




















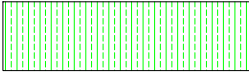
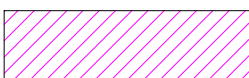



















**General Legend**

-  Gas Main
-  Gas Service
-  New Water Main on Plan Sheets
-  Existing Water Main on Plan Sheets
-  New Water Service on Plan Sheets
-  Existing Water Service on Plan Sheets
-  New Water Main on Fitting Detail Sheets
-  Existing Water Main on Fitting Detail Sheets
-  Sanitary Sewer Main
-  Sanitary Sewer Service
-  Underground Electrical Cable
-  Underground Electrical Service
-  Overhead Electrical Cable
-  Overhead Electrical Service
-  Underground Telephone Cable
-  Underground Telephone Service
-  Underground Cable TV
-  Underground Cable TV Service
-  Existing Storm Sewer
-  Abandon In-Place Existing Water Mains and Remove Old Valve Boxes and Stop Boxes. After New Main Passes Tests and Services Have Been Reconnected to the New Main.
-  Existing Permanent Easement
-  New Permanent Easement
-  New Right of Way
-  Temporary Easement
-  Existing Reducer
-  New Reducer
-  Existing Valve
-  New Valve
-  Stop Box
-  Existing Fire Hydrant
-  New Fire Hydrant
-  Meter Pit
-  Existing Manhole
-  New Manhole
-  Utility Pole
-  Property Pin
-  Poured Thrust Block
-  Gas Meter
-  Telephone Pedestal
-  Tracer Wire Riser

**Sheet Index**

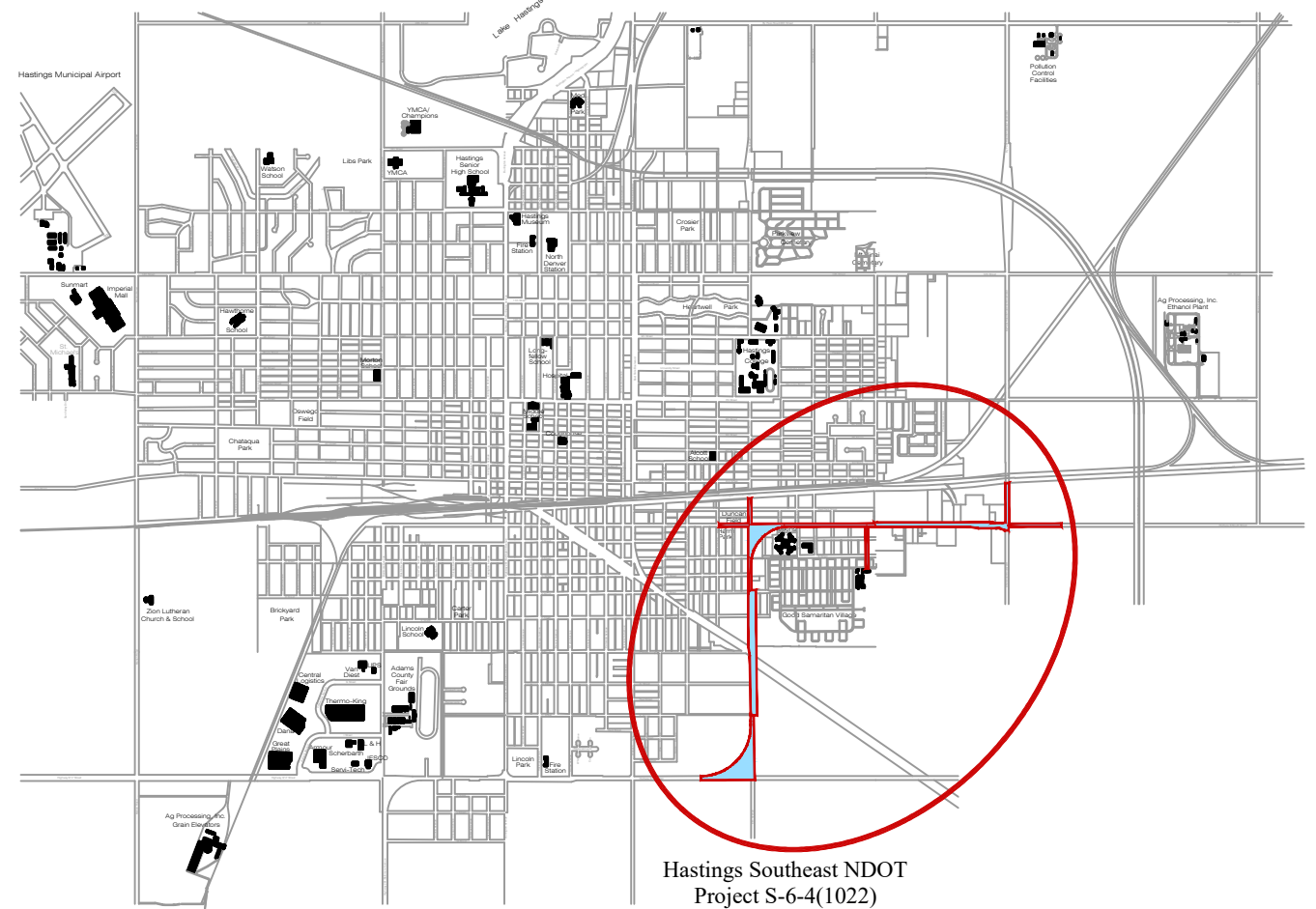
Cover	Plan Cover Sheet
Quantities	Sheet Layout and Quantities
CW1.1 to CW1.12	Water Main Improvements Plan and Profile Sheets
CW2.1 to CW2.2	Water Main Improvements Civil Fitting Details
CW3.1 to CW3.2	Water Main Improvements Civil Standard Plan Details

ONLY EXISTING SANITARY SEWER AND PROPOSED STORM SEWER ARE SHOWN IN THE PROFILE. ALL OTHER EXISTING UNDERGROUND UTILITIES ARE TO BE FIELD VERIFIED DURING CONSTRUCTION.



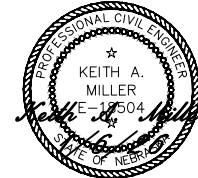
# City of Hastings


## Hastings Southeast Water Main Improvements Phase 2 WA-342 HU 2026-12



Hastings Southeast NDOT  
Project S-6-4(1022)  
C.N.41086 Water Main  
Improvements.  
WR-139

I, Keith A. Miller, am the Coordinating Professional on the HASTINGS SOUTHEAST WATER MAIN IMPROVEMENTS PHASE 2 WA-342 HU 2026-12



Hastings Southeast NDOT Project S-6-4(1022) C.N.41086 Water Main Improvements Phase 2		Des: K. Miller
		Drawn: S. Struss
		Date: 12/30/2025
		Supt: B. Lubken
<b>FOR BID</b>		W.D. No.: WA-342
		Ckd:
		Sheet No.: Cover
		No.: WR-139 (Paid by Hastings Utilities)



Know what's below.  
Call before you dig.

City Engineer



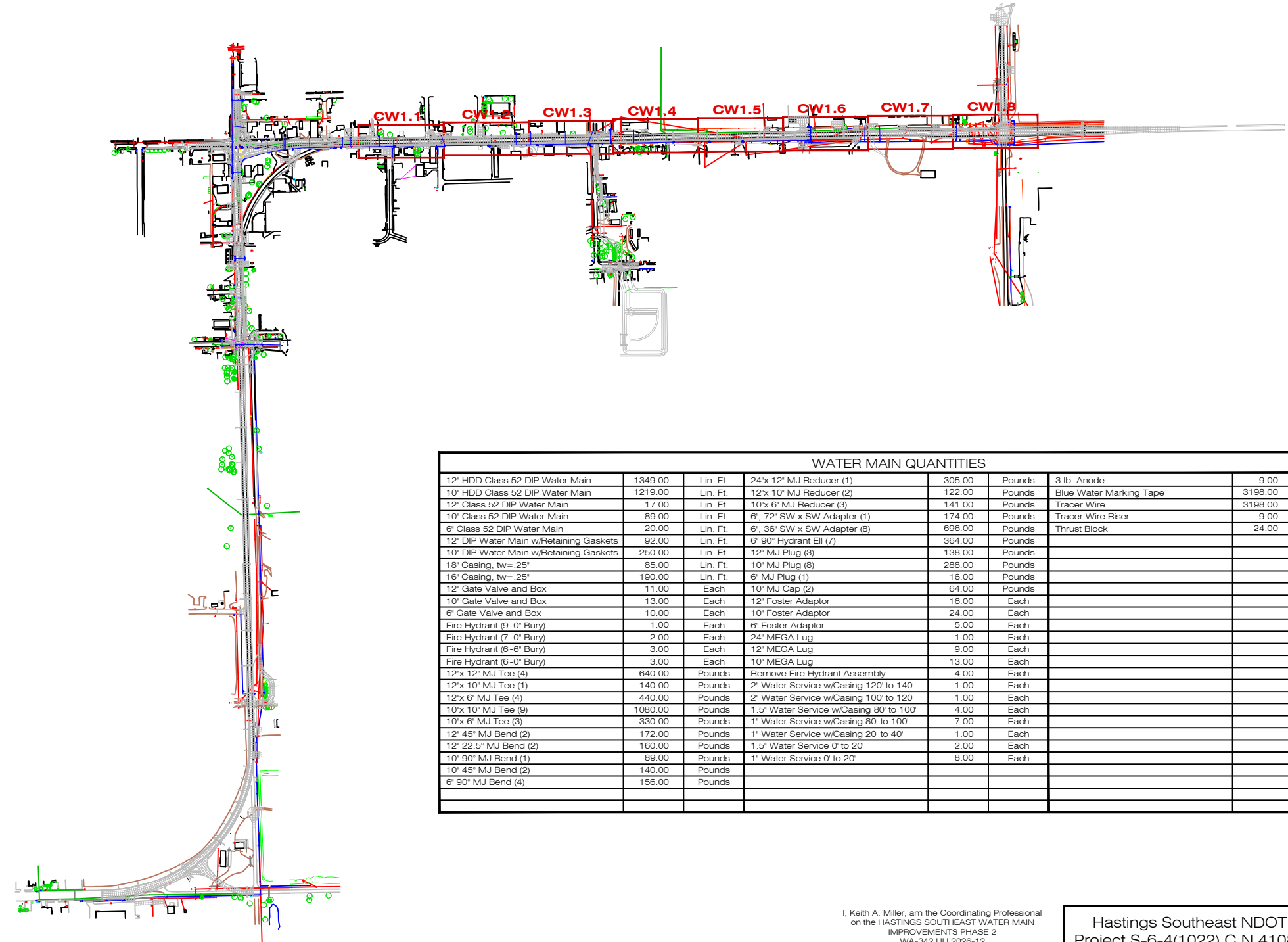
# City of Hastings

## Hastings Southeast Water Main Improvements Phase 2 WA-342 HU 2026-12



### General Notes

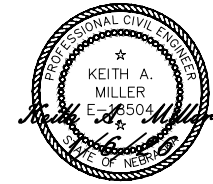
1. The Contractor will be Responsible for Notifying the City Street Department Office at (402)461-2341 and the Communications Center at (402)461-2364 for all Temporary Street Closings Prior to Construction.
2. The Contractor is Responsible for the Traffic Control and Closure of any Lanes of Traffic and is Subsidiary to the Bid. All Barricades and Barricading Shall Comply with the Latest Edition of Part VI of the Manual on "Uniform Traffic Control Devices".
3. The Contractor will be Responsible for Calling "Diggers Hotline" for Locations of all Underground Facilities.
4. The Contractor will be Responsible for Any and All Surface Disturbance caused by them.
5. Tracer Wire, Tracer Wire Risers, Marking Tape, and Anodes will be Supplied By Hastings Utilities, Installed by the Contractor, and Shall be Subsidiary to the Bid.
6. Any Potholing or Excavating of Existing Utilities Needed to Complete this Project is Subsidiary to the Bid.
7. Some Properties in the Project Area May Have Underground Sprinklers on them. Any Damages and Repairs will be the Responsibility of the Contractor.



WATER MAIN QUANTITIES									
12" HDD Class 52 DIP Water Main	1349.00	Lin. Ft.	24" 12" MJ Reducer (1)	305.00	Pounds	3 lb. Anode	9.00	Each	
10" HDD Class 52 DIP Water Main	1219.00	Lin. Ft.	12" 10" MJ Reducer (2)	122.00	Pounds	Blue Water Marking Tape	3198.00	Lin. Ft.	
12" Class 52 DIP Water Main	17.00	Lin. Ft.	10" 6" MJ Reducer (3)	141.00	Pounds	Tracer Wire	3198.00	Lin. Ft.	
10" Class 52 DIP Water Main	89.00	Lin. Ft.	6" 72" SW x SW Adapter (1)	174.00	Pounds	Tracer Wire Riser	9.00	Each	
6" Class 52 DIP Water Main	20.00	Lin. Ft.	6" 36" SW x SW Adapter (8)	696.00	Pounds	Thrust Block	24.00	Each	
12" DIP Water Main w/Retaining Gaskets	92.00	Lin. Ft.	6" 90" Hydrant EI (7)	364.00	Pounds				
10" DIP Water Main w/Retaining Gaskets	250.00	Lin. Ft.	12" MJ Plug (3)	138.00	Pounds				
18" Casing, tw= 25"	85.00	Lin. Ft.	10" MJ Plug (8)	288.00	Pounds				
16" Casing, tw= 25"	190.00	Lin. Ft.	6" MJ Plug (1)	16.00	Pounds				
12" Gate Valve and Box	11.00	Each	10" MJ Cap (2)	64.00	Pounds				
10" Gate Valve and Box	13.00	Each	12" Foster Adaptor	16.00	Each				
6" Gate Valve and Box	10.00	Each	10" Foster Adaptor	24.00	Each				
Fire Hydrant (9'-0" Bury)	1.00	Each	6" Foster Adaptor	5.00	Each				
Fire Hydrant (7'-0" Bury)	2.00	Each	24" MEGA Lug	1.00	Each				
Fire Hydrant (6'-6" Bury)	3.00	Each	12" MEGA Lug	9.00	Each				
Fire Hydrant (6'-0" Bury)	3.00	Each	10" MEGA Lug	13.00	Each				
12"x 12" MJ Tee (4)	640.00	Pounds	Remove Fire Hydrant Assembly	4.00	Each				
12"x 10" MJ Tee (1)	140.00	Pounds	2" Water Service w/Casing 120' to 140'	1.00	Each				
12"x 8" MJ Tee (4)	440.00	Pounds	2" Water Service w/Casing 100' to 120'	1.00	Each				
10"x 10" MJ Tee (9)	1080.00	Pounds	1.5" Water Service w/Casing 80' to 100'	4.00	Each				
10"x 6" MJ Tee (3)	330.00	Pounds	1" Water Service w/Casing 80' to 100'	7.00	Each				
12" 45" MJ Bend (2)	172.00	Pounds	1" Water Service w/Casing 20' to 40'	1.00	Each				
12" 22.5" MJ Bend (2)	160.00	Pounds	1.5" Water Service 0' to 20'	2.00	Each				
10" 90" MJ Bend (1)	89.00	Pounds	1" Water Service 0' to 20'	8.00	Each				
10" 45" MJ Bend (2)	140.00	Pounds							
6" 90" MJ Bend (4)	156.00	Pounds							

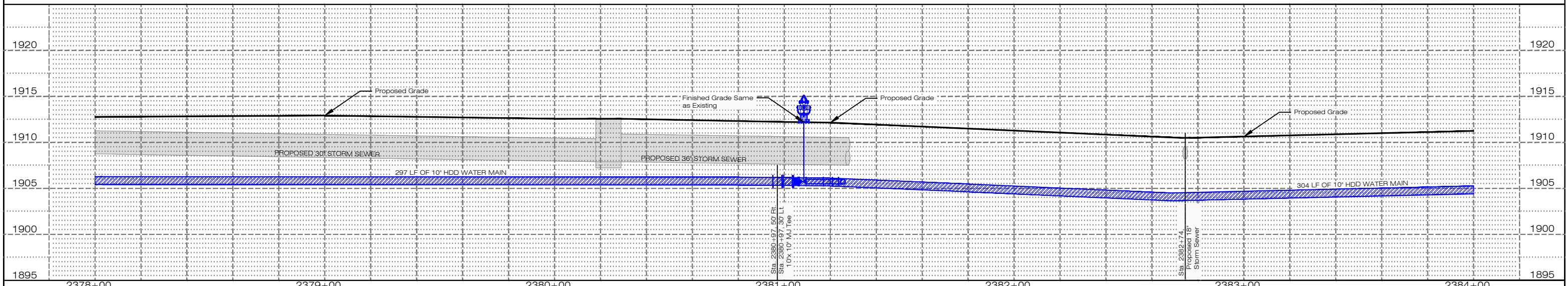
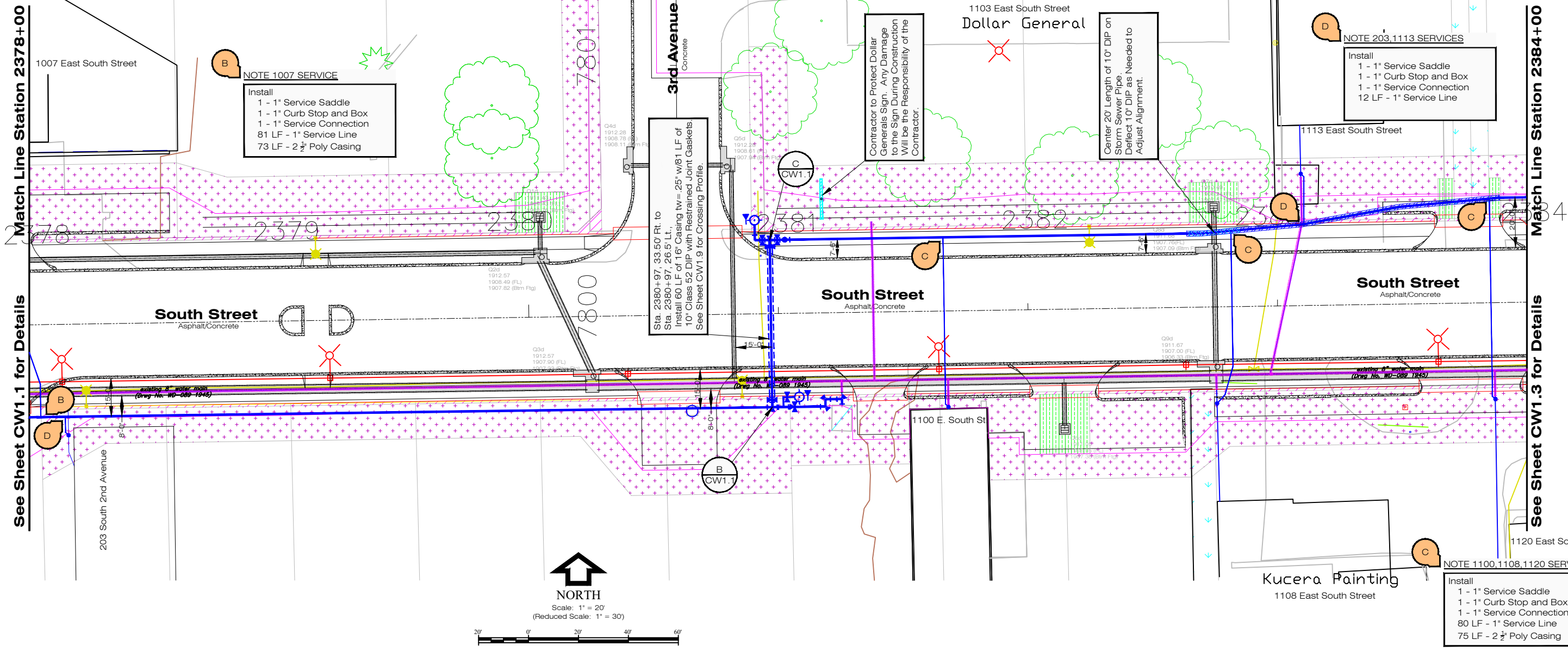


I, Keith A. Miller, am the Coordinating Professional on the HASTINGS SOUTHEAST WATER MAIN IMPROVEMENTS PHASE 2 WA-342 HU 2026-12



Hastings Southeast NDOT Project S-6-4(1022) C.N.41086 Water Main Improvements Phase 2		Desn K. Miller Drawn S. Struss Date 12/30/2025 Supt B. Lubken W.D. No. WA-342 Ckd Ckd Sheet No. Quantities No. WR-139 (Paid by Hastings Utilities)
	<b>FOR          BID</b>	





No.	Revision	By	Date	Ckd	App

WATER MAIN QUANTITIES									
10" HDD Class 52 DIP Water Main	601.00	Lin. Ft.	6" 90° Hydrant Ell (1)	52.00	Pounds	3 lb. Anode	2.00	Each	
10" Cl. 52 DIP w/Retaining Gaskets	81.00	Lin. Ft.	6" 72" SW x SW Adapter (1)	174.00	Pounds	Blue Water Marking Tape	660.00	Lin. Ft.	
6" Class 52 DIP Water Main	20.00	Lin. Ft.	6" 36" SW x SW Adapter (1)	87.00	Pounds	Tracer Wire	660.00	Lin. Ft.	
16" Casing, tw=25"	60.00	Lin. Ft.	10" MJ Plug (1)	36.00	Pounds	Tracer Wire Riser	2.00	Each	
10" Gate Valve and Box	3.00	Each	10" Foster Adaptor	7.00	Each	Thrust Block	5.00	Each	
6" Gate Valve and Box	3.00	Each	6" Foster Adaptor	4.00	Each				
Fire Hydrant (6'-6" Bury)	2.00	Each	10" MEGA Lug	2.00	Each				
10"x 10" MJ Tee (2)	240.00	Pounds	1" Water Service w/Casing 80 to 100'	4.00	Each				
10"x 6" MJ Tee (1)	110.00	Pounds	1" Water Service 0 to 20'	2.00	Each				
6" 90° MJ Bend (4)	156.00	Pounds							
10"x 6" MJ Reducer (2)	94.00	Pounds							

I, Keith A. Miller, am the Coordinating Professional on the HASTINGS SOUTHEAST WATER MAIN IMPROVEMENTS PHASE 2 WA-342 HU 2026-12

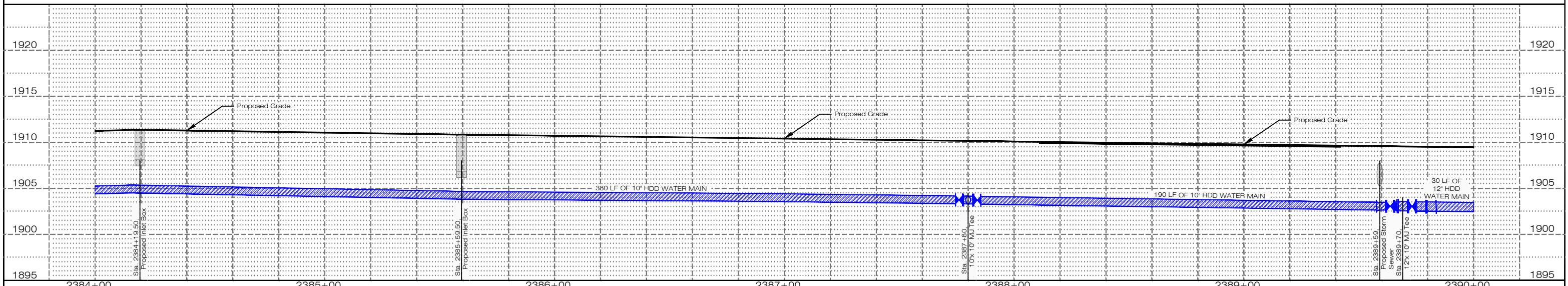
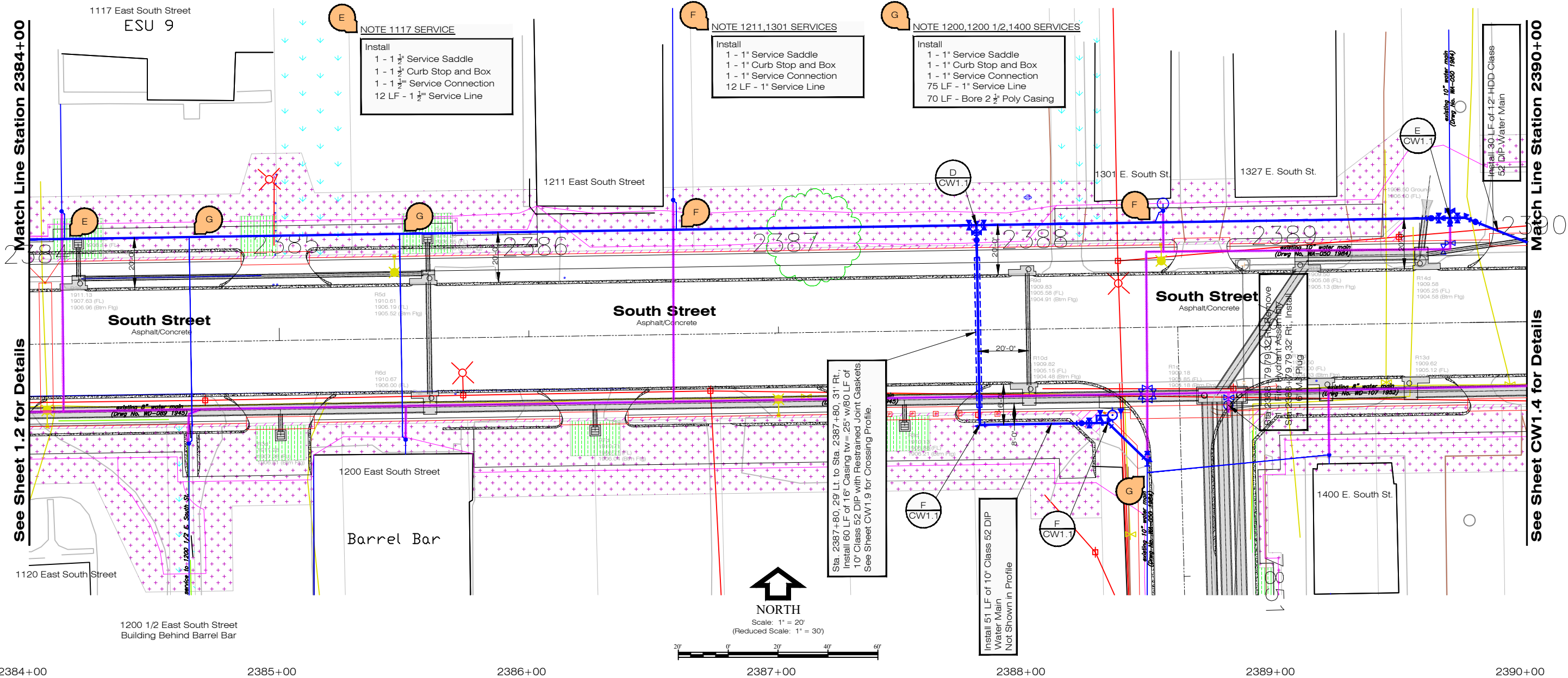
Hastings Southeast NDOT  
 Project S-6-4(1022) C.N.41086  
 Sta. 2378+00 to Sta. 2384+00  
 Water Main Improvements  
 Phase 2

FOR BID

811 Know what's below. Call before you dig.

HASTINGS UTILITIES

Des: K. Miller  
 Drawn: S. Struss  
 Date: 12/30/2025  
 Supt: B. Lubken  
 W.D. No.: WA-342  
 Ckd:   
 Sheet No.: CW1.2  
 No.: WR-139  
 (Paid by Hastings Utilities)



No.	Revision	By	Date	Ckd	App

Description	Quantity	Unit	Description	Quantity	Unit
12" HDD Class 52 DIP Water Main	30.00	Lin. Ft.	10"x 6" MJ Tee (1)	90.00	Pounds
10" HDD Class 52 DIP Water Main	570.00	Lin. Ft.	12" 22.5" MJ Bend (1)	80.00	Pounds
10" Cl. 52 DIP w/Retaining Gaskets	80.00	Lin. Ft.	10" 90" MJ Bend (1)	89.00	Pounds
10" Class 52 DIP Water Main	75.00	Lin. Ft.	10" 45" MJ Bend (2)	140.00	Pounds
16" Casing, tw= 25"	60.00	Lin. Ft.	12"x 10" MJ Reducer (1)	61.00	Pounds
12" Gate Valve and Box	1.00	Each	6" 90" Hydrant Ell (1)	52.00	Pounds
10" Gate Valve and Box	6.00	Each	6" 36" SW x SW Adapter (1)	87.00	Pounds
6" Gate Valve and Box	1.00	Each	12" MJ Plug (1)	46.00	Pounds
Fire Hydrant (7'-0" Bury)	1.00	Each	10" MJ Plug (3)	108.00	Pounds
12"x 12" MJ Tee (1)	160.00	Pounds	6" MJ Plug (1)	16.00	Pounds
12"x 10" MJ Tee (1)	140.00	Pounds	10" MJ Cap (2)	64.00	Pounds
10"x 10" MJ Tee (4)	720.00	Pounds	12" Foster Adaptor	4.00	Each
10" Foster Adaptor	10.00	Each	10" MEGA Lug	1.00	Each
12" MEGA Lug	7.00	Each	10" MEGA Lug	7.00	Each
Remove Fire Hydrant Assembly	1.00	Each	1 1/2" Water Service 0' to 20'	1.00	Each
1 1/2" Water Service 0' to 20'	3.00	Each	1" Water Service w/Casing 80' to 100'	2.00	Each
1" Water Service 0' to 20'	2.00	Each	3 lb. Anode	2.00	Each
Blue Water Marking Tape	830.00	Lin. Ft.	Tracer Wire	830.00	Lin. Ft.
Tracer Wire Riser	1.00	Each	Thrust Block	7.00	Each

I, Keith A. Miller, am the Coordinating Professional on the HASTINGS SOUTHEAST WATER MAIN IMPROVEMENTS PHASE 2  
 WA-342 HJ 2026-12

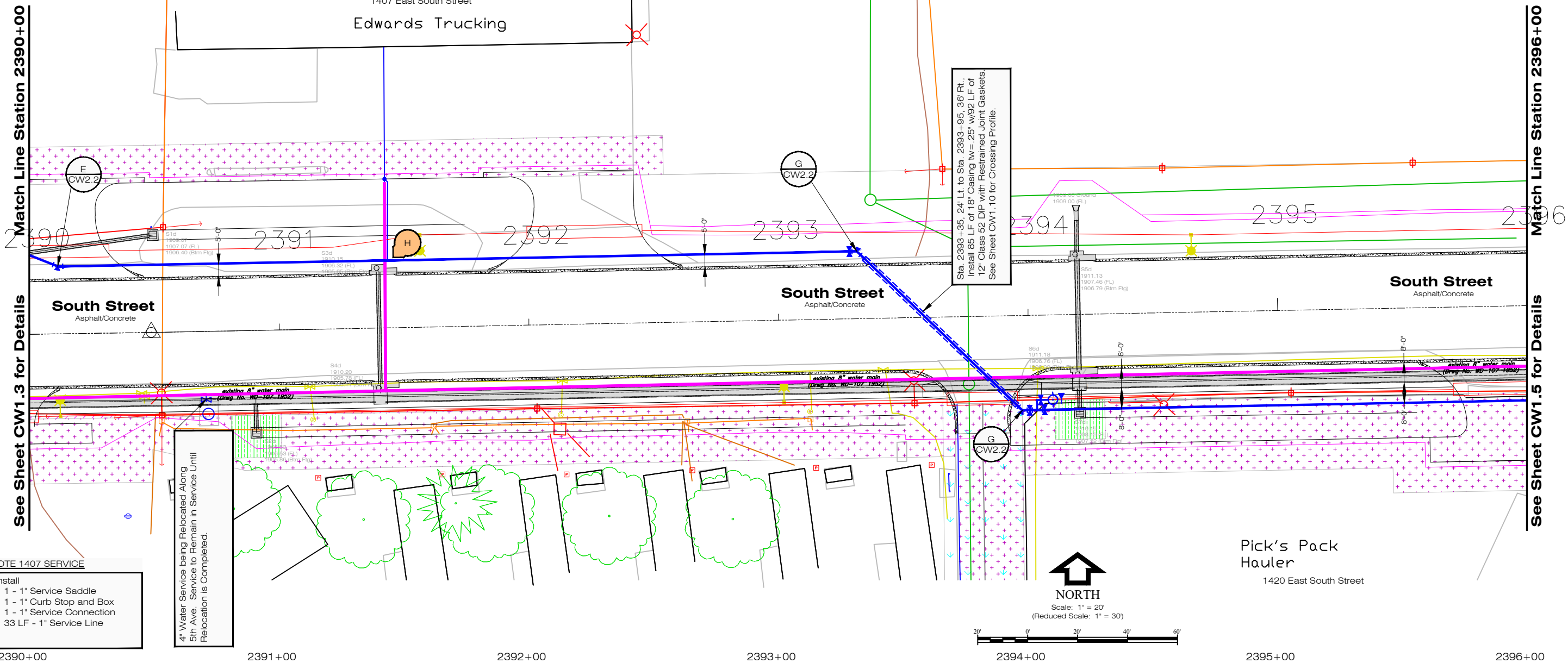
Hastings Southeast NDOT  
 Project S-6-4(1022) C.N.41086  
 Sta. 2384+00 to Sta. 2390+00  
 Water Main Improvements  
 Phase 2

FOR BID

HASTINGS UTILITIES

811 Know what's below. Call before you dig.

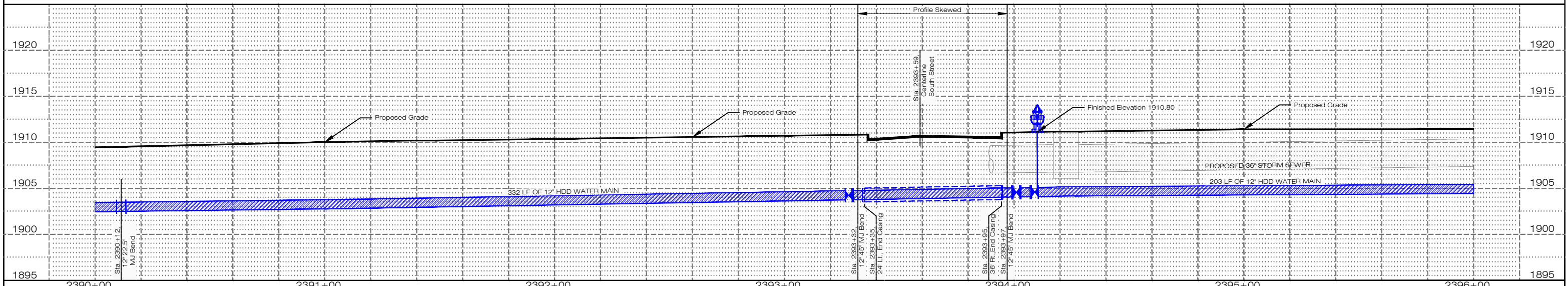
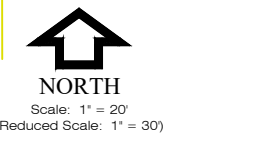
Des: K. Miller  
 Drawn: S. Struss  
 Date: 12/30/2025  
 Supt: B. Lubken  
 W.D. No.: WA-342  
 Ckd: [Signature]  
 Sheet No.: CW1.3  
 No.: WR-139 (Paid by Hastings Utilities)



**NOTE 1407 SERVICE**  
 Install  
 1 - 1" Service Saddle  
 1 - 1" Curb Stop and Box  
 1 - 1" Service Connection  
 33 LF - 1" Service Line

4" Water Service being Relocated Along 5th Ave. Service to Remain in Service Until Relocation is Completed.

Sta. 2393+35, 24' Lt. to Sta. 2393+95, 36' Rt., Install 85 LF of 18" Casing w/=.25" w/92 LF of 12" Class 52 DIP with Restrained Joint Gaskets See Sheet CW1.10 for Crossing Profile.



No.	Revision	By	Date	Ckd	App

WATER MAIN QUANTITIES				
12" HDD Class 52 DIP Water Main	535.00	Lin. Ft.	12" MEGA Lug	5.00 Each
12" Cl. 52 DIP w/Retaining Gaskets	92.00	Lin. Ft.	1" Water Service w/Casing 20' to 40'	1.00 Each
18" Casing, tw=.25"	85.00	Lin. Ft.	3 lb. Anode	1.00 Each
12" Gate Valve and Box	3.00	Each	Blue Water Marking Tape	690.00 Lin. Ft.
6" Gate Valve and Box	1.00	Each	Tracer Wire	690.00 Lin. Ft.
Fire Hydrant (6'-6" Bury)	1.00	Each	Tracer Wire Riser	1.00 Each
12"x 6" MJ Tee (1)	110.00	Pounds		
12" 45° MJ Bend (2)	172.00	Pounds		
12" 22.5° MJ Bend (1)	80.00	Pounds		
6" 90° Hydrant Ell (1)	52.00	Pounds		
6", 36" SW x SW Adapter (1)	87.00	Pounds		
12" Foster Adaptor	4.00	Each		

I, Keith A. Miller, am the Coordinating Professional on the HASTINGS SOUTHEAST WATER MAIN IMPROVEMENTS PHASE 2 WA-342 HU 2026-12

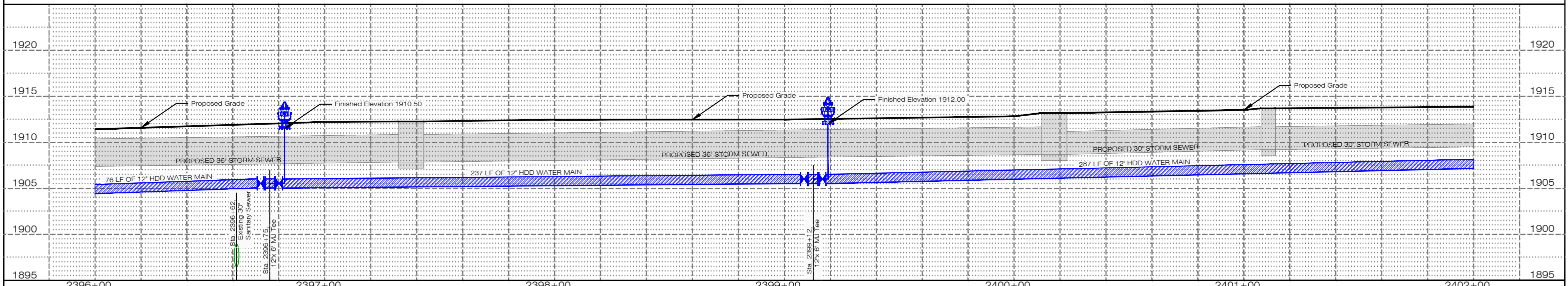
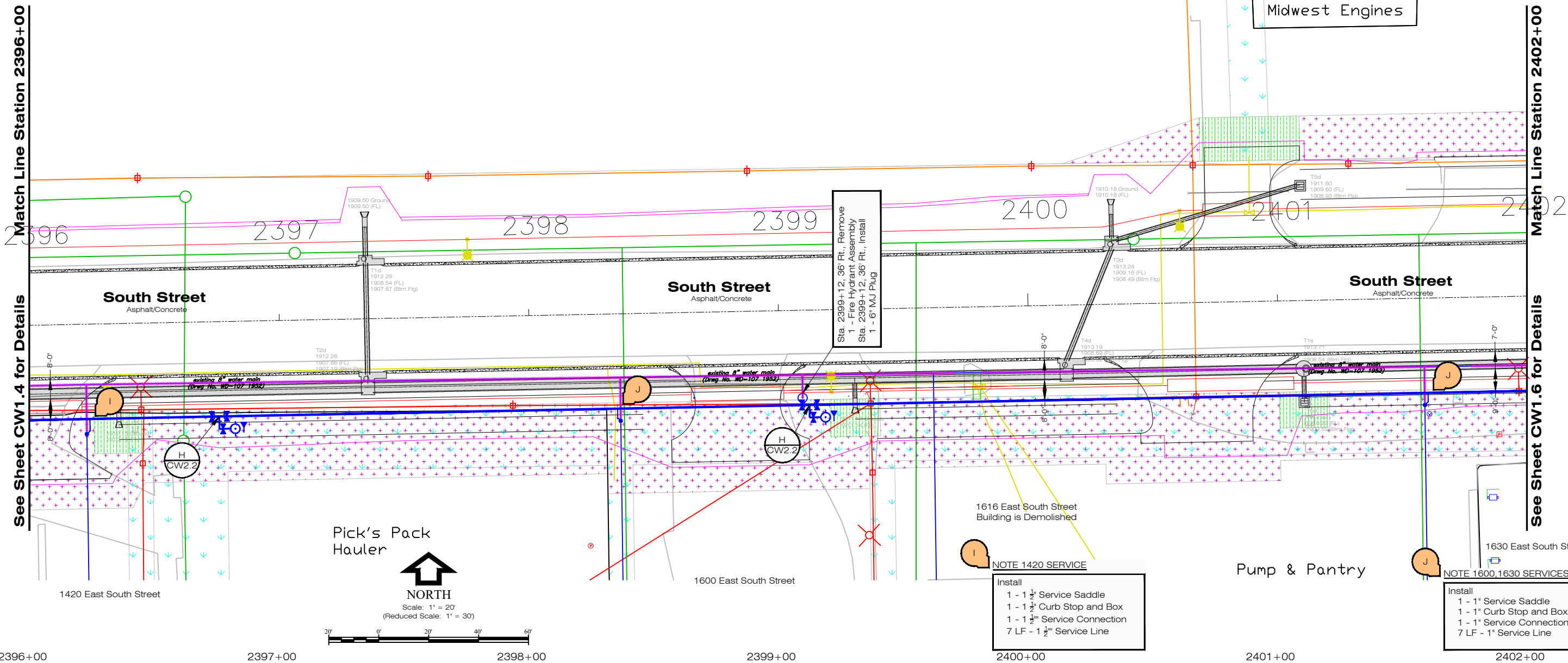
Hastings Southeast NDOT  
 Project S-6-4(1022) C.N.41086  
 Sta. 2390+00 to Sta. 2396+00  
 Water Main Improvements  
 Phase 2

FOR BID

811 Know what's below. Call before you dig.

HASTINGS UTILITIES

Design: K. Miller  
 Drawn: S. Struss  
 Date: 12/30/2025  
 Supt: B. Lubken  
 W.D. No.: WA-342  
 Ckd: [Signature]  
 Sheet No.: CW1.4  
 No.: WR-139 (Paid by Hastings Utilities)



No.	Revision	By	Date	Ckd	App

WATER MAIN QUANTITIES					
Description	Quantity	Unit	Material	Quantity	Unit
12" HDD Class 52 DIP Water Main	600.00	Lin. Ft.	3 lb. Anode	1.00	Each
12" Gate Valve and Box	4.00	Each	Blue Water Marking Tape	660.00	Lin. Ft.
6" Gate Valve and Box	2.00	Each	Tracer Wire	660.00	Lin. Ft.
Fire Hydrant (6'-0" Bury)	2.00	Each	Tracer Wire Riser	2.00	Each
12'x 6" MJ Tee (2)	220.00	Pounds	1 1/2" Water Service 0' to 20'	1.00	Each
6" 90° Hydrant Ell (2)	104.00	Pounds	1" Water Service 0' to 20'	2.00	Each
6", 36" SW x SW Adapter (2)	174.00	Pounds			
12" Foster Adaptor	4.00	Each			
Remove Fire Hydrant Assembly	1.00	Each			

I, Keith A. Miller, am the Coordinating Professional on the HASTINGS SOUTHEAST WATER MAIN IMPROVEMENTS PHASE 2  
 WA-342 HU 2026-12

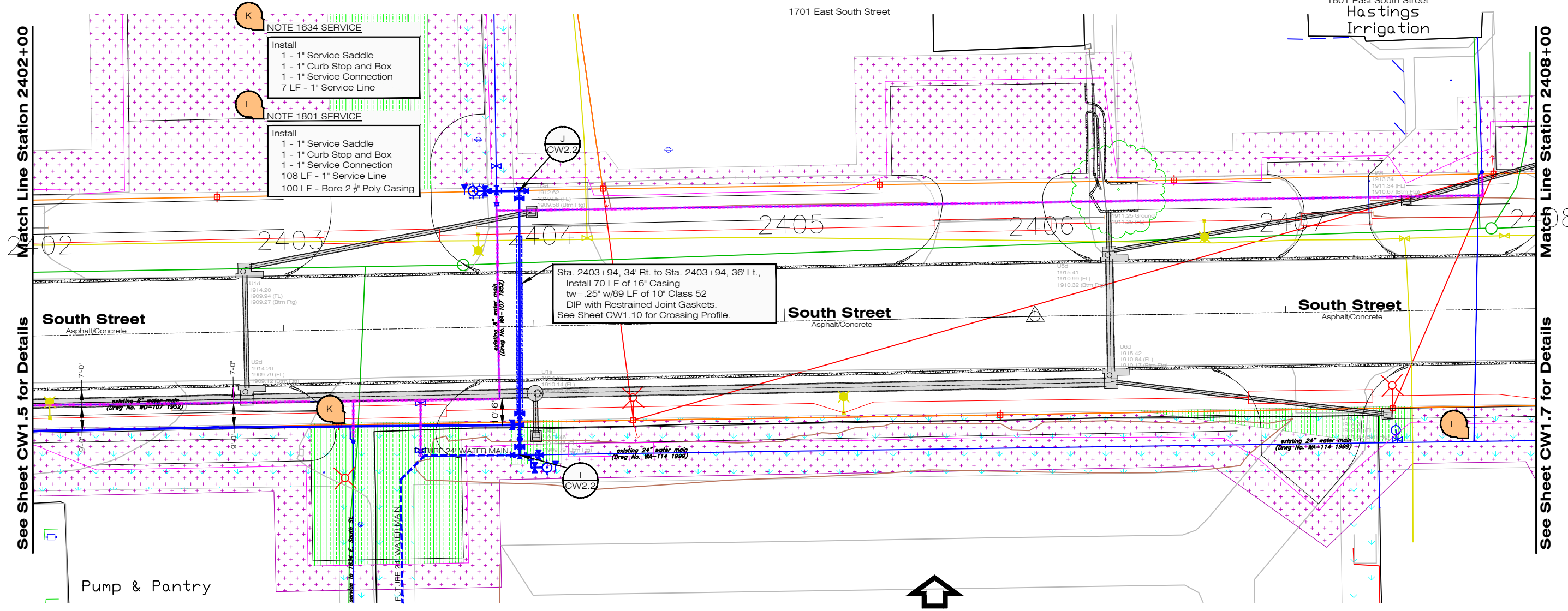
Hastings Southeast NDOT  
 Project S-6-4(1022) C.N.41086  
 Sta. 2396+00 to Sta. 2402+00  
 Water Main Improvements  
 Phase 2

FOR BID

811 Know what's below. Call before you dig.

HASTINGS UTILITIES

Des: K. Miller  
 Drawn: S. Struss  
 Date: 12/30/2025  
 Supt: B. Lubken  
 W.D. No.: WA-342  
 Ckd: [Signature]  
 Sheet No.: CW1.5  
 No.: WR-139  
 (Paid by Hastings Utilities)



Match Line Station 2402+00 Match Line Station 2408+00

See Sheet CW1.5 for Details See Sheet CW1.7 for Details

South Street Asphalt/Concrete

1701 East South Street

1801 East South Street Hastings Irrigation

1630 East South Street

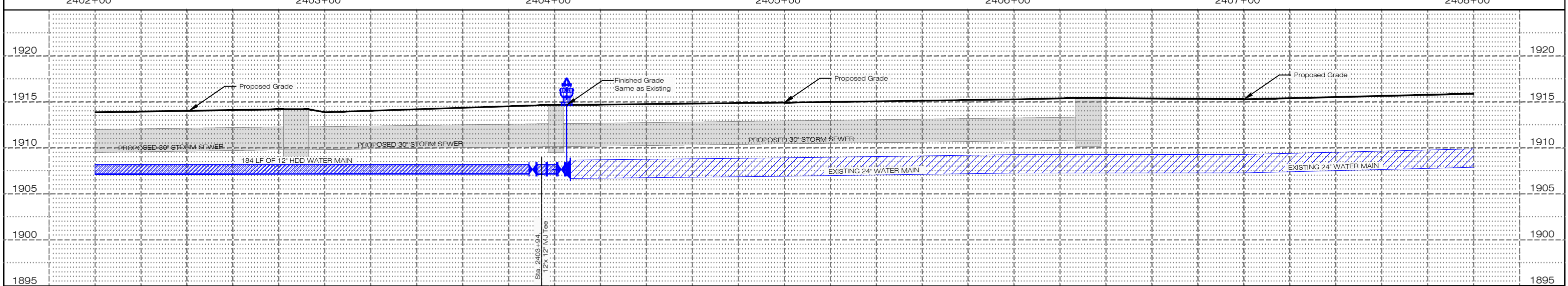
1634 East South Street Bosselman Energy Building Behind Pump & Pantry

Pump & Pantry

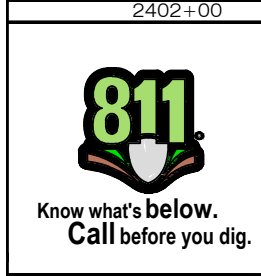
Scale: 1" = 20'  
Reduced Scale: 1" = 30'

NORTH

2402+00 2403+00 2404+00 2405+00 2406+00 2407+00 2408+00



WATER MAIN QUANTITIES											
12" HDD Class 52 DIP Water Main	184.00	Lin. Ft.	10"x 10" MJ Tee (2)	240.00	Pounds	12" MEGA Lug	3.00	Each			
12" Class 52 DIP Water Main	17.00	Lin. Ft.	24"x 12" MJ Reducer (1)	305.00	Pounds	10" MEGA Lug	1.00	Each			
10" Cl. 52 DIP w/Retaining Gaskets	89.00	Lin. Ft.	12"x 10" MJ Reducer (1)	61.00	Pounds	Remove Fire Hydrant Assembly	1.00	Each			
10" Class 52 DIP Water Main	9.00	Lin. Ft.	10"x 6" MJ Reducer (1)	47.00	Pounds	1" Water Service w/Casing 100' to 120'	1.00	Each			
16" Casing, tw=25"	70.00	Lin. Ft.	6" 90° Hydrant Ell (1)	52.00	Pounds	1" Water Service 0' to 20'	1.00	Each			
12" Gate Valve and Box	3.00	Each	6" 36" SW x SW Adapter (2)	174.00	Pounds	3 lb. Anode	2.00	Each			
10" Gate Valve and Box	2.00	Each	12" MJ Plug (2)	92.00	Pounds	Blue Water Marking Tape	300.00	Lin. Ft.			
6" Gate Valve and Box	2.00	Each	10" MJ Plug (2)	72.00	Pounds	Tracer Wire	300.00	Lin. Ft.			
Fire Hydrant (9'-0" Bury)	1.00	Each	12" Foster Adaptor	4.00	Each	Tracer Wire Riser	2.00	Each			
Fire Hydrant (7'-0" Bury)	1.00	Each	10" Foster Adaptor	3.00	Each	Thrust Block	7.00	Each			
12"x 12" MJ Tee (3)	480.00	Pounds	6" Foster Adaptor	1.00	Each						
12"x 6" MJ Tee (1)	110.00	Pounds	24" MEGA Lug	1.00	Each						



I, Keith A. Miller, am the Coordinating Professional on the HASTINGS SOUTHEAST WATER MAIN IMPROVEMENTS PHASE 2 WA-342 HU 2026-12

**KEITH A. MILLER**  
E-17504  
STATE OF NEBRASKA

Hastings Southeast NDOT  
Project S-6-4(1022) C.N.41086  
Sta. 2402+00 to Sta. 2408+00  
Water Main Improvements  
Phase 2

FOR BID

Des: K. Miller  
Drawn: S. Struss  
Date: 12/30/2025  
Supt: B. Lubken  
W.D. No.: WA-342  
Ckd:  
Ckd:  
Sheet No.: CW1.6  
No.: WR-139  
(Paid by Hastings Utilities)

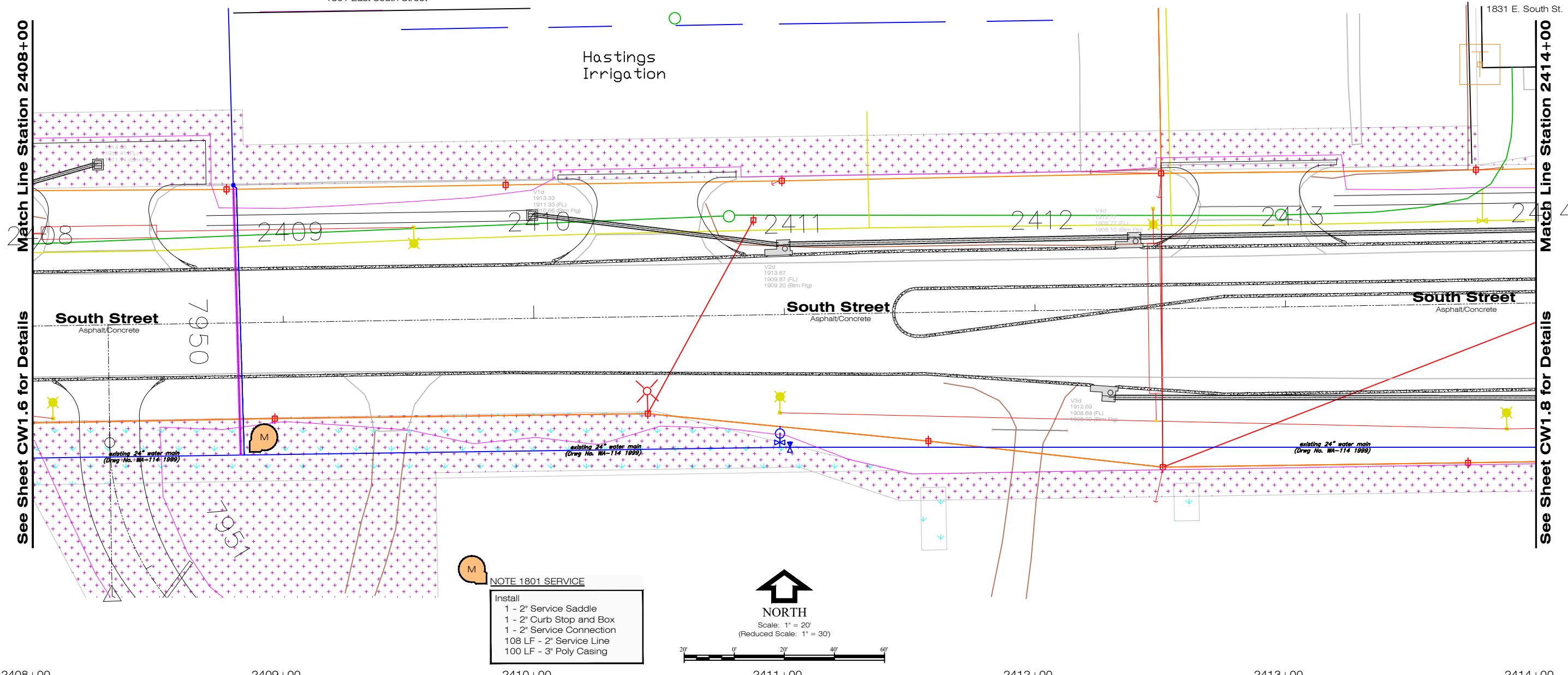
1801 East South Street

1831 E. South St.

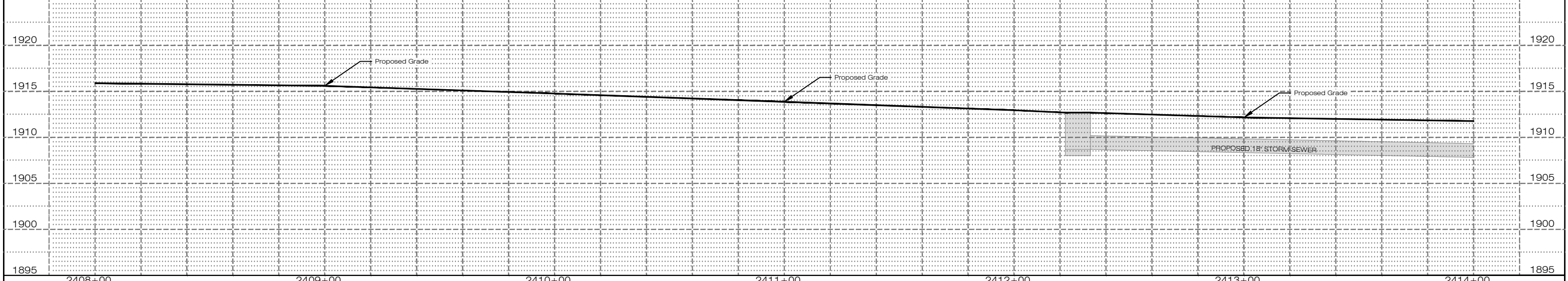
Hastings Irrigation

See Sheet CW1.6 for Details

See Sheet CW1.8 for Details



2408+00      2409+00      2410+00      2411+00      2412+00      2413+00      2414+00



No.	Revision	By	Date	Ckd	App

WATER MAIN QUANTITIES			
Description	Quantity	Unit	Notes
2" Water Service w/Casing 100' to 120'	1.00	Each	

I, Keith A. Miller, am the Coordinating Professional on the HASTINGS SOUTHEAST WATER MAIN IMPROVEMENTS PHASE 2 WA-342 HU 2026-12

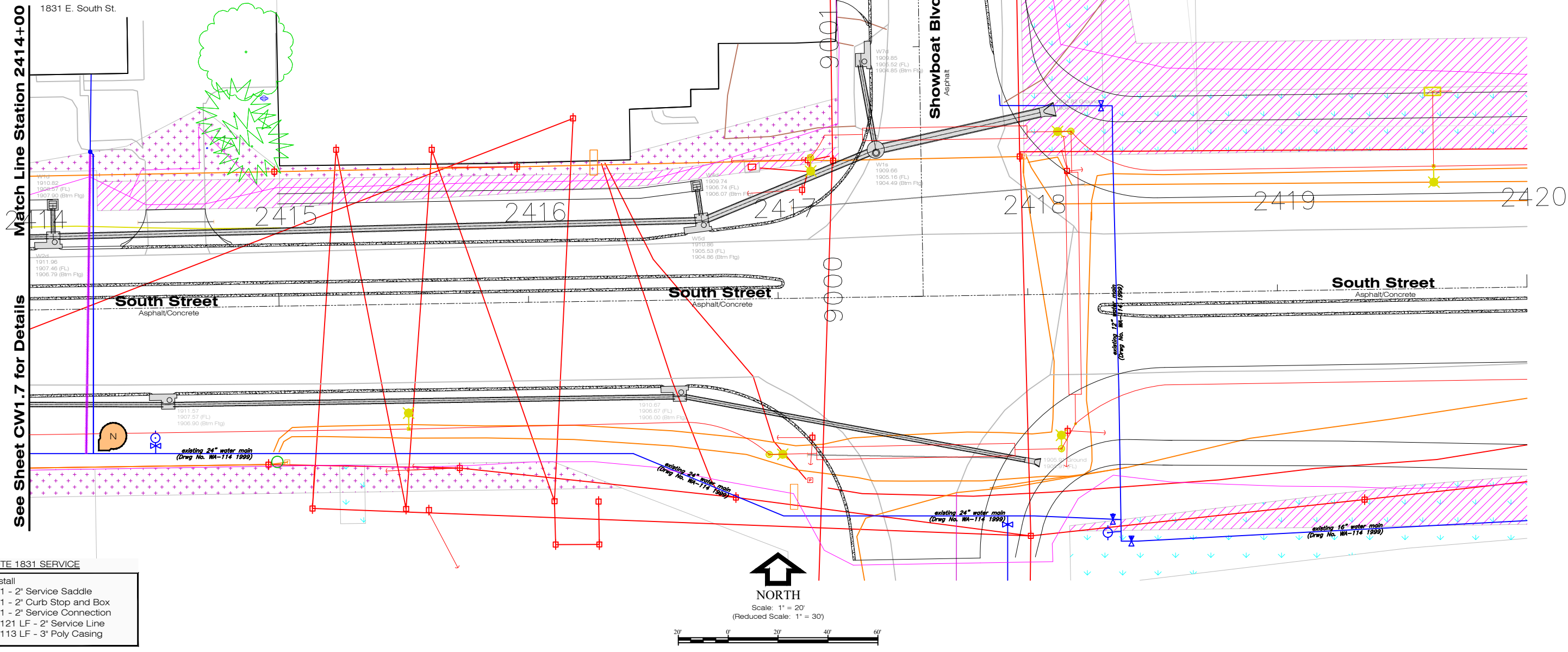
Hastings Southeast NDOT  
 Project S-6-4(1022) C.N.41086  
 Sta. 2408+00 to Sta. 2414+00  
 Water Main Improvements  
 Phase 2

FOR BID

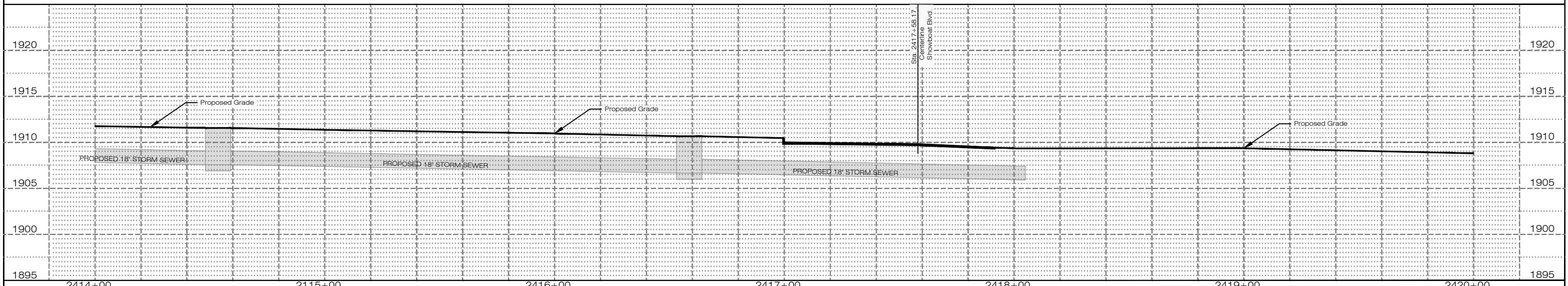
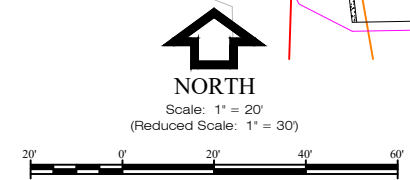
HASTINGS UTILITIES

Den: K. Miller  
 Drawn: S. Struss  
 Date: 12/30/2025  
 Supt: B. Lubken  
 W.D. No.: WA-342  
 Ckd: [Signature]  
 Sheet No.: CW1.7  
 No.: WR-139  
 (Paid by Hastings Utilities)





- NOTE 1831 SERVICE**
- Install
  - 1 - 2" Service Saddle
  - 1 - 2" Curb Stop and Box
  - 1 - 2" Service Connection
  - 121 LF - 2" Service Line
  - 113 LF - 3" Poly Casing



No.	Revision	By	Date	Ckd	App

WATER MAIN QUANTITIES			
Description	Quantity	Unit	Notes
2" Water Service w/Casing 120' to 140'	1.00	Each	

I, Keith A. Miller, am the Coordinating Professional on the HASTINGS SOUTHEAST WATER MAIN IMPROVEMENTS PHASE 2 WA-342 HU 2026-12

Hastings Southeast NDOT  
 Project S-6-4(1022) C.N.41086  
 Sta. 2414+00 to Sta. 2420+00  
 Water Main Improvements  
 Phase 2

**FOR BID**

811 Know what's below. Call before you dig.

HASTINGS UTILITIES

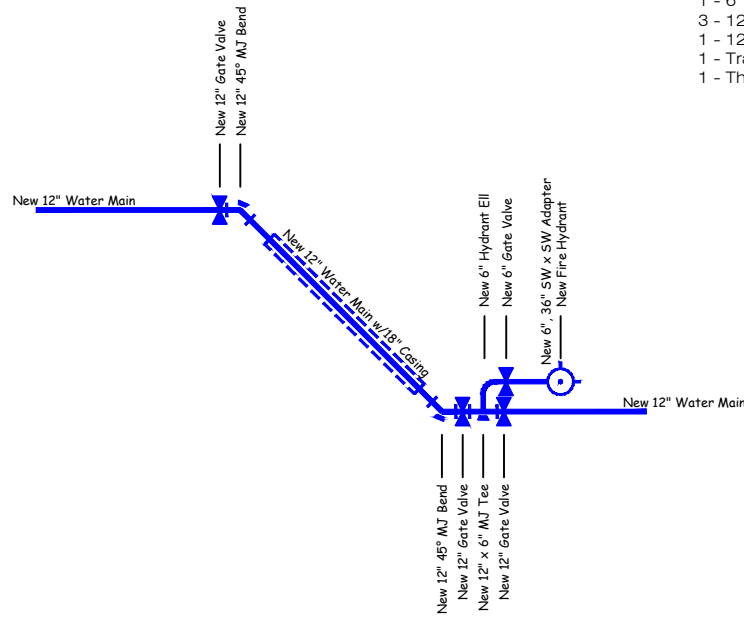
Den: K. Miller  
 Drawn: S. Struss  
 Date: 12/30/2025  
 Supt: B. Lubken  
 W.D. No.: WA-342  
 Ckd:        
 Sheet No.: CW1.8  
 No.: WR-139  
 (Paid by Hastings Utilities)





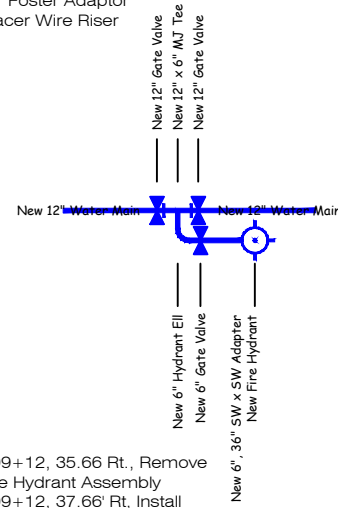


- Sta. 2393+32, 27' Lt, Install  
 1 - 12" 45° MJ Bend  
 1 - 12" Gate Valve w/Box  
 1 - 12" Foster Adaptor  
 2 - 12" MEGA Lug  
 1 - Thrust Block



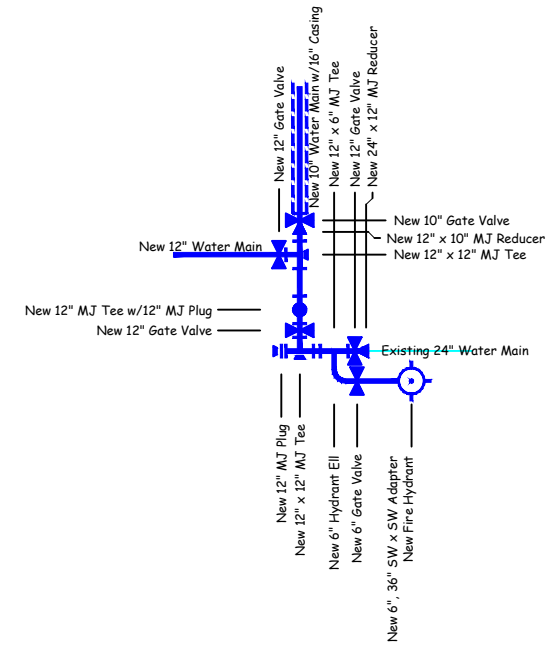
- Sta. 2393+97, 38' Rt, Install  
 1 - 12" 45° MJ Bend  
 1 - 12" 6" MJ Tee  
 2 - 12" Gate Valve and Box  
 1 - 6" Gate Valve and Box  
 1 - Fire Hydrant (6'-0" Bury)  
 1 - 6", 36" SWx SW Adapter  
 1 - 6" 90° Hydrant Ell  
 3 - 12" Foster Adaptor  
 1 - 12" MEGA Lug  
 1 - Tracer Wire Riser  
 1 - Thrust Block

- Sta. 2396+75, 37.45 Rt., Install  
 1 - 12"x 6" MJ Tee  
 2 - 12" Gate Valve and Box  
 1 - 6" Gate Valve and Box  
 1 - Fire Hydrant (6'-0" Bury)  
 1 - 6", 36" SWx SW Adapter  
 1 - 6" 90° Hydrant Ell  
 2 - 12" Foster Adaptor  
 1 - Tracer Wire Riser

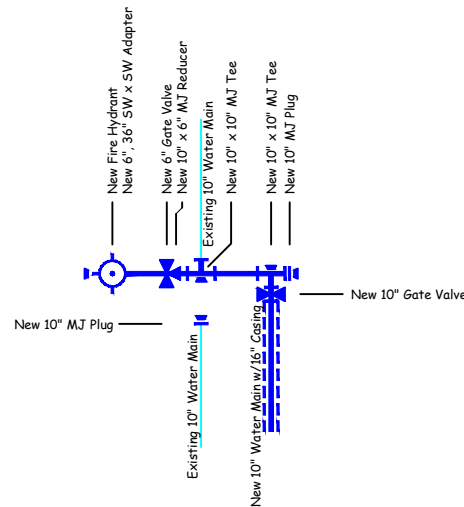


- Sta. 2399+12, 35.66 Rt., Remove  
 1 - Fire Hydrant Assembly  
 Sta. 2399+12, 37.66' Rt, Install  
 1 - 12"x 6" MJ Tee  
 2 - 12" Gate Valve and Box  
 1 - 6" Gate Valve and Box  
 1 - Fire Hydrant (6'-0" Bury)  
 1 - 6", 36" SWx SW Adapter  
 1 - 6" 90° Hydrant Ell  
 2 - 12" Foster Adaptor  
 1 - Tracer Wire Riser

- Sta. 2403+94, 52' Rt, Install  
 3 - 12"x 12" MJ Tee  
 1 - 12"x 6" MJ Tee  
 3 - 12" Gate Valve and Box  
 1 - 10" Gate Valve and Box  
 1 - 6" Gate Valve and Box  
 1 - Fire Hydrant (7'-0" Bury)  
 1 - 24"x 12" MJ Reducer  
 1 - 12" x 10" MJ Reducer  
 2 - 12" MJ Plug  
 1 - 6", 36" SWx SW Adapter  
 1 - 6" 90° Hydrant Ell  
 7 - 12" Foster Adaptor  
 1 - 10" Foster Adaptor  
 1 - 24" MEGA Lug  
 3 - 12" MEGA Lug  
 1 - 10" MEGA Lug  
 17 LF - 12" DIP Water Main  
 1 - Tracer Wire Riser  
 3 - Thrust Block



- Sta. 2403+95, 54' Lt., Remove  
 1 - Fire Hydrant Assembly  
 Sta. 2403+95, 54' Lt, Install  
 2 - 10"x 10" MJ Tee  
 1 - 10" Gate Valve and Box  
 1 - 6" Gate Valve and Box  
 1 - Fire Hydrant (9'-0" Bury)  
 2 - 10" MJ Plug  
 1 - 10"x 6" MJ Reducer  
 1 - 6", 36" SWx SW Adapter  
 2 - 10" Foster Adaptor  
 1 - 6" Foster Adaptor  
 9 LF - 10" DIP Water Main  
 1 - Tracer Wire Riser  
 4 - Thrust Block



NOTE: See Service Related Note on CW1.6

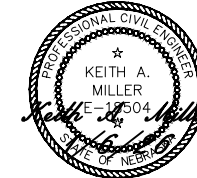


Know what's below.  
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No.	Revision	By	Date	Ckd	App

DETAILS ON THIS SHEET ARE  
 NOT TO SCALE

I, Keith A. Miller, am the Coordinating Professional  
 on the HASTINGS SOUTHEAST WATER MAIN  
 IMPROVEMENTS PHASE 2  
 WA-342 HU 2026-12

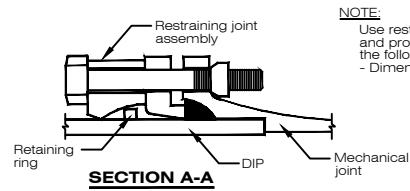


Hastings Southeast NDOT  
 Project S-6-4(1022) C.N.41086  
 Fittings Details  
 Water Main Improvements  
 Phase 2



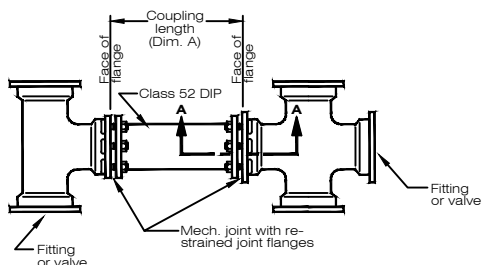
**FOR  
 BID**

Desn	K. Miller
Dwn	S. Struss
Date	12/30/2025
Supt	B. Lubken
W.D. No.	WA-342
Ckd	
Sheet No.	CW2.2
No.	WR-139
(Paid by Hastings Utilities)	



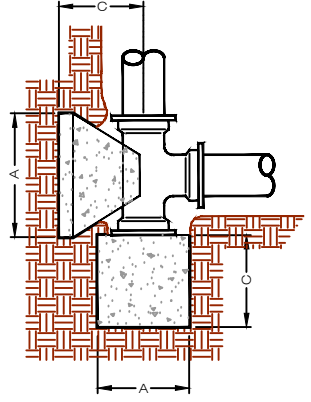
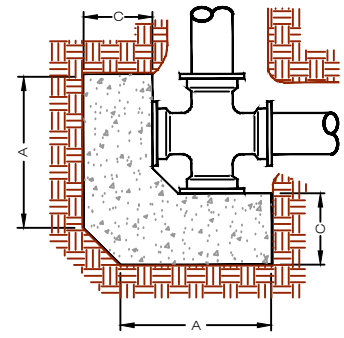
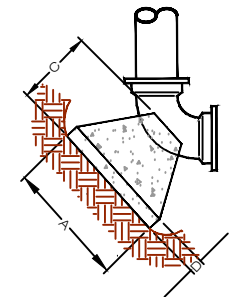
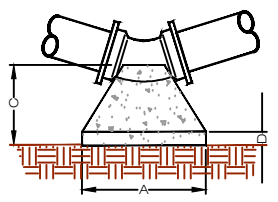
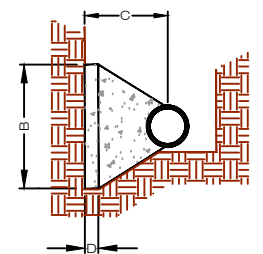
**NOTE:**  
Use restrained joint couplings when noted on drawings and provide length as noted. If length is not noted, use the following minimum standard coupling length - Dimension A

PIPE DIA.	MIN. DIM. A
16" (406mm)	2'-6" (.76m)
24" (609mm)	3'-0" (.91m)
30" (762mm)	3'-0" (.91m)
36" (914mm)	3'-6" (1.10m)
42" (1066mm)	3'-6" (1.10m)
48" (1219mm)	4'-0" (1.20m)



**NOTE:**  
Alternate restraining joint assembly may be used with prior approval by the Engineer or as specified by the contract documents

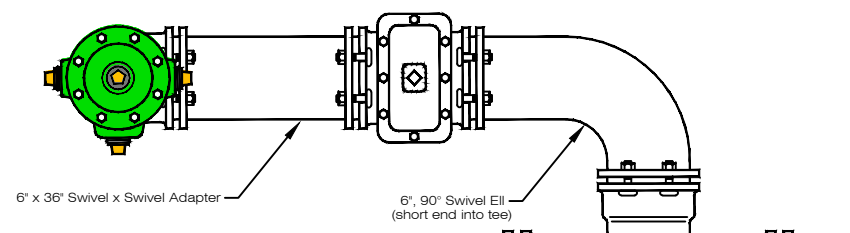
**RESTRAINED JOINT COUPLING DETAIL**



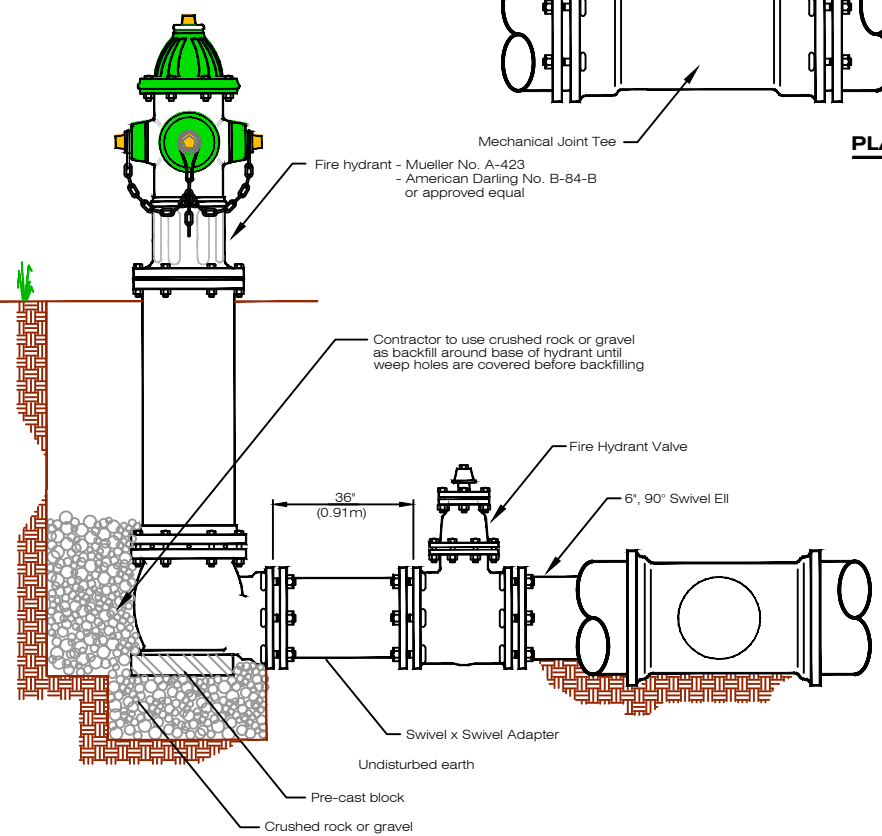
**CONCRETE THRUST BLOCK DETAILS**

**THRUST BLOCK DIMENSIONS**

PIPE SIZE INCH (mm)	A FEET (m)	B FEET (m)	C FEET (m)	D INCH (mm)
4 (101mm)	1.00 (.30m)	1.00 (.30m)	1.00 (.30m)	3 (76mm)
6 (152mm)	1.50 (.46m)	1.50 (.46m)	1.00 (.30m)	6 (152mm)
8 (203mm)	2.00 (.61m)	2.00 (.61m)	1.00 (.30m)	6 (152mm)
10 (254mm)	2.50 (.76m)	2.50 (.76m)	2.00 (.61m)	9 (228mm)
12 (304mm)	3.00 (.91m)	3.00 (.91m)	2.00 (.61m)	9 (228mm)
14 (355mm)	3.00 (.91m)	3.00 (.91m)	2.50 (.76m)	12 (304mm)
16 (406mm)	4.00 (1.20m)	3.00 (.91m)	2.50 (.76m)	12 (304mm)
18 (457mm)	4.00 (1.20m)	4.00 (1.20m)	2.50 (.76m)	12 (304mm)
20 (508mm)	4.00 (1.20m)	4.00 (1.20m)	3.00 (.91m)	16 (406mm)
24 (609mm)	4.50 (1.40m)	4.50 (1.40m)	3.00 (.91m)	16 (406mm)
30 (762mm)	4.50 (1.40m)	5.00 (1.50m)	3.50 (1.10m)	18 (457mm)
36 (914mm)	5.00 (1.50m)	5.00 (1.50m)	3.50 (1.10m)	18 (457mm)
42 (1066mm)	5.50 (1.70m)	5.50 (1.70m)	4.00 (1.20m)	24 (609mm)
48 (1219mm)	6.00 (1.80m)	6.00 (1.80m)	4.00 (1.20m)	24 (609mm)

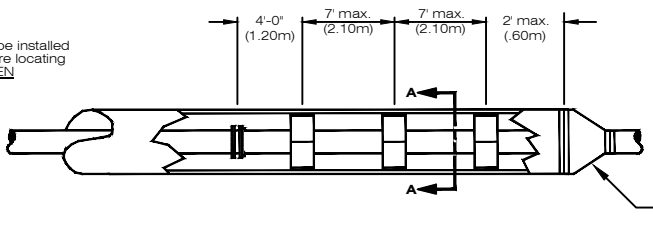


**PLAN VIEW**



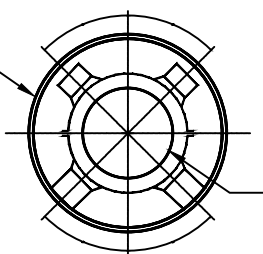
**HYDRANT AND VALVE DETAIL**

**NOTE:**  
Tracer wire is to be installed through tracer wire locating station **UNBROKEN**



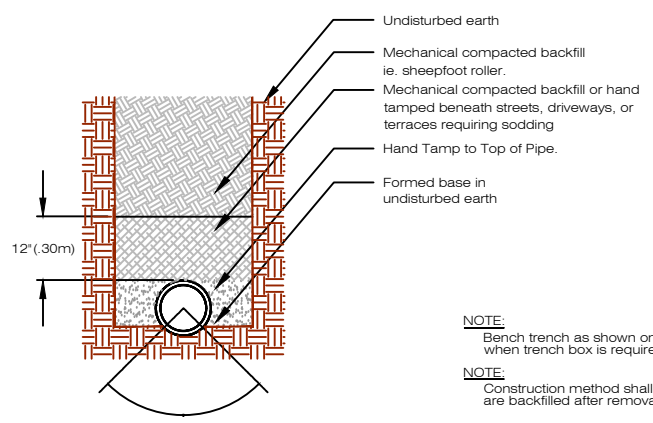
**NOTE:**  
One chock shall be placed not more than 2'-0" (.6m) from each end of the casing. Subsequent chocks were placed at intervals shown within the casing pipe.

Steel casing as specified, wall as specified, exterior surface to be coated



**SECTION "A-A"**

**STEEL CASING DETAIL**



**NOTE:**  
Bench trench as shown on bedding Detail III when trench box is required.

**NOTE:**  
Construction method shall insure all voids are backfilled after removal of trench box.

**TYPE II BEDDING-DIP WATER MAIN**



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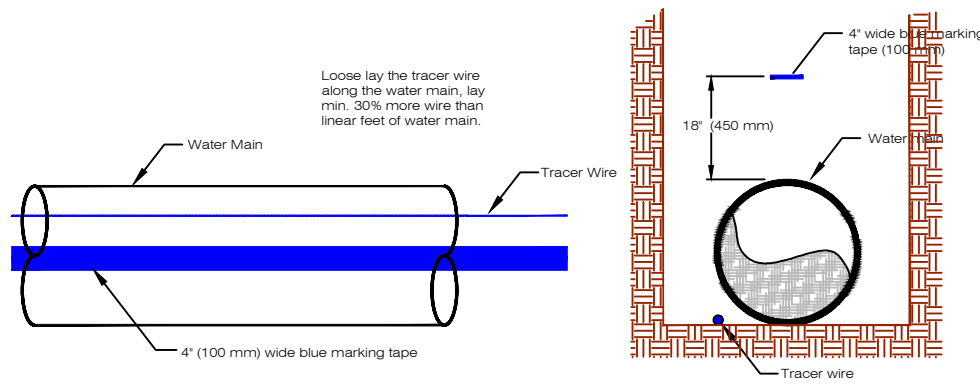


Hastings Southeast NDOT  
Project S-6-4(1022) C.N.41086  
Standard Water Details  
Water Main Improvements  
Phase 2

Desn	K. Miller
Dwn	S. Struss
Date	12/30/2025
Supt	B. Lubken
W.D. No.	WA-342
Ckd	
Ckd	
Sheet No.	CW3.1
No.	WR-139
(Paid by Hastings Utilities)	



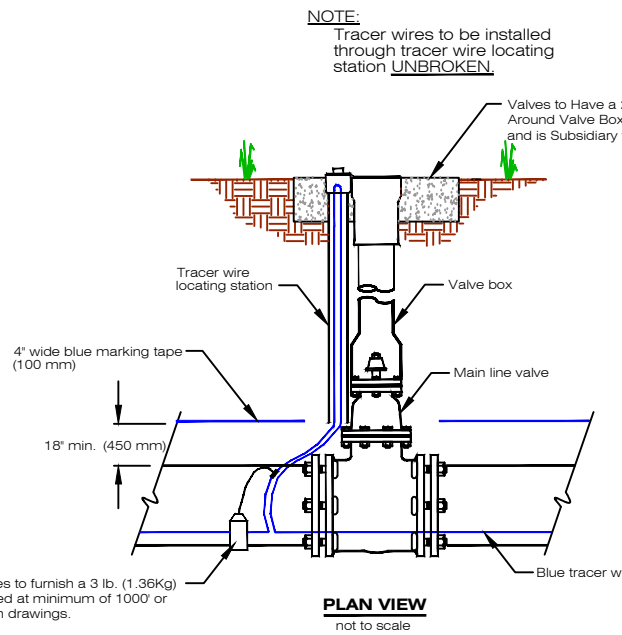
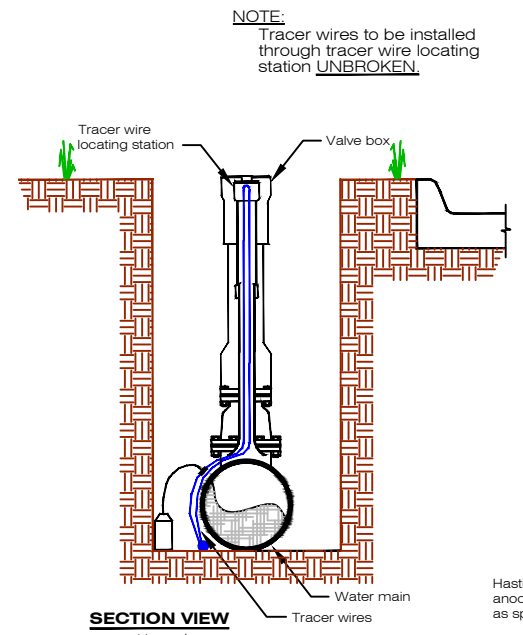
**FOR BID**



**NOTE:**  
Sufficient space shall be provided to allow installation of service saddle and/or tapping equipment.

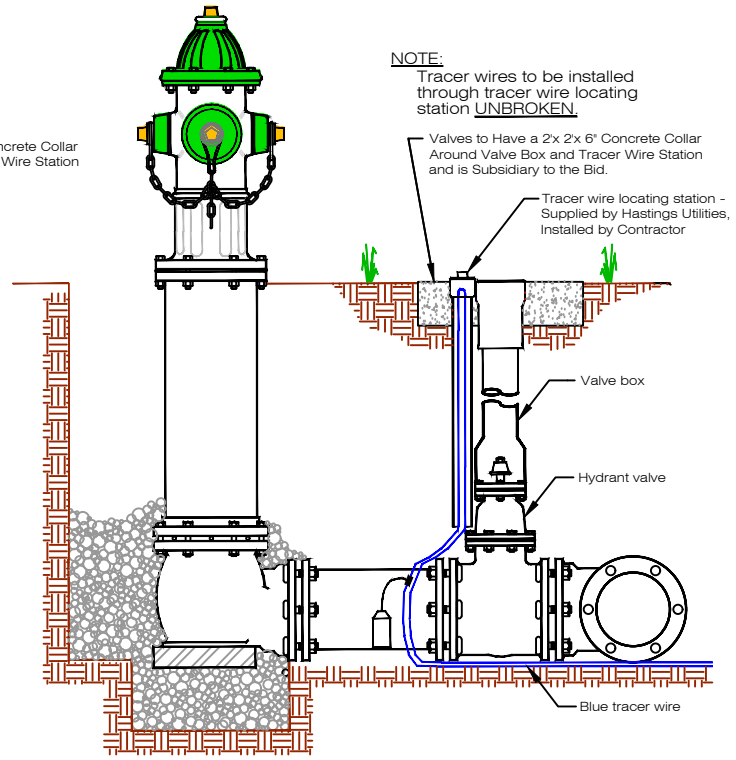
**NOTE:**  
Tracer wire and warning tape to be provided by Hastings Utilities (subsidiary to bid).

**TRACER WIRE AND TEST STATION DETAIL**

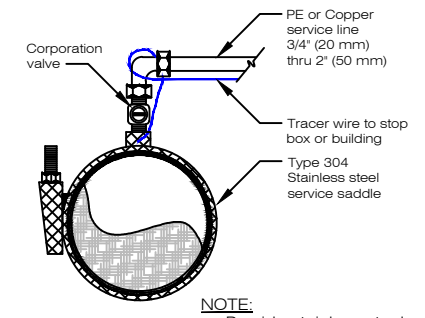


Hastings Utilities to furnish a 3 lb. (1.36Kg) anode. Installed at minimum of 1000' or as specified on drawings.

**TRACER WIRE LOCATING STATION FOR MAIN LINE VALVE AND FIRE HYDRANT**

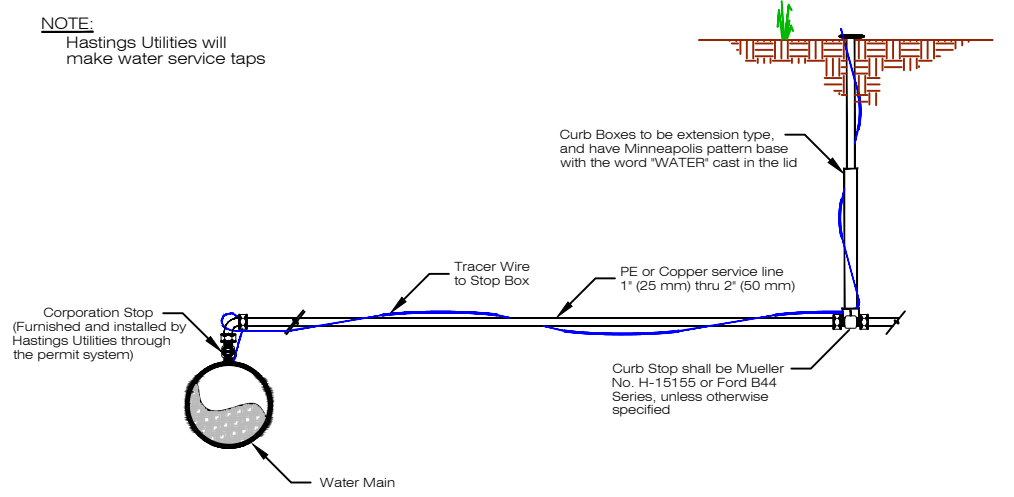


**PLAN VIEW**  
not to scale

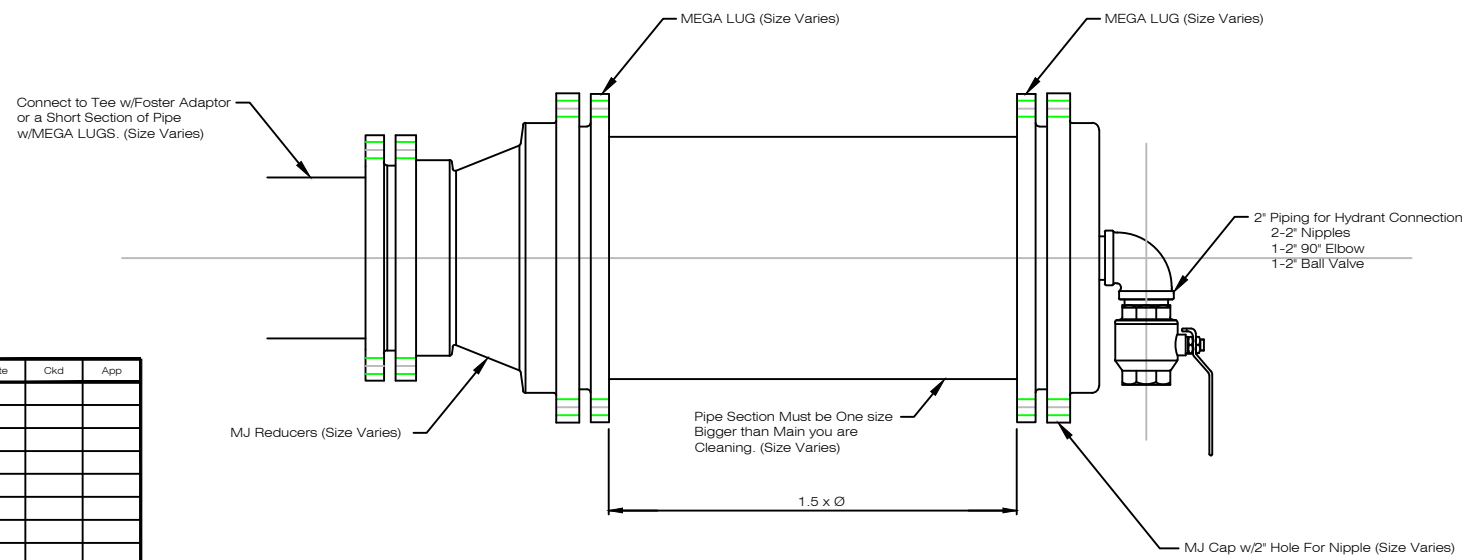


**NOTE:**  
All water services must be 5' (1.52 m) deep.

**SERVICE AND SERVICE SADDLE CONNECTION DETAILS 3/4" THRU 2"**



**WATER SERVICE DETAIL**



**PIG LAUNCHER DETAIL**

No.	Revision	By	Date	Ckd	App



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Hastings Southeast NDOT  
Project S-6-4(1022) C.N.41086  
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**HASTINGS UTILITIES**

**FOR BID**

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Dwn	S. Struss
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W.D. No.	WA-342
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