WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

FOR THE

CITY OF KENTON, OHIO

KENTON, OHIO
VICINITY MAP
SCALE: NONE

STATE LOCATION MAP
SCALE: NONE

DRAWINGS PREPARED FOR:

LYNN WEBB, MAYOR
CINDY MURRAY, SAFETY SERVICE DIRECTOR
BRAD LAUTAR, AUDITOR
TERRI DOWNEY, TREASURER

CITY COUNCIL
JOEL E.ALTHAUSER, PRESIDENT
SUE FOX BUROKER, MEMBER
LYDIA MILLER, MEMBER
CLIFF WYNEGAR, MEMBER
CHAD MILLER, MEMBER
DORIS BLUM, MEMBER
PEGG WREN, MEMBER
ROBIN JONES, MEMBER

APRIL 2026

WESSLER ENGINEERING
More than a Project™
BLUFFTON
80 State Route 103, Suite C
Bluffton, Ohio 45817
Phone: (419) 358-0521
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PROJECT NO. 709126-04-001

STATE OF OHIO ADAM SITKA E-88514 PROFESSIONAL ENGINEER 04/07/2026	ADAM SITKA REGISTERED ENGINEER STATE OF OHIO NO. E-88514
STATE OF OHIO WAYNE C. MOORE E-70068 PROFESSIONAL ENGINEER 04/07/2026	WAYNE C. MOORE REGISTERED ENGINEER STATE OF OHIO NO. E-70068 COVERING ELECTRICAL
STATE OF OHIO BAILEY HUSBAND E-91322 PROFESSIONAL ENGINEER 04/07/2026	BAILEY HUSBAND REGISTERED ENGINEER STATE OF OHIO NO. E-91322 COVERING PROCESS AND INSTRUMENTATION
STATE OF OHIO JAKOB C. BRUHL E-89802 PROFESSIONAL ENGINEER 04/07/2026	JAKOB C. BRUHL REGISTERED ENGINEER STATE OF OHIO NO. E-89802 COVERING STRUCTURAL
STATE OF OHIO TIMOTHY M. ANDERSON PE-59158 PROFESSIONAL ENGINEER 04/07/2026	TIMOTHY M. ANDERSON REGISTERED ENGINEER STATE OF OHIO NO. PE-59158 COVERING HVAC

IMAGERY FROM OHIO STATE MAP.

LOCATION AND SCOPE OF WORK PLAN

0 750 1500 3000 FT
1" = 1500'

DRAWING INDEX

Water Treatment Plant Phase 1 Improvements
City of Kenton, Ohio

SHEET TYPE DEFINITIONS:
G - GENERAL
T - WTP
EC - EROSION CONTROL
A - ARCHITECTURAL
C - CIVIL / PROCESS
S - STRUCTURAL
P - PLUMBING
M - MECHANICAL
E - ELECTRICAL
N - NETWORK

SHEET NUMBER	AREA	SHEET TYPE	NUMBER	SHEET DESIGNATION	
Area 1 - GENERAL					
1	1	G	1.0	1G1	TITLE SHEET
2	1	G	2.0	1G2	LOCATION, DRAWING INDEX AND SCOPE OF WORK PLAN
3	1	G	3.0	1G3	SYMBOLS, ABBREVIATIONS AND GENERAL NOTES
4	1	S	1.0	1S1	STRUCTURAL GENERAL NOTES
5	1	M	1.0	1M1	MECHANICAL SYMBOLS AND ABBREVIATIONS
Area 2 - WATER TREATMENT PLANT BUILDING					
6	2	Y	1.0	2Y1	WATER TREATMENT PLANT - SITE PLAN
7	2	C	1.0	2C1	UPPER LEVEL IMPROVEMENTS PLAN
8	2	C	2.0	2C2	LOWER LEVEL IMPROVEMENTS PLAN
9	2	C	3.0	2C3	FILTER INFLUENT IMPROVEMENTS PLAN
10	2	C	4.0	2C4	HIGH SERVICE PUMP IMPROVEMENTS SECTION
11	2	C	5.0	2C5	FILTER GALLERY IMPROVEMENTS SECTIONS
12	2	C	6.0	2C6	PIPE CHANNEL IMPROVEMENTS SECTIONS
13	2	C	7.0	2C7	IMPROVEMENTS SECTION
14	2	C	8.0	2C8	FLOCCULATION, REACTION AND SETTLING BASIN IMPROVEMENTS PLAN
15	2	C	9.0	2C9	GARAGE BUILDING - IMPROVEMENTS PLAN AND SECTION
16	2	M	1.0	2M1	UPPER FLOOR MECHANICAL DEMOLITION PLAN
17	2	M	2.0	2M2	LOWER FLOOR MECHANICAL DEMOLITION PLAN
18	2	M	3.0	2M3	UPPER FLOOR MECHANICAL PLAN
19	2	M	4.0	2M4	LOWER FLOOR MECHANICAL PLAN
20	2	M	5.0	2M5	GARAGE - MECHANICAL PLANS
21	2	E	1.0	2E1	WTP BUILDING UPPER LEVEL DEMOLITION PLAN
22	2	E	2.0	2E2	WTP BUILDING UPPER LEVEL POWER PLAN
23	2	E	3.0	2E3	WTP BUILDING - LOWER LEVEL POWER PLAN
24	2	E	4.0	2E4	FILTER GALLERY - POWER PLAN AND SECTIONS
25	2	E	5.0	2E5	GARAGE BUILDING - ELECTRICAL DEMOLITION & IMPROVEMENTS PLAN
26	2	E	6.0	2E6	FLOCCULATION, REACTION AND SETTLING BASIN IMPROVEMENTS
Area 3 - WELLS					
27	3	C	1.0	3C1	EXISTING WELL 2 IMPROVEMENTS
28	3	C	2.0	3C2	EXISTING WELL 4 IMPROVEMENTS
29	3	C	3.0	3C3	EXISTING WELL 5 IMPROVEMENTS
30	3	C	4.0	3C4	EXISTING WELL 6 IMPROVEMENTS
31	3	C	5.0	3C5	EXISTING WELL 7 IMPROVEMENTS
32	3	C	6.0	3C6	EXISTING WELL 8 IMPROVEMENTS
33	3	C	7.0	3C7	EXISTING WELL 9 IMPROVEMENTS
Area 4 - ELEVATED STORAGE TANK					
34	4	Y	1.0	4Y1	ELEVATED WATER TOWER - SITE PLAN AND IMPROVEMENTS
Area 5 - STRUCTURAL REPAIRS					
35	5	S	1.0	5S1	CONCRETE REPAIR AND REHABILITATION PLAN
Area 6 - ELECTRICAL					
36	6	E	1.0	6E1	ELECTRICAL LEGEND
37	6	E	2.0	6E2	DEMOLITION POWER ONE-LINE DIAGRAM
38	6	E	3.0	6E3	IMPROVEMENTS POWER ONE-LINE DIAGRAM
39	6	E	4.0	6E4	PFI-ACTR ONE-LINE DIAGRAM
40	6	E	5.0	6E5	WTP & FILTER 1 CONTROL ONE-LINE DIAGRAM
41	6	E	6.0	6E6	FILTER 2 & ELLOVE CONTROL ONE-LINE DIAGRAM
42	6	E	7.0	6E7	WELLS & TOWER CONTROL ONE-LINE DIAGRAM
43	6	E	8.0	6E8	INSTRUMENT MOUNTING DETAILS
44	6	E	9.0	6E9	WELLS & TOWER CONTROL ONE-LINE DIAGRAM
Area 7 - CONTROLS					
45	7	N	1	7N1	PROCESS AND INSTRUMENTATION LEGEND
46	7	N	2	7N2	WELL RAW WATER P&ID
47	7	N	3	7N3	FILTERS 1, 3 & 5 P&ID
48	7	N	4	7N4	FILTERS 2, 4 & 6 P&ID
49	7	N	5	7N5	HIGH SERVICE PUMPS P&ID
50	7	N	6	7N6	GARAGE SLUDGE PROCESS P&ID
51	7	N	7	7N7	NETWORK DIAGRAM
Area 8 - MECHANICAL					
52	8	M	1.0	8M1	MECHANICAL DETAILS
53	8	M	2.0	8M2	MECHANICAL DETAILS
54	8	M	3.0	8M3	MECHANICAL SCHEDULES
55	8	M	4.0	8M4	MECHANICAL DIAGRAMS
56	8	M	5.0	8M5	MECHANICAL DIAGRAMS

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					
	APPROVED BY	AMS					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — ADAM SITKA E-88514 — REGISTERED PROFESSIONAL ENGINEER — 04/01/2026

WESSLER ENGINEERING — More than a Project℠

WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS
CITY OF KENTON, OHIO
LOCATION, DRAWING INDEX AND SCOPE OF WORK PLAN

SHEET NO. **1G2**
PAGE NO. 2

EXISTING FEATURES LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
BM	BENCH MARK	C	CISTERN		EASEMENT - CONSTRUCTION/PERMANENT
TBM	TEMPORARY BENCH MARK	EM	ELECTRIC METER		LOT BOUNDARY
SB-1	SOIL BORING LOCATION	AC	AIR CONDITIONING UNIT		PROPERTY BOUNDARY
	SECTION CORNER	UR	UTILITY RISER (DEFINED BY UTILITY)		RIGHT-OF-WAY - TEMPORARY/PERMANENT
	DRILL HOLE IN CONCRETE/HARRISON MONUMENT	UP	UTILITY PEDESTAL (DEFINED BY UTILITY)		SECTION BOUNDARY
CP	CONTROL POINT (SET/FOUND)	UM	UTILITY MARKER (DEFINED BY UTILITY)		WETLANDS
MN	MAGNETIC NAIL (SET/FOUND)		JOINT POWER/TELEPHONE POLE	540	CONTOUR - INTERMEDIATE ELEVATION
BS	BOAT SPIKE (SET/FOUND)		LIGHT POLE	550	CONTOUR - INDEX ELEVATION
PK	PK NAIL (SET/FOUND)		LIGHT ON POWER POLE	OHE OHE	OVERHEAD ELECTRIC
RS	RAILROAD SPIKE (SET/FOUND)		LIGHT ON JOINT POLE	OHC OHC	OVERHEAD CABLE TV
RW	R/W MARKER - CONCRETE/GRANITE/STONE		POWER POLE	OHT OHT	OVERHEAD TELEPHONE
IP	IRON PIPE/IRON PIN/REBAR (WITH DIAMETER)		TELEPHONE POLE	UGC UGC	UNDERGROUND CABLE TV
BP	BRASS PLUG		LAMP POST	UGE UGE	UNDERGROUND ELECTRIC
CA	CABLE TV MANHOLE		GUY ANCHOR	UGF UGF	UNDERGROUND FIBER OPTIC
E	ELECTRIC MANHOLE		GUY POLE OR STUB	G G G	GAS MAIN
G	GAS MANHOLE		CONTROLLER CABINET	DG DG	DIGESTER GAS
O	OTHER MANHOLE		FLAG POLE	P P P	PETROLEUM MAIN
T	TELEPHONE MANHOLE		POST	UGT UGT	UNDERGROUND TELEPHONE
TEL	TELEPHONE VAULT		GROUND LIGHT	W W W	WATER MAIN
T	TRAFFIC MANHOLE	M	MAILBOX	W W W	WATER SERVICE
TH	TRAFFIC HANDHOLE	M M	DOUBLE/MULTIPLE MAILBOX	FM FM	FORCEMAIN
W	WATER MANHOLE		MAST ARM POLE		GRAVITY SEWER PIPE
A	AIR RELEASE VALVE		TRAFFIC SIGNAL STRAIN POLE		PLANT CHEMICAL LINE
S	SANITARY SEWER MANHOLE		SIGNAL LOOP DETECTOR BOX	D D	PLANT DRAIN LINE
D	DRAINAGE/STORM SEWER MANHOLE		SIGNAL LOOP DETECTOR LOOP		TOP OF BANK/TOE OF SLOPE
CO	SANITARY SEWER CLEANOUT		SIGN - SINGLE POST		CENTERLINE OF DITCH/SWALE/STREAM
ST	SEPTIC TANK		SIGN - DOUBLE POST		FENCE - FIELD
V	VALVE VAULT		SIGN - RAILROAD SIGNAL		FENCE - METAL
	BEEHIVE INLET		SIGN - RAILROAD CROSSING		FENCE - WOOD
	CURB INLET		BUSH		GUARDRAIL
	DROP INLET		STUMP		STREAM
	CATCH BASIN		TREE - CONIFEROUS		TREE/BRUSH LINE
DS	DOWNSPOUT		TREE - DECIDUOUS		
GM	GAS METER		ROCK OUTCROP		
GV	GAS VALVE		SATELLITE		
GS	GAS SERVICE VALVE	SPRK	SPRINKLER CONTROL VALVE		
PV	PETROLEUM VALVE	WM	WATER METER		
PS	PETROLEUM SHUTOFF VALVE	WV	WATER VALVE		
MW	GAS STATION MONITORING WELL	WS	WATER SERVICE VALVE		
GFC	GAS STATION FILL CAP	WW	WATER WELL		
GW	NATURAL GAS WELL/STORAGE WELL	ETW	ENVIRONMENTAL TEST WELL		
SH	SPRINKLER HEAD	FH	FIRE HYDRANT		
YH	YARD HYDRANT	PV	PROCESS VALVE		

*NOTE: THIS TABLE IS A LISTING OF TYPICAL EXISTING SYMBOLS AND MAY NOT INCLUDE ALL EXISTING SYMBOLS FOUND WITHIN THIS PLAN SET. IF ADDITIONAL ITEMS WILL BE CALLED OUT ON THEIR PLAN SHEETS. IF A QUESTION ARISES ON THE MEANING OF ANY SYMBOL NOT LISTED IN THIS TABLE, PLEASE CONTACT THE ENGINEER FOR CLARIFICATION. THE SYMBOLS ARE NOT TO SCALE.

Ohio Utilities Protection Service
Call 811 before you dig

TABLE OF ABBREVIATIONS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR	IPS	IRON PIPE SIZE
ALUM	ALUMINUM	OSPC	OHIO STATE PLANE COORDINATE
APP	APPARENT	LB	POUND(S)
APPROX	APPROXIMATE(LY)	LF	LINEAR FEET
ASPH	ASPHALT	LN	LANE
ASSOC	ASSOCIATES	LS	LIFT STATION
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	MA EX	MATCH EXISTING
AVE	AVENUE	MJ	MECHANICAL JOINT
AVG	AVERAGE	MATL	MATERIAL
BLDG	BUILDING	MAX	MAXIMUM
BLVD	BOULEVARD	MH	MANHOLE
BM	BENCHMARK	MIN	MINIMUM
CO	CLEANOUT	MISC	MISCELLANEOUS
CI	CAST IRON	MNFR	MANUFACTURER
CL	CENTER LINE	N	NORTHING, NORTH
CMA	COLD MIX ASPHALT	NGS	NATIONAL GEODETIC SURVEY
CMP	CORRUGATED METAL PIPE	NO.	NUMBER
CMU	CONCRETE MASONRY UNIT	OC	ON CENTER
CONC	CONCRETE	OD	OUTSIDE DIAMETER
CONT	CONTINUOUS	PC	POINT OF CURVE (BEGIN CURVE)
CNR	CORNER	POLY	POLYETHYLENE
CP	CONTROL POINT	PI	POINT OF INTERSECTION
CPP	CORRUGATED PLASTIC PIPE	POT	POINT ON TANGENT
CR STN	CRUSHED STONE	PT	POINT OF TANGENT (END CURVE)
CYD	CUBIC YARD	PSI	POUNDS PER SQUARE INCH
D	DEPTH	PT	POINT
DI	DUCTILE IRON	PVC	POLYVINYL CHLORIDE
DI MJ	DUCTILE IRON MECHANICAL JOINT	R	RADIUS
DBL	DOUBLE	ROW	RIGHT-OF-WAY
DIA	DIAMETER	RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE	RD	ROAD
DIPS	DUCTILE IRON PIPE SIZE	S	SOUTH
DR	DRIVE	SR	STATE ROUTE
E	EASTING, EAST	SST	STAINLESS STEEL
EF	EACH FACE	SVA	SERVICE VALVE ASSEMBLY
EW	EACH WAY	SB	SOIL BORING
EA	EACH	SCHED	SCHEDULE
EJ	EAST JORDAN IRON WORKS	SDR	STANDARD DIMENSION RATIO
EL	ELEVATION	SECT	SECTION
EX	EXISTING	SF	SQUARE FEET
EXP	EXPANSION	SHT	SHEET
FFE	FINISH FLOOR ELEVATION	SPECS	SPECIFICATION(S)
FM	FORCE MAIN	SQ	SQUARE
FND	FOUND	SRF	STATE REVOLVING FUND
FT	FEET	ST	STREET
FTG	FOOTING	STA	STATION
GALV	GALVANIZED	SYD	SQUARE YARD
GPS	GLOBAL POSITIONING SYSTEM	TBM	TEMPORARY BENCHMARK
HMA	HOT MIX ASPHALT	TC	TOP OF CASTING
HDPE	HIGH DENSITY POLYETHYLENE	TYP	TYPICAL
HORIZ	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
ID	INSIDE DIAMETER	USGS	US GEOLOGICAL SURVEY
IE	INVERT ELEVATION	VERT	VERTICAL
INC	INCORPORATED	VLV	VALVE
ODOT	OHIO DEPARTMENT OF TRANSPORTATION	W	WIDTH, WEST
INSTR	INSTRUMENT	WSE	WATER SURFACE ELEVATION
INV	INVERT	YR	YEAR

*NOTE: THIS TABLE IS A LISTING OF TYPICAL ABBREVIATIONS AND MAY NOT INCLUDE ALL ABBREVIATIONS FOUND WITHIN THIS PLAN SET. IF A QUESTION ARISES ON THE MEANING OF AN ABBREVIATION NOT LISTED IN THIS TABLE, PLEASE CONTACT THE ENGINEER FOR CLARIFICATION.

GENERAL NOTES:

1. NOTIFY THE ENGINEER IF ANY CONFLICTING INFORMATION BECOMES APPARENT IN THE CONTRACT DOCUMENTS AS SOON AS POSSIBLE AND PRIOR TO THE COMMENCEMENT OF ANY WORK IN THE VICINITY OF OR RELATIVE TO THE APPARENT CONFLICT SO THAT CLARIFICATION MAY OCCUR PRIOR TO CONSTRUCTION.
2. ANY ALTERATIONS TO THESE DRAWINGS NOT AUTHORIZED BY WESSLER ENGINEERING AND NOT IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS AND RECORDS ON FILE AT WESSLER ENGINEERING SHALL RELIEVE WESSLER ENGINEERING OF ANY RESPONSIBILITY FOR THE ACCURACY OF THE DRAWINGS.
3. USE CAUTION DURING THE EXECUTION OF WORK TO PREVENT DAMAGE TO STATE, COUNTY, MUNICIPAL, AND PRIVATE PROPERTY. REPAIR ALL DAMAGES AS A RESULT OF OPERATIONS, INCLUDING DAMAGE TO DRAINAGE STRUCTURES, FIELD TILES, PUBLIC/PRIVATE ROADS, AND LANDSCAPING (INCLUDING FENCING). REPAIR AND REPLACE DAMAGED ITEMS AT NO ADDITIONAL COST TO THE OWNER. PERFORM ALL REPAIR AND REPLACEMENT WORK TO THE SATISFACTION OF THE PERMITTING AGENCY. THE OWNER AND THE ENGINEER.
4. TAKE CARE TO AVOID DAMAGE TO PAVED AREAS WHICH ARE NOT SPECIFICALLY CALLED OUT FOR REPAIR OR REPLACEMENT. REPAIR, OR REPLACE ALL SUCH PAVEMENTS WHICH ARE DAMAGED BY CONSTRUCTION ACTIVITIES AND CONSTRUCTION TRAFFIC AT NO ADDITIONAL COST TO THE OWNER.
5. COMPLY WITH ALL APPLICABLE PERMITS AND REGULATIONS. APPLICABLE PERMITS ISSUED TO THE OWNER WILL BE MADE AVAILABLE TO THE CONTRACTOR. CONTACT ALL APPLICABLE PERMITTING AGENCIES WITHIN THE TIME PERIOD SPECIFIED BY THAT AGENCY PRIOR TO BEGINNING CONSTRUCTION.
6. ALL PRIVATE WELL LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. FIELD VERIFY AND DETERMINE EXACT LOCATIONS OF ALL PRIVATE WELLS IN THE PROJECT AREA.
7. ALL EXISTING AND NEW UTILITY INFORMATION, INCLUDING BUT NOT LIMITED TO LOCATION, SIZE AND INVERT ELEVATION, IS SHOWN BASED UPON AVAILABLE INFORMATION. THE ENGINEER DOES NOT GUARANTEE OR ASSUME SUCH INFORMATION TO BE TRUE, ACCURATE, EXHAUSTIVE OR EVEN APPROXIMATE. CONTACT THE OHIO UNDERGROUND PLANT PROTECTION SERVICE (811) AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY. CONTACT OTHER UTILITIES DIRECTLY.
8. DETERMINE WHICH UTILITIES MAY CONFLICT WITH THE WORK AND VERIFY THEIR LOCATION, SIZE AND ELEVATION PRIOR TO CONSTRUCTION AND DETERMINE IF THERE ARE ANY DISCREPANCIES OR CONFLICTS. IF ANY DISCREPANCIES OR CONFLICTS ARE DISCOVERED, NOTIFY THE ENGINEER AS SOON AS POSSIBLE.
9. EXISTING UTILITY SERVICE LINES TO INDIVIDUAL CUSTOMERS MAY NOT BE SHOWN ON THE DRAWINGS. ASSUME THAT UNDERGROUND SERVICE LINES FOR ALL UTILITIES EXIST TO EACH PROPERTY ALONG THE ROUTE OF THE PLANNED IMPROVEMENTS.
10. COORDINATE ALL WORK WITH THE RESPECTIVE UTILITIES. SCHEDULE WORK ACCORDINGLY, AND NOTIFY ALL UTILITIES A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY.
11. COORDINATE PLANNED UTILITY SERVICE INTERRUPTIONS WITH THE RESPECTIVE UTILITIES AND THE UTILITIES' AFFECTED CUSTOMERS. SERVICE INTERRUPTIONS SHOULD NOT LAST MORE THAN FOUR (4) HOURS. GIVE WRITTEN NOTICE TO ALL AFFECTED UTILITY CUSTOMERS AND PROPERTY OWNERS AT LEAST TWENTY-FOUR (24) HOURS BUT NOT MORE THAN SEVENTY-TWO (72) HOURS PRIOR TO ANY PLANNED INTERRUPTION OF UTILITY SERVICE.
12. USE CAUTION DURING THE EXECUTION OF WORK TO PREVENT DAMAGE TO EXISTING UTILITIES. REPAIR OR REPLACE ALL PUBLIC AND PRIVATE FACILITIES DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS.
13. MAINTAIN EXISTING STORMWATER DRAINAGE FOR THE ENTIRE DURATION OF THE PROJECT.
14. DO NOT DISTURB EXISTING MANHOLES OR INLETS, UNLESS NOTED OTHERWISE.
15. ALL EQUIPMENT, APPURTENANCES AND PIPING REMOVED AS PART OF THE DEMOLITION SHALL FIRST BE OFFERED TO THE OWNER FOR SALVAGE. DELIVER SALVAGED ITEMS SELECTED BY OWNER TO A LOCATION DESIGNATED BY THE OWNER OR ENGINEER. IN THE EVENT THE OWNER DOES NOT ELECT TO KEEP THE REMOVED ITEMS, REMOVE SUCH ITEMS FROM THE SITE AND DISPOSE OF AT A LOCATION APPROVED FOR SUCH DISPOSAL AT THE CONTRACTOR'S EXPENSE.
16. COORDINATE STAGING AREA LOCATIONS WITH THE OWNER.
17. ALL CONSTRUCTION TRAFFIC SHALL USE MAJOR ROADS. NO CONSTRUCTION TRAFFIC SHALL USE LOCAL STREETS FOR INDIRECT ACCESS.
18. ALL EXISTING PIPING MAY NOT BE SHOWN. REFERENCE EXISTING RECORD DRAWINGS ON FILE WITH THE OWNER AND WESSLER ENGINEERING FOR ADDITIONAL INFORMATION OF EXISTING PIPING AND CONDUIT THROUGHOUT THE PLANT SITE.
19. THE WORK SHOWN ON THESE DRAWINGS IS OCCURRING ON A PLANT SITE IN WHICH BURIED ELECTRICAL CONDUIT AND SMALL PIPING MAY EXIST THROUGHOUT AND IN THE VICINITY OF THE PROJECT AND MAY NOT BE SHOWN ON THESE DRAWINGS. EXPECT TO ENCOUNTER BURIED ELECTRICAL AND COMMUNICATIONS WIRING, WITH OR WITHOUT CONDUIT, SMALL PIPING, AND FIELD TILE WHILE DIGGING ON THIS SITE.
20. NEW PIPING CARRYING LIQUIDS SHALL HAVE MINIMUM COVER AS DEFINED IN SPEC 02660, UNLESS SPECIFIC ELEVATIONS ON THE DRAWINGS INDICATE OTHERWISE.
21. INSPECT THE SITE PRIOR TO BIDDING TO UNDERSTAND THE EXTENT OF THE DEMOLITION WORK INVOLVED AND ADJUST BID ACCORDINGLY.
22. COMPLETELY REMOVE UNDERGROUND PIPING THAT HAS PREVIOUSLY BEEN OR WILL BE TAKEN OUT OF SERVICE. IN CONFLICT WITH THE NEW WORK, UNLESS OTHERWISE NOTED, ABANDON IN PLACE ALL UNDERGROUND PIPING NOT IN CONFLICT WITH THE NEW WORK. DO NOT LEAVE ABANDONED PIPING LIVE. SEE SPECIFICATION SECTION 02050 FOR DEMOLITION PROCEDURES. SEE SPECIFICATION SECTION 01550 FOR PLANT OPERATIONS DURING CONSTRUCTION FOR COORDINATION OF DEMOLITION WORK AND NEW CONSTRUCTION.
23. ALL EQUIPMENT TO BE REMOVED THAT HAS ELECTRICAL COMPONENTS, CONDUIT AND WIRING, OR SMALL PIPING CONNECTED SHALL HAVE THE ELECTRICAL COMPONENTS AND SMALL PIPING REMOVED BACK TO THE SOURCE.
24. LENGTHS OF SEWERS AS SHOWN ON THE DRAWINGS AND INDICATED AS LINEAR FEET (LF) ARE FROM CENTER TO CENTER OF STRUCTURES.
25. NORTHING AND EASTING INFORMATION IS GIVEN AT CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
26. PLACE NO. 8 CRUSHED AGGREGATE BETWEEN PIPES AT ALL PIPE CROSSINGS TO PREVENT PIPE SETTLEMENT UNLESS SHOWN OTHERWISE.
27. VERIFY EXISTING SEWER INVERTS AND LOCATIONS PRIOR TO CONSTRUCTION AND DETERMINE IF THERE ARE ANY DISCREPANCIES OR CONFLICTS.
28. ADJUST SEWER LATERALS AS NECESSARY TO AVOID CONFLICTS. LATERALS THAT REQUIRE FIELD ADJUSTMENT SHALL BE LAID AT NO LESS THAN THE MINIMUM SLOPE AS SPECIFIED IN THE DRAWINGS AND SPECIFICATIONS.

UTILITY CONTACTS

WATER
CITY OF KENTON
501 WATERWORKS DRIVE
KENTON, OH 43326
419-674-4850

ELECTRIC
AEP OHIO
300 S MAIN STREET
KENTON, OH 43326
419-675-5600

ELECTRIC
MIDWEST ELECTRIC, INC
06029 COUNTY ROAD 33A
SAINT MARYS, OH 45885

COMMUNICATIONS
WINDSTREAM
COMMUNICATIONS (KINETIC)
225 WEST COLUMBUS STREET
KENTON, OH 43326

GAS
EMBRIDGE GAS
150 S JACKSON ST #800
LIMA, OH 45801
1-800-362-7557

INTERNET
CHARTER COMM/SPECTRUM
3691 TURNER RD., DAYTON OH
45415
513-581-3838

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG				
	APPROVED BY	AMS				
	ISSUE DATE	APRIL 2026				
	PROJECT NUMBER	709126-04-001				

STATE OF OHIO — ADAM SITKA — E-88514 — REGISTERED PROFESSIONAL ENGINEER — 04/01/2026

WESSLER ENGINEERING — More than a Project℠

WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

SYMBOLS, ABBREVIATIONS AND GENERAL NOTES

SHEET NO. 1G3

PAGE NO. 3

STRUCTURAL GENERAL NOTES

A. GENERAL INFORMATION

1. SHOP DRAWINGS OF ALL FABRICATED ITEMS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
2. VERIFY DIMENSIONS AND DETAILS BEFORE BEGINNING WORK. COORDINATE WALL OPENINGS WITH PROCESS / MECHANICAL / ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL CHECK AND COORDINATE SIZES AND LOCATIONS OF ALL BLOCK-OUTS, CONDUITS, PIPE SLEEVES, EMBEDDED ITEMS, ETC. WITH MECHANICAL AND ELECTRICAL.
3. HORIZONTAL RUNS OF ELECTRICAL CONDUIT ARE NOT PERMITTED IN CONCRETE.
4. EXISTING CONDITIONS ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR. VERIFICATION IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR IS TO IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS BETWEEN EXISTING CONDITIONS AND DESIGN AND DETAILS INDICATED BY THESE DRAWINGS.

B. DESIGN

1. CODES AND SPECIFICATIONS
   a. 2024 OHIO BUILDING CODE (2021 INTERNATIONAL BUILDING CODE).
   b. ASCE 7-16: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
   c. ACI 318-19: BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
   d. ACI 350-06: CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES.
   e. ACI 301-16: SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS.
   f. AMERICAN WELDING SOCIETY STANDARDS AND SPECIFICATIONS (AWS).

C. CONCRETE REPAIR

1. CONCRETE REPAIR SHALL INCLUDE:
   a. SURFACE PREPARATION
   b. APPLICATION OF BONDING AGENT / CORROSION RESISTANT COATING
   c. APPLICATION OF REPAIR MATERIAL
   d. CURING OF REPAIR MATERIAL
2. CONTRACTOR SHALL HAVE AT LEAST 5 YEARS EXPERIENCE IN CONCRETE RESTORATION PROJECTS.
3. SUBMIT PRODUCT INFORMATION FOR EACH PRODUCT DEMONSTRATING COMPLIANCE WITH THE REQUIREMENTS AND APPROPRIATENESS FOR APPLICATION SHOWN (SEE SPECIFICATION 03100).
4. DELIVER MATERIALS TO PROJECT SITE IN ORIGINAL UNOPENED CONTAINERS WITH LABELS INDICATING MANUFACTURER, PRODUCT NAME, AND EXPERATION PERIOD FOR USE, POT LIFE, AND CURING TIME. STORE AND HANDLE MATERIALS IN A MANNER TO PREENT THEIR DETERIORATION OR DAMAGE.
5. DO NOT PROCEED WITH CONCRETE REPAIR WHEN AMBIENT AND SUBSTRATE TEMPERATURE LIMITS ARE OUTSIDE THE LIMITS PERMITTED BY THE PRODUCT MANUFACTURER.
6. PREPARATION
   a. LIMITS OF THE REPAIR AREA TO BE SAW CUT TO A MINIMUM DEPTH OF 1 INCH TO PROVIDE A UNIFORM EDGE. REMOVE SOUND CONCRETE BENEATH THE DISINTEGRATED CONCRETE TO A DEPTH OF NOT LESS THAN 1/4 INCH AND NOT MORE THAN 1 INCH. EDGES OF REPAIR AREA SHALL HAVE A SQUARE OR PREFERABLY SLIGHTLY UNDERCUT SHOULDER.
   b. BEFORE DELINEATING OF REPAIR AREA, USE AN R-METER TO LOCATE REINFORDING. ADJUST LOCATION OF CUT AS REQUIRED. DO NOT CUT EXISTING REINFORCING.
   c. DEPTH OF REPAIR SHALL BE AS REQUIRED TO EXPOSE A SOUND CONCRETE SURFACE.
   d. USE ONLY PNEUMATIC OR HAND TOOLS FOR REMOVAL OF CONCRETE. USE ONLY POINTED TOOLS AND CHISEL. POINTS NO WIDER THAN 2 INCHES ARE PERMITTED. BUSH HAMMERING IS NOT PERMITTED.
   e. REMOVE CONCRETE BELOW AND ADJACENT TO EXPOSED REINFORCING STEEL TO PROVIDE CLEARANCE REQUIRED FOR PLACEMENT OF REPAIR MATERIAL.
   f. DO NOT DAMAGE EXISTING REINFORCING STEEL.
   g. SUBSTRATE SURFACES SHALL BE CLEAN AND SOUND. REMOVE ALL DETERIORATED CONCRETE, LAITANCE, DIRT, OIL, GREASE, AND OTHER BOND INHIBITING MATERIALS.
   h. SURFACES TO RECEIVE REPAIR MATERIAL INCLUDING EXISTING REINFORCING STEEL, SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, CORROSION, AND FOREIGN MATERIALS USING WIRE BRUSH, WATER, OR AIR PRESSURE.
   i. APPLY BONDING AGENT/CORROSION INHIBITOR TO ALL EXPOSED REINFORCING STEEL IN ACRODANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. APPLICATION OF CONCRETE MATERIALS
   a. DO NOT FEATHER EDGE REPAIR MATERIALS.
   b. FOLLOW MANUFACTURER'S PUBLISHED INSTRUCTION FOR APPLICATION AND CURING OF CONCRETE REPAIR MATERIALS.
   c. SURFACE SHALL BE SATURATED SURFACE DRY (SSD).
   d. CREATE A PASTE WITH THE CONCRETE REPAIR MATERIAL AND WORK IT IN TO THE CONCRETE SURFACE WITH A STIFF BRISTLE BRUSH.
   e. BEFORE PASTE COMPLETELY DRIES, FILL REPAIR AREA, CONSOLIDATE, AND FINISH.
   f. CURE CONCRETE REPAIR AREA WITH WET BURLAP AND POLYETHYLENE. FOLLOW MANUFACTURER'S PUBLISHED INSTRUCTIONS.
8. FIELD QUALITY CONTROL
   a. AFTER CURING, ALL REPAIR AREAS SHALL BE SOUNDED. UNSOUND OR VISIBLY CRACKED AREAS SHALL BE REMOVED AND REPLACED AT CONTRACTOR'S EXPENSE.

SPECIAL INSPECTIONS AND TESTS

THE OWNER OR THE OWNER'S REPRESENTATIVE, OTHER THAN THE CONTRACTOR, IS TO EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE SPECIAL INSPECTIONS AND TESTS FOR THE FOLLOWING ITEMS AS OUTLINED IN CHAPTER 17 OF THE 2024 OHIO BUILDING CODE (OBC):

1. CONCRETE CONSTRUCTION PER OBC 1705.3
   a. VERIFY USE OF REQUIRED DESIGN MIX. (CONTINUOUS)
   b. PERFORM STRENGTH TESTS, SLUMP AND AIR CONTENT TESTS, AND DETERMINE TEMPERATURE OF CONCRETE. (CONTINUOUS)
   c. INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES. (CONTINUOUS)
   d. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES. (PERIODIC)
   e. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED. (PERIODIC)
2. CONTRACTOR TO PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND INCIDENTALS AS REQUIRED TO COOPERATE WITH INDIVIDUAL SPECIAL INSPECTORS AND TESTING AGENCIES EMPLOYED BY THE OWNER, AND TO FACILITATE SPECIAL INSPECTIONS.
3. CONTRACTOR TO NOTIFY SPECIAL INSPECTION LABORATORY AT LEAST 48 HOURS PRIOR TO START OF WORK.
4. STRUCTURAL OBSERVATIONS PER OBC 1704.6
   a. THE WATER TREATMENT PLANT IS CLASSIFIED AS RISK CATEGORY III, REQUIRING STRUCTURAL OBSERVATIONS BY A REGISTERED DESIGN PROFESSIONAL.
   b. THE STRUCTURAL OBSERVER SHALL VISUALLY OBSERVE REPRESENTATIVE LOCATIONS OF STRUCTURAL SYSTEMS, DETAILS AND LOAD PATHS FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.
5. INSPECTIONS AND TESTS REQUIRED IN CHAPTER 17 DO NOT SUPERSEDE OR MAKE UNNECESSARY INSPECTIONS AND TESTS REQUIRED BY ANY LAW OR REGULATION.

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JW					
	APPROVED BY	JCB					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — JAKOB C. BRUHL E-89802 — PROFESSIONAL ENGINEER — 04/01/2026

WESSLER ENGINEERING — More than a Project℠

WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

STRUCTURAL GENERAL NOTES

SHEET NO. **1S1**

PAGE NO. 4

NOTE: ALL SYMBOL DESCRIPTIONS ARE SUBJECT TO MODIFICATION ON THE DRAWINGS. ALL SYMBOLS NOT NECESSARILY USED ON THIS PROJECT.

VALVES & FITTINGS:

- BACK FLOW PREVENTER
- BALANCING VALVE - MANUAL
- BALANCING VALVE - AUTOMATIC
- BALL VALVE
- BALL VALVE - 3 WAY
- BUTTERFLY VALVE
- CHECK VALVE
- GATE VALVE
- GLOBE VALVE
- GLOBE VALVE - ANGLE
- GLOBE VALVE - 3 WAY
- MOTORIZED CONTROL VALVE
- MOTORIZED CONTROL VALVE - 3 WAY
- NEEDLE VALVE
- PLUG VALVE
- PLUG VALVE - 3 WAY
- PNEUMATIC CONTROL VALVE
- PRESSURE SAFETY, ANGLE TYPE VALVE
- PRESSURE REDUCING, SELF CONTAINED VALVE
- PRESSURE REDUCING, PILOT OPERATED VALVE
- PRESSURE REDUCING, PILOT OPERATED ANGLE VALVE
- SOLENOID VALVE
- THERMAL EXPANSION VALVE
- LINE BREAK
- PIPE ELBOW UP (RISER)
- PIPE ELBOW DOWN
- PIPE TEE DOWN
- CAP OR PLUG
- REDUCER, CONCENTRIC
- REDUCER, ECCENTRIC
- Y-STRAINER
- FLEXIBLE CONNECTION
- FLANGES
- UNION
- PIPE GUIDE
- PIPE ANCHOR
- FILTER
- GAUGE
- THERMOMETER
- STEAM TRAP
- PUMP

VALVES & FITTINGS:

- MATERIAL CHANGE
- AAV AUTOMATIC AIR VENT
- DRAIN
- FLOW METER

GENERAL SYMBOLS:

- POINT OF CONNECTION
- POINT OF REMOVAL
- PLAN NOTE
- DEMOLITION NOTE
- REVISION
- DETAIL BUBBLE
- SECTION BUBBLE

DIFFUSERS & REGISTERS

SUPPLY DIFFUSER:
- SHADING INDICATES BLANKED-OFF QUADRANT OF DIFFUSION PATTERN
- SEE SCHEDULE FOR RUNOUT SIZE
- DIFFUSER TYPE
- DIFFUSER SIZE
- SDA 750 — DIFFUSER CFM

SUPPLY DIFFUSER:
- SHADING INDICATES BLANKED-OFF QUADRANT OF DIFFUSION PATTERN
- SEE SCHEDULE FOR RUNOUT SIZE
- DIFFUSER TYPE
- DIFFUSER SIZE
- SDA 750 — DIFFUSER CFM

RETURN/EXHAUST GRILLE:
- SEE SCHEDULE FOR RUNOUT SIZE
- GRILLE TYPE
- GRILLE SIZE
- RGA 750 — GRILLE CFM

RETURN/EXHAUST GRILLE:
- SEE SCHEDULE FOR RUNOUT SIZE
- GRILLE TYPE
- GRILLE SIZE
- RGA 750 — GRILLE CFM

LINEAR BAR & SLOT DIFFUSER:
- ARROW INDICATES DIRECTION OF AIR FLOW
- SEE SCHEDULE FOR RUNOUT SIZE
- DIFFUSER TYPE
- DIFFUSER SIZE
- LDA 220 — DIFFUSER CFM

LINEAR BAR & SLOT DIFFUSER:
- ARROW INDICATES DIRECTION OF AIR FLOW
- SEE SCHEDULE FOR RUNOUT SIZE
- DIFFUSER TYPE
- DIFFUSER SIZE
- LDA 220 — DIFFUSER CFM

TERMINAL BOXES

WITH REHEAT COIL:
- SEE SCHEDULE FOR RUNOUT SIZE
- SEE SCHEDULE FOR RUNOUT SIZE
- SINGLE-DUCT TERMINAL BOX
- TYPE OF TERMINAL BOX
- VAV-1
- CONTROL PANEL
- MAINTAIN CODE REQUIRED CLEARANCE IN FRONT OF CONTROL PANEL

DUAL DUCT TERMINAL BOX:
- TYPE OF TERMINAL BOX
- VAV-1
- CONTROL PANEL(S)
- MAINTAIN CODE REQUIRED CLEARANCE IN FRONT OF CONTROL PANEL

DUCTWORK:

- SUPPLY ARROW
- RETURN/EXHAUST ARROW
- THERMOSTAT
- THERMOSTAT, LOCKED
- HUMIDISTAT
- SENSOR
- SUPPLY UP
- SUPPLY DOWN
- RETURN/EXHAUST UP
- RETURN/EXHAUST DOWN
- ROUND UP
- ROUND DOWN
- FLAT OVAL SUPPLY UP
- FLAT OVAL SUPPLY DOWN
- 16x12 RECTANGULAR DUCT WIDTH x HEIGHT
- 16"ø ROUND DUCT DIAMETER
- 16x12ø FLAT OVAL DUCT WIDTH x HEIGHT
- 90° MITERED ELBOW WITH TURNING VANES
- ELBOW
- DUCT END CAP
- 15° MAX DUCT TRANSITION - SLOPED BOTH SIDES
- 15° MAX DUCT TRANSITION - FLAT ON ONE SIDE
- FLEXIBLE DUCT
- VOLUME DAMPER
- FD FIRE DAMPER
- MOTORIZED DAMPER
- BDD BACKDRAFT DAMPER
- AD ACCESS DOOR
- FAN (OR PUMP)

DUCTWORK:

SINGLE LINE REPRESENTATION

- SUPPLY UP
- SUPPLY DOWN
- RETURN/EXHAUST UP
- RETURN/EXHAUST DOWN
- ROUND UP
- ROUND DOWN
- FLAT OVAL SUPPLY UP
- FLAT OVAL SUPPLY DOWN
- 16x12 RECTANGULAR DUCT WIDTH x HEIGHT
- 16"ø ROUND DUCT DIAMETER
- 16x12ø FLAT OVAL DUCT WIDTH x HEIGHT
- DUCT END CAP
- DUCT TRANSITION - SLOPED ON BOTH SIDES
- DUCT TRANSITION - FLAT ON ONE SIDE
- FLEXIBLE DUCT
- VOLUME BALANCE DAMPER
- FD FIRE DAMPER
- MOTORIZED DAMPER
- BDD BACKDRAFT DAMPER

PIPING DESIGNATIONS:

- NEW
- EXISTING TO REMAIN
- DEMOLITION
- FUTURE
- PIPE SLOPES IN DIRECTION OF ARROW

FLOW/CONTROL SYMBOLS:

- AI ANALOG INPUT
- AO ANALOG OUTPUT
- BI BINARY INPUT
- BO BINARY OUTPUT
- CO2 CARBON DIOXIDE SENSOR
- CS CURRENT SENSOR
- ΔP DIFFERENTIAL PRESSURE SENSOR
- S DUCT SMOKE DETECTOR
- ES END SWITCH
- H HUMIDITY SENSOR
- LL LOW LIMIT TEMPERATURE SENSOR
- M DAMPER MOTOR
- P PRESSURE SENSOR
- T TEMPERATURE SENSOR
- AIR FLOW MEASURING STATION
- AIR HANDLER FAN
- CONTROL VALVE
- HYDRONIC PUMP
- MS MOTOR STARTER
- VFD VARIABLE FREQUENCY DRIVE
- FM FLOW METER

MECHANICAL ABBREVIATIONS:

AFF	ABOVE FINISHED FLOOR
AH	(PARAMETER) ALARM HIGH
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AL	(PARAMETER) ALARM LOW
AS	AIR SEPARATOR
ASD	ADJUSTABLE SPEED DRIVE (ALSO VFD)
BDD	BACK DRAFT DAMPER
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
CA	COMPRESSED AIR
CH	CHILLER
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
℄	CENTERLINE
CO	CLEANOUT
CP	CONDENSATE PUMP
CTF	COOLING TOWER FAN
CTWR	COOLING TOWER WATER RETURN
CTWS	COOLING TOWER WATER SUPPLY
CU	COPPER
CS	CARBON STEEL
CV	CONTROL VALVE
CW	DOMESTIC COLD WATER
D	DRAIN
DB	DRY BULB
DCV	DOUBLE CHECK VALVE
DIA	DIAMETER
DN	DOWN
DPI	DIFFERENTIAL PRESSURE INDICATOR
DPS	DIFFERENTIAL PRESSURE SENSOR
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EL	ELEVATION
ET	EXPANSION TANK
EX	EXISTING
F	FILTER
FCU	FAN COIL UNIT
FCV	FLOW CONTROL VALVE
FD	FLOOR DRAIN
FE	FLOW ELEMENT
FLA	FULL LOAD AMPS
FT	FLOW TRANSMITTER
GC	GENERAL CONTRACTOR
HE	HEAT EXCHANGER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
HWRP	HOT WATER RECIRCULATION PUMP
HHWR	HEATING HOT WATER RETURN
HHWS	HEATING HOT WATER SUPPLY
HV	HAND VALVE
LI	LEVEL INDICATOR
LSH	LEVEL SENSOR HIGH
LSL	LEVEL SENSOR LOW
LSLL	LEVEL SENSOR LOW LOW
MC	MECHANICAL CONTRACTOR
MFR	MANUFACTURER
N2	NITROGEN
NC	NORMALLY CLOSED
NG	NATURAL GAS
NO	NORMALLY OPEN
PC	PLUMBING CONTRACTOR
PH	PHASE
PI	PRESSURE INDICATOR
PIT	PRESSURE INDICATING TRANSMITTER
PRV	PRESSURE REGULATING VALVE
PS	PRESSURE SWITCH
PSV	PRESSURE SAFETY VALVE
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	PRESSURE TRANSMITTER
PWR	PURIFIED WATER RETURN
PWS	PURIFIED WATER SUPPLY
RF	RETURN FAN
RG	RETURN GRILLE
RO	REVERSE OSMOSIS
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
S	STEAM
SC	STEAM CONDENSATE OR SPEED CONTROLLER
SAN	SANITARY
SD	SUPPLY DIFFUSER
SF	SUPPLY FAN
SFT	SOFT WATER
STR	STRAINER
TCC	TEMPERATURE CONTROL CONTRACTOR
TI	TEMPERATURE INDICATOR
TT	TEMPERATURE TRANSMITTER
V	VENT
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE (ALSO ASD)
VTR	VENT THROUGH ROOF
WB	WET BULB
WH	WALL HYDRANT
ZS	LIMIT SWITCH

SCALE VERIFICATION	DRAWN BY	JAL
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	RLW
	APPROVED BY	TMA
	ISSUE DATE	MARCH 2026
	PROJECT NUMBER	709126-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO — TIMOTHY M. ANDERSON PE-59198

WESSLER ENGINEERING — More than a Project™

WATER TREATMENT PLANT PHASE 1

CITY OF KENTON, OHIO

MECHANICAL SYMBOLS AND ABBREVIATIONS

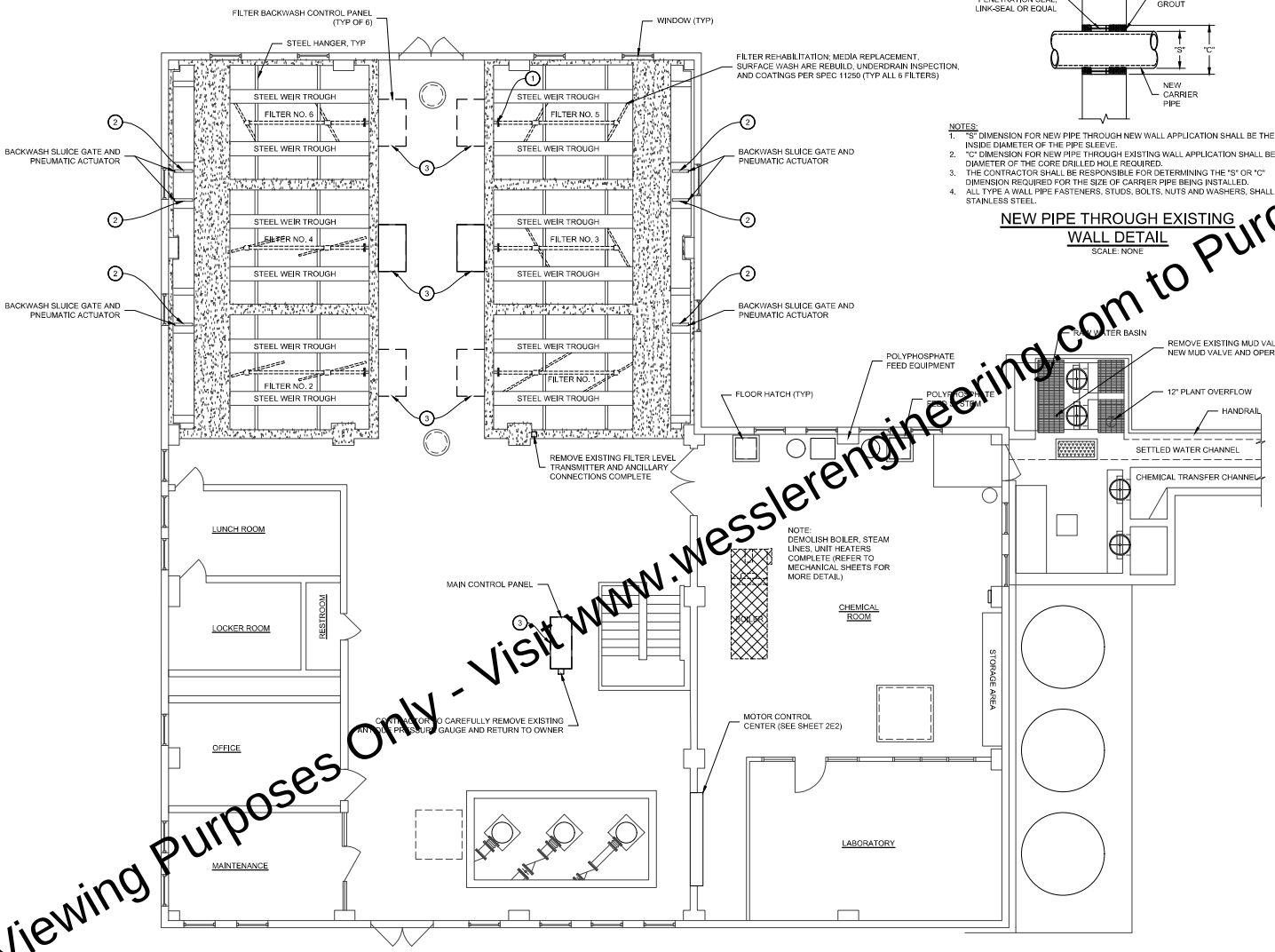
SHEET NO. **1M1**

EXISTING SITE PLAN

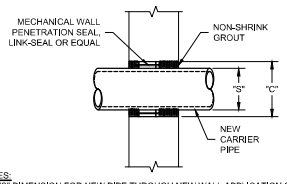
SCALE: 1"=20'

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	WESSLER ENGINEERING More than a Project℠	WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG						CITY OF KENTON, OHIO
	APPROVED BY	AMS						WATER TREATMENT PLANT SITE PLAN
	ISSUE DATE	APRIL 2026						SHEET NO. 2Y1
	PROJECT NUMBER	709126-04-001						PAGE NO. 6

STATE OF OHIO — ADAM SITKA E-88514 — REGISTERED PROFESSIONAL ENGINEER — 04/01/2026



UPPER LEVEL PLAN
3/16" = 1'-0"



NOTES:
1. "S" DIMENSION FOR NEW PIPE THROUGH NEW WALL APPLICATION SHALL BE THE INSIDE DIAMETER OF THE PIPE SLEEVE.
2. "C" DIMENSION FOR NEW PIPE THROUGH EXISTING WALL APPLICATION SHALL BE THE DIAMETER OF THE CORE DRILLED HOLE REQUIRED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE "S" OR "C" DIMENSION REQUIRED FOR THE SIZE OF CARRIER PIPE BEING INSTALLED.
4. ALL TYPE A WALL PIPE FASTENERS, STUDS, BOLTS, NUTS AND WASHERS, SHALL BE STAINLESS STEEL.

NEW PIPE THROUGH EXISTING WALL DETAIL
SCALE: NONE

0 4 8 12 FT
3/16"=1'-0"

GENERAL NOTES:

1. SEE SPECIFICATION 01550 FOR CONSTRUCTION SEQUENCING.
2. HVAC, PROCESS PIPING, AND CHEMICAL FEED PIPING NOT SHOWN FOR CLARITY.

KEYED NOTES

1 REPLACE 4" DI FLANGED SPOOL WITH NEW 4" STAINLESS STEEL FLANGED SPOOL, SEE DETAIL THIS SHEET (TYP FOR ALL 6 FILTER SURFACE WASH PIPING).

2 REPLACE SLUICE GATE ACTUATOR PER SPEC 11209.

3 FILTER CONTROL PANEL IMPROVEMENTS, SEE SHEET 2E2.

LEGEND

- EXISTING FEATURES
- NEW FEATURES
- PIPING TO BE REMOVED AND REPLACED
- PIPING TO BE RECOATED
- FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					
	APPROVED BY	AMS					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — ADAM SITKA E-88514 — REGISTERED PROFESSIONAL ENGINEER — 04/01/2026

WESSLER ENGINEERING — More than a Project℠

WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

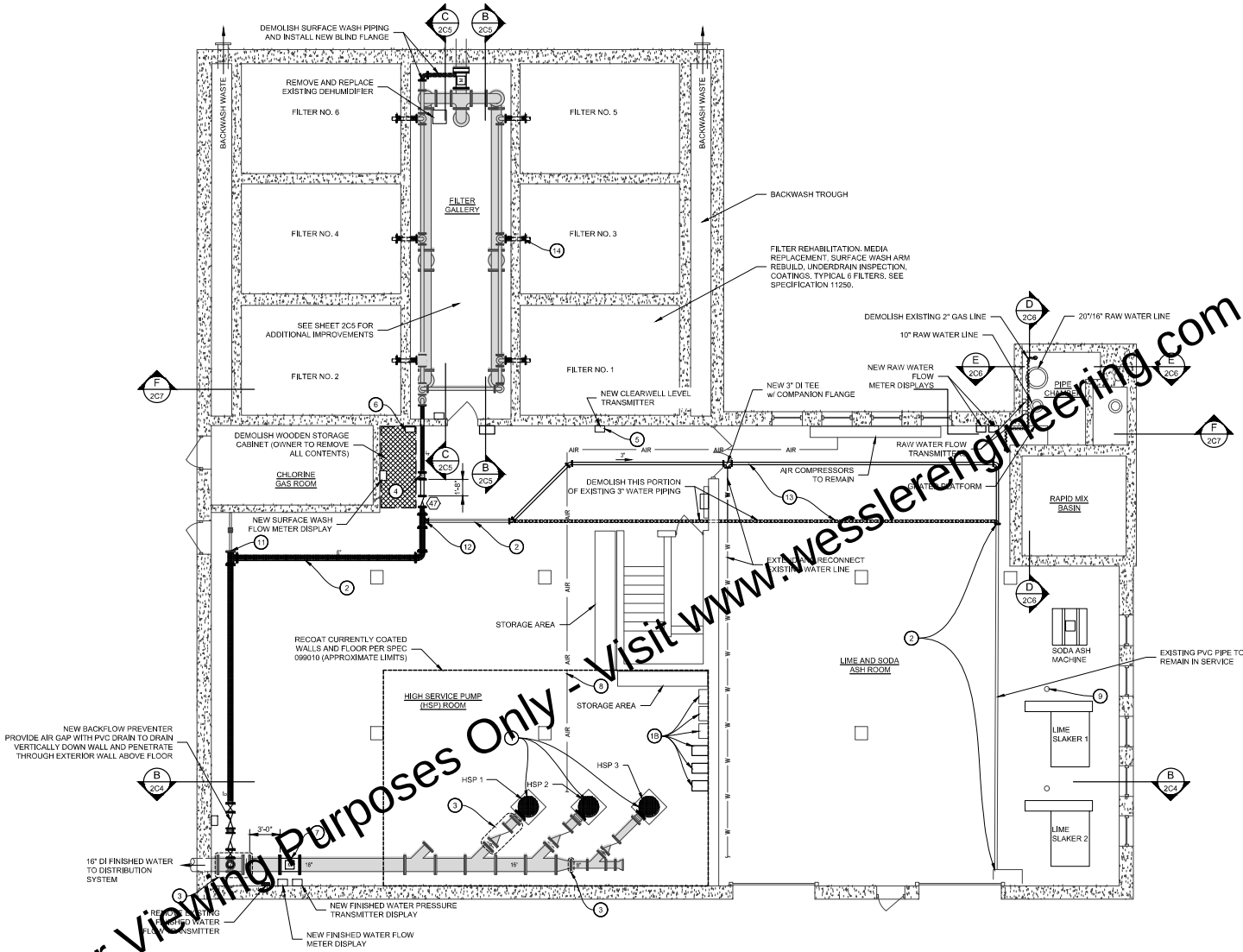
CITY OF KENTON, OHIO

WTP BUILDING - UPPER LEVEL IMPROVEMENTS PLAN

SHEET NO. **2C1**

PAGE NO. 7

Drawing: X:\Kenton_OH\709126 Kenton WTP Phase 1\Design\DWG\Sheets\709126-WTP-EX.dwg | Layout: 2C1 | Plotted: 04/02/26 @ 11:27:24 | LastSavedBy: mlein



LOWER LEVEL PLAN
3/16" = 1'-0"

0 4 8 12 FT
3/16"=1'-0"

GENERAL NOTES:

1. SEE SPECIFICATION 01550 FOR CONSTRUCTION SEQUENCING.
2. HVAC, PROCESS PIPING, AND CHEMICAL FEED PIPING NOT SHOWN FOR CLARITY.
3. SEE SHEET 2C5 FOR DETAILED FILTER GALLERY PIPING MODIFICATIONS.

KEYED NOTES

1 DEMOLISH EXISTING HIGH SERVICE PUMP MOTOR AND APPURTENANCES COMPLETE. PROVIDE NEW PUMP MOTOR AND APPURTENANCES COMPLETE. SEE SPECIFICATION 11210.

1B DEMOLISH AND REPLACE VFD FOR ALL HIGH SERVICE PUMPS. SEE SPECIFICATION 16495.

2 REMOVE INSULATION ON BUILDING WATER LINE.

3 REMOVE AND REPLACE EXISTING NUTS, BOLTS, AND WASHERS ON PROCESS PIPING AND SELECT FLANGES AS SHOWN, SEE SPECIFICATION 15060.

4 REMOVE EXISTING PIPING. INSTALL NEW 4" MAGNETIC FLOW METER ON SURFACE WASH LINE.

5 REMOVE EXISTING SUBMERSIBLE CLEARWELL LEVEL TRANSMITTER. INSTALL NEW CLEARWELL LEVEL TRANSMITTER. SEE SPECIFICATION 13420.

6. INSTALL NEW CLEARWELL LEVEL TRANSMITTER (RADAR). SEE SPECIFICATION 13420. CORE DRILL THROUGH CONCRETE FLOOR INTO CLEARWELL NO. 3.

7. REMOVE EXISTING ORIFICE PLATE METER AND SPOOL PIECE. INSTALL NEW 16" MAGNETIC FLOW METER.

8. DO NOT DISTURB EXISTING AIR LINE.

9. FLOOR DRAIN IMPROVEMENTS

10. REPLACE EXISTING NATURAL GAS LINE TO VALVE.

11. RECONNECT EXISTING CHLORINE ROOM WATER LINE.

12. ELECTRICAL COMPONET IS CURRENTLY GROUNDED TO WATER LINE. REGROUND ELSEWHERE.

13. REMOVE EXISTING 3-INCH PIPING AS REQUIRED AND REROUTE ALONG THE NEW ALIGNMENT SHOWN. PROVIDE NEW 3-INCH DUCTILE IRON PIPE FROM THE EXISTING CONNECTION POINT TO THE NEW ROUTING. PENETRATE THE WALL ABOVE THE EXISTING DOOR AS INDICATED. CONNECT NEW PIPING TO ALL EXISTING PIPING.

14 REPLACE 4" DI FLANGED SPOOL WITH NEW 4" STAINLESS STEEL FLANGED SPOOL. SEE SHEET 2C1 FOR MORE DETAIL (TYP FOR ALL 6 FILTER SURFACE WASH PIPING).

LEGEND

- EXISTING FEATURES
- NEW FEATURES
- PIPING TO BE REMOVED AND REPLACED
- PIPING TO BE RECOATED
- FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG				
	APPROVED BY	AMS				
	ISSUE DATE	APRIL 2026				
	PROJECT NUMBER	709126-04-001				

STATE OF OHIO ADAM SITKA E-88514 REGISTERED PROFESSIONAL ENGINEER 04/01/2026

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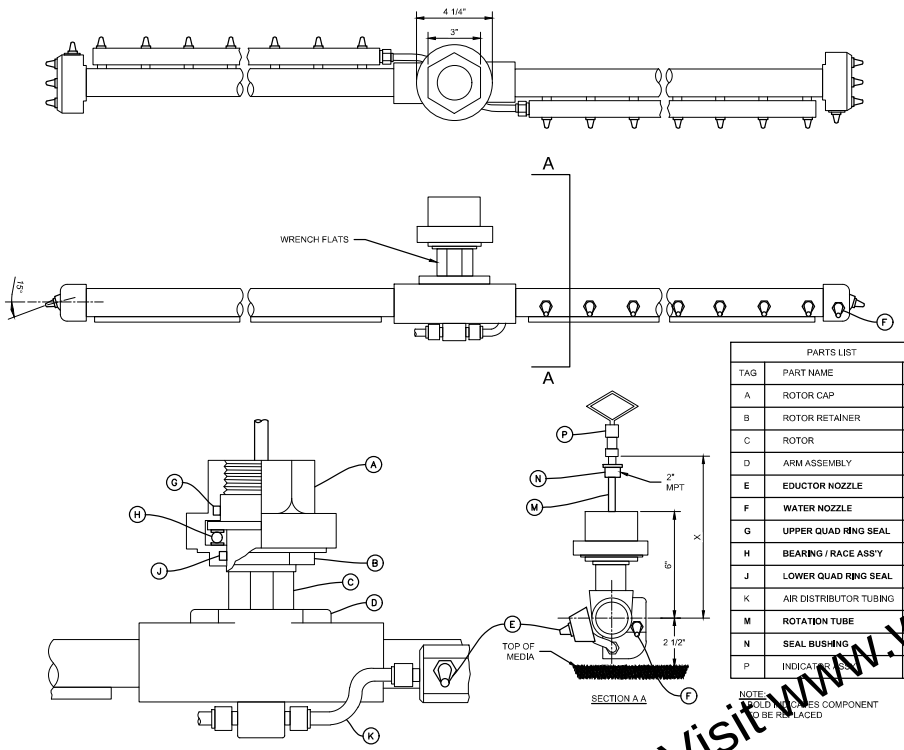
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

WTP BUILDING - LOWER LEVEL IMPROVEMENTS PLAN

SHEET NO. 2C2

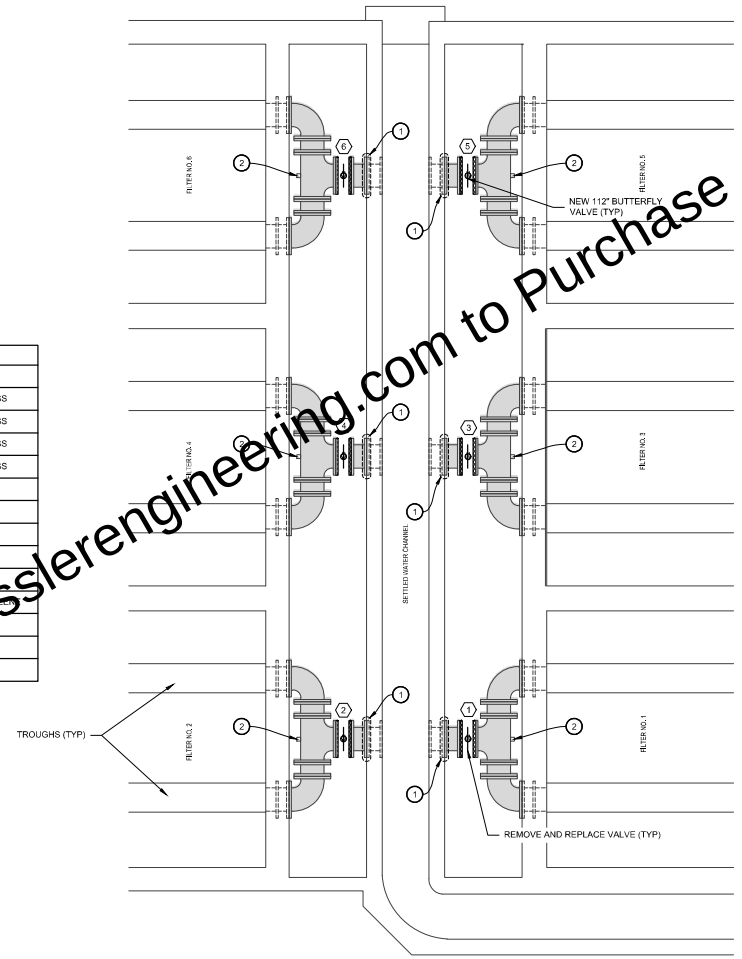
PAGE NO. 8



PARTS LIST		
TAG	PART NAME	MATERIAL
A	ROTOR CAP	CAST BRASS
B	ROTOR RETAINER	CAST BRASS
C	ROTOR	CAST BRASS
D	ARM ASSEMBLY	CAST BRASS
E	EDUCTOR NOZZLE	PVC
F	WATER NOZZLE	PVC
G	UPPER QUAD RING SEAL	BUNA - N
H	BEARING / RACE ASS'Y	STN STEEL
J	LOWER QUAD RING SEAL	BUNA - N
K	AIR DISTRIBUTOR TUBING	POLYETHYLENE
M	ROTATION TUBE	COPPER
N	SEAL BUSHING	PVC
P	INDICATOR ASSY	BRASS

NOTE:
BOLD INDICATES COMPONENT TO BE REPLACED

SURFACE WASH DETAILS
SCALE: NONE



PARTIAL FILTER GALLERY PLAN AT ELEV 968.00
3/8" = 1'-0"

0 2 4 6 FT
3/8"=1'-0"

GENERAL NOTES:

1. REMOVE EXISTING INTERIOR WALL COATINGS AND COAT IN ACCORDANCE WITH SPECIFICATION 09900 FOR ALL 6 FILTERS
2. REMOVE EXISTING FILTER MEDIA, SUPPORT, GRAVEL AND UNDERDRAIN PORCELAIN SPHERES, REFER TO SPEC 11250 (TYP ALL 6 FILTERS, EACH FILTER CONTAINS 360 WHEELER UNITS IN PRECAST BLOCKS.
3. REMOVE SURFACE WASH ARMS AND APURTENANCES COMPLETE FOR REPAIR AND REBUILD, SEE SPEC 11250.
4. BEFORE CONDUCTING REPAIR WORK, INSPECT FILTER INTERIOR INCLUDING ALL WALLS FLOORS, TROUGHS, STEEL COMPONETS, HANGERS AND UNDERDRAIN, REFER TO SPEC 03320 (TYP ALL 6 FILTERS)
5. INSTALL NEW PORCELAIN SPHERES, SUPPORT GRAVEL AND FILTER MEDIA PER SPEC 11250.
6. SEE SHEET 2C5 FOR FILTER GALLERY IMPROVEMENTS.
7. SEE SHEET 2C5 FOR VALVE AND ACTUATOR SCHEDULE.

KEYED NOTES

1 REMOVE AND REPLACE BOLTS, NUTS AND WASHERS

2 FILTER INFLUENT PRESSURE TAP TO BE INSTALLED IN BOTTOM OF FITTING.

LEGEND

- EXISTING FEATURES
- NEW FEATURES
- PIPING TO BE REMOVED AND REPLACED
- PIPING TO BE RECOATED
- FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					
	APPROVED BY	AMS					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO · ADAM SITKA · E-88514 · REGISTERED PROFESSIONAL ENGINEER · 04/01/2026

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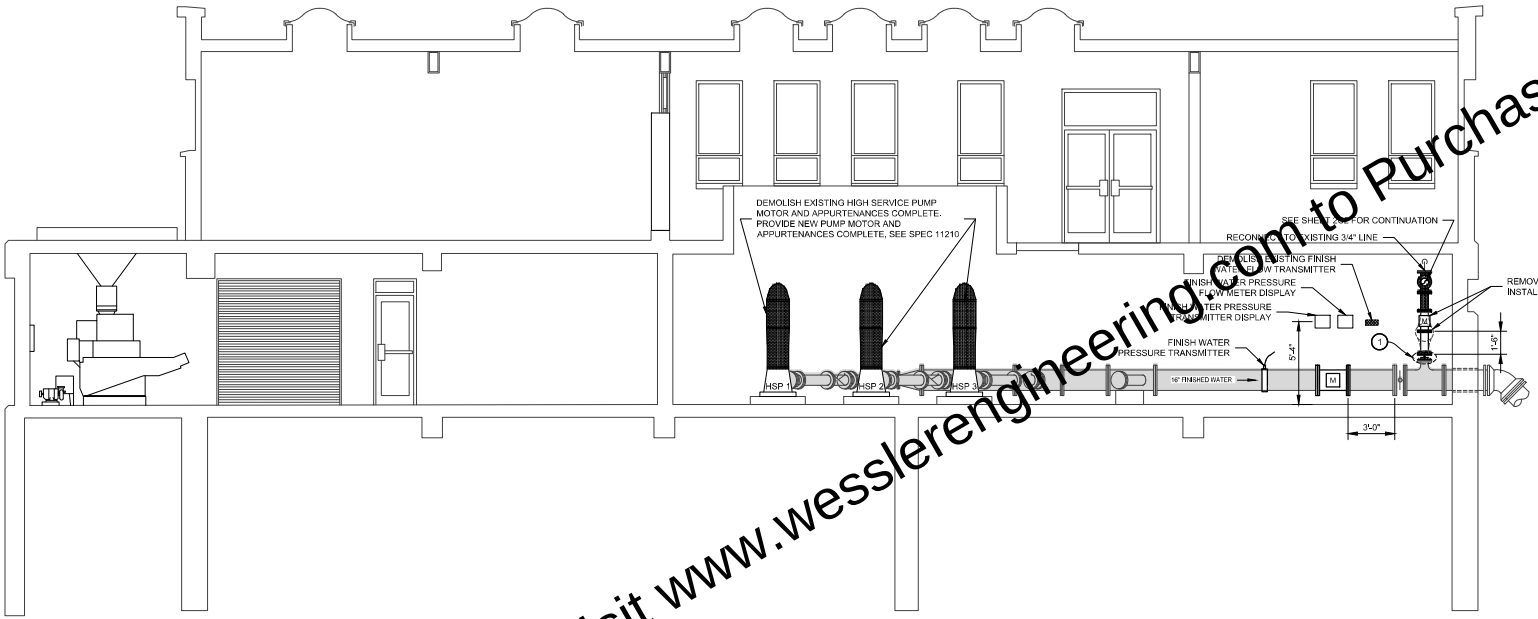
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

WTP BUILDING - FILTER INFLUENT IMPROVEMENTS PLAN

SHEET NO. 2C3

PAGE NO. 9



SECTION B 2C2
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. HVAC NOT SHOWN FOR CLARITY.

KEYED NOTES

1 REMOVE AND REPLACE EXISTING NUTS, BOLTS, AND WASHERS ON PROCESS PIPING AND SELECT FLANGES AS SHOWN, SEE SPECIFICATION 15060.

LEGEND

- EXISTING FEATURES
- NEW FEATURES
- PIPING TO BE REMOVED AND REPLACED
- PIPING TO BE RECOATED
- FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					
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	PROJECT NUMBER	709126-04-001					

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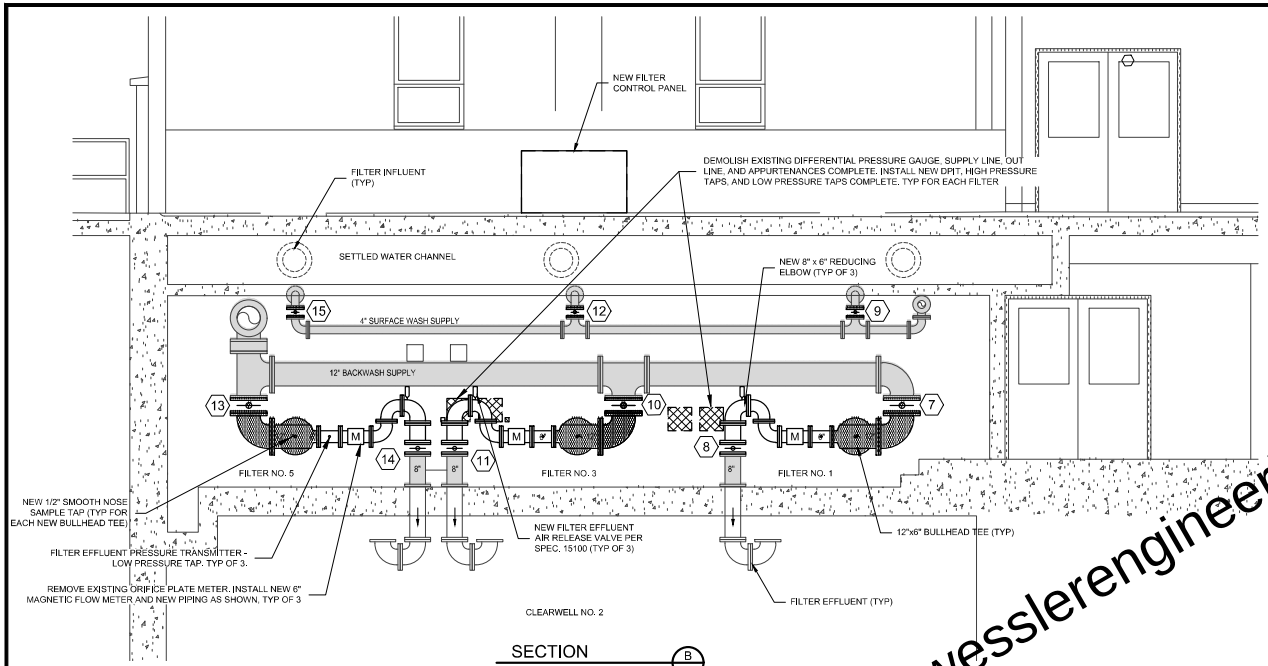
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

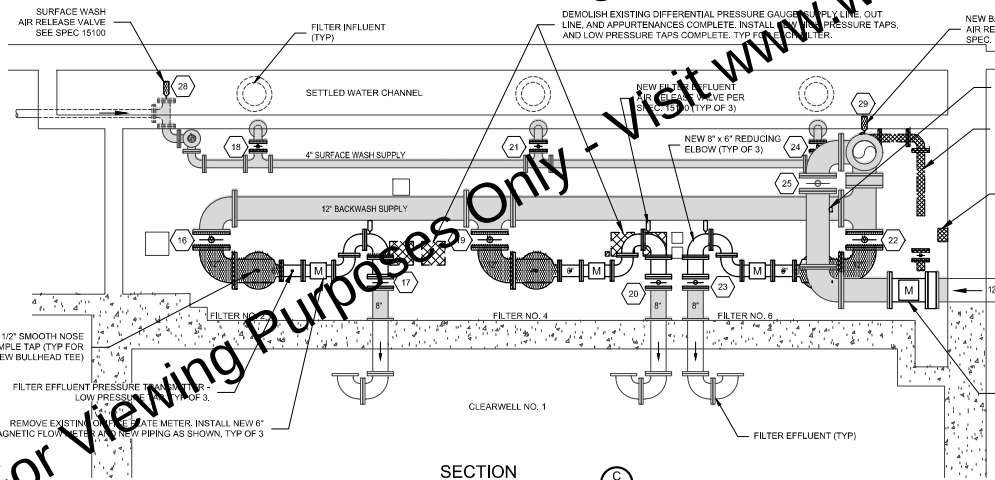
WTP BUILDING - HIGH SERVICE PUMP IMPROVEMENTS SECTION

SHEET NO. **2C4**

PAGE NO. 10



SECTION B 2C2
SCALE: 3/8" = 1'-0"



SECTION C 2C2
SCALE: 3/8" = 1'-0"

VALVE AND ACTUATOR REPLACEMENT SCHEDULE

VALVE NO.	SIZE	TYPE	OPERATOR	FUNCTION	REMARKS
1	12"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 1 INFLUENT	DEMOLISH EXISTING PNEUMATIC ACTUATOR
2	12"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 2 INFLUENT	DEMOLISH EXISTING PNEUMATIC ACTUATOR
3	12"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 3 INFLUENT	DEMOLISH EXISTING PNEUMATIC ACTUATOR
4	12"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 4 INFLUENT	DEMOLISH EXISTING PNEUMATIC ACTUATOR
5	12"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 5 INFLUENT	DEMOLISH EXISTING PNEUMATIC ACTUATOR
6	12"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 6 INFLUENT	DEMOLISH EXISTING PNEUMATIC ACTUATOR
7	12"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 1 -BACKWASH	DEMOLISH EXISTING PNEUMATIC ACTUATOR
8	8"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 1 - EFFLUENT	DEMOLISH EXISTING PNEUMATIC ACTUATOR
9	4"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 1 - SURFACE WASH	DEMOLISH EXISTING PNEUMATIC ACTUATOR
10	12"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 3 - BACKWASH	DEMOLISH EXISTING PNEUMATIC ACTUATOR
11	8"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 3 - EFFLUENT	DEMOLISH EXISTING PNEUMATIC ACTUATOR
12	4"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 3 - SURFACE WASH	DEMOLISH EXISTING PNEUMATIC ACTUATOR
13	12"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 5 - BACKWASH	DEMOLISH EXISTING PNEUMATIC ACTUATOR
14	8"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 5 - EFFLUENT	DEMOLISH EXISTING PNEUMATIC ACTUATOR
15	4"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 5 - SURFACE WASH	DEMOLISH EXISTING PNEUMATIC ACTUATOR
16	12"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 6 - BACKWASH	DEMOLISH EXISTING PNEUMATIC ACTUATOR
17	8"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 6 - EFFLUENT	DEMOLISH EXISTING PNEUMATIC ACTUATOR
18	4"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 6 - SURFACE WASH	DEMOLISH EXISTING PNEUMATIC ACTUATOR
19	12"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 4 - BACKWASH	DEMOLISH EXISTING PNEUMATIC ACTUATOR
20	8"	BUTTERFLY	ELECTRIC ACTUATOR	FITLER 4 - EFFLUENT	DEMOLISH EXISTING PNEUMATIC ACTUATOR
21	4"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 4 - SURFACE WASH	DEMOLISH EXISTING PNEUMATIC ACTUATOR
22	12"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 6 - BACKWASH	DEMOLISH EXISTING PNEUMATIC ACTUATOR
23	8"	BUTTERFLY	ELECTRIC ACTUATOR	FILTER 6 - EFFLUENT	DEMOLISH EXISTING PNEUMATIC ACTUATOR
24	4"	BUTTERFLY	ELECTRIC ACTUATOR	FITLER 6 - SURFACE WASH	DEMOLISH EXISTING PNEUMATIC ACTUATOR
25	12"	BUTTERFLY	ELECTRIC ACTUATOR	BACKWASH CONTROL	
26	2"	COMBINATION AIR VALVE	N/A	FILTER 1 EFFLUENT	
27	2"	COMBINATION AIR VALVE	N/A	FILTER 2 EFFLUENT	
28	2"	COMBINATION AIR VALVE	N/A	FILTER 3 EFFLUENT	
29	2"	COMBINATION AIR VALVE	N/A	FILTER 4 EFFLUENT	
30	2"	COMBINATION AIR VALVE	N/A	FILTER 5 EFFLUENT	
31	2"	COMBINATION AIR VALVE	N/A	FILTER 6 EFFLUENT	
32	16"	BUTTERFLY	HANDWHEEL OR LEVER	16" RAW WATER LINE	WITHIN PIPE CHAMBER
33	12"	BUTTERFLY	HANDWHEEL OR LEVER	12" RAW WATER LINE	WITHIN PIPE CHAMBER
34	1"	AIR RELEASE	N/A	SURFACE WASH LINE	PIPE GALLERY
35	2"	COMBINATION AIR VALVE	N/A	BACKWASH LINE	PIPE GALLERY
36	6"	PLUG	ELECTRIC ACTUATOR	SLUDGE PIPING INFLUENT 1	
37	5"	PLUG	LEVER	SLUDGE PIPING INFLUENT 1	
38	4"	CHECK	N/A	SLUDGE PIPING EFFLUENT 1	
39	4"	PLUG	LEVER	SLUDGE PIPING EFFLUENT 1	
40	6"	PLUG	ELECTRIC ACTUATOR	SLUDGE PIPING INFLUENT 2	
41	5"	PLUG	LEVER	SLUDGE PIPING INFLUENT 2	
42	4"	CHECK	N/A	SLUDGE PIPING EFFLUENT 2	
43	4"	PLUG	LEVER	SLUDGE PIPING EFFLUENT 2	
44	4"	PLUG	LEVER	SLUDGE PIPING EFFLUENT	
45	2"	COMBINATION AIR VALVE	N/A	SLUDGE PIPING EFFLUENT	
46	4"	BUTTERFLY	ELECTRIC ACTUATOR	WATER SALES STATION	
47	4"	CHECK	N/A	GARAGE- WATER SALES STATION	
48	4"	BUTTERFLY	ELECTRIC ACTUATOR	GARAGE- WATER SALES STATION	

GENERAL NOTES:

1. PIPING SUPPORTS NOT SHOWN FOR CLARITY
2. VALVES 1-27 SHOWN ON SCHEDULE ARE EXISTING AND REQUIRE REMOVAL AND REPLACEMENT.
3. WHERE EXISTING PNEUMATIC ACTUATORS ARE PRESENT, REMOVE ACTUATOR ELECTRICAL SERVICE, CONTROLS, AND PNEUMATIC TUBING COMPLETE.
4. VALVES NOT LISTED ON THE SCHEDULE ARE TO REMAIN IN SERVICE WITH CURRENT CONFIGURATION.
5. REMOVE EXISTING OPERATORS WHERE PRESENT WHERE VALVE IS TO BE REPLACED.

LEGEND

- EXISTING FEATURES
- NEW FEATURES
- PIPING TO BE REMOVED AND REPLACED
- PIPING TO BE RECOATED
- FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					
	APPROVED BY	AMS					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — ADAM SITKA — E-88514 — REGISTERED PROFESSIONAL ENGINEER — 04/01/2026

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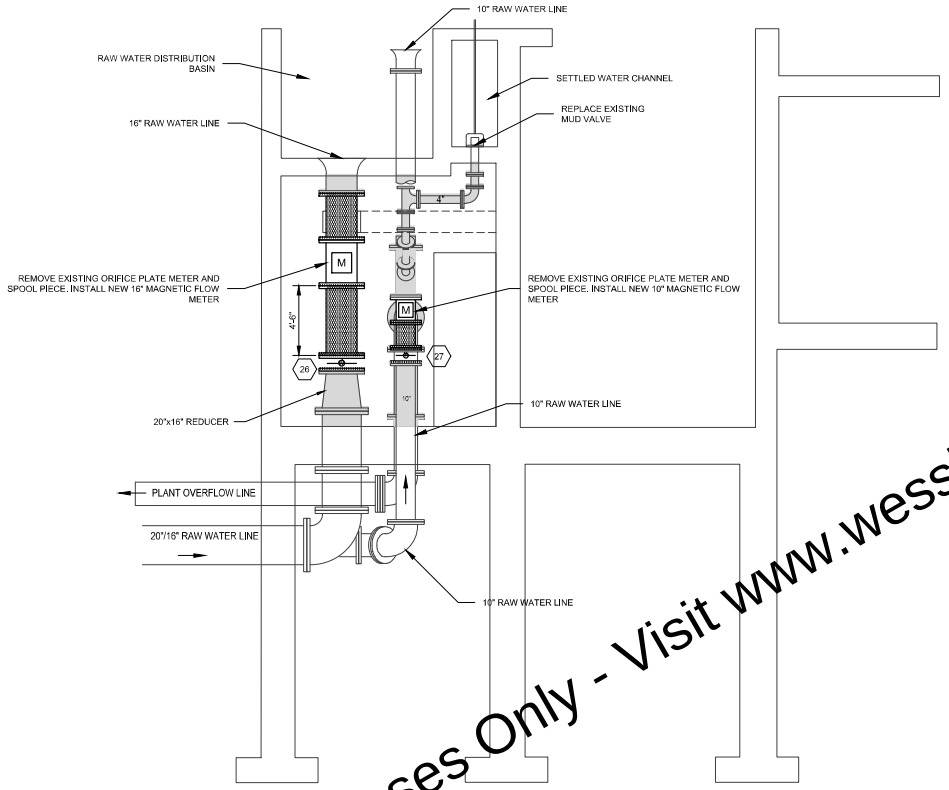
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

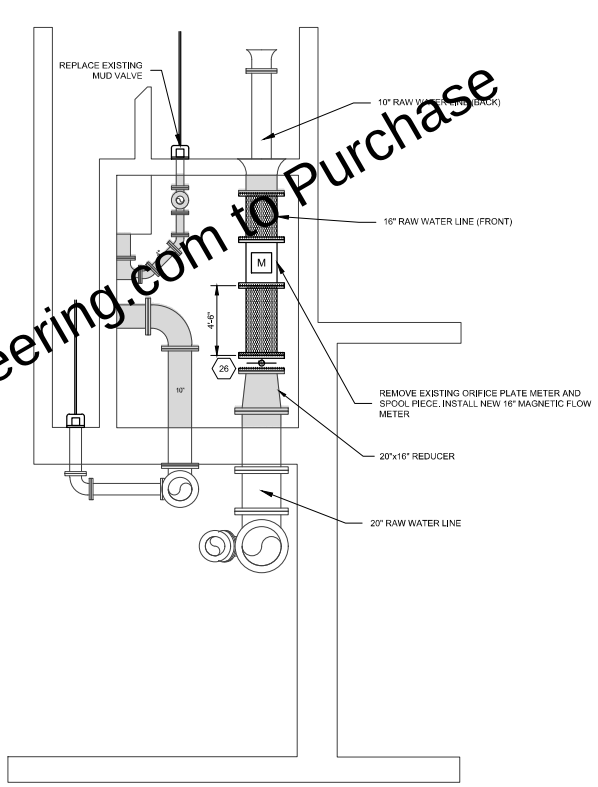
WTP BUILDING - FILTER GALLERY IMPROVEMENTS SECTIONS

SHEET NO. 2C5

PAGE NO. 11



SECTION D 2C2
SCALE: 1/4" = 1'-0"



SECTION E 2C2
SCALE: 1/4" = 1'-0"

LEGEND
- EXISTING FEATURES
- NEW FEATURES
- PIPING TO BE REMOVED AND REPLACED
- PIPING TO BE RECOATED
- FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
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STATE OF OHIO — ADAM SITKA E-88514 — REGISTERED PROFESSIONAL ENGINEER — 04/01/2026

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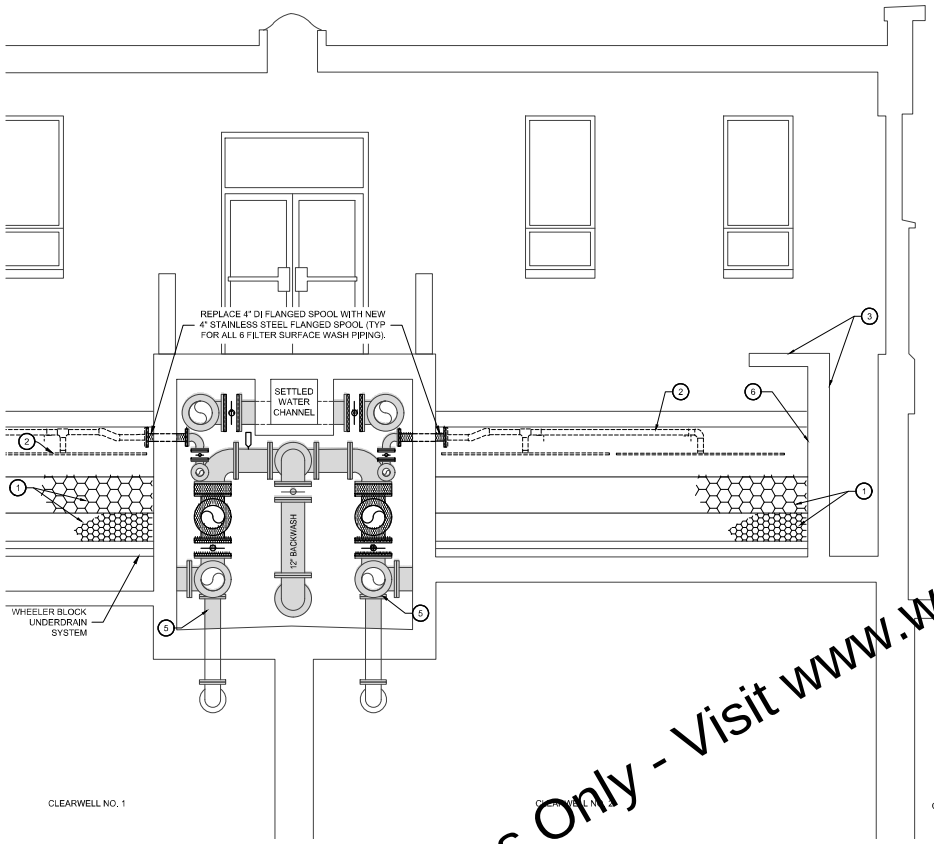
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

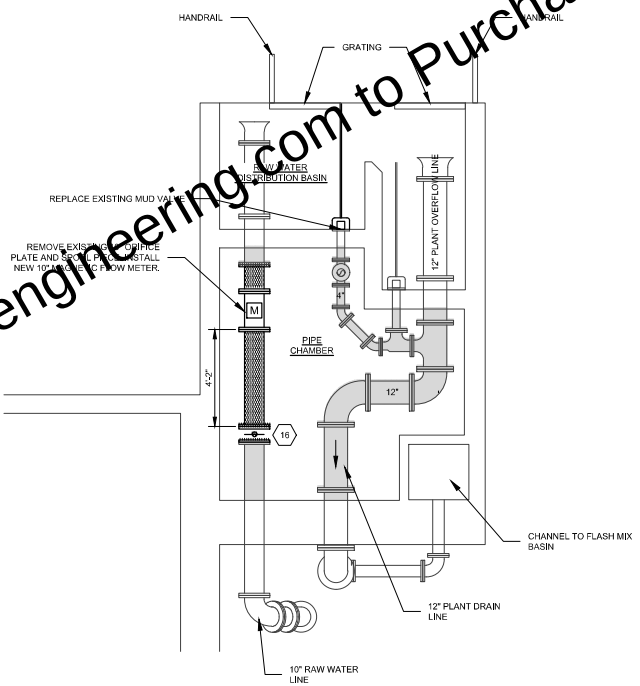
WTP BUILDING - PIPE CHAMBER IMPROVEMENTS SECTIONS

SHEET NO. **2C6**

PAGE NO. 12



SECTION
SCALE: 3/8" = 1'-0"
F / 2C2



GENERAL NOTES:

1. CLEARWELL PIPING NOT SHOWN FOR CLARITY.

KEYED NOTES

1 REMOVE EXISTING MEDIA, SUPPORT GRAVEL, AND UNDERDRAIN PORCELAIN SPHERES. REFER TO SPECIFICATION 11250. TYPICAL ALL 6 FILTERS.

2 REMOVE SURFACE WASH ARMS AND APPURTENANCES COMPLETE FOR REPAIR AND REBUILD. SEE SPECIFICATION 11250.

3 BEFORE CONDUCTING REPAIR WORK, INSPECT FILTER INTERIOR INCLUDING ALL WALLS, FLOORS, TROUGHS, STEEL COMPONENTS, HANGERS, AND UNDERDRAIN. REFER TO SPECIFICATION 11250. TYPICAL ALL 6 FILTERS.

4 INSTALL NEW PORCELAIN SPHERES, SUPPORT GRAVEL AND FILTER MEDIA. SEE SPECIFICATION 11250.

5 SEE SHEET 2C5 FOR FILTER GALLERY IMPROVEMENTS.

6 REMOVE EXISTING INTERIOR WALL COATINGS AND COAT IN ACCORDANCE WITH SPECIFICATION 09900, TYP FOR ALL 6 FILTERS.

LEGEND

- EXISTING FEATURES
- NEW FEATURES
- PIPING TO BE REMOVED AND REPLACED
- PIPING TO BE RECOATED
- FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					
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	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

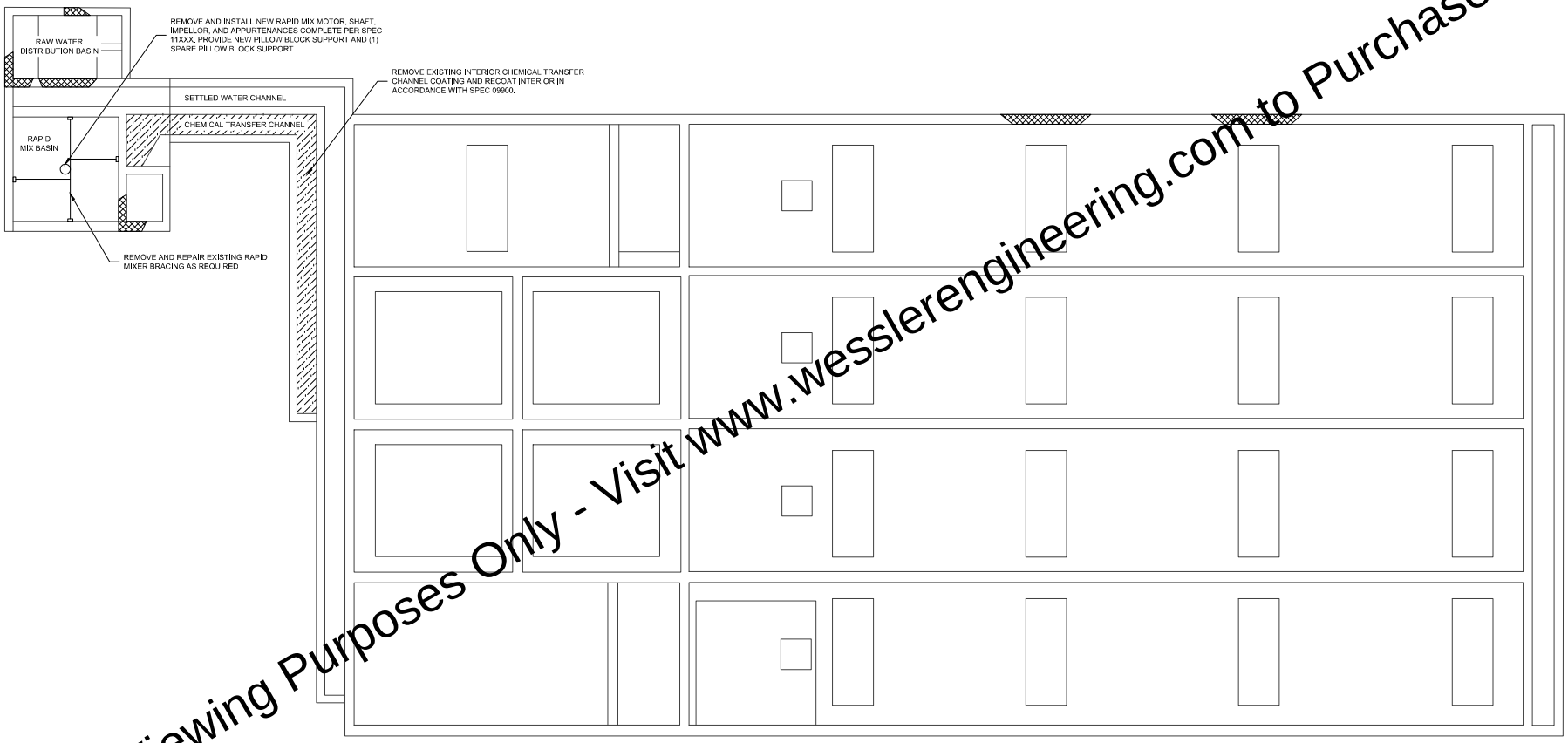
STATE OF OHIO — ADAM SITKA E-88514 — REGISTERED PROFESSIONAL ENGINEER — 04/01/2026

WESSLER ENGINEERING — More than a Project℠

WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS
CITY OF KENTON, OHIO

WTP BUILDING - IMPROVEMENTS SECTION

SHEET NO. **2C7**
PAGE NO. 13



PLAN VIEW
3/16" = 1'-0"

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					
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	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — ADAM SITKA E-88514 — REGISTERED PROFESSIONAL ENGINEER — 04/01/2026

WESSLER ENGINEERING — More than a Project℠

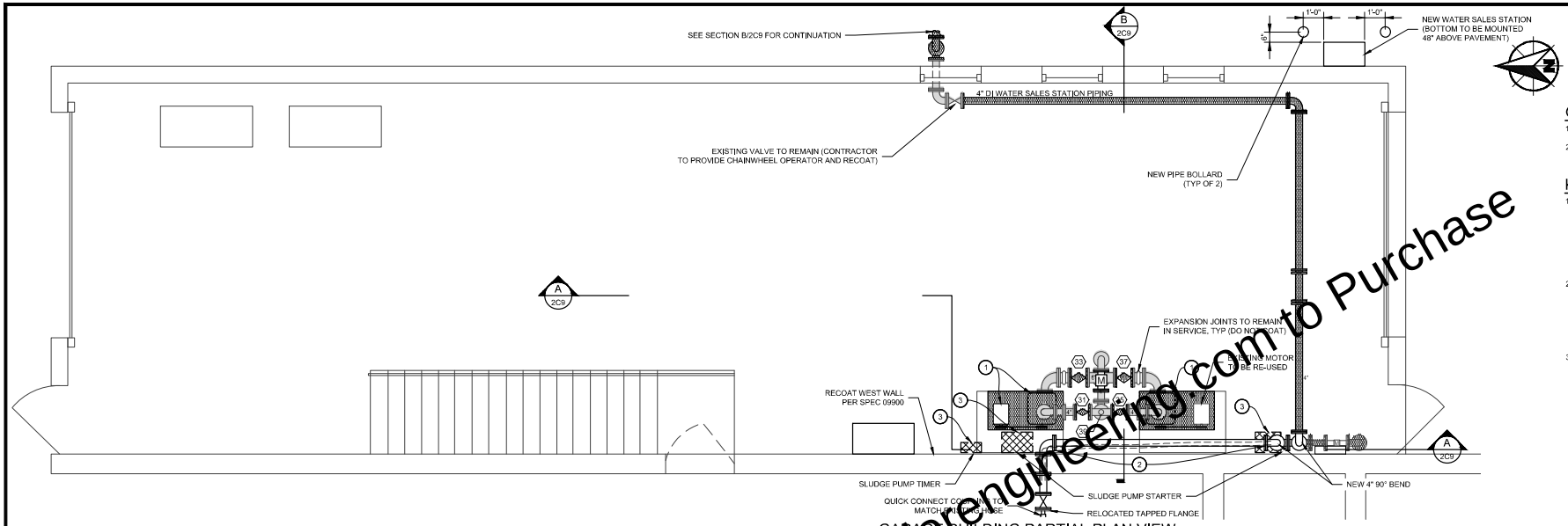
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

FLOCCULATION, REACTION AND SETTLING BASIN IMPROVEMENTS - PLAN VIEW

SHEET NO. **2C8**

PAGE NO. 14



GARAGE BUILDING PARTIAL PLAN VIEW
3/8" = 1'-0"

GENERAL NOTES:

1. FIELD VERIFY PIPE LAYOUTS AND DIMENSIONS BEFORE CONSTRUCTION.
2. SUPPORT NEW PIPING AS REQUIRED. PIPING SUPPORTS NOT SHOWN.

KEYED NOTES

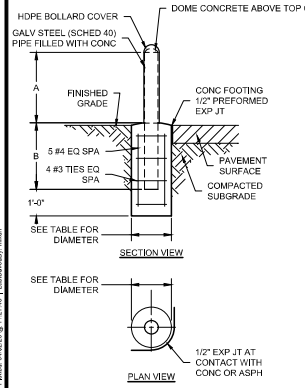
1 DEMOLISH AND REPLACE TWO (2) EXISTING SLUDGE PUMPS. REMOVE AND REPLACE MOTOR FOR ONE (1) SLUDGE PUMP AS INDICATED ON DRAWINGS. PROVIDE INSTALLATION IN ACCORDANCE WITH SPECIFICATION SECTION 11200. MODIFY SUCTION AND DISCHARGE PIPING AS REQUIRED.

2 NEW SOFTENING TANK WASHDOWN PIPING. REMOVE EXISTING TAPPED BLIND FLANGE AND FIRE HOSE. INSTALL NEW 4" FLANGED DUCTILE IRON PIPING. REUSE EXISTING GATE VALVE AND COMPANION FLANGE. MODIFY EXISTING PIPE SUPPORTS AS NEEDED.

3 DEMOLISH EXISTING SLUDGE PUMP TIMER SWITCH AND PANEL. SEE SHEET 2E5.

LEGEND

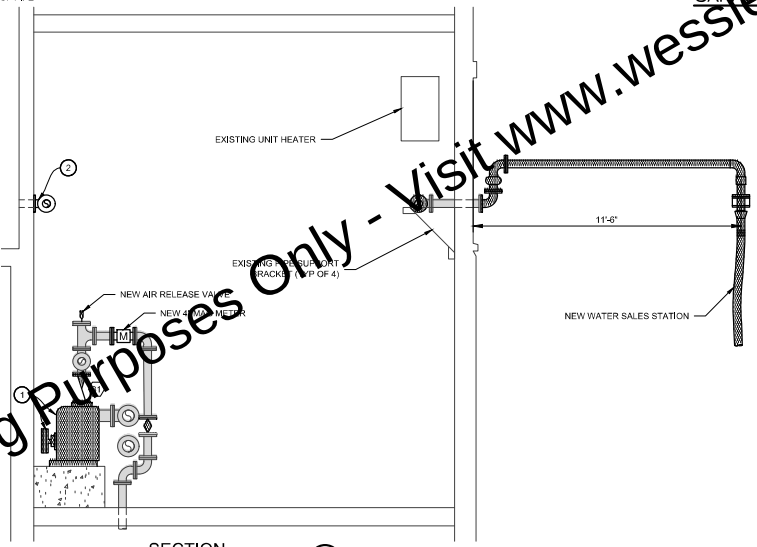
- EXISTING FEATURES
- NEW FEATURES
- PIPING TO BE REMOVED AND REPLACED
- PIPING TO BE RECOATED
- FEATURES TO BE DEMOLISHED



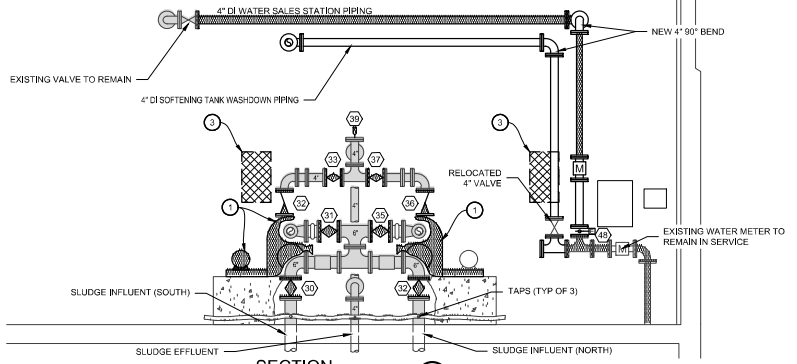
1. REFER TO SPEC 05520 FOR BOLLARD COVERS.

BOLLARDS	
	TYPE 1
PIPE DIA	6"
PIPE LENGTH	6'-0"
DIMENSION A	2'-6"
DIMENSION B	2'-6"
CONC FOOTING DIA	18"

BOLLARD DETAIL
NONE



SECTION
SCALE: 3/8" = 1'-0"
B 2C9



SECTION
SCALE: 3/8" = 1'-0"
A 2C9

SCALE VERIFICATION	DRAWN BY	MLN
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG
	APPROVED BY	AMS
	ISSUE DATE	APRIL 2026
	PROJECT NUMBER	709126-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO — ADAM SITKA E-88514 — REGISTERED PROFESSIONAL ENGINEER — 04/01/2026

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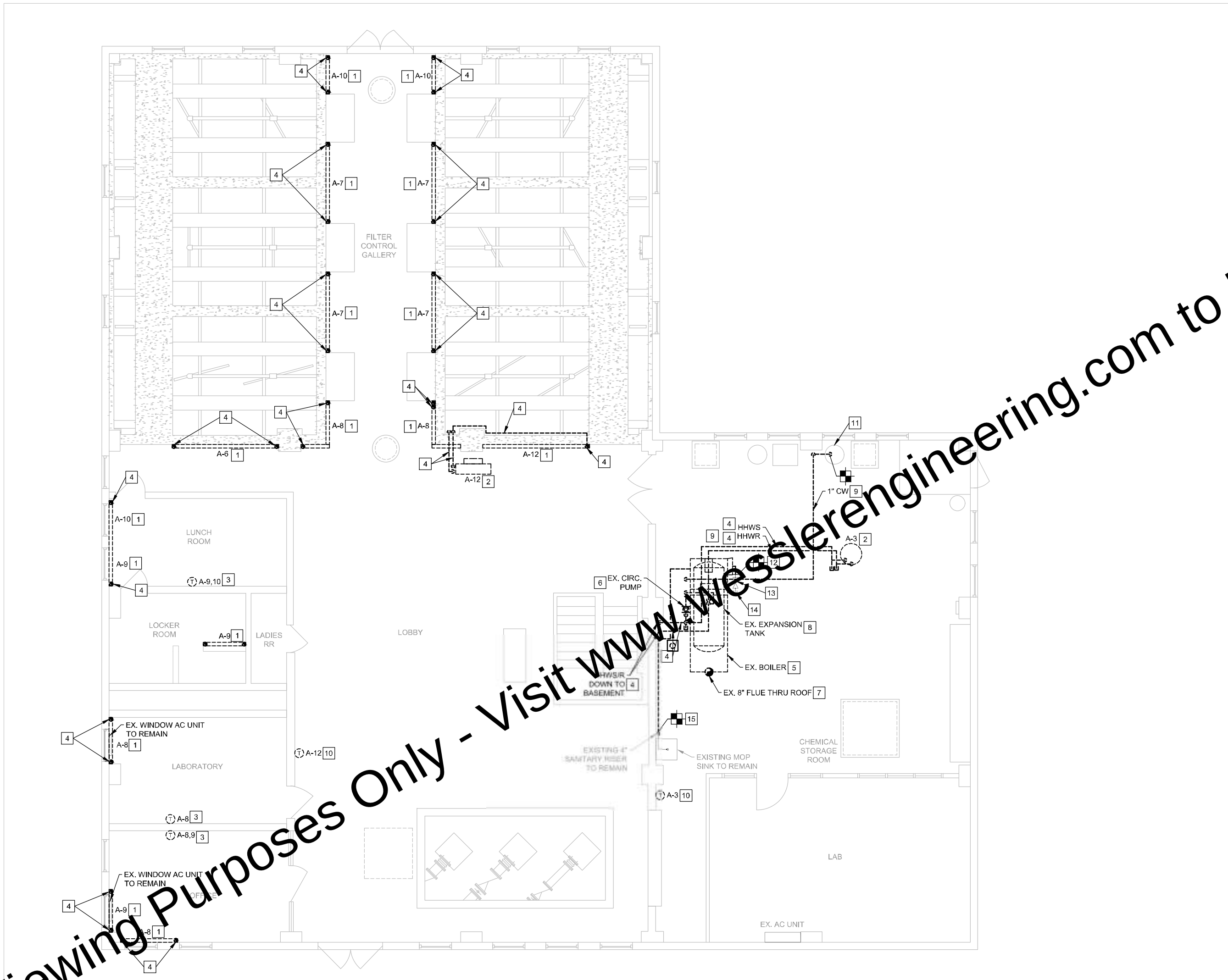
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

GARAGE BUILDING - IMPROVEMENTS PLAN AND SECTION

SHEET NO. 2C9

PAGE NO. 15



UPPER FLOOR MECHANICAL DEMOLITION PLAN

SCALE: 3/16" = 1'-0"

GENERAL NOTES:

A. REFER TO SHEET 1M1 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE TEMPORARY ROOF PROTECTION OVER REMAINING OPENING WHERE BOILER FLUE HAS BEEN REMOVED THAT IS WEATHERPROOF DURING THE INTERIM BEFORE THE NEW BOILER FLUE IS INSTALLED.

DEMOLITION NOTES:

1. REMOVE EXISTING FINNED TUBE RADIATION ENCLOSURE AND ASSOCIATED HOT WATER PIPING. PREPARE SPACE FOR NEW FINNED TUBE RADIATION.
2. REMOVE EXISTING HOT WATER UNIT HEATER, ASSOCIATED PIPING, AND CONTROLS.
3. REMOVE EXISTING THERMOSTAT AND PREPARE SPACE FOR RECEIVING NEW THERMOSTAT.
4. REMOVE EXISTING HHWS/R PIPING AND APPURTENANCES. REFER TO DRAWING 2M2 FOR PIPING BELOW.
5. REMOVE EXISTING BOILER, EQUIPMENT STAND, ASSOCIATED PIPING, AND CONTROLS.
6. REMOVE EXISTING HOT WATER CIRCULATION PUMP.
7. REMOVE EXISTING BOILER FLUE. PREPARE ROOF FOR RECEIVING NEW FLUE.
8. REMOVE EXISTING EXPANSION TANK AND ASSOCIATED PIPING.
9. REMOVE EXISTING DOMESTIC CW MAKEUP PIPING TO BOILER THRU FLOOR. SEE SHEET 2M2 FOR CONTINUATION.
10. REMOVE EXISTING THERMOSTAT. PATCH WALL TO MATCH EXISTING CONSTRUCTION.
11. EXISTING CHEMICAL FEED TANK TO REMAIN. REFER TO PLAN OF NEW WORK FOR RECONNECTION OF COLD WATER MAKE-UP.
12. REMOVE 1-1/2" NATURAL GAS PIPING, INCLUDING PRESSURE REDUCING VALVE BACK TO THIS POINT. REFER TO DRAWING 2M3 FOR RECONNECTION OF REMAINING PIPING.
13. EXISTING NATURAL GAS SHUT-OFF VALVE.
14. EXISTING 2" NATURAL GAS FROM BELOW.
15. REMOVE 2" BOILER DRAIN DOWN PIPE BACK TO THIS POINT WHERE IT TIES INTO THE VERTICAL SANITARY WASTE RISER. CAP 2" DRAIN AT RISER CONNECTION.

SCALE VERIFICATION

BAR IS ONE INCH LONG ON ORIGINAL DRAWING

DRAWN BY	JAL
CHECKED BY	RLW
APPROVED BY	TMA
ISSUE DATE	MARCH 2026
PROJECT NUMBER	709126-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO
TIMOTHY M. ANDERSON
PE-59198
REGISTERED PROFESSIONAL ENGINEER

WESSLER ENGINEERING
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WATER TREATMENT PLANT PHASE 1

CITY OF KENTON, OHIO

UPPER FLOOR MECHANICAL DEMOLITION PLAN

SHEET NO.
2M1

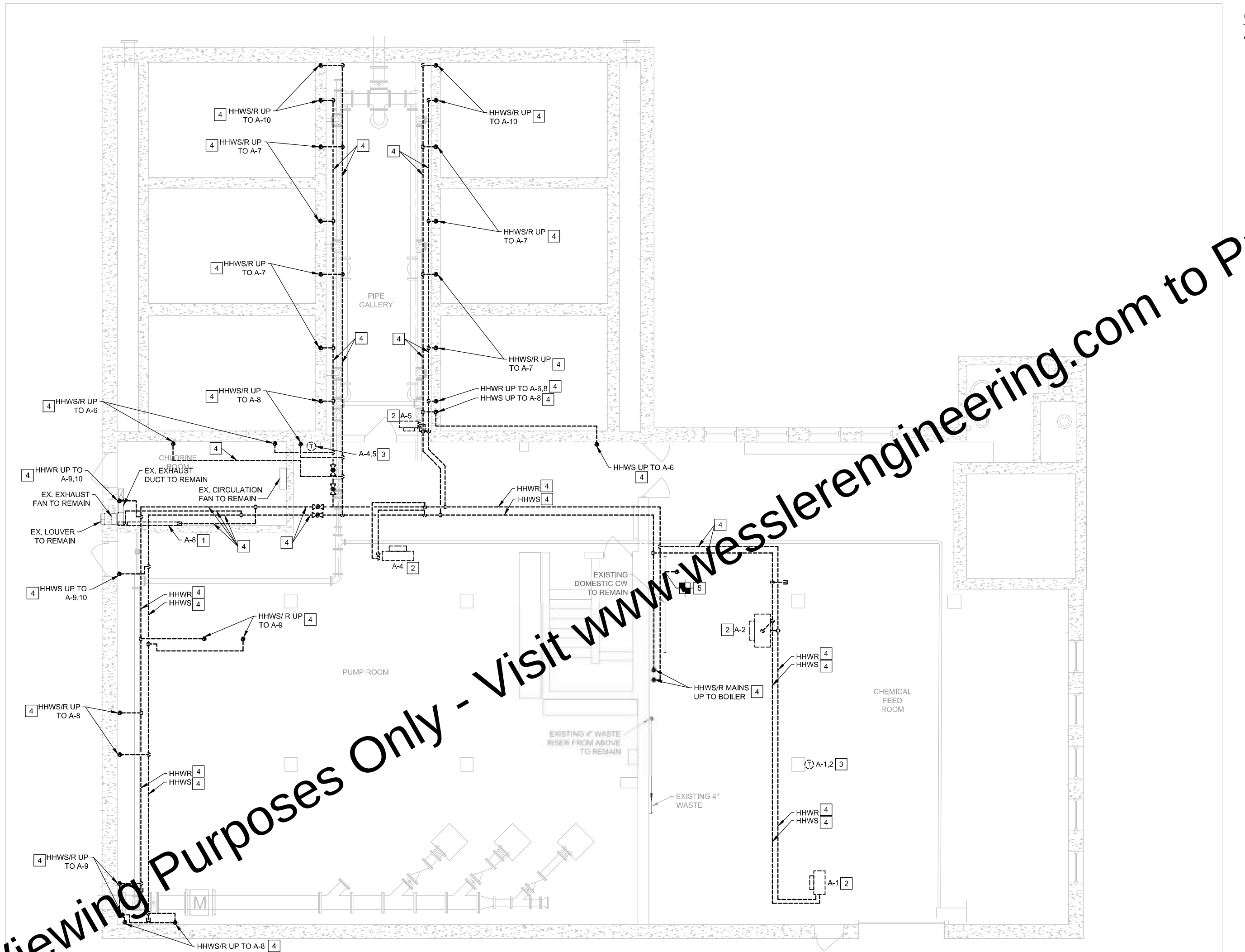
PAGE NO.

GENERAL NOTES:

A. REFER TO SHEET 1M1 FOR ADDITIONAL GENERAL NOTES.

DEMOLITION NOTES:

1. REMOVE EXISTING FINNED TUBE RADIATION AND ASSOCIATED HOT WATER PIPING. PREPARE SPACE FOR NEW FINNED TUBE RADIATION.
2. REMOVE EXISTING HOT WATER UNIT HEATER, ASSOCIATED PIPING, AND CONTROLS.
3. REMOVE EXISTING THERMOSTAT. PATCH WALL TO MATCH EXISTING CONSTRUCTION.
4. REMOVE EXISTING HHWS/R PIPING AND APPURTENANCES.
5. REMOVE EXISTING DOMESTIC CW PIPING BACK TO POINT INDICATED. PREPARE PIPING FOR NEW CONNECTION.



LOWER FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 3/16" = 1'-0"

Drawing: G:\Projects\26-002 Wessler - Kenton WTP Mul Bldgs Heating Sys Upgrades\BMA-CAD\CAD\26-002_M-SHEETS.dwg | Layout: 2M2 | Plotted: 03/24/26 @ 01:17:33 | LastSavedBy: pcohn

SCALE VERIFICATION	DRAWN BY	JAL	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	RLW	
	APPROVED BY	TMA	
	ISSUE DATE	MARCH 2026	
	PROJECT NUMBER	709126-04-001	

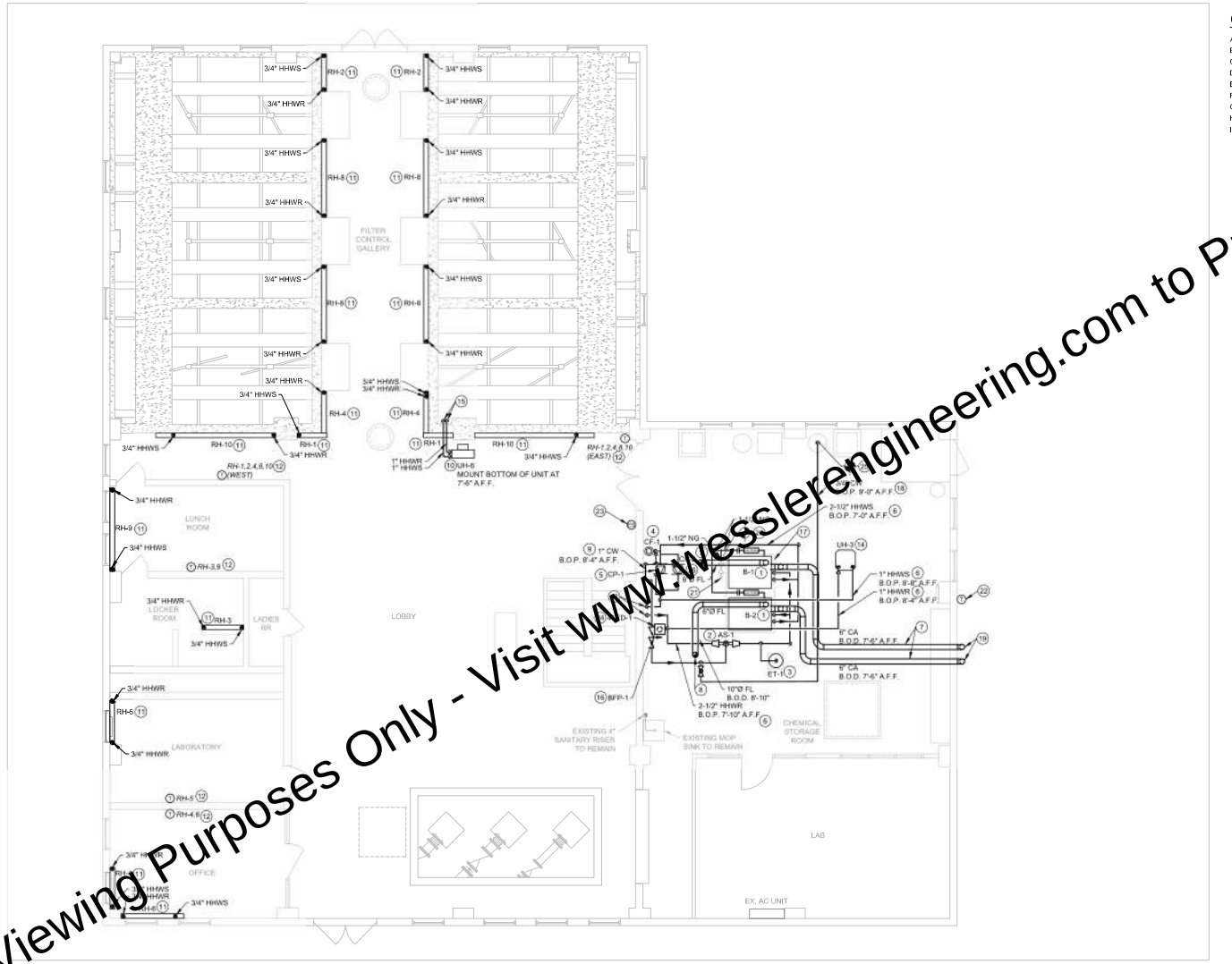
NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO — TIMOTHY M. ANDERSON PE-59198 — REGISTERED PROFESSIONAL ENGINEER — 3/24/2026

WESSLER ENGINEERING — More than a Project™

WATER TREATMENT PLANT PHASE 1
CITY OF KENTON, OHIO
LOWER FLOOR MECHANICAL DEMOLITION PLAN

SHEET NO. **2M2**



GENERAL NOTES:

A. REFER TO SHEET 1M1 FOR ADDITIONAL GENERAL NOTES.
B. COORDINATE ALL NEW WORK WITH EXISTING TRADES.
C. INSULATE ALL HHWS/R PIPING WITH 1" THICK FIBERGLASS INSULATION.
D. INSULATE ALL DOMESTIC CW PIPING WITH 1" THICK FIBERGLASS INSULATION.
E. SLEEVE AND SEAL ALL FLOOR AND WALL PENETRATIONS.
F. REFER TO SHEET 8M3 FOR ALL EQUIPMENT SCHEDULES.
G. ALL CONTROL WIRING TO THERMOSTATS SHALL BE RUN IN RIGID CONDUIT.
H. LABEL ALL EQUIPMENT, PIPING, AND THERMOSTATS.
I. PRIME AND PAINT ALL NATURAL GAS PIPING WITH RUST PROHIBITIVE PAINT TO MATCH EXISTING.

(#) PLAN NOTES:

1. PROVIDE NEW BOILER ON EQUIPMENT PAD IN LOCATION SHOWN. MAINTAIN CLEARANCES PER MANUFACTURER RECOMMENDATION. SEE DETAIL '1' ON SHEET 8M1.
2. PROVIDE NEW AIR AND DIRT SEPARATOR IN LOCATION SHOWN. MOUNT UNIT ON EQUIPMENT STAND. SEE DETAIL '7' ON SHEET 8M1.
3. PROVIDE NEW EXPANSION TANK IN LOCATION SHOWN. MOUNT UNIT ON EQUIPMENT PAD. SEE DETAIL '7' ON SHEET 8M1.
4. PROVIDE NEW 5 GALLON CHEMICAL FEEDER WITH QUICK-RELEASE LID LIKE WESSELS CPFTA-5 OR EQUIVALENT IN LOCATION SHOWN. SEE DETAIL '6' ON SHEET 8M1.
5. PROVIDE NEW CIRCULATION PUMP IN LOCATION SHOWN. SUPPORT PUMP FROM EXISTING STRUCTURE INDEPENDENT OF PIPING WITH SPRING VIBRATION ISOLATORS. SEE DETAIL '3' ON SHEET 8M1.
6. PROVIDE NEW HHWS/R PIPING. SUPPORT PIPING FROM STRUCTURE. SEE DETAIL '1' ON SHEET 8M2.
7. 6" COMBUSTION AIR INTAKE TO BOILER. DUCT SHALL PENETRATE EXTERIOR WALL. SLEEVE AND SEAL DUCT THRU WALL. TERMINATE WITH GOOSENECK TURNED DOWN AND PROVIDE BIRDSCREEN OVER THE INTAKE OPENING. SUPPORT PVC COMBUSTION AIR INTAKES EVERY 6'-0". FULLY INSULATE PVC COMBUSTION AIR PIPES WITH 1-1/2" FIBERGLASS INSULATION.
8. 6" FLUE FROM BOILER. PENETRATE ROOF USING EXISTING ROOF PENETRATION. PROVIDE FLASHING AND COUNTERFLASHING TO ENSURE POSITIVE WEATHERPROOF SEAL. INSTALL FLUE PER MANUFACTURER INSTRUCTION. SEE DETAIL '4' ON SHEET 8M2.
9. PROVIDE NEW DOMESTIC COLD WATER PIPING IN LOCATION SHOWN. SEE CONTINUATION ON SHEET 2M4. SEE DETAIL '3' ON SHEET 8M2. PROVIDE SHUT-OFF VALVE IN VERTICAL.
10. PROVIDE NEW HYDRONIC UNIT HEATER IN LOCATION SHOWN. SEE DETAIL '2' ON SHEET 8M1.
11. PROVIDE NEW HYDRONIC FINNED TUBE RADIATION IN LOCATION SHOWN. COORDINATE HHWS/R CONNECTIONS WITH FLOOR PENETRATIONS. SEE DETAIL '5' ON SHEET 8M1.
12. PROVIDE NEW FINNED TUBE RADIATION THERMOSTAT ON WALL. MOUNT THERMOSTAT AT +4'-0" A.F.F.
13. NEW 2-1/2" HHWS/R DOWN THRU FLOOR TO BASEMENT. SEE SHEET 2M4 FOR CONTINUATION. SLEEVE AND SEAL FLOOR PENETRATION. SEE DETAIL '3' ON SHEET 8M2.
14. PROVIDE NEW HYDRONIC UNIT HEATER IN LOCATION SHOWN. SUSPEND UNIT FROM STRUCTURE AND MOUNT TIGHT TO STRUCTURE. MAINTAIN MANUFACTURER RECOMMENDED CLEARANCES. SEE DETAIL '2' ON SHEET 8M1.
15. CONNECT HHWS/R PIPES TO HYDRONIC RADIATION PIPING IN WALL. MATCH EXISTING ROUTING WITH NEW PIPING.
16. PROVIDE BACKFLOW PREVENTER IN DOMESTIC COLD WATER PIPING IN LOCATION SHOWN. SUPPORT FROM ADJACENT PIPING. ROUTE DRAIN LINE TO NEAREST FLOOR DRAIN. SEE DETAIL '2' ON SHEET 8M2.
17. PROVIDE 6" HIGH CONCRETE PAD FOR BOILERS. PIN NEW PAD TO EXISTING FLOOR SLAB.
18. PROVIDE 3/4" COLD WATER CONNECTION TO EXISTING CHEMICAL FEED SYSTEM.
19. CORE DRILL EXISTING MASONRY WALL AS REQUIRED TO ACCOMMODATE NEW COMBUSTION AIR INTAKES. SEAL WALL PENETRATIONS WEATHERTIGHT.
20. CONNECT TO THE EXISTING 2" NATURAL GAS PIPING AT THIS POINT. PROVIDE 1-1/2" NG TO CONNECTIONS TO EACH BOILER GAS TRAIN.
21. EXISTING 1-1/2" NATURAL GAS FROM BELOW.
22. OUTSIDE AIR TEMPERATURE SENSOR FOR BOILER SYSTEM. FURNISHED BY BOILER MANUFACTURER AND INSTALLED BY THE MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT AND WIRING BACK TO BOILER CONTROL PANEL PER MANUFACTURERS RECOMMENDATIONS. SEAL CONDUIT THRU WALL WEATHERTIGHT.
23. PROVIDE BOILER EMERGENCY STOP BUTTON. REFER TO BOILER SEQUENCE OF OPERATION ON DRAWING 8M5. PROVIDE E-STOP STATION AND WIRING. SEE DETAIL ON DRAWING 8M5. BUTTON SHALL BE TWIST AND PULL TO RESET. REFER TO ELECTRICAL DRAWINGS FOR EMERGENCY STOP BUTTON WIRING.
24. PROVIDE NEW FLOOR DRAIN. PROVIDE CORE DRILL OF EXISTING FLOOR AS REQUIRED TO ACCOMMODATE NEW FLOOR DRAIN. TERMINATE BACKFLOW PREVENTER DRAIN, BOILER CONDENSATE, AND BLOWDOWN OVER FLOOR DRAIN. SUPPORT PIPING ACROSS THE FLOOR TO THE DRAIN WITH PIPE STANTIONS.
25. RECONNECT 3/4" DOMESTIC COLD WATER MAKE-UP TO EXISTING CHEMICAL FEED SYSTEM. COORDINATE OUTAGE OF COLD WATER SERVICE BETWEEN DEMOLITION AND NEW PIPING CONNECTION TO NOT CAUSE DISRUPTION OF SERVICE TO THE OWNER'S PROCESS.
26. 6" FLUE FROM BOILER. PENETRATE ROOF AND PROVIDE FLASHING AND COUNTERFLASHING TO ENSURE POSITIVE WEATHERPROOF SEAL. INSTALL FLUE PER MANUFACTURER INSTRUCTION. SEE DETAIL '4' ON SHEET 8M2.

1 UPPER FLOOR MECHANICAL PLAN

SCALE: 3/16" = 1'-0"

SCALE VERIFICATION	DRAWN BY	JAL	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	RLW					
	APPROVED BY	TMA					
	ISSUE DATE	MARCH 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — TIMOTHY M. ANDERSON PE-59198 — PROFESSIONAL ENGINEER

WESSLER ENGINEERING — More than a Project™

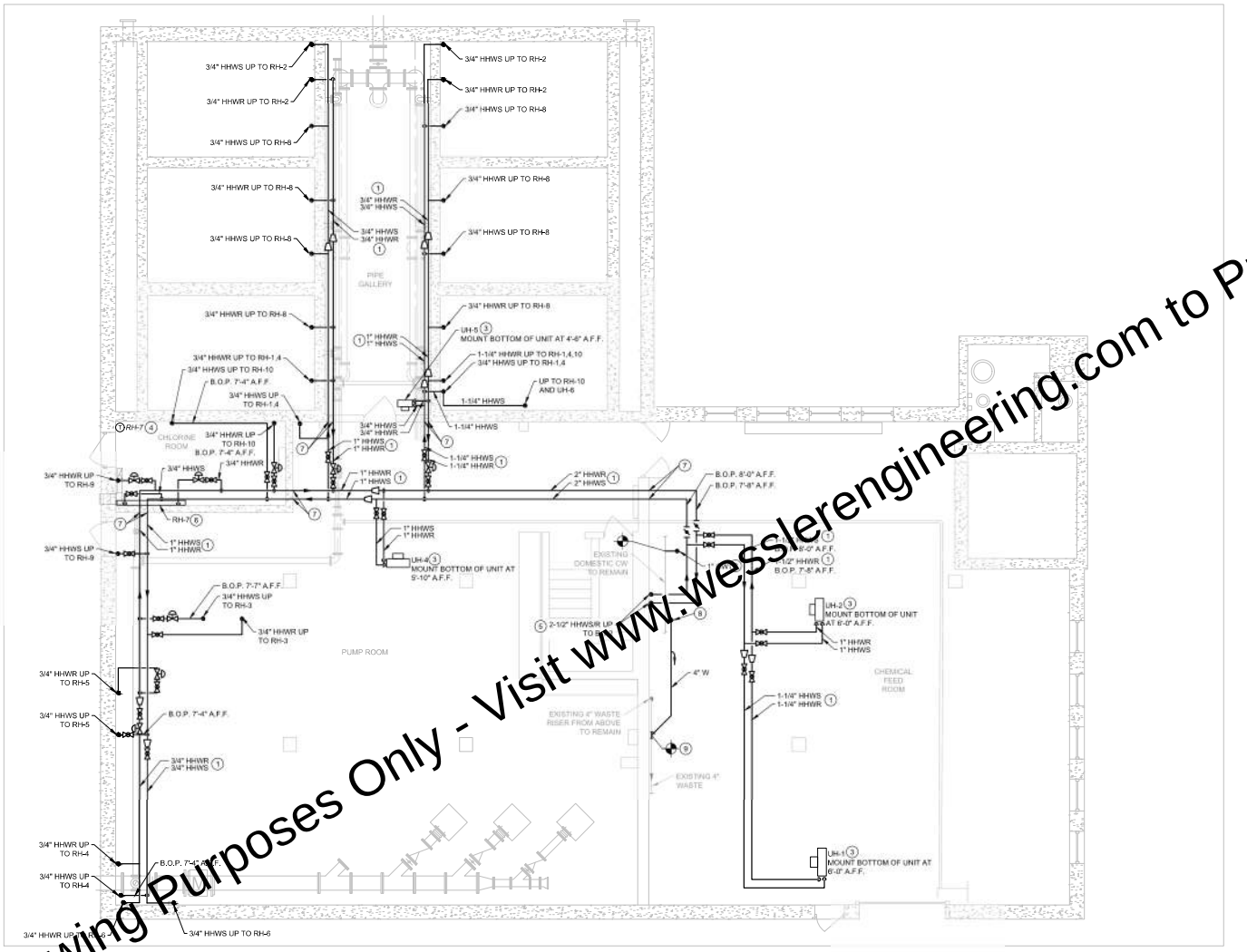
WATER TREATMENT PLANT PHASE 1

CITY OF KENTON, OHIO

UPPER FLOOR MECHANICAL PLAN

SHEET NO. **2M3**

PAGE NO. 18



LOWER FLOOR MECHANICAL PLAN

SCALE: 3/16" = 1'-0"

GENERAL NOTES:

A. REFER TO SHEET 1M1 FOR ADDITIONAL GENERAL NOTES.
B. INSULATE ALL HHWS/R PIPING WITH 1" THICK FIBERGLASS INSULATION.
C. INSULATE ALL DOMESTIC CW PIPING WITH 1" THICK FIBERGLASS INSULATION.
D. SLEEVE AND SEAL ALL FLOOR AND WALL PENETRATIONS.
E. ROUTE ALL HHWS/R PIPING IMMEDIATELY SERVING FINNED TUBE RADIATION LOCATED IN FILTER CONTROL GALLERY THROUGH EXISTING FLOOR PENETRATIONS.
F. REFER TO SHEET 8M3 FOR ALL EQUIPMENT SCHEDULES.

(#) PLAN NOTES:

1. PROVIDE NEW HHWS/R PIPING AND SUPPORT PIPING FROM STRUCTURE. SEE DETAIL '1' ON SHEET 8M2.
2. PROVIDE NEW DOMESTIC CW WATER PIPING IN LOCATION SHOWN. SEE CONTINUATION ON SHEET [illegible]. INSULATE PIPE THROUGH SLAB. SEE DETAIL '3' ON SHEET 8M2.
3. PROVIDE NEW HYDRONIC UNIT HEATER IN LOCATION SHOWN. SEE DETAIL '2' ON SHEET 8M1.
4. PROVIDE NEW ZONE THERMOSTAT ON WALL. MOUNT THERMOSTAT AT +4'-0" A.F.F.
5. STUB 2" HHWS/R UP THRU FLOOR TO CHEMICAL STORAGE. SEE SHEET 2M3 FOR CONTINUATION. INSULATE PIPE THROUGH SLAB. SEE DETAIL '3' ON SHEET 8M2.
6. PROVIDE NEW HYDRONIC FINNED TUBE RADIATION IN LOCATION SHOWN. COORDINATE HHWS/R CONNECTIONS WITH EXISTING RISER LOCATIONS. SEE DETAIL '5' ON SHEET 8M1.
7. UTILIZE EXISTING OPENINGS IN WALLS WHERE EXISTING PIPING HAS BEEN REMOVED.
8. 4" WASTE WITH P-TRAP UP TO 4" FD-1 ON UPPER FLOOR. REFER TO DRAWING 2M3. SLOPE NEW PORTION OF WASTE PIPING AT 1/8" PER FOOT.
9. CONNECT NEW 4" WASTE TO EXISTING 4" WASTE AT THIS POINT. PROVIDE PROTECTION TO EXISTING FLOOR AND WALL SERVICES WHEN CUTTING EXISTING WASTE PIPE.

SCALE VERIFICATION	DRAWN BY	JAL	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
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	APPROVED BY	TMA					
	ISSUE DATE	MARCH 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — TIMOTHY M. ANDERSON PE-59198 — PROFESSIONAL ENGINEER

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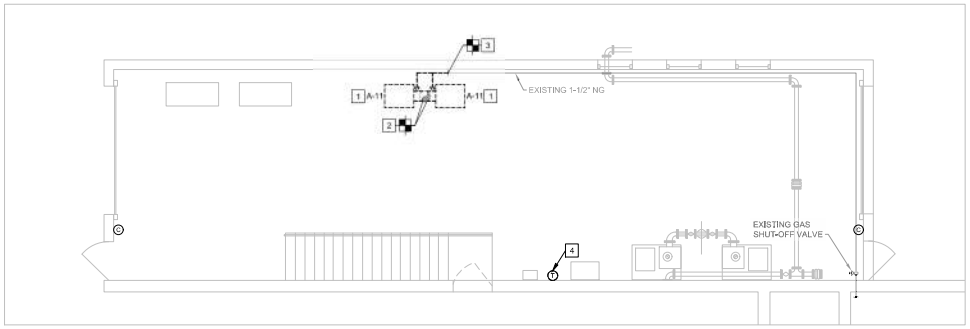
WATER TREATMENT PLANT PHASE 1

CITY OF KENTON, OHIO

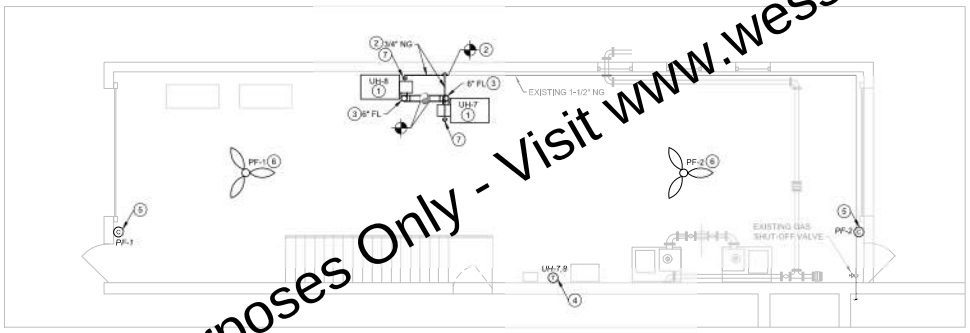
LOWER FLOOR MECHANICAL PLAN

SHEET NO. **2M4**

PAGE NO. 19



GARAGE MECHANICAL DEMOLITION PLAN
SCALE: 3/16" = 1'-0"



GARAGE MECHANICAL PLAN
SCALE: 3/16" = 1'-0"

GENERAL NOTES:

A. REFER TO SHEET 1M1 FOR ADDITIONAL GENERAL NOTES.
B. COORDINATE ALL NEW WORK WITH EXISTING TRADES.
C. REFER TO SHEET 6M3 FOR ALL EQUIPMENT SCHEDULES.

DEMOLITION NOTES:

1. REMOVE EXISTING GAS FIRED UNIT HEATER.
2. REMOVE EXISTING FLUE UP TO FLUE RISER THRU ROOF. PROTECT FLUE RISER AND PREPARE FOR NEW CONNECTIONS.
3. REMOVE EXISTING NATURAL GAS PIPING BACK TO POINT INDICATED. PROTECT REMAINING PIPING AND PREPARE FOR NEW CONNECTION.
4. REMOVE EXISTING UNIT HEATER THERMOSTAT AND CONTROL WIRING. PREPARE WALL FOR RECEIVING NEW THERMOSTAT.

PLAN NOTES:

1. PROVIDE NEW GAS FIRED UNIT HEATER IN LOCATION SHOWN. SUSPEND FROM STRUCTURE. MAINTAIN CLEARANCES RECOMMENDED BY MANUFACTURER. MOUNT BOTTOM OF UNIT AT 15'-0" A.F.F. SEE DETAIL '4' ON SHEET 8M1.
2. PROVIDE NEW NATURAL GAS PIPING WHERE INDICATED.
3. PROVIDE NEW FLUE IN LOCATION SHOWN. CONNECT TO EXISTING FLUE RISER UP THRU ROOF.
4. PROVIDE NEW ELECTRICAL THERMOSTAT TO CONTROL UNIT HEATERS UH-7 AND UH-8. ALL CONTROL WIRING SHALL BE RUN IN RIGID CONDUIT.
5. MOUNT AND WIRE PROPELLER FAN CONTROLLER ON WALL AT +4'-0" A.F.F. FAN CONTROLLERS ARE WIRELESS OPERATION. PROVIDE LAMINATED TAG ABOVE CONTROLLER ON THE WALL, "PROPELLER CEILING FAN". REFER TO ELECTRICAL DRAWINGS FOR POWER CONNECTION TO THE FAN.
6. MOUNT PROPELLER FAN AT UNDERSIDE OF EXISTING ROOF. PROVIDE ANGLE IRON STEEL SECURED TO EXISTING STRUCTURE TO MOUNT FAN. INSTALL FAN PR THE MANUFACTURERS WRITTEN INSTRUCTIONS.
7. PROVIDE NEW GAS PRESSURE REGULATOR BEFORE CONNECTION TO NEW UNIT HEATER. TOTAL CONNECTED GAS LOAD IS 400 MBH.

SCALE VERIFICATION	DRAWN BY	JAL	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
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	APPROVED BY	TMA					
	ISSUE DATE	MARCH 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — TIMOTHY M. ANDERSON PE-59198 — PROFESSIONAL ENGINEER

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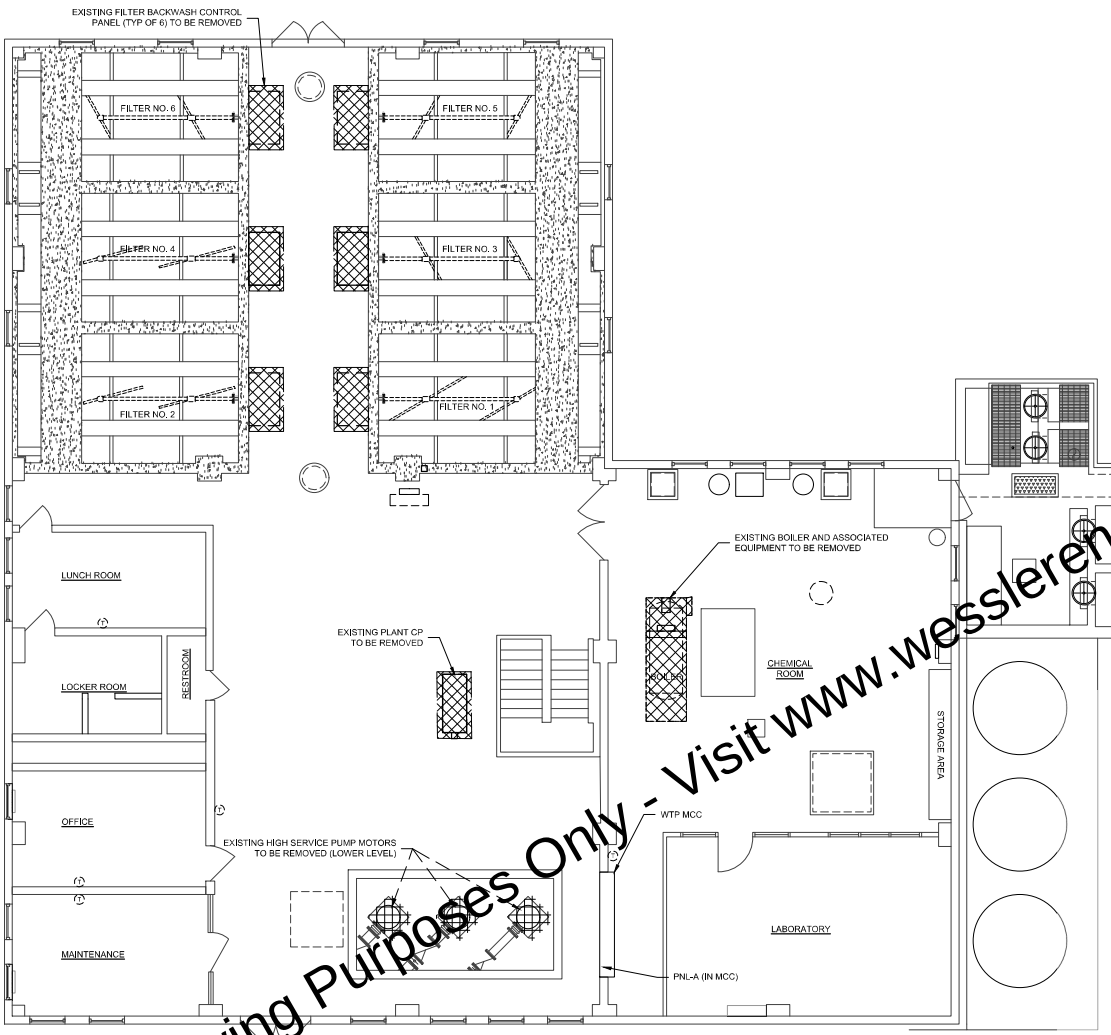
WATER TREATMENT PLANT PHASE 1
CITY OF KENTON, OHIO

GARAGE MECHANICAL DEMOLITION PLAN

SHEET NO. **2M5**
PAGE NO. 20



GENERAL NOTES:

1. SEE SPECIFICATION 01550 FOR CONSTRUCTION SEQUENCING.
2. HVAC, PROCESS PIPING, AND CHEMICAL FEED PIPING NOT SHOWN FOR CLARITY.
3. REMOVE CONTROL PANELS FROM EXISTING PNL A IN MCC AS SHOWN. CONFIRM CIRCUIT NUMBER IS ACCURATE AND UPDATE PANEL SCHEDULE ACCORDINGLY.

PANEL SCHEDULE

	DESIGNATION:			MCC PNL A			MAINS:			M.L.O.					
	LOCATION:			MCC			BUS SIZE:			225 AMP					
	VOLTAGE:						PANEL MOUNTING:			IN MCC					
	PHASE:			3 PHASE, 4 WIRE			ALL BREAKERS:			10000 A.I.C. (MINIMUM)					
CKT. NO.	LOAD DESCRIPTION	#	KVA	CKT BKR AMPS	CKT BKR POLE	KVA A	KVA B	KVA C	CKT BKR AMPS	CKT BKR POLE	KVA	#	LOAD DESCRIPTION	CKT NO.
1	5 FIX - MAIN LIGHTING LOBBY			20	1	0.00			20	1			4 FIXTURES 1 ABOVE (2' X 2' ABOVE PNL	2
3	LABORATORY LIGHTS			20	1		0.83		20	1			FLTR WALK (BW RM 1 DOR, LADDER) LGT	4
5	FILTER CONTROL GALLERY LIGHTS			20	1			0.80	20	1			MAINTENANCE OFFICE LIGHTS	6
7	1/2 LIGHTING CHEMICAL ROOM			20	1	0.00			20	1			1/2 LIGHTING CHEMICAL ROOM	8
9	NW SIDE EXTERIOR LIGHTS			20	1		0.83		20	1			EAST SIDE EXTERIOR LIGHTS	10
11	LIME & SODA ASH FLOOD LIGHTS			20	1			0.80	20	1			SPARE	12
13	FILTERS SOUTH SIDE RECEPT			20	1	0.00			20	1			FILTERS N SIDE RECEPT - EXT LGT W DR	14
15	WTR PUTN, BW RM 1 DR RECEPT			20	1		0.00		20	1			MAINT SUPER EN WALL RECEPT	16
17	LOBBY N WALL LAB S/N RECEPT			20	1			0.80	20	1			CHEM ROOM N/W WALL RECEP - EXT LGT	18
19	LOBBY EAST WALL - EXT LGT E DOOR			20	1	0.00			20	1			LOBBY OVERHEAD HEATING UNIT	20
21	CHEMICAL ROOM HEATER			20	1		0.00		20	1			BOILER	22
23	BREAK ROOM EAST WALL			20	1			0.00	20	1			SUPER OFFICE WEST WALL RECEPT	24
25	STARTER - ?????			20	1	0.00			20	1			XXXXXXXXXX	26
27	XXXXXXXXXX			20	1		0.00		20	1			XXXXXXXXXX	28
29	XXXXXXXXXX			20	1			0.00	20	1			COMPRESSOR ALARM	30
31	SI INSULATION SYSTEM			15	1	0.00			20?	1			SCA SPARE – SEE SECURITY LIGHT BASIN	32
33	LABORATORY HEATER			30	2		0.00		20	2			SPARE	34
								0.80						35
	TOTAL CONNECTED LOAD:					0.00	0.83	0.80	TOTAL →		0.00	KVA		
#	ONE (1) OR TWO (2) DIGIT NUMBERS REFER TO CONDUIT & WIRE SCHEDULE ON THIS SHEET													
	1 1-pole 15A breaker, 26 1-pole 20A breakers, 1 2-pole 20A breaker, 4 1-pole 30A breakers, 1 2-pole 30A breaker													

UPPER FLOOR DEMOLITION PLAN

SCALE: 3/16" = 1'-0"

SCALE VERIFICATION	DRAWN BY	CMG	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	CMG				
	APPROVED BY	WCM				
	ISSUE DATE	APRIL 2026				
	PROJECT NUMBER	709126-04-001				

STATE OF OHIO — WAYNE C. MOORE E-70068 — REGISTERED PROFESSIONAL ENGINEER — 04/01/2026

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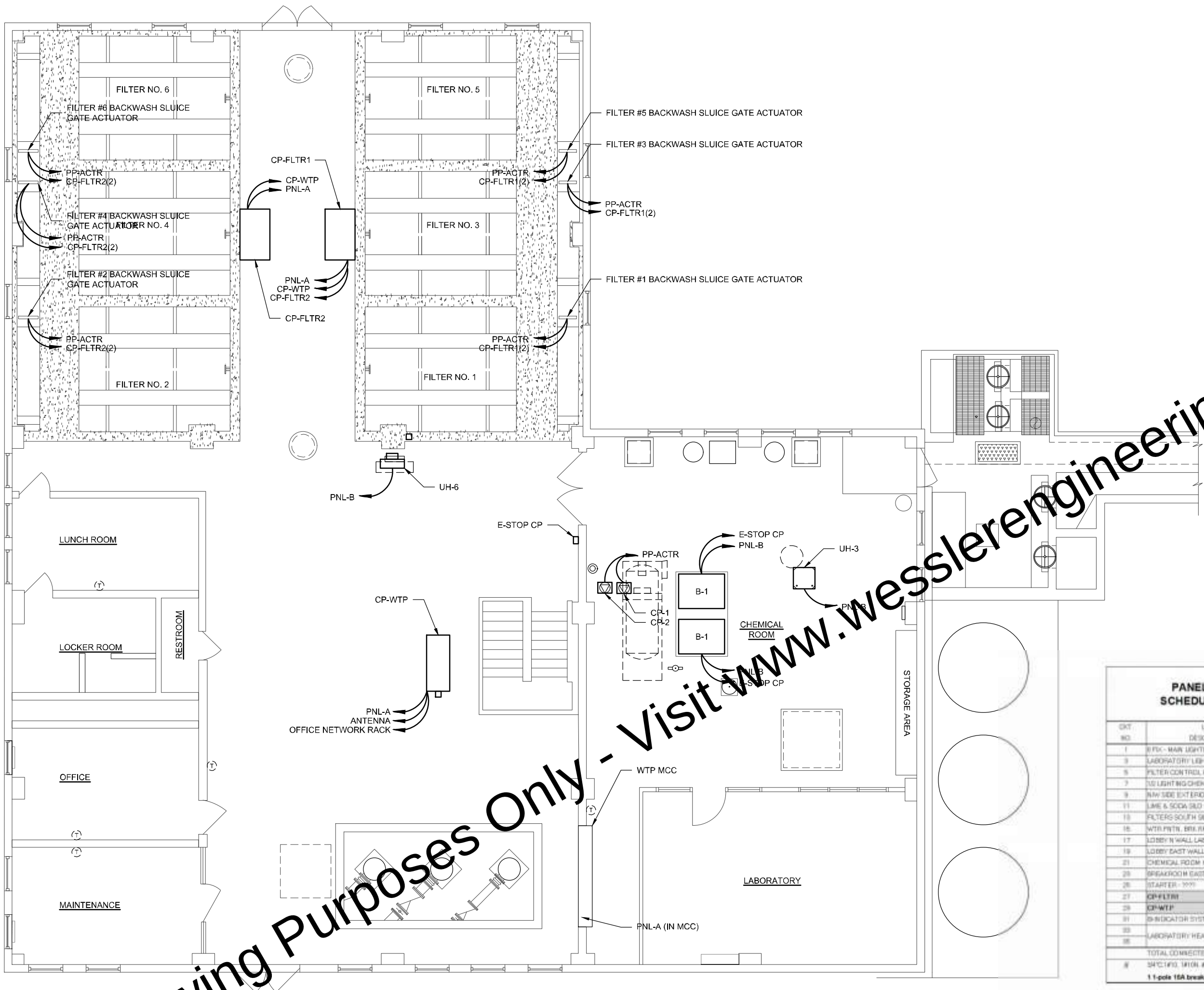
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

WTP BUILDING - UPPER FLOOR DEMOLITION PLAN

SHEET NO. **2E1**

PAGE NO. 21



GENERAL NOTES:

1. REPLACE CIRCUIT BREAKERS IN EXISTING PNL A WITH NEW CIRCUIT BREAKERS AFTER DEMO OF EXISTING CIRCUITS.
2. REUSE OF EXISTING CONDUITS IS ACCEPTABLE WHERE POSSIBLE.
3. SEE WIRING DIAGRAM IN MECHANICAL SHEETS FOR E-STOP AND BOILER CONTROL.
4. COORDINATE WIRING FOR E-STOP CP WITH BOILER INSTALL AND HEATING WATER CONTROL DIAGRAM SHOWN ON SHEET 8M5.

PANEL SCHEDULE

DESIGNATION	MCC PNL A
LOCATION	MCC
VOLTAGE	
PHASE	3 PHASE, 4 WIRE
MAINS	M.L.O.
BUS SIZE	225 AMP
PANEL MOUNTING	IN MCC
ALL BREAKERS	10000 A.I.C. (MINIMUM)

CKT NO.	LOAD DESCRIPTION	#	KVA	CKT. BKR. AMPS	CKT. BKR. POLE	KVA A	KVA B	KVA C	CKT. BKR. AMPS	CKT. BKR. POLE	KVA	#	LOAD DESCRIPTION	CKT NO.
1	8 FIX - MAIN LIGHTING LOBBY			20	1	0.00			20	1			4 FIXTURES 2 ABOVE CP & 2 ABOVE PNL	2
3	LABORATORY LIGHTS			20	1		0.00		20	1			FLTR WLK, BRK RM, LCKR, LADIES LGT	4
5	FILTER CONTROL GALLERY LIGHTS			20	1			0.00	20	1			MAINT/SUPER OFFICE LIGHTS	6
7	1/2 LIGHTING CHEMICAL ROOM			20	1	0.00			20	1			1/2 LIGHTING CHEMICAL ROOM	8
9	N/W SIDE EXTERIOR LIGHTS			20	1		0.00		20	1			EAST SIDE EXTERIOR LIGHTS	10
11	LIME & SODA SILO FLOOD LIGHTS			20	1			0.00	20	1			SPARE	12
13	FILTERS SOUTH SIDE RECEPT			20	1	0.00			20	1			FILTERS N SIDE RECEPT - EXIT LGT W DR	14
15	WTR PNTN, BRK RM, LKR RECEPT			20	1		0.00		20	1			MAINT/SUPER E/N WALL RECEPT	16
17	LOBBY N WALL LAB E/N RECEPT			20	1			0.00	20	1			CHEM ROOM N/W WALL RECEP - EXIT LGT	18
19	LOBBY EAST WALL - EXIT LGT E DOOR			20	1	0.00			20	1			LOBBY OVERHEAD HEATING UNIT	20
21	CHEMICAL ROOM HEATER			20	1		0.00		20	1			BOILER	22
23	BREAKROOM EAST WALL			20	1			0.00	20	1			SUPER OFFICE WEST WALL RECEPT	24
25	STARTER - ????			20	1	0.00			30	1		1	CP-FLTR2	26
27	CP-FLTR1	1		30	1		0.00		30	1		1	SPARE	28
29	CP-WTP	1		30	1			0.00	20	1			COMPRESSOR ALARM	30
31	B-INDICATOR SYSTEM			15	1	0.00			20T	1			30A-SPARE -- 32B-SECURITY LIGHT BASIN	32
33	LABORATORY HEATER			30	2		0.00		20	2			SPARE	34
35								0.00						36
	TOTAL CONNECTED LOAD					0.00	0.00	0.00	TOTAL =		0.00	KVA		
#	3/4"C,1#10, 1#10N, #10G													

1 1-pole 15A breaker, 26 1-pole 20A breakers, 1 2-pole 20A breaker, 4 1-pole 30A breakers, 1 2-pole 30A breaker

UPPER FLOOR POWER PLAN

SCALE: 3/16" = 1'-0"

SCALE VERIFICATION			NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	DRAWN BY	CMG				
	CHECKED BY	CMG				
	APPROVED BY	WCM				
	ISSUE DATE	APRIL 2026				
	PROJECT NUMBER	709126-04-001				

STATE OF OHIO
WAYNE C. MOORE
E-70068
REGISTERED
PROFESSIONAL ENGINEER

W
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WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

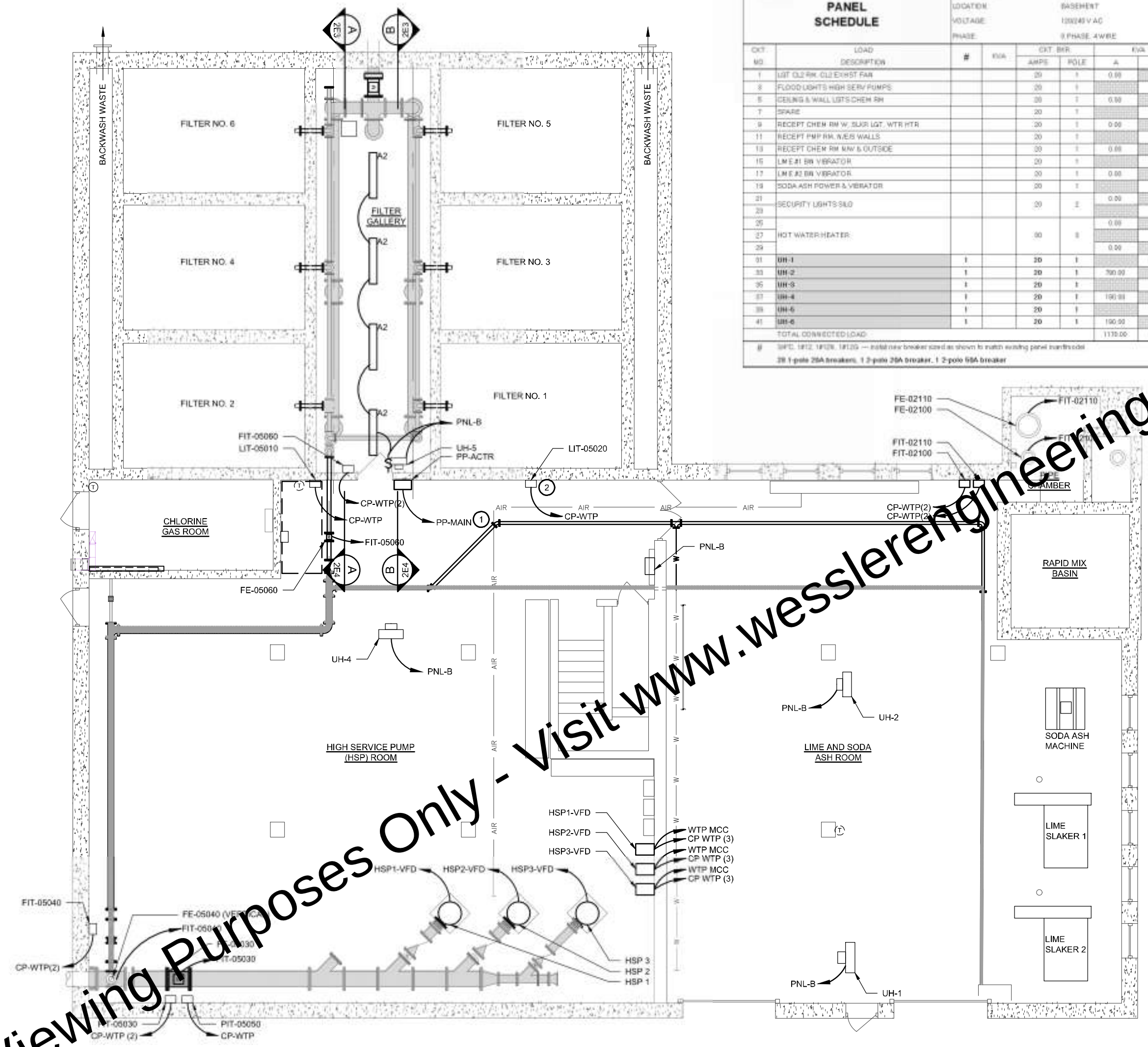
CITY OF KENTON, OHIO

WTP BUILDING - UPPER FLOOR POWER PLAN

SHEET NO.
2E2

PAGE NO.
22

Drawing: X:\Kenton_OH\709126 Kenton WTP Phase I Design\DWG\Sheets\709126-WTP-EL.dwg | Layout: 2E2 | Plotted: 04/02/26 @ 11:27:54 | LastSavedBy: miken



LOWER FLOOR PLAN
SCALE: 3/16" = 1'-0"

PANEL SCHEDULE

DESIGNATION	PNL B	MAINS	100 AMP MAIN CIRCUIT BREAKER
LOCATION	BASEMENT	BUS SIZE	225 AMP
VOLTAGE	120/240 V AC	PANEL MOUNTING	SURFACE
PHASE	3 PHASE, 4 WIRE	ALL BREAKERS	10000 A I.C. (MINIMUM)

CKT. NO.	LOAD DESCRIPTION	#	KVA	CKT. BKR. AMPS	CKT. BKR. POLE	KVA A	KVA B	CKT. BKR. AMPS	CKT. BKR. POLE	KVA	#	LOAD DESCRIPTION	CKT. NO.
1	LGT CL2 RM, CL2 EXHST FAN			20	1	0.00		20	1			LGTS PUMP RM & FILTER GALLERY	2
3	FLOOD LIGHTS HIGH SERV PUMPS			20	1		0.00	20	1			LGTS CHEM RM (SOUTH ROW)	4
5	CEILING & WALL LGTS CHEM RM			20	1	0.50		20	1			SPARE	6
7	SPARE			20	1		0.00	20	1			CHLORINE ROOM	8
9	RECEPT CHEM RM W, SLKR LGT, WTR HTR			20	1	0.00		20	1			RECEPT FLTR GLRY, CL2 RM, OUTSIDE FLTR	10
11	RECEPT PMP RM, N/E/S WALLS			20	1		0.00	20	1			SPARE	12
13	RECEPT CHEM RM N/W & OUTSIDE			20	1	0.00		20	1			HEATING UNITS CHEM FEED & PMP RM	14
15	LIME #1 BIN VIBRATOR			20	1		0.00	20	1			BENCH GRINDER	16
17	LIME #2 BIN VIBRATOR			20	1	0.00		20	1			AIR COMPRESSORS	18
19	SODA ASH POWER & VIBRATOR			20	1		0.00	20	1			AIR COMPRESSORS	20
21	SECURITY LIGHTS SILO			20	2	0.00		50	3			AIR COMPRESSORS 3PH [illegible]	22
23							0.00						24
25	HOT WATER HEATER			30	3	0.00							26
27							0.00	50	2			[illegible]ELDER	28
29						0.00							30
31	UH-1	1		20	1		630.00	20	1			B-1	32
33	UH-2	1		20	1	700.00		20	1			B-2	34
35	UH-3	1		20	1		156.00		1			SPACE	36
37	UH-4	1		20	1	190.00		100	3			MAIN CB	38
39	UH-5	1		20	1		84.00						40
41	UH-6	1		20	1	190.00							42
	TOTAL CONNECTED LOAD					1170.00	870.00	TOTAL =		20[illegible]00 KVA			

\# 3#FC, 1#12, 1#12N, 1#12G — install new breaker sized as shown to match existing panel manf/model
28 1-pole 20A breakers, 1 2-pole 20A breaker, 1 2-pole 50A breaker

GENERAL NOTES:

1. DEMO EXISTING LIGHTS IN FILTER GALLERY AND REPLACE WITH NEW LIGHTS AS SHOWN. LIGHTS SHALL REMAIN ON EXISTING CIRCUIT. THIS CIRCUIT IS BELIEVED TO BE CIRCUIT 2 IN EXISTING PNL B. REPLACE EXISTING WIRE WITH #12 AS REQUIRED FOR COMPLETE INSTALL. LIGHTS SHALL BE SURFACE MOUNTED, WET LOCATION RATED, LED LIGHT FIXTGURE, 120-277V 64W, FROSTED POLYCARBONATE LENS, MEDIUM DISTRIBUTION. 6000 LUMENS OR GREATER 4000K COLOR TEMPERATORE. HOLOPHANE EVT4 SERIES OR EQUAL.

KEYED NOTES ○

1 REFERENCE SITE PLAN SHEET 2Y1 FOR EXISTING POWER PANEL PP-MAIN LOCATION IN GENERATOR BUILDING.
2 EXISTING CLEARWELL TRANSMITTER TO BE REMOVED. NEW TRANSMITTER TO BE INSTALLED IN ITS PLACE.
3 INSTALL NEW 20A-1P CIRCUIT BREAKERS AS SHOWN TO SUPPLY NEW UH LOADS. BREAKERS SHOULD MATCH MANUFACTURER AND MODEL OF PANEL.

SCALE VERIFICATION	DRAWN BY	CMG	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
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	APPROVED BY	WCM				
	ISSUE DATE	APRIL 2026				
	PROJECT NUMBER	709126-04-001				

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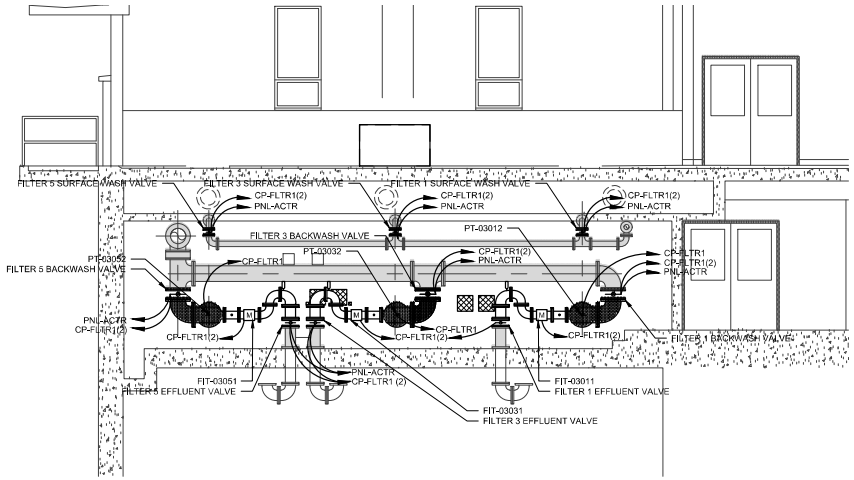
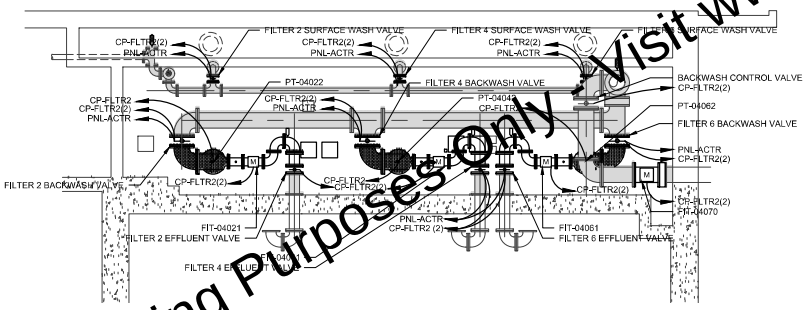
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS
CITY OF KENTON, OHIO
WTP BUILDING - LOWER LEVEL POWER PLAN

SHEET NO. **2E3**

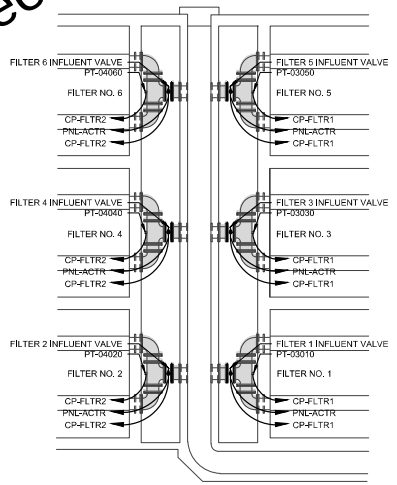
Drawing: X:\Kenton_OH\709126 Kenton WTP Phase I Design\DWG\Sheets\709126-WTP-EL.dwg | Layout: 2E3 | Plotted: 04/02/26 @ 11:27:58 | LastSavedBy: miken



SECTION B
SCALE: 1/4" = 1'-0"
2E3



SECTION A
SCALE: 1/4" = 1'-0"
2E3



PARTIAL FILTER GALLERY POWER PLAN AT ELEV 968.00
SCALE: 3/16" = 1'-0"

SCALE VERIFICATION	DRAWN BY	CMG	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
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	APPROVED BY	WCM					
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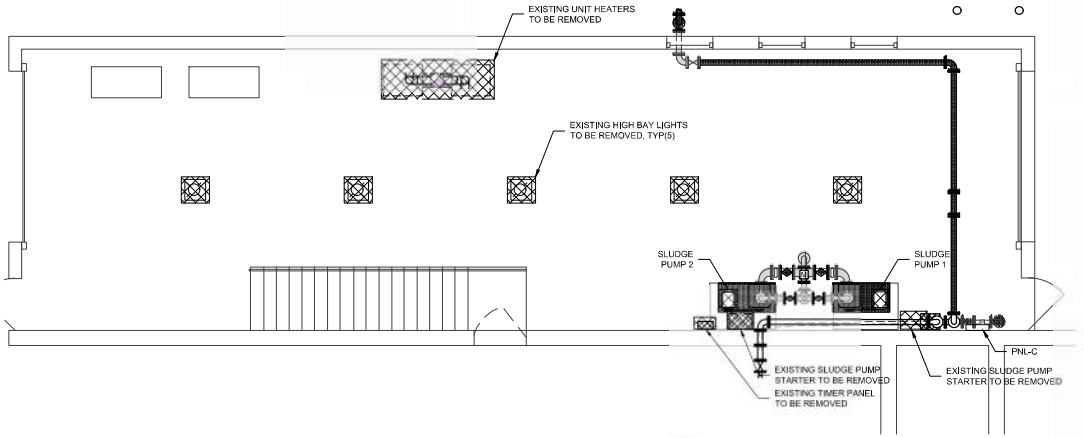
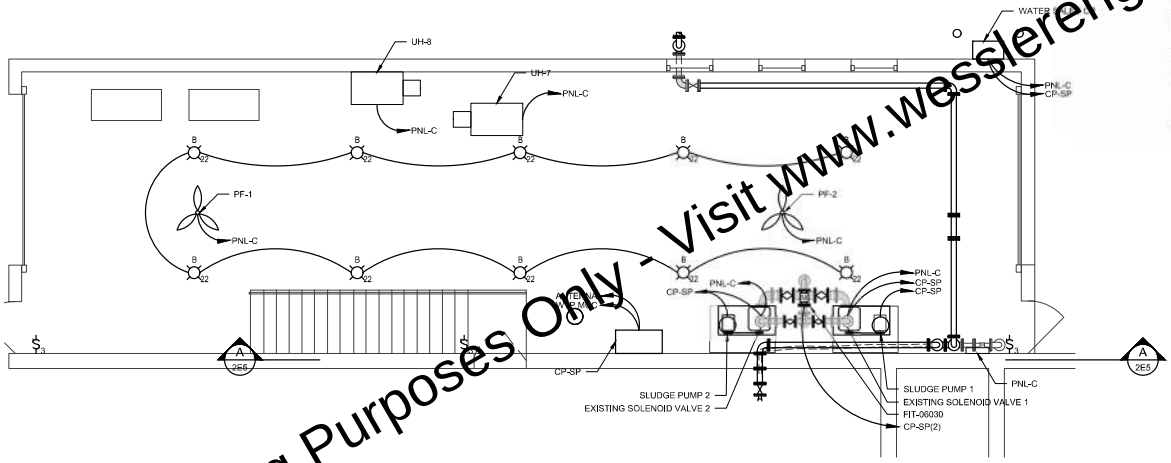
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS
CITY OF KENTON, OHIO

FILTER GALLERY - POWER PLAN AND SECTIONS

SHEET NO. **2E4**
PAGE NO. 24



ELECTRICAL DEMOLITION PLAN VIEW
SCALE: 1/4" = 1'-0"



ELECTRICAL IMPROVEMENT PLAN VIEW
SCALE: 1/4" = 1'-0"

PANEL SCHEDULE

CKT NO	LOAD DESCRIPTION	#	KVA	CKT BKR AMPS	CKT BKR POLE	KVA A	KVA B	CKT BKR AMPS	CKT BKR POLE	KVA	#	LOAD DESCRIPTION	CKT NO
1	UNKNOWN?			20	1	0.00		20	1			UNKNOWN?	2
3	UNKNOWN?			20	1		0.00	20	1			UNKNOWN?	4
5	UNKNOWN?			20	1	0.00		20	1			UNKNOWN?	6
7	EAST WALL RECEPT/CAMERAS			20	1		0.00	30	1			SPARE	8
9	UNKNOWN?			20	1	0.00							10
11	UNKNOWN?			20	1		0.00	20	1			[redacted]	12
13	SPACE				1	0.00			1			SPACE	14
15	SPACE				1		0.00		1			SPACE	16
17	SPACE				1	0.00			1			SPACE	18
19	SPACE				1		0.00		1			SPACE	20
21	SPACE				1	0.00			1			SPACE	22
23	SPACE				1		0.00		1			SPACE	24
25						0.00			-			N/A	26
27	MAIN CB			100	3				-			N/A	28
29						0.00			-			N/A	30
	TOTAL CONNECTED LOAD:							TOTAL =		0.00	KVA		

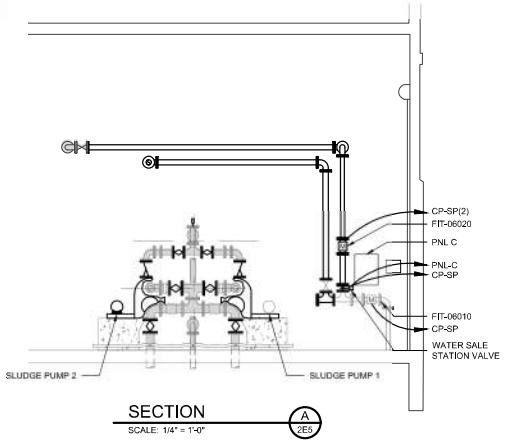
ONE (1) OR TWO (2) DIGIT NUMBERS REFER TO CONDUIT & WIRE SCHEDULE
10 1-pole 20A breakers, 1 1-pole 30A breaker

SCHEDULE

120/240 V AC, 3 PHASE, 4 WIRE — PANEL MOUNTING: SURFACE — ALL BREAKERS: 10000 A.I.C. (MINIMUM)

CKT NO	LOAD DESCRIPTION	#	KVA	CKT BKR AMPS	CKT BKR POLE	KVA A	KVA B	CKT BKR AMPS	CKT BKR POLE	KVA	#	LOAD DESCRIPTION	CKT NO
1	UNKNOWN?			20	1	0.00		20	1			UNKNOWN?	2
3	UNKNOWN?			20	1		0.00	20	1			UNKNOWN?	4
5	UNKNOWN?			20	1	0.00		20	1			UNKNOWN?	6
7	EAST WALL RECEPT/CAMERAS			20	1		0.00	30	1			SPARE	8
9	UNKNOWN?			20	1	0.00							10
11	UNKNOWN?			20	1		0.00	20	1		3	WATER SALES CP	12
13			300.00			1800.00		30	1	1680.00	2	UH-7	14
15	WATER SALE SOLENOID	3	300.00	30	3		1080.00	30	1	1680.00	2	UH-8	16
17			300.00			960.00		20	1	360.00	1	PF-1	18
19			600.00				960.00	20	1	360.00	1	PF-2	20
21	SLUDGE SOLENOID 1&2	5	600.00	30	3	1440.00		30	1	856.00	1	LIGHTING	22
23			600.00				600.00		1			SPACE	24
25						0.00			-			N/A	26
27	MAIN CB			100	3		0.00		-			N/A	28
29						0.00			-			N/A	30
	TOTAL CONNECTED LOAD:					4190.00	0640.00	TOTAL =		7676.00	KVA		

#1 – 3/4"C, 1#12, 1#12N, 1#12G - INSTALL NEW 20A CIRCUIT BREAKERS TO MATCH MAIN MODEL OF PANEL
#2 – 3/4"C, 1#10, 1#10N, 1#10G - INSTALL NEW 30A CIRCUIT BREAKERS TO MATCH MAIN MODEL OF PANEL
#3 – 3/4"C, 3#10, 1#10G - INSTALL NEW 30A CIRCUIT BREAKERS TO MATCH MAIN MODEL OF PANEL



SECTION
SCALE: 1/4" = 1'-0"
A 2E5

GENERAL NOTES:

1. REMOVE EXISTING LIGHTS IN GARAGE AND REPLACE WITH NEW LIGHTS AS SHOWN. FIXTURE SHALL BE HOLPHANE PXLW SERIES LED LOW-BAY FIXTURE, RATED AT 10,000 LUMENS, WITH 4K COLOR TEMPERATURE. DESIGNED FOR INDOOR INDUSTRIAL APPLICATIONS. FIXTURE SHALL FEATURE A HIGH-EFFICIENCY LED LIGHT ENGINE WITH LONG LIFE PERFORMANCE AND UNIVERSAL MOUNTING PROVISION. FIXTURE SHALL OPERATE ON 120-277V VAC AND INCLUDE INTEGRAL LED DRIVER. PROVIDE FIXTURE COMPLETE WITH ALL REQUIRED MOUNTING HARDWARE AND ACCESSORIES FOR COMPLETE INSTALLATION.

KEYED NOTES ⓧ

1. REUSE EXISTING CONDUIT FROM WTP-MCC TO EXISTING SLUDGE STARTER AND AND REWORK AS NECESSARY INSIDE THE GARAGE AREA TO SUPPLY THE NEW CP-SP.

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	PROJECT NUMBER	709126-04-001					

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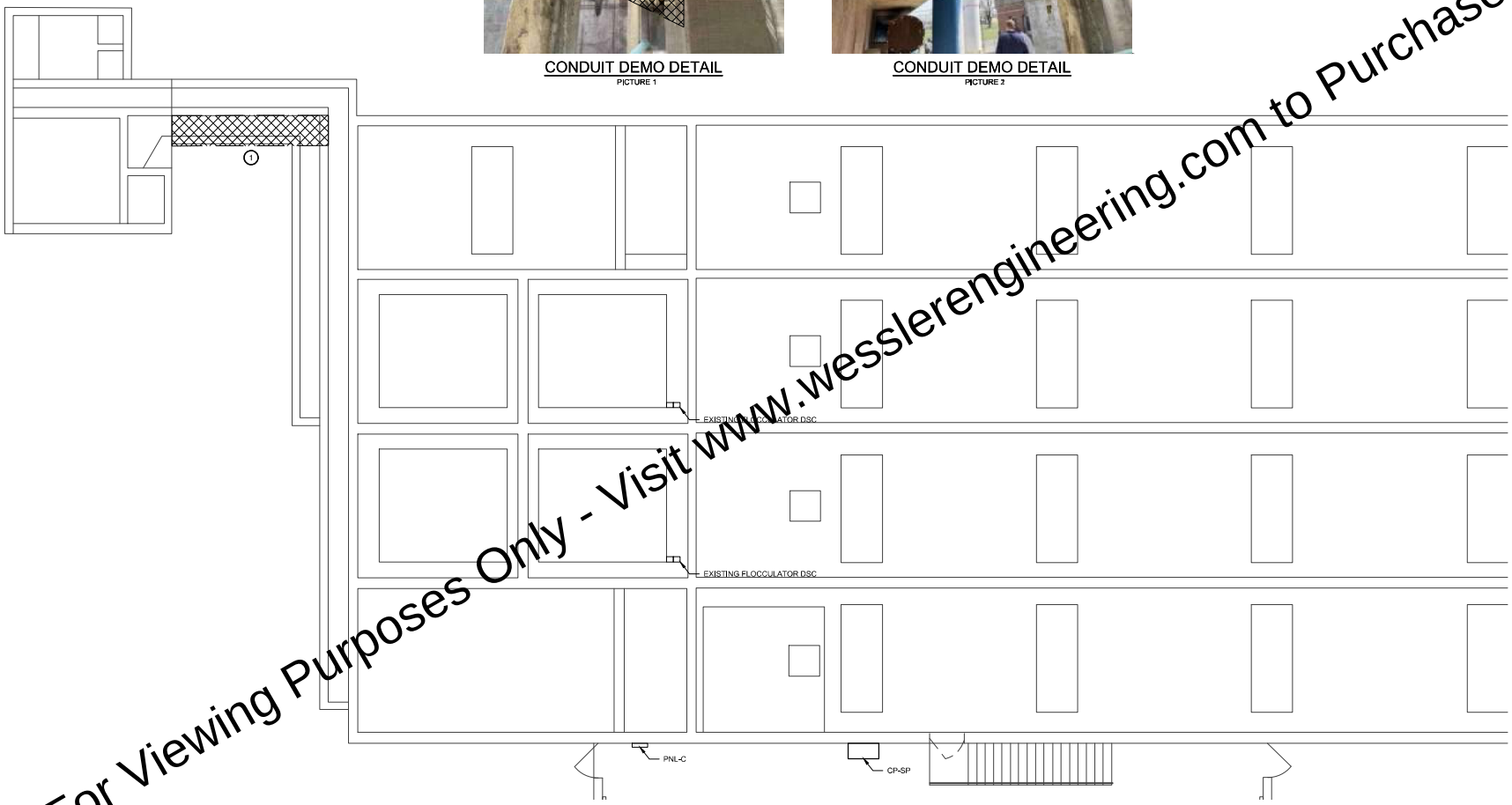
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS
CITY OF KENTON, OHIO

GARAGE ELECTRICAL DEMOLITION & IMPROVEMENT PLAN VIEW

SHEET NO. **2E5**
PAGE NO. 25

CONDUIT DEMO DETAIL
PICTURE 1

CONDUIT DEMO DETAIL
PICTURE 2



PLAN VIEW
SCALE: 3/16" = 1'-0"

KEYED NOTES (X)

1. REPLACE EXISTING CONDUIT AND WIRE MOUNTED ON THE UNDERSIDE OF WALKWAY BETWEEN WTP BUILDING AND BASIN. LOCATE AND VERIFY EXISTING LOADS FOR EACH CONDUIT AND REPLACE WIRE FROM SOURCE TO LOAD. INSTALL NEW ALUMINUM CONDUIT AND ANY NECESSARY MOUNTING HARDWARE OR ACCESSORIES FOR A COMPLETE INSTALLATION. COORDINATE WITH ENGINEER AS REQUIRED. SEE DETAIL PICTURES OF CONDUITS.

   THE FOLLOWING IS A LIST OF POTENTIAL LOADS THAT HAVE THE HIGHEST PROBABILITY TO BE ASSOCIATED WITH THE EXISTING CONDUITS TO AID IN THE VERIFICATION PROCESS. WOULD ASSUME USING 2"C ALUMINUM FOR THE REPLACEMENT WITH WIRE CALLED OUT BELOW. ALL OF THESE ARE ASSUMED TO COME FROM EXISTING MCC-WTP TO LOADS AT LOCATIONS INDICATED BELOW:

   - EXISTING FLOCCULATORS (4) ON BASIN - 3#8, #8G
   - EXISTING PNL C IN GARAGE - 3#1, #4G
   - NEW CP-SP (REFEED) IN GARAGE - 3#8, #8G
   - DRAG LINE SLUDGE COLLECTOR - 3#8, #8G

   CONFIRM ACTUAL WIRE SIZES AND REPLACE IN KIND UPON FIELD VERIFICATION. ABOVE ARE MEANT TO BE CONSERVATIVE ESTIMATES.

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WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

FLOCCULATION, REACTION & SETTLING BASIN IMPROVEMENTS

SHEET NO. **2E6**

PAGE NO. 26

GENERAL NOTES:

1. PROVIDE 3/4"C, 2/C#16TPS BETWEEN NEW FLOW METER AND EXISTING TELEMETRY PANEL.

LEGEND

FEATURES TO BE REMOVED AND REPLACED

FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					
	APPROVED BY	AMS					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

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WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

EXISTING WELL 2 IMPROVEMENTS

SHEET NO. **3C1**

PAGE NO. 27

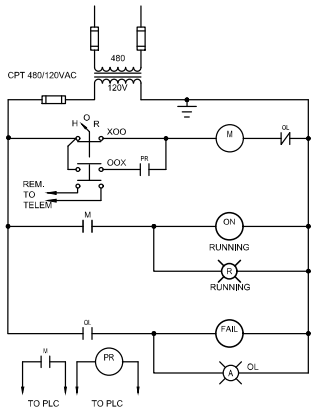
GENERAL NOTES:

1. PROVIDE 3/4"C, 2/C#16TPS BETWEEN NEW FLOW METER AND NEW TELEMETRY PANEL.
2. PROVIDE 3/4"C, 2#23, #12G BETWEEN EXISTING LIGHTING PANEL AND NEW TELEMETRY PANEL. USE EXISTING SPARE OR INSTALL NEW BREAKER IN SPACE. BREAKER SHOULD MATCH MANF AND MODEL OF EXISTING CIRCUIT BREAKERS IN THE PANEL.
3. PROVIDE NEW NEMA 12 SIZE 1 COMBINATION MOTOR STARTER TO SUPPLY PUMP. PROVIDE 3#12, #12G FOR POWER WIRING FROM EXISTING DISCONNECT TO NEW STARTER.
4. PROVIDE 6#14, #14G FOR SIGNALS TO NEW TELEMETRY PANEL BASED ON WIRING SCHEMATIC SHOWN BELOW.
5. REPLACE EXISTING TWO CIRCUIT PANEL WITH NEW NEMA 1 RATED 6-8 CIRCUIT PANEL AND PROVIDE 3-20A, 10kA RATED CIRCUIT BREAKERS TO REFEED EXISTING CIRCUITS AND NEW TELEMETRY PANEL AS SHOWN.

LEGEND

FEATURES TO BE REMOVED AND REPLACED

FEATURES TO BE DEMOLISHED



STARTER SCHEMATIC WIRING DIAGRAM

SCALE: NONE

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					CITY OF KENTON, OHIO
	APPROVED BY	AMS					EXISTING WELL 4 IMPROVEMENTS
	ISSUE DATE	APRIL 2026					SHEET NO. 3C2
	PROJECT NUMBER	709126-04-001					PAGE NO. 28

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GENERAL NOTES:

1. PROVIDE 3/4"C, 2/C#16TPS BETWEEN NEW FLOW METER AND EXISTING TELEMETRY PANEL.

LEGEND

FEATURES TO BE REMOVED AND REPLACED

FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					
	APPROVED BY	AMS					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

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WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

EXISTING WELL 5 IMPROVEMENTS

SHEET NO. **3C3**

PAGE NO. 29

GENERAL NOTES:

1. PROVIDE 3/4"C, 2/C#16TPS BETWEEN NEW FLOW METER AND EXISTING TELEMETRY PANEL.

LEGEND

FEATURES TO BE REMOVED AND REPLACED

FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					
	APPROVED BY	AMS					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

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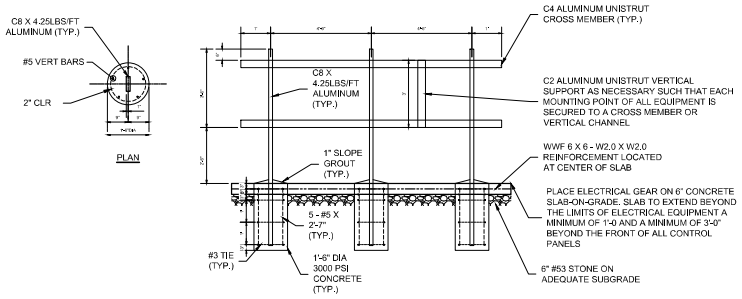
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

EXISTING WELL 6 IMPROVEMENTS

SHEET NO. **3C4**

PAGE NO. 30



NOTES:
1. ALL HARDWARE ANCHORS, BOLTS, WASHERS AND ALL OTHER HARDWARE TO BE STAINLESS STEEL, 1/2" DIA.
2. WHERE ALUMINUM COMES IN CONTACT WITH CONCRETE, COAT WITH BITUMINOUS.
3. DETAILS ARE TYPICAL OF ALL FOUNDATIONS
4. MOUNT ELECTRICAL GEAR TO CROSS MEMBER USING STAINLESS STEEL HARDWARE.
5. FOR SMALLER EQUIPMENT, USE TWO POSTS WITH SAME DIMENSIONING AS SHOWN ABOVE BUT WITH 4'-6" LESS WIDTH (TOTAL WIDTH OF CROSS MEMBERS WILL BE 6'-6")

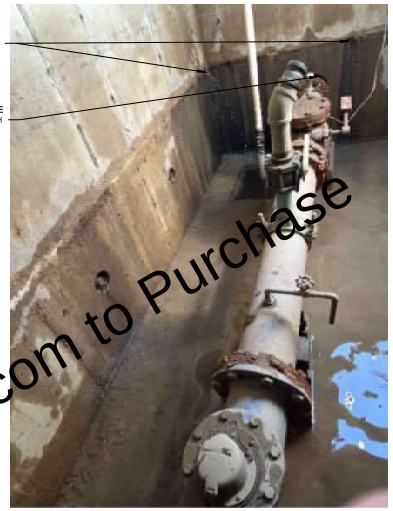
TYPICAL ELECTRICAL RACK

NONE

CRACK INJECTION ON ALL ACTIVE LEAKAGE JOINTS AND VISIBLE INFILTRATION PATHS, TO ACHIEVE A WATERTIGHT SEAL

CLEAN AND PREPARE BOTH EXISTING PIPE PENETRATION. FILL ANNULAR SPACE WITH NON-SHRINK GROUT

REMOVE EXISTING FLOW METER. INSTALL NEW 6" PROPELLER METER



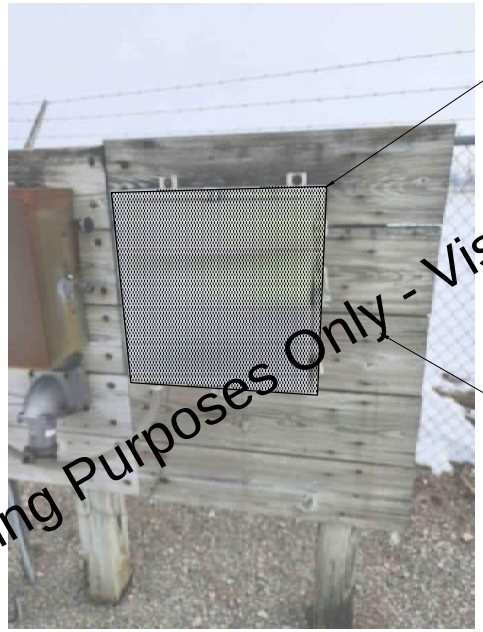
GENERAL NOTES:

1. PROVIDE 3/4"C. 2/C#16TPS BETWEEN NEW FLOW METER AND EXISTING TELEMETRY PANEL.

LEGEND

FEATURES TO BE REMOVED AND REPLACED

FEATURES TO BE DEMOLISHED



REUSE EXISTING TELEMETRY ENCLOSURE. CAREFULLY REMOVE EXISTING BACK PANEL AND REPLACE WITH NEW BACK PANEL.

REPLACE EXISTING WOOD ELECTRIVCAL RACK WITH NEW ALUMINUM ELECTRICAL RACK, SEE DETAIL AT TOP LEFT

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	PROJECT NUMBER	709126-04-001					

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WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

EXISTING WELL 7 IMPROVEMENTS

SHEET NO. **3C5**

PAGE NO. 31

REMOVE EXISTING FLOW METER. INSTALL NEW 6" PROPELLER METER

GENERAL NOTES:

1. PROVIDE 3/4"C, 2/C#16TPS BETWEEN NEW FLOW METER AND EXISTING TELEMETRY PANEL.

LEGEND

FEATURES TO BE REMOVED AND REPLACED

FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					
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WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

EXISTING WELL 8 IMPROVEMENTS

SHEET NO. **3C6**

PAGE NO. 32

METER PIT

REMOVE EXISTING FLOW METER. INSTALL NEW 6" PROPELLER METER

GENERAL NOTES:

1. PROVIDE 3/4"C, 2/C#16TPS BETWEEN NEW FLOW METER AND EXISTING TELEMETRY PANEL.

LEGEND

FEATURES TO BE REMOVED AND REPLACED

FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	TMG					CITY OF KENTON, OHIO
	APPROVED BY	AMS					EXISTING WELL 9 IMPROVEMENTS
	ISSUE DATE	APRIL 2026					SHEET NO. 3C7
	PROJECT NUMBER	709126-04-001					PAGE NO. 33

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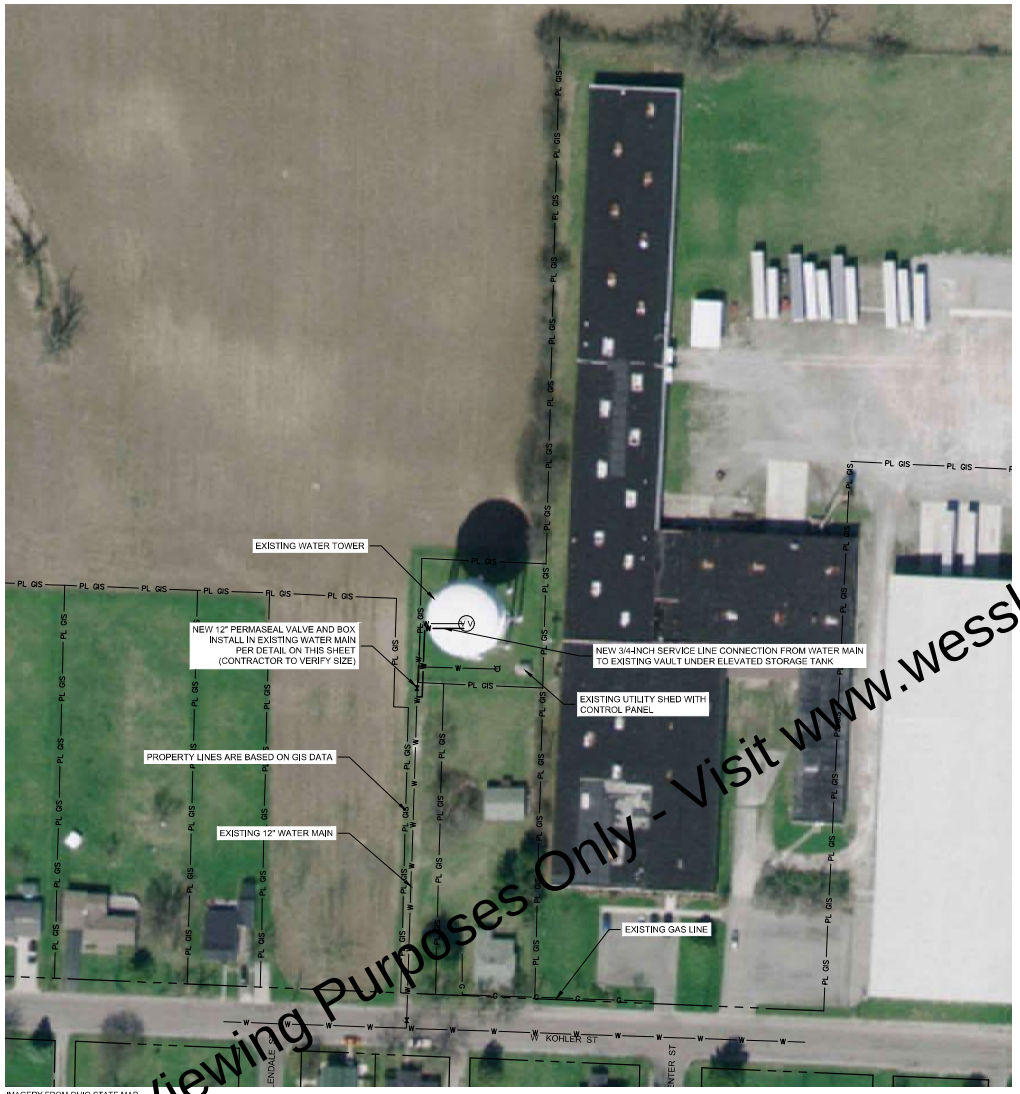


IMAGERY FROM OHIO STATE MAP

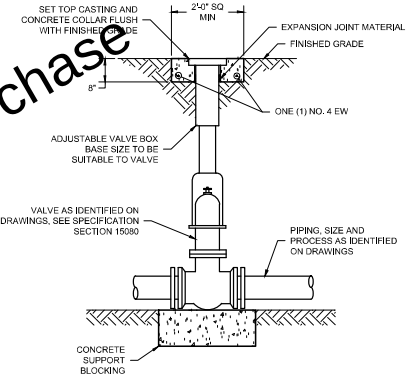
WATER TOWER SITE PLAN

0 25 50 100 FT
1" = 50'

UTILITY SHED

GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, UTILITY LOCATIONS, AND WATER MAIN SIZE.
2. CONTRACTOR TO PULL NEW 2/C#16 TPS CABLE IN EXISTING CONDUIT BETWEEN NEW PRESSURE TRANSMITTER INSTALLED IN VALVE VAULT AND CONTROL BUILDING. INSTALL NEW NEMA 4X SST JUNCTION BOXES IN MANHOLE AS REQUIRED FOR CABLE CONNECTIONS.



NOTES:
1. APPLIES TO PLUG, GATE AND BUTTERFLY VALVES.

VALVE AND BOX

SCALE: NONE

VALVE VAULT

LEGEND

FEATURES TO BE REMOVED AND REPLACED

FEATURES TO BE DEMOLISHED

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
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WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

ELEVATED WATER TOWER - SITE PLAN AND IMPROVEMENTS

SHEET NO. **4Y1**

PAGE NO. 34

SEVERE DETERIORATION ON TOP 2'-0" OF THESE WALLS; LIKELY NEEDS SPALL REPAIR

CRACK INJECTION ON VERTICAL FACE

CRACK INJECTION ON VERTICAL FACE; LIKELY ALSO REQUIRES SPALL REPAIR

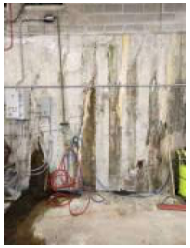
POSSIBLE SPALL REPAIR OF PREVIOUSLY PATCHED AREAS AND SEVERELY CRACKED AREAS ALONG THE WEST WALL

SPALL REPAIR AT TOP OF WALL; CRACK INJECTION ON VERTICAL SURFACE

CONCRETE REPAIR AND REHABILITATION NOTES:

1. THE PHOTOS ON THIS SHEET ARE REPRESENTATIVE OF THE REQUIRED REPAIRS. THEY ARE NOT INTENDED TO BE A COMPREHENSIVE INVENTORY OF ALL REQUIRED REPAIR.
2. HYDROPHILIC CRACK INJECTION IS RECOMMENDED IN MOST LOCATIONS. THERE ARE A FEW LOCATIONS WHERE EPOXY INJECTION MAY BE MORE APPROPRIATE BASED ON EXPERTISE AND EXPERIENCE OF CONCRETE REPAIR AND REHABILITATION CONTRACTOR.
3. CHECK INTEGRITY OF CONCRETE ON PREVIOUS PATCHED AREAS AND OTHER SEVERELY CRACKED AREAS.
4. CONCRETE REPAIR QUANTITY ESTIMATES

SPALL REPAIR - VERTICAL	50 SF (INTAKE)	
	330 SF (WEST WALL)	
	10 SF (NORTHWEST CORNER)	
SPALL REPAIR - HORIZONTAL	20 SF (INTAKE)	
	10 SF (LIME MIXING)	
	20 SF (TOP OF EAST WALL; TWO LOCATIONS)	
	30 SF (UNDER CHANNEL OVERHEAD REPAIR)	
	550 SF	TOTAL + CONTINGENCY
CRACK INJECTION	100 LF (INTAKE WALLS)	
	150 LF (WEST WALL)	
	50 LF (NORTH WALL)	
	150 LF (SOUTH WALL AND CHANNEL)	
	200 LF (EAST WALL; SHARED WITH MAINTENANCE GARAGE)	
	750 LF	TOTAL + CONTINGENCY

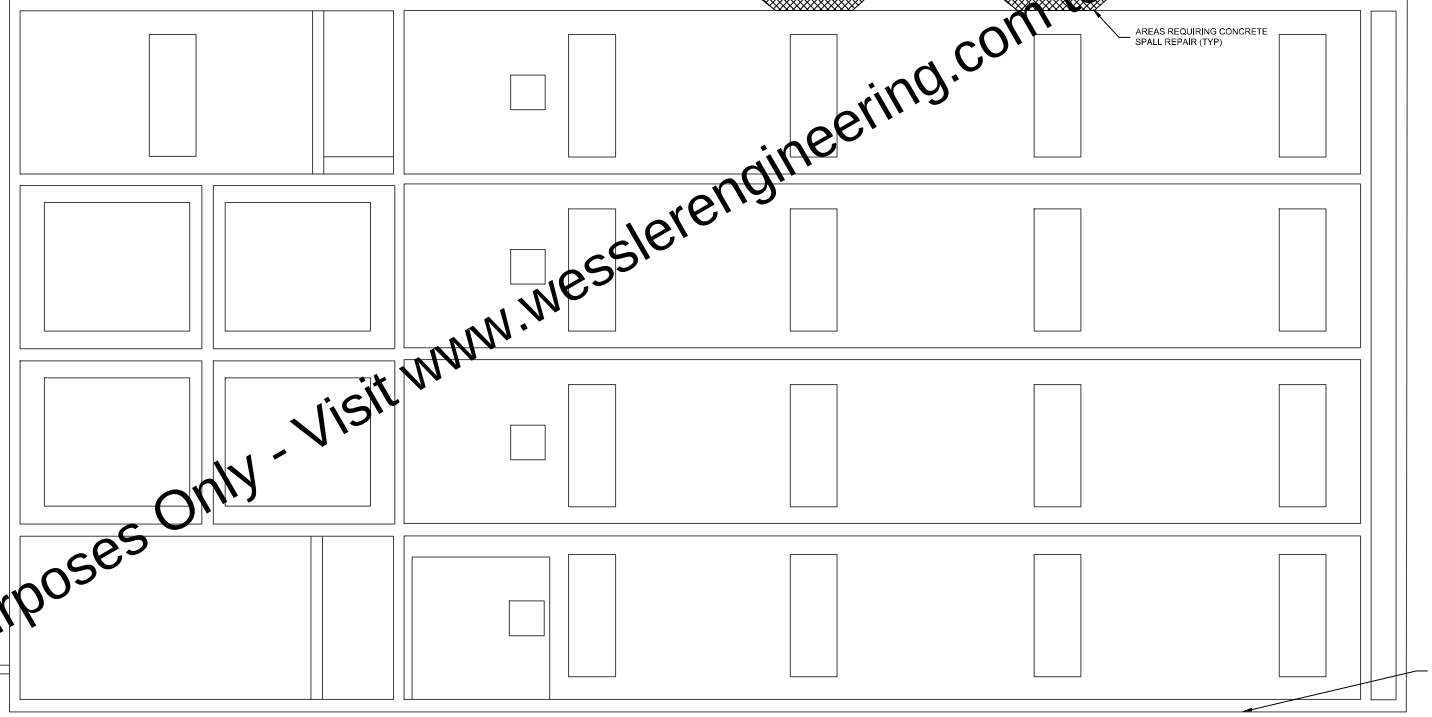


CRACK INJECTION REQUIRED ON VERTICAL FACE (MANY PLACES ALONG THE SHARED WALL WITH MAINTENANCE GARAGE)

CRACK INJECTION ON VERTICAL FACE

CRACK INJECTION ON HORIZONTAL FACE (BOTTOM OF CHANNEL); OVERHEAD SPALL REPAIR REQUIRED IN SOME AREAS

AREAS REQUIRING CONCRETE SPALL REPAIR (TYP)



PLAN VIEW
3/16" = 1'-0"

SCALE VERIFICATION	DRAWN BY	MLN	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	JW					
	APPROVED BY	JCB					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — JAKOB C. BRUHL E-89802 — PROFESSIONAL ENGINEER — 04/01/2026

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WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

CONCRETE REPAIR AND REHABILITATION PLAN

SHEET NO. **5S1**

PAGE NO. 35

LIGHTING

SURFACE/PENDANT MOUNTED LIGHT FIXTURE LETTER DENOTES TYPE, # DENOTED CIRCUIT, SHADING DENOTES EMERGENCY AND/OR NIGHT LIGHT

SURFACE/PENDANT MOUNTED LIGHT FIXTURE LETTER DENOTES TYPE, # DENOTES CIRCUIT, SHADING DENOTES EMERGENCY AND/OR NIGHT LIGHT

RECESS MOUNTED LIGHT FIXTURE LETTER DENOTES TYPE, # DENOTED CIRCUIT, SHADING DENOTES EMERGENCY AND/OR NIGHT LIGHT

RECESS MOUNTED LIGHT FIXTURE LETTER DENOTES TYPE, # DENOTES CIRCUIT, SHADING DENOTES EMERGENCY AND/OR NIGHT LIGHT

H.I.D. OR INCANDESCENT FIXTURE CEILING MOUNTED LETTER DENOTES TYPE, # DENOTES CIRCUIT

WALL MOUNTED FIXTURE LETTER DENOTES TYPE, # DENOTES CIRCUIT

WALL MOUNTED PHOTOCELL

CEILING MOUNTED EXIT SIGN

WALL MOUNTED EXIT SIGN

EMERGENCY LIGHT FIXTURE # DENOTES CIRCUIT

POLE MOUNTED FIXTURE

RECEPTACLE

DUPLEX RECEPTACLE
SUBSCRIPT DENOTES TYPE: UPS DENOTES UNINTERRUPTIBLE POWER SUPPLY
# DENOTES CIRCUIT

SINGLE OUTLET RECEPTACLE

SPECIAL PURPOSE OUTLET

MULTI-OUTLET RECEPTACLE SINGLE

MULTI-OUTLET RECEPTACLE DUPLEX

240 VOLT RECEPTACLE

PANELS AND BOXES

JUNCTION BOX

PULL BOX

PANEL

HVAC AND FIRE ALARM

FIRE ALARM PULL STATION

FIRE ALARM CONTROL PANEL

ANNUNCIATOR

HORN/LIGHT DEVICE

DUCT DETECTOR

SMOKE DETECTOR SUBSCRIPT DENOTES TYPE:
Z DENOTES IONIZATION
P DENOTES PHOTOELECTRIC
T DENOTES THERMAL

THERMOSTAT

AMBIENT TEMPERATURE TRANSMITTER

UNIT HEATER

WALL MOUNTED GAS DETECTION FIXTURE

SWITCHES

WALL SWITCH
SUBSCRIPT DENOTES TYPE:
NO SUBSCRIPT DENOTES SINGLE POLE
3 DENOTES 3 WAY
4 DENOTES 4 WAY
M DENOTES MANUAL MOTOR STARTER

MOTOR STARTER

COMBINATION MOTOR STARTER

DISCONNECT SWITCH

FUSED DISCONNECT SWITCH

LS DOOR LIMIT SWITCH

LOCAL CONTROL STATION

SPEED SWITCH

WIRING

CONDUIT HOME RUN

CONDUIT EXPOSED

CONDUIT CONCEALED

FLEXIBLE CONDUIT

SCHEMATICS

3-POSITION SELECTOR SWITCH
HAND - OFF - AUTO

PUSHBUTTON SWITCH N.O.
TEXT DENOTES LEGEND PLATE

PUSHBUTTON SWITCH N.C. TEXT DENOTES LEGEND PLATE

MUSHROOM HEAD EMERGENCY STOP PUSHBUTTON SWITCH N.C. MAINTAINED TEXT DENOTES LEGEND PLATE

PUSHBUTTON SWITCH N.C. WITH LOCK-OUT TEXT DENOTES LEGEND PLATE

DISCONNECT SWITCH N.O.

DISCONNECT SWITCH N.C.

TEMPERATURE SWITCH OR THERMOSTAT N.O. TEXT DENOTES TAG NUMBER

TEMPERATURE SWITCH OR THERMOSTAT N.C. TEXT DENOTES TAG NUMBER

PRESSURE SWITCH N.O. TEXT DENOTES TAG NUMBER

PRESSURE SWITCH N.C. TEXT DENOTES TAG NUMBER

LEVEL SWITCH N.O.
TEXT DENOTES TAG NUMBER

LEVEL SWITCH N.C. TEXT DENOTES TAG NUMBER

ON DELAY TIMED SWITCH N.O.T.C. TEXT DENOTES TAG NUMBER

ON DELAY TIMED SWITCH N.C.T.O. TEXT DENOTES TAG NUMBER

OFF DELAY TIMED SWITCH N.O.T.O. TEXT DENOTES TAG NUMBER

OFF DELAY TIMED SWITCH N.C.T.C. TEXT DENOTES TAG NUMBER

TORQUE SWITCH
TEXT DENOTES TAG NUMBER

LIMIT SWITCH
TEXT DENOTES TAG NUMBER

CONTACT (NORMALLY OPEN) # DENOTES COIL NUMBER

CONTACT (NORMALLY CLOSED) # DENOTES COIL NUMBER

INDICATOR LIGHT - LETTER DENOTES COLOR

PUSH-TO-TEST INDICATOR LIGHT LETTER DENOTES COLOR

ETM ELAPSED TIME METER

SV SOLENOID VALVE

MECHANICAL INTERLOCK CONNECTION

COIL
M DENOTES MOTOR STARTER
CR DENOTES CONTROL RELAY
TR DENOTES TIME DELAY RELAY
LC DENOTES LIGHTING CONTACTOR
PR DENOTES INTERPOSING PILOT RELAY
XXX DENOTES REFERENCE LINE NUMBER

SINGLE LINE

EXISTING TO REMAIN

EXISTING TO BE DEMOLISHED

NEW

FUTURE

TX-STRUCTURE DESIGNATION
XXX kVA
480-120/208V
3P/4W
TYPE OF TRANSFORMER

PROTECTIVE RELAY, NUMBER DENOTES IEEE DEVICE FUNCTION

1200A 52 MEDIUM VOLTAGE DRAWOUT CIRCUIT BREAKER

100 A FUSE

XXA DRAWOUT POWER CIRCUIT BREAKER

XXA MOLDED CASE CIRCUIT BREAKER

THERMAL OVERLOAD RELAY

GROUND

600:5A (3) CURRENT TRANSFORMER NUMBER DENOTES QUANTITY

480-120V (3) POTENTIAL TRANSFORMER NUMBER DENOTES QUANTITY

DRAW-OUT ELEMENT

800 A 3Ø 3W ATS AUTOMATIC OR MANUAL TRANSFER SWITCH

XX MOTOR NUMBER DENOTES HORSEPOWER

XXkW 480V,3Ø,4W GENERATOR XX NUMBER DENOTES REQUIRED kW RATING AND VOLTAGE

EQUIPMENT/DEVICE LOCATION SYMBOLS

LOCATED AT MCC, COMBINATION STARTER, OR BYPASS STARTER

LOCATED IN FIELD

LOCATED AT DCU 1A REMOTE I/O RACK

LOCATED AT VFD

MISC PLAN VIEW SYMBOLS

EQUIPMENT CONNECTION

GROUND ROD

INSTRUMENT TRANSMITTER

COMMUNICATIONS

TELEPHONE OR NETWORK DROP

ETHERNET JACK

SINGLE LINE, CONT'D.

X% LINE REACTOR
X% NUMBER DENOTES PERCENT IMPEDANCE

CAPACITOR

VOLTMETER AND SWITCH

ST SHUNT TRIP

TVSS SURGE PROTECTION DEVICE

LIGHTNING ARRESTOR

K KIRK-KEY INTERLOCK

MPU-# MINI POWER UNIT

VFD VARIABLE FREQUENCY DRIVE

SITE DUCTBANKS

UGC UNDERGROUND CONTROL

UGE UNDERGROUND ELECTRICAL

UGF UNDERGROUND FIBER

ABBREVIATIONS

A	AMPERE(S)	MAN	MANUFACTURER SUPPLIED (EX. MAN-CP)
ACU	AIR CONDITIONING UNIT	MAU	MAKEUP AIR UNIT
AE	ANALYTICAL SENSOR	MCC	MOTOR CONTROL CENTER
AF	AMP FRAME	MH	MANHOLE
AFF	ABOVE FINISHED FLOOR	MOL	MOTOR OPERATED LOUVER
AHU	AIR HANDLING UNIT	MPU	MINI POWER UNIT
AIT	ANALYTICAL INDICATOR TRANSMITTER	MV	MEDIUM VOLTAGE
AM	AMMETER	N	NEUTRAL
AMP	AMPERE(S)	N/A	NOT APPLICABLE
AT	AMP TRIP	N.C.	NORMALLY CLOSED
ATL	ACROSS THE LINE (STARTER)	NEC	NATIONAL ELECTRICAL CODE
ATS	AUTOMATIC TRANSFER SWITCH	NET	NETWORK (PANEL)
AUX	AUXILIARY	NF	NON-FUSED
AWG	AMERICAN WIRE GAUGE	NFSS	NON-FUSED SAFETY SWITCH
BKR	BREAKER	N.O.	NORMALLY OPEN
BLDG	BUILDING	NTS	NOT TO SCALE
C	CONDUIT	OL	OVERLOAD
CB	CIRCUIT BREAKER	PB	PUSHBUTTON
CKT	CIRCUIT	PLC	PROGRAMMABLE LOGIC CONTROLLER
CMS	COMBINATION MOTOR STARTER	PM	POWER METER/MONITOR
CP	CONTROL PANEL	PNL	PANEL
CR	CORROSION RESISTANT	PP	POWER PANEL
CU	COPPER	RCPT	RECEPTACLE
DF	DUCT FAN	RGS	RIGID GALVANIZED STEEL
DH	DUCT HEATER	RIO	REMOTE INPUT/OUTPUT
DISC	DISCONNECT	R/S	RING SWITCH
EF	EXHAUST FAN	RVSS	REDUCED VOLTAGE SOFT STARTER
ELEV	ELEVATION	RVAT	REDUCED VOLTAGE AUTOTRANSFORMER
EMH	ELECTRICAL MANHOLE	SF	SUPPLY FAN
EMT	ELECTRICAL METALLIC TUBING	SHLD	SHIELDED
EQUIP	EQUIPMENT	SOL	SOLENOID
EXP	EXPLOSION PROOF	SP	SINGLE POLE
F	FUSED OR FUSE	SPD	SURGE PROTECTIVE DEVICE
FE	FLOW SENSOR	SST	STAINLESS STEEL
FIT	FLOW INDICATING TRANSMITTER	STR	STARTER
FLA	FULL LOAD AMPS	SW	SWITCH
FOPP	FIBER OPTIC PATCH PANEL	SWBD	SWITCHBOARD
FV(N)R	FULL VOLTAGE (NON) REVERSING	SWGR	SWITCHGEAR
G	GROUND	TB	TERMINAL BOX
GEN	GENERATOR	TPS	TWISTED PAIR SHIELDED
GF	GROUND FAULT	TYP	TYPICAL
GF(C)I	GROUND FAULT (CIRCUIT) INTERRUPTER	UGE	UNDERGROUND ELECTRICAL
HH-(P/C)	HANDHOLE (POWER/CONTROLS)	UGT	UNDERGROUND TELEPHONE
HOA	HAND-OFF-AUTOMATIC	UGCC	UNDERGROUND CONTROLS CABLE
HOR	HAND-OFF-REMOTE	UGF	UNDERGROUND FIBER
HP	HORSEPOWER	UH	UNIT HEATER
JB	JUNCTION BOX	UL	UNDERWRITERS LABORATORIES
KV	KILOVOLTS	UNO	UNLESS NOTED OTHERWISE
KVA	KILOVOLTS AMPS	V	VOLTS
KVAR	KILOVAR	VFD	VARIABLE FREQUENCY DRIVE
KW	KILOWATTS	VM	VOLTMETER
LCP	LOCAL CONTROL PANEL	VS	VOLTMETER SWITCH
LCS	LOCAL CONTROL STATION	W	WIRE/WATT
LE	LEVEL SENSOR	WH	WATER HEATER
LIT	LEVEL INDICATING TRANSMITTER	WP	WEATHERPROOF
LOR	LOCAL-OFF-REMOTE	XFMR	TRANSFORMER
LP	LIGHTING PANEL		
LTG	LIGHTING		
LV	LOW VOLTAGE		

GENERAL NOTES:

1. PROVIDE SPARES AND SPARE EQUIPMENT AS OUTLINED IN SPECIFICATIONS.
2. CONDUIT AND WIRE BETWEEN DEVICES (SUCH AS VERTICAL TURBINE PUMP MOTOR THERMOSTATS OR DISCONNECT AUX. CONTACTS) AND POWER EQUIPMENT (SUCH AS VFDS AND MOTOR STARTERS) WHERE NOT EXPLICITLY SHOWN SHALL BE #14. CONDUIT SIZE TO FOLLOW THE REQUIREMENTS SET FORTH IN THE NEC, 3/4"C MINIMUM EXPOSED, 1"C MINIMUM BURIED.
3. CONTRACTOR RESPONSIBLE FOR INFORMING THE ENGINEER DURING CONSTRUCTION OF ANY CONDITIONS ON SITE WHICH MAY PREVENT ANY ASPECT OF THE INSTALLATION FROM MEETING THE REQUIREMENTS SET FORTH IN THE NEC. SPECIAL CARE SHALL BE TAKEN WITH REGARDS TO CONDUIT FILL, CLEARANCE, JUNCTION/PULL BOX, AND CIRCUIT DISCONNECTING MEANS REQUIREMENTS.
4. ALL CONTROL PANELS AND LOCAL STATIONS NOT EXPLICITLY INDICATED TO HAVE A DISCONNECT SWITCH MOUNTED ADJACENT TO THE PANEL SHALL HAVE A MAIN CIRCUIT BREAKER WITH THRU PANEL OPERATOR WHICH SHALL BE LOCKABLE AND INTERLOCKED WITH THE PANEL DOOR AS NEEDED TO MEET THE REQUIREMENTS OF THE NEC.
5. CONTRACTOR RESPONSIBLE FOR ALL CONDUIT AND WIRE BETWEEN MECHANICAL EQUIPMENT (INCLUDING BUT NOT LIMITED TO UNIT HEATERS, EXHAUST FANS AND AIR CONDITIONING UNITS) AND CONTROLLERS (INCLUDING BUT NOT LIMITED TO MOTOR STARTERS, THERMOSTATS AND MOTOR OPERATED LOUVERS). FOR BID PURPOSES THIS IS TO BE 1"C, 4#14, #14G BETWEEN EACH PIECE OF EQUIPMENT AND CONTROLLER.
6. MANUFACTURER EQUIPMENT SHOWN FOR BIDDING PURPOSES ONLY. FINAL WIRING LIST TO BE PROVIDED BY EQUIPMENT SUPPLIER IN SHOP DRAWING SUBMITTAL. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL WIRING AND CONDUIT BETWEEN THE MANUFACTURER'S CONTROL PANELS AND THE EQUIPMENT PROVIDED BY THE MANUFACTURER.

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	APPROVED BY	WCM					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

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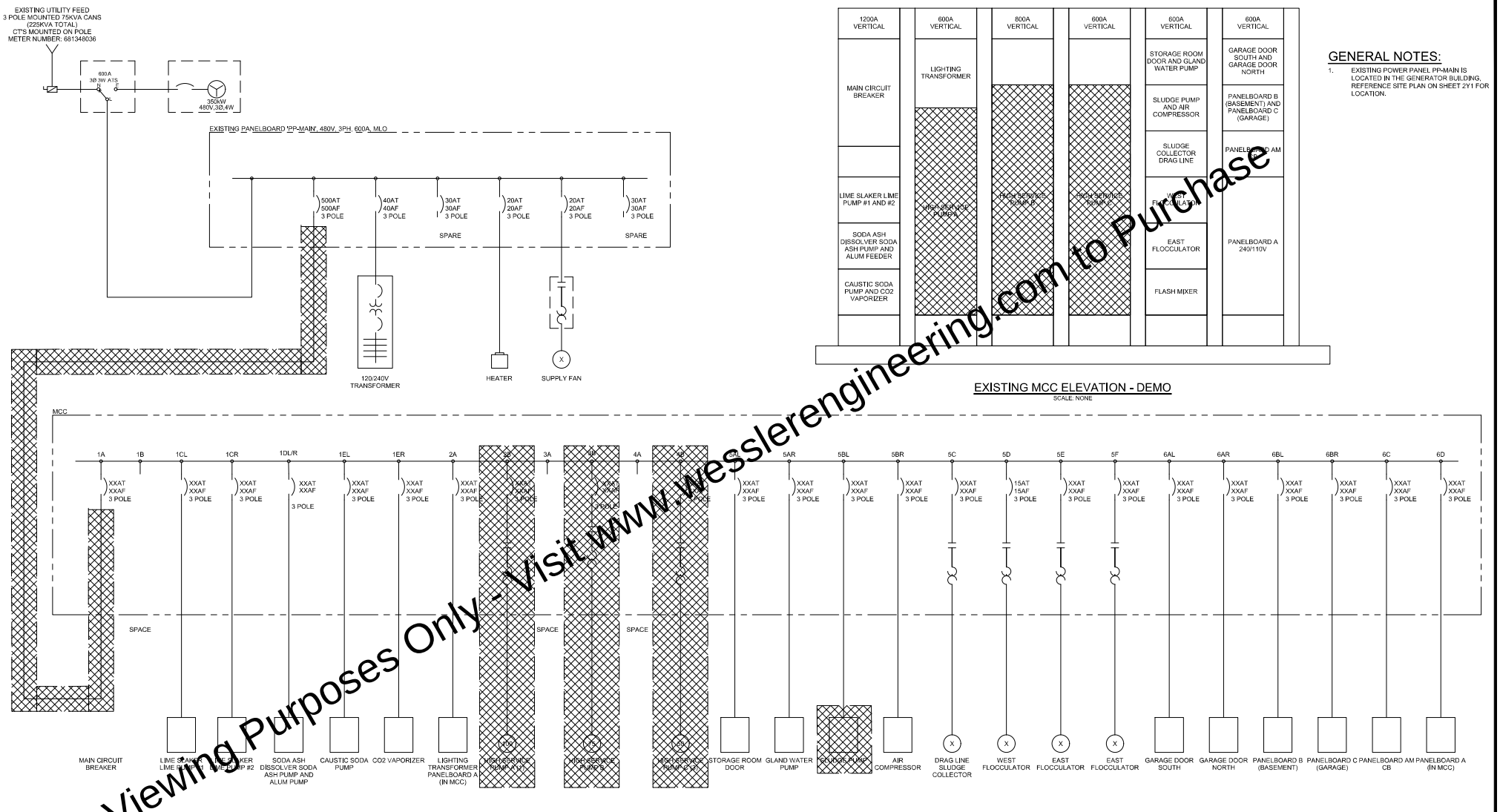
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

ELECTRICAL LEGEND

SHEET NO. 6E1

PAGE NO. 36



WTP ONE-LINE DEMO DIAGRAM
SCALE: NONE

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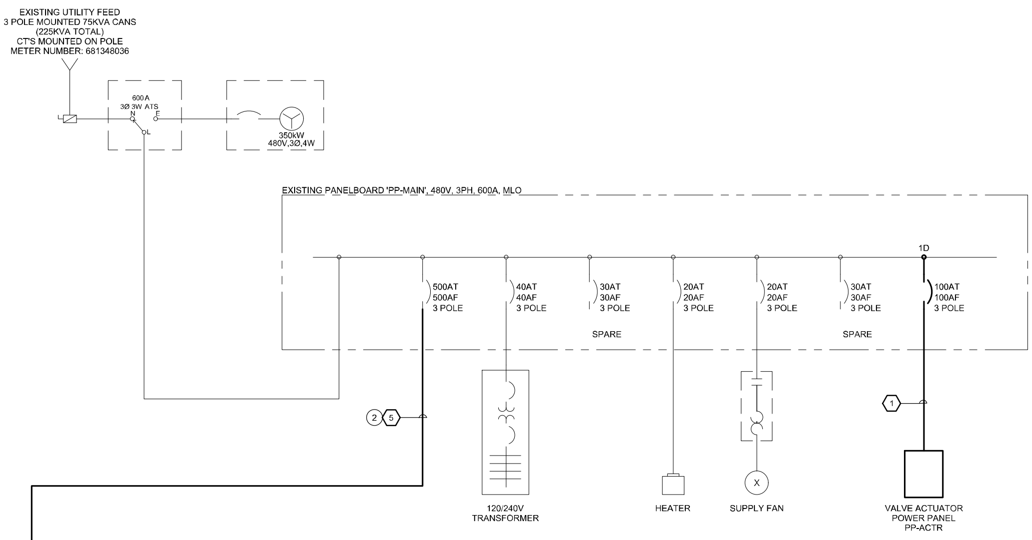
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

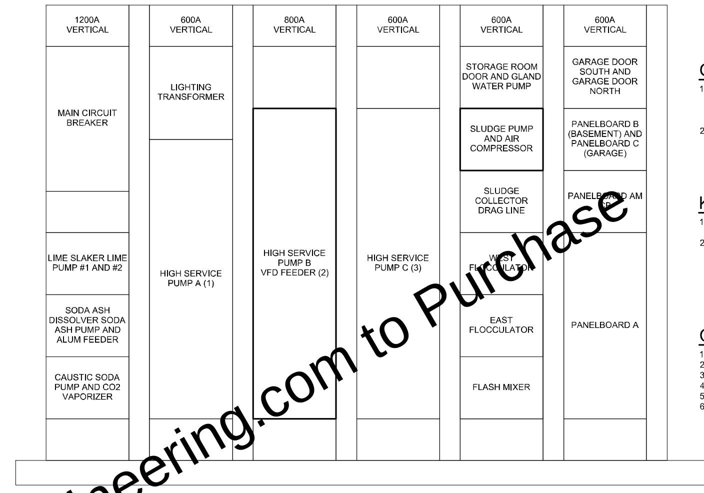
CITY OF KENTON, OHIO

DEMOLITION POWER ONE-LINE DIAGRAM

SHEET NO. **6E2**

PAGE NO. 37





EXISTING MCC ELEVATION - IMPROVEMENTS

SCALE: NONE

GENERAL NOTES:

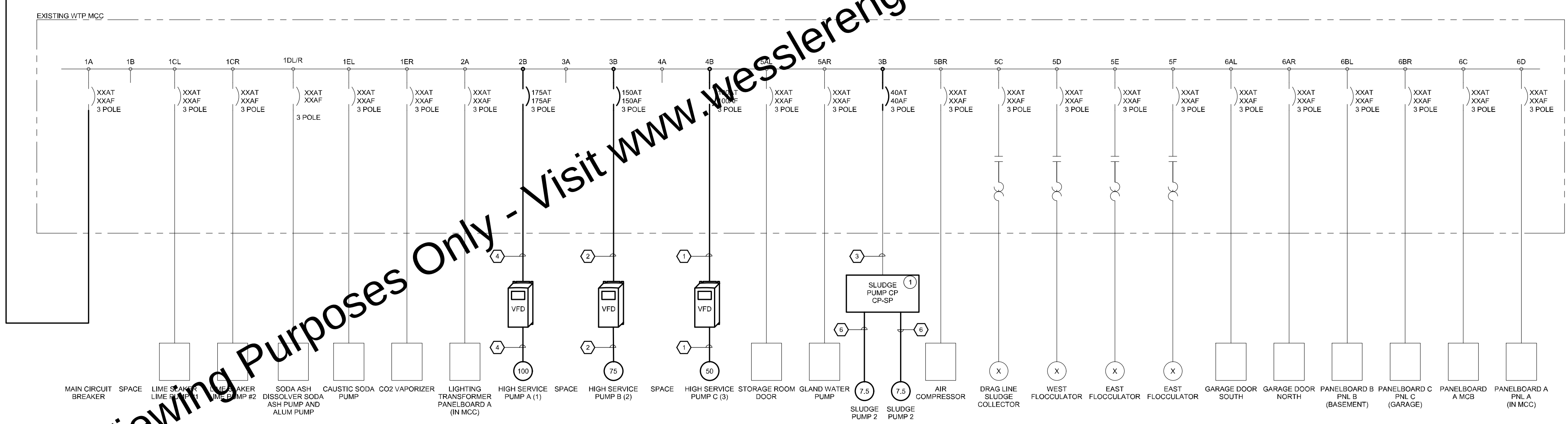
1. EXISTING POWER PANEL PP-MAIN IS LOCATED IN THE GENERATOR BUILDING, REFERENCE SITE PLAN ON SHEET 2Y1 FOR LOCATION.
2. PROVIDE NEW CIRCUIT BREAKERS IN EXISTING WTP MCC AS SHOWN. MANUFACTURER AND MODEL SHOULD COMPATIBLE WITH EXISTING MCC AND RATED FOR AT LEAST 22KAIC.

KEYED NOTES

1. REUSE EXISTING CONDUIT AND PULL NEW WIRE TO CP-SP.
2. REPLACE EXISTING CONDUIT WITH PARALLEL #250 CONDUCTORS IN ONE CONDUIT WITH TWO SEPARATE DEDICATED FEEDS TO AVOID DERATING FACTOR. COORDINATE WITH OWNER ON ACCEPTABLE DOWNTIME FOR TRANSITION. EXISTING CONDUITS MAY BE REUSED AT EC DISCRETION.

CONDUIT AND WIRE

1. 1"C, 3#2, #8G
2. 2"C, 3#3/0, #4G
3. EX C, 3#8, #8G
4. 2"C, 3#2/0, #4G
5. 2-2"C, 3#250, #1G
6. 3/4"C, 3#12, #12G



WTP ONE-LINE IMPROVEMENTS DIAGRAM

SCALE: NONE

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WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

IMPROVEMENT POWER ONE-LINE DIAGRAM

SHEET NO. 6E3

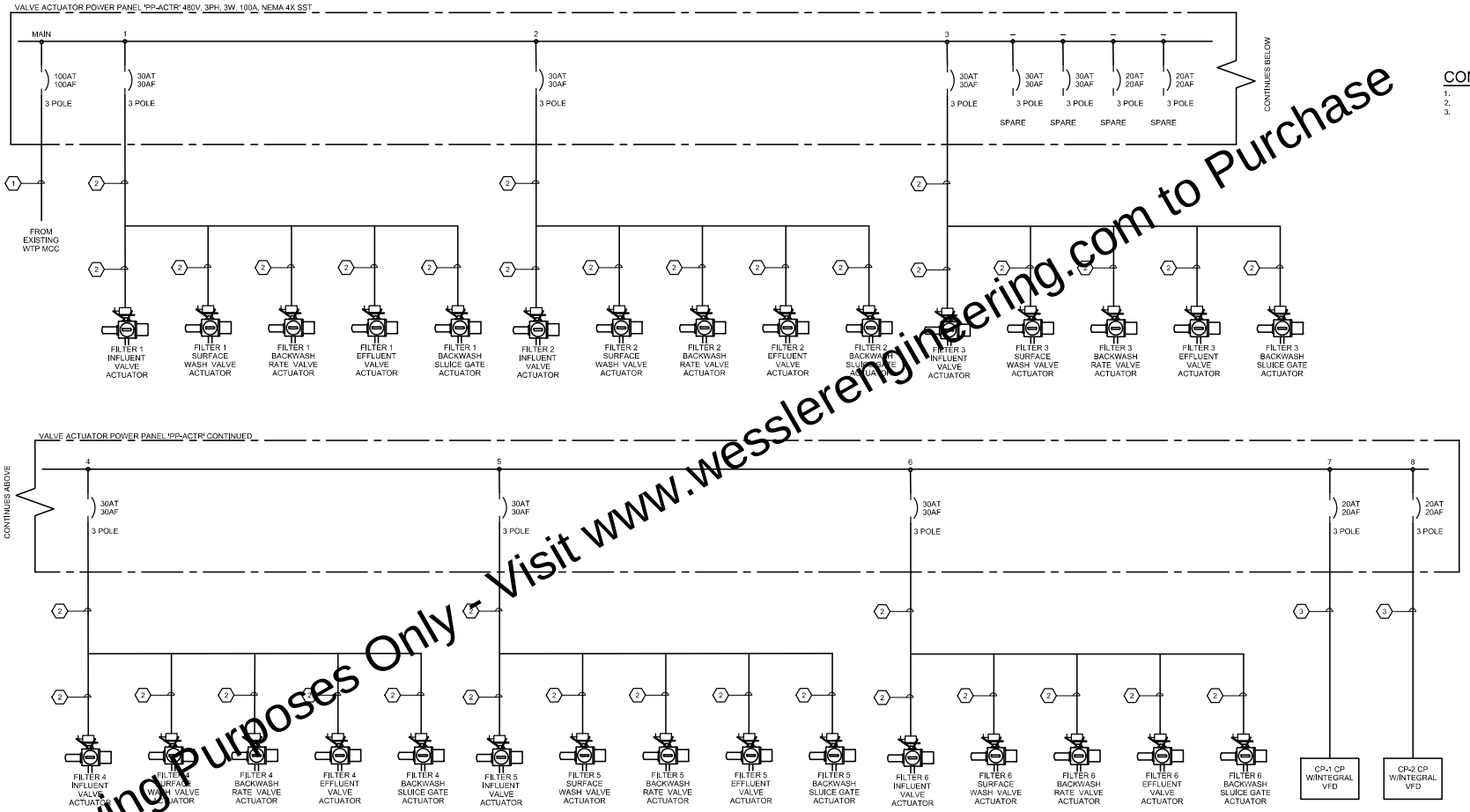
Drawing: X:\Kenton_OH\709126 Kenton WTP Phase I Design\DWG\Sheets\709126-EL-OD.dwg | Layout: 6E3 | Plotted: 04/02/26 @ 02:10:49 | LastSavedBy: mken

GENERAL NOTES:

1. GATE ACTUATORS SHALL BE DAISY CHAINED FROM LINE SIDE OF INTEGRAL DISCONNECT BETWEEN ACTUATORS OF THE SAME FILTER.

CONDUIT AND WIRE (4)

1. 1"C, 3#2, #8G
2. 3/4"C, 3#10, #10G
3. 3/4"C, 3#12, #12G



VALVE ACTUATOR POWER PANEL 'PP-ACTR' ONE LINE DIAGRAM

SCALE: NONE

SCALE VERIFICATION	DRAWN BY	CMG	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
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	APPROVED BY	WCM					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

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WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

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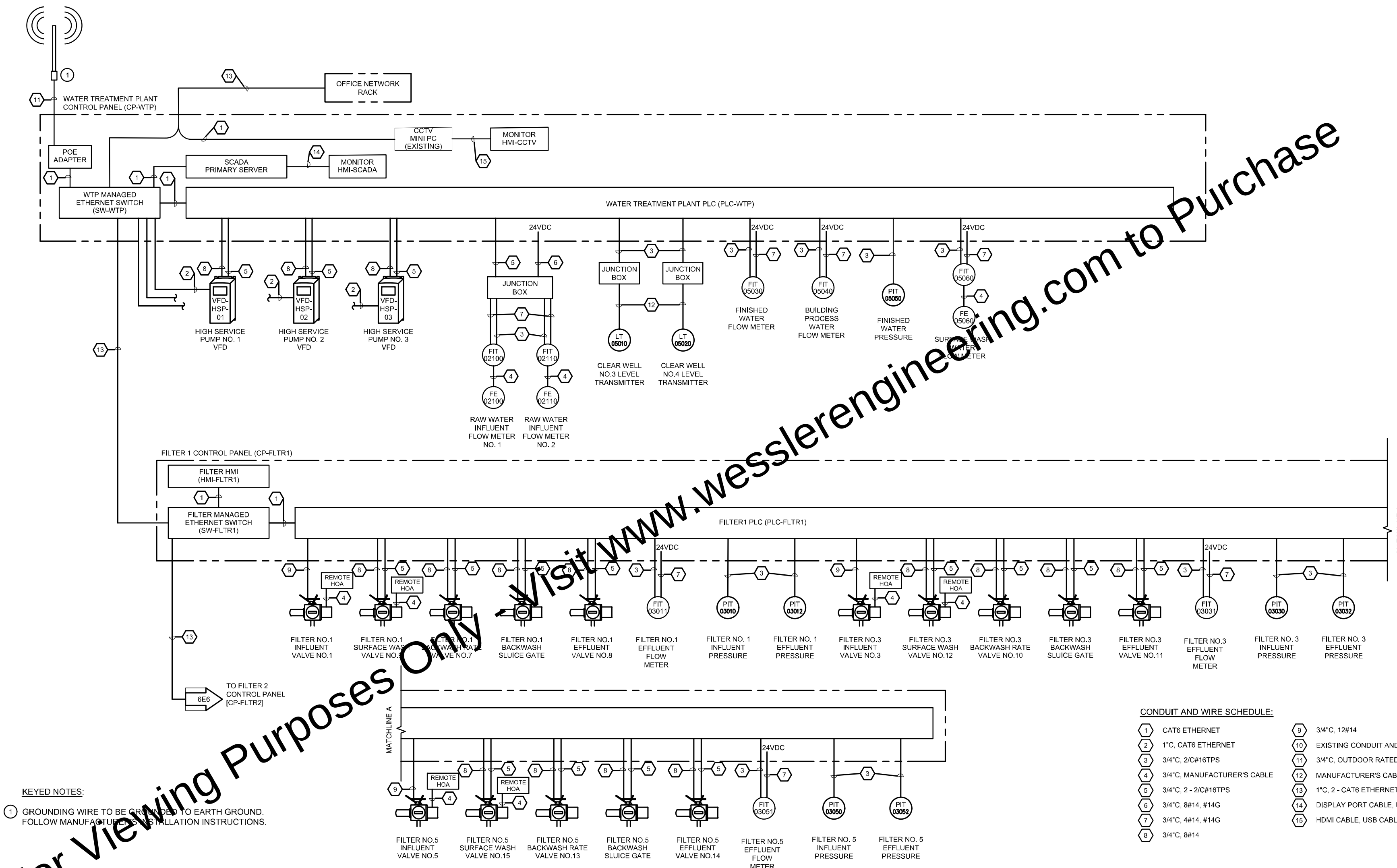
PP-ACTR ONE LINE DIAGRAM

SHEET NO. **6E4**

PAGE NO. 39



KEYED NOTES:

1. GROUNDING WIRE TO BE GROUNDED TO EARTH GROUND. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

CONDUIT AND WIRE SCHEDULE:

1. CAT6 ETHERNET
2. 1"C, CAT6 ETHERNET
3. 3/4"C, 2/C#16TPS
4. 3/4"C, MANUFACTURER'S CABLE
5. 3/4"C, 2 - 2/C#16TPS
6. 3/4"C, 8#14, #14G
7. 3/4"C, 4#14, #14G
8. 3/4"C, 8#14
9. 3/4"C, 12#14
10. EXISTING CONDUIT AND WIRE
11. 3/4"C, OUTDOOR RATED CAT6
12. MANUFACTURER'S CABLE NO CONDUIT
13. 1"C, 2 - CAT6 ETHERNET
14. DISPLAY PORT CABLE, USB CABLE, INTERNAL WIRING AS REQUIRED
15. HDMI CABLE, USB CABLE, INTERNAL WIRING AS REQUIRED

SCALE VERIFICATION	BAR IS ONE INCH LONG ON ORIGINAL DRAWING
DRAWN BY	KJM
CHECKED BY	BDP
APPROVED BY	BNH
ISSUE DATE	APRIL 2026
PROJECT NUMBER	709126-04-001

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STATE OF OHIO BAILEY HUSBAND E-91322 REGISTERED PROFESSIONAL ENGINEER 04/01/2026

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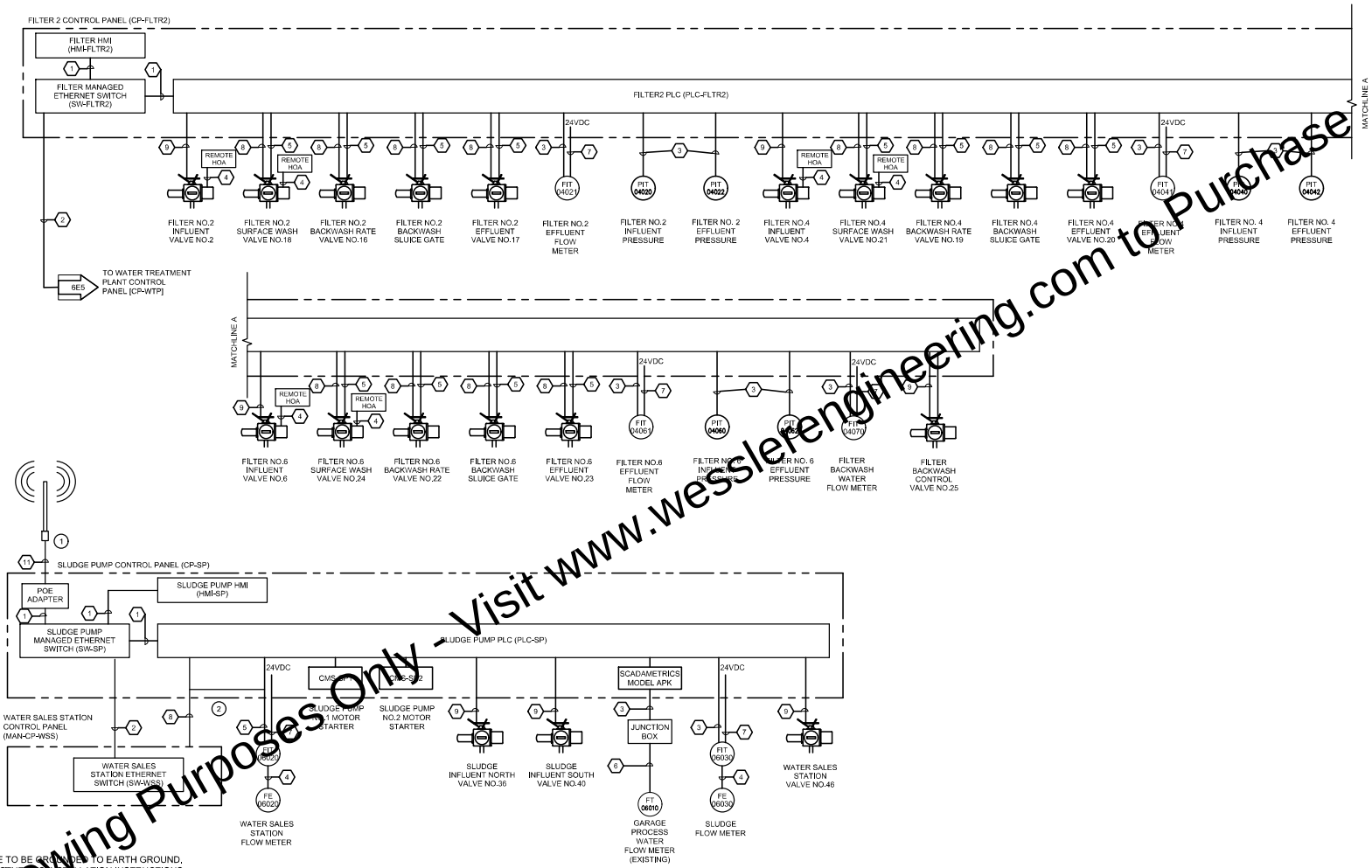
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

WTP & FILTER 1 CONTROL ONE-LINE DIAGRAM

SHEET NO. **6E5**



KEYED NOTES:

1. GROUNDING WIRE TO BE GROUNDED TO EARTH GROUND. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. FLOW METER TO HAVE ONE PULSED SIGNAL TO MAN-CP-WSS FOR WATER SALES STATION AND ONE ANALOG SIGNAL TO PLC-SP FOR SCADA TOTALIZATION

CONDUIT AND WIRE SCHEDULE:

1	CAT6 ETHERNET
2	1"C, 2 - CAT6 ETHERNET
3	3/4"C, 2/C#16TPS
4	3/4"C, MANUFACTURER'S CABLE
5	3/4"C, 2 - 2/C#16TPS
6	MANUFACTURER'S CABLE NO CONDUIT
7	3/4"C, 4#14, #14G
8	3/4"C, 8#14
9	3/4"C, 12#14
10	EXISTING CONDUIT AND WIRE
11	3/4"C, OUTDOOR RATED CAT6

SCALE VERIFICATION	DRAWN BY	KJM	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
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WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

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FILTER 2 & SLUDGE CONTROL ONE-LINE DIAGRAM

SHEET NO. **6E6**

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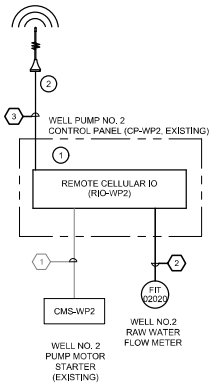

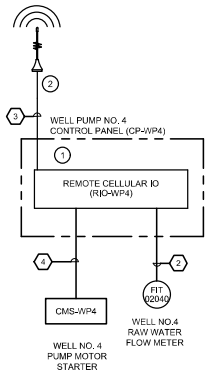

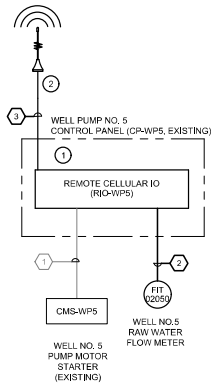

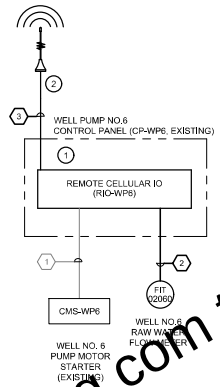

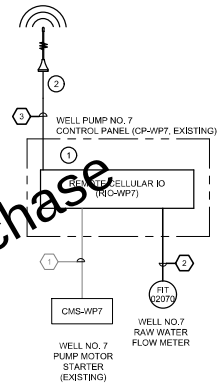

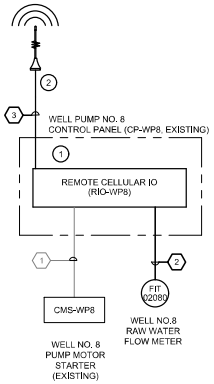

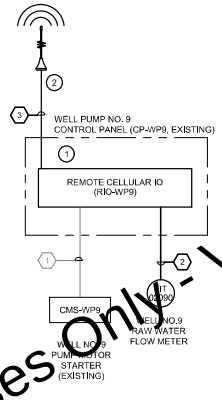

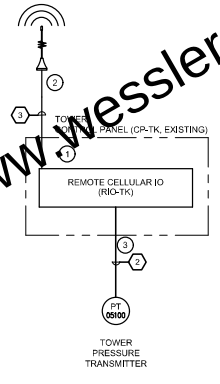

KEYED NOTES:

1. NEW BACK PANEL WITH HARDWARE PROVIDED BY OWNER
2. OMNIDIRECTIONAL ANTENNA, BRACKET, AND MANUFACTURER'S CABLE PROVIDED BY OWNER
3. REUSE EXISTING CONDUIT. PULL NEW CABLE FROM CP-TK TO NEW PRESSURE TRANSMITTER LOCATION INSIDE VAULT.

CONDUIT AND WIRE SCHEDULE:

1. EXISTING CONDUIT AND WIRE
2. 3/4"C, 2/C#16TPS
3. MANUFACTURER'S CABLE
4. 3/4"C, 6#14

SCALE VERIFICATION	DRAWN BY	KJM	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	BDP					
	APPROVED BY	BNH					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — BAILEY HUSBAND E-91322 — REGISTERED PROFESSIONAL ENGINEER — 04/01/2026

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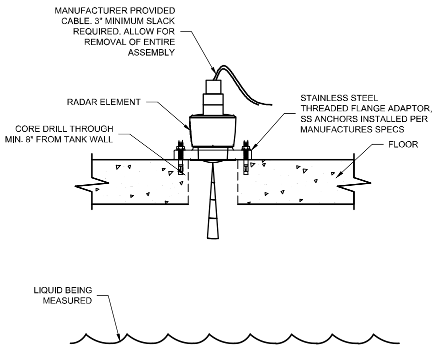
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

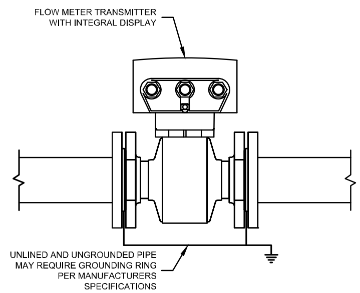
WELLS & TOWER CONTROL ONE-LINE DIAGRAM

SHEET NO. **6E7**

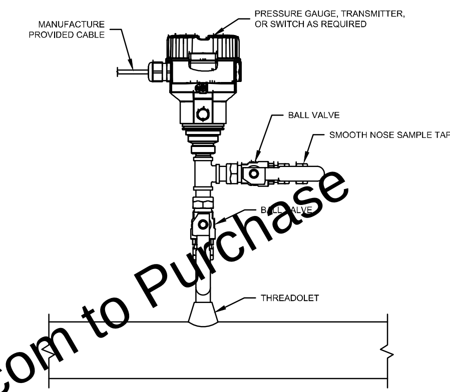
PAGE NO. 42



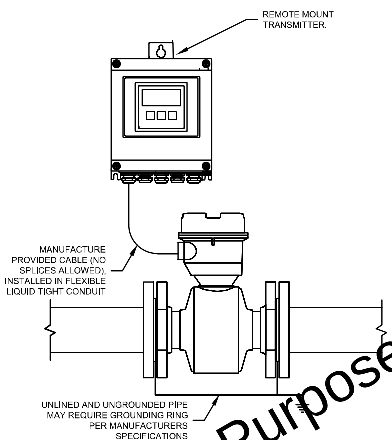
RADAR FLOOR MOUNTING
SCALE: NONE



FLOW METER MOUNTING
SCALE: NONE



PRESSURE TRANSMITTER MOUNTING
SCALE: NONE



FLOW METER MOUNTING
SCALE: NONE

SCALE VERIFICATION
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DRAWN BY	KJM
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PROJECT NUMBER	709126-04-001

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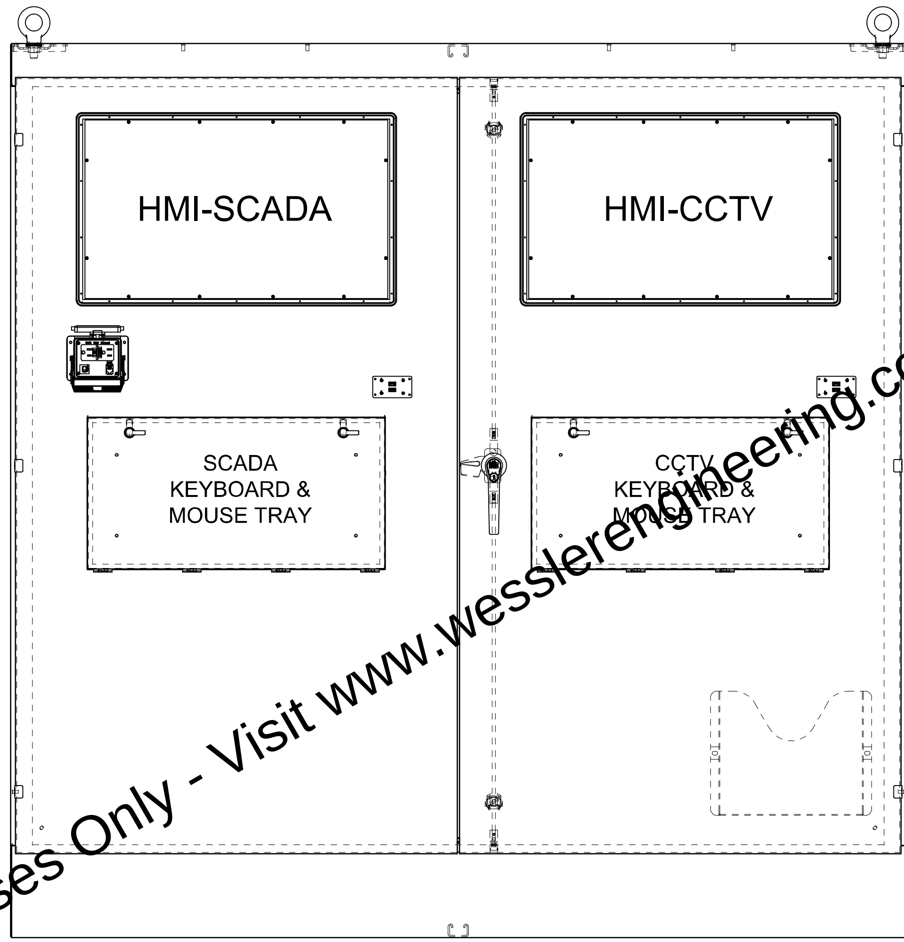
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS
CITY OF KENTON, OHIO
INSTRUMENT MOUNTING DETAILS

SHEET NO.
6E8



**PANEL LAYOUT FOR REFERENCE ONLY. FINAL LAYOUT AND ENCLOSURE SIZING SHALL BE PROVIDED TO ENGINEER FOR REVIEW

CP-WTP CONTROL PANEL LAYOUT

SCALE: NONE

SCALE VERIFICATION		
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	APPROVED BY	BNH
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STATE OF OHIO BAILEY HUSBAND E-91322 REGISTERED PROFESSIONAL ENGINEER 04/01/2026

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WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

PANEL LAYOUT

SHEET NO. **6E9**

PAGE NO. 44

VALVE SYMBOLS

- ECCENTRIC PLUG
- THREE - WAY
- BUTTERFLY
- BALL
- GLOBE
- PRESSURE RELIEF
- AIR RELEASE AND VACUUM RELIEF
- GATE
- KNIFE GATE
- CONSTANT VOLUME FLOW REGULATOR
- MUD
- BALL CHECK
- SWING CHECK
- SPLIT DISC CHECK
- REGULATED SIDE PRESSURE CONTROL
- PINCH
- DIAPHRAGM
- NEEDLE
- CALIBRATED BALANCE
- SOLENOID

GATE SYMBOLS

- SLUICE GATE
- SLIDE GATE
- FLAP GATE
- WEIR GATE
- STOP GATE
- WEIR AND STOP GATE

VALVE AND GATE POWER ACTUATOR SYMBOLS

- ELECTRIC MOTOR
- ELECTRIC MOTOR WITH POSITIONER
- HYDRAULIC WITH POSITIONER
- HYDRAULIC WITH SOLENOID
- PNEUMATIC WITH POSITIONER
- PNEUMATIC WITH SOLENOID

XX: FC = FAIL CLOSED
FIP = FAIL INTERMEDIATE POSITION
FIP = FAIL TO LAST POSITION
FO = FAIL OPEN

NOTE: XX = FAIL POSITION ON LOSS OF PRIMARY POWER (PNEUMATIC OR ELECTRICAL)

FLOW ELEMENTS SYMBOLS

- WEIR PLATE
- PARSHALL FLUME
- ROTAMETER
- PROPELLER OR TURBINE METER
- ORIFICE METER
- CLAMP ON ULTRASONIC FLOWMETER
- MAGNETIC FLOWMETER
- VENTURI OR FLOW TUBE
- AREA VELOCITY FLOWMETER

MISCELLANEOUS SYMBOLS

- HARDWIRED INTERLOCK SEE SPECIFICATION
- MICROPROCESSOR BASED INTERLOCK SEE SPECIFICATION
- BLIND FLANGE OR CLEAN OUT
- AIR GAP
- STRAINER
- FLUSHING WATER CONNECTION
- SEAL WATER CONNECTION
- EDUCTOR
- AUTOMATIC SAMPLER
- DIFFUSER
- BUBBLER LEVEL ELEMENT
- VENT
- RUPTURE DISK
- ORTHO PHOSPHATE ELEMENT
- PROBE
- ELECTRIC MOTOR
- MANUAL SAMPLE PORT
- AUTOMATIC DRAIN
- MANUAL DRIP TRAP
- DIAPHRAGM SEAL
- ANNULAR SEAL
- FLOW STRAIGHTENING VANE
- CALIBRATION CHAMBER
- DENSITY METER X: N - NUCLEAR, O - OPTICAL, U - ULTRASONIC
- SELF CONTAINED AIR SUPPLY
- PURGE SET X: W = WATER, A = AIR
- SUBMERSIBLE MIXER
- AIR COMPRESSOR
- FLOATING MIXER
- FLAME TRAP AND THERMAL SHUTOFF ASSEMBLY
- FLOATING DECANTER
- TEMPERATURE GAUGE
- PRESSURE GAUGE
- PRESSURE TRANSMITTER
- LEVEL SWITCH

LEVEL ELEMENTS SYMBOLS

- SUBMERSIBLE PRESSURE
- ULTRASONIC
- FLOAT
- NON-CONTACT RADAR
- CAPACITANCE FLOAT STICK

PUMP AND COMPRESSOR SYMBOLS

- SUBMERSIBLE PUMP
- CENTRIFUGAL BLOWER
- CENTRIFUGAL PUMP (DRY PIT)
- VERTICAL TURBINE PUMP
- PROGRESSING CAVITY PUMP
- LOBE PUMP, BLOWER OR COMPRESSOR (POSITIVE DISPLACEMENT)
- COMPRESSOR (PISTON)
- CHEMICAL FEED PUMP
- PLUNGER PUMP
- DIAPHRAGM PUMP
- PERISTALTIC PUMP

FLOW STREAM IDENTIFIERS

SEE PROCESS - MECHANICAL LEGEND

INPUTS AND OUTPUTS TO PLC OR DISTRIBUTED CONTROL

- ANALOG INPUT
- ANALOG OUTPUT
- PULSE INPUT
- PULSE OUTPUT
- DIGITAL INPUT
- DIGITAL OUTPUT

NOTE:
X = TOTAL NUMBER OF SIGNALS WHERE MORE THAN ONE SIGNAL IS REQUIRED. IF QUANTITY IS NOT SHOWN THEN ONE SIGNAL IS REQUIRED.

GENERAL NOTE:

1. THIS IS A STANDARD LEGEND. NOT ALL THE INFORMATION SHOWN ON THIS LEGEND IS USED IN THESE CONTRACT DRAWINGS.

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	ISSUE DATE	APRIL 2026
	PROJECT NUMBER	709126-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO BAILEY HUSBAND E-91322 REGISTERED PROFESSIONAL ENGINEER 04/01/2026

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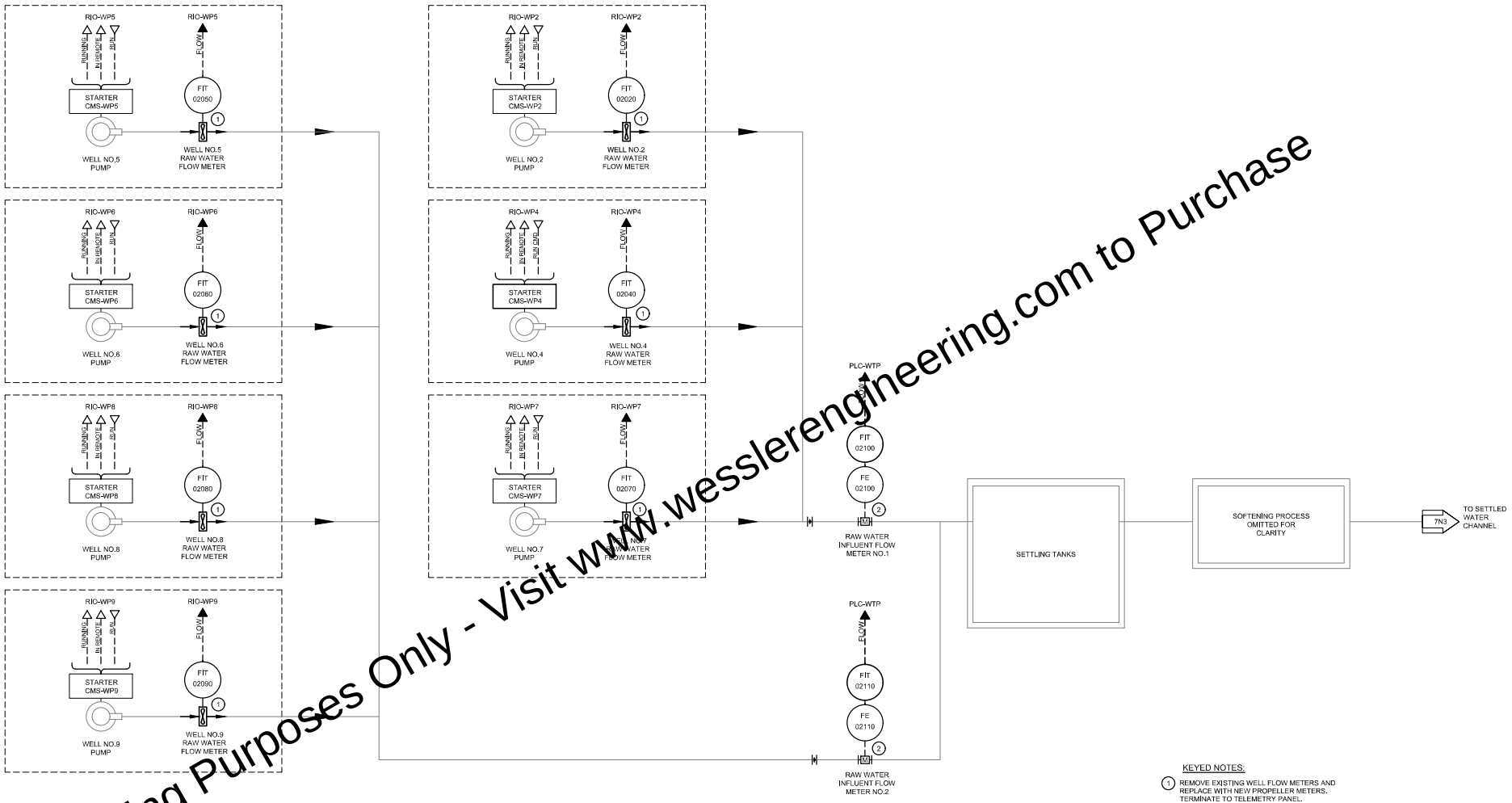
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

PROCESS AND INSTRUMENTATION LEGEND

SHEET NO. 7N1



KEYED NOTES:

1. REMOVE EXISTING WELL FLOW METERS AND REPLACE WITH NEW PROPELLER METERS. TERMINATE TO TELEMETRY PANEL.
2. REMOVE EXISTING ORIFICE PLATE AND SPOOL PIECE. REPLACE WITH NEW MAGNETIC FLOW METER. TERMINATE TO NEW CP-WTP.

SCALE VERIFICATION	DRAWN BY	KJM	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	
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	APPROVED BY	BNH					
	ISSUE DATE	APRIL 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — BAILEY HUSBAND E-91322 — PROFESSIONAL ENGINEER — REGISTERED

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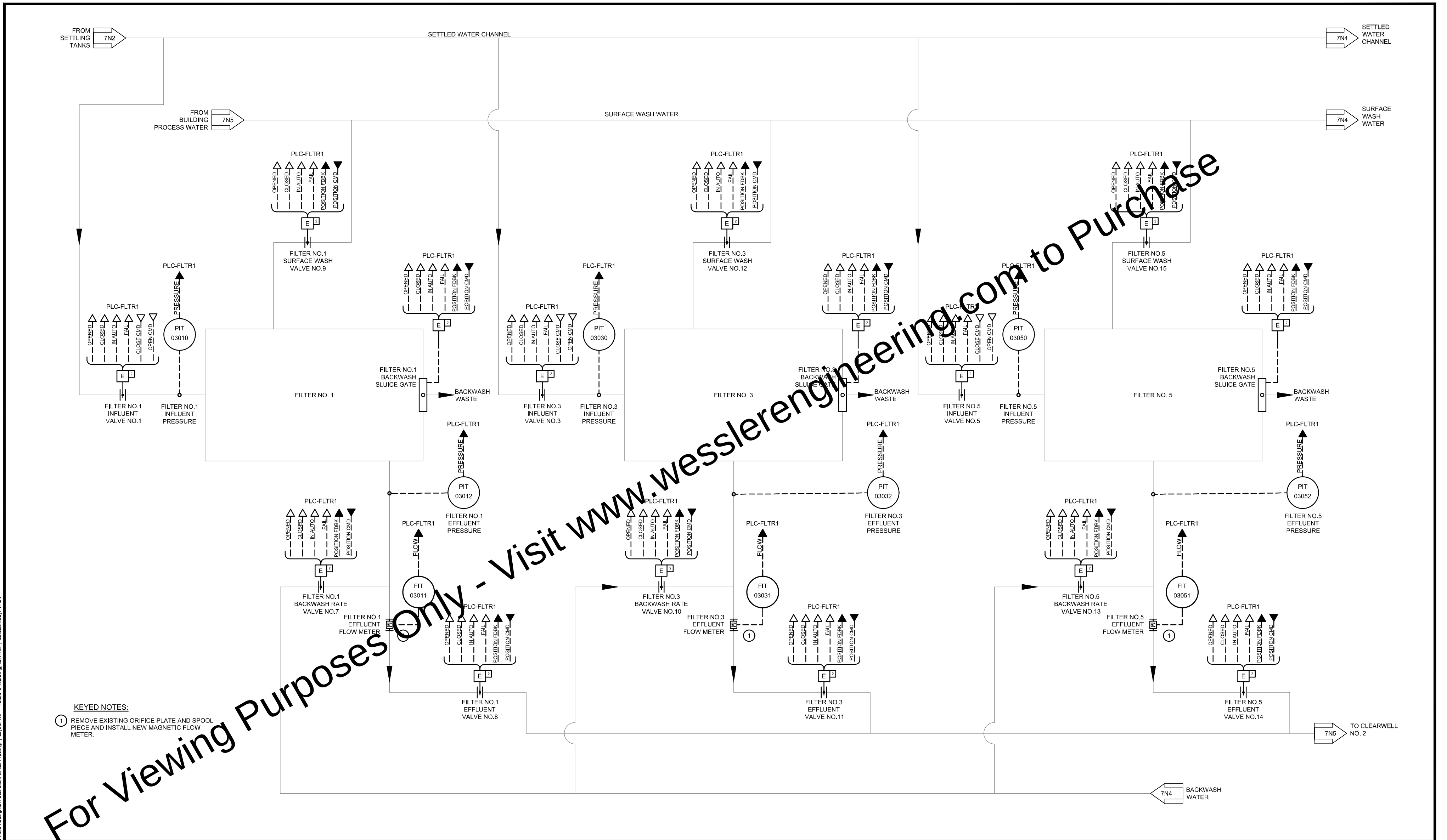
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

WELL RAW WATER P&ID

SHEET NO. **7N2**

PAGE NO. 46



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	APPROVED BY	BNH
	ISSUE DATE	APRIL 2026
	PROJECT NUMBER	709126-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO
BAILEY HUSBAND
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04/01/2026

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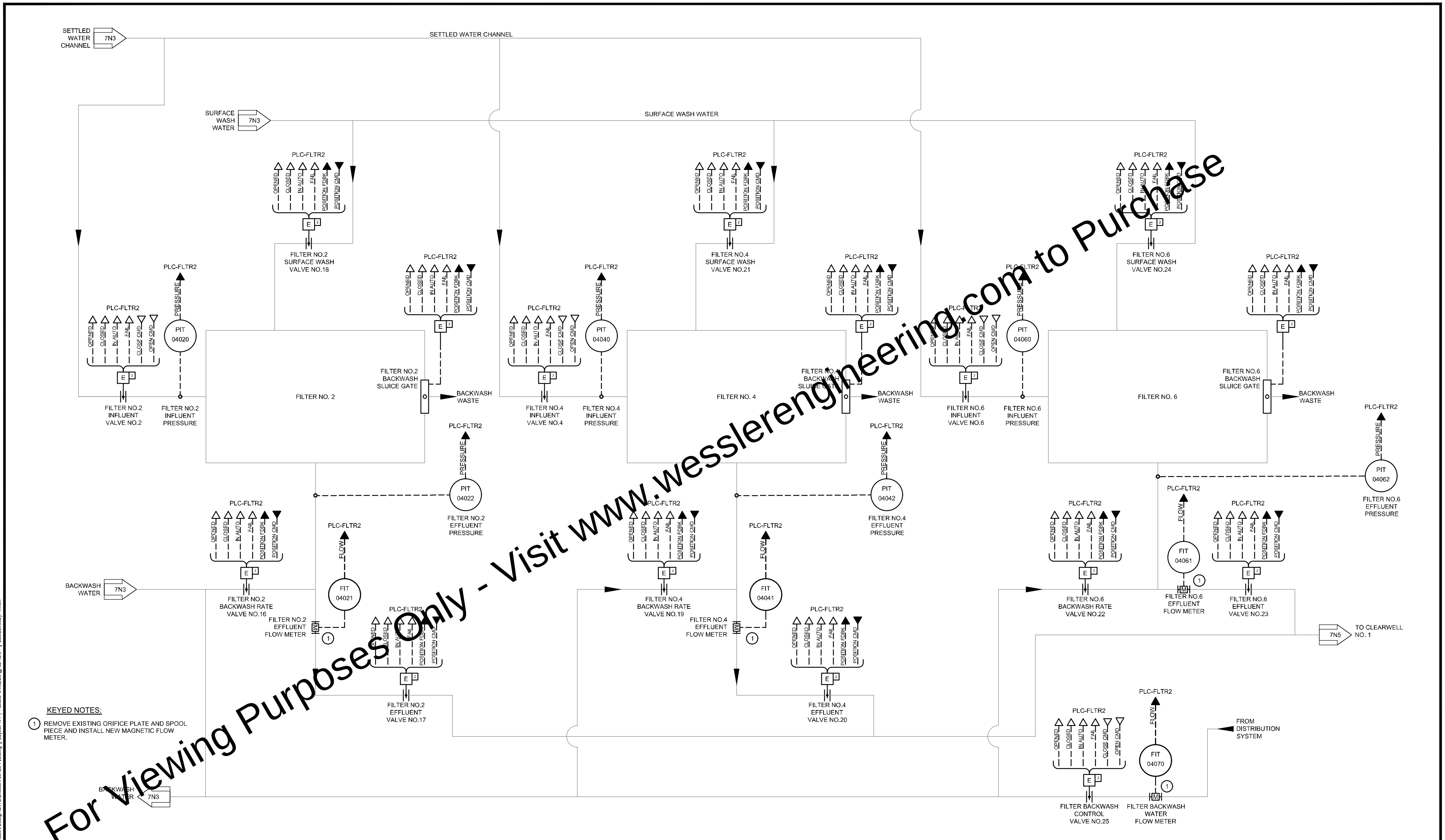
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

FILTERS 1, 3, & 5 P&ID

SHEET NO.
7N3



KEYED NOTES:

1. REMOVE EXISTING ORIFICE PLATE AND SPOOL PIECE AND INSTALL NEW MAGNETIC FLOW METER.

SCALE VERIFICATION	DRAWN BY	KJM
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	BDP
	APPROVED BY	BNH
	ISSUE DATE	APRIL 2026
	PROJECT NUMBER	709126-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO — BAILEY HUSBAND — E-91322 — REGISTERED — PROFESSIONAL ENGINEER — 04/01/2026

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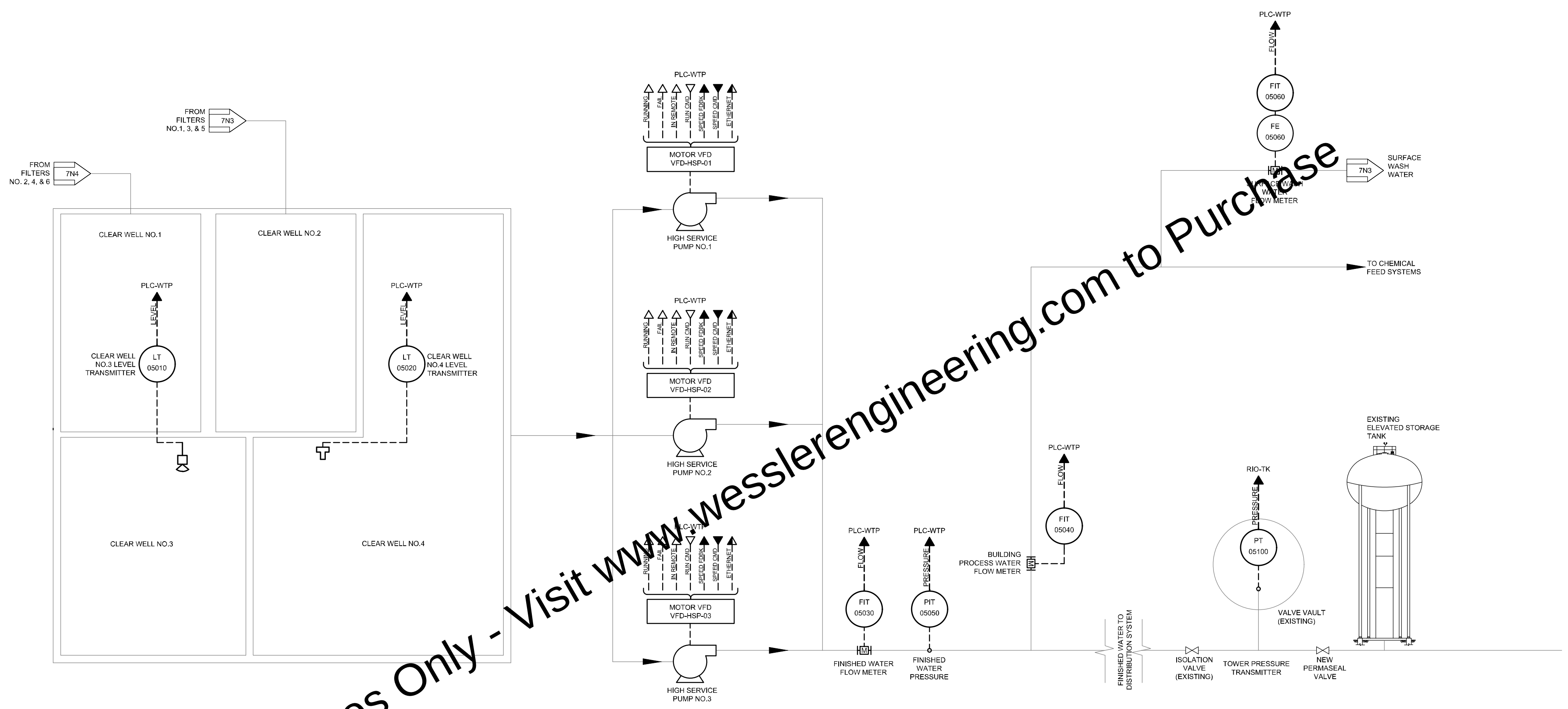
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

FILTERS 2, 4, & 6 P&ID

SHEET NO. **7N4**



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	ISSUE DATE	APRIL 2026
	PROJECT NUMBER	709126-04-001

NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO BAILEY HUSBAND E-91322 REGISTERED PROFESSIONAL ENGINEER 04/01/2026

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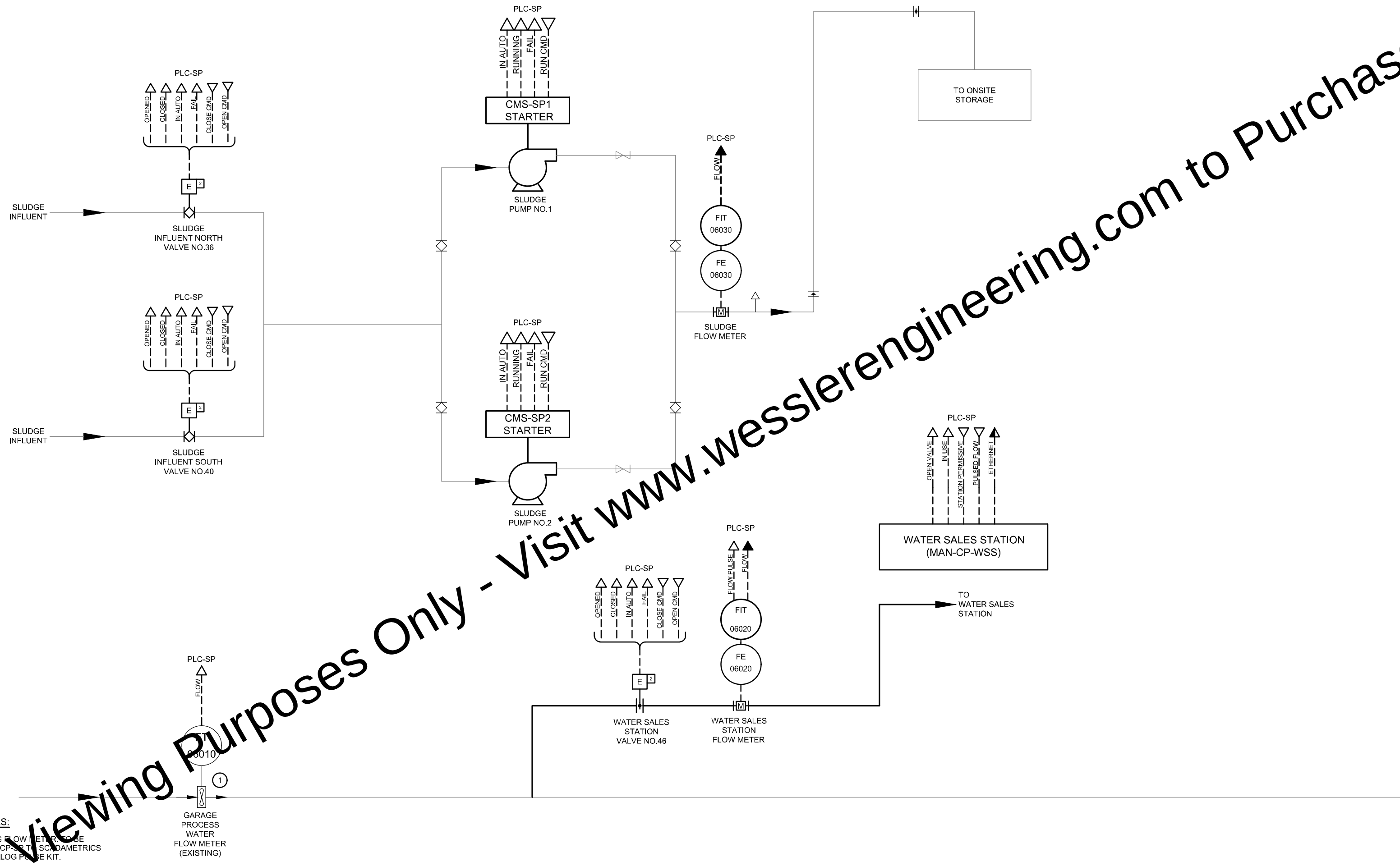
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

HIGH SERVICE PUMPS P&ID

SHEET NO. **7N5**

PAGE NO. 49



KEYED NOTES:

1. REUSE EXISTING FLOW METER TO BE TERMINATED IN CP-SP TO SCADAMETRICS MODEL APK ANALOG PULSE KIT.

SCALE VERIFICATION		
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	DRAWN BY	KJM
	CHECKED BY	BDP
	APPROVED BY	BNH
	ISSUE DATE	APRIL 2026
	PROJECT NUMBER	709126-04-001

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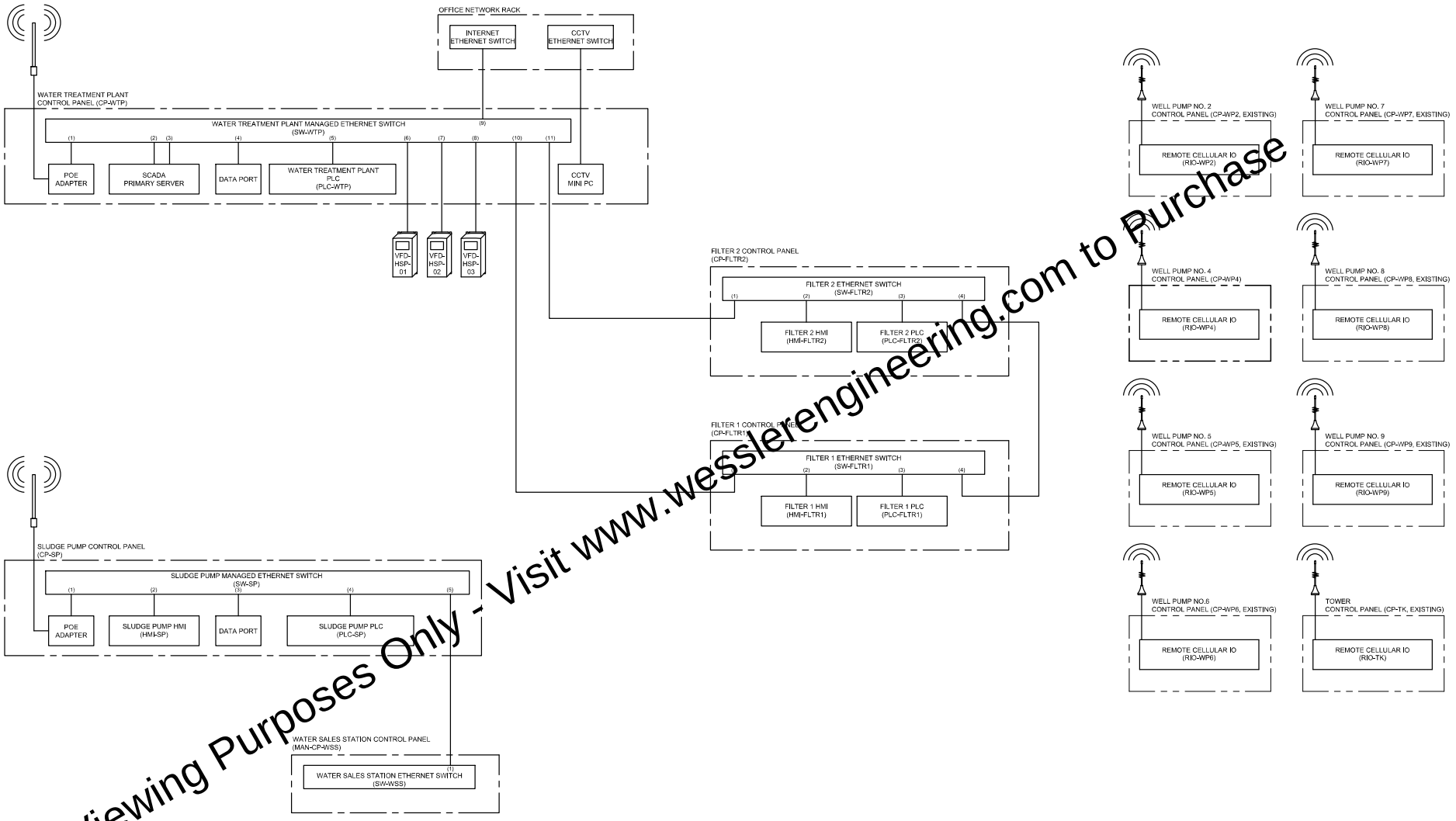
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

GARAGE SLUDGE PROCESS P&ID

SHEET NO.
7N6



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	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — BAILEY HUSBAND E-91322 — PROFESSIONAL ENGINEER — REGISTERED — 04/01/2026

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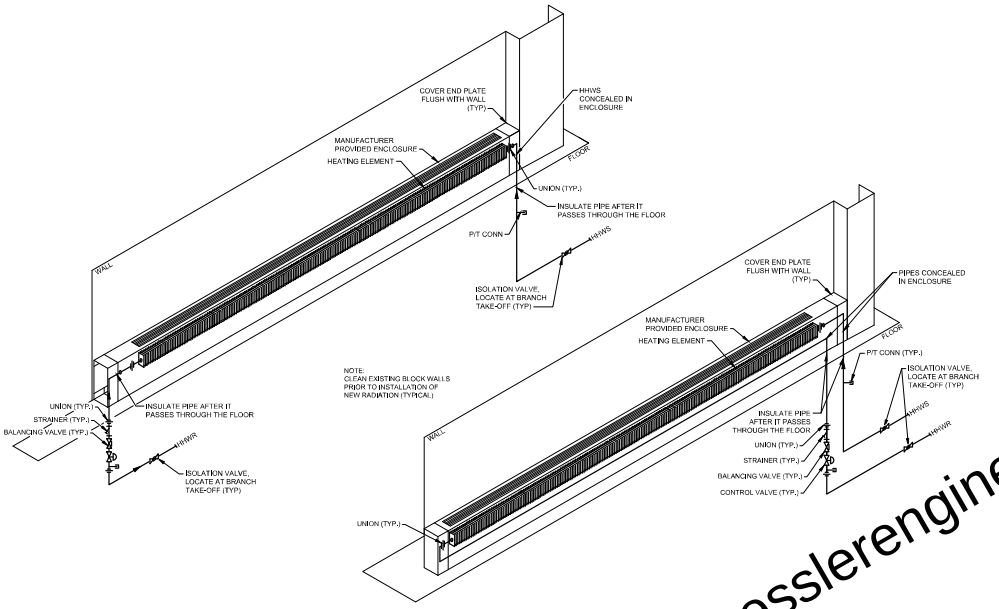
WATER TREATMENT PLANT PHASE 1 IMPROVEMENTS

CITY OF KENTON, OHIO

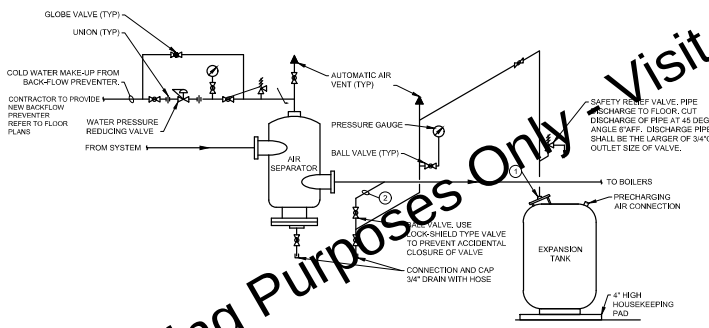
NETWORK DIAGRAM

SHEET NO. 7N7

PAGE NO. 51

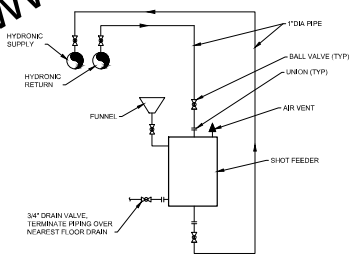


5 HYDRONIC RADIANT HEATER PIPING DETAIL
SCALE: NONE



NOTES:
1. TANK CONNECTION LOCATIONS MAY VARY DEPENDING ON TANK SIZE AND MODEL.
2. PROVIDE ANTI-THERMOSYPHON LOOP TO PREVENT GRAVITY HEATING OF TANK. 12"MIN. DROP.

7 AIR CONTROL EXPANSION AND MAKE-UP WATER DETAIL
SCALE: NONE



6 ONE-SHOT CHEMICAL FEEDER DETAIL
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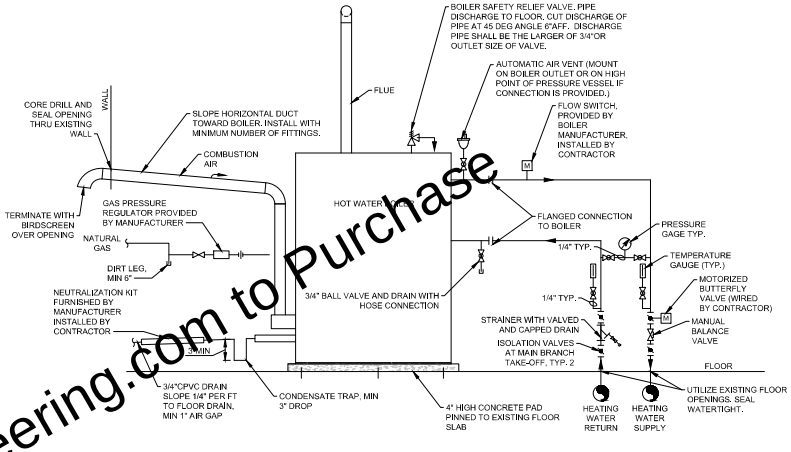
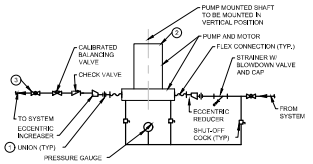
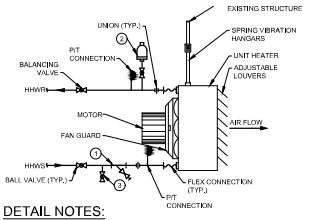


1 CONDENSING BOILER PIPING DETAIL
SCALE: NONE



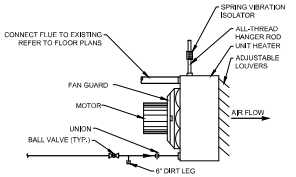
NOTES:
1. UNIONS ARE NOT REQUIRED WHEN PUMP IS CONNECTED TO PIPING WITH FLANGE CONNECTIONS.
2. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SUPPORT OF PUMP AND MOTOR. SUPPORT PIPING INDEPENDENT OF ADJACENT PIPING WITH SPRING TYPE VIBRATION ISOLATORS.
3. FOR PIPE SIZES OVER 2", BUTTERFLY VALVES SHALL BE USED IN LIEU OF BALL VALVES.

3 INLINE PUMP PIPING DETAIL
SCALE: NONE



DETAIL NOTES:
1. PROVIDE VALVED STRAINER WITH BLOWDOWN AND CAP BLOWDOWN WITH HOSE THREADS.
2. AUTOMATIC AIR VENT W/ 1/2" BALL VALVE EXTEND THROUGH INSULATION, INSTALL AIR VENT AT HIGHEST POINT IN PIPING CONNECTION.
3. 1/2" BALL VALVE MANUAL DRAIN W/ HOSE CONNECTION EXTENDED THROUGH INSULATION AT LOWEST POINT IN PIPING RUN.

2 HYDRONIC UNIT HEATER PIPING DETAIL
SCALE: NONE



4 GAS UNIT HEATER PIPING DETAIL
SCALE: NONE

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BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	RLW					
	APPROVED BY	TMA					
	ISSUE DATE	MARCH 2026					
	PROJECT NUMBER	709126-04-001					

STATE OF OHIO — TIMOTHY M. ANDERSON PE-59198 — PROFESSIONAL ENGINEER

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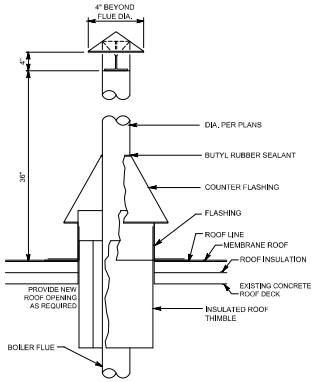
WATER TREATMENT PLANT PHASE 1

CITY OF KENTON, OHIO

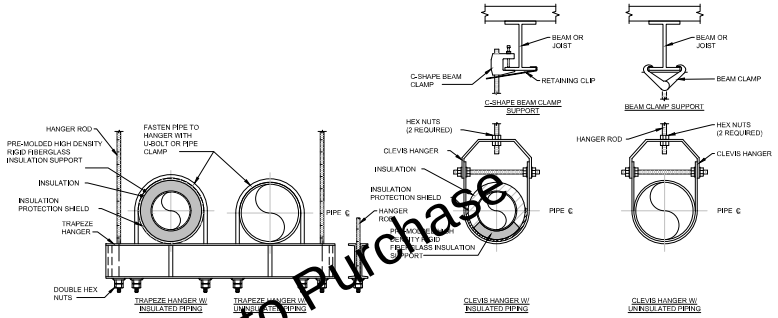
MECHANICAL DETAILS

SHEET NO. **8M1**

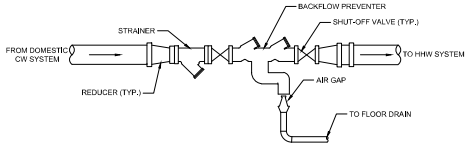
PAGE NO. 52



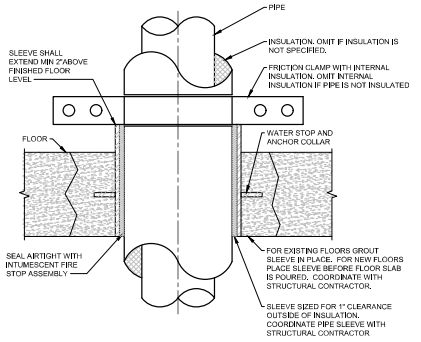
4 **FLUE STACK DETAIL**
SCALE: NONE



1 **TYPICAL PIPE SUPPORT DETAIL**
SCALE: NONE



2 **BACKFLOW PREVENTER DETAIL**
SCALE: NONE



3 **PIPE FLOOR PENETRATION DETAIL**
SCALE: NONE

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STATE OF OHIO — TIMOTHY M. ANDERSON PE-59198

WESSLER ENGINEERING — More Than a Project™

WATER TREATMENT PLANT PHASE 1
CITY OF KENTON, OHIO

MECHANICAL DETAILS

SHEET NO. **8M2**
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HYDRONIC UNIT HEATER SCHEDULE

NOTES:
1. PROVIDE CORROSION-RESISTANT PAINT. PAINT SHALL BE BAKED, POLYESTER POWDERCOAT. FINISH COLOR SHALL BE MANUFACTURER STANDARD.
2. POSITION HORIZONTAL AIR DEFLECTORS AT 30 DEGREES FROM HORIZONTAL TO FLOOR.
3. PROVIDE DISCONNECT SWITCH ON UNIT
4. PROVIDE UNIT-MOUNTED THERMOSTAT.

UNIT TAG	LOCATION	CONFIGURATION	MBH	EAT	CFM	EWT	LWT	GPM	WPD	FAN DIA.	MOTOR						ELECTRICAL DATA			MFG.	MODEL #	WGT	NOTES
											MOTOR HP	DRIVE	NO. OF SPEEDS	FAN SPEED	FLA	VOLT/PH	DISC. SW. BY	EM POWER	CONTROL TYPE				
UH-1	CHEMICAL ROOM	HORIZONTAL DELIVERY	166.5	50	2310	180	160	12	1.9 ft. wg.	20"	1/4	DIRECT	2	LOW	2.75	120/1	MFG	NO	THERMOSTAT	ZEHNDER RITTLING	RH-193	115 lbs.	1,2,3,4
UH-2	CHEMICAL ROOM	HORIZONTAL DELIVERY	60.5	50	1240	180	160	6	0.5 ft. wg.	18"	1/8	DIRECT	2	LOW	1.58	120/1	MFG	NO	THERMOSTAT	ZEHNDER RITTLING	RH-108	88 lbs.	1,2,3,4
UH-3	STORE ROOM	VERTICAL DELIVERY	40.3	50	1150	180	160	4.0	0.1 ft. wg.	13-3/4"	1/10	DIRECT	2	HIGH	1.3	120/1	MFG	NO	THERMOSTAT	ZEHNDER RITTLING	RV-59	65 lbs.	1,2,3,4
UH-4	PUMP ROOM	HORIZONTAL DELIVERY	60.5	50	1240	180	160	6	0.5 ft. wg.	18"	1/8	DIRECT	2	LOW	1.58	120/1	MFG	[illegible]	THERMOSTAT	ZEHNDER RITTLING	RH-108	88 lbs	1,2,3,4
UH-5	PIPING ROOM	HORIZONTAL DELIVERY	15.8	50	450	180	160	2	0.7 ft. wg.	9"	1/30	DIRECT	2	HIGH	0.7	120/1	[illegible]	[illegible]	THERMOSTAT	ZEHNDER RITTLING	RH-24	39 lbs	1,2,3,4
UH-6	MAIN FLOOR	HORIZONTAL DELIVERY	60.5	50	1240	180	160	6	0.5 ft. wg.	18"	1/8	DIRECT	2	LOW	1.58	[illegible]	MFG	NO	THERMOSTAT	ZEHNDER RITTLING	RH-108	88 lbs	1,2,3,4

GAS FIRED UNIT HEATER SCHEDULE

NOTES:
1. PROVIDE CORROSION-RESISTANT PAINT. PAINT SHALL BE BAKED, POLYESTER POWDERCOAT. FINISH COLOR SHALL BE MANUFACTURER STANDARD.
2. PROVIDE UNIT WITH 30° DEFLECTOR HOOD.
3. PROVIDE DISCONNECT SWITCH ON UNIT.
4. PROVIDE REMOTE 24V THERMOSTAT WITH TRANSFORMER AND THERMOSTAT GUARD WITH UNIT AS SHOWN ON PLANS.

UNIT TAG	LOCATION	CONFIGURATION	TYPE	FUEL TYPE	INPUT MBH	OUTPUT MBH	NO. OF STAGES	EAT	CFM	GAS PRESSURE	FLUE CONN. SIZES	AFUE RATING	FAN DIA.	MOTOR					ELECTRICAL DATA			MFG.	MODEL #	WGT.	NOTES
														MOTOR HP	DRIVE	NO. OF SPEEDS	RPM	VOLT/PH	DISC. SW. BY	EM POWER	CONTROL TYPE				
UH-7	GARAGE	HORZONTAL DELIVERY	INDIRECT FIRED	NAT. GAS	400	332	1	40°F	5440	6-7 in. wg	6"	83%	24"	3/4	DIRECT	1	1125	120/1	MFG	NO	THERMOSTAT	MODINE	PDP 400 A E 01	406 lbs.	1,2,3,4
UH-8	GARAGE	HORZONTAL DELIVERY	INDIRECT FIRED	NAT. GAS	400	332	1	40°F	5440	6-7 in. wg	[illegible]	83%	24"	3/4	DIRECT	1	1125	120/1	MFG	NO	THERMOSTAT	MODINE	PDP 400 A E 01	406 lbs.	1,2,3,4

FLOOR DRAIN SCHEDULE

NOTES:
1. C.I. BODY, 1/2 C.I. LOOSE SET GRATE, FLASHING CLAMP, SEDIMENT BUCKET, ACID RESISTANT COATING INSIDE AND OUTSIDE. PROVIDE WITH DEEP SEAL P-TRAP

UNIT TAG	LOCATION	TYPE	IPS SIZE	STRAINER	BASIS OF DESIGN		NOTES
					MFG.	MODEL #	
FD-1	CHEMICAL STORAGE	12" SQUARE TOP	4"	CAST IRON	J.R. SMITH	2415C-C-LSG-ARIO	1

HOT WATER BOILER SCHEDULE

NOTES:
1. FURNISH UNIT WITH A 120V INTEGRATED CONTROL PANEL AND LEAD/LAG SYSTEM.
2. FURNISH UNIT WITH SAFETY RELIEF VALVE.
3. FURNISH UNIT WITH PRESSURE VESSEL CONNECTIONS.
4. FURNISH UNIT WITH DRAIN VALVE, AIR VENT VALVE KIT, AND AUTO ISOLATION VALVE W/ 24V POWER FROM BOILER CONTROL PANEL.
5. FURNISH UNIT WITH COMBUSTION AIR FILTER AND DIRECT VENT CONNECTION.
6. FURNISH UNIT WITH GAS TRAIN PACKAGE.
7. FURNISH OUTSIDE AIR TEMPERATURE SENSOR
8. FURNISH UNIT WITH HHW TEMPERATURE SENSOR AND ISOLATION VALVE.

UNIT TAG	LOCATION	FUEL TYPE	INPUT MBH	GAS PRESSURE	MIN. TURN DOWN	MIN. SURFACE AREA	GPM	EWT	LWT	PPESSURE DROP	RELIEF VALVE SETTING	ELECTRICAL DATA					MFG.	MODEL #	WGT	NOTES
												STARTER BY	DISC. SW. BY	EM POWER	MCA	VOLT/PH				
B-1	STORE ROOM	NAT. GAS	500	7-14 in. wg.	10:1	193 sq. ft	50	160°F	180°F	2.5 ft. wg.	125 psig	MFG.	MFG.	NO	20	120/1	CLEAVER BROOKS	CFC-E2-700-500-[illegible]	[illegible] lbs.	1,2,3,4,5,6,7,8
B-2	STORE ROOM	NAT. GAS	500	7-14 in. wg.	10:1	193 sq. ft	50	160°F	180°F	2.5 ft. wg	125 psig	MFG	MFG.	NO	20	120/1	CLEAVER BROOKS	CFC-[illegible]-500-125HW	2065 lbs.	1,2,3,4,5,6,7,8

HOT WATER RADIATION SCHEDULE

NOTES:
1. PROVIDE END CAPS AND ALL TRIM. COLOR BY ARCHITECT.
2. PROVIDE ALL MOUNTING HARDWARE AND SUPPORTS. MOUNT BOTTOM OF ENCLOSURE MIN. 2" A.F.F.
3. PROVIDE ALL PIPE SUPPORTS, EXPANSION FITTINGS, ACCESSORIES AND DIAGRAMS FOR A COMPLETE AND FUNCTIONAL SYSTEM.
4. FIELD-VERIFY ALL ENCLOSURE LENGTHS BEFORE ORDERING.
5. ENCLOSURE TO BE 14 GAUGE.

UNIT TAG	LOCATION	MBH	ELEMENT LENGTH	ROWS	FINS PER FT	GPM	EWT (°F)	LWT (°F)	WATER PRESSURE DROP (FT. W.C.)	TUBE SIZE	NUMBER OF PASSES	ENCLOSURE			MFG.	MODEL #	NOTES
												DEPTH	HEIGHT	LENGTH			
RH-1	SEE PLANS	3.3	2'-0"	1	48	0.5	180	160	0.1	3/4"	1	5-3/8"	24"	2'-10"	ZEHNDER RITTLING	FT5	1,2,3,4,5
RH-2	SEE PLANS	3.3	2'-0"	1	48	0.5	180	160	0.1	3/4"	1	5-3/8"	24"	3'-7"	ZEHNDER RITTLING	FT5	1,2,3,4,5
RH-3	SEE PLANS	4.9	3'-0"	1	48	0.5	180	160	0.1	3/4"	1	5-3/8"	24"	4'-0"	ZEHNDER RITTLING	FT5	1,2,3,4,5
RH-4	SEE PLANS	5.2	3'-6"	1	48	0.5	180	160	0.1	3/4"	1	5-3/8"	24"	4'-0"	ZEHNDER RITTLING	FT5	1,2,3,4,5
RH-5	SEE PLANS	7.3	3'-6"	2	48	1	180	160	0.2	3/4"	1	5-3/8"	24"	4'-0"	ZEHNDER RITTLING	FT5	1,2,3,4,5
RH-6	SEE PLANS	8.3	4'-0"	2	48	1	180	160	0.3	3/4"	1	5-3/8"	24"	6'-0"	ZEHNDER RITTLING	FT5	1,2,3,4,5
RH-7	SEE PLANS	5.2	3'-6"	1	48	0.5	180	160	0.1	3/4"	1	5-3/8"	24"	5'-6"	ZEHNDER RITTLING	FT5	1,2,3,4,5
RH-8	SEE PLANS	6.7	4'-6"	1	48	1	180	160	0.2	3/4"	1	5-3/8"	24"	7'-6"	ZEHNDER RITTLING	FT5	1,2,3,4,5
RH-9	SEE PLANS	6.7	4'-6"	1	48	1	180	160	0.2	3/4"	1	5-3/8"	24"	8'-0"	ZEHNDER RITTLING	FT5	1,2,3,4,5
RH-10	SEE PLANS	17.4	7'-6"	3	48	2	180	160	0.9	3/4"	1	5-3/8"	24"	11'-6"	ZEHNDER RITTLING	FT5	1,2,3,4,5

BACKFLOW PREVENTER SCHEDULE

NOTES:
1. FURNISH WITH AIR GAP.
2. FURNISH WITH FLOOD DETECTION SENSOR.
3. FURNISH WITH QUARTER-TURN SHUT-OFF BALL VALVES.
4. FURNISH WITH BRONZE STRAINER.

UNIT TAG	LOCATION	FLOW (GPM)	PRESSURE LOSS (PSI)	FLUID	LINE SIZE	BASIS OF DESIGN			NOTES
						MFG.	MODEL #	WGT.	
BFP-1	CHEMICAL ROOM	15	12	DOMESTIC COLD WATER	1"	WATTS	LF919-FS-QT-S	12 lbs	[illegible] 2, 3, 4

EXPANSION TANK AND AIR CONTROL SYSTEM SCHEDULE

NOTES:
1. PROVIDE AUTOMATIC AIR VENT ON AIR SEPARATOR.

TAG NO.	LOCATION	SYSTEM SERVED	TYPE	APPROX SYSTEM VOLUME GAL	WATER TEMP RANGE MIN/MAX	PRV FILL PRESSURE AT TANK PSIG	MAX OPER. PRESS.		MIN. VOLUME GAL.	MIN. ACCEPT VOLUME GAL.	AIR AND DIRT SEPARATOR				BASIS OF DESIGN					NOTES
							RELIEF VALVE PSIG	AT TANK PSIG			TAG NO.	INLET & OUTLET SIZE	GPM	MAX P.D. FT.	MFG	VERTICAL EXP. TANK MODEL #	VERTICAL EXP. TANK WGT.	AIR/ DIRT SEPARATOR MODEL #	AIR/ DIRT SEPARATOR WGT.	
ET-1	STORE ROOM	HEATING WATER	BLADDER	275	40/180	12 psig	125 psig	175 psig	20	23	AS-1	2-1/2"	47	1 ft.wg.	BELL & GOSSETT	B85	275 lbs.	CRSN-2-1/2N	70 lbs.	1

FAN SCHEDULE

NOTES:
1. FURNISH WITH WIRELESS 6-SPEED CONTROLLER.
2. FURNISH WITH UNIVERSAL MOUNTING.

UNIT TAG	LOCATION	TYPE	DIAMTER (FT.)	AIRFLOW	RPM	MOTOR			ELECTRICAL DATA			BASIS OF DESIGN			NOTES
						TYPE	HP	VOLT/PHASE	DISC. SW. BY	EM POWER	CONTROL TYPE	MFG.	MODEL #	WGT.	
PF-1	GARAGE	PROPELLER	5	7,113 CFM	120	DIRECT DRIVE	1/10	120/1	MFG.	NO	WIRELESS CONTROLLER	GREENHECK	DM-3	16 lbs.	1,2
PF-2	GARAGE	PROPELLER	5	7,113 CFM	120	DIRECT DRIVE	1/10	120/1	MFG.	NO	WIRELESS CONTROLLER	GREENHECK	DM-3	16 lbs.	1,2

PUMP SCHEDULE

NOTES
1. PUMPS SHALL BE CONTROLLED BY RESPECTIVE BOILER CONTROL PANEL.
2. EACH PUMP SHALL COME WITH AN INTEGRAL VARIABLE FREQUENCY DRIVE FACTORY WIRED TO PUMP MOTOR

UNIT TAG	LOCATION	TYPE	FLOW (GPM)	TDH (FT.)	FLUID	FLUID TEMP (DEG F)	MIN. EFFICIENCY	MOTOR					ELECTRICAL DATA				BASIS OF DESIGN			NOTES
								BHP	MOTOR HP	RPM	VOLT/PHASE	STARTER BY	STARTER TYPE	DISC. SW. BY	EM POWER	CONTROL TYPE	MFG.	MODEL #	WGT.	
CP-1	STORE ROOM	INLINE	50	30	HEATING WATER	60-180	50.9%	0.7	1	2518	460/3	MFG.	VFD - INTEGRAL	MFG.	NO	DDC	BELL & GOSSET	ECOCIRC XL 65-130	35 lbs.	1,2
CP-2	STORE ROOM	INLINE	50	30	HEATING WATER	60-180	50.9%	0.7	1	2518	460/3	MFG	VFD - INTEGRAL	MFG.	NO	DDC	BELL & GOSSET	ECOCIRC XL 65-130	35 lbs	1,2

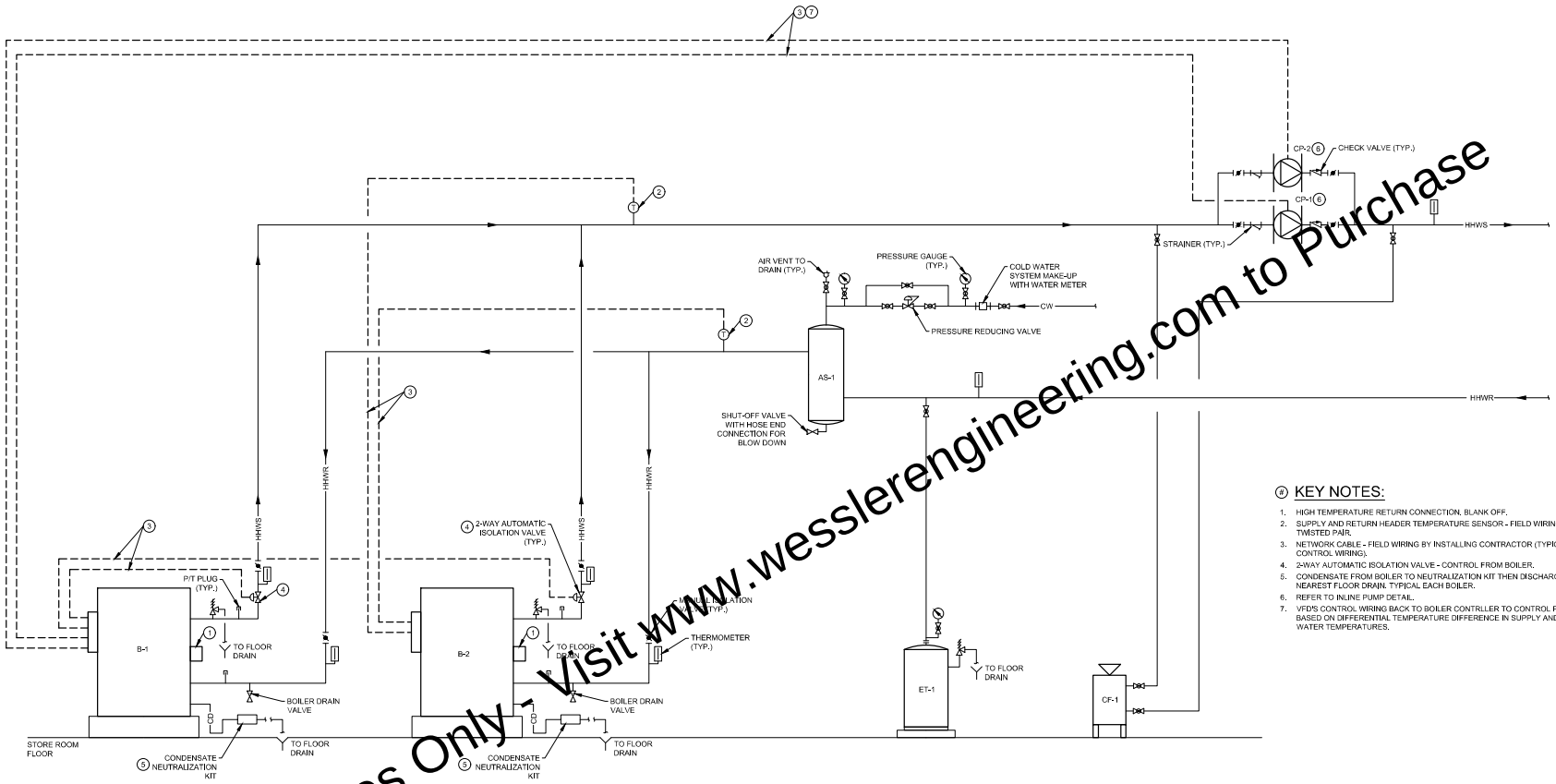
SCALE VERIFICATION	DRAWN BY	JAL	NO.	DATE	INITIALS	REVISION DESCRIPTIONS
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	RLW				
	APPROVED BY	TMA				
	ISSUE DATE	MARCH 2026				
	PROJECT NUMBER	709126-04-001				

STATE OF OHIO
TIMOTHY M. ANDERSON
PE-59198
REGISTERED PROFESSIONAL ENGINEER
3/24/2026

WESSLER ENGINEERING
More than a Project™

WATER TREATMENT PLANT PHASE 1
CITY OF KENTON, OHIO
MECHANICAL SCHEDULES

SHEET NO. **8M3**



KEY NOTES:

1. HIGH TEMPERATURE RETURN CONNECTION, BLANK OFF.
2. SUPPLY AND RETURN HEADER TEMPERATURE SENSOR - FIELD WIRING WITH TWISTED PAIR.
3. NETWORK CABLE - FIELD WIRING BY INSTALLING CONTRACTOR (TYPICAL FOR ALL CONTROL WIRING).
4. 2-WAY AUTOMATIC ISOLATION VALVE - CONTROL FROM BOILER.
5. CONDENSATE FROM BOILER TO NEUTRALIZATION KIT THEN DISCHARGE TO NEAREST FLOOR DRAIN. TYPICAL EACH BOILER.
6. REFER TO INLINE PUMP DETAIL.
7. VFD'S CONTROL WIRING BACK TO BOILER CONTRLLER TO CONTROL PUMP SPEED BASED ON DIFFERENTIAL TEMPERATURE DIFFERENCE IN SUPPLY AND RETURN WATER TEMPERATURES.

HEATING WATER FLOW DIAGRAM
SCALE: NO SCALE

SCALE VERIFICATION	DRAWN BY	JAL	NO.	DATE	INITIALS	REVISION DESCRIPTIONS	TIMOTHY M. ANDERSON PE-59198 STATE OF OHIO	WESSLER ENGINEERING "More than a Project"	WATER TREATMENT PLANT PHASE 1	SHEET NO. 8M4
BAR IS ONE INCH LONG ON ORIGINAL DRAWING	CHECKED BY	RLW							CITY OF KENTON, OHIO	PAGE NO. 55
	APPROVED BY	TMA							MECHANICAL DIAGRAMS	
	ISSUE DATE	MARCH 2026								
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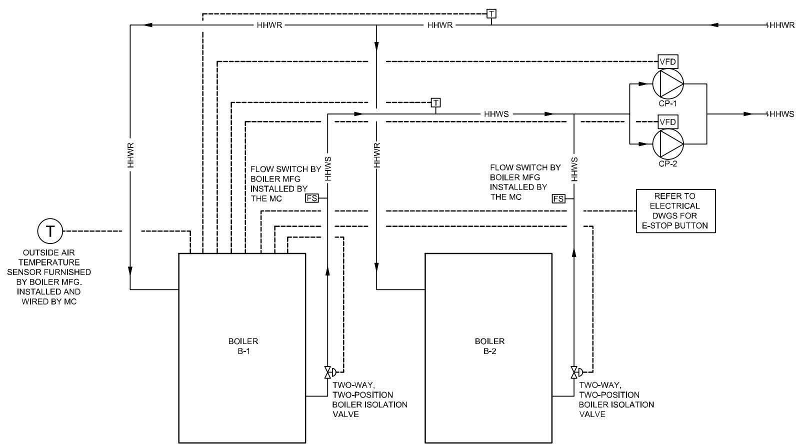
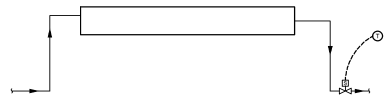


SEQUENCE OF OPERATIONS:

1. BOILER OPERATION SHALL BE BASED ON OUTSIDE AIR TEMPERATURE. BOILERS SHALL BE ENABLED WHEN THE OUTSIDE AIR TEMPERATURE IS 60 DEGREES (ADJ) OR LESS.
2. THE BOILER WATER SHALL AUTOMATICALLY BE RESET WITHIN THE BOILER CONTROL SYSTEM TO THE FOLLOWING:
   50-60 DEGREES - 120 DEGREE SUPPLY
   35-49 DEGREES - 140 DEGREE SUPPLY
   25-34 DEGREES - 160 DEGREE SUPPLY
   BELOW 25 DEGREES - 180 DEGREE SUPPLY
3. WHEN THE BOILERS ARE ENABLED, THE BOILER CONTROL SYSTEM SHALL ALTERNATE EACH BOILER AND HEATING WATER PUMP AS THE LEAD BOILER TO KEEP EQUAL WEAR ON EACH.
4. WHEN THE LEAD BOILER IS ENABLED, THE TWO-WAY, TWO-POSITION CONTROL VALVE SHALL FULLY OPEN AND THE LEAD BOILER PUMP SHALL START. ONCE FLOW IS PROVEN THRU THE BOILER, THE BOILER SHALL AUTOMATICALLY STAGE THE INTERNAL BURNER. THE LAG BOILER SHALL REMAIN INACTIVE AND THE RESPECTIVE TWO-WAY ISOLATION VALVE SHALL REMAIN CLOSED.
5. THE LEAD BOILER SHALL FIRE AND MAINTAIN THE HEATING WATER SUPPLY TEMPERATURE BASED ON THE RESET SCHEDULE. THE BOILER CONTROL PANEL SHALL VARY THE SPEED OF THE LEAD HEATING WATER PUMP BASED ON THE DIFFERENTIAL TEMPERATURE BETWEEN THE HEATING WATER SUPPLY AND RETURN WATER TEMPERATURES.
6. WHENEVER THE LEAD BOILER OR LEAD PUMP FAIL TO START, THE LAG BOILER OR PUMP SHALL START. WHEN THE LAG BOILER STARTS, THE TWO-WAY VALVE ON THE LEAD BOILER SHALL CLOSE AND THE TWO-WAY VALVE ON THE LAG BOILER SHALL FULLY OPEN.
7. THE BOILER CONTROLS SHALL ALARM TO THE FOLLOWING:
   a. LOW WATER LEVEL
   b. LOW WATER RETURN TEMPERATURE
   c. HIGH TEMPERATURE SUPPLY WATER
   d. FLAME FAILURE
   e. HIGH WATER LEVEL
8. WHENEVER THE LEAD BOILER IS DISABLED, THE LEAD PUMP SHALL CONTINUE TO RUN FOR A PERIOD OF NOT LESS THAN 15 MINUTES. AFTER THE TIME PERIOD HAS EXPIRED THE LEAD PUMP SHALL AUTOMATICALLY STOP.
9. EMERGENCY STOP:
   a. EACH BOILER SHALL BE WIRED TO A CENTRALLY LOCATED EMERGENCY STOP BUTTON. THE BUTTON SHALL DE-ENERGIZE THE BOILERS, PUMPS, AND CLOSE THE AUTOMATIC GAS VALVE IN THE GAS TRAIN. A MANUAL RESET IS REQUIRED WHEN BUTTON IS ENGAGED.
   b. REFER TO THE DRAWING FLOOR PLANS FOR LOCATION OF THE EMERGENCY STOP BUTTON.
   c. THE EMERGENCY STOP BUTTON SHALL HAVE A LAMINATED SIGN ABOVE THE BUTTON THAT READS, "EMERGENCY BOILER SHUT-DOWN".
   d. THE LAMINATED SIGN SHALL HAVE A RED BACKGROUND WITH WHITE LETTERING. LETTERING SHALL BE 1/2 INCH IN HEIGHT.

3 HEATING WATER CONTROL DIAGRAM
SCALE: NONE

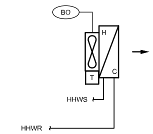


HYDRONIC RADIATION CONTROL DIAGRAM
SCALE: NONE

SEQUENCE OF OPERATIONS:

A. AS THE SPACE TEMPERATURE DROPS BELOW SPACE TEMPERATURE SET POINT, THE TWO-WAY, TWO-POSITION CONTROL VALVE IN THE RETURN WATER PIPING SHALL FULLY OPEN.
B. WHEN THE SPACE TEMPERATURE REACHES SPACE TEMPERATURE SET POINT, THE TWO-WAY, TWO-POSITION CONTROL VALVE SHALL FULLY CLOSE.
C. SPACE TEMPERATURE ST POINT: 65°F WITH 5 DEGREE DEADBAND.

2 HYDRONIC RADIATION CONTROL DIAGRAM
SCALE: NONE



HEATING WATER UNIT HEATER CONTROL DIAGRAM
SCALE: NONE

PLAN NOTES:

1. STAINLESS STEEL PLATE SPACE TEMPERATURE SENSOR TO BE MOUNTED ON UNIT HEATER.

SEQUENCE OF OPERATIONS:

1. OPERATION:
   A. IF INTEGRAL THERMOSTAT FALLS BELOW "TEMPERATURE SETPOINT" UNIT HEATER FAN SHALL START. IF INTEGRAL THERMOSTAT IS SATISFIED, THE UNIT HEATER FAN SHALL STOP.
2. SETPOINTS:
   A. SPACE TEMPERATURE SETPOINT: 65F W/ 5F DEADBAND.

1 HYDRONIC UNIT HEATER CONTROL DIAGRAM
SCALE: NONE

SCALE VERIFICATION	DRAWN BY	JAL
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NO.	DATE	INITIALS	REVISION DESCRIPTIONS

STATE OF OHIO TIMOTHY M. ANDERSON PE-59198 REGISTERED PROFESSIONAL ENGINEER 3/24/2026

WESSLER ENGINEERING
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WATER TREATMENT PLANT PHASE 1
CITY OF KENTON, OHIO
MECHANICAL DIAGRAMS

SHEET NO. **8M5**

Drawing: G:\Projects\26-032 Wessler - Kenton WTP Mul Bldgs Heating Sys Upgrades\BM-CAD\CAD\26-032_M-SHEETS.dwg | Layout: 2M10 | Plotted: 03/24/26 @ 01:17:46 | LastSavedBy: pcohn