OAKCREEK WISCONSIN

Meeting Date: June 24, 2025

Item No.: 5

PLAN COMMISSION REPORT

Proposal:	Site Plan and Architectural Review – City of Oak Creek Water Treatment Facility
Description:	Site, building, and related plan review for site modifications at the City of Oak Creek Water Treatment Facility.
Applicant(s):	Brian Johnston, Oak Creek Water & Sewer Utility
Address(es):	9325 S. 5th Avenue (4th Aldermanic District)
Suggested Motion:	That the Plan Commission approves the site and architectural plans for site modifications and a building addition at the City of Oak Creek Water Treatment Facility located at 9325 S. 5th Ave.

Owner(s):	City of Oak Creek		
Tax Key(s):	869-9995-005		
Lot Size(s):	14.37 acres		
Current Zoning District(s):	I-1, Institutional		
Overlay District(s):	CU		
Wetlands:	☒ Yes ☐ No	Floodplain:	☐ Yes ☒ No
Comprehensive Plan:	Public/Semi-Public		

Background: The Applicant is seeking Plan Commission approval for site, architectural, and related plans to construct a 6,776-square-foot pump station building and a 5,544-square-foot chlorine contact tank at the Oak Creek Water Treatment Facility, located at 9325 S. 5th Ave. This request is partly driven by the need to address deficiencies in the existing chlorine contact tank, which the Wisconsin Department of Natural Resources (WDNR) has identified as not meeting current code requirements and in need of compliance.

Both the proposed pump station and chlorine contact tank will be single-story structures, connected by a four-foot-wide enclosed corridor to create a unified architectural appearance and allow the buildings to operate as a single facility. In addition to the new construction, the proposal includes expanding the existing parking lot, relocating one (1) of the three (3) current access drives, and modifying on-site fencing.

These improvements will increase the impervious surface area on the site by approximately 21,154 square feet.

District Specific Standards, Use Specific Standards, & Land Use: The proposed plans comply with the intent, standards, and requirements of the City's Zoning Ordinance, including the bulk and dimensional standards of the I-1 Institutional District, as well as the conditions outlined in the Conditional Use Permit (CUP) approved by the Common Council on January 20, 2015 (Ordinance 2748), covering setbacks, lot coverage, and building height. Furthermore, the proposed land use aligns with the City's Comprehensive Plan.

Design: The proposed building is proportionate to neighboring structures and features a four-sided architectural design, incorporating both horizontal and vertical banding to create visual continuity with existing buildings. The pump station will have a brick façade that matches the existing water plant structures, while the chlorine tank building will be finished with a cementitious coating and cast stone in complementary colors to harmonize with the new pump station. The proposed design complies with all applicable Municipal Code requirements.

The site plan also includes fencing improvements to enhance both security and aesthetics. Approximately 80 linear feet of existing chain-link fencing along the northern property line and adjacent to the north parking lot will be removed and replaced with an eight (8) -foot-tall decorative security fence. Additionally, about 800 linear feet of new decorative security fencing will be installed along the northeast portion of the site, connecting to the northeast corner of the existing water treatment plant to fully enclose the new facilities. A decorative security gate will be added at the new driveway to provide controlled access for ingress and egress.

Screening: The proposed plan includes ground-mounted mechanical equipment. These mechanical units are not visible from any public right-of-way or adjacent residential properties, so screening is not required. Additionally, no new dumpsters are proposed for the site.

Parking: The current site includes two parking areas. The first lot, located south and behind the existing filters building, contains five (5) visitor spaces, one (1) handicap space, nine (9) employee parking spaces, and four (4) spaces designated for utility vehicles. The second lot, on the north side of the site, currently has eight (8) angled parking spaces. As part of the proposed improvements, this lot will be rehabilitated and expanded to provide 11 straight parking spaces.

The facility's maximum staffing during a shift is expected to be 10 employees, including one (1) plant manager, one (1) on-shift operator, three (3) maintenance staff, three (3) operators on the opposite shift, one (1) custodian, and one (1) summer intern. Visitor traffic is minimal and generally limited to occasional consultants or sales representatives.

Given the low visitor frequency and current employee numbers, the existing and proposed parking supply is expected to adequately meet the operational needs of the facility.

Lighting: Lighting plans and fixture cut sheets have been submitted for review. The applicant proposes installing three (3) wall-mounted light fixtures on the east façade of the new buildings. Additionally, nine (9) new pole-mounted fixtures are planned along the access driveway. These poles will be 15 feet tall and will match the existing light poles on site in both style and appearance.

In accordance with City Code requirements, all fixtures will have a color temperature of 5,000 Kelvins or lower and will be full cutoff, ensuring that the light source is fully shielded and directed downward. The proposed lighting design complies with these standards, providing safe and effective site illumination while minimizing glare and light spill onto adjacent properties.

Engineering and Utility: City Engineering and Utility Departments have no concerns. The applicant must comply with all applicable regulations and requirements.

Access: Access to the property is currently provided by three driveways along S. 5th Avenue. The submitted plans propose removing the northernmost existing asphalt access drive and replacing it with a new 24-foot-wide asphalt driveway, to be located slightly north of the one being removed. This new driveway will be gated and will provide direct access to the expanded parking area, the new pump station building, and the new chlorine contact tank.

Signage: No new or additional signage is being proposed as part of this review. Any future signs must comply with the Municipal Code, and the owner or tenant will need to apply for the necessary permits before installing any additional signs on the property.

Environmental: The site does contain wetlands located in the far southern portion of the property. These wetlands will not be impacted by the proposed. No additional environmentally sensitive areas, such as floodplains or environmental corridors, are present on the site.

While the construction of the proposed building will result in a reduction of the site's green space, the overall amount of green space will remain well above the minimum 30 percent required by code.

Landscaping: In accordance with the Conditional Use Permit (CUP) approved for the site in January 2015, landscaping is required to screen parking areas and structures from casual view as seen from public rights-of-way and adjacent residential zoning districts. The landscape plan submitted with the current proposal meets these requirements, effectively screening parking areas and structures from view along public rights-of-way, consistent with the intent of the CUP.

A tree preservation and removal plan has also been submitted. The proposed development will require the removal of 11 existing trees, each with a diameter greater than 12 inches at breast height and currently classified as being in good condition. To satisfy tree replacement requirements, the applicant proposes planting 34 new trees throughout the site, as outlined in the submitted landscape plan.

Fire Department: The Fire Department indicated no concerns. The Applicant must comply with all regulations and requirements of the City of Oak Creek Fire Department.

Review/Options/Alternatives: The Plan Commission has the discretion to either approve the plans as presented, approve them with specified conditions, or disapprove the proposal. In reviewing the request, the Commission will evaluate it in light of the City's Zoning Ordinance and any other relevant information.

The Plan Commission may only approve or approve with conditions if it is satisfied that the proposed project complies with all applicable provisions of the City's Zoning Ordinance, as well as with all adopted plans and policy documents. Any approval with conditions must specify the necessary actions to bring the application into compliance with the City's Zoning Ordinance and its adopted plans and policy documents.

The Plan Commission has the authority to modify any of the site plan review criteria outlined in Sec. 17.0804(g)(3)(a-j) of the City's Zoning Ordinance. However, such modifications require a 3/4 majority vote of the Commissioners present at the meeting and must include supplemental design elements or improvements to compensate for any modifications to the specific standards.

If the request is not approved, the Plan Commissioners are required to provide the relevant Code Sections upon which the denial is based. This will allow the applicant to revise and resubmit the proposal accordingly.

Respectfully submitted & approved by:

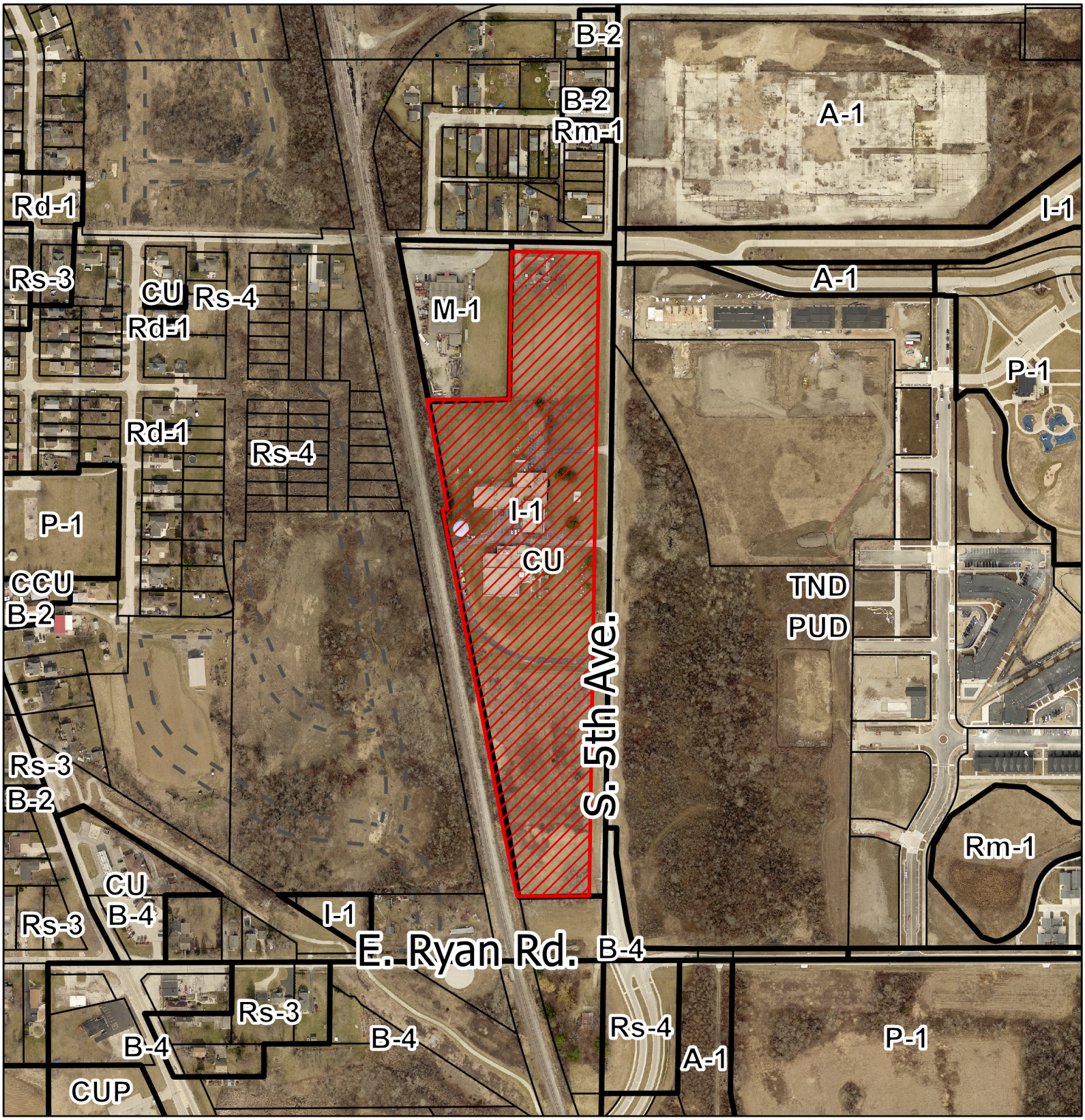
Kristi Laine
Community Development Director

Prepared by:

Todd Roehl
Senior Planner

Attachments:
Location Map
Narrative (6 pages)
Civil Plans (8 pages)
Landscape Plan (5 pages)
Architectural Plans (4 pages)
Lighting Plan (1 page)

Location Map
9325 S. 5th Ave.



This map is not a survey of the actual boundary of the property this map depicts

OAKCREEK
WISCONSIN
Community Development

0 0.07 0.13 Miles

N

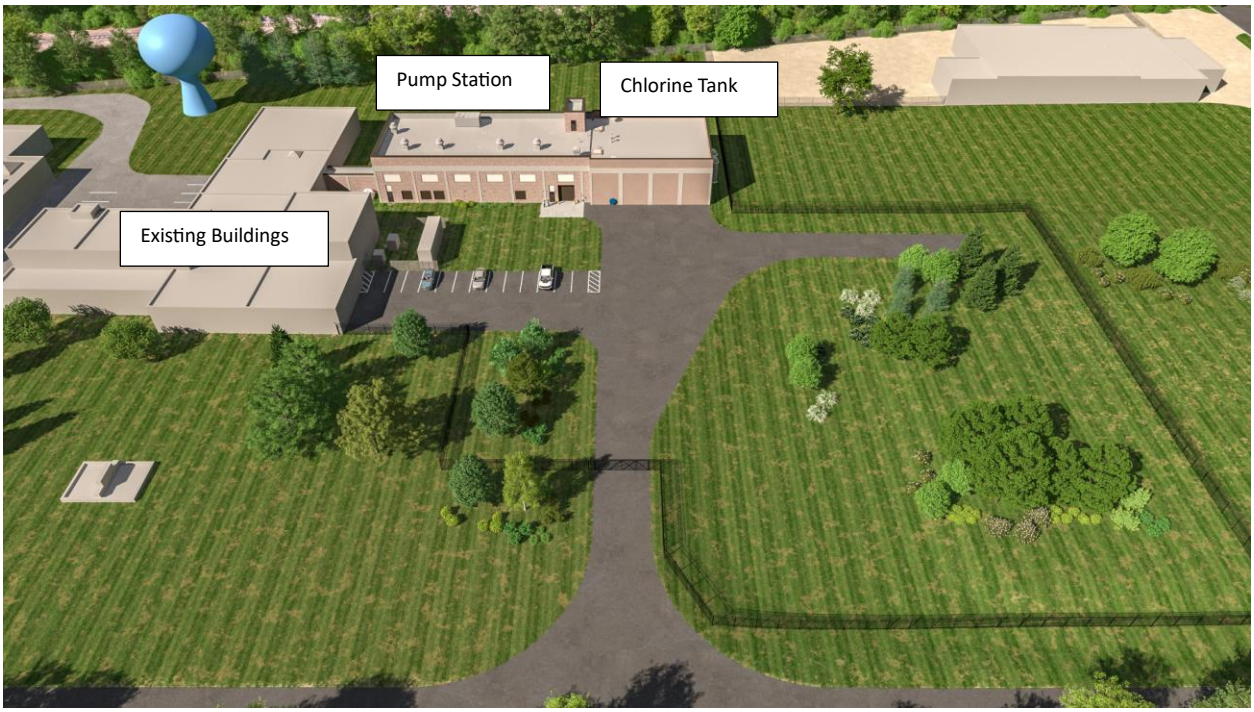
Legend

- Zoning
- Official Street Map
- Parcels
- FloodFringe2024
- Floodway2024
- 9325 S. 5th Ave.

Oak Creek Water and Sewer Utility

Underground Facilities Rehabilitation Project – General Description

The Underground Facilities Rehabilitation project consists of adding a new 6,776 square foot pump station building housing two pump stations and an ultraviolet light disinfection system. The new pump station building is located on the north side (to the right in figure below) of the existing water plant filter building, and connected to the existing building with a walkway. Directly to the north of the new pump station building is a 5,544 square foot chlorine contact tank. The new pump station building and chlorine contact tank are connected by a four foot wide corridor so the entire structure looks like one building.



The walkway and new pump station building have a brick façade matching the existing water plant buildings. The chlorine contact tank has a cementitious coating and cast stone with similar colors to compliment the new pump station building.

The existing north access road and security gate to the water plant will be demolished and replaced with a new access road and security gate to the north. The new access road will extend west off of 5th Avenue and connect to the new pump station building and chlorine contact tank. A portion of the new access road will extend north to provide space for chemical delivery trucks.

The existing parking lot on the north side will be rehabilitated. The existing 8 angled parking spots will be replaced with 11 straight parking spots. Changes in impervious surface (paving) are summarized below.

- Demolished: 3,365 sf
- Replaced: 5,164 sf
- Additional: 21,154 sf
- Total: 26,318 sf

Approximately 80 feet of existing chain link security fence on the north property line and existing north parking lot will be replaced with new decorative security fence. An additional 800 feet of new decorative security fence will be added on the northeast side of the site and connect to the northeast corner of the existing water plant to enclose the new facilities.

Landscaping and plantings are added around the new facilities and in the northeast portion of the property for a pleasing appearance. This encompasses about 130,000 square feet of green space land.

22118 Underground Facilities Rehabilitation Project Narrative

The project is necessary to address requirements identified in a Wisconsin Department of Natural Resources (DNR) Sanitary Survey. The existing Chlorine Contact (CT) Tank and Pump Station wet well are non-compliant with Wisconsin Administrative Code Chapter NR 811 because they are located below the groundwater table. This poses a risk of groundwater infiltrating the drinking water system, which the DNR considers a potential significant public health hazard. In addition, the CT tank and associated piping represent single points of failure in the system. The CT tank cannot be taken out of service for required DNR inspections, further compromising the system's safety and reliability. The DNR code violations are summarized in this table.

Underground Facility	Nonconforming Feature	Wisconsin Administrative Code Section
CT Tank	The tank floor is below groundwater. The floor must be at least 2 feet above groundwater.	NR 811.63 (4) NR 811.65 (3)
	Tank cannot be taken out of service for required drain-down inspections because it is a single tank and must always be in service to meet disinfection requirements.	NR 810.14 NR 811.64 (6b)
	A single tank does not meet the reliability and redundancy requirements for critical treatment processes. All critical treatment processes shall be provided with redundancy.	NR 811.42 (3)
	The tank roof is below the ground surface. The roof must be at least 2 feet above the ground surface.	NR 811. 63 (6)
	The tank roof is covered by the ground and does not have a flexible membrane covering, sloped to the sides for drainage.	NR 811.64.10 (e)
	Tank does not have an overflow. Drinking-water storage tanks are required to have an overflow.	NR 811.64 (4)
	The area around the tank is not graded to prevent standing water within 50 feet of the tank.	NR 811. 63 (2)
Pipes out of the CT tank (High Lift Pump Station suction pipes)	The water-pressure head in the pipes is lower than the ground surface elevation. Drinking-water pipes must have a water-pressure head higher than ground surface elevation.	NR 811.64 (5a) NR 811.37
High Lift Pump Station Clearwell	Clearwell floor is below groundwater. The floor must be at least 2 feet above groundwater.	NR 811.63 (4) NR 811.65 (3)

Project Drivers and Scope

This project is driven by four main objectives:

1. Protection of Public Health and Regulatory Compliance

- Eliminating drinking water tanks located below the groundwater table reduces the risk of contamination and ensures compliance with DNR regulations.
- Incorporating ultraviolet (UV) disinfection in conjunction with chlorine provides multiple barriers against pathogens, significantly enhancing public health protection.

2. Improved Public Service Reliability

- The existing chlorine contact (CT) tank and associated piping present single points of failure that are non-compliant with DNR regulations and could disrupt water service for over 70,000 people. The new CT tank and piping eliminate these vulnerabilities, increasing system reliability and preventing costly plant shutdowns for repairs or inspections.
- Many of the high-lift pumps and major electrical components at the water treatment plant are over 50 years old, past their expected service life, and no longer compliant with safety codes. Replacement parts are difficult or impossible to find.
- This project will replace aging pumps and electrical systems with modern, reliable, and safer equipment that offers longer service life and readily available components.

3. Enhanced Operations and Maintenance

- The new high-lift pumping system will consolidate and replace older pumps with fewer, more energy-efficient models requiring less maintenance.
- New electrical equipment will replace outdated systems, improving efficiency, safety, and ease of maintenance.
- The aboveground CT tank will have fewer maintenance issues compared to the existing underground tank. It will also allow for required inspections and maintenance to be performed without compromising system integrity.
- The addition of UV disinfection allows for a smaller CT tank and provides greater operational flexibility to meet disinfection requirements under varying conditions.
- While the new UV facility and intermediate pump station introduce new equipment, they are designed for easier operation and maintenance.

4. Enhanced Customer Service and Satisfaction

- This project reinforces the City's commitment to customer satisfaction by improving the chlorine disinfection process through a baffled CT tank and the addition of UV treatment.
- Upgraded pumps and electrical infrastructure increase the reliability of water service delivery.
- By maintaining regulatory compliance, improving reliability, and upgrading infrastructure, the Utility can continue providing water at reasonable rates while reinforcing public confidence in the system.

Project Scope

The project consists of the following major components:

1. **Construction of a New Building ("Pump Station") and Walkway**, which will house:
    - **Intermediate Pumps**: 4 pumps rated at 6.13 MGD each (3 duty, 1 standby) for a firm capacity of 18.4 MGD, equipped with variable speed drives.
    - **High-Lift Pumps**: 4 pumps rated at 6.13 MGD each (3 duty, 1 standby) for a firm capacity of 18.4 MGD, with variable speed drives.
    - **Backwash Pump**: 1 pump rated at 10 MGD with a variable speed drive.
    - **UV Disinfection Facility**: 2 UV reactors rated at 18.4 MGD each (1 duty, 1 standby) for a firm capacity of 18.4 MGD.
    - **Fluoride Feed Facility**: Includes one storage tank, one day tank, and two metering pumps (1 duty, 1 standby).
    - **Electrical Room**: Houses key systems for safe and reliable operations.
2. **Flow Monitoring Enhancements**
    - Two new flowmeters will be installed on the high-lift discharge lines to measure total water pumped into the system.
    - Existing flowmeters for plant use, backwash supply, and surface wash water will remain in use.
3. **Decommissioning and Replacement**
    - Decommissioning the outdated fluoride system that poses safety risks and does not comply with DNR code.
    - Demolition of six existing high-lift pumps (firm capacity of 22.5 MGD) and one 10 MGD backwash pump.
    - Removal of old electrical equipment from the high-lift pump station.
    - Decommissioning of the existing 1.3 MG underground CT tank (to remain in place but disconnected).
4. **New Aboveground CT Tank**
    - Construction of a new 0.7 MG cast-in-place concrete CT tank consisting of two interconnected compartments.
5. **Electrical System Upgrade**
    - New switchgear, motor control centers, and transformers will be installed in the existing high-lift pump station, reducing the need for new building construction.

- One existing 2.4kV generator will be modified to operate at 480V, with no increase in capacity, resulting in cost savings and use of more readily available equipment.

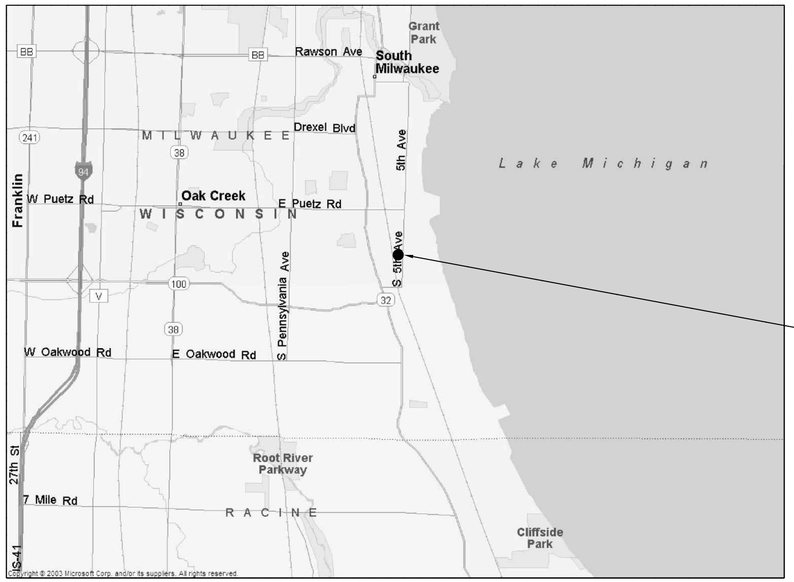
6. **Site Work and Infrastructure**
    - Installation of yard piping to connect the new pump station to the existing Filter Building and high-service line.
    - Excavation, earth retention, stormwater facility installation, access road improvements, and landscaping.
    - New instrumentation and controls for all new equipment.
    - Security upgrades, including fencing and surveillance, for the new facilities.

OAK CREEK WATER AND SEWER UTILITY

UNDERGROUND FACILITIES REHABILITATION

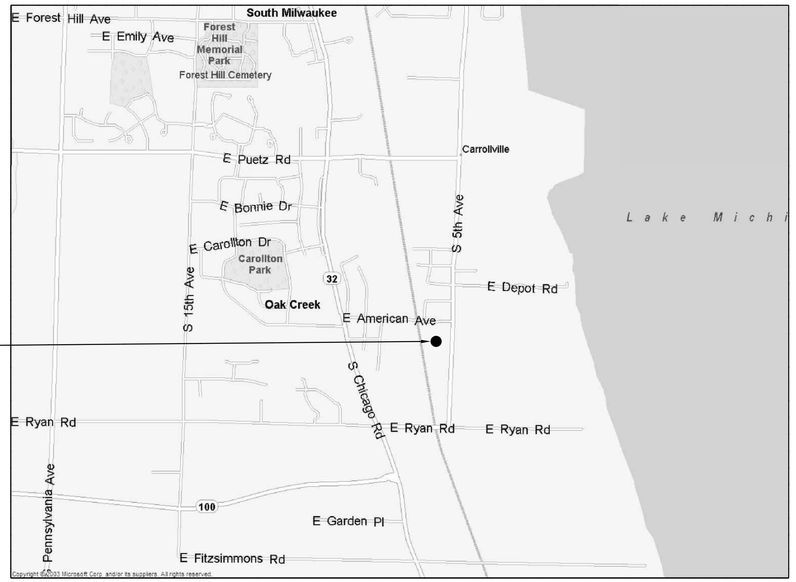
CITY OF OAK CREEK, WISCONSIN

PROJECT NUMBER: 22118



VICINITY MAP
NTS

PROJECT LOCATION



LOCATION MAP
NTS

NO.	DATE	REVISION	BY	APVD
DSGN	J WICKS	DR F JAGLA	CHK J WICKS	APVD J WICKS

Jacobs

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

GENERAL
COVER SHEET, VICINITY AND LOCATION MAPS

AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
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DATE	MARCH 2025
PROJ	C9X43300
DWG	01-G-0001
SHEET	1 of 157

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149	95-ES-2022	PUMP STATION INTERMEDIATE LEVEL PLAN
150	95-ES-2023	PUMP STATION GROUND LEVEL PLAN
151	95-ES-2024	PUMP STATION ROOF PLAN
152	95-ES-2031	PRETREATMENT FACILITY PARTIAL FIRST FLOOR PLAN
153	95-ES-2032	PRETREATMENT FACILITY PARTIAL FIRST FLOOR PLAN
154	95-ES-2042	CT TANK ROOF PLAN
155	95-ES-2051	ELEVATED BACKWASH TANK PLAN
156	95-ES-2081	LOW LIFT PUMP STATION PARTIAL SITE PLAN
157	95-ES-2082	LOW LIFT PUMP STATION FIRST FLOOR PLAN

NO.	DATE	DR	REVISION	CHK	BY	APVD
DSGN	J WICKS	F JAGLA		J WICKS	J WICKS	J WICKS

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

Jacobs

GENERAL

INDEX OF DRAWINGS

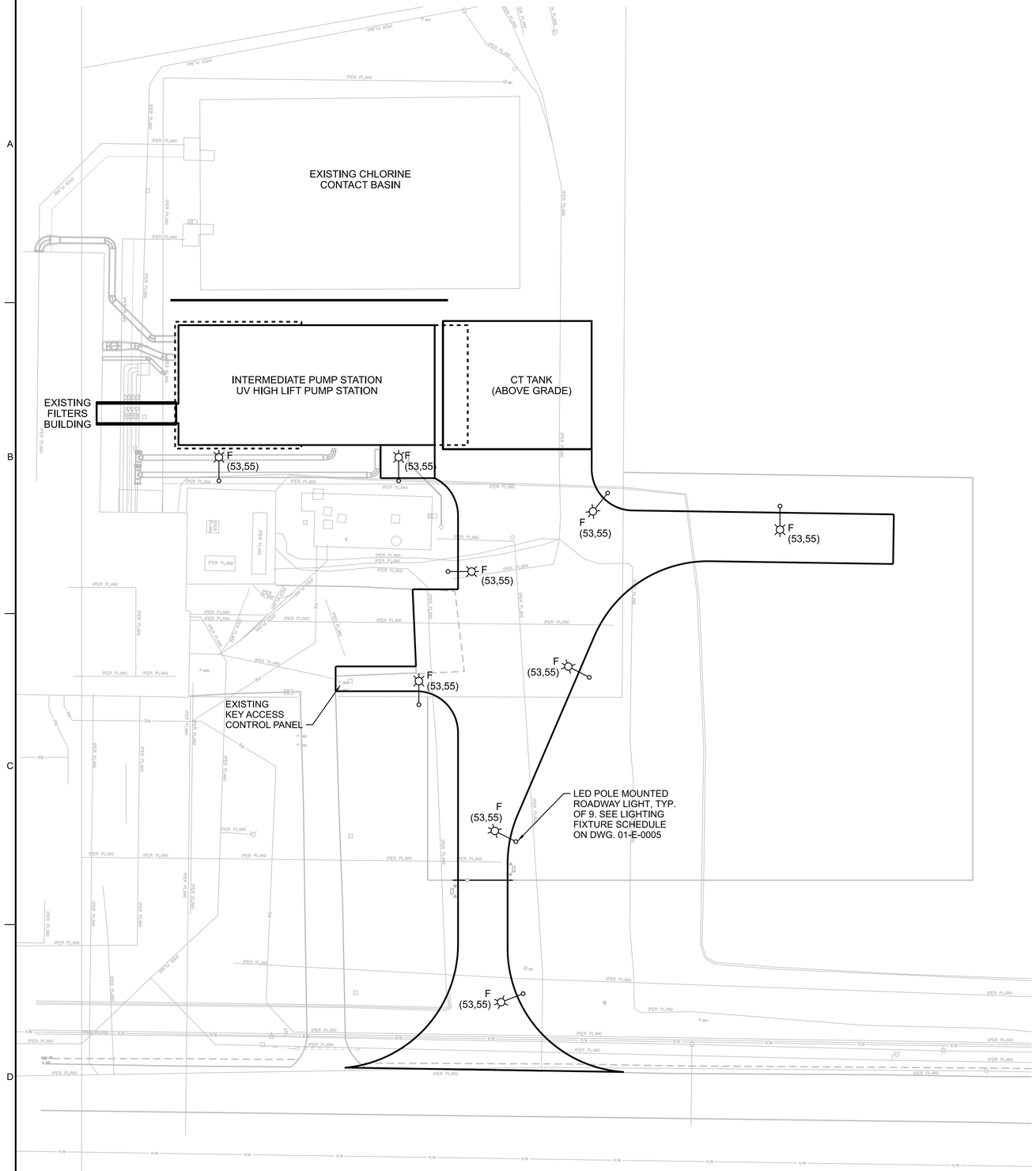
AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MARCH 2025
PROJ	C9X43300
DWG	01-G-0002
SHEET	2 of 157

90%

GENERAL NOTES

1. PROVIDE NEW PHOTOCELL AND TIME CLOCK FOR ROADWAY LIGHTING. SEE ELECTRICAL PLANS FOR LOCATION OF DEVICES.



LIGHTING SITE PLAN

NTS

N

NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD
DSGN	R WOOD		J MARTINEZ	J LANDMAN			J WICKS

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

Jacobs

SITE ELECTRICAL

LIGHTING SITE PLAN

AS NOTED

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MARCH 2025
PROJ	C9X43300
DWG	05-E-2011
SHEET	38 of 157

90%

SURVEY LEGEND

- MANHOLE
- INLET
- CATCH BASIN
- FIRE HYDRANT
- WATER VALVE
- POWER POLE
- LIGHT POLE
- GUY WIRE
- CONTROL BOX
- GUARD POST
- VENT PIPE
- SOIL BORING
- SIGN
- DECIDUOUS TREE
- CONIFEROUS TREE
- BUSH
- MAIL BOX

- SANITARY SEWER
- STORM WATER
- WATER MAIN
- RAW WATER
- BURIED NATURAL GAS
- BURIED FIBER OPTIC
- BURIED ELECTRIC
- OVERHEAD ELECTRIC
- CHAIN LINK FENCE
- PROPERTY LINE
- RIGHT OF WAY LINE

CONTROL POINTS DATA

B.M. #1 - NORTHWEST BOLT ON FIRE HYDRANT ON THE SOUTH SIDE OF THE NORTH ENTRANCE TO THE WATER UTILITY SITE.
ELEVATION = 98.99

B.M. #2 - CHISELED SQUARE ON THE NORTH SIDE OF ROUND CONCRETE STRUCTURE 23'+/- WEST OF PARKING LOT AND 90'+/- NORTH OF BUILDING.
ELEVATION = 96.97

B.M. #3 - RAILROAD SPIKE IN SOUTH FACE OF POWER POLE #58-4818 IN FRONT OF HOUSE #3928 AMERICAN AVE.
ELEVATION = 101.21

DEMOLITION AND EROSION CONTROL LEGEND

- -REMOVE ASPHALT PAVEMENT
- -MILL AND OVERLAY
- -REMOVE GRAVEL PAVEMENT
- -SAWCUT
- -REMOVE FENCE
- -REMOVE UTILITY
- -REMOVE TREE/BOLLARD
- -REMOVE UTILITY STRUCTURE
- -REMOVE SITE LIGHT (SEE ELECTRICAL PLANS)
- -STONE CONSTRUCTION ENTRANCE (SCE)
- -EROSION MATTING
- -SILT FENCE (SF)
- -RIP-RAP
- -INLET PROTECTION (S)
- -EROSION BALES
- -TREE PROTECTION

LAYOUT LEGEND

- -DECORATIVE FENCE
- -BOLLARD
- -ASPHALT PAVEMENT
- -MILL AND OVERLAY
- -CONCRETE PAVEMENT
- -TURF RESTORATION

GRADING & UTILITY LEGEND

- -EXISTING CONTOUR (100)
- -PROPOSED CONTOUR (100)
- -SPOT ELEVATION (100.00) -MATCH EXISTING (ME±)
- -TOP OF CURB GRADE (100.50) - FLANGE GRADE (100.00)
- - MANHOLE
- - PROPOSED STORM SEWER

NO.	DATE	REVISION	BY	APVD
DSGN	B.FROEHLICH	DR S.KURTZ	CHK J.LISAK	APVD J.LISAK

Jacobs

GRAEF

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

GENERAL

CIVIL LEGEND 1

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MAY 2025
PROJ	C9X43300
DWG	05-G-2001
SHEET	of

100% (PERMITTING)

GENERAL NOTES

1. THE BASE SURVEY WAS PREPARED BY GRAEF IN 2014. ALL UNDERGROUND UTILITIES AND STRUCTURES HAVE BEEN SHOWN TO A REASONABLE DEGREE OF ACCURACY AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THEIR EXACT LOCATION AND TO AVOID DAMAGE THERETO.
2. REFER TO SHEET 05-G-2001 FOR BENCHMARKS, DATUM, AND TOPOGRAPHIC ELEMENTS.
3. CONTRACTOR SHALL VERIFY LOCATION OF WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCING WORK.
4. THE PROJECT SITE IS A MUNICIPAL WATER UTILITY PROPERTY AND IS TO BE SECURE AT ALL TIMES.

SURVEY NOTES

1. COORDINATES ARE BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1927, US SURVEY FOOT, GROUND. TO OBTAIN GRID COORDINATES MULTIPLY GROUND COORDINATES BY THE COMBINATION FACTOR 0.99993899.
   VERTICAL CONTROL IS IN THE NATIONAL GEODETIC VERTICAL DATUM OF 1929, REDUCED TO THE CITY OF OAK CREEK DATUM BY SUBTRACTING 580.60.
2. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
3. IN ACCORDANCE WITH WISCONSIN STATUTE 182.0175, DAMAGE TO TRANSMISSION FACILITIES, EXCAVATOR SHALL BE SOLELY RESPONSIBLE TO PROVIDE ADVANCE NOTICE TO THE DESIGNATED "ONE CALL SYSTEM" NOT LESS THAN THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION REQUIRED TO PERFORM WORK CONTAINED ON THIS DRAWING, AND FURTHER, EXCAVATOR SHALL COMPLY WITH ALL OTHER REQUIREMENTS OF THIS STATUTE RELATIVE TO EXCAVATOR'S WORK.
4. RIGHT-OF-WAY ALONG THE WEST SIDE OF SOUTH 5TH STREET AND SOUTH SIDE OF EAST AMERICAN AVENUE HAS BEEN ADJUSTED FOR FUTURE ACQUISITION.

REMOVAL NOTES

1. EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AND DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORK.
2. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY LINES NOTED FOR ABANDONMENT OR REMOVAL. EXISTING UTILITIES THAT ARE TO BE ABANDONED OR REMOVED SHALL BE RESPECTIVELY ABANDONED OR REMOVED TO THE LOCATIONS INDICATED ON THIS PLAN. ALL UTILITY STRUCTURES LOCATED ALONG REMOVED UTILITY LINES SHALL BE REMOVED IN THEIR ENTIRETY.
3. PROTECT EXISTING SITE FEATURES AND STRUCTURES SCHEDULED TO REMAIN.
4. ASPHALT PAVEMENT NOTED FOR REMOVAL SHALL BE SAW CUT TO FULL DEPTH PRIOR TO REMOVAL.
5. ITEMS SCHEDULED FOR REMOVAL AND EXCESS EXCAVATED MATERIALS SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ANY APPLICABLE REGULATIONS.
6. CONTRACTOR IS RESPONSIBLE FOR SECURING THE JOB SITE TO PROTECT THE PUBLIC.
7. CONTRACTOR SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL CODES, RULES AND REGULATIONS APPLICABLE TO DEMOLITION WORK INCLUDING BUT NOT LIMITED TO EROSION CONTROL, AIR POLLUTION, NOISE POLLUTION, AND WASTE DISPOSAL.
8. CONTRACTOR SHALL REPLACE PAVEMENT, CURB AND GUTTER, TREES, LAWN AREA, ANY ABOVE GROUND APPURTENANCES, OR ANY OTHER ITEM THAT WAS DAMAGED AS A RESULT OF CONSTRUCTION RELATED ACTIVITIES AS DEEMED BY OWNERS REPRESENTATIVE THAT WAS NOT CALLED OUT FOR REMOVAL OR REPLACEMENT. CONTRACTOR SHALL REPLACE/REPAIR DAMAGED ITEM TO THE SATISFACTION OF OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.
9. TREE PROTECTION FENCING LOCATIONS SHOWN ARE APPROXIMATE. ALL EXISTING TREES OUTSIDE OF GRADING LIMITS ARE INTENDED TO REMAIN. FINAL LOCATIONS OF FENCING SHALL BE DETERMINED IN THE FIELD AND AS IDENTIFIED ON CONSTRUCTION DETAILS. ADDITIONAL FENCING MAY BE REQUIRED. COORDINATE WITH OWNER'S REPRESENTATIVE. TREE PROTECTION FENCE SHALL REMAIN IN PLACE THROUGHOUT CONSTRUCTION.
10. REFER TO THE ELECTRICAL SHEETS AND COORDINATE WITH THE ELECTRICAL ENGINEER REGARDING THE REMOVAL EFFORTS ASSOCIATED WITH THE EXTERIOR ELECTRICAL SYSTEM ELECTRICAL LINES, DUCT BANKS, SITE LIGHTS, ETC.)
11. NOTE THAT FENCE REMOVAL HAS BEEN SHOWN GENERALLY AND ASSOCIATED WITH ANTICIPATED WORK. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS FOR REMOVALS AND REPLACEMENT DUE TO CONSTRUCTION ACTIVITIES AND SEQUENCING, AND SHALL MAINTAIN SECURITY OF THE SITE AT ALL TIMES DURING CONSTRUCTION.

LAYOUT NOTES

1. CONTRACTOR SHALL VERIFY LOCATIONS OF WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT AND/OR ENGINEER PRIOR TO COMMENCING WORK.
2. THE BUILDING OUTLINES SHOWN ARE FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED FOR STAKING PURPOSES. THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT AND STRUCTURAL ENGINEER ON THE STAKING OF THE BUILDING.
3. SITE LIGHTS ARE SHOWN FOR REFERENCE PURPOSES ONLY AND THE CONTRACTOR SHALL REFER TO THE ELECTRICAL PLANS FOR DETAIL DESIGN INFORMATION. CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL ENGINEER ON STAKING OF THE SITE LIGHTS.
4. ALL DIMENSIONS SHOWN ARE TO THE EDGE OF PAVEMENT.
5. ALL PAVEMENT STRIPPING SHALL BE WHITE IC COLOR.
6. REFER TO LANDSCAPING PLANS FOR SITE RESTORATION INFORMATION AND DETAILS.

GRADING NOTES

1. SPOT GRADES, CURB AND GUTTER GRADES, AND CONTOURS SHOWN ON THE PLANS ARE TO FINISH GRADE.
2. ADJUST EXISTING CASTINGS, VALVE BOXES, AND OTHER UTILITY PENETRATIONS TO FINISH GRADE.
3. ALL SLOPES 4:1 AND STEEPER TO BE STABILIZED WITH CLASS I TYPE B MATTING.

UTILITY NOTES

1. CONTRACTOR SHALL FIELD VERIFY ELEVATION OF EXISTING INVERTS PRIOR TO INSTALLATION OF PROPOSED UTILITIES.
2. PIPE LENGTHS AND INVERTS ARE TO CENTER OF STRUCTURE.
3. CRUSHED STONE BACKFILL SHALL BE USED AS UTILITY TRENCH BACKFILL ON SITE.

EROSION CONTROL NOTES

1. CONSTRUCTION SITE EROSION CONTROL AND SEDIMENTATION CONTROL SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF OAK CREEK, AND SHALL EMPLOY EROSION CONTROL METHODS AS SHOWN AND SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) "CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL TECHNICAL STANDARDS".
2. ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED FOR STABILITY AND OPERATION AFTER A RAINFALL OF 0.5 INCHES OR MORE, BUT NO LESS THAN ONCE EVERY WEEK. MAINTENANCE OF ALL EROSION CONTROL STRUCTURES SHALL BE PROVIDED TO INSURE INTENDED PURPOSE IS ACCOMPLISHED. REPAIRS AND MAINTENANCE SHALL BE COMPLETED WITHIN 24 HOURS OF INSPECTION. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP AND REMOVAL OF ALL SEDIMENT WHEN LEAVING PROPERTY. EROSION CONTROL MEASURES MUST BE IN WORKING CONDITION AT END OF EACH WORK DAY. MAINTAIN A LOG BOOK THAT DOCUMENTS EROSION CONTROL INSPECTIONS, FINDINGS, AND CORRECTIVE ACTIONS TAKEN.
4. SILT FENCE AND SEDIMENT LOGS SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN DEPOSITS REACH A DEPTH OF 6 INCHES. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE SEDIMENT LOGS WHEN DEPOSITS REACH A DEPTH OF HALF THE HEIGHT OF THE SEDIMENT LOGS. THE SILT FENCE OR SEDIMENT LOGS SHALL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
5. FILTER FABRIC SHALL BE INSTALLED AS INLET PROTECTION TO TRAP SEDIMENT IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. INLET PROTECTION SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1060, TYPE FF GEOTEXTILE FABRIC SHALL BE ON THE WISDOT EROSION CONTROL PRODUCT ACCEPTABILITY LIST (PAL) .
6. STONE CONSTRUCTION ENTRANCE/TEMPORARY GRAVEL ROAD (IF REQUIRED) SHALL BE MAINTAINED BY SCRAPING STONE OR BY PLACING NEW STONE ONCE THE SURFACE BECOMES CLOGGED WITH SEDIMENT. A MINIMUM OF A 12 INCH THICK PAD DEPTH SHALL BE MAINTAINED.
7. EROSION CONTROL MEASURES SHALL BE MAINTAINED ON A CONTINUING BASIS UNTIL SITE IS FULLY STABILIZED.
8. PERIODIC STREET SWEEPING SHALL BE COMPLETED TO MAINTAIN THE PUBLIC STREET FREE OF DUST AND DIRT.
9. SILT FENCE OR SEDIMENT LOGS SHALL BE INSTALLED IN HORSESHOE FASHION AROUND ALL TOPSOIL AND FILL STOCKPILES. NOTIFY CITY OF OAK CREEK OF ANY NEW STOCKPILE LOCATIONS.
10. CONSTRUCTION SEQUENCE FOR EROSION CONTROL INCLUDES:
    1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
    2. INSTALL SILT FENCE AND INLET PROTECTION.
    3. STRIP TOPSOIL IN TEMPORARY SEDIMENT BASIN AREA
    4. INSTALL SEDIMENT BASIN AND OUTLET CONTROL STRUCTURE. STABILIZE IMMEDIATELY AFTER INSTALLATION.
    5. STRIP TOPSOIL AND INSTALL TEMPORARY DIVERSIONS TO DIRECT RUNOFF TO SEDIMENT BASIN.
    6. STRIP TOPSOIL FROM REMAINDER OF SITE.
    7. PERFORM ROUGH GRADING AND BUILDING EXCAVATION. ADJUST DIVERSION DITCHES AS NEEDED TO MAINTAIN DRAINAGE TO SEDIMENT BASIN.
    8. INSTALL UTILITIES. INSTALL INLET PROTECTION ON NEW INLETS. INSTALL RIPRAP AT NEW OUTFALLS.
    9. CONSTRUCT BUILDING.
    10. INSTALL PAVEMENTS.
    11. INSTALL LANDSCAPING ON COMPLETED SITE WITHIN 7 DAYS OF COMPLETING CONSTRUCTION.
    12. REMOVE TEMPORARY SEDIMENTATION BASIN
    13. REMOVE EROSION CONTROL MEASURES ONLY WHEN SITE IS FULLY STABILIZED.
11. SITE DEWATERING. WATER PUMPED FROM THE SITE SHALL BE TREATED BY SEDIMENT BASINS OR OTHER APPROPRIATE BEST MANAGEMENT PRACTICES SPECIFIED IN THE WDNR "CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL TECHNICAL STANDARDS". WATER SHALL NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE, ADJACENT SITES, OR RECEIVING CHANNELS.
12. WASTE AND MATERIAL DISPOSAL. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.
13. TRACKING. EACH SITE SHALL HAVE GRAVELED ROADS, ACCESS DRIVES AND PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING, TO THE SATISFACTION OF THE CITY, BEFORE THE END OF EACH WORKDAY. FLUSHING MAY NOT BE USED UNLESS SEDIMENT WILL BE CONTROLLED BY A SEDIMENT BASIN OR OTHER APPROPRIATE BEST MANAGEMENT PRACTICE SPECIFIED IN THE WDNR "CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL TECHNICAL STANDARDS". NOTIFY CITY OF OAK CREEK FOR CHANGES IN STABILIZED CONSTRUCTION ENTRANCE LOCATION.
14. SEDIMENT CLEANUP. ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF A STORM EVENT SHALL BE CLEANED UP BY THE END OF THE NEXT WORK DAY. ALL OTHER OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE CLEANED UP BY THE END OF THE WORK DAY.
15. ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN OR MORE DAYS SHALL BE STABILIZED BY TEMPORARY OR PERMANENT SEEDING, AND MULCHING, SODDING, COVERING WITH TARPS, OR EQUIVALENT BEST MANAGEMENT PRACTICES. IF TEMPORARY SEEDING IS USED, A PERMANENT COVER SHALL ALSO BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION. SEEDING OR SODDING SHALL BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION.
16. PERMANENT SEEDING SHALL BE ESTABLISHED NO LATER THAN SEPTEMBER 15TH. IF PERMANENT SEEDING IS NOT ESTABLISHED, TEMPORARY SEEDING SHALL BE ESTABLISHED NO LATER THAN OCTOBER 15TH. ALL SEEDED AREAS MUST BE MULCHED AT A RATE OF 1.5 TO 2 TONS PER ACRE AND ANCHORED BY EITHER CRIMPING OR BY APPLYING A TACKIFIER.
17. PERMANENT SEED MIX SHALL BE WISDOT SEED MIX NO. 40 AT 7 POUNDS PER 1000 SQUARE FEET.
18. USE ANNUAL RYE SEED MIX AT 100 POUNDS PER ACRE AS A TEMPORARY SEED MIX. PERMANENT SEEDING SHALL FOLLOW WITHIN ONE YEAR. IF TEMPORARY SEEDING IS NOT ESTABLISHED BY OCTOBER 15TH, USE CLASS I TYPE B MATTING ON ALL SLOPES 4:1 OR STEEPER.
19. SOIL OR DIRT STORAGE PILES SHALL BE LOCATED A MINIMUM OF TWENTY-FIVE FEET FROM ANY DOWNSLOPE ROAD, LAKE, STREAM, WETLAND, OR DRAINAGE CHANNEL. STRAW BALE OR FILTER FABRIC FENCES SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE PILE. IF REMAINING FOR MORE THAN THIRTY DAYS. PILES SHALL BE STABILIZED BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS.
20. WHEN THE DISTURBED AREA HAS BEEN STABILIZED BY PERMANENT VEGETATION OR OTHER MEANS AND APPROVED BY THE ENGINEER AND OWNER, TEMPORARY BEST MANAGEMENT PRACTICES SUCH AS FILTER FABRIC FENCES, STRAW BALES, SEDIMENT AND SEDIMENT TRAPS SHALL BE REMOVED.
21. NOTIFY THE CITY WITHIN TWO WORKING DAYS OF COMMENCING ANY LAND DEVELOPMENT OR LAND DISTURBING ACTIVITY.
22. NOTIFY THE CITY OF COMPLETION OF ANY BEST MANAGEMENT PRACTICES WITHIN THE NEXT WORKING DAY AFTER THEIR INSTALLATION.
23. OBTAIN PERMISSION IN WRITING FROM THE CITY OF OAK CREEK ENGINEERING DEPARTMENT PRIOR TO MODIFYING THE EROSION CONTROL PLAN. NOTIFY WDNR AT LEAST FIVE WORKING DAYS PRIOR TO IMPLEMENTING CHANGES TO THE EROSION CONTROL PLAN.
24. REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPMENT OR LAND DISTURBING ACTIVITIES.
25. KEEP A COPY OF THE EROSION CONTROL PLAN ON SITE.
26. EROSION CONTROL MEASURES ESTABLISHED AS PART OF PRIOR AND SEPARATE PROJECTS ARE TO REMAIN IN PLACE AND BE MAINTAINED UNLESS NOTED FOR REMOVAL.

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		B FROEHLICH	S KURTZ	J LISAK	J LISAK	J LISAK	

GRAEF

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

Jacobs

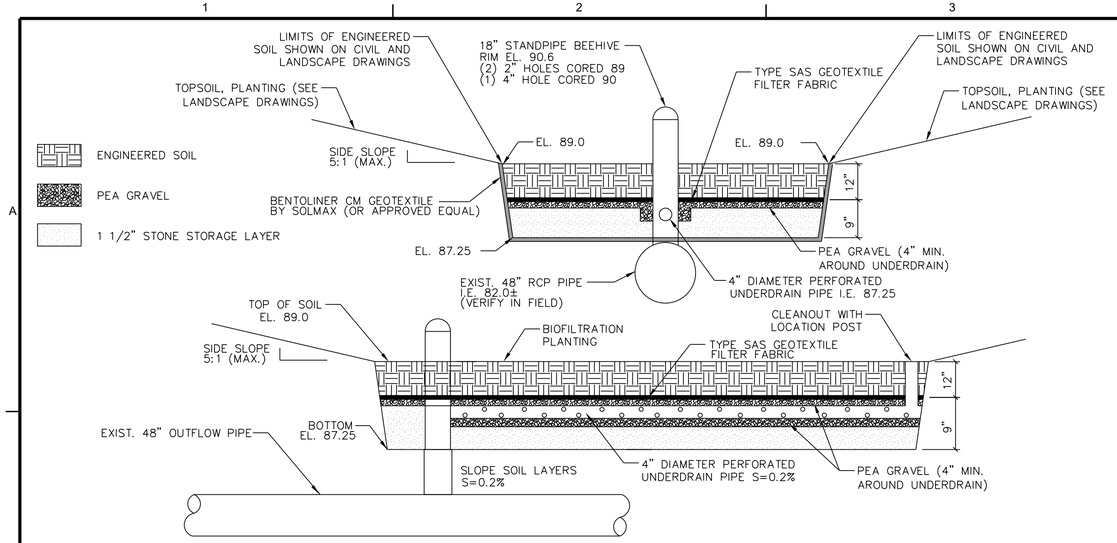
CIVIL

CONSTRUCTION NOTES

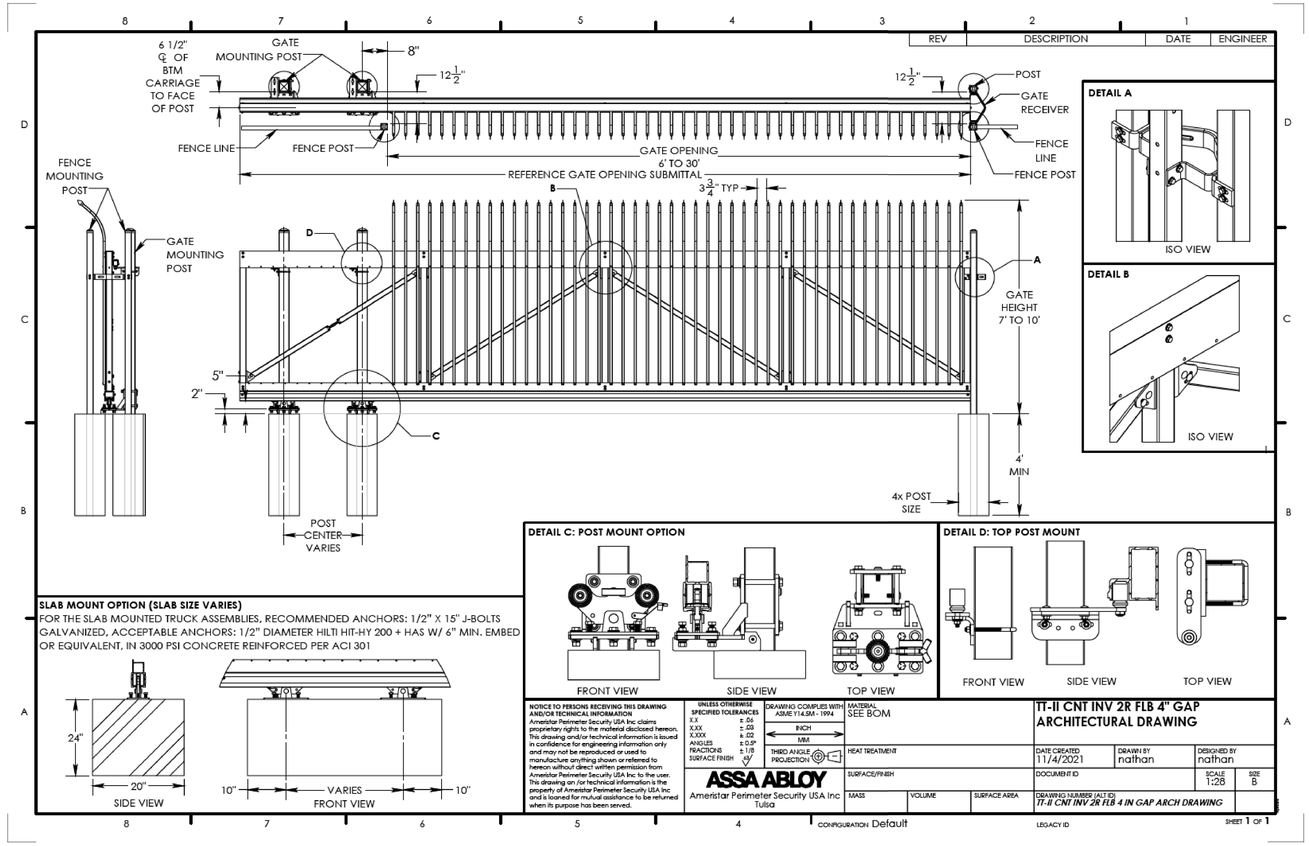
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING, 0 1"

DATE	MAY 2025
PROJ	C9X43300
DWG	05-C-2002
SHEET	of

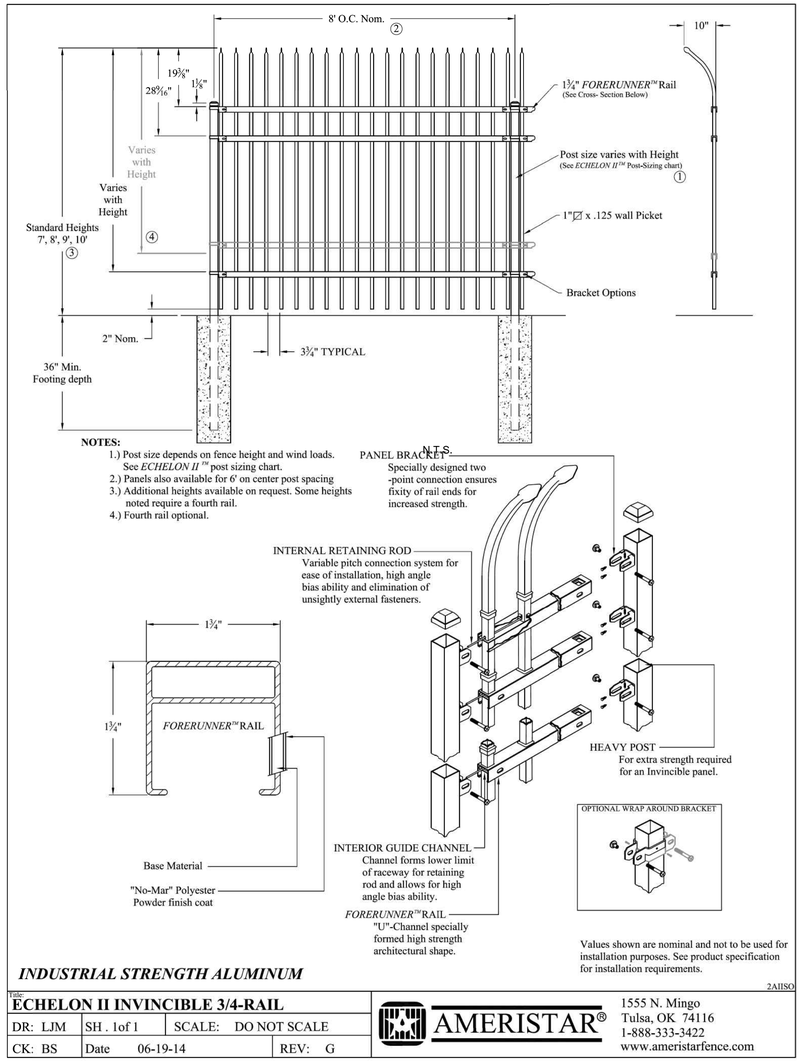
100% (PERMITTING)



A1 **BIORETENTION BASIN**
N.T.S.



D1 **VEHICULAR GATE-SLIDE**
N.T.S.



D5 **DECORATIVE FENCE**
N.T.S.

NO.	DATE	DSGN	REVISION	CHK	APVD	BY	APVD
		B FROEHLICH	S KURTZ	J LISAK	J LISAK		J LISAK

GRAEF

Jacobs

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

CIVIL

CONSTRUCTION DETAILS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MAY 2025
PROJ	C9X43300
DWG	05-C-2005
SHEET	of

100% (PERMITTING)

$PWPATH
FILENAME: 05-C-2005_C9X4330.dgn
PLOT DATE: $PLOTDATE
PLOT TIME: $PLOTTIME

GENERAL NOTES

A. SEE SHEET 05-C-2002 FOR GENERAL NOTES.

B. SEE SHEET 05-C-2002 FOR REMOVAL NOTES.

C. SEE SHEET 05-C-2002 FOR EROSION CONTROL NOTES.

D. SEE SHEET 05-C-2003 FOR CONSTRUCTION DETAILS.

C. SEE SHEET 05-G-2001 FOR CONTROL POINTS DATA.

SHEET KEYNOTES

1. EXISTING PROPERTY LINE
2. EXISTING FENCE
3. EXISTING WE ENERGIES UNDERGROUND ELECTRIC (SEE ELECTRIC DRAWINGS)
4. EXISTING MONITORING WELL - TO BE REMOVED
5. EXISTING TREE - TO BE REMOVED
6. EXISTING KEY ACCESS/CONTROL PANEL (SEE ELECTRICAL PLANS)
7. EXISTING BACKWASH RECOVERY BASIN (BELOW GRADE) . DO NOT WORK WITHIN 5FT.
8. EXISTING CHLORINE CONTACT BASIN (BELOW GRADE) . DO NOT WORK WITHIN 5FT.
9. EXISTING BOLLARD TO BE REMOVED.
10.
11. SILT FENCE (B1/05-C-2003)
12. INLET PROTECTION (C4/05-C-2003)
13. TREE PROTECTION (D1/05-C-2003)
14.
15.
16.
17.
18.
19.
20.
21.
22.

EXISTING CHLORINE CONTACT BASIN (BELOW GRADE)

EXISTING BACKWASH RECOVER BASIN (BELOW GRADE)

MILL AND OVERLAY (TYP.)

SAWCUT

GRAVEL REMOVAL (TYP.)

FENCE REMOVAL (TYP.)

REMOVE GATE

ASPHALT REMOVAL (TYP.)

SAWCUT

SOUTH 5TH AVENUE

E. AMERICAN AVENUE

D1 SITE DEMOLITION AND EROSION CONTROL

0 30 60

N

NO.	DATE	DSGN
	REVISION	DR
BY	APVD	
J LISAK		B FROEHLICH
	APVD	S KURTZ
J LISAK		CHK

Jacobs

GRAEF

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

CIVIL
SITE DEMOLITION AND EROSION CONTROL PLAN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MAY 2025
PROJ	C9X43300
DWG	05-C-2007
SHEET	of

100% (PERMITTING)

$PWPATH

FILENAME: 05-C-2007_C9X4330.dgn

PLOT DATE: $PLOTDATE

PLOT TIME: $PLOTTIME

GENERAL NOTES

A. SEE SHEET 05-C-2002 FOR GENERAL NOTES.

B. SEE SHEET 05-C-2002 FOR LAYOUT NOTES.

C. SEE SHEET 05-C-2004 FOR CONSTRUCTION DETAILS.

D. SEE SHEET 05-G-2001 FOR CONTROL POINTS DATA.

SHEET KEYNOTES

1. EXISTING PROPERTY LINE
2. EXISTING FENCE
3. EXISTING WE ENERGIES UNDERGROUND ELECTRIC (SEE ELECTRIC DRAWINGS)
4.
5.
6. EXISTING KEY ACCESS/CONTROL PANEL (SEE ELECTRICAL PLANS)
7. EXISTING BACKWASH RECOVERY BASIN (BELOW GRADE) . DO NOT WORK WITHIN 5FT.
8. EXISTING CHLORINE CONTACT BASIN (BELOW GRADE) . DO NOT WORK WITHIN 5FT.
9.
10.
11.
12.
13. CONCRETE PAVEMENT
14. CONCRETE STOOP (SEE STRUCTURAL DRAWINGS)
15.
16. ASPHALT PAVEMENT
17. CONCRETE BOLLARD
18. DECORATIVE FENCE
19. VEHICULAR GATE
20. TURF
21. KEY ACCESS/CONTROL PANEL (SEE ELECTRICAL PLANS)
22. REQUIRED SHORING (CONTRACTOR DESIGNED)
23. INTERMEDIATE PUMP STATION OVERFLOW (SEE DRAWING 20-D-2002)
24. CT TANK OVERFLOW (SEE DRAWING 40-S-2001)
25. CONCRETE PAD (SEE STRUCTURAL PLANS)

EXISTING CHLORINE CONTACT BASIN (BELOW GRADE)

CT TANK (ABOVE GRADE)

PUMP STATION

EXISTING BACKWASH RECOVERY BASIN (BELOW GRADE)

ALL NEW IMPROVEMENTS SHALL MAINTAIN 5 FEET MINIMUM CLEARANCE FROM BELOW GRADE STRUCTURE.

TURF RESTORATION

E. AMERICAN AVENUE

SOUTH 5TH AVENUE

SITE LAYOUT PLAN

D1

0 30 60

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		B FROEHLICH	S KURTZ	J LISAK	J LISAK	J LISAK	

GRAEF

Jacobs

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

CIVIL

SITE LAYOUT PLAN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MAY 2025
PROJ	C9X43300
DWG	05-C-2008
SHEET	of

100% (PERMITTING)

TREE REMOVAL SCHEDULE

Tree Tag ID	Scientific Name	Common Manme	DBH (Inches)	Dripline (Feet)	Condition	Invasive or Not	Tree Mitgation	Reason to Remove
162	*Acer saccharum*	Sugar Maple	18.5	18	Good (60-80%)	Native	3	WTP Expansion
163	*Picea abies*	Norway spruce	20.0	16	Fair (40-60%)	Non-native	3	WTP Expansion
165	*Acer saccharum*	Sugar Maple	23.5	20	Fair (40-60%)	Native	3	WTP Expansion
166	*Acer saccharum*	Sugar Maple	17.7	18	Good (60-80%)	Native	3	WTP Expansion
167	*Acer saccharum*	Sugar Maple	20.6	25	Good (60-80%)	Native	3	WTP Expansion
173	*Prunus americana*	American plum	16.9	13	Fair (40-60%)	Native	3	WTP Expansion
174	*Acer saccharum*	Sugar maple	22.6	26	Good (60-80%)	Native	3	WTP Expansion
175	*Acer saccharum*	Sugar maple	24.8	31	Good (60-80%)	Native	3	WTP Expansion
176	*Acer saccharum*	Sugar maple	22.6	23	Good (60-80%)	Native	3	WTP Expansion
177	*Ulmus americana*	American elm	25.0	30	Good (60-80%)	Native	3	WTP Expansion
178	*Populus deltoides*	Eastern cottonwood	32.5	32	Fair (40-60%)	Native	4	WTP Expansion

TOTAL NUMBER OF REPLACEMENT TREE REQUIRED BY CITY CODE:34

LIMIT OF DISTURBANCE, TYP.

NOTED AS PROTECTED, WORK WITHIN DRIPLINE

TREE PROTECTION FENCING, TYP. SEE SHEET L1002.

TREE PROTECTION FENCING OUT OF DRIPLINES

NORTH

NO.	DATE	DR	CHK	APVD
DSGN			BY	APVD

REVISION

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

Jacobs
LANDSCAPE ARCHITECTURE

TREE PRESERVATION PLAN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MAY 2025
PROJ	C9X43300
DWG	06-L-1001
SHEET	of

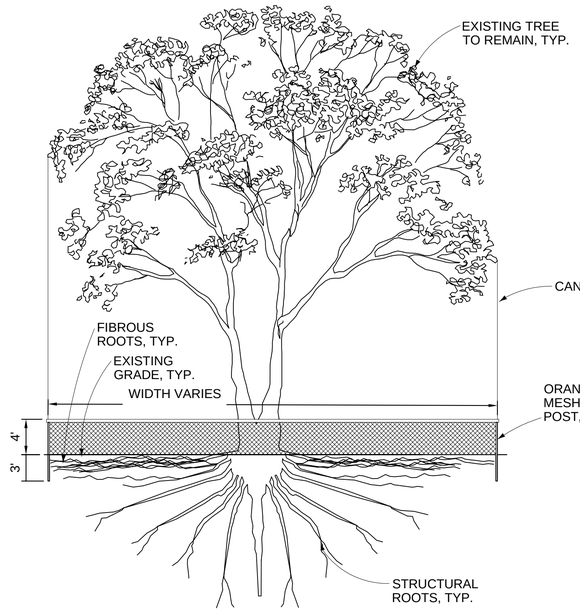
100% (PERMITTING)

GENERAL NOTES:

1. PROTECTION FENCING IS A LIMIT OF DISTURBANCE
2. NO CONSTRUCTION TRAFFIC, CUTTING, FILLING OR TRENCHING WITHIN TREE PROTECTION FENCING
3. NO STORAGE OF MATERIAL OR EQUIPMENT WITHIN TREE PROTECTION FENCING
4. PROTECTION FENCING SHALL NOT BE MOVED ONCE FENCING IS SITED AND INSTALLED
5. IF EARTH-MOVING EQUIPMENT IS EMPLOYED AT ANY TIME, CARE SHALL BE TAKEN SO AS NOT TO DAMAGE STRUCTURAL ROOTS THAT THE CONTRACTOR WAS UNABLE TO IDENTIFY AND/OR PRUNE DURING MANUAL/PNEUMATIC EXCAVATION.

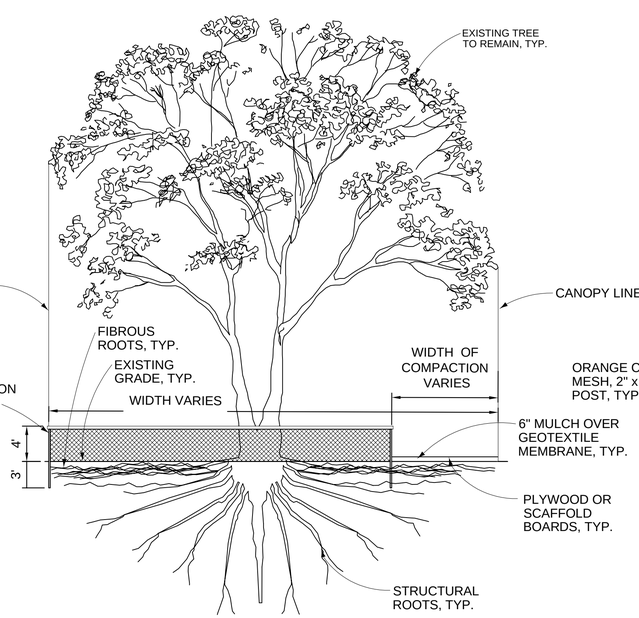
SEQUENCING:

1. PERFORM WORK IN ACCORDANCE WITH THE APPROVED TREE PROTECTION PLAN APPROVED BY LANDSCAPE ARCHITECT
2. INSTALL TREE PROTECTION FENCING
3. ADD 6" MULCH OVER GEOTEXTILE MEMBRANE TO LIMITS OF CONSTRUCTION WITHIN CANOPY LINE
4. INSTALL PLYWOOD OR SCAFFOLD BOARDS
5. INSTALL TREE PROTECTION SIGNAGE PER SPECIFICATIONS AND APPROVED TREE PROTECTION PLAN



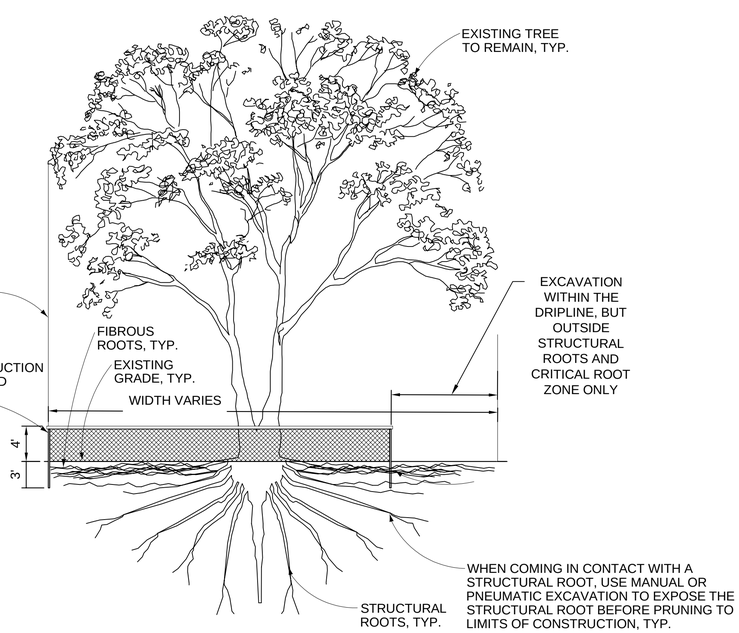
LIMITS OF CONSTRUCTION OUTSIDE OF CANOPY LINE

1 TREE PROTECTION FENCE DETAIL OUTSIDE DRIPLINE
NTS



COMPACTION LIMITS OF CONSTRUCTION WITHIN THE CANOPY LINE

2 TREE PROTECTION FENCE DETAIL WITHIN DRIPLINE
NTS



EXCAVATION LIMITS OF CONSTRUCTION WITHIN THE CANOPY LINE

3 TREE PROTECTION FENCE DETAIL, EXCAVATION WITHIN DRIPLINE
NTS

NO.	DATE	REVISION	DR	CHK	BY	APVD
						APVD

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

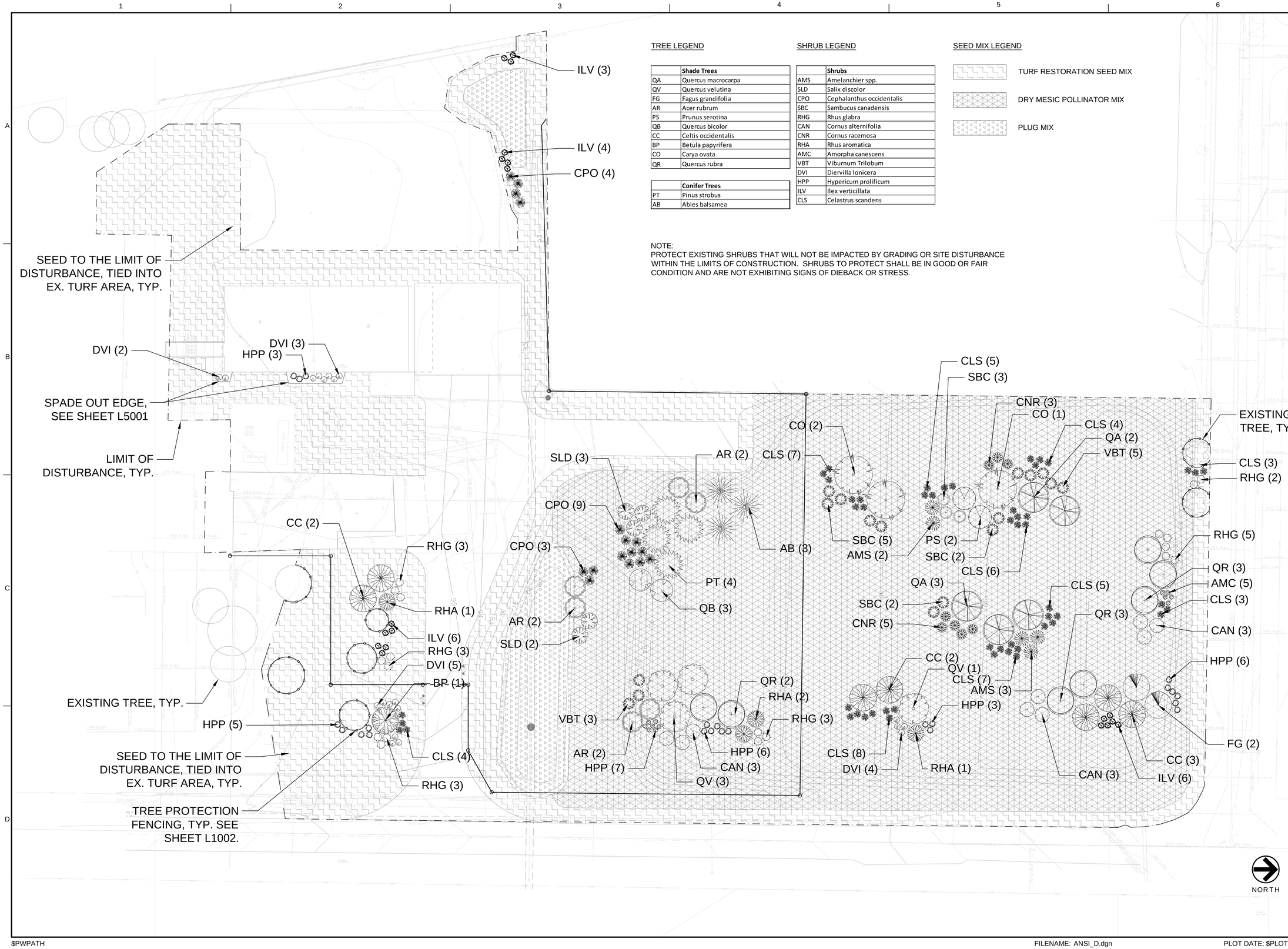
Jacobs
LANDSCAPE ARCHITECTURE

TREE PROTECTION DETAILS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MAY 2025
PROJ	C9X43300
DWG	06-L-1002
SHEET	of

100% (PERMITTING)



TREE LEGEND

	Shade Trees
QA	Quercus macrocarpa
QV	Quercus velutina
FG	Fagus grandifolia
AR	Acer rubrum
PS	Prunus serotina
QB	Quercus bicolor
CC	Celtis occidentalis
BP	Betula papyrifera
CO	Carya ovata
QR	Quercus rubra

	Conifer Trees
PT	Pinus strobus
AB	Abies balsamea

SHRUB LEGEND

	Shrubs
AMS	Amelanchier spp.
SLD	Salix discolor
CPO	Cephalanthus occidentalis
SBC	Sambucus canadensis
RHG	Rhus glabra
CAN	Cornus alternifolia
CNR	Cornus racemosa
RHA	Rhus aromatica
AMC	Amorpha canescens
VBT	Viburnum Trilobum
DVI	Diervilla lonicera
HPP	Hypericum prolificum
ILV	Ilex verticillata
CLS	Celastrus scandens

SEED MIX LEGEND

TURF RESTORATION SEED MIX

DRY MESIC POLLINATOR MIX

PLUG MIX

NOTE:
PROTECT EXISTING SHRUBS THAT WILL NOT BE IMPACTED BY GRADING OR SITE DISTURBANCE WITHIN THE LIMITS OF CONSTRUCTION. SHRUBS TO PROTECT SHALL BE IN GOOD OR FAIR CONDITION AND ARE NOT EXHIBITING SIGNS OF DIEBACK OR STRESS.

NO.	DSGN	DATE	DR	REVISION	CHK	APVD	BY	APVD

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

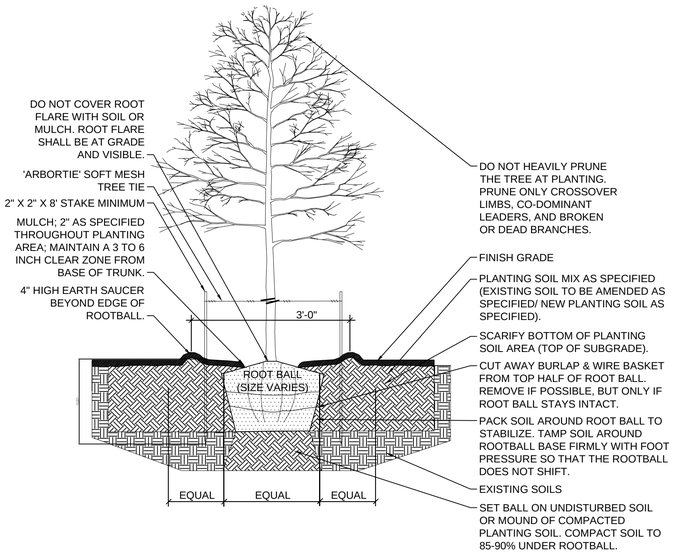
Jacobs
LANDSCAPE ARCHITECTURE

LANDSCAPE PLAN

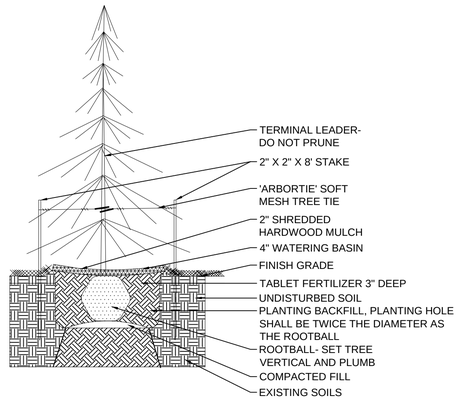
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MAY 2025
PROJ	C9X43300
DWG	06-L-2001
SHEET	of

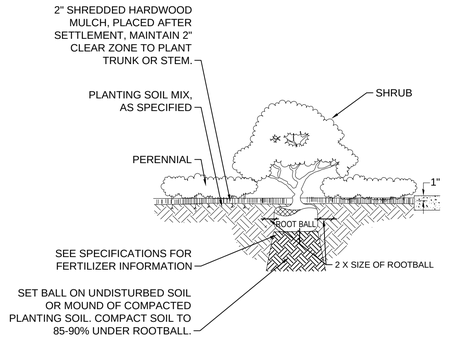
100% (PERMITTING)



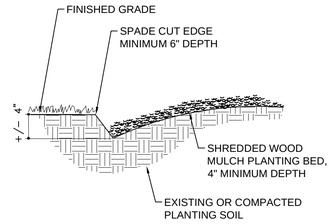
1 DECIDUOUS TREE PLANTING DETAIL
NTS



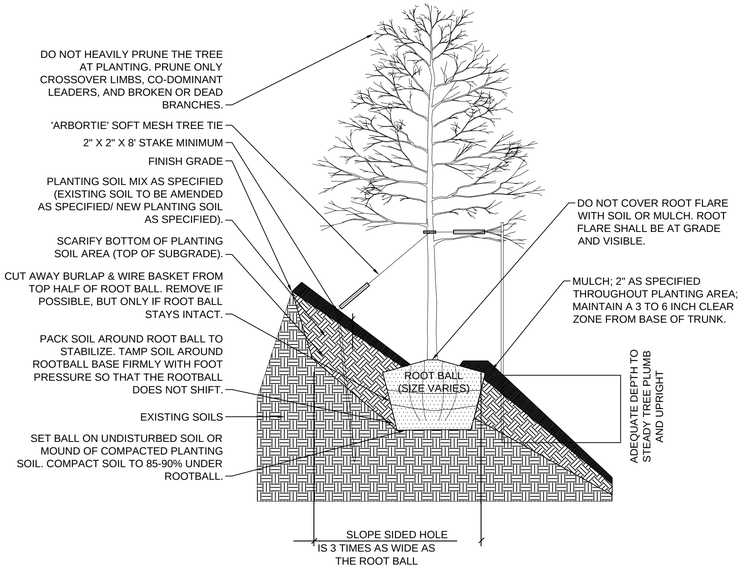
2 EVERGREEN TREE PLANTING DETAIL
NTS



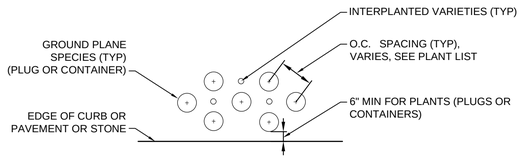
3 SHRUB PLANTING DETAIL
NTS



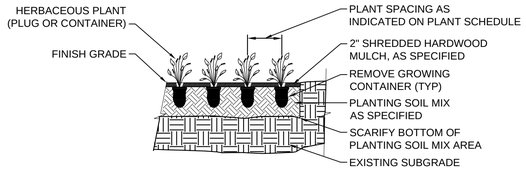
4 SPADE OUT EDGE
NTS



5 TREE PLANTING ON A SLOPE
NTS



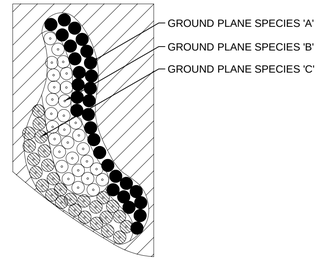
PLANT SPACING LAYOUT



PLUG AND CONTAINER NOTES:

1. SEPARATE AND SPREAD OUT CONTAINER-BOUND ROOTS, IF APPLICABLE. PLANTS WHOSE ROOT SYSTEMS COMPRISE MORE THAN 40% OF THE ROOT BALL WILL NOT BE ACCEPTED

6 PLUG PLANTING DETAIL
NTS



NOTES:

1. ARRANGE PLUGS IN DRIFTS.
2. DO NOT PLANT IN RECTANGULAR GRIDS.
3. PLANT IN MASSING QUANTITIES PER PLANT SCHEDULE NOTES OR AS INDICATED ON SHEETS.

7 GREEN MULCH SPECIES PLUG MASSING DETAIL
NTS

GENERAL NOTES:

1. CUT BINDINGS AROUND TRUNK AND REMOVE BURLAP AND CAGE FROM TRUNK AND UPPER 1/2 OF ROOT BALL. CUT AND ADJUST BURLAP TO PREVENT FORMATION OF AIR POCKETS.
2. SET ROOTBALL ON UNDISTURBED SUBGRADE LEVEL OR ON SLIGHTLY RAISED MOUND OF COMPACTED PLANTING SOIL.
3. STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT IF TREE DOES NOT REMAIN UPRIGHT AND PLUMB ON ITS OWN. REFER TO STAKING DETAILS.
4. BROKEN OR CRUMBLING ROOT BALLS WILL BE REJECTED.
5. PRUNE ALL DEAD OR DAMAGED WOOD AFTER PLANTING.

FOR ALL TREES:

1. CONTRACTOR SHALL STAKE TREES AS NECESSARY TO MAINTAIN UPRIGHT AND PLUMB TREES.
2. EACH TREE SHALL HAVE A MINIMUM OF TWO STAKES PER TREE. ADDITIONAL STAKES MAY BE NECESSARY TO MAINTAIN TREES UPRIGHT AND PLUMB.
3. TREE STAKE SIZE IS A MINIMUM. CONTRACTOR TO SIZE STAKES TO MAINTAIN TREES UPRIGHT AND PLUMB.
4. REMOVE STAKES AND ARBORTIE AFTER THE WARRANTY IS APPEALED.

NO.	DSGN	DATE	DR	CHK	APVD	BY	APVD	REVISION

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

Jacobs

LANDSCAPE ARCHITECTURE

PLANTING DETAILS

100% (PERMITTING)

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MAY 2025
PROJ	C9X43300
DWG	06-L-5001
SHEET	of

PLANTING SCHEDULE

TREE AND SHRUBS

Key	Scientific Name	Common Manme	Quantity	Mitigation Counts	Unit	Size (Minimum)	Type	Spacing	Note
SHADE TREES									
QA	Quercus macrocarpa	Bur oak	5	5	Each	2.5" Cal	B&B	As Shown	
QV	Quercus velutina	Black Oak	4	4		2.5" Cal			
FG	Fagus grandifolia	American Beech	2	2		2.5" Cal			
AR	Acer rubrum	Red Maple	6	6		2.5" Cal			
PS	Prunus serotina	Black Cherry	2	2		2.5" Cal			
QB	Quercus bicolor	Swamp White Oak	3	3		2.5" Cal			
CC	Celtis occidentalis	Hackberry	7	7		2.5" Cal			
BP	Betula papyrifera	Paper birch	1	1		2.5" Cal			
CO	Carya ovata	Shagbark Hickory	3	3		2.5" Cal			
QR	Quercus rubra	Northern Red Oak	8	7		2.5" Cal			
CONIFER TREES									
PT	Pinus strobus	Eastern White Pine	4	0	Each	6' HT.	Container	As Shown	Single stem
AB	Abies balsamea	Balsam Fir	3	0					
SHRUBS									
AMS	Amelanchier spp.	Serviceberry	5	N/A	Each	2' HT. X 2'W	5 GAL	As Shown	
SLD	Salix discolor	Pussy willow	5				5 GAL		
CPO	Cephalanthus occidentalis	Buttonbush	16				5 GAL		
SBC	Sambucus canadensis	Common Elderberry	12				5 GAL		
RHG	Rhus glabra	Smooth Sumac	19				5 GAL		
CAN	Cornus alternifolia	Pagoda Dogwood	9				5 GAL		
CNR	Cornus racemosa	Gray Dogwood	8				5 GAL		
RHA	Rhus aromatica	Fragrant Sumac	4				5 GAL		
AMC	Amorpha canescens	Leadplant	5				3 GAL		
VBT	Viburnum Trilobum	Highbush cranberry	8				5 GAL		
DVI	Diervilla lonicera	Dwarf Bush Honeysuckle	14				3 GAL		
HPP	Hypericum prolificum	Shrubby St. John's Wort	30				3 GAL		
ILV	Ilex verticillata	Winterberry	19				3 GAL		
CLS	Celastrus scandens	American Bittersweet	52				3 GAL		

TOTAL TREE MITIGATION COUNTS: 34

SEED MIX

Scientific Name	Common Manme	% of Mix

TURF RESTORATION SEED MIX (SEEDING RATE: 5 LBS/AC)

Festuca trachyphylla	Hard Fescue	50%
Festuca rubra	Creeping Red Fescue	30%
Festuca rubra subsp. commutata	Chewings Fescue	20%

DRY MESIC POLLINATOR MIX (SEEDING RATE: 8.5 LBS/AC)

Schizachyrium scoparium	Little Bluestem	20%
Andropogon gerardii	Big Bluestem	15%
Panicum virgatum	Switchgrass	15%
Sporobolus heterolepis	Prairie Dropseed	2%
Sorghastrum nutans	Indiangrass	2%
Elymus canadensis	Nodding Wild Rye	2%
Solidago spp.	Goldenrod	2%
Liatris pycnostachya	Prairie Blazing Star	5%
Monarda didyma	Wild Bergamot	3%
Asclepias tuberosa	Butterfly Weed	3%
Symphyotrichum novae-angliae	New England Aster	2%
Silphium laciniatum	Compass Plant	2%
Dodecatheon meadia	Shooting Star	2%
Tradescantia ohiensis	Spiderwort	2%
Dalea purpurea	Purple Prairie Clover	2%
Symphyotrichum laeve	Smooth Blue Aster	2%
Geum triflorum	Prairie Smoke	2%
Monarda fistulosa	Bee Balm	2%
Coreopsis palmata	Prairie Coreopsis	3%
Lupinus perennis	Wild Lupine	3%
Rudbeckia hirta	Black-eyed Susan	3%
Anemone cylindrica	Thimbleweed	3%
Aquilegia canadensis	Wild Columbine	3%

PLUG MIX

Scientific Name	Common Manme	Spacing	% of Mix
Iris versicolor	Blue Flag Iris	18"	5%
Asclepias incarnata	Swamp Milkweed	30"	5%
Eutrochium purpureum	Joe-Pye Weed	24"	10%
Symphyotrichum novae-angliae	New England Aster	18"	20%
Liatris pycnostachya	Prairie Blazing Star	9"	30%
Monarda fistulosa	Wild Bergamot	18"	10%
Rudbeckia hirta	Black-Eyed Susan	18"	20%

REVISION | NO. | DATE | DR | CHK | BY | APVD

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

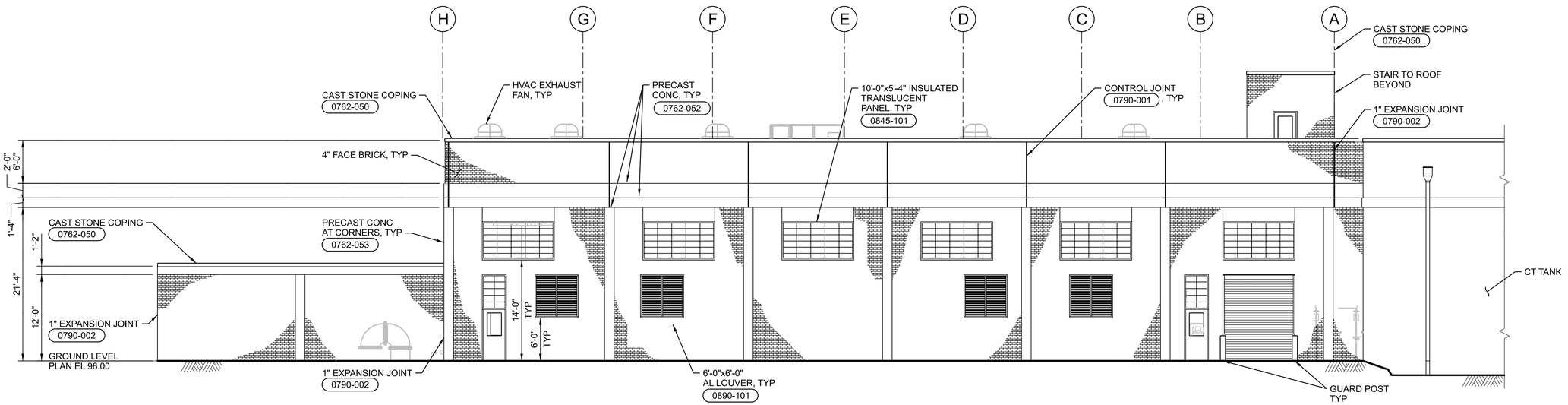
Jacobs
LANDSCAPE ARCHITECTURE

PLANTING SCHEDULE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE MAY 2025
PROJ C9X43300
DWG 06-L-6001
SHEET of

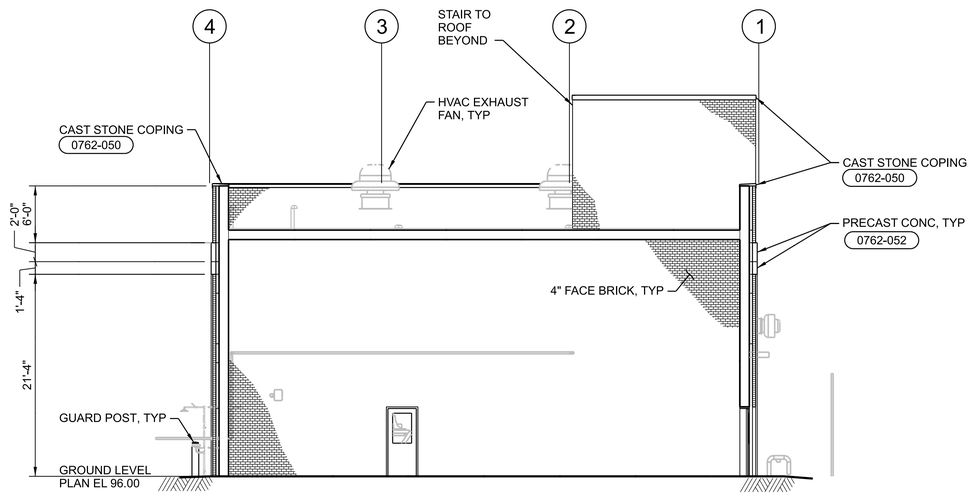
100% (PERMITTING)



1 EAST ELEVATION

1/8"=1'-0"

20-A-2003
20-A-2004



2 NORTH ELEVATION

1/8"=1'-0"

20-A-2003
20-A-2004

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD
DSGN	V MILEWSKI	E CARLSON		R SIEBERS		J WICKS	

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

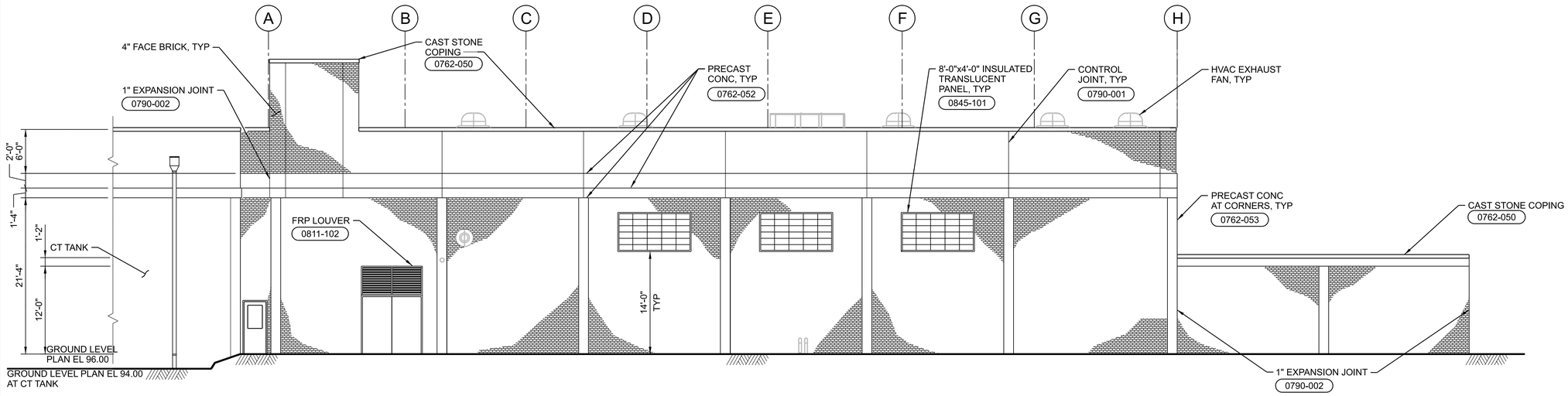
Jacobs

PUMP STATION
ARCHITECTURAL ELEVATIONS

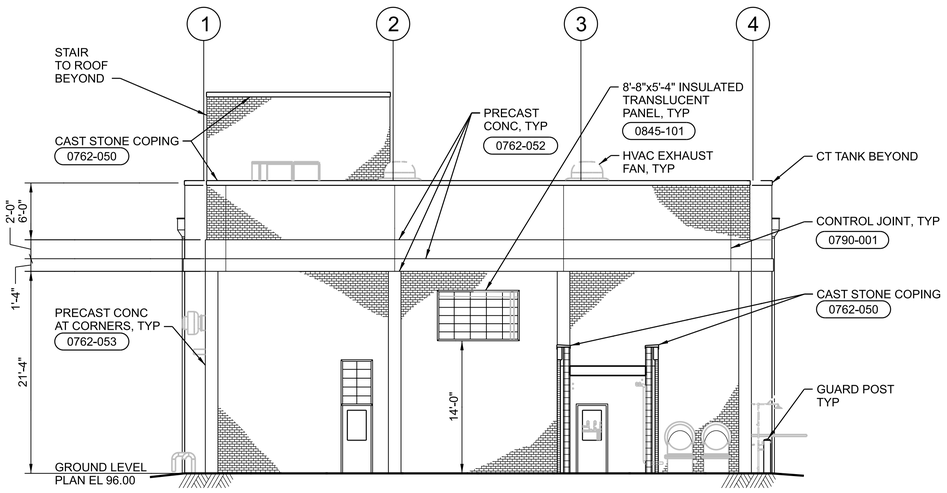
1/8"=1'-0
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MARCH 2025
PROJ	C9X43300
DWG	20-A-3001
SHEET	83 of 157

90%



3 WEST ELEVATION
1/8"=1'-0"
20-A-2003
20-A-2004



4 SOUTH ELEVATION
1/8"=1'-0"
20-A-2003
20-A-2004

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD
DSGN	V MILEWSKI	E CARLSON		R SIEBERS		J WICKS	

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

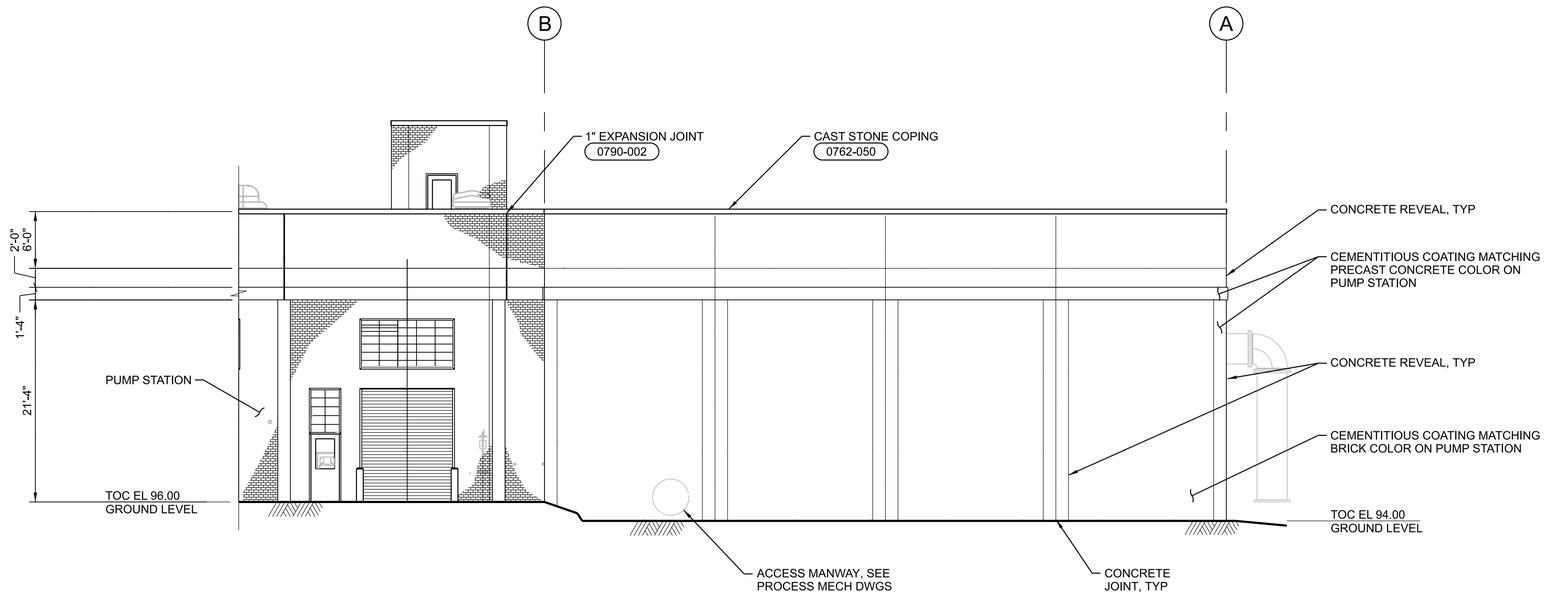
Jacobs

PUMP STATION
ARCHITECTURAL ELEVATIONS

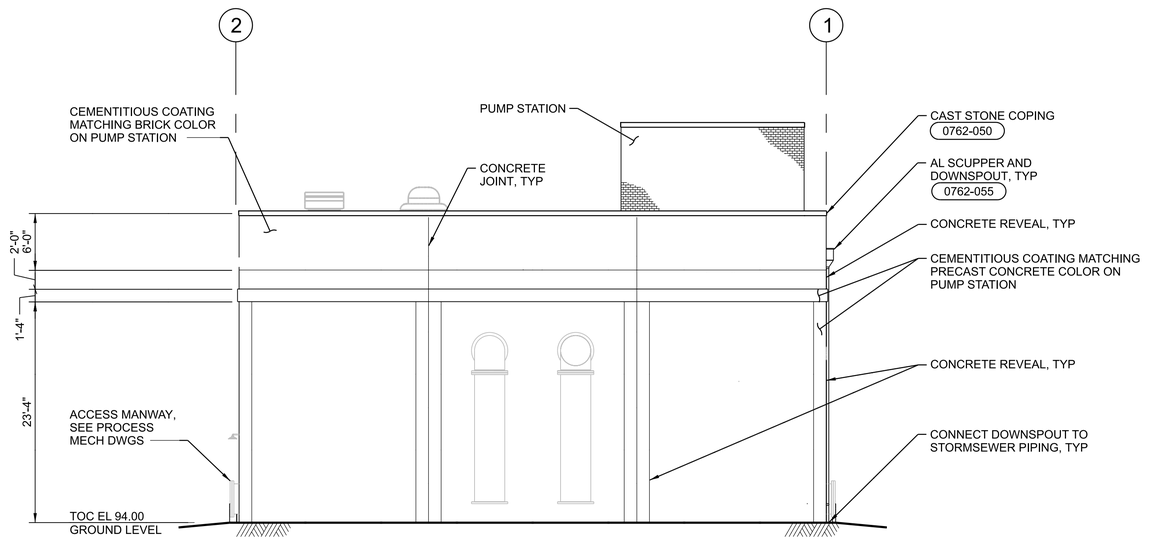
1/8"=1'-0
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MARCH 2025
PROJ	C9X43300
DWG	20-A-3002
SHEET	84 of 157

90%



1 EAST ELEVATION
1/8"=1'-0"
40-A-2002



2 NORTH ELEVATION
1/8"=1'-0"
40-A-2002

NO.	DATE	REVISION	BY	APVD
DSGN	V MILEWSKI	DR E CARLSON	CHK R SIEBERS	APVD J WICKS

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES REHABILITATION
CITY OF OAK CREEK, WISCONSIN

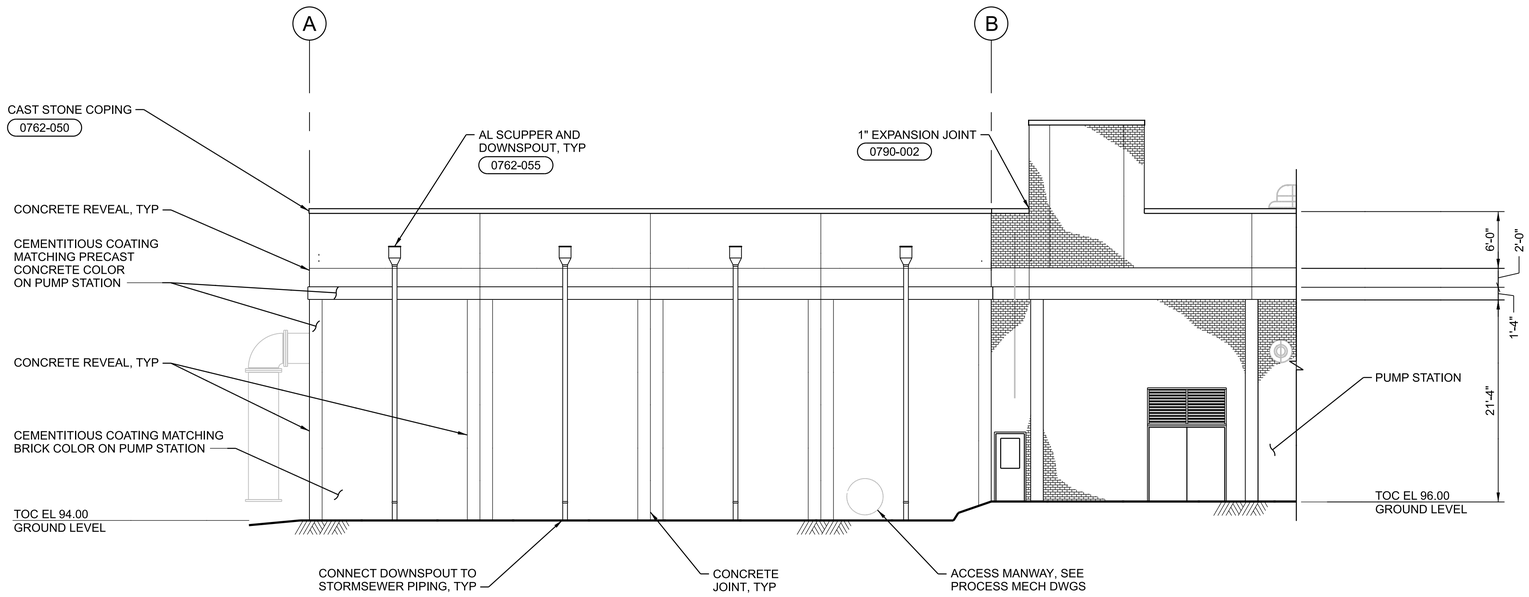
Jacobs

CT TANK
ARCHITECTURAL
NORTH AND EAST ELEVATIONS

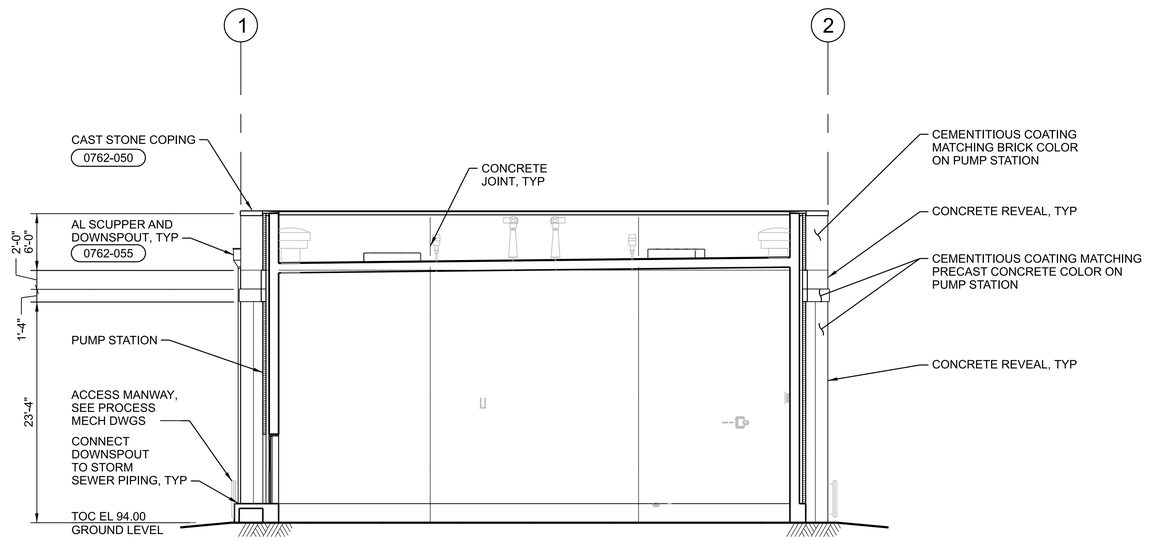
AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MARCH 2025
PROJ	C9X43300
DWG	40-A-3001
SHEET	136 of 157

90%



3 WEST ELEVATION
1/8"=1'-0"
40-A-2002



4 SOUTH ELEVATION
1/8"=1'-0"
40-A-2002

NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD
DSGN	V MILEWSKI		E CARLSON	R SIEBERS		J WICKS	

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES
REHABILITATION
CITY OF OAK CREEK, WISCONSIN

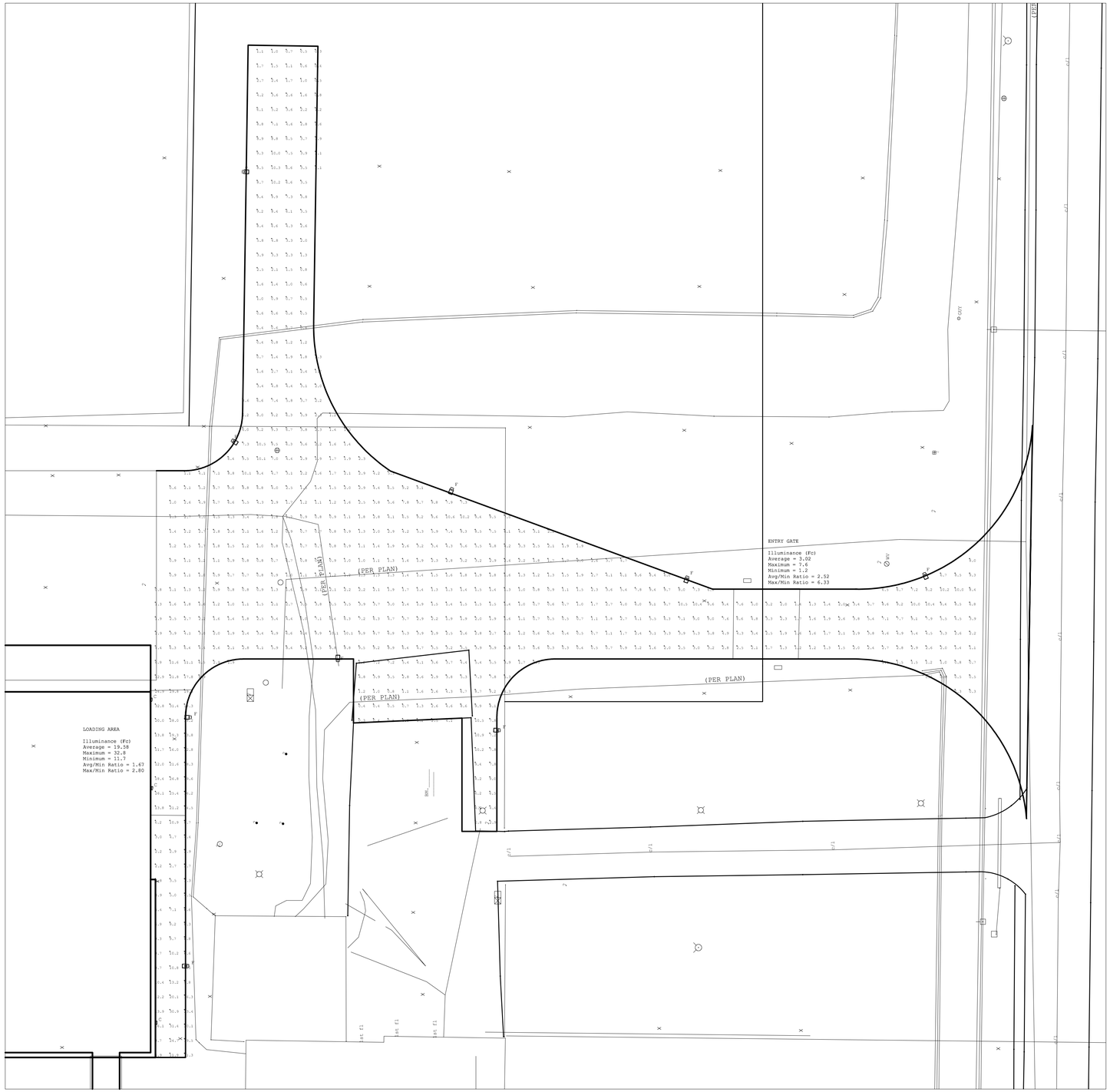
Jacobs

CT TANK
ARCHITECTURAL
SOUTH AND WEST ELEVATIONS

AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MARCH 2025
PROJ	C9X43300
DWG	40-A-3002
SHEET	137 of 157

90%



Luminaire Schedule						
Symbol	Qty	Label	Description	Tag	Luminaire Lumens	Luminaire Watts
	9	MGLEDM P14 5K MR	MGLEDM P14 5K MR	F	16056	105
	3	TWH LED ALO 50K T3M	TWH LED ALO 50K T3M	C	9213	78

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
roadway	Illuminance	Fc	4.68	32.8	0.3	15.60	109.33
ENTRY GATE	Illuminance	Fc	3.02	7.6	1.2	2.52	6.33
LOADING AREA	Illuminance	Fc	19.58	32.8	11.7	1.67	2.80

NO.	DATE	DR
DSGN	A. YOUNGBERG	

BY	APVD

APVD

OAK CREEK WATER AND SEWER UTILITY
UNDERGROUND FACILITIES
REHABILITATION
CITY OF OAK CREEK, WISCONSIN

Jacobs

ELECTRICAL
SITE PLAN
PHOTOMETRIC CALCULATIONS

VERIFY SCALE

NOT TO SCALE

DATE	JUNE 3, 2025
PROJ	C9X43300
DWG	LTG CALC-01
SHEET	1 of 1