



Planning & Development Division
Planning & Economic Development Department

Room 160
 411 West First Street
 Duluth, Minnesota 55802

218-730-5580
 planning@duluthmn.gov

File Number	PLSUP-2501-0015		Contact	Chris Lee, clee@duluthmn.gov	
Type	Special Use Permit – Water Pumping Station		Planning Commission Date	March 11, 2025	
Deadline for Action	Application Date	January 28, 2025	60 Days	March 29 2025	
	Date Extension Letter Mailed	February 14, 2025	120 Days	May 28, 2025	
Location of Subject	408 N 34 th Ave E				
Applicant	City of Duluth		Contact		
Agent	Lakehead Constructors		Contact	Robert Mackereth	
Legal Description	PID: 010-2710-03610				
Site Visit Date	February 23, 2025		Sign Notice Date	February 21, 2025	
Neighbor Letter Date	February 23, 2025		Number of Letters Sent	36	

Proposal

A Special Use Permit to construct a new structure to house a water pumping booster station for the City of Duluth.

Recommended Action: Approve with conditions.

	Current Zoning	Existing Land Use	Future Land Use Map Designation
Subject	R-1	Public Utilities	Traditional Neighborhood
North	R-1	Residential	Traditional Neighborhood
South	R-1	Public Utilities	Traditional Neighborhood
East	R-1	Residential	Traditional Neighborhood
West	R-1	Residential	Traditional Neighborhood

Summary of Code Requirements

UDC Section 50-37.10. Special Use Permits. The Planning Commission shall approve the application or approve it with modifications if the commission determines that the application meets the following criteria: 1. The application is consistent with the Comprehensive Land Use Plan; 2. The application complies with all applicable provisions of this Chapter, including without limitation any use-specific standards applicable to the proposed use, development or redevelopment, and is consistent with any approved district plan for the area; 3. Without limiting the previous criteria, the commission may deny any application that would result in a random pattern of development with little contiguity to existing or programmed development or would cause anticipated negative fiscal or environmental impacts on the community.

Comprehensive Plan Governing Principles and/or Policies and Current History (if applicable):

Governing Principle # 1- Reusing of previously developed lands: this proposal is utilizing existing developed lands for improved utilities resilience.

Governing Principle #12 - Create efficiencies in delivery of public services: this proposal is adding capacity to improve utility access for the City.

Future Land Use – Traditional Neighborhood: Characterized by grid or connected street pattern, houses oriented with shorter dimension to the street and detached garages, some with alleys. Limited commercial, schools, churches, and home businesses. Parks and open space areas are scattered through or adjacent to the neighborhood.

History: The property is currently a water pumping booster station that was constructed in 1914.

Review and Discussion Items

Staff finds that:

1. The applicant is proposing to construct a new 1,591 square foot water pumping booster station. The structure will be a single story with a maximum height at the parapet of 22 feet.
2. Th existing booster station will be demolished and the site of the old booster station will be restored to vegetation. As demonstrated with the governing principles above as well as the future land use of Traditional Neighborhood, this proposal meets the goals of the comprehensive plan.
3. UDC Sec. 50-24 (Parking and loading). The site plan indicates a parking pad that can accommodate 3 vehicles.
4. UDC Sec. 50-25 (Landscaping and Tree Preservation). The applicant is not proposing any trees or shrubs as there is extensive underground infrastructure. The disturbed soils and removed structure will be replaced with grass.
5. UDC Sec. 50-26 (Screening, Walls and Fences). No commercial containers or fencing is being installed. The plans indicate the rooftop vents will be screened with parapets and not be visible from the street.
6. UDC Sec. 50-29 (Sustainability Standards). Does not apply as the structure is under 10,000 square feet.
7. UDC Sec. 50-30 (Building Design Standards). The proposed structure meets these requirements for wall articulations, roof design, and glazing.
8. UDC Sec. 50-31 (Exterior Lighting). Building mounted LED lighting appears to be appropriate with downcast fixtures. This will be verified at the time of building permit application.
9. As demonstrated by the above findings, this proposal meets all application provisions of the UDC.
10. The proposed pump house will not result in a random pattern of development or have anticipated negative fiscal or environmental impacts.
11. No City, agency, or public comments have been received.
12. Per UDC 50-37.1.N, an approved Planning Review will expire if the project or activity authorized is not begun within one year, which may be extended for one additional year at the discretion of the Land Use Supervisor.

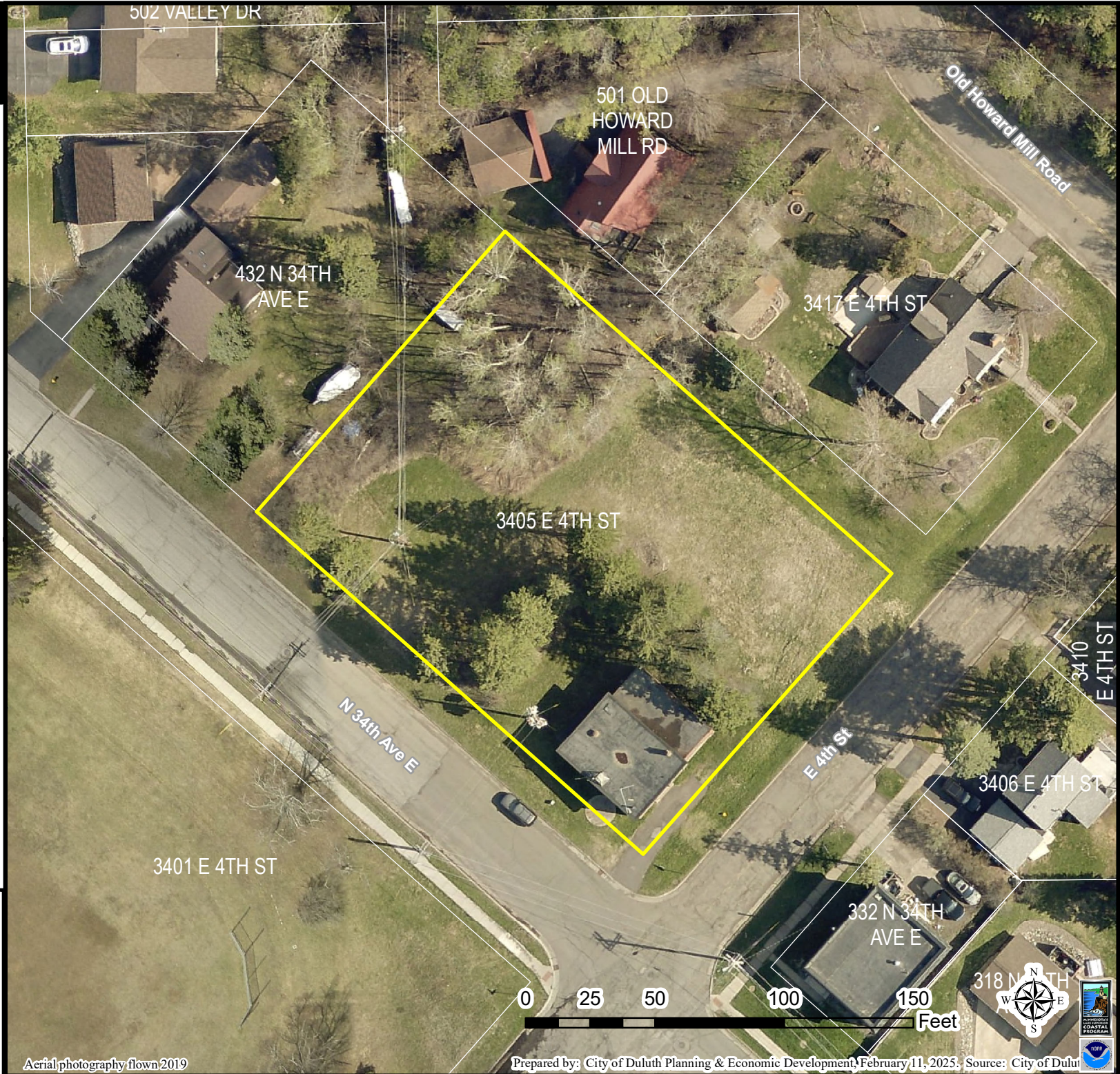
Staff Recommendation

Based on the above findings, staff recommends that Planning Commission approve the Special Use Permit with the following conditions:

1. The project be limited, constructed, and maintained consistent with plans submitted and included in this report.
2. Exterior lighting will meet all zoning requirements; applicant shall provide a lighting plan at the time of building permit application to confirm compliance with these requirements.
3. Any alterations to the approved plans that do not alter major elements of the plan may be approved by the Land Use Supervisor without further Planning Commission approval; however, no such administrative approval shall constitute a variance from the provisions of Chapter 50.



PLSUP-2501-0015
 Special Use Permit
 3405 E 4th St



The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained within.

Aerial photography flown 2019

Prepared by: City of Duluth Planning & Economic Development, February 11, 2025. Source: City of Duluth



NOTES:
 1. THESE IMAGES ARE CONCEPTUAL AND FOR GENERAL REFERENCE - SEE DRAWINGS FOR ALL DESIGN AND DETAILING.
 2. FINAL COLOR SELECTION TO BE DETERMINED.

Construction Services & Inspections
 Reviewed For Code Compliance
 MSBC 2020
 Kaleb Montgomery 12/02/2024

PROJECT DATE:	DRAWN BY:	No	DATE	REVISIONS	BY
FEBRUARY 26, 2024	MAM/JFG				
	DESIGNED BY: AJS				
	CHECKED BY: Checker				

HEREBY CERTIFY THAT THIS PLAN, REPORT, OR SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. DATE: FEBRUARY 26, 2024

ENGINEER: ALLEN J. SZYMANSKI
 LICENSE # 204026

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WOODLAND BOOSTER STATION IMPROVEMENTS
 CITY OF DULUTH
 ST. LOUIS COUNTY, MINNESOTA

BOOSTER STATION - ARCHITECTURAL PERSPECTIVE

PROJECT NO.
00616177
 SHEET
30-A100

PLOT DATE: 2/23/2024 11:42:40 AM - Address: C:\Users\mami\OneDrive\Documents\8202 - Duluth Woodland Pump Station\8202_PUMP_STATION_ARCH_PERS.rvt

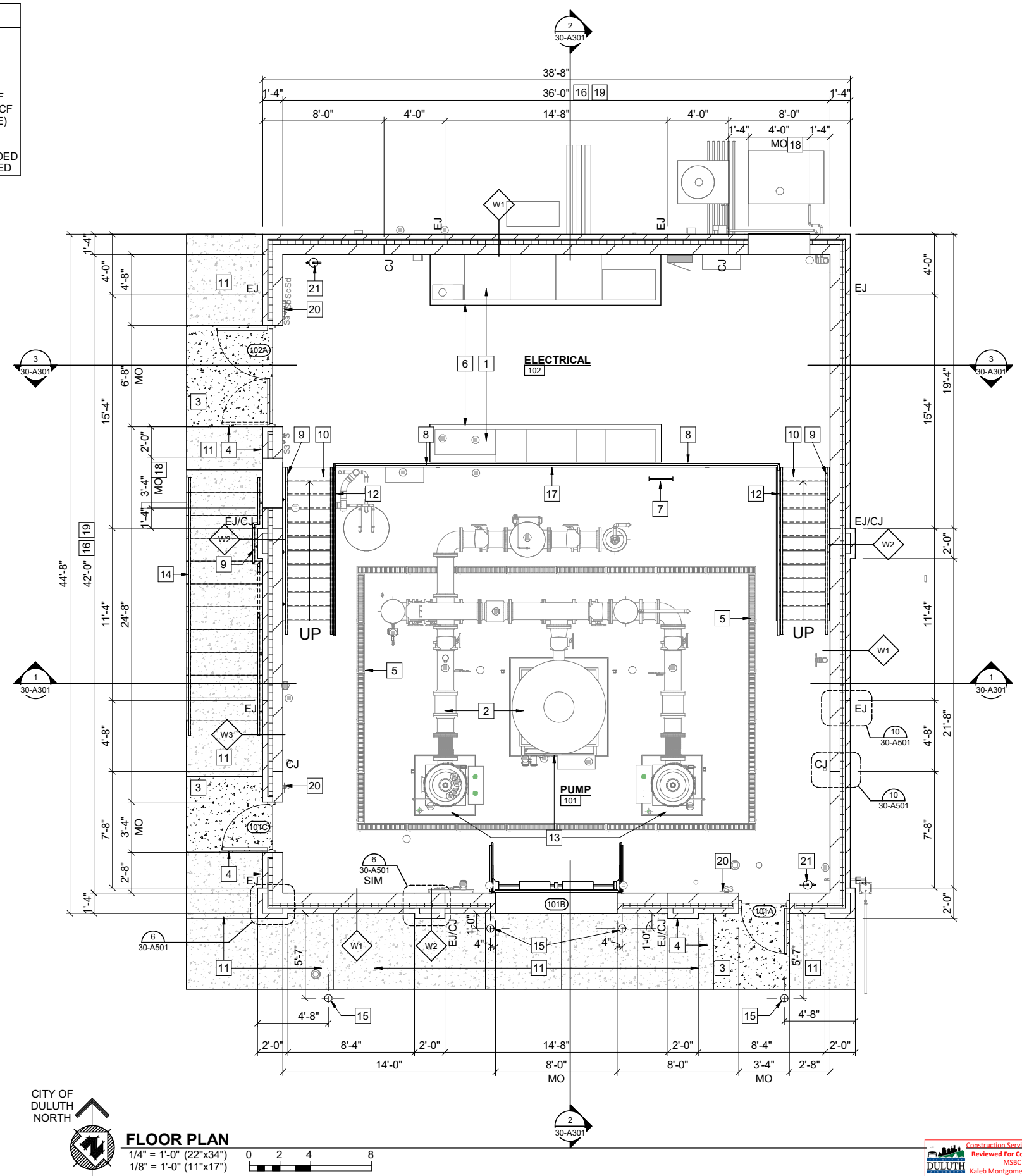
GENERAL NOTES

- A. ALL DIMENSIONING IS TO FACE OF CONCRETE MASONRY UNIT OR CONCRETE.
- B. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ARCHITECT BEFORE CONTINUING WITH CONSTRUCTION.
- C. THE CONTRACT DOCUMENTS CONSIST OF THE SPECIFICATION MANUAL AND DRAWINGS WHICH ARE INTENDED TO BE COMPLEMENTARY AND TO BE USED IN CONJUNCTION WITH ONE ANOTHER.
- D. IF DISCREPANCIES OCCUR BETWEEN THE SPECIFICATION MANUAL AND THE DRAWINGS, NOTIFY THE ARCHITECT FOR A RESOLUTION.
- E. EXTERIOR WALL AND RELATED OPENINGS BY ALL TRADES SHALL BE FLASHED AND CAULKED BY THE GC. ALL ROOFING PENETRATIONS SHALL BE FLASHED BY THE ROOFING CONTRACTOR.
- F. OPENINGS FOR PLUMBING, PROCESS, VENTILATING, AND ELECTRICAL WORK IN WALLS, FLOORS, CEILINGS, AND ROOF SHALL BE PROVIDED BY THE GC. LOCATION AND SIZE SHALL BE THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTORS.
- G. CONTRACTOR TO COORDINATE STRUCTURAL, ARCHITECTURAL, HVAC, AND PLUMBING PLANS FOR DETAILS, DIMENSIONS, ELEVATIONS, OPENINGS, INSERTS, ETC. NOTIFY ARCHITECT OF ANY VARIANCE BEFORE COMMENCING CONSTRUCTION.
- H. IN NO CASE SHALL STRUCTURAL ALTERATIONS OR WORK AFFECTING A STRUCTURAL MEMBER BE MADE, UNLESS APPROVED BY THE ENGINEER.
- I. GENERAL CONTRACTOR SHALL PROVIDE ALL CONCRETE EQUIPMENT HOUSEKEEPING PADS INSIDE THE BUILDING AS INDICATED ON THE PLUMBING, PROCESS MECHANICAL, HVAC, AND ELECTRICAL DRAWINGS.
- J. ALL PIPE AND CONDUIT PENETRATIONS THROUGH EXTERIOR WALLS SHALL BE PER DETAIL 2/30-A503. CONDUIT MAY BE GROUTED SOLID IN LIEU OF PERIMETER SEALANT. PIPES SHALL BE SEALED ON BOTH SIDES.
- K. ALL NEW EXPOSED ANCHORS, PIPING, CONDUIT, DUCTWORK, INSULATION (WITHOUT FINISHED JACKET), HANGERS, BRACKETS, SUPPORTS, FASTENERS, ETC. SHALL BE PAINTED, INTERIOR AND EXTERIOR, UNO.

KEY NOTES #

- 1 ELECTRICAL PANEL LOCATION - SEE ELECTRICAL
- 2 PROCESS EQUIPMENT OR PIPING, TYP - SEE PROCESS MECHANICAL
- 3 CONCRETE STOOP - SEE FOUNDATION PLAN
- 4 1/2" EXPANSION JOINT MATERIALS w/ REMOVABLE CAP AND SELD-LEVELING SEALANT BETWEEN SIDWALK, BUILDING AND STOOP FOUNDATION, TYP
- 5 TRENCH DRAIN - SEE PLUMBING
- 6 3 1/2" HIGH CONCRETE HOUSEKEEPING PAD BY GC FOR ELECTRICAL EQUIPMENT. PROVIDE 6x6-W2.9xW2.9 WWM AND RADIUS TOOLED EXPOSED EDGES. PAD TO BE 4" BEYOND FACE AND EXPOSED END OF ELECTRICAL EQUIPMENT, UNO. VERIFY FINAL SIZE REQUIRED w/ ELECTRICAL
- 7 ROOF ACCESS LADDER - SEE DETAIL 3/30-A503
- 8 GUARDRAIL w/ TOE PLATE - SEE DETAIL 9/30-A503
- 9 WALL MOUNTED HANDRAIL - SEE DETAIL 7/30-A503
- 10 STEEL STAIR - SEE DETAIL 6/30-A503
- 11 CONCRETE SIDEWALK w/ BROOM FINISH AND TOOLED CONTROL JOINTS AS SHOWN OVER MIN 6" COMPACTED GRANULAR FILL. SLOPE AWAY FROM BUILDING. CROSS SLOPE MAX 1:50. RUNNING SLOPE MAX 1:20. SEE SITE/CIVIL
- 12 GUARDRAIL w/ HANDRAIL - SEE DETAIL 8/30-A503
- 13 RAISED CONCRETE EQUIPMENT PAD - SEE PRECESS MECHANICAL AND STRUCTURAL
- 14 TOP MOUNTED HANDRAIL - SEE SHEET 05-C511
- 15 PIPE BOLLARD - SEE SITE/CIVIL
- 16 PAINT ALL INTERIOR CMU WALLS - FULL HEIGHT
- 17 PAINT CONCRETE WALL - FULL HEIGHT - WALL TO WALL
- 18 MASONRY OPENING FOR LOUVER - SEE DETAIL 9/30-A502
- 19 PAINT ENTIRE EXPOSED UNDERSIDE OF ROOF STRUCTURE INCLUDING STEEL JOISTS, METAL DECK AND MISC FRAMING AND BRIDGING COMPLETE.
- 20 WALL MOUNTED TACTILE "EXIT" SIGN - SEE DETAIL 1/30-A503
- 21 FIRE EXTINGUISHER w/ WALL BRACKET, TOP AT 48" AFF

CODE SUMMARY	
2020 MINNESOTA STATE BUILDING CODE	
ICC CODE	2020
OCCUPANCY CLASSIFICATION	F-2
CONSTRUCTION TYPE	VB
STORIES/ LEVELS	1
BUILDING AREA	1,727 SF
BUILDING VOLUME	25,000 > X < 50,000 CF
OCCUPANT LOAD (OL)	6 (CODE)
REQUIRED EXITS	1
EXIT DISTANCE	75 FT
SPRINKLERS SYSTEM	NONE REQUIRED OR PROVIDED
BUILDING IS MECHANICAL SPACE ONLY - NOT OCCUPIED	

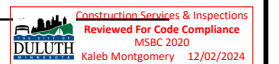


FLOOR PLAN

1/4" = 1'-0" (22"x34")
 1/8" = 1'-0" (11"x17")

WOODLAND BOOSTER STATION IMPROVEMENTS
 CITY OF DULUTH
 ST. LOUIS COUNTY, MINNESOTA

BOOSTER STATION - ARCHITECTURAL
FLOOR PLAN



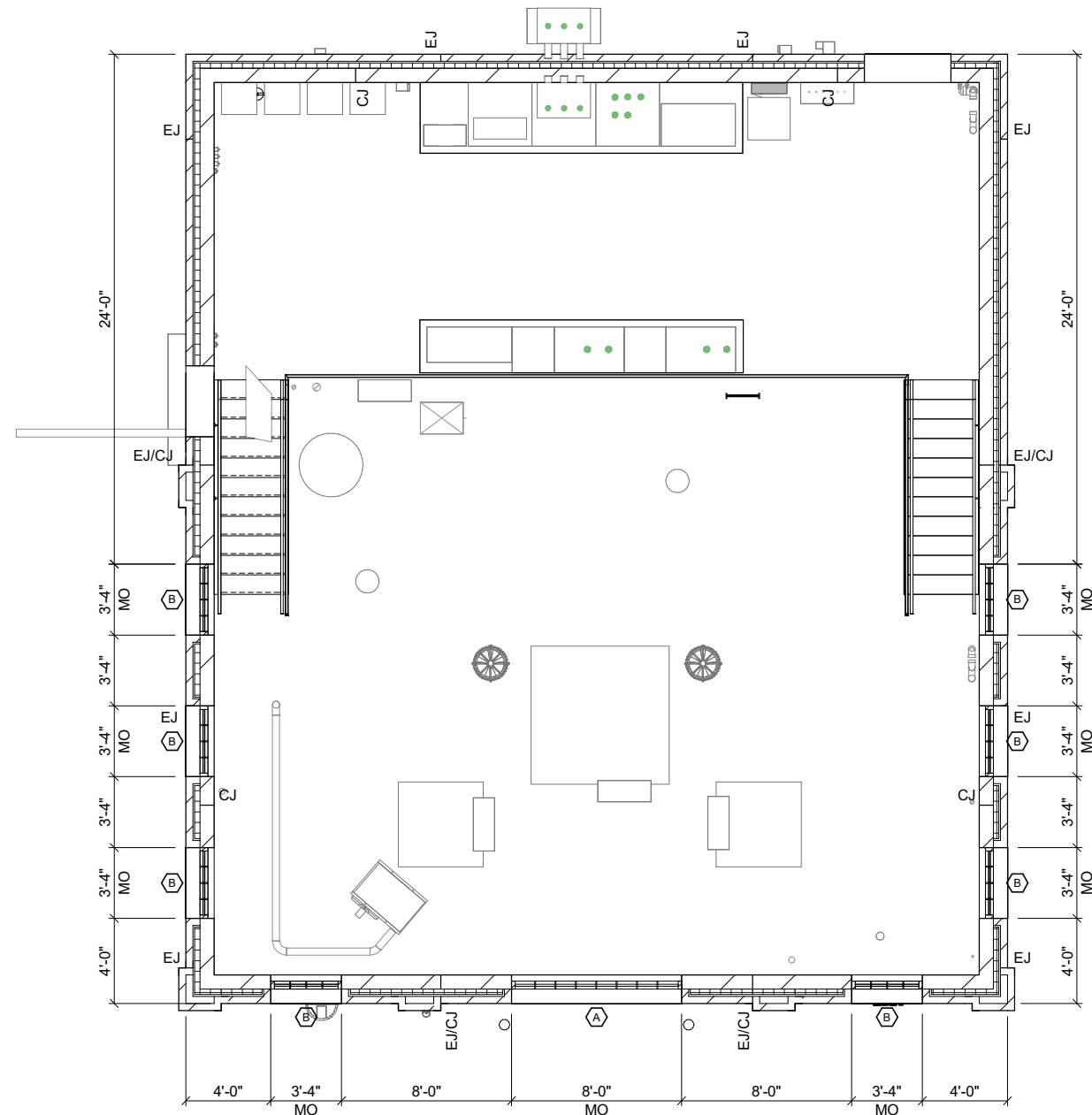
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FEBRUARY 26, 2024	MAM/JFG				
	DESIGNED BY: AJS				
	CHECKED BY: SC				

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PROJECT NO.
00616177
 SHEET
30-A101

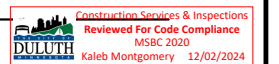


CITY OF DULUTH NORTH



CLEARSTORY PLAN

1/4" = 1'-0" (22"x34")
 1/8" = 1'-0" (11"x17")



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PROJECT DATE:	DRAWN BY:	No	DATE	REVISIONS	BY
FEBRUARY 26, 2024	MAM/JFG				
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**BOOSTER STATION - ARCHITECTURAL
 CLEARSTORY PLAN**

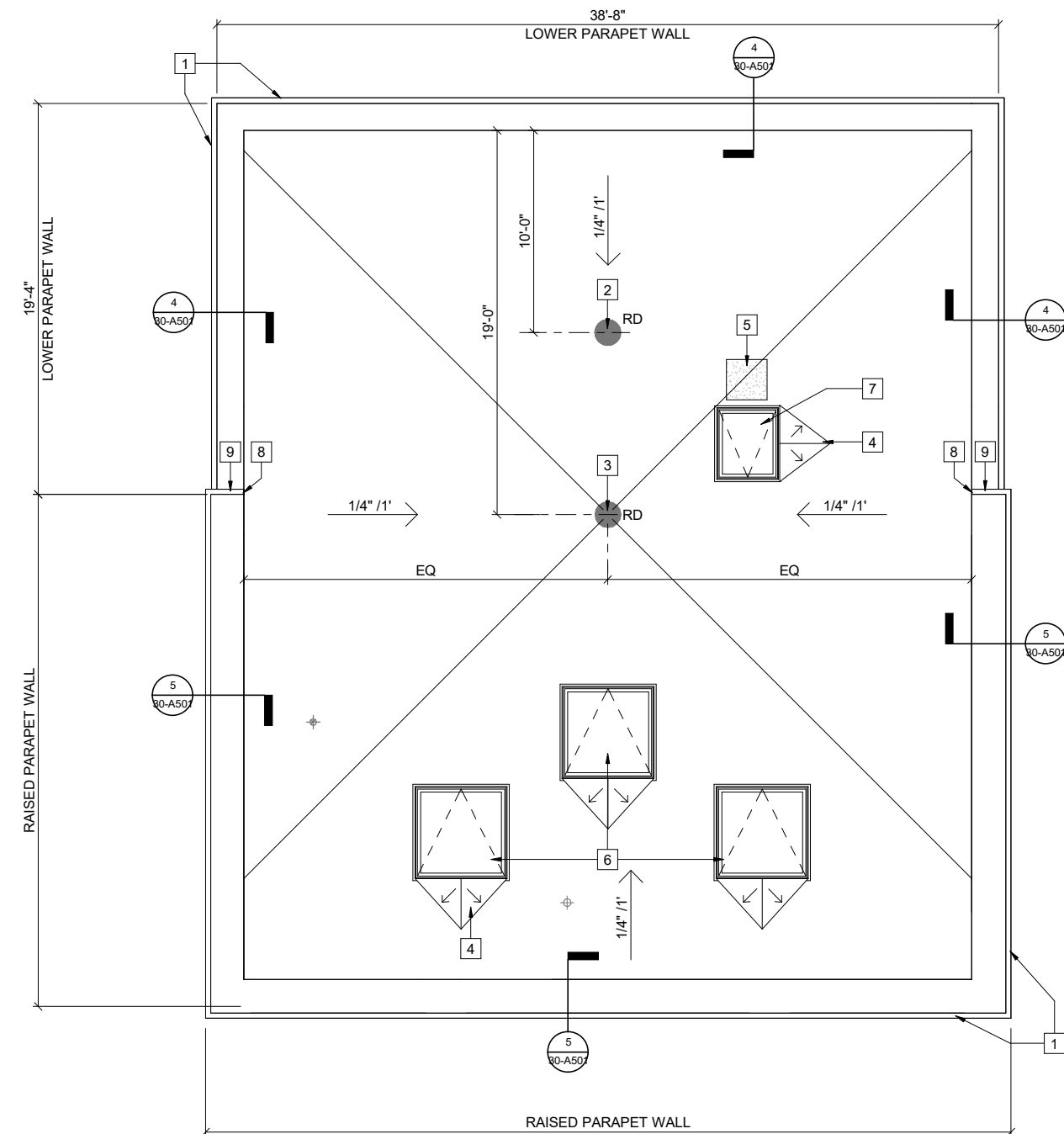
PROJECT NO.
00616177
 SHEET
30-A102

KEY NOTES #

- 1 PREFINISHED ROOF EDGE/FASCIA, TYP
- 2 OVERFLOW ROOF DRAIN - SEE DETAIL 3/30-A501
- 3 ROOF DRAIN - SEE DETAIL 3/30-A501
- 4 ROOF SADDLE 1/2 INCH PER FOOT TAPERED ISO INSULATION WITH 1/2 INCH EDGE THICKNESS, TYP - BY ROOFING CONTRACTOR
- 5 WALKING PAD BY ROOFING MANUFACTURER, TYP
- 6 EQUIPMENT ACCESS HATCH, SHALL BE CENTERED OVER PUMPS AND TANK - SEE DETAIL 2/30-A501 SIM
- 7 ROOF ACCESS HATCH - SEE DETAIL 2/30-A501
- 8 METAL FASCIA END CAP
- 9 PREFINISHED METAL FASCIA TO WRAP PARAPET - SEE DETAIL 7/30-A501

FULLY ADHERED MEMBRANE ROOFING SYSTEM

- FULLY ADHERED 60 MIL EPDM MEMBRANE ROOF SYSTEM
- 2 INCH FLAT POLYISO INSULATION BOARD
- 1/4 INCH PER FOOT FOUR WAY TAPERED POLYISO INSULATION WITH 1/2 INCH EDGE THICKNESS AT THE RD
- 2 INCH FLAT POLYISO INSULATION BOARD
- VAPOR RETARDER
- STEEL ROOF DECK - SEE STRUCTURAL

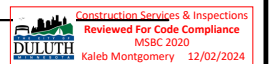


CITY OF DULUTH NORTH



ROOF PLAN

1/4" = 1'-0" (22"x34")
 1/8" = 1'-0" (11"x17")



PLOT DATE: 2/23/2024 11:42:48 AM ... Addendum 0001 (0001) 17 - Duluth Wastewater Pump Station Improvements - DULUTH WOODLAND PUMP STATION - ARCH - R21-14

PROJECT DATE:	DRAWN BY:	No	DATE	REVISIONS	BY
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	DESIGNED BY: AJS				
	CHECKED BY: Checker				

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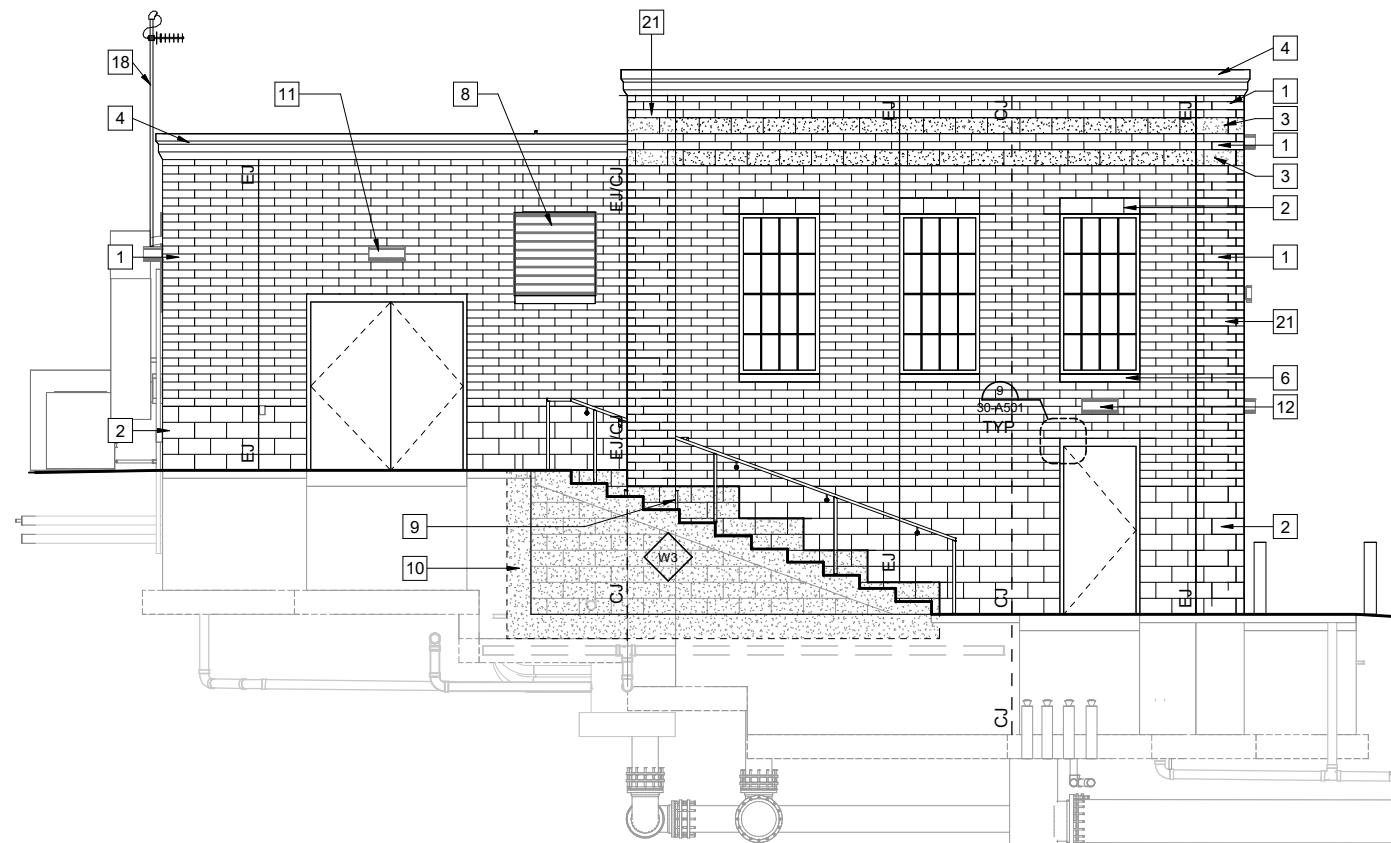
BOOSTER STATION - ARCHITECTURAL ROOF PLAN

PROJECT NO. 00616177
SHEET 30-A103

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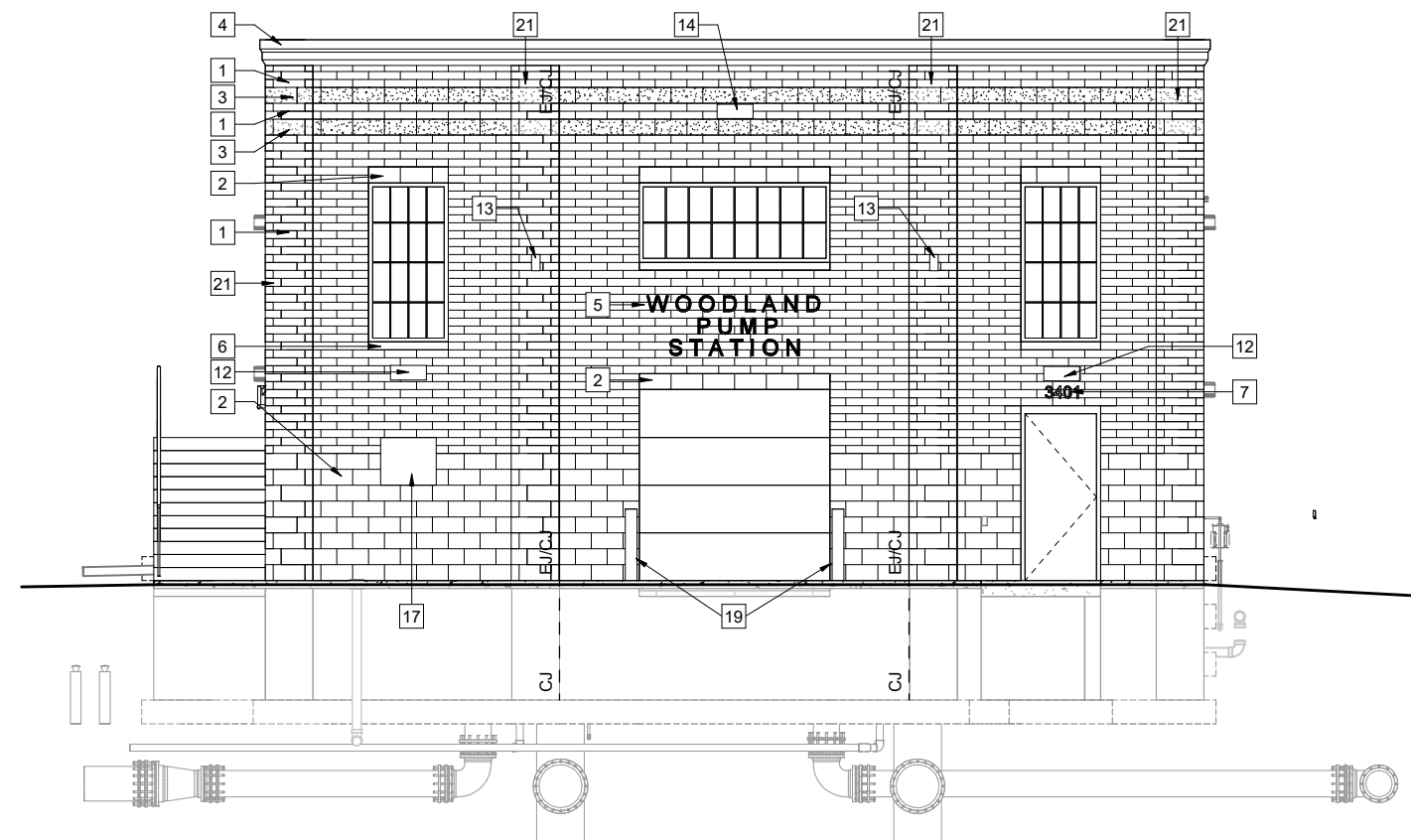
KEY NOTES #

- 1 4" HIGH BRICK - TYPE A, 4"x4"x16"
- 2 8" HIGH BRICK - TYPE B, 4"x8"x16"
- 3 8" HIGH BRICK - TYPE C, 4"x8"x16"
- 4 PREFINISHED ROOF EDGE/FASCIA, TYP
- 5 8" HIGH LETTERS - CENTER IN BRICK ABOVE OVERHEAD DOOR
- 6 CAST STONE SILL, TYP
- 7 6" HIGH ADDRESS NUMBERS - VERIFY FINAL NUMBER WITH OWNER - CENTER ABOVE WALK DOOR
- 8 PREFINISHED LOUVER - SEE HVAC
- 9 PAINT EXPOSED CMU
- 10 EXTENT OF SHEET MEMBRANE WATER PROOFING
- 11 PREFINISHED LIGHT FIXTURE, TYP - SEE ELECTRICAL. MOUNT CENTER OF LIGHT AT 8'-8" AFF, CENTERED OVER DOOR
- 12 PREFINISHED LIGHT FIXTURE, TYP - SEE ELECTRICAL. MOUNT CENTER OF LIGHT AT 8'-8" AFF, CENTERED BELOW WINDOW
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- 17 DEDICATION PLAQUE - FURNISHED BY OWNER. INSTALLED BY CONTRACTOR.
- 18 ANTENNA, PIPE MAST, MOUNTING BRACKETS AND CABLE BY ELECTRICAL - SEE ELECTRICAL. PAINT PIPE AND BRACKETS, TYP
- 19 PIPE BOLLARD - SEE SITE/CIVIL. PAINT, TYP
- 20 GAS METER AND PIPING - PAINT
- 21 SEE DETAIL 11/30-A503 FOR MASONRY LAYOUT AT PIERS AND CORNER PIERS.



WEST EXTERIOR BUILDING ELEVATION

1/4" = 1'-0" (22"x34")
1/8" = 1'-0" (11"x17")



SOUTH EXTERIOR BUILDING ELEVATION

1/4" = 1'-0" (22"x34")
1/8" = 1'-0" (11"x17")

PLOT DATE: 2/23/2024 11:42:43 AM. Addendum: 00616177 - Duluth Woodland Water Pump Station Improvements - DULUTH WOODLAND PUMP STATION, MSJC, RD174

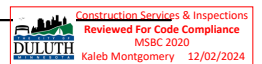
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FEBRUARY 26, 2024	MAM/JFG	AJS	Checker			

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WOODLAND BOOSTER STATION IMPROVEMENTS
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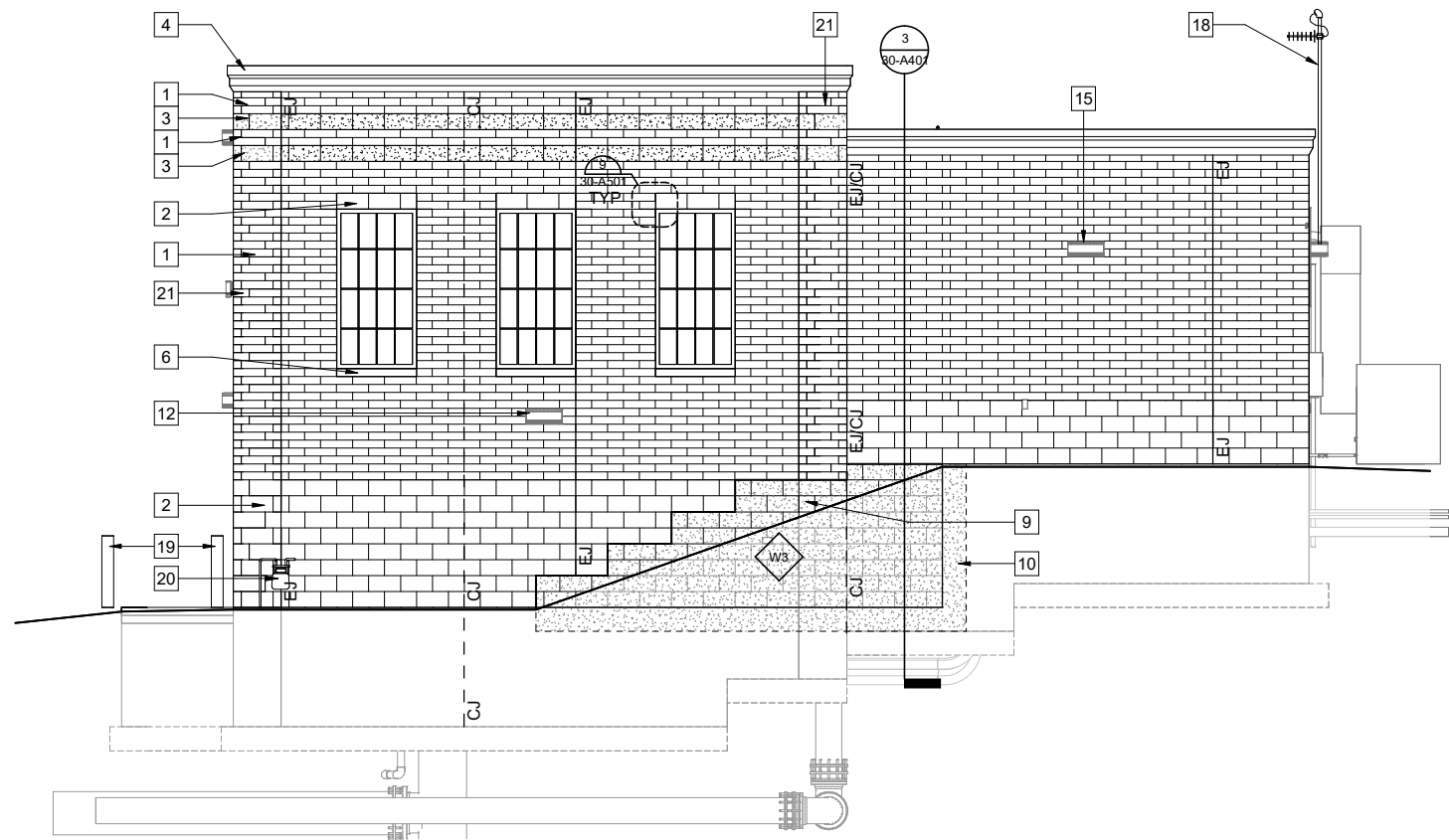
BOOSTER STATION - ARCHITECTURAL EXTERIOR ELEVATIONS



PROJECT NO.
00616177
SHEET
30-A201

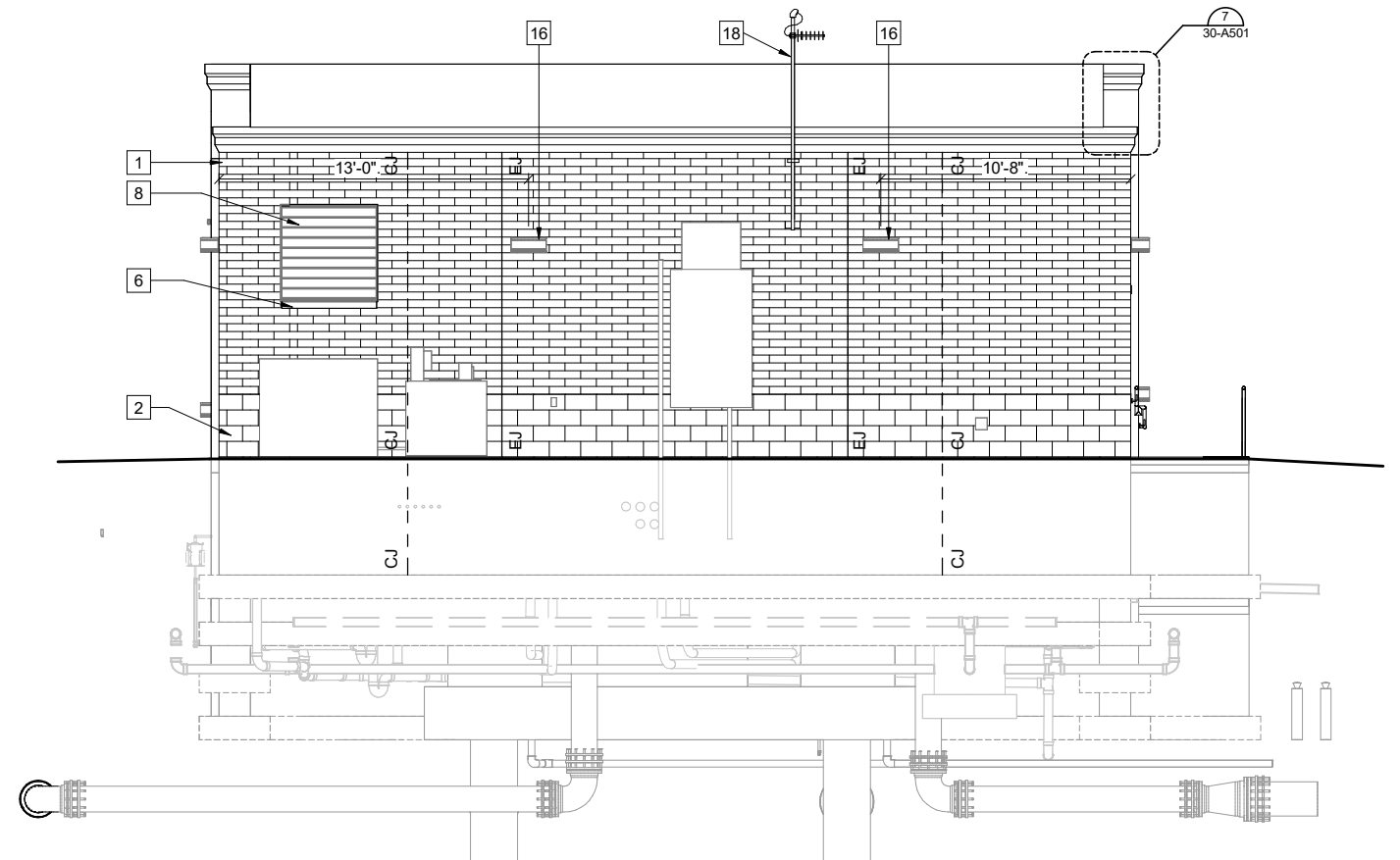
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EAST EXTERIOR BUILDING ELEVATION

1/4" = 1'-0" (22"x34")
1/8" = 1'-0" (11"x17")



NORTH EXTERIOR BUILDING ELEVATION

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PLOT DATE: 2/23/2024 11:42:52 AM - Addendum 001 to Woodland Pump Station - Duluth Woodland Pump Station - R23-14

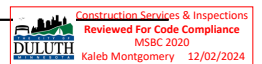
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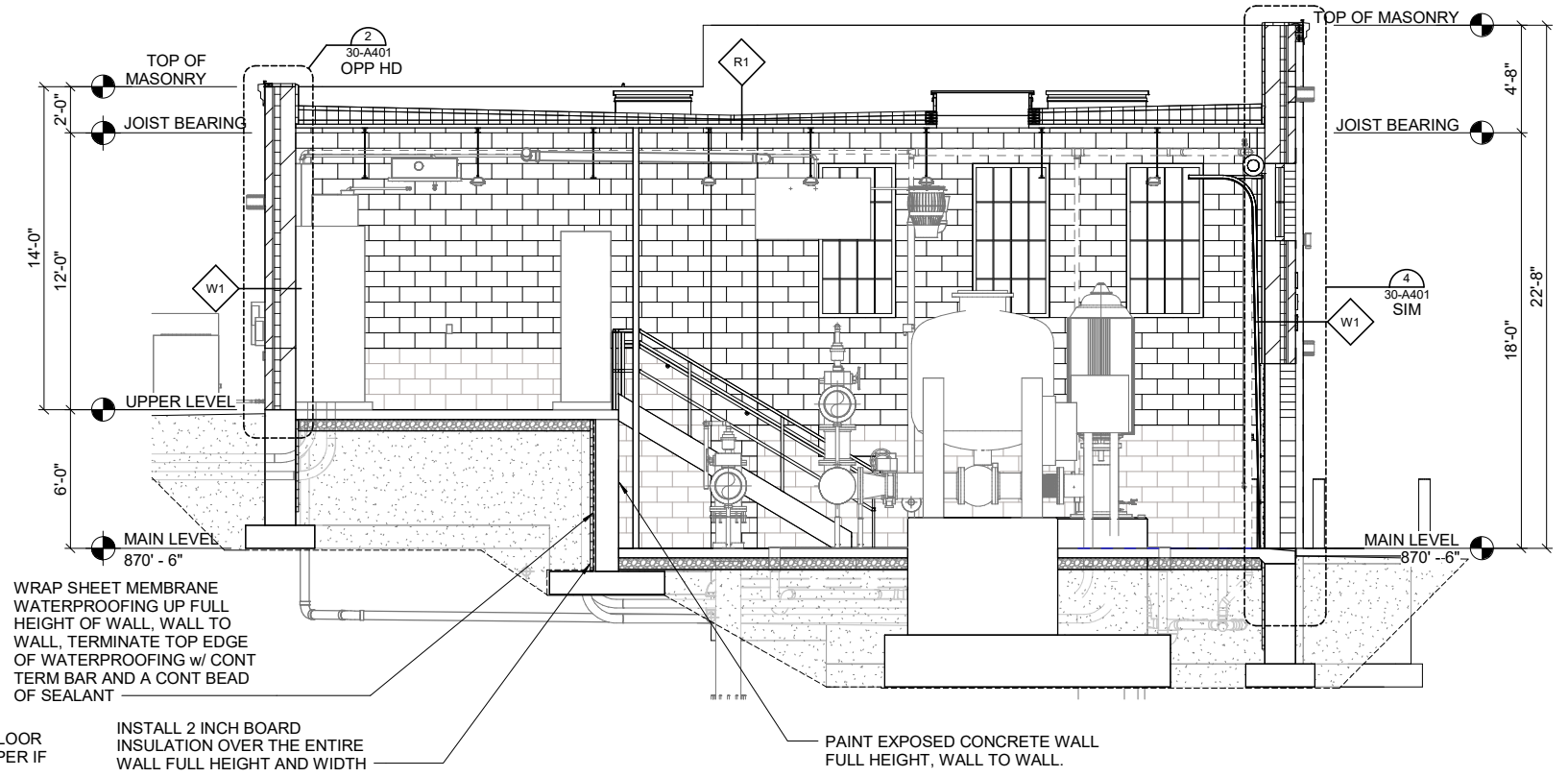
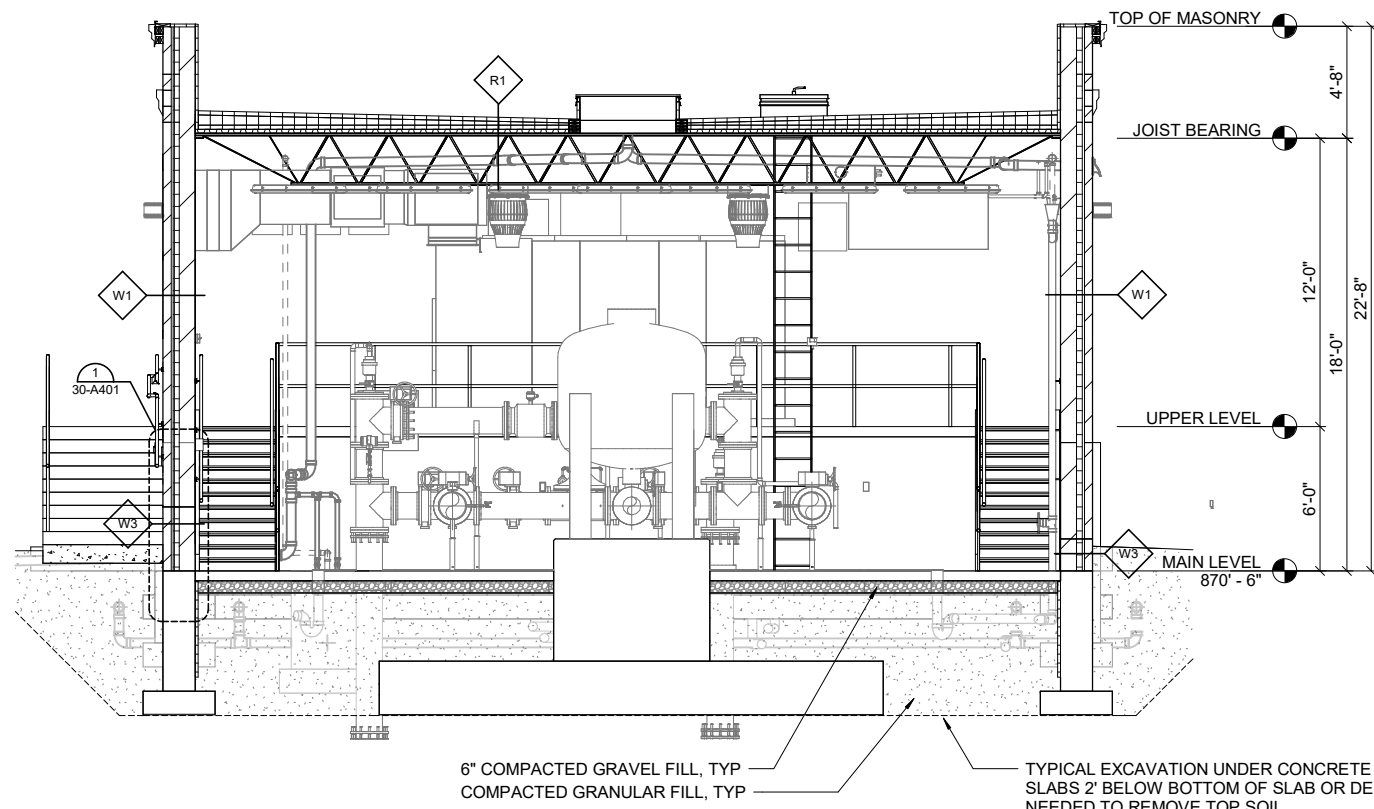
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WOODLAND BOOSTER STATION IMPROVEMENTS
 CITY OF DULUTH
 ST. LOUIS COUNTY, MINNESOTA

BOOSTER STATION - ARCHITECTURAL EXTERIOR ELEVATIONS



PROJECT NO.
00616177
SHEET
30-A202



WRAP SHEET MEMBRANE WATERPROOFING UP FULL HEIGHT OF WALL, WALL TO WALL, TERMINATE TOP EDGE OF WATERPROOFING w/ CONT TERM BAR AND A CONT BEAD OF SEALANT

INSTALL 2 INCH BOARD INSULATION OVER THE ENTIRE WALL FULL HEIGHT AND WIDTH

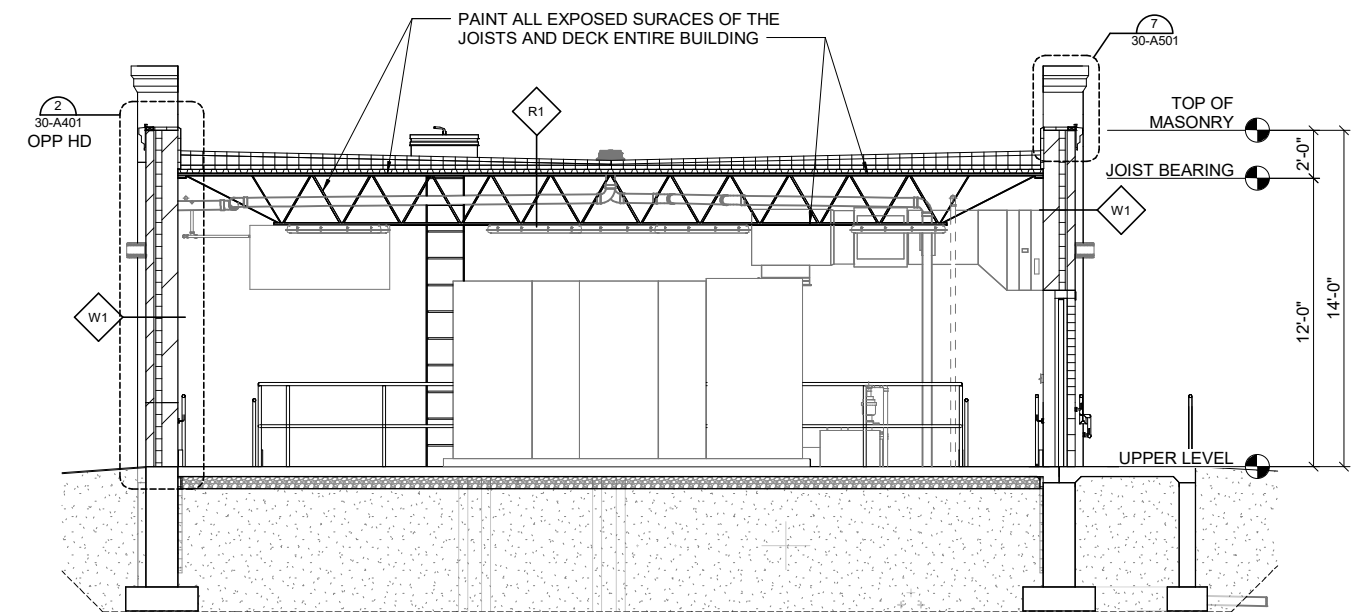
PAINT EXPOSED CONCRETE WALL FULL HEIGHT, WALL TO WALL.

1 BUILDING SECTION

30-A301 1/4" = 1'-0" (22" x 34") 0 2 4 8
1/8" = 1'-0" (11" x 17")

2 BUILDING SECTION

30-A301 1/4" = 1'-0" (22" x 34") 0 2 4 8
1/8" = 1'-0" (11" x 17")



PAINT ALL EXPOSED SURFACES OF THE JOISTS AND DECK ENTIRE BUILDING

3 BUILDING SECTION

30-A301 1/4" = 1'-0" (22" x 34") 0 2 4 8
1/8" = 1'-0" (11" x 17")

PLOT DATE: 2/23/2024 11:45:56 AM ... Address: C:\Users\mami\OneDrive\Documents\8202 - Duluth Woodland Pump Station\8202_R03.rvt

PROJECT DATE:	DRAWN BY:	No.	DATE	REVISIONS	BY
FEBRUARY 26, 2024	MAM/JFG				
	DESIGNED BY: AJS				
	CHECKED BY: Checker				

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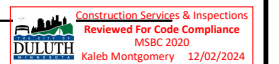


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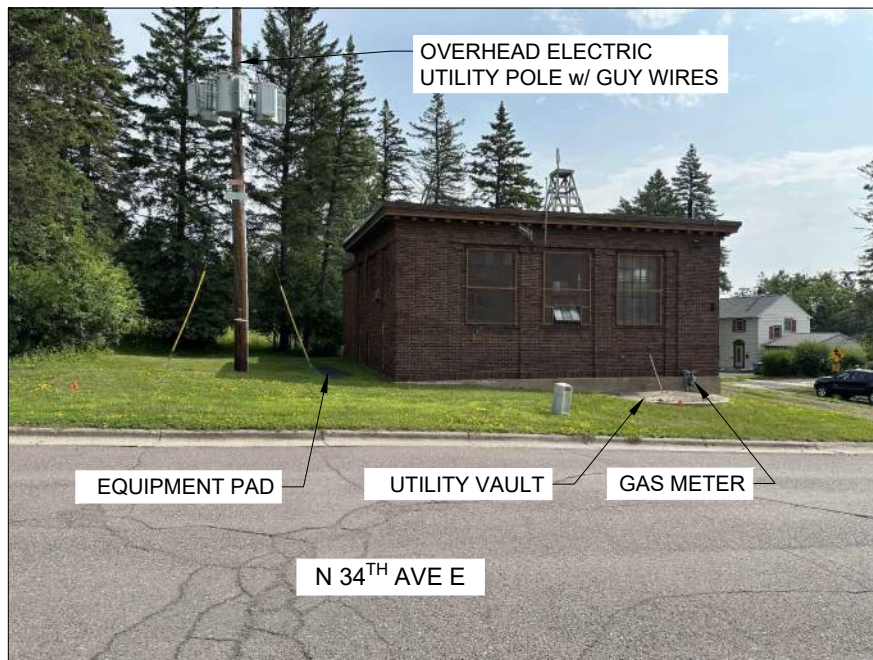
BOOSTER STATION - ARCHITECTURAL BUILDING SECTIONS

PROJECT NO.
00616177
SHEET
30-A301

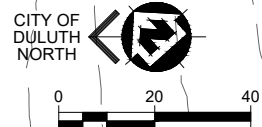
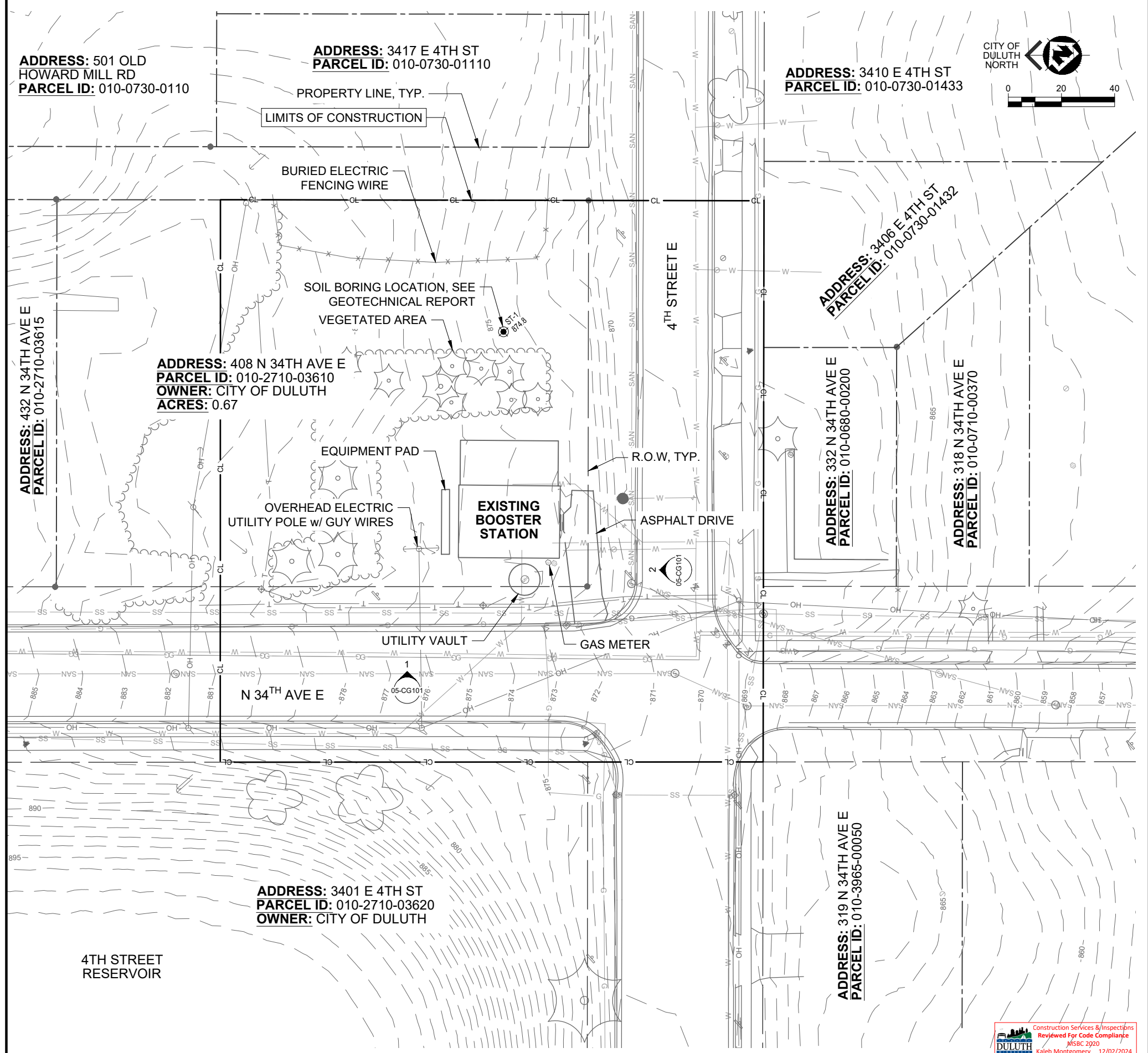




1 EXTERIOR WALL LOOKING NORTH
05-CG101 NO SCALE



2 EXTERIOR WALL LOOKING EAST
05-CG101 NO SCALE



PLOT DATE: 2/26/2024; 2:58 AM; C:\0001\0608\0177\CAD\Drawings\Drawings\05-CG101.dwg; P:\PROJECTS\010000177\05-CG101.dwg

PROJECT DATE:	FEBRUARY 26, 2024	DRAWN BY:	WT	---	---	---
DESIGNED BY:	JL	CHECKED BY:	SRC	---	---	---
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DATE:	FEBRUARY 26, 2024	ENGINEER:	SCOTT R. CHILSON	LICENSE #:	44297	<i>SCRC</i>

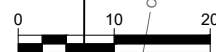
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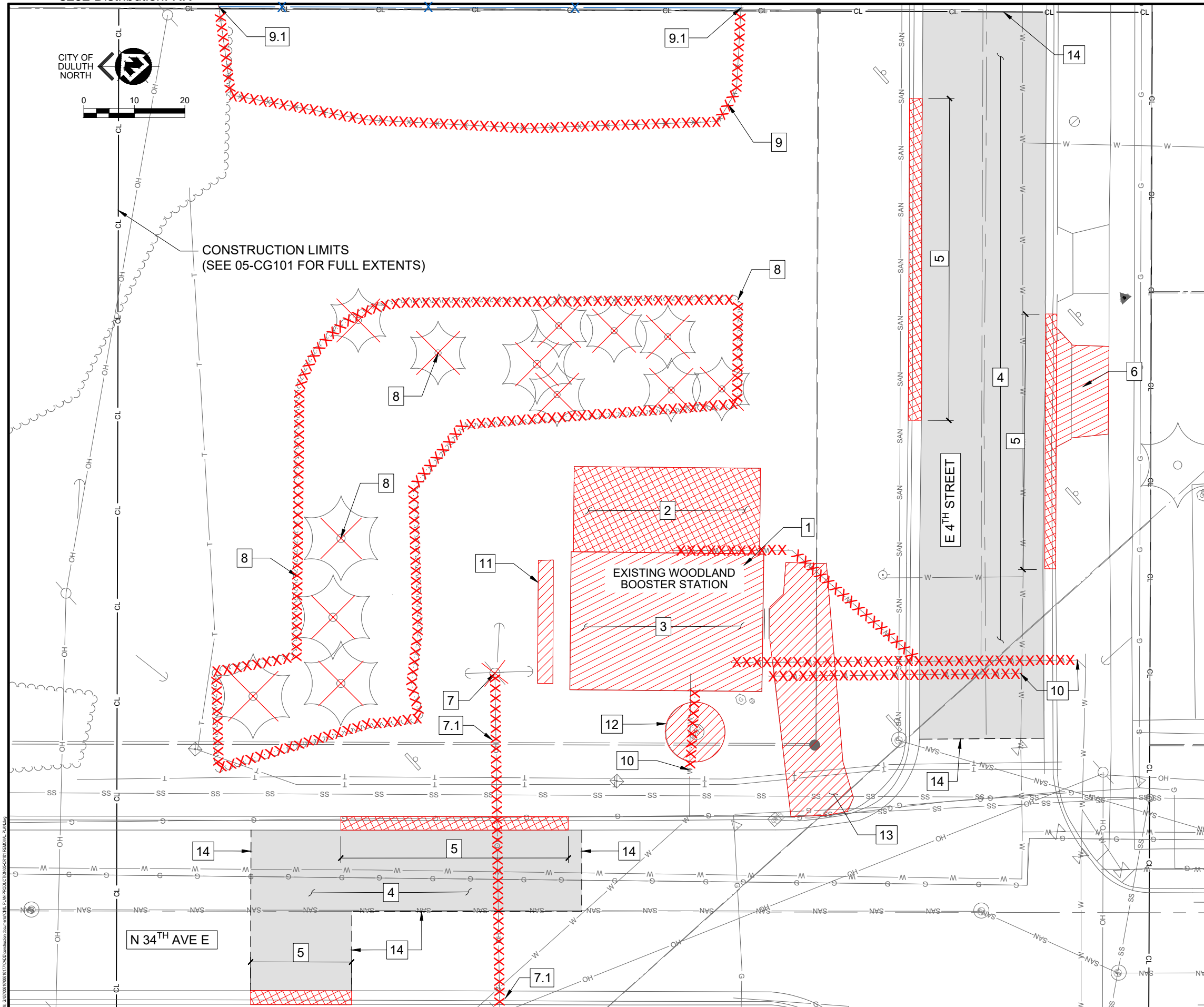
SITE-CIVIL EXISTING SITE PLAN

Construction Services & Inspections
Reviewed For Code Compliance
MSBC 2020
Kaleb Montgomery 12/02/2024

PROJECT NO.	00616177
SHEET	05-CG101



CONSTRUCTION LIMITS
(SEE 05-CG101 FOR FULL EXTENTS)



- KEY NOTES #**
- 1 EXISTING BOOSTER STATION SHALL REMAIN OPERATIONAL UNTIL NEW BOOSTER STATION IS COMMISSIONED AND PROVEN RELIABLE. WRITTEN APPROVAL FROM ENGINEER REQUIRED PRIOR TO DEMOLISHING.
 - 2 DEMOLISH ADDITION PORTION OF EXISTING BOOSTER STATION, INCLUDING STRUCTURE FOOTINGS, ONCE PROPOSED BOOSTER STATION IS IN OPERATION
 - 3 DEMOLISH ORIGINAL STRUCTURE OF EXISTING BOOSTER STATION, INCLUDING INTERIOR SLAB (ASSUME 24" SLAB THICKNESS) ONCE PROPOSED BOOSTER STATION IS IN OPERATION. FOUNDATION TO BE ABANDONED - SEE SHEET 20-RSA102.
 - 4 DEMOLISH AND REPLACE BITUMINOUS STREET RESTORATION FOR ALL PAVEMENT DISTURBANCE (SEE DETAIL STR-8/05-C510). GRADE TO MATCH EXISTING
 - 5 DEMOLISH AND REPLACE CONCRETE CURB & GUTTER (SEE DETAIL 5 & 6/05-C507). GRADE TO MATCH EXISTING
 - 6 DEMOLISH AND REPLACE CONCRETE APRON. GRADE TO MATCH EXISTING
 - 7 PROTECT & DEMOLISH POWER POLE ONCE PROPOSED BOOSTER STATION IS OPERATIONAL
 - 7.1 PROTECT & DEMOLISH OVERHEAD ELECTRIC UTILITY. COORDINATE DEMOLITION WITH MINNESOTA POWER
 - 8 DEMOLISH TREES & SHRUBS, CLEAR AND GRUB SITE (COMPLETE)
 - 9 COORDINATE WITH HOMEOWNER OF 3417 E 4TH STREET AND RELOCATE EXISTING UNDERGROUND ELECTRIC FENCE
 - 9.1 PROVIDE SPLICE BOX - 2 (REQUIRED)
 - 10 CAP AND ABANDON WATER LINES AFTER NEW BOOSTER STATION IS COMMISSIONED AND PROVEN RELIABLE. WRITTEN APPROVAL FROM ENGINEER PRIOR TO ABANDONMENT.
 - 11 DEMOLISH CONCRETE EQUIPMENT PAD
 - 12 DEMOLISH CONCRETE VAULT AFTER NEW BOOSTER STATION IS COMMISSIONED AND PROVEN RELIABLE
 - 13 DEMOLISH EXISTING BOOSTER STATION DRIVEWAY AFTER NEW BOOSTER STATION IS COMMISSIONED AND PROVEN RELIABLE. WRITTEN APPROVAL FROM ENGINEER REQUIRED PRIOR TO DEMOLISHING.
 - 14 SAW CUT ALONG THIS LINE FOR PAVEMENT REMOVALS

No	DATE	REVISIONS	BY

PROJECT DATE: FEBRUARY 26, 2024
 DRAWN BY: WT
 DESIGNED BY: JL
 CHECKED BY: SRC

DATE: February 26, 2024
 ENGINEER: SCOTT R. CHILSON
 LICENSE #: 44297

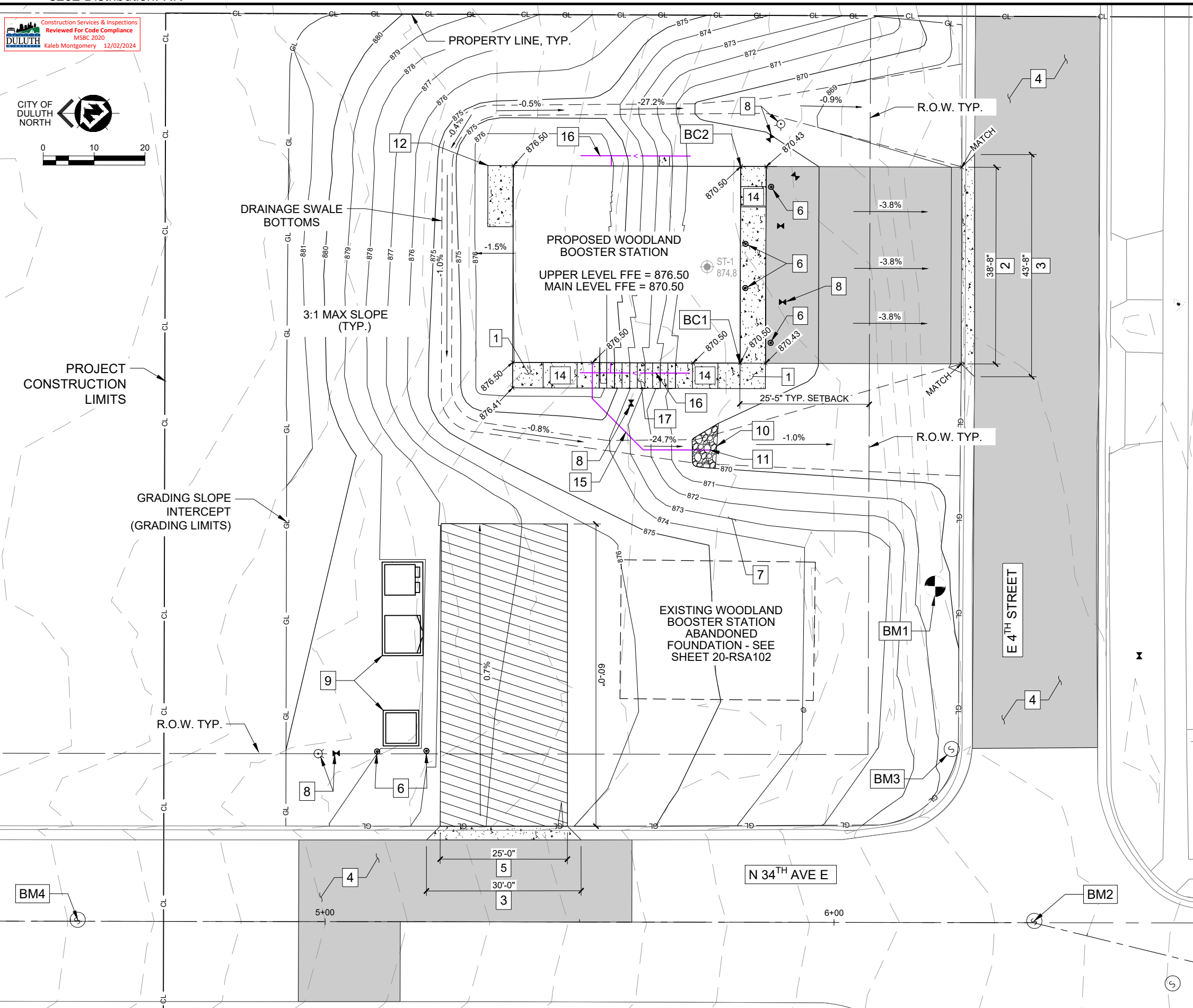
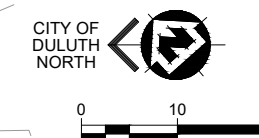
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WOODLAND BOOSTER STATION IMPROVEMENTS
 CITY OF DULUTH
 ST. LOUIS COUNTY, MINNESOTA

**SITE-CIVIL
 REMOVAL PLAN**



PROJECT NO. 00616177
SHEET 05-CR101



- KEY NOTES #**
- 1 PROVIDE 7" THICK CONCRETE SIDEWALK w/BROOM FINISH AND TOOLED CONTROL JOINTS AS SHOWN ON SHEET 30-A101. SLOPE AWAY FROM BUILDING. CROSS SLOPE MAX: 1/4" PER FOOT. RUNNING SLOPE MAX: 1/2" PER FOOT. SEE DETAILS 2/05-C507 & 3/05-C507.
 - 2 PROVIDE ASPHALT DRIVEWAY SEE DETAIL 7/05-C507
 - 3 PROVIDE SURMOUNTABLE CURB AND GUTTER AT DRIVEWAY ENTRANCE - SEE DETAIL 5/05-C507. TAPER SURMOUNTABLE CURB TO BLEND w/ EXISTING CURB AT BOTH ENDS.
 - 4 PROVIDE BITUMINOUS STREET RESTORATION FOR ALL PAVEMENT DISTURBANCE (SEE DETAIL STR-8/05-C510). GRADE TO MATCH EXISTING SLOPE
 - 5 PROVIDE REINFORCED TOPSOIL DRIVEWAY FOR MAINTENANCE ACCESS - SEE DETAIL 4/05-C507
 - 6 PIPE BOLLARD, TYP. - SEE DETAIL 1/05-C507
 - 7 SITE GRADING TO BE COMPLETED AFTER EXISTING BOOSTER STATION HAS BEEN DEMOLISHED
 - 8 AT-GRADE PROPOSED UTILITY FEATURE, TYP. - SEE YARD PIPING PLANS
 - 9 ELECTRICAL EQUIPMENT CONCRETE PAD - TOP OF SLAB SHALL BE 6" ABOVE SURROUNDING GRADE - REFER TO ELECTRICAL SITE PLAN ON SHEET 05-CE101
 - 10 PROVIDE RIPRAP AT DRAIN OUTLET
 - 11 PROVIDE VARMINT GUARD AND VERTICAL MARKER AT OUTLET OF DRAINAGE PIPE
 - 12 PROVIDE 6'X12' CONCRETE PAD FOR HVAC STRUCTURES. VERIFY PAD SIZE WITH EQUIPMENT MANUFACTURER. TOP OF SLAB SHALL BE MINIMUM 2" ABOVE GRADE
 - 13 PROVIDE 2'X2' CONCRETE SPLASH PAD FOR OVERFLOW DRAIN
 - 14 CONCRETE STOOP - SEE DETAIL 11/30-S501 FOR REINFORCEMENT AND SLOPE
 - 15 4"Ø HDPE STORMWATER EJECTOR FORCE MAIN. ROUTE FROM STUB OUT AT BUILDING (BY PLUMBING CONTRACTOR) TO DAYLIGHT IN SWALE - SEE SHEET 30-P102
 - 16 DRAIN TILE STORMWATER EJECTOR SYSTEM (BY PLUMBING CONTRACTOR) - SEE SHEET 30-P102
 - 17 CONCRETE STEPS ALONG EXTERIOR OF BUILDING - SEE DETAIL STR7/05-C510.

BUILDING CORNER SCHEDULE

BUILDING CORNER	DESCRIPTION	NORTHING	EASTING
BC1	EXTERIOR CORNER W4 FDN WALL	3356109.13	4854964.22
BC2	EXTERIOR CORNER W4 FDN WALL	3356138.36	4854990.52

BENCHMARK SCHEDULE

BM. NO.	DESCRIPTION	NORTHING	EASTING	ELEV.
BM1	HYDRANT TOP NUT	3356051.35	4854963.55	872.50
BM2	MH 0490011 RIM	3355989.21	4854934.19	870.60
BM3	MH 0490007 RIM	3356025.32	4854944.70	870.22
BM4	MH 0820049 RIM	3356114.64	4854794.26	881.88

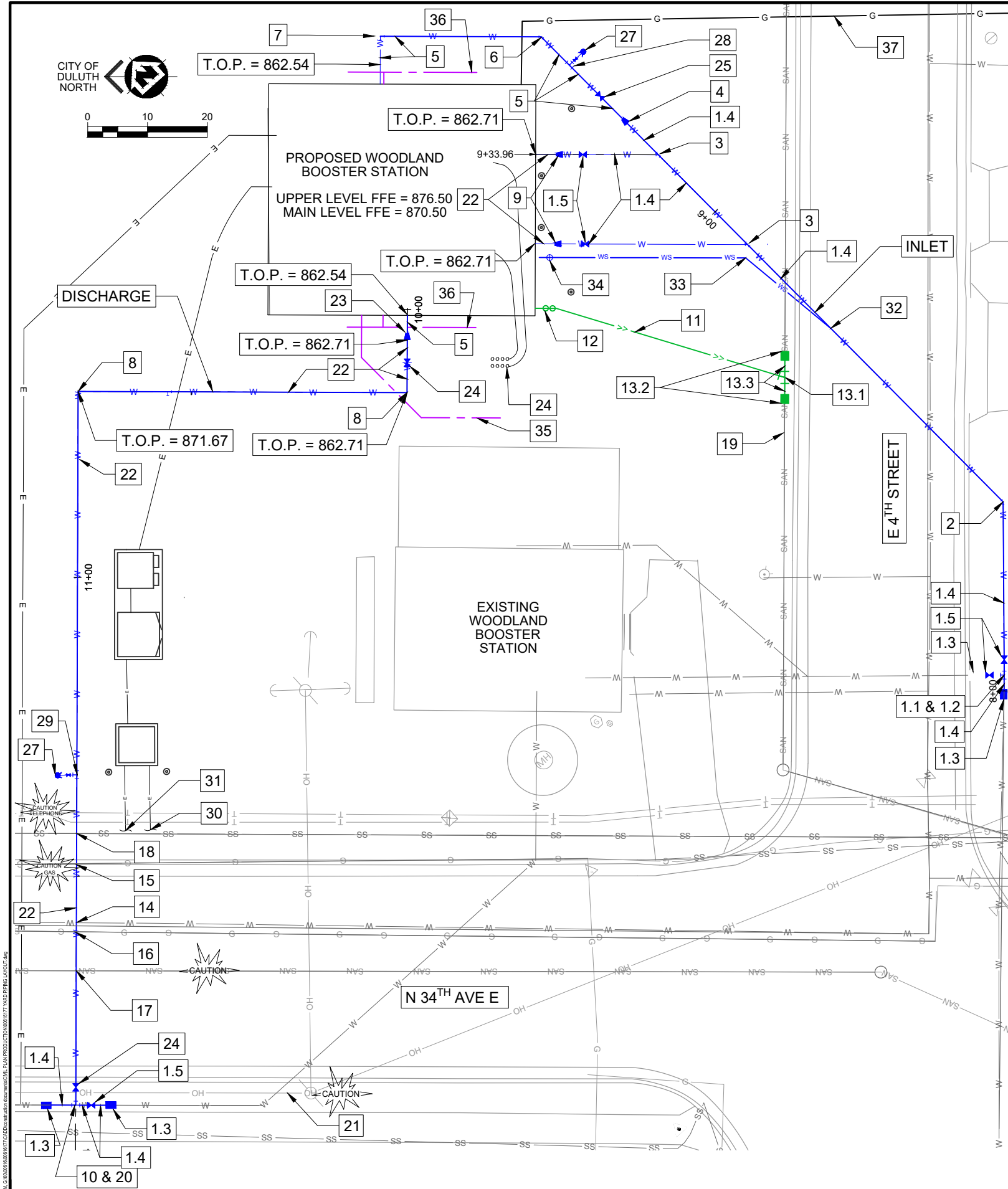
PROJECT DATE:	DRAWN BY:	DESIGNED BY:	CHECKED BY:	DATE	REVISIONS	BY
FEBRUARY 26, 2024	WT	JL	SRG			

DATE: February 26, 2024

ENGINEER: SCOTT R. CHILSON
LICENSE #: 44287



WOODLAND BOOSTER STATION IMPROVEMENTS
CITY OF DULUTH
ST. LOUIS COUNTY, MINNESOTA



KEY NOTES #

- 1.1 DEMO EXISTING 90° BEND
- 1.2 PROVIDE 20"X20"X20" MJ TEE
- 1.3 PROVIDE 20" ROMAC COUPLING
- 1.4 20" DIP
- 1.5 PROVIDE 20" MJ BUTTERFLY VALVE W/ VALVE BOX
- 2 PROVIDE 20" MJ 45° BEND
- 3 PROVIDE 20" MJ WYE
- 4 PROVIDE 20"X12" MJ REDUCER
- 5 12" DIP
- 6 PROVIDE 12" MJ 45° BEND
- 7 PROVIDE 12" MJ 90° BEND
- 8 PROVIDE 16" MJ 90° BEND
- 9 PROVIDE 20"X16" MJ REDUCER
- 10 TIE INTO EXISTING WATERMAIN
- 11 6" C900 PVC SANITARY LATERAL
- 12 PROVIDE 2-WAY SANITARY CLEANOUT
- 13.1 TIE INTO EXISTING 8" SANITARY SEWER MAIN WITH 6"X8" PVC WYE
- 13.2 CLAY TO PVC CONNECTION COUPLING (2 - REQ'D)
- 13.3 8" C900 PVC SANITARY PIPE
- 14 PROTECT EXISTING 8" CAST IRON WATER MAIN
- 15 PROTECT EXISTING 10" COATED STEEL GAS MAIN
- 16 PROTECT EXISTING LOW PRESSURE GAS LINE
- 17 PROTECT EXISTING 15" CLAY SANITARY SEWER MAIN
- 18 PROTECT EXISTING 15" RC STORM SEWER MAIN
- 19 PROTECT EXISTING 8" CLAY SANITARY SEWER MAIN
- 20 PROVIDE 20"X20"X16" MJ TEE
- 21 PROTECT OVERHEAD POWER LINES - COORDINATE WITH UTILITIES
- 22 16" DIP
- 23 PROVIDE 16"X12" MJ REDUCER
- 24 PROVIDE 16" BUTTERFLY VALVE W/ VALVE BOX
- 25 PROVIDE 12" BUTTERFLY VALVE W/ VALVE BOX
- 26 ANODE BANK
- 27 PROVIDE HYDRANT W/ GATE VALVE & VALVE BOX
- 28 PROVIDE 12"X12"X6" MJ TEE
- 29 PROVIDE 16"X16"X6" MJ TEE
- 30 PROVIDE UTILITY CONNECTION TO SOUTH GRID SOURCE - COORDINATE WITH MINNESOTA POWER
- 31 PROVIDE UTILITY CONNECTION TO NORTH GRID SOURCE - COORDINATE WITH MINNESOTA POWER
- 32 PROVIDE 1" CORPORATION IN WATERMAIN
- 33 PROVIDE 1" POLYETHYLENE WATER SERVICE
- 34 PROVIDE 1" CURBSTOP
- 35 4"Ø HDPE STORMWATER EJECTOR FORCE MAIN - SHEET SHEET 05-C101
- 36 DRAIN TILE STORMWATER EJECTOR SYSTEM (BY PLUMBING CONTRACTOR) - SEE SHEET 30-P102
- 37 GAS SERVICE BY GAS UTILITY - VERIFY FINAL ROUTE AND GAS METER LOCATION WITH GAS UTILITY. UTILITY MAY PREFER TO EXTEND SERVICE FROM EXISTING WOODLAND BOOSTER STATION TO PROPOSED STATION.

GENERAL NOTE:
 ACTUAL OUTSIDE DIAMETER OF EXISTING WATER MAIN AND SANITARY MAIN MAY EXCEED CURRENT DIPRA STANDARDS. THE CONTRACTOR SHALL TEST PIT AND CONFIRM COMPATIBILITY OF COUPLING FITTINGS TO BE USED

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FEBRUARY 26, 2024	WT	JL	SRC			

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DATE: February 26, 2024

ENGINEER: SCOTT R. CHILSON
 LICENSE #: 44297

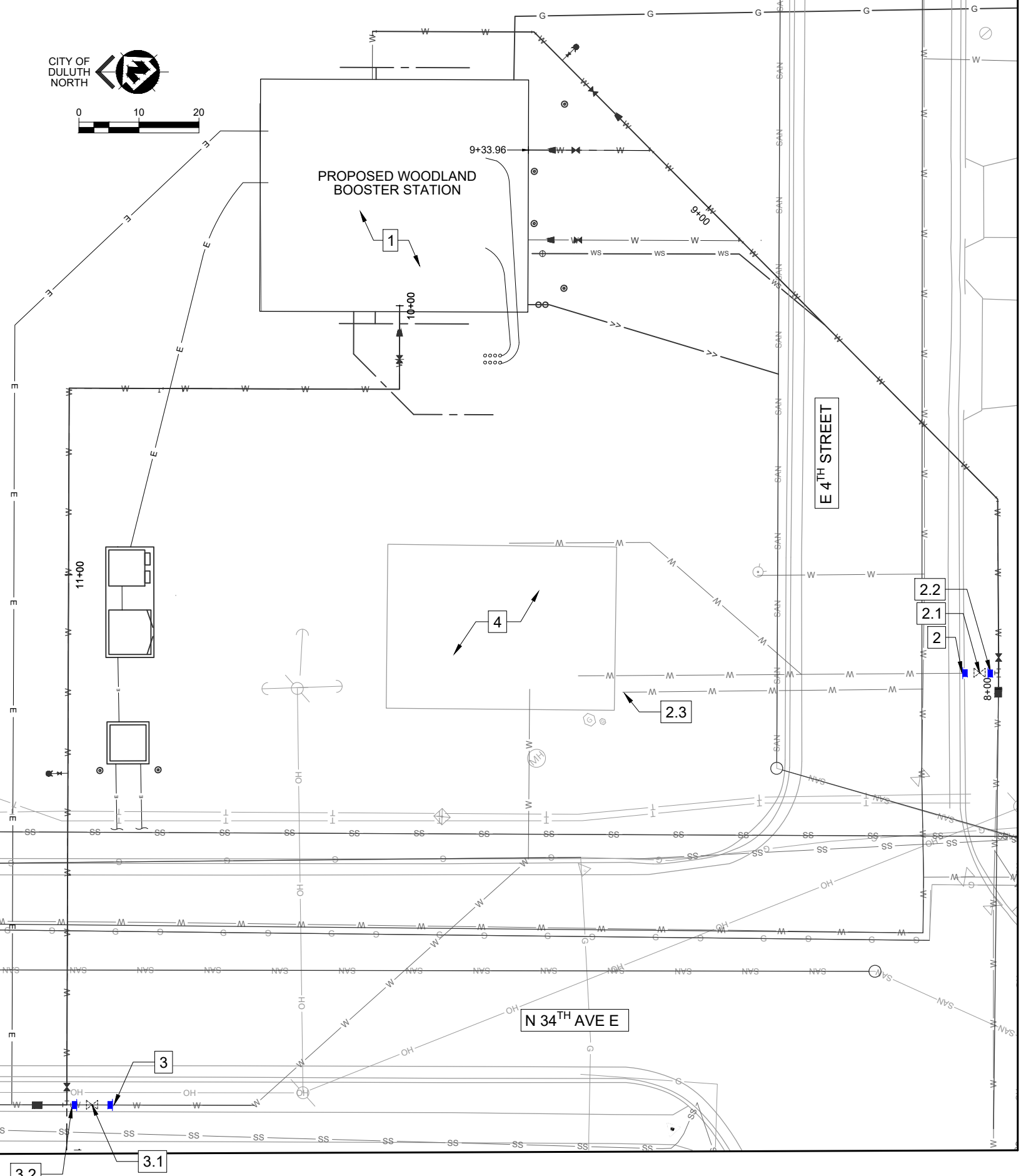
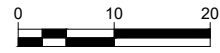
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SITE-CIVIL
YARD PIPING PLAN - PHASE 1



PROJECT NO. 00616177
SHEET 05-C102



KEY NOTES #

- 1 PHASE 2 TO BEGIN ONCE NEW BOOSTER STATION IS COMMISSIONED AND PROVEN RELIABLE. WRITTEN APPROVAL FROM ENGINEER REQUIRED PRIOR TO COMMENCEMENT OF PHASE 2 WORK.
- 2 CAP & ABANDON IN PLACE EXISTING 20" DIP
- 2.1 SALVAGE PREVIOUSLY INSTALLED 20" MJ BUTTERFLY VALVE & VALVE BOX
- 2.2 PROVIDE 20" PLUG ON UNUSED BRANCH OF PREVIOUSLY INSTLAED 20" MJ TEE
- 2.3 DISCONNECT & ABANDON IN PLACE EXISTING WATER SERVICE
- 3 CAP & ABANDON IN PLACE EXISTING 20" DIP
- 3.1 SALVAGE PREVIOUSLY INSTALLED 20" MJ BUTTERFLY VALVE & VALVE BOX
- 3.2 PROVIDE 20" PLUG ON UNUSED BRANCH OF PREVIOUSLY INSTLAED 20" MJ TEE
- 4 REMAINING CONCRETE FOUNDATION APPROXIMATELY 24" BELOW FINISHED GRADE

PLOT DATE: 2/26/2024 7:28 AM; C:\0001\00000001\0001\CAD\Drawings\8202\8202-CIVIL\8202-CIVIL-01.dwg; PLOT: 8202-CIVIL-01.dwg; PLOT DATE: 2/26/2024 7:28 AM

PROJECT DATE:	DRAWN BY:	No	DATE	REVISIONS	BY
FEBRUARY 26, 2024	WT	---	---	---	---
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	CHECKED BY:	---	---	---	---
	SRC	---	---	---	---

DATE: February 26, 2024 LICENSE # 44287 ENGINEER: *[Signature]*

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SITE-CIVIL
YARD PIPING PLAN - PHASE 2



PROJECT NO.
00616177
 SHEET
05-C104

