

MUSKINGUM COUNTY FAIRGROUNDS WATERLINE EXTENSION MUSKINGUM COUNTY, OHIO MARCH 2022

OWNER:
MUSKINGUM COUNTY FAIR BOARD
1300 PERSHING ROAD
ZANESVILLE, OHIO 43701

CONTACTS

CONTRACTOR SHALL CONTACT BOB WILSON AT 740-819-0712 AT LEAST 48 HRS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL CONTACT JASON BAUGHMAN AT LEAST 48 HOURS PRIOR TO INSTALLATION OF FIRE HYDRANTS AT 740-455-7905.

UTILITIES

GAS : COLUMBIA GAS OF OHIO
98 STUEBENVILLE STREET
CAMBRIDGE, OHIO 43725
(800)440-6111

NATIONAL GAS & OIL
1500 GRANVILLE ROAD
NEWARK, OHIO 43055
(740) 344-2102

ELECTRIC : AMERICAN ELECTRIC POWER
1900 LICKING ROAD
ZANESVILLE, OHIO 43701
1(800) 672-2231

GUENRSEY MUSKINGUM ELECTRIC
17 SOUTH LIBERTY STREET
NEW CONCORD, OHIO 43762
(740) 454-0770

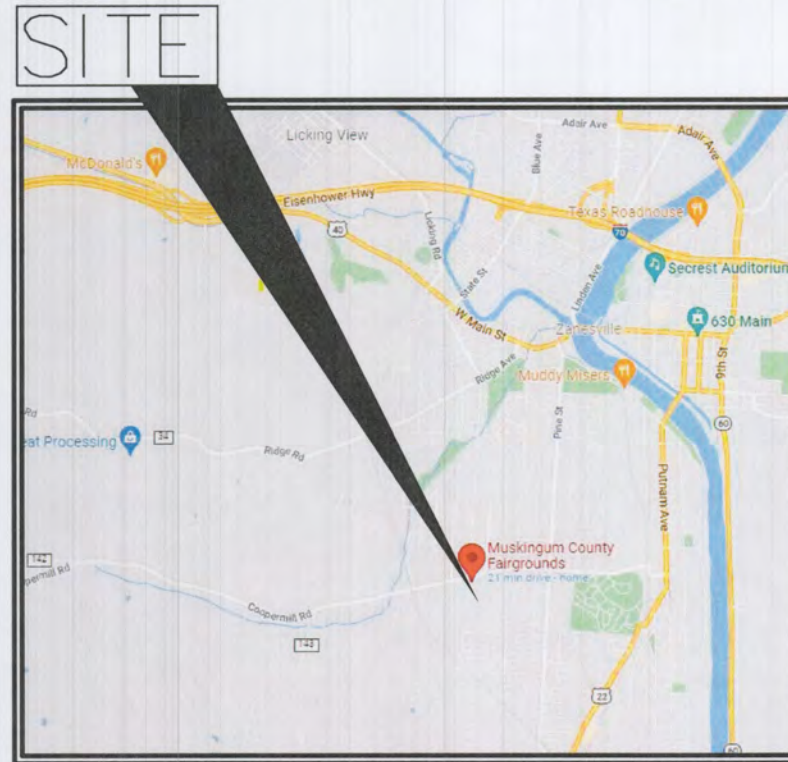
SEWER : MUSKINGUM COUNTY SEWAGE DEPARTMENT
1410 NEWARK ROAD
ZANESVILLE, OHIO 43701
(740) 452-4940

WATER : MUSKINGUM COUNTY WATER DEPARTMENT
375 RICHARDS ROAD
ZANESVILLE, OHIO 43701
(740) 453-0678

MUSKINGUM COUNTY WATER DEPARTMENT
375 RICHARDS ROAD
ZANESVILLE, OHIO 43701
(740) 453-0678

CITY OF ZANESVILLE WATER DEPARTMENT
1750 NORTH RIVER ROAD
ZANESVILLE, OHIO 43701
(740)452-7111

TELEPHONE : A T & T
150 EAST GAY STREET, ROOM 11
COLUMBUS, OHIO 43215
1(800) 362-2764



(VICINITY MAP NOT TO SCALE)

PROJECT DESCRIPTION

NEW CONSTRUCTION OF
PRESSURE REDUCING VALVE
WATERLINE AND APPURTENANCES

INDEX OF SHEETS:

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ALL SITE IMPROVEMENTS ARE SUBJECT TO APPROVAL BY THE PROJECT ENGINEER. THIS POLICY SHALL BE ADHERED TO THROUGHOUT THE LIFE OF THIS SITE IMPROVEMENT PROJECT. ANY AND ALL IMPROVEMENTS THAT ARE NOT APPROVED BY THE PROJECT ENGINEER SHALL BE REMOVED AND REPLACED AT THE DISCRETION OF THE PROJECT ENGINEER, AT NO FURTHER COST TO EITHER THE OWNERS OR THE PROJECT ENGINEER, BY THE CONTRACTOR PERFORMING SAID WORK.

SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND LOCATIONS OF THE PROJECT ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

Mollie S. Crooks

MOLLIE S. CROOKS, PRESIDENT
MUSKINGUM COUNTY COMMISSIONER

DATE

Cindy S. Cameron

CINDY S. CAMERON
MUSKINGUM COUNTY COMMISSIONER

03/07/2022

DATE

James W. Porter

JAMES W. PORTER
MUSKINGUM COUNTY COMMISSIONER

3/7/2022

DATE

ESTIMATED QUANTITIES

ITEM	QTY	UNIT	DESCRIPTION
	920*	LF	INSTALLATION OF 6" WATERLINE AND APPURTENANCES
	2*	EACH	FIRE HYDRANTS INSTALLED
253	56	S.Y.	PAVEMENT REPAIR
SPECIAL	400	TONS	NO. 57 LIMESTONE BACKFILL IN PAVEMENT/ DRIVEWAY AREAS
624	1	LUMP	MOBILIZATION
659	1	LUMP	SEEDING AND MULCHING

* ALL WATERLINE AND APPURTENANCES INCLUDING FIRE HYDRANTS WILL BE PROVIDED BY THE MUSKINGUM COUNTY WATER DEPARTMENT. ALL INSTALLATION OF WATERLINE, FIRE HYDRANTS, APPURTENANCES, CONCRETE BACKING, BACKFILL MATERIALS AND ASPHALT FOR ROADWAY REPAIRS WILL BE PROVIDED BY THE CONTRACTOR.



Mark J. Eicher

MARK J. EICHER
MUSKINGUM COUNTY ENGINEER

3-7-22

DATE

Mark J. Eicher, P.E., P.S.
155 Rehl Road
Zanesville, Ohio 43701
740-454-0155
Muskingum County Engineer's Office

PREPARED BY:

WATERLINE EXTENSION
MUSKINGUM COUNTY FAIRGROUNDS
ZANESVILLE, OHIO 43701

PROJECT NAME:

PLANS APPROVED BY:
MJE

PLANS PREPARED BY:
MJE

DATE:
1-31-22

REVISED:

SHEET SIZE:
11"X17"

SHEET NAME:
TITLE

SHEET NUMBER:
1/12



GENERAL NOTES

THE CONTRACTOR SHALL NOTIFY THE COUNTY ENGINEER'S OFFICE, TELEPHONE (740) 454-0155 FORTY EIGHT (48) HOURS PRIOR TO COMMENCING WORK ON THE PROJECT, HOLIDAYS AND WEEKENDS EXCLUDED.

AT THE TIME OF THE BID OPENING EACH BIDDER WILL BE PRESUMED TO HAVE INSPECTED THE SITE AND TO HAVE READ AND TO BE THOROUGHLY FAMILIAR WITH THE PLANS AND CONTRACT DOCUMENTS.

ALL PROPERTY LINE MARKERS (IRON PINS, SPIKES, CONCRETE MONUMENTS, ETC.) THAT ARE DISTURBED BY THE CONSTRUCTION OPERATIONS SHALL BE REFERENCED AND PROPERLY RESET FOLLOWING CONSTRUCTION UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL SURVEYOR OF THE STATE OF OHIO AT THE CONTRACTOR'S EXPENSE.

ALL MANUFACTURED MATERIALS USED FOR THIS PROJECT MUST BE DOMESTIC AND MADE IN THE U.S.A

ALL SHOP DRAWINGS MUST BE APPROVED BY MUSKINGUM COUNTY WATER DEPARTMENT. MUSKINGUM COUNTY WATER DEPARTMENT IS TO HAVE AN INSPECTOR ON THE JOB SITE AT ALL TIMES WHEN THE CONTRACTOR IS WORKING.

SPECIFICATIONS:

THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS DATED JANUARY 2016, INCLUDING ALL SUPPLEMENTS THERETO IN FORCE ON DATE OF CONTRACT SHALL GOVERN ALL MATERIALS AND WORKMANSHIP INVOLVED IN THE IMPROVEMENTS SHOWN ON THESE PLANS EXCEPT AS SUCH SPECIFICATIONS ARE MODIFIED BY THE FOLLOWING SPECIFICATIONS OR BY THE LATEST EDITION OF THE AWWA STANDARDS, SHALL APPLY AS NEEDED AND ARE HEREBY CONSIDERED A PART OF THESE PLANS.

PERMITS:

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND HAVE IN HIS POSSESSION AN APPROVED AND SIGNED SET OF CONSTRUCTION DRAWINGS. WITHOUT THE REQUIRED PERMITS AND AN APPROVED SET OF PLANS, CONSTRUCTION WILL NOT BE PERMITTED.

TREES:

TREES ENCOUNTERED DURING CONSTRUCTION OUTSIDE THE RIGHT-OF-WAY LIMITS SHALL BE REMOVED ONLY WHEN NECESSARY AND COSTS OF SAME SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS ITEMS.

SAFETY REQUIREMENTS:

THE CONTRACTOR AND SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.

MISCELLANEOUS WORK:

ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR AND THE COST OF SAME SHALL BE INCLUDED IN THE PRICE FOR VARIOUS RELATED ITEMS. IF NO SCHEDULE OF VALUES IS PROVIDED ALL ITEMS OF WORK INDICATED ON THE PLANS ARE TO BE PERFORMED WITH FULL COMPENSATION TO BE INCLUDED IN THE CONTRACT AMOUNT.

FIELD TILE:

ALL FIELD TILE BROKEN DURING EXCAVATION SHALL BE REPLACED TO ORIGINAL CONDITION OR CONNECTED TO EITHER THE CURB SUB DRAIN OR THE STORM SEWER SYSTEM AS DIRECTED BY THE ENGINEER.

SURPLUS EXCAVATION:

THE CONTRACTOR SHALL DISPOSE OF ALL SURPLUS EXCAVATION OFFSITE.

TRAFFIC CONTROL:

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE "OHIO MANUAL OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION AND MAINTENANCE OPERATIONS," COPIES OF WHICH ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, BUREAU OF TRAFFIC, 25 S. FRONT STREET, COLUMBUS, OHIO 43215.

TWO -WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES.

ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR VARIOUS ITEMS.

EROSION CONTROL:

EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF OHIO'S STANDARDS FOR STORM WATER MANAGEMENT LAND DEVELOPMENT AND URBAN STREAM PROTECTION MANUAL "RAINWATER AND LAND DEVELOPMENT".

TRACKING OR SPILLAGE OF MUD, DIRT, OR DEBRIS UPON STREETS, RESIDENTIAL OR COMMERCIAL DRIVES, SIDEWALKS, OR BIKE PATHS IS PROHIBITED AND ANY SUCH OCCURRENCE SHALL BE CLEANED IMMEDIATELY.

THE PROJECT SITE SHALL BE FREE OF ALL DEBRIS AND MATERIALS RESULTING FROM THIS OPERATION AND ALL SURFACES, STRUCTURES, DITCHES, AND PROPERTY RESTORED TO ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER.

EXISTING UTILITIES:

THE IDENTITY AND LOCATION OF THE EXISTING UNDERGROUND UTILITY FACILITIES KNOWN TO BE LOCATED IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE PLANS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UTILITY. THE ENGINEER ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR DEPTHS OF THE UNDERGROUND FACILITIES SHOWN ON THE PLANS, OR THE EXISTENCE OF UTILITIES NOT INDICATED ON THE PLANS.

SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES BOTH PUBLIC AND PRIVATE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS ITEMS. ANY UTILITY DISTURBED OR DAMAGED SHALL BE REPAIRED AND/OR RESTORED, AS A MINIMUM, TO THE CONDITION THAT EXISTED PRIOR TO THIS CONSTRUCTION, UNLESS DIRECTED OTHERWISE BY THE OWNER OR HIS REPRESENTATIVE.

THE CONTRACTOR SHALL CAUSE NOTICE TO BE GIVEN TO THE OHIO UTILITIES PROTECTION SERVICES (800) 362-2764 AND TO THE OWNERS OF THE UTILITY FACILITIES SHOWN ON THE PLAN WHO ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE IN ACCORDANCE WITH SECTION 153.64 OF THE REVISED CODE. THE ABOVE MENTIONED NOTICE SHALL BE GIVEN AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.


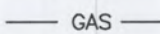

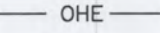

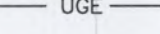







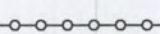


NON-RUBBER TIRED VEHICLES:

NO NON-RUBBER TIRED VEHICLES SHALL BE MOVED ON ANY STREET. EXCEPTIONS MAY BE GRANTED WHERE SHORT DISTANCES AND SPECIAL CIRCUMSTANCES ARE INVOLVED. REQUEST FOR AN EXCEPTION MUST BE MADE IN WRITING AND ANY DAMAGE OCCURRING SHALL BE REPAIRED TO THE SATISFACTION OF AND AT NO ADDITIONAL COST TO THE OWNER.

WATER WITHDRAWAL REGISTRATION:

THE OHIO DEPARTMENT OF NATURAL RESOURCES REQUIRES A WATER REGISTRATION WHERE SURFACE OR GROUNDWATER IS WITHDRAWN AT A RATE GREATER THAN 100,000 GALLONS PER DAY. THE CONTRACTOR WILL BE REQUIRED TO APPLY FOR AND SUBMIT THE REQUIRED FORM.

LEGEND

	EX. FIRE HYDRANT		EX. GAS LINE
	PR. FIRE HYDRANT		EX. OVERHEAD ELECTRIC
	GATE VALVE		EX. UNDERGROUND ELECTRIC
	WATER METER		EX. UNDERGROUND TELEPHONE
	CATCH BASIN		EX. STORM
	TELEPHONE BOX		EX. WATER
	ELECTRIC VAULT		PR. WATER
	EX. YARD HYDRANT		EX. FENCE

Mark J. Eicher, P.E., P.S.
 155 Rehl Road
 Zanesville, Ohio 43701
 740-454-0155

Muskingum
County
ENGINEER'S OFFICE

PREPARED BY:

WATER LINE EXTENSION
 MUSKINGUM COUNTY FAIRGROUNDS
 ZANESVILLE, OHIO 43701

PROJECT NAME:

PLANS APPROVED BY:

MJE

PLANS PREPARED BY:

MJE

DATE:

1-31-22

REVISED:

SHEET SIZE:

11'X17'

SHEET NAME:

GENERAL NOTES

SHEET NUMBER:

2
 12

STREET, STORM AND WATER NOTES

PERMITS:

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND HAVE IN HIS POSSESSION AN APPROVED AND SIGNED SET OF CONSTRUCTION DRAWINGS. WITHOUT THE REQUIRED PERMITS AND AN APPROVED SET OF PLANS, CONSTRUCTION WILL NOT BE PERMITTED.

ALL STREET CROSSINGS OF "OTHER CONDUITS", GAS, TELEPHONE, ELECTRIC, CABLE TV, SHALL BE INSTALLED PRIOR TO THE CONSTRUCTION OF THE STREET.

UNAUTHORIZED STREET EXCAVATION:

IN THE EVENT EXCAVATION FOR THE STREET IS FROM 0" TO 6" BELOW THAT CALLED FOR THE PLANS, THE CONTRACTOR SHALL REPLACE THIS EXCESS EXCAVATED MATERIAL WITH COMPACTED 304 CRUSHED LIMESTONE AGGREGATE AS DIRECTED AND AT NO EXTRA COST TO THE OWNER OR ENGINEER.

BACK FILL--STORM SEWERS AND WATER MAINS:

WHERE THE STORM SEWER AND/OR WATER MAINS AND WATER SERVICES CROSS PROPOSED PAVEMENT, THE TRENCH SHALL BE BACK FILLED WITH COMPACTED GRANULAR MATERIAL, ITEM 603.08, AND SHALL BE COMPACTED IN 8-INCH LIFTS, FROM THE BOTTOM OF THE TRENCH TO A PLANE SIX INCHES (6") BELOW THE SUBGRADE. THE LIMITS OF PLACEMENT SHALL BE 5 FEET FROM THE EDGE OF PAVEMENT. WHERE THE STORM SEWER AND/OR WATER MAINS RUN PARALLEL WITH THE CENTERLINE OF THE STREET OR UNDER SIDEWALKS OR WITHIN THE INFLUENCE LINE, MEASURED FROM BACK OF CURB, BACK FILL SHALL BE COMPACTED GRANULAR BACK FILL FROM THE BOTTOM OF THE TRENCH TO WITHIN 6" OF THE FINISHED OR EXISTING GRADE. (ALL OTHER TRENCH BACK FILL SHALL BE COMPACTED IN 12-INCH LAYERS, LOOSE MEASUREMENT. COMPACTION SHALL BE AT LEAST THE DENSITY OF THE SURROUNDING GROUND.) THE COST OF ALL BACK FILL IS TO BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS, SEE WATERLINE DETAILS SHEET FOR BACKFILL DETAILS..

STRUCTURAL BACKFILL, BACKFILL OCCURRING UNDER PAVEMENT OR BUILDING AREAS, SHALL MEET THE REQUIREMENTS OF ODOT SPECIFICATION 603.09. AND COMPACTION TESTING TO VERIFY COMPACTION SHALL BE PAID FOR BY THE "OWNER". ANY BACKFILL WHICH FAILS TO MEET THESE REQUIREMENTS SHALL BE REPLACED AND/OR RE-COMPACTED AND RETESTED AT THE EXPENSE OF THE CONTRACTOR.

WATER MAINS:

ALL WATER LINE MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE MUSKINGUM COUNTY WATER AUTHORITY CURRENT RULES AND REGULATIONS. ALL WATER LINE MATERIAL 10 INCH DIAMETER OR LESS SHALL BE DUCTILE IRON PIPE, CLASS 52 MEETING AWWA C151 OR PVC AWWA C900, OR DR-14, HDPE SHALL MEET AWWA C906 SPECIFICATIONS. ALL WATER MAINS 3" OR LESS ARE TO BE SDR 21. IN CASE OF CONFLICT IN GRADE BETWEEN WATER LINES

AND STORM SEWERS, THE WATER LINES SHALL BE LOWERED DURING CONSTRUCTION.

THE MAIN LINE FOR CUL-DE-SACS WILL BE A MINIMUM OF 6" DIAMETER PIPE. BACKFILL GROUND OVER THE TOP OF THE PIPE SHALL BE FREE OF ROCKS, ORGANIC REFUSE OR OTHER OBJECTIONABLE MATERIAL. SEE BACKFILL NOTE ABOVE. THE INSTALLING CONTRACTOR IS RESPONSIBLE FOR CONDUCTING PRESSURE AND LEAKAGE TESTS AT A PRESSURE OF 150 PSI IN ACCORDANCE WITH AWWA C-600. THE NORMAL WORKING PRESSURE FOR THE WATER MAIN SHALL BE NOT LESS THAN 35 PSI ANY TAPPING SLEEVES REQUIRED SHALL BE STAINLESS STEEL, INCLUDING BOLTS AND ACCESSORIES.

CHLORINATION OF WATER MAINS:

THE CONTRACTOR SHALL BE MADE RESPONSIBLE IN HAVING THE WATER MAINS CHLORINATED AND TESTED IN ACCORDANCE WITH AWWA SPECIFICATIONS SECTION C651. THE COST OF CHLORINATION SHALL BE INCLUDED IN THE PRICE BID OF THE VARIOUS WATER MAIN ITEMS. THE CONTRACTOR SHALL SUBMIT TWO (2) COPIES OF TEST RESULTS TO THE WATER DEPARTMENT. TABLET CHLORINATION SHALL BE USED, THE TABLETS SHALL BE FIXED TO THE PIPE WITH PERMATAX.

SERVICE CONNECTIONS:

SERVICES SHALL BE MADE USING FORD F-1100 CORPORATION STOPS, VALVE BOXES SHALL BE MUELLER OR BINGHAM-TAYLOR WITH COVERS MARKED "WATER". NO SUBSTITUTION FOR VALVE BOXES WILL BE PERMITTED UNLESS APPROVED BY THE MUSKINGUM COUNTY WATER DEPARTMENT. THE LOCATION OF THE END OF THE SERVICE WILL BE MARKED USING A MINIMUM OF 6 FOOT LONG 4 INCH SQUARE WOOD POLE EXTENDING 3 FEET IN THE GROUND. THE TOP OF THE POLE WILL BE PAINTED BLUE FOR AT LEAST 1 FOOT. SERVICE CONNECTIONS BY CONTRACTOR SHALL BE MADE BY TAPPING THROUGH A SERVICE CLAMP OR SADDLE PROVIDING FULL 360° SUPPORT AGAINST THE PIPE. CLAMP AND BOLTS SHALL BE STAINLESS STEEL, WITH MINIMUM 6" BETWEEN BOLT CENTERS. ALL SERVICE LINES MUST GO TO PROPERTY LINE. ALL WATER SERVICE LINES SHALL BE 2" OR LESS, AND SHALL BE 200 PSI C.T.S., TUBING. WATER SERVICE TAP SIZE SHALL BE 3/4". INDIVIDUAL BOOSTER PUMPS SHALL NOT BE ALLOWED FOR ANY INDIVIDUAL SERVICE.

TRACER TAPE:

TRACER TAPE SHALL BE LAID NO LESS THAN 18 INCHES ABOVE THE MAIN LINE PIPE. THE TRACER WIRE SHALL BE MADE OF 12 GAUGE WIRE. TO BE INSTALLED AT ALL MAIN LINE LOCATIONS. TRACER WIRE SHALL ALSO BE LAID WITH ALL SERVICE CONNECTIONS. ALL LOCATE WIRE CONNECTIONS WILL HAVE WATER TIGHT WIRE NUTS

VALVES:

GATE VALVES SHALL COMPLY WITH AWWA C509, IRON BODY, RESILIENT WEDGE VALVES, MANUFACTURED 2500 SERIES AMERICAN FLOW CONTROL. VALVES WILL BE LOCATED CLOSE TO MAIN LINE VALVE, CLOSE RIGHT TEE'S WHEN IN A BRANCH LINE. SUPPLY ONE VALVE WRENCH FOR EACH 10 VALVES INSTALLED. WRENCHES ARE TO BE TURNED OVER TO MUSKINGUM COUNTY WATER DEPARTMENT.

VALVE BOXES:

VALVE BOXES SHALL BE LOCATED WITHIN THE R/W AND 6" FROM THE PROPERTY LINE UNLESS OTHERWISE SHOWN ON THE PLANS OR ORDERED BY THE ENGINEER.

JOINTS:

ALL PVC PIPE SHALL BE PROVIDED WITH PUSH-ON-TYPE WITH A THICKENED BELL, AND SHALL CONFORM TO ASTM D 3139 WITH A RUBBER GASKET CONFORMING TO ASTM F477.

FITTINGS:

THE FITTINGS SHALL BE DUCTILE IRON, MADE IN THE UNITED STATES, CONFORMING TO AWWA C153, SHALL BE PROVIDED WITH MECHANICAL JOINT ENDS (WITH RETAINER GLAND) MADE IN ACCORDANCE WITH AWWA C111. ALL C153 FITTINGS SHALL HAVE A BITUMINOUS COATED CEMENT LINING COMPLYING WITH AWWA C104 AND SHALL HAVE AN OUTSIDE COATING COMPLYING WITH AWWA C110. ANCHORAGE METHODS TO BE USED UTILIZING ANCHORING TEES, ELBOWS AND COUPLINGS SHALL BE APPROVED BY THE ENGINEER. ANCHORING FITTINGS SHALL BE EQUIPPED WITH A ROTABLE GLAND OR OTHER METHOD TO FACILITATE VERTICAL POSITIONING OF APPURTENANCES. ALL BENDS SHALL HAVE CONCRETE THRUST BLOCKING. ALL BOLTS SHALL BE FIELD COATED WITH A BITUMINOUS COATING AFTER IN PLACE.

METER PITS:

METER PITS SHALL BE LOCATED AS SHOWN ON THE PLANS, AND SHALL INCLUDE COPPER SETTERS. METER PITS SHALL BE MIDSTATE 18" X 24". PIT LID SHALL BE 18" X 24" MIDSTATES PLASTIC LID AND WITH MXV BRACKET. COPPER SETTER SHALL BE FORD 5/8" X 3/4" VH72-18W-44-33.

FIRE HYDRANTS:

FIRE HYDRANTS SHALL BE 12" HIGH CLOW ONLY. FIRE HYDRANTS OPEN RIGHT, WITH A 6" X 2' ANCHOR COUPLER BETWEEN VALVE AND HYDRANT. ALL FIRE HYDRANTS SHALL BE SET A MINIMUM OF 4' FROM THE EDGE OF THE PAVEMENT, BUT NOT MORE THAN 6' UNLESS OTHERWISE SHOWN. THE BREAKAWAY FLANGE SHALL BE A MINIMUM OF 3" ABOVE GRADE BUT NO MORE THAN 6" ABOVE GRADE. USE CLASS "A" SETTING WHERE APPLICABLE. CUT CHAINS OFF OF ALL HYDRANTS, LUBE THREADS OF CAPS WITH SUPER LUBE GREASE.

MANUFACTURER:

ALL MANUFACTURED MATERIALS FOR THIS PROJECT ARE TO BE "MADE IN THE U.S.A." OR AS APPROVED BY THE ENGINEER.

WATER LINE SPECIFICATIONS

ACCEPTIBLE PIPE & APPURTENANCES :

PIPE MATERIAL	PIPE SPECS
PC350 D.I. PIPE	AWWA C151
PC235 PVC PIPE DR18	AWWA C900
PC305 PVC PIPE DR14	AWWA C900
HDPE	AWWA C906
CL 160 PVC PIPE SDR26	ASTM D2241 - NSF APPROVED
CL200 PVC PIPE SDR21	ASTM D2241 - NSF APPROVED
CL250 PVC PIPE SDR17	ASTM D2241 - NSF APPROVED
VALVES/TAPPING SLEEVES	AWWA C-500
STOP BOXES/SERVICE BOXES	AWWA C-800
DISINFECTION/FLUSHING	AWWA C-651
INSTALLATION/TESTING	AWWA C-600, C-605

Mark J. Eicher, P.E., P.S.
Muskingum County
ENGINEER'S OFFICE
 155 Rehl Road
 Zanesville, Ohio 43701
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PROJECT NAME: WATERLINE EXTENSION
 PROJECT LOCATION: MUSKINGUM COUNTY FAIRGROUNDS ZANESVILLE, OHIO 43701

PLANS APPROVED BY: **MJE**

PLANS PREPARED BY: **MJE**

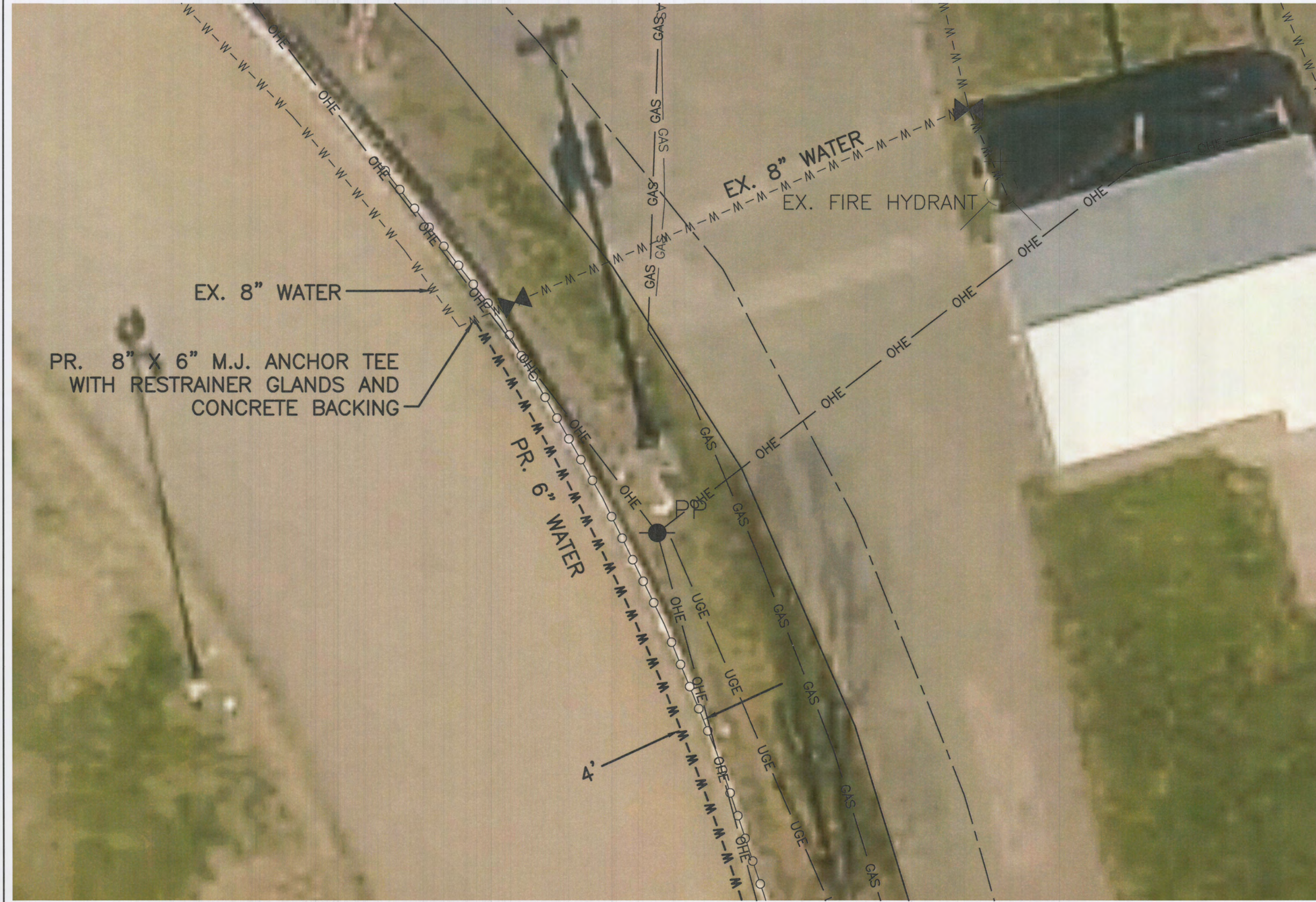
DATE: **1-31-22**

REVISED:

SHEET SIZE: **11" X 17"**

SHEET NAME: **WATERLINE NOTES**

SHEET NUMBER: **3/12**



Mark J. Eicher, P.E., P.S.
 155 Rehl Road
 Zanesville, Ohio 43701
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ENGINEER'S OFFICE 740-454-0155

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APPROX. LOCATION
 2" PLASTIC WATERLINE

COBURN

Mark J. Eichler, P.E., P.S.
 155 Rehl Road
 Zanesville, Ohio 43701
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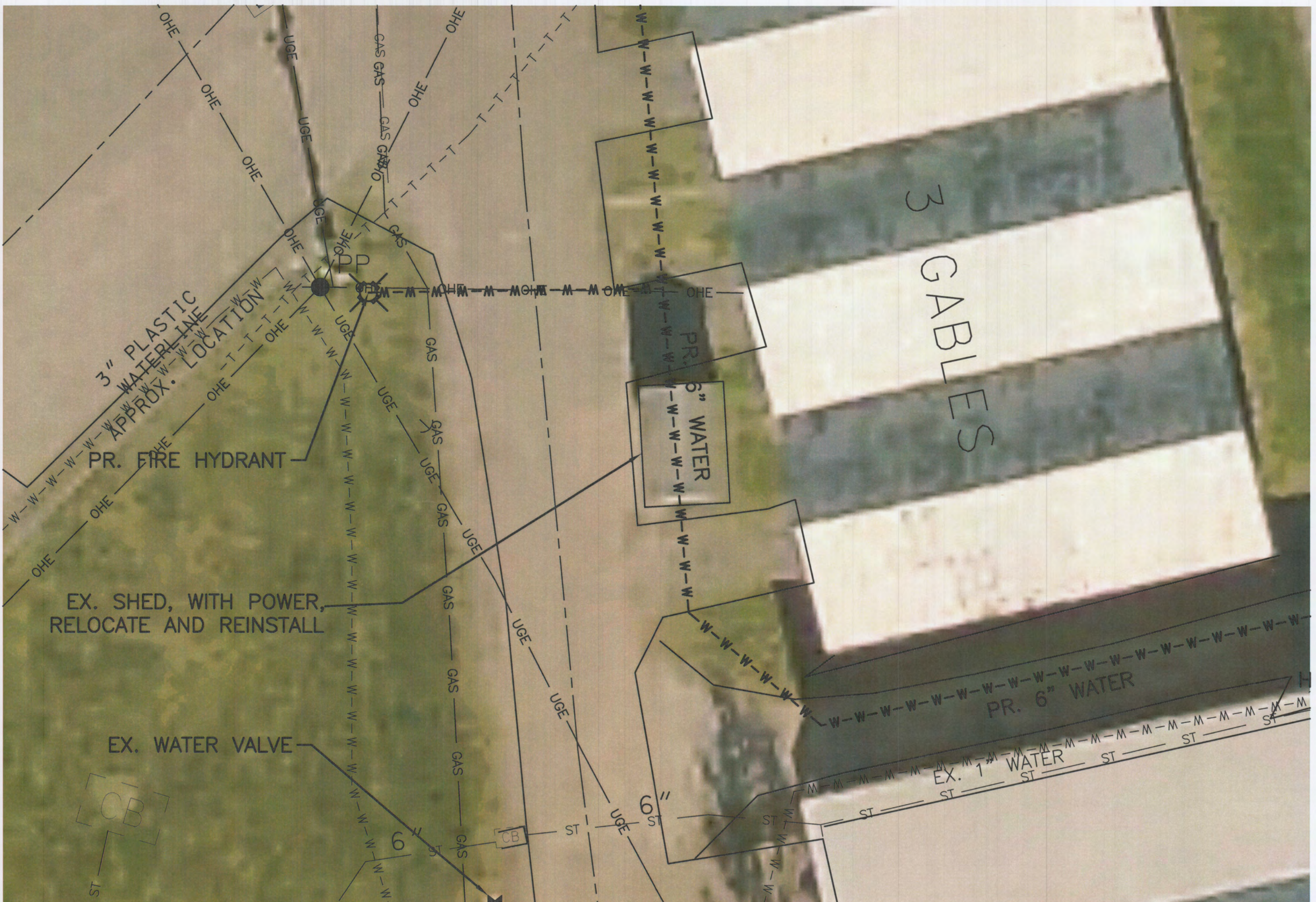
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PLANS PREPARED BY: **MJE**

DATE: **1-31-22**

REVISED:

SHEET SIZE: **11"X17"**

SHEET NAME: **PLAN VIEW**

SHEET NUMBER: **9/12**

9
12



Mark J. Eicher, P.E., P.S.
 155 Rehl Road
 Zanesville, Ohio 43701
Muskingum County
ENGINEER'S OFFICE 740-454-0155

PREPARED BY:

PROJECT NAME: WATERLINE EXTENSION
 PROJECT LOCATION: MUSKINGUM COUNTY FAIRGROUNDS ZANESVILLE, OHIO 43701

PLANS APPROVED BY:
 MJE

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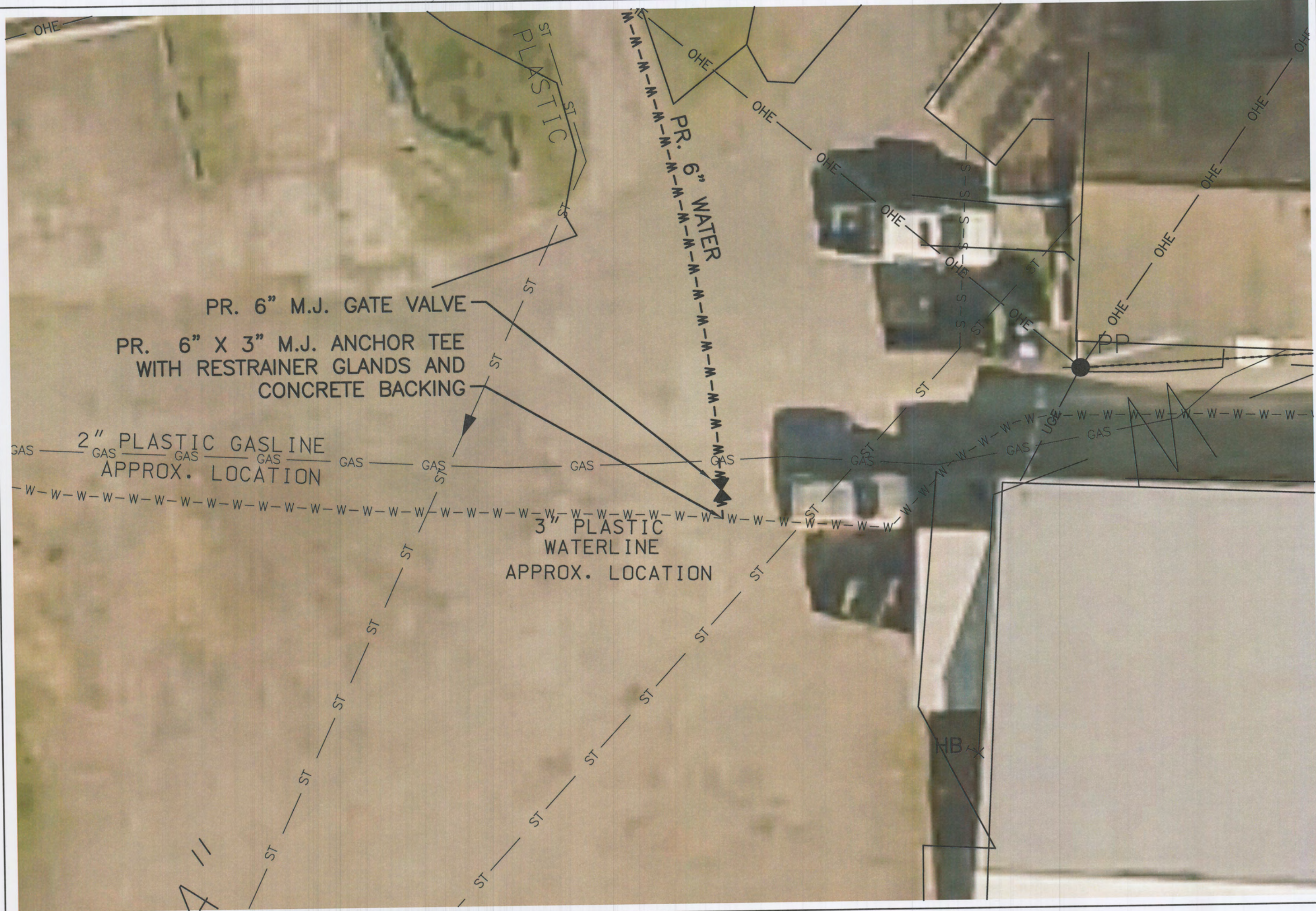
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Muskingum County

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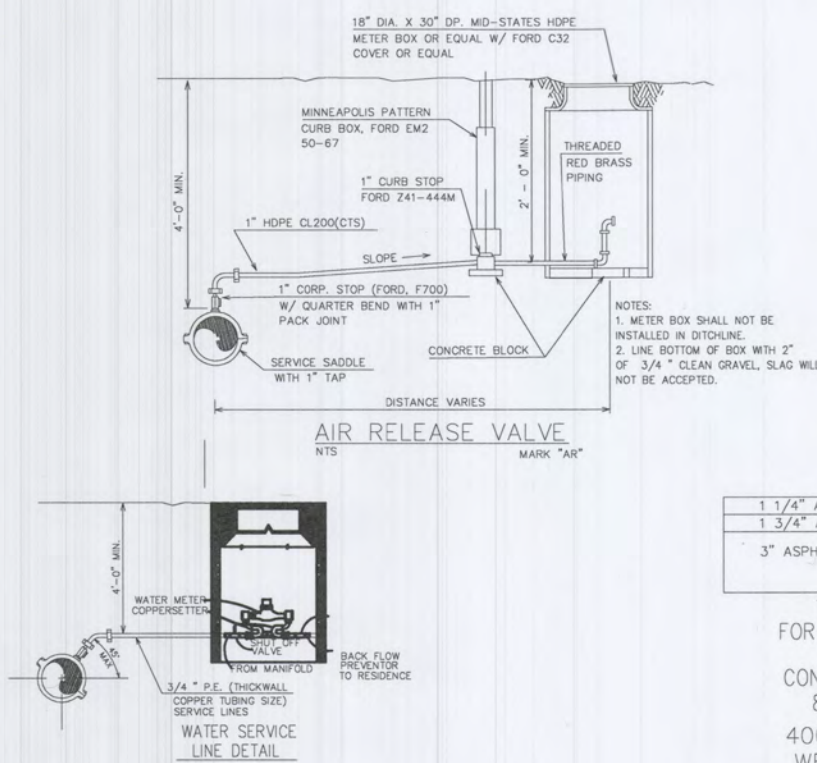
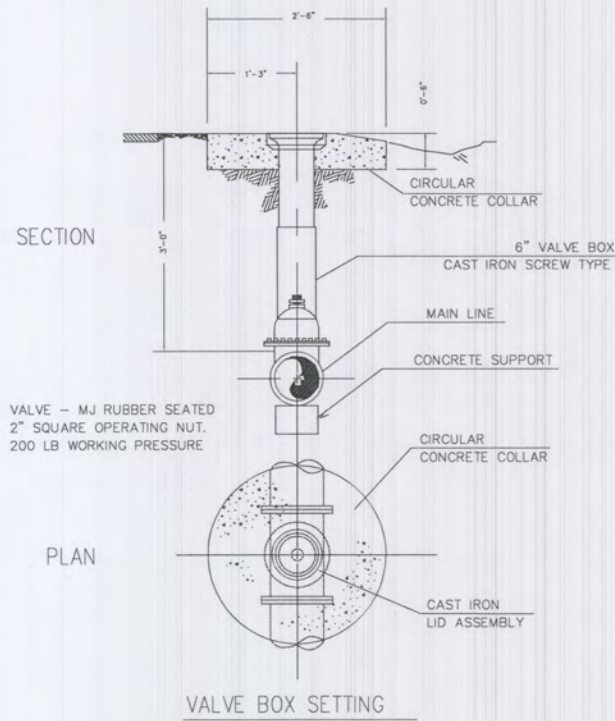
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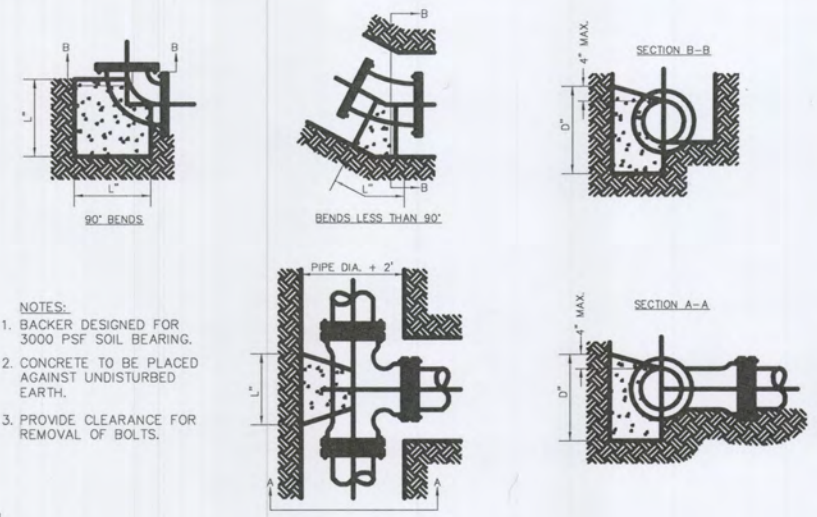
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1 1/4" ASPHALT CONCRETE SURFACE COURSE
1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE
3" ASPHALT CONCRETE BASE COURSE

TYPICAL ROAD SECTION FOR PAVEMENT REPAIR AREAS
 CONTRACTOR MAY SUBSTITUTE 8" CLASS C CONCRETE
 4000 PSI CONCRETE WITH WELDED WIRE MESH 6x6 W1.4xW1.4 (10 GAGE)



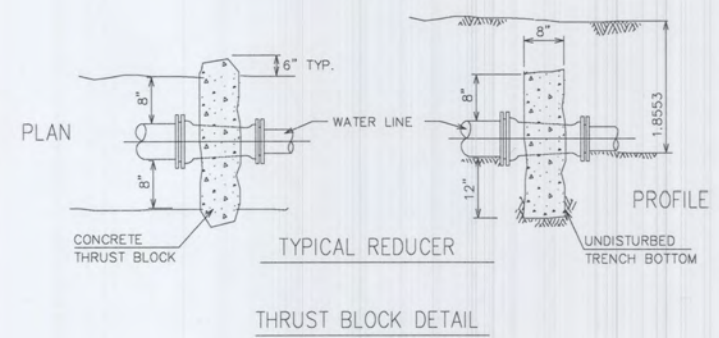
- NOTES:
1. BACKER DESIGNED FOR 3000 PSF SOIL BEARING.
 2. CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH.
 3. PROVIDE CLEARANCE FOR REMOVAL OF BOLTS.

TYP. BEND AND TEE DETAILS

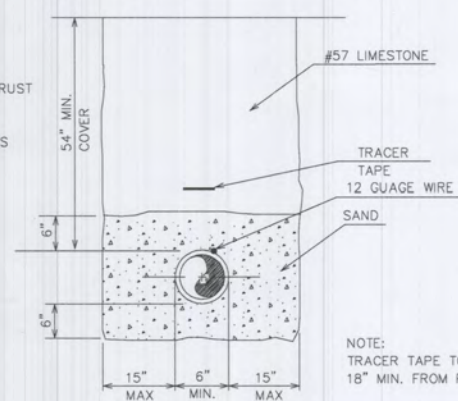
SIZE OF PIPE	BENDS						TEES			
	DEGREE OF BEND						BRANCH			
	11 1/4"	22 1/2"	45"	90"			3", 4", 6"	8"	12"	16"
	L" D"	L" D"	L" D"	L" D"	L" D"	L" D"	L" D"	L" D"	L" D"	L" D"
3"	8 6	10 6	20 6	36 8			3" 16 7			
4"	8 6	10 6	20 6	36 8			4" 16 7			
6"	8 6	12 7	20 8	36 9			6" 16 7			
8"	9 8	16 9	24 12	50 11			8" 14 8	18 12		
12"	14 12	24 14	36 18	60 18			12" 14 12	24 14	36 18	
16"	18 16	32 18	36 36	70 26			16" 18 16	32 18	36 36	70 26

STEEL WILL BE USED AS REQUIRED BY ENGINEER

MINIMUM REQUIREMENTS

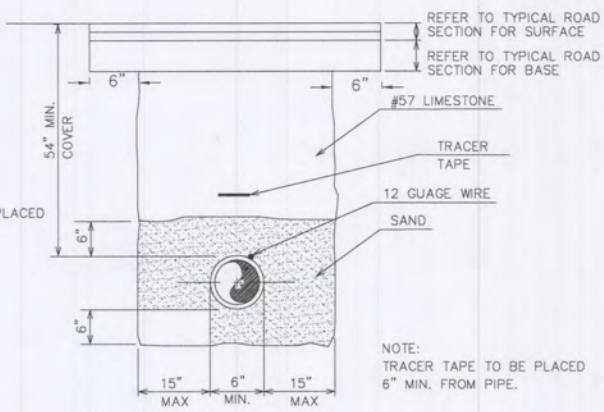


- M.J. FITTINGS DUCTILE - IRON
- NOTE:
1. PROVIDE SUBSTANTIAL THRUST BLOCKING ON ALL FITTINGS.
 2. KEEP ALL FLANGES, BOLTS CLEAN OF CONCRETE.



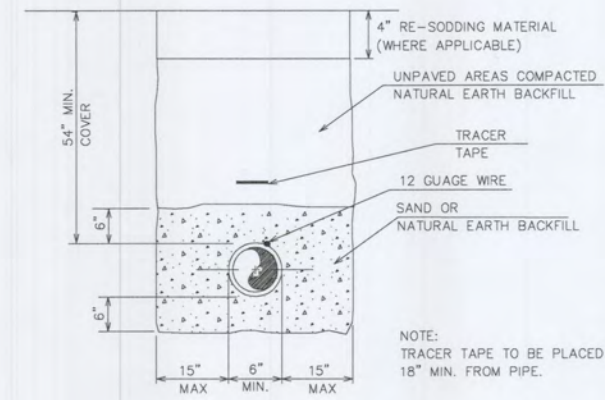
TYP. PIPE TRENCH DETAIL NON PAVED DRIVEWAY AREAS

- NOTE: TRACER TAPE TO BE PLACED 18" MIN. FROM PIPE.



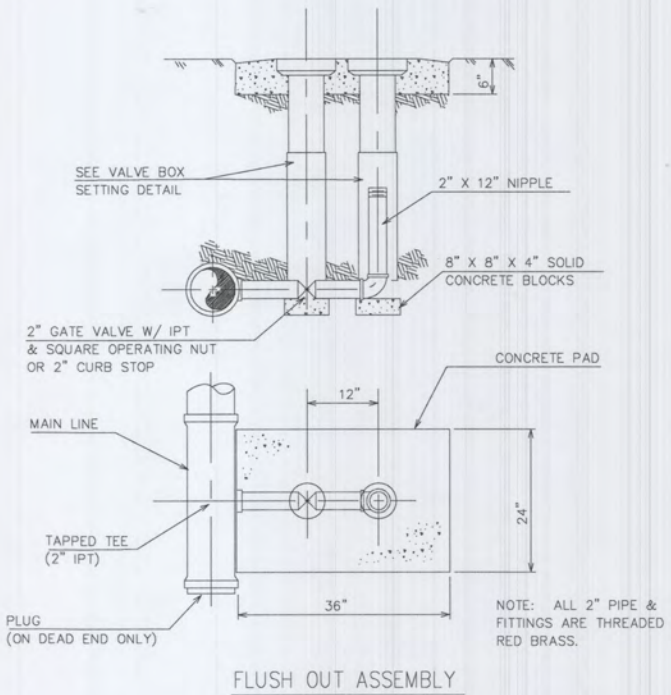
TYP. PIPE TRENCH DETAIL (PAVEMENT AREAS)

- NOTE: TRACER TAPE TO BE PLACED 6" MIN. FROM PIPE.

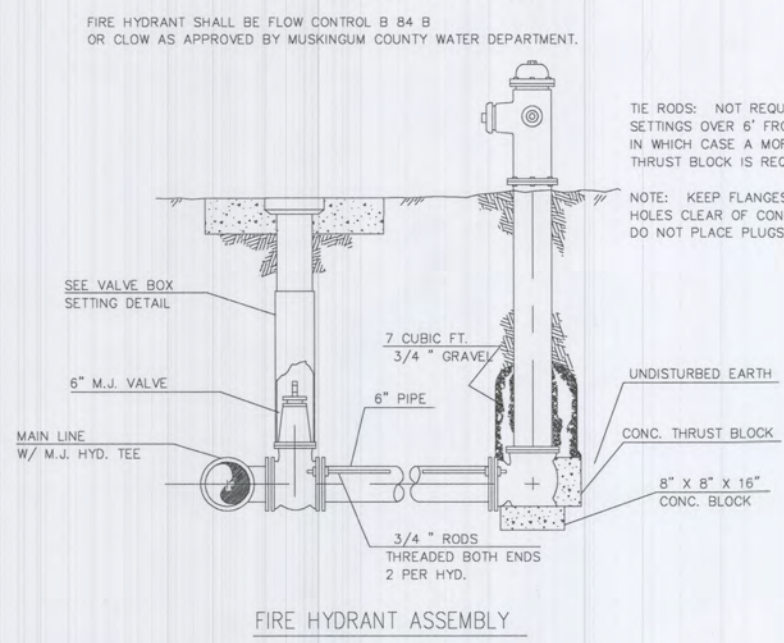


TYP. PIPE TRENCH DETAIL (NON-PAVEMENT AREAS)

- NOTE: TRACER TAPE TO BE PLACED 18" MIN. FROM PIPE.

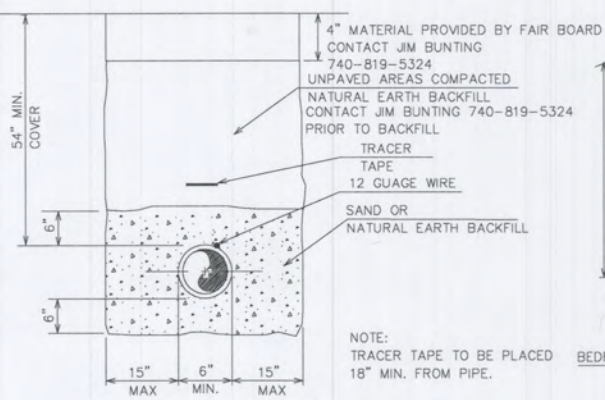


FLUSH OUT ASSEMBLY



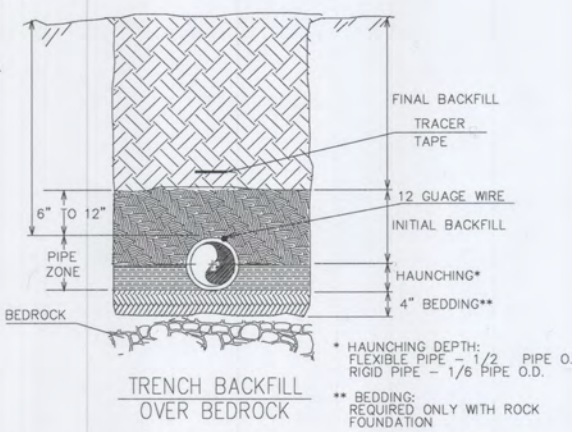
FIRE HYDRANT ASSEMBLY

- TIE RODS: NOT REQUIRED FOR SETTINGS OVER 6' FROM MAIN, IN WHICH CASE A MORE SUBSTANTIAL THRUST BLOCK IS REQUIRED.
- NOTE: KEEP FLANGES AND WEEP HOLES CLEAR OF CONCRETE, DO NOT PLACE PLUGS IN WEEP HOLES.



TYP. PIPE TRENCH DETAIL TRACK AREA

- NOTE: TRACER TAPE TO BE PLACED 18" MIN. FROM PIPE.



TRENCH BACKFILL OVER BEDROCK

- * HAUNCHING DEPTH: FLEXIBLE PIPE - 1/2 PIPE O.D. RIGID PIPE - 1/6 PIPE O.D.
- ** BEDDING: REQUIRED ONLY WITH ROCK FOUNDATION