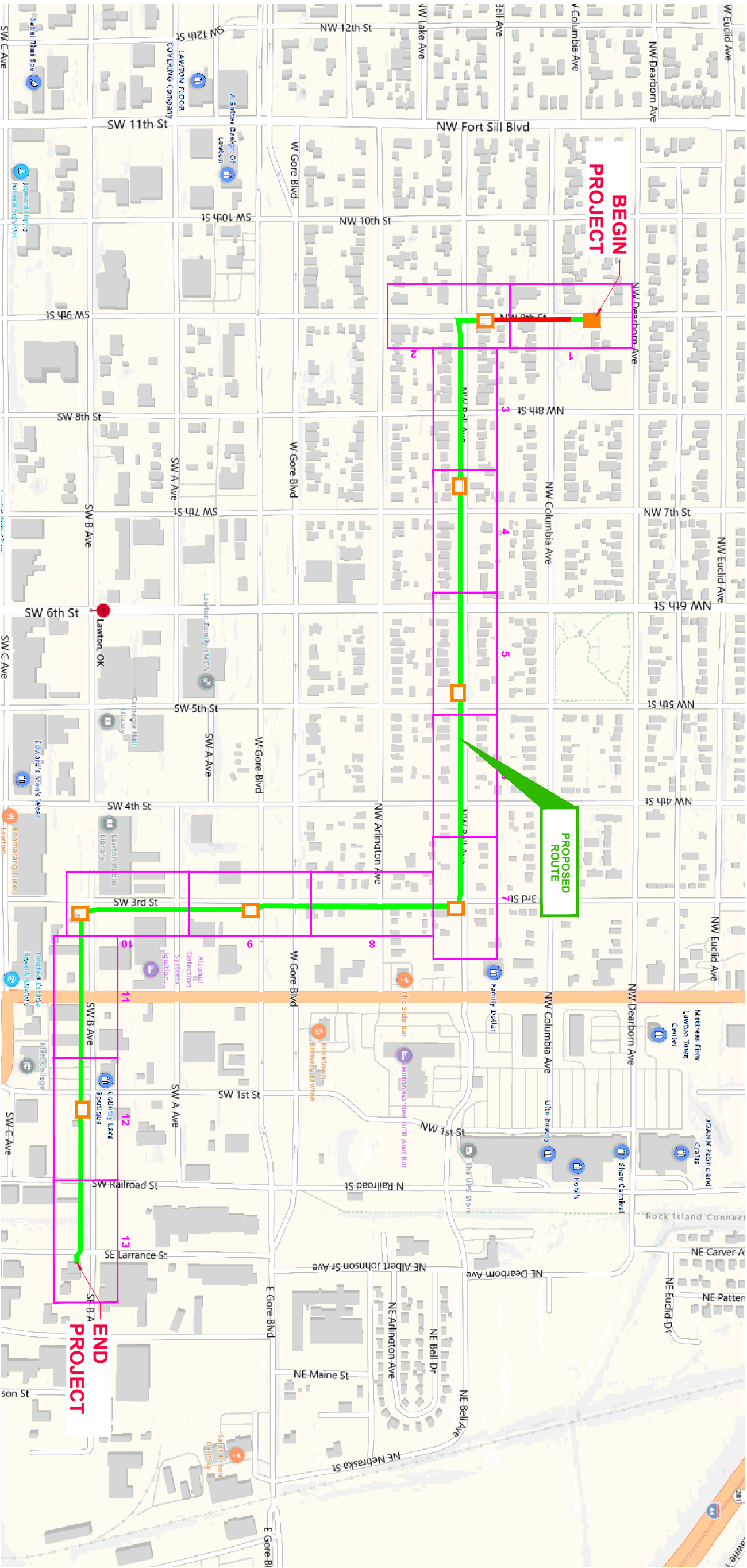
(SEAL)

NOTARY PUBLIC

Commission Number: _____

Commission Expires: _____

VICINITY



DESIGN CONTRACTOR:



LEGEND

AERIAL	PROG. SPLICE POINT
UNDERGROUND	PROG. HANDHOLE
EXIST. SEGRA NETWORK	
PULL-THRU EXIST.	
TO BE PLACED BY OTHERS	

SEGRA

RING CLOSURE 1
NW 9TH ST TO SE LARRANCE ST
LAWTON, OK 73501

CONSTRUCTION
APRIL 10, 2025

RING_CLOSURE_1_MS.DWG

Item Title:

Consider approving a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Ring Closure 2) to serve a Lawton Public School facility, and authorizing the Mayor and City Clerk to execute the permit.

Initiator: Christine James, Director

Information Source: Christine James, Director, Kameron Good, Planning - Senior Planner

Background:

Unite Private Networks, LLC dba Segra has been hired by Lawton Public Schools to run fiber to several of their facilities. The Public Utilities Department has reviewed and approved the proposed route. Since the route will be within the street right-of-way or public easement, a Council approved Revocable Communications Cable Permit is required. The applicant has paid the construction fee of \$24.15 for each proposed rod, or portion thereof, to be installed underground, and they will pay an annual fee of \$2.50 for each rod, or portion thereof, until such time the fiber is no longer needed and all fiberoptic cable, conduit, and associated facilities are removed from the City's streets right-of-way or public easements at the applicant's own cost.

Ring Closure 2 is approximately 331 feet or 20.06 rods

Correlation to the True North Statement:**Exhibit:**

Revocable Permit_Ring Closure 2

Key Issues:

N/A

Funding Source:

Revenue Source

Recommended Action:

Approve a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Ring Closure 2) to serve a Lawton Public School facility, and authorize the Mayor and City Clerk to execute the permit.

ATTACHMENTS:

1. Ring Closure 2_RP

REVOCABLE COMMUNICATIONS CABLE PERMIT

This Revocable Communications Cable Permit is made and entered into this ____ day of _____, 2025, by and between the City of Lawton, Oklahoma, a municipal corporation (hereinafter called "City") and Unite Private Networks, LLC dba Segra (hereinafter called "Permittee").

SECTION 1. GRANT OF PERMIT. The City hereby grants unto Permittee a Revocable Communications Cable Permit for the right and privilege to lay 331 feet (20.06) rods of communication cable along and under certain streets, alleys, easements and public rights-of-way within the corporate limits of said City, said cables being located in Section 20, T2N, R11W, more particularly described below:

A location beginning approximately 860 feet east and 34 feet south of the NW/C of Section 20, Township 2 North, Range 11 West, I.M., Comanche County, Oklahoma, according to the US Government Survey thereof which is located in the south street right-of-way of NE Rogers Lane at an existing power pole; thence west along the southern portion of the street right-of-way of NE Rogers Lane a distance of approximately 77 feet to a point along the east side of NE Lawrie Tatum Road; thence south along the eastern portion of the street right-of-way of NE Lawrie Tatum Road a distance of 254 feet;

hereinafter referred to as the "permitted premises".

SECTION 2. PERMIT FEES AND AUDIT.

A. The Permittee agrees that it will pay the City a construction fee of TWENTY-FOUR DOLLARS AND FIFTEEN CENTS (\$24.15) for each rod, or portion thereof, of fiberoptics cable laid within the permitted premises. The construction fee has been paid to the City prior to the effective date of this permit.

B. The Permittee also agrees that it will pay the City an annual fee of TWO DOLLARS AND FIFTY CENTS (\$2.50) for each rod, or portion thereof, or, at the election of the City, five percent (5%) of the gross income earned by Permittee for the operation of its communications system within the corporate limits of the City. Gross income is defined as rental or lease proceeds, or any other proceeds derived from the use of the permitted premises within the corporate limits of the City.

C. Unless the Permittee is notified in writing by the City Manager, the annual fee will be based on the cost of rods laid within the permitted premises; provided, however, that the City, at its sole discretion, has the right to elect either the per rod method, gross income method, or combination thereof in determining the annual fee to be paid by Permittee. If the City elects to

change from the per rod method to the gross income method, adjustments or credits will be made to the payments previously made by the Permittee.

1. If the annual use fee is based on a per rod method, the fee shall be paid to the City within thirty (30) days of the yearly anniversary date after approval by the city council.
2. If the annual use fee is based on a percentage of gross income, the fee shall be paid to the City on a monthly basis no later than fifteen (15) days following the close of Permittee's billing cycle. Each payment will be accompanied by an accurate statement of the gross revenues earned from which the fee is based.

D. At the request of the City, the Permittee shall provide the City an accurate supplemental statement of its monthly gross revenues.

E. The Permittee shall provide the City a copy of its annual financial audit or certified statement of its revenue which would include the gross income earned by Permittee from the operations of its communications system within the permitted premises within one hundred twenty (120) days after the end of the Permittee's fiscal year. Further, the City, through its employees or agents, after a ten (10) day written notice by the City to Permittee, has the right of access to review all of Permittee's financial statements, records, accounts, bank accounts and statements to verify the gross income earned by Permittee from its operation of its communications system within permitted premises. Such review will be made at Permittee's principal place of business at 120 W 12th Street, 11th Floor, Kansas City, MO 64105, or other places as agreed to by the City and the Permittee. Permittee, its employees, agents, and officials shall cooperate fully with City of Lawton representatives conducting the financial review.

SECTION 3. TERM OF PERMIT. This Permit shall be in effect from and after the date first written above and shall expire upon termination of either party. The City, through its City Council, may revoke this permit at any time by giving Permittee a ninety (90) day written notice of revocation. Upon termination or revocation of this Permit, Permittee shall immediately and no later than ninety (90) days from termination or revocation, at its own cost, remove all its fiberoptic cables, conduit, and associated facilities from the permitted premises.

SECTION 4. COMPLIANCE WITH RULES AND REGULATIONS.

A. Permittee agrees that it will comply with the following conditions:

1. The Permittee, by installation of the fiberoptic cable(s) or associated facilities, shall not interfere with vehicular traffic or public or private utilities. If a

street closure is required, Permittee will make a street closure notification in accordance with City policy.

2. The Permittee shall be responsible for any damage that occurs due to the Permittee's installation, use, or maintenance of its fiberoptic cable(s) and associated facilities to any other utility or facility that is permitted to be located in the public land, right-of-way, or easement.
3. The Permittee agrees to relocate said fiberoptic cable(s) or associated facilities at the Permittee's expense, within a reasonable time which shall be agreed to by both the City and the Permittee, if the same might interfere with any proposed installation of public utilities.
4. Unless and until revoked, this Revocable Communications Cable Permit described herein is and shall be for the sole use and benefit of Permittee only.
5. This permit shall not be transferred to any successor, lessee, or assign without approval and written consent of the City.
6. The Permittee agrees that it will at all times indemnify, protect, and hold harmless the City, its officials and employees from and against any and all damages, claims, demands, suits, actions, and causes of action arising from any injury or death to persons, or loss or destruction of or damage to property, caused by or contributed to by the negligence of the Permittee, its contractors, agents and employees.
7. It is expressly understood that the permit conveys no property interest of any kind in or to any public land, rights-of-way, or easements to the Permittee.
8. The Permittee shall provide written notice to the City's designated office twenty (20) days prior to commencement of any routine construction, installation, or maintenance operation conducted in the public land, rights-of-way or easements. If such routine construction, installation, or maintenance operation will be interrupt, impede or restrict vehicular traffic, the Permittee shall provide advance public notice of same and shall provide on-site safeguard and traffic warnings. In emergency situations arising at other than regular business hours, notice of the work undertaken shall be given by the Permittee to the City's designated office the following business day.
9. The Permittee shall notify the City in writing upon the termination of said fiberoptic cable(s) and all fiberoptic cables, conduit, and associated

facilities shall be removed from the right-of-way or public easement within ninety (90) days of termination and said right-of-way and/or easement shall be returned to substantially the same condition existing prior to the installation.

10. The Permittee agrees to comply with all ordinances now in force or hereafter enacted by said City.

11. Permittee covenants and agrees that its use of the permitted area shall be restricted to the requirements of this permit for the installation and maintenance of 20.06 rods of communications cable(s).

B. The following construction and methods shall apply to the installation of the communications cable:

1. The method of construction of said communications cable and facilities over and across the property in the permitted premises shall be subject to the approval of the City.
2. The communications cable shall be installed at such grade that the top thereof shall not be less than thirty-six (36) inches below the surface of said property and shall thereafter be maintained at such grade unless special permission is received from the City, but in no case shall the cable be less than thirty inches (30") below the surface.
3. The communications cable and associated facilities shall be constructed, repaired, replaced, and maintained by the Permittee at the Permittee's own cost and expense in a safe, proper, and workmanlike manner and at such times and in such a manner as not to prevent or interfere with the safe, proper, and convenient movement of traffic along, over, and across said permitted property.
4. All communications cables installed crossing from one side of a public right-of-way to the other shall be encased in a steel pipe having a minimum wall thickness of 0.250 inches or HDPE Schedule 40 conduit. If considered necessary, the City Engineer may require pressure grouting of the voids on any size encasement. This shall include private driveways located on the public rights-of-way.
5. The Permittee shall backfill all trenches, in accordance with city standards, fill all holes caused by shrinkage, remove all excess dirt, and leave the

permitted premises in a solid and safe condition. The Permittee shall restore all sodded areas to its original condition by placing slab sod on all disturbed areas and subject to the inspection and approval of the City. If the Permittee shall fail to make any repairs or do any work required of said Permittee by the provisions of this permit within ten (10) working days after receipt of written notice from the City calling attention thereto and requesting such repairs or work to be done, then the City shall have the right to make such repairs or do such work at the expense of the Permittee and the Permittee shall reimburse the City for cost and expense of such repairs or work promptly upon receipt of a bill thereof by the City to the Permittee.

6. All communications cables installed crossing from one side of the public right-of-way to the other or crossing any City underground facilities, such as water, sewer or drainage lines, shall require pre-bore potholing of City facilities and an inspection. When openings are made adjacent to any street or alley, or within any street right-of-way or public easement, the Permittee shall, at its expense, furnish barricades, fences, lights, and danger signals and shall take all precautionary measures for the protection of the public. Permittee will be charged, in accordance with the Fee Schedule, for any requested or required inspections conducted by the City.
7. No materials or equipment used in the construction of the work shall be placed so as to endanger the work or prevent free access to all water valves, gas valves, manholes, electric, and telephone in the vicinity. The City reserves the right to remedy any neglect, on the part of the Permittee as regards the protection of the work, at the Permittee's expense.
8. No use of private owned property without prior written consent from the property owner of record. Use includes the storage of any materials or equipment. City is only granting use of public rights-of-way and public easements within the area described in SECTION 1 of this permit.
9. It is expressly agreed that in the event that the City revokes the permit or directs the Permittee to relocate all or a portion of the communications cable and/or associated facilities authorized by this permit, the Permittee will at its sole expense, remove or relocate its cable and associated facilities as the City directs within ninety (90) days of such revocation.
10. All street crossings will require dry boxing and/or tunneling at a minimum depth of forty-eight inches (48") below the street surface unless special permission is received from the City to open cut.

11. The Permittee shall place handhole lids with permanent labels on all handholes within the street right-of-way or public easement. The label shall include the company's name and be made of material sturdy enough to resist weather and normal wear and tear so that the label can be easily read until such time the handhole is removed. Label shall be permanently affixed to said lid or made as part of the lid.
12. The Permittee shall provide the City's designated office with a set of record surveyed as-built drawings of the cable facilities installed within any street right-of-way or public easement within forty-five (45) days of installation which shall be reviewed by the City Engineer for compliance with this permit and the City Code.
13. The Permittee shall obtain and maintain during the term of this permit and any renewal term a general liability insurance covering property damage and bodily injury, including death, in the following amounts: \$1,000,000 aggregate; \$100,000 per person; and \$25,000 property damage. The City of Lawton is to be shown on the certificate as additional insured. The City shall receive proof of said insurance prior to any excavation/installation under this permit.
14. Permittee will place no additional structures, encroachments, or improvements in or upon the permitted property without approval of the City.
15. Permittee will restore grounds to their preexisting condition and restore infrastructure to City Code standards following excavation in the permitted area.

SECTION 5. INDEMNIFICATION. Permittee covenants and agrees, at its expense, to defend, indemnify, and save the City, its officials and employees harmless of, from and against any and all claims, damages, expenses, liabilities, taxes and losses of every conceivable kind, character and nature whatsoever asserted by or on behalf of any person, firm, corporation or governmental authority arising out of, resulting from, or in any way connected with the issuance of this permit, the leased premises or the condition, occupancy, use, possession, conduct, operation or management, or any work done in or about the leased premises granted under the permit issued by City to Permittee.

SECTION 6. SEVERABILITY. If any phase of this permit described in SECTION 1 is disconnected, terminated, or ruled invalid by a court of competent jurisdiction, said phase shall be

deemed separate, distinct, and independent from the remaining phases and such disconnection, termination, or ruling shall not affect the validity of the remaining phases of this permit.

SECTION 7. POINTS OF CONTACT. The points of contact for the administration of this Revocable Communications Cable Permit are:

City Planning
City of Lawton
212 SW 9th Street
Lawton, Oklahoma 73501
(580) 581-3375

City Public Utilities
City of Lawton
212 SW 9th Street
Lawton, Oklahoma 73501
(580) 581-3324

Unite Private Networks, LLC dba Segra
Charlene White, VP & AGC, Real Estate
120 W 12th Street, 11th Floor
Kansas City, MO 64105
816-591-5095

IN WITNESS WHEREOF, the parties hereto have caused the above and foregoing instrument to be duly executed in duplicate originals, the day and year first written.

CITY OF LAWTON, OKLAHOMA
a municipal corporation

BY: _____
STANLEY BOOKER, MAYOR

ATTEST:

DONALYNN BLAZEK-SCHERLER, CITY CLERK

APPROVED as to form and legality the _____ day of _____, 2025.

TIMOTHY WILSON, INTERIM CITY ATTORNEY

PERMITEE

BY: _____
Charlene White, VP & AGC, Real Estate

ATTEST:

Name & Title

STATE OF MISSOURI)
) SS
COUNTY OF _____)

Before me, the undersigned, a Notary Public in and for said County and State, on this _____ day of _____, 2025, personally appeared Charlene White, to me known to be the identical person who executed the within and foregoing instrument as its VP & AGC, Real Estate and acknowledged to me that she executed the same as her free and voluntary act and deed and as the free and voluntary act and deed of such corporation for the uses and purposes therein set forth.

Given under my hand and seal the day and year last written.

(SEAL)

NOTARY PUBLIC

Commission Number: _____

Commission Expires: _____

NOTE:
ALL AS-BUILTS WILL REQUIRE TEXT AND RED LINES
VIA PDF WRITER, NO OTHER FORM WILL BE ACCEPTED



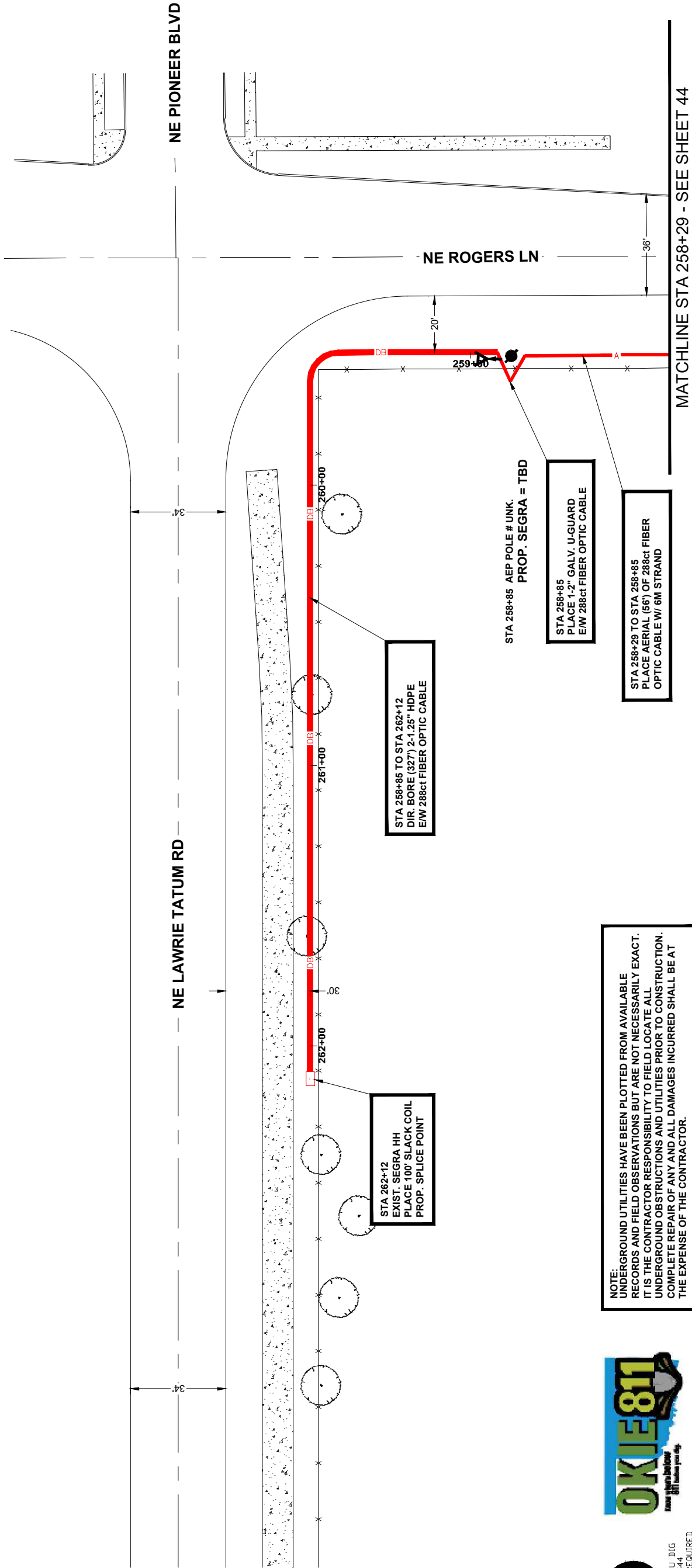
NOTE:
CONTRACTOR TO VERIFY
EXISTING SEGRA TIE-IN POINT
PRIOR TO CONSTRUCTION.

CAUTION !!!
CONTRACTOR TO LOCATE &
VERIFY ALL EXISTING UTILITIES
PRIOR TO CONSTRUCTION

CAUTION!!!
EXIST. BURIED FIBER, TELEPHONE, CATV, GAS, ELECTRIC, WATER,
SANITARY SEWER & STORM SEWER FACILITIES IN CONSTRUCTION AREA
AND HAVE NOT BEEN FIELD LOCATED. CONTRACTOR TO VERIFY EXACT
LOCATION AND DEPTH PRIOR TO ANY DIGGING AND/OR BORING.



SCALE 1"=40'



NOTE:
UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE
RECORDS AND FIELD OBSERVATIONS BUT ARE NOT NECESSARILY EXACT.
IT IS THE CONTRACTOR RESPONSIBILITY TO FIELD LOCATE ALL
UNDERGROUND OBSTRUCTIONS AND UTILITIES PRIOR TO CONSTRUCTION.
COMPLETE REPAIR OF ANY AND ALL DAMAGES INCURRED SHALL BE AT
THE EXPENSE OF THE CONTRACTOR.

DESCRIPTION	UNIT	QUANTITY	LF	-	1-1.25" PLENUM	LF	-
288ct FIBER OPTIC CABLE (OVERLASH)	LF	-	LF	-	1-1.25" PLENUM	LF	-
288ct FIBER OPTIC CABLE (AERIAL)	LF	66	LF	-	1-1.25" CORE BORE	EA	-
288ct FIBER OPTIC CABLE (RIBER)	LF	20	LF	327	SEGRA EQUIPMENT	EA	-
288ct FIBER OPTIC CABLE NEW (U.G.)	LF	327	LF	-	3/4" PLYWOOD BACKBOARD	EA	-
6W STRAND	LF	66	LF	654	REMOVE & RESTORE CONCRETE S/W	SF	-
1-2" ONLY U-GUARD	EA	1	EA	-	REMOVE & RESTORE CONCRETE PAVEMENT	SF	-
OVERHEAD GUY	FT	-	EA	-	SLACK COIL IN HHWH	FT	100
DOWN GUY & ANCHOR	EA	1	LF	-	24H FIBER OPTIC CABLE (TOTAL)	LF	-
AERIAL SLACK LOOP	FT	-	LF	-	288ct FIBER OPTIC CABLE (TOTAL)	LF	503



REV	DESCRIPTION	BY	APVD	DATE
-		-	-	-
-		-	-	-
-		-	-	-
-		-	-	-
0	20	-	40	-

INFORMATION ON THIS DOCUMENT IS PROPRIETARY AND SHALL NOT
BE USED, REPRODUCED OR DISCLOSED IN WHOLE OR IN PART
WITHOUT WRITTEN CONSENT OF LAMBER

SEGRA

COMANCHE COUNTY
LAWTON, OK

PROJECT:	LAWTON, OK - RING CLOSURE 2 NE 45TH ST TO NE LAWRIE TATUM RD LAWTON, OK 73507	PROJECT CODE:	PC-51229
TITLE:	FIBER OPTIC CABLE BUILD PLAN	DRAWN LIT SERVICES	DWG NO:
APPRV	-	APPV	-
SHEETS	45 OF 45	APPROVED ORIGINAL ISSUE	04/10/25

MATCHLINE STA 258+29 - SEE SHEET 44

Item Title:

Consider approving a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Ring Closure 3) to serve a Lawton Public School facility, and authorizing the Mayor and City Clerk to execute the permit.

Initiator: Christine James, Director

Information Source: Christine James, Director, Kameron Good, Planning - Senior Planner

Background:

Unite Private Networks, LLC dba Segra has been hired by Lawton Public Schools to run fiber to several of their facilities. The Public Utilities Department has reviewed and approved the proposed route. Since the route will be within the street right-of-way or public easement, a Council approved Revocable Communications Cable Permit is required. The applicant has paid the construction fee of \$24.15 for each proposed rod, or portion thereof, to be installed underground, and they will pay an annual fee of \$2.50 for each rod, or portion thereof, until such time the fiber is no longer needed and all fiberoptic cable, conduit, and associated facilities are removed from the City's streets right-of-way or public easements at the applicant's own cost.

Ring Closure 3 is approximately 3 feet or 0.1818 rods

Correlation to the True North Statement:**Exhibit:**

Revocable Permit_Ring Closure 3

Key Issues:

N/A

Funding Source:

Revenue Source

Recommended Action:

Approve a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Ring Closure 3) to serve a Lawton Public School facility, and authorize the Mayor and City Clerk to execute the permit.

ATTACHMENTS:

1. Ring Closure 3_RP

REVOCABLE COMMUNICATIONS CABLE PERMIT

This Revocable Communications Cable Permit is made and entered into this ____ day of _____, 2025, by and between the City of Lawton, Oklahoma, a municipal corporation (hereinafter called "City") and Unite Private Networks, LLC dba Segra (hereinafter called "Permittee").

SECTION 1. GRANT OF PERMIT. The City hereby grants unto Permittee a Revocable Communications Cable Permit for the right and privilege to lay 3 feet (0.1818) rods of communication cable along and under certain streets, alleys, easements and public rights-of-way within the corporate limits of said City, said cables being located in Section 28, T2N, R12W, more particularly described below:

A location beginning approximately 12 feet south of the SW/C of Lot 1, Block 22 of Country Club West Addition, Part 6, to the City of Lawton, Comanche County, Oklahoma, according to the recorded plat thereof a point being an existing pole; thence east along the northern portion of the street right-of-way of W Gore Blvd a distance of 3 feet to an existing handhole;

hereinafter referred to as the "permitted premises".

SECTION 2. PERMIT FEES AND AUDIT.

A. The Permittee agrees that it will pay the City a construction fee of TWENTY-FOUR DOLLARS AND FIFTEEN CENTS (\$24.15) for each rod, or portion thereof, of fiberoptics cable laid within the permitted premises. The construction fee has been paid to the City prior to the effective date of this permit.

B. The Permittee also agrees that it will pay the City an annual fee of TWO DOLLARS AND FIFTY CENTS (\$2.50) for each rod, or portion thereof, or, at the election of the City, five percent (5%) of the gross income earned by Permittee for the operation of its communications system within the corporate limits of the City. Gross income is defined as rental or lease proceeds, or any other proceeds derived from the use of the permitted premises within the corporate limits of the City.

C. Unless the Permittee is notified in writing by the City Manager, the annual fee will be based on the cost of rods laid within the permitted premises; provided, however, that the City, at its sole discretion, has the right to elect either the per rod method, gross income method, or combination thereof in determining the annual fee to be paid by Permittee. If the City elects to change from the per rod method to the gross income method, adjustments or credits will be made to the payments previously made by the Permittee.

1. If the annual use fee is based on a per rod method, the fee shall be paid to the City within thirty (30) days of the yearly anniversary date after approval by the city council.
2. If the annual use fee is based on a percentage of gross income, the fee shall be paid to the City on a monthly basis no later than fifteen (15) days following the close of Permittee's billing cycle. Each payment will be accompanied by an accurate statement of the gross revenues earned from which the fee is based.

D. At the request of the City, the Permittee shall provide the City an accurate supplemental statement of its monthly gross revenues.

E. The Permittee shall provide the City a copy of its annual financial audit or certified statement of its revenue which would include the gross income earned by Permittee from the operations of its communications system within the permitted premises within one hundred twenty (120) days after the end of the Permittee's fiscal year. Further, the City, through its employees or agents, after a ten (10) day written notice by the City to Permittee, has the right of access to review all of Permittee's financial statements, records, accounts, bank accounts and statements to verify the gross income earned by Permittee from its operation of its communications system within permitted premises. Such review will be made at Permittee's principal place of business at 120 W 12th Street, 11th Floor, Kansas City, MO 64105, or other places as agreed to by the City and the Permittee. Permittee, its employees, agents, and officials shall cooperate fully with City of Lawton representatives conducting the financial review.

SECTION 3. TERM OF PERMIT. This Permit shall be in effect from and after the date first written above and shall expire upon termination of either party. The City, through its City Council, may revoke this permit at any time by giving Permittee a ninety (90) day written notice of revocation. Upon termination or revocation of this Permit, Permittee shall immediately and no later than ninety (90) days from termination or revocation, at its own cost, remove all its fiberoptic cables, conduit, and associated facilities from the permitted premises.

SECTION 4. COMPLIANCE WITH RULES AND REGULATIONS.

A. Permittee agrees that it will comply with the following conditions:

1. The Permittee, by installation of the fiberoptic cable(s) or associated facilities, shall not interfere with vehicular traffic or public or private utilities. If a street closure is required, Permittee will make a street closure notification in accordance with City policy.

2. The Permittee shall be responsible for any damage that occurs due to the Permittee's installation, use, or maintenance of its fiberoptic cable(s) and associated facilities to any other utility or facility that is permitted to be located in the public land, right-of-way, or easement.
3. The Permittee agrees to relocate said fiberoptic cable(s) or associated facilities at the Permittee's expense, within a reasonable time which shall be agreed to by both the City and the Permittee, if the same might interfere with any proposed installation of public utilities.
4. Unless and until revoked, this Revocable Communications Cable Permit described herein is and shall be for the sole use and benefit of Permittee only.
5. This permit shall not be transferred to any successor, lessee, or assign without approval and written consent of the City.
6. The Permittee agrees that it will at all times indemnify, protect, and hold harmless the City, its officials and employees from and against any and all damages, claims, demands, suits, actions, and causes of action arising from any injury or death to persons, or loss or destruction of or damage to property, caused by or contributed to by the negligence of the Permittee, its contractors, agents and employees.
7. It is expressly understood that the permit conveys no property interest of any kind in or to any public land, rights-of-way, or easements to the Permittee.
8. The Permittee shall provide written notice to the City's designated office twenty (20) days prior to commencement of any routine construction, installation, or maintenance operation conducted in the public land, rights-of-way or easements. If such routine construction, installation, or maintenance operation will be interrupt, impede or restrict vehicular traffic, the Permittee shall provide advance public notice of same and shall provide on-site safeguard and traffic warnings. In emergency situations arising at other than regular business hours, notice of the work undertaken shall be given by the Permittee to the City's designated office the following business day.
9. The Permittee shall notify the City in writing upon the termination of said fiberoptic cable(s) and all fiberoptic cables, conduit, and associated facilities shall be removed from the right-of-way or public easement within ninety (90) days of termination and said right-of-way and/or easement shall

be returned to substantially the same condition existing prior to the installation.

10. The Permittee agrees to comply with all ordinances now in force or hereafter enacted by said City.

11. Permittee covenants and agrees that its use of the permitted area shall be restricted to the requirements of this permit for the installation and maintenance of 0.1818 rods of communications cable(s).

B. The following construction and methods shall apply to the installation of the communications cable:

1. The method of construction of said communications cable and facilities over and across the property in the permitted premises shall be subject to the approval of the City.
2. The communications cable shall be installed at such grade that the top thereof shall not be less than thirty-six (36) inches below the surface of said property and shall thereafter be maintained at such grade unless special permission is received from the City, but in no case shall the cable be less than thirty inches (30") below the surface.
3. The communications cable and associated facilities shall be constructed, repaired, replaced, and maintained by the Permittee at the Permittee's own cost and expense in a safe, proper, and workmanlike manner and at such times and in such a manner as not to prevent or interfere with the safe, proper, and convenient movement of traffic along, over, and across said permitted property.
4. All communications cables installed crossing from one side of a public right-of-way to the other shall be encased in a steel pipe having a minimum wall thickness of 0.250 inches or HDPE Schedule 40 conduit. If considered necessary, the City Engineer may require pressure grouting of the voids on any size encasement. This shall include private driveways located on the public rights-of-way.
5. The Permittee shall backfill all trenches, in accordance with city standards, fill all holes caused by shrinkage, remove all excess dirt, and leave the permitted premises in a solid and safe condition. The Permittee shall restore all sodded areas to its original condition by placing slab sod on all disturbed

areas and subject to the inspection and approval of the City. If the Permittee shall fail to make any repairs or do any work required of said Permittee by the provisions of this permit within ten (10) working days after receipt of written notice from the City calling attention thereto and requesting such repairs or work to be done, then the City shall have the right to make such repairs or do such work at the expense of the Permittee and the Permittee shall reimburse the City for cost and expense of such repairs or work promptly upon receipt of a bill thereof by the City to the Permittee.

6. All communications cables installed crossing from one side of the public right-of-way to the other or crossing any City underground facilities, such as water, sewer or drainage lines, shall require pre-bore potholing of City facilities and an inspection. When openings are made adjacent to any street or alley, or within any street right-of-way or public easement, the Permittee shall, at its expense, furnish barricades, fences, lights, and danger signals and shall take all precautionary measures for the protection of the public. Permittee will be charged, in accordance with the Fee Schedule, for any requested or required inspections conducted by the City.
7. No materials or equipment used in the construction of the work shall be placed so as to endanger the work or prevent free access to all water valves, gas valves, manholes, electric, and telephone in the vicinity. The City reserves the right to remedy any neglect, on the part of the Permittee as regards the protection of the work, at the Permittee's expense.
8. No use of private owned property without prior written consent from the property owner of record. Use includes the storage of any materials or equipment. City is only granting use of public rights-of-way and public easements within the area described in SECTION 1 of this permit.
9. It is expressly agreed that in the event that the City revokes the permit or directs the Permittee to relocate all or a portion of the communications cable and/or associated facilities authorized by this permit, the Permittee will at its sole expense, remove or relocate its cable and associated facilities as the City directs within ninety (90) days of such revocation.
10. All street crossings will require dry boxing and/or tunneling at a minimum depth of forty-eight inches (48") below the street surface unless special permission is received from the City to open cut.

11. The Permittee shall place handhole lids with permanent labels on all handholes within the street right-of-way or public easement. The label shall include the company's name and be made of material sturdy enough to resist weather and normal wear and tear so that the label can be easily read until such time the handhole is removed. Label shall be permanently affixed to said lid or made as part of the lid.
12. The Permittee shall provide the City's designated office with a set of record surveyed as-built drawings of the cable facilities installed within any street right-of-way or public easement within forty-five (45) days of installation which shall be reviewed by the City Engineer for compliance with this permit and the City Code.
13. The Permittee shall obtain and maintain during the term of this permit and any renewal term a general liability insurance covering property damage and bodily injury, including death, in the following amounts: \$1,000,000 aggregate; \$100,000 per person; and \$25,000 property damage. The City of Lawton is to be shown on the certificate as additional insured. The City shall receive proof of said insurance prior to any excavation/installation under this permit.
14. Permittee will place no additional structures, encroachments, or improvements in or upon the permitted property without approval of the City.
15. Permittee will restore grounds to their preexisting condition and restore infrastructure to City Code standards following excavation in the permitted area.

SECTION 5. INDEMNIFICATION. Permittee covenants and agrees, at its expense, to defend, indemnify, and save the City, its officials and employees harmless of, from and against any and all claims, damages, expenses, liabilities, taxes and losses of every conceivable kind, character and nature whatsoever asserted by or on behalf of any person, firm, corporation or governmental authority arising out of, resulting from, or in any way connected with the issuance of this permit, the leased premises or the condition, occupancy, use, possession, conduct, operation or management, or any work done in or about the leased premises granted under the permit issued by City to Permittee.

SECTION 6. SEVERABILITY. If any phase of this permit described in SECTION 1 is disconnected, terminated, or ruled invalid by a court of competent jurisdiction, said phase shall be deemed separate, distinct, and independent from the remaining phases and such disconnection, termination, or ruling shall not affect the validity of the remaining phases of this permit.

SECTION 7. POINTS OF CONTACT. The points of contact for the administration of this Revocable Communications Cable Permit are:

City Planning
City of Lawton
212 SW 9th Street
Lawton, Oklahoma 73501
(580) 581-3375

City Public Utilities
City of Lawton
212 SW 9th Street
Lawton, Oklahoma 73501
(580) 581-3324

Unite Private Networks, LLC dba Segra
Charlene White, VP & AGC, Real Estate
120 W 12th Street, 11th Floor
Kansas City, MO 64105
816-591-5095

IN WITNESS WHEREOF, the parties hereto have caused the above and foregoing instrument to be duly executed in duplicate originals, the day and year first written.

CITY OF LAWTON, OKLAHOMA
a municipal corporation

BY: _____
STANLEY BOOKER, MAYOR

ATTEST:

DONALYNN BLAZEK-SCHERLER, CITY CLERK

APPROVED as to form and legality the _____ day of _____, 2025.

TIMOTHY WILSON, INTERIM CITY ATTORNEY

PERMITEE

BY: _____
Charlene White, VP & AGC, Real Estate

ATTEST:

Name & Title

STATE OF MISSOURI)
) SS
COUNTY OF _____)

Before me, the undersigned, a Notary Public in and for said County and State, on this _____ day of _____, 2025, personally appeared Charlene White, to me known to be the identical person who executed the within and foregoing instrument as its VP & AGC, Real Estate and acknowledged to me that she executed the same as her free and voluntary act and deed and as the free and voluntary act and deed of such corporation for the uses and purposes therein set forth.

Given under my hand and seal the day and year last written.

(SEAL)

NOTARY PUBLIC

Commission Number: _____

Commission Expires: _____

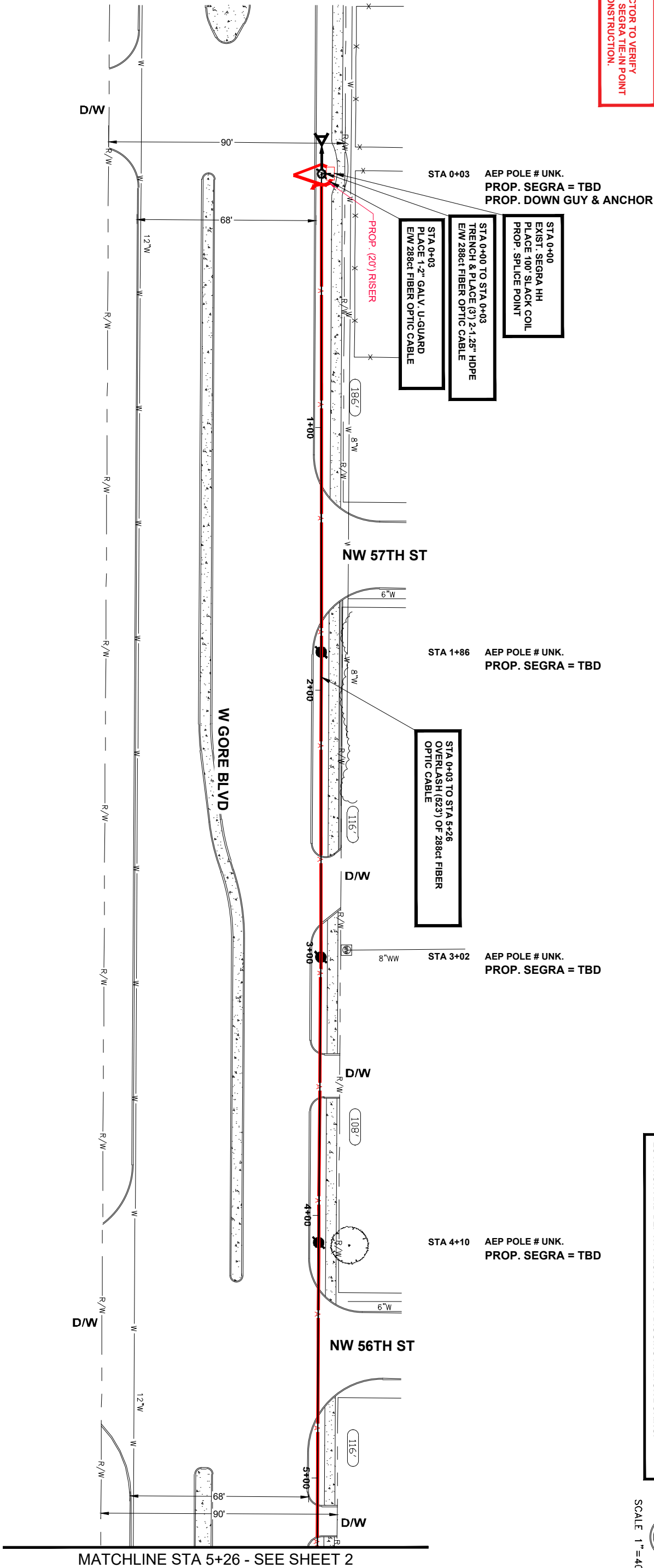
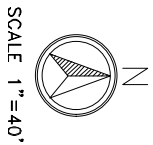
NOTE:
ALL AS-BUILTS WILL REQUIRE TEXT AND RED LINES
VIA PDF WRITER, NO OTHER FORM WILL BE ACCEPTED

NOTE:
CONTRACTOR TO VERIFY
EXISTING SEGRA TIE-IN POINT
PRIOR CONSTRUCTION.



CAUTION!!!
CONTRACTOR TO LOCATE &
VERIFY ALL EXISTING UTILITIES
PRIOR TO CONSTRUCTION

CAUTION!!!
EXIST. BURIED FIBER, TELEPHONE, CATV, GAS, ELECTRIC, WATER,
SANITARY SEWER & STORM SEWER FACILITIES IN CONSTRUCTION AREA
AND HAVE NOT BEEN FIELD LOCATED. CONTRACTOR TO VERIFY EXACT
LOCATION AND DEPTH PRIOR TO ANY DIGGING AND/OR BORING.



DESCRIPTION	UNIT	QUANTITY						
288c FIBER OPTIC CABLE (OVERLASH)	LF	526	TRENCH 2'-1.25" HDPE	LF	-	1-1.25' PLENUM	LF	-
288c FIBER OPTIC CABLE (AERIAL)	LF	-	TRENCH 1'-1.25" HDPE	LF	-	1-4" CORE BORE	EA	-
288c FIBER OPTIC CABLE (RISER)	LF	20	DIR. BORE 2'-1.25" HDPE	LF	-	SEGRA EQUIPMENT	EA	-
288c FIBER OPTIC CABLE (NEW U/G)	LF	#	DIR. BORE 1-4" HDPE CASING	LF	-	3/4" PL YWOOD BACKBOARD	EA	-
8W STRAND	LF	#	1.25" HDPE	LF	#	REMOVE & RESTORE CONCRETE SW	SF	-
1-2 GALV U-GUARD	EA	1	2' X 36" X 36" HH	EA	-	REMOVE & RESTORE CONCRETE F/MENT	SF	-
OVERHEAD GUY	FT	-	30" X 48" X 36" HH	EA	-	SLACK COIL IN HH/H	FT	100
DOWN GUY & ANCHOR	EA	1	3-1/2" CABLE T-ROD DIR. CUSTOMER CONDUIT	LF	-	28c FIBER OPTIC CABLE (TOTAL)	LF	-
AERIAL SLACK LOOP	FT	-	1-2" EMT	LF	-	288c FIBER OPTIC CABLE (TOTAL)	LF	646



REV	DESCRIPTION	BY	APVD	DATE
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
0	20	-	40	-



COMANCHE COUNTY LAWTON, OK		PROJECT CODE: PC-51229
TITLE: FIBER OPTIC CABLE BUILD PLAN		PROJECT NAME: 1 NW 58TH ST LAWTON, OKLAHOMA 73505
DRAWN BY: UT-SERVICES	DATE: 05/13/25	REV:
APPROVED BY: 1 OF 1	APPROVED BY: 05/13/25	



CALL BEFORE YOU DIG
1-800-522-6544
48 HOURS NOTICE REQUIRED



OKIE 811
Call before you dig

NOTE:
UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE
RECORDS AND FIELD OBSERVATIONS BUT ARE NOT NECESSARILY EXACT.
IT IS THE CONTRACTOR RESPONSIBILITY TO FIELD LOCATE ALL
UNDERGROUND OBSTRUCTIONS AND UTILITIES PRIOR TO CONSTRUCTION.
COMPLETE REPAIR OF ANY AND ALL DAMAGES INCURRED SHALL BE AT
THE EXPENSE OF THE CONTRACTOR.

Item Title:

Consider approving a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Ring Closure 4) to serve a Lawton Public School facility, and authorizing the Mayor and City Clerk to execute the permit.

Initiator: Christine James, Director

Information Source: Christine James, Director, Kameron Good, Planning - Senior Planner

Background:

Unite Private Networks, LLC dba Segra has been hired by Lawton Public Schools to run fiber to several of their facilities. The Public Utilities Department has reviewed and approved the proposed route. Since the route will be within the street right-of-way or public easement, a Council approved Revocable Communications Cable Permit is required. The applicant has paid the construction fee of \$24.15 for each proposed rod, or portion thereof, to be installed underground, and they will pay an annual fee of \$2.50 for each rod, or portion thereof, until such time the fiber is no longer needed and all fiberoptic cable, conduit, and associated facilities are removed from the City's streets right-of-way or public easements at the applicant's own cost.

Ring Closure 4 is approximately 4,177 feet or 253.2 rods

Correlation to the True North Statement:**Exhibit:**

Revocable Permit_Ring Closure 4

Key Issues:

N/A

Funding Source:

Revenue Source

Recommended Action:

Approve a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Ring Closure 4) to serve a Lawton Public School facility, and authorize the Mayor and City Clerk to execute the permit.

ATTACHMENTS:

1. Ring Closure 4_RP

REVOCABLE COMMUNICATIONS CABLE PERMIT

This Revocable Communications Cable Permit is made and entered into this ____ day of _____, 2025, by and between the City of Lawton, Oklahoma, a municipal corporation (hereinafter called "City") and Unite Private Networks, LLC dba Segra (hereinafter called "Permittee").

SECTION 1. GRANT OF PERMIT. The City hereby grants unto Permittee a Revocable Communications Cable Permit for the right and privilege to lay 4,177 feet (253.2) rods of communication cable along and under certain streets, alleys, easements and public rights-of-way within the corporate limits of said City, said cables being located in Section 21, T2N, R12W, more particularly described below:

A route beginning approximately 12 feet north of the SW/C of Lot 23, Block 14 of Crosby Park Addition, Part 7, to the City of Lawton, Comanche County, Oklahoma, according to the recorded plat thereof a point being an existing pole; thence north along the eastern portion of the street right-of-way of NW Crosby Park Blvd a distance of approximately 800 feet adjacent to Lots 16-17, 20-23, Block 14 of Crosby Park to a proposed handhole near the NW/C of Lot 22, Block 11 of Crosby Park; thence north approximately 235' under NW Quannah Parker Trailway to a proposed handhole near the SW/C of Lot 1, Block 1 of Crosby Park Estates, Part 1, to the City of Lawton, Comanche County, Oklahoma, according to the recorded plat thereof; thence east approximately 988 feet along the south side of Lots 1-10, Block 1 of Crosby Park Estates to a proposed handhole near the SE/C of Lot 10, Block 1 of Crosby Park Estates, Part 2; thence north approximately 1,011 feet along the east side of Lots 10-11, 21, Block 1 of Crosby Park Estates, Part 2, and Lots 1, 4-6, Block 4 of Crosby Park Estates, Part 1 to a proposed handhole located approximately 50' south of the NE/C of Lot 6, Block 4 of Crosby Park Estates, Part 1; thence east approximately 900' (eastern portion of run to be located on private property, also known as Block 8 of Crosby Park Estates, Part 2) to a proposed handhole to be located in the western portion of the street right-of-way of NW Debracy Avenue approximately 96' north of the SE/C of Block 8 of Sherwood Addition, Part 2, to the City of Lawton, Comanche County, Oklahoma, according to the recorded plat thereof; thence north approximately 169' on private property, also known as Block 8 to a proposed handhole to be located in the western portion of the street right-of-way of NW Debracy Ave;

hereinafter referred to as the "permitted premises".

SECTION 2. PERMIT FEES AND AUDIT.

A. The Permittee agrees that it will pay the City a construction fee of TWENTY-FOUR DOLLARS AND FIFTEEN CENTS (\$24.15) for each rod, or portion thereof, of fiber optics

cable laid within the permitted premises. The construction fee has been paid to the City prior to the effective date of this permit.

B. The Permittee also agrees that it will pay the City an annual fee of TWO DOLLARS AND FIFTY CENTS (\$2.50) for each rod, or portion thereof, or, at the election of the City, five percent (5%) of the gross income earned by Permittee for the operation of its communications system within the corporate limits of the City. Gross income is defined as rental or lease proceeds, or any other proceeds derived from the use of the permitted premises within the corporate limits of the City.

C. Unless the Permittee is notified in writing by the City Manager, the annual fee will be based on the cost of rods laid within the permitted premises; provided, however, that the City, at its sole discretion, has the right to elect either the per rod method, gross income method, or combination thereof in determining the annual fee to be paid by Permittee. If the City elects to change from the per rod method to the gross income method, adjustments or credits will be made to the payments previously made by the Permittee.

1. If the annual use fee is based on a per rod method, the fee shall be paid to the City within thirty (30) days of the yearly anniversary date after approval by the city council.
2. If the annual use fee is based on a percentage of gross income, the fee shall be paid to the City on a monthly basis no later than fifteen (15) days following the close of Permittee's billing cycle. Each payment will be accompanied by an accurate statement of the gross revenues earned from which the fee is based.

D. At the request of the City, the Permittee shall provide the City an accurate supplemental statement of its monthly gross revenues.

E. The Permittee shall provide the City a copy of its annual financial audit or certified statement of its revenue which would include the gross income earned by Permittee from the operations of its communications system within the permitted premises within one hundred twenty (120) days after the end of the Permittee's fiscal year. Further, the City, through its employees or agents, after a ten (10) day written notice by the City to Permittee, has the right of access to review all of Permittee's financial statements, records, accounts, bank accounts and statements to verify the gross income earned by Permittee from its operation of its communications system within permitted premises. Such review will be made at Permittee's principal place of business at 120 W 12th Street, 11th Floor, Kansas City, MO 64105, or other places as agreed to by the City and the Permittee. Permittee, its employees, agents, and officials shall cooperate fully with City of Lawton representatives conducting the financial review.

SECTION 3. TERM OF PERMIT. This Permit shall be in effect from and after the date first written above and shall expire upon termination of either party. The City, through its City Council, may revoke this permit at any time by giving Permittee a ninety (90) day written notice of revocation. Upon termination or revocation of this Permit, Permittee shall immediately and no later than ninety (90) days from termination or revocation, at its own cost, remove all its fiberoptic cables, conduit, and associated facilities from the permitted premises.

SECTION 4. COMPLIANCE WITH RULES AND REGULATIONS.

A. Permittee agrees that it will comply with the following conditions:

1. The Permittee, by installation of the fiberoptic cable(s) or associated facilities, shall not interfere with vehicular traffic or public or private utilities. If a street closure is required, Permittee will make a street closure notification in accordance with City policy.
2. The Permittee shall be responsible for any damage that occurs due to the Permittee's installation, use, or maintenance of its fiberoptic cable(s) and associated facilities to any other utility or facility that is permitted to be located in the public land, right-of-way, or easement.
3. The Permittee agrees to relocate said fiberoptic cable(s) or associated facilities at the Permittee's expense, within a reasonable time which shall be agreed to by both the City and the Permittee, if the same might interfere with any proposed installation of public utilities.
4. Unless and until revoked, this Revocable Communications Cable Permit described herein is and shall be for the sole use and benefit of Permittee only.
5. This permit shall not be transferred to any successor, lessee, or assign without approval and written consent of the City.
6. The Permittee agrees that it will at all times indemnify, protect, and hold harmless the City, its officials and employees from and against any and all damages, claims, demands, suits, actions, and causes of action arising from any injury or death to persons, or loss or destruction of or damage to property, caused by or contributed to by the negligence of the Permittee, its contractors, agents and employees.

7. It is expressly understood that the permit conveys no property interest of any kind in or to any public land, rights-of-way, or easements to the Permittee.
 8. The Permittee shall provide written notice to the City's designated office twenty (20) days prior to commencement of any routine construction, installation, or maintenance operation conducted in the public land, rights-of-way or easements. If such routine construction, installation, or maintenance operation will be interrupt, impede or restrict vehicular traffic, the Permittee shall provide advance public notice of same and shall provide on-site safeguard and traffic warnings. In emergency situations arising at other than regular business hours, notice of the work undertaken shall be given by the Permittee to the City's designated office the following business day.
 9. The Permittee shall notify the City in writing upon the termination of said fiberoptic cable(s) and all fiberoptic cables, conduit, and associated facilities shall be removed from the right-of-way or public easement within ninety (90) days of termination and said right-of-way and/or easement shall be returned to substantially the same condition existing prior to the installation.
 10. The Permittee agrees to comply with all ordinances now in force or hereafter enacted by said City.
 11. Permittee covenants and agrees that its use of the permitted area shall be restricted to the requirements of this permit for the installation and maintenance of 253.2 rods of communications cable(s).
- B. The following construction and methods shall apply to the installation of the communications cable:
1. The method of construction of said communications cable and facilities over and across the property in the permitted premises shall be subject to the approval of the City.
 2. The communications cable shall be installed at such grade that the top thereof shall not be less than thirty-six (36) inches below the surface of said property and shall thereafter be maintained at such grade unless special permission is received from the City, but in no case shall the cable be less than thirty inches (30") below the surface.

3. The communications cable and associated facilities shall be constructed, repaired, replaced, and maintained by the Permittee at the Permittee's own cost and expense in a safe, proper, and workmanlike manner and at such times and in such a manner as not to prevent or interfere with the safe, proper, and convenient movement of traffic along, over, and across said permitted property.
4. All communications cables installed crossing from one side of a public right-of-way to the other shall be encased in a steel pipe having a minimum wall thickness of 0.250 inches or HDPE Schedule 40 conduit. If considered necessary, the City Engineer may require pressure grouting of the voids on any size encasement. This shall include private driveways located on the public rights-of-way.
5. The Permittee shall backfill all trenches, in accordance with city standards, fill all holes caused by shrinkage, remove all excess dirt, and leave the permitted premises in a solid and safe condition. The Permittee shall restore all sodded areas to its original condition by placing slab sod on all disturbed areas and subject to the inspection and approval of the City. If the Permittee shall fail to make any repairs or do any work required of said Permittee by the provisions of this permit within ten (10) working days after receipt of written notice from the City calling attention thereto and requesting such repairs or work to be done, then the City shall have the right to make such repairs or do such work at the expense of the Permittee and the Permittee shall reimburse the City for cost and expense of such repairs or work promptly upon receipt of a bill thereof by the City to the Permittee.
6. All communications cables installed crossing from one side of the public right-of-way to the other or crossing any City underground facilities, such as water, sewer or drainage lines, shall require pre-bore potholing of City facilities and an inspection. When openings are made adjacent to any street or alley, or within any street right-of-way or public easement, the Permittee shall, at its expense, furnish barricades, fences, lights, and danger signals and shall take all precautionary measures for the protection of the public. Permittee will be charged, in accordance with the Fee Schedule, for any requested or required inspections conducted by the City.
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the right to remedy any neglect, on the part of the Permittee as regards the protection of the work, at the Permittee's expense.

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9. It is expressly agreed that in the event that the City revokes the permit or directs the Permittee to relocate all or a portion of the communications cable and/or associated facilities authorized by this permit, the Permittee will at its sole expense, remove or relocate its cable and associated facilities as the City directs within ninety (90) days of such revocation.
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12. The Permittee shall provide the City's designated office with a set of record surveyed as-built drawings of the cable facilities installed within any street right-of-way or public easement within forty-five (45) days of installation which shall be reviewed by the City Engineer for compliance with this permit and the City Code.
13. The Permittee shall obtain and maintain during the term of this permit and any renewal term a general liability insurance covering property damage and bodily injury, including death, in the following amounts: \$1,000,000 aggregate; \$100,000 per person; and \$25,000 property damage. The City of Lawton is to be shown on the certificate as additional insured. The City shall receive proof of said insurance prior to any excavation/installation under this permit.
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15. Permittee will restore grounds to their preexisting condition and restore infrastructure to City Code standards following excavation in the permitted area.

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SECTION 6. SEVERABILITY. If any phase of this permit described in SECTION 1 is disconnected, terminated, or ruled invalid by a court of competent jurisdiction, said phase shall be deemed separate, distinct, and independent from the remaining phases and such disconnection, termination, or ruling shall not affect the validity of the remaining phases of this permit.

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212 SW 9th Street
Lawton, Oklahoma 73501
(580) 581-3375

City Public Utilities
City of Lawton
212 SW 9th Street
Lawton, Oklahoma 73501
(580) 581-3324

Unite Private Networks, LLC dba Segra
Charlene White, VP & AGC, Real Estate
120 W 12th Street, 11th Floor
Kansas City, MO 64105
816-591-5095

IN WITNESS WHEREOF, the parties hereto have caused the above and foregoing instrument to be duly executed in duplicate originals, the day and year first written.

CITY OF LAWTON, OKLAHOMA
a municipal corporation

BY: _____
STANLEY BOOKER, MAYOR

ATTEST:

DONALYNN BLAZEK-SCHERLER, CITY CLERK

APPROVED as to form and legality the _____ day of _____, 2025.

TIMOTHY WILSON, INTERIM CITY ATTORNEY

PERMITEE

BY: _____
Charlene White, VP & AGC, Real Estate

ATTEST:

Name & Title

STATE OF MISSOURI)
) SS
COUNTY OF _____)

Before me, the undersigned, a Notary Public in and for said County and State, on this _____ day of _____, 2025, personally appeared Charlene White, to me known to be the identical person who executed the within and foregoing instrument as its VP & AGC, Real Estate and acknowledged to me that she executed the same as her free and voluntary act and deed and as the free and voluntary act and deed of such corporation for the uses and purposes therein set forth.

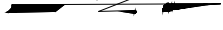
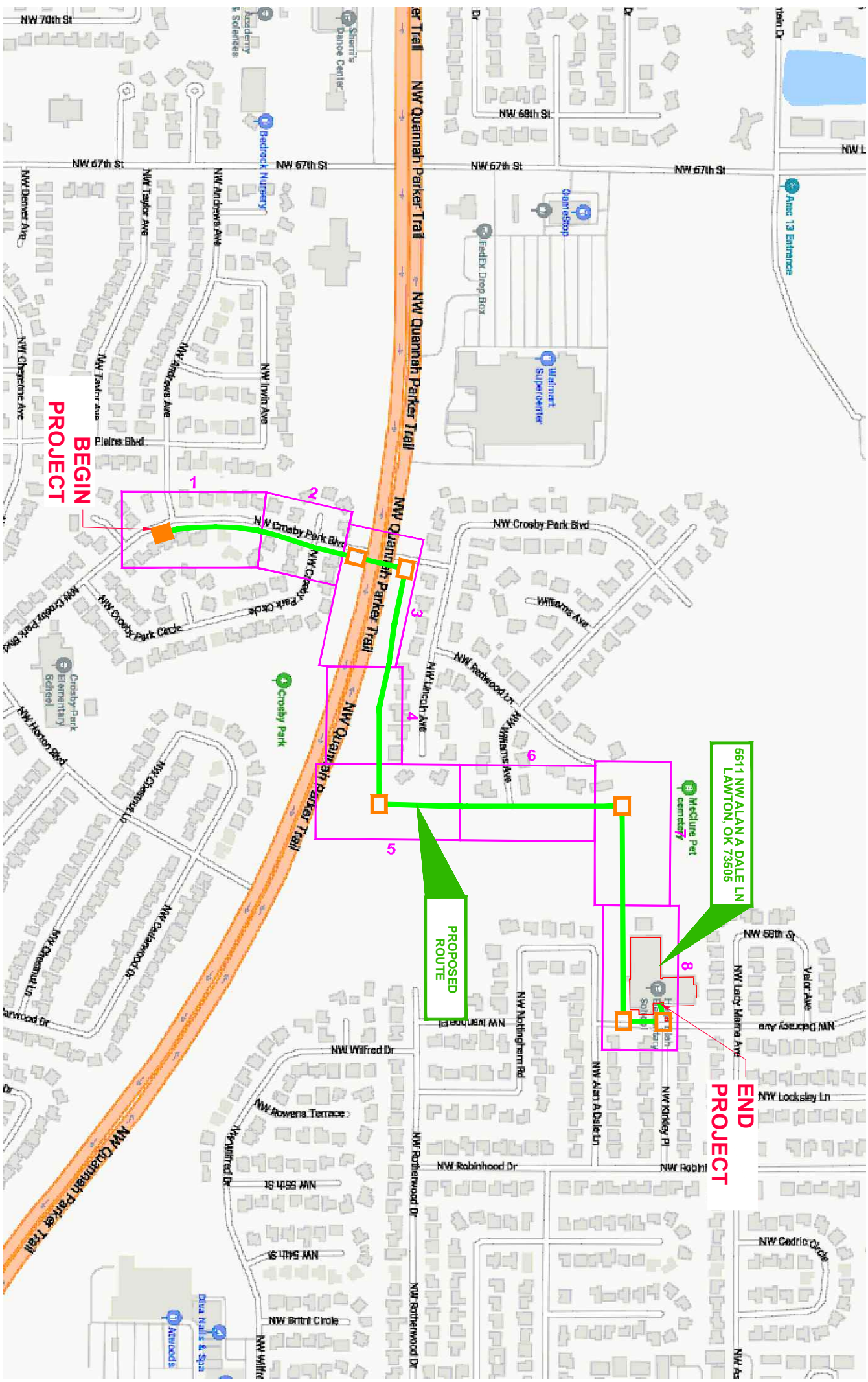
Given under my hand and seal the day and year last written.

(SEAL)

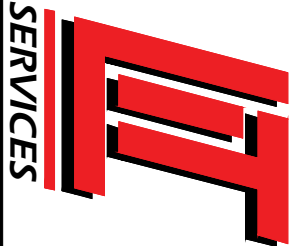
NOTARY PUBLIC

Commission Number: _____

Commission Expires: _____



DESIGN CONTRACTOR:



LEGEND

AERIAL
UNDERGROUND
EXIST. SEGRA NETWORK
PULL-THRU EXIST.
TO BE PLACED BY OTHERS

PROP. SPLICE POINT
PROP. HANDHOLE



SEGRA

LAWTON, OK - RING CLOSURE 4

5611 NW ALAN A DALE LN

LAWTON, OK 73505

CONSTRUCTION

APRIL 09, 2025

Item Title:

Consider approving a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Media Tech Center) to serve a Lawton Public School facility, and authorizing the Mayor and City Clerk to execute the permit.

Initiator: Christine James, Director

Information Source: Christine James, Director, Kameron Good, Planning - Senior Planner

Background:

Unite Private Networks, LLC dba Segra has been hired by Lawton Public Schools to run fiber to several of their facilities. The Public Utilities Department has reviewed and approved the proposed route. Since the route will be within the street right-of-way or public easement, a Council approved Revocable Communications Cable Permit is required. The applicant has paid the construction fee of \$24.15 for each proposed rod, or portion thereof, to be installed underground, and they will pay an annual fee of \$2.50 for each rod, or portion thereof, until such time the fiber is no longer needed and all fiberoptic cable, conduit, and associated facilities are removed from the City's streets right-of-way or public easements at the applicant's own cost.

Media Tech Center is approximately 603 feet or 36.5 rods

Correlation to the True North Statement:**Exhibit:**

Revocable Permit_Media Tech Center

Key Issues:

N/A

Funding Source:

Revenue Source

Recommended Action:

Approve a Revocable Communications Cable Permit for Unite Private Networks, LLC dba Segra to run fiber (Media Tech Center) to serve a Lawton Public School facility, and authorize the Mayor and City Clerk to execute the permit.

ATTACHMENTS:

1. Media Tech Center_RP

REVOCABLE COMMUNICATIONS CABLE PERMIT

This Revocable Communications Cable Permit is made and entered into this ____ day of _____, 2025, by and between the City of Lawton, Oklahoma, a municipal corporation (hereinafter called "City") and Unite Private Networks, LLC dba Segra (hereinafter called "Permittee").

SECTION 1. GRANT OF PERMIT. The City hereby grants unto Permittee a Revocable Communications Cable Permit for the right and privilege to lay 603 feet (36.5) rods of communication cable along and under certain streets, alleys, easements and public rights-of-way within the corporate limits of said City, said cables being located in Section 30, T2N, R11W, more particularly described below:

A location beginning approximately 200 feet east and approximately 25 feet north of the SW/C of the NW/4 of Section 30, Township 2 North, Range 11 West, I.M., Comanche County, Oklahoma, according to the US Government Survey thereof, which is an existing hand hole at the base of an existing pole; thence east along the northern street right-of-way of NW Ferris Avenue a distance of approximately 573 feet; thence north a distance of approximately 30 feet along the western side of a private drive to the north right-of-way line of NW Ferris Avenue;

hereinafter referred to as the "permitted premises".

SECTION 2. PERMIT FEES AND AUDIT.

A. The Permittee agrees that it will pay the City a construction fee of TWENTY-FOUR DOLLARS AND FIFTEEN CENTS (\$24.15) for each rod, or portion thereof, of fiberoptics cable laid within the permitted premises. The construction fee has been paid to the City prior to the effective date of this permit.

B. The Permittee also agrees that it will pay the City an annual fee of TWO DOLLARS AND FIFTY CENTS (\$2.50) for each rod, or portion thereof, or, at the election of the City, five percent (5%) of the gross income earned by Permittee for the operation of its communications system within the corporate limits of the City. Gross income is defined as rental or lease proceeds, or any other proceeds derived from the use of the permitted premises within the corporate limits of the City.

C. Unless the Permittee is notified in writing by the City Manager, the annual fee will be based on the cost of rods laid within the permitted premises; provided, however, that the City, at its sole discretion, has the right to elect either the per rod method, gross income method, or combination thereof in determining the annual fee to be paid by Permittee. If the City elects to

change from the per rod method to the gross income method, adjustments or credits will be made to the payments previously made by the Permittee.

1. If the annual use fee is based on a per rod method, the fee shall be paid to the City within thirty (30) days of the yearly anniversary date after approval by the city council.
2. If the annual use fee is based on a percentage of gross income, the fee shall be paid to the City on a monthly basis no later than fifteen (15) days following the close of Permittee's billing cycle. Each payment will be accompanied by an accurate statement of the gross revenues earned from which the fee is based.

D. At the request of the City, the Permittee shall provide the City an accurate supplemental statement of its monthly gross revenues.

E. The Permittee shall provide the City a copy of its annual financial audit or certified statement of its revenue which would include the gross income earned by Permittee from the operations of its communications system within the permitted premises within one hundred twenty (120) days after the end of the Permittee's fiscal year. Further, the City, through its employees or agents, after a ten (10) day written notice by the City to Permittee, has the right of access to review all of Permittee's financial statements, records, accounts, bank accounts and statements to verify the gross income earned by Permittee from its operation of its communications system within permitted premises. Such review will be made at Permittee's principal place of business at 120 W 12th Street, 11th Floor, Kansas City, MO 64105, or other places as agreed to by the City and the Permittee. Permittee, its employees, agents, and officials shall cooperate fully with City of Lawton representatives conducting the financial review.

SECTION 3. TERM OF PERMIT. This Permit shall be in effect from and after the date first written above and shall expire upon termination of either party. The City, through its City Council, may revoke this permit at any time by giving Permittee a ninety (90) day written notice of revocation. Upon termination or revocation of this Permit, Permittee shall immediately and no later than ninety (90) days from termination or revocation, at its own cost, remove all its fiberoptic cables, conduit, and associated facilities from the permitted premises.

SECTION 4. COMPLIANCE WITH RULES AND REGULATIONS.

A. Permittee agrees that it will comply with the following conditions:

1. The Permittee, by installation of the fiberoptic cable(s) or associated facilities, shall not interfere with vehicular traffic or public or private utilities. If a

street closure is required, Permittee will make a street closure notification in accordance with City policy.

2. The Permittee shall be responsible for any damage that occurs due to the Permittee's installation, use, or maintenance of its fiberoptic cable(s) and associated facilities to any other utility or facility that is permitted to be located in the public land, right-of-way, or easement.
3. The Permittee agrees to relocate said fiberoptic cable(s) or associated facilities at the Permittee's expense, within a reasonable time which shall be agreed to by both the City and the Permittee, if the same might interfere with any proposed installation of public utilities.
4. Unless and until revoked, this Revocable Communications Cable Permit described herein is and shall be for the sole use and benefit of Permittee only.
5. This permit shall not be transferred to any successor, lessee, or assign without approval and written consent of the City.
6. The Permittee agrees that it will at all times indemnify, protect, and hold harmless the City, its officials and employees from and against any and all damages, claims, demands, suits, actions, and causes of action arising from any injury or death to persons, or loss or destruction of or damage to property, caused by or contributed to by the negligence of the Permittee, its contractors, agents and employees.
7. It is expressly understood that the permit conveys no property interest of any kind in or to any public land, rights-of-way, or easements to the Permittee.
8. The Permittee shall provide written notice to the City's designated office twenty (20) days prior to commencement of any routine construction, installation, or maintenance operation conducted in the public land, rights-of-way or easements. If such routine construction, installation, or maintenance operation will be interrupt, impede or restrict vehicular traffic, the Permittee shall provide advance public notice of same and shall provide on-site safeguard and traffic warnings. In emergency situations arising at other than regular business hours, notice of the work undertaken shall be given by the Permittee to the City's designated office the following business day.
9. The Permittee shall notify the City in writing upon the termination of said fiberoptic cable(s) and all fiberoptic cables, conduit, and associated

facilities shall be removed from the right-of-way or public easement within ninety (90) days of termination and said right-of-way and/or easement shall be returned to substantially the same condition existing prior to the installation.

10. The Permittee agrees to comply with all ordinances now in force or hereafter enacted by said City.

11. Permittee covenants and agrees that its use of the permitted area shall be restricted to the requirements of this permit for the installation and maintenance of 36.5 rods of communications cable(s).

B. The following construction and methods shall apply to the installation of the communications cable:

1. The method of construction of said communications cable and facilities over and across the property in the permitted premises shall be subject to the approval of the City.
2. The communications cable shall be installed at such grade that the top thereof shall not be less than thirty-six (36) inches below the surface of said property and shall thereafter be maintained at such grade unless special permission is received from the City, but in no case shall the cable be less than thirty inches (30") below the surface.
3. The communications cable and associated facilities shall be constructed, repaired, replaced, and maintained by the Permittee at the Permittee's own cost and expense in a safe, proper, and workmanlike manner and at such times and in such a manner as not to prevent or interfere with the safe, proper, and convenient movement of traffic along, over, and across said permitted property.
4. All communications cables installed crossing from one side of a public right-of-way to the other shall be encased in a steel pipe having a minimum wall thickness of 0.250 inches or HDPE Schedule 40 conduit. If considered necessary, the City Engineer may require pressure grouting of the voids on any size encasement. This shall include private driveways located on the public rights-of-way.
5. The Permittee shall backfill all trenches, in accordance with city standards, fill all holes caused by shrinkage, remove all excess dirt, and leave the

permitted premises in a solid and safe condition. The Permittee shall restore all sodded areas to its original condition by placing slab sod on all disturbed areas and subject to the inspection and approval of the City. If the Permittee shall fail to make any repairs or do any work required of said Permittee by the provisions of this permit within ten (10) working days after receipt of written notice from the City calling attention thereto and requesting such repairs or work to be done, then the City shall have the right to make such repairs or do such work at the expense of the Permittee and the Permittee shall reimburse the City for cost and expense of such repairs or work promptly upon receipt of a bill thereof by the City to the Permittee.

6. All communications cables installed crossing from one side of the public right-of-way to the other or crossing any City underground facilities, such as water, sewer or drainage lines, shall require pre-bore potholing of City facilities and an inspection. When openings are made adjacent to any street or alley, or within any street right-of-way or public easement, the Permittee shall, at its expense, furnish barricades, fences, lights, and danger signals and shall take all precautionary measures for the protection of the public. Permittee will be charged, in accordance with the Fee Schedule, for any requested or required inspections conducted by the City.
7. No materials or equipment used in the construction of the work shall be placed so as to endanger the work or prevent free access to all water valves, gas valves, manholes, electric, and telephone in the vicinity. The City reserves the right to remedy any neglect, on the part of the Permittee as regards the protection of the work, at the Permittee's expense.
8. No use of private owned property without prior written consent from the property owner of record. Use includes the storage of any materials or equipment. City is only granting use of public rights-of-way and public easements within the area described in SECTION 1 of this permit.
9. It is expressly agreed that in the event that the City revokes the permit or directs the Permittee to relocate all or a portion of the communications cable and/or associated facilities authorized by this permit, the Permittee will at its sole expense, remove or relocate its cable and associated facilities as the City directs within ninety (90) days of such revocation.
10. All street crossings will require dry boxing and/or tunneling at a minimum depth of forty-eight inches (48") below the street surface unless special permission is received from the City to open cut.

11. The Permittee shall place handhole lids with permanent labels on all handholes within the street right-of-way or public easement. The label shall include the company's name and be made of material sturdy enough to resist weather and normal wear and tear so that the label can be easily read until such time the handhole is removed. Label shall be permanently affixed to said lid or made as part of the lid.
12. The Permittee shall provide the City's designated office with a set of record surveyed as-built drawings of the cable facilities installed within any street right-of-way or public easement within forty-five (45) days of installation which shall be reviewed by the City Engineer for compliance with this permit and the City Code.
13. The Permittee shall obtain and maintain during the term of this permit and any renewal term a general liability insurance covering property damage and bodily injury, including death, in the following amounts: \$1,000,000 aggregate; \$100,000 per person; and \$25,000 property damage. The City of Lawton is to be shown on the certificate as additional insured. The City shall receive proof of said insurance prior to any excavation/installation under this permit.
14. Permittee will place no additional structures, encroachments, or improvements in or upon the permitted property without approval of the City.
15. Permittee will restore grounds to their preexisting condition and restore infrastructure to City Code standards following excavation in the permitted area.

SECTION 5. INDEMNIFICATION. Permittee covenants and agrees, at its expense, to defend, indemnify, and save the City, its officials and employees harmless of, from and against any and all claims, damages, expenses, liabilities, taxes and losses of every conceivable kind, character and nature whatsoever asserted by or on behalf of any person, firm, corporation or governmental authority arising out of, resulting from, or in any way connected with the issuance of this permit, the leased premises or the condition, occupancy, use, possession, conduct, operation or management, or any work done in or about the leased premises granted under the permit issued by City to Permittee.

SECTION 6. SEVERABILITY. If any phase of this permit described in SECTION 1 is disconnected, terminated, or ruled invalid by a court of competent jurisdiction, said phase shall be

deemed separate, distinct, and independent from the remaining phases and such disconnection, termination, or ruling shall not affect the validity of the remaining phases of this permit.

SECTION 7. POINTS OF CONTACT. The points of contact for the administration of this Revocable Communications Cable Permit are:

City Planning
City of Lawton
212 SW 9th Street
Lawton, Oklahoma 73501
(580) 581-3375

City Public Utilities
City of Lawton
212 SW 9th Street
Lawton, Oklahoma 73501
(580) 581-3324

Unite Private Networks, LLC dba Segra
Charlene White, VP & AGC, Real Estate
120 W 12th Street, 11th Floor
Kansas City, MO 64105
816-591-5095

IN WITNESS WHEREOF, the parties hereto have caused the above and foregoing instrument to be duly executed in duplicate originals, the day and year first written.

CITY OF LAWTON, OKLAHOMA
a municipal corporation

BY: _____
STANLEY BOOKER, MAYOR

ATTEST:

DONALYNN BLAZEK-SCHERLER, CITY CLERK

APPROVED as to form and legality the _____ day of _____, 2025.

TIMOTHY WILSON, INTERIM CITY ATTORNEY

PERMITEE

BY: _____
Charlene White, VP & AGC, Real Estate

ATTEST:

Name & Title

STATE OF MISSOURI)
) SS
COUNTY OF _____)

Before me, the undersigned, a Notary Public in and for said County and State, on this _____ day of _____, 2025, personally appeared Charlene White, to me known to be the identical person who executed the within and foregoing instrument as its VP & AGC, Real Estate and acknowledged to me that she executed the same as her free and voluntary act and deed and as the free and voluntary act and deed of such corporation for the uses and purposes therein set forth.

Given under my hand and seal the day and year last written.

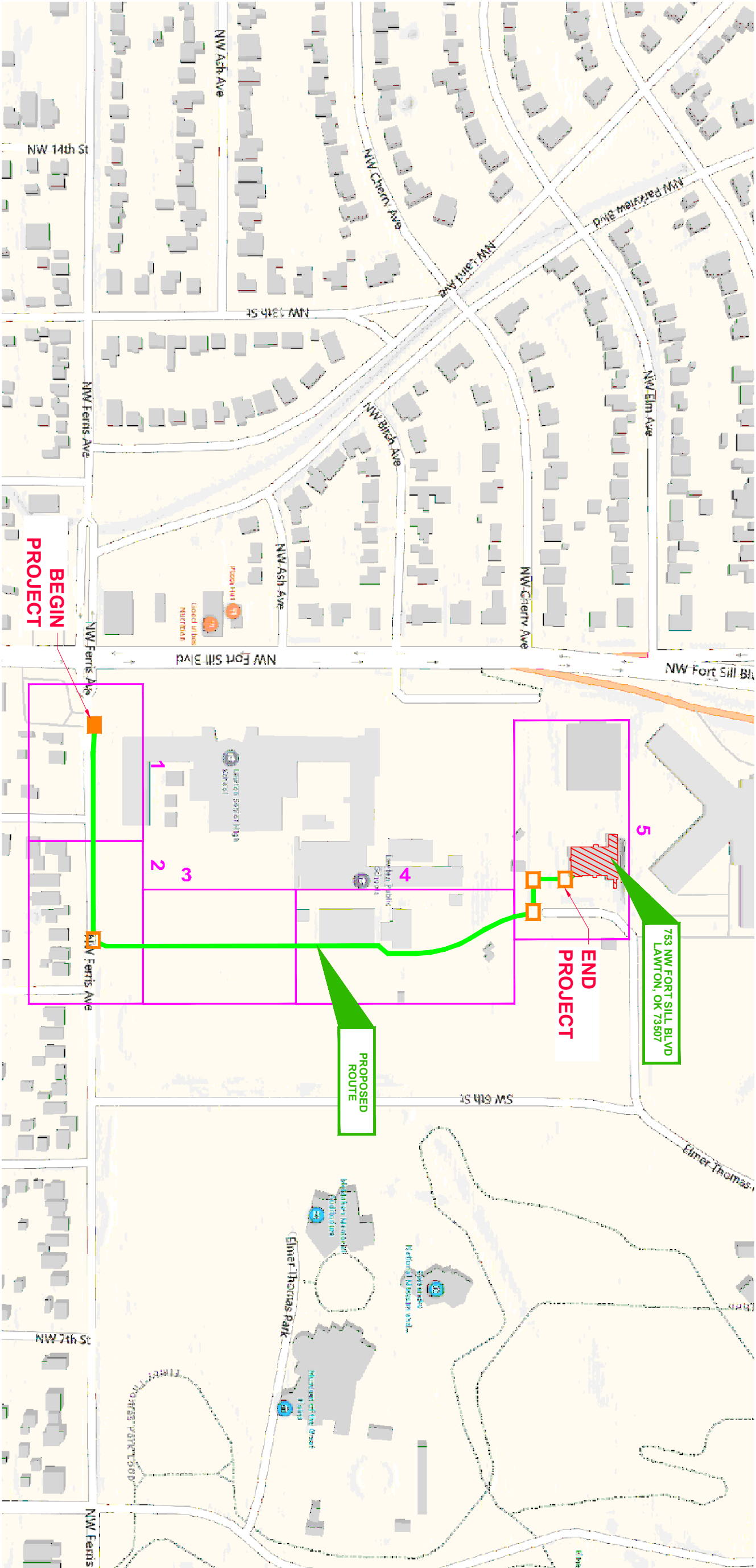
(SEAL)

NOTARY PUBLIC

Commission Number: _____

Commission Expires: _____

VICINITY



DESIGN CONTRACTOR:



LEGEND

- AERIAL

UNDERGROUND

EXIST. SEGRA NETWORK

PULL-THRU EXIST.

TO BE PLACED BY OTHERS
- PROP. SPLICE POINT

PROP. HANDHOLE

SEGRA

MEDIA TECH CENTER
753 NW FORT SILL BLVD
LAWTON, OK 73507

CONSTRUCTION
APRIL 09, 2025

MEDIA_TECH_CENTER_MS.DWG

Item Title:

Consider approving the traffic signal at 50th and Cache to be placed with the north and southbound signals onto flashing red, and east and west signals to flashing yellow until such a time that development of properties in which the signals are required are fully developed and ready to open to the public.

Initiator: Bob Weger, Councilman - Ward 6

Information Source: Michael Watrous, Director

Background:

On September 24th, a contractor working for a sub-developer completed repairs to the signal prior to the city's acceptance of the signal (on the 28 October agenda). During these repairs, the contractor left the signal operational without notification to the City.

This item met on the 15 October Streets, Bridges and Building Development Committee with a request from the committee to bring the item to council, along with the traffic study that warranted the signal. This study is attached to this agenda item.

Correlation to the True North Statement:

Safety, Efficiency, Citizen

Exhibit:

Traffic Study warranting the signal

Key Issues:

Turning a signal operational or non-operational is the time that is the most dangerous for an intersection. When this signal was inadvertently left on by the contractor, 2 vehicle accidents with injuries occurred. This will likely be the case when turning the signal inoperable (flashing) and then again once development is complete on the property.

Funding Source:

N/A

Recommended Action:

Approve the traffic signal at 50th and Cache to be placed with the north and southbound signals onto flashing red, and east and west signals to flashing yellow until such a time that development of properties in which the signals are required are fully developed and ready to open to the public.

ATTACHMENTS:

1. 4800 NW Cache Road Traffic Study



TRAFFIC IMPACT STUDY

**Proposed Development Site
Cache Road and NW 50th Street
Lawton, OK**

**Prepared for:
Eddie Cordes, LLC
May 2016**

**Prepared by:
Traffic Engineering Consultants, Inc.**




**B.J. Hawkins, P.E., PTOE
Oklahoma P.E. #25164
CA # 1160**

5/11/16
Date

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1.0 INTRODUCTION

Traffic Engineering Consultants, Inc. (TEC) was retained by Eddie Cordes, LLC to perform a traffic impact study for a proposed development site to be located in Lawton, Oklahoma. The study was requested to determine the effects the proposed development site would have on the adjacent street system, to review the available access to the development site and to provide recommendations for improvements that may be necessary to accommodate the traffic expected to be generated by the development site.

2.0 BACKGROUND

The proposed development site is located south of Cache Road/Quanah Parker Trailway opposite NW 50th Street shown in **Figure 1**. There are currently no definitive tenants to build on the 11.6 acre site. Due to the uncertainty of the vacant site, assumptions had to be made for the land uses and square footages. The *Shopping Center* land use category encompasses a wide array of land uses including retail, office, restaurants and more and would be appropriate for all businesses proposed for this development site. The square footage was estimated using a floor-to-area ratio of 0.20 which is commonly used in traffic impact studies to estimate square footage. The southern 3.8 acres of the site has been sold to the mini-storage facility east of the site. The land will develop as mini-storage and will provide access through the existing mini-storage facility. There will be no shared access with the proposed development site and, therefore, this parcel of land will be excluded from the study.

Access to the development site is proposed via two existing right-in/right-out drives on Cache Road and one proposed full-access drive opposing NW 50th Street at the existing median opening on Cache Road. Cache Road is a six lane divided principal arterial. It has a posted speed limit of 45 mph and carries an approximate average daily traffic (ADT) of 31,500 vehicles per day in the area. Quanah Parker Trailway splits off/joins Cache Road west of NW 50th Street. The intersection of Cache Road and NW 50th Street is currently unsignalized and controlled via southbound stop sign. The intersection of Cache Road and NW 44th Street is currently signalized and located approximately 810 feet east of NW 50th Street.

3.0 TRAFFIC DATA COLLECTION

Existing traffic volume data was collected adjacent to the proposed development site in March of 2016. Peak hour turning movement volumes were collected at the intersections of Cache Road and NW 50th



FIGURE 1. Proposed Development Site
Cache Rd. and NW 50th St.
Lawton, OK

Street and Cache Road and NW 44th Street. The data was collected during the a.m. (7:00 to 9:00) and p.m. (4:00 to 6:00) peak hour periods. Given the traffic characteristics in the area and the anticipated trip generation for the proposed development, the weekday peak periods would represent a “worst-case scenario” with regards to traffic impact on the surrounding roadway network. If traffic operations are acceptable during these weekday peak hours, it can be reasoned that conditions would be acceptable throughout the remainder of the day and week. Additionally, 24-hour traffic volume data was collected on Cache Road and NW 47th Street. The 2016 existing traffic is summarized in **Figure 2** and detailed printouts of all the traffic count data are included in the appendix.

The 2016 existing traffic was then utilized to determine the background traffic for 2021. The timeline for developing the site is currently unknown at this time, so for the sake of the study the 2021 design period was selected as a future design year. The background traffic was determined for the 2021 by applying an average annual growth rate of 2% to the 2016 existing traffic. The Lawton Metropolitan Planning Organization *2040 Metropolitan Transportation Plan* indicated that vehicular growth on Cache Road in the area of the study site has been stagnant since 2003. However, to be conservative the commonly used 2% annual growth rate was utilized to grow the background traffic volumes. The 2021 projected background traffic is summarized in **Figure 3**.

4.0 PROJECTED TRAFFIC

To determine the effects a new development will have on an existing street system, the new or additional traffic must be projected. The latest edition of the *Trip Generation Manual*, published by the Institute of Transportation Engineers, was used to determine the amount of traffic the development is expected to generate. The report is a nationally accepted reference which provides trip rates for determining the traffic expected to be generated by different land use types.

Available information was utilized regarding the anticipated land use to determine the site generated traffic. The *Shopping Center* category was selected to determine the trip generation for the proposed development site. The resulting traffic volumes projected to be generated by the site once it is fully developed are indicated in **Table 1**.

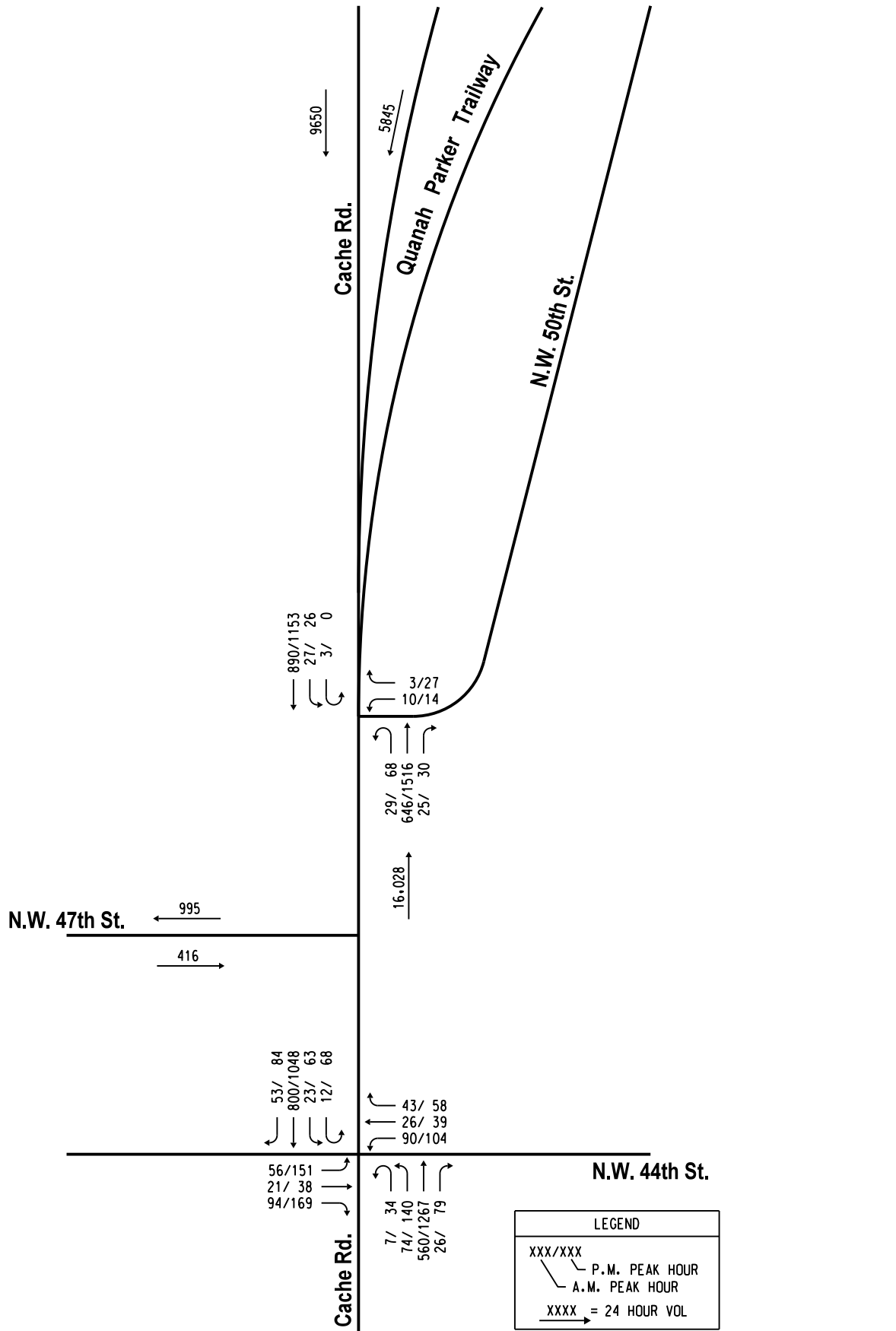


FIGURE 2. 2016 Existing Traffic

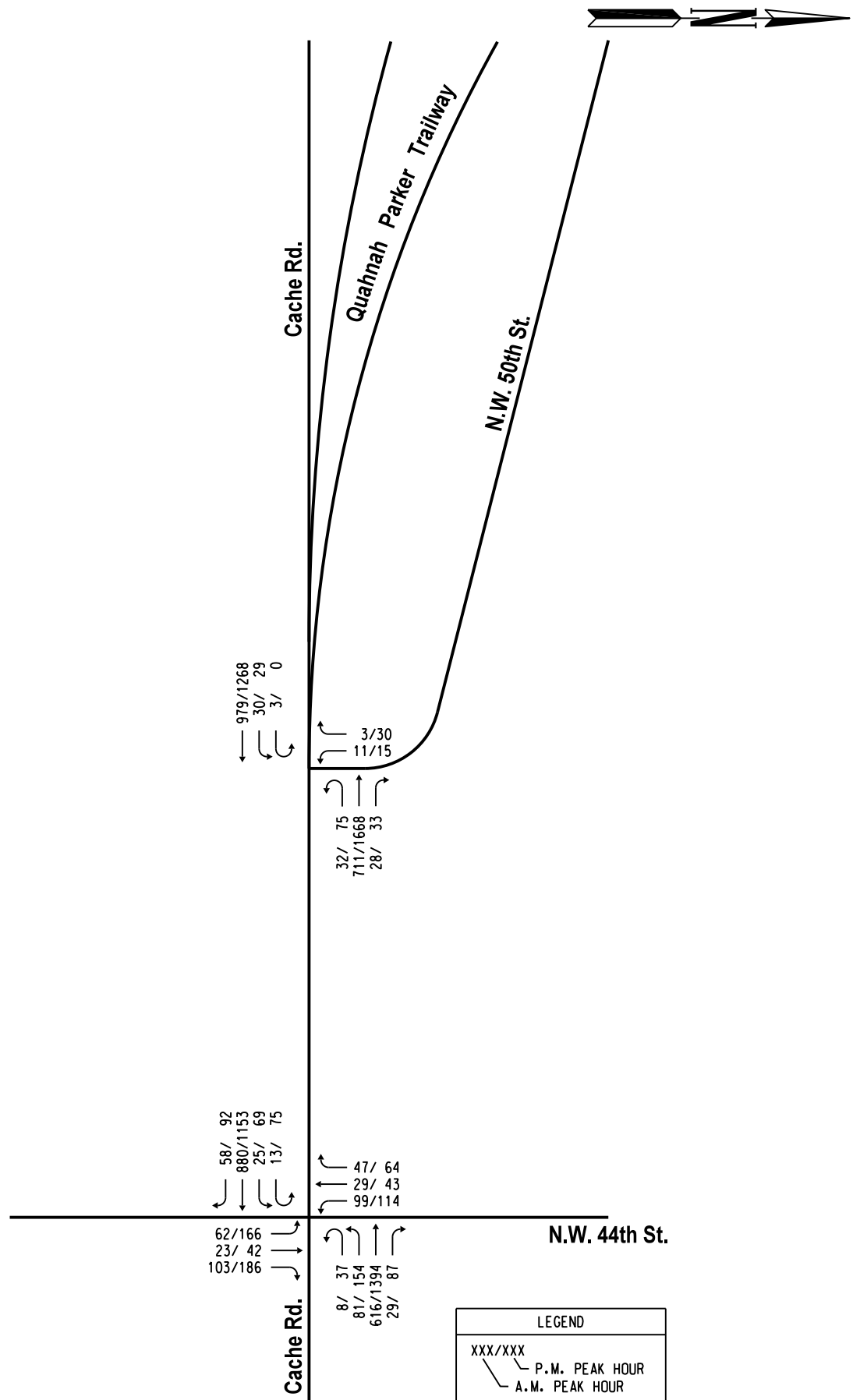


FIGURE 3. 2021 Projected Background Traffic

TABLE 1
PROJECTED SITE GENERATED TRAFFIC VOLUMES

Building Type (Land Use)	ITE Land Use Code	Approximate Gross Floor Area or Other	Avg. Weekday Vehicle Trip Ends			Average AM Peak Hour Directional Distribution		Average AM Peak Hour Directional Volume (vph)		Average PM Peak Hour Directional Distribution		Average PM Peak Hour Directional Volume (vph)	
			Per Day	Per Peak Hour of Adjacent Street Traffic									
				One Hour Between 7am & 9am	One Hour Between 4pm & 6pm								
			(vpd)	(vph)	(vph)	IN	OUT	IN	OUT	IN	OUT		
Trip Rate* Shopping Center	820	(sf) 101,060	67.66	1.55	5.97	0.62	0.38	97	60	0.48	0.52	289	314
			6,838	157	603								

* Trip Rates from "TRIP GENERATION", 9th Ed., Vol. 3 of 3, Institute of Transportation Engineers.

The traffic expected to be generated by the proposed development site was then distributed among the surrounding street system as well as the various points of access for the a.m. and p.m. peak hours. The distribution of the site generated traffic was based on anticipated usage of the site and traffic patterns in the area which were obtained from the traffic data that was collected for this study and is summarized in **Figure 4**. The directional distribution of the site generated traffic for the proposed development site is expected to be:

- 45% to/from Cache Road east of the development
- 40% to/from Cache Road/Quanah Parker Trailway west of the development
- 08% to/from NW 44th Street northeast of the development
- 05% to/from NW 44th Street southeast of the development
- 02% to/from NW 50th Street north of the development

The projected site generated traffic was then added to the background traffic for the 2021 design year. The 2021 projected combined traffic (2021 projected background traffic + site generated traffic) for each access point to the proposed development site, as well as the surrounding street system, are summarized in **Figure 5**.

5.0 CAPACITY ANALYSIS

The capacity analyses were conducted using *Synchro 9.0*, which is a software package for modeling and optimizing traffic signal timings at signalized intersections and analyzing unsignalized intersections in accordance with the methodology of the latest edition of the *Highway Capacity Manual*. The *Highway Capacity Manual* is published by the Transportation Research Board of the National Research Council, Washington, D.C. The information has been widely accepted throughout the U.S. as a guide for defining

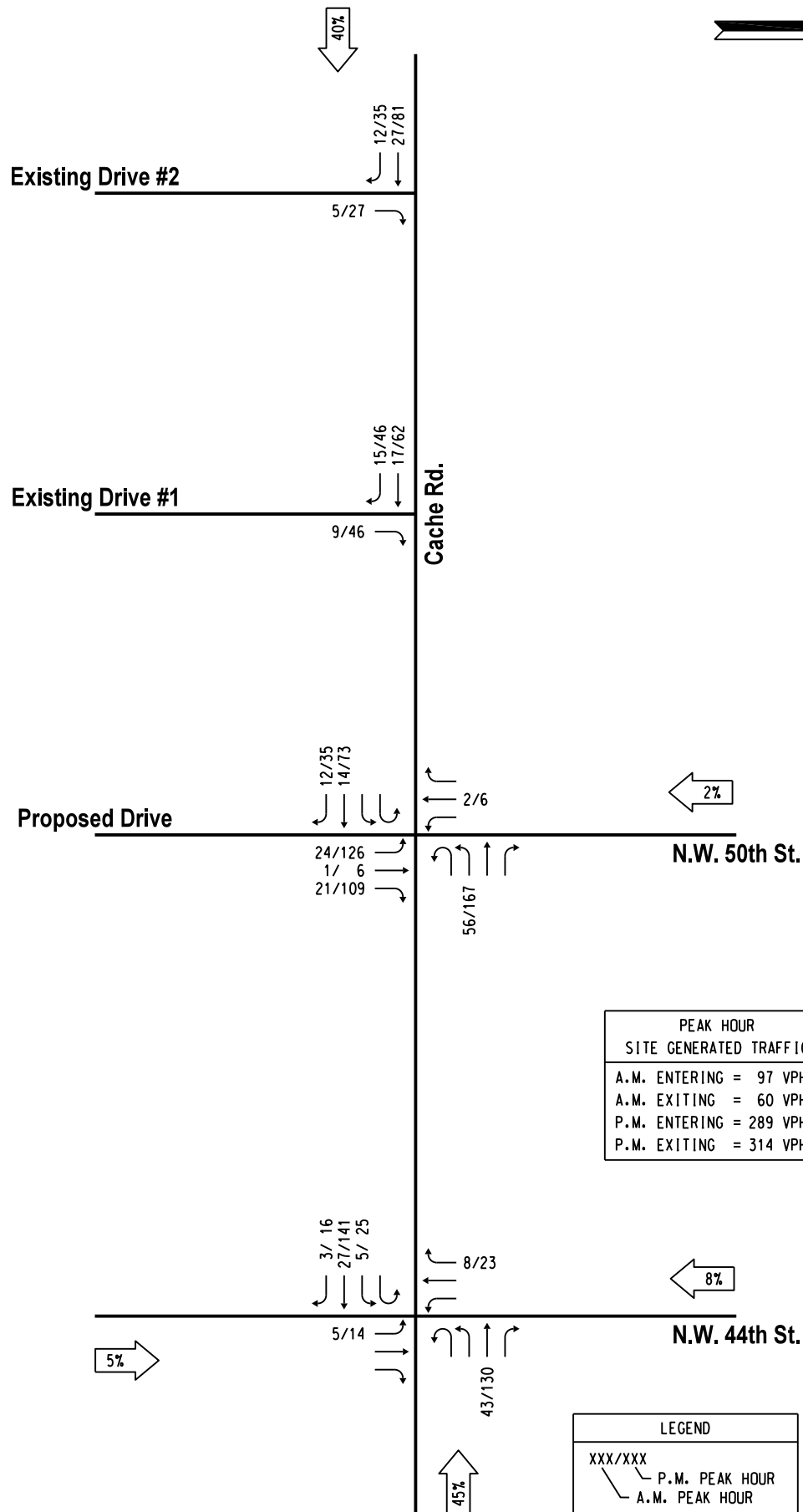


FIGURE 4. Distribution of Site Generated Traffic



Existing Drive #2

12/ 35
569/820
5/27

Existing Drive #1

15/ 46
559/801
9/46

Cache Rd.

Proposed Drive

12/ 35
993/1341
30/ 29
3/ 0
24/126
1/ 6
21/109

3/30
2/ 6
11/15

N.W. 50th St.

32/ 75
56/ 167
711/1668
28/ 33

61/ 108
907/1294
30/ 94
13/ 75
67/180
23/ 42
103/186

55/ 87
29/ 43
99/114

N.W. 44th St.

8/ 37
81/ 154
659/1524
29/ 87

LEGEND	
XXX/XXX	P.M. PEAK HOUR
XXX/XXX	A.M. PEAK HOUR

FIGURE 5. 2021 Projected Combined Traffic

and solving transportation challenges. The information is approved and distributed by the U.S. Department of Transportation, Federal Highway Administration.

The capacity analysis provides a measure of the amount of traffic that a given facility can accommodate. Traffic facilities generally operate poorly at or near capacity. The analysis is intended to estimate the maximum amount of traffic that can be accommodated by a facility while maintaining prescribed operational qualities. The definition of operational criteria is accomplished using levels-of-service. The concept of levels-of-service is defined as a qualitative measure and describes operational conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Six levels-of-service are defined for each type of facility for which analysis procedures are available. They are given letter designations, from “A” to “F”, with level-of-service “A” representing the best operating conditions and level-of-service “F” the worst.

The average control delay for signalized intersections is estimated for each lane group and aggregated for each approach and for the intersection as a whole. The level-of-service for this type of traffic control is directly related to the control delay value. The level-of-service criteria for signalized intersections are indicated below.

SIGNALIZED INTERSECTIONS

Level-of-Service	Control Delay per Vehicle (s/veh)
A	0-10
B	> 10-20
C	> 20-35
D	> 35-55
E	> 55-80
F	> 80

The criteria for stop controlled or unsignalized intersections have different threshold values than do those for signalized intersections. A higher level of control delay has been determined to be acceptable at a signalized intersection for the same level-of-service. The level-of-service criteria for unsignalized intersections are indicated below.

UNSIGNALIZED INTERSECTIONS

Level-of-Service	Control Delay per Vehicle (s/veh)
A	0-10
B	> 10-15
C	> 15-25
D	> 25-35
E	> 35-50
F	> 50

Capacity analyses were conducted for the a.m. and p.m. peak hours at each access point to the proposed development as well as the intersections of Cache Road and NW 44th Street. The intersections were analyzed and reviewed under the 2016 existing traffic, 2021 projected background traffic and 2021 projected combined traffic. For purposes of this report, an overall intersection level-of-service “D” or better and a critical approach (approach with the lowest level-of-service) level-of-service “E” or better was considered an acceptable level-of-service. The results of the capacity analyses conducted are summarized in **Table 2** and the raw data sheets have been included in the appendix.

TABLE 2
Intersection Capacity Analysis Results

Intersection	Type of Traffic Control	AM Peak Hour				PM Peak Hour			
		Critical Approach		Intersection		Critical Approach		Intersection	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
		(sec/veh)		(sec/veh)		(sec/veh)		(sec/veh)	
2016 Existing Traffic									
Cache Road and NW 50th Street	Unsignalized	19.0 / SB	C	0.6	A	60.8 / SB	F	1.5	A
Cache Road and NW 44th Street	Signalized	24.6 / SB	C	17.2	B	31.1 / SB	C	26.7	C
2021 Projected Background Traffic									
Cache Road and NW 50th Street	Unsignalized	21.4 / SB	C	0.6	A	101.8 / SB	F	2.1	A
Cache Road and NW 44th Street	Signalized	25.7 / SB	C	18.3	B	37.3 / WB	D	33.5	C
2021 Projected Background Traffic + Site Generated Traffic									
Cache Rd. and NW 50th St./Proposed Dr.	Signalized	26.4 / EB	C	18.0	B	39.8 / SB	D	18.8	B
Cache Road and NW 44th Street	Signalized	48.0 / SB	D	28.6	C	74.5 / SB	E	37.3	D
Cache Road and Existing Drive #1	Unsignalized	10.3 / NB	B	0.2	A	12.2 / NB	B	0.6	A
Cache Road and Existing Drive #2	Unsignalized	10.3 / NB	B	0.1	A	12.0 / NB	B	0.4	A

The analyses conducted under the 2016 existing traffic indicated that the critical approach (southbound movement) at the intersection of Cache Road and NW 50th Street currently operates at level-of-service “F” during the p.m. peak hour. Under the 2021 projected background traffic, the critical movement at the intersection would continue operating at level-of-service “F” during the p.m. peak hour.

The critical movement at the intersection of Cache Road and NW 50th Street operates at level-of-service “F” during the p.m. peak hour which is typical for side street traffic turning onto a busy arterial during the peak hours of the day. The addition of the proposed development traffic and Proposed Drive opposite NW 50th Street will add much more side street traffic and delay to the intersection. As a result, once the proposed development site traffic was added to the 2021 background traffic, the intersection was analyzed with a traffic signal installed. Under the 2021 projected combined traffic, each intersection would be expected to operate at acceptable levels-of-service during the a.m. and p.m. peak hours.

6.0 TRAFFIC SIGNAL WARRANT ANALYSIS

In order to determine the need for additional traffic control measures at the intersection of Cache Road and NW 50th Street/Proposed Drive, a traffic signal warrant analysis was conducted. The analysis was conducted in accordance with the *Manual on Uniform Traffic Control Devices (MUTCD)*. This publication is a federally approved publication which governs the traffic engineering practices across the country. The MUTCD has eight sets of thresholds or “warrants” that may be evaluated at an intersection to determine whether or not a traffic signal should be considered to reduce accidents or delay. If one of the warrants is met the installation of a traffic signal should be considered.

Due to the unknowns surrounding the development site, only the peak hour traffic volumes were generated and analyzed and, therefore, only the peak hour vehicular volume warrant was evaluated. The results indicated that the intersection of Cache Road and NW 50th Street/Proposed Drive easily satisfied the peak hour vehicular volume warrant during the p.m. peak hour under the 2021 projected combined traffic. The computer printouts of the warrant analysis have been included in the appendix.

7.0 CONCLUSIONS AND RECOMMENDATIONS

TEC was requested to conduct a traffic impact study on a proposed commercial development site in Lawton, Oklahoma. Existing traffic volume data was collected adjacent to the proposed development site. The 2016 existing traffic was utilized to determine the background traffic for 2021 by applying an average annual growth rate of 2% for five years. The 2021 design period was selected as a future design year since no current development date is known at this time. The proposed development site traffic was determined and added to the 2021 projected background traffic for conducting the reviews and analyses.

The analyses conducted under the 2016 existing traffic and 2021 projected background traffic indicated that the critical movement at the intersection of Cache Road and NW 50th Street would operate at level-of-service “F” during the p.m. peak hour.

A traffic signal warrant analysis was conducted at the intersection of Cache Road and NW 50th Street/Proposed Drive and the analysis determined that the intersection easily satisfied the peak hour vehicular volume warrant under the 2021 projected combined traffic. Once the site generated traffic was applied to the 2021 background traffic and traffic signal installed, each intersection would be expected to operate at acceptable levels-of-service during the a.m. and p.m. peak hours.

Based on the review and analyses, the construction of Proposed Drive at the existing median opening opposite NW 50th Street would be a sensible location and depending on how the property is developed, it is likely that a traffic signal would be required at the intersection of Cache Road and NW 50th Street/Proposed Drive. The westbound left turn lane at the intersection currently provides 100 feet of storage and a 100 foot taper. A queuing analysis was conducted on the intersection and it was determined that once the property develops, the westbound left turn lane will require 104 feet of storage during the a.m. peak hour and 136 feet of storage during the p.m. peak hour. It is recommended that once the site is developed, the westbound left turn lane be extended to include a minimum of 150 feet of storage and a 100 foot taper. The computer printouts of the warrant analysis have been included in the appendix.

The intersection of Cache Road and NW 44th Street is signalized and located approximately 800 feet to the east of NW 50th Street. It is recommended that if a traffic signal is installed at the intersection of Cache Road and NW 50th Street, it is coordinated with the traffic signal at Cache Road and NW 44th Street to prevent backups and delay between the closely spaced intersections.

APPENDIX

EXISTING TRAFFIC DATA

Traffic Engineering Consultants, Inc.
6000 S. Western Ave., Suite 300
Oklahoma City, Ok. 73160

Site Code: 1
 Station ID:
 Cache Rd. wb
 west of N.W. 44th St.
 Latitude: 0' 0.0000 Undefined

Start Time	28-Mar-16	Tue	Wed	Thu	Fri	Sat	Sun	Week Average
	Channel 1	WB	Channel	WB	Channel	WB	Channel	WB
12:00 AM	*	0	*	*	*	*	*	0
01:00	*	120	*	*	*	*	*	0
02:00	*	63	*	*	*	*	*	63
03:00	*	0	*	*	*	*	*	0
04:00	*	63	*	*	*	*	*	63
05:00	*	41	*	*	*	*	*	41
06:00	*	51	*	*	*	*	*	51
07:00	*	105	*	*	*	*	*	105
08:00	*	271	*	*	*	*	*	271
09:00	*	469	*	*	*	*	*	469
10:00	*	681	*	*	*	*	*	681
11:00	*	709	*	*	*	*	*	709
12:00 PM	0	741	*	*	*	*	*	794
01:00	0	978	*	*	*	*	*	1021
02:00	0	1255	*	*	*	*	*	1244
03:00	0	1187	*	*	*	*	*	1150
04:00	0	1157	*	*	*	*	*	1157
05:00	0	1413	*	*	*	*	*	1413
06:00	0	1402	*	*	*	*	*	1402
07:00	0	1500	*	*	*	*	*	1500
08:00	0	1121	*	*	*	*	*	1121
09:00	0	895	*	*	*	*	*	895
10:00	0	769	*	*	*	*	*	769
11:00	0	487	*	*	*	*	*	487
Lane	0	315	*	*	*	*	*	315
Day	0	187	*	*	*	*	*	187
AM Peak	13598	6637	0	0	0	0	0	16028
Vol.	11:00	11:00	-	-	-	-	-	11:00
PM Peak	1064	978	-	-	-	-	-	1021
Vol.	17:00	12:00	-	-	-	-	-	17:00
Vol.	1500	1233	-	-	-	-	-	1500
Comb. Total	13598	6637	0	0	0	0	0	16028
ADT	ADT 15,860	AADT 15,860						

Traffic Engineering Consultants, Inc.
6000 S. Western Ave., Suite 300
Oklahoma City, Ok. 73160

Site Code: 2
 Station ID:
 Cache Rd.
 west of N.W. 44th St.
 Latitude: 0' 0.0000 Undefined

Start Time	28-Mar-16		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	Channel	EB	Channel	EB	Channel	EB	Channel	EB	Channel	EB	Channel	EB	Channel	EB	Channel
12:00 AM	*	*	*	*	54	0	81	0	*	*	*	*	*	*	68	0
01:00	*	*	*	*	51	0	59	0	*	*	*	*	*	*	55	0
02:00	*	*	*	*	29	0	45	0	*	*	*	*	*	*	37	0
03:00	*	*	*	*	34	0	23	0	*	*	*	*	*	*	28	0
04:00	*	*	*	*	42	0	59	0	*	*	*	*	*	*	50	0
05:00	*	*	*	*	86	0	81	0	*	*	*	*	*	*	84	0
06:00	*	*	*	*	168	0	195	0	*	*	*	*	*	*	182	0
07:00	*	*	*	*	527	0	534	0	*	*	*	*	*	*	530	0
08:00	*	*	*	*	527	0	556	0	*	*	*	*	*	*	542	0
09:00	*	*	*	*	488	0	519	0	*	*	*	*	*	*	504	0
10:00	*	*	*	*	510	0	583	0	*	*	*	*	*	*	546	0
11:00	*	*	*	*	631	0	752	0	*	*	*	*	*	*	692	0
12:00 PM	*	*	*	*	692	0	796	0	*	*	*	*	*	*	744	0
01:00	*	*	*	*	698	0	749	0	*	*	*	*	*	*	724	0
02:00	*	*	*	*	683	0	745	0	*	*	*	*	*	*	714	0
03:00	*	*	758	0	732	0	799	0	*	*	*	*	*	*	763	0
04:00	*	*	704	0	741	0	*	*	*	*	*	*	*	*	722	0
05:00	*	*	747	0	731	0	*	*	*	*	*	*	*	*	739	0
06:00	*	*	634	0	623	0	*	*	*	*	*	*	*	*	628	0
07:00	*	*	537	0	14	0	*	*	*	*	*	*	*	*	276	0
08:00	*	*	368	0	516	0	*	*	*	*	*	*	*	*	442	0
09:00	*	*	239	0	318	0	*	*	*	*	*	*	*	*	278	0
10:00	*	*	189	0	179	0	*	*	*	*	*	*	*	*	184	0
11:00	*	*	116	0	119	0	*	*	*	*	*	*	*	*	118	0
Lane	0	0	4292	0	9193	0	6576	0	0	0	0	0	0	0	9650	0
Day			4292		9193		6576								9650	
AM Peak	-	-	-	-	11:00	-	11:00	-	-	-	-	-	-	-	11:00	-
Vol.	-	-	-	-	631	-	752	-	-	-	-	-	-	-	692	-
PM Peak	-	-	15:00	-	16:00	-	15:00	-	-	-	-	-	-	-	15:00	-
Vol.	-	-	758	-	741	-	799	-	-	-	-	-	-	-	763	-
Comb. Total	0		4292		9193		6576		0	0	0	0	0	0	9650	
ADT		ADT 9,568		AADT 9,568												

Traffic Engineering Consultants, Inc.
6000 S. Western Ave., Suite 300
Oklahoma City, Ok. 73160

Site Code: 2
 Station ID:
 Quanah Parker Trailway
 west of N.W. 44th St.
 Latitude: 0' 0.0000 Undefined

Start Time	28-Mar-16		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	Channel	EB	Channel	EB	Channel	EB	Channel	EB	Channel	EB	Channel	EB	Channel	EB	Channel
12:00 AM	*	*	*	*	31	0	21	0	*	*	*	*	*	*	26	0
01:00	*	*	*	*	14	0	18	0	*	*	*	*	*	*	16	0
02:00	*	*	*	*	11	0	13	0	*	*	*	*	*	*	16	0
03:00	*	*	*	*	15	0	4	0	*	*	*	*	*	*	12	0
04:00	*	*	*	*	21	0	22	0	*	*	*	*	*	*	10	0
05:00	*	*	*	*	56	0	55	0	*	*	*	*	*	*	22	0
06:00	*	*	*	*	121	0	125	0	*	*	*	*	*	*	56	0
07:00	*	*	*	*	373	0	393	0	*	*	*	*	*	*	123	0
08:00	*	*	*	*	374	0	397	0	*	*	*	*	*	*	383	0
09:00	*	*	*	*	328	0	365	0	*	*	*	*	*	*	386	0
10:00	*	*	*	*	315	0	359	0	*	*	*	*	*	*	346	0
11:00	*	*	*	*	376	0	396	0	*	*	*	*	*	*	337	0
12:00 PM	*	*	*	*	402	0	424	0	*	*	*	*	*	*	386	0
01:00	*	*	*	*	406	0	418	0	*	*	*	*	*	*	413	0
02:00	*	*	*	*	377	0	391	0	*	*	*	*	*	*	412	0
03:00	*	*	393	0	433	0	451	0	*	*	*	*	*	*	384	0
04:00	*	*	411	0	437	0	*	*	*	*	*	*	*	*	426	0
05:00	*	*	442	0	401	0	*	*	*	*	*	*	*	*	424	0
06:00	*	*	332	0	400	0	*	*	*	*	*	*	*	*	422	0
07:00	*	*	249	0	618	0	*	*	*	*	*	*	*	*	366	0
08:00	*	*	161	0	264	0	*	*	*	*	*	*	*	*	434	0
09:00	*	*	119	0	129	0	*	*	*	*	*	*	*	*	212	0
10:00	*	*	71	0	81	0	*	*	*	*	*	*	*	*	124	0
11:00	*	*	43	0	55	0	*	*	*	*	*	*	*	*	76	0
Lane	0	0	2221	0	6038	0	3852	0	0	0	0	0	0	0	5845	0
Day	0	0	2221	0	6038	0	3852	0	0	0	0	0	0	0	5845	0
AM Peak	-	-	-	-	11:00	-	08:00	-	-	-	-	-	-	-	08:00	-
Vol.	-	-	-	-	376	-	397	-	-	-	-	-	-	-	386	-
PM Peak	-	-	17:00	-	19:00	-	15:00	-	-	-	-	-	-	-	19:00	-
Vol.	-	-	442	-	618	-	451	-	-	-	-	-	-	-	434	-
Comb. Total	0		2221		6038		3852		0		0		0		5845	
ADT		ADT 5,797		AADT 5,797												

Traffic Engineering Consultants, Inc.
6000 S. Western Ave., Suite 300
Oklahoma City, Ok. 73160

Site Code: 3
 Station ID:
 N.W. 44th St.
 south of Cache Rd.
 Latitude: 0' 0.0000 Undefined

Start Time	28-Mar-16		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	1	12	*	*	*	*	*	*	*	*	*	*	1	12
01:00	*	*	5	12	*	*	*	*	*	*	*	*	*	*	5	12
02:00	*	*	4	7	*	*	*	*	*	*	*	*	*	*	4	7
03:00	*	*	1	2	*	*	*	*	*	*	*	*	*	*	1	2
04:00	*	*	2	2	*	*	*	*	*	*	*	*	*	*	2	2
05:00	*	*	3	4	*	*	*	*	*	*	*	*	*	*	3	4
06:00	*	*	5	12	*	*	*	*	*	*	*	*	*	*	5	12
07:00	*	*	11	44	*	*	*	*	*	*	*	*	*	*	11	44
08:00	*	*	28	39	*	*	*	*	*	*	*	*	*	*	28	39
09:00	*	*	20	41	*	*	*	*	*	*	*	*	*	*	20	41
10:00	*	*	26	50	*	*	*	*	*	*	*	*	*	*	26	50
11:00	28	77	23	58	*	*	*	*	*	*	*	*	*	*	26	68
12:00 PM	41	81	27	95	*	*	*	*	*	*	*	*	*	*	34	88
01:00	34	79	31	82	*	*	*	*	*	*	*	*	*	*	32	80
02:00	22	65	21	52	*	*	*	*	*	*	*	*	*	*	22	58
03:00	31	76	*	*	*	*	*	*	*	*	*	*	*	*	31	76
04:00	34	72	*	*	*	*	*	*	*	*	*	*	*	*	34	72
05:00	41	49	*	*	*	*	*	*	*	*	*	*	*	*	41	49
06:00	21	77	*	*	*	*	*	*	*	*	*	*	*	*	21	77
07:00	13	69	*	*	*	*	*	*	*	*	*	*	*	*	13	69
08:00	19	43	*	*	*	*	*	*	*	*	*	*	*	*	19	43
09:00	23	42	*	*	*	*	*	*	*	*	*	*	*	*	23	42
10:00	8	26	*	*	*	*	*	*	*	*	*	*	*	*	8	26
11:00	6	22	*	*	*	*	*	*	*	*	*	*	*	*	6	22
Lane	321	778	208	512	0	0	0	0	0	0	0	0	0	0	416	995
Day	1099	720	720		0	0	0	0	0	0	0	0	0	0	1411	
AM Peak	11:00	11:00	08:00	11:00	-	-	-	-	-	-	-	-	-	-	08:00	11:00
Vol.	28	77	28	58	-	-	-	-	-	-	-	-	-	-	28	68
PM Peak	12:00	12:00	13:00	12:00	-	-	-	-	-	-	-	-	-	-	17:00	12:00
Vol.	41	81	31	95	-	-	-	-	-	-	-	-	-	-	41	88
Comb. Total	1099		720		0		0		0		0		0		1411	
ADT	ADT 1,405		ADT 1,405													

Traffic Engineering Consultants, Inc.
6000 S. Western Ave., Suite 300
Oklahoma City, Ok. 73139

File Name : 50th & cache
Site Code :
Start Date : 03-28-16
Page No : 1

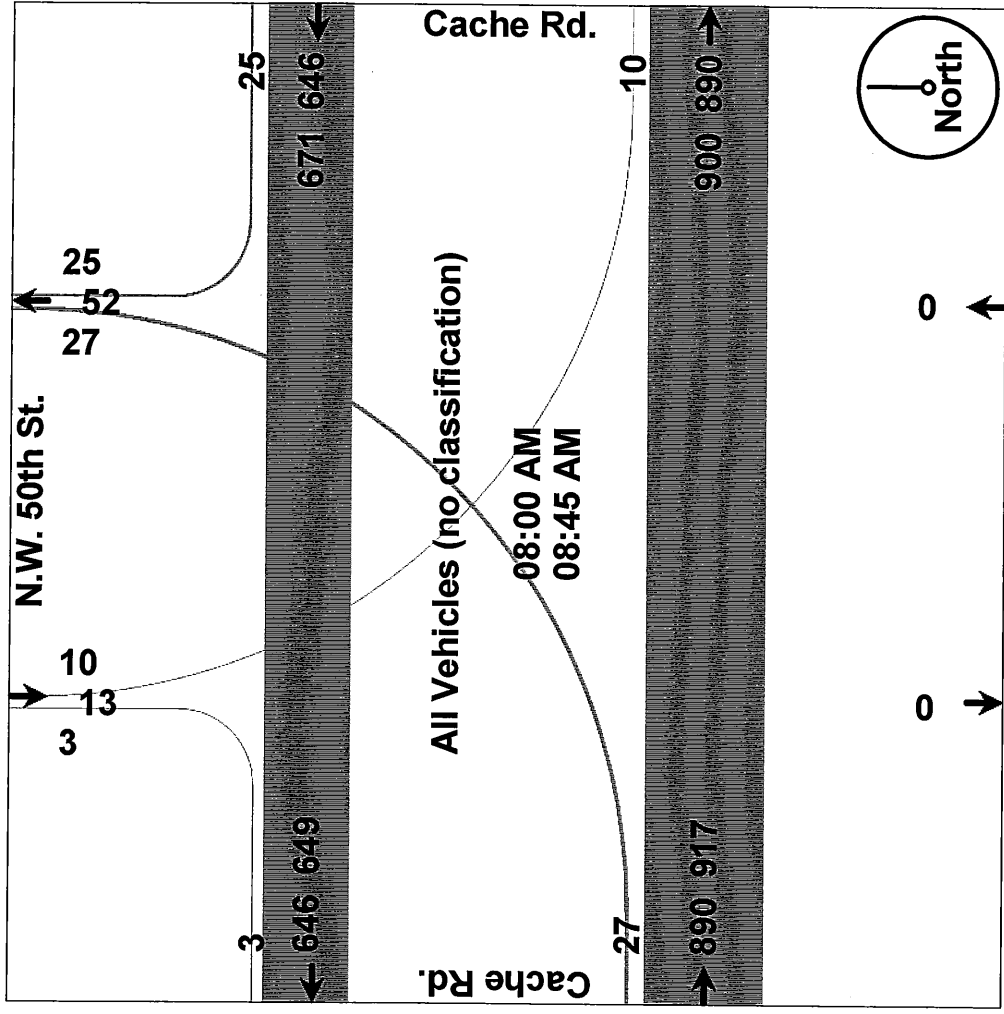
Groups Printed- All Vehicles (no classification)

Start Time	N.W. 50th St. Southbound					Cache Rd. Westbound					Cache Rd. Eastbound				
	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total		
07:00 AM	2	0	0	2	77	0	9	86	5	157	0	162	250		
07:15 AM	7	0	0	7	99	2	10	111	1	211	0	212	330		
07:30 AM	3	1	0	4	120	6	6	132	4	224	0	228	364		
07:45 AM	1	1	0	2	123	15	11	149	4	267	0	271	422		
Total	13	2	0	15	419	23	36	478	14	859	0	873	1366		
08:00 AM	2	0	0	2	122	10	8	140	8	196	0	204	346		
08:15 AM	4	3	0	7	175	5	8	188	8	194	3	205	400		
08:30 AM	1	0	0	1	169	5	7	181	6	249	0	255	437		
08:45 AM	3	0	0	3	180	5	6	191	5	251	0	256	450		
Total	10	3	0	13	646	25	29	700	27	890	3	920	1633		
04:00 PM	3	1	0	4	344	3	14	361	5	314	1	320	685		
04:15 PM	2	1	0	3	340	5	17	362	4	308	0	312	677		
04:30 PM	2	7	0	9	332	8	13	353	7	277	0	284	646		
04:45 PM	3	6	0	9	352	10	18	380	8	292	0	300	689		
Total	10	15	0	25	1368	26	62	1456	24	1191	1	1216	2697		
05:00 PM	3	7	0	10	376	6	14	396	4	282	0	286	692		
05:15 PM	3	7	0	10	422	8	19	449	9	302	0	311	770		
05:30 PM	5	7	0	12	366	6	17	389	5	277	0	282	683		
05:45 PM	3	2	0	5	322	9	13	344	3	275	1	279	628		
Total	14	23	0	37	1486	29	63	1578	21	1136	1	1158	2773		
Grand Total	47	43	0	90	3919	103	190	4212	86	4076	5	4167	8469		
Apprch %	52.2	47.8	0		93	2.4	4.5		2.1	97.8	0.1				
Total %	0.6	0.5	0	1.1	46.3	1.2	2.2	49.7	1	48.1	0.1	49.2			

Traffic Engineering Consultants, Inc.
6000 S. Western Ave., Suite 300
Oklahoma City, Ok. 73139

File Name : 50th & cache
Site Code :
Start Date : 03-28-16
Page No : 2

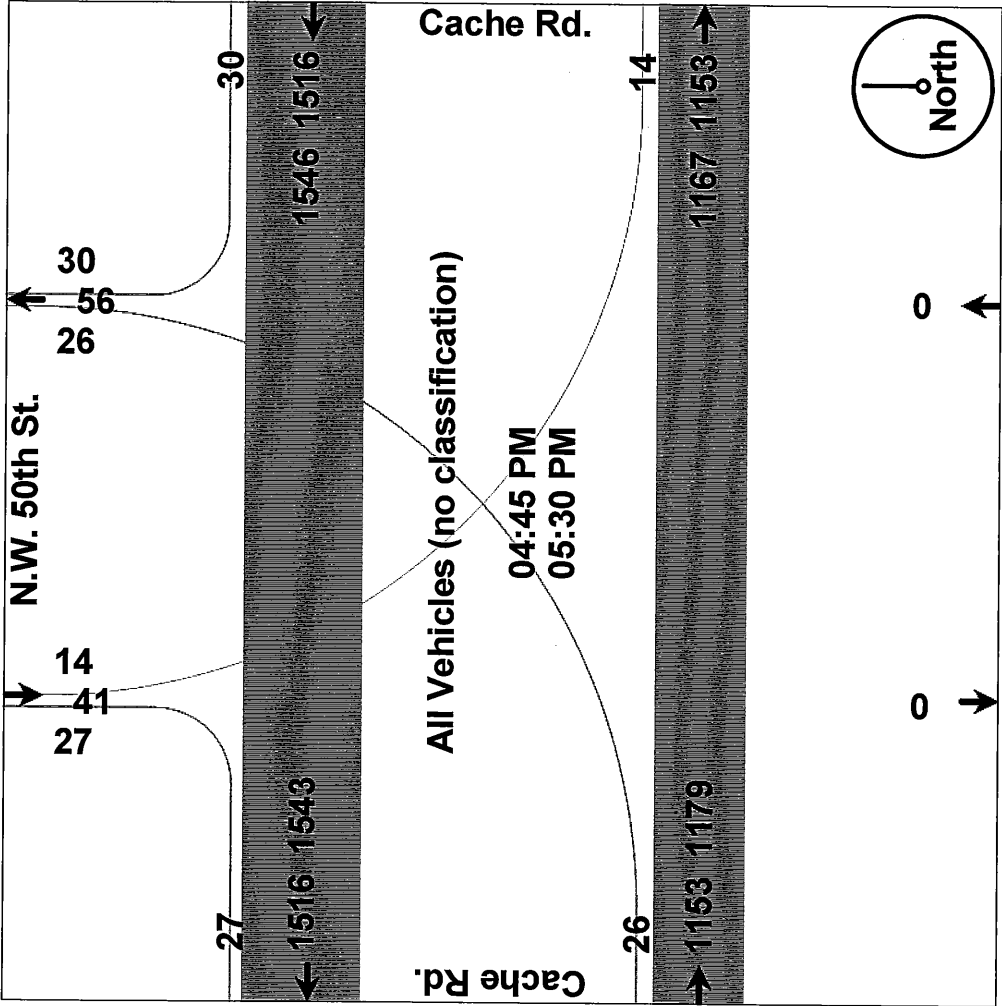
Start Time	N.W. 50th St. Southbound				Cache Rd. Westbound				Cache Rd. Eastbound			
	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1												
Peak Hour for Entire Intersection Begins at 08:00 AM												
08:00 AM	2	0	0	2	122	10	8	140	8	196	0	204
08:15 AM	4	3	0	7	175	5	8	188	8	194	3	205
08:30 AM	1	0	0	1	169	5	7	181	6	249	0	255
08:45 AM	3	0	0	3	180	5	6	191	5	251	0	256
Total Volume	10	3	0	13	646	25	29	700	27	890	3	920
% App. Total	76.9	23.1	0		92.3	3.6	4.1		2.9	96.7	0.3	
PHF	.625	.250	.000	.464	.897	.625	.906	.916	.844	.886	.250	.898
												.907



Traffic Engineering Consultants, Inc.
6000 S. Western Ave., Suite 300
Oklahoma City, Ok. 73139

File Name : 50th & cache
Site Code :
Start Date : 03-28-16
Page No : 4

Start Time	N.W. 50th St. Southbound				Cache Rd. Westbound				Cache Rd. Eastbound			
	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total
Peak Hour Analysis From 12:00 PM to 06:00 PM - Peak 1 of 1												
Peak Hour for Entire Intersection Begins at 04:45 PM												
04:45 PM	3	6	0	9	352	10	18	380	8	292	0	300
05:00 PM	3	7	0	10	376	6	14	396	4	282	0	286
05:15 PM	3	7	0	10	422	8	19	449	9	302	0	311
05:30 PM	5	7	0	12	366	6	17	389	5	277	0	282
Total Volume	14	27	0	41	1516	30	68	1614	26	1153	0	1179
% App. Total	34.1	65.9	0	85.4	93.9	1.9	4.2	97.8	2.2	97.8	0	94.8
PHF	.700	.964	.000	.854	.898	.750	.895	.899	.722	.954	.000	.948
												.920



Traffic Engineering Consultants, Inc.
6000 S. Western Ave., Suite 300
Oklahoma City, Ok. 73139

File Name : 44th & cache
Site Code :
Start Date : 03-28-16
Page No : 1

Groups Printed- All Vehicles (no classification)																									
N.W. 44th St. Southbound											Cache Rd. Westbound					N.W. 44th St. Northbound						Cache Rd. Eastbound			
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total				
07:00 AM	9	5	4	0	18	8	71	8	1	88	4	1	11	0	16	5	142	8	0	155	277				
07:15 AM	16	7	7	0	30	15	86	6	0	107	4	0	17	0	21	6	201	6	5	218	376				
07:30 AM	26	3	6	0	35	13	114	7	1	135	14	2	17	0	33	3	219	6	2	230	433				
07:45 AM	20	9	11	0	40	17	123	9	4	153	13	7	19	0	39	0	257	7	4	268	500				
Total	71	24	28	0	123	53	394	30	6	483	35	10	64	0	109	14	819	27	11	871	1586				
08:00 AM	20	3	7	0	30	12	120	3	1	136	7	4	17	0	28	8	172	14	2	196	390				
08:15 AM	24	4	16	0	44	19	147	10	2	178	12	1	20	0	33	6	173	7	1	187	442				
08:30 AM	24	8	9	0	41	17	148	5	3	173	16	8	30	0	54	2	225	15	4	246	514				
08:45 AM	22	11	11	0	44	26	145	8	1	180	21	8	27	0	56	7	230	17	5	259	539				
Total	90	26	43	0	159	74	560	26	7	667	56	21	94	0	171	23	800	53	12	888	1885				
04:00 PM	34	7	12	0	53	41	296	11	9	357	34	13	33	0	80	11	272	24	14	321	811				
04:15 PM	26	10	12	0	48	49	299	24	6	378	30	11	38	0	79	12	281	20	13	326	831				
04:30 PM	22	11	10	0	43	47	294	24	7	372	31	12	40	0	83	10	255	16	11	292	790				
04:45 PM	19	7	12	0	38	46	310	22	10	388	37	5	47	0	89	14	254	25	13	306	821				
Total	101	35	46	0	182	183	1199	81	32	1495	132	41	158	0	331	47	1062	85	51	1245	3253				
05:00 PM	27	13	16	0	56	26	326	20	7	379	35	10	40	0	85	15	249	23	21	308	828				
05:15 PM	26	10	18	0	54	30	348	21	7	406	36	9	36	0	81	14	284	27	21	346	887				
05:30 PM	32	9	12	1	54	38	283	16	10	347	43	14	46	0	103	20	261	9	13	303	807				
05:45 PM	25	8	12	0	45	44	274	13	1	332	30	2	31	0	63	14	239	10	14	277	717				
Total	110	40	58	1	209	138	1231	70	25	1464	144	35	153	0	332	63	1033	69	69	1234	3239				
Grand Total	372	125	175	1	673	448	3384	207	70	4109	367	107	469	0	943	147	3714	234	143	4238	9963				
Approch %	55.3	18.6	26	0.1		10.9	82.4	5	1.7		38.9	11.3	49.7	0		3.5	87.6	5.5	3.4						
Total %	3.7	1.3	1.8	0	6.8	4.5	34	2.1	0.7	41.2	3.7	1.1	4.7	0	9.5	1.5	37.3	2.3	1.4	42.5					

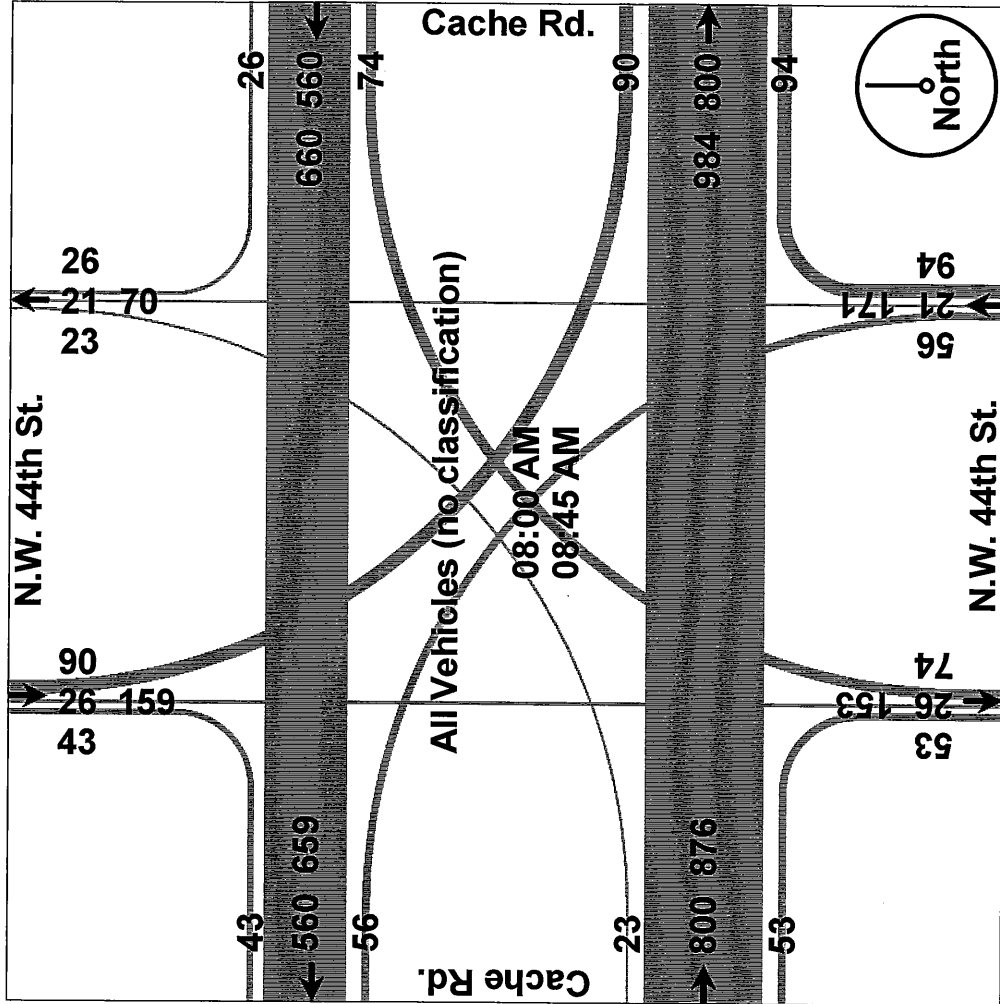
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File Name : 44th & cache
Site Code :
Start Date : 03-28-16
Page No : 2

	N.W. 44th St. Southbound					Cache Rd. Westbound					N.W. 44th St. Northbound					Cache Rd. Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	20	3	7	0	30	12	120	3	1	136	7	4	17	0	28	8	172	14	2	196	390
08:15 AM	24	4	16	0	44	19	147	10	2	178	12	1	20	0	33	6	173	7	1	187	442
08:30 AM	24	8	9	0	41	17	148	5	3	173	16	8	30	0	54	2	225	15	4	246	514
08:45 AM	22	11	11	0	44	26	145	8	1	180	21	8	27	0	56	7	230	17	5	259	539
Total Volume	90	26	43	0	159	74	560	26	7	667	56	21	94	0	171	23	800	53	12	888	1885
% App. Total	56.6	16.4	27	0		11.1	84	3.9	1		32.7	12.3	55	0		2.6	90.1	6	1.4		
PHF	.938	.591	.672	.000	.903	.712	.946	.650	.583	.926	.667	.656	.783	.000	.763	.719	.870	.779	.600	.857	.874

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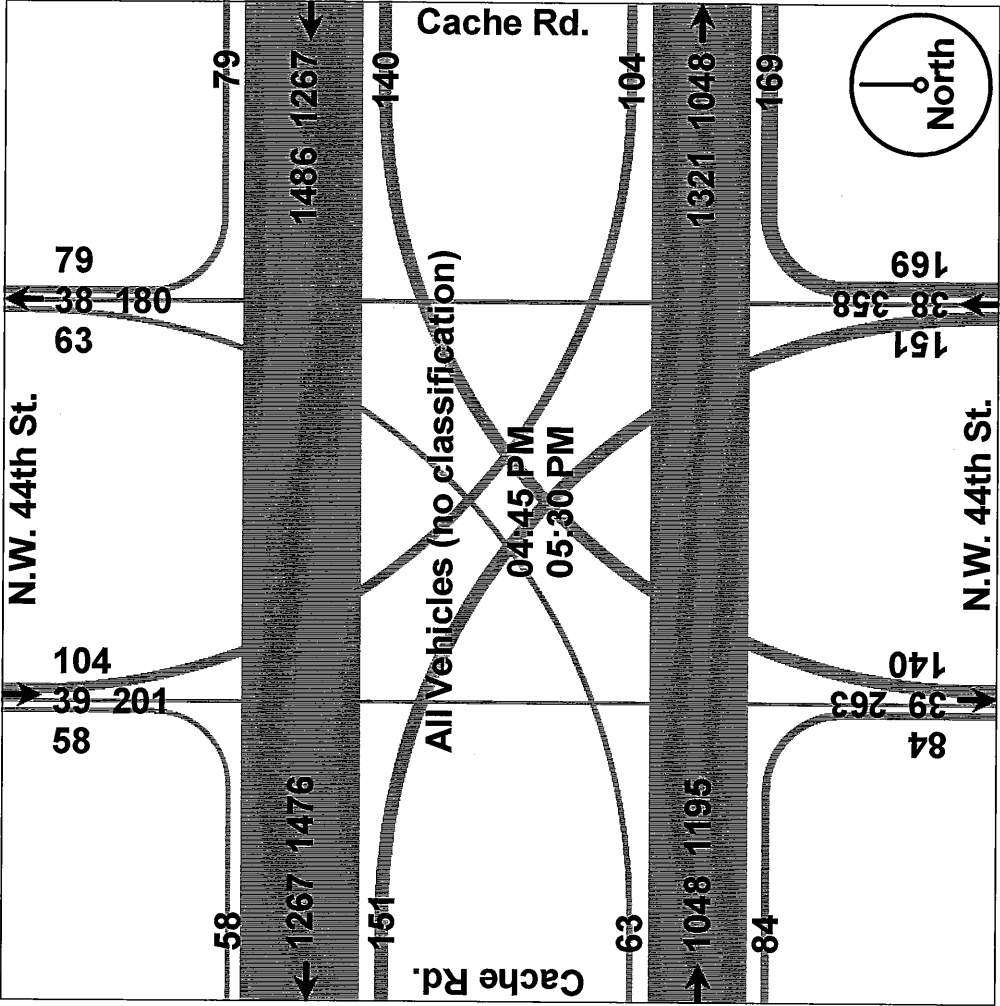
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Site Code :
Start Date : 03-28-16
Page No : 3



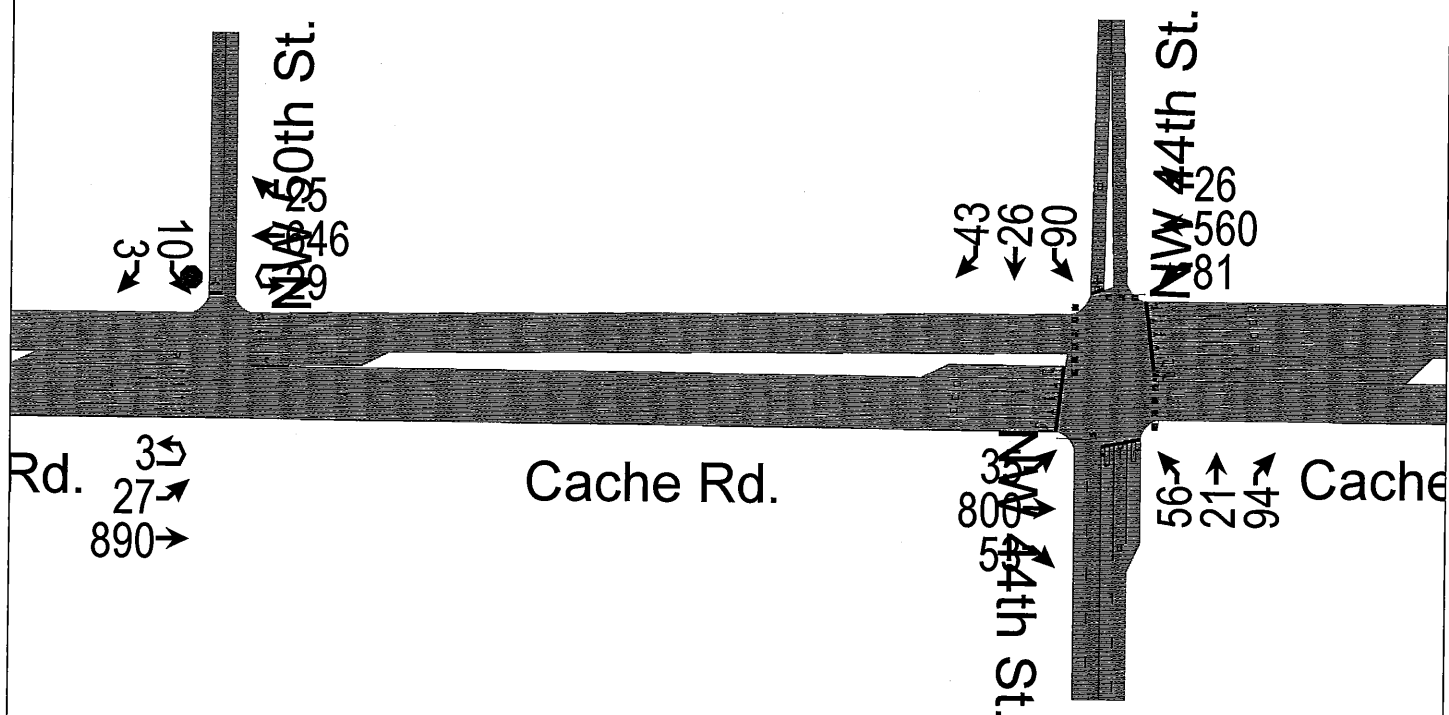
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File Name : 44th & cache
Site Code :
Start Date : 03-28-16
Page No : 4

	N.W. 44th St. Southbound					Cache Rd. Westbound					N.W. 44th St. Northbound					Cache Rd. Eastbound					
Start Time	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	19	7	12	0	38	46	310	22	10	388	37	5	47	0	89	14	254	25	13	306	821
05:00 PM	27	13	16	0	56	26	326	20	7	379	35	10	40	0	85	15	249	23	21	308	828
05:15 PM	26	10	18	0	54	30	348	21	7	406	36	9	36	0	81	14	284	27	21	346	887
05:30 PM	32	9	12	1	54	38	283	16	10	347	43	14	46	0	103	20	261	9	13	303	807
Total Volume	104	39	58	1	202	140	1267	79	34	1520	151	38	169	0	358	63	1048	84	68	1263	3343
% App. Total	51.5	19.3	28.7	0.5		9.2	83.4	5.2	2.2		42.2	10.6	47.2	0		5	83	6.7	5.4		
PHF	.813	.750	.806	.250	.902	.761	.910	.898	.850	.936	.878	.679	.899	.000	.869	.788	.923	.778	.810	.913	.942



CAPACITY ANALYSES



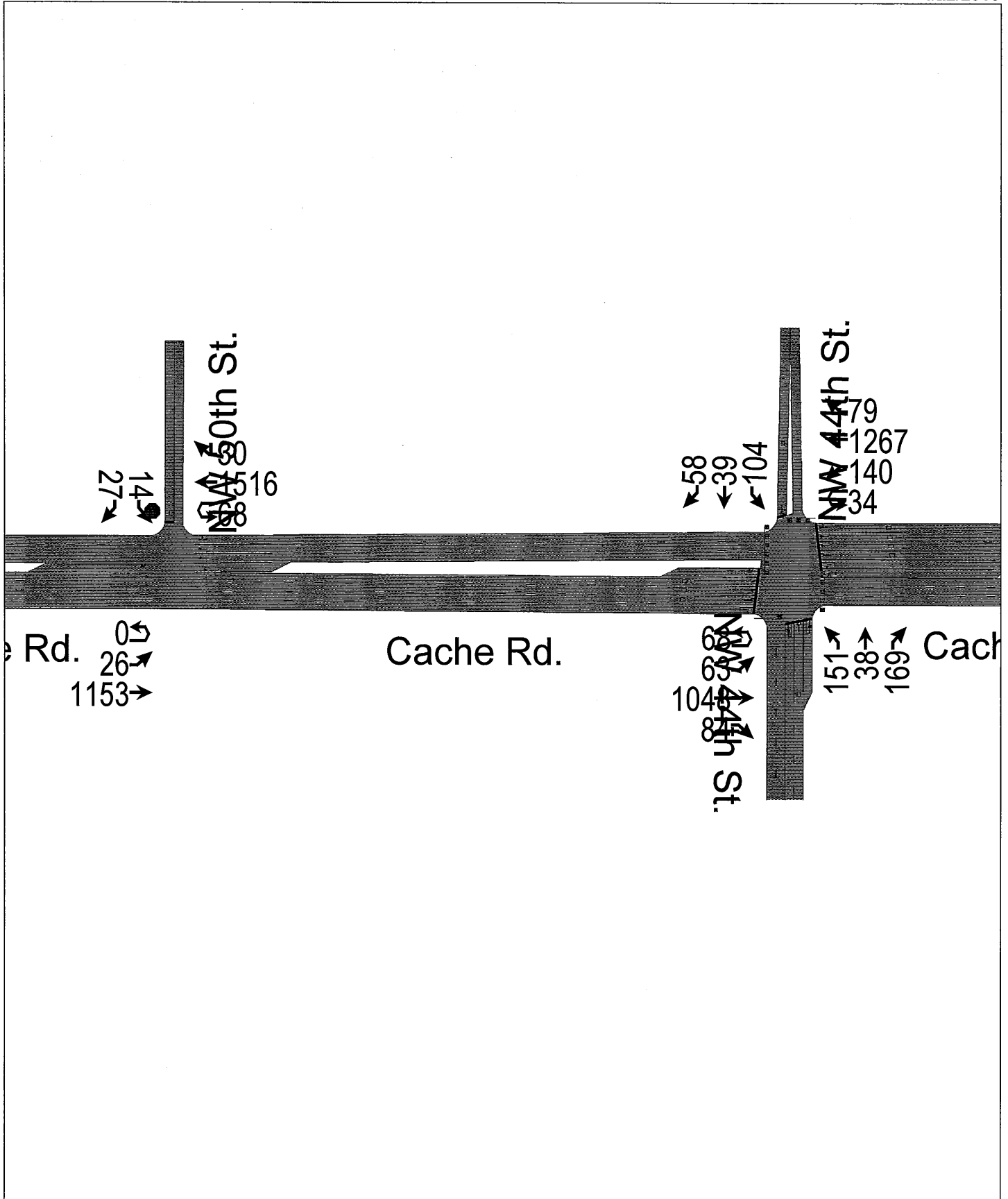
Intersection								
Int Delay, s/veh	0.6							
Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	3	27	890	29	646	25	10	3
Future Vol, veh/h	3	27	890	29	646	25	10	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	140	-	100	-	-	0	-
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	3	29	967	32	702	27	11	3
Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	536	729	0	706	-	0	1231	365
Stage 1	-	-	-	-	-	-	779	-
Stage 2	-	-	-	-	-	-	452	-
Critical Hdwy	5.64	5.34	-	5.64	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.04	-
Follow-up Hdwy	2.32	3.12	-	2.32	-	-	3.82	3.92
Pot Cap-1 Maneuver	792	528	-	639	-	-	237	540
Stage 1	-	-	-	-	-	-	329	-
Stage 2	-	-	-	-	-	-	556	-
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	546	546	-	639	-	-	237	540
Mov Cap-2 Maneuver	-	-	-	-	-	-	237	-
Stage 1	-	-	-	-	-	-	329	-
Stage 2	-	-	-	-	-	-	556	-
Approach	EB			WB			SB	
HCM Control Delay, s	0.4			0.5			19	
HCM LOS							C	
Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1		
Capacity (veh/h)	546	-	639	-	-	272		
HCM Lane V/C Ratio	0.06	-	0.049	-	-	0.052		
HCM Control Delay (s)	12	-	10.9	-	-	19		
HCM Lane LOS	B	-	B	-	-	C		
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-	0.2		

HCM 2010 Signalized Intersection Summary

5: NW 44th St. & Cache Rd.

4/22/2016

												
Movement	FBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	800	53	81	560	26	56	21	94	90	26	43
Future Volume (veh/h)	35	800	53	81	560	26	56	21	94	90	26	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	38	870	58	88	609	28	61	23	102	98	28	47
Adj No. of Lanes	1	3	1	2	4	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	1507	469	237	2055	94	192	202	171	143	41	69
Arrive On Green	0.04	0.30	0.30	0.07	0.32	0.32	0.11	0.11	0.11	0.15	0.15	0.15
Sat Flow, veh/h	1774	5085	1583	3442	6329	288	1774	1863	1583	980	280	470
Grp Volume(v), veh/h	38	870	58	88	461	176	61	23	102	173	0	0
Grp Sat Flow(s), veh/h/ln	1774	1695	1583	1721	1602	1812	1774	1863	1583	1731	0	0
Q Serve(g_s), s	1.1	7.6	1.4	1.3	3.8	3.8	1.7	0.6	3.2	5.0	0.0	0.0
Cycle Q Clear(g_c), s	1.1	7.6	1.4	1.3	3.8	3.8	1.7	0.6	3.2	5.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	0.57		0.27
Lane Grp Cap(c), veh/h	72	1507	469	237	1560	588	192	202	171	253	0	0
V/C Ratio(X)	0.53	0.58	0.12	0.37	0.30	0.30	0.32	0.11	0.59	0.68	0.00	0.00
Avail Cap(c_a), veh/h	338	1838	572	655	1737	655	608	638	542	593	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.7	15.7	13.5	23.4	13.3	13.3	21.6	21.2	22.3	21.3	0.0	0.0
Incr Delay (d2), s/veh	5.9	0.4	0.1	1.0	0.1	0.3	0.9	0.2	3.3	3.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.6	0.6	0.6	1.7	2.0	0.9	0.3	1.6	2.6	0.0	0.0
LnGrp Delay(d),s/veh	30.6	16.0	13.6	24.4	13.4	13.6	22.6	21.4	25.6	24.6	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C	C	C	C		
Approach Vol, veh/h		966			725			186			173	
Approach Delay, s/veh		16.5			14.7			24.1			24.6	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.7	8.6	20.6		12.7	7.1	22.1				
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0	5.0	5.0				
Max Green Setting (Gmax), s		18.0	10.0	19.0		18.0	10.0	19.0				
Max Q Clear Time (g_c+I1), s		5.2	3.3	9.6		7.0	3.1	5.8				
Green Ext Time (p_c), s		0.5	0.1	5.9		0.7	0.0	7.6				
Intersection Summary												
HCM 2010 Ctrl Delay				17.2								
HCM 2010 LOS				B								



Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	26	1153	68	1516	30	14	27
Future Vol, veh/h	26	1153	68	1516	30	14	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	None		-		None	-	None
Storage Length	140	-	100	-	-	0	-
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	28	1253	74	1648	33	15	29

Major/Minor	Major1		Major2			Minor2	
Conflicting Flow All	1680	0	915	-	0	2370	840
Stage 1	-	-	-	-	-	1812	-
Stage 2	-	-	-	-	-	558	-
Critical Hdwy	5.34	-	5.64	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	2.32	-	-	3.82	3.92
Pol Cap-1 Maneuver	181	-	490	-	-	59	265
Stage 1	-	-	-	-	-	75	-
Stage 2	-	-	-	-	-	490	-
Platoon blocked, %	-		-		-		
Mov Cap-1 Maneuver	181	-	490	-	-	50	265
Mov Cap-2 Maneuver	-	-	-	-	-	50	-
Stage 1	-	-	-	-	-	75	-
Stage 2	-	-	-	-	-	414	-

Approach	EB		WB		SB
HCM Control Delay, s	0.6		0.6		60.8
HCM LOS	F				

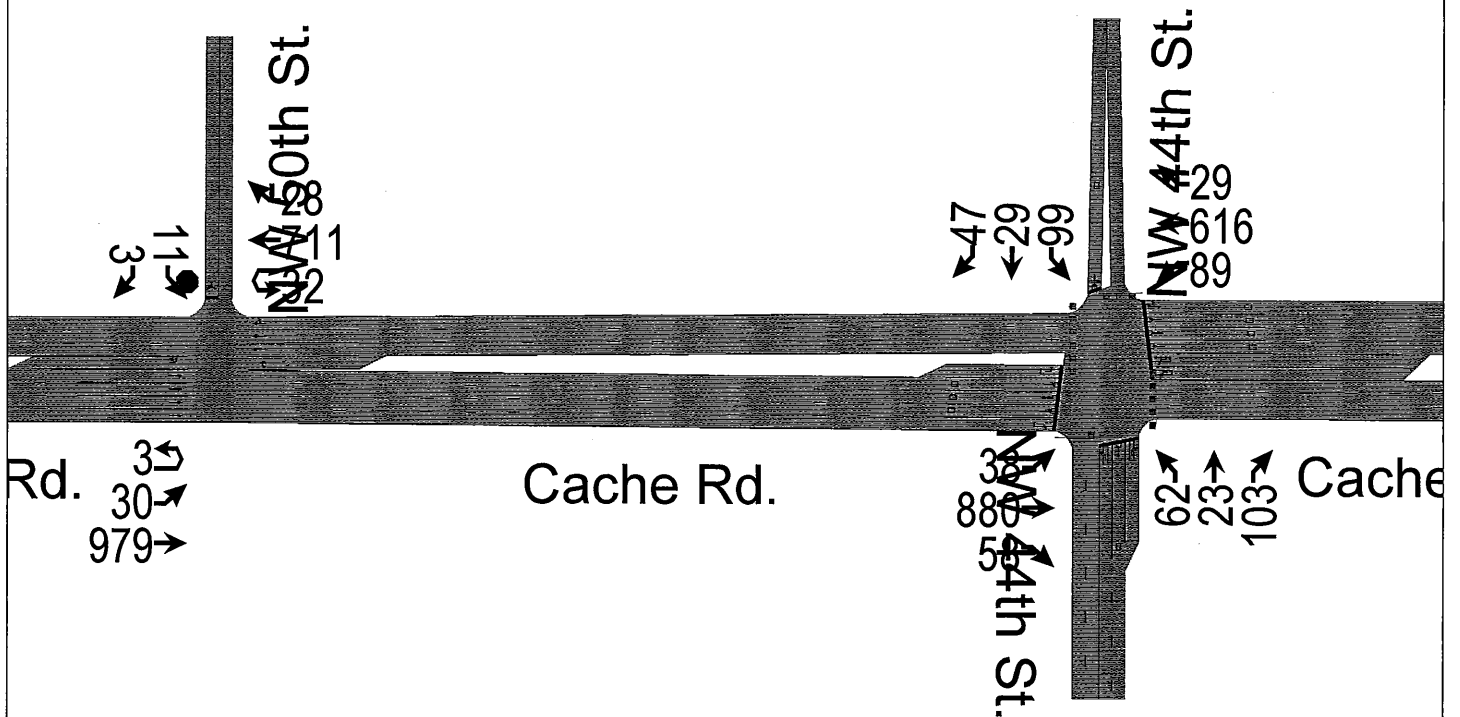
Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	181	-	490	-	-	107
HCM Lane V/C Ratio	0.156	-	0.151	-	-	0.416
HCM Control Delay (s)	28.5	-	13.6	-	-	60.8
HCM Lane LOS	D	-	B	-	-	F
HCM 95th %tile Q(veh)	0.5	-	0.5	-	-	1.7

HCM 2010 Signalized Intersection Summary

5: NW 44th St. & Cache Rd.

4/22/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	1048	84	174	1267	79	151	38	169	104	39	58
Future Volume (veh/h)	131	1048	84	174	1267	79	151	38	169	104	39	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	142	1139	91	189	1377	86	164	41	184	113	42	63
Adj No. of Lanes	1	3	1	2	4	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	1501	467	290	1726	108	276	289	246	146	54	81
Arrive On Green	0.10	0.30	0.30	0.08	0.28	0.28	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1774	5085	1583	3442	6213	387	1774	1863	1583	897	333	500
Grp Volume(v), veh/h	142	1139	91	189	1065	398	164	41	184	218	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1602	1794	1774	1863	1583	1730	0	0
Q Serve(g_s), s	5.2	13.4	2.8	3.5	13.6	13.6	5.7	1.3	7.3	8.0	0.0	0.0
Cycle Q Clear(g_c), s	5.2	13.4	2.8	3.5	13.6	13.6	5.7	1.3	7.3	8.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	0.52		0.29
Lane Grp Cap(c), veh/h	180	1501	467	290	1335	498	276	289	246	281	0	0
V/C Ratio(X)	0.79	0.76	0.19	0.65	0.80	0.80	0.59	0.14	0.75	0.78	0.00	0.00
Avail Cap(c_a), veh/h	269	1501	467	521	1382	516	483	508	431	471	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.0	21.1	17.4	29.3	22.1	22.1	26.0	24.1	26.7	26.5	0.0	0.0
Incr Delay (d2), s/veh	8.9	2.3	0.2	2.5	3.3	8.4	2.0	0.2	4.5	4.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	6.5	1.3	1.8	6.4	7.9	2.9	0.7	3.5	4.2	0.0	0.0
LnGrp Delay(d),s/veh	37.8	23.4	17.6	31.8	25.4	30.6	28.0	24.3	31.2	31.1	0.0	0.0
LnGrp LOS	D	C	B	C	C	C	C	C	C	C		
Approach Vol, veh/h	1372				1652				389		218	
Approach Delay, s/veh	24.5				27.4				29.1		31.1	
Approach LOS	C				C				C		C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		3	4	6		7	8				
Phs Duration (G+Y+Rc), s	15.3		10.6	24.5	15.7		11.7	23.3				
Change Period (Y+Rc), s	5.0		5.0	5.0	5.0		5.0	5.0				
Max Green Setting (Gmax), s	18.0		10.0	19.0	18.0		10.0	19.0				
Max Q Clear Time (g_c+l1), s	9.3		5.5	15.4	10.0		7.2	15.6				
Green Ext Time (p_c), s	0.9		0.2	3.3	0.8		0.1	2.7				
Intersection Summary												
HCM 2010 Ctrl Delay	26.7											
HCM 2010 LOS	C											



Intersection	
Int Delay, s/veh	0.6

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	3	30	979	32	711	28	11	3
Future Vol, veh/h	3	30	979	32	711	28	11	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	140	-	100	-	-	0	-
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	3	33	1064	35	773	30	12	3

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	590	803	0	777	-	0	1355	402
Stage 1	-	-	-	-	-	-	858	-
Stage 2	-	-	-	-	-	-	497	-
Critical Hdwy	5.64	5.34	-	5.64	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.04	-
Follow-up Hdwy	2.32	3.12	-	2.32	-	-	3.82	3.92
Pot Cap-1 Maneuver	740	487	-	584	-	-	205	511
Stage 1	-	-	-	-	-	-	295	-
Stage 2	-	-	-	-	-	-	527	-
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	502	502	-	584	-	-	205	511
Mov Cap-2 Maneuver	-	-	-	-	-	-	205	-
Stage 1	-	-	-	-	-	-	295	-
Stage 2	-	-	-	-	-	-	527	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0.5	21.4
HCM LOS			C

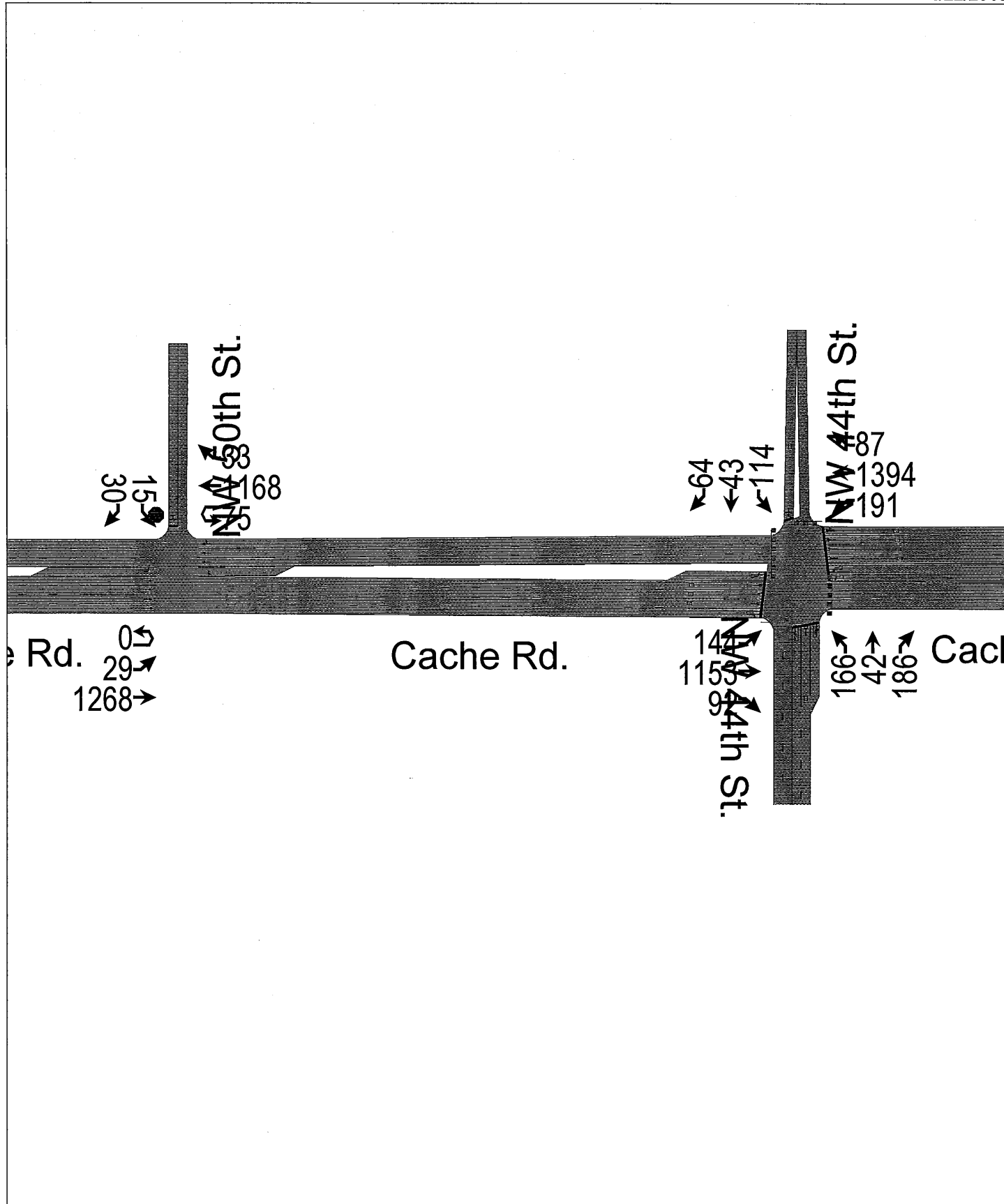
Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	502	-	584	-	-	235
HCM Lane V/C Ratio	0.071	-	0.06	-	-	0.065
HCM Control Delay (s)	12.7	-	11.6	-	-	21.4
HCM Lane LOS	B	-	B	-	-	C
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-	0.2

HCM 2010 Signalized Intersection Summary

5: NW 44th St. & Cache Rd.

4/22/2016

												
Movement	FBL	FBT	FBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	880	58	89	616	29	62	23	103	99	29	47
Future Volume (veh/h)	38	880	58	89	616	29	62	23	103	99	29	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	41	957	63	97	670	32	67	25	112	108	32	51
Adj No. of Lanes	1	3	1	2	4	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	75	1529	476	241	2075	98	200	210	179	151	45	71
Arrive On Green	0.04	0.30	0.30	0.07	0.33	0.33	0.11	0.11	0.11	0.15	0.15	0.15
Sat Flow, veh/h	1774	5085	1583	3442	6317	299	1774	1863	1583	979	290	463
Grp Volume(v), veh/h	41	957	63	97	508	194	67	25	112	191	0	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1721	1602	1810	1774	1863	1583	1732	0	0
Q Serve(g_s), s	1.3	9.0	1.6	1.5	4.4	4.4	1.9	0.7	3.7	5.8	0.0	0.0
Cycle Q Clear(g_c), s	1.3	9.0	1.6	1.5	4.4	4.4	1.9	0.7	3.7	5.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.17	1.00		1.00	0.57		0.27
Lane Grp Cap(c), veh/h	75	1529	476	241	1578	594	200	210	179	268	0	0
V/C Ratio(X)	0.55	0.63	0.13	0.40	0.32	0.33	0.33	0.12	0.63	0.71	0.00	0.00
Avail Cap(c_a), veh/h	321	1748	544	623	1652	622	578	607	516	564	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.9	16.6	14.1	24.6	13.9	14.0	22.6	22.0	23.4	22.2	0.0	0.0
Incr Delay (d2), s/veh	6.1	0.6	0.1	1.1	0.1	0.3	1.0	0.2	3.6	3.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.2	0.7	0.7	1.9	2.3	1.0	0.4	1.8	3.0	0.0	0.0
LnGrp Delay(d),s/veh	32.0	17.2	14.2	25.7	14.1	14.3	23.6	22.3	27.0	25.7	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C	C	C	C		
Approach Vol, veh/h	1061				799				204		191	
Approach Delay, s/veh	17.6				15.5				25.3		25.7	
Approach LOS	B				B				C		C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		3	4	6		7	8				
Phs Duration (G+Y+Rc), s	11.2		8.9	21.6	13.5		7.3	23.2				
Change Period (Y+Rc), s	5.0		5.0	5.0	5.0		5.0	5.0				
Max Green Setting (Gmax), s	18.0		10.0	19.0	18.0		10.0	19.0				
Max Q Clear Time (g_c+I1), s	5.7		3.5	11.0	7.8		3.3	6.4				
Green Ext Time (p_c), s	0.5		0.1	5.7	0.7		0.0	8.0				
Intersection Summary												
HCM 2010 Ctrl Delay	18.3											
HCM 2010 LOS	B											

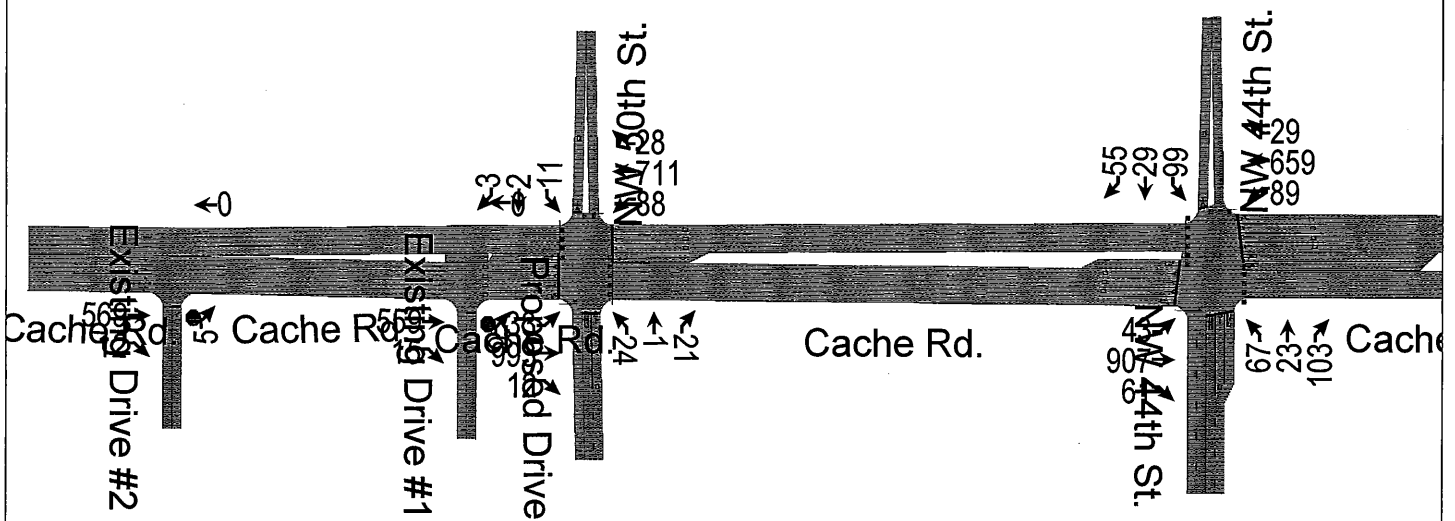


Intersection							
Int Delay, s/veh	2.1						
Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	29	1268	75	1668	33	15	30
Future Vol, veh/h	29	1268	75	1668	33	15	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	140	-	100	-	-	0	-
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	32	1378	82	1813	36	16	33
Major/Minor	Major1		Major2		Minor2		
Conflicting Flow All	1849	0	1006	-	0	2608	924
Stage 1	-	-	-	-	-	1994	-
Stage 2	-	-	-	-	-	614	-
Critical Hdwy	5.34	-	5.64	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	2.32	-	-	3.82	3.92
Pot Cap-1 Maneuver	149	-	436	-	-	44	233
Stage 1	-	-	-	-	-	57	-
Stage 2	-	-	-	-	-	458	-
Platoon blocked, %		-		-	-		
Mov Cap-1 Maneuver	149	-	436	-	-	35	233
Mov Cap-2 Maneuver	-	-	-	-	-	35	-
Stage 1	-	-	-	-	-	57	-
Stage 2	-	-	-	-	-	360	-
Approach	EB		WB		SB		
HCM Control Delay, s	0.8		0.6		101.8		
HCM LOS	F						
Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	
Capacity (veh/h)	149	-	436	-	-	81	
HCM Lane V/C Ratio	0.212	-	0.187	-	-	0.604	
HCM Control Delay (s)	35.5	-	15.1	-	-	101.8	
HCM Lane LOS	E	-	C	-	-	F	
HCM 95th %tile Q(veh)	0.8	-	0.7	-	-	2.7	

HCM 2010 Signalized Intersection Summary
5: NW 44th St. & Cache Rd.

4/22/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	1153	92	191	1394	87	166	42	186	114	43	64
Future Volume (veh/h)	144	1153	92	191	1394	87	166	42	186	114	43	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	157	1253	100	208	1515	95	180	46	202	124	47	70
Adj No. of Lanes	1	3	1	2	4	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	1472	458	305	1663	104	291	306	260	154	58	87
Arrive On Green	0.11	0.29	0.29	0.09	0.27	0.27	0.16	0.16	0.16	0.17	0.17	0.17
Sat Flow, veh/h	1774	5085	1583	3442	6211	389	1774	1863	1583	890	337	502
Grp Volume(v), veh/h	157	1253	100	208	1172	438	180	46	202	241	0	0
Grp Sat Flow(s), veh/h/ln	1774	1695	1583	1721	1602	1794	1774	1863	1583	1730	0	0
Q Serve(g_s), s	6.1	16.3	3.4	4.1	16.6	16.6	6.6	1.5	8.6	9.4	0.0	0.0
Cycle Q Clear(g_c), s	6.1	16.3	3.4	4.1	16.6	16.6	6.6	1.5	8.6	9.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	0.51		0.29
Lane Grp Cap(c), veh/h	196	1472	458	305	1287	480	291	306	260	299	0	0
V/C Ratio(X)	0.80	0.85	0.22	0.68	0.91	0.91	0.62	0.15	0.78	0.81	0.00	0.00
Avail Cap(c_a), veh/h	252	1472	458	490	1299	485	454	477	406	443	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.5	23.5	18.9	31.1	24.9	24.9	27.3	25.2	28.1	27.9	0.0	0.0
Incr Delay (d2), s/veh	13.2	5.0	0.2	2.7	9.7	21.3	2.1	0.2	5.0	6.6	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3.7	8.3	1.5	2.1	8.4	11.0	3.4	0.8	4.1	5.0	0.0	0.0
LnGrp Delay(d), s/veh	43.7	28.5	19.2	33.7	34.6	46.2	29.4	25.4	33.1	34.5	0.0	0.0
LnGrp LOS	D	C	B	C	C	D	C	C	C	C		
Approach Vol, veh/h	1510			1818			428			241		
Approach Delay, s/veh	29.5			37.3			30.7			34.5		
Approach LOS	C			D			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.5	11.2	25.3		17.2	12.8	23.8				
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0	5.0	5.0				
Max Green Setting (Gmax), s		18.0	10.0	19.0		18.0	10.0	19.0				
Max Q Clear Time (g_c+I1), s		10.6	6.1	18.3		11.4	8.1	18.6				
Green Ext Time (p_c), s		1.0	0.2	0.7		0.7	0.1	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay	33.5											
HCM 2010 LOS	C											



HCM 2010 Signalized Intersection Summary

3: Proposed Drive/NW 50th St. & Cache Rd.

4/22/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	993	12	88	711	28	24	1	21	11	2	3
Future Volume (veh/h)	33	993	12	88	711	28	24	1	21	11	2	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	36	1079	13	96	773	30	26	1	23	12	2	3
Adj No. of Lanes	1	4	0	1	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	2192	26	237	2179	84	569	24	560	352	61	74
Arrive On Green	0.03	0.33	0.33	0.27	0.87	0.87	0.03	0.37	0.37	0.28	0.28	0.28
Sat Flow, veh/h	1774	6576	79	1774	5024	194	1774	66	1527	996	214	259
Grp Volume(v), veh/h	36	788	304	96	521	282	26	0	24	17	0	0
Grp Sat Flow(s), veh/h/ln	1774	1602	1849	1774	1695	1828	1774	0	1593	1470	0	0
Q Serve(g_s), s	1.8	11.8	11.8	4.0	2.6	2.7	0.9	0.0	0.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	11.8	11.8	4.0	2.6	2.7	0.9	0.0	0.9	0.6	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.11	1.00		0.96	0.71		0.18
Lane Grp Cap(c), veh/h	58	1602	616	237	1470	793	569	0	584	487	0	0
V/C Ratio(X)	0.62	0.49	0.49	0.41	0.35	0.36	0.05	0.00	0.04	0.03	0.00	0.00
Avail Cap(c_a), veh/h	237	1602	616	237	1470	793	719	0	584	487	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.0	23.9	23.9	30.1	3.6	3.6	20.3	0.0	18.3	23.3	0.0	0.0
Incr Delay (d2), s/veh	10.1	1.1	2.8	1.1	0.6	1.2	0.0	0.0	0.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.3	6.5	2.0	1.3	1.5	0.4	0.0	0.4	0.3	0.0	0.0
LnGrp Delay(d), s/veh	53.0	25.0	26.7	31.1	4.2	4.7	20.3	0.0	18.5	23.4	0.0	0.0
LnGrp LOS	D	C	C	C	A	A	C		B	C		
Approach Vol, veh/h	1128			899			50			17		
Approach Delay, s/veh	26.4			7.2			19.4			23.4		
Approach LOS	C			A			B			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		38.0	17.0	35.0	7.4	30.6	8.0	44.0				
Change Period (Y+Rc), s		5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s		33.0	12.0	30.0	10.0	18.0	12.0	30.0				
Max Q Clear Time (g_c+I1), s		2.9	6.0	13.8	2.9	2.6	3.8	4.7				
Green Ext Time (p_c), s		0.2	0.3	6.1	0.0	0.1	0.0	5.3				
Intersection Summary												
HCM 2010 Ctrl Delay	18.0											
HCM 2010 LOS	B											

HCM 2010 Signalized Intersection Summary

5: NW 44th St. & Cache Rd.

4/22/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	907	61	89	659	29	67	23	103	99	29	55
Future Volume (veh/h)	43	907	61	89	659	29	67	23	103	99	29	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	47	986	66	97	716	32	73	25	112	108	32	60
Adj No. of Lanes	1	3	1	2	3	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	486	1356	422	943	1331	59	171	179	152	131	39	73
Arrive On Green	0.55	0.53	0.53	0.27	0.27	0.27	0.10	0.10	0.10	0.14	0.14	0.14
Sat Flow, veh/h	1774	5085	1583	3442	4991	222	1774	1863	1583	931	276	517
Grp Volume(v), veh/h	47	986	66	97	486	262	73	25	112	200	0	0
Grp Sat Flow(s), veh/h/ln	1774	1695	1583	1721	1695	1824	1774	1863	1583	1725	0	0
Q Serve(g_s), s	1.1	13.3	1.9	1.9	11.0	11.1	3.5	1.1	6.2	10.1	0.0	0.0
Cycle Q Clear(g_c), s	1.1	13.3	1.9	1.9	11.0	11.1	3.5	1.1	6.2	10.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	0.54		0.30
Lane Grp Cap(c), veh/h	486	1356	422	943	904	486	171	179	152	243	0	0
V/C Ratio(X)	0.10	0.73	0.16	0.10	0.54	0.54	0.43	0.14	0.74	0.82	0.00	0.00
Avail Cap(c_a), veh/h	486	1356	422	943	904	486	355	373	317	345	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.0	18.5	15.8	24.4	28.2	28.3	38.3	37.3	39.6	37.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	3.1	0.7	0.0	2.3	4.3	1.7	0.4	6.7	10.4	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.4	0.9	0.9	5.4	6.1	1.8	0.6	3.0	5.5	0.0	0.0
LnGrp Delay(d),s/veh	15.1	21.6	16.5	24.4	30.5	32.5	40.0	37.6	46.3	48.0	0.0	0.0
LnGrp LOS	B	C	B	C	C	C	D	D	D	D		
Approach Vol, veh/h		1099			845			210			200	
Approach Delay, s/veh		21.0			30.5			43.1			48.0	
Approach LOS		C			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.7	29.7	29.0		17.7	29.7	29.0				
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0	5.0	5.0				
Max Green Setting (Gmax), s		18.0	10.0	24.0		18.0	10.0	24.0				
Max Q Clear Time (g_c+I1), s		8.2	3.9	15.3		12.1	3.1	13.1				
Green Ext Time (p_c), s		0.5	0.2	4.1		0.5	0.2	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay				28.6								
HCM 2010 LOS				C								

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	559	15	0	0	0	9
Future Vol, veh/h	559	15	0	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	608	16	0	0	0	10
Major/Minor	Major1			Minor1		
Conflicting Flow All	0	0		616	311	
Stage 1	-	-		616	-	
Stage 2	-	-		0	-	
Critical Hdwy	-	-		7.54	6.94	
Critical Hdwy Stg 1	-	-		6.54	-	
Critical Hdwy Stg 2	-	-		-	-	
Follow-up Hdwy	-	-		3.52	3.32	
Pot Cap-1 Maneuver	-	-		375	685	
Stage 1	-	-		445	-	
Stage 2	-	-		-	-	
Platoon blocked, %	-	-				
Mov Cap-1 Maneuver	-	-		375	685	
Mov Cap-2 Maneuver	-	-		375	-	
Stage 1	-	-		445	-	
Stage 2	-	-		-	-	
Approach	EB			NB		
HCM Control Delay, s	0			10.3		
HCM LOS				B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR			
Capacity (veh/h)	685	-	-			
HCM Lane V/C Ratio	0.014	-	-			
HCM Control Delay (s)	10.3	-	-			
HCM Lane LOS	B	-	-			
HCM 95th %tile Q(veh)	0	-	-			

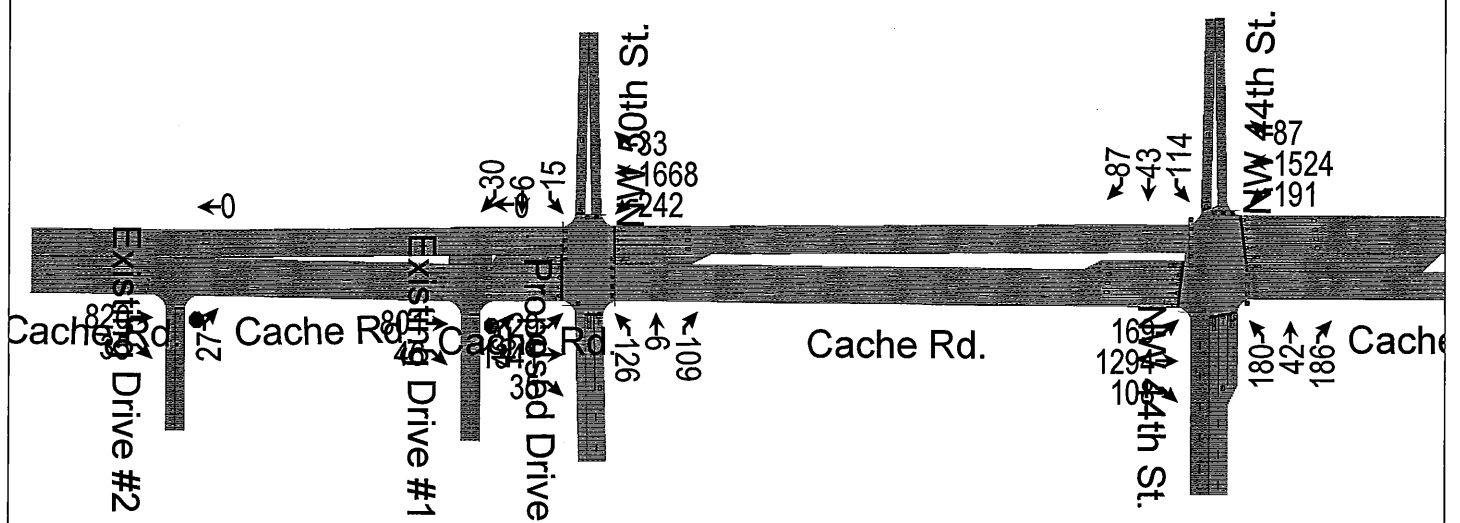
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	569	12	0	0	0	5
Future Vol, veh/h	569	12	0	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	618	13	0	0	0	5

Major/Minor	Major1		Minor1	
Conflicting Flow All	0	0	625	315
Stage 1	-	-	625	-
Stage 2	-	-	0	-
Critical Hdwy	-	-	7.54	6.94
Critical Hdwy Stg 1	-	-	6.54	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	369	681
Stage 1	-	-	439	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	369	681
Mov Cap-2 Maneuver	-	-	369	-
Stage 1	-	-	439	-
Stage 2	-	-	-	-

Approach	EB	NB
HCM Control Delay, s	0	10.3
HCM LOS		B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR
Capacity (veh/h)	681	-	-
HCM Lane V/C Ratio	0.008	-	-
HCM Control Delay (s)	10.3	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0	-	-



HCM 2010 Signalized Intersection Summary 3: Proposed Drive/NW 50th St. & Cache Rd.

4/22/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	1341	35	242	1668	33	126	6	109	15	6	30
Future Volume (veh/h)	29	1341	35	242	1668	33	126	6	109	15	6	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	32	1458	38	263	1813	36	137	7	118	16	7	33
Adj No. of Lanes	1	4	0	1	3	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	2118	55	419	2748	55	471	27	452	99	55	161
Arrive On Green	0.03	0.33	0.33	0.47	1.00	1.00	0.08	0.30	0.30	0.18	0.18	0.18
Sat Flow, veh/h	1774	6470	169	1774	5133	102	1774	89	1507	323	313	912
Grp Volume(v), veh/h	32	1083	413	263	1197	652	137	0	125	56	0	0
Grp Sat Flow(s), veh/h/ln	1774	1602	1833	1774	1695	1845	1774	0	1597	1548	0	0
Q Serve(g_s), s	2.0	21.5	21.5	12.2	0.0	0.0	6.7	0.0	6.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	21.5	21.5	12.2	0.0	0.0	6.7	0.0	6.5	3.1	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.06	1.00		0.94	0.29		0.59
Lane Grp Cap(c), veh/h	50	1573	600	419	1815	987	471	0	479	315	0	0
V/C Ratio(X)	0.64	0.69	0.69	0.63	0.66	0.66	0.29	0.00	0.26	0.18	0.00	0.00
Avail Cap(c_a), veh/h	161	1573	600	419	1815	987	493	0	479	315	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.32	0.32	0.32	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	52.9	32.1	32.1	25.4	0.0	0.0	31.5	0.0	29.2	38.6	0.0	0.0
Incr Delay (d2), s/veh	12.6	2.5	6.4	0.9	0.6	1.1	0.3	0.0	1.3	1.2	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.1	9.9	12.0	6.0	0.2	0.3	3.3	0.0	3.1	1.6	0.0	0.0
LnGrp Delay(d), s/veh	65.4	34.6	38.5	26.3	0.6	1.1	31.9	0.0	30.6	39.8	0.0	0.0
LnGrp LOS	E	C	D	C	A	A	C		C	D		
Approach Vol, veh/h	1528			2112			262			56		
Approach Delay, s/veh	36.3			4.0			31.2			39.8		
Approach LOS	D			A			C			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		38.0	31.0	41.0	13.6	24.4	8.1	63.9				
Change Period (Y+Rc), s		5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s		33.0	26.0	36.0	10.0	18.0	10.0	52.0				
Max Q Clear Time (g_c+I1), s		8.5	14.2	23.5	8.7	5.1	4.0	2.0				
Green Ext Time (p_c), s		1.1	5.4	7.2	0.0	0.8	0.0	21.1				
Intersection Summary												
HCM 2010 Ctrl Delay	18.8											
HCM 2010 LOS	B											

HCM 2010 Signalized Intersection Summary

5: NW 44th St. & Cache Rd.

4/22/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	1294	108	191	1524	87	180	42	186	114	43	87
Future Volume (veh/h)	169	1294	108	191	1524	87	180	42	186	114	43	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	184	1407	117	208	1657	95	196	46	202	124	47	95
Adj No. of Lanes	1	3	1	2	3	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	227	1942	605	409	1834	105	260	273	232	137	52	105
Arrive On Green	0.26	0.76	0.76	0.12	0.37	0.37	0.15	0.15	0.15	0.17	0.17	0.17
Sat Flow, veh/h	1774	5085	1583	3442	4921	282	1774	1863	1583	799	303	612
Grp Volume(v), veh/h	184	1407	117	208	1141	611	196	46	202	266	0	0
Grp Sat Flow(s), veh/h/ln	1774	1695	1583	1721	1695	1813	1774	1863	1583	1715	0	0
Q Serve(g_s), s	10.7	16.1	2.3	6.2	35.0	35.1	11.7	2.4	13.7	16.7	0.0	0.0
Cycle Q Clear(g_c), s	10.7	16.1	2.3	6.2	35.0	35.1	11.7	2.4	13.7	16.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	0.47		0.36
Lane Grp Cap(c), veh/h	227	1942	605	409	1264	676	260	273	232	293	0	0
V/C Ratio(X)	0.81	0.72	0.19	0.51	0.90	0.90	0.75	0.17	0.87	0.91	0.00	0.00
Avail Cap(c_a), veh/h	227	1942	605	409	1264	676	290	305	259	296	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	39.7	9.9	8.3	45.4	32.6	32.6	45.0	41.1	45.9	44.8	0.0	0.0
Incr Delay (d2), s/veh	13.0	1.5	0.4	1.0	10.7	17.8	9.5	0.3	24.0	29.7	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	6.0	7.3	1.1	3.0	18.2	20.8	6.4	1.2	7.5	10.3	0.0	0.0
LnGrp Delay(d), s/veh	52.7	11.5	8.8	46.5	43.3	50.4	54.6	41.4	69.9	74.5	0.0	0.0
LnGrp LOS	D	B	A	D	D	D	D	D	E	E		
Approach Vol, veh/h	1708				1960				444		266	
Approach Delay, s/veh	15.7				45.8				60.2		74.5	
Approach LOS	B				D				E		E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.1	18.1	47.0		23.8	19.1	46.0				
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0	5.0	5.0				
Max Green Setting (Gmax), s		18.0	11.0	42.0		19.0	12.0	41.0				
Max Q Clear Time (g_c+I1), s		15.7	8.2	18.1		18.7	12.7	37.1				
Green Ext Time (p_c), s		0.4	0.4	10.9		0.0	0.0	3.1				
Intersection Summary												
HCM 2010 Ctrl Delay	37.3											
HCM 2010 LOS	D											

HCM 2010 TWSC
9: Existing Drive #1 & Cache Rd.

4/22/2016

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	801	46	0	0	0	46
Future Vol, veh/h	801	46	0	0	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	871	50	0	0	0	50

Major/Minor	Major1		Minor1	
Conflicting Flow All	0	0	896	459
Stage 1	-	-	896	-
Stage 2	-	-	0	-
Critical Hdwy	-	-	7.54	6.94
Critical Hdwy Stg 1	-	-	6.54	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	235	549
Stage 1	-	-	301	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	235	549
Mov Cap-2 Maneuver	-	-	235	-
Stage 1	-	-	301	-
Stage 2	-	-	-	-

Approach	EB	NB
HCM Control Delay, s	0	12.2
HCM LOS		B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR
Capacity (veh/h)	549	-	-
HCM Lane V/C Ratio	0.091	-	-
HCM Control Delay (s)	12.2	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	820	35	0	0	0	27
Future Vol, veh/h	820	35	0	0	0	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	891	38	0	0	0	29
Major/Minor	Major1			Minor1		
Conflicting Flow All	0	0		910	464	
Stage 1	-	-		910	-	
Stage 2	-	-		0	-	
Critical Hdwy	-	-		7.54	6.94	
Critical Hdwy Stg 1	-	-		6.54	-	
Critical Hdwy Stg 2	-	-		-	-	
Follow-up Hdwy	-	-		3.52	3.32	
Pot Cap-1 Maneuver	-	-		230	545	
Stage 1	-	-		296	-	
Stage 2	-	-		-	-	
Platoon blocked, %	-	-				
Mov Cap-1 Maneuver	-	-		230	545	
Mov Cap-2 Maneuver	-	-		230	-	
Stage 1	-	-		296	-	
Stage 2	-	-		-	-	
Approach	EB			NB		
HCM Control Delay, s	0			12		
HCM LOS				B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR			
Capacity (veh/h)	545	-	-			
HCM Lane V/C Ratio	0.054	-	-			
HCM Control Delay (s)	12	-	-			
HCM Lane LOS	B	-	-			
HCM 95th %tile Q(veh)	0.2	-	-			

QUEUEING ANALYSES

Queuing and Blocking Report

2021 Projected Combined Traffic: A.M. Peak Hour

4/22/2016

Intersection: 3: Proposed Drive/NW 50th St. & Cache Rd.

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	T	TR	L	T	T	TR	L	TR	LTR
Maximum Queue (ft)	65	96	94	92	85	93	110	76	62	43	24	28
Average Queue (ft)	32	95	80	52	52	51	67	46	22	18	8	7
95th Queue (ft)	73	97	105	102	89	104	127	85	67	48	31	30
Link Distance (ft)		93	93	93	93		736	736	736	192	192	237
Upstream Blk Time (%)		31	5	2	0							
Queuing Penalty (veh)		44	7	2	1							
Storage Bay Dist (ft)	140					100						
Storage Blk Time (%)		31				5	2					
Queuing Penalty (veh)		10				12	1					

Queuing and Blocking Report
2021 Projected Combined Traffic: P.M. Peak Hour

4/22/2016

Intersection: 3: Proposed Drive/NW 50th St. & Cache Rd.

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	T	TR	L	T	T	TR	L	TR	LTR
Maximum Queue (ft)	55	106	100	100	103	121	140	147	113	122	58	48
Average Queue (ft)	26	99	94	80	71	91	82	86	72	86	39	30
95th Queue (ft)	78	112	106	108	112	136	168	160	133	130	68	54
Link Distance (ft)		93	93	93	93		736	736	736	192	192	237
Upstream Blk Time (%)	0	44	20	6	7							
Queuing Penalty (veh)	0	92	43	12	14							
Storage Bay Dist (ft)	140					100						
Storage Blk Time (%)	0	44				6	3					
Queuing Penalty (veh)	0	13				34	6					

TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic Engineering Consultants, Inc.
Cache Road and NW 50th Street/Proposed Drive - Lawton, OK
2021 Projected Combined Traffic

Signal Warrants - Summary

Major Street Approaches

Eastbound: Cache Road

Number of Lanes: **2**
85% Speed > 40 MPH.
Total Approach Volume: **2,443**

Westbound: Cache Road

Number of Lanes: **2**
85% Speed > 40 MPH.
Total Approach Volume: **2,770**

Minor Street Approaches

Northbound: Proposed Drive

Number of Lanes: **2**

Total Approach Volume: **287**

Southbound: NW 50th Street

Number of Lanes: **1**

Total Approach Volume: **67**

Warrant Summary (Rural values apply.)

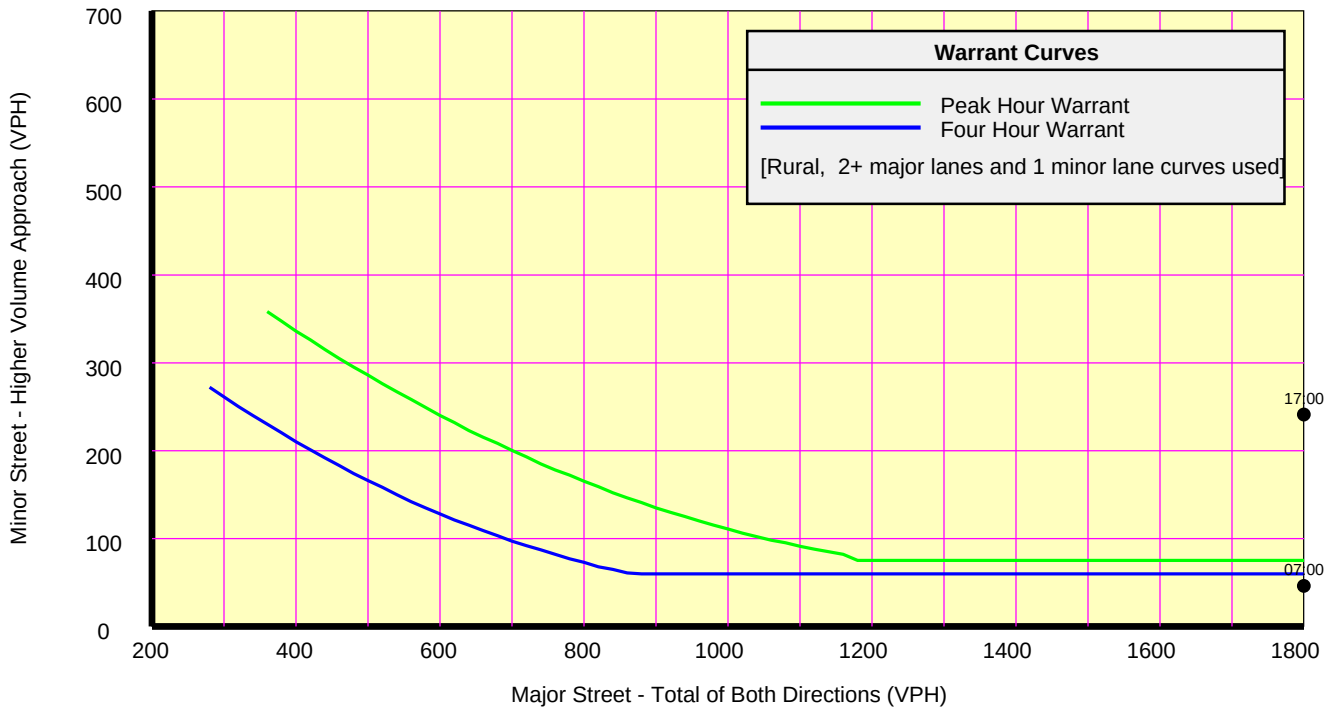
Warrant 1 - Eight Hour Vehicular Volumes	Not Evaluated
Warrant 1A - Minimum Vehicular Volume	Not Evaluated
Warrant 1B - Interruption of Continuous Traffic	Not Evaluated
Warrant 1C - Combination of Warrants	Not Evaluated
Warrant 2 - Four Hour Volumes	Not Evaluated
Warrant 3 - Peak Hour	Satisfied
Warrant 3A - Peak Hour Delay	Satisfied
Number of hours (4) volumes exceed minimum >= required (1). Delay data not evaluated.	
Warrant 3B - Peak Hour Volumes	Satisfied
Volumes exceed minimums for at least one hour.	
Warrant 4 - Pedestrian Volumes	Not Evaluated
Warrant 5 - School Crossing	Not Evaluated
Warrant 6 - Coordinated Signal System	Not Evaluated
Warrant 7 - Crash Experience	Not Evaluated
Warrant 8 - Roadway Network	Not Evaluated
Warrant 9 - Intersection Near a Grade Crossing	Not Evaluated

Traffic Engineering Consultants, Inc.

Cache Road and NW 50th Street/Proposed Drive - Lawton, OK

2021 Projected Combined Traffic

Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

War 1A-Minimum Volume

War 1B-Interruption of Traffic

War 1C-Combination of Warrants

Hour Begin	Major Total	Minor Vol	Dir	Maj NA	Min NA	Hour Begin	Major Total	Minor Vol	Dir	Maj NA	Min NA	Hour Begin	Major Total	Minor Vol	Dir	1A Met	1B Met
17:00	3,348	241	NB	No	No	17:00	3,348	241	NB	No	No	17:00	3,348	241	NB	No	No
16:45	3,348	241	NB	No	No	16:45	3,348	241	NB	No	No	16:45	3,348	241	NB	No	No
16:30	3,348	241	NB	No	No	16:30	3,348	241	NB	No	No	16:30	3,348	241	NB	No	No
16:15	3,348	241	NB	No	No	16:15	3,348	241	NB	No	No	16:15	3,348	241	NB	No	No
07:00	1,865	46	NB	No	No	07:00	1,865	46	NB	No	No	07:00	1,865	46	NB	No	No
06:45	1,865	46	NB	No	No	06:45	1,865	46	NB	No	No	06:45	1,865	46	NB	No	No
06:30	1,865	46	NB	No	No	06:30	1,865	46	NB	No	No	06:30	1,865	46	NB	No	No
06:15	1,865	46	NB	No	No	06:15	1,865	46	NB	No	No	06:15	1,865	46	NB	No	No
22:45	0	0	SB	No	No	22:45	0	0	SB	No	No	22:30	0	0	SB	No	No
22:30	0	0	SB	No	No	22:30	0	0	SB	No	No	22:15	0	0	SB	No	No
22:15	0	0	SB	No	No	22:15	0	0	SB	No	No	22:00	0	0	SB	No	No
22:00	0	0	SB	No	No	22:00	0	0	SB	No	No	21:45	0	0	SB	No	No
21:45	0	0	SB	No	No	21:45	0	0	SB	No	No	21:30	0	0	SB	No	No
21:30	0	0	SB	No	No	21:30	0	0	SB	No	No	21:15	0	0	SB	No	No
21:15	0	0	SB	No	No	21:15	0	0	SB	No	No	21:00	0	0	SB	No	No
21:00	0	0	SB	No	No	21:00	0	0	SB	No	No	20:45	0	0	SB	No	No
20:45	0	0	SB	No	No	20:45	0	0	SB	No	No	20:30	0	0	SB	No	No
20:30	0	0	SB	No	No	20:30	0	0	SB	No	No	20:15	0	0	SB	No	No
20:15	0	0	SB	No	No	20:15	0	0	SB	No	No	20:00	0	0	SB	No	No
20:00	0	0	SB	No	No	20:00	0	0	SB	No	No	19:45	0	0	SB	No	No
19:45	0	0	SB	No	No	19:45	0	0	SB	No	No	19:30	0	0	SB	No	No
19:30	0	0	SB	No	No	19:30	0	0	SB	No	No	19:15	0	0	SB	No	No
19:15	0	0	SB	No	No	19:15	0	0	SB	No	No	19:00	0	0	SB	No	No
19:00	0	0	SB	No	No	19:00	0	0	SB	No	No	18:45	0	0	SB	No	No

Item Title:

Consider approving a First Amendment Professional Services Agreement between the City of Lawton and the Honorable Jari Askins for the position of Interim City Attorney.

Initiator: John Ratliff, City Manager

Information Source: John Ratliff, City Manager

Background:

At the special meeting held on October 22, 2025, the City Council directed the City Manager to negotiate a contract with the Honorable Jari Askins, to serve as Interim City Attorney. At the October 28, 2025, regular meeting, the City Council approved a Professional Services Agreement. The original agreement is attached for reference.

When entering Ms. Askins into the City's system, Payroll requested the term "independent contractor" be removed from the agreement. Usually, independent contractors are paid through the Finance Department, but Ms. Askins has requested that her compensation include the applicable tax withholdings, and to do that she must be paid through the City's payroll system.

This amendment only removes the term "independent contractor". Ms. Askins is not eligible nor will she receive any employee benefits.

Correlation to the True North Statement:**Exhibit:**

Professional Services Agreement with Jari Askins

First Amended Professional Services Agreement with Jari Askins

Key Issues:

N/A

Funding Source:

Legal's Salaries and Wages Account

Recommended Action:

Approve the First Amended Professional Services Agreement between the City of Lawton and Jari Askins.

ATTACHMENTS:

1. Professional Services Agreement with Jari Askins
2. First Amended Professional Services Agreement with Jari Askins

**RETAINER AGREEMENT
FOR PROFESSIONAL AND LEGAL SERVICES**

This Agreement is made and entered into this 28th day of October, 2025, by and between the City of Lawton, Oklahoma, hereinafter referred to as “City” and the Honorable Jari Askins, hereinafter referred to as “Jari Askins.”

Whereas, City desires to retain Jari Askins, as an independent contractor to serve as the Interim City Attorney for the City of Lawton, Oklahoma; and

Whereas, Jari Askins desires to accept the temporary appointment subject to the terms and conditions specified hereinafter.

Now, therefore, in consideration of the mutual promises, stipulations, and covenants contained herein, the City and Jari Askins agree as follows:

I. APPOINTMENT

1.01 City hereby appoints Jari Askins to serve as Interim City Attorney the City of Lawton, Oklahoma. Jari Askins shall be deemed an independent contractor to the City and the City shall have no control over the manner, mode, or means by which Jari Askins performs the duties and responsibilities required for the position of Interim City Attorney.

1.02 Jari Askins agrees to faithfully and to the best of her ability provide administrative and operational oversight of the City Attorney’s Office as specified in, but not limited to the following: (a) Charter of the City of Lawton, Oklahoma; (b) City Code, Ordinances and Resolutions of the City of Lawton, Oklahoma; and (c) other directives of the Lawton City Council, which are not inconsistent with the Constitution, laws of the United States, State of Oklahoma, Charter, Code and Ordinances of the City and other laws. However, notwithstanding the provisions of the paragraph, it is understood and agreed by the parties that Jari Askins- as an independent contractor - shall have the autonomy to exercise the duties of Interim City Attorney in a manner she determines best.

1.03 Jari Askins, as the Interim City Attorney, will oversee the operational and administrative aspects of the office of the City Attorney to include: the supervision of office employees and serving as the City Council’s legal advisor.

1.04 In addition, as the Interim City Attorney, Jari Askins shall serve as legal counsel for all public trusts for which the Mayor and members of the Lawton City Council serve as the chairman and the entire board of trustees of such public trusts. Provided that the public trust has not retained outside counsel for legal services.

1.05 Jari Askins shall not contract with any other person or entity to perform, in whole or in part, the legal services required under this Agreement without the prior written approval of the City. Neither this Agreement nor any interest conveyed herein may be transferred, assigned, conveyed, hypothecated, or encumbered voluntarily, or by operation of law, whether for the benefit of creditors, or otherwise, without the prior written approval of the City.

1.06 Jari Askins shall, at all times during her term as Interim City Attorney, remain a member in good standing of the Oklahoma Bar Association otherwise, this Agreement will terminate immediately.

II. TERM

2.01 The term of this Agreement shall begin on November 3, 2025, and shall end of February 3, 2026. This Agreement may be extended month to month, if agreed to in writing by both parties, through June 30, 2026.

III. TERMINATION AND RESIGNATION

3.01 This agreement may be terminated in the sole and absolute discretion of the City Council by at least five (5) affirmative votes of the Lawton City Council cast in open session [with the Mayor being allowed to vote], at which time Jari Askins shall immediately cease to hold the position of Interim City Attorney.

3.02 This agreement may be terminated by Jari Askins by the filing a notice of intent to resign, provided that said written notice is filed with the City Clerk of the City of Lawton at least thirty (30) days prior to the effective date of such resignation.

3.03 If this agreement has not otherwise been terminated pursuant to Paragraph 3.01 or Paragraph 3.02, this agreement will automatically terminate immediately in the event the City Council hires a City Attorney.

3.04 Upon the termination of this Agreement, Jari Askins shall immediately deliver to the office of City Attorney all pleadings, documents and materials in their possession related to his duties. Said documents shall be considered property of the City.

IV. REMUNERATIONS AND BENEFITS

4.01 During the term of this agreement, the City agrees to provide remunerations and benefits as follows:

- (a) **Remunerations.** To the extent Jari Askins performs the duties of the Interim City Attorney (approximately 20- 30 hours a week), City shall provide compensation at the rate of One Hundred Forty-Six and 00/100 Dollars (\$146.00) per hour, which will be subject to appropriate deductions. This shall be the only remuneration provided for services. Under no circumstances, shall the total paid during the contract term exceed Seventy-Five Thousand and 00/100 (\$75,000.00). It is understood and agreed that services rendered pursuant to this agreement will be performed exclusively as an independent contractor and not as an agent or employee of the City.
- (b) **Benefits.** Jari Askins will neither be eligible for nor receive any employee benefits that are otherwise available to employees of the City, including but not limited to participation in any City retirement plan, vacation pay, sick pay, health insurance or any other fringe benefit plan of the City.

4.02 Non-City Work. Jari Askins shall be allowed to engage in other work during the term of this agreement. Should Jari Askins determine her other work constitutes a conflict of interest with the City, City Council shall be notified immediately.

V. INDEMNIFICATION

Jari Askins agrees to indemnify the City, its officers, employees, and agents against, and will hold and save each of them harmless from, any and all actions, suits, claims, damages, to persons or property, losses, costs, penalties, obligations, errors, omissions or liabilities (herein "claims or liabilities") that may be asserted or claimed by any person, firm or entity arising out of or in connection with the performance of her duties as the Interim City Attorney.

VII. PERFORMANCE, MODIFICATION & SEVERABILITY

7.01 Jari Askins shall perform the duties required of the Interim City Attorney under the standards set by law, the Oklahoma Supreme Court and the Oklahoma Bar Association's standards of conduct and discipline.

7.02 No alteration or variation of the terms or conditions of this Agreement shall be valid unless made in writing and signed by the parties hereto.

7.03 In the event that any portion or portions of this agreement are adjudged unlawful by a court of competent jurisdiction, the judgment of such court shall not affect the validity of the remaining portions hereof, which shall be and remain in full force and effect during the term of this agreement.

In witness whereof, the parties have hereunto set their hands on the day and year first above written.

CITY OF LAWTON, OKLAHOMA,
A Municipal Corporation

BY: _____
STANLEY BOOKER, MAYOR

ATTEST:

DONALYNN BLAZEK SCHERLER
CITY CLERK

BY:


JARI ASKINS

Approved as to form and legality for and on behalf of the City of Lawton, Oklahoma, this 29th day
of October, 2025.


TIMOTHY WILSON
INTERIM CITY ATTORNEY

**FIRST AMENDED RETAINER AGREEMENT
FOR PROFESSIONAL AND LEGAL SERVICES**

This First Amended Agreement is made and entered into this ____ day of _____, by and between the City of Lawton, Oklahoma, hereinafter referred to as “City” and the Honorable Jari Askins, hereinafter referred to as “Jari Askins.”

Whereas, on October 28th, 2025, the original agreement was approved by City Council; and

Whereas, this First Amended Agreement amends the original agreement by removing the term “independent contractor” solely to allow compensation to Jari Askins through the City of Lawton’s payroll system with applicable tax withholdings.

Whereas, City desires to retain Jari Askins, to serve as the Interim City Attorney for the City of Lawton, Oklahoma; and

Whereas, Jari Askins desires to accept the temporary appointment subject to the terms and conditions specified hereinafter.

Now, therefore, in consideration of the mutual promises, stipulations, and covenants contained herein, the City and Jari Askins agree as follows:

I. APPOINTMENT

1.01 City hereby appoints Jari Askins to serve as Interim City Attorney the City of Lawton, Oklahoma. The City shall have no control over the manner, mode, or means by which Jari Askins performs the duties and responsibilities required for the position of Interim City Attorney.

1.02 Jari Askins agrees to faithfully and to the best of her ability provide administrative and operational oversight of the City Attorney’s Office as specified in, but not limited to the following: (a) Charter of the City of Lawton, Oklahoma; (b) City Code, Ordinances and Resolutions of the City of Lawton, Oklahoma; and (c) other directives of the Lawton City Council, which are not inconsistent with the Constitution, laws of the United States, State of Oklahoma, Charter, Code and Ordinances of the City and other laws. However, notwithstanding the provisions of the paragraph, it is understood

and agreed by the parties that Jari Askins shall have the autonomy to exercise the duties of Interim City Attorney in a manner she determines best.

1.03 Jari Askins, as the Interim City Attorney, will oversee the operational and administrative aspects of the office of the City Attorney to include: the supervision of office employees and serving as the City Council's legal advisor.

1.04 In addition, as the Interim City Attorney, Jari Askins shall serve as legal counsel for all public trusts for which the Mayor and members of the Lawton City Council serve as the chairman and the entire board of trustees of such public trusts. Provided that the public trust has not retained outside counsel for legal services.

1.05 Jari Askins shall not contract with any other person or entity to perform, in whole or in part, the legal services required under this Agreement without the prior written approval of the City. Neither this Agreement nor any interest conveyed herein may be transferred, assigned, conveyed, hypothecated, or encumbered voluntarily, or by operation of law, whether for the benefit of creditors, or otherwise, without the prior written approval of the City.

1.06 Jari Askins shall, at all times during her term as Interim City Attorney, remain a member in good standing of the Oklahoma Bar Association otherwise, this Agreement will terminate immediately.

II. TERM

2.01 The term of this Agreement shall begin on November 3, 2025, and shall end of February 3, 2026. This Agreement may be extended month to month, if agreed to in writing by both parties, through June 30, 2026.

III. TERMINATION AND RESIGNATION

3.01 This agreement may be terminated in the sole and absolute discretion of the City Council by at least five (5) affirmative votes of the Lawton City Council cast in open session [with the

Mayor being allowed to vote], at which time Jari Askins shall immediately cease to hold the position of Interim City Attorney.

3.02 This agreement may be terminated by Jari Askins by the filing a notice of intent to resign, provided that said written notice is filed with the City Clerk of the City of Lawton at least thirty (30) days prior to the effective date of such resignation.

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- (b) **Benefits.** Jari Askins will neither be eligible for nor receive any employee benefits that are otherwise available to employees of the City, including but not limited to participation in any City retirement plan, vacation pay, sick pay, health insurance or any other fringe benefit plan of the City.

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V. INDEMNIFICATION

Jari Askins agrees to indemnify the City, its officers, employees, and agents against, and will hold and save each of them harmless from, any and all actions, suits, claims, damages, to persons or property, losses, costs, penalties, obligations, errors, omissions or liabilities (herein “claims or liabilities”) that may be asserted or claimed by any person, firm or entity arising out of or in connection with the performance of her duties as the Interim City Attorney.

VII. PERFORMANCE, MODIFICATION & SEVERABILITY

7.01 Jari Askins shall perform the duties required of the Interim City Attorney under the standards set by law, the Oklahoma Supreme Court and the Oklahoma Bar Association’s standards of conduct and discipline.

7.02 No alteration or variation of the terms or conditions of this Agreement shall be valid unless made in writing and signed by the parties hereto.

7.03 In the event that any portion or portions of this agreement are adjudged unlawful by a court of competent jurisdiction, the judgment of such court shall not affect the validity of the remaining portions hereof, which shall be and remain in full force and effect during the term of this agreement.

In witness whereof, the parties have hereunto set their hands on the day and year first above written.

CITY OF LAWTON, OKLAHOMA,
A Municipal Corporation

BY: _____
STANLEY BOOKER, MAYOR

ATTEST:

DONALYNN BLAZEK SCHERLER
CITY CLERK

BY: _____
JARI ASKINS

Approved as to form and legality for and on behalf of the City of Lawton, Oklahoma, this _____ day
of _____, 2025.

TIMOTHY WILSON
INTERIM CITY ATTORNEY

Item Title:

Consider ratifying the City Manager's decision to co-sponsor a Resource Fair with the Fires Innovation Science and Technology Accelerator (FISTA) to support furloughed government civilians, scheduled for November 5 from 10 a.m. to 2 p.m. at FISTA Innovation Park.

Initiator: Caitlin Gatlin, Communication & Marketing Manager

Information Source: Caitlin Gatlin, Communication & Marketing Manager

Background:

With many government civilians impacted by the federal shutdown, the City of Lawton wants to do its part to help during this difficult time. Partnering with the Fires Innovation Science and Technology Accelerator (FISTA), the City will co-sponsor a Resource Fair to connect furloughed employees with local support and opportunities. The event will take place on Wednesday, November 5, from 10 a.m. to 2 p.m. at FISTA, 200 SW C Avenue.

Correlation to the True North Statement:

This partnership allows the City to help spread the word through its communication channels and reflects our pledge to provide World Class Customer Service — because everything we do is for the citizen.

Exhibit:

N/A

Key Issues:

N/A

Funding Source:

N/A

Recommended Action:

Approve co-sponsorship with the Fires Innovation Science and Technology Accelerator (FISTA) for a Resource Fair to support furloughed government civilians on November 5 from 10 a.m. - 2 p.m.

ATTACHMENTS:

None

Item Title:

Consider approving 105 in 25 Mill and Overlay Project Management Task Order for WSB in the amount of \$382,670.00.

Initiator: Michael Watrous, Director

Information Source: Michael Watrous, Director

Background:

This task order covers the project management and inspection work for the 105 in 25 program.

Correlation to the True North Statement:

Transparency, Citizen, Safety

Exhibit:

Task Order

Key Issues:

City Staff does not have the dedicated positions to directly manage this project and perform required actions.

Funding Source:

105 in 25 CIP and Ad Valorem Funding.

Recommended Action:

Approve the 105 in 25 Mill and Overlay Project Management Task Order for WSB in the amount of \$382,670.00.

ATTACHMENTS:

1. City of Lawton 105 in 25 T.O.

Mr. Michael Watrous
Public Works Director
City of Lawton
2100 SW 6th Street
Lawton, OK 73501

Dear Mr. Watrous,

WSB is pleased to submit the attached Task Order for your review and approval. This Task Order outlines our scope of services related to design, bidding, construction engineering and inspection, and post-construction activities for the 105 in '25 Pavement Rehabilitation Project.

The duration of this Task Order is twelve (12) months, commencing on July 1, 2025, and encompasses the execution of the tasks described herein.

TASK 1.0 – Design

WSB will provide full-service delivery for the design and implementation of 105 pavement segments grouped into 25 coordinated projects. Services will span from initial design through post-construction, ensuring consistency, quality, and value across each phase.

The process will begin with field evaluations and data collection to inform the selection of pavement treatments based on condition assessments and performance goals. WSB will assess the feasibility, cost, and constructability of proposed alternatives, including drainage analysis, surface grading, and ADA compliance. Construction plans and technical specifications will be developed, alongside detailed engineer's estimates and QA/QC reviews to ensure accuracy and constructability.

Design Subtasks include:

- 1.1 Perform field evaluations and measurements to support pavement design development.
- 1.2 Select pavement treatments based on condition assessments and performance goals.
- 1.3 Evaluate feasibility, cost, and constructability of design alternatives (including alternates as needed).

- 1.4 Collect and review hydrologic and hydraulic data relevant to drainage performance.
- 1.5 Assess surface grading, flow paths, and drainage infrastructure, including catch basins and storm sewer inverts.
- 1.6 Ensure ADA and accessibility compliance in design elements.
- 1.7 Prepare construction plans and technical specifications, including QA/QC reviews.
- 1.8 Develop engineer's cost estimate and bid quantities [QA/QC].
- 1.9 Perform constructability review

TASK 2.0 – Bidding

WSB will manage the bidding process in alignment with municipal procurement policies, preparing bid documents, advertising the project, conducting pre-bid meetings, responding to contractor inquiries, and evaluating bids through detailed bid tab analysis and qualification reviews.

Bidding Subtasks include:

- 2.1 Prepare bid documents and advertise the project in accordance with municipal procurement policies.
- 2.1 Conduct pre-bid meetings and respond to contractor questions.
- 2.3 Review bids, contractor qualifications, and perform bid tab analysis

TASK 3.0 – Construction Engineering and Inspection (CE&I)

Following bidding, WSB will lead construction engineering and inspection services, beginning with pre-construction meetings and continuing through daily oversight of field activities to verify compliance with plans, specifications, traffic control, and ADA standards. WSB will review material testing reports, process contractor pay applications and change orders, track quantities, and conduct final walkthroughs and punch list inspections. Final documentation, including FQCO and payment materials, will be prepared and submitted. Throughout construction, WSB will maintain daily logs and submit weekly project status reports to City staff and City Council to ensure clear, ongoing communication.

CE&I Subtasks include:

- 3.1 Conduct pre-construction meetings with contractors and stakeholders.
- 3.2 Monitor compliance with plans and specifications, including: Field inspections (placement, dimensions, materials). Traffic control implementation and revisions. ADA and utility conflict resolution during construction."
- 3.3 Review and accept material testing reports [QA/QC].
- 3.4 Process change orders, pay applications, and track quantities.
- 3.5 Conduct final walkthrough and punch list inspections
- 3.6 Prepare final quantities, FQCO, and documentation for final payment
- 3.7 Maintain daily construction logs and progress reports (Review Reports for Accuracy)
- 3.8 Draft and submit weekly project status reports to City staff and city council.

TASK 3.0 – Post Construction

Post-construction, WSB will perform follow-up performance assessments at one- and two-year intervals, update pavement condition tracking to inform future planning efforts, and ensure all project records are archived appropriately in the City's shared drive.

Subtasks include:

- 4.1 Conduct post-construction performance assessments (1-year, 2-year follow-ups).
- 4.2 Update pavement condition tracking for inclusion in future planning cycles
- 4.3 Archive project records in shared drive.

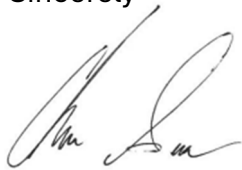
ADDITIONAL SERVICES

Additional services not specifically identified in this Task Order may be added upon written mutual agreement between the City of Lawton and WSB via an amendment.

COMPENSATION

The City of Lawton shall compensate WSB a not-to-exceed amount of \$382,670 for all services provided under this Task Order. Services shall be invoiced monthly based on hourly rates. A work breakdown structure by task can be found on Appendix A.

Sincerely



Chris Serrano
WSB

NOTICE TO PROCEED

By: _____
Signature Date

Please Print Name

Appendix A

Client:	City of Lawton								
Project:	FYE 26 Pavement Maintenance Program 105 in 25 (PW2504 P1-4)	Category							
Rates:	2025 City of Lawton Master Services Agreement	Program Manager	Project Engineer	Design Specialist II	Design Specialist I	CM Specialist II	Lab Manager		
		Chris S	Brent F	Cass H.	Ivan M.	Dustin L.	Cecil B		
		\$285.00	\$285.00	\$187.00	\$124.00	\$145.00	\$178.00		
Period:	7/1/2025 TO 6/30/2026	Hours						Direct Labor	Direct Labor Cost
		75	199	100	130	1842	15	2361	\$382,670.00
Phase 1	Design	38	60	100	100			298	\$59,030.00
	1.1 Perform field evaluations and measurements to support pavement design development.	4	20	10	20				
	1.2 Select pavement treatments based on condition assessments and performance goals.	4	20	10	20				
	1.3 Evaluate feasibility, cost, and constructability of design alternatives (including alternates as needed).	15		10	5				
	1.4 Collect and review hydrologic and hydraulic data relevant to drainage performance.	6		20	5				
	1.5 Assess surface grading, flow paths, and drainage infrastructure, including catch basins and storm sew			30	30				
	1.6 Ensure ADA and accessibility compliance in design elements.	***							
	1.7 Prepare construction plans and technical specifications, including QA/QC reviews.	5	10	10	10				
	1.8 Develop engineer's cost estimate and bid quantities [QA/QC].	4	10	10	10				
	1.9 Perform constructability review	***							
Phase 2	Bidding	2	70		5	5		82	\$21,865.00
	2.1 Prepare bid documents and advertise the project in accordance with municipal procurement policies.	2	20						
	2.2 Conduct pre-bid meetings and respond to contractor questions.		20			***			
	2.3 Review bids, contractor qualifications, and perform bid tab analysis		30		5	5			
Phase 3	Construction Engineering and Inspection	31	69		25	1825	15	1965	\$298,895.00
	3.1 Conduct pre-construction meetings with contractor and stakeholders.	5	10		10	***			
	3.2 Monitor compliance with plans and specifications, including:Field inspections (placement, dimensions	6	20						
	3.3 Review and accept material testing reports [QA/QC].	6	10			1820			
	3.4 Process change orders, pay applications, and track quantities.	8	6						
	3.5 Conduct final walkthrough and punch list inspections		5				15		
	3.6 Prepare final quantities, FQCO, and documentation for final payment		5		5	***			
	3.7 Maintain daily construction logs and progress reports (Review Reports for Accuracy)	4	8		10	***			
	3.8 Draft and submit weekly project status reports to City staff and city council.	2	5			5			
	3.9								
Phase 4	Post Construction	4				12		16	\$2,880.00
	4.1 Conduct post-construction performance assessments (1-year, 2-year follow-ups).	4				12			
	4.2 Update pavement condition tracking for inclusion in future planning cycles	***							
	4.3 Archive project records in shared drive.	***							
*** Indicates task is included									

Item Title:

Consider determining the actual costs of the dismantling and removal of dilapidated buildings and other expenses that may be necessary in conjunction with same by approving invoices for demolition of properties as required by State Statue 11-22-112.4 for properties located at 1008 SW Roosevelt Avenue, 2031 SW Dr Charles W Whitlow Avenue and 1805 NW Lawton Avenue.

Initiator: Larry Parks, Director

Information Source: Jonathan Jernigan, Neighborhood Services - Supervisor

Background:

This is in accordance with the True North Culture Statement for a Safe Community. We will be relentless in our efforts to provide a safe environment for our citizens to thrive. State Statute requires that the governing body determine the actual cost of the dismantling and removal of dilapidated buildings and any other expenses that may be necessary in conjunction with dismantling and removal of the building, including the cost of notice and mailing.

1008 SW Roosevelt - \$7,789.16

2031 SW Dr. Charles W Whitlow - \$3,033.85

1805 NW Lawton Aenue - \$6,946.82

Correlation to the True North Statement:

Safe Neighborhood

Exhibit:

Invoices

Key Issues:

To approve payment of invoice(s)

Funding Source:

Neighborhood Services Abatement and Demolition Funds

Recommended Action:

Approve invoices for demolition of properties as required by State Statue 11-22-112.4 for properties located at 1008 SW Roosevelt Avenue, 2031 SW Charles W Whitlow Avenue and 1805 NW Lawton Avenue.

ATTACHMENTS:

1. SKM_C301i25102114130

INVOICE (INV-00028446)
FOR CITY OF LAWTON

BILLING CONTACT

WRIGHT, ANTHONY J & ROMALDA L
4030 SE LEE BLVD
Lawton, OK 735016545



INVOICE NUMBER	INVOICE DATE	INVOICE DUE DATE	INVOICE STATUS	INVOICE DESCRIPTION
INV-00028446	10/22/2025	04/21/2026	Due	Demolition

REFERENCE NUMBER	FEE NAME	TOTAL
D&D-1024-0216	Cost of Notice	\$103.97
	Demolition Contract	\$2,945.00
	Land Fill Tipping Fees	\$3,839.21
	Lien Filing Fees and Postage	\$40.98
	Research Fees	\$60.00
	Water & Sewer Cap	\$800.00
1008 Sw Roosevelt Ave Lawton, OK 73501		SUBTOTAL \$7,789.16

REMITTANCE INFORMATION
City of Lawton, OK 212 SW 9th St Lawton, OK 73501

TOTAL **\$7,789.16**



**INVOICE (INV-00028447)
FOR CITY OF LAWTON**

BILLING CONTACT

COOK, LILTON ETAL C/O PATRICE CRYER
2775 ENGLE RD NW
ATLANTA, GA 303187214



INVOICE NUMBER	INVOICE DATE	INVOICE DUE DATE	INVOICE STATUS	INVOICE DESCRIPTION
INV-00028447	10/22/2025	04/21/2026	Due	Demolition

REFERENCE NUMBER	FEE NAME	TOTAL
D&D-1024-0222	Cost of Notice	\$103.97
	Demolition Contract	\$1,475.00
	Land Fill Tipping Fees	\$553.90
	Lien Filing Fees and Postage	\$40.98
	Research Fees	\$60.00
	Water & Sewer Cap	\$800.00
2031 Sw Dr. Charles W. Whitlow Ave Lawton, OK 73501		SUBTOTAL \$3,033.85

REMITTANCE INFORMATION
City of Lawton, OK 1405 SW 11th St Lawton, OK 73501

TOTAL	\$3,033.85
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INVOICE (INV-00028528)
FOR CITY OF LAWTON

BILLING CONTACT

HORIZON ROCK LLC
1401 MANATEE AVE SUITE 320
BRADENTON, FL 34205



INVOICE NUMBER	INVOICE DATE	INVOICE DUE DATE	INVOICE STATUS	INVOICE DESCRIPTION
INV-00028528	10/29/2025	04/28/2026	Due	Demolition

REFERENCE NUMBER	FEE NAME	TOTAL
D&D-0425-0406	Cost of Notice	\$103.97
	County Lien Filing Fees, Postage	\$40.98
	Demolition Contract	\$3,000.00
	Land Fill Tipping Fees	\$2,941.87
	Research Fees	\$60.00
	Water & Sewer Cap	\$800.00
1805 Nw Lawton Ave Lawton, OK 73507		SUBTOTAL \$6,946.82

REMITTANCE INFORMATION
City of Lawton, OK 212 SW 9th St Lawton, OK 73501

TOTAL **\$6,946.82**



Item Title:

Consider approving proposed appointments to boards and commissions.

Initiator: Stan Booker, Mayor

Information Source: Julia Mantzke, Council Relations Liaison

Background:

It is recommended that the people nominated as shown be approved for appointments to the following boards and commissions:

MUSEUM OF THE GREAT PLAINS

AUTHORITY:

George Gill-Mayoral Appointment
212 SW 9th St.
Lawton, OK 73507
UT 06/11/2027

WATER CONSERVATORY COUNCIL COMMITTEE:

Robert Weger-*Ward 6 Representative*
212 SW 9th St.
Lawton, OK 73501
Council Term

George Gill-*Ward 4 Representative*
212 SW 9th St.
Lawton, OK 73501
Council Term

AMBULANCE COMMITTEE:

Lane Hooton – *Mayoral Appointment*
212 SW 9th St.
Lawton, OK 73501
Council Term

Sonny Puletasi-CCMH EMS Director-*CCMH Representative*
3401 W. Gore Blvd.
Lawton, OK 73505

Bruce Crowell, Kirk's EMS Director-*Kirks Ambulance Representative*
1616 SW F Ave.
Lawton, OK 73501

Clint Langford, Emergency Management Director- *Comanche County Emergency Management Representative*
315 SW 5th St., Suite 107

Lawton, OK 73501

Jared Williams, Fire Chief-*COL Staff Member*
212 SW 9th St.
Lawton, OK 73501

Correlation to the True North Statement:

Transparency and Trust

Exhibit:

Proposed Appointments

Key Issues:

N/A

Funding Source:

N/A

Recommended Action:

Approve the appointments to boards and commissions.

ATTACHMENTS:

1. Board Appointments- 11.04.2025



November 04, 2025

MUSEUM OF THE GREAT PLAINS

AUTHORITY:

George Gill-Mayoral Appointment
212 SW 9th St.
Lawton, OK 73507
UT 06/11/2027

AMBULANCE COMMITTEE CONT.:

Jared Williams, Fire Chief-COL Staff Member
212 SW 9th St.
Lawton, OK 73501

**WATER CONSERVATORY COUNCIL
COMMITTEE:**

Robert Weger-Ward 6 Representative
212 SW 9th St.
Lawton, OK 73501
Council Term

George Gill-Ward 4 Representative
212 SW 9th St.
Lawton, OK 73501
Council Term

AMBULANCE COMMITTEE:

Lane Hooton – Mayoral Appointment
212 SW 9th St.
Lawton, OK 73501
Council Term

Sonny Puletasi-CCMH EMS Director-CCMH
Representative
3401 W. Gore Blvd.
Lawton, OK 73505

Bruce Crowell, Kirk's EMS Director-Kirks
Ambulance Representative
1616 SW F Ave.
Lawton, OK 73501

Clint Langford, Emergency Management Director-
Comanche County Emergency Management
Representative
315 SW 5th St., Suite 107
Lawton, OK 73501

Item Title:

Consider approving the minutes of the October 22, 2025 Special Meeting.

Initiator: Donalynn Blazek-Scherler, City Clerk

Information Source: Donalynn Blazek-Scherler, City Clerk

Background:

The minutes of the October 22, 2025 Special Meeting have been drafted and are awaiting approval.

Correlation to the True North Statement:

Transparency and Trust

Exhibit:

Minutes on file in the City Clerk's Office

Key Issues:**Funding Source:****Recommended Action:**

Approve the minutes of the October 22, 2025 meeting.

ATTACHMENTS:

None

Item Title:

Consideration and action upon a resolution of the City of Lawton, Oklahoma, (the “City”) approving and authorizing the incurring of indebtedness by the trustees of the Lawton Industrial Development Authority (the “Authority”) to be accomplished by the issuance of its Sales Tax Revenue Bonds, or other evidences of indebtedness in one or more series either in series names or others determined as needed on a tax-exempt or taxable basis, at a premium or discount, in the aggregate principal par amount of not to exceed Eighty-Five Million and No/100 Dollars (\$85,000,000.00) (the “Bonds”) for the purpose of financing all or a portion of the costs of acquisition, construction, equipping, renovating and improving certain streets and capital improvement projects which are expected to include, but are not limited to, a portion of or all of the costs of the improvements to the Lawton Youth Sports Facility, Elmer Thomas Park, the discovery zone, and other acquisitions, repairs and improvements relating to City capital projects all for the benefit of the City; and pay costs of issuance related thereto; providing that the organizational document creating the Authority is subject to the provisions of the Bond Indenture authorizing the issuance of said Bonds; approving the award of the sale of said Bonds on a negotiated basis, approving the waiver of competitive bidding with regard to the sale of said Bonds; and approving the proceedings of the Authority pertaining to the sale of said Bonds; approving and authorizing a sales tax agreement (the “Sales Tax Agreement”) by and between the City and the Authority pertaining to a year-to-year pledge of certain sales tax revenues; and all matters related thereto, including execution of all related documents thereto.

Initiator: John Ratliff, City Manager, Dewayne Burk, Deputy City Manager

Information Source: John Ratliff, City Manager, Timothy Wilson, Interim City Attorney, Dewayne Burk, Deputy City Manager

Background:

The City desires to make certain capital improvements for the benefit of the City. This resolution authorizes and approves the incurring of indebtedness by the trustees of the Lawton Industrial Development Authority (herein the “Authority”) to be accomplished by the issuance of its Sales Tax Revenue Bonds, or other evidences of indebtedness in one or more series either in these series names or others determined as needed on a tax-exempt or taxable basis, at a premium or discount, in the aggregate principal par amount of not to exceed Eighty-Five Million and No/100 Dollars (\$85,000,000.00) (the “Bonds”) for the purpose of financing all or a portion of the costs of acquisition, construction, equipping, renovating and improving certain streets and capital improvement projects which are expected to include, but are not limited to, a portion of or all of the costs of the improvements to the Lawton Youth Sports Facility, Elmer Thomas Park, the discovery zone and other acquisitions, repairs and improvements relating to City capital projects all for the benefit of the City; and pay costs of issuance related thereto; providing that the organizational document creating the Authority is subject to the provisions of the indenture authorizing the issuance of said Bonds; approving the award of the sale of said Bonds on a negotiated basis, approving the waiver of competitive bidding with respect to the sale of said Bonds; and approving the proceedings of the Authority pertaining to the sale of said Bonds; approving and authorizing a Sales Tax Agreement (the “Sales Tax Agreement”) by and between the City and the Authority pertaining to the year-to-year pledge of certain sales tax revenues; and all matters related thereto, including execution of all related documents thereto.

Correlation to the True North Statement:

Exhibit:

Resolution

Key Issues:

Does City Council approve of the Authority accepting the terms of the loan?

Funding Source:

This is a new bond issuance which will be paid from the PROPEL CIP Sales Tax receipts.

Recommended Action:

Approve the resolution authorizing the Authority to authorize a new loan for new projects in the total aggregate principal par amount of not to exceed \$85,000,000.00.

ATTACHMENTS:

1. City Council Resolution (002)

PURSUANT TO THE LEGAL NOTICE AS IS REQUIRED BY THE OKLAHOMA OPEN MEETING ACT INCLUDING THE POSTING OF NOTICE AND AGENDA AS IS REQUIRED BY THE TERMS THEREOF, THE CITY COUNCIL OF THE CITY OF LAWTON, STATE OF OKLAHOMA MET IN REGULAR MEETING AT THE CITY COUNCIL CHAMBERS, 212 S.W. 9TH, LAWTON, OKLAHOMA, ON THE 4TH DAY OF NOVEMBER, 2025, AT 6:00 P.M.

COUNCILMEMBERS PRESENT:

COUNCILMEMBERS ABSENT:

(Other Proceedings)

Thereupon, a resolution was introduced and the title was read in full by the Mayor. Councilmember _____ moved passage of the resolution, and Councilmember _____ seconded the motion. The motion, carrying with it the approval of said resolution, was approved by the following vote:

AYE:

NAY:

The resolution so approved was as follows:

RESOLUTION NO. 25-

A RESOLUTION OF THE CITY OF LAWTON, OKLAHOMA, (THE “CITY”) APPROVING AND AUTHORIZING THE INCURRING OF INDEBTEDNESS BY THE TRUSTEES OF THE LAWTON INDUSTRIAL DEVELOPMENT AUTHORITY (THE “AUTHORITY”) TO BE ACCOMPLISHED BY THE ISSUANCE OF ITS SALES TAX REVENUE BONDS, OR OTHER EVIDENCES OF INDEBTEDNESS IN ONE OR MORE SERIES EITHER IN SERIES NAMES OR OTHERS DETERMINED AS NEEDED ON A TAX-EXEMPT OR TAXABLE BASIS, AT A PREMIUM OR DISCOUNT, IN THE AGGREGATE PRINCIPAL PAR AMOUNT OF NOT TO EXCEED EIGHTY-FIVE MILLION AND NO/100 DOLLARS (\$85,000,000.00) (THE “BONDS”) FOR THE PURPOSE OF FINANCING ALL OR A PORTION OF THE COSTS OF ACQUISITION, CONSTRUCTION, EQUIPPING, RENOVATING AND IMPROVING CERTAIN STREETS AND CAPITAL IMPROVEMENT PROJECTS WHICH ARE EXPECTED TO INCLUDE, BUT ARE NOT LIMITED TO, THE LAWTON YOUTH SPORTS FACILITY, ELMER THOMAS PARK, THE DISCOVERY ZONE AND OTHER ACQUISITIONS, REPAIRS AND IMPROVEMENTS RELATING TO CITY CAPITAL PROJECTS ALL FOR THE BENEFIT OF THE CITY; AND PAY COSTS OF ISSUANCE RELATED THERETO; PROVIDING

THAT THE ORGANIZATIONAL DOCUMENT CREATING THE AUTHORITY IS SUBJECT TO THE PROVISIONS OF THE BOND INDENTURE AUTHORIZING THE ISSUANCE OF SAID BONDS; APPROVING THE AWARD OF THE SALE OF SAID BONDS ON A NEGOTIATED BASIS, APPROVING THE WAIVER OF COMPETITIVE BIDDING WITH REGARD TO THE SALE OF SAID BONDS; AND APPROVING THE PROCEEDINGS OF THE AUTHORITY PERTAINING TO THE SALE OF SAID BONDS; APPROVING AND AUTHORIZING A SALES TAX AGREEMENT (THE "SALES TAX AGREEMENT") BY AND BETWEEN THE CITY AND THE AUTHORITY PERTAINING TO A YEAR-TO-YEAR PLEDGE OF CERTAIN SALES TAX REVENUES; AND ALL MATTERS RELATED THERETO, INCLUDING EXECUTION OF ALL RELATED DOCUMENTS THERETO.

WHEREAS, the Lawton Industrial Development Authority, a public trust (the "Authority"), has been created by a Trust Indenture for the use and benefit of the City of Lawton, Oklahoma (the "City"), under authority of and pursuant to the provisions of Title 60, Oklahoma Statutes 2021, Sections 176-180.4, inclusive, as amended and supplemented, the Oklahoma Trust Act and other applicable statutes of the State of Oklahoma; and

WHEREAS, the Trustees of the Authority have determined upon a financing plan consisting of providing funds for the purpose of financing all or a portion of the costs of acquisition, construction, equipping, renovating, and improving of certain streets and certain capital improvement projects for the benefit of the City and to pay costs of issuance related thereto (collectively, the "Project"); and

WHEREAS, in order to effect the said financing, the Trustees of the Authority intend to incur indebtedness in the total aggregate principal par amount of not to exceed Eighty-Five Million and No/100 Dollars (\$85,000,000.00), said indebtedness to be evidenced by the issuance of its Sales Tax Revenue Bonds, or other evidences of indebtedness, in one or more series in series names or others determined as needed on a tax-exempt or taxable basis, at a premium or discount (the "Bonds"), of the Authority pursuant to the terms and conditions contained in a Bond Indenture securing the Bonds (the "Bond Indenture");

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LAWTON, OKLAHOMA:

SECTION 1. The aforesaid plan and the financing thereof, as submitted, will provide funds for the purpose of financing all or a portion of the costs of acquisition, construction, equipping, renovating and improving certain streets and capital improvement projects which are expected to include, but are not limited to, a portion of or all of the costs of the improvements to the Lawton Youth Sports Facility, Elmer Thomas Park, the discovery zone and other acquisitions, repairs and improvements relating to City capital projects all for the benefit of the City and to pay costs of issuance related thereto (the "Project"). The aforesaid Project will serve the public purposes of the City and hereby is expressly determined to be in furtherance of the public purposes for which the Authority was created.

SECTION 2. The incurring of indebtedness by the Trustees of the Lawton Industrial Development

Authority in the aggregate principal par amount of not to exceed Eighty-Five Million and No/100 Dollars (\$85,000,000.00) in one or more series on a tax-exempt or taxable basis, at a premium or discount, for the purpose of financing all or a portion of the costs of acquisition, construction, equipping, renovating and improving certain streets and capital improvement projects which are expected to include, but are not limited to, a portion of or all of the costs of the improvements to the Lawton Youth Sports Facility, Elmer Thomas Park, the discovery zone and other acquisitions, repairs and improvements relating to City capital projects all for the benefit of the City and to pay costs of issuance related thereto is hereby consented to, authorized and approved according to the terms and conditions of the Bond Indenture, provided that said Bonds shall never constitute a debt of the City. Further, the City Council hereby approves, by a three-fourths (3/4) or greater vote, the waiver of competitive bidding with regard to the award of the sale of the Bonds to either a financial institution or underwriter (the "Underwriter") as designated in a bond purchase agreement on a negotiated basis. Competitive bidding upon the Bonds evidencing said indebtedness hereby is expressly waived and negotiated sale of the Bonds evidencing said indebtedness to Underwriter is hereby approved.

SECTION 3. Pursuant to the requirement of 60 O.S. Section 176(F), the City Council of the City of Lawton, Oklahoma, by a two-thirds (2/3) or greater vote, hereby approves and authorizes the incurring of indebtedness by the Lawton Industrial Development Authority (herein the "Authority") in a maximum aggregate principal par amount of up to Eighty-Five Million and No/100 Dollars (\$85,000,000.00) said indebtedness to be evidenced by the issuance of the Authority's Sales Tax Revenue Bonds, or other evidences of indebtedness, in one or more series in series names or others determined as needed on a tax-exempt or taxable basis, at a premium or discount (the "Bonds"), of the Authority pursuant to the terms and conditions contained in a Bond Indenture securing the Bonds, such Bonds being described and authorized by the Resolution of the Authority of November 4, 2025.

SECTION 4. The pledging of certain sales tax revenues, on a year-to-year basis in connection with soliciting the sale of the Bonds and the Sales Tax Agreement by and between the City and the Authority and its execution, is hereby approved. It is further affirmed that the organizational document creating the Authority will be subject to the provisions of the Bond Indenture authorizing the issuance of said Bonds.

SECTION 5. The Mayor, Mayor Pro Tem, Clerk, or Deputy City Clerk of the City representing the City at the closing of the above-referenced Bond issue are hereby authorized to execute and deliver on behalf of the City any and all certifications and documentation necessary or attendant to the delivery of the Bonds, as directed by Bond Counsel.

SECTION 6. By reason of the need for the benefit to the citizens of the City that can be realized with the Project and for the immediate preservation of the public peace, health and safety, this Resolution shall be effective immediately upon its adoption.

SECTION 7. In all other respects all the actions of the Authority taken on November 4, 2025, with respect to the issuance of the Bonds and otherwise are hereby and by these presents expressly approved, confirmed, and ratified in all respects.

This resolution shall become effective immediately.

THIS RESOLUTION PASSED AND APPROVED by the City Council of the City of Lawton, Oklahoma this 4th day of November, 2025.

CITY OF LAWTON, OKLAHOMA

Stan Booker, Mayor

ATTEST:

Donalynn Blazek-Scherler, City Clerk

(SEAL)

APPROVED as to form and legality this 4th day of November, 2025.

Timothy Wilson, Acting City Attorney

CERTIFICATE
OF
CITY COUNCIL ACTION

I, the undersigned, hereby certify that I am the duly qualified and acting City Clerk of the City of Lawton, Oklahoma.

I further certify that the City Council of the City of Lawton, Oklahoma, held a Regular Meeting at 6:00 P.M. on November 4, 2025, after due notice was given in full compliance with the Oklahoma Open Meeting Act.

I further certify that attached hereto is a full and complete copy of a Resolution that was passed and approved by said City Council at said meeting as the same appears in the official records of my office and that said Resolution is currently in effect and has not been repealed or amended as of this date.

I further certify that below is listed those Councilmembers present and absent at said meeting; those making and seconding the motion that said Resolution be passed and approved; and those voting for and against such motion:

PRESENT:

ABSENT:

MOTION MADE BY:

MOTION SECONDED BY:

AYE:

NAY:

WITNESS MY HAND THIS NOVEMBER 4, 2025.

CITY OF LAWTON, OKLAHOMA

(SEAL)

City Clerk

Item Title:

Consider adopting a resolution proposing that the improvement district entitled Willow Springs Neighborhood Water Main Improvement District be created upon setting a public hearing date and instructing the City Clerk to give notice of such hearing on the proposed district to the property owners of record within the proposed district boundary.

Initiator: Christine James, Director

Information Source: Christine James, Director, Cynthia Augustine, Real Property Coordinator , Willie Whisenhunt, Director

Background:

The property owners of Willow Springs Condominiums/Townhouses have filed a petition with the City Clerk's office for the development of an improvement district for the replacement of their water mains. On June 24, 2025, City Council approved Resolution 25-177 determining that an improvement district for the Willow Springs Condominium/Townhouse neighborhood is necessary for the replacement of their water mains and directed the City Engineer and/or Public Utilities Director to prepare preliminary plans and cost estimate for the proposed improvement district.

The Public Utilities Director hired Garver to evaluate the proposed project, create preliminary plans and to estimate the construction costs. Garver estimated the replacement of approximately 2,000 linear feet of 8-inch water lines to include appropriate fire hydrants, water meters and all associated appurtenances at \$1,037,210.00, which includes a 30% contingency. Other project costs include engineering design, bidding, permitting, construction services, etc. bring the total worst-case estimated cost to \$1,318,209.00. After loan costs are calculated, the total repayment cost for the improvement district could range from \$1,716,803.85 (15-year repayment term) to \$2,150,183.40 (30-year repayment term). The City Council will have the ultimate decision on the loan terms once the actual costs are determined. The numbers presented at this time are to reflect the worst-case scenario.

Correlation to the True North Statement:**Exhibit:**

Resolution 25-_____

Assessment Plat

Addendum to Assessment Plat

Technical Memorandum from Garver including Preliminary Plans

Estimate of Costs for the Improvements

Affidavit of Mailing and Hearing Notice

Key Issues:

N/A

Funding Source:

Water Resources Board Loan

Recommended Action:

Adopt Resolution 25-_____, setting a public hearing for December 9, 2025, and instruct the City Clerk to give notice of such hearing on the proposed district to the property owners of record within the proposed district boundary.

ATTACHMENTS:

1. Resolution No. 25-_____ (Second Res)
2. Assessment Plat
3. Addendum to Assessment Plat
4. Technical Memo
5. Est Project Cost
6. Affidavit of Mailing and Notice of Public Hearing

RESOLUTION NO. 25-_____

A RESOLUTION PROPOSING THAT THE IMPROVEMENT DISTRICT ENTITLED WILLOW SPRINGS NEIGHBORHOOD WATER MAIN IMPROVEMENT DISTRICT BE CREATED; INSTRUCTING THE CITY CLERK TO GIVE NOTICE OF A HEARING ON THE PROPOSED DISTRICT; AND CONTAINING OTHER PROVISIONS RELATING THERETO.

WHEREAS, pursuant to Title 11, Section 39-106, Oklahoma State Statutes, a petition has been filed with the City Clerk requesting the creation of an Improvement District more fully described below to be known as the Willow Springs Neighborhood Water Main Improvement District and upon consideration and review of said petition, the Council hereby finds that the creation of said Improvement District is necessary for the health, welfare, and well-being of the residents of the City of Lawton, Oklahoma, and that said improvements will confer a special benefit upon property within the District; and

WHEREAS, pursuant to Title 11, Section 39-106, Oklahoma State Statues, on June 24, 2025, the City Council approved Resolution 25-177 directing the engineer to prepare preliminary plans and an estimate for costs for the proposed district; and

WHEREAS, the City Engineer and/or the Public Utilities Director has prepared and filed with the City Clerk, the following:

- (A) The Assessment plat with an addendum attached showing the amount of maximum benefit estimated to be assessed against each tract or parcel in the district in conformity with Title 11, Oklahoma State Statue, Section 39-106;
- (B) The preliminary plans of the type of construction in conformity with Title 11, Oklahoma State Statue, Section 39-106; and
- (C) An estimate of costs for the improvements; and

WHEREAS, the City Council has examined the assessment plat, preliminary plans and estimate of cost for the district.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Lawton, Oklahoma, that:

SECTION 1. It is hereby proposed that the Willow Springs Neighborhood Water Main Improvement District be created in accordance with the assessment plat and preliminary plans on file with the City Clerk.

SECTION 2. The Clerk is hereby instructed to give notice of a hearing on the proposed district pursuant to Title 11, Oklahoma State Statue, Section 39-107 said public hearing to be held on Tuesday, December 9, 2025, at 6:00 p.m., in Wayne Gilley Auditorium at City Hall, 212 SW 9th Street, Lawton, Oklahoma.

PASSED and APPROVED by the Mayor and Council of the City of Lawton this 4th day of November, 2025.

STANLEY BOOKER, MAYOR

ATTEST:

DONALYNN BLAZEK-SCHERLER, CITY CLERK

APPROVED as to form and legality this _____ day of _____, 2025.

JARI ASKINS, INTERIM CITY ATTORNEY

Willow Springs Neighborhood Water Main Improvement District Assessment Plat



Lot 1, Block 11, Willow Creek Addition, Part 3, to the City of Lawton, Comanche County, Oklahoma and the Amended Willow Springs Townhouse Addition, a replat of a portion of Lot 1, Block 11, Willow Creek Addition, Part 3, to the City of Lawton, Comanche County, Oklahoma.

Addendum to the Assessment Plat

As of 10/23/2025

Per County Treasurer		Per County Assessor		Property Address	Legal Description				Co Account #	Assessment Amount	
Owner	Mailing Address	Owner	Mailing Address		Lot	Block	Addition	Unit #		15 Year Term	30 Year Term
Sharon Gail Mayhue Living Trust	1212 NW Norwick Ave, Lawton OK 73505	Sharon Gail Mayhue Living Trust	1212 NW Norwick Ave, Lawton OK 73505	6801 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 4 Bldg C	160037264	\$26,412.37	\$33,079.74
Napier, Joyce & Dennis	10896 S Auburn Hills Dr, Edinburgh IN 46124	Napier, Joyce & Dennis	10896 S Auburn Hills Dr, Edinburgh IN 46124	6802 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 35 Bldg C	160045203	\$26,412.37	\$33,079.74
DMK Holdings, LLC	1 Hilliary Drive, Lawton OK 73507	DMK Holdings, LLC	1 Hilliary Drive, Lawton OK 73507	6803 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 3 Bldg B	160039044	\$26,412.37	\$33,079.74
King, Crystal	6804 NW Willow Springs Drive, Lawton OK 73505	King, Crystal	6804 NW Willow Springs Drive, Lawton OK 73505	6804 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 34 Bldg B	160037276	\$26,412.37	\$33,079.74
Taylor, Mikeal & Alyssa Zuech	6805 NW Willow Springs Drive, Lawton OK 73505	Taylor, Mikeal & Alyssa Zuech	6805 NW Willow Springs Drive, Lawton OK 73505	6805 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 2 Bldg D	160039042	\$26,412.37	\$33,079.74
Nelson, Carolyn	2501 Corbeau Drive, Irving TX 75038	Nelson, Carolyn	2501 Corbeau Drive, Irving TX 75038	6806 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 33 Bldg A	160039051	\$26,412.37	\$33,079.74
Kleimola, Elizabeth	14514 Vance Jackson Rd Apt 2304, San Antonio TX 78249	Kleimola, Elizabeth	14514 Vance Jackson Rd Apt 2304, San Antonio TX 78249	6807 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 1 Bldg A	160039043	\$26,412.37	\$33,079.74
Bentley, Brenda	3106 NW Brent Circle, Lawton OK 73505	Bentley, Brenda	3106 NW Brent Circle, Lawton OK 73505	6808 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 32 Bldg A	160037834	\$26,412.37	\$33,079.74
Finch, Un Cha	6809 NW Willow Springs Drive, Lawton OK 73505	Finch, Un Cha	6809 NW Willow Springs Drive, Lawton OK 73505	6809 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 5 Bldg C	160045650	\$26,412.37	\$33,079.74
Hood Jr, Ralph	1209 NW Logan Avenue, Lawton OK 73507	Hood Jr, Ralph	1209 NW Logan Avenue, Lawton OK 73507	6810 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 31 Bldg B	160037275	\$26,412.37	\$33,079.74
Robbins, Jacqui	6811 NW Willow Springs Drive, Lawton OK 73505	Robbins, Jacqui	6811 NW Willow Springs Drive, Lawton OK 73505	6811 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 6 Bldg B	160039045	\$26,412.37	\$33,079.74
Blankenship, Taira	1737 Oakwood Estates Dr, Plant City FL 33563	Bell, Lillian	1510 SE Walnut Creek Road, Lawton OK 73501	6812 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 30 Bldg C	160038502	\$26,412.37	\$33,079.74
Johnson, Khali	7751 Effingham Square, Alexandria VA 22315	Johnson, Khali	7751 Effingham Square, Alexandria VA 22315	6813 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 7 Bldg D	160037265	\$26,412.37	\$33,079.74
Meckes, Jonathan & Kayla	121 SW Elk Creek Loop, Cache OK 73527	Carey Corner Properties, LLC	c/o Joshua Carey 11125 Autumn Road, Edmond OK 73013	6814 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 29 Bldg A	160037836	\$26,412.37	\$33,079.74
Bartley, Doyle	6815 NW Willow Springs Dr, Lawton OK 73505	Bartley, Doyle	6815 NW Willow Springs Dr, Lawton OK 73505	6815 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 8 Bldg A	160037266	\$26,412.37	\$33,079.74
Velasco, Joselyn	6816 NW Willow Springs Dr, Lawton OK 73505	Velasco, Joselyn	6816 NW Willow Springs Dr, Lawton OK 73505	6816 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 28 Bldg D	160037274	\$26,412.37	\$33,079.74
Robinson, Toby & Yoon	5353 Cane Ridge Rd Apt 1401, Anitoch TN 37013	Robinson, Toby & Yoon	5353 Cane Ridge Rd Apt 1401, Anitoch TN 37013	6817 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 9 Bldg C	160037267	\$26,412.37	\$33,079.74
Series One of Threlkeld Investments, LLC	2903 NW Templeton Ter, Lawton OK 73505	Series One of Threlkeld Investments, LLC	2903 NW Templeton Ter, Lawton OK 73505	6818 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 27 Bldg B-2	160037273	\$26,412.37	\$33,079.74
Lee, Violet	6819 NW Willow Springs Drive Unit D, Lawton OK 73505	Lee, Violet	6819 NW Willow Springs Drive Unit D, Lawton OK 73505	6819 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 10 Bldg B-1	160037835	\$26,412.37	\$33,079.74
Nelson, Carolyn	2501 Corbeau Drive, Irving TX 75038	Nelson, Carolyn	2501 Corbeau Drive, Irving TX 75038	6820 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 26 Bldg C	160039050	\$26,412.37	\$33,079.74
Morse, Shirley Ann	6821 NW Willow Springs Dr, Lawton OK 73505	Morse, Shirley Ann	6821 NW Willow Springs Dr, Lawton OK 73505	6821 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 11 Bldg D	160037268	\$26,412.37	\$33,079.74
Craig, Emma Trustees	6822 NW Willow Springs Dr, Lawton OK 73505	Craig, Emma Trustees	6822 NW Willow Springs Dr, Lawton OK 73505	6822 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 25 Bldg C	160044719	\$26,412.37	\$33,079.74
Thomas, Annette & John	1201 NW Thornbury Dr, Lawton OK 73505	Thomas, Annette & John	1201 NW Thornbury Dr, Lawton OK 73505	6823 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 12 Bldg A	160039046	\$26,412.37	\$33,079.74
DMK Holdings, LLC	1 Hilliary Drive, Lawton OK 73507	DMK Holdings, LLC	1 Hilliary Drive, Lawton OK 73507	6824 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 24 Bldg B-2	160039049	\$26,412.37	\$33,079.74
Deavours, Tara	6825 NW Willow Springs Dr, Lawton OK 73505	Deavours, Tara	6825 NW Willow Springs Dr, Lawton OK 73505	6825 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 13 Bldg C	160037269	\$26,412.37	\$33,079.74
Gray, Lewis	6826 NW Willow Springs Dr, Lawton OK 73505	Gray, Lewis	6826 NW Willow Springs Dr, Lawton OK 73505	6826 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 23 Bldg D	160014166	\$26,412.37	\$33,079.74
Burnett, Steven	6827 NW Willow Springs Dr, Lawton OK 73505	Burnett, Steven	6827 NW Willow Springs Dr, Lawton OK 73505	6827 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 14 Bldg B-1	160037270	\$26,412.37	\$33,079.74
Gettens, Gloria	6828 NW Willow Springs Dr, Lawton OK 73505	Gettens, Gloria	6828 NW Willow Springs Dr, Lawton OK 73505	6828 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 22 Bldg B-2	160042592	\$26,412.37	\$33,079.74
Stanfield, Heesun	5007 SW Malcom Rd, Lawton OK 73505	Stanfield, Heesun	5007 SW Malcom Rd, Lawton OK 73505	6829 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 15 Bldg D	160039047	\$26,412.37	\$33,079.74
Simpkins, Barbie Lynn	c/o James Baker 1209 NW Logan Avenue, Lawton OK 73507	Simpkins, Barbie Lynn	c/o James Baker 1209 NW Logan Avenue, Lawton OK 73507	6830 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 21 Bldg A	160037832	\$26,412.37	\$33,079.74
Carr Sr, Leslie	6831 NW Willow Springs Dr, Lawton OK 73505	Eldora Acquisitions, LLC	3037 Grizzly Peak Drive, Broomfield CO 80023	6831 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 16 Bldg A	160037271	\$26,412.37	\$33,079.74
Gilbert, Joseph	6832 NW Willow Springs Dr, Lawton OK 73505	Gilbert, Joseph	6832 NW Willow Springs Dr, Lawton OK 73505	6832 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 42 Bldg A	160037833	\$26,412.37	\$33,079.74
Mullins & Associates, LLC	c/o Scott Mullins 816 Andrea St, Norman OK 73072	Mullins & Associates, LLC	816 Andrea St, Norman OK 73072	6836 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 41 Bldg B-2	160037278	\$26,412.37	\$33,079.74
Nelson, Carolyn	2501 Corbeau Drive, Irving TX 75038	Nelson, Carolyn	2501 Corbeau Drive, Irving TX 75038	6838 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 40 Bldg C	160039054	\$26,412.37	\$33,079.74
Campbell, Robert & Deanna	6895 NW Willow Springs Dr, Lawton OK 73505	Campbell, Robert & Deanna	6895 NW Willow Springs Dr, Lawton OK 73505	6895 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 20 Bldg C	160037979	\$26,412.37	\$33,079.74
Mullins & Associates, LLC	c/o Scott Mullins 816 Andrea St, Norman OK 73072	Mullins & Associates, LLC	816 Andrea St, Norman OK 73072	6897 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 19 Bldg B-2	160037272	\$26,412.37	\$33,079.74
Tselee, Gena & Dianne Scales	6899 NW Willow Springs Dr, Lawton OK 73505	Williams, Troy	6899 NW Willow Springs Dr, Lawton OK 73505	6899 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 18 Bldg D	160039048	\$26,412.37	\$33,079.74
Scales, Anthony & Dianne	291 Goldenstar Ln, Portsmouth VA 23701	Scales, Anthony & Dianne	291 Goldenstar Ln, Portsmouth VA 23701	68101 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 17 Bldg A	160037978	\$26,412.37	\$33,079.74
Williams, Vernon & Rachelle	711 SW B Ave, Lawton OK 73501	Williams, Vernon & Rachelle	711 SW B Ave, Lawton OK 73501	68103 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 39 Bldg C	160037277	\$26,412.37	\$33,079.74
Stewart, Pamela Camille	c/o Monica Gonzalez 68105 NW Willow Springs Dr	Gonzalez, Monica	68105 NW Willow Springs Dr, Lawton OK 73505	68105 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 38 Bldg B-2	160039053	\$26,412.37	\$33,079.74
Tate, John & Clara	68107 NW Willow Springs Dr, Lawton OK 73505	Tate, John & Clara	68107 NW Willow Springs Dr, Lawton OK 73505	68107 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 37 Bldg D	160045330	\$26,412.37	\$33,079.74
Nelson, Carolyn	2501 Corbeau Drive, Irving TX 75038	Nelson, Carolyn	2501 Corbeau Drive, Irving TX 75038	68109 NW Willow Springs Drive	pt 1	11	Willow Creek Part 3	Unit 36 Bldg A	160039052	\$26,412.37	\$33,079.74
Foulds Jr, Lloyd	6833 NW Willow Springs Dr, Lawton OK 73505	Foulds Jr, Lloyd	6833 NW Willow Springs Dr, Lawton OK 73505	6833 NW Willow Springs Drive	1	1	Amended Willow Springs Townhouse	N/A	160073695	\$26,412.37	\$33,079.74
Colon, Moses	2401 NW Faircloud Circle, Lawton OK 73505	Colon, Moses	2401 NW Faircloud Circle, Lawton OK 73505	6835 NW Willow Springs Drive	2	1	Amended Willow Springs Townhouse	N/A	160073696	\$26,412.37	\$33,079.74
Claycomb, Alexandria	6837 NW Willow Sprongs Dr, Lawton OK 73505	Claycomb, Alexandria	6837 NW Willow Sprongs Dr, Lawton OK 73505	6837 NW Willow Springs Drive	3	1	Amended Willow Springs Townhouse	N/A	160073697	\$26,412.37	\$33,079.74
Ramming, David	6839 NW Willow Springs Dr, Lawton OK 73505	Ramming, David	6839 NW Willow Springs Dr, Lawton OK 73505	6839 NW Willow Springs Drive	4	1	Amended Willow Springs Townhouse	N/A	160073698	\$26,412.37	\$33,079.74
Lanier, Patrick	PO Box 139, Wellesley Island NY 13640	Lanier, Patrick	PO Box 139, Wellesley Island NY 13640	6840 NW Willow Springs Drive	pt 3-4	5	Amended Willow Springs Townhouse	N/A	160073718	\$26,412.37	\$33,079.74
Thornton, Carin	6841 NW Willow Springs Dr, Lawton OK 73505	Thornton, Carin	6841 NW Willow Springs Dr, Lawton OK 73505	6841 NW Willow Springs Drive	5	1	Amended Willow Springs Townhouse	N/A	160073699	\$26,412.37	\$33,079.74
Jackson, Ransom	6842 NW Willow Springs Dr, Lawton OK 73505	Jackson, Ransom	6842 NW Willow Springs Dr, Lawton OK 73505	6842 NW Willow Springs Drive	pt 2-3	5	Amended Willow Springs Townhouse	N/A	160078551	\$26,412.37	\$33,079.74
Watson, Jean Rose and Oliver	c/o Darrin and Jessica Vogal PO Box 83, Lawton OK 73502	Vogel, Darrin and Jessica	PO Box 83, Lawton OK 73502	6843 NW Willow Springs Drive	1	2	Amended Willow Springs Townhouse	N/A	160073700	\$26,412.37	\$33,079.74
Lee, Victor	6844 NW Willow Springs Dr, Lawton OK 73505	Lee, Victor	6844 NW Willow Springs Dr, Lawton OK 73505	6844 NW Willow Springs Drive	pt 1-2	5	Amended Willow Springs Townhouse	N/A	160073715	\$26,412.37	\$33,079.74
Graham Sr, Gardner and Mary	6845 NW Willow Springs Dr, Lawton OK 73505	Graham Sr, Gardner and Mary	6845 NW Willow Springs Dr, Lawton OK 73505	6845 NW Willow Springs Drive	2	2	Amended Willow Springs Townhouse	N/A	160073701	\$26,412.37	\$33,079.74
Clanton, Angeinette	6846 NW Willow Springs Dr, Lawton OK 73505	Clanton, Angeinette	6846 NW Willow Springs Dr, Lawton OK 73505	6846 NW Willow Springs Drive	1	4	Amended Willow Springs Townhouse	N/A	160073710	\$26,412.37	\$33,079.74
Jones, George	6847 NW Willow Springs Dr, Lawton OK 73505	Jones, George	6847 NW Willow Springs Dr, Lawton OK 73505	6847 NW Willow Springs Drive	3	2	Amended Willow Springs Townhouse	N/A	160073702	\$26,412.37	\$33,079.74
McCutcheon Jr, Kenneth	6848 NW Willow Springs Dr, Lawton OK 73505	McCutcheon Jr, Kenneth	6848 NW Willow Springs Dr, Lawton OK 73505	6848 NW Willow Springs Drive	2	4	Amended Willow Springs Townhouse	N/A	160073711	\$26,412.37	\$33,079.74
Muffer, Franklin	6849 NW Willow Springs Dr, Lawton OK 73505	J & S Realty Group, LLC	4419 SW Parkway Drive, Lawton OK 73505	6849 NW Willow Springs Drive	4	2	Amended Willow Springs Townhouse	N/A	160073703	\$26,412.37	\$33,079.74
Pollock, Christy	6850 NW Willow Springs Dr, Lawton OK 73505	Morgan, Michele	6850 NW Willow Springs Dr, Lawton OK 73505	6850 NW Willow Springs Drive	3	4	Amended Willow Springs Townhouse	N/A	160073712	\$26,412.37	\$33,079.74
Jennings, Chae	6851 NW Willow Springs Dr, Lawton OK 73505	Short, MehYang M	6851 NW Willow Springs Dr, Lawton OK 73505	6851 NW Willow Springs Drive	5	2	Amended Willow Springs Townhouse	N/A	160073704	\$26,412.37	\$33,079.74
Market One Real Estate of Lawton	1101 NW 67th Street, Lawton OK 73505	Market One Real Estate of Lawton	1101 NW 67th Street, Lawton OK 73505	6852 NW Willow Springs Drive	4	4	Amended Willow Springs Townhouse	N/A	160073713	\$26,412.37	\$33,079.74
Kerrigan, Barbara	6853 NW Willow Springs Dr, Lawton OK 73505	Kerrigan, Barbara	6853 NW Willow Springs Dr, Lawton OK 73505	6853 NW Willow Springs Drive	1	3	Amended Willow Springs Townhouse	N/A	160073705	\$26,412.37	\$33,079.74
Chang, Wooh H and Uh K	1101 NW 67th Street, Lawton OK 73505	Chang, Wooh H and Uh K	1101 NW 67th Street, Lawton OK 73505	6854 NW Willow Springs Drive	5	4	Amended Willow Springs Townhouse	N/A	160073714	\$26,412.37	\$33,079.74
Bentley, Tammy	6855 NW Willow Springs Dr, Lawton OK 73505	Bentley, Tammy	6855 NW Willow Springs Dr, Lawton OK 73505	6855 NW Willow Springs Drive	2	3	Amended Willow Springs Townhouse	N/A	160073706	\$26,412.37	\$33,079.74
Thompson, Kenneth and Mi Nam	6857 NW Willow Springs Dr, Lawton OK 73505	Thompson, Kenneth and Mi Nam	6857 NW Willow Springs Dr, Lawton OK 73505	6857 NW Willow Springs Drive	3	3	Amended Willow Springs Townhouse	N/A	160073707	\$26,412.37	\$33,079.74
Dasinger, Patty	6859 NW Willow Springs Dr, Lawton OK 73505	Dasinger, Patty	6859 NW Willow Springs Dr, Lawton OK 73505	6859 NW Willow Springs Drive	pt 4	3	Amended Willow Springs Townhouse	N/A	160073708	\$26,412.37	\$33,079.74
Matthews, Jason and Thea	6861 NW Willow Springs Dr, Lawton OK 73505	Matthews, Jason and Thea	6861 NW Willow Springs Dr, Lawton OK 73505	6861 NW Willow Springs Drive	pt 4-5	3	Amended Willow Springs Townhouse	N/A	160073709	\$26,412.37	\$33,079.74
										\$1,716,803.85	\$2,150,183.40

Willow Springs Technical Memorandum

City of Lawton

RECEIVED

SEP 11 2025

CITY OF LAWTON
CITY CLERK'S OFFICE



750 SW 24th St
Ste 200
Moore, OK 73160

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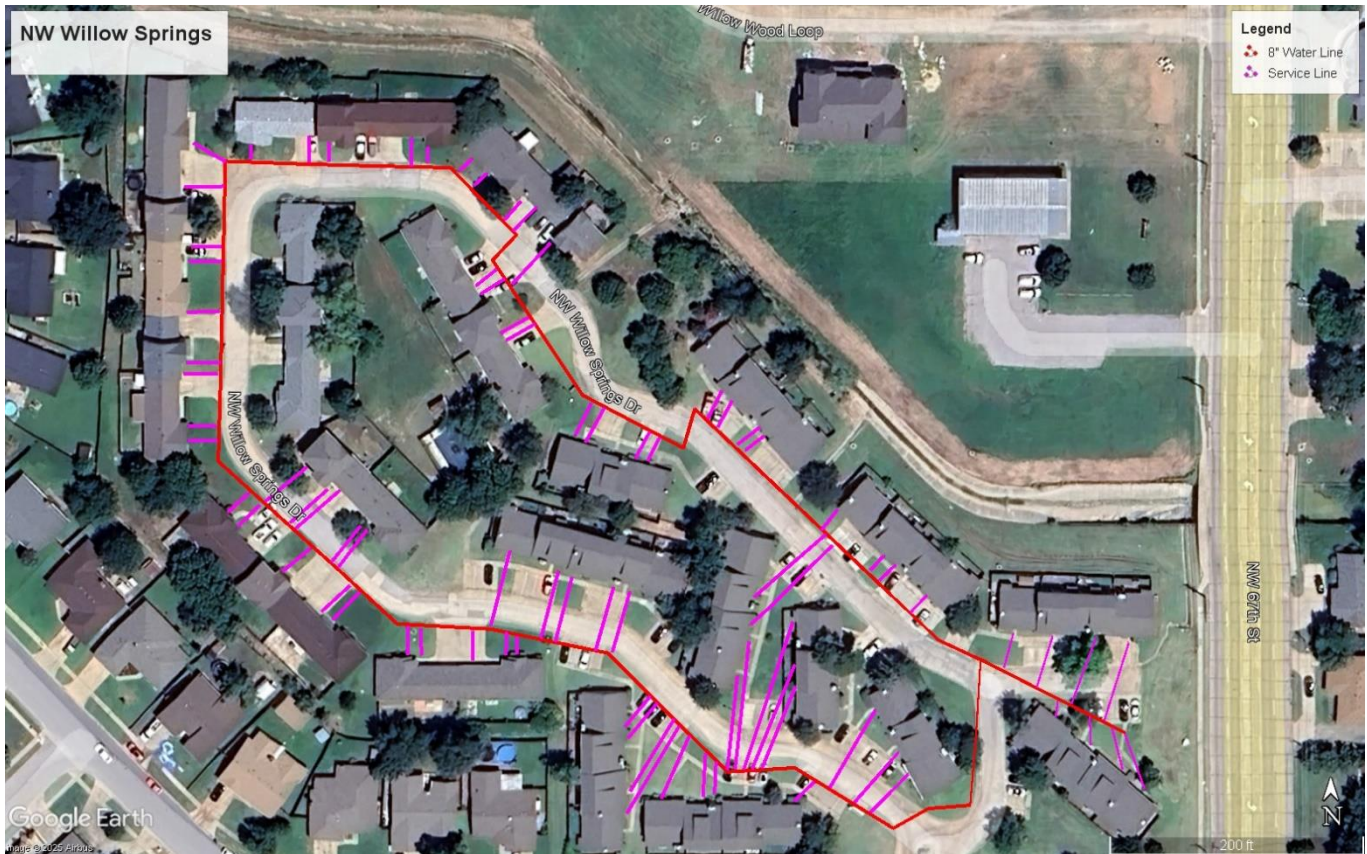
1.0 Introduction

The City of Lawton (City) has engaged Garver for professional engineering services to replace water lines servicing the Willow Springs Condominium and Townhouse Community (Willow Springs). This technical memorandum (TM) outlines the cost feasibility of the project.

1.1 Background & Project Description

Willow Springs currently owns and maintains the water lines serving the community. Willow Springs plans to upgrade its water infrastructure by installing approximately 2,000 linear feet (LF) of 8-inch water lines. The project area serves approximately 80 residents and includes the entirety of Willow Springs.

Figure 1: Willow Springs Condo and Townhouse Community Evaluation Area



2.0 Purpose and Need

The purpose of this project is to replace existing water lines within the Willow Springs community that have experienced deterioration over time. The current infrastructure is aging and will not be able to provide reliable service in the future.

Willow Springs currently owns and maintains the water lines serving the community. As part of this project, the City will take on ownership of the water lines and will be responsible for the replacement of the lines and all future maintenance. The City will coordinate with Willow Springs to define the extent of the new easements. Following construction, the City will assume responsibility for long-term operation and maintenance of the new water lines.

3.0 Design Information

Throughout the project there are 4-inch and 6-inch water lines, the lines will be upsized to 8-inch to be consistent with City standard. Fire hydrants, water meters, and all associated appurtenances will be replaced. All construction will occur within the acquired City easements. A hydraulic analysis will be completed prior to bidding and construction.

4.0 Comprehensive Cost Estimate

Garver completed monetary evaluations for the project. These are rough order of magnitude (ROM) level cost considerations for comparison, control, and budget authorization purposes based on the available information at the time of this TM. The costs account for engineering services, permitting coordination, and construction. The expected range of accuracy for this type of consideration is -30% to +50% of the actual project estimate. A 30% contingency has been included in the construction cost estimate. Table 5-1 below summarizes the ROM costs developed for the future developments in Willow Springs.

Table 5-1: Comprehensive Cost Estimate

Description	Total Cost
Engineering Design, Bidding, and Construction Services	\$160,000.00
Permitting Coordination	\$50,000.00
Construction (30% Contingency)	\$1,037,210.00
Total Estimated Project Cost	\$1,247,210.00

The presented costs are based off previously completed projects in the Lawton area and from Garver's experience as a professional engineering firm familiar with the construction industry. Garver can not guarantee that proposals, bids, or actual construction costs will not vary from the estimates provided.

5.0 Conclusion and Recommendations

This project will replace deteriorated water lines with infrastructure that meets current City standards, improving water service and reliability for residents. It will also transfer maintenance responsibilities to the City, reducing risk of future service disruptions. This project is considered in the best interest of Willow Springs residents and the City.

Appendix A- Detailed Cost Estimate

CONSTRUCTION					
ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
1	MOBILIZATION	LS	1	\$38,310.00	\$38,310.00
2	DE-MOBILIZATION	LS	1	\$7,500.00	\$7,500.00
3	8" PVC C900 DR18 WATER LINE PIPE	LF	2,000	\$180.00	\$360,000.00
4	8" GATE VALVE AWWA 509	EA	30	\$4,000.00	\$120,000.00
5	1" SERVICE INSTALLATION	EA	80	\$2,200.00	\$176,000.00
6	FIRE HYDRANT ASSEMBLY	EA	8	\$9,000.00	\$72,000.00
8	FITTINGS	LBS	1,800	\$13.00	\$23,400.00
SUBTOTAL					\$ 797,210.00
CONTINGENCY (30%)					\$240,000.00
TOTAL					\$1,037,210.00

ENGINEERING	
Design	\$70,000.00
Bidding	\$40,000.00
Construction	\$50,000.00
TOTAL	\$160,000.00
PERMITTING COORDINATION	
Hydraulic Analysis TM	\$25,000.00
Permitting Package	\$25,000.00
TOTAL	\$50,000.00

Willow Springs Improvement District Estimated Cost

Planning Costs, includes staff time, advertising, printing, etc.	\$2,051.00
Public Utilities Costs, includes staff time for project management	\$25,000.00
Preliminary Design Costs (per Garver agreement)	\$21,000.00
Engineering Design/Bidding/Construction Costs	\$160,000.00
Construction Costs	\$1,037,210.00
Permitting Coordination	\$50,000.00
Inspection Fees	\$25,000.00
	\$1,320,261.00

LESS payment made by Willow Springs Condo Assoc 4/14/2025 Receipt # 2446853	-\$2,052.00
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TOTAL PROJECT COST	\$1,318,209.00
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TOTAL REPAYMENT COST (15 YEARS)	\$1,716,803.85
--	-----------------------

with annual payments of \$114,453.59 (**\$1,760.82** for each of the 65 property owners) for **15 years** (last payment is less)

TOTAL REPAYMENT COST (30 YEARS)	\$2,150,183.40
--	-----------------------

with annual payments of \$71,672.78 (**\$1,102.66** for each of the 65 property owners) for **30 years** (last payment is less)

Affidavit of Mailing

I, Donalynn Blazek-Scherler, City Clerk of the City of Lawton, Oklahoma, after duly being sworn, do hereby affirm, depose, certify and say that the foregoing Notice of Hearing as to the creation of the Willow Springs Neighborhood Water Main Improvement District was mailed by me not more than thirty (30) nor less than ten (10) days before December 9, 2025, to the owners of the tract or parcels of land to be assessed at his or her last known address as obtained from the records of the Comanche County Treasurer.

WITNESS my hand this _____ day of _____, 2025.

Donalynn Blazek-Scherler, City Clerk
Norman, Oklahoma

STATE OF OKLAHOMA)
) SS:
COUNTY OF CLEVELAND)

Sworn and subscribed to me by Donalynn Blazek-Scherler known to me to be the City Clerk of the City of Lawton, Oklahoma, this _____ day of _____, 2025.

Notary Public

My Commission Expires:

My Commission Number:

**NOTICE OF HEARING AS TO THE CREATION OF THE
WILLOW SPRINGS NEIGHBORHOOD WATER MAIN IMPROVEMENT DISTRICT**

NOTICE IS HEREBY GIVEN.

1. A hearing shall be held on the proposed creation of the Willow Springs Neighborhood Water Main Improvement District on December 9, 2025, at 6:00 p.m., in the Wayne Gilley Auditorium at City Hall, 212 SW 9th Street, Lawton, Oklahoma.

2. The improvements shall include the replacement of the water mains within the proposed district as authorized by Title 11, Oklahoma Statute, Section 39-103 to the Willow Springs Neighborhood Water Main Improvement District located west of NW 67th Street and north of NW Willow Creek Drive within the Willow Springs Condominiums and Townhouses which is within the corporate limits of the City of Lawton as more fully described and set out on the Assessment Plat of the Willow Springs Neighborhood Water Main Improvement District on file with the City Clerk.

3. Any interested person may ascertain in the office of the City Clerk:

- (a) a description of the property to be assessed, and
- (b) the maximum amount of benefit estimated to be conferred on each tract or parcel of land.

4. The preliminary basis for estimating the assessment is as follows:

The owners of property within the District upon which Improvements are located at the time the District is created shall pay an equal amount per parcel for said improvements plus the associated costs as more particularly set out on the addendum to the Assessment Plat of the Willow Springs Neighborhood Water Main Improvement District on file with the City Clerk which constitutes the maximum amount of benefit estimated to be conferred on each tract or parcel of land upon Improvements thereon. "Improvement" is defined as the replacement of the water mains within the district. The preliminary basis for estimating the assessment is attached hereto.

Donalynn Blazek-Scherler, City Clerk
Lawton, Oklahoma

Item Title:

Consider approving an ordinance pertaining to Utilities, Amending Sections 22-4-1-410 And 22-4-1-412 , both in Division 22-4-1, Article 22-4, Chapter 22, Lawton City Code 2015 by adding provisions for abandoned shopping carts to be considered bulk waste, clarifying bulk waste terminology and setting fees as such, providing for severability and establishing an effective date.

Initiator: Michael Watrous, Director, Stan Booker, Mayor

Information Source: Michael Watrous, Director

Background:

The attached ordinance amends Sections 22-4-1-410 and 22-4-1-412 of the Lawton City Code to address the handling of abandoned shopping carts within the city. The amendment designates abandoned shopping carts as bulky waste for the purpose of collection and disposal, establishing related service fees within the existing solid waste fee schedule. In addition, the ordinance updates terminology to ensure consistency between “premium bulky waste” and “special collection” language used throughout the code. These revisions aim to improve service efficiency, support cleaner public spaces, and provide a clear mechanism for cost recovery associated with the removal of abandoned shopping carts.

Correlation to the True North Statement:

Safe Community

Exhibit:

Ordinance 25-

Key Issues:

N/A

Funding Source:

N/A

Recommended Action:

Approve the ordinance, waive the reading of the ordinance, and read the title only.

ATTACHMENTS:

1. Chap 22 SHOPPING CART ORDINANCE (1)(10.31.25)

ORDINANCE NO. 2025-__

AN ORDINANCE PERTAINING TO UTILITIES, AMENDING SECTIONS 22-4-1-410 AND 22-4-1-412 , BOTH IN DIVISION 22-4-1, ARTICLE 22-4, CHAPTER 22, LAWTON CITY CODE 2015 BY ADDING PROVISIONS FOR ABANDONED SHOPPING CARTS TO BE CONSIDERED BULK WASTE, CLARIFYING BULK WASTE TERMINOLOGY, AND SETTING FEES AS SUCH, PROVIDING FOR SEVERABILITY AND ESTABLISHING AN EFFECTIVE DATE.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LAWTON, OKLAHOMA:

SECTION 1. Section 22-4-1-410 is hereby amended in Chapter 22 of the Lawton City Code to read as follows:

22-4-1-410 - Bulky waste collection service.

A. Bulky waste collection services will be provided to one- and two-family residential utility account customers once monthly. Each of the collections shall be limited to a maximum volume of four (4) cubic yards. Length, width, and height values of bulky waste materials for the purpose of calculating volume shall be measured at the greatest dimension of the waste. Fees shall be assessed for any additional residential bulky waste set out beyond four (4) cubic yards up to a maximum of eight (8) cubic yards at the rates established in the fee schedule. Bulky waste volumes set out for collection in excess of eight (8) cubic yards significantly delay overall collection services and may not be collected on the regularly scheduled day but shall automatically be arranged to be collected at the City's convenience subject to the special collection ~~premium~~ bulky waste collection rate established in the fee schedule.

B. For special collection ~~premium~~ bulky waste collection fees as stated in the fee schedule, non-residential utility account customers, including multi-family accounts, may schedule bulky waste collection. One- and two- family residential utility account customers may also request bulky waste collection services at times other than the regularly scheduled collection date for this special collection ~~premium~~ fee.

C. Fees for special collection ~~premium~~ bulky waste collection services shall be charged to the monthly utility bill for the address of the property or property frontage containing the waste.

D. Specific waste materials eligible for collection as bulky waste are as identified in the Solid Waste Set Out Guide.

E. Any item identified in the solid waste set out guide as non-collectible waste may not be collected on the regularly scheduled day but shall automatically be arranged to be collected at the city's convenience subject to the special collection ~~premium~~ bulky waste collection rate established in the fee schedule.

F. All bulky waste items shall be set within ten (10) feet of the street curb or edge of pavement, in the street right-of-way, but outside of the street pavement, on the frontage of the property being

served, at least five (5) feet away from obstacles such as mailboxes, fences, water and gas meters, parked cars, power poles, guy wires, fire hydrants, and signs to allow for mechanized pickup. Items also shall not be placed under trees, power lines, or other overhead obstacles. The city assumes no responsibility to repair lawns or landscaping damaged by collection of bulky waste set out for collection. Placement of bulky waste materials at locations where obstructions impede the delivery of service may not be collected on the regularly scheduled day but shall automatically be arranged to be collected at the city's convenience subject to the special collection ~~premium~~ bulky waste collection rate established in the fee schedule. Determining whether bulky waste collection is impeded by obstacles will be made at the discretion of the waste management crew on site.

G. Bulky waste materials shall be placed at curbside not later than 7:00 A.M. on the day of and no sooner than three (3) days prior to the designated collection date. Placement of bulky waste materials at curbside other than during these specified times shall automatically result in a special collection ~~premium~~ bulky waste collection subject to additional charges as established in the fee schedule.

H. Abandoned shopping carts declared as a nuisance shall be considered bulky waste and collected and charged a fee, in accordance with the fee schedule.

SECTION 2. Severability. If any section, subsection, sentence, clause, phrase, or portion of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, said portion shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity of the remaining portion of this ordinance.

SECTION 3. Effective Date. The provisions of this ordinance shall become 30 days after its passage.

ADOPTED AND APPROVED BY THE COUNCIL OF THE CITY OF LAWTON, OKLAHOMA THIS ____ DAY OF ____, 2025.

STANLEY BOOKER, MAYOR

ATTEST:
(SEAL)

DONALYNN BLAZEK-SCHERLER, CITY CLERK

APPROVED as to form and legality this _____ day of _____ 2025.

TIMOTHY WILSON, INTERIM CITY ATTORNEY

ORDINANCE NO. 2025-__

AN ORDINANCE PERTAINING TO UTILITIES, AMENDING SECTIONS 22-4-1-410 AND 22-4-1-412 , BOTH IN DIVISION 22-4-1, ARTICLE 22-4, CHAPTER 22, LAWTON CITY CODE 2015 BY ADDING PROVISIONS FOR ABANDONED SHOPPING CARTS TO BE CONSIDERED BULK WASTE, CLARIFYING BULK WASTE TERMINOLOGY, AND SETTING FEES AS SUCH, PROVIDING FOR SEVERABILITY AND ESTABLISHING AN EFFECTIVE DATE.

BRIEF GIST

This ordinance updated the wording of “premium bulky waste” to match the fee working of “special collection” and includes provisions for a bulky waste fee for abandoned shopping carts.

ADOPTED and APPROVED by the City Council of Lawton, Oklahoma this
____ day of _____ 2025.

STANLEY BOOKER, MAYOR

ATTEST:

DONALYNN BLAZEK-SCHERLER, CITY CLERK

(Published in the Lawton Constitution this ____ day of _____, 2025.)

Item Title:

Consider approving an ordinance pertaining to Nuisance and Health, amending Divisions 15-1-101, 15-1-118, and 15-1-119, and creating Division 15-1-120, all in Article 15-1, Chapter 15, Lawton City Code 2015 by adding definitions, changing numbering, adding shopping cart provisions concerning unlawful possession, and requiring retailers to play an active role in the public nuisance of abandoned shopping carts within the city, providing for codification, providing for severability and establishing an effective date.

Initiator: Michael Watrous, Director, Stan Booker, Mayor

Information Source: Michael Watrous, Director

Background:

The attached ordinance amends multiple divisions within Article 15-1, Chapter 15 of the Lawton City Code to strengthen the City's ability to address the public nuisance of abandoned shopping carts. The amendment adds new definitions for "abandoned cart," "retailer," and "shopping cart," reorganizes existing code sections, and creates Division 15-1-120 to establish clear procedures and responsibilities for nuisance abatement.

The ordinance requires retailers to take an active role in preventing the abandonment of shopping carts by marking carts with the retailer's name, posting signage prohibiting cart removal, and promptly retrieving carts once notified by City staff. Failure to retrieve carts may result in the City classifying them as bulk waste under Chapter 22 and charging the associated removal fees.

These updates aim to reduce urban blight, improve public safety, and ensure that retailers share in the responsibility of maintaining clean and orderly public spaces throughout the community.

Correlation to the True North Statement:

Safe Community

Exhibit:

Ordinance 25-

Key Issues:

N/A

Funding Source:

N/A

Recommended Action:

Approve the ordinance, waive the reading of the ordinance, and read the title only.

ATTACHMENTS:

1. Chap 15 SHOPPING CART ORDINANCE (10.31.25)

ORDINANCE NO. 2025-__

AN ORDINANCE PERTAINING TO NUISANCE AND HEALTH, AMENDING DIVISIONS 15-1-101, 15-1-118, AND 15-1-119, AND CREATING DIVISION 15-1-120, ALL IN ARTICLE 15-1, CHAPTER 15, LAWTON CITY CODE 2015 BY ADDING DEFINITIONS, CHANGING NUMBERING, ADDING SHOPPING CART PROVISIONS CONCERNING UNLAWFUL POSSESSION, AND REQUIRING RETAILERS TO PLAY AN ACTIVE ROLE IN THE PUBLIC NUISANCE OF ABANDONED SHOPPING CARTS WITHIN THE CITY, PROVIDING FOR CODIFICATION, PROVIDING FOR SEVERABILITY AND ESTABLISHING AN EFFECTIVE DATE.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LAWTON, OKLAHOMA:

SECTION 1. Section 15-1-101 is hereby amended in Chapter 15 of the Lawton City Code to read as follows:

15-1-101 - Definitions.

A. As used in this chapter, the following terms shall have the meanings respectively ascribed to them herein. This section shall not apply to preexisting agricultural activities

1. "Abandoned Cart" means any shopping cart located off the premises of the retailer to whom it belongs, and not in the possession of the retailer's employee or authorized agent.

2. ~~1.~~ "Abandoned sign" - see definition in Section 18-9-1-902 of this code.

3. ~~2.~~ "Administrative officer" means the building official/code official of the city, as defined in Chapter 1 of this code, or his designee.

4. ~~3.~~ "Antique or classic vehicle" means any motor vehicle twenty-five (25) years of age or older, based upon the date of manufacture thereof, that is valued in excess of two thousand five hundred dollars (\$2,500.00) as established by the National Automobile Dealers Association Official Guide Average Retail Price of the vehicle and shall be in operable condition including but not limited to having a current registration.

5. ~~4.~~ "Blighting influence" means the maintaining of the exterior of a building or structure in a condition that, if not corrected, would or could cause surrounding buildings and structures to become likewise maintained leading to an overall deterioration of the surrounding area. Such a condition would include failing to remove, allowing to remain or permitting graffiti on the exterior of any building or structure.

6. ~~5.~~ "Cleaning" means the removal of trash or weeds, or both, from property.

7. ~~6.~~ "Dead tree limb" means any tree limb, branch or twig which is dead or in such an advanced state of disease that a reasonable question exists regarding the tree limb's ability to remain aloft and attached to the tree and which creates a safety hazard to persons or vehicles standing or passing beneath such limb.

8. ~~7.~~ "Dilapidated sign" - see definition in Section 18-9-1-902 of this code.

9. ~~8.~~ "Hearing officer" means the city manager or his designee.

~~10.-9.~~ "Junk " means every kind of previously used or secondhand rags, sacks, bottles, cans, paper, machinery, vehicles, vehicle parts, rubber goods, metal and all other similar articles of whatsoever nature or kind.

~~11.-10.~~ "Junk vehicle" means any vehicle, as defined herein, which is wrecked, dismantled, partially dismantled, inoperative, deteriorated, decayed, lacks parts or maintenance necessary for operation, abandoned, bearing no state registration or bearing a state registration that is more than three (3) months out of date, or having a value less than one thousand dollars (\$1,000.00) as established by the National Automobile Dealers Association Official Guide adjusted for the condition of the vehicle.

~~12.-11.~~ "Low hanging limb" means any limb, branch, twig, or tree foliage situated eight (8) feet or less above any sidewalk or fourteen (14) feet or less above any street, alley, public way or utility easement. Suspected low hanging limbs are herein defined are measured from a point on the low tree limb closest to the ground perpendicular to the public property or public way immediately below.

~~13.-12.~~ "Major overhaul" means repair of a vehicle when components are removed for overhaul or repair such as, but not limited to, the engine, transmission, rear end suspension assembly, or body components.

~~14.-13.~~ "Nuisance" means unlawfully doing an act, or omitting to perform a duty, which act or omission either:

- a. Unreasonably annoys, disturbs, injures or endangers the comfort, repose, health, peace, or safety of others; or
- b. Unlawfully interferes with, obstructs or tends to obstruct or render dangerous for passage, any lake or navigable river, stream, canal or basin, or any public park, square, street or other public property; or
- c. In any way renders other persons insecure in life or in the use of property, provided; or
- d. Offends decency.

~~This section shall not apply to preexisting agricultural activities~~

~~15.-14.~~ "Owner" or "property owner" means the owner of record as shown by the most current tax rolls of the county treasurer.

~~16.-15.~~ "Park or parking" means a temporary placement of a vehicle when not in use.

~~17.~~ "Premises" means the parcel of property owned, leased or operated by the retailer, including parking areas.

~~18.-16.~~ "Private property" means any real property which is not a public way or public property.

~~19.-17.~~ "Private nuisance" means any nuisance not otherwise meeting the criteria of a public nuisance.

~~20.-18.~~ "Public nuisance" means a nuisance which affects at the same time an entire community or neighborhood or any considerable number of persons, although the extent of the annoyance or damage inflicted upon the individuals may be unequal.

21.-19. "Public place" means any enclosed indoor area where individuals other than employees are invited or permitted. Private residences, homes, or apartments shall not be considered a public place.

22.-20. "Public property" or "public right-of-way" means that real property over which the state or any subdivision of the state exercises control and dominion or which the state or any subdivision of the state has beneficial interest.

23.-21. "Public way" means any sidewalk, street, alley, right-of-way or easement.

24. "Retailer" means any business that makes shopping carts available to customers.

25.-22. "Shopping Cart" means a basket or wheeled device provided by a retail establishment for customer use in transporting goods.

26.-22. "Sign" shall have all of the meanings for the various types of signs as defined in Section [18-9-1-902](#) of this code.

27.-23. "Smoking" means the carrying or possession by a person of a lighted cigar, cigarette, pipe or other lighted smoking device.

28.-24. "Store or storage" means the placement of a vehicle on private property in excess of seventy-two (72) hours.

29.-25. "Tattoo" means to insert pigment under the surface of the skin of a human being, by pricking with a needle or otherwise, so as to produce a permanent indelible mark or figure visible on the skin. Provided, however, that the provisions hereof shall not apply to any act performed by a licensed practitioner of the healing arts.

30.-26. "Trash" means any refuse, litter, ashes, leaves, broken, dead or detached limbs and branches, cut or uprooted vegetation, debris, paper, combustible materials, rubbish, offal, waste, junk or matter of any kind or form which is uncared for, discarded or abandoned.

31.-27. "Vehicle" means a device in, upon, or by which any person or property is or may be transported, except devices designed to be moved by human power or used exclusively upon stationary rails or tracks, the term shall include, but not be limited to, automobiles, buses, motorbikes, motorcycles, motor scooters, trucks, tractors, go-carts, boats, trailers, and campers.

32.-28. "Vehicle owner" means the most current title holder of a vehicle as recorded pursuant to applicable state recording statutes..

33.-29. "Weeds" includes all vegetation at any stage of maturity which:

a. Exceeds twelve (12) inches in height, except healthy trees, shrubs or produce for human consumption or vegetation in a tended and cultivated garden unless such vegetation by its density or location constitutes a detriment to the health, benefit and welfare of the public and interferes with the mowing of said weeds;

b. Regardless of height, harbors, conceals or invites deposits or accumulation of refuse or trash;

- c. Harbors rodents or vermin;
- d. Gives off unpleasant or noxious odors;
- e. Constitutes a fire or traffic hazard; or
- f. Is dead or diseased.

The term "weed" does not include tended crops on land zoned for agricultural use which are planted more than one hundred fifty (150) feet from a parcel zoned for other than agricultural use

SECTION 2. Division 15-1-118 is hereby amended in Chapter 15 of the Lawton City Code to read as follows:

15-1-118 – Abatement by suit in district court.

~~In cases where it is deemed impractical to summarily abate a nuisance, the city may bring suit in the district court.~~

15-1-118 – Shopping Carts

Abandoned shopping carts on public and private property constitute a public nuisance, create traffic and safety hazards, contribute to urban blight, and impose unnecessary costs upon the City. The purpose of this Article is to establish reasonable regulations for the identification, containment, and retrieval of shopping carts, to place responsibility on retailers to prevent abandonment, and to provide for cost recovery when the City is required to abate the nuisance.

1. Cart Removal

a. It is unlawful for any person to cause or permit any cart to be abandoned on or upon any sidewalk, street or other public area, or any private property, other than the premises of the owner of such cart.

b. It is unlawful for any person, either temporarily or permanently, to remove a cart from the premises of the owner of such cart, or to be in possession of a cart that has been removed from the premises of the owner of such cart, which is properly marked in conformity with this article, without the written consent of the owner or otherwise exempted by city code. This section shall not apply to carts removed from the premises, with the consent of the owner, for the purposes of repair, maintenance or disposal.

2. Retailer's Responsibility

a. All shopping carts shall be permanently marked with the retailer's name by the owning retailer.

b. Retailers shall post conspicuous signs at store exits notifying customers that removal of carts from the premises is unlawful.

c. Upon notification from city staff of the following information, retailers shall retrieve abandoned carts the next business day.

- The street address or other description of the location of the abandoned cart(s)
- The number of carts at that location
- The date and approximate time that the abandoned carts were found

Commented [MW1]: The first section is just reaffirming that cart theft is illegal. This is an attempt to be ahead of a State Law under consideration that specifically outlaws shopping cart theft ([Changes made to Oklahoma shopping cart theft bill, advances out of Senate committee](#))

Commented [MW2]: Carts need to be marked or we wont know who to contact

Commented [MW3]: Have 96 hours to help with areas such as during holidays. Other city codes have it as 72 hours.

Commented [MZ4]: Updated this section from 96 hours to "the next business day"

d. If not collected by the next business day, the City shall consider the abandoned shopping carts a bulk waste nuisance as defined in Chapter 22, and charged accordingly for the collection thereof.

e. Notice of impoundment shall be provided to the retailer within 5 business days.

f. Impounded carts shall be held for 30 days, after which the shopping carts may be disposed of in a manner decided by the City Manager.

g. Violations. Each violation of this section shall constitute a public nuisance and a separate violation of this Code. Each violation shall be punishable as provided in Section 1-1-119 of this Code.

SECTION 3. Division 15-1-119 is hereby amended in Chapter 15 of the Lawton City Code to read as follows:

15-1-119—Procedure cumulative.

~~The procedures for abating nuisance prescribed by this chapter and by other provisions of law and ordinance shall be cumulative one to the other. The city may elect to follow any such procedure which is applicable in abating any particular nuisance.~~

15-1-119 - Abatement by suit in district court.

In cases where it is deemed impractical to summarily abate a nuisance, the city may bring suit in the district court.

SECTION 4. Division 15-1-120 is hereby created in Chapter 15 of the Lawton City Code to read as follows:

15-1-120 - Procedure cumulative.

The procedures for abating nuisance prescribed by this chapter and by other provisions of law and ordinance shall be cumulative one to the other. The city may elect to follow any such procedure which is applicable in abating any particular nuisance.

SECTION 5. Codification. Division 15-1-120 shall be codified in Article 15-1, Chapter 15, Lawton City Code, 2015.

SECTION 6. Severability. If any section, subsection, sentence, clause, phrase, or portion of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, said portion shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity of the remaining portion of this ordinance.

SECTION 7. Effective Date. The provisions of this ordinance shall become 30 days after its passage.

ADOPTED AND APPROVED BY THE COUNCIL OF THE CITY OF LAWTON,
OKLAHOMA THIS ____ DAY OF ____, 2025.

Commented [MZ5]: Section now matches the penalty provision from the panhandling ordinance for the shopping cart ordinance.

STANLEY BOOKER, MAYOR

ATTEST:
(SEAL)

DONALYNN BLAZEK-SCHERLER, CITY CLERK

APPROVED as to form and legality this _____ day of _____ 2025.

TIMOTHY WILSON, INTERIM CITY ATTORNEY

ORDINANCE NO. 2025-__

AN ORDINANCE PERTAINING TO NUISANCE AND HEALTH, AMENDING DIVISIONS 15-1-101, 15-1-118, AND 15-1-119, AND CREATING DIVISION 15-1-120, ALL IN ARTICLE 15-1, CHAPTER 15, LAWTON CITY CODE 2015 BY ADDING DEFINITIONS, CHANGING NUMBERING, ADDING SHOPPING CART PROVISIONS CONCERNING UNLAWFUL POSSESSION, AND REQUIRING RETAILERS TO PLAY AN ACTIVE ROLE IN THE PUBLIC NUISANCE OF ABANDONED SHOPPING CARTS WITHIN THE CITY, PROVIDING FOR CODIFICATION, PROVIDING FOR SEVERABILITY AND ESTABLISHING AN EFFECTIVE DATE.

BRIEF GIST

This ordinance reaffirms that the theft of shopping carts is illegal, but also that retail establishments also have a role in the shopping cart nuisance throughout the city and establishes minimum requirements on such establishments to define their role.

ADOPTED and APPROVED by the City Council of Lawton, Oklahoma this ____ day of ____ 2025.

STANLEY BOOKER, MAYOR

ATTEST:

DONALYNN BLAZEK-SCHERLER, CITY CLERK

(Published in the Lawton Constitution this ____ day of _____, 2025.)

Item Title:

Pursuant to Section 307B.3, Title 25, Oklahoma Statutes, consider convening in executive session to discuss the potential purchase of real property, and if necessary, take appropriate action in open session.

Initiator: Michael Watrous, Director

Information Source: Michael Watrous, Director

Background:

The property listed has been identified as being required for project PW2101. The property is located along South Railroad Street, east of the current landfill. The land purchase was authorized in the 2016 CIP and all later CIP extensions.

Correlation to the True North Statement:

Safety, Efficiency, Citizen

Exhibit:

Location Map, CIP Resolution of Intent

Key Issues:

Direction is needed to begin the process of acquiring the property, if that is the will of City Council.

Funding Source:

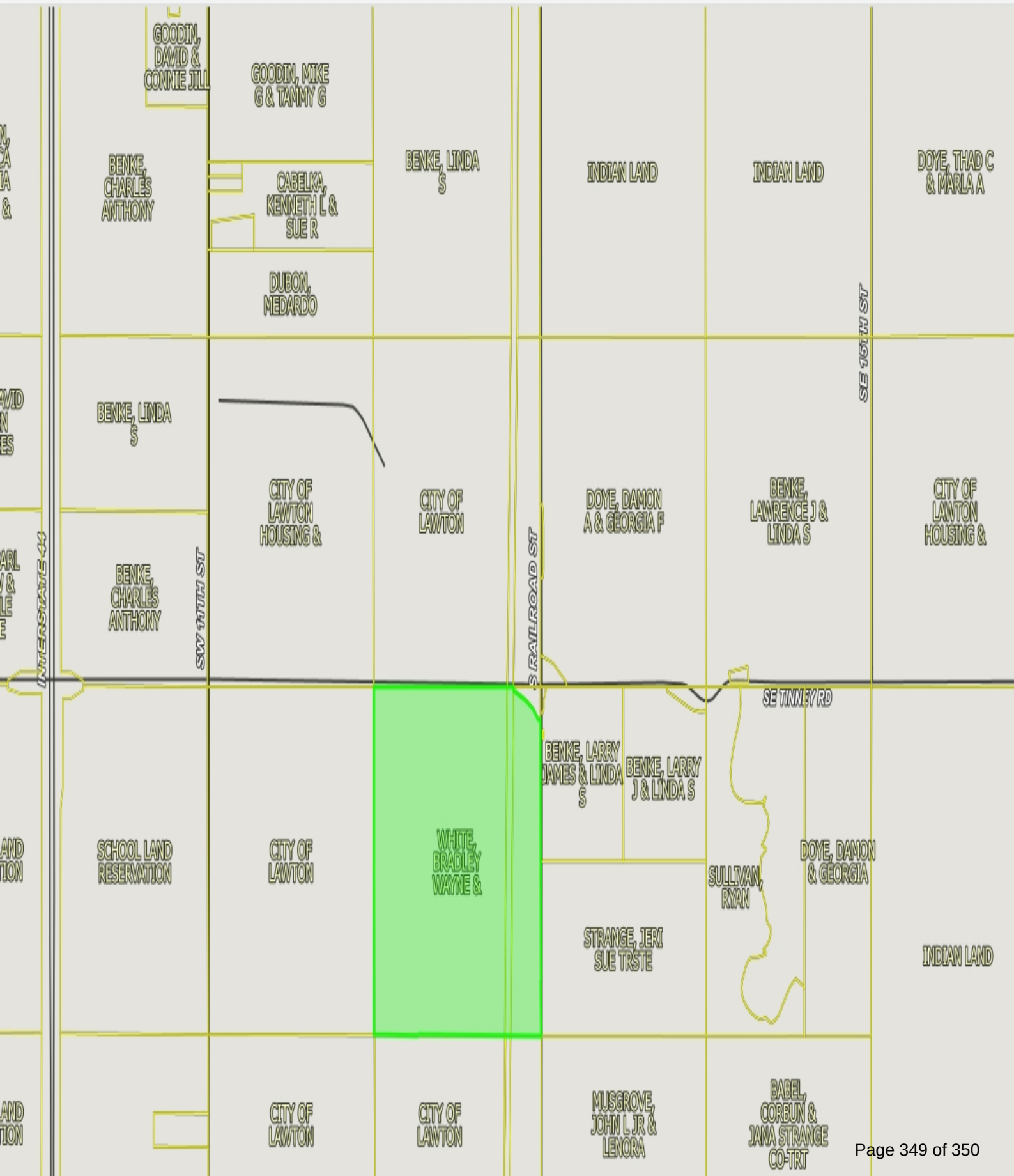
Project PW2101 Funds, available budget \$3,546,713.09

Recommended Action:

Authorize staff to make an offer and begin negotiations for the purchase of the property identified.

ATTACHMENTS:

1. Interested Parcel



Item Title:

Pursuant to Section 307B.4, Title 25, Oklahoma Statutes, consider convening in executive session to discuss the pending action in the Court of Civil Appeals titled Julie Magness v. City of Lawton, Case No. 123509 and, if necessary, take appropriate action in open session.

Initiator: Timothy Wilson, Interim City Attorney

Information Source: Timothy Wilson, Interim City Attorney

Background:

The Interim City Attorney and Deputy City Attorney desire to discuss with the Mayor and Council the pending action in the Court of Civil Appeals titled Julie Magness v. City of Lawton, Case No. 123509, and, if necessary, take appropriate action in open session. The Interim City Attorney advises the City Council that the Council should determine that disclosure of confidential communication regarding the above-referenced action will seriously impair the ability of the City Attorney to protect the City's interests, and from that determination, the Council should convene in executive session to discuss this matter.

Correlation to the True North Statement:**Exhibit:**

N/A

Key Issues:

N/A

Funding Source:**Recommended Action:**

Convene in executive session to discuss the pending action in the Court of Civil Appeals titled Julie Magness v. City of Lawton, Case No. 123509 and, if necessary, take appropriate action in open session.

ATTACHMENTS:

None