
Medina County Sanitary Engineers
C.H. 42 Grafton Road Water Main Replacement Project 2022
WR-500/5-1.3

ADDENDUM 2

November 1, 2022

Planholders of the Medina County Sanitary Engineers, C.H. 42 Grafton Road Water Main Replacement Project 2022, WR-500/5-1.3 project are hereby notified of the following amendments to the Contract Documents. This Addendum is hereby made a part of the Contract Documents.

QUESTIONS

The following questions were submitted to the Engineer. The answers provided below are for the clarification of Bidders questions. Questions have been paraphrased for brevity.

Question #1 – Is recycled 304 allowed for granular backfill?

Recycled 304 is an acceptable material, if it is from a supplier that has certified the gradation. Tickets must be provided by the Contractor for review and approval by the Medina County Engineer prior to use.

Question #2 – Will the contractor be paid to repair storm sewers that are shown on the plans, but damaged during water line installation?

This is included in Bid Items 10a through 10d. See attached General Summary Sheet.

Question #3 – Are CPESC certified inspections required for the SWP3?

No.

Question #4 – Will the owner/ engineer be providing layout stakes for construction?

No, this is the responsibility of the Contractor. See Specification 01800, Section 4.01.

Question #5 – Is compaction testing required for trench backfill? Premium backfill only? If so, how often?

Yes, see Specification 02200, Sections 3.09 and 4.01.

Question #6 – Will the owner pay for RR flagmen and inspection?

Contractor is directed to follow CSX railroad information in Section 01043, Part 4, Special Provisions, 4.10 CSX Railroad Permitting. Since the permit is still under review, what CSX will require regarding flagmen and inspection is still unsure.

Question #7 – What is the cost of the MCE highway permit for work on Grafton Rd?

There is no fee for the MCE highway permit. However, there is a change for the driveway and ditch enclosure permit fees. Sheet 2 (General Notes) has been updated with this information. Please see attached.

Question #8 – Is premium backfill required at a 1:1 off e/p or 5' and then a 1:1?

See Drawing Sheet 2, General Notes.

Question #9 – Are 57's or 304 to be used within the zone of influence?

See Specification 02200, Sections 2.03 and Drawing Sheet 2, General Notes.

Question #10 – Does premium only need to be brought up to 1:1 or does it have to be brought to within 1 ft of the surface?

See Drawing Sheet 2, General Notes.

Question #11 – Can joint restraints be used in lieu of concrete thrust blocks?

No, MCSE requires concrete blocking for all horizontal and vertical bends even though the joints are restrained.

Question #12 – Plans show trench less construction ending at STA 21+00 but shows Certa-Lok continuing to STA 27+92. Is this correct? How will the open cut Certa-Lok be paid?

Yes, Certa-Lok that is not indicated to be trenchless is to be installed by open cut and is to be paid under Item 2d or 2e based on type. Certa-Lok installed trenchlessly shall be paid under Item 2f.

Question #13 – Will the contractor be responsible for paying for bacteria testing? If so, what will the county charge?

No, all bacteria sampling and testing will be completed by MCSE personnel, at no cost to the Contractor.

SPECIFICATIONS

Page 01043-8, 4.11

Add the following section:

“4.11 GENERAL SUMMARY SHEET

- A. Attached to this Specification is the general summary showing the quantities for the work.”

Page 01043-8, 4.11, A

Add the attached General Summary Sheet.

DRAWINGS

Replace Sheet 2 General Notes with the attached Sheet 2 General Notes.

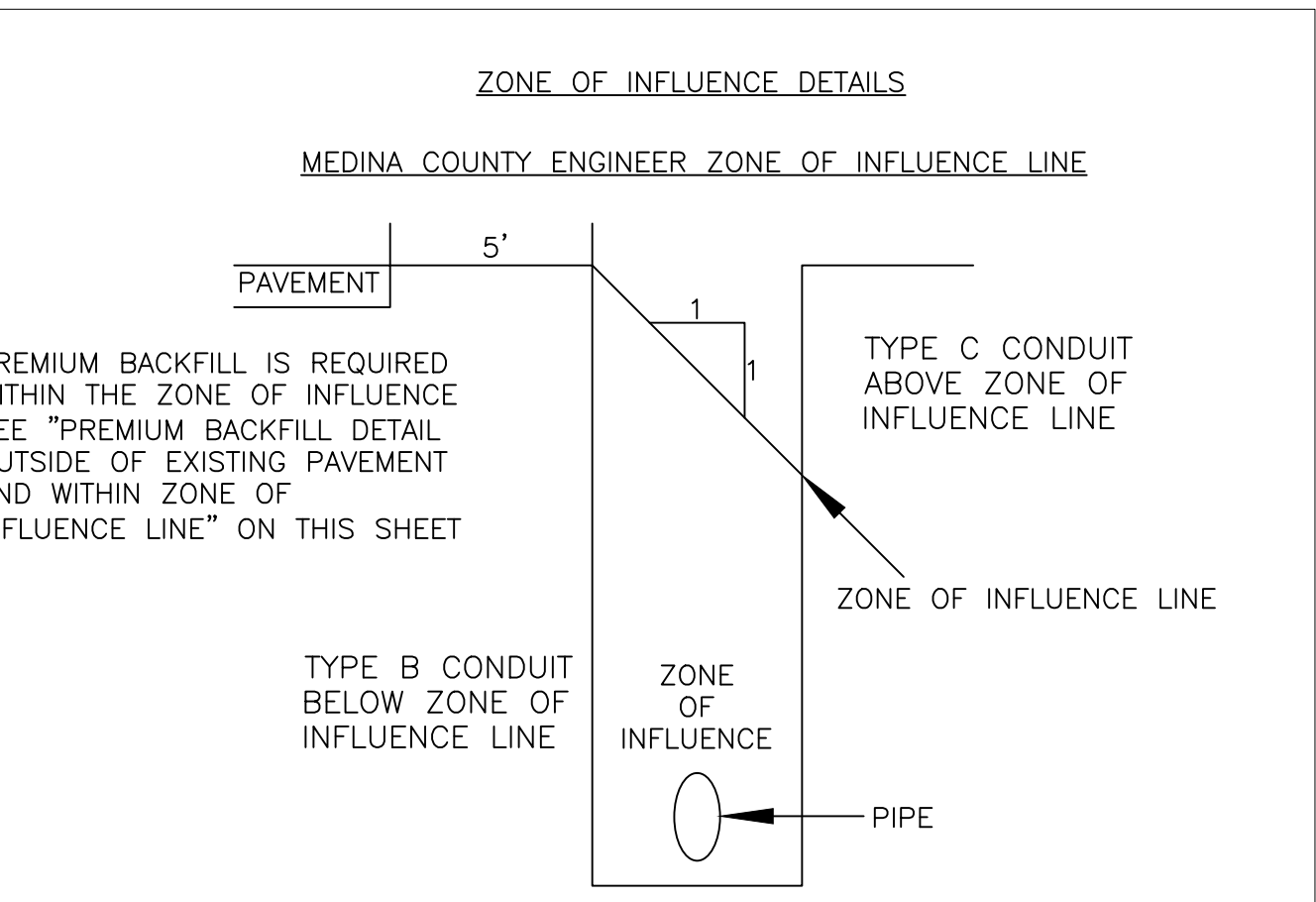
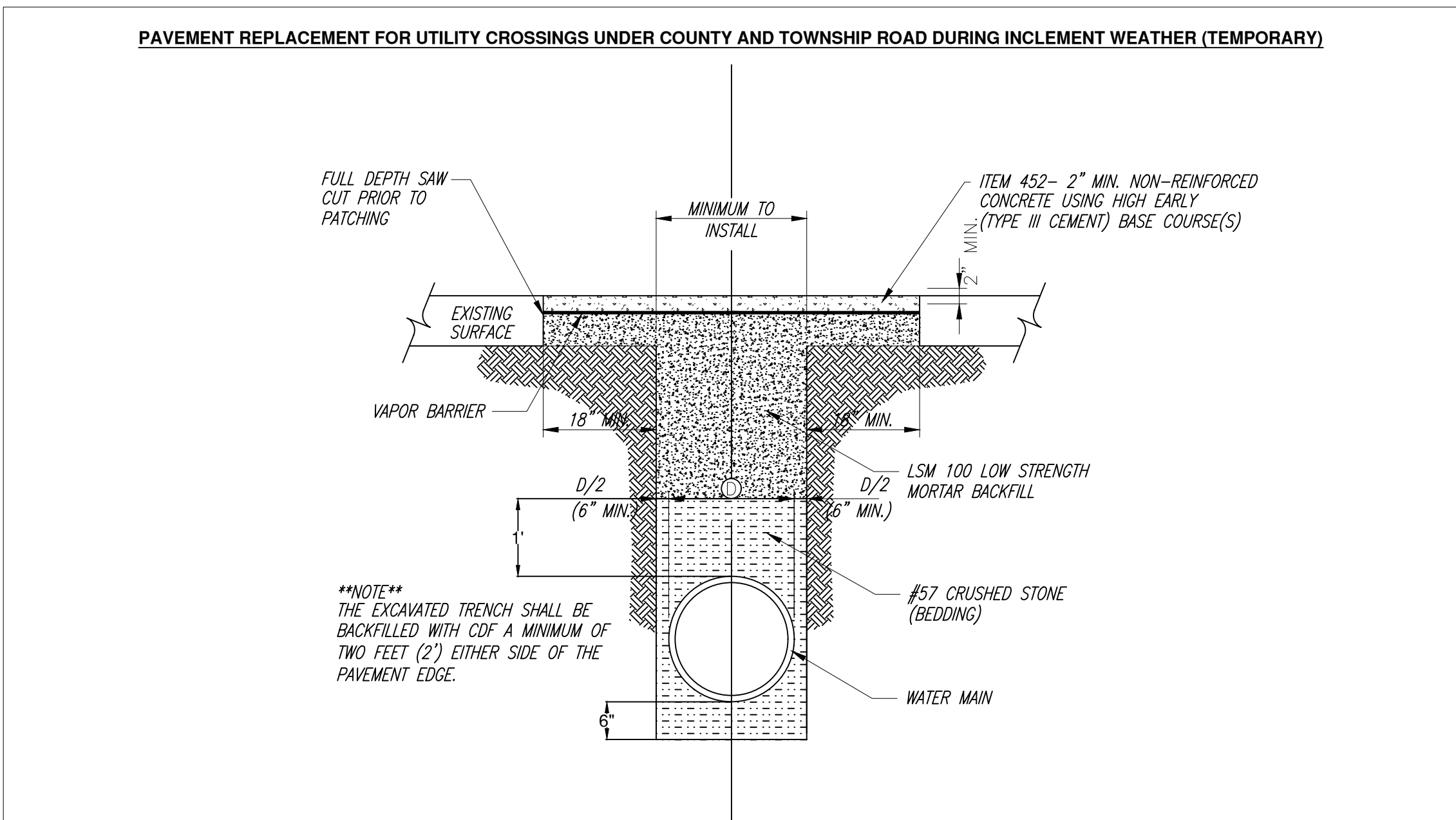
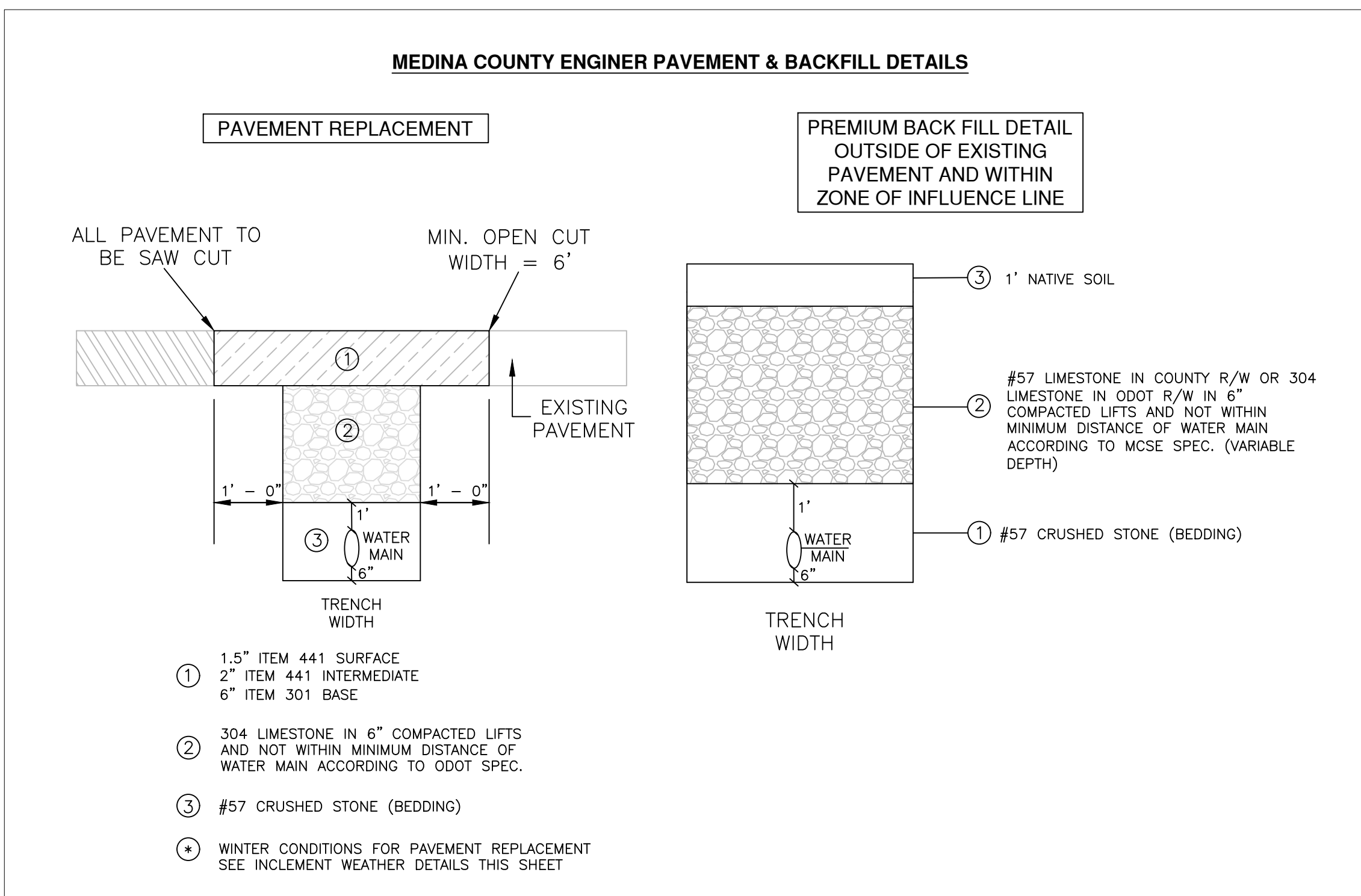
Replace Sheet 17 Water Main Standards with the attached Sheet 17 Water Main Standards.

RECEIPT OF THIS ADDENDUM MUST BE ACKNOWLEDGED ON PAGE C-410 - 1 OF THE BID.

**Medina County Sanitary Engineer
C.H. #42 Grafton Road Water Main Replacement 2022**

Item No.	Plan Quantity	Contingency Quantity	Grand Total	Unit	Description	Sheet 3	Sheet 4	Sheet 5	Sheet 6	Sheet 7	Sheet 8	Sheet 9	Sheet 10	Sheet 11	Sheet 12
1	1	0	1	LS	Mobilization and Demobilization	0	0	0	0	0	0	0	0	0	0
2a	0	28	28	LF	6-inch Water Main, Types B and C	0	0	0	0	0	0	0	0	0	0
2b	73	13	86	LF	8-inch Water Main, Types B and C	6	0	8	0	40	19	0	0	0	0
2c	56	10	66	LF	12-inch Water Main, Types B and C	0	0	0	56	0	0	0	0	0	0
2d	694	111	805	LF	16-inch Water Main, Type B - PVC	0	100	418	4	36	0	126	10	0	0
2e	4056	20	4076	LF	16-inch Water Main, Type C - PVC	0	0	277	736	776	800	683	784	0	0
2f	215	5	220	LF	16-inch Water Main in 30-inch Bored Casing - PVC	35	0	120	60	0	0	0	0	0	0
2g	3	1	4	EA	Connections to Existing Water Mains 12-inch and Smaller (Without Tapping)	1	0	1	0	0	1	0	0	0	0
2h	2	0	2	EA	Connection to Existing Water Mains 16-inch (Without Tapping)	1	0	0	0	0	0	0	1	0	0
2i	18	2	20	EA	Existing Water Main Plugged	3	0	4	3	4	0	2	1	0	1
2j	208	12	220	LF	8-inch Water Main Abandoned	0	0	0	0	0	0	0	0	0	208
2k	5920	40	5960	LF	16-inch Water Main Abandoned	338	800	800	800	800	800	805	777	0	0
3	1679	0	1679	LF	16-inch Water Main, Trenchless - PVC	304	700	0	0	675	0	0	0	0	0
4a	3	0	3	EA	8-inch Gate Valve and Box	1	0	1	0	0	1	0	0	0	0
4b	1	0	1	EA	8-inch by 8-inch Tapping Sleeve, Valve and Box	0	0	0	0	1	0	0	0	0	0
4c	1	0	1	EA	12-inch by 12-inch Tapping Sleeve, Valve and Box	0	0	0	1	0	0	0	0	0	0
4d	17	1	18	EA	16-inch Gate Valve and Box	1	2	1	3	2	1	2	3	2	0
4e	4	2	6	EA	Valve Abandonment	0	1	0	1	1	0	1	0	0	0
5a	10	1	11	EA	Fire Hydrant Assembly	0	1	1	1	1	1	1	2	1	1
5b	16	0	16	EA	Fire Hydrant Assembly Removed	1	0	2	2	2	3	3	2	0	1
5c	3	1	4	EA	Flushing Assembly	1	0	1	0	0	1	0	0	0	0
6a	98	15	113	LF	Water Service, (Less than 2-inch diameter)	14	33	13	6	0	7	25	0	0	0
6b	1448	19	1467	LF	Water Service Trenchless, (Less than 2-inch diameter)	0	51	0	322	320	55	140	560	0	0
6c	29	2	31	EA	Water Service Connection Reinstated, (Less than 2-inch diameter)	1	3	1	5	4	2	5	8	0	0
7a	7	20	27	SY	ODOT Item 202 Pavement and Base Removed	3	3	0	0	1	0	0	0	0	0
7b	231	20	251	SY	ODOT Item 202 Driveway and Berm Pavement Removed	55	114	22	0	8	0	32	0	0	0
8a	7	20	27	SY	Flexible Pavement Trench Repair - Heavy Roadway	3	3	0	0	1	0	0	0	0	0
8b	112	10	122	SY	Flexible Pavement Trench Repair - Driveway	55	57	0	0	0	0	0	0	0	0
8c	119	10	129	SY	Gravel Pavement Trench Repair - Driveway	0	57	22	0	8	0	32	0	0	0
8d	7	20	27	SY	Temporary Pavement Repair	3	3	0	0	1	0	0	0	0	0
8e	0	100	100	SY	ODOT Item 411 Stabilized Crushed Aggregate (Berm)	0	0	0	0	0	0	0	0	0	0
8f	55	10	65	SY	3-inch ODOT Item 301 Asphalt Concrete Base Course	55	0	0	0	0	0	0	0	0	0
9	0	10	10	SY	6-inch ODOT Item 452 Non-Reinforced Concrete Pavement, Class MS (Approach)	0	0	0	0	0	0	0	0	0	0
10a	38	50	88	LF	Sewer Repair (Less than or equal to 8-inch diameter)	0	1	20	0	7	0	10	0	0	0
10b	71	20	91	LF	Sewer Repair (10-inch diameter to 15-inch diameter)	0	30	41	0	0	0	0	0	0	0
10c	20	200	220	LF	Sewer Repair (18-inch diameter to 21-inch diameter)	0	5	5	10	0	0	0	0	0	0
10d	10	10	20	LF	Sewer Repair (24-inch diameter and larger)	0	0	0	5	5	0	0	0	0	0
11	0	2	2	EA	Catch Basin Removed and Replaced	0	0	0	0	0	0	0	0	0	0
12	1	0	1	LS	Video Recording of the Zone of Influence	0	0	0	0	0	0	0	0	0	0
13	1	0	1	LS	Maintenance of Traffic	0	0	0	0	0	0	0	0	0	0
14	1	0	1	LS	Storm Water Pollution Prevention	0	0	0	0	0	0	0	0	0	0
15	1	0	1	LS	Clearing and Grubbing	0	0	0	0	0	0	0	0	0	0
16	7	0	7	EA	Trees	0	0	0	0	7	0	0	0	0	0

PAVEMENT AND ZONE OF INFLUENCE DETAILS



- MEDINA COUNTY ENGINEER NOTES**
- Contractor will be responsible for obtaining a "no-fee" highway use permit from MCE for work on Grafton Road (CH-42).
 - If drive pipe is to be disturbed or conduit placed between EOP & drive culvert, a driveway permit is to be obtained by the Contractor from MCE and Contractor is responsible for any permit fees. Driveway permit valid for one (1) year will cost \$100.00. Driveway permit valid for six (6) months will cost \$75.00. Driveway permit valid for three (3) months will cost \$50.00.
 - If ditch enclosure is to be disturbed, a ditch enclosure permit is to be obtained by the Contractor from MCE and Contractor is responsible for permit fee. Cost for Ditch Enclosure permit is \$100.00 and is valid for one (1) year.
 - Premium backfill on Grafton Road (CH-42) and Marks Road (CH-22) shall be 304 used under pavement and #57 Limestone shall be used outside of pavement per details on this sheet. Backfill should have 95% compaction. The use of Control Density Fill (CDF), if requested for use by the Contractor, is acceptable.
 - Compaction of backfill should have 12" lifts
 - Bore Pit Locations are to be submitted and approved by MCSE & MCE prior to permit approval.
 - Contractor must verify all elevations
 - All pavement to be saw cut
 - Inclement Weather Detail to be utilized between Nov 15 and March 15 or at the discretion of the County Road Authority.
 - All open trenches are to be covered with steel plates and with barrels at night per MCE regulations.

OHIO EPA GENERAL NOTES

- A minimum 35 PSI pressure shall be delivered to the curb stop boxes during normal operating conditions for all water service connections.
- Booster pumps are not permitted on water service connections.
- The sanitary sewers must pass a leakage test which shall be a low pressure air test in accordance with the "Ten State Standards" section 33.95 and ASTM F-1417 hydrostatic testing will have a leakage limit of 100 Gal./In./Mi./Day.
- All sanitary manholes shall be air tested per ASTM specification C 1244-93 to verify water tightness and proper construction per plan details.
- All flexible sanitary sewers must pass a deflection test (5% Max.)
- Deflection tests shall be performed no sooner than 30 days following completion of backfill. Maximum ring deflection of the pipe under load shall be limited to 5% of the average inside diameter listed in ASTM D-2751 for ABS solid wall pipe and ASTM D-2680 for ABS composite wall pipe. ASTM-3034 for Polyvinyl Chloride (PVC) pipe lists outside dimensions and minimum wall thicknesses which may be used to calculate applicable base diameters. The proper sized mandrels shall be pulled through the pipe.
- All pipe failing to maintain the minimum deflection diameter or larger for the applicable type of pipe shall be considered to have been improperly installed and shall be relayed or replaced by the contractor at their expense.
- All water mains shall be installed and pressure tested per AWWA C600.
- All water mains shall be disinfected per AWWA C651.
- The following minimum horizontal separations (measured out-to-out clear) between the proposed water line and the sewers shall be maintained:
 - 10 foot separation from the storm sewer
 - 10 foot separation from the sanitary sewer
- The following minimum vertical clearances (measured out-to-out clear) between the proposed water line and the sewers shall be maintained:
 - 18 inch clearance from the storm sewer
 - 18 inch clearance from the sanitary sewer

Water Lines	Medina County Sanitary Engineer 791 West Smith Road Medina, Ohio 44256 (330) 723-9585 or (844) 722-8404
Sanitary Sewers	
Storm Sewers	Medina County Engineer 791 West Smith Road Medina, Ohio 44256 (330) 723-9561
Fiber Optic	Medina County Fiber Optic Network 144 N Broadway Street Medina, Ohio 44256 (216) 722-9215
Ohio 811	Registered Underground Utilities Protection Service 1-800-362-2764
Columbia Gas of Ohio	Dan Suren Field Engineer (440) 891-2428
CSX Railroad	CSX Transportation, Inc. 500 Water Street Jacksonville, Florida 32202 (877) 835-5279

- Additional Notes for Townships and County Highways:**
- Medina County Highway Engineer inspectors will periodically check that:
- Signs & Flaggers (Patrolmen) are used every day.
 - The road is washed every day.
 - The excavated area is closed or plated daily.
 - Premium fill is used if the trench is within 5'-0" of the edge of the pavement.
 - Trench boxes & ladders are used as required by M.C.H.E.
 - All equipment is parked 10'-0" minimum from the pavement edge.

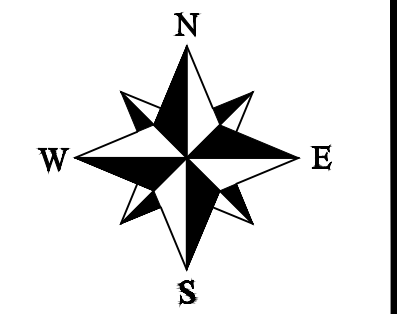
CAUTION:
Contact all utilities by calling
OHIO811 1-800-362-2764
before beginning construction

GENERAL NOTES

- Underground facilities, structures, and utilities have been plotted from available surveys and drawings from various sources. Therefore, their locations must be considered approximate only. Also, there may be others, the existence of which is not presently known. It shall be the contractor's responsibility to ascertain for himself the conditions that he may encounter during completion of the project.
- Blasting will not be permitted unless approved by the owner.
- All abandoned pipes shall be bulkheaded and filled with grout.
- Existing catch basins, where disturbed, shall be reset to finished grade, or pavement elevation as directed by the engineer.
- All manholes, catch basins, monument rims, valve boxes, castings, and covers shall be adjusted to finished pavement elevations, final grade or as directed by the engineer.
- The contractor shall be responsible for the design, installation, and final clearance of any required needling, underpinning, shoring or bracing of existing structures.
- Minor alignment changes may be required during construction due to possible utility conflicts, as directed and/or approved by the engineer.
- The contractor is to confirm the invert elevations of all existing sewers affected by his work prior to commencement of work and report all findings to the engineer.
- The Medina County Sanitary Engineer will obtain O.D.O.T. permits for work in State of Ohio roadways. All other roadway use permits shall be obtained by the Contractor.
- Work limits shall be limited to within the Right-of-Way. All of the contractor's operations must be confined within the existing street's Right-of-Way limits or existing easements acquired by the owner. Any additional construction easements needed for completion of his work must be secured from the property owners by the contractor at his expense and at no additional cost to the owner.
- Trees: All trees shall be saved unless otherwise noted, or as directed by the engineer. Extreme caution must be taken to protect trees. Any damage to the trees must be repaired and the method of repair must receive prior approval from the engineer.
- Sanitary sewers are to be separated from existing and proposed potable water lines by a minimum horizontal distance of ten feet (10'), outside of pipe to outside of pipe. In instances where water and sewer line must cross, the water line is to maintain a vertical distance of eighteen inches (18") above the sanitary sewer, outside of pipe to outside of pipe.
- All construction equipment shall be equipped with mufflers in accordance with federal safety standards.
- If utility poles or guy wires must be held, contractor to coordinate with proper utility company. The cost for holding poles or guy wires will be the responsibility of the contractor.
- Contractor will be responsible for repairing/replacing all hardscape items (i.e., decks, fences, sheds) encountered during construction in addition to restoration requirements as described in Section 02800, Sodding, Seeding and Mulching.
- Contractor to verify existing sanitary sewer lateral elevations prior to installing the new sanitary lateral from the new sanitary sewer main to where the sanitary connection exits the home.
- Restoration of driveways shall be performed "in kind" to match existing driveway apron materials and depths, and shall be approved by the road authority.
- All sanitary cleanouts shall be installed to existing grade.
- Maximum 45 degree bend shall be installed on sanitary laterals. Minimum two (2) feet of PVC SDR-35 pipe shall be installed between bends.
- 5' - 0" Minimum of undisturbed earth from the face of the utility pole to the trench wall MUST be maintained or the pole must be held by the effect utility. Cost of holding to be paid for by the contractor.
- Contractor is to provide a minimum of one (1) week's notice to MCSE for all planned water outages.
- During water outages, water is to be restored by the end of the workday.
- Subgrade Investigation: Soil Boring locations are indicated on the plans. Geotechnical Exploration Report is available at <https://bit.ly/GraftonRdSoils>. Additional information can be found in Section 01043, Coordination and Control of the Work in the Project Manual.

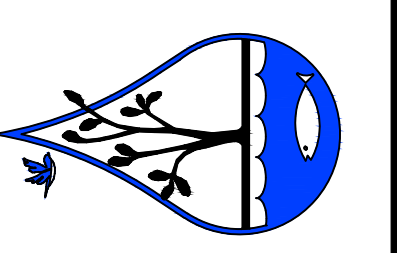
WATER NOTES

- If an existing water service is in conflict with the proposed water main, the contractor is to re-route the service over the proposed water main. Contractor to furnish all labor, materials and equipment to perform the work. Price of this work is to be included in the price of the water main.
- Fire Hydrants printed on drawings are NOT TO SCALE. They are intended for reference. In some cases they may appear to be in conflict with other utilities, but they designed to meet proper utility separation.
- Contractor is to set all hydrants and valves to grade at the time of installation.
- Contractor is to call MCSE PERMITS AT (330) 723-9599 to schedule a meter vault for water service connection, if applicable.
- Joint sealer is to be used around square boxouts for all gate valves and water shut off valves,
- Box out material should match existing



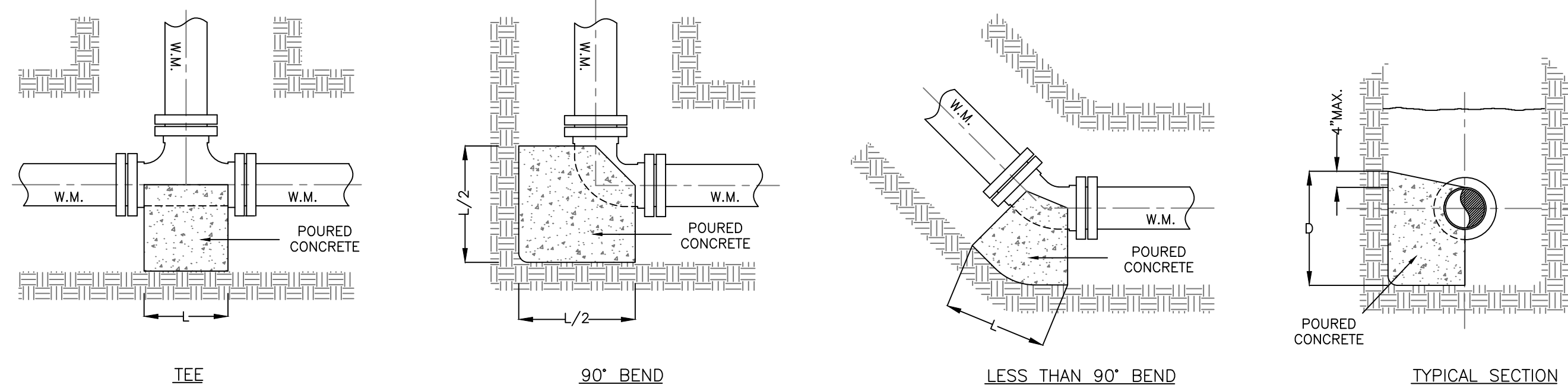
COUNTY: MEDINA	TOWNSHIP: VARIOUS	DATE: MAY 2022	BY:
DRAWN BY:	REVIEWED BY:	SCALES: N/A / N/A	DESCRIPTION
10/31/22	REVISIONS TO MEDINA COUNTY ENGINEER NOTES	JM	DATE

**- GENERAL NOTES -
WATER MAIN REPLACEMENT
C.H. 42 GRAFTON RD.**

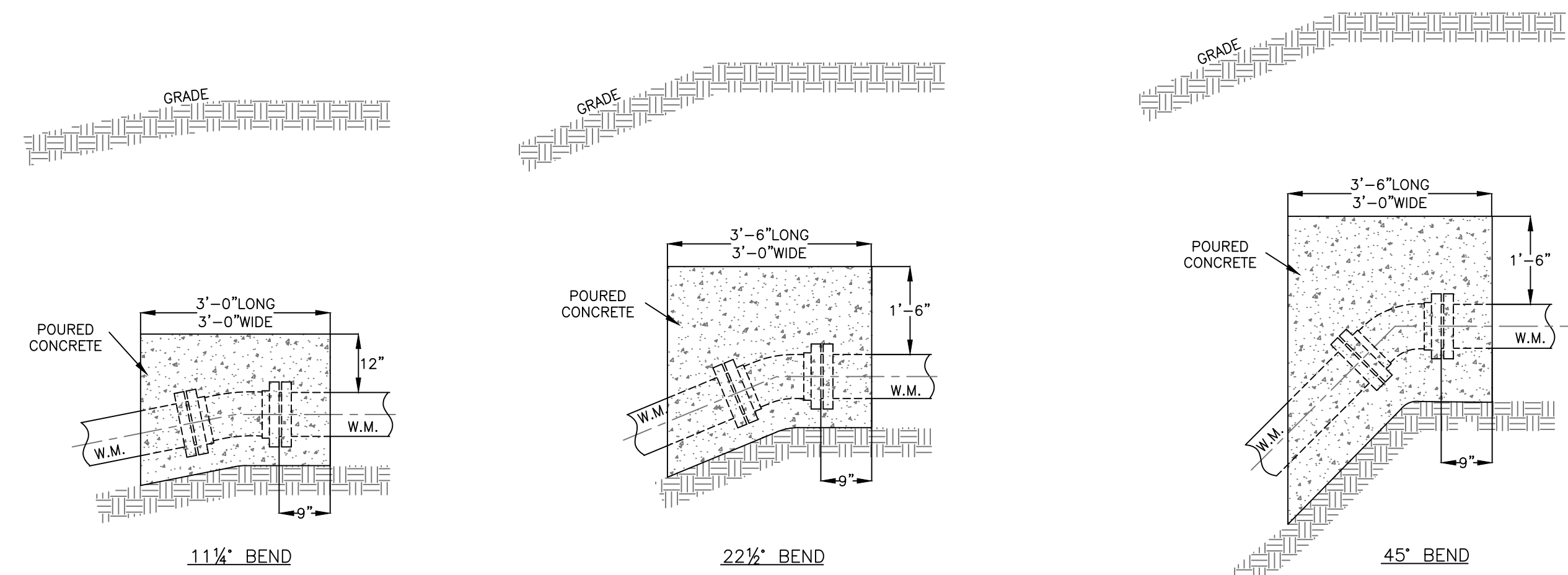


PLAN PREPARED BY:
**MEDINA COUNTY
SANITARY ENGINEER**
JEREMY SINKO, P.E.
791 WEST SMITH RD.
MEDINA, OHIO 44256
(630) 723-9585

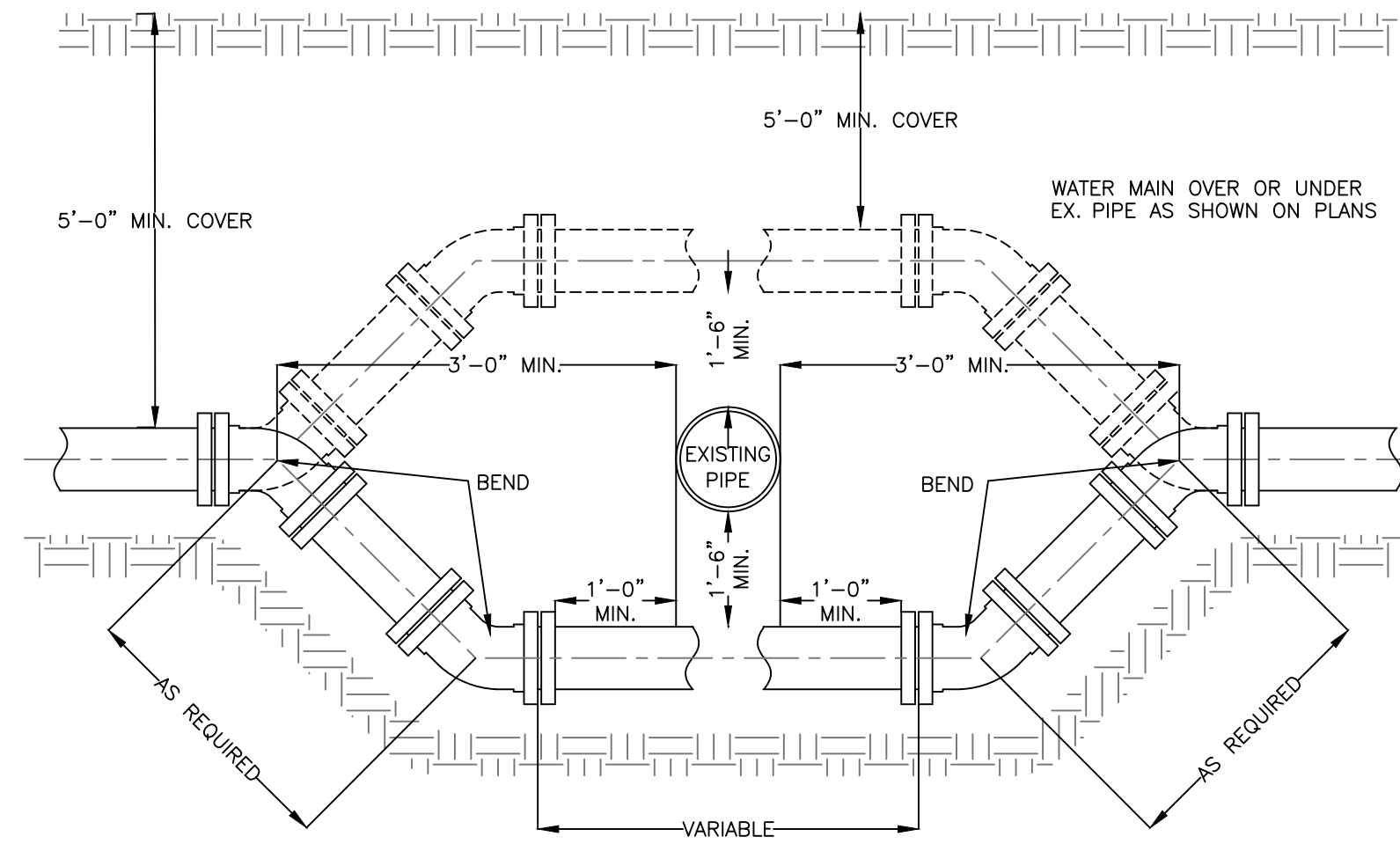
PROJECT NUMBER	WR-500/5-1.3
SHEET NUMBER	2 / 17



CONCRETE BLOCKING FOR HORIZONTAL BENDS



CONCRETE BLOCKING FOR VERTICAL BENDS

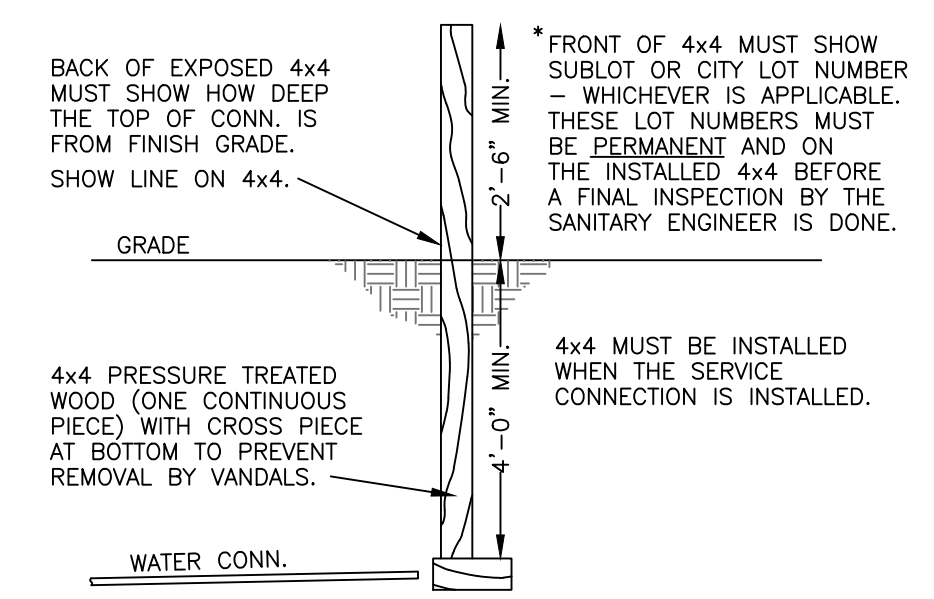


STANDARD OFFSET DETAIL

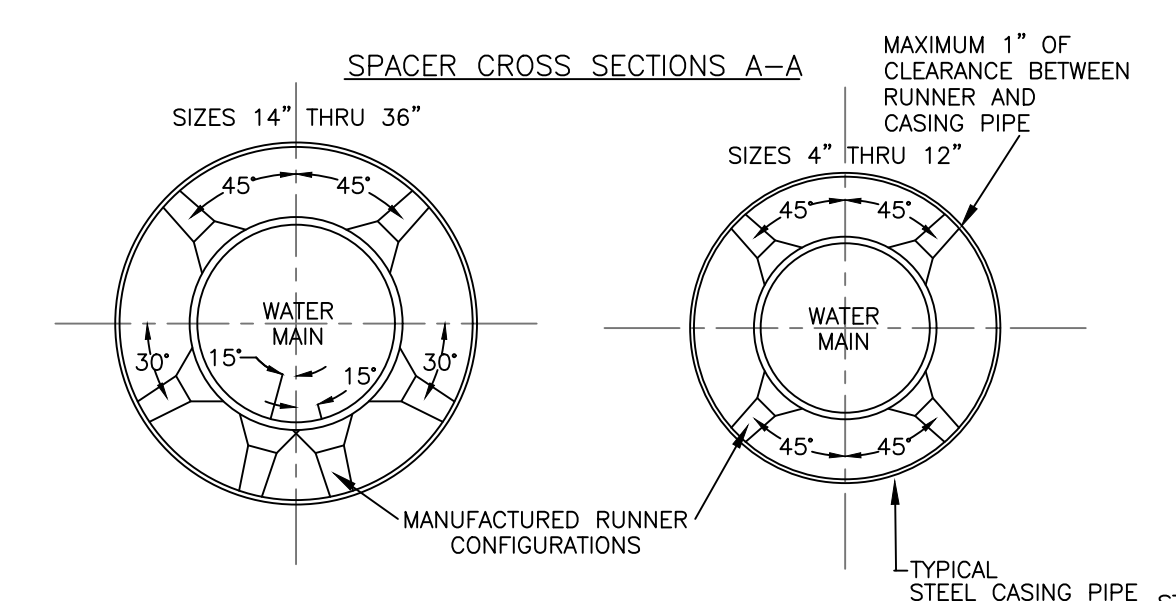
TEES	BRANCH								
	3", 4", 6"		8"		12"		16"		
	L	D	L	D	L	D	L	D	
3", 4", 6"	16"	7"							
8"	14"	8"	18"	12"					
12"	9"	12"	18"	12"	24"	18"			
16"	8"	16"	14"	16"	28"	16"	30"	26"	
> 16"	TO BE DETERMINED IN FIELD BASED ON GROUND CONDITIONS								

BENDS	SIZE OF PIPE	DEGREE OF BEND							
		1 1/4°		22 1/2°		45°		90°	
		L	D	L	D	L	D	L	D
3", 4", 6"	8"	6"	10"	6"	20"	6"	36"	6"	
8"	9"	8"	14"	8"	24"	8"	50"	8"	
12"	14"	12"	22"	12"	30"	15"	60"	15"	
16"	18"	16"	24"	18"	33"	36"	70"	22"	
> 16"	TO BE DETERMINED IN FIELD BASED ON GROUND CONDITIONS								

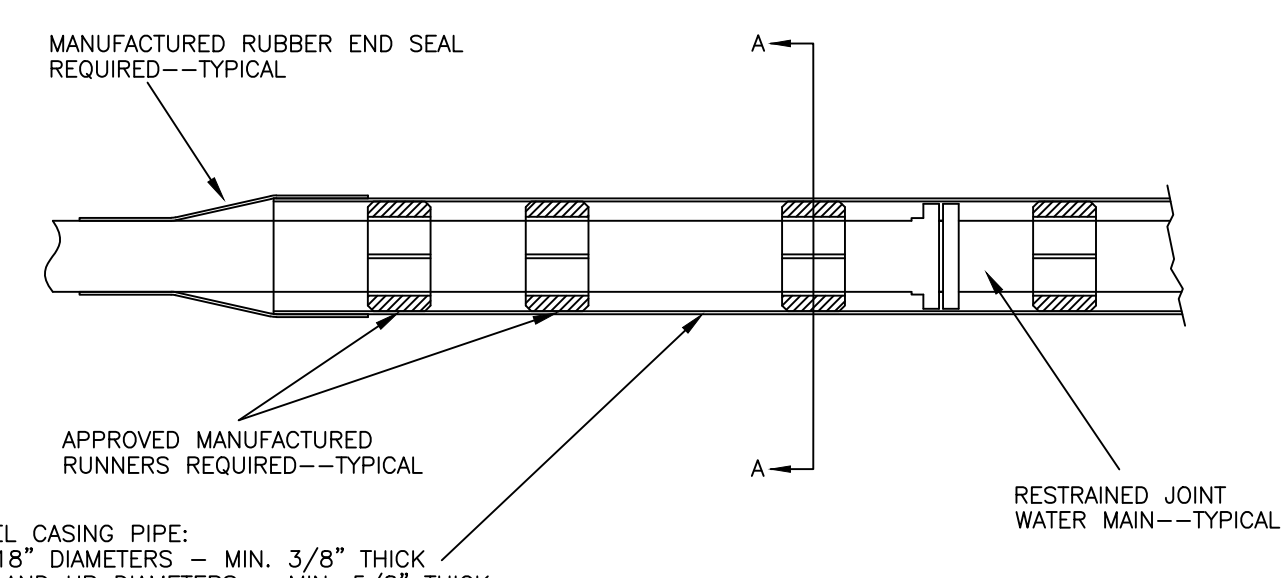
CASING TABLE	
NOMINAL PIPE SIZE	MIN CASING SIZE INSIDE DIAMETER
4"	12"
6"	12"
8"	16"
10"	18"
12"	20"
15"	22"
18"	26"
21"	30"
24"	33"
27"	36"
36"	48"



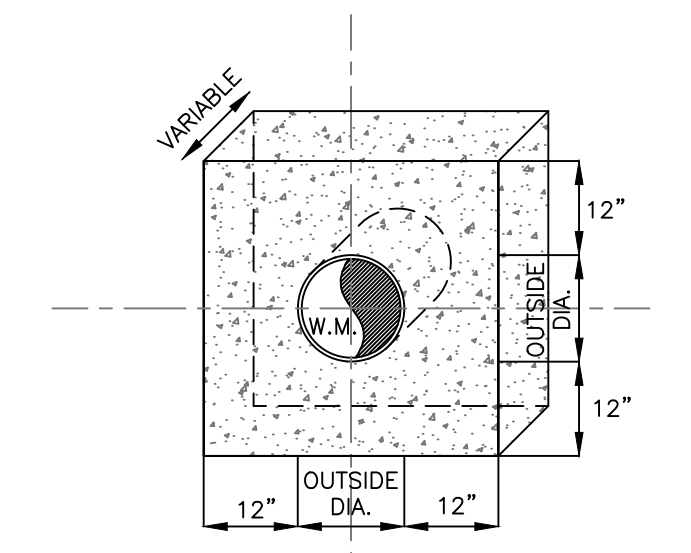
TYPICAL WATER CONNECTION MARKER DETAIL
(TO BE PLACED AT THE END OF EVERY WATER LATERAL)



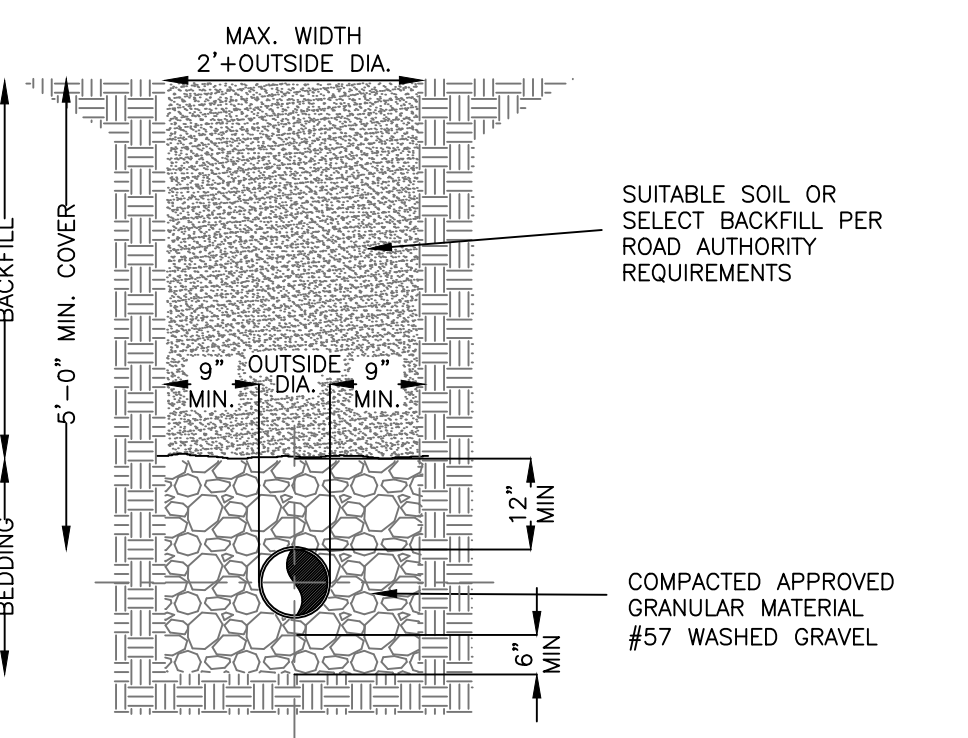
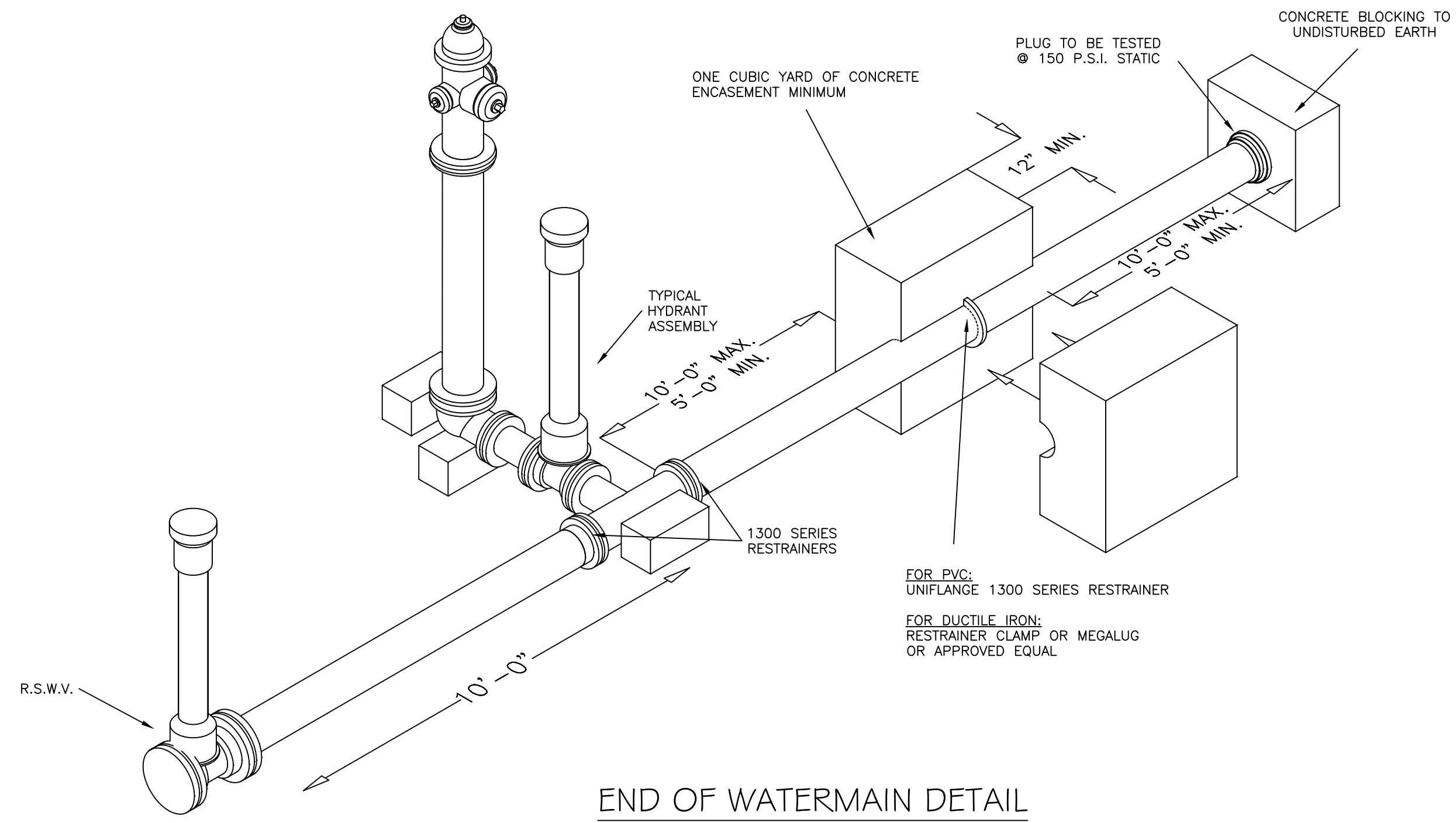
- NOTE:
- CASING SPACERS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
 - WATER MAIN TO BE CENTERED INSIDE CASING PIPE.
 - CASING PIPE TO EXTEND A MIN. OF 10' FROM EDGE OF PAVEMENT.



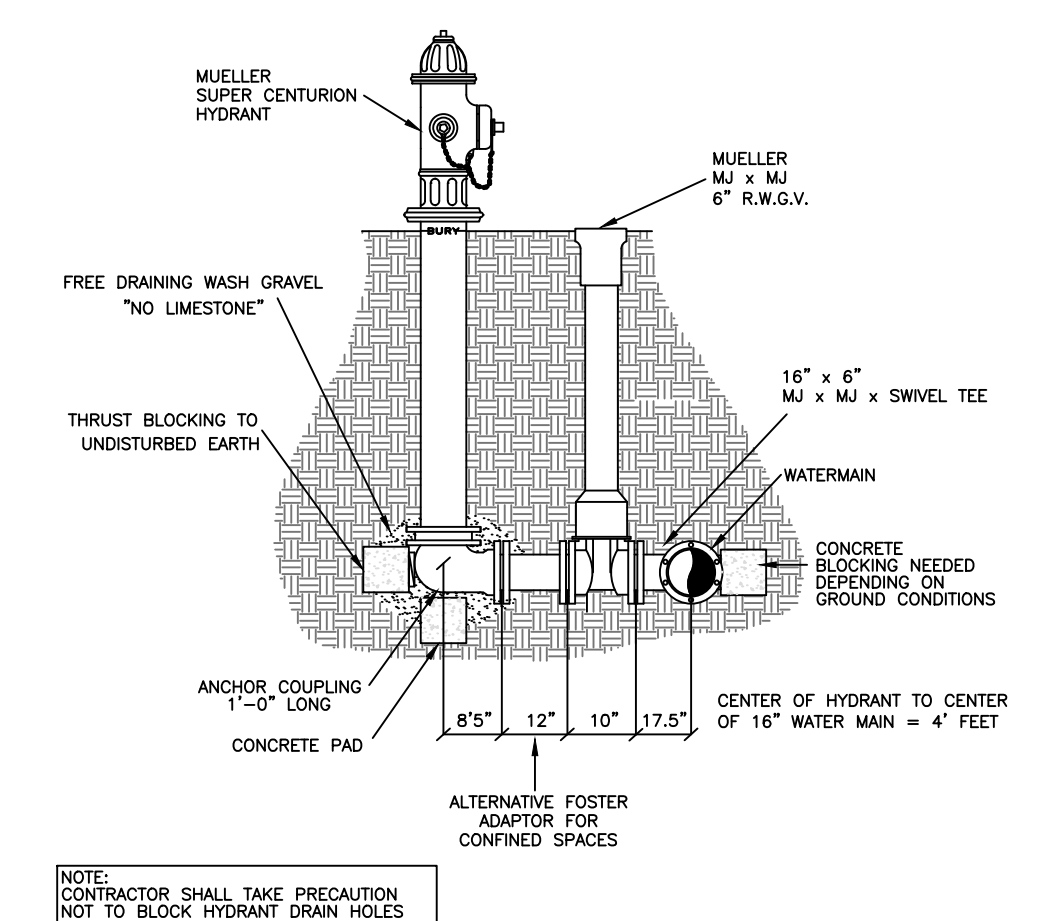
CASING DETAIL



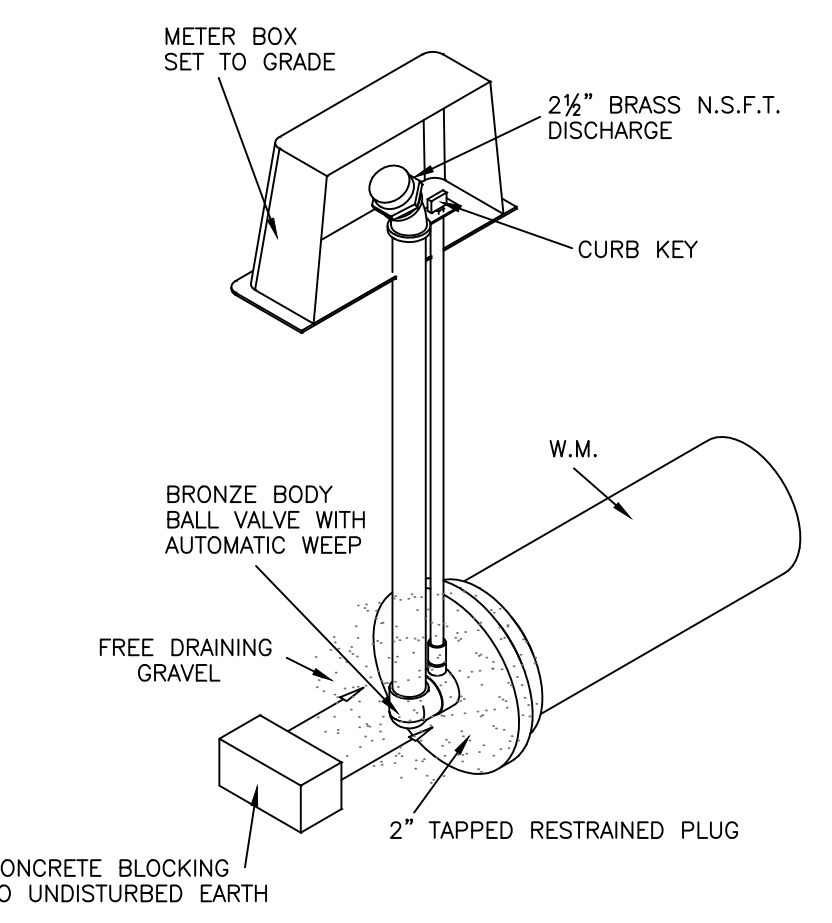
CONCRETE ENCASEMENT DETAIL



TYPICAL TRENCH SECTION



TYPICAL HYDRANT SECTION



TYPICAL FLUSHING ASSEMBLY

- WATER MAIN STANDARDS -
C.H. 42 GRAFTON RD.
WATER MAIN REPLACEMENT
PROJECT 2022

DRAWN BY:	REVIEWED BY:	DATE: 10/31/2022	COUNTY: MEDINA
02/2021	03/2022	10/2022	
SALES: HORIZONTAL N/A / VERTICAL N/A		REVISED DETAIL SHEETS	
UPDATE OF LANGUAGE FOR CARRIER PIPE SPACING		UPDATE TO TYPICAL TRENCH SECTION	
			BY:
			DESCRIPTION
			DATE

PLAN PREPARED BY:
MEDINA COUNTY
SANITARY ENGINEER
 JEREMY SINKO, P.E.
 791 WEST SMITH RD.
 MEDINA, OHIO 44256
 (330) 723-6585

PROJECT NUMBER	WR-500/5-1.3
SHEET NUMBER	17 / 17

J:\DRAWINGS\DESIGN\LIVERPOOL\GRAFTON-MARKS\WATERMAIN STANDARDS SHEET 2021.DWG