PROJECT MANUAL FOR STANDARD UTILITIES SPECIFICATIONS FOR WISDOT LET PROJECTS CITY OF FOND DU LAC FOND DU LAC COUNTY, WI

December 2021 Project #01878061



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WISDOT LET PROJECTS									
	CITY OF FOND DU LAC								
	FOND DU LAC COUNTY, WI								
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1			SECTION 01 11 00							
2 3	SUMMARY OF WORK									
4	PART	1 GEN	NERAL							
5	1.01 APPLICABLE PROVISIONS									
6		A.	Applicable provisions of Division 01 shall govern work of this section.							
7	1.02	APPL	ICABLE PUBLICATIONS (NONE)							
8	1.03 DESCRIPTION OF WORK									
9 10 11 12 13 14		А.	In general, the work consists of the reconstruction of utility and roadway infrastructure along Military Road in the City of Fond du Lac, Wisconsin. A portion of this project involves the replacement of sanitary sewer mainline and laterals as well as the replacement of water mainline and services within the project limits. The work is described in detail as shown on the project plan sheets and the associated contract documents, including specifications, contained herein.							
15 16		В.	The construction consists of supplying all materials, equipment, labor, etc. to supply a complete working system.							
17 18 19		C.	See the contract documents for more details regarding the project's final schedule of completion as well as many milestone completion dates.							
20			END OF SECTION							

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1		SECTION 01 14 00								
2 3		WORK RESTRICTIONS AND PROVISIONS								
4	PART	1 GENERAL								
5	1.01	01 APPLICABLE PROVISIONS								
6		A. Applicable provisions of Division 01 shall govern work of this section.								
7	1.02	APPLICABLE PUBLICATIONS								
8 9 10 11 12 13 14 15		 A. The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the reference thereto. 1. Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways, current edition. 2. State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, Current Edition at time of bid opening. 								
16	1.03	B DESCRIPTION OF WORK (N/A)								
17	1.04	RELATED WORK ELSEWHERE								
18		A. Procurement and Contracting Requirements - Division 00 (All Sections)								
19	1.05	SUBMITTALS (N/A)								
20	1.06	OPERATION/MAINTENANCE MANUALS AND INSTRUCTIONS (N/A)								
21	PART	2 PRODUCTS AND MATERIALS (N/A)								
22	PART	3 CONSTRUCTION METHODS								
23	3.01	EXAMINATIONS								
24 25 26 27 28 29		A. Contractor shall obtain complete data at the site and inspect surfaces that are to receive the work before proceeding with assembling, fitting or erecting his work under this contract. The Contractor shall notify the Engineer in writing in the case of discrepancies between existing work and drawings, and of any defects in surfaces that are to receive the Contractor's work. The Engineer will direct the remedy of applicable surfaces.								
30 31 32 33		B. Information pertaining to existing conditions that appear on the drawings is based on available records. While such data has been collected with reasonable care, there is no expressed or implied guarantee that conditions so indicated are entirely representative of those actually existing or that unexpected developments may not								

- occur. All data included was provided to assist the Contractor in the investigation
 of conditions. The Contractor is responsible for the interpretation of the data
 provided.
- 4 C. The Contractor shall become acquainted with the location of underground service, 5 utilities, structures, etc., which may be encountered or be affected by the 6 Contractor's work, and shall be responsible for any damage caused by neglect to 7 provide proper precautions or protection.
- 8 D. <u>Utility Locations.</u> Contractor shall be responsible for locating and verifying all 9 utilities on the project and also all relocations where necessary. Typically the 10 utilities require the request for locate be made a minimum of three working days 11 before the Contractor begins work in the area. The utilities shown on the contract 12 drawings are approximate in location, depth, number, and type.
- E. Contractor shall verify grades, lines, levels, locations, and dimensions as shown on drawings and report any errors or inconsistencies to the Engineer before commencing work. Starting of work by the Contractor shall imply acceptance of existing conditions.

17 3.02 STORAGE AND HANDLING

- 18A.Contractor or the Contractor's authorized representative must be present to accept19delivery of all equipment and material shipments. The Owner's employees will not20knowingly accept, unload, or store anything delivered to the site for the21Contractor's use. Inadvertent acceptance of delivered items by any representative22of the Owner shall not constitute acceptance or responsibility to assume all liability23for any equipment or material delivered to the job site.
- B. Any material or equipment removed from the present construction shall be the property of the Owner and disposition shall be as directed by the Owner or stockpiled at locations shown on the contract drawings. All salvaged materials shall be removed in a workmanlike manner and carefully transported to Owner's storage area. The Contractor shall coordinate the salvaging of items with the Owner.
- 29 C. Contractor shall confine all operations, equipment, apparatus, and storage of 30 materials to the immediate area of work to the greatest possible extent. Contractor 31 shall ascertain, observe, and comply with all rules and regulations in effect on the 32 project site, including, but not limited to parking and traffic regulations, use of 33 walks, security restrictions and hours of allowable ingress and egress.
- D. The storage of materials on the grounds shall be in strict accordance with the instructions of the Owner.
 - 1. All materials affected by moisture shall be stored on platforms and protected from the weather in accordance with manufacturer recommendations.
- 382.Should it be necessary at any time to move material storage platforms, the39Contractors shall move same at the Contractor's expense, when directed by40the Owner.

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3. Areas used for storage of materials shall be repaired and restored by the 1 2 Contractor. 3 E. The Owner assumes no responsibility for materials stored on the site. The Contractor shall assume full responsibility for damage due to the storage of 4 5 materials. F. During the construction of this project, materials, storage areas, and earth stockpiles 6 shall be located so as not to interfere with the installation of the utilities nor cause 7 damage to existing structures or utilities. 8 9 3.03 WORK RESTRICTIONS AND PROVISIONS 10 Notification. The Contractor shall notify the Owner and the Engineer 72 hours in A. advance of beginning work. Notice must also be given to the Owner and the 11 Engineer for each subsequent day the Contractor will be working. 12 В. Operation During Construction. The existing facilities shall remain completely 13 14 operational during construction. The Contractor shall be responsible to see that the facilities are operating as they should. Sequence of operations or place of 15 commencement may be determined by the Engineer as deemed to best serve the 16 needs and convenience of the Owner, or as necessity of occasion requires. 17 C. Starting of work implies acceptance of the work of others. Removal and 18 replacement of work applied to defective surfaces, in order to correct defects, shall 19 20 be done at the expense of the Contractor who applied work to defective surfaces. 21 D. Access to Work. Representatives of the State and Federal Regulatory Agencies and Owner shall have access to the work and on-site records at all times. 22 E. Project Log. A project log shall be maintained showing daily progress of work. 23 Engineer and Owner shall have access to this logbook and the project schedule at 24 25 all times. 26 F. Existing pipes, electrical work, and all other utilities encountered, which may interfere with new work, shall be rerouted, capped, cut off, or replaced by the 27 28 Contractor. 29 G. Dust and Noise. Contractor shall make an effort to keep dust and noise to a minimum during construction. The dispersion of dust from construction related 30 activities shall, until acceptance of work, be minimized by the application of water 31 32 or other acceptable materials or covers. Noise from any construction activities shall only be allowed during approved working hours. This includes preparation, 33 organizational and clean-up work. Work hours are limited to weekdays between 34 7 a.m. and 7 p.m. unless specifically stated elsewhere in these specifications or 35 approved during construction by the Owner and Engineer in writing. 36 Only maintenance of traffic and/or erosion control activities are allowed outside of these 37 38 times.

1 2	H.	Contractor shall confine equipment, apparatus, storage of materials and operations to limits by specific direction of the Owner or Engineer and shall not bring material
3		onto the site until they are needed for the progress of the work.
4	I.	<u>Cleaning</u> . Contractor shall be responsible for all cleaning required within the
5		technical sections of the specifications governing work under the Contractor's
6		jurisdiction as well as for keeping all work areas, passageways, and all other areas of the premises free of rubbish, debris and scrap which may be caused by the
7 8		Contractor's operations or that of the Subcontractors.
o 9		1. Remove rubbish, debris, and scrap promptly upon its accumulation and in
10		no event later than the end of each week.
11		 Combustible waste shall be removed immediately or stored in fire resistive
12		containers until disposed of in an approved manner.
13		3. Spillage of oil, grease, or other liquids which could cause a slippery or
14		otherwise hazardous situation or stain a finished surface, shall be cleaned
15		up immediately.
16		4. Dust, dirt, and other foreign matter shall be removed completely from all
17		internal surfaces of all mechanical and electrical units, cabinets, ducts,
18		pipes, etc.
19		5. Dirt, soil, fingerprints, stains and the like, shall be completely removed from
20		all exposed finished surfaces.
21		6. If rubbish and debris is not removed, or surfaces cleaned as specified above,
22		the Owner reserves the right to have said work done by others and the
23		related cost(s) will be deducted from monies due the Contractor.
24	J.	Disposal of Demolished Materials. Remove from the site all debris, rubbish, and
25		other materials resulting from demolition operations. Storage of removed materials
26		will not be permitted on the site. If burning is allowed, the Contractor shall obtain
27		all required permits.
28	K.	Mail Service.
29		1. <u>Temporary relocation of mailboxes</u> . If the Postal Carrier cannot deliver
30		mail to the properties affected by the construction of utilities or roadway,
31		the Contractor shall provide temporary mailboxes or shall relocate existing
32		mailboxes to an accessible site. Contractor shall relocate mailboxes to their
33		new location and set to proper height, as directed by an authorized
34		representative of the US Postal Service. Mailboxes shall be reset as close
35		to original location as possible, unless otherwise noted, while maintaining
36		proper height and location requirements of the US Postal Service, upon
37		restoration of regular postal service. If mailboxes, bases or posts are
38		damaged during removal, it shall be the Contractor's responsibility to
39 40		replace the damaged part prior to reinstallation. Contractor shall not be responsible for correction of existing deficient mailboxes, bases, or posts.
40		Owner and Engineer shall be notified of such instances immediately.
41		2. <u>Final relocation of mailboxes.</u> If the Postal Carrier can deliver mail to
43		affected properties during construction, Contractor shall maintain
44		reasonable access to said mailboxes. Upon completion of the project,

- 1Contractor shall relocate mailboxes to a location and height that meets the2US Postal Service requirements along affected roadways.
- L. <u>Street Signs.</u> The Contractor shall salvage and reinstall all signs affected by construction. All signs to be removed shall be done in a workmanlike manner and carefully transported to Owner's storage area. If signs, sign bases or posts are damaged during removal, it shall be the Contractor's responsibility to replace said sign, base or post prior to reinstallation.
- 8 M. <u>Garbage Collection.</u> Garbage and/or recycling collection will continue throughout 9 the project. Contractor shall provide temporary access to garbage vehicles 10 throughout the project area or assist with garbage collection in areas inaccessible 11 to vehicular traffic during the project.
- 12 3.04 OPERATION AND PROTECTION
- 13A.Contractor shall schedule his work as to minimize the inconvenience to the Owner14and residents adjacent to the project.
- 15B.Traffic Control.The Contractor shall meet the requirements for traffic control in16accordance with the Manual on Uniform Traffic Control Devices. All structures17and equipment shall be constructed, installed, and operated with guards, controls,18and other devices in place.
- 19 C. The Contractor shall provide protection as follows:
 - 1. <u>Protection.</u> The Contractor shall provide and maintain proper barricades, fences, signal lights, or watchmen to properly protect the work, persons, animal and property against injury. The cost of protection shall be incidental to the contract and no extra payment will be allowed therefore.
 - 2. Provide, erect, and maintain all required barricades, guard rails, temporary walkways, etc., of sufficient size and strength necessary for protection of stored material and equipment; adjacent to or within project area; adjoining property and the building(s) as well as to prevent accidents to the public and the workmen at the job site.
 - 3. Provide and maintain proper shoring and bracing for existing underground utilities encountered during excavation work, to protect them from collapse or other type of damage until such time as they are to be removed, incorporated into the new work, or can be properly backfilled upon completion of new work.
- 344.Provide protection against rain, snow, wind, ice, storms or heat so as to35maintain all work, materials, apparatus, and fixtures, incorporated in the36work or stored on the site, free from injury or damage. At the end of the37day's work, cover all new work likely to be damaged. Remove snow and38ice as necessary for safety and proper execution of the work.
- 395.Protect the building and foundations from damage at all times from rain and
groundwater. Provide all equipment and enclosures as necessary to provide
this protection.

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1			6.	Damaged property shall be repaired or replaced in order to return it to preconstruction conditions.						
2 3			7.	Protect materials, work, and equipment, not normally covered by above						
4			1.	protection, until construction proceeds to a point where the general building						
5				protection, until construction proceeds to a point where the general bunding protection of the area where located, dispenses with the necessity therefore.						
6				Protect work outside of the building lines such as trenches and open						
7										
8			8.	excavations, as specified above.						
o 9			0.	Take any and all necessary precautions to protect Owner's property as well						
				as adjacent property, including trees, shrubs, buildings, sanitary sewers,						
10				water piping, gas piping, electric conduit or cable, etc., from any and all						
11			0	damage which may result due to work on this project.						
12			9.	Repair work outside of property line in accordance with the requirements						
13			10	of the authority having jurisdiction.						
14			10.	Repair any work damaged by failure to provide proper and adequate						
15				protection to its original state to the satisfaction of the Owner or remove and						
16				replace with new work at the Contractor's expense.						
17			11.	Tree Protection. Trees shall be protected from damage and scarring. Do						
18				not injure trunks, branches, or roots of trees that are to remain. No trees						
19				shall be removed without the approval of the Owner. Tree branches in the						
20				way of construction operations shall be carefully pruned prior to						
21				construction. Do cutting and trimming only as approved and as directed by						
22				the Owner. Do not operate equipment or vehicles within the drip line of a						
23				tree to be preserved. Any roots exposed during construction shall be cut						
24				clean. Ripping of the roots with excavation equipment shall not be allowed.						
25			12.	All survey monuments, property stakes, etc., which are encountered during						
26				the construction are to be preserved and undisturbed. The Engineer shall be						
27				notified of all such items immediately upon discovery. Failure to preserve						
28				such monuments will not be allowed and replacement shall be at the						
29				Contractor's expense.						
30	PART	C4 ME	ASURE	EMENT AND PAYMENT						
31	4.01	GENE	ERAL							
32		A.	Work	restrictions and provisions shall be paid for at the bid price in accordance						
33				one of the following methods, unless indicated otherwise in the Bid Schedule						
34				ecial Procedures - Division 01.						
35		B.	A11 w	ork specified herein shall be considered in each of the measurement and						
36		D.		ent method(s) stipulated, unless indicated otherwise in the Bid Schedule or						
37				al Procedures - Division 01.						
38	4.02	WOR	-	FRICTIONS AND PROVISIONS						
-										
39		A.	Work	Restrictions and Provisions, Inclusive. The cost associated with work						
40			restrictions and provisions shall be considered inclusive to payment for work							

1	related to the associated construction item, unless indicated otherwise in the Bid
2	Schedule or Special Procedures - Division 01.
3	
4	END OF SECTION

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1													
2 3	SUBMITTALS												
4	PART 1 GENERAL												
5	1.01	APPLICABLE PROVISIONS											
б		Α.	A. Applicable provisions of Division 01 shall govern work of this section.										
7	1.02	APPLIC	CABLE PUBLICATIONS (NONE)										
8	1.03	DESCR	RIPTION OF WORK										
9 10			The work under this section shall cover furnishing submittal information as required by the contract drawings, other specification sections and as specified herein.										
11	1.04	RELAT	ED WORK ELSEWHERE										
12		A. 1	Procurement and Contracting Requirements - Division 00 (All Sections)										
13		В.	Submittal Log - Section 01 33 23										
14	1.05	SUBMI	ITTALS										
15 16 17		:	As soon as possible after Notice to Proceed, submit brochures of catalog cuts and specifications for all new equipment. Submittal of product data shall comply with the requirements for Submittals.										
18 19 20 21 22			Prior to fabrication or installation, submit Submittals for review. Each submittal shall consist of the minimum number of copies as listed on the submittal log. Two will be returned to the Contractor. Should more than two copies of reviewed Submittals be necessary for Contractor's use and distribution, the Contractor shall supply additional sufficient number of Submittals for review as required.										
23 24 25 26 27 28 29 30 31 32]	 Submittals shall include layout details, schedules, setting instructions, and manufacturer's literature. Concrete reinforcing steel Submittals shall include a concrete pouring sequence for structures with vertical construction joints. Submittals shall be identified with the name of the project, numbered consecutively and bear the stamp of review of the Contractor as evidence that all drawings have been checked by the Contractor for accuracy and compatibility with contract requirements. Drawings not so checked and noted will be returned without being examined. Partial lists will not be considered; Submittals for each part of work shall be complete in one submittal. 										

1 2 3 4		D.	If information on previously submitted Submittals is altered, in addition to the notations made by the Engineer, the Contractor shall bring all changes to the attention of the Engineer. Corrections or changes indicated on reviewed Submittals shall not be considered an order for extra work.
5 6 7		E.	Submittals will not be considered reviewed unless they bear the stamp of review and signature of the Engineer. Drawings will be reviewed for general design only. Dimensions and fit of units of various parts shall be the Contractor's responsibility.
8 9 10 11 12		F.	Prior to work at the site, submit samples allowing reasonable time for review and testing. Submit samples in sufficient quantity (minimum of five), of adequate size showing quality, type, color range, finish and texture. Label each sample stating material, description, applicable specification sections, intended use, project name, and Contractor's name.
13 14 15 16		G.	Order no materials subject to sample review until receipt of written shop drawing review. Materials installed shall match reviewed samples. No review of samples shall be taken in itself to change or modify contract requirements beyond the expressed stipulations of the review letter.
17 18 19		H.	All Submittals for major equipment must be reviewed and delivery dates scheduled prior to performing any work at the site. A revised work schedule shall be submitted weekly showing corrected delivery dates.
20	1.06	OPER	ATION/MAINTENANCE MANUALS AND INSTRUCTIONS
21 22 23	1.06	OPER A.	Prior to start up of the equipment, the Contractor shall provide the Engineer with operation and maintenance manuals as listed on the submittal log. The manuals shall include the following:
21 22 23 24 25 26 27	1.06		 Prior to start up of the equipment, the Contractor shall provide the Engineer with operation and maintenance manuals as listed on the submittal log. The manuals shall include the following: 1. Supplier and manufacturer's name, address, telephone number, and local representative's name, address and telephone number. Sources of service and parts and a list of local repair services, supply houses, and potential sources for the types of repairs and equipment parts.
21 22 23 24 25 26 27 28 29	1.06		 Prior to start up of the equipment, the Contractor shall provide the Engineer with operation and maintenance manuals as listed on the submittal log. The manuals shall include the following: 1. Supplier and manufacturer's name, address, telephone number, and local representative's name, address and telephone number. Sources of service and parts and a list of local repair services, supply houses, and potential sources for the types of repairs and equipment parts. 2. Complete and accurate set of record drawings including drawing dimensions, schematics of hydraulics, wiring, and piping.
21 22 23 24 25 26 27 28	1.06		 Prior to start up of the equipment, the Contractor shall provide the Engineer with operation and maintenance manuals as listed on the submittal log. The manuals shall include the following: 1. Supplier and manufacturer's name, address, telephone number, and local representative's name, address and telephone number. Sources of service and parts and a list of local repair services, supply houses, and potential sources for the types of repairs and equipment parts. 2. Complete and accurate set of record drawings including drawing dimensions,
21 22 23 24 25 26 27 28 29 30	1.06		 Prior to start up of the equipment, the Contractor shall provide the Engineer with operation and maintenance manuals as listed on the submittal log. The manuals shall include the following: 1. Supplier and manufacturer's name, address, telephone number, and local representative's name, address and telephone number. Sources of service and parts and a list of local repair services, supply houses, and potential sources for the types of repairs and equipment parts. 2. Complete and accurate set of record drawings including drawing dimensions, schematics of hydraulics, wiring, and piping. 3. Warranties and bonds shall be included in manual. 4. Catalog literature complete with test data and performance data and ratings. 5. Specify equipment function, normal operating, and limiting conditions.
21 22 23 24 25 26 27 28 29 30 31 32 33	1.06		 Prior to start up of the equipment, the Contractor shall provide the Engineer with operation and maintenance manuals as listed on the submittal log. The manuals shall include the following: 1. Supplier and manufacturer's name, address, telephone number, and local representative's name, address and telephone number. Sources of service and parts and a list of local repair services, supply houses, and potential sources for the types of repairs and equipment parts. 2. Complete and accurate set of record drawings including drawing dimensions, schematics of hydraulics, wiring, and piping. 3. Warranties and bonds shall be included in manual. 4. Catalog literature complete with test data and performance data and ratings. 5. Specify equipment function, normal operating, and limiting conditions. 6. Assembly, installation, alignment, adjusting, and checking instructions.
21 22 23 24 25 26 27 28 29 30 31 32 33 34	1.06		 Prior to start up of the equipment, the Contractor shall provide the Engineer with operation and maintenance manuals as listed on the submittal log. The manuals shall include the following: 1. Supplier and manufacturer's name, address, telephone number, and local representative's name, address and telephone number. Sources of service and parts and a list of local repair services, supply houses, and potential sources for the types of repairs and equipment parts. 2. Complete and accurate set of record drawings including drawing dimensions, schematics of hydraulics, wiring, and piping. 3. Warranties and bonds shall be included in manual. 4. Catalog literature complete with test data and performance data and ratings. 5. Specify equipment function, normal operating, and limiting conditions. 6. Assembly, installation, alignment, adjusting, and checking instructions. 7. Operating instructions for start-up, shutdown, routine and normal operation.
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35	1.06		 Prior to start up of the equipment, the Contractor shall provide the Engineer with operation and maintenance manuals as listed on the submittal log. The manuals shall include the following: 1. Supplier and manufacturer's name, address, telephone number, and local representative's name, address and telephone number. Sources of service and parts and a list of local repair services, supply houses, and potential sources for the types of repairs and equipment parts. 2. Complete and accurate set of record drawings including drawing dimensions, schematics of hydraulics, wiring, and piping. 3. Warranties and bonds shall be included in manual. 4. Catalog literature complete with test data and performance data and ratings. 5. Specify equipment function, normal operating, and limiting conditions. 6. Assembly, installation, alignment, adjusting, and checking instructions. 7. Operating instructions for start-up, shutdown, routine and normal operation. 8. Emergency operating instructions indicating range and flexibility during
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36	1.06		 Prior to start up of the equipment, the Contractor shall provide the Engineer with operation and maintenance manuals as listed on the submittal log. The manuals shall include the following: 1. Supplier and manufacturer's name, address, telephone number, and local representative's name, address and telephone number. Sources of service and parts and a list of local repair services, supply houses, and potential sources for the types of repairs and equipment parts. 2. Complete and accurate set of record drawings including drawing dimensions, schematics of hydraulics, wiring, and piping. 3. Warranties and bonds shall be included in manual. 4. Catalog literature complete with test data and performance data and ratings. 5. Specify equipment function, normal operating, and limiting conditions. 6. Assembly, installation, alignment, adjusting, and checking instructions. 7. Operating instructions for start-up, shutdown, routine and normal operation. 8. Emergency operating instructions indicating range and flexibility during emergencies.
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37	1.06		 Prior to start up of the equipment, the Contractor shall provide the Engineer with operation and maintenance manuals as listed on the submittal log. The manuals shall include the following: 1. Supplier and manufacturer's name, address, telephone number, and local representative's name, address and telephone number. Sources of service and parts and a list of local repair services, supply houses, and potential sources for the types of repairs and equipment parts. 2. Complete and accurate set of record drawings including drawing dimensions, schematics of hydraulics, wiring, and piping. 3. Warranties and bonds shall be included in manual. 4. Catalog literature complete with test data and performance data and ratings. 5. Specify equipment function, normal operating, and limiting conditions. 6. Assembly, installation, alignment, adjusting, and checking instructions. 7. Operating instructions for start-up, shutdown, routine and normal operation. 8. Emergency operating instructions indicating range and flexibility during emergencies. 9. Detailed service information including schedule of recommended
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36	1.06		 Prior to start up of the equipment, the Contractor shall provide the Engineer with operation and maintenance manuals as listed on the submittal log. The manuals shall include the following: 1. Supplier and manufacturer's name, address, telephone number, and local representative's name, address and telephone number. Sources of service and parts and a list of local repair services, supply houses, and potential sources for the types of repairs and equipment parts. 2. Complete and accurate set of record drawings including drawing dimensions, schematics of hydraulics, wiring, and piping. 3. Warranties and bonds shall be included in manual. 4. Catalog literature complete with test data and performance data and ratings. 5. Specify equipment function, normal operating, and limiting conditions. 6. Assembly, installation, alignment, adjusting, and checking instructions. 7. Operating instructions for start-up, shutdown, routine and normal operation. 8. Emergency operating instructions indicating range and flexibility during emergencies.

1 2 3 4 5 6 7 8 9 10 11 12 13		 Detailed safety section covering the operation and maintenance of a Contractor shall supply a complete list of equipment service numbers, me numbers, electrical requirements, manufacturer's names, etc. The correct model number shall be designated where the literature comore than one model. For items assembled by the Contractor, the Contractor shall write and pro- duplicate operation and maintenance instructions. Data shall be folded to 8-1/2 inch x 11 inch size and placed into hard co- binders. Material shall be grouped according to specifications section filed behind individual filing tab pages on which the following is to be typ Item, Manufacturer, Contractor's Order Number, Supplier's Order Num Manufacturer's Order Number. Manuals shall be delivered to the Engineer for approval prior to 	odel vers vide over and ped: ber,
14		completion.	
15	1.07	PERMITS AND APPROVALS	
16 17		A. Obtain and submit copies of all permits, code inspections, and approval docume as specified.	ents,
		•	
18	1.08	CONSTRUCTION SCHEDULE	
19 20 21 22 23 24 25		A. Submit a minimum of five copies of a schedule of operation prior to construct The schedule shall provide for activities of the various trades and shall be sequer to provide a minimum of interruption to the operation of existing facilities. All ample time for the Owner to alter operations as required by the construction of various components of the work. Revised and updated construction schedule shall provided throughout the construction as deemed necessary and requested by Engineer.	low the lobe
26 27		B. The construction schedule shall be supplemented by a list of Submittals, dates will be submitted for approval and a reasonable time allowance for review.	hey
28	1.09	START-UP REPORTS	
29 30 31 32 33 34 35 36		 A. Where equipment startup by a factory-trained representative is required, a minin of three copies of the start-up report shall be submitted which describe representatives activities and installation approval. 1. Start-up report shall be a typewritten document containing descrip information specifically identifying the piece by equipment, all t conducted, and the results of the tests. 2. Start-up role log, with the dated signatures of those conducting and accep all start-up instructions and tests shall be provided as part of the report. 	the tive cests ting
37 38		B. Substantial completion will not be issued until all start-up reports have be submitted.	een

1	1.10	RECO	ORD DRAWINGS
2 3 4 5 6 7 8 9		A.	 The Engineer will provide the Contractor with a suitable set of contract drawings on which daily records of changes and deviations from contract shall be recorded. All buried or concealed piping, conduit, or similar items shall be located by dimensions and elevations on the record drawings. 1. The daily record of changes shall be the responsibility of Contractor's field superintendent. No arbitrary mark-ups will be permitted. 2. At completion of the project, the Contractor shall submit the marked-up record drawings to the Owner.
10	1.11	SUBN	MITTAL LOG
11 12 13 14 15 16 17		А.	A submittal log is included as Section 01 33 23 of this Project Manual, which lists the minimum required Submittals, product data, samples, and operation and maintenance manuals. Additional submittals not listed on the log may be required by the Engineer during the course of construction. All submittals to the Engineer shall include the submittal number shown on the log. The minimum number of copies to be submitted is shown on the submittal log. Any additional copies required by the Contractor may be submitted in addition to the number shown on the log.
18	PART	2 PR	ODUCTS AND MATERIALS (N/A)
19	PART	3 CO	NSTRUCTION METHODS (N/A)
20	PART	C4 ME	CASUREMENT AND PAYMENT
21	4.01	GENI	ERAL
22 23 24		A.	Submittals shall be paid for at the bid price in accordance with one of the following methods, unless indicated otherwise in the Bid Schedule or Special Procedures - Division 01.
25 26 27		B.	All work specified herein shall be considered in each of the measurement and payment method(s) stipulated, unless indicated otherwise in the Bid Schedule or Special Procedures - Division 01.
28	4.02	SUBN	MITTALS
29 30 31 32 33 34		A.	Submittals, Inclusive. The cost for all submittals shall be considered inclusive to payment for work related to the respective equipment, associated construction, or utility, unless indicated otherwise in the Bid Schedule or Special Procedures - Division 01. END OF SECTION
J-1			

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES SUBMITTAL LOG Page 1 of 1																		
PROJECT:									MSA PROJECT NO:									
CONTRACTOR:																		
contractor.	Referred											Action				# copies to		
Spec Section #	Spec Section Title/Product	Date Rec'd	Min. # Req'd	# Submitted	Submittal/Revision #	То	Date Sent	Date Reviewed	Reviewed with no Comments	Reviewed with Comments as Noted	Amend and Resubmit	Rejected	Date Ret'd	Contractor	Owner	Field	File	
City of Fond du Lac Detailed Specifications for Water Main & Sewer Construction	Tracer Wire		1															
City of Fond du Lac Detailed Specifications for Water Main Construction	Water Utilities		1															
City of Fond du Lac Detailed Specifications for Sewer Construction	Public Sanitary Utility Sewerage Pipe		1															
City of Fond du Lac Detailed Specifications for Sewer Construction	Sanitary Sewer Manholes		1															

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SECTION 01 35 00

SPECIAL PROCEDURES

1. Municipality Acceptance of Sanitary Sewer and Water Main Construction.

The Department and City of Fond du Lac personnel or its designated representatives will observe and inspect the construction of the sanitary sewer and water main under this contract. Compliance testing shall be performed by contractor in the presence of City of Fond du Lac personnel or its designated representatives. Final acceptance of the sanitary sewer and water main construction will be by City of Fond du Lac.

2. Notice to Contractor – Televising Sanitary Sewer.

The City of Fond du Lac will televise all sanitary sewer mains installed as part of this contract. Contact the City of Fond du Lac City Engineer, Christopher Johnson, (920) 322-3449, cjohnson@fdl.wi.gov three working days after completion of the sanitary sewer and lateral work. Allow for fourteen calendar days from notification prior to paving.

3. General Requirements for Sanitary Sewer Construction.

All sanitary sewer work shall be according to the plans and specifications, the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition, the City of Fond du Lac Detailed Specifications for Sanitary Sewer Construction, and the Military Rd. Standard Detail Drawings. A copy of the City Specifications and Military Rd. Standard Detail Drawings can be found at the following website:

https://www.fdl.wi.gov/engineering/military-road/

Any discrepancy between the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition, and the City of Fond du Lac Detailed Specifications for Sanitary Sewer Construction, the City of Fond du Lac Detailed Specifications for Sanitary Sewer Construction shall govern.

City of Fond du Lac will provide primary survey reference points and line and grade staking for the work. Notify the City of Fond du Lac Engineering Department (Christopher Johnson, (920) 322-3449, <u>cjohnson@fdl.wi.gov</u>) a minimum of four working days in advance of any staking request. Line and grade staking will be set once. Contractor is responsible for preserving stakes. Any additional staking or re-staking due to alteration or removal of stakes by construction activity shall be paid for by contractor.

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Deflection tests shall be performed by the contractor under the observation of the City on all PVC main line pipe installed using an approved go-no-go device. The test shall be conducted after all backfill has been placed and consolidated. If testing occurs within 30 days of placement of final backfill, deflection shall not exceed five percent. When testing occurs after 30 days of placement of final backfill, the deflection shall not exceed 7.5%. For acceptance, the device must pass through the entire section between manholes in one pass when pulled by hand without the use of excessive force.

All sanitary sewers, except relays with active connected buildings' sewers, shall be required to pass a low pressure air test or water infiltration test according to Chapter 3.7.0 of the Standard Specifications for Sewer & Water Construction in Wisconsin, Sixth Edition.

All testing shall be done under the observation of the engineer. Any section not meeting the requirements shall be repaired and retested. The expense for testing, and repairing if necessary, the main, laterals and manholes shall be incorporated into the price bid for sanitary main in place. No extra payment will be made for such work.

Sanitary sewer mains and laterals shall be insulated with two inch polystyrene boards according to Section 4.17.2 of the Standard Specifications for Sewer & Water Construction in Wisconsin, Latest Edition, whenever the depth of cover is less than 6 feet, or passes within 2 feet of an underground structure which may experience freezing temperatures. This shall apply to new construction as well as any existing facility uncovered during reconstruction work.

All abandonment and removals of existing sanitary sewer and structures (excluding Remove Existing Sanitary Manhole bid item) required as part of new sanitary sewer construction shall be performed according to the City of Fond du Lac Detailed Specifications for Sewer Construction, as incidentals to the sanitary sewer construction.

4. General Requirements for Water Main Construction.

All water main work shall be according to the plans and specifications, the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition, the City of Fond du Lac Detailed Specifications for Water Main Construction, and the Military Rd. Standard Detail Drawings. A copy of the City Specifications and Military Rd. Standard Detail Drawings can be found at the following website:

https://www.fdl.wi.gov/engineering/military-road/

Any discrepancy between the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition, and the City of Fond du Lac Detailed Specifications for Water Main Construction, the City of Fond du Lac Detailed Specifications for Water Main Construction shall govern.

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All existing water main valves shall be operated by City of Fond du Lac Water Utility personnel only. Notify the Fond du Lac Water Utility at least two working days prior to the request for water shut off.

Water mains and services shall be insulated with two inch polystyrene boards according to the City of Fond du Lac Detailed Specifications whenever six feet of cover cannot be obtained, or if the pipeline passes within two feet of an underground structure which may experience freezing temperatures.

Contractor shall give minimum one hour notice to residential customers before turning the water service off to install the new water service. Coordinate with commercial customers prior to starting work to discuss water shut off windows, and come to a mutually agreed upon time. Water shut off may have to occur outside of normal business hours. Notify commercial customers a minimum of twenty-four hours in advance of turning the water off to install the new water service.

City of Fond du Lac will provide primary survey reference points and line and grade staking for the work. Notify Fond du Lac Water Utility (Travis Kloetzke, (920) 322-3683; cell phone (920) 539-5743; <u>tkloetzke@fdl.wi.gov</u>) at least four working days in advance of any staking request. Line and grade staking will be set once. Contractor is responsible for preserving stakes. Any additional staking or re-staking due to alteration or removal of stakes by construction activity shall be paid for by contractor.

The interior of all pipe and fittings used in the connection to an existing main shall be swabbed or sprayed with a one percent hypochlorite solution before they are installed. Every effort will then be used to prevent the contamination of the pipe and fittings being installed. This shall be incorporated into the bid price for the respective water main bid item. No extra payment will be made for such work.

All abandonment and removals of existing water main and fittings (excluding Remove Existing Water Valve Box and Remove Existing Hydrant bid items) required as part of new water main construction shall be performed according to the City of Fond du Lac Detailed Specifications for Water Main Construction, as incidentals to the water main construction.

All water service boxes placed in concrete sidewalks or driveways require the placement of a Neenah R-7506-C Hudson box, which are provided by the City of Fond du Lac Water Utility. The Hudson boxes shall be placed to match the new sidewalk or driveway grade, and the covers shall be free of all concrete. It will be the contractor's responsibility to make sure each casting is in place before the concrete is poured. The water service box has to be adjusted to approximately three inches below finish grade for the casting to fit properly. After the contractor has determined finish grade the Water Utility will adjust the water

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service box to the correct grade with twenty-four hours' notice. The rim of the casting shall be installed within ¹/₄" of the final concrete surface elevation. All costs associated with adjusting or placing these Hudson boxes shall be incidental to water construction. The Contractor will be responsible to replace any new sidewalks or driveways where the Hudson boxes have been damaged, are not adjusted to the proper grade or not installed in the concrete properly.

Notify the Fond du Lac Water Utility a minimum of 48 hours in advance of any proposed flushing of the new water main. This will allow time for a notice to be put in the local paper, warning customers of potential rusty water conditions.

5. Remove Existing Sanitary Manhole, Item SPV.0060.01; Remove Existing Water Valve Box, Item SPV.0060.02; and Remove Existing Hydrant, Item SPV.0060.03.

A Description

Removing the existing sanitary sewer and water structures as shown in the plans and hereinafter provided.

B (Vacant)

C Construction

C.1 Remove Structures

The Remove Existing (Structure) work item includes the cost of furnishing all necessary labor, materials, equipment, excavation, salvage, proper disposal of excess material, sheeting, shoring, dewatering, backfilling, compaction, and all related work to dismantle or remove the existing sanitary manholes, water valve boxes, and existing fire hydrants and to bulkhead each open end of the abandoned pipe as exposed during construction or to remove the pipe as necessary for installation of the new piping and facilities, all as stated herein and according to the Standard Specifications for Sewer and Water Construction in Wisconsin.

Remove completely all existing sanitary manholes.

Remove existing valve boxes and/or valve manholes to a point 4 feet below grade (minimum). Completely fill the remaining void with compacted granular backfill.

Remove fire hydrants to the top of elbow, bulkhead the remaining pipe at the elbow, and completely fill the void with compacted granular backfill.

Remove existing curb stop boxes that the contractor verifies are inactive to a point 4 feet below grade (minimum). Completely fill the remaining void with compacted granular backfill. This work shall be considered incidental to water construction.

D Measurement

The department will measure Remove Existing Sanitary Manhole; Remove Existing Water Valve Box; and Remove Existing Fire Hydrant on an each basis approved by the City of Fond du Lac, and acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Remove Existing Sanitary Manhole	EACH
SPV.0060.02	Remove Existing Water Valve Box	EACH
SPV.0060.03	Remove Existing Fire Hydrant	EACH

Payment is full compensation for providing all labor and materials for all structure removal; for all excavating, for sheeting and shoring; for dewatering; for backfilling and compacting; for providing and placing granular backfill material; for removing sheeting and shoring; and for restoring the worksite.

6. Sanitary Manhole 4-FT Diameter, Item SPV.0060.06; Sanitary Manhole 5-FT Diameter, Item SPV.0060.07; Sanitary Manhole 8-FT Diameter, Item SPV.0060.08 and Sanitary Sewer plug 12-Inch, Item SPV.0600.10.

A Description

Sanitary sewer manholes, frames, grates, lids, and plugs shall be according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Sewer Construction.

B Materials

Provide materials according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Sewer Construction.

Provide 48-inch diameter precast sanitary sewer manholes conforming to ASTM designation C478, and shall meet the design, physical tests, finish and marking requirements of this specification. All materials shall be subject to visual inspection by the City of Fond du Lac's project representative. The purpose of this inspection is to cull and reject any materials that fail to conform to the city's requirements as to general finish, exposed reinforcement and cracked or damaged materials.

All manhole inverts shall be cast for full height flow and all side connecting mains shall have full sweep curvature into main line flow. No variation will be allowed from this requirement.

Manhole joints shall be constructed utilizing either a rubber gasket joint conforming to ASTM designation C443 where the pre-molded flexible butyl sealant joint shall conform to AASHTO designation M198, or an embedded bell gasket meeting the requirements of ASTM designations C\$\$#, C478 and C497.

All manhole base sections shall be equipped with molded rubber boot of appropriate size conforming to ASTM designation C923. Pipe to manhole connectors shall be "Kor-N-Seal" by Trelleborg Pipe Seals Milford, Inc., "Quik-Lok" by A-Lok Products, Inc. or approved equal. The boot shall be located in the manhole section to allow for a minimum of two inches of concrete below the bottom of the sewer main. All boots shall come complete with all required stainless steel hardware.

Manhole steps shall be steel reinforced plastic conforming to Section 8.40.1(a) of the Standard Specifications for Sewer & Water Construction in Wisconsin, Sixth Edition. All manhole steps shall be approved by the City of Fond du Lac and OSHA and shall be installed at intervals of 16 inches. The cost of the manhole steps shall be included in the unit prices for manholes. Manhole steps shall be aligned over the outgoing pipe unless directed otherwise by the engineer.

Manhole cone sections shall be of the eccentric type unless specified otherwise on the plan set.

Concealed pick holes are required for manhole barrel sections. Lifting holes penetrating through the manhole sidewalls are not permitted.

Sanitary sewer manhole frames and covers shall be manufactured from gray iron conforming to the requirements for Class 35B of ASTM A48.

Castings shall be true to pattern in form dimensions, free from pouring faults, sponginess, cracks, blowholes, and other defects in positions affecting strength and value for the service intended. Castings shall be boldly filleted at angles and the risers shall be sharp and perfect. Castings shall be sandblasted or otherwise effectively cleaned of scale and sand so as to present a smooth, clean and uniform surface. Sanitary sewer manhole frames and covers shall be Neenah Foundry R-1550 with type B lid. Covers shall be self-sealing, have concealed pick holes and have a continuous flat "T" seal gasket, which fits securely in a machined bearing surface. Non-rocking covers are not allowable.

Internal manhole chimney seals will not be required.

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Manhole adjusting rings, including adjustment for surface slope, shall be injection moldedrecycled high-density polyethylene as manufactured by LADTECH, Inc., or approved equal. Furnish all ring materials, butyl rubber adhesive, labor and equipment to install the rings per manufacturer's recommendations. Concrete adjusting rings shall not be used for manhole adjustment.

Prior to incorporating any materials or products into the work, submit to the engineer product literature and catalog cuts of the materials to be supplied. Submit information in sufficient detail to readily determine if these materials are in conformance with the specifications.

C Construction

Perform all construction according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Sewer Construction.

Adjustment rings shall be installed per manufacture's recommendations. The adjustment rings shall conform to pavement slope using wedge shapes $\frac{3}{4}$ to $1-\frac{1}{2}$ inch, and other thickness adjustment rings as required. Wedge rings shall be installed at the top of the ring stack under a maximum $\frac{1}{4}$ inch thick solid adjustment shim ring.

A ³/₈ inch diameter, continuous bead of butyl rubber adhesive is required to be installed between each ring. A double ring of sealant is required between the concrete manhole and adjacent ring. A double ring of sealant is also required between the casting and adjacent rings unless concrete is to be vibrated between the casting and rings for concrete paving. For concrete paving, the ring adjustment shall include a double ring of adhesive, ¹/₄ inch thick, between the top solid shim ring and the first HDPE ring below the shim.

Where asphalt pavement is constructed, HDPE rings shall be adjusted so the manhole casting rim is no more than $\frac{1}{8}$ inch below pavement grade and conforming to the pavement slope.

Salvage the existing frames and covers. Contact the City of Fond du Lac City Engineer, Christopher Johnson, (920) 322-3449, to coordinate an acceptable location to stockpile the frames and covers for the City of Fond du Lac pick up.

D Measurement

The department will measure Sanitary Manhole (Size) as each individual manhole and Sanitary Sewer Plug (Size) on an each basis, approved by the City of Fond du Lac, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

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ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.06	Sanitary Manhole 4-FT Diameter	EACH
SPV.0060.07	Sanitary Manhole 5-FT Diameter	EACH
SPV.0060.08	Sanitary Manhole 8-FT Diameter	EACH
SPV.0060.10	Sanitary Sewer Plug 12-Inch	EACH

Payment is full compensation for providing all labor and materials, including precast concrete manhole sections, base, cone, adjustment rings, frame and cover, steps, waterstop seals, couplings, joint material, butyl rubber adhesive, plugs, and other required fittings; for all excavating, except rock excavation; for forming foundation; for replacing unstable material in the trench bottom; for sheeting and shoring; for dewatering; for sewage pumping; for constructing the manhole; for backfilling and compacting; for providing and placing granular backfill material, including bedding material; for removing sheeting and shoring; for testing; for cleaning out the manhole and adjoining pipes and restoring the worksite.

7. Adjust Existing Sanitary Manhole Casting, Item SPV.0060.09.

A Description

Adjust Sanitary Manhole Covers shall be according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Sewer Construction. A vertical change of less than one foot in the elevation of a cover is classified as an adjustment.

B Materials

Provide materials according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Sewer Construction.

Salvage and reinstall frames, castings, and lids.

Manhole adjusting rings, including adjustment for surface slope, shall be injection moldedrecycled high-density polyethylene as manufactured by LADTECH, Inc., or approved equal. Furnish all ring materials, butyl rubber adhesive, labor and equipment to install the rings per manufacturer's recommendations. Concrete adjusting rings shall not be used.

C Construction

Perform all construction according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Sewer Construction.

Adjustment rings shall be installed per manufacture's recommendations. The adjustment rings shall conform to pavement slope using wedge shapes $\frac{3}{4}$ to $1-\frac{1}{2}$ inch, and other thickness adjustment rings as required. Wedge rings shall be installed at the top of the ring stack under a maximum $\frac{1}{4}$ inch thick solid adjustment shim ring.

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A ³/₈ inch diameter, continuous bead of butyl rubber adhesive is required to be installed between each ring. A double ring of sealant is required between the concrete manhole and adjacent ring. A double ring of sealant is also required between the casting and adjacent rings unless concrete is to be vibrated between the casting and rings for concrete paving. For concrete paving, the ring adjustment shall include a double ring of adhesive, ¹/₄ inch thick, between the top solid shim ring and the first HDPE ring below the shim.

Where asphalt pavement is constructed, HDPE rings shall be adjusted so the manhole casting rim is no more than $\frac{1}{8}$ inch below pavement grade and conforming to the pavement slope.

Remove and reinstall frames, castings, and lids.

D Measurement

The department will measure Adjust Existing Sanitary Manhole Casting, as each individual unit approved by the City of Fond du Lac, and acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.09	Adjust Existing Sanitary Manhole Casting	EACH

Payment is full compensation for providing all required materials including all necessary adjusting ring materials and butyl rubber adhesive; for removing, reinstalling and adjusting the frames, grates, and lids.

8. Connect to Existing Sanitary Sewer Main (All Sizes Except 27-Inch), Item SPV.0060.11; Connect to Existing 27-Inch Sanitary Sewer Main, Item SPV.0060.12;

A Description

Sanitary sewer mainline pipe connections to existing pipes and existing structures (all pipe and structures excluding the 27-inch diameter sanitary sewer main); sanitary sewer mainline pipe connections to existing 27-inch diameter sanitary sewer main shall be according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Sanitary Sewer Construction.

Sanitary sewer mainline wye fittings for lateral connections and sanitary lateral connections to existing pipes at various locations shall be according to the plans and specifications, the City of Fond du Lac Detailed Specifications for Sanitary Sewer Construction and shall be incidental to the sanitary lateral bid item.

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B Materials

Provide materials according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Sanitary Sewer Construction.

Prior to incorporating any materials or products into the work, submit to the engineer product literature and catalog cuts of the materials to be supplied. Submit information in sufficient detail to readily determine if these materials are in conformance with the specifications.

C Construction

Perform all construction according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

D Measurement

The department will measure Connect to Existing Sanitary Sewer Main and Connect to Existing 27-Inch Sanitary Sewer on an each basis approved by the City of Fond du Lac, and acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.11	Connect to Existing Sanitary Sewer Main (All	EACH
	Sizes Except 27-Inch)	
SPV.0060.12	Connect to Existing 27-Inch Sanitary Sewer	EACH

Payment is full compensation for providing all labor and materials, including flexible couplings and bands, and other required connection fittings; for all excavating, except rock excavation; for sealing joints and making connections to new or existing pipe or fixtures; for backfilling and compacting; for providing and placing granular backfill material, including bedding material; for cleaning out pipes and restoring the worksite.

9. Adjust Ex. Valve Box, Item SPV.0060.04; Adjust Ex. Curb Stop Box, Item SPV.0060.05; Water Valve and Box 4-Inch, Item SPV.0060.13; Water Valve and Box 6-Inch, Item SPV.0060.14; 8-Inch, Item SPV.0060.15; 10inch, Item SPV.0060.16; 12-Inch, Item SPV.0060.17; Fire Hydrant, Item SPV.0060.18; Cross 12"x6", Item SPV.0060.19; Cross 12"x10", Item SPV.0060.20; Tee 6"x6"x6", Item SPV.0060.21; Tee 8"x6"x8", Item SPV.0060.22; Tee 10"x8"x10", Item SPV.0060.23; Tee 10"x10"x10", Item SPV.0060.24; Tee 12"x4"x12", Item SPV.0060.25; Tee 12"x6"x12", Item SPV.0060.26; Tee 12"x8"x12", Item SPV.0060.27; Tee 12"x12"x12", Item SPV.0060.28; Bend 45-Degree 4-Inch, Item SPV.0060.29; Bend 22.5-Degree 6-Inch, Item SPV.0060.??; Bend 45-Degree 6-Inch, Item SPV.0060.30; Bend 90-Degree 6-Inch, Item SPV.0060.32; Bend 45-Degree 8-Inch, Item SPV.0060.33; Bend 90-Degree 8-Inch, Item SPV.0060.34; Bend 45-Degree 10-Inch, Item SPV.0060.35; Bend 90-Degree 10-Inch, Item SPV.0060.36; Bend 11.25-Degree 12-Inch, Item SPV.0060.37; Bend 45-Degree 12-Inch, Item SPV.0060.38; Bend 90-Degree 12-Inch, Item SPV.0060.39; Reducer 12"x8", Item SPV.0060.40; Plug 6-Inch, SPV.0060.41; Plug 10-Inch, SPV.0060.42; Plug 12-Inch, SPV.0060.43; Connect to Existing 4-Inch Water Main, Item SPV.0060.44; Connect to Existing 6-Inch Water Main, Item SPV.0060.45; Connect to Existing 8-Inch Water Main, Item SPV.0060.46; Connect to Existing 10-Inch Water Main, Item SPV.0060.47; Connect to Existing 12-Inch Water Main, Item SPV.0060.48; Sacrificial Anode Bag, Item SPV.0060.49; Corporation, Curb Stop, Box, Saddle & Union 1-1/4 Inch, Item SPV.0060.50; Corporation, Curb Stop, Box, Saddle & Union 1-1/2 Inch, Item SPV.0060.51.

A Description

Water mainline pipe connections to existing pipes, water valve box and curb stop box adjustment, water valves and road boxes, fire hydrants, water mainline fittings, plugs, anode bags, water lateral corporation and saddle connections, curb stop, curb stop box, and water main connections shall be according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

B Materials

Provide materials according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

Prior to incorporating any materials or products into the work, submit to the engineer product literature and catalog cuts of the materials to be supplied. Submit information in sufficient detail to readily determine if these materials are in conformance with the specifications.

Each water service box installed for 1" and $1-\frac{1}{4}$ " water services shall have a $1-\frac{1}{2}$ " schedule 40 PVC pipe cut to a minimum length of five feet and permanently inserted. The bottom end of the pipe shall have two $\frac{1}{4}$ " x 3" slots cut opposite of one another to allow enough expansion for the $1-\frac{1}{2}$ " PVC pipe to slide over the operating cross bar as detailed in the Polyethylene Water service detail S-16. The furnishing and installation of this PVC pipe shall be incidental to the Curb Stop, Box, Saddle & Union bid item.

C Construction

Perform all construction according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

Adjust Ex. Valve Box and Adjust Ex. Curb Stop Box bid item shall include furnishing all labor, tools, material, and equipment including valve box and stop extensions required to adjust all existing valve boxes and curb stop boxes to finished ground elevations.

The contractor shall verify that all of the hydrants, water valve boxes and water service boxes are centered and straight, to the satisfaction of the City, after backfilling and compacting and prior to paving (incidental to water construction).

D Measurement

The department will measure Adjust Ex. Water Valve Box, Adjust Ex. Curb Stop Box, Water Valve and Box (Size); Fire Hydrant; Cross (Size); Tee (Size); Bend (Size); Reducer (Size); Plug (Size); Connect to Existing (Size) Water Main; Sacrificial Anode Bag; Corporation, Stop, Box, Saddle & Union (Size); by the individual fitting and/or set, and/or each, approved by the City of Fond du Lac, and acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.04	Adjust Ex. Valve Box	EACH
SPV.0060.05	Adjust Ex. Curb Stop Box	EACH
SPV.0060.13	Water Valve & Box 4-Inch	EACH
SPV.0060.14	Water Valve & Box 6-Inch	EACH
SPV.0060.15	Water Valve & Box 8-Inch	EACH
SPV.0060.16	Water Valve & Box 10-Inch	EACH
SPV.0060.17	Water Valve & Box 12-Inch	EACH
SPV.0060.18	Fire Hydrant	EACH

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SPV.0060.19	Cross 12"x6"	EACH
SPV.0060.20	Cross 12"x10"	EACH
SPV.0060.21	Tee 6"x6"x6"	EACH
SPV.0060.22	Tee 8"x6"x8"	EACH
SPV.0060.23	Tee 10"x8"x10"	EACH
SPV.0060.24	Tee 10"x10"x10"	EACH
SPV.0060.25	Tee 12"x4"x12"	EACH
SPV.0060.26	Tee 12"x6"x12"	EACH
SPV.0060.27	Tee 12"x8"x12"	EACH
SPV.0060.28	Tee 12"x12"x12"	EACH
SPV.0060.29	Bend 45-Degree 4-Inch	EACH
SPV.0060.30	Bend 22.5-Degree 6-Inch	EACH
SPV.0060.31	Bend 45-Degree 6-Inch	EACH
SPV.0060.32	Bend 90-Degree 6-Inch	EACH
SPV.0060.33	Bend 45-Degree 8-Inch	EACH
SPV.0060.34	Bend 90-Degree 8-Inch	EACH
SPV.0060.35	Bend 45-Degree 10-Inch	EACH
SPV.0060.36	Bend 90-Degree 10-Inch	EACH
SPV.0060.37	Bend 11.25-Degree 12-Inch	EACH
SPV.0060.38	Bend 45-Degree 12-Inch	EACH
SPV.0060.39	Bend 90-Degree 12-Inch	EACH
SPV.0060.40	Reducer 12"x8"	EACH
SPV.0060.41	Plug 6-Inch	EACH
SPV.0060.42	Plug 10-Inch	EACH
SPV.0060.43	Plug 12-Inch	EACH
SPV.0060.44	Connect to Existing 4-Inch Water Main	EACH
SPV.0060.45	Connect to Existing 6-Inch Water Main	EACH
SPV.0060.46	Connect to Existing 8-Inch Water Main	EACH
SPV.0060.47	Connect to Existing 10-Inch Water Main	EACH
SPV.0060.48	Connect to Existing 12-Inch Water Main	EACH
SPV.0060.49	Sacrificial Anode Bags	EACH
SPV.0060.50	Corporation, Curb Stop, Box, Saddle & Union 1-1/4	EACH
	Inch	
SPV.0060.51	Corporation, Curb Stop, Box, Saddle & Union 1-1/4	EACH
	Inch	

Payment is full compensation for providing all labor, equipment, and materials, including valves and valve boxes, valve box adaptors, valve box and stop extensions, fire hydrants, tees, crosses, bends, reducers, couplings, connection sleeves, plugs, tapping saddles, saddle outlets, corporations, curb stops and boxes, polyethylene encasement, thrust restraint, anchoring fittings, tracer wire and terminal box; and other required materials to provide a complete working system; for all excavating, except rock excavation; for removing or abandoning the existing pipe or fixture that the new item replaces; for forming foundation;

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for replacing unstable material in the trench bottom; for sheeting and shoring; for dewatering; for making connections to new or existing pipe or fixtures; for backfilling and compacting; for providing and placing granular backfill material, including bedding material; for providing trench insulation where required; for removing sheeting and shoring; for testing and chlorination; for cleaning out pipes and structures; and restoring the worksite.

10. Temporary 2-Inch Blow Off, Item SPV.0060.66

A Description

This special provision may be necessary for setting up a temporary blow off for sections of water main without a hydrant normally used for flushing. Temporary blow off shall be according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

B Materials

Provide materials according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

C Construction

Perform all construction according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

After all testing is complete the plug and temporary blow off will be removed and connection made to the existing main or a permanent mechanical joint plug without the 2 inch tap will be installed.

D Measurement

The department will measure Temporary 2-Inch Blow Off as each individual blow off, acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.66	Temporary 2-Inch Blow Off	EACH

Payment is full compensation for furnishing and installing a mechanical joint plug, fittings, and pipe; for tapping and flushing; for removal of the temporary blow off; for connection to the main.

11. Sanitary Lateral 6-Inch, Item SPV.0090.01; Sanitary Sewer Pipe 8-Inch, Item SPV.0090.04; Sanitary Sewer Pipe 10-Inch, Item SPV.0090.05;

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Sanitary Sewer Pipe 12-Inch, Item SPV.0090.06; Sanitary Sewer Pipe 27-Inch, Item SPV.0090.07.

A Description

Sanitary sewer laterals and pipe shall be according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Sewer Construction.

Sanitary sewer mainline wye fittings for lateral connections and sanitary lateral connections to existing pipes at various locations shall be according to the plans and specifications, the City of Fond du Lac Detailed Specifications for Sanitary Sewer Construction and shall be incidental to sanitary lateral bid item.

B Materials

Shall be PVC SDR 35 pipe (6" to 12" diameter) conforming to ASTM designation D3034 or PVC PS46 pipe (27" diameter) conforming to ASTM designation F679, and shall be according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Sewer Construction.

All PVC pipe and fittings shall have elastomeric or rubber gaskets positively secured in place at the point of manufacture. The joints shall provide a continuous watertight conduit having an infiltration rate not exceeding 50 gallons per inch of diameter per mile per day. Factory-furnished sanitary sewer wyes shall have bell lengths equal to the length of the sanitary sewer main.

Granular backfill will be required on the entire project and included in the bid price for sanitary sewer and sanitary lateral pipe. Backfill all trenches and excavation with granular backfill conforming to Section 209 of the standard specifications or dense graded base (1 ¼-Inch) conforming to Section 305 of the standard specifications. The contractor may use excavated material from trench conforming to Section 209 for granular backfill to supplement any imported materials, if approved by the City of Fond du Lac. Contractor shall be responsible for QC testing and documentation for the backfill material according to Section 730 of the standard specifications in the presence of the City of Fond du Lac or its designated representative. Testing results shall be submitted to the City of Fond du Lac and the engineer within one business day of obtaining the sample.

Provide couplings to connect new laterals to existing laterals which comply with ASTM C-1173 and have a rubber or elastomeric sleeve and stainless steel band assembly fabricated to match with outer diameter of pipes to be joined.

If the upstream lateral has a larger diameter than the downstream lateral to which it is to be joined, provide an eccentric pipe fitting if required to maintain a pipe invert continuously sloped in the downstream direction.

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Prior to incorporating any materials or products into the work, submit to the engineer product literature and catalog cuts of the materials to be supplied. Submit information in sufficient detail to readily determine if these materials are in conformance with the specifications.

C Construction

Perform all construction according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Sewer Construction.

Excavate to expose existing sanitary lateral or main at the location of connection to determine exact diameter, location, and elevation of the existing pipe. Contractor shall verify that each active sanitary lateral is reconnected. Investigate, dye test, televise and/or provide necessary inspections to determine which sanitary laterals are active. Provide for tracing the existing lateral with a Metrotech or equivalent.

Maintain flow by plugging upstream manhole and bypass pumping.

If in the opinion of the City of Fond du Lac or its delegated representative the trench bottom is of unstable material, the City of Fond du Lac or its delegated representative may direct the contractor to excavate the unstable material until a firm foundation is obtained. The over excavated portion of the trench shall be backfilled with such material and in such a manner as may be required by the City of Fond du Lac and/or engineer. This work shall be considered incidental and included in the price bid for sanitary sewer or sanitary lateral piping.

D Measurement

The department will measure Sanitary Lateral 6-Inch; Sanitary Sewer Pipe (Size) by the linear foot approved by the City of Fond du Lac, and acceptably completed. Measurement will be from center to center of new or existing manholes or to end of sewer pipe not terminating in a manhole. New sewers which begin at an existing connection 6-inch or more outside an existing manhole wall will be measured from the connection.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Sanitary Lateral 6- Inch	LF
SPV.0090.04	Sanitary Sewer Pipe 8- Inch	LF
SPV.0090.05	Sanitary Sewer Pipe 10- Inch	LF
SPV.0090.06	Sanitary Sewer Pipe 12- Inch	LF
SPV.0090.07	Sanitary Sewer Pipe 27- Inch	LF
Payment is full compensation for providing all labor and materials, including couplings, vertical risers, vertical and horizontal bends, tracer wire and terminal box, connections, wye fittings, and other required fittings; for all dye testing or inspection required to identify active laterals; for all excavating, except rock excavation; furnishing and placing pipe bedding; for forming foundation; for replacing unstable material in the trench bottom; for sheeting and shoring; for dewatering; connection of new sanitary lateral or main to existing sanitary lateral or main; for laying pipe; furnishing and placing granular backfill; QC testing & documentation; compacting the backfill; for removing sheeting and shoring; for removal and associated sealing of any existing pipe or manholes located within excavation or trenching operations; for testing; for cleaning out pipes and restoring the worksite. The contractor shall supply and install all fittings, couplings, bends and appurtenances not specifically itemized but necessary to install a complete working system.

12. Polyethylene Water Service 1-1/4 Inch (C.T.S.) SPV.0090.02; Polyethylene Water Service 1-1/2 Inch (C.T.S.) SPV.0090.03; PVC Water Main 4-Inch, Item SPV.0090.08; PVC Water Main 6-Inch, Item SPV.0090.09; PVC Water Main 8-Inch, Item SPV.0090.10; Water Main 10-Inch, Item SPV.0090.11; PVC Water Main 12-Inch, Item SPV.0090.12.

A Description

Water main and water service pipe shall be according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

Water service main line connections and water service connections to existing pipes at various locations shall be according to the plans and specifications, the City of Fond du Lac Detailed Specifications for Water Main Construction and shall be incidental to water service bid items.

B Materials

Water service pipe shall be polyethylene according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

Water main piping shall be PVC DR18 pipe according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

Granular backfill will be required on the entire project and shall be included in the bid price for water main and water service pipe. Backfill all trenches and excavation with granular backfill conforming to Section 209 of the standard specifications or dense graded base (1 ¼-Inch) conforming to Section 305 of the standard specifications. The contractor may use excavated material from trench conforming to Section 209 for granular backfill to

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supplement any imported materials, if approved by the City of Fond du Lac. Contractor shall be responsible for QC testing and documentation for the backfill material according to Section 730 of the standard specifications in the presence of the City of Fond du Lac or its designated representative. Testing results shall be submitted to the City of Fond du Lac and the engineer within one business day of obtaining the sample.

Prior to incorporating any materials or products into the work, submit to the engineer product literature and catalog cuts of the materials to be supplied. Submit information in sufficient detail to readily determine if these materials are in conformance with the specifications.

C Construction

Perform all construction according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

Provide continuity testing of tracer wire prior to placement of base aggregate.

Provide the necessary inspections and excavations to determine which water services are active and shall be reconnected and relayed. Approximate locations of the existing water services based on City records are shown on the contract drawings. The contractor shall be responsible for locating and verifying all active water services along the project and the cost of this verification is considered incidental to the water construction.

If in the opinion of the City of Fond du Lac or its delegated representative the trench bottom is of unstable material, the City of Fond du Lac or its delegated representative may direct the contractor to excavate the unstable material until a firm foundation is obtained. The over excavated portion of the trench shall be backfilled with such material and in such a manner as may be required by the City of Fond du Lac and/or engineer. This work shall be considered incidental and included in the price bid for water main or water service piping.

PRIVATE LEAD WATER SERVICE CONTRACT

The City will not have a separate contractor to relay private lead water services under this contract; however, property owners may have a separate contractor perform these relays. The Contractor shall coordinate with the Private Lead Service Contractor to ensure the utilities are installed prior to or in conjunction with the work performed on the private side. The Private Lead Service Contractor shall re-compact trench backfill to subgrade as their work follows the water service work. The Contractor shall complete landscaping to the limits required by their contract work as directed by the Engineer.

D Measurement

The department will measure Polyethylene Water Service (Size) and PVC Water Main (Size) by the linear foot, approved by the City of Fond du Lac, and acceptably completed. Measurement for water service will be from centerline of water main through fittings and

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valves to the connection to existing water service piping or to the curb stop of empty lots without water service. Measurement for mainline will be through valves and fittings to centerline of connecting main, end of pipe, valve, or fitting.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	Polyethylene Water Service 1-1/4 Inch (C.T.S.)	LF
SPV.0090.03	Polyethylene Water Service 1-1/2 Inch (C.T.S.)	LF
SPV.0090.08	PVC Water Main 4-Inch	LF
SPV.0090.09	PVC Water Main 6-Inch	LF
SPV.0090.10	PVC Water Main 8-Inch	LF
SPV.0090.11	PVC Water Main 10-Inch	LF
SPV.0090.12	PVC Water Main 12-Inch	LF

Payment is full compensation for providing all labor and materials, including pipe, joint restraint, tracer wire, tracer wire terminal box, and miscellaneous items for installing a complete working system; for notification of building occupants; for all excavating, except rock excavation; furnishing and placing pipe bedding; for forming foundation; for replacing unstable material in the trench bottom; for sheeting and shoring; for dewatering; for sealing joints and making connections to new or existing pipe or fixtures; furnishing and placing granular backfill; QC testing & documentation; compacting the backfill; for providing pipe insulation where required; for removing sheeting and shoring; for hydrostatic testing and disinfection; continuity testing; for cleaning out pipes and structures; and restoring the worksite.

13. Temporary Water Service Project 4986-00-25, Item SPV.0060.64

A Description

The new water utility shall be installed and tested while the existing water utility piping is still in operation to keep water service to the adjacent residents and businesses for as long as possible. This special provision is for installing and maintaining temporary water piping with associated services to affected buildings. During prolonged periods of conflict between the existing water piping and the new water facilities, it may be necessary to shut off water and/or remove existing water piping which would adversely affect water service to the adjacent properties. In order to maintain water service during these periods of conflict, a temporary water system will be constructed, tested and disinfected prior to operation, and connected to the existing water system to supply affected users all according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction. The contractor shall install temporary water service to all users where water service will be interrupted for more than 4 hours. The contractor shall coordinate interruption to business and commercial users so the interruption will not cause

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a disruption of business or commercial activities. All users shall be given a 24 hour notice of service interruption, except during emergencies. The contractor shall make arrangements with the City of Fond du Lac Water Utility to sequence connection and operation of new mains and abandonment of existing mains. Two (2) safe water samples taken 24 hours apart prior to connecting any property to temporary water service.

B Materials

Provide materials according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

C Construction

Prior to any work associated with this effort, the contractor shall submit to engineer a detailed plan of the materials, construction, layout, operation and maintenance of the proposed temporary water system. This work will only be allowed after written approval of the proposed system is received by the contractor from both engineer and the City of Fond du Lac Water Utility.

D Measurement

The department will measure Temporary Water System by each project, approved by the City of Fond du Lac, and acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.64	Temporary Water Service Project 4986-00-25	EA

Payment is full compensation for providing all labor and materials, including pipe, valves fittings and couplings, and other required materials to provide a complete working system; for making connections to new or existing pipe or fixtures; for testing and chlorination; for all maintenance activities; for removing the temporary system after use and restoring the worksite.

14. Bypass Pumping 27-Inch Sanitary Interceptor Project 4986-00-25, Item SPV.0060.65.

A Description

This special provision is for providing labor and equipment to provide flow control and bypass pumping when reconstructing the 27-inch diameter sanitary sewer interceptor piping. Flows thru this piping system may be substantial and specialized pumping equipment, with adequate capacity, will be required. For reference only, see Appendix A -2021 Fond du Lac Flow Monitoring for flow meter data obtained from sanitary manhole 27-123 along Morris Street in October of 2021.

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B Materials

None.

C Construction

The contractor shall coordinate this work effort with the City of Fond du Lac Sewer Utility staff and provide appropriate pumping equipment with capacities to handle, and safely bypass, all flows passing thru the section of 27-inch diameter sanitary interceptor pipe under reconstruction.

D Measurement

The department will measure Bypass Pumping 27-Inch Sanitary Interceptor by each project, approved by the City of Fond du Lac, and acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid items:

ITEMDESCRIPTIONUNITNUMBERSPV.0060.65Bypass Pumping 27-Inch Sanitary Interceptor Project 4986-00-25EA

Payment is full compensation for providing all labor, equipment, materials, and other incidentals required for temporary flow control of the sanitary interceptor piping system; for all coordination with Utility staff; for system maintenance and operation during use; for any fuel or power consumed by the pumping equipment; for barricades or traffic control items related to protection of hoses and/or equipment; for setup and removal; and for restoring the worksite.

15. Insulation Board 2-Inch, Item SPV.0165.01.

A Description

Furnish and install insulation board according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

B Materials

Provide materials according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

C Construction

Perform all construction according to the plans and specifications, and the City of Fond du Lac Detailed Specifications for Water Main Construction.

D Measurement

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The department will measure Insulation Board 2-Inch by the square foot, approved by the City of Fond du Lac, and acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.01	Insulation Board 2-Inch	SF

Payment is full compensation for furnishing and installing insulation board as described above.

1 2			SECTION 01 77 00
3 4			CLOSEOUT PROCEDURES
5	PART	1 GEN	NERAL
6	1.01	APPL	ICABLE PROVISIONS
7		A.	Applicable provisions of Division 01 shall govern work of this section.
8	1.02	APPL	ICABLE PUBLICATIONS (NONE)
9	1.03	DESC	RIPTION OF WORK
10 11 12 13 14 15		А.	The work under this section shall cover: starting of systems; demonstration and instructions; testing, adjusting and balancing; operation and maintenance data; protecting installed and completed construction; final cleaning; manuals for materials and finishes; manual for equipment and systems; spare parts and maintenance products; product warranties, guarantees and bonds; project closeout procedures; and maintenance service.
16 17 18		B.	The Contractor shall assume the responsibility for the protection of all finished construction until accepted by the Owner. The Contractor shall repair and restore any and all damage to finished work to the satisfaction of the Engineer.
19 20 21		C.	The Contractor shall require each trade to clean the premises of accumulations of surplus materials and rubbish caused by their activities. Burning of rubbish on site will not be permitted.
22	1.04	RELA	TED WORK ELSEWHERE
23		A.	(ALL SECTIONS)
24		B.	OPERATION/MAINTENANCE MANUALS AND INSTRUCTIONS
25 26 27 28		C.	Provide operation and maintenance manuals covering each item of equipment furnished. Submit manuals to Engineer prior to "Substantial Completion" in accordance with Submittals - Division 01 of these specifications, and as specified herein.
29 30		D.	Submit data bound in $8-1/2 \ge 11$ inch (A4) text pages, three D side ring binders with durable plastic covers.

1 2 3		E.	Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.
4 5 6		F.	Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
7 8		G.	Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30		H.	 Contents: Prepare Table of contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows: Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and supplier. Identify the following: a. Significant design criteria. b. List of equipment. c. Parts list for each component. d. Operating instructions. e. Maintenance instructions for equipment and systems. f. Maintenance instructions for [special] finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents. 3. Part 3: Project documents and certificates, including the following: a. Shop drawings and product data. b. Air and water balance reports. c. Certificates. d. Originals of warranties and bonds.
31	1.05	FINA	L CLEANING
32		A.	Execute final cleaning prior to final project assessment.
33 34		В.	Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances.
35 36		C.	Clean equipment and fixtures to sanitary condition with cleaning materials appropriate to surface and material being cleaned.
37		D.	Clean filters of operating equipment.

1		E.	Clean debris from roofs, gutters, downspouts, and drainage systems.
2		F.	Clean site; sweep paved areas, rake clean landscaped surfaces.
3		G.	Remove waste and surplus materials, rubbish, and construction facilities from site.
4	1.06	STAR	ATING OF SYSTEMS
5		A.	Coordinate schedule for start-up of various equipment and systems.
6		B.	Notify Engineer and Owner seven days prior to start-up of each item.
7 8 9		C.	Verify each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
10 11		D.	Verify tests, meter readings, and specified electrical characteristics agree with those required by equipment or system manufacturer.
12		E.	Verify wiring and support components for equipment are complete and tested.
13 14		F.	Execute start-up under supervision of applicable manufacturer's representative and Contractors' personnel in accordance with manufacturers' instructions.
15 16 17 18		G.	When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
19 20		Н.	Submit a written report in accordance with Submittals-Division 01 that equipment or system has been properly installed and is functioning correctly.
21	1.07	DEM	ONSTRATION AND INSTRUCTIONS
22 23		A.	Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of Substantial Completion.
24 25		B.	For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
26 27 28		C.	Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
29 30 31		D.	Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at schedule time, at equipment location.

1 2		E.	Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
3 4		F.	Required instruction time for each item of equipment and system is specified in individual sections.
5	1.08	TEST	ING, ADJUSTING AND BALANCING
6 7 8		A.	The completed Work in accordance with requirements of the contract documents when ready in all respects for use by the Owner shall be subjected to a performance test at operating conditions.
9 10 11 12		B.	Submit reports to Engineer indicating observations and results of tests and indicating compliance or non-compliance with requirements of Contract Documents. Make all adjustments necessary to fulfill requirements and to comply with the instructions and recommendations of manufacturers, and to comply with all codes and regulations.
13	1.09	PROT	TECTING INSTALLED CONSTRUCTION
14 15		A.	Protect installed Work and provide special protection where specified in individual specification sections.
16 17		B.	Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
18 19		C.	Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
20 21		D.	Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
22 23 24		E.	Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
25		F.	Prohibit traffic from landscaped areas.
26	1.10	PROJ	ECT RECORD DOCUMENTS
27 28 29 30 31 32 33		Α.	 Maintain on site one set of the following record documents; record actual revisions to the Work: 1. Drawings. 2. Specifications. 3. Addenda. 4. Change Orders and other modifications to the Contract. 5. Reviewed Shop Drawings, Product Data, and Samples.

1			6. Manufacturer's instruction for assembly, installation, and adjusting.
2		B.	Ensure entries are complete and accurate, enabling future reference by Owner.
3		C.	Store record documents separate from documents used for construction.
4		D.	Record information concurrent with construction progress, not less than weekly.
5 6 7 8 9		E.	 Specifications: Legibly mark and record at each product section description of actual products installed, including the following: Manufacturer's name and product model and number. Product substitutions or alternates utilized. Changes made by Addenda and modifications.
10 11 12 13 14 15 16 17 18		F.	 Record Drawings [and Shop Drawings]: Legibly mark each item to record actual construction including: Measured depths of foundations in relation to finish first floor datum. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the work. Field changes of dimension and detail. Details not on original Contract Drawings.
19		G.	Submit documents to Engineer prior to claim for final Application for Payment.
20	1.11	MAN	UAL FOR MATERIALS AND FINISHES
21 22		A.	Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Engineer will review draft and return one copy with comments.
23 24		B.	For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.
25 26 27		C.	Submit one copy of completed volumes 15 days prior to final inspection. Draft copy be reviewed and returned after final inspection, with Engineer comments. Revise content of document sets as required prior to final submission.
28 29		D.	Submit two sets of revised final volumes in final form within 10 days after final inspection.
30 31 32		E.	Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Include information for re-ordering custom manufactured products.

1 2 3		F.	Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
4 5 6		G.	Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Include recommendations for inspections, maintenance, and repair.
7		Н.	Additional Requirements: As specified in individual product specification sections.
8 9		I.	Include listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.
10	1.12	MAN	UAL FOR EQUIPMENT AND SYSTEMS
11 12		A.	Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Engineer will review draft and return one copy with comments.
13 14		B.	For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.
15 16 17		C.	Submit one copy of completed volumes 15 days prior to final inspection. Draft copy be reviewed and returned after final inspection, with Engineer comments. Revise content of document sets as required prior to final submission.
18 19		D.	Submit two sets of revised final volumes in final form with 10 days after final inspection.
20 21 22 23		E.	Each Item of Equipment and Each System: Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.
24 25		F.	Panelboard Circuit Directories: Provide electrical service characteristics, control, and communications typed.
26		G.	Include color-coded wiring diagrams as installed.
27 28 29		H.	Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and special operating instructions.
30 31 32		I.	Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

1		J.	Include servicing and lubrication schedule, and list of lubricants required.
2		K.	Include manufacturer's printed operation and maintenance instructions.
3		L.	Include sequence of operation by controls manufacturer.
4 5		M.	Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
6		N.	Include control diagrams by controls manufacturer as installed.
7 8		0.	Include Contractor's coordination drawings, with color-coded piping diagrams as installed.
9 10		Р.	Include charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
11 12		Q.	Include list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
13		R.	Include test and balancing reports as specified in Quality Control – Division 01.
14		S.	Additional Requirements: As specified in individual product specification sections.
15 16		T.	Include listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.
17	1.13	SPAR	E PARTS AND MAINTENANCE PRODUCTS
18 19		A.	Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.
20 21		B.	Deliver to Project site and place in location as directed by Owner; obtain receipt prior to final payment.
22	1.14	PROI	DUCT WARRANTIES, GUARANTEES AND BONDS
23 24 25		A.	Obtain warranties, guarantees and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
26 27		B.	Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.
28		C.	Verify documents are in proper form, contain full information, and are notarized.
29		D.	Co-execute submittals when required.

1 2		E.	Include Table of Contents and assemble in three D side ring binder with durable plastic cover.
3		F.	Submit prior to final Application for Payment.
4		G.	Time of Submittals:
5 6			1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days
7 8			after acceptance.Make other submittals within ten days after Date of Substantial Completion,
9			prior to final Application for Payment.
10 11 12			3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty or bond period.
13	1.15	LOOS	SE AND DETACHABLE PARTS
14		A.	The Contractor shall retain all loose and small detachable parts of apparatus and
15			equipment furnished under this contract, until completion of the work and shall turn
16			them over to the Owner.
17	1.16	CLOS	EOUT PROCEDURES
18 19 20		A.	Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's review.
21 22		В.	Provide submittals to Engineer for presentation to Owner required by authorities having jurisdiction.
23 24		C.	Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
25 26		D.	Owner will occupy all portions of building as specified in Summary of Work – Division 01.
27	PART	2 PRO	DDUCTS AND MATERIALS (N/A)
28	PART	3 CO	NSTRUCTION METHODS (N/A)
29 30	PART	'4 ME	ASUREMENT AND PAYMENT (N/A)
30 31			END OF SECTION

1	APPENDIX A
2	
3	2021 Fond du Lac Flow Monitoring
4	

Appendices

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Morris Street - MH 27-123 Flow Monitoring Location Map



1	APPENDIX B
2	
3	Military Road Sanitary Sewer Televising Reports

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Televising/Sealing Report

Date:	10-7	-05				Page No.: 1767	
T. V. Ci	ew.	hn R	icker	<i>}</i>		Current Soil Conditions: 💥 🖇	amp
Ch	ris	Kaatz				Current Weather Conditions: _C	loudy
Floodin	r Storm	Sewer		Yes	No	Temperature: 55	And a second
		or to T.V	v.	Yes) No		
				\subseteq			
					1.2	Fond du La	C
						First on the Lake	New Mill
	_					First on the Lake	25-85
0n:	N. 9	th S	f		From:	H 25-21-A To: MH	25-21
Sype of	Sewer:_	Sani	tary		Kind of I	Pipe: <u>Clay</u> Type of Joint: <u>Tar</u> Approx. Sewer Depth: <u>9</u>	Size: 10
Type of	ilt: Surface:	Blac	Fta.			A	
rypeon	c/ut nuçç.	2190	quint.			Approx. Sewer Depth:	na mananana wa ana ani a yana yana da ana da anganan kundun ana manana mangapita dala kata kutu ana na
Ftg.	House	Services	5	Intīl.	Video	Comments	Viewing EASt
	N	S	+	GPM	Ft. Film	Comments Tape # 156	(DS) US
					: 40		A
34						Radial Crackat Joint	
82	Υ_					cookied off	
		Y				Cookied off	Superior St. 4
126	<u> </u>	Y Y				Adive	
131		Υ.				Coakied off	
180	- -					went under water	
100		Ψ-				Cookied off Cookied off	
203						Come out from under water	
210						Pine core to the pult	0
220						Pipe sees to the right went under water	15-74 WH
244				10		Leaking in Joint	K.M.
246				5		Leaking in Joint	8
				15		Leaking in Joint	
153						MH= 25-21	
					: 52	END	Hackory St
						2	· · /
						Rated 7	
					*	in five fect Piper is Lecting 30 gal. Mip. Need to be fix	
						30 gal. Mir. Need to be fix)	
<u> </u>							
						B.	
Total							

.



Crew	D	ate	On Stre	et	Page #		
John R. and Mike S.	2008	-01-10	Superior S	Street		2083	
Upstream M.H. Numb	er Downstream	M.H. Number	Upstream M.I	H. Street	Downstream M.H. Street		
25-22	25	5-85	Military R	load	N	linth Street	
Pipe Size	Pipe I	Material	Pipe Ty	pe	Pipe Joint		
12	V	CP	Sanita	ry	Tar		
Flushed	Flood	Vie	W	TV View	R	ating (10 is best)	
Yes	No	Noi	rth	DS		6	
Depth	Street Type	Soil	Weather	TV L	ength	MH_Type	
12"9"	Concrete	Frozen	Cloudy	84	4.5	Clay Brick	
Comments							

¥	Ftg. 0.0 0.0 0.0	Code MH IB GO	Description Manhole Inspection Begin General Observation	Position	Comment 25-22 No Boot
	•15.7	RC	Radial Crack		
	•20.7	RC	Radial Crack		
	•23.8	RC	Radial Crack		
	°30.1	RC	Radial Crack		
*	∘49.1	RC	Radial Crack		
	•74.2 •78.1 •80.2 •84.5 •84.5 •84.5	GO RC RC MH GO IE	General Observation Radial Crack Radial Crack Manhole General Observation Inspection End		Main bends to the Northwest 25-21 No Boot

					Tele	vising/Sealing Report	
Date: T. V. Cr Flooding Line Flu	, Storm S	Sewer		Mah Art Tes		Page No.: 1604 Current Soil Conditions: 4 Current Weather Conditions: Temperature: 70° Fond du Lake	
On:	<u>S. M</u>	lilita sau	iny.	Rd	From:	MH#25-22A To: MH#,	25-55 Size 10"
Year Bu Type of	ilt: Street Su	_ urfacing:		conc	<u>rete</u>	Approx. Sewer Depth: 9	
Ftg.	House	Services	5	Infil.	Video	Comments	Viewing NE
	NW	SE	T	GPM	Ft. Film	Tape #143	(DS) US
					1:51		^
13				ĵ-		leaky joint	
16				5		leaky joint	
20				4		leaky joint	
24				1		LOAKY TOTAT	W.4#54.
-26						leaking a Thickle tham joint	
34 37				<u> </u>		leaking a trickle from fourt	
				<u> </u>		drip at joint	
50						leaky joint atrichte	
54						leaking fram joint	
57				1		leaking fram jajut leaking a trickle	
59				-		leaking a trickle	
60				<u> </u>		leaking a thick le	
65						jeint dulpping	
66						lenky joint	МН 25-55
				3		lenky jaint	25-55
80						leaking a twickle MH 25-55	2 Walker
96					10.2	MH 25-55	Walker st. Walker
					1:57		N. 030
						Dital	Mit
						Ruted 26	25-22A
						No wye's on this section. Main could be een enter off on both ends and manhale filled	
						Main could be cenented off	sugerier SX
				· · · · · ·		on Doth ener and mapphyle Hilled	Chille I
							N'SA
						· · · · · · · · · · · · · · · · · · ·	
			<u> </u>				
							2 - 1 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -
Total		1	1				
rutat				1	1		

					Tele	vising/Sealing Report							
Date: T. V. Crew	0- 	8 - ohn arry	03 Rici Di	<u>Kert</u> Ke <i>m</i> a		Page No.: 1602 Current Soil Conditions: Damp Current Weather Conditions: Slang Temperature: 75							
Line Flushe	Flooding Storm Sewer Line Flushed Prior to T.V. Yes No First on the Lake												
011: <u>5</u>	. <i>M</i>	ilite	ary	Rd	From:/	MH# 25-23 To: MH# 25-22							
Type of Sew Year Built: Type of Stre	wer:	<u>5~~</u>	utar	4	Kind of F	<u>M.H.# 25-23 To: MH#25-22</u> Pipe: <u>Clay</u> Type of Joint: <u>Tar</u> Size: 10 <u>Approx. Sewer Depth: 8'6'</u>							
	Iouse S	c F		Infil. GPM	Video Ft. Film	Comments Tape# 143 DS							
		5~		CILIVI	1844	1 ape" 193 DS	US						
20'					1:45	MH. 25-22	.						
						S. 9	10						
						MH OD	walker ST						
						B to the B M							
						Rated: 3	33						
•													
						-b-							
							-						
							Ann ST.						
							i						
┣┣													
			·										
						······································							
							1						
Total													

~

Televising/Sealing Report

Date: 10-8-03 T. V. Crew: John Rickert Larry Dikeman Page No.: 1601 Current Soil Conditions: Damp Current Weather Conditions: Sauge Temperature: 75° (Yes) (Yes) Flooding Storm Sewer No No Fond du Lac Line Flushed Prior to T.V. First on the Lake On: <u>S. Military Rd</u> From: <u>MH. # 25-24</u> To: <u>M.H. # 25-23</u> Type of Sewer: <u>Sanitary</u> Kind of Pipe: <u>Clay</u> Type of Joint: <u>Tar Size</u>: <u>10</u>" Year Built: Type of Street Surfacing: <u>Concrete</u> Approx. Sewer Depth: <u>8'6"</u> Ftg. House Services Infil. Video Comments Viewing North Tape # 143 GPM | Ft. Film | W E T (DS) US 1:42 29 1:44 M.H. 25-23 Walker 0,25-23 Rated : 5 ST. "Ro MH 25-24 1 þ ĩ L ŧ. 1 Ê Ann Total

					Tele	vising/Sealing Report	
Date: T. V. Cr Flooding Line Flu	, Storm : shed Pri	Sewer or to T.V	;K.	eman Tes Tes	No No	Page No.: <u>1600</u> Current Soil Conditions: <u>De</u> Current Weather Conditions: <u>Temperature</u> Fond du La First on the Lake	<u>C</u>
0n: <u><</u>	5. Mi	litar	y R	?d	From:/	<u>M.H. # 25-25 To: M.H. #</u> Pipe: <u>Clay</u> Type of Joint: <u>Tar</u>	25-24
Type of S Year Bui Type of S	ut		,		Kind of F	Pipe: <u>Clay</u> Type of Joint: <u>Tar</u> Approx. Sewer Depth: <u>8</u>	
Ftg.	the second se	Services		Infil.	Video	Comments	Viewing NorthEAst
	NW	SE		GPM	Ft. Film	Tape # 143	US US
30		V			1:36	Contra CP	
66						Cemented Off Trace of roots in Joints	
						Trace of roots in Joints Continue 3/4 full of Mineral Deposit Roots Stop Active Dripping troots	
74	Т					3/4 full of Mineral Depesit	vy Walker
83						Roots Stop	PO ST
93		T				Active Dripping troots Trace of roots in Joint	
103							MH
12						Continue	1 O 25-24
111	<u> </u>	Y				Leaking a Little	- 1
	670	<u> </u>		2		Active ? Debris in Lateral	
170				~	1:42	M.H. 25-24 has Lateral M.H. 25-24	
					15/5-	/ j-11 - 2 J - 2 1	
							4 1 1
						Rated: 5	
							MH STA
] 25-25
							N
							4
				· ·			4
							1

l.

Total

						Tele	vising/Seali	ng Report				
	Date: T. V. Cr	7-/ ew:/ Je	16-0 2H, 1 4N A	07 AVIC RICKE	NC RT,	Page No.: 2002, Current Soil Conditions: <u>DAMP</u> Current Weather Conditions: <u>CLOUDY</u> Temperature: <u>740</u>						
	Flooding Line Flu			1.	(Yes Fes	No No	Â			· · · · ·		
and the second						~			nd du La st on the Lake			· .
	On:	NEST	ERN,	AUE.		From:/	M.H. 2.	5-46.	To: M.H.	25	58	- -
	Type of Year Bu Type of	Sewer: ilt: Street Su	SAN urfacing:	TAR CO	NCRE	_Kind of F	Pipe: <u>TRANS</u>	Approx. Sewer	To: <u>M.H.</u> of Joint: <u>CASKE</u> r Depth:8	7. Size:_ -/0	8"	
	Ftg.	House S	Services N	T	Infil. GPM	Video Ft. Film	Comments TAPE	# 174		Viewin		7 US
	49'				······	152	TOTAL	LENGH7			↑	
						1:57	M.H.	25-58	•		8	
							RATE	- 3			ESTERN	
· · · · · ·								·····				
											ANE.	
						· · · · · · · · · · · · · · · · · · ·		·····		mi	ITAR	P RD
· •	· · · · · · · · · · · · · · · · · · ·			-						 		1H . 5-46
								(MH.	
			· · · · · ·					·			MH. 25-58	
											DOKE Г	. ST,
	Total							· · · · · · · · · · · · · · · · · · ·				

.

				Tele	vising/Sealing Report	
Date: T. V. Cr	7-16 ew: 	-07 LAVI RIC	GNC KERT		Page No.: <u>2001</u> Current Soil Conditions: Current Weather Conditions:	DAMP CLOUDY
	Storm Sew shed Prior to		(Tes)	No No	Temperature: 740	
				<i>F</i> =	Fond du L First on the La	
					M.H. 25-47 To: M.	
Type of S Year Bui Type of S	Sewer:_ <i>SA</i> lt: Street Surfac	ing:	RY JONE	Kind of F RETE.	Pipe: TRANS ITE Type of Joint: GAS	<u>KET Size: 8"</u> 5'-10''
Ftg.	House Ser		Infil. GPM	Video Ft. Film	Comments TAPE. # 174	Viewing WE
13:	,) ,			1:45,	NOT ACTIVE.	
1041		/			NOT ACTIVE. ACTIVE ? NOT ACTIVE.	RIVER
178'				152	ACTIVE ?	
3.50'				152	TOTAL LENGHT, M.H. 25-46	
					RATE - 3	
					No Boot	
	•					
						- M.H. 25-46. O MILITARY
and the second s						

-- .

					Tele	vising/Sealing Report							
T. V. Cr Flooding	Date: <u>10-13-03</u> T. V. Crew: <u>John Rickert</u> <u>Larry Dikeman</u> Flooding Storm Sewer Line Flushed Prior to T.V. Mo Key No No No No No No No No No No												
On:	On: S. Military Rd. From: M.H. # 25-49 To: M.H. # 25-60												
On: Some from: Joint: To: Joint: Jo													
Ftg.		Services		Infil.	Video	Comments	Viewing North						
	W	E	T	GPM	Ft. Film	Tape # 144	(DS) US						
11.77					:51	/	^						
43						Radial Crack@ Joint							
45						Main Bends a Little to East							
62						Active Radial Crack @ Joint	MH						
118	Y					Active? Henry Mineral Dep	25-60						
122						Radial Crack@ Juint	0						
130						Mineral Deposits on Joint	3						
145			·			Radial Crack @ Joint							
152						Radial Crack @ Juint							
178						Mineral Deposits on Joint							
						Continue							
201 210						Radial Crack @ Joint	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						
212						Radial Crack on Top							
238		~~				Radial Crack on Top							
285		Y				Not Active 1/2 full of Debris							
335	Y					Not Active	0 25-49						
352						Radial Grack @ Joint							
357		Y				Not Active 1/2 full Debris	Wilkins						
395	Y					Active ?							
407 413		Y				Active							
						Radial Crack @ Joint							
418						Not Active							
449	T	<u> </u>				Active?							
461 491				· ·		Not Active							
507		<u> </u>				Main Bends West							
						Radial Cracks @ Joint Continue							
513						Cracks STOP							
523	Y			4		Lateral Leaking							
526						Radial Cracks @ Joint							
552					1212	M.H. 25-60							
						Rated:6							
Total													



Crew			Date		Oi	n Street			Page #			
John R. and Mike S	S.	2010-05-18			Wilkins Street			2612				
Upstream M.H. Num	ber	Downstream M.H. Number			Upstream M.H. Street			Downstream M.H. Street				
25-50			25-49		Supe	erior Stree	et		Military Road			
Pipe Size		Pipe	e Material		Pi	ре Туре			Pipe Joint			
8			VCP		S	anitary			Mortar			
Flushed		Flood		View		TV View			Rating (10 is best)			
Yes Back Flushed		Yes		East	ast		DS		5			
Depth	Street	Туре	Soil		Weat	her	er TV Len		MH_Type			
7'11"	Black	ktop	Damp		Sun	ny	4	64	Concrete Brick			
Comments		-	-			-						
Deadend Manhole												

	Ftg	. Code	Description	Position	Comment
lenne.	•0.0	о мн	Manhole		25-50
	•0.0) IB	Inspection Begin		
\mathbf{V}	0.0) GO	General Observation		No Boot
V	°15.4	4 MD	Mineral Deposits		
	18.0 م		Mineral Deposits		
	°21.		Cookied Off Lateral	3	
	0 24.1		Cookied Off Lateral	9	
	•25.		Mineral Deposits		
	●27.3		Mineral Deposits		
	•29.		Mineral Deposits		
	\\\ ° 31.:		Mineral Deposits		
	● 35.5 ● 37.5		Mineral Deposits		
	•40.		Mineral Deposits Mineral Deposits		
	•43.3		Lateral With Infiltration	3	4GPM
	•44.4		Mineral Deposits	3	4GPIM
	•47.		Longitudinal Crack		
	•56.		Mineral Deposits		
	56 .		Longitudinal Crack		
	°66.		Lateral Active	10	Running
	•67. ⁻		Cracked & Quartered	10	rtannig
	•68.		Lateral With Infiltration	3	3GPM
	1 00 73.8		Cookied Off Lateral	3	
	e85.4	4 MD	Mineral Deposits		
	•90.:	2 MD	Mineral Deposits		
#	•95.8	8 MD	Mineral Deposits		
555	1 03.3		Mineral Deposits		
V	•113.8		Mineral Deposits		
•	• 125.4		Lateral With Infiltration	3	4GPM
	° 138.		Lateral Active	10	
	° 153.4		Lateral With Infiltration	2	2GPM
	¢154.		Joint Offset		
	• 155.		Longitudinal Crack		
	• 170.		Mineral Deposits	2	
	° 178.		Cookied Off Lateral Longitudinal Crack	2	
	• 183. • 183.		Mineral Deposits		
	° 186.		Mineral Deposits		
	° 189.4		Mineral Deposits		
	° 195.		Mineral Deposits		
	P202.		Lateral Active	10	
	°211.		Mineral Deposits		
	P215.		Mineral Deposits		
	°218.		Mineral Deposits		
	°230.		Lateral With Infiltration	2	4GPM
	°263.	3 LA	Lateral Active	10	running
	°265.	0 CC	Circular Crack		-
	•277.9		Circular Crack		
	°281.		Cookied Off Lateral	2	
	⁶ 286.	5 LA	Lateral Active	11	





Televising/Sealing Report									
Date:10-10-2003Page No.:1610T. V. Crew:JOHN RICKERTCurrent Soil Conditions:DAMPBOBLAVIGUECurrent Weather Conditions:SONNY									
Flooding Storm Sewer Line Flushed Prior to T.V. No No First on the Lake									
On: S. MILITARY RD From: M.H. 25-51 To: M.H. 25-49									
Year Bu	ut:					Pipe: <u>CLAY</u> Type of Joint: <u>TAR</u> Approx. Sewer Depth: <u>8</u>	Size:/0		
Ftg.	House	Services		Infil.	Video	Comments	NE-institution (
rig.	W	E		GPM	Ft. Film	TAPE # 144	Viewing NORTH DS US		
					127	STARTS OUT P.V.C.			
.5	V			1		ACTIUF			
10'						CLAY PIPE,	1		
14'		1		12		JOINT LEAKING			
191						CRACKED & DUARTERED			
41'		ļ		ļ		CRACKS STOP	MILITARY		
51	8/					CRACKS START			
791 941	<u> </u>		 	ļ-/		ACTIVE - LEAKING.	4		
103'	/					CRACKED & QUARTERED	× 1		
110'		1				ACTIVE. CRACKED & QUARTERED.	3		
128'						DUSHING IN. & CRACKED			
139.						CONT. CRACKED			
1.50'	V					ACTIVE.	1		
1541	1	V				ACTIVE.	1		
157						ROOTS.	m,H		
160'						CRACKED & QUARTERED	25-49		
167'						3/4 FULL OF DEBRIE	0		
170'			<u> </u>			CRACKS CONTO	-01		
180' 188'				 		CRACKS STOD			
194'						CRACKS CONTO			
197						11 11			
		14				NOT ACTIVE.			
206'		1		1		CRACKED & QUARTERED			
226'	Y					ACTIVE.			
243"			•			CRACKED & BUARTERED			
246' 254'		V.				ACTIVE 2			
254						CRACKED & QUARTERED			
2691						PUSHING IN ON TOP	14		
288'	17						5 HENDING		
292' 311'	<u> </u>					ACTIVE.	0.0		
321						CRACKS ON TOP-CONT.	m. H. 9 725-57		
5001						RADIAL CRACKS AT JOINT	T25-57		
Total		L	I				1		
				1	1	L			

Televising/Sealing Report

T. V. Ci R Floodin Line Flu	rew: <u>J</u> <u>OB ER</u> g Storm ushed Pri	ior to T.V	<u>2 ICKEI</u> <u>LAUI</u> 1.	Ves Ves	No No	Page No.: 1611 Current Soil Conditions: <u>A</u> Current Weather Conditions: <u>S</u> Temperature: <u>70°</u> Fond du Lac First on the Lake M.H. 25-51 To: M.H.	
Type of Year Bu Type of	Sewer:	SAN17 urfacing:	Co	UCR.	_Kind of I	Pipe: <u>CLAY</u> Type of Joint: <u>TAR</u> Approx. Sewer Depth: <u>8</u>	Size:/0 ''
Ftg.		Services	-	Infil.	Video	Comments	Viewing NORTH
	w	Ē		GPM	Ft. Film	TAPE 144	OS US
325 327' 333' 334' 362' 382' 382' 410' 416' 416' 424' 424' 424' 424' 424' 474'	<i>Y T T T T T T T T T T</i>	× × T			<u>51</u>	ACTIVE, PIDE CRACKED & QUARTERED NOT ACTIVE HALF DEBRU RADIAL CRACK AT JOINT, CRACKED & QUARTERED RADIAL CRACK AT JOINT 34 FULL DEBRIS NOT ACTIVE X2 FULL DEBRIS NOT ACTIVE X2 FULL DERIS NOT ACTIVE RADIAL CRACKS ACTIVE ? RADIAL CRACKS AT JOINT II II II JOINT LEAKS MIH. 25-49, TOTAL LENGHT RATE - 8	 S military RD, m.A. 25-42 O H.A. H.A.
Total							A HELDIAL 5T. m.H. 25-51



Crew	Date)	0	n Street		Page #		
John R. and Mike S	S.	2016-08	3-30	Henr	ning Street	4215		
Upstream M.H. Num	ber	Downstream M	.H. Number	Upstrea	m M.H. Street	Downstream M.H. Street		
25-52		25-5	1	D	eadend		Military Rd.	
Pipe Size		Pipe Mat	terial	Pi	ре Туре	Pipe Joint		
8		VCF)	S	anitary	Tar		
Flushed		Flood	Vie	W	TV View		Rating (10 is best)	
Yes		Yes	We	st	DS		3	
Depth	Stree	t Type	Soil	Weat	her TV L	.ength	MH_Type	
6'2"	Blac	cktop	Dry	Sun	ny 30)6.2	Spin Cast	
Comments			•		-			

	Ftg.	Code MH	Description Manhole	Position	Comment 25-52
1 Circle	0.0	IB	Inspection Begin		20.02
\mathbf{V}	0.0	GO	General Observation		CIP Liner
	•10.8	MD	Mineral Deposits		
	°15.3	MD	Mineral Deposits		
	•18.0	MD	Mineral Deposits		
	°21.8	LIA	Lateral Inactive	3	
	•31.8	LA	Lateral Active	9	
	•60.5	CC	Circular Crack		
	•68.6	LA	Lateral Active	3	
	•71.0	COL	Cookied Off Lateral	9	
	_^92.5	CC	Circular Crack		
	°94.6	CC	Circular Crack		
	م 105.3	LA	Lateral Active	9	
	110.4م	COL	Cookied Off Lateral	3	
	112.8	MD	Mineral Deposits		
	•115.4	CC	Circular Crack		
	•117.7	CC	Circular Crack		
	•119.4	CC	Circular Crack		
	•126.8	LC	Longitudinal Crack		
	°129.1	LC	Longitudinal Crack		
	•131.2	CC	Circular Crack		
	v137.7	COL	Cookied Off Lateral	3	
	●137.7	GO	General Observation		camera under water
***	\\\°140.4	LA	Lateral Active	9	leaking 4 gpm
	\\\ ⁰ 141.8	JL	Joint Leaking		2 gpm
V	\ \\ [\] °146.9	JL	Joint Leaking		5 gpm
	\\`149.7	JL	Joint Leaking	1 to 4	leaking 15 gpm
	\ \⁰154.3	JL	Joint Leaking		3 gpm
	• 154.5	GO	General Observation	_	camera out of water
	•183.1	COL	Cookied Off Lateral	9	with a hole
	°208.0	S	Sag		need flusher to pull main
	°208.7	GO	General Observation		camera under water
	°213.0	LA	Lateral Active	9	
	≥213.0	LA	Lateral Active	9	2
	°213.4 °217.2	JL COL	Joint Leaking Cookied Off Lateral	2	2 gpm
	•217.2	GOL	General Observation	Z	aging to unbog storm
	•221.6	GO GO	General Observation		going to unbag storm going back to 140.4 feet
	•252.3	COL	Cookied Off Lateral	10	going back to 140.4 leet
	256.5	MD	Mineral Deposits	10	
	°259.2	GO	General Observation		main bends to northwest
	268.7	GO	General Observation		main bends to northwest
	°295.7	S	Sag		ends
	•295.7	MC	Main Changes		to pvc
	•306.2	MH	Manhole		25-51
	306.2	GO	General Observation		has boot
	•306.2	IE	Inspection End		
		_	· · · · ·		

	Televising/Sealing Report										
T. V. Cr Flooding Line Flu	Date: 10-10-2003 T. V. Crew: <u>ROBERT H LAUILA</u> <u>JOHN RICKFRT</u> Flooding Storm Sewer Line Flushed Prior to T.V. On: <u>S. MILITARY RD From: M, H, #25-53</u> To: M, H, #25-51										
Type of a Year Bu	Type of Sewer: SANITARY Kind of Pipe: CLAY Type of Joint: TAR Size: 10" Year Built: Type of Street Surfacing: CONCRETE Approx. Sewer Depth: 9-FEET										
Ftg.	House	Services	;	Infil.	Video	Comments	Viewing NORTH				
	w	E	T	GPM	Ft. Film	TADE # 144	(DS) US				
					:14		1				
16'						RADIAL CRACKS					
18'						LONGITUDIAL CRACKS.					
30'		Y				BAD JOINTS NOT ACTIVE.					
37'						RADIAL CRACK	m.H.				
56		<u> </u>				NOT ACTIVE	0:25-51				
65' 86'		ľ				ACTIVE					
891	1 M					RADIAL CRACK. ACTIVE ?					
941											
98'						RADIAL CRACK. AT JOINT					
115'											
118'						CRACKED & QUARTERED					
1231	[() ()					
12.5'		V				NOT ACTIVE.					
126'		1				CRACKED QUARTERED					
129'		T				ACTIVE ?					
129'	V					ACTIVE	A m.H				
132'						CRACKED & QUARTERED	025-53				
148'		ļ				11 11	GROVE ST.				
		ļ				CONTINUES ON.					
180'		V_				ACTIVE ?					
182'						CRACKED & QUARTERED					
1861	+	<u> </u>				ACTIVE					
190'	· · · · ·					CRACKED & QUARTERED	3				
212" 215" 241"						LONGITUDIAL CRACKED					
2/5-							E I				
2421							TARY				
2431	-7					ACTIVE ?					
2561		V				CRACKED PIPE CONT. NOT ACTIVE	R.D.				
256'											
2921						CRACKED & QUARTERED					
301'		Y				ACTIVE.					
Total											

					Tele	vising/Sealing Report					
T. V. Cr Boll Flooding	Date: 10-10-2003 T. V. Crew: <u>TOHN RICKERT</u> <u>BOB LAVIGNE</u> Flooding Storm Sewer Line Flushed Prior to T.V. Page No.: <u>1609</u> Current Soil Conditions: <u>DAMP</u> Current Weather Conditions: <u>SONNY</u> Temperature: <u>70³</u> Fond du Lac First on the Lake										
0n: <u>S</u> ,	On: S. MILITARY ROD From: M. H # 25-53 To: M. H # 25-51										
Type of a Year Bui Type of a	Type of Sewer: <u>SANITARY</u> Kind of Pipe: <u>CLAY</u> Type of Joint: <u>TAR</u> . Size: <u>10</u> Year Built: Type of Street Surfacing: <u>CONCRETE</u> . Approx. Sewer Depth: <u>9</u>										
Ftg.		Services	_	Infil.	Video	$\frac{\text{Comments}}{TAPE} \neq 144$	Viewing NORTH				
	w	E	T	GPM	Ft. Film	<u>TAPE ~ 144</u>	QS US				
308'					· 27	RATE - 7	M.H. 0 25-5-1 0.0 1 I 1 I 1 I 1 E 0 25-5-3 0.0 1 E 1 E 1 E 1 E 1 E 1 E 1 E 1 E 1 E 1 E				
						· · · · · · · · · · · · · · · · · · ·					
Total											

				Telev	vising/Sealing Report						
Date: 10-9-03 T. V. Crew: John Rickert Larry Dikeman Flooding Storm Sewer Line Flushed Prior to T.V. Yes No No No No No No No No No No											
First on the Lake On: <u>5. Military Rd</u> From: <u>M.H.</u> <u>425-54</u> To: <u>M.H.</u> <u>425-53</u> Type of Sewer: <u>5Anitary</u> Kind of Pipe: <u>Clay</u> Type of Joint: <u>Tar</u> <u>Size: 10*</u> Year Built: Type of Street Surfacing: <u>Concrete</u> Approx. Sewer Depth: <u>10'0"</u>											
Ftg. Hous	e Services		Infil.	Video	Comments	Viewing North					
W	E	T	GPM	Ft. Film	Tape # 144	DS US					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	7 7 7			\$ 05	Hole Next to Tap Radial Crack @ Joint Radial Crack @ Joint Active Active Radial Crack @ Joint Main Cracked + Quartered + Continues Cracks Stop Main cracked + Quartered + Continues V3 full of debris Active? Main Cracked + Quatered Cracks STOP Main Cracked + Quatered + Continues Active? Main Cracked + Quatered Active? Main Cracked + Quatered Active? Main Cracked + Quatered Active? Rated # Continues Active? Rated # Continues	• Grave MH ST. 05-53					
Total											

					Tele	vising/Sealing Report					
Flooding	Date: 10-9-03 T. V. Crew: Larry Dikeman Tohn Rickert Flooding Storm Sewer Line Flushed Prior to T.V. Yes No Line Flushed Prior to T.V.										
On:	On: <u>S. Military Rd</u> From: <u>MH# 25-55</u> To: <u>MH# 25-54</u>										
Type of :	Type of Sewer: Sahitary Kind of Pipe: Clay Type of Joint: file Size: 10" Year Built:										
Ftg.		Services		Infil.	Video	Comments Trage # 14/1	Viewing NE				
	NW	SE	T	GPM	Ft. Film 0!00	Tape#144	DS) US				
24					:0]	spider webs in top probably notact We can't get past this top its sticking in the mala too far. Well back and the try from the other way. Rated: 4 Manhales are in bad shape.	We W.qtb O MH J5-54 Walker St. Walker St.				
Total											

					Tele	vising/Sealing Report					
Flooding	Date: <u>10-9-03</u> T. V. Crew: <u>Lapery Dikeman</u> <u>Tohu Rickent</u> Flooding Storm Sewer Line Flushed Prior to T.V. Yes No No No No No No No No No No										
On:	5. A	17/17	ary 1	Rd.	From:	MH# 25-54 To: MH#	25-55				
Type of Year Bu Type of	Sewer:	- ufacing:	itar;	cónc	_Kind of I Irete	Pipe: <u>clay</u> Type of Joint: <u>tak</u> Approx. Sewer Depth: <u>lab</u>	Size:/0 * 0 '				
Ftg.		Services		Infil.	Video	Comments #	Viewing 5 W				
	<u>\$E</u>	NW	T	GPM	Ft. Film	Comments $Tape # 144$	DS US				
					<u>: 0 </u>	mineral deposits an joint debais in tap; probably not active depais in wyc; probably not active same tap we could ut get post from the other dipection. Rated:4 Manholes are in bad shape	Vielenansst. Walkost. Walkost.				
Total							W.9 ^{tb} st: 1 0 MH 25-54				

					Tele	vising/Sealing Report					
Floodin	Date: 10-13-03 T. V. Crew: Larry Dikeman Tohn Rickert Nostorme Flooding Storm Sewer Line Flushed Prior to T.V. Yes No No For No First on the Lake										
On:	On: <u>S. Military Rd.</u> From: <u>MH#25-60</u> To: <u>MH#25-58</u>										
Type of Year Bu Type of	On: <u>S. Military Rd.</u> From: <u>MH</u> [#] 25-60 To: <u>MH</u> [#] 25-58 Type of Sewer: <u>samitary</u> Kind of Pipe: <u>clay</u> Type of Joint: <u>tar</u> Size: <u>10"</u> Year Built: <u>Type of Street Surfacing</u> : <u>concrete</u> Approx. Sewer Depth: <u>6</u> 6"										
Ftg.	House	Service	s	Infil.	Video	Comments # all al	Viewing NW				
		<u> </u>		GPM	Ft. Film	Tape # 144	(DS) US				
						Reted: 5	MH25-56 Wester Ave MH 25-60 Monnis St.				
Total											
1 Viai											

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