RESOURCE LIST

CITY OF BIRCHWOOD VILLAGE, **MINNESOTA**

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CITY OF BIRCHWOOD VILLAGE, MINNESOTA **CONSTRUCTION PLANS FOR** WILDWOOD AVENUE LIFT STATION REPLACEMENT

220 WILDWOOD AVE BIRCHWOOD VILLAGE, MN 55110



NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL , 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION C	
SUPERVISION, AND THAT I AM A DULY LICENSED PRO	
OF MINNESOTA	
SIGNATURE: Aunt Alendary	TYPED OR PRINTED NAME
DATE 10/28/2024	LIC NO.

2024

VAS PREPARED BY ME OR UNDER MY DIRECT ENGINEER UNDER THE LAWS OF THE STATE

Jacob E. Humbur

56751



3507 HIGH POINT DRIVE NORTH BLDG. 1 - SUITE E130 OAKDALE, MINNESOTA 55128 Phone: (651) 704-9970 Email: oakdale@bolton-menk.com www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE	
JIL	0	BID	10/28/2024	
DRAWN NLH				
CHECKED				
JEH				
CLIENT PROJ. NO.				
1131616				

SHEET INDEX

SHEET NO. GENERAL

- TITLE, LOCATION MAP, AND SHEET INDEX G0.01 G0.02 ABBREVIATIONS G0.03 LEGEND <u>SITE</u>
- C0.01 EXISTING/DEMOLITION SITE - PLAN C0.02 **EXISTING/DEMOLITION - SECTION**
- STANDARD DETAILS C1.01
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PROCESS

C5.01 **PROPOSED LIFT STATION - PLAN AND SECTION PROPOSED MANHOLE - PLAN AND SECTION** C5.02

ELECTRICAL

- ELECTRICAL SYMBOLS AND ABBREVIATIONS E0.01
- **ELECTRICAL SITE PLAN LIFT STATION** E0.02
- E0.03 ELECTRICAL DETAILS

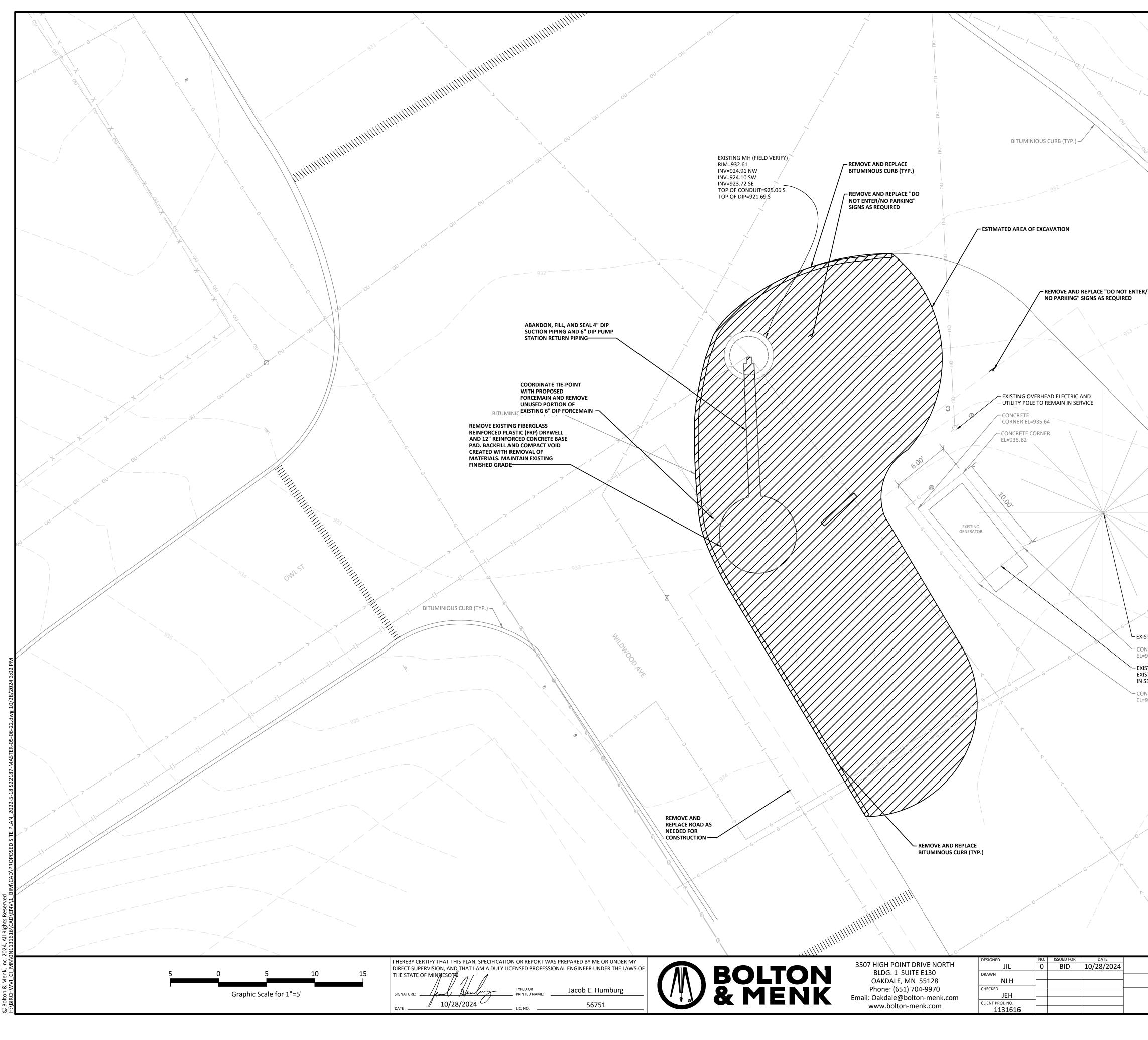
SHEE	CITY OF BIRCHWOOD VILLAGE, MINNESOTA
	WILDWOOD AVENUE LIFT STATION REPLACEMENT
G0.	TITLE, LOCATION MAP, AND SHEET INDEX

A	ACRE, ANGLE	CONT	CONTINUED, CONTINUOUS	FIN	FINISHED	KV	KILOVOLT	pН	HYDROGEN ION
AB	ANCHOR BOLT	CONTR	CONTRACTOR	FL	FLOWLINE, FLOOR	KW	KILOWATT	PI	PLANT INFLUEN PRESSURE INDIC
	ABBREVIATION ABUTMENT	COR CORD	CORNER COUNTY ROAD	FLEX FLOCC	FLEXIBLE FLOCCULATOR, FLOCCULATION	KWH	KILOWATT HOUR	PL	PLATE, PROPERT
	ACTIVATED CARBON, ASPHALT CONCRETE	COTG	CLEAN-OUT TO GRADE	FLG	FLANGE	L	LITER, LENGTH, LENGTH OF CURVE	PLAS	PLASTER, PLASTI
A/C	AIR CONDITIONING	СР	CATTLE PASS	FLGD	FLANGED	LAB	LABORATORY	PLY WD PLF	PLYWOOD POUNDS PER LIN
	ACOUSTIC, ACOUSTICAL	CPLG	COUPLING	FLR	FLOOR	LAT	LATITUDE	PLT	PLANT
ACP	ASPHALTIC CONCRETE PAVEMENT, ASBESTOS CEMENT PIPE	CRK		FME FMH	FARM ENTRANCE FLEXIBLE METAL HOSE	LAV LB	LAVATORY POUND	PNEU	PNEUMATIC
ADJ	ADJUST, ADJACENT	CS C.S.A.H.	CAUSTIC SODA, CAST STEEL, CURVE SPIRAL COUNTY STATE AID HIGHWAY	FOC	FACE OF CONCRETE	LDG	LOADING	POC	POINT OF CURV
AER	AERATION	CT	CERAMIC TILE	FOM	FACE OF MASONRY	LEV	LEVEL	POP POST	POPLAR POINT ON SEM
	AGGREGATE	CTR	CENTER	FOS	FACE OF STUDS	LF	LINEAR FEET	POT	POINT ON SEMI
		CTSK	COUNTERSINK	FOW	FACE OF WALL	LIN	LINEAR	PP	POWER POLE
	ALTERNATE	CTWD	COTTONWOOD	FP	FENCE POST	LO		PPD	POUNDS PER D
ALUM AMB	ALUMINUM AMBIENT	CU CU FT	COPPER, CUBIC CUBIC FOOT	FPC FPM	FLEXIBLE PIPE COUPLING FEET PER MINUTE	LOR LOS	LINE-OFFICE REVISION LENGTH OF OFFSET SPIRAL	PPH	POUNDS PER H
	AMERICAN NATIONAL STANDARDS INSTITUTE	CU YD	CUBIC YARD	FPS	FEET PER SECOND	LP	LOW POINT, LIGHT POLE	PPM	PARTS PER MIL
	(FORMERLY A.S.A.)	CULT	CULTIVATED FIELD	FR	FRAME	LOC	LOCATION	PR PRC	PAIR POINT OF REVE
	AMERICAN PETROLEUM INSTITUTE	CULV	CULVERT	FR	FRONTAGE ROAD	LT	LEFT	PRESS	PRESSURE
APP	APPROACH	CY	CUBIC YARD	FS	FAR SIDE, FLOOR SINK, FINISHED SURFACE,	LWL	LOW WATER LEVEL	PROJ	PROJECT
	APPROVED APPROXIMATE	CYL	CYLINDER		FORGED STEEL, FROTH SPRAY, FORE SIGHT,	LWR	LOWER	PROP	PROPERTY
APPROX	APPROXIMATE	DC	DEGREE OF CURVE	FT	FLOW SWITCH FEET, FOOT	М	METER	PROV	PROVISIONS
	ARCH LENGTH	DBLK	DITCH BLOCK	FTG FTNG	FOOTING	M	MIDDLE ORDINATE (CIRCULAR CURVE),	PRV	PRESSURE REG
	ARCHITECTURAL	DAMP	DAMPER	FUT	FUTURE		MAXIMUM OFFSET (VERTICAL CURVE)	PS	RELIEF, REDUC
	AMERICAN STANDARDS ASSOCIATION (NOW ANSI)	DEP	DEPARTURE	FWD	FORWARD	MAG	MAGNETIC	PS	POUNDS PER S
	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	DES	DESIGN, DESIRABLE			MAN	MANUAL	PSI	POUNDS PER S
	ASSEMBLY AMERICAN SOCIETY FOR TESTING AND MATERIAL	DET	DETAIL	GA	GAGE, GAUGE	MAINT	MAINTENANCE	PSIA	POUNDS PER S
	AMERICAN SOCIETY FOR TESTING AND MATERIAL ATMOSPHERE	DF DG		GAL GALV		MACH MAS	MACHINE MASONRY	PSIG	POUNDS PER S
	AINIOSI HERE AIR VACUUM AND AIR RELEASE VALVE	DG	DOOR GRILLE, DITCH GRADE DUCTILE IRON	GALV	GALVANIZED IRON GARAGE	MATL	MASONRY MATERIAL	РТ	POINT, POINT
AWWA	AMERICAN WATER WORKS ASSOCIATION	DIA	DIAMETER	GDE	GRADE	MATE	MAXIMUM	PTDF	PRESSURE TRE
AZ	AZIMUTH	DIAPH	DIAPHRAGM	GEN	GENERAL, GENERATOR	MCC	MOTOR CONTROL CENTER	PV PVC	PLUG VALVE POLYVINYL CH
		DIP	DUCTILE IRON PIPE	GFA	GROOVED FLANGE ADAPTOR	MECH	MECHANICAL	Г V С	
	BALANCE	DIST	DISTANCE, DISTRICT	GI	GALVANIZED IRON	MEMB	MEMBRANE	Q	DISCHARGE CF
BC	BEGIN CURVE, BOLT CIRCLE,	DIV	DIVISION	GLV	GLOBE VALVE	MET	METAL	QUANT	QUANTITY
BCR	BETWEEN CENTERS BEGIN CURVE RETURN	DISCH DISP	DISCHARGE DISPENSER	GP GPD	GUY POLE GALLONS PER DAY	MFR, MFGR	MANUFACTURER MILLION GALLONS PER DAY		
BD	BOARD	DISP DN	DISPENSER DOWN, DECANT	GPD GPH	GALLONS PER DAY GALLONS PER HOUR	MGD MH	MILLION GALLONS PER DAY MANHOLE	R	RADIUS, RISER
	BOX ELDER	DO	DISSOLVED OXYGEN	GPM	GALLONS PER MINUTE	MI	MALLEABLE IRON, MILE		RETURN, RAT
BEG	BEGIN	DR	DOOR, DRAIN	GR	GUARDRAIL	MIN	MINIMUM, MINUTE	RAD RAG	RADIALLY RETURN AIR G
	BETWEEN	DRWY	DRIVEWAY	GR	GRAVEL	MISC	MISCELLANEOUS	RAS	RETURN ACTIV
	BLIND FLANGE	DS	DRENCH SHOWER AND EYE WASH	GRAN	GRANULAR	MK	MARK	RC	REINFORCED C
	BACK FLOW PREVENTER BRAKE HORSEPOWER	DWG DIFF		GRD	GRADE, GROUND	ML	MATCH LINE, MEDIAN LINE	RCCP	REINFORCED (
	BITUMINOUS	DIFF	DIFFUSER, DIFFERENTIAL	GR BRK GV	GRADE BREAK, GRADE CHANGE GATE VALVE	MM MNDOT	MILLIMETER MINNESOTA DEPARTMENT OF TRANSPORTATION	RCP	REINFORCED (
BLDG	BUILDING	E	EAST, RATE OF SUPERELEVATION,	GYP	GYPSUM	MO	MOTOR OPERATED, MASONRY OPENING	RD	ROOF DRAIN,
	BLIND FLANGE	-	EXTERNAL DISTANCE	•		MOD	MODEL	RDWD RDWY	REDWOOD ROADWAY
BLK	BLACK, BLOCK	EA	EACH	H20	WATER	MON	MONUMENT	RECIRC	RECIRCULATIN
	BLOCKING	EBL	EAST BOUND LANE	Н	HAUL	MPH	MILES PER HOUR	RECONST.	RECONSTRUC
	BEAM, BENCH MARK BLOW OFF ASSEMBLY	EC		HB	HOSE BIBB	MS		RED	REDUCER, REI
	BLOW OFF ASSEMBLY BIOCHEMICAL OXYGEN DEMAND	ECC ECR	ECCENTRIC END CURB RETURN	HDR HEX	HEADER HEXAGONAL	MTC MTD	MECHANICAL-TYPE-COUPLING MOUNTED	REF	REFERENCE, F
	BORROW	ECR	END CORB RETORN EACH FACE, EXHAUST FAN	HEX Hg	MERCURY	MTD MTL	MOUNTED MATERIAL	REFR	REFRIGERATC
вот	BOTTOM	EFF	EFFLUENT	HI	HEIGHT OF INSTRUMENT	MTR	MOTOR	RF	
BPV	BACK PRESSURE VALVE	EG	EXHAUST GRILLE	HMS	HOLLOW METAL STEEL	-		REG REINF	REGULATING REINFORCE, R
	BRIDGE, BASE OF RAIL	EL	ELEVATION	НО	HOUSE	Ν	NORTH	REM	REMOVE
	BEARING	ELEC	ELECTRICAL, ELECTRONIC	H, HOR	HORIZONTAL	NAT	NATURAL	RE-STL	REINFORCING
	BELL AND SPIGOT BACK SIGHT, BOTTOM SLOPE	ELEV	ELEVATION	HORIZ HP		NBL	NORTH BOUND LANE	RET W	RETAINING W
	BASEMENT	EMB ENG	EMBANKMENT ENGINE	HP	HORSEPOWER, HIGH PRESSURE HEATING RETURN, HOUR	NBS	NATIONAL BUREAU OF STANDARDS NORMALLY CLOSED	REQ, REQD	
	BOTTOM PLATE	ENGR	ENGINER	HT	HEIGHT	NE	NORTH EAST	REV	REVISION
	BRITISH THERMAL UNIT	ENT	ENTRANCE	HTG	HEATING	NEMA	NATIONAL ELECTRICAL MANUFACTURERS	RM ROW	ROOM RIGHT OF WA
	BUTTERFLY VALVE	EQ	EQUAL	HTR	HEATER		ASSOCIATION	RPM	REVOLUTION
BVC	BEGIN VERTICAL CURVE	EQUA	EQUATION	H & V	HEATING AND VENTILATION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION		REINFORCED
BWV	BACK WATER VALVE	EQUIP	EQUIPMENT	HW	HOT WATER, HIGH WATER	NF	NEAR FACE	RR	RAILROAD
C	CENTIGRADE, CURVE, CUT	ER	EDGE OF ROAD	H.W. EL.		NIC		RT	RIGHT
	CABINET	EST EVAP	ESTIMATE EVAPORATOR	H.W.L. HWL	HIGH WATER LEVEL HIGH WATER LEVEL	NO NPS	NUMBER, NORMALLY OPEN NOMINAL PIPE SIZE (FORMERLY I.P.S.)	R/W	RIGHT OF WA
	CAPACITY	EVC	END VERTICAL CURVE	HWR	HOT WATER RETURN	NPT	NATIONAL PIPE THREAD	RWL	RAINWATER L
CAR	COUNTY AID ROAD	EW	EACH WAY, EYE WASH	HWS	HOT WATER SUPPLY	NRS	NON-RISING STEM	RY	RAILWAY
	CATCH BASIN, CHALK BOARD	EXC	EXCAVATION	HWO	HANDWHEEL OPERATED	NS	NEAR SIDE	S	SOUTH, SCUN
	CENTER TO CENTER	EXH	EXHAUST	HWY	HIGHWAY	NTS	NOT TO SCALE	SA	SAMPLE
	CEILING DIFFUSER CEMETERY, CEMENT	EX-HY	EXTRA HEAVY	HYD	HYDRAULIC, HYDRANT	NW	NORMAL WATER, NORTH WEST	SALV	SALVAGED
	CUBIC FEET PER HOUR	EXIST EXP	EXISTING EXPANSION		INTERNATIONAL BUILDING CODE	N & D	NEAR SIDE	SAN SAR	SANITARY STATE AID RO
	CUBIC FEET PER MINUTE	EXP EXP JT	EXPANSION EXPANSION JOINT	IC	INTERIOR ANGLE OF CURVE	OBLIT	OBLITERATE	SBL	SOUTH BOUN
CFS	CUBIC FEET PER SECOND	EXT	EXTERIOR, EXTENSION	ID	INSIDE DIAMETER	OC	OVER CROSSING, ON CENTER	SC	SPARE CHEMI
	CURB AND GUTTER			IF	INSIDE FACE	O.C.E.W.	ON CENTER EACH WAY	SCD	SCREWED
	CHANNEL	F	FAHRENHEIT, FINISH	IH	INTERSTATE HIGHWAY	OD		SCFM	STANDARD CU
	CHEMICAL CHANGE	FA	FEDERAL AID	IN	INCH	OF	OVERFLOW, OUTSIDE FACE	SCH	SCHEDULE
	CHANGE CHECK VALVE	FABR	FABRICATION, FABRICATE, FABRICATED FRESH AIR INTAKE	INCL INFL	INCLUDE INFLUENT	OH OPER	OVERHEAD OPERATOR, OPERATING	SCHED SCP	SCHEDULE SECTIONAL CO
	CHECK VALVE CHECKERED PLATE	FAI FAI	FRESH AIR INTAKE FEDERAL AID INTERSTATE	INFL	INFLUENT	OPER OPNG	OPERATOR, OPERATING OPENING	SCP SCPA	SECTIONAL CO
	CAST IRON	FAP	FEDERAL AID PRIMARY	INL	INLET	ORP	OXIDATION-REDUCTION POTENTIAL	SD	SERVICE DRIV
CIP	CAST IRON PIPE	FAS	FEDERAL AID SECONDARY	INP	IN PLACE	OS & Y	OUTSIDE SCREW AND YOKE	SDR	STORM DRAIN
CL	CHLORINE GAS, CHLORINATOR, CHAIN LINK,	FAU	FEDERAL AID URBAN	INSL	INSULATION, INSULATED	OUT	OUTLET	SE	SOUTHEAST
		FB	FLAT BAR, FLOOR BEAM, FIELD BOOK	INSUL	INSULATION	OWG	OIL, WATER, GAS	SEC	SECONDARY
	CEILING CLEAR	FCO	FLOOR CLEANOUT			OZ	OUNCE	SECT	SECTION
	CLEAR CENTIMETER	FD FDN	FLOOR DRAIN FOUNDATION	INSTR INV	INSTRUMENT INVERT ELEVATION	D	POLE, PAGE, PLACE	SER SETT	SERIES SETTLING
	CEMENT MORTAR LINED AND COATED	FDN FDR	FOUNDATION FEEDER	INV	INVERT ELEVATION IRON PIPE	P PAVMT	POLE, PAGE, PLACE PAVEMENT	SETT	SETTLING STORY FRAME
	CORRUGATED METAL PIPE	FE	FIRE EXTINGUISHER, FINAL EFFLUENT,	IP	IRON PIPE IRON PIPE SIZE	PAVIVIT	PRIMARY CLARIFIER, PORTLAND CEMENT	SFCE	SURFACE
CMP-A	CORRUGATED METAL PIPE ARCH		FLOW ELEMENT	IRRG	IRRIGATION	-	POINT OF CURVATURE	S-G	SAND AND GR
	CONCRETE MASONRY UNIT	FE COR	FENCE CORNER	-		PCC	POINT OF COMPOUND CURVE	SH	SHOWER
	CLEANOUT	FED	FEDERAL	JAN	JANITOR	PCOTG	PRESSURE CLEANOUT TO GRADE	SHLD	SHOULDER
		FF	FLAT FACE, FAR FACE, FINISHED FLOOR	JCT		PE	PLANT EFFLUENT, POLYELECTROLYTE, POLYMER	SHT	SHEET
	COMPRESSOR COMPACT	F TO F	FACE TO FACE	J&A	JACK AND AUGER	PE	PROJECT ENGINEER, PROFESSIONAL ENGINEER,	SIM	SIMILAR
	COMPACT CONCRETE, CONCENTRIC	FG FH	FINISHED GRADE FIRE HYDRANT	JNT, JT ISTS	JOINT JOISTS	PERF	POLYETHYLENE PERFORATED	SL SO	SLUDGE, SLOF SOUTH
	CONCEPTE, CONCENTRIC	FH FHDWL	FIRE HYDRANT HEAD WALL	JSTS	C I CI UL	PERF PERMISS	PERFORATED PERMISSIBLE	SO SO VALVE	SOUTH SHUT OFF VAL
	CONSTRUCTION, CONSTRUCT	F&I	FURNISH AND INSTALL	KG	KILOGRAM	PERIVISS PER PERIM	PERIMETER	SP	STATIC PRESS
		FIG	FIGURE	KM	KILOMETER	PG		SPEC	SPECIFICATIO
			I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION						BID 10/28/2024
			SUPERVISION, AND THAT I AM A DULY LICENSED F	PROFESSIONAL ENGINEER UNE	DER THE LAWS OF THE STATE	LTOP	BLDG. 1 SUITE E130 DRAWN	NLH	10/20/202

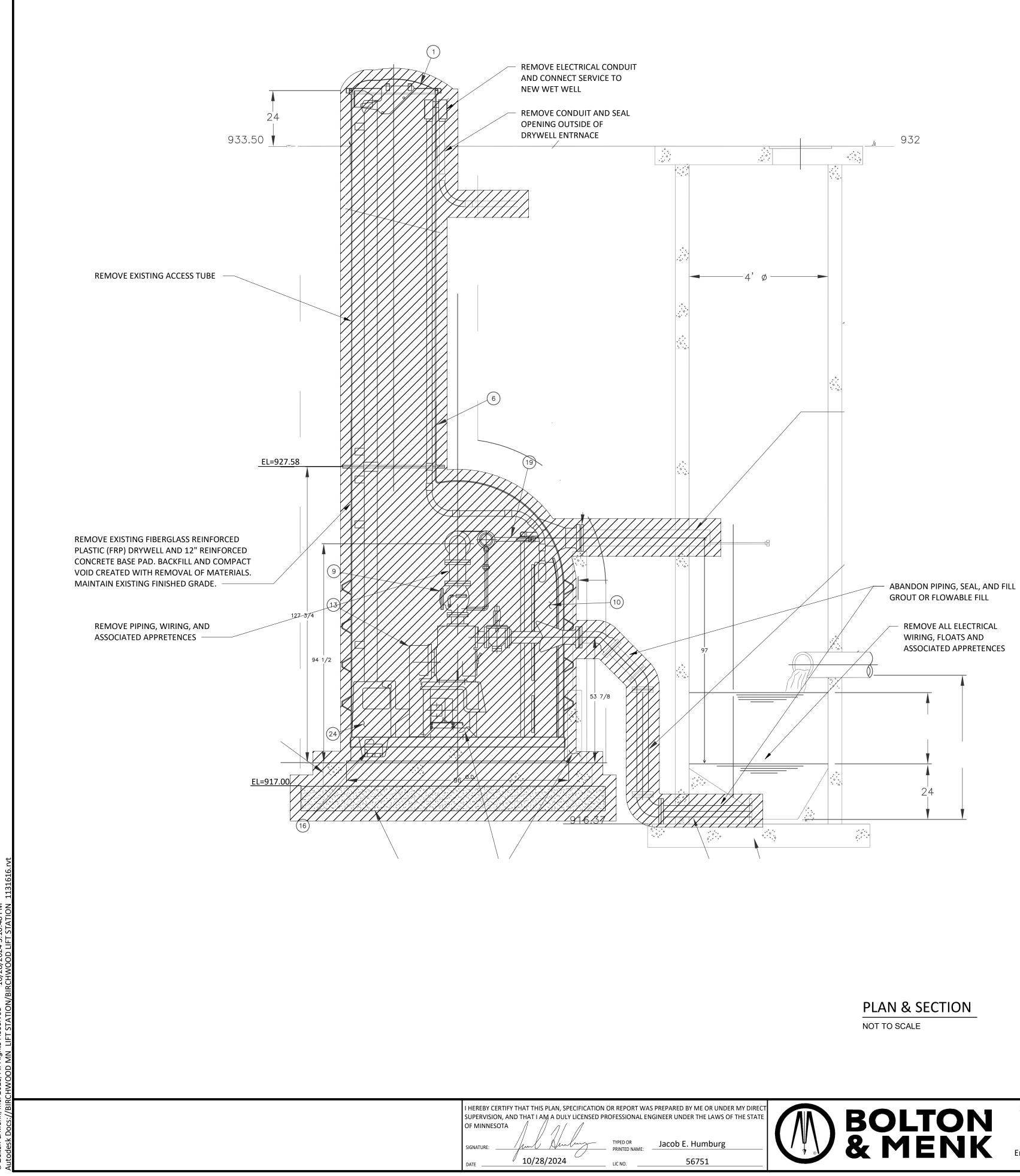
	ABBRE	VIATIONS		G0.02
WILDWOO	D AVENUE LI	FT STATION REPLACEMENT		പ്ര പാ
		D VILLAGE, MINNESOTA		SHEET
	ΥH	YARD HYDRANT ADDITION		EVIATIONS
	YD	YARD <u>NOTE</u> : SEE PIPIN	G SCHED	ULE FOR
	XS XSECT	EXTRA STRONG CROSS SECTION		
	X-RD	CROSS ROAD		
	X-OVER	CROSSOVER		
	WT WWM	WEIGHT WELDED WIRE MESH		
	WS WSTP	WATER SURFACE WATER STOP		
	W/O	WITHOUT		
	WDW W'MN	WINDOW WATER MAIN		
	WCO WD	WALL CLEANOUT WOOD		
	WC	WATER COLUMN, WATER CLOSET		
IPE ARCH	WAS WBL	WASTE ACTIVATED SLUDGE WEST BOUND LANE		
IPE	W W/	WEST, WASTE, WATER WITH		
PER MINUTE	VTR	VENT THROUGH ROOF		
	VPT	VERTICAL POINT OF TANGENCY		
	VPC VPI	VERTICAL POINT OF CURVATURE VERTICAL POINT OF INTERSECTION		
	VOL VTC	VOLUME VENT TO CEILING		
	VM	VEHICULAR MEASURE		
COND, SLOPE, SAND	VERT VIT	VERTICAL VITRIFIED		
	VC VCP	VERTICAL CURVE VITRIFIED CLAY PIPE		
	VAR VB	VARIES, VARIABLE VAPOR BARRIER		
	V	VACUUM, VALVE, VERTICAL, VENT, VOLT, VOLUME		
JTE, ORTAR	UW	UTILITY		
ITE	UR USGS	URINAL U.S. GEOLOGICAL SURVEY		
	UNADJ	UNADJUSTED		
	UH UL	UNIT HEATER UNDERWRITERS LABORATORIES		
	UG UGC	UNDERGROUND UNDERGROUND CONDUIT		
)	UC	UNDER-CROSSING		
	UBC	UNIFORM BUILDING CODE		
	TWP TYP	TOWNSHIP		
	TV TW	THERMOSTATIC VALVE TOP OF WALL, THERMOMETER WELL		
	TTH	TEMPORARY TRUNK HIGHWAY		
	TRANSV TS	TRANSVERSE TANGENT TO SPIRAL, TOPSOIL, TOP SLOPE		
R ROAD	TR TRANS	TREE, TRENCH, TRACK TRANSITION, TRANSMITTED		
CULVERT PIPE PIPE	ТР	TELEPHONE POLE, TELEGRAPH POLE		
DGE	TOE TOPOG	THREAD ONE END TOPOGRAPHY		
	THR'D TK	THREADED TANK		
E, RING	ТН	TRUNK HIGHWAY		
ROCK,	T.F. TFE	TOP OF FOOTING TOP OF FOOTING ELEVATION		
	TEL TEMP CONN	TELEPHONE TEMPORARY CONNECTION		
	ТС	TOP OF CURB		
	TBE TBM	THREAD BOTH ENDS TEMPORARY BENCH MARK		
JGLAS FIR	TAN TB	TANGENT TACK BOARD		
ICH GAUGE NCY	T & B T & G	TOP AND BOTTOM TONGUE AND GROOVE		
ICH ICH ABSOLUTE	Т	THERMOSTAT, TREAD OF STAIR, TOP, TANGENT		
DOT	SYST	SYSTEM		
Έ	SWR SYM	SIDEWALL REGISTER, SEWER SYMMETRICAL, SYMBOL		
	SW	SIDEWALK, SOUTH WEST		
	SURF SV	SURFACE SOLENOID VALVE		
-	SUPER SUPP	SUPER ELEVATION SUPPLIER, SUPPLY		
/E	SUCT	SUCTION		
	STP	STUMP STRUCTURAL, STRUCTURE		
	STN STN STL	STAINLESS STAINLESS STEEL		
	STM	STORM		
т	STK STL	STAKE STEEL		
	STC STD	SLEEVE-TYPE COUPLING STANDARD		
	ST STA	STREET, STONE, STEEL, STUCCO, STATE STATION		
ОТ	SSU	SERVICE SINK SECONDS SAYBOLT UNIVERSAL		
PLACE	SS	SANITARY SEWER, STAINLESS STEEL,		
OF INTERSECTION,	SQ SQYD	SQUARE SQUARE YARD		
	SPEC'D SPK	SPECIFIED SPIKE		

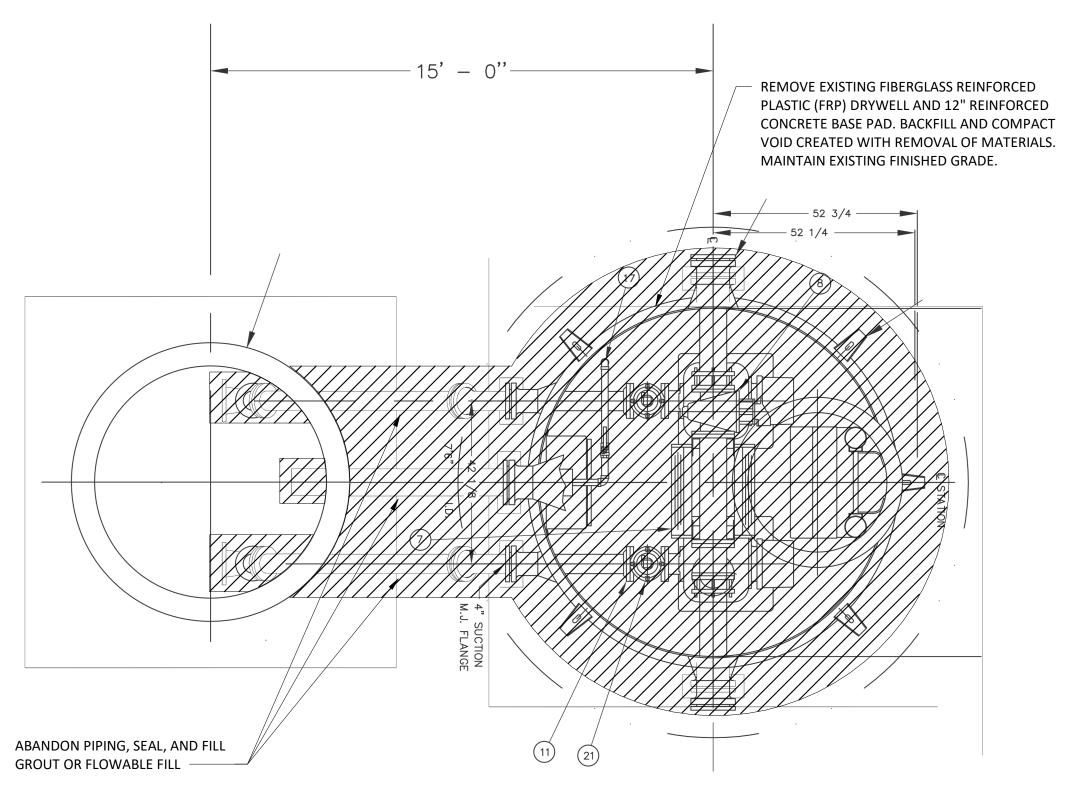
PIPING & FITTI	ING SYMBOLS	IN	STRUMENT IDEN	ITIFICATION I	LETTERS		PIP	ING SCHEDULE		PIPE D	ESIGN TABLE
	Pipe & Joint Designations	FIRST LETTER SUCCEEDING LETTERS			PIPING SYSTEM DESIGNATION			PDT NO. PIPE MATERIAL FITTING MATERIAL			
AC Air Cock				READOUT OR			CA	Aeration Compressed Air		Class (as Specified) for Ductile	
P Air Operation	Bell & Spigot Joint	VARIABLE	MODIFIER	PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER	CG	Chlorine Gas	1	Iron ANSI A21.51/AWWA C151 Flanged or Mechanical Joints as	Class 125 Ductile or Cast Iron, ANSI A21.10/AWW
⊢ BP ⊢ Backflow Preventer	Flanged Adapter	A Analysis		Alarm			CS DG	Chlorine Solution Digester Gas	—	Indicated. Class (as Specified)	C110 Flanged or Mechanical Joint as Indicated
—— Blind Flange	Flanged Joint Fitting	B Burner Flame Conductivity					DS	Digester Sludge		for Threaded Flange	
Drip Trap	Mechanical Joint Fitting	C (Electrical)			Control		FC GW	Ferric Chloride Grit Washing			3-Inch and Smaller - 150 lb. Malleable Iron, ANS
Exhaust to Atmosphere (Inside)	$ = \frac{1}{10000000000000000000000000000000000$	D Density (Mass) or Specific Gravity	Differential			-	GS	Grit Separation	2	Standard Weight Carbon Steel,	B16.3 Banded, Screwed, 3-1/2 Inch and Larger -
Exhaust to Atmosphere (Outside)		E Voltage (EMF)		Primary Element	+		HW I B	Hot Water Lagoon Return		ASTM A120, Black	Standard Weight -ASTM A234 ANSI B16.9 Welde Steel or 125 lb. Flanged Cast Iron as Indicated
	Wall Sleeve	F Flow Rate	Ratio (Fraction)				NG	Natural Gas			
	——————————————————————————————————————	G Gauging (Dimension		Glass			NP NR	Non-Potable Water Noxic Return			3-Inch and Smaller - 150 lb. Malleable Iron, ANS
⊢ FC → Flame Cell							P	Polymer	3	Standard Weight Carbon Steel, ASTM A120, Galvanized	B16.3 Banded, Screwed, Galvanized 3-1/2 Inch a Larger - 125 lb. Cast Iron Flanged or Mechanical
		Hand (Manually H Initiated)				High	PD	Plant Drain			Coupling as Indicated
⊢ Flexible Hose	Removable Plug	I Current (Electrical)		Indicate			PP PS	Process Piping Primary Sludge		Copper, ASTM B88 Buried	
○ 4"F.D. Floor Drain - Size		J Power	Scan				PW	Potable Water	4	Service - Type K, Soft Temper	Wrought Copper or Cast Bronze Solder Joint, ANS
Harnessed Sleeve Coupling (H.S.C.)	· .	K Time or			Control Station		RAS	Recirculation Return Activated Sludge		Exposed Service - Type L, Hard Temper	B16.22, 150 psi
	⊢ ST ⊢ Sediment Trap	Time-Schedule		Light (Pilot)		Low	S	Sample			Schodulo 20 Doluvinul Chlorido, Socket Schuert M
	└──── Sight Flow Indicator	M Moisture or Humidit				Middle or	SC SD	Scum Sanitary Drain	5	Polyvinyl Chloride, Schedule 80, Normal Impact ASTM D1785	Schedule 80 Polyvinyl Chloride, Socket Solvent W Joints, ASTM D2467
→>>>> 1-1/2" Hose Gate			y			Intermediate	SN	Supernatant		Fiberglass Deinforced Diastic	Enour Desin Fragment Wound or Molded Type
FE Meter				Orifice			SR SS	Sludge Recirculation	6	Fiberglass Reinforced Plastic (FRP) ASTM D2996	Epoxy Resin Fragment Wound or Molded Type - psi @ 200 F
(M) Motor Operation				(Restriction)			SS ST	Secondary Sludge Sludge Transfer		Linear Low Density	
N.C. Normally Closed		P Pressure or Vacuum		Point (Test) Connection)			UW	Utility Water (Non-Potable Plant Water)	7	Poly-ethylene Tubing, Vacuum Rated, Installed Inside 3"	Compression Fitting
		Q Quantity or Event	Integrate or Totalize	Meter			WAS WW	Waste Activated Sludge Waste Water		Schedule 80 PVC Pipe	
N.O. Normally Open						f				Cast Iron Soil ANSI A112.5.1,	Cast Iron Soil ANSI A112.5.1, Service Weight, Bel
—⊣¦⊢— Orifice		R Radioactivity		Record or Print			EQUIP	PMENT SCHEDULE	8	Service Weight, Bell and Spigot or Hubless	and Spigot or Hubless
Pump		S Speed or Frequency			Switch		DESIGNATION	EQUIPMENT TYPE			
		T Temperature		Totalizing	Transmit		F	Fan	9	Class (as Specified) for Ductile Iron ANSI A21.51/AWWA C151,	Class 125 Ductile or Cast Iron, ANSI A21.10/AWV
	YMBOLS	U								Bell and Spigot	C110, Mechanical Joint
		V Viscosity			Valve, Damper		ME	Miscellaneous Equipment	10	Polyvinyl Chloride Sewer Pipe,	
Process	Plan				or Louver		Р	Pump	10	Bell and Spigot ASTM D-3034	Polyvinyl Chloride, Bell and Spigot, ASTM D-3034
Flow	Process	W Weight or Force		Well			S	Special		Standard Weight Steel, ASTM	Standard Waight Dutt Wald Staal ANSI D1C 0.45
Diagram	Drawings	X							11	A53, Seamless. (10 Mil Polyethylene or PVC Coated @	Standard Weight, Butt Weld Steel ANSI B16.9 AS A234
		Y			Relay or Compute		SG	Stop Gate, shear gate, sluice gate, slide gate, flap gate		Exterior) Polyvinyl Chloride Pressure Pipe	
Angle Valve	D Ball Valve				Drive, Actuate				12	ASTM D2241 (C900) with Bell &	Class 125 Ductile Iron or ANSI A21.10/ AWWA C1
Ø Ball Valve	Butterfly Valve	Z Position			or Unclassified		UH	Unit Heater	12	Spigot Ends. Wall thickness as Specified	Flanged or Mechanical Joints as Indicated
					Final Control Element		V	Valve (Valves 4"		Polypropylene, ASTM D2146	Polypropylene, Schedule 40 Drainage Type with
Butterfly Valve	Check Valve				Liement			Diameter and Larger Included in	13	Schedule 40 with Heat Fused Joints	Heat Fused Socket Joints
Check Valve	Gate Valve		INSTRUMENT	IDENTIFICATI	ION			Schedule		Stainless Steel AISI Type 304,	Stainless Steel AISI Type 316 ANSI B16.9
Diaphragm Valve	Plug Valve								14	ASTM A312 Schedule 5S	Butt-Welded Schedule 5S or 150 lb Flanged
Gate Valve			Identificatio	n Letters (See Table)			EQUIPME	INT IDENTIFICATION		Welded Steel, AWWA C200 with	
V N						-	•		15	Specified Wall Thickness.	ASTM A234, Grade B, Seamless or Butt-welded. Fittings 14-inches and Larger Mitered to Conform
O Globe Valve										Epoxy/Cement Mortar Lined for Potable Water Service	AWWA C208 Table 2 with Butt-Weld Ends
Hose Gate Valve								Equipment Number		Class (as Specified) for Ductile Iron	
Knife Gate Valve			Instrument	Number			ME - DS -	2	16	ANSI A21.51/AWWA C151 Glass	Class 125 Ductile or Cast Iron ANSI A21.51/AWW
								—— Piping System	10	Lined Flanged or Mechanical Joints as Indicated Class (as specified) for	•
Needle Valve				(Sc	hedule Identification		Threaded Flange	
Pinch Valve										SECTION AND	D DETAIL IDENTIFICATION
Plug Valve			Locally Mounted Instrument		ounted On Board						
							PIPE	IDENTIFICATION			IDENTIFICATION
RPZ (Reduced Pressure Zone)			VALVE C	PERATORS						(1) SECTION CUT ON DRAWING N	I-1 AS:
Pressure Regulating Valve											2
				\frown			6-DS- (1)				M-2 DRAWING ON
PT Pressure/Temperature Relief Valve		(C)	Cylinders	HW	Handw	heel		Pipe Design Table			WHICH SECTION APPEARS *
Relief or Safety Valve		CW	Chainwheel	L	Lever			ng System (See Piping Schedule)		(2) ON DRAWING M-2 THIS SECTION	UN IS IDENTIFIED AS.
□			Diaphragm	(M)	Motor		Pipe Si	ze In Inches		SECTION NUMBER	2 SECTION M-2 DRAWING ON WHICH
本				\bigcirc							SECTION APPEARS *
3-Way Plug Valve (2-Port)		(E)	Electric	P	Pneum	atic				DETAIL	DENTIFICATION
3-Way Plug Valve (3-Port)		F	Float	S	Soleno	id	STANDARD	DETAIL IDENTIFICATION		(1) DETAIL CALL OUT ON DRAWIN	IG M-2 AS:
🖂 3-Way Valve		(H)	Hydraulic	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			(1) DETAIL CALL OU	F ON DRAWING M-2 AS:		DETAIL NUMBER	
3-Way Plug Valve (4-Port)							STANDARD DETAIL NUMBER	<u> </u>			M-1 DRAWING ON WHICH
\mathbf{V}								M-1 DRAWING ON WHICH		(2) ON DRAWING M-1 THIS DETAI	DETAIL IS SHOWN *
——V—— Vent								DETAIL IS SHOWN *			\frown
——————————————————————————————————————				Soil Boring							M-2 DETAIL DRAWING ON WHICH
Y-Type Strainer				5				AND SECTION (OR DETAIL CALL-OUT			DETAIL IS CALLED OUT *
Y-Type Strainer								RE SHOWN ON THE SAME DRAWING, BER IS REPLACED BY A LINE.			
	I							IED NO. ISSUED FOR DATE			
		PLAN, SPECIFICATION OR REPORT WAS PREPARED A DULY LICENSED PROFESSIONAL ENGINEER UND	BY IVIE OK UNDER MY DIRECT DER THE LAWS OF THE STATE	B	OLTO		BLDG. 1 SUITE E130	JIL 0 BID 10/28/2024	С	ITY OF BIRCHWOOD V	
		TYPED OR Jacob F					KDALE, MINNESOTA 55337 Phone: (651) 704-9970			WILDWOOD AVENUE LIFT S	
		PRINTED NAME:	56751	J Č	MEN	Email	l: Oakdale@bolton-menk.com	JEH PROJ. NO.		LEGEI	ND
	DATE 10/28/	2024 LIC NO.	56751				www.bolton-menk.com	1131616			

Iton & Menk, Inc. 2023, All Rights Reserved 10/28/2024 3:10:02 PN desk Docs///BIRCHWOOD ANN THET STATION/RIRCHWOOD THET STATION



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WILDWO	OD AVENUE LIFT STAT		80	C0.01
EXIS	TING/DEMOLITIO	N SITE - PLAN		

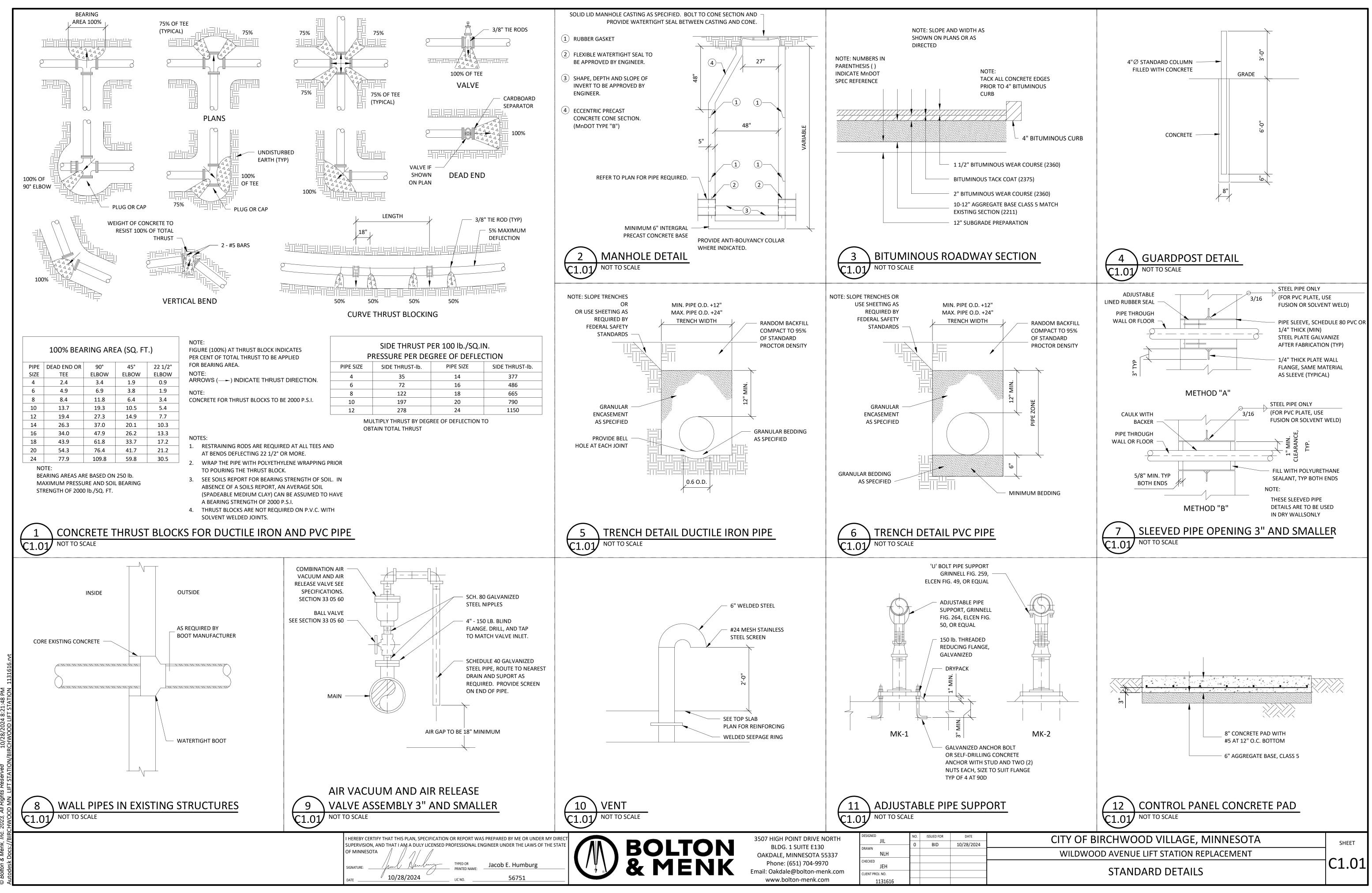


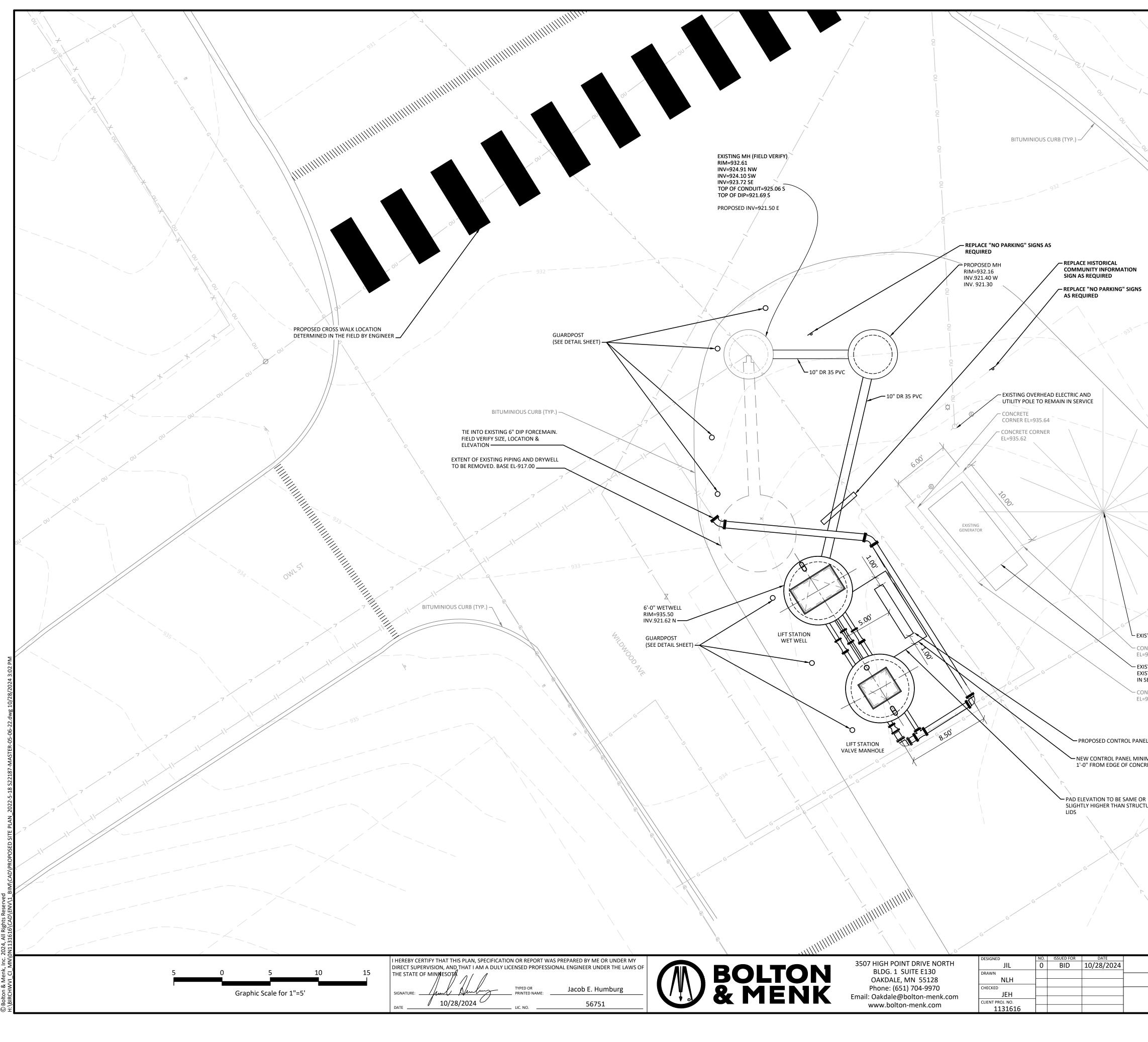


3507 HIGH POINT DRIVE NORTH BLDG. 1 SUITE E130 OAKDALE, MINNESOTA 55337 Phone: (651) 704-9970 Email: Oakdale@bolton-menk.com www.bolton-menk.com

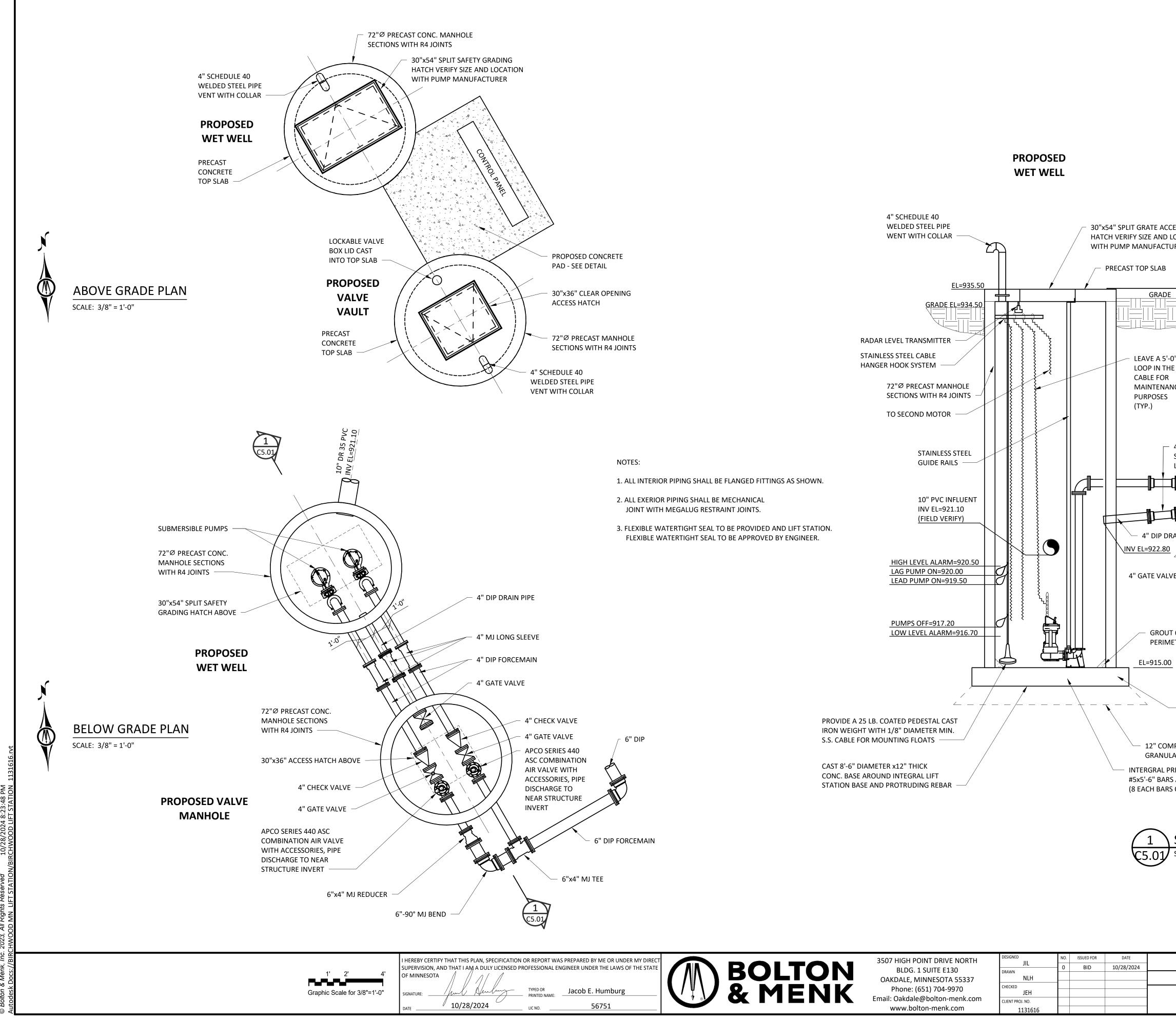
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CITY OF BIRCHWOOD VILLAGE, MINNESOTA	
WILDWOOD AVENUE LIFT STATION REPLACEMENT	
EXISTING/DEMOLITION - SECTION	





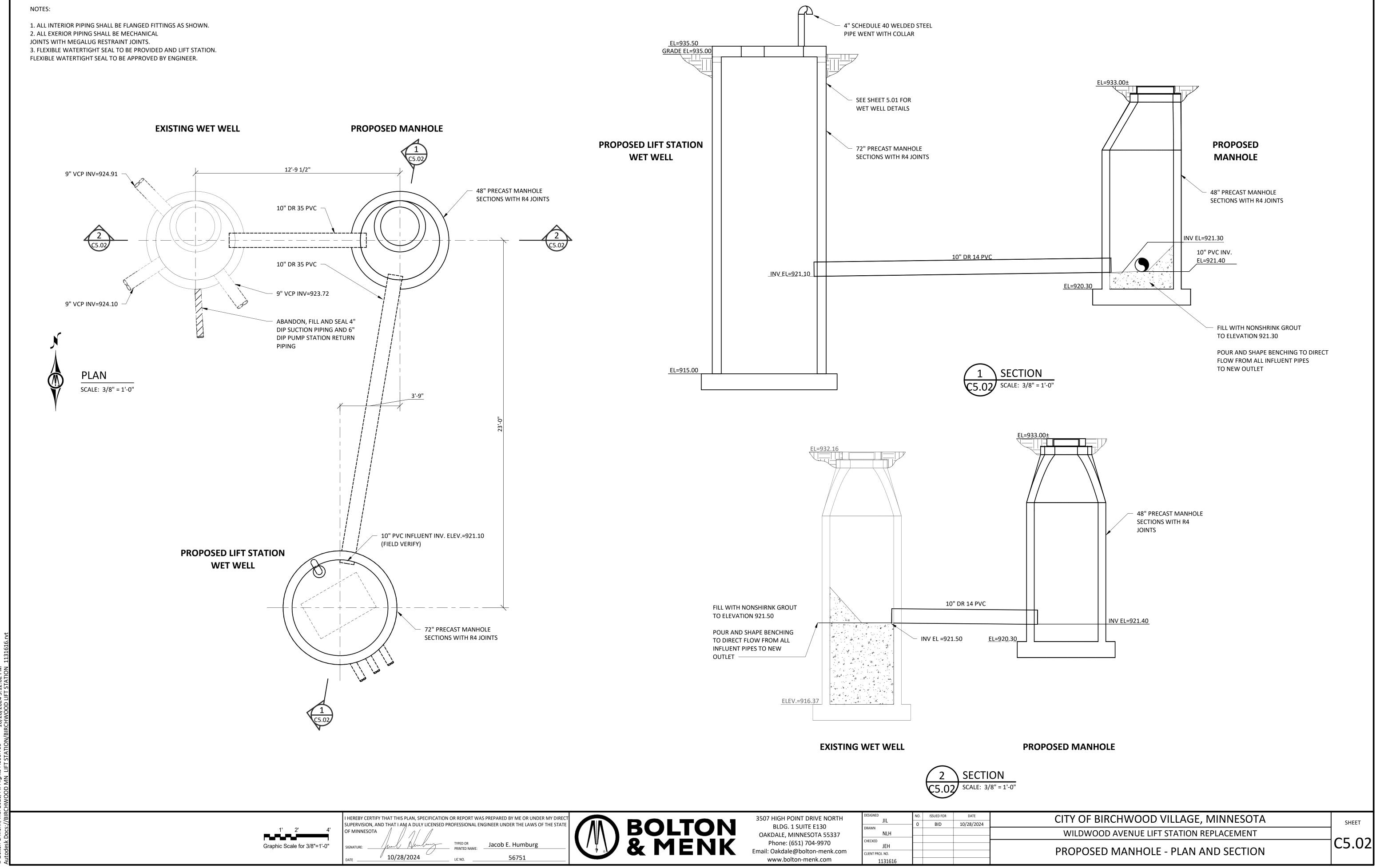
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	NOTES:			
		VALK MODEL W11-2 LOCATI	ON DETERMINED IN THE	FIELD.
	3. 2 EA W16-9P	CROSS WALK SIGNS LOCATIO	ON DETERMINED IN FIEL	D
	4. FINAL GUARE	DPOST LOCATIONS TO BE DE	TERMINED IN FIELD BY E	NGINEER
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NCRETE CORNER 935.75			.6	
STING CONCRETE PAD AND STING GENERATOR TO REMAIN		6		
SERVICE NCRETE CORNER		6		
935.67		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
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IMUM RETE PAD	6	/ /		
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CITY	OF BIRCHWOOI	D, MINNESOTA		SHEET
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	PROPOSED SIT	E - PLAN		





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PROPOSED VALVE CONTROL PANEL PAD	
CAST INTO TOP SLAB	
– 4" SCHEDULE 40 WELDED STEEL	
ESS PIPE WENT WITH COLLAR	
JRER PRECAST TOP SLAB	
EL=935.50	
0" 72"Ø PRECAST MANHOLE SECTIONS WITH R4 JOINTS	
E SECTIONS WITH R4 JOINTS	
VALVE APCO SERIES 440 ASC COMBINATION AIR VALVE WITH ACCESSORIES, PIPE	
DISCHARGE TO NEAR STRUCTURE	
SLEEVE LONG	
EL=923.00	
$\sim$ $\sim$ $\sim$ $\sim$ $\sim$ $\sim$ $\sim$ $\sim$ $\sim$ CAST 8'-6" DIAMETER x12" CONC.	
PROTRUDING REBAR	
12" COMPACTED GRANULAR FILL	
6"x6" CHAMFER AROUND SLOPE GROUT TO VALVE INVERT	
ETER OF MANHOLE	
PIPE SUPPORT (TYP.)	
PROVIDE #5 RING BARS	
AT 12" O.C.	
IPACTED AR FILL	
RECAST BASE WITH	
AT 45° DEGREE SPACING CAST INTO CONC. BASE)	
CAST INTO CONC. BASE	
SECTION	
SCALE: 3/8" = 1'-0"	
CITY OF BIRCHWOOD VILLAGE, MINNESOTA	SHEET
WILDWOOD AVENUE LIFT STATION REPLACEMENT	
PROPOSED LIFT STATION - PLAN AND SECTION	C5.01



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LIGHTING	POWER	FIRE ALARM	PROCESS	SCHEMATIC SYMBOLS
LUMINAIRE LEGEND	36 G WP 48" DESCRIPTORS, REFER TO ABBREVIATIONS:	Left Alarm Strobe, Wall Mount	L LEVEL TRANSDUCER	R1 RELAY COIL (NUMBER DENOTED)
	G = GROUND FAULT CIRCUIT INTERRUPTER GFCI = GROUND FAULT CIRCUIT INTERRUPTER	ALARM STROBE, CEILING MOUNT	F FLOW METER	
a CIRCUIT NUMBER	AC = MOUNT ABOVE COUNTER TOP USB = DEVICE WITH USB CHARGING PORT(S) OC = OCCUPANCY CONTROLLED	ALARM STROBE & HORN/SPEAKER, WALL MOUNT	T TEMPERATURE TRANSDUCER	
RECESSED LUMINAIRE	X" = MOUNTING HEIGHT AFF CIRCUIT IDENTIFIER	ALARM STROBE & HORN/SPEAKER, CEILING MOUNT	SS SUSPENDED SOLIDS SENSOR	H THREE POSITION SELECTOR SWIT
EMERGENCY EGRESS/LIFE SAFETY SYMBOL	DUPLEX RECEPTACLE	토여 ALARM HORN/SPEAKER, WALL MOUNT	DISSOLVED OXYGEN SENSOR	R TWO POSITION SELECTOR SWITC (RUN-OFF DENOTED)
NIGHT LIGHT SYMBOL	DOUBLE DUPLEX RECEPTACLE	€ ALARM HORN/SPEAKER, CEILING MOUNT	G GAS DETECTION SENSOR	PUSH TO TEST PILOT LIGHT (COLOR DENOTED)
NIGHT LIGHT AND EMERGENCY EGRESS	ISOLATED GROUND	토 PULL STATION	(SB) SLUDGE BLANKET SENSOR	- PILOT LIGHT - COLOR DENOTED)
		B BELL/CHIME	PH PH SENSOR	O PUSH BUTTON - NORMALLY CLOSE
CRITICAL POWER	P T GENERATOR POWER CIRCUIT	S SMOKE DETECTOR	S SOLENOID	O O PUSH BUTTON - NORMALLY OPEN
RECESSED DOWNLIGHT (ROUND & SQUARE)	↓	HEAT DETECTOR	MV MOTORIZED VALVE	TR TIMING RELAY
RECESSED WALL WASH DOWNLIGHT		DUCT SMOKE DETECTOR	LIMIT SWITCH	CLOSED SWITCH - TIME DELAY OF
SURFACE MOUNT LIGHT	SPECIAL PURPOSE RECEPTACLE	M MAGNETIC DOOR HOLD	P PRESSURE SWITCH	OPEN SWITCH - TIME DELAY CLOS
	Φ SIMPLEX RECEPTACLE	FR ALARM CONTROL RELAY		CLOSED SWITCH, TIME DELAY CLO
	MOTOR, SINGLE PHASE	FS FLOW SWITCH	F FLOOD SWITCH	↔ OPEN SWITCH, TIME DELAY OPEN
$\nabla$ $\nabla$ Track lighting				→ → → → → → → → → → → → → → → → → → →
		FD ELECTRIC DAMPER	MD MOTORIZED DAMPER	0-1-0 TEMPERATURE SWITCH - OPEN OF
SHADED REGION INDICATES FACE				
EXIT SIGN STEM INDICATES WALL MOUNT				
EXIT SIGN, WITH EMERGENCY LIGHTING	B DISCONNECT SWITCH, ENCLOSED BREAKER			
• O POLE MOUNTED LUMINAIRE		NAC NOTIFICATION APPLIANCE CONTROL PANEL	FS FLOW SWITCH	는 GROUND
Sa LIGHT CONTROL DEVICE LABELS DESCRIPTORS, REFER TO ABBREVIATIONS	면 ELECTRIC HAND DRYER			
/ SWITCH CIRCUIT IDENTIFIER SWITCH TYPE: 2=TWO POLE, SINGLE THROW	PP POWER POLE		H HUMIDISTAT	TERMINAL BLOCK
3=THREE WAY 4=FOUR WAY D=DIMMER		HEALTH CARE	EMERGENCY STOP PUSHBUTTON	CONNECTION NODE
P=WITH PILOT LIGHT T=TIMER	MOA MULTI-OUTLET ASSEMBLY	NURSE CALL LIGHT, WALL MOUNT	CONTROL STATION	
SP=SPEED CONTROL K=KEYED M=MOTOR HORSE POWER RATED	GROUNDING/ELECTRODE BOND POINT	NURSE CALL LIGHT, CEILING MOUNT	や CORD & PLUG	
MS=MANUAL MOTOR STARTER H/L=HIGH/LOW CONTROL				
\$ SWITCH	HH IN-GRADE HANDHOLE	SRS STANDARD ROOM STATION	ONE-LINE DIAGRAM	
S OCCUPANCY SENSOR, CEILING MOUNT	T T WALL-MOUNT GROUND BUS	BAS BED AUDIO STATION		
OS OCCUPANCY SENSOR, WALL MOUNT	RECESSED PANELBOARD	X - SCREEN SIZE	CIRCUIT BREAKER	
O DAYLIGHT SENSOR, CEILING MOUNT	PANELBOARD	MRQ MARQUEE	FUSE	
O DAYLIGHT SENSOR, WALL MOUNT		NURSE LOCATOR	/ SWITCH	
LIGHTING CONTROL STATION	COMMUNICATIONS		XX DISCONNECT SWITCH	
EMERGENCY LIGHTING REMOTE HEAD	X → NUMBER OF PORTS (TYPICAL) ▼ TELEPHONE OUTLET		- STARTER / CONTACTOR	
	DATA OUTLET, FLOOR MOUNT		MOTOR STARTER OVERLOADS	
			125 MOTOR HORSE POWER RATING	
SECURITY	AUDIO/VIDEO OUTLET	GENERAL	TRANSFORMER	
CR CARD READER		CONDUIT/WIRE RUN, EXPOSED		
KP KEY PAD	SPEAKER, WALL MOUNT	CONDUIT/WIRE RUN, CONCEALED/UNDERGROUND	M METER	
DC DOOR CONTACT	S SPEAKER, CEILING MOUNT	JUNCTION BOX, WALL MOUNT	GENERATOR	
	PROJECTOR/SMART BOARD WALL MOUNT	J JUNCTION BOX, CEILING MOUNT	VFD VFD MOTOR CONTROLLER	
GB GLASS BREAK	PROJECTOR, CEILING MOUNT	JUNCTION BOX, FLOOR MOUNT	SSRV SSRV MOTOR CONTROLLER	
RX REQUEST TO EXIT	PROJECTOR CONTROL OUTLET		SPD SURGE PROTECTION DEVICE	
	SMARTBOARD CONTROL OUTLET	30 EQUIPMENT TAG	AUTOMATIC TRANSFER SWITCH	
	IC INTERCOM STATION	REVISION TAG	لے۔ م ^{لم} LIGHTNING ARRESTOR	PANELBOARD NAMING LEGEND:
EDH ELECTRIFIED DOOR HARDWARE	B BELL/CHIME	AHU-11-A CONDUIT/WIRE TAG	SKW HEATER	DP = DISTRIBUTION PANEL
	Image: Second control       Image: Second contro       Image: Second control   <	CONDUIT STUB W/BUSHING		LP = LIGHTING PANELBOARD DP-X-Y : X= FLOOR LEVEL PANEL IS LOCA
				Y= # OF PANEL ON THE FLOOR
	   *			
	I HEREBY CERTIFY THAT THIS BY ME OR UNDER MY DIRECT PROFESSIONAL ENGINEER UN	PYAN, SPECIFICATION, OR REPORT WAS PREPARED SUPERVISION AND THAT I AM A DULY LICENSED OF THE LAWS OF THE STATE OF MINNESOTA.		DLTON 3507 HIGH BLDC OAK
			land surveying ate Office:	MENK OAKI

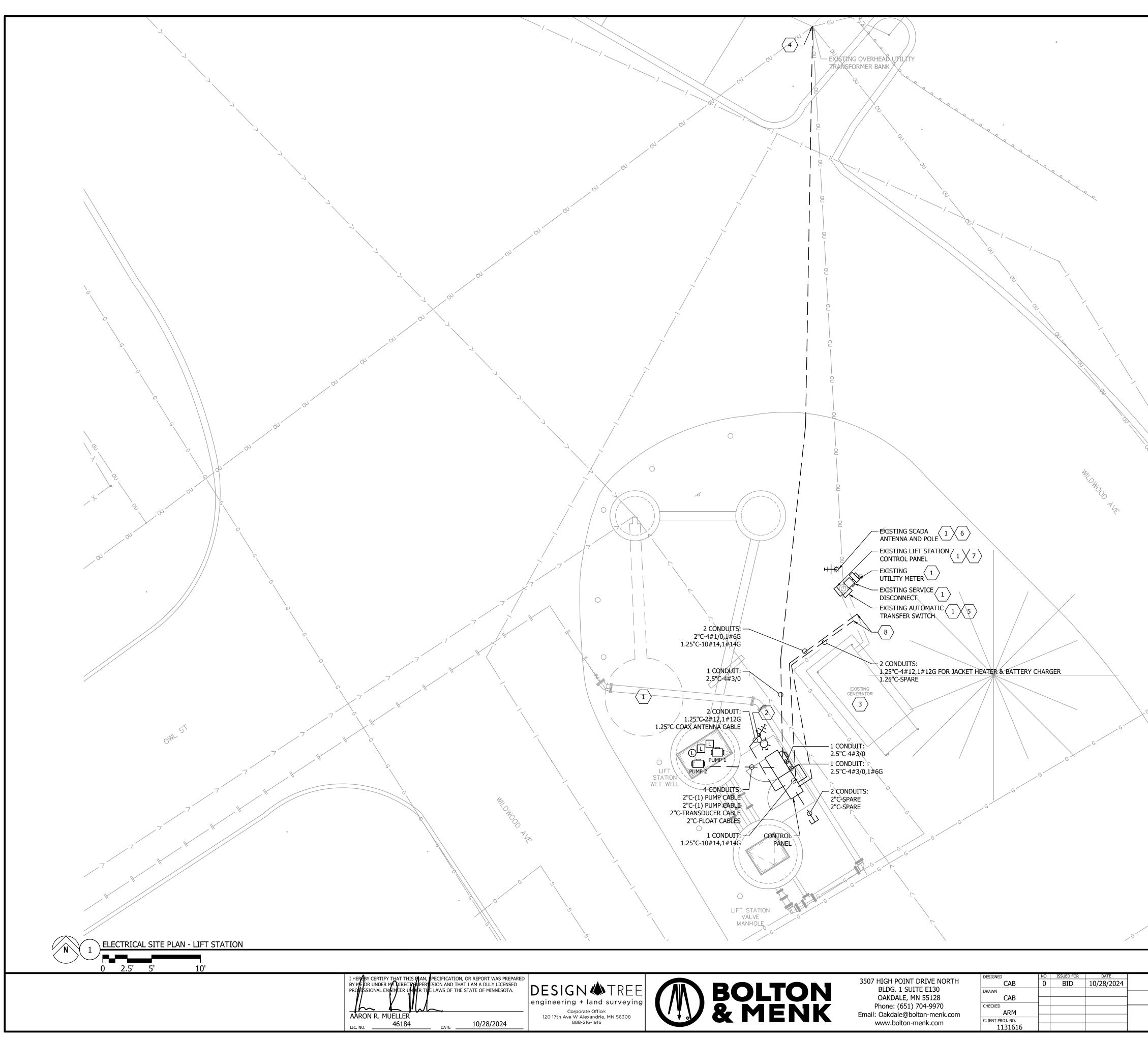
		EL	ECTRICAL	ABB	REVIATIONS		
1P	1 POLE			N.C.	NORMALLY CLOSED	v	VOLT
2P	2 POLE		FUSED OR FUSE	NEC	NATIONAL ELECTRICAL CODE	VA	VOLT-AMPERES
3P	3 POLE		FIRE ALARM	NEMA	NATIONAL ELECTRICAL	VDT	VIDEO DISPLAY TERMINAL
1P	4 POLE		FIRE ALARM CONTROL PANEL		MANUFACTURER'S	VERT VFD	
٩	AMPERE OR AMP		FURNISHED BY OTHERS FAN COIL UNIT	NIC	ASSOCIATION NOT IN CONTRACT	VFD	VARIABLE FREQUENCY DRIVE VERIFY
, /C	AIR CONDITIONER		FIXTURE	NIU	NETWORK INTERFACE UNIT	VOL	VOLUME
C	ABOVE COUNTER		FULL LOAD AMPS	NL	NIGHT LIGHT		
CLG	ABOVE CEILING		FLOOR	N.O.	NORMALLY OPEN	W	WATT OR WIRE
DO JC	AUTOMATIC DOOR OPENER		FLUORESCENT FUSE	NPF NTS	NORMAL POWER FACTOR	W/ WG	WITH WIRE GUARD
AIC	AMPERE INTERRUPTING CAPACITY		FULL VOLTAGE REVERSING	115	NOT TO SCALE	WH	WATER HEATER
١F	ARC FAULT		FULL VOLTAGE NON-REVERSING	i oc	OCCUPANCY CONTROLLED	w/o	WITHOUT
\FF	ABOVE FINISHED FLOOR			ОН	OVERHEAD	WP	WEATHERPROOF
AFG	ABOVE FINISHED GRADE	G	GROUND FAULT CIRCUIT	OIT	OPERATOR INTERFACE TERMINAL		
AFCI	ARC FAULT CIRCUIT INTERRUPTER	GA	INTERRUPTER GAUGE	OL	OVERLOADS	XFMR XFR	TRANSFORMER TRANSFER
AHU	AIR HANDLING UNIT	GAL	GALLON	PA	PUBLIC ADDRESS		IRANSFER
AL	ALUMINUM		GALVANIZED	PB	PULL BOX OR PUSHBUTTON		
ALT .	ALTERNATE	GC	GENERAL CONTRACTOR	PE	PNEUMATIC ELECTRIC		
AMP	AMPERE		GENERATOR	PED	PEDESTAL		
	AMPLIFIER	GFI	GROUND FAULT CIRCUIT	PF	POWER FACTOR		
ANNUN APPROX	ANNUNCIATOR APPROXIMATELY	GFCI	INTERRUPTER GROUND FAULT CIRCUIT	PH PIV	PHASE POST INDICATING VALVE		
AQSTAT			INTERRUPTER	PLMG	PLUMBING CONTRACTOR		
ARCH	ARCHITECT, ARCHITECTURAL	GFP	GROUND FAULT PROTECTOR	PNL	PANEL		
٩S	AMP SWITCH	GND	GROUND	PP	POWER POLE		
AT	AMP TRIP	GRS	GALVANIZED RIGID STEEL	PR	PAIR		
	AUTOMATIC TRANSFER SWITCH		(CONDUIT)	PRI	PRIMARY		
AUTO AUX		GYPBD	GYPSUM BOARD	PROJ PRV			
AUX AV	AUXILIARY AUDIO VISUAL	ноа	HAND-OFF-AUTOMATIC	PRV PT	POWER ROOF VENTILATOR POTENTIAL TRANSFORMER		
AWG	AMERICAN WIRE GAUGE		HORIZONTAL	PTR	PRINTER	2	ANGLE
		HP	HORSEPOWER	PVC	POLYVINYL CHLORIDE	@	AT
BAT	BATTERY		HIGH POWER FACTOR		(CONDUIT)	Ā	DELTA
BD	BOARD		HIGH SERVICE PUMP	PWR	POWER	ľ.	FEET
BLDG BMS	BUILDING BUILDING MANAGEMENT	HT HTG	HEIGHT HEATING	QTY	QUANTITY	#	INCHES NUMBER
SIME	SYSTEM	HTR	HEATER	QTY	QUANTIY QUARTZ	ø	PHASE
	515161	HV	HIGH VOLTAGE	QZ	QUARTZ	C∟	CENTER LINE
2	CONDUIT	HVAC	HEATING, VENTILATING AND	RCPT	RECEPTACLE	P	PLATE
CAB	CABINET		AIR CONDITIONING	RQD	REQUIRED	X"	MOUNTING HEIGHT AFF
CAT	CATALOG	HWP	HYDRONIC WATER PUMP	RM	ROOM		
	CABLE TELEVISION CIRCUIT BREAKER	HZ	HERTZ	RSC RTU	RIGID STEEL CONDUIT ROOF TOP UNIT		
CB CCTV	CLOSED CIRCUIT TELEVISION	IC	INTERRUPTING CURRENT	RTU	REMOTE TELEMETRY UNIT		
CKT	CIRCUIT	IG	ISOLATED GROUND				
CLG	CEILING	IMC	INTERMEDIATE METAL	SC	SURFACE CONDUIT		
СОМВ	COMBINATION	CONDUI		SCP	SUPERVISORY CONTROL PANEL		
CMPR	COMPRESSOR	INCAND		SEC	SECONDARY		
CONN CONST	CONNECTION CONSTRUCTION	IR I/W	INFRARED INTERLOCK WITH	SHT SIM	SHEET SIMILAR		
CONT	CONTINUATION OR	1/ 1/	INTEREOCK WITH	S/N	SOLID NEUTRAL		
20111	CONTINUOUS	J	JUNCTION BOX	SPEC	SPECIFICATION		
CONTR	CONTRACTOR	J-BOX	JUNCTION BOX	SPKR	SPEAKER		
CONV	CONVECTOR	JB	JUNCTION BOX	SP	SPARE		
CP ~T	CIRCULATING PUMP	KATC		SR	SURFACE RACEWAY		
CT CTR	CURRENT TRANSFORMER CENTER	KAIC	KILOAMPS INTERUPPTING CAPACAITY	SS SSRV	STAINLESS STEEL SOLID STATE REDUCED		
CU	COPPER	кν	KILOVOLT		VOLTAGE		
		KVA	KILOVOLT-AMPERE	SST	SOLID STATE		
		KVAR	KILOVOLT-AMPERE REACTIVE		SELECTOR SWITCH		
	DIRECT CURRENT	KW		S/S	STOP/START PUSHBUTTONS		
	DOMESTIC WATER CIRCULATING PUMP	KWH	KILOWATT HOUR	STA STD	STATION STANDARD		
	DEPARTMENT	LCP	LIGHTING CONTROL PANEL	SURF	SURFACE MOUNTED		
DET	DETAIL	LCS	LOCAL CONTROL STATION	SW	SWITCH		
	DIAMETER	LOC	LOCATE OR LOCATION	SWBD	SWITCHBOARD		
	DISCONNECT			SYM	SYMMETRICAL		
	DISTRIBUTION DIVISION	LTG LTNG	LIGHTING LIGHTNING	SYS	SYSTEM		
	DOWN		LOW VOLTAGE	TEL	TELEPHONE		
	DAMPER			TERM	TERMINAL		
DS	DISCONNECT/SAFETY SWITCH	MAX	MAXIMUM	TL	TWIST LOCK		
	DOUBLE THROW	M/C	MOMENTARY CONTACT	TR	TAMPER RESISTANT		
DWG	DRAWING	MC	MECHANICAL CONTRACTOR	TSTAT	THERMOSTAT		
C	ELECTRICAL CONTRACTOR	MCA MCB	MAX CIRCUIT AMPACITY MAIN CIRCUIT BREAKER	TTC	TELEPHONE TERMINAL CABINET		
	ELECTRICAL CONTRACTOR EXHAUST FAN	MCC	MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER	ΤV	TELEVISION		
	ELECTRIC, ELECTRICAL	MDC	MAIN DISTRIBUTION CENTER		TELEVISION TERMINAL		
LEV	ELEVATOR	MDP	MAIN DISTRIBUTION PANEL		CABINET		
	EMERGENCY	MFR	MANUFACTURER	TYP	TYPICAL		
	ENERGY MANAGEMENT SYSTEM	MH	MANHOLE				
	ELECTRICAL METALLIC TUBING ELECTRIC PNEUMATIC	MIC MIN	MICROPHONE MINIMUM	UC UE	UNDER COUNTER UNDERGROUND ELECTRICAL		
	EQUIPMENT	MISC	MINIMUM	UE	UNDERGROUND ELECTRICAL UNDERGROUND		
~	ELECTRIC WATER COOLER	MLO	MAIN LUGS ONLY	UH	UNIT HEATER		
XIST	EXISTING	MOA	MULTIOUTLET ASSEMBLY	UNO	UNLESS NOTED OTHERWISE		
	EXHAUST	MS	MANUAL MOTOR STARTER	USB	WITH USB CHARGING PORT		
EXP	EXPLOSION PROOF	MSBD	MAIN SWITCHBOARD	UT	UNDERGROUND TELEPHONE		
		MT	MOUNT MANUAL TRANSFER SWITCH	UTIL	UTILITY		
		MTS MTR	MANUAL TRANSFER SWITCH MOTOR, MOTORIZED	UV	UNIT VENTILATOR OR ULTRAVIOLET		
		1					
		1					



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CITY OF BIRCHWOOD, MINNESOTA
WILDWOOD AVENUE LIFT STATION MODIFICATIONS
ELECTRICAL SYMBOLS AND ABBREVIATIONS



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GENERAL NOTES:

- 1. COORDINATE FINAL LOCATION OF ELECTRIC UTILITY TRANSFORMER WITH ELECTRIC UTILITY, MAINTAIN ALL REQUIRED CLEARANCES PER UTILITY COMPANIES REQUIREMENTS.
- 2. VERIFY LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO PLACEMENT OF EQUIPMENT AND ANY EARTHWORK.
- 3. COORDINATE FINAL LOCATION OF CONTROL PANEL WITH THE OWNER'S
- ON-SITE REPRESENTATIVE PRIOR TO INSTALLATION. 4. COORDINATE DIMENSIONS OF PROVIDED EQUIPMENT WITH CONCRETE
- SUPPLIER.
- 5. WETWELL INTERIOR IS CLASSIFIED AS A CLASS 1, DIVISION 1, GROUP D HAZARDOUS LOCATION. AREA 18" ABOVE TOP SLAB AND 3' FROM OPENINGS TO THE WETWELL IS A CLASS 1, DIVISION 2, GROUP D HAZARDOUS LOCATION. AREA IN A 3' DIAMETER FROM WETWELL VENT OPENING IS A CLASS 1, DIVISION 1, GROUP D HAZARDOUS LOCATION. AREA WITHIN A 3'-5' RADIUS FROM WETWELL VENT OPENING IS A CLASS 1, DIVISION II, GROUP D HAZARDOUS LOCATION.
- 6. VAULT INTERIOR IS A CLASS 1, DIVISION 2, GROUP D HAZARDOUS LOCATION. 7. DO NOT INSTALL ELECTRICAL EQUIPMENT IN HAZARDOUS LOCATIONS OTHER THAN CONDUIT TO WETWELL AND DEVICES/CABLING IN WETWELL.

KEYEDNOTES:

- DEMOLISH EXISTING LIFT STATION AND ALL ASSOCIATED ELECTRICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO, PUMPS, CONTROL PANEL, FLOATS, SCADA ANTENNA/POLE, UTILITY POLE, AUTOMATIC TRANSFER SWITCH, UTILITY METER, AND SERVICE DISCONNECT COMPLETELY. ALL EXISTING LIFT STATION EQUIPMENT IS LOCATED IN UNDERGROUND LIFT STATION ENCLOSURE, EXCEPT SERVICE DISCONNECT, UTILITY METER, CONTROL PANEL, ANTENNA, AND AUTOMATIC TRANSFER SWITCH.
- 2. PROVIDE YARD LIGHT , SCADA ANTENNA, AND DIRECT BURIAL FIBERGLASS POLE. YARD LIGHT SHALL BE LITHONIA DSX1, OR EQUAL LED LUMINAIRE, 4000K, TYPE 4 OPTICS, 15,000 LUMEN OUTPUT, INTEGRAL DAYLIGHT AND MOTION SENSOR TO DIM LIGHT WHEN NO MOTION IS DETECTED. POLE SHALL BE 20'-0" TALL ABOVE GRADE, DIRECT BURY FIBERGLASS POLE, BLACK IN COLOR. PROVIDE SEPARATE RACEWAY UP THE INSIDE OF THE POLE FOR ANTENNA CABLING.
- 3. EXISTING GENERATOR TO REMAIN AS IS. 4. PROVIDE NEW UNDERGROUND RISER ON EXISTING UTILITY POLE TO FEED THE NEW LIFT STATION CONTROL PANEL. PROVIDE CONDUIT UP THE POLE
- WITH A WEATHERHEAD AS REQUIRED BY THE UTILITY COMPANY, COORDINATE WORK REQUIREMENTS WITH UTILITY COMPANY.
- 5. SALVAGE AUTOMATIC TRANSFER SWITCH AND REINSTALL ON BACKSIDE OF THE NEW LIFT STATION CONTROL PANEL.
- 6. SALVAGE EXISTING RADIO AND REINSTALL IN NEW LIFT STATION CONTROL PANEL.
- 7. SALVAGE EXISTING SCADA ANTENNA AND INSTALL ON NEW DIRECT BURIAL POLE.
- 8. INTERCEPT EXISTING GENERATOR CONDUITS WHERE POSSIBLE, CONTRACTOR SHALL VERIFY THE EXISTING CONDUIT QUANTITIES, ROUTING, AND SIZES ON SITE PRIOR TO PERFORMING WORK. WHERE EXISTING CONDUITS ARE NOT ABLE TO BE INTERCEPTED AND REUSED THE CONTRACTOR SHALL ENTER THE GENERATOR ENCLOSURE WITH THE NEW CONDUITS UNDERGROUND BENEATH AND THEN UP THROUGH THE EXISTING GENERATOR PAD.

CITY OF BIRCHWOOD, MINNESOTA	SHEET
WILDWOOD AVENUE LIFT STATION MODIFICATIONS	E1.02
ELECTRICAL SITE PLAN - LIFT STATION	

