

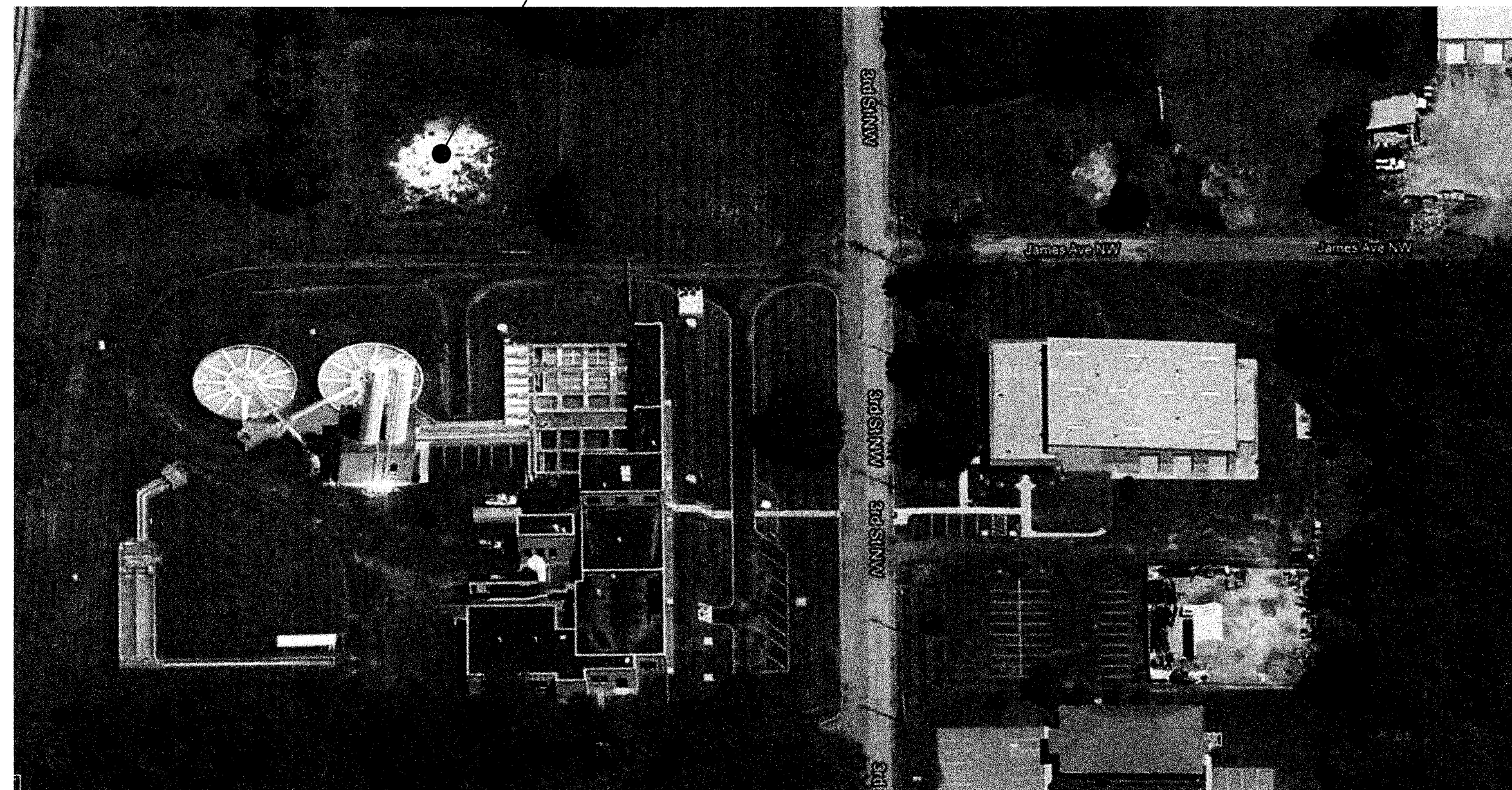
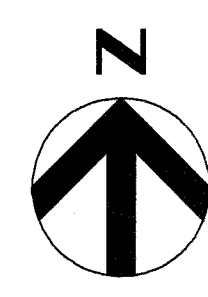


AQUA OHIO, INC. MASSILLON WATER TREATMENT PLANT SLUDGE DEWATERING FACILITY AUGUST 2013

STARK COUNTY, OHIO

SITE LOCATION FOR
NEW SLUDGE DEWATERING FACILITY

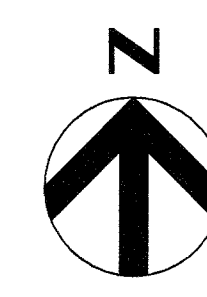
AQUA OHIO MASSILLON
WATER TREATMENT PLANT



EXISTING WTP

SITE MAP
NTS

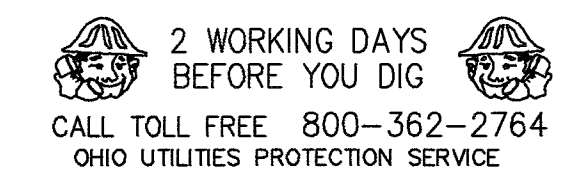
ADDRESS: 869 THIRD STREET, NW
MASSILLON, OH



VICINITY MAP
NTS

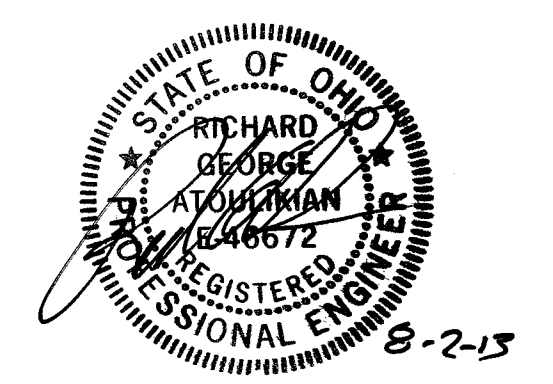


HDR Engineering, Inc.



Approved by the Massillon City Engineer
this 22nd Day of August 2013.

Keith A. Dylewski, P.E., P.S.



DRAWING LIST

GENERAL

00G-01 GENERAL - COVER SHEET
 00G-02 GENERAL - INDEX OF DRAWINGS AND GENERAL NOTES
 00G-03 GENERAL - ABBREVIATIONS
 00G-04 GENERAL - SYMBOLS

CIVIL

00C-01 CIVIL - OVERALL SITE PLAN
 00C-02 CIVIL - GRADING PLAN
 00C-03 CIVIL - PAVING PLAN
 00C-04 CIVIL - EROSION AND SEDIMENTATION CONTROL PLAN
 00C-05 CIVIL - EROSION AND SEDIMENTATION CONTROL, DETAILS AND NOTES
 00C-06 CIVIL - YARD PIPING PLAN - SHEET 1
 00C-07 CIVIL - YARD PIPING PLAN - SHEET 2
 00C-08 CIVIL - DETAILS
 00C-09 CIVIL - STORMWATER MANAGEMENT PLAN
 00C-10 CIVIL - STORMWATER MANAGEMENT DETAILS

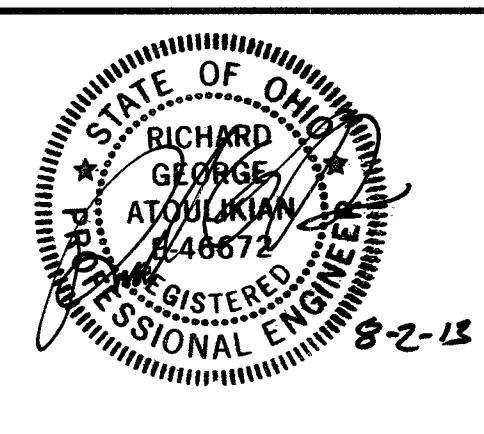
GENERAL NOTES:

1. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT AND ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES WHICH PERTAIN TO AND AFFECT THE CONSTRUCTION OF THIS PROJECT.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
3. ALL EXISTING FEATURES, SUCH AS PAVEMENT, SIDEWALK, CURB, GUTTER, FENCING, LANDSCAPING, ETC., WHICH IS DAMAGED OR REMOVED TO INSTALL NEW WORK SHALL BE REPLACED IN KIND AND IS DEEMED TO BE INCLUDED IN THE LUMP SUM CONTRACT VALUE.
4. ANY WORK PERFORMED WITH MATERIAL NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR SHALL POTHOLE EXISTING UTILITIES AHEAD OF HIS CONSTRUCTION TO ALLOW FOR ANY NECESSARY ADJUSTMENTS OR REALIGNMENTS AND TO VERIFY PIPE TYPES FOR ORDERING PROPER TRANSITION AND/OR TIE-IN FITTINGS WHICH MAY BE REQUIRED.
6. WHENEVER EXCAVATION IS TO BE DONE, CALL OUPS (OHIO UTILITIES PROTECTION SERVICES) BEFORE EXCAVATION IS TO BEGIN FOR UTILITY LOCATION.
7. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, CONTROL DUST, AND TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD, AND DUST FREE CONDITION AT ALL TIMES.
8. AN APPROVED SET OF PLANS SHALL BE MAINTAINED ON THE JOB SITE AT ALL TIMES THAT WORK IS IN PROGRESS. DEVIATION FROM THE PLANS SHALL NOT BE ALLOWED WITHOUT WRITTEN AUTHORIZATION.
9. ALL MATERIALS WHICH MAY COME IN CONTACT WITH DRINKING/PROCESS WATER SHALL CONFORM TO NATIONAL SANITATION FOUNDATION (NSF) STANDARDS 60 AND 61.



ISSUE	DATE	DESCRIPTION
3	8/1/13	CITY OF MASSILLON REVISED CIVIL DRAWINGS
2	4/29/13	AQUA OHIO APPROVED VE CHANGES
1	4/8/13	REVISED CIVIL DRAWINGS
0	3/25/13	100% DESIGN DOCUMENTS

AQUA APPROVAL	B. BISSON/M. FRITZ
VE CHANGES	AQUA OHIO
PROJECT MANAGER	R. ATOULIKIAN
PROJECT ENGINEER	J. MARIE
STRUCTURE	M. PAINE
CADD	M. ROBLE
ARCHITECTURAL	B. ELLINGTON
PROCESS	C. ROBY
MECH./PLUMBING	C. WORK
PROJECT NUMBER	197099



AQUA

**MASSILLON WATER TREATMENT PLANT
 SLUDGE DEWATERING FACILITY**

**GENERAL
 INDEX OF DRAWINGS
 AND GENERAL NOTES**

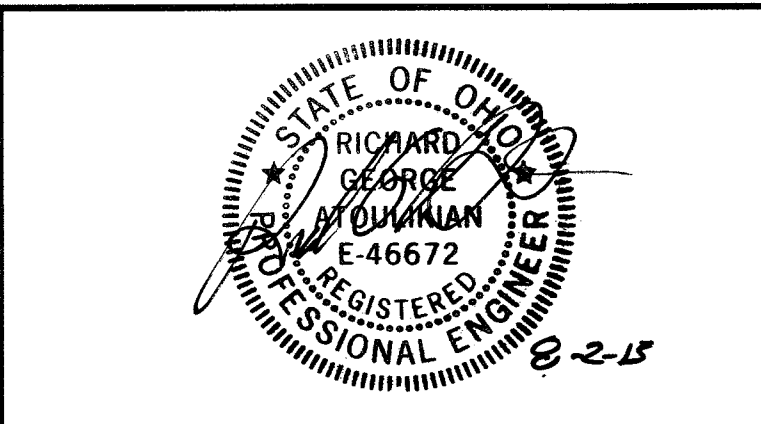
FILENAME	00G-02.DWG	SHEET	00G-02
SCALE	NONE		

1	2	3	4	5	6	7	8
A/C AIR CONDITIONING A/E ARCHITECT/ENGINEER A AMPERE AB ANCHOR BOLT ABAN ABANDON ABC AGGREGATE BASE COURSE ABT ABOUT AC ALTERNATING CURRENT ACK ACKNOWLEDGE ACP ACOUSTIC CEILING PANEL, ASPHALTIC CONCRETE PAVEMENT ACST ACOUSTIC AD ADDENDUM, AREA DRAIN ADDL ADDITIONAL ADH ADHESIVE ADJ ADJUSTABLE, ADJACENT ADF AMP FRAME, AMP FUSE AFF ABOVE FINISH FLOOR AFG ABOVE FINISH GRADE AGGR AGGREGATE AI AREA INLET, ANALOG INPUT AIC AMPS INTERRUPTING CAPACITY ALIG ALIGNMENT ALT ALTERNATE, ALTITUDE ALUM ALUMINUM AM ACOUSTICAL MATERIAL AMB AMBIENT ANC ANCHOR AO ANALOG OUTPUT AP ACCESS PANEL APRX APPROXIMATE APVD APPROVED ARCH ARCHITECTURAL ASSY ASSEMBLY AT ACOUSTICAL TILE, AMP TRIP ATC ACOUSTICAL TILE CEILING ATM ATMOSPHERE AUTO AUTOMATIC AUX AUXILIARY AVE AVENUE AVG AVERAGE AWG AMERICAN WIRE GAGE ACUSTICAL WALL TILE B TO B BACK TO BACK BAL BALANCE BBB BULLETIN BOARD BC BASE CABINET, BOTTOM CHORD, BOLT CENTER, BOLT CIRCLE BD BOARD BE BOTH ENDS, BELL END BF BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET BITUM BITUMINOUS BKG BACKING BL BASE LINE BLDG BUILDING BLK BLOCK BLKG BLOCKING BM BENCHMARK, BEAM BOC BACK OF CURB BOD BOTTOM OF DUCT BOG BOTTOM OF GRILLE BOL BOTTOM OF LOUVER, BOLLARD BOP BOTTOM OF PIPE BOR BOTTOM OF REGISTER BOT BOTTOM BOU BOTTOM OF UNIT BP BASE PLATE BRG BEARING BRGP BEARING PLATE BRKT BRACKET BS BOTH SIDES BTU BRITISH THERMAL UNIT BTW BETWEEN BTWLD BUTT WELD BU BELL UP, BUILT-UP BUR BUILT-UP ROOFING BW BOTH WAYS BYP BYPASS C TO C CENTER TO CENTER C&G CURB AND GUTTER C CHANNEL SHAPE, CENTIGRADE, CONDUIT CAB CABINET CAP CAPACITY CAT CATALOG, CATALOGIORY CAV CAVITY CB CATCH BASIN CCB CONCRETE BLOCK CCW COUNTER CLOCKWISE CCDF CONTROLLED-DENSITY FILL CE CONCRETE EDGE CER CERAMIC CF CUBIC FEET (FOOT) CFL COUNTER FLASHING CHBD CHALKBOARD CHD CHORD CHFR CHAMFER CHH COMMUNICATION HANDHOLE CI CURB INLET CIP CAST-IN-PLACE CIPB CONCRETE INTERLOCKING PAVER BALLAST CIRC CIRCULATION, CIRCULAR CONSTRUCTION JOINT CKT CIRCUIT CL CENTERLINE, CLASS, CLOSE CLG CEILING CLKG CAULKING CLR CLEAR CMH COMMUNICATION MANHOLE CMP CORRUGATED METAL PIPE CMU CONCRETE MASONRY UNIT CO CLEANOUT, CONCRETE OPENING COL COLUMN COM COMMON COMB COMBINATION COMM COMMUNICATION COMP COMPOSITION, COMPRESSIBLE, COMPOSITE CON CONCENTRIC CONC CONCRETE CONN CONNECTION CONST CONSTRUCTION CONT CONTINUOUS COOR COORDINATE CORR CORROSION, CORRUGATED CP CHECKER PLATE, CONTROL POINT CPLG COUPLING CRL CORROSION-RESISTANT LINING CSC COMPRESSION-SLEEVE COUPLING CSK COUNTERSINK CSS CLINIC SERVICE SINK CT CERAMIC TILE CTJ CONTRACTION JOINT CTR CENTER CTRL CONTROL CULV CULVERT CU COPPER, CUBIC CW CLOCKWISE CY CUBIC YARD d PENNY (NAIL MEASURE) DEEP, DIFFUSER, DRAIN DB DUCT BANK, DECIBEL, DRY BULB DBA DEFORMED BAR ANCHOR DBL DOUBLE DC DIRECT CURRENT DEG DEGREE DEG C DEGREE CENTIGRADE DEG F DEGREE FAHRENHEIT DEMO DEMOLITION DEP DEPRECATED DEPT DEPARTMENT DET DETAIL DI DROP INLET, DUCTILE IRON, DIGITAL INPUT DIA DIAMETER DIAG DIAGONAL, DIAGRAM DIFF DIFFERENTIAL, DIFFERENCE DIM DIMENSION DISCH DISCHARGE DIST DISTANCE, DISTRIBUTION DIV DIVISION DL DEAD LOAD DMJ DOUBLE MECHANICAL JOINT DMPF DAMP PROOFING DN DOWN DO DISSOLVED OXYGEN, DIGITAL OUTPUT, DITTO DP DEPTH DPDT DOUBLE POLE, DOUBLE THROW DPST DOUBLE POLE, SINGLE THROW DS DOWN SPOUT DST DOUBLE TEE, DRIP TRAP ASSEMBLY DUP DUPLICATE DWG DRAWING DWL DWEL DWR DRAWER E EAST EA EACH, EXHAUST AIR EC ELECTRICAL CONTRACTOR ECC ECCENTRIC ED EQUIPMENT DRAIN EDB ELECTRICAL DUCT BANK EE EACH END EF EACH FACE EFF EFFLUENT, EFFICIENCY EHH ELECTRICAL HANDHOLE EHS EXTERIOR INSULATION & FINISH SYSTEM EJ EXPANSION JOINT ELC ELBOW, ELEVATION ELEC ELECTRIC EMBD EMBEDDED EMER EMERGENCY EMH ELECTRICAL MANHOLE ENCL ENCLOSURE ENGR ENGINEER ENR ENTRANCE EOP EDGE OF PAVEMENT EQ EQUAL EQUIP EQUIPMENT EQUIV EQUIVALENT ES EACH SIDE, EQUAL SPACE, EMERGENCY SHOWER ESEW EMERGENCY SHOWER AND EYE WASH EST ESTIMATE EW EACH WAY, EMERGENCY EYE/FACE WASH EWC ELECTRIC WATER COOLER EWF EACH WAY, EACH FACE EWTB EACH WAY, TOP AND BOTTOM EVC EXCAVATION EXH EXHAUST EXP EXPANSION, EXPOSED EXST EXISTING EXT EXTERIOR, EXTERNAL, EXTENSION F TO F FINISH OR FINISHED FACE TO FACE FACE AND BYPASS F&B FABRICATE FAB FLOOR BEAM FBD FIBERBOARD FBO FIBERGLASS FBM BOARD FOOT MEASURE FBO FURNISHED BY OWNER FC FLUSHING CONNECTION FCA FLANGED COUPLING ADAPTER FD FLOOR DRAIN FDC FLEXIBLE DUCT CONNECTION FEEDER FDTN FOUNDATION FE FLOW, FLOW LINE FE FIRE EXTINGUISHER CABINET FES FLARED END SECTION FEXT FIRE EXTINGUISHER FF FAR FACE, FACTORY FINISH, FLAT FACE FG FINISHED GRADE FH FIRE HYDRANT FIG FIGURE FIN FINISH FJ FLUSH JOINT FL FLOW, FLOW LINE FLX FLEXIBLE FLG FLANGE FLOR FLUORESCENT FLR FLOOR FLS FLASHING, FLUSH FN FENCE FO FINISHED OPENING, FIBER OPTIC FOB FLAT ON BOTTOM FOC FACE OF CONCRETE, FACE OF CURB FOF FACE OF FINISH FOM FACE OF MASONRY FOS FACE OF STUDS FOT FLAT ON TOP FPT FEMALE PIPE THREAD FR FRAME FRP FIBERGLASS REINFORCED PLASTIC FRM FIRE RETARDANT TREATED MATERIAL FS FLOOR SINK, FAR SIDE FT FEET, FOOT FTG FOOTING, FITTING FUR FURRED, FURRING FURN FURNITURE, FURNISH FUT FUTURE FV FACE VELOCITY FW FIELD WELD, FIRE WALL FWD FORWARD FWE FURNISHED WITH EQUIPMENT FIXTR FIXTURE G GRILLE, GROUND GAGE (METAL THICKNESS) GAL GALLON GALV GALVANIZED GB GRAB BAR, GRADE BREAK GC GROOVED COUPLING GD GUARD GEN GENERAL GFCI GROUND FAULT CIRCUIT INTERRUPTER GFMU GUTTER FACE MASONRY UNIT GUTTER GRADE GJ GROOVED JOINT GL GLASS GLB GLASS BLOCK, GLULAM BEAM GND GROUND GP GUY POLE GR GRADE GRTG GRATING GSB GYPSUM SHEATHING BOARD GT GREASE TRAP GVL GRAVEL GW GUY WIRE GWB GYPSUM WALLBOARD GYP GYPSUM HARDBOARD H HIGH HB HOSE BIBB HBD HARDBOARD HC HANDICAPPED, HOLLOW CORE, HORIZONTAL CURVE, HORIZONTAL CENTERLINE HD HEAD, HOT DIP HDR HEADER HDW HARDWARE HEX HEXAGONAL HGR HANGER HH HANDHOLE HID HIGH-INTENSITY DISCHARGE HM HOLLOW METAL HORIZ HORIZONTAL HP HIGH POINT, HORSEPOWER HPC HORIZONTAL POINT OF CURVATURE HPS HIGH-PRESSURE SODIUM HPT HORIZONTAL POINT OF TANGENCY HR HOSE REEL, HOUR HS HEADED STUD, HIGH STRENGTH HOLLOW STRUCTURAL SHAPE HT HEIGHT HTG HEATING HV HIGH VOLTAGE HVAC HEATING, VENTILATING AND AIR CONDITIONING HWD HARDWOOD HWL HIGH WATER LEVEL HYD HYDRAULIC HZ HERTZ, CYCLES PER SECOND ID INSIDE DIAMETER, INTERIOR DIMENSION IE INVERT ELEVATION, FOR EXAMPLE IF INSIDE FACE IH INTAKE HOOD IMP IMPACT INCH INC INCLUDE, INCANDESCENT INF INFLUENT INSTR INSTRUMENTATION INSUL INSULATION INT INTERIOR, INTERSECTION INTR INTERMEDIATE, INTERIOR INV INVERT IPS IRON PIPE SIZE IPT INTERNAL PIPE THREAD IR INSIDE RADIUS, IRON ROD IRR IRRIGATION ISO ISOMETRIC JB JUNCTION BOX JCT JUNCTION JF JOINT FILLER JOIST JT JOINT K KIP KB KNEE BRACE KCMIL THOUSAND CIRCULAR MILS KO KNOCK DOWN KD KNOCK OUT KSI KIPS PER SQUARE INCH KW KILOWATT L ANGLE, LENGTH, LAVATORY, LINTEL LAD LADDER LAM LAMINATE LAT LATERAL LB LAG BOLT, POUND LCTB LIQUID CHALK AND TACK BOARD LDG LANDING LDR LEADER LE LIFTING EYE LF LINEAR FOOT LG LONG LH LEFT HAND LIN LINEAR LIQ LIQUID LLH LONG LEG HORIZONTAL LLV LONG LEG VERTICAL LLU LIQUID MARKER LECTURE UNIT LNG LONGITUDINAL LOC LOCATION LP LOW POINT LPS LOW-PRESSURE SODIUM LR LONG RADIUS LT LEFT LTD LIMITED LTG LIGHTING LTEL LINTEL LTNG LIGHTNING LV LOW VOLTAGE LVL LAMINATED VENEER LUMBER LVR LOUVER LW LIGHTWEIGHT LWC LIGHTWEIGHT CONCRETE LWL LOW WATER LEVEL MA MIXED AIR MACH MACHINED MAINT MAINTENANCE MAN MANUAL MATL MATERIAL MAX MAXIMUM MB MACHINE BOLT MBR MEMBER MC MECHANICAL CONTRACTOR, MECHANICAL COUPLING, MOMENT CONNECTION MCB METAL CORNER BEAD MCMJ MASONRY CONTROL JOINT MDMJ MODIFIED DOUBLE MECHANICAL JOINT MECH MECHANICAL MED MEDIUM MFR MANUFACTURER MH MANHOLE, METAL HALIDE MIN MINIMUM MIR MIRROR MISC MISCELLANEOUS MJ MECHANICAL JOINT ML MASONRY LINTEL MLO MAIN LUGS ONLY MMB MEMBRANE MO MASONRY OPENING MOD MODULAR, MODIFY MON MONUMENT MPT MALE PIPE THREAD MRGWB MOISTURE-RESISTANT GYPSUM WALLBOARD MS MOP SINK MSL MEAN SEA LEVEL MT MOUNT MTL METAL MU MASONRY UNIT MULL MULLION MV MEDIUM VOLTAGE MW MONITORING WELL N NORTH, NEUTRAL NA NOT APPLICABLE NAT NATURAL, NATIONAL NC NORMALLY CLOSED NEG NEGATIVE NF NEAR FACE, NON-FUSED NIC NOT IN CONTRACT NO NORMALLY OPEN, NUMBER NOM NOMINAL NPS NOMINAL PIPE SIZE NPT NATIONAL PIPE THREAD NS NEAR SIDE NTS NOT TO SCALE NWL NORMAL WATER LEVEL O TO O OUT TO OUT OA OUTSIDE AIR, OVERALL OC ON CENTER OCPD OVER CURRENT PROTECTION DEVICE OD OUTSIDE DIAMETER OED OPEN END DUCT OF OUTSIDE FACE, OFFICE FURNISHING OFCI OWNER FURNISHED CONTRACTOR INSTALLED OFOI OWNER FURNISHED OWNER INSTALLED OC ORIGINAL GROUND OH OVERHEAD OPNG OPENING OPP OPPOSITE OPT OPTIONAL OR OUTSIDE RADIUS ORD OVERFLOW ROOF DRAIN ORIG ORIGINAL OVFL OVERFLOW OVHG OVERHANG OZ OUNCE P PAINT PA PUBLIC ADDRESS PAR PARALLEL, PARAPET PB PANIC BAR, PULL BOX PBD PARTICLE BOARD PC POINT OF CURVE, PIECE, PRECAST PCC POINT OF COMPOUND CURVATURE PCF POUNDS PER CUBIC FOOT PCT PERCENT PE PLAIN END PED PEDESTAL PEN PENETRATION PERF PERFORATED PERM PERMANENT PERP PERPENDICULAR PF POWER FACTOR PFMU PREFACED MASONRY UNIT PH PHASE PI POINT OF INTERSECTION PKG PACKAGE PL PLATE, PROPERTY LINE, PRECAST LINTEL PLAS PLASTER PLAT PLATFORM PLBG PLUMBING PLF POUNDS PER LINEAR FOOT PLN PNEUMATIC POL POLISH POS POSITIVE, POSITION PP POLYPROPYLENE, POWER POLE PRC POINT OF REVERSE CURVATURE PREF PREFINISHED PREFAB PREFABRICATED PRELIM PRELIMINARY PREP PREPARE PRES PRESSURE PRI PRIMARY PROP PROPERTY, PROPOSED PROT PROTECTION PS PIPE SUPPORT PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH PSIA POUNDS PER SQUARE INCH ABSOLUTE PSIG POUNDS PER SQUARE INCH GAGE PST PRESTRESSED PT POINT, POINT OF TANGENCY PTN PARTITION PVC POLYVINYL CHLORIDE, POINT OF VERTICAL CURVE PVMT PAVEMENT PWD PLYWOOD PWJ PLYWOOD WEB JOIST PZ PIEZOMETER Q RATE OF FLOW QT QUARRY TILE QTR QUARTER QTY QUANTITY QUAL QUALITY R&R REMOVE AND REPLACE R&S REMOVE AND SALVAGE R RADIUS, REGISTER, RISER RA RETURN AIR RB RESILIENT BASE, ROCK BERM RCPT RECEPTACLE RD ROOF DRAIN REC RECESS RECD RECEIVED RECT RECTANGULAR RED REDUCER REF REFERENCE REINF REINFORCING REM REMOVE REQD REQUIRED RESIL RESILIENT RET RETAINING, RETURN REV REVISION, REVERSE RF RESILIENT FLOORING RFG ROOFING RFL REFLECTED, REFLECTOR RGH ROUGH RGS RIGID GALVANIZED STEEL RGS-PVC PVC COATED RGS RH RELIEF HOOD, RIGHT HAND, RELATIVE HUMIDITY RL REQUIRED LAP RLFA RELIEF AIR RM ROOM RND ROUND RNG RUNNING ROW ROUGH OPENING RO RIGHT-OF-WAY RPM REVOLUTIONS PER MINUTE RR RAILROAD RSP ROCK SLOPE PROTECTION RT RIGHT RVT RESILIENT VINYL TILE RY READY S SOUTH, SINK SA SUPPLY AIR SAMU SOUND-ABSORBING MASONRY UNIT SAN SANITARY SB SPLASH BLOCK SC SOLID CORE SCH SCHEDULE SCHEM SCHEMATIC SCN SCREEN SE STEEL/ALUMINUM EDGE SEC SECONDARY, SECONDS SECT SECTION SEP SEPARATE SFP SQUARE FOOT, SILT FENCE SG SHEET GLASS, SEALANT GROOVE SH SHOWER SHT SHEET SHTG SHEATHING SIL SILENCE SIM SIMILAR SJ SLAB JOINT SL SLOPE, STEEL LINTEL SLTD SLOTTED SLV SLEEVES SMLS SEAMLESS SOG SLAB ON GRADE SP SOUNDPROOF, STANDPIPE SPA SPACING SPEC SPECIFICATION SPLY SUPPLY SPST SINGLE POLE SINGLE THROW SPT SET POINT SQ SQUARE SR SHORT RADIUS SS SERVICE SINK SST STAINLESS STEEL ST PIPE SUPPORT STA STATION STD STANDARD STIF STIFFENER STIRR STIRRUP STL STEEL STOR STORAGE STRUC STRUCTURAL, STRAIGHT SUB SUBSTITUTE SUC SUCTION SUSP SUSPENDED SY PLYWOOD SYM SYMBOL SYMM SYMMETRICAL SYN SYNTHETIC SYS SYSTEM T&B TOP AND BOTTOM T&G TONGUE AND GROOVE T TILE, TREAD, TOP TA TOILET ACCESSORY, TEMPERED AIR TAN TANGENT TBM TEMPORARY BENCHMARK TCE TEMPORARY CONSTRUCTION EASEMENT TEF TROWELED EPOXY FLOORING TEMP TEMPORARY, TEMPERATURE THD THREAD THK THICK THRESH THRESHOLD TKBD TACK BOARD TOB TOP OF BOLT, TOP OF BANK, TOP OF BEAM, TOP OF BERM TOC TOP OF CURB, TOP OF CONCRETE TOD TOP OF DUCT TOF TOP OF FOOTING TOG TOP OF GRATING TOL TOLERANCE, TOP OF LEDGER TOM TOP OF MASONRY TOP TOP OF PLATE TOPO TOPOGRAPHY TOS TOP OF SLAB, TOP OF STEEL, TOE OF SLOPE TWP TOP OF WALL TOILET PARTITION, TELEPHONE POLE, TOE PLATE, TRAP PRIMER TPD TOILET PAPER DISPENSER TPG TOPPING, THROUGH PLATE GIRDER TR TRANSOM TRANS TRANSITION TRD TRENCH DRAIN TYP TYPICAL U URINAL UG UNDERGROUND ULT ULTIMATE UNFN UNFINISHED UNO UNLESS NOTED OTHERWISE UTIL UTILITY V VENT, VELOCITY, VOLT VA VOLT AMPERE VAC VACUUM VAR VARNISH, VARIABLE, VOLT AMPERES REACTIVE VAPOR BARRIER, VINYL BASE, VALVE BOX VC VERTICAL CURVE VCP VITRIFIED CLAY PIPE VCT VINYL COMPOSITION TILE, VERTICAL CENTERLINE VELOCITY VENT VENTILATION VERT VERTICAL VERTS VERTICAL REINFORCING VGR VERTICAL GRAIN VIF VERIFY IN FIELD VIN VINYL VOL VOLUME VPC VERTICAL POINT OF CURVATURE VPI VERTICAL POINT OF INTERSECTION VPT VERTICAL POINT OF TANGENCY VS VERSUS, VAPOR SEAL VTR VENT THROUGH ROOF VWC VINYL WALL COVERING W/ WITH W/O WITHOUT W WATT, WEST, WIDE, WINDOW, WIRE, WIDE FLANGE BEAM WB WOOD BASE WC WATER CLOSET, WATER COLUMN WD WOOD, WIDTH WF WIDE FLANGE, WASH FOUNTAIN WG WIRE GLASS, WATER GAGE WH WALL HYDRANT, WEEP HOLE WI WROUGHT IRON WL WATER LEVEL WLD WELDED WM WIRE MESH WP WEATHERPROOF WS WATERSTOP, WATER SURFACE WGST WAINSCOT WT WEIGHT, WATER TIGHT WTHP WATERPROOF, WORKING POINT WWF WELDED WIRE FABRIC XP EXPLOSION-PROOF XS EXTRA STRONG XSECT CROSS SECTION XXS DOUBLE EXTRA STRONG YH YARD HYDRANT YS YIELD STRENGTH GENERAL NOTES: 1. THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS. 2. LISTING OF ABBREVIATIONS DOES NOT IMPLY THAT ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS. 3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF A WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION; "INC" MAY MEAN INCLUDED OR INCLUDING AND "REINF" MAY MEAN EITHER REINFORCE OR REINFORCING. 4. SEE INSTRUMENTATION LEGEND SHEET FOR PROJECT-SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.							



3	8/1/13	CITY OF MASSILLON REVISED CIVIL DRAWINGS
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PROJECT NUMBER	197099



AQUA

**MASSILLON WATER TREATMENT PLANT
SLUDGE DEWATERING FACILITY**

GENERAL ABBREVIATIONS		SHEET
FILENAME	00G-03.DWG	00G-03
SCALE	NONE	

MATERIALS IN PLAN/SECTION	
	ACOUSTICAL CEILING TILE (SECTION)
	ASPHALT (PLAN OR SMALL-SCALE SECTION)
	ASPHALT (LARGE-SCALE SECTION)
	BATT INSULATION (SECTION)
	BRICK MASONRY (PLAN AND/OR SECTION)
	CHECKERED PLATE (PLAN)
	CONCRETE (PLAN AND/OR SECTION)
	CONCRETE MASONRY (PLAN AND/OR SECTION)
	DEMOLITION (PLAN AND/OR SECTION)
	EARTH (SECTION)
	FILTER POINT MAT (PLAN)
	FINISHED WOOD (SECTION)
	GLULAM LUMBER (SECTION)
	GRANULAR FILL (SECTION)
	GRATING (SECTION)
	GRATING (PLAN)
	GROUT (SECTION)
	GYPSUM BOARD (SECTION)
	METAL (SECTION)
	ORIENTED STRAND BOARD (SECTION)
	PARTICLE BOARD (SECTION)
	PLYWOOD (LARGE-SCALE SECTION)
	PLYWOOD (SMALL-SCALE SECTION)
	PRECAST CONCRETE (PLAN AND/OR SECTION)
	RIGID INSULATION (SECTION)
	RIPRAP (PLAN AND/OR SECTION)
	SAND (SECTION)
	SOD (SECTION)
	WEEP JOINT MORTAR PROTECTION SYSTEM (SECTION)
	WOOD - CONTINUOUS (SECTION)
	WOOD BLOCKING (SECTION)

GENERAL SYMBOLOGY

ARROW INDICATES DIRECTION OF PLAN NORTH

PLAN
1/4" = 1'-0"
PLAN TITLE

SECTION LETTER
FLAG INDICATES DIRECTION OF SECTION CUT

SHEET WHERE SECTION IS LOCATED

SECTION CUT MARKER

SECTION LETTER
SECTION TITLE
3/8" = 1'-0"

SHEET WHERE SECTION VIEW IS FIRST CUT *

DETAIL NUMBER
SHEET WHERE DETAIL IS LOCATED *

DETAIL MARKER

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.

DETAIL NUMBER
DETAIL TITLE
3" = 1'-0"

SHEET WHERE DETAIL WAS CALLED OUT *

ELEVATION NUMBER
ARROW INDICATES POINT OF VIEW
SHEET WHERE ELEVATION IS LOCATED *

SINGLE ELEVATION OR PHOTO MARKER

ELEVATION NUMBER
ARROW INDICATES POINT OF VIEW ELEVATION
INDICATES SHEET WHERE ELEVATION IS LOCATED

MULTIPLE ELEVATION OR PHOTO MARKER

ELEVATION IDENTIFICATION NUMBER
ELEVATION TITLE
3" = 1'-0"

SHEET WHERE POINT OF VIEW MARKER CAN BE FOUND *

* EXCEPTIONS WHERE THE SHEET NUMBER IS REPLACED BY A DASH (-).
1) FOR COMMON DETAILS, SECTIONS, ELEVATIONS OR DETAILS THAT ARE CUT OR CALLED OUT ON MULTIPLE SHEETS.
2) SECTIONS, ELEVATIONS OR DETAILS THAT ARE LOCATED ON THE SAME SHEET THEY ARE CUT OR CALLED OUT ON.

GENERAL SYMBOLOGY

TARGET ELEVATION

ARCHITECTURAL

ROOM NAME
XX-XX ROOM NUMBER

XXX DOOR NUMBER

A COLUMN GRID LINE

X WALL TYPE

X WINDOW TYPE

X LOUVER

X ACCESSORY, FURNITURE, AND MISCELLANEOUS EQUIPMENT IDENTIFIER

KEY NOTE DESIGNATION

KEY NOTE NUMBER

GENERAL LINE SYMBOLOGY

	4-HOUR FIRE RATED WALL
	3-HOUR FIRE RATED WALL
	2-HOUR FIRE RATED WALL
	1-HOUR FIRE RATED WALL
	COLUMN GRID LINE/CENTERLINE

SHEET NAMING CONVENTION

DISCIPLINE DESIGNATOR & DISCIPLINE ORDER

G	GENERAL SURVEYING/MAPPING
V	DEMOLITION
X	CIVIL
C	LANDSCAPING
L	MULTI-DISCIPLINE
U	STRUCTURAL
A	ARCHITECTURAL
D	PROCESS
M	MECHANICAL (HVAC)
P	PLUMBING
F	FIRE PROTECTION
E	ELECTRICAL
Y	INSTRUMENTATION

IDENTIFICATION SYMBOLOGY

PIPING

FIGURE 36-PL-EXAMPLE
LINE SIZE 36"
SERVICE PLANT EFFLUENT

EQUIPMENT IDENTIFICATION

ALTERNATIVE 1

FIGURE NPWP2023-EXAMPLE
SERVICE ABBREVIATION NPWP INDICATES NON-POTABLE WATER
EQUIPMENT ABBREVIATION 20 INDICATES PUMP
BUILDING OR STRUCTURE NUMBER 23
EQUIPMENT NUMBER PUMP 23

ALTERNATIVE 2

FIGURE NPWP-23-EXAMPLE
SERVICE ABBREVIATION NPWP INDICATES NON-POTABLE WATER
EQUIPMENT ABBREVIATION 20 INDICATES PUMP
EQUIPMENT NUMBER PUMP 23

PIPING SYMBOLOGY

VALVES		MISCELLANEOUS
SINGLE LINE	DOUBLE LINE	
		BALL VALVE
		BUTTERFLY VALVE
		DIAPHRAGM VALVE
		GATE VALVE
		GLOBE VALVE
		KNIFE GATE VALVE
		NEEDLE VALVE
		PINCH VALVE
		PLUG VALVE
		THREE-WAY BALL VALVE
		THREE-WAY PLUG VALVE
CONTROL		
		BALL CHECK VALVE
		CHECK VALVE
		DOUBLE-DISK CHECK VALVE
		CONE VALVE
		PRESSURE RELIEF VALVE
		PRESSURE-REDUCING VALVE
		AIR RELEASE VACUUM VALVE A = AIR RELEASE VAC = VACUUM
		PRESSURE-REGULATING VALVE
		3-WAY CONTROL VALVE
MISCELLANEOUS		
		BACKFLOW PREVENTER
		WATER METER
		VARIABLE AREA METER
		UNION
		WYE-STRAINER
		PENETRATION THROUGH STRUCTURE
		FLEXIBLE HOSE OR TUBING
		FLEXIBLE PIPING CONNECTION
		LINE SIZE CHANGE (CONCENTRIC REDUCER)
		LINE SIZE CHANGE (ECCENTRIC REDUCER)
		LINE TURNING DOWN
		LINE TURNING UP
		BLIND FLANGE
		PIPE BREAK

PIPING SYMBOLOGY

MISCELLANEOUS

	PIPE JOINT (SEE SPECS FOR REQUIREMENTS)
	COMPRESSION SLEEVE TYPE COUPLING
	FLANGED COUPLING ADAPTER (FCA)
	FLEXIBLE CONNECTION
	HARNESSED MECHANICAL COUPLING
	PRESSURE GAGE (W/COCK)
	TRAP
	QUICK DISCONNECT CAM & GROOVE COUPLING
	CAP OR PLUG
	INTERIOR CLEANOUT
	HOSE VALVE, HOSE BIBB, OR FLUSHING CONNECTION
	HOSE RACK
	FLOOR DRAIN
X	X = TYPE DESIGNATED IN SPECIFICATIONS
	BELL UP (PLAN)
	BELL UP (SECTION OR SCHEMATIC)
	DRAIN (SECTION OR SCHEMATIC)
ATA	AIR TOOL ASSEMBLY
AVS	AUTOMATIC VALVE STATION
PRS	PRESSURE-REDUCING STATION

GENERAL NOTES:

1. THIS IS A STANDARD SHEET SHOWING COMMON SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.

2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

NOTE: MISCELLANEOUS SYMBOLOGY SHOWN IS FOR SINGLE-LINE PIPING. DOUBLE-LINE PIPING SYMBOLS ARE SIMILAR.

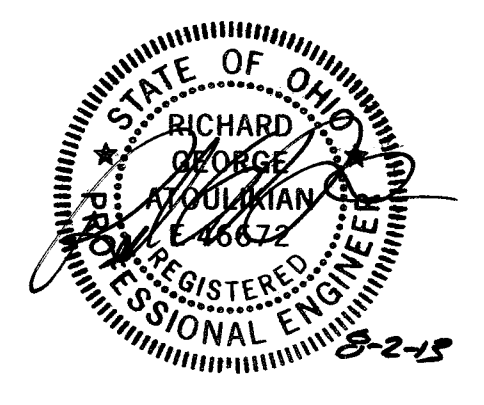
GENERAL SYMBOLOGY

ISSUE	DATE	DESCRIPTION
3	8/1/13	CITY OF MASSILLON REVISED CIVIL DRAWINGS
2	4/29/13	AQUA OHIO APPROVED VE CHANGES
1	4/8/13	REVISED CIVIL DRAWINGS
0	3/25/13	100% DESIGN DOCUMENTS

AQUA APPROVAL	B. BISSON/M. FRITZ
VE CHANGES	AQUA OHIO
PROJECT MANAGER	R. ATOLIKIAN
PROJECT ENGINEER	J. MARIE
STRUCTURE	M. PAINE
CADD	M. ROBLE
ARCHITECTURAL	B. ELLINGTON
PROCESS	C. ROBY
MECH./PLUMBING	C. WORK
PROJECT NUMBER	197099

GENERAL SYMBOLOGY

FILENAME: 00G-04.DWG
SCALE: NONE
SHEET: 00G-04

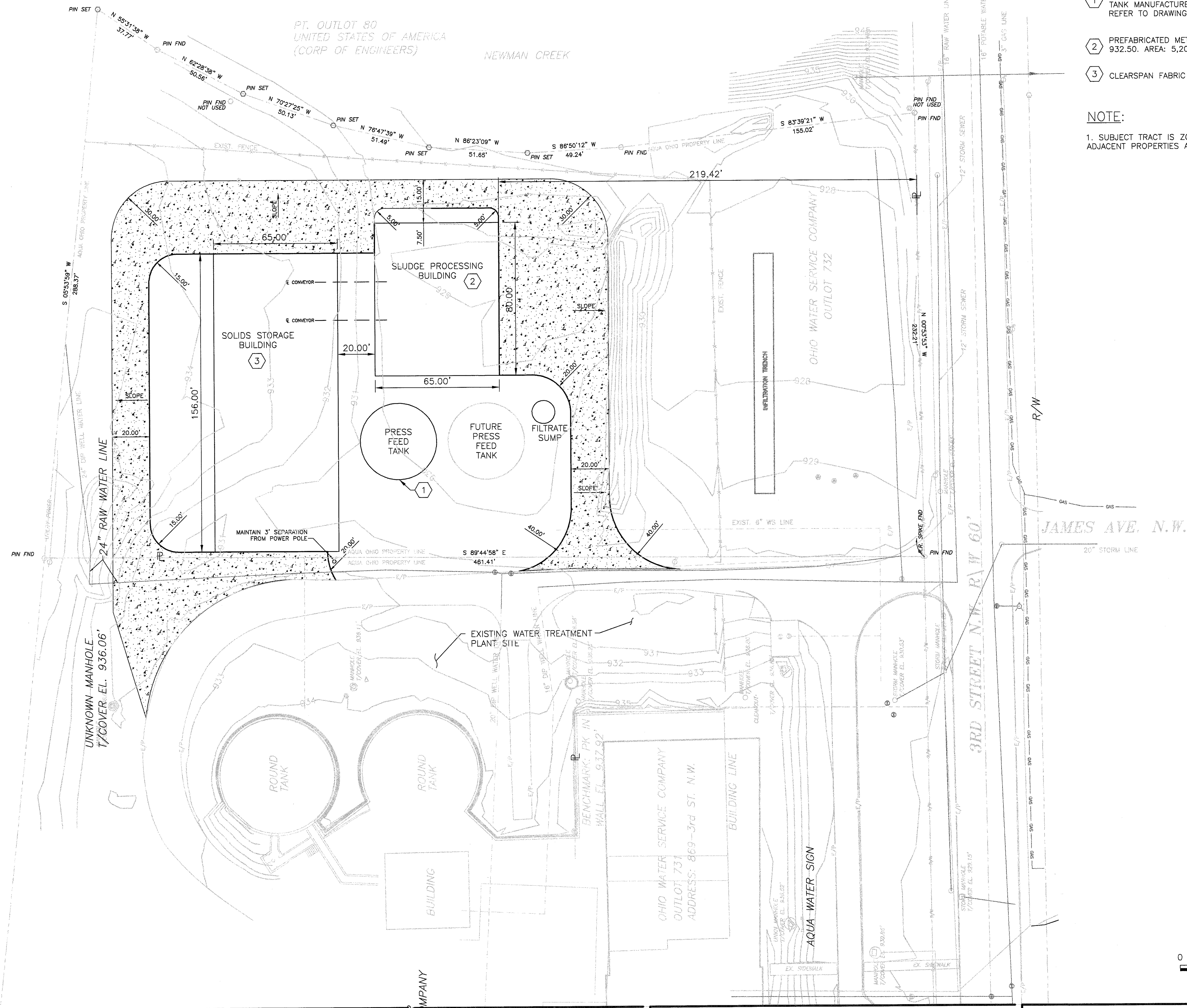
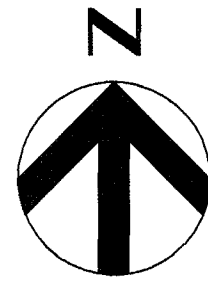


AQUA

MASSILLON WATER TREATMENT PLANT
SLUDGE DEWATERING FACILITY

GENERAL SYMBOLOGY

FILENAME	00G-04.DWG	SHEET
SCALE	NONE	00G-04



KEY NOTES:

- ① BOLTED STEEL SLUDGE STORAGE TANK SHALL BE 250,000 GALLONS. TANK MANUFACTURER IS RESPONSIBLE FOR FOUNDATION DESIGN. REFER TO DRAWING OOC-14 FOR ADDITIONAL DETAILS
- ② PREFABRICATED METAL BUILDING STRUCTURE ON CMU BASE. FFE: 932.50. AREA: 5,200 SF.
- ③ CLEARSPAN FABRIC STRUCTURE. FFE: 932.50. AREA: 10,140 SF.

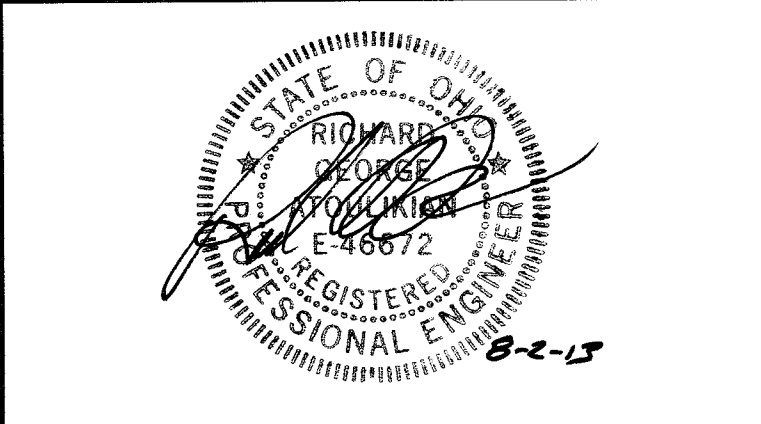
NOTE:

1. SUBJECT TRACT IS ZONED I-2 INDUSTRIAL. ALL ADJACENT PROPERTIES ARE ZONED INDUSTRIAL.



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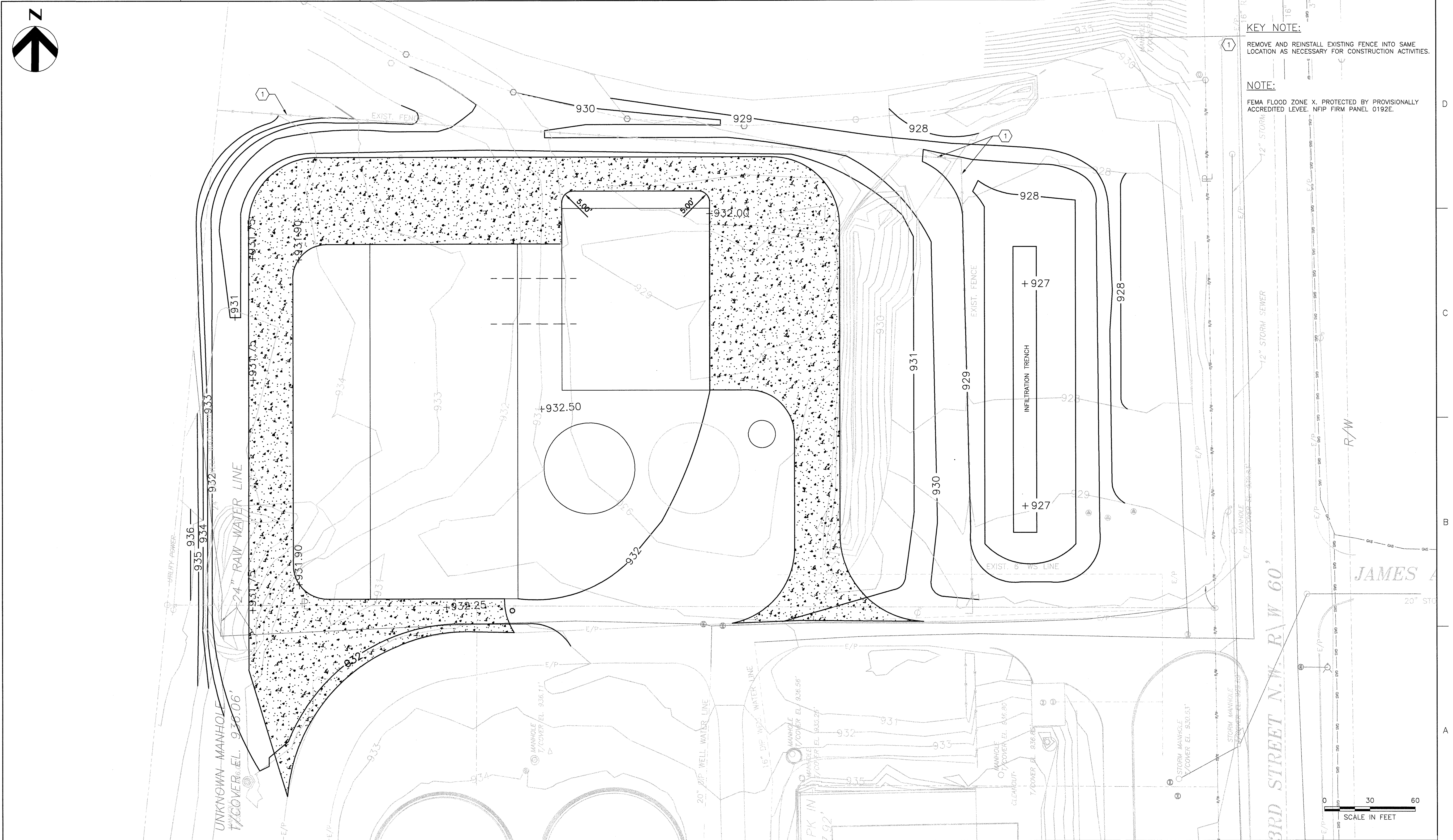


AQUA

**MASSILLON WATER TREATMENT PLANT
SLUDGE DEWATERING FACILITY**

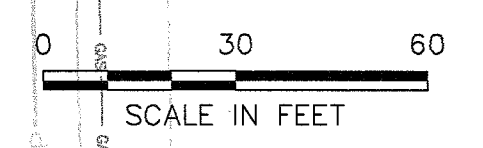
**CIVIL
OVERALL SITE PLAN**

FILENAME	OOC-01.DWG	SHEET
SCALE	1:30	00C-01



KEY NOTE:
 1 REMOVE AND REINSTALL EXISTING FENCE INTO SAME LOCATION AS NECESSARY FOR CONSTRUCTION ACTIVITIES.

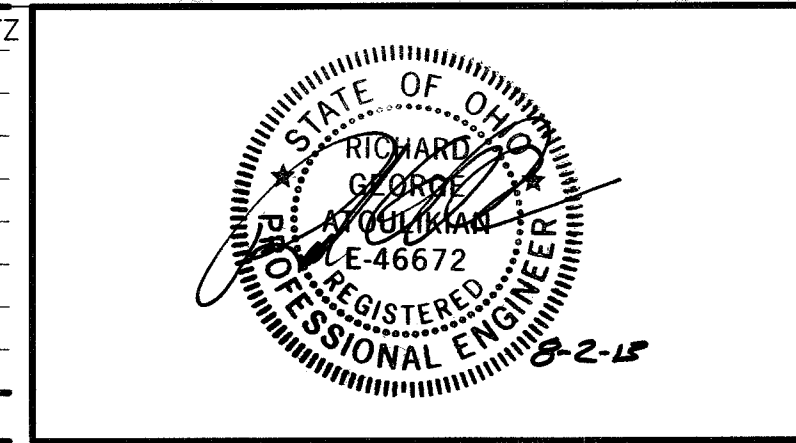
NOTE:
 FEMA FLOOD ZONE X. PROTECTED BY PROVISIONALLY ACCREDITED LEVEL. NFIP FIRM PANEL 0192E.



HDR
 HDR Engineering, Inc.

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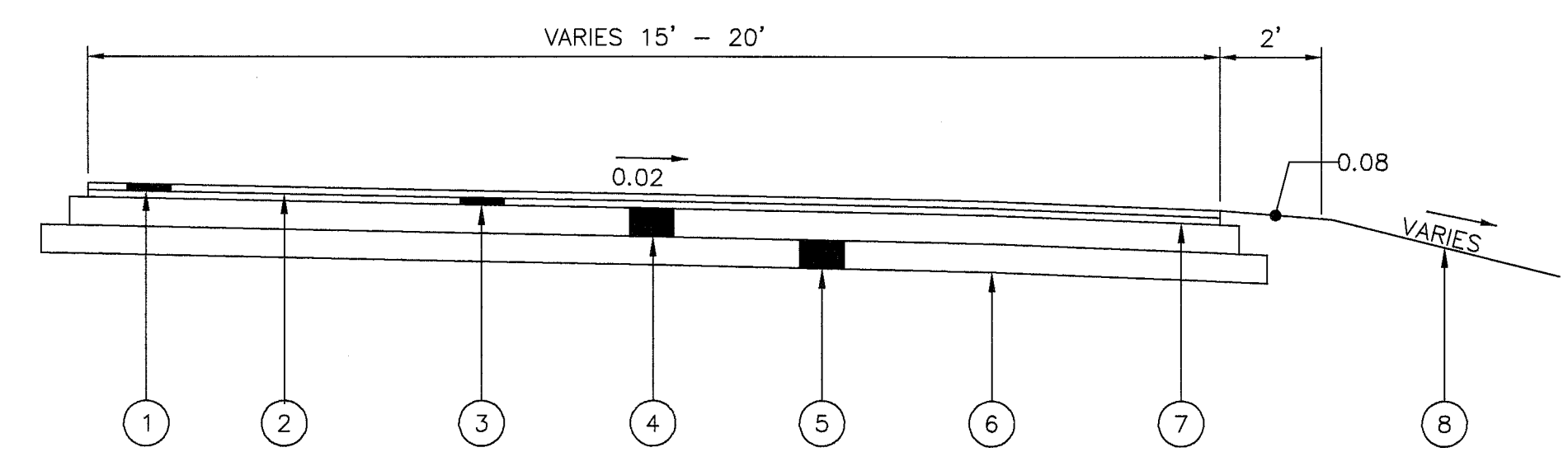
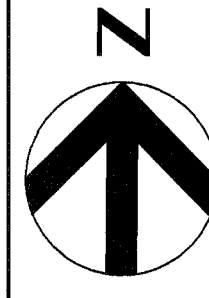


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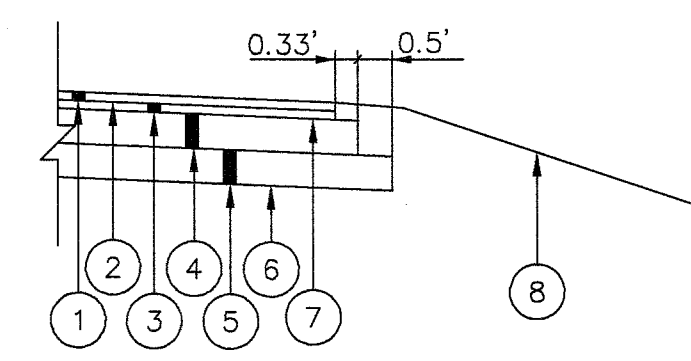
MASSILLON WATER TREATMENT PLANT
 SLUDGE DEWATERING FACILITY

CIVIL GRADING PLAN

FILENAME	00C-02.DWG	SHEET	00C-02
SCALE	1:20		



FULL DEPTH TYPICAL SECTION

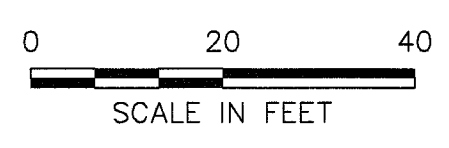


PAVEMENT STEP DETAIL

LEGEND

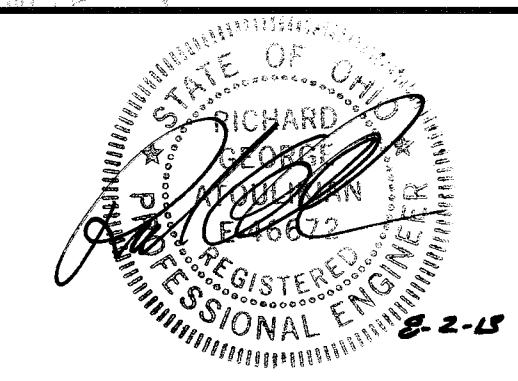
- ① ITEM 448 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE TYPE 1, PG64-22
- ② ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL./S.Y.
- ③ ITEM 448 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE 2, PG64-22
- ④ ITEM 301 - 4" ASPHALT CONCRETE BASE
- ⑤ ITEM 304 - 6" AGGREGATE BASE
- ⑥ ITEM 204 - SUBGRADE COMPACTION
- ⑦ ITEM 407 - TACK COAT @ 0.075 GAL./S.Y.
- ⑧ ITEM 659 - SEEDING AND MULCHING

 PROPOSED PAVEMENT
 -E/P- EXISTING PAVEMENT



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MECH./PLUMBING	C. WORK
PROJECT NUMBER	197099

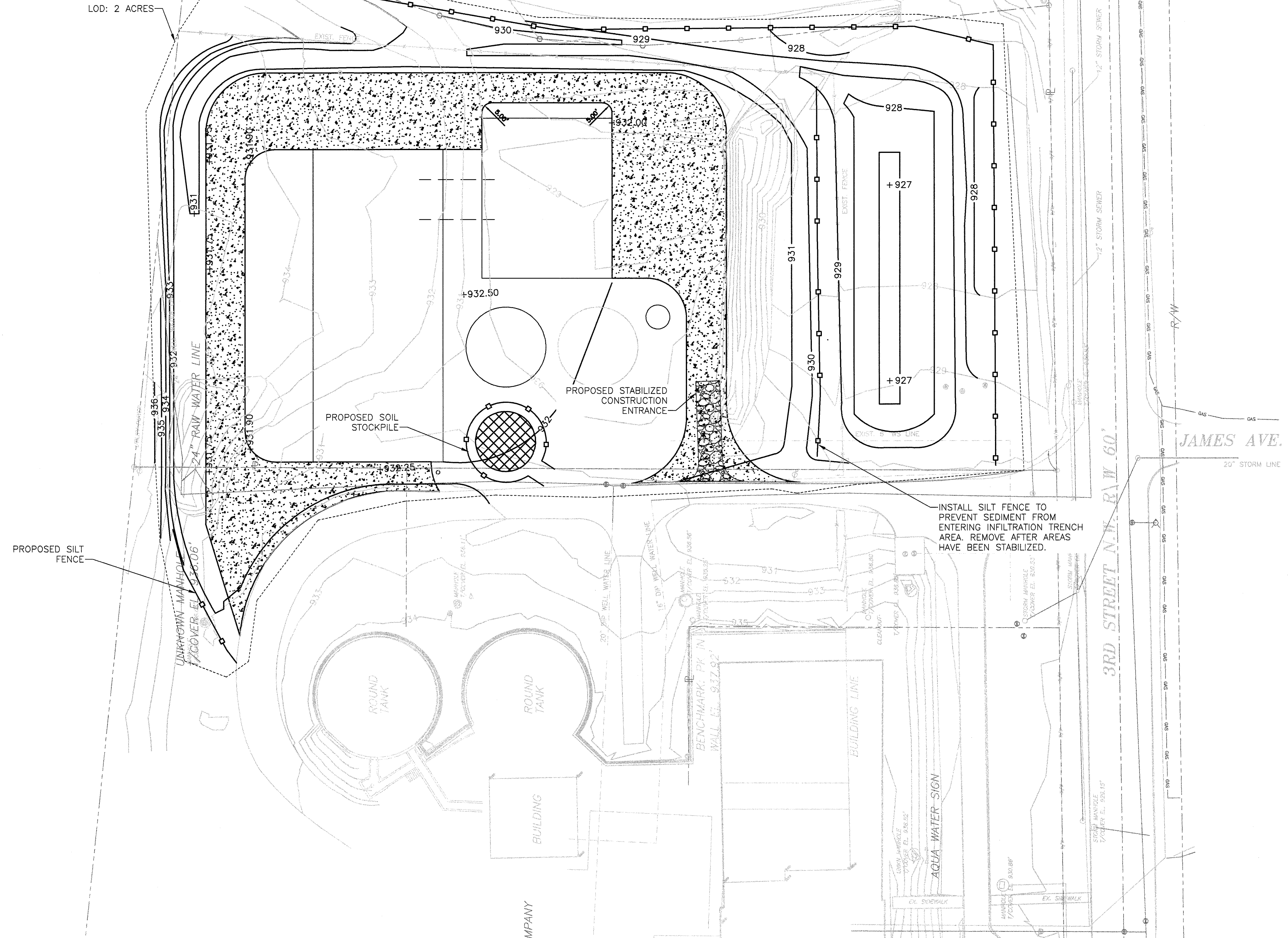
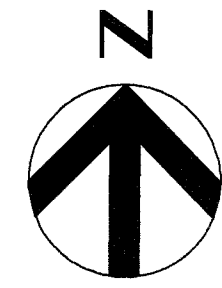


AQUA
 MASSILLON WATER TREATMENT PLANT
 SLUDGE DEWATERING FACILITY

**CIVIL
 PAVING PLAN**

FILENAME: 00C-03.DWG
 SCALE: 1:20

SHEET
00C-03



CONSTRUCTION SEQUENCE:

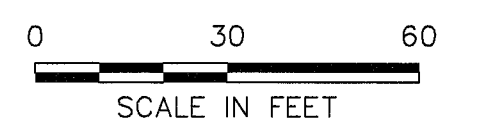
1. THE LIMIT OF DISTURBANCE (LOD) IS TO BE STAKED OUT TO IDENTIFY ALL TREES AND EXISTING STRUCTURES TO BE PROTECTED THROUGH THE COURSE OF CONSTRUCTION. ONCE THE LOD HAS BEEN IDENTIFIED, PROPER EROSION AND SEDIMENT CONTROLS ARE TO BE INSTALLED AS SHOWN ON THE APPROVED PLANS INCLUDING SILT FENCING AND ANY TREE PROTECTION.
2. SITE CLEARING AND TREE REMOVAL WILL OCCUR ONCE EROSION & SEDIMENTATION CONTROL MEASURES ARE IN PLACE. ONCE ADEQUATE CLEARING HAS BEEN MADE, A STABILIZED CONSTRUCTION ENTRANCE IS TO BE CONSTRUCTED TO ALLOW APPROPRIATE SITE ACCESS. TEMPORARY SEEDING IS TO TAKE PLACE AFTER ANY CLEARING TO STABILIZE BARE AREAS.
3. INSTALL DIVERSION SWALES ABOVE AREAS TO BE DISTURBED PRIOR TO CONSTRUCTION. INSTALL ADDITIONAL RUNOFF CONTROL MEASURES AS NEEDED AS GRADING PROGRESSES.
4. BEGIN CONSTRUCTION OF TREATMENT PLANT FACILITIES AND OPERATIONS.
5. INSTALL ROADWAYS.
6. BEGIN GRADING CONVEYANCE CHANNEL FOR THE INFILTRATION TRENCH.
7. TEMPORARILY STABILIZE TOPSOIL STOCKPILES (SEED AND SILT FENCE AROUND TOE OF SLOPE)
8. BEGIN LAND CLEARING AND GRADING AS SOON AS KEY EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE. ONCE A SCHEDULED DEVELOPMENT AREA IS CLEARED, GRADING SHOULD FOLLOW IMMEDIATELY SO THAT PROTECTIVE GROUND COVER CAN BE REESTABLISHED QUICKLY. DO NOT LEAVE ANY AREA BARE AND EXPOSED FOR EXTENDED PERIODS. LEAVE ADJOINING AREAS PLANNED FOR DEVELOPMENT, OR TO BE USED FOR BORROW OR DISPOSAL, UNDISTURBED FOR AS LONG AS POSSIBLE TO SERVE AS NATURAL BUFFER ZONES.
9. BEGIN EXCAVATION OF INFILTRATION TRENCH. INSTALLATION OF SAND AND GRAVEL LAYERS SHOULD NOT OCCUR UNTIL THE ENTIRE SITE HAS BEEN STABILIZED. INTRODUCTION OF EXCESS SEDIMENT FROM CONSTRUCTION ACTIVITIES TO THE INFILTRATION SYSTEM WOULD BE HARMFUL.
10. IMMEDIATELY AFTER LAND CLEARING AND GRADING, APPLY SURFACE STABILIZATION ON GRADED AREAS, CHANNELS, AND OTHER DISTURBED AREAS. STABILIZE ANY DISTURBED AREA WHERE ACTIVE CONSTRUCTION WILL NOT TAKE PLACE FOR 21 WORKING DAYS BY TEMPORARY SEEDING AND/OR MULCHING OR BY OTHER SUITABLE MEANS. INSTALL PERMANENT STABILIZATION MEASURES IMMEDIATELY AFTER FINAL GRADING. TEMPORARY SEEDING AND/OR MULCHING MAY BE NECESSARY IF WEATHER CONDITIONS DETERIORATE, WITH PERMANENT MEASURES DELAYED TEMPORARILY.
11. ALL DISTURBED AREAS SHOULD HAVE PERMANENT MEASURES APPLIED. ALL TEMPORARY STRUCTURES SHOULD BE REMOVED AFTER PERMANENT STRUCTURES ARE IN PLACE AND STABILIZED. BORROW/DISPOSAL AREAS SHOULD BE PERMANENTLY VEGETATED OR OTHERWISE STABILIZED.

LEGEND:

	930	EXISTING CONTOUR
	930	PROPOSED CONTOUR
		LIMIT OF DISTURBANCE
		PROPOSED SILT FENCE
		PROPOSED STABILIZED CONSTRUCTION ENTRANCE

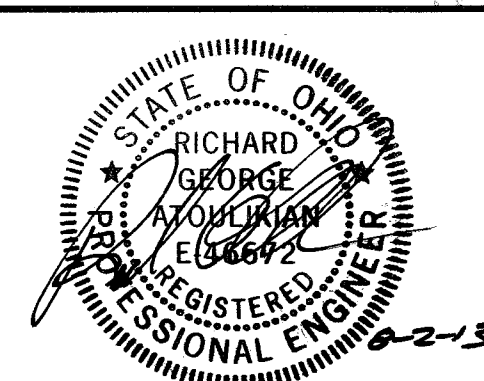
NOTES:

1. EXISTING SOIL HAS BEEN CHARACTERIZED AS ALLUVIAL-LAND URBAN COMPLEX BY THE NATIONAL RESOURCES CONSERVATION SERVICES.
2. SILT FENCING IS TO BE INSTALLED AT THE TOE OF SLOPE TO PREVENT SOIL MIGRATION.
3. THE RECOMMENDED SEEDING TIMES ARE AUGUST-OCTOBER AND MARCH-MAY. RECOMMENDED SEED MIXTURES ARE TO BE KENTUCKY BLUEGRASS OR PERENNIAL RYEGRASS. EXAMPLES INCLUDE ANDROPOGON GERARDII AND PANICUM VIRGATUM.
4. THE CONTRACTOR SHALL PREVENT AND/OR REDUCE AND CONTROL SOIL EROSION RESULTING FROM THE PROPOSED IMPROVEMENTS. THE USE OF SILT FENCING, JUTE MATTING, TEMPORARY SEEDING, SILT CHECKS, INLET PROTECTION AROUND ALL CATCH BASINS, STABILIZED CONSTRUCTION ENTRANCE(S), ETC. WILL BE REQUIRED. SEDIMENT CONTROL STRUCTURES/DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL RAINWATER AND LAND DEVELOPMENT - OHIO'S STANDARDS FOR STORM WATER MANAGEMENT, LAND DEVELOPMENT AND URBAN PROTECTION. SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUED INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS SET FORTH ON THE APPROVED STORM WATER POLLUTION PREVENTION IF APPLICABLE OR AS DETAILED ON THE CONSTRUCTION PLANS, AS SPECIFIED BY THE CITY OF MASSILLON.



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MECH./PLUMBING	C. WORK
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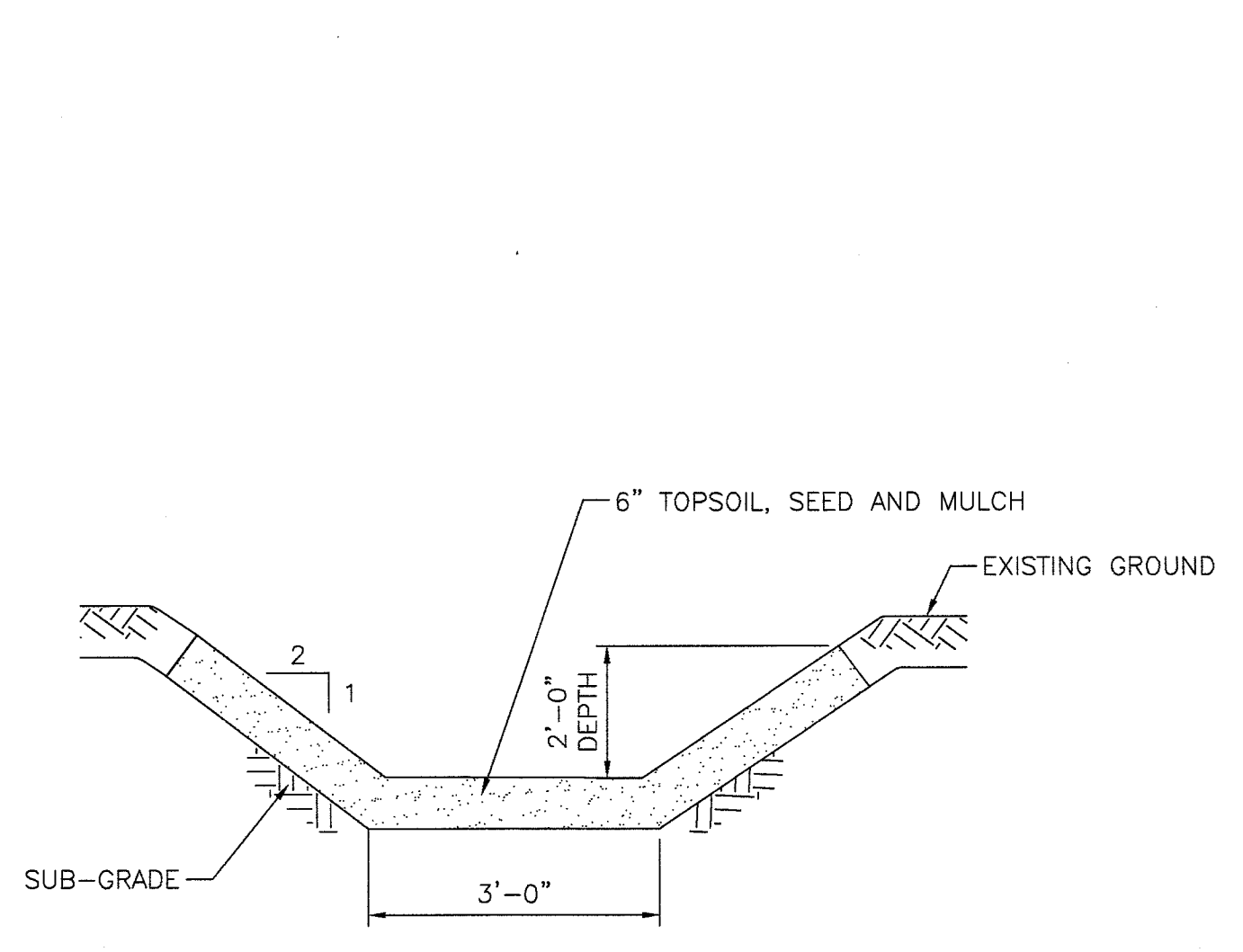
AQUA

**MASSILLON WATER TREATMENT PLANT
SLUDGE DEWATERING FACILITY**

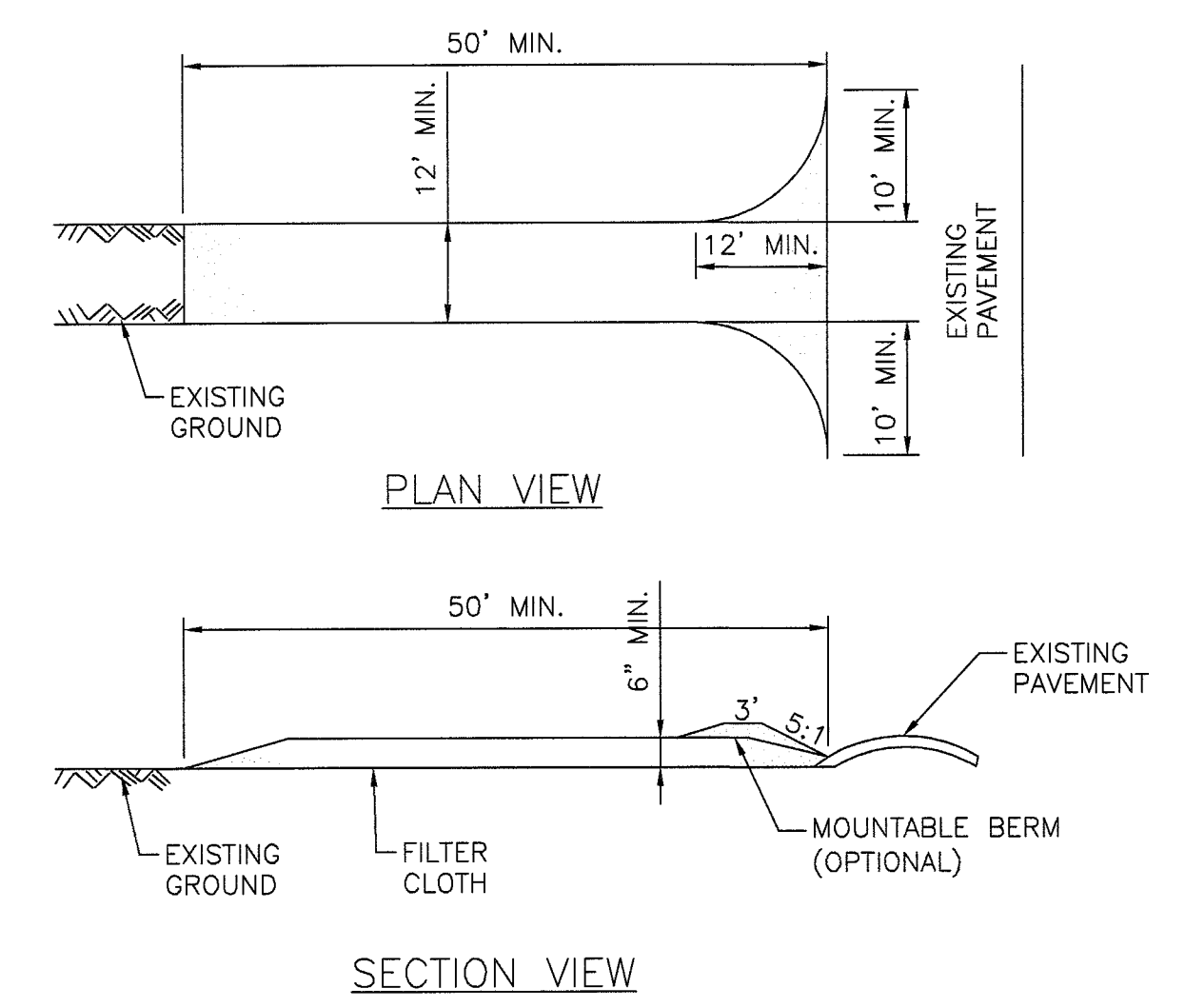
CIVIL		EROSION AND SEDIMENTATION CONTROL PLAN	
FILENAME	00C-04.DWG	SHEET	00C-04
SCALE	1:30		

SOIL EROSION & SEDIMENT CONTROL NOTES:

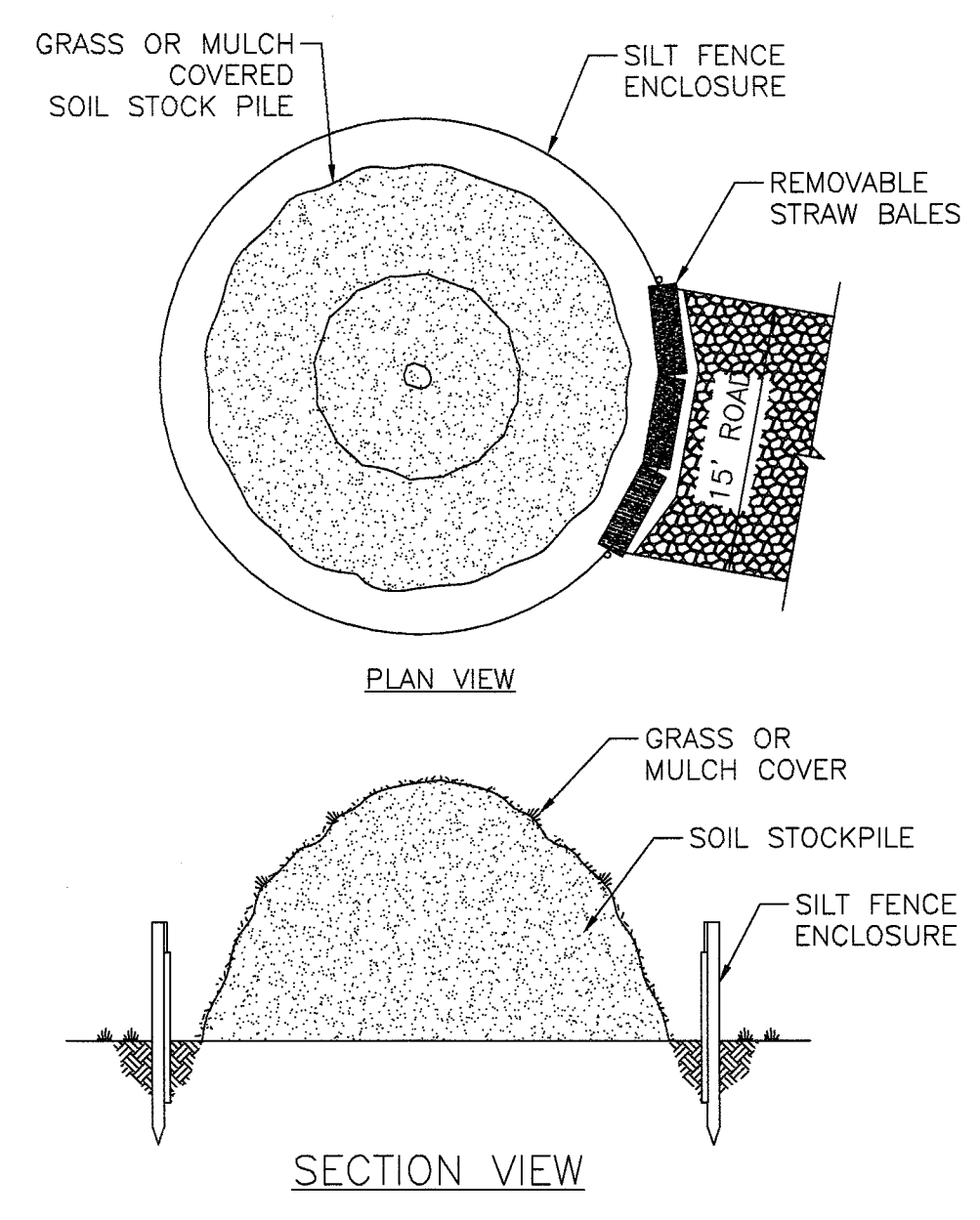
1. ALL APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATION AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN OHIO.
3. APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
4. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS AND INSTALL ALL MEASURES REQUIRED TO REASONABLY CONTROL SOIL EROSION RESULTING FROM CONSTRUCTION OPERATIONS AND PREVENT EXCESSIVE FLOW OF SEDIMENT FROM THE CONSTRUCTION SITE.
5. ANY DISTURBED AREA THAT IS TO BE LEFT EXPOSED FOR MORE THAN THIRTY (30) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION IN ACCORDANCE WITH THE OHIO STANDARDS AND THEIR RATES SHOULD BE INCLUDED IN THE NARRATIVE. PERFORM SEEDING WORK FROM FEBRUARY 1 TO APRIL 30 FOR SPRING PLANTING, AND AUGUST 15 TO OCTOBER 30 FOR FALL PLANTING, UNLESS OTHERWISE APPROVED BY ENGINEER. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE OHIO STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
6. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE CONFIRMATION OF LIME, FERTILIZER AND SEED APPLICATION AND RATES OF APPLICATION AT THE REQUEST OF THE GLOUCESTER SOIL CONSERVATION DISTRICT.
7. ALL CRITICAL AREAS SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH AT A RATE OF 2 TONS PER ACRE, ACCORDING TO THE OHIO STANDARDS IMMEDIATELY FOLLOWING ROUGH GRADING.
8. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORM WATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
9. ALL SEDIMENTATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
10. A CRUSHED STONE, TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS EXISTS. THE STABILIZED PAD WILL BE INSTALLED ACCORDING TO THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS.
11. ALL DRIVEWAYS MUST BE STABILIZED WITH 2 1/2" CRUSHED STONE OR SUB BASE PRIOR TO INDIVIDUAL LOT CONSTRUCTION.
12. PAVED AREAS MUST BE KEPT CLEAN AT ALL TIMES.
13. MULCHING IS REQUIRED ON ALL SEEDED AREAS TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED TO PROMOTE EARLIER VEGETATION COVER.
14. OFFSITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE EROSION CONTROL INSPECTOR.
15. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
16. ANY CONVEYANCE OF THIS PROJECT PRIOR TO ITS COMPLETION WILL TRANSFER FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ANY SUBSEQUENT OWNERS.
17. IMMEDIATELY AFTER THE COMPLETION OF STRIPPING AND STOCKPIILING OF TOPSOIL, THE STOCKPILE MUST BE STABILIZED ACCORDING TO THE STANDARD FOR TEMPORARY VEGETATIVE COVER. STABILIZE TOPSOIL STOCKPILE WITH STRAW MULCH FOR PROTECTION IF THE SEASON DOES NOT PERMIT THE APPLICATION AND ESTABLISHMENT OF TEMPORARY SEEDING. ALL SOIL STOCKPILES ARE NOT TO BE LOCATED WITHIN FIFTY (50) FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY AND THE BASE MUST BE PROTECTED WITH A SEDIMENT BARRIER.
18. ANY CHANGES TO THE SITE PLAN WILL REQUIRE THE SUBMISSION OF A REVISED SOIL AND SEDIMENT CONTROL PLAN TO THE GLOUCESTER SOIL CONSERVATION DISTRICT. THE REVISED PLAN MUST BE IN ACCORDANCE WITH THE CURRENT OHIO STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
19. METHODS FOR THE MANAGEMENT OF HIGH ACID PRODUCING SOILS SHALL BE IN ACCORDANCE WITH THE STANDARDS. HIGH ACID PRODUCING SOILS ARE THOSE FOUND TO CONTAIN IRON SULFIDES OF HAVE A pH OF 4 OR LESS.
20. TEMPORARY AND PERMANENT SEEDING MEASURES MUST BE APPLIED ACCORDING TO THE OHIO STANDARDS AND MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE OHIO STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
21. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN 3:1 UNLESS OTHERWISE APPROVED BY THE DISTRICT.
22. DUST IS TO BE CONTROLLED BY AN APPROVED METHOD ACCORDING TO THE OHIO STANDARDS AND MAY INCLUDE WATERING WITH A SOLUTION OF CALCIUM CHLORIDE AND WATER.
23. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.
24. USE STAGED CONSTRUCTION METHODS TO MINIMIZE EXPOSED SURFACES, WHERE APPLICABLE.
25. ALL VEGETATIVE MATERIAL SHALL BE SELECTED IN ACCORDANCE WITH AMERICAN STANDARDS FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF THE NURSERYMEN AND IN ACCORDANCE WITH THE OHIO STANDARDS.
26. NATURAL VEGETATION AND SPECIES SHALL BE RETAINED WHERE SPECIFIED ON THE LANDSCAPING PLAN.
27. THE SOIL EROSION INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED, AS DIRECTED BY THE DISTRICT INSPECTOR.



VEGETATED DIVERSION SWALE DETAIL
NTS

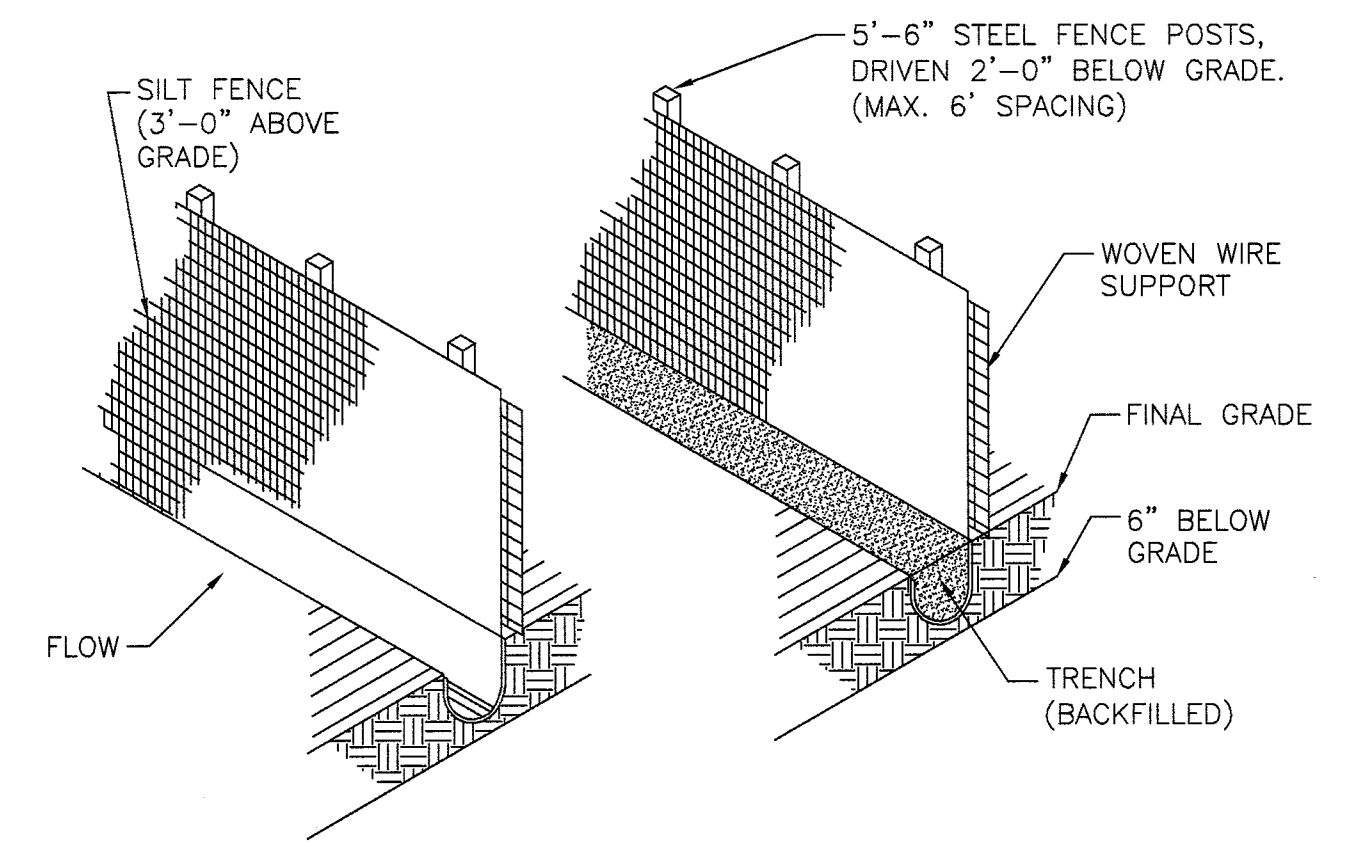


STABILIZED CONSTRUCTION ENTRANCE
NTS



NOTES:
1. SOIL STOCKPILE SHALL BE ENCIRCLED WITH SILT FENCING WITH A PASSAGEWAY PROVIDED FOR EQUIPMENT ACCESS.

SOIL STOCKPILE DETAIL
NTS



SILT FENCE DETAIL
NTS

NOTE: THE CONTRACTOR SHALL PREVENT AND/OR REDUCE AND CONTROL SOIL EROSION RESULTING FROM THE PROPOSED IMPROVEMENTS. THE USE OF SILT FENCING, JUTE MATTING, TEMPORARY SEEDING, SILT CHECKS, INLET PROTECTION AROUND ALL CATCH BASINS, STABILIZED CONSTRUCTION ENTRANCE(S), ETC. WILL BE REQUIRED. SEDIMENT CONTROL STRUCTURES/DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL RAINWATER AND LAND DEVELOPMENT - OHIO'S STANDARDS FOR STORM WATER MANAGEMENT, LAND DEVELOPMENT AND URBAN PROTECTION. SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUED INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS SET FORTH ON THE APPROVED STORM WATER POLLUTION PREVENTION IF APPLICABLE OR AS DETAILED ON THE CONSTRUCTION PLANS, AS SPECIFIED BY THE CITY OF MASSILLON.



ISSUE	DATE	DESCRIPTION
3	8/1/13	CITY OF MASSILLON REVISED CIVIL DRAWINGS
2	4/29/13	AQUA OHIO APPROVED VE CHANGES
1	4/8/13	REVISED CIVIL DRAWINGS
0	3/25/13	100% DESIGN DOCUMENTS

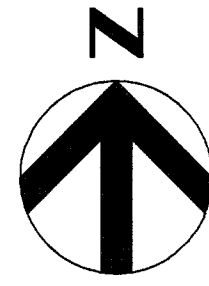
AQUA APPROVAL	B. BISSON/M. FRITZ
VE CHANGES	AQUA OHIO
PROJECT MANAGER	R. ATOULIKIAN
PROJECT ENGINEER	J. MARIE
STRUCTURE	M. PAINE
CADD	M. ROBLE
ARCHITECTURAL	B. ELLINGTON
PROCESS	C. ROBY
MECH./PLUMBING	C. WORK
PROJECT NUMBER	197099



AQUA
MASSILLON WATER TREATMENT PLANT
SLUDGE DEWATERING FACILITY

CIVIL
EROSION AND SEDIMENTATION CONTROL
DETAILS AND NOTES

FILENAME	O0C-05.DWG	SHEET
SCALE	NTS	O0C-05



NOTES:

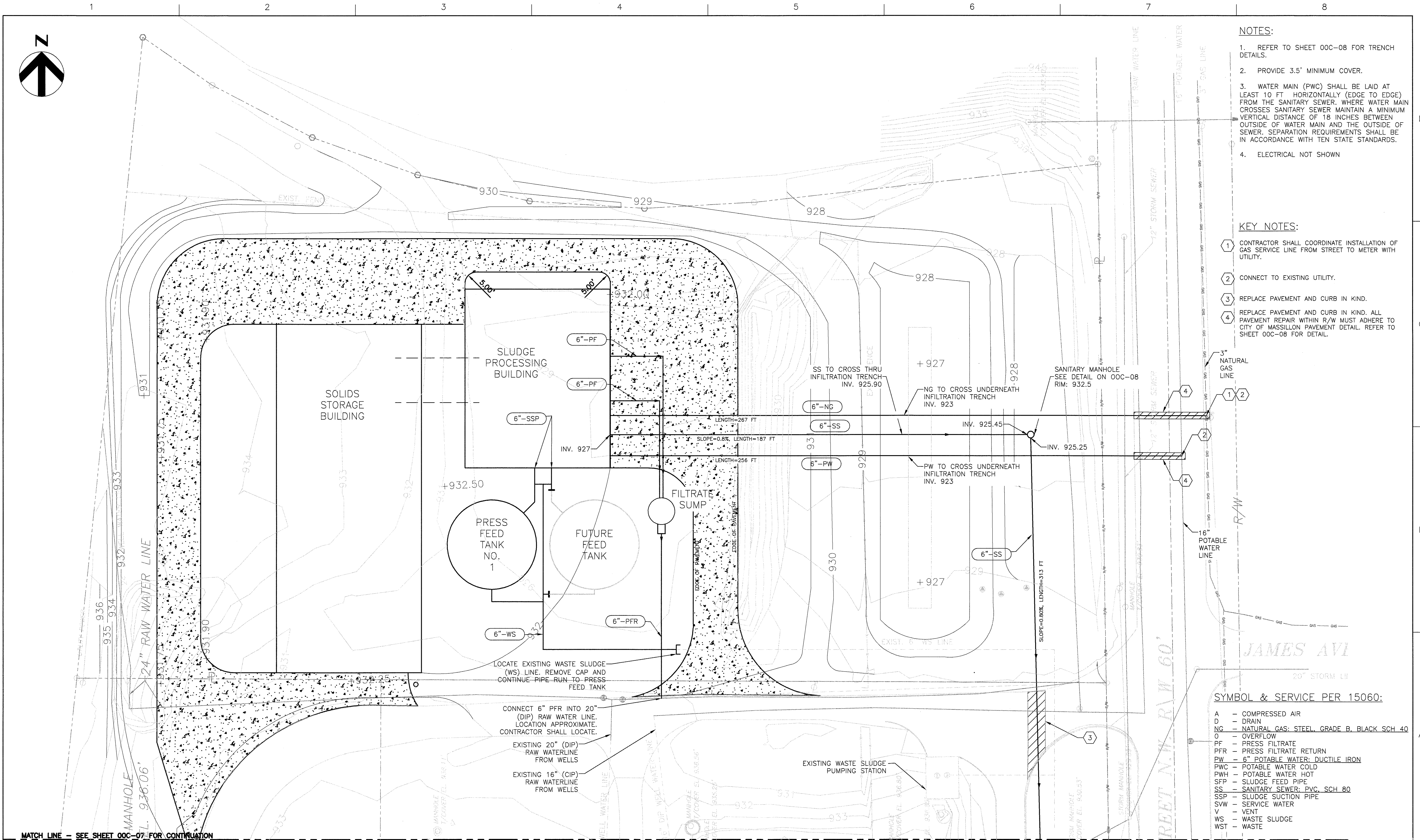
1. REFER TO SHEET 00C-08 FOR TRENCH DETAILS.
2. PROVIDE 3.5' MINIMUM COVER.
3. WATER MAIN (PWC) SHALL BE LAID AT LEAST 10 FT HORIZONTALLY (EDGE TO EDGE) FROM THE SANITARY SEWER, WHERE WATER MAIN CROSSES SANITARY SEWER MAINTAIN A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN OUTSIDE OF WATER MAIN AND THE OUTSIDE OF SEWER. SEPARATION REQUIREMENTS SHALL BE IN ACCORDANCE WITH TEN STATE STANDARDS.
4. ELECTRICAL NOT SHOWN

KEY NOTES:

- 1 CONTRACTOR SHALL COORDINATE INSTALLATION OF GAS SERVICE LINE FROM STREET TO METER WITH UTILITY.
- 2 CONNECT TO EXISTING UTILITY.
- 3 REPLACE PAVEMENT AND CURB IN KIND.
- 4 REPLACE PAVEMENT AND CURB IN KIND. ALL PAVEMENT REPAIR WITHIN R/W MUST ADHERE TO CITY OF MASSILLON PAVEMENT DETAIL. REFER TO SHEET 00C-08 FOR DETAIL.

SYMBOL & SERVICE PER 15060:

- A - COMPRESSED AIR
- D - DRAIN
- NG - NATURAL GAS: STEEL, GRADE B, BLACK SCH 40
- O - OVERFLOW
- PF - PRESS FILTRATE
- PFR - PRESS FILTRATE RETURN
- PW - 6" POTABLE WATER: DUCTILE IRON
- PWC - POTABLE WATER COLD
- PWH - POTABLE WATER HOT
- SFP - SLUDGE FEED PIPE
- SS - SANITARY SEWER: PVC, SCH 80
- SSP - SLUDGE SUCTION PIPE
- SWW - SERVICE WATER
- V - VENT
- WS - WASTE SLUDGE
- WST - WASTE

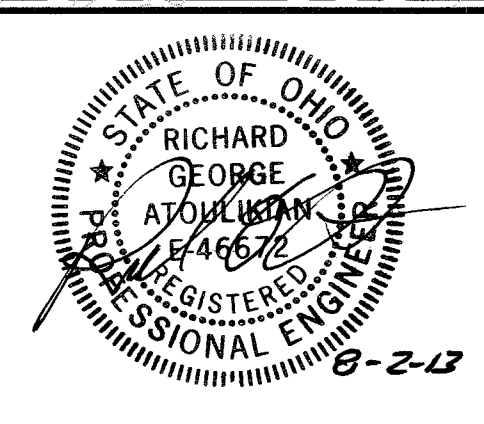


MATCH LINE - SEE SHEET 00C-07 FOR CONTINUATION



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VE CHANGES	AQUA OHIO
PROJECT MANAGER	R. ATOULIKIAN
PROJECT ENGINEER	J. MARIE
STRUCTURE	M. PAINE
CADD	M. ROBLE
ARCHITECTURAL	B. ELLINGTON
PROCESS	C. ROBY
MECH./PLUMBING	C. WORK
PROJECT NUMBER	197099



AQUA

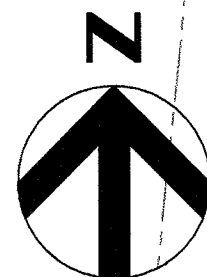
MASSILLON WATER TREATMENT PLANT
SLUDGE DEWATERING FACILITY

CIVIL

YARD PIPING PLAN
SHEET 1

FILENAME	00C-06.DWG	SHEET	
SCALE	1:20		
		00C-06	

MATCH LINE - SEE SHEET 00C-06 FOR CONTINUATION



UNKNOWN
1/2 COVER

SCU #2
ROUND TANK

SCU #1
ROUND TANK

CHEMICAL FEED BUILDING

BENCHMARK: PK IN
WALL EL. 937.92'

OHIO WATER SERVICE COMPANY
OUTLOT 731
ADDRESS: 869-3rd ST. N.W.

BUILDING LINE

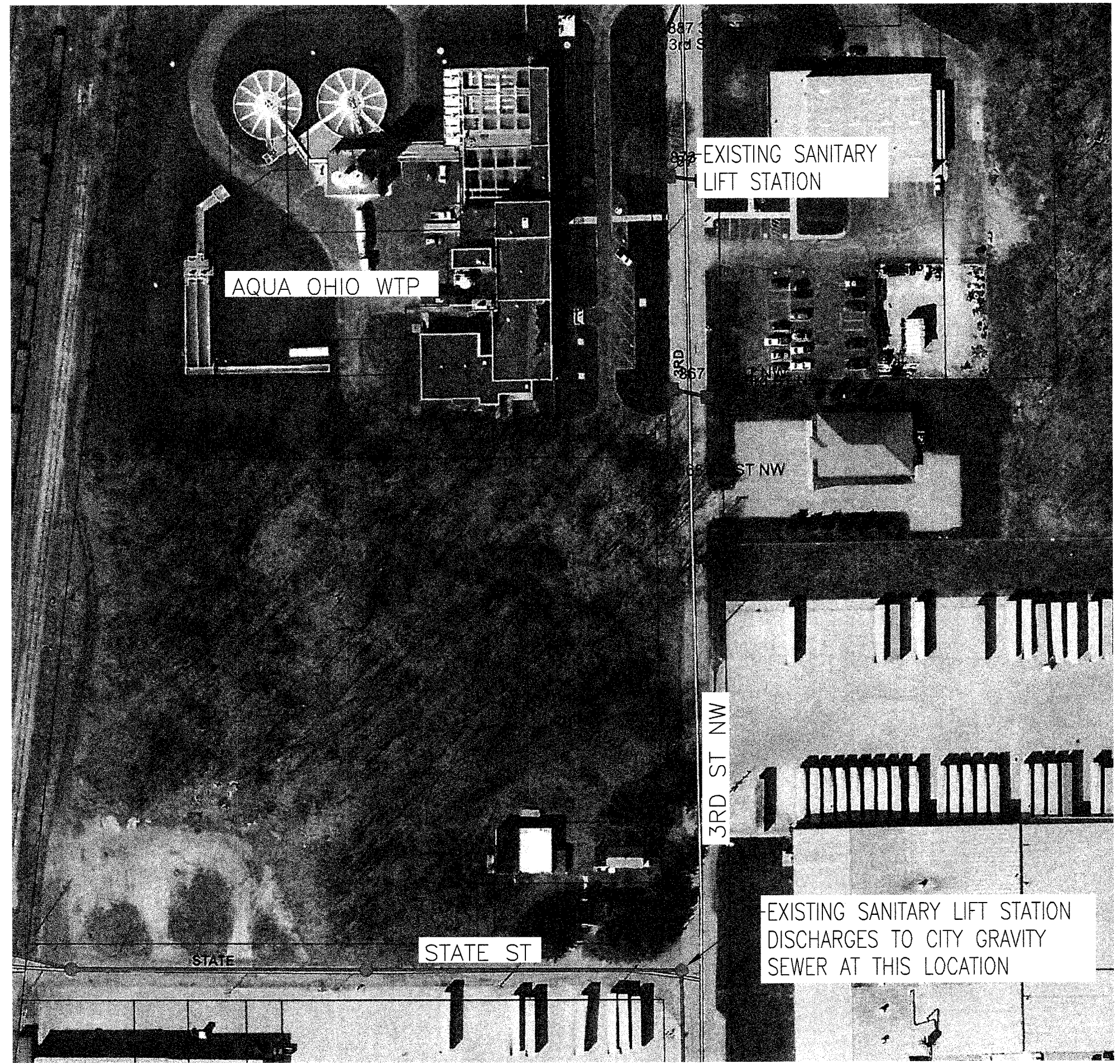
AQUA WATER SIGN

6"-SS
SLOPE=0.60% LENGTH=313 FT

UNKNOWN MANHOLE
1/2 COVER EL. 928.15'

NOTES:
1. REFER TO SHEET 00C-08 FOR TRENCH DETAILS.
2. PROVIDE 3.5' MINIMUM COVER.
3. WATER MAIN (PWC) SHALL BE LAID AT LEAST 10 FT HORIZONTALLY (EDGE TO EDGE) FROM THE SANITARY SEWER. WHERE WATER MAIN CROSSES SANITARY SEWER MAINTAIN A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN OUTSIDE OF WATER MAIN AND THE OUTSIDE OF SEWER. SEPARATION REQUIREMENTS SHALL BE IN ACCORDANCE WITH TEN STATE STANDARDS.

KEY NOTES:
1. CONNECT PROPOSED PROCESSING BUILDING FLOOR DRAINS TO EXISTING SANITARY LIFT STATION.



SANITARY PUMP STATION DISCHARGE LOCATION
NTS

MAIN TREATMENT BUILDING

EX. SIDEWALK

EXISTING SANITARY LIFT STATION

BACKWASH RECOVERY TANK

SANITARY FORCE MAIN. SEE INSET FOR CONNECTION TO GRAVITY SEWER.

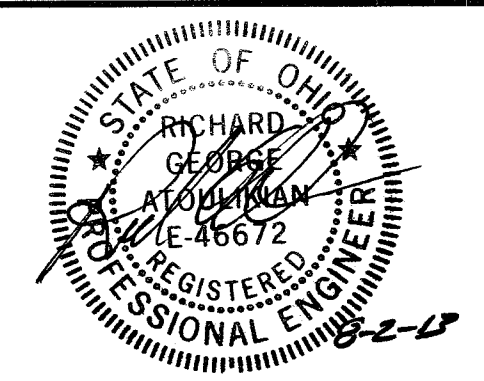
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- PWC - POTABLE WATER COLD
- PWH - POTABLE WATER HOT
- SFP - SLUDGE FEED PIPE
- SS - SANITARY SEWER: PVC, SCH 80
- SSP - SLUDGE SUCTION PIPE
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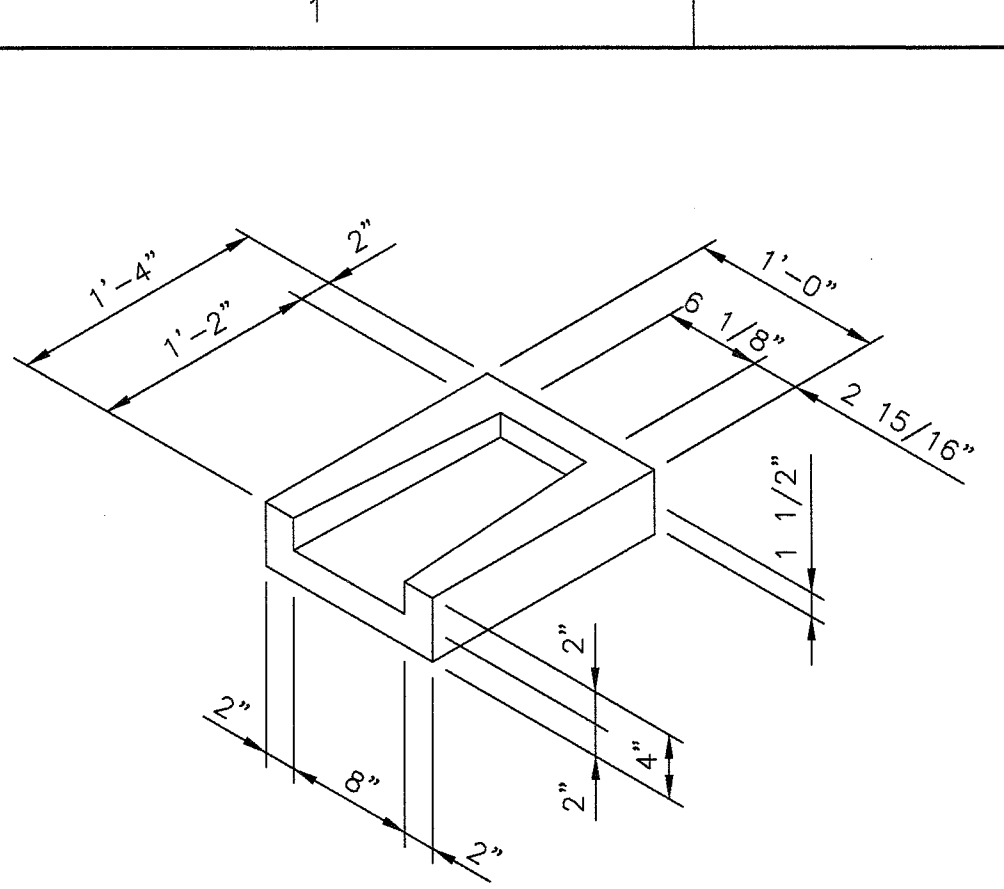


AQUA
MASSILLON WATER TREATMENT PLANT
SLUDGE DEWATERING FACILITY

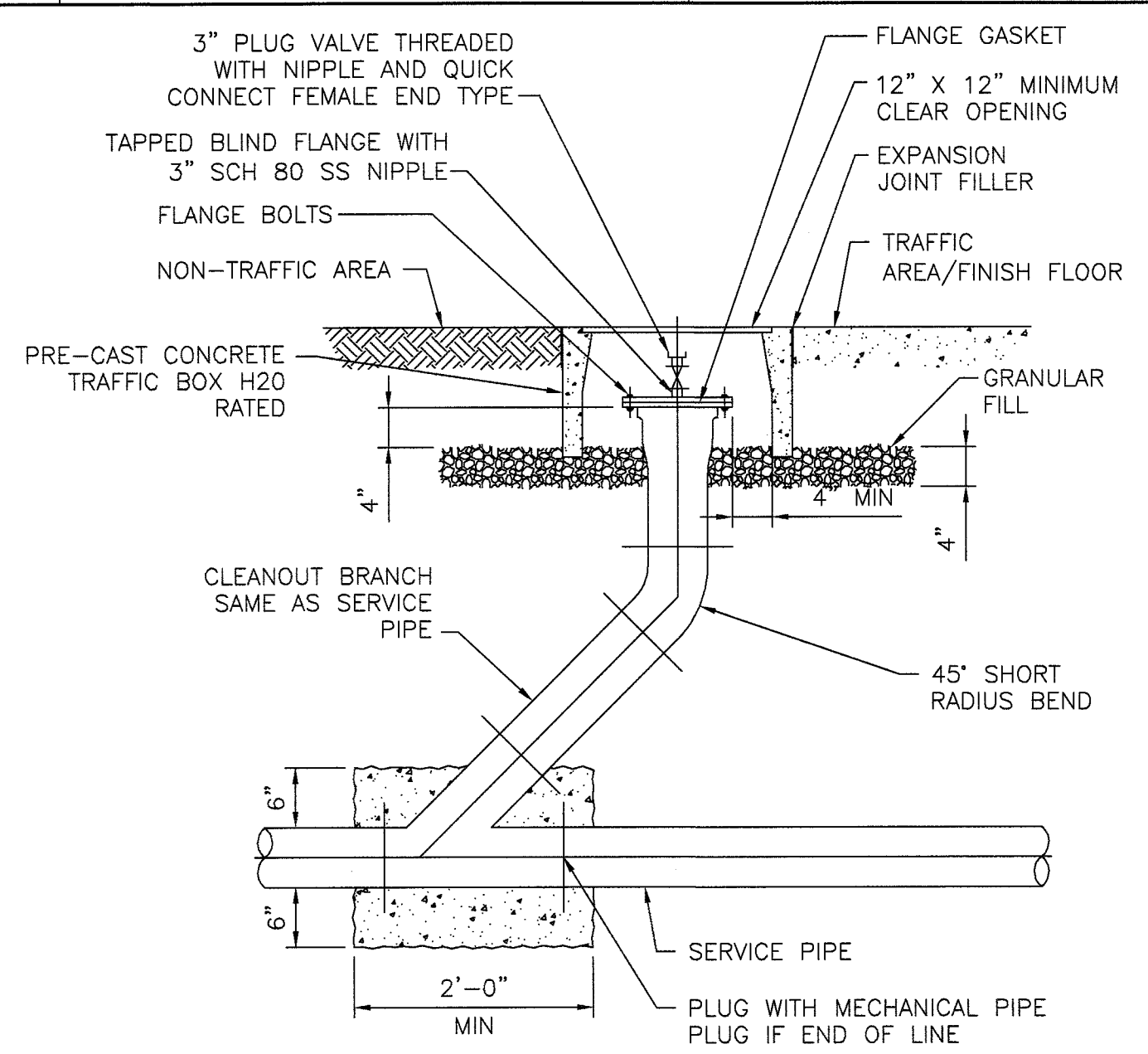
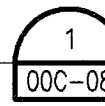
CIVIL
YARD PIPING PLAN
SHEET 2

FILENAME: 00C-07.DWG
SCALE: 1:20

SHEET
00C-07

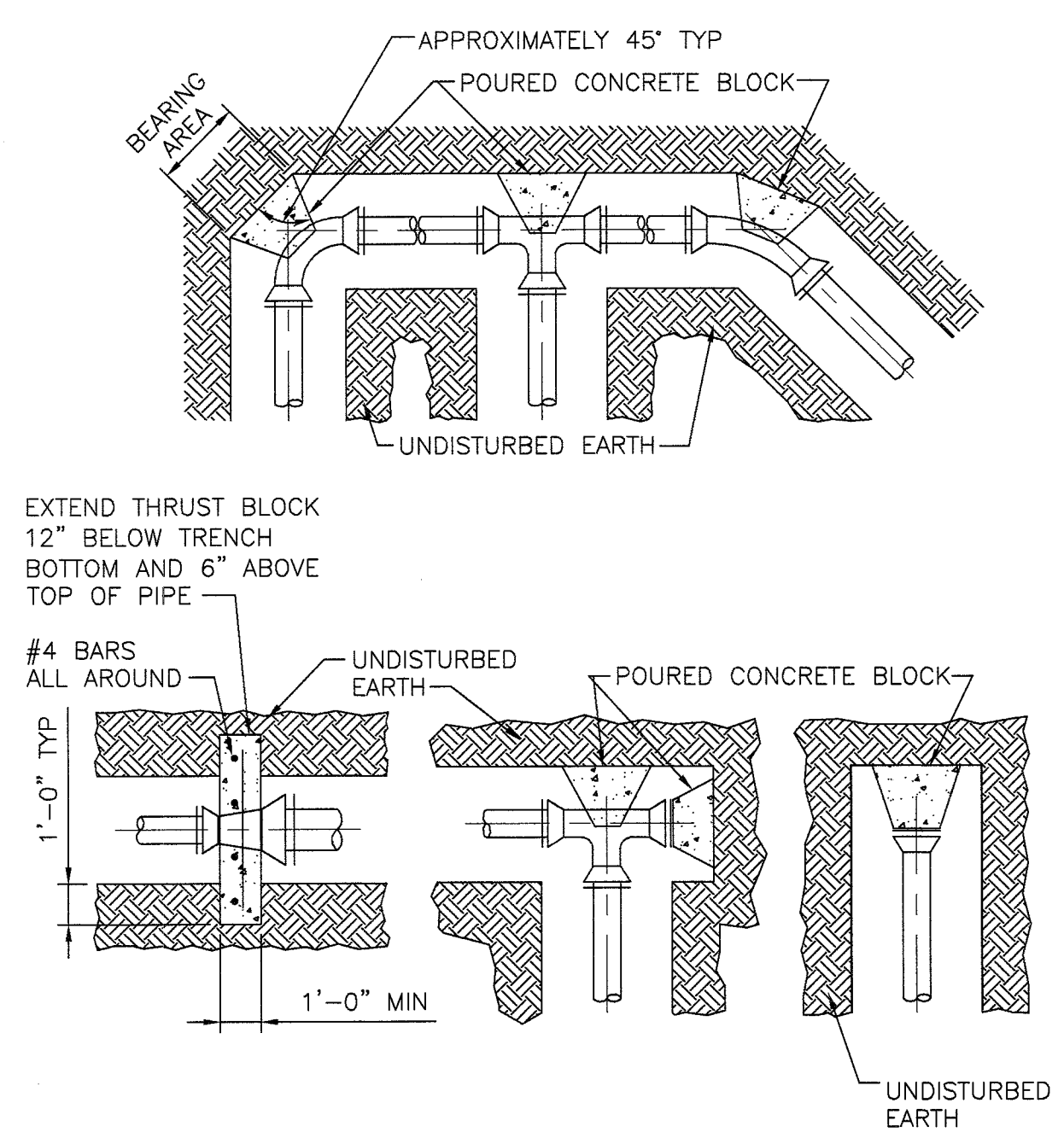
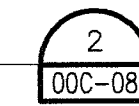


CONCRETE SPLASH BLOCK
NTS

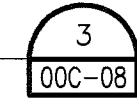


NOTE:
1. PROVIDE RESTRAINED JOINTS ON CLEAN OUT BRANCH.

PRESSURE CLEANOUT AT GRADE
NTS



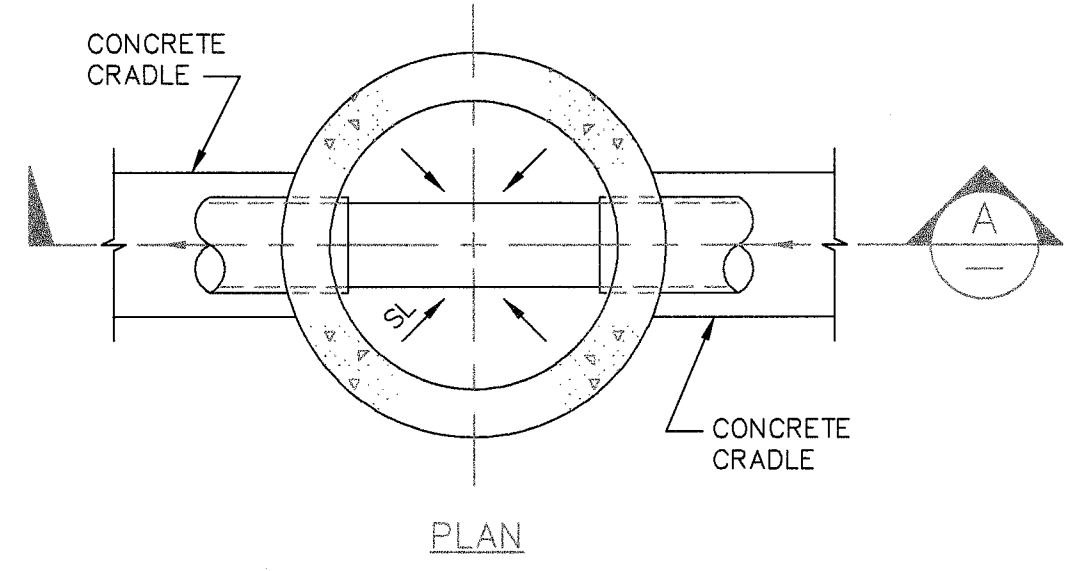
THRUST BLOCK DETAIL
NTS



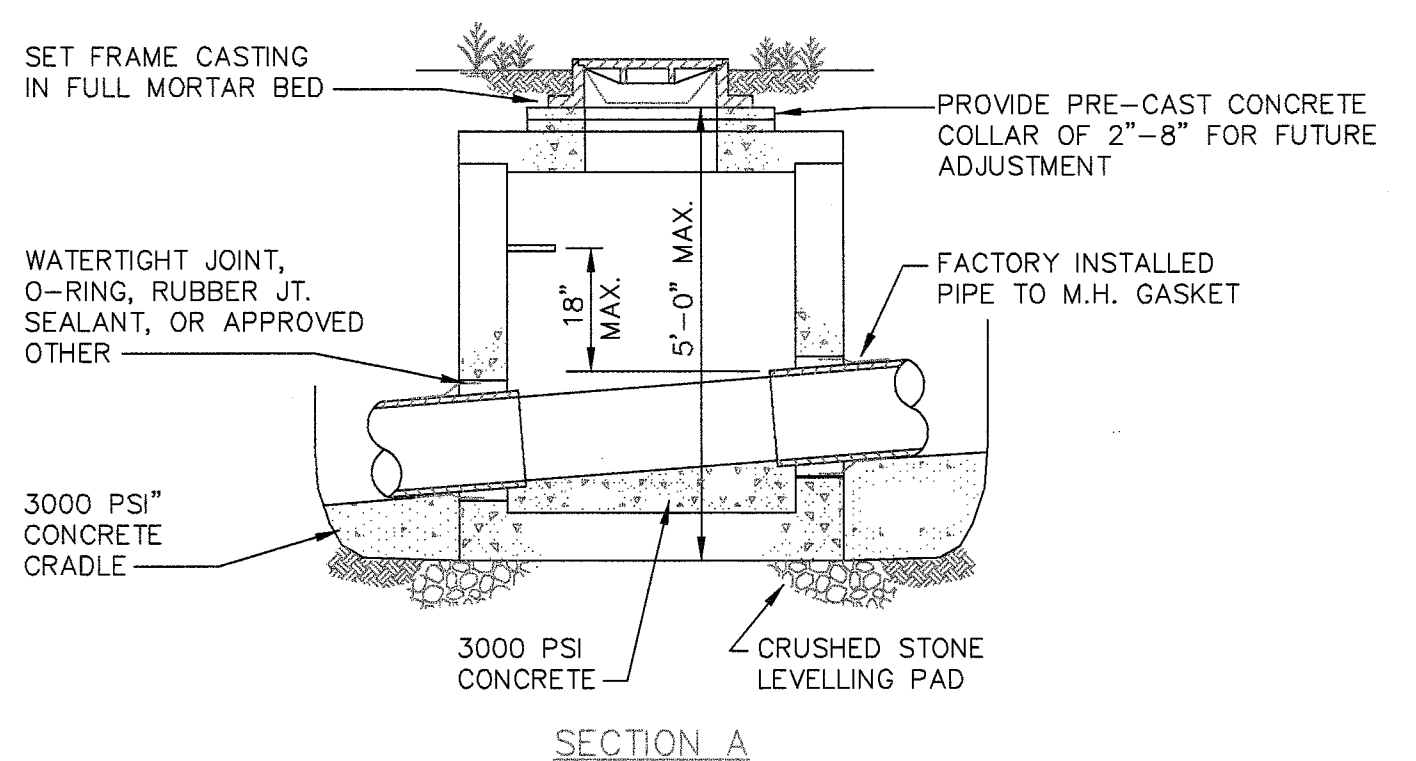
FITTING SIZES	BEARING AREA OF BLOCK IN SQ. FT.				
	TEE & END	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4"	1.0	1.4	1.0	—	—
6"	2.1	3.0	1.6	1.0	—
8"	3.8	5.3	2.9	1.5	1.0
10"	5.9	8.4	4.6	2.4	1.2
12"	8.5	12.0	6.6	3.4	1.7
14"	11.5	16.3	8.8	4.5	2.3
16"	15.0	21.3	11.6	6.0	3.0
18"	19.0	27.0	14.6	7.6	3.8
20"	23.5	33.3	18.1	9.4	4.7
24"	34.0	48.0	26.2	13.6	6.8
30"	53.0	75.0	40.6	20.7	10.4
36"	76.3	107.9	58.3	29.8	15.0

NOTES:

1. PLACE 4 MIL POLYETHYLENE BETWEEN CONCRETE AND FITTING. CONSTRUCT BLOCK SUCH THAT CONCRETE DOES NOT INTERFERE WITH THE ADJACENT PIPE JOINT.
2. THE HEIGHT (h) OF THE BLOCK SHALL BE EQUAL TO OR LESS THAN 1/2 THE TOTAL DEPTH FROM FINISHED GRADE TO THE BOTTOM THE BLOCK BUT NOT LESS THAN THE PIPE DIAMETER.
3. THE HORIZONTAL DIMENSION OF THE BEARING AREA SHALL BE BETWEEN 1 AND 2 TIMES THE VERTICAL DIMENSION.
4. THRUST BLOCK ORIENTATION SHALL BE SUCH THAT THE CENTER OF THE FITTING CORRESPONDS WITH THE CENTER OF THE THRUST BLOCK.
5. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI @ 28 DAYS. LISTED AREAS ARE BASED ON TEST PRESSURE OF 100 P.S.I. AND AN ALLOWABLE SOIL BEARING STRESS OF 2,000 LBS PER SQUARE FOOT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURE AND SOIL BEARING PRESSURE, USE THE FOLLOWING EQUATION: BEARING AREA = (TEST PRESSURE/100) X (TABLE VALUE) X 2000/BEARING PRESSURE.

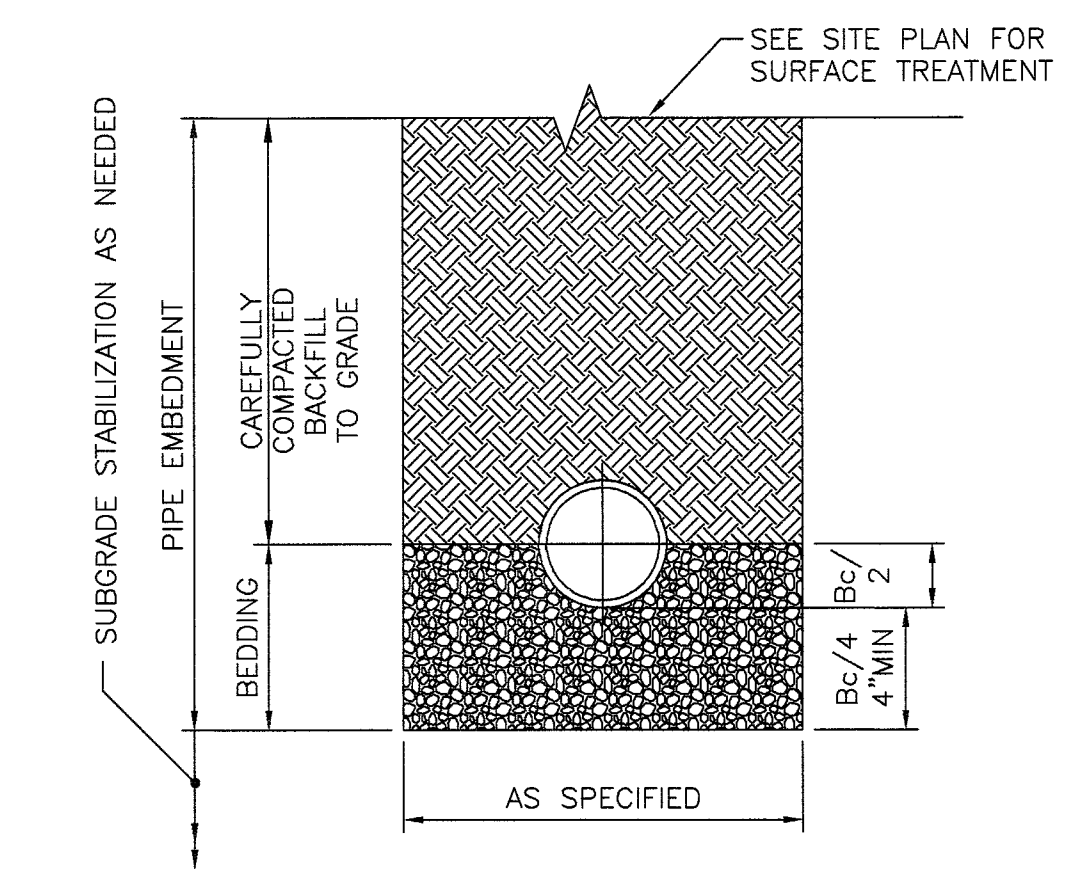
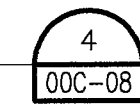


PLAN



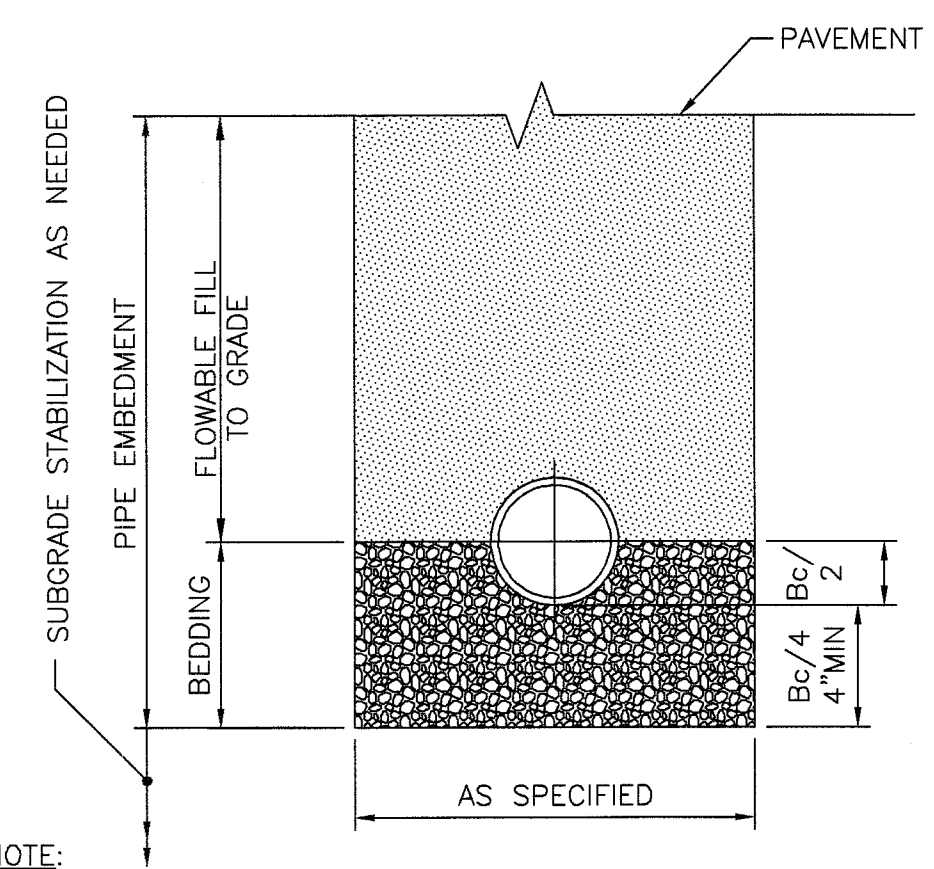
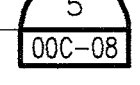
SECTION A

SHALLOW SANITARY SEWER MANHOLE
NTS



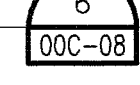
NOTE:
1. Bc=OUTSIDE DIAMETER OF PIPE.

GENERAL PIPE TRENCH
NTS



NOTE:
1. Bc=OUTSIDE DIAMETER OF PIPE.
2. FOR USE ON AQUA OHIO PROPERTY ONLY.

PAVEMENT PIPE TRENCH
NTS



Kathy Cotazaro-Perry, Mayor
Massillon
City of Champions

CITY OF MASSILLON ENGINEERING
181 LINCOLN WAY EAST
MASSILLON, OHIO 43306-1722
TEL: (330)830-1722
FAX: (330)830-1788

**TRENCH DETAIL
WITHIN
ROADWAY/DRIVEWAY**

ASPHALT: 8" CONCRETE BASE WITH 2" OF 448 ASPHALT CONCRETE
BRICK: 8" CONCRETE BASE W/ BRICK SURFACE MATCHING ORIGINAL
CONCRETE: 10" BASE AND SURFACE MONOLITHIC REPLACEMENT JOINT TO JOINT

IF ASPHALT AC BAND

existing roadway

ITEM 304 AGGREGATE BASE (No. 57 GRAVEL) BEDDING FOR FLEXIBLE PIPING BEDDING FOR RIGID PIPING

ASTM D-2321 CLASS 1 (No. 57 GRAVEL) BEDDING FOR FLEXIBLE PIPING BEDDING FOR RIGID PIPING

9" 9" 12" 6" MIN

TOP OF SUBBASE

TOP OF PIPE

TRENCH WIDTH =
UP TO 42" PIPE, I.D. PIPE + 2'0"
48" & LARGER, O.D. PIPE + 2'0"

NOTES

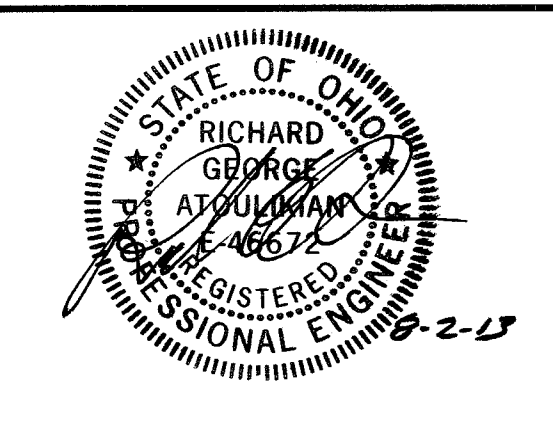
1) CONCRETE BASE SHALL BE OF 1:2:4, 6 BAG MIX, PORTLAND CEMENT CONCRETE USING HIGH EARLY STRENGTH CEMENT AND IT MUST BE CURED AT LEAST 48 HRS.

(*) MUST BE USED WHEN WIDTH OF TRENCH IS GREATER THAN 3' AT THE SUBBASE. FIBER CONCRETE BASE MAY BE USED IN LIEU OF THE BARS.



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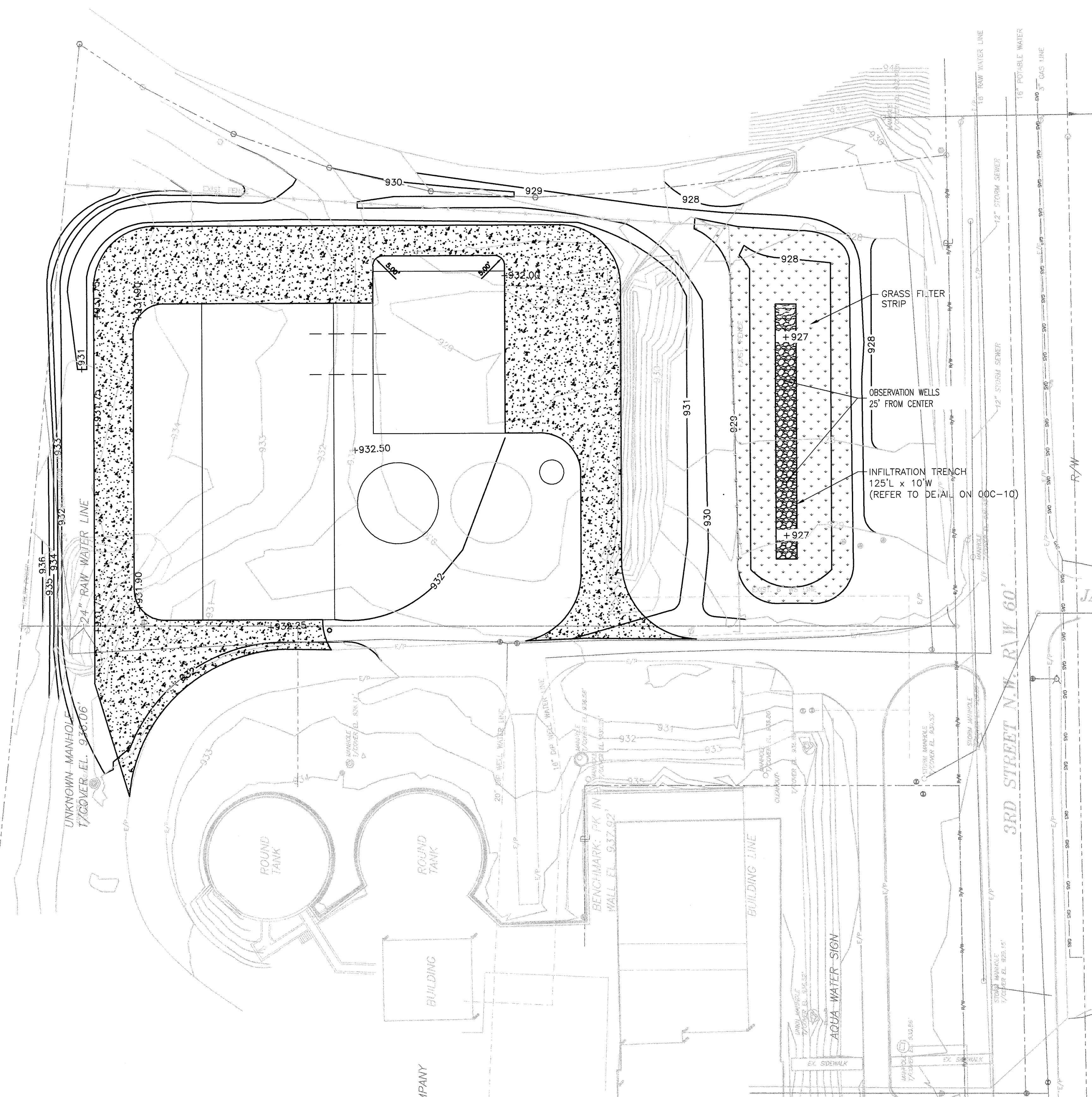
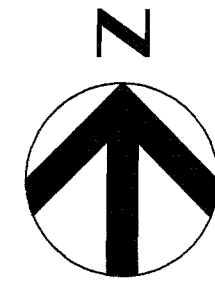
AQUA APPROVAL	B. BISSON/M. FRITZ
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MECH./PLUMBING	C. WORK
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AQUA

MASSILLON WATER TREATMENT PLANT
SLUDGE DEWATERING FACILITY

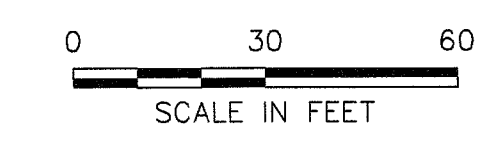
CIVIL DETAILS		SHEET
FILENAME	00C-08.DWG	00C-08
SCALE	NTS	



LEGEND:

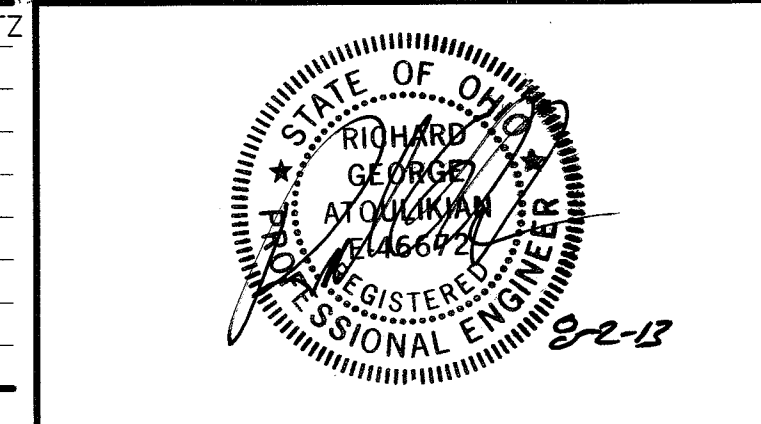
- 930 - EXISTING CONTOUR
- 930 - PROPOSED CONTOUR
- [Hatched Box] PROPOSED RIP-RAP CONVEYANCE
- [Dotted Box] PROPOSED GRASS FILTER STRIP

NOTE:
SEE DWG. 00C-10 FOR STORMWATER MANAGEMENT DETAILS



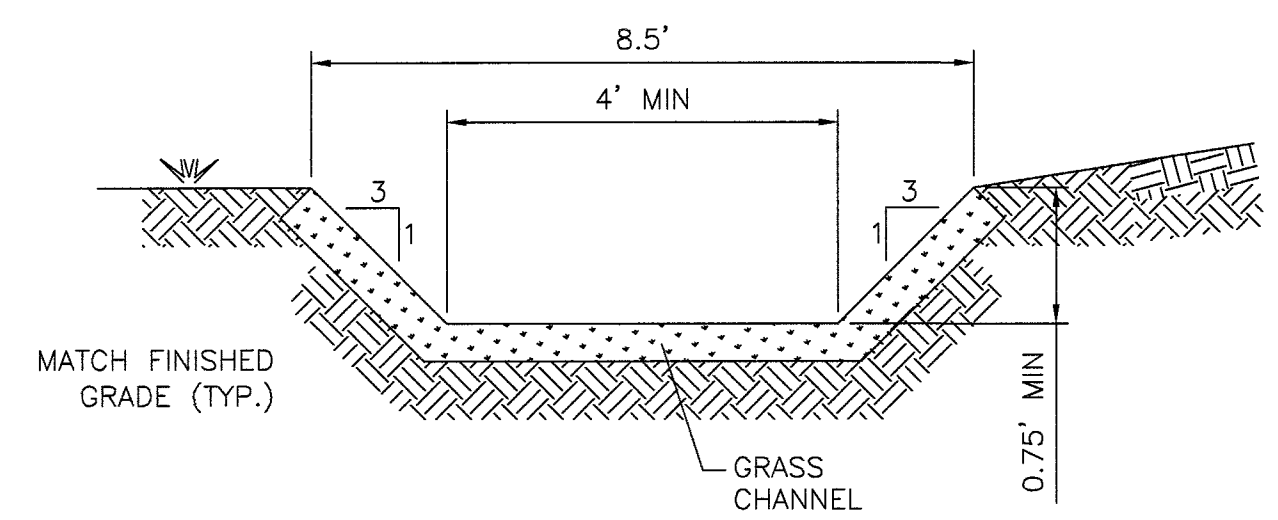
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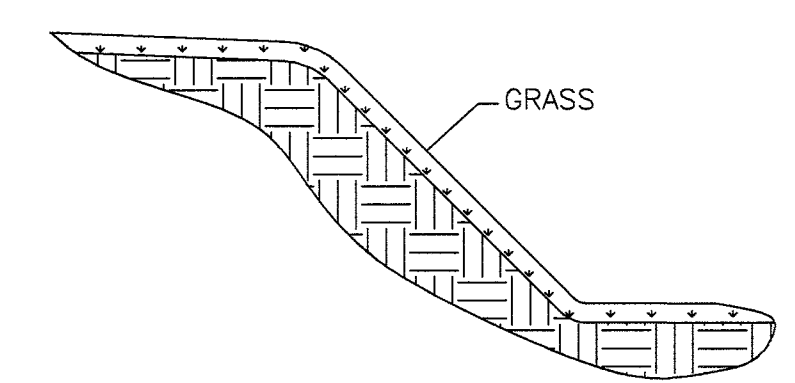


AQUA
MASSILLON WATER TREATMENT PLANT
SLUDGE DEWATERING FACILITY

CIVIL		SHEET
STORMWATER MANAGEMENT PLAN		00C-09
FILENAME	00C-09.DWG	
SCALE	1:30	

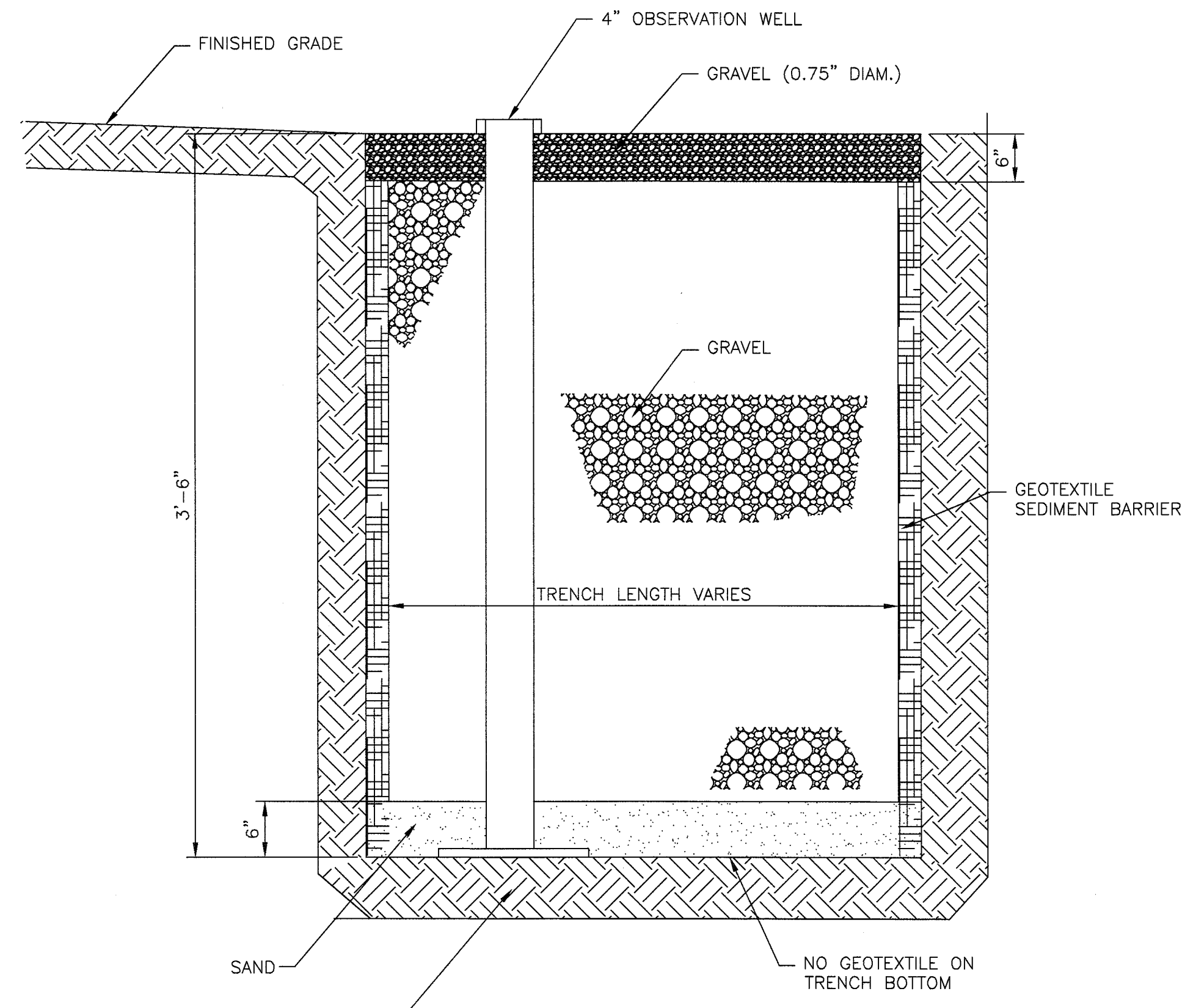


RIP-RAP LINED SWALE DETAIL
NTS



NOTES:
1. SLOPE NOT TO EXCEED 5%.

GRASS FILTER STRIP
NTS



NOTE:
1. OBSERVATION WELL TO BE 4" PERFORATED HOPE PIPE. PIPE SHOULD BE PERMANENTLY AND SECURELY ATTACHED TO A BASE TO PREVENT UPWARD MOVEMENT.
2. INFILTRATION TRENCH TO BE FILLED WITH POORLY-GRADED, UNIFORM SIZE CRUSHED WASHED ROCK WITH A POROSITY OF 0.4.

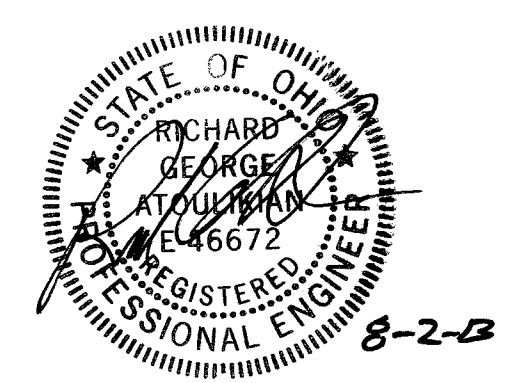
INFILTRATION TRENCH DETAIL
NTS



HDR Engineering, Inc.

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AQUA
MASSILLON WATER TREATMENT PLANT
SLUDGE DEWATERING FACILITY

CIVIL
STORMWATER MANAGEMENT DETAILS

FILENAME	OOC-10.DWG
SCALE	NTS

SHEET	00C-10
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