CON 11-1-1

Water Supply Engineering



IA1415072

CARROLL MUNICIPAL WATER SUPPLY

Project #: W2020-0287

Permit #: 2020-0493W Supplement 01

DWSRF #: _____

August 26, 2020

Permit 2020-0493, Supplement 01

APPROVED
Sara Smith, PE
DATE March 30, 2021
IDNR ENVIRONMENTAL SERVICES DIVISION

Iowa Department of Natural Resources
Water Supply Engineering Section
502 East 9th Street
Des Moines, IA 50319

RE: Carroll, Iowa
Water Distribution Main Replacement - 2020
JEO Project No. 191586.00

Enclosed are two work change directives instructing the contractor to install ductile iron water main within railroad right of way at 6' bury by directional drill methods and allowing the contractor to use directional drill methods for installation of the remainder of the water main.

Please direct any questions or comments to me at 402.392.9918 or by email at cwhite@jeo.com.

LICENSED PROFESSIONAL ENGINEER
CALEB T WHITE 24593
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the state of Iowa.

Caleb T White 08/26/2020

Caleb T White, P.E. Date

License Number: 24593

My license renewal date is December 31, 2021.

Pages or sheets covered by this seal:

Work Change Directives 01 and 02

Enclosures
- Work Change Directive 01
- Work Change Directive 02

191586.00 - WCD 01-02 to IDNR_08262020.docx

Work Change Directive

WORK CHANGE DIRECTIVE NO. | 2
DATE | 7/6/20
PROJECT | Water Distribution Main Replacements - 2020
JEO PROJECT NO. | 191586.00
LOCATION | Carroll, Iowa
OWNER | City of Carroll
CONTRACTOR | King Construction

You are directed to proceed promptly with the following change(s):
Description Install water main by directional bore as shown on the attached plan sheets.
Purpose of Change Directive Contractor's proposal, decrease impact to adjacent property owners.
Attachment(s) Revised sheets D.01, D.04, D.05, D.06, D.07, D.08; Changes to the work; Contract Price Change Estimate

If claim is made that the above changes have affected Contract Price or Contract Times, any claim for a Change Order based thereon will involve one or more of the following methods of determining the effect of the changes:

Method of Determining Change in Contract Price
☐ **Unit Prices**
☐ **Lump Sum**
☒ **Other** Attached changes to the work

Method of Determining Change in Contract Times
☒ **CONTRACTOR's Records**
☒ **ENGINEER's Records**
☐ **Other** _____

Estimated Increase (Decrease) in Contract Price
$ 0

Estimated Increase (Decrease) in Contract Times
0 **Days**

If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

Recommended:	**Authorized:**	**Accepted:**
ENGINEER	**OWNER**	**CONTRACTOR**
07/06/2020	07-13-2020	7-17-20
Date	**Date**	**Date**

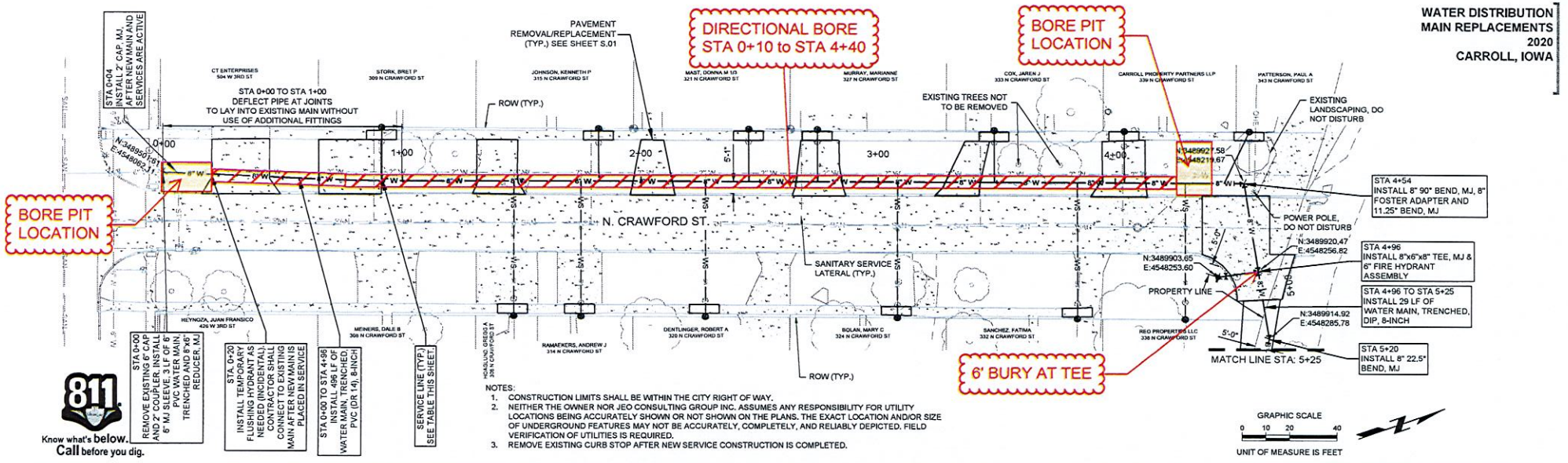
cc: Project Manager, Resident Project Representative, Contractor, Owner

Work Change Directive No. 2

The contractor, by acceptance of the Work Change Directive, is to incorporate the following changes to the work:

1. The contractor is to bore the alignments as shown on the attached plan sheets.
2. Measurement for the work will be by the linear foot and will not include locations installed by open cut.
3. The price for boring shall remain as indicated on the bid form.
4. The contractor shall replace all pedestrian ramps as shown on the plans. Sidewalks shall be replaced to the extent necessary for the installation of the water services shown on the plan sheets.
5. Locations of bore pits, excavations, and receipt pits shall be field located to minimize disruption to adjacent property owners.
6. Removal and replacement of pavement, driveways, and other surfacing shall only occur where needed to accomplish installation of the bored alignments and trenched alignments as shown.
7. Cost for tree removal, including environmental surveys, in addition to what is shown on plans in order to excavate for bore pits shall be incidental to other items for which payment is made.
8. The contractor's compensation for verifying utility locations, televising sewer services, and potholing existing utilities shall be the remaining cost of pavement removal and replacement not otherwise installed on the project.
9. The contractor's final cost to bore the alignments shown shall not exceed the bid price, except as modified by work change directives and change orders.

WATER DISTRIBUTION MAIN REPLACEMENTS 2020 CARROLL, IOWA

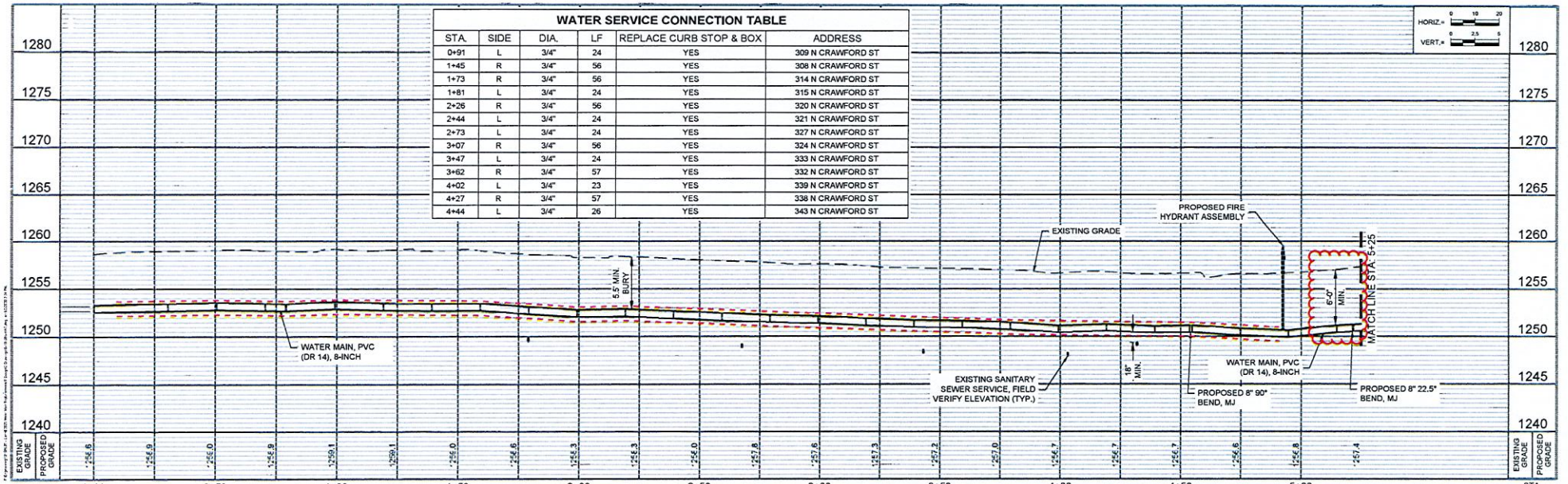


811 Know what's below. Call before you dig.

NOTES:
1. CONSTRUCTION LIMITS SHALL BE WITHIN THE CITY RIGHT OF WAY.
2. NEITHER THE OWNER NOR JEO CONSULTING GROUP INC. ASSUMES ANY RESPONSIBILITY FOR UTILITY LOCATIONS BEING ACCURATELY SHOWN OR NOT SHOWN ON THE PLANS. THE EXACT LOCATION AND/OR SIZE OF UNDERGROUND FEATURES MAY NOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. FIELD VERIFICATION OF UTILITIES IS REQUIRED.
3. REMOVE EXISTING CURB STOP AFTER NEW SERVICE CONSTRUCTION IS COMPLETED.

WATER SERVICE CONNECTION TABLE

STA.	SIDE	DIA.	LF	REPLACE CURB STOP & BOX	ADDRESS
0+91	L	3/4"	24	YES	309 N CRAWFORD ST
1+45	R	3/4"	56	YES	308 N CRAWFORD ST
1+73	R	3/4"	56	YES	314 N CRAWFORD ST
1+81	L	3/4"	24	YES	315 N CRAWFORD ST
2+26	R	3/4"	56	YES	320 N CRAWFORD ST
2+44	L	3/4"	24	YES	321 N CRAWFORD ST
2+73	L	3/4"	24	YES	327 N CRAWFORD ST
3+07	R	3/4"	56	YES	324 N CRAWFORD ST
3+47	L	3/4"	24	YES	333 N CRAWFORD ST
3+62	R	3/4"	57	YES	332 N CRAWFORD ST
4+02	L	3/4"	23	YES	339 N CRAWFORD ST
4+27	R	3/4"	57	YES	338 N CRAWFORD ST
4+44	L	3/4"	26	YES	343 N CRAWFORD ST

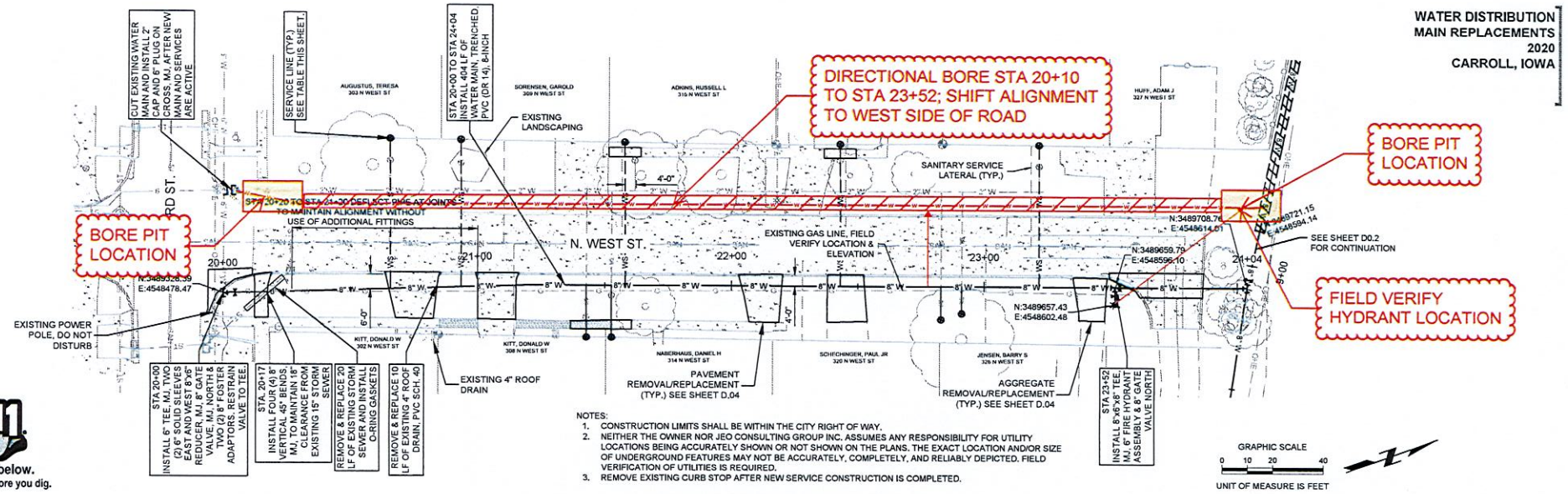


JEO CONSULTING GROUP

CITY OF CARROLL #47	DJ	EEJ	3/3/2020	NJD	5/13/2020	191586	S-191586-WAT.dwg

PLAN AND PROFILE D.01

WATER DISTRIBUTION
MAIN REPLACEMENTS
2020
CARROLL, IOWA



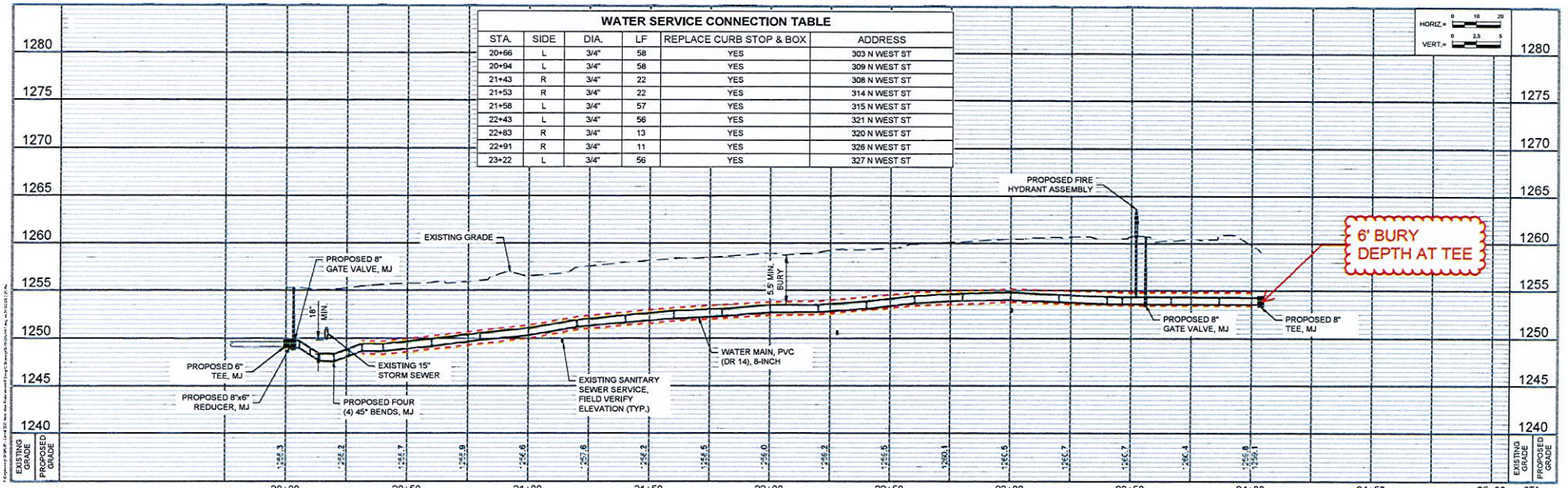
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3. REMOVE EXISTING CURB STOP AFTER NEW SERVICE CONSTRUCTION IS COMPLETED.

GRAPHIC SCALE
0 10 20 40
UNIT OF MEASURE IS FEET

WATER SERVICE CONNECTION TABLE

STA.	SIDE	DIA.	LF	REPLACE CURB STOP & BOX	ADDRESS
20+66	L	3/4"	58	YES	303 N WEST ST
20+94	L	3/4"	58	YES	309 N WEST ST
21+43	R	3/4"	22	YES	308 N WEST ST
21+53	R	3/4"	22	YES	314 N WEST ST
21+58	L	3/4"	57	YES	315 N WEST ST
22+43	L	3/4"	56	YES	321 N WEST ST
22+83	R	3/4"	13	YES	320 N WEST ST
22+91	R	3/4"	11	YES	326 N WEST ST
23+22	L	3/4"	56	YES	327 N WEST ST



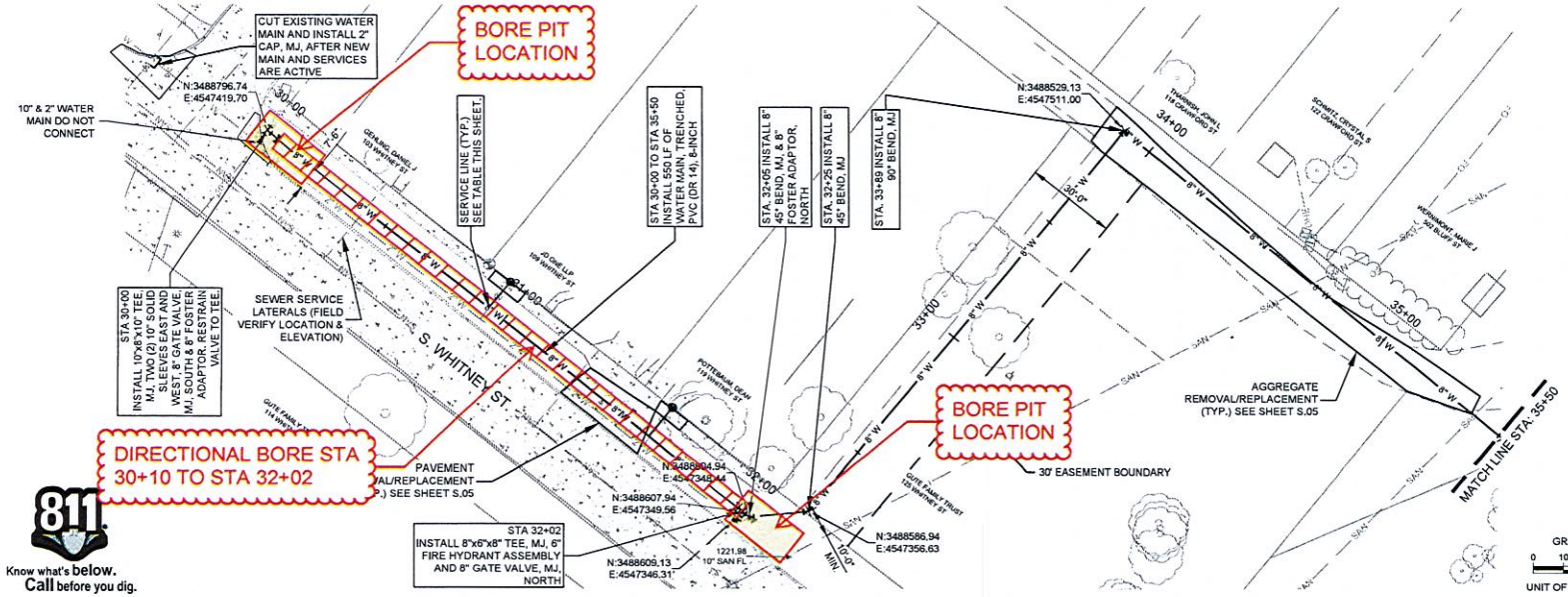
JEO CONSULTING GROUP

REVISED	REVISED	FIELD CREW	FIELD CREW	REVIEWED BY	REVIEWED DATE	DRAWN BY	DATE	PROJECT NO.	FILE NAME
6/16/20		CITY OF CARROLL #47	DJ	EEJ	3/3/2020	NJD	3/13/2020	191586	S-191586-WAT.dwg

PLAN AND PROFILE

D.04

WATER DISTRIBUTION MAIN REPLACEMENTS 2020 CARROLL, IOWA

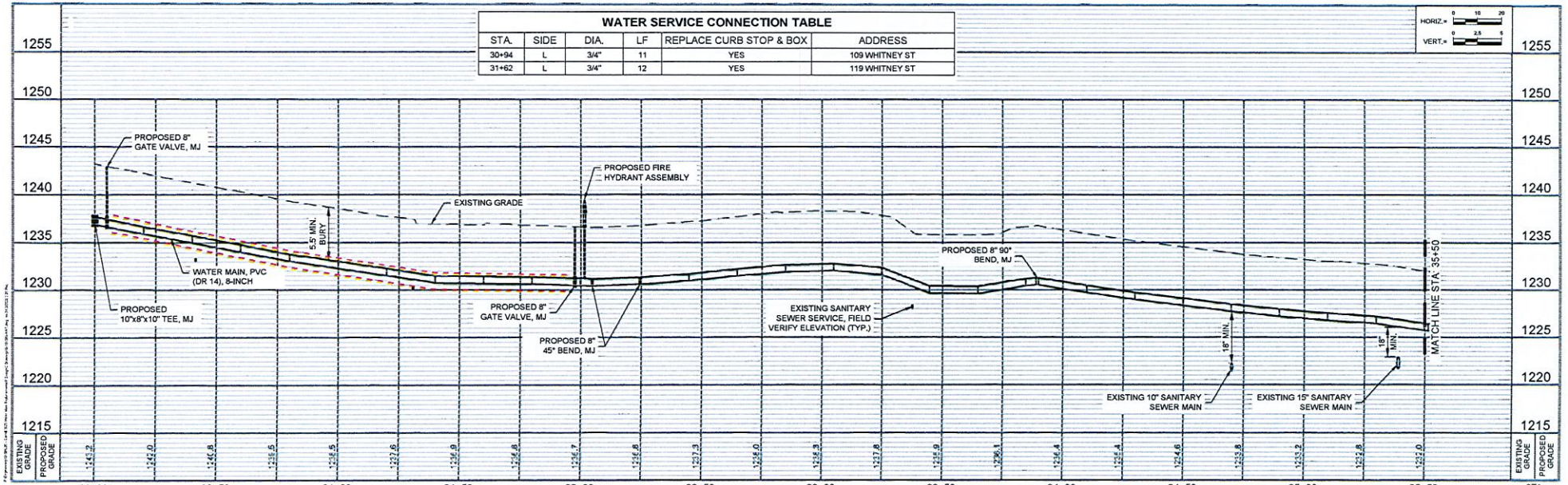


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3. REMOVE EXISTING CURB STOP AFTER NEW SERVICE CONSTRUCTION IS COMPLETED.

WATER SERVICE CONNECTION TABLE

STA.	SIDE	DIA.	LF	REPLACE CURB STOP & BOX	ADDRESS
30+94	L	3/4"	11	YES	109 WHITNEY ST
31+62	L	3/4"	12	YES	119 WHITNEY ST

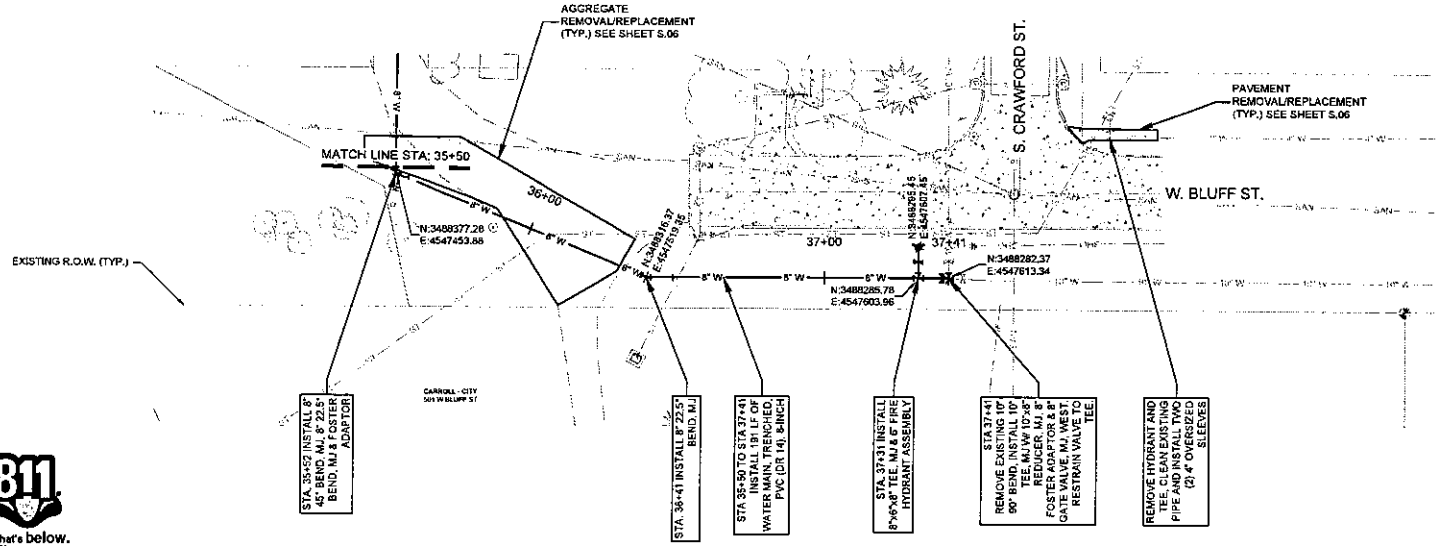


JEO CONSULTING GROUP

REVISION 1 | REVISION 2 | FIELD BOOK: CITY OF CARROLL #47 | FIELD CREW: DJ | REVIEW BY: EEJ | REVIEW DATE: 3/3/2020 | DP WAS BY: NJD | DATE: 3/13/2020 | PROJECT NO.: 191586 | FILE NAME: S-191586-WAT.dwg

PLAN AND PROFILE D.05

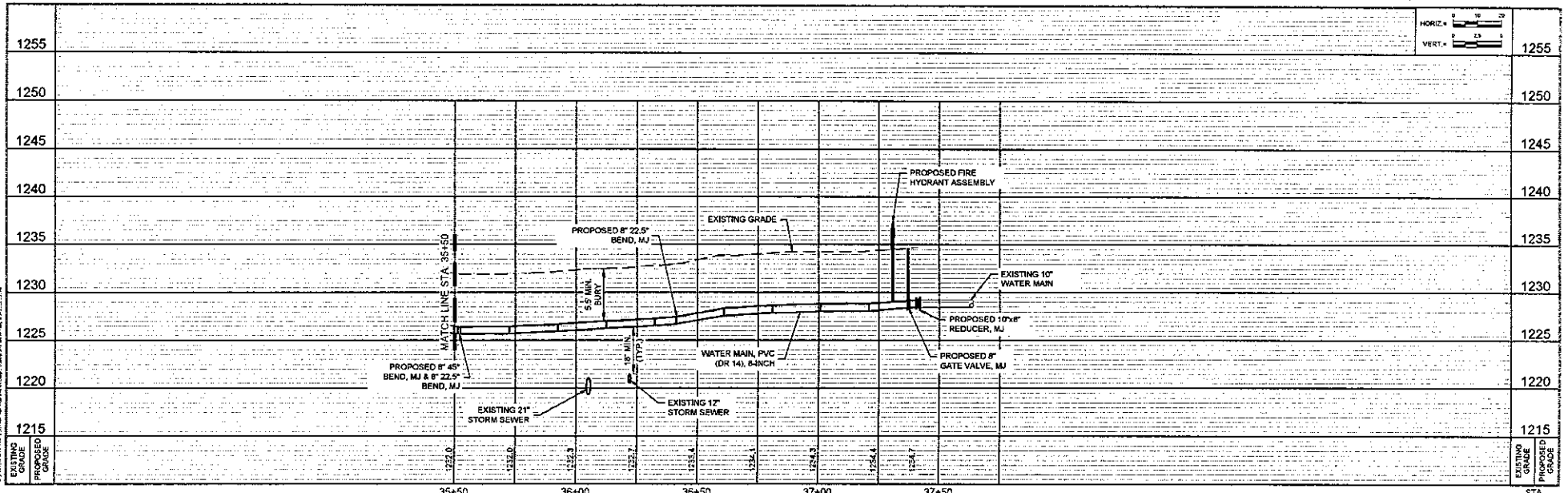
WATER DISTRIBUTION MAIN REPLACEMENTS 2020 CARROLL, IOWA



NOTES:
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GRAPHIC SCALE
0 10 20 40
UNIT OF MEASURE IS FEET

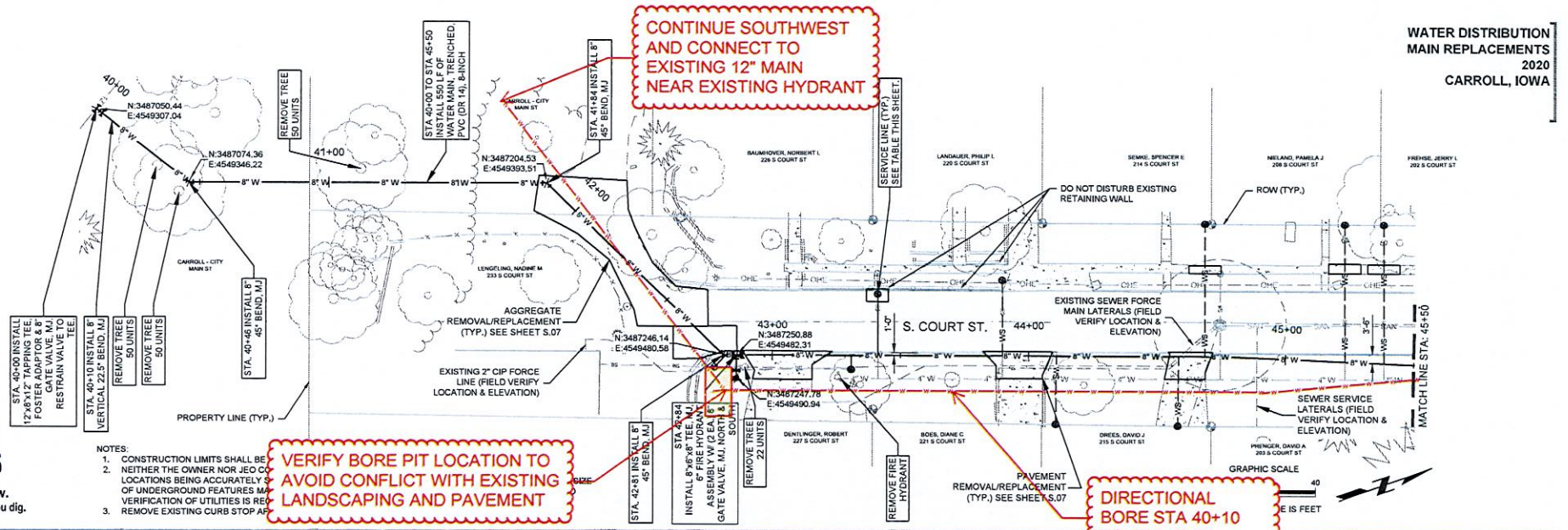


JEO CONSULTING GROUP

		CITY OF CARROLL #47	DJ	EEJ	3/3/2020	NJD	3/13/2020	191586	S-191586-WAT.dwg

PLAN AND PROFILE D.06

WATER DISTRIBUTION
MAIN REPLACEMENTS
2020
CARROLL, IOWA

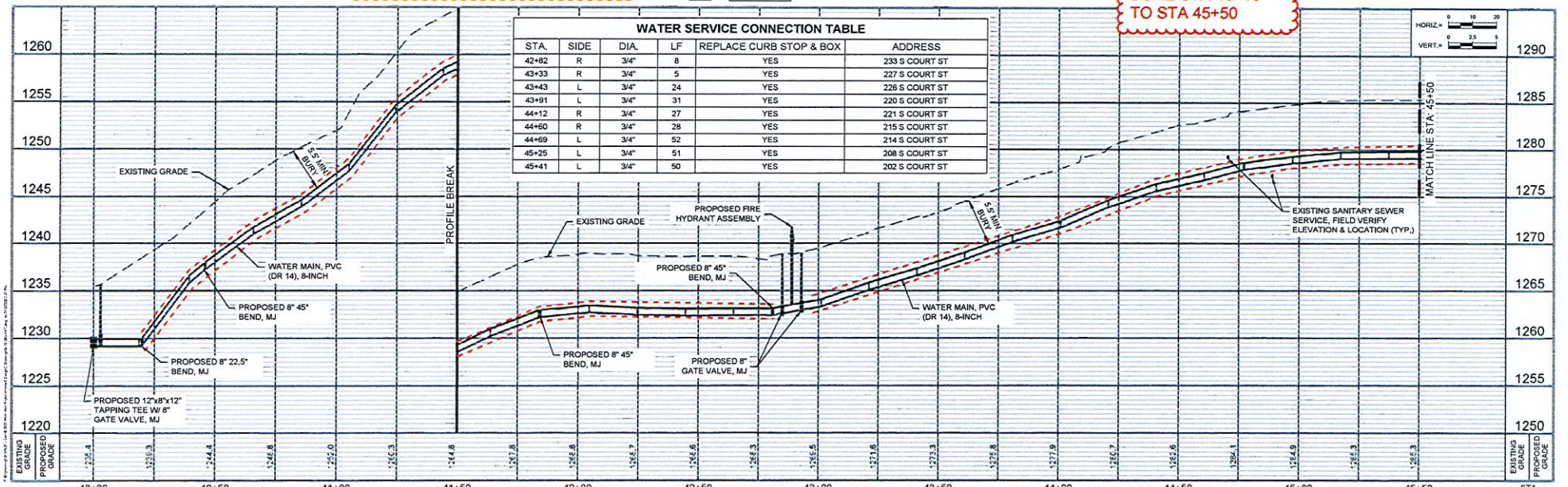


811 Know what's below. Call before you dig.

NOTES:
1. CONSTRUCTION LIMITS SHALL BE
2. NEITHER THE OWNER NOR JEO CO LOCATIONS BEING ACCURATELY S OF UNDERGROUND FEATURES MA VERIFICATION OF UTILITIES IS REC
3. REMOVE EXISTING CURB STOP AF

WATER SERVICE CONNECTION TABLE

STA.	SIDE	DIA.	LF	REPLACE CURB STOP & BOX	ADDRESS
42+82	R	3/4"	8	YES	233 S COURT ST
43+33	R	3/4"	5	YES	227 S COURT ST
43+43	L	3/4"	24	YES	226 S COURT ST
43+91	L	3/4"	31	YES	220 S COURT ST
44+12	R	3/4"	27	YES	221 S COURT ST
44+60	R	3/4"	28	YES	215 S COURT ST
44+69	L	3/4"	52	YES	214 S COURT ST
45+25	L	3/4"	51	YES	208 S COURT ST
45+41	L	3/4"	50	YES	202 S COURT ST



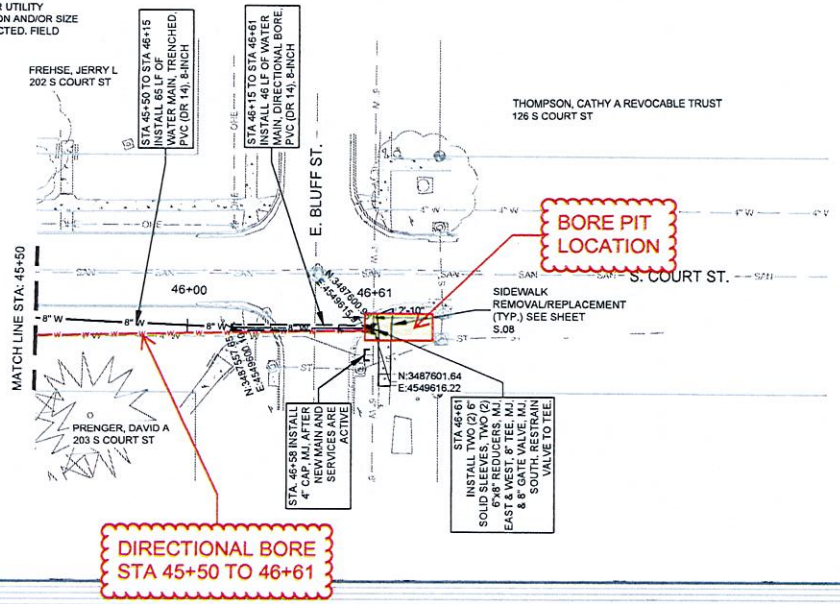
JEO CONSULTING GROUP

FIELD BOOK	REVIEWED BY	REVIEW DATE	DP MH BY	DATE	PROJECT No.	FILE NAME
CITY OF CARROLL #47	DJ	EEJ	3/9/2020	NJD	3/13/2020	191586	S-191586-WAT.dwg

PLAN AND PROFILE D.07

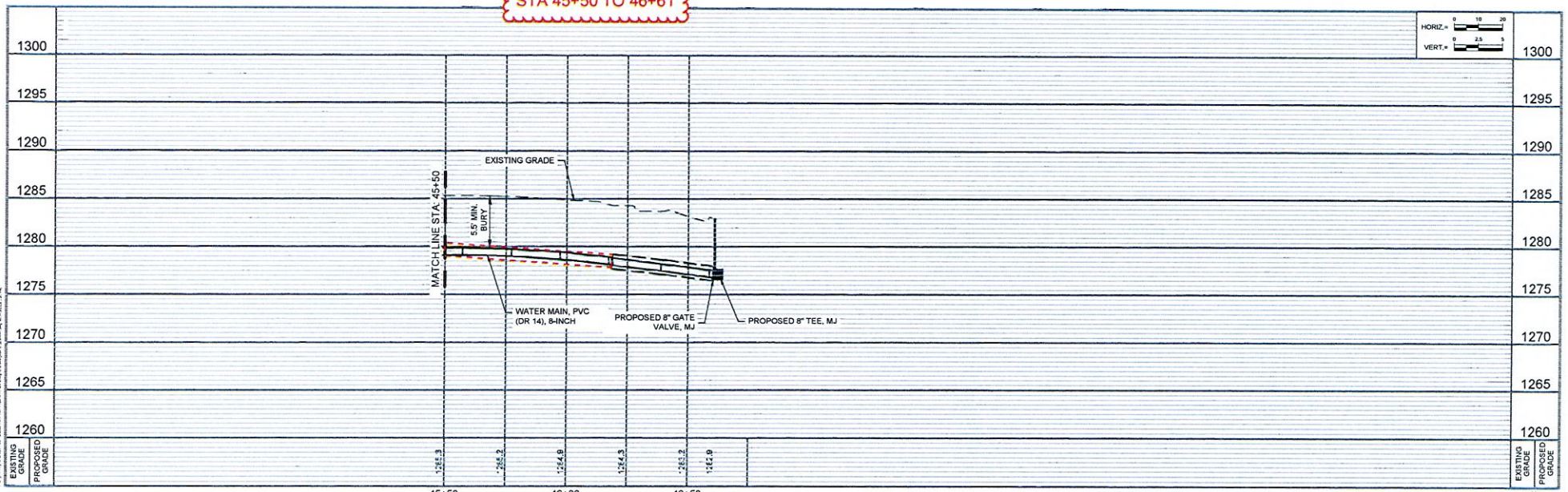
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2. NEITHER THE OWNER NOR JEO CONSULTING GROUP INC. ASSUMES ANY RESPONSIBILITY FOR UTILITY LOCATIONS BEING ACCURATELY SHOWN OR NOT SHOWN ON THE PLANS. THE EXACT LOCATION AND/OR SIZE OF UNDERGROUND FEATURES MAY NOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. FIELD VERIFICATION OF UTILITIES IS REQUIRED.
3. REMOVE EXISTING CURB STOP AFTER NEW SERVICE CONSTRUCTION IS COMPLETED.

WATER DISTRIBUTION MAIN REPLACEMENTS 2020 CARROLL, IOWA



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

GRAPHIC SCALE
0 10 20 40
UNIT OF MEASURE IS FEET



JEO CONSULTING GROUP

REVISION	REVISION	FIELD BOOK	FIELD CREW	REVIEW BY	REVIEW DATE	DRAWN BY	DATE	PROJECT NO.	FILE NAME		
		CITY OF CARROLL #47	DJ	EEJ	3/3/2020	NJD	3/13/2020	191586	S-191586-WAT.dwg	PLAN AND PROFILE	D.08

Work Change Directive

WORK CHANGE DIRECTIVE NO. | 1
DATE | 7/6/20
PROJECT | Water Distribution Main Replacements - 2020
JEO PROJECT NO. | 191586.00
LOCATION | Carroll, Iowa
OWNER | City of Carroll
CONTRACTOR | King Construction

You are directed to proceed promptly with the following change(s):
Description Install 8" ductile iron pipe by directional bore at 6 foot bury along UPRR right of way with approximate excavation and bore pit locations shown on the attached plan sheets.
Purpose of Change Directive Compliance with UPRR Permit conditions.
Attachment(s) Revised sheets C.01, D.01 to D.03; Changes to the work; Contract Price Change Estimate

If claim is made that the above changes have affected Contract Price or Contract Times, any claim for a Change Order based thereon will involve one or more of the following methods of determining the effect of the changes:

Method of Determining Change in Contract Price
☐ **Unit Prices**
☐ **Lump Sum**
☒ **Other** Attached

Method of Determining Change in Contract Times
☒ **CONTRACTOR's Records**
☒ **ENGINEER's Records**
☐ **Other** _____

Estimated Increase (Decrease) in Contract Price
$ 33,786

Estimated Increase (Decrease) in Contract Times
0 **Days**

If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

Recommended:	**Authorized:**	**Accepted:**
ENGINEER	**OWNER**	**CONTRACTOR**
07/06/2020	07-13-2020	7-17-20
Date	**Date**	**Date**

cc: Project Manager, Resident Project Representative, Contractor, Owner

Work Change Directive No. 1

The contractor, by acceptance of the Work Change Directive, is to incorporate the following changes to the work:

1. The alignment along UPRR railroad right of way is to be 8" ductile iron pipe, directionally bored at 6-foot depth. Contractor to verify bore pit location and dimensions on the provided plan sheets.
2. Contractor shall conduct work in a manner to minimize duration of work on UPRR right of way, including boring pit locations and boring operations.
3. Bid Item 44 – "WATER MAIN, TRENCHED, DIP (CL52), 8-INCH" is established as a part of the contract. prices, quantities, and estimate reference information shall be as shown on the figures and pricing change sheet.
4. Bid Item 45 – "WATER MAIN, TRENCHLESS, DIP, RESTRAINED JOINT (CL52), 8-INCH" is established as a part of the contract. prices, quantities, and estimate reference information shall be as shown on the figures and pricing change sheet.

Work Change Estimate

JEO Project Name:	**Carroll Water Main Replacements - 2020**	JEO Project Number:	**191658**
Owner:	**City of Carroll**	Work Change Directive Number:	**1**
Contractor:	**King Construction**	Effective Date:	

Item		Change Order Information			
Bid Item No.	Description	Item Quantity	Units	Unit Price	Total Value of Item ($)
2	WATER MAIN, TRENCHED, PVC (DR 14), 8-INCH	-584	LF	$90.00	($52,560.00)
3	WATER MAIN, TRENCHLESS, PVC (DR 14), 8-INCH	-200	LF	$96.00	($19,200.00)
44	WATER MAIN, TRENCHED, DIP, (CL52), 8-INCH	49	LF	$129.00	$6,321.00
45	WATER MAIN, TRENCHLESS, DIP, RESTRAINED JOINT (CL52), 8-INCH	735	LF	$135.00	$99,225.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
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				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
				$0.00	$0.00
			Total		**$33,786.00**

ESTIMATE OF QUANTITIES
WATER TRANSMISSION MAIN

ITEM #	REFERENCE #	DESCRIPTION	UNIT	QUANTITY
1	5010-108-A-1	WATER MAIN, TRENCHED, PVC (DR 14), 6-INCH	LF	95
2	5010-108-A-1	WATER MAIN, TRENCHED, PVC (DR 14), 8-INCH	LF	2838
3	5010-108-A-2	WATER MAIN, TRENCHLESS, PVC (DR 14), 8-INCH	LF	246
4	5010-108-A-2	WATER MAIN, TRENCHLESS, PVC (DR 14), 6-INCH	LF	333
5	5010-108-C-1	FITTING, 90° BEND, 8-INCH	EA	2
6	5010-108-C-1	FITTING, 45° BEND, 8-INCH	EA	10
7	5010-108-C-1	FITTING, 22.5° BEND, 8-INCH	EA	5
8	5010-108-C-1	FITTING, 11.25° BEND, 8-INCH	EA	2
9	5010-108-C-1	FITTING, CAP, 2-INCH	EA	3
10	5010-108-C-1	FITTING, CAP, 4-INCH	EA	2
11	5010-108-C-1	FITTING, CAP, 6-INCH	EA	1
12	5010-108-C-1	FITTING, PLUG, 6-INCH	EA	2
13	5010-108-C-1	FITTING, TEE, 8-INCH X 8-INCH X 8-INCH	EA	2
14	5010-108-C-1	FITTING, TEE, 6-INCH X 6-INCH X 6-INCH	EA	2
15	5010-108-C-1	FITTING, TEE, 10-INCH X 8-INCH X 10-INCH	EA	1
16	5010-108-C-1	FITTING, TEE, 10-INCH X 10-INCH X 10-INCH	EA	1
17	5010-108-C-1	FITTING, TAPPING TEE, 12-INCH X 8-INCH X 12-INCH	EA	1
18	5010-108-C-1	FITTING, REDUCER, MJ X PE, 8-INCH X 6-INCH	EA	5
19	5010-108-C-1	FITTING, REDUCER, MJ X PE, 10-INCH X 8-INCH	EA	1
20	5010-108-C-1	FITTING, SLEEVE, 4-INCH	EA	5
21	5010-108-C-1	FITTING, SLEEVE, 6-INCH	EA	9
22	5010-108-C-1	FITTING, SLEEVE, 8-INCH	EA	5
23	5010-108-C-1	FITTING, SLEEVE, 10-INCH	EA	2
24	5010-108-C-1	FITTING, FOSTER ADAPTER, 8-INCH	EA	4
25	5020-108-A-0	VALVE, GATE VALVE, 8-INCH	EA	10
26	5020-108-C-0	FIRE HYDRANT ASSEMBLY, 6-INCH	EA	6
27	5010-108-D-0	WATER SERVICE STUB,COPPER TYPE K, 3/4-INCH	LF	1575
28	5020-108-K	VALVE BOX REMOVAL	EA	44
29	7030-108-A-0	REMOVAL OF SIDEWALK	SY	171
30	7030-108-A-0	REMOVAL OF DRIVEWAY	SY	754
31	7040-108-H-0	REMOVAL OF STREET PAVEMENT	SY	260
32	4020-108-D	REMOVAL OF STORM SEWER	LF	20
33	7030-108-E-0	SIDEWALK, PCC, 6-INCH	SY	195
34	7030-108-G-0	DETECTABLE WARNINGS	SF	26
35	7030-108-H-1	DRIVEWAY, PAVED, PCC, 6-INCH	SY	608
36	7030-108-H-2	DRIVEWAY, GRANULAR	TONS	155
37	7010-108-A-0	STREET, PAVED, PCC, 7-INCH	SY	222
38	4020-108-A	STORM SEWER GRAVITY MAIN, TRENCHED, RCP CLASS III, 15 INCH	LF	20
39	2010-108-A	CLEARING AND GRUBBING	UNIT	262.3
40	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING, FERTILIZING, AND MULCHING	AC	1.35
41	3010-108-F	TRENCH COMPACTION TESTING	LS	1
42	1070-206	TRAFFIC CONTROL	LS	1
43	1090-105-D	MOBILIZATION	LS	1
44	S010-108-A-1	WATER MAIN, TRENCHED, DIP, (CLS2), 8-INCH"	LF	779
45	S010-108-A-2	WATER MAIN, TRENCHLESS, DIP, RESTRAINED JOINT (CLS2), 8-INCH"	LF	779

FIRE HYDRANT CAP AND BONNET SCHEDULE

HYDRANT NO.	STA.	SHEET NO.	COLOR
1	4+96	D.01	BLUE
2	23+52	D.04	BLUE
3	32+01	D.05	BLUE
4	37+31	D.06	BLUE
5	42+86	D.07	BLUE
6	50+33	D.09	GREEN

ESTIMATE REFERENCE INFORMATION

ITEM #	REFERENCE #	DESCRIPTION
1, 2	5010-108-A-1	TRENCH EXCAVATION, DEWATERING, FURNISHING BEDDING MATERIAL, PLACING BEDDING AND BACKFILL MATERIAL, TRACER SYSTEM, TESTING, DISINFECTION, AND POLYETHYLENE WRAP FOR DUCTILE IRON PIPE AND FOR FITTINGS.
44		CLEARING AND GRUBBING OF TREES LESS THAN 6-IN IN DIAMETER ARE INCIDENTAL TO BID ITEM.
		SEE CITY OF CARROLL SUPPLEMENTAL SPECIFICATIONS.
3, 4	5010-108-A-2	FURNISHING AND INSTALLING PIPE; TRENCHLESS INSTALLATION MATERIALS AND EQUIPMENT; PIT EXCAVATION, DEWATERING, AND PLACING BACKFILL MATERIAL; TRACER SYSTEM; TESTING; AND DISINFECTION.
		SEE CITY OF CARROLL SUPPLEMENTAL SPECIFICATIONS.
5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	5010-108-C-1	RESTRAINED JOINTS AND THRUST BLOCKS ARE INCIDENTAL TO BID ITEM.
		CONNECTING TO THE EXISTING MAIN IS INCIDENTAL TO BID ITEM
		SEE CITY OF CARROLL SUPPLEMENTAL SPECIFICATIONS.
24	5020-108-A-0	ALL COMPONENTS ATTACHED TO THE VALVE OR REQUIRED FOR ITS COMPLETE INSTALLATION, INCLUDING UNDERGROUND OR ABOVE GROUND OPERATOR, SQUARE VALVE OPERATION NUT, VALVE BOX AND COVER, VALVE BOX EXTENSION, AND VALVE STEM EXTENSION ARE INCIDENTAL TO BID ITEM.
25	5020-108-C-0	THE FIRE HYDRANT, BARREL EXTENSIONS SUFFICIENT TO ACHIEVE PROPER BURY DEPTH OF ANCHORING PIPE AND HEIGHT OF FIRE HYDRANT ABOVE FINISHED GRADE, AND COMPONENTS TO CONNECT THE FIRE HYDRANT TO THE WATER MAIN, INCLUDING ANCHORING PIPE, FITTINGS, THRUST BLOCKS, PEA GRAVEL OR POROUS BACKFILL MATERIAL, AND FIRE HYDRANT GATE VALVE AND APPURTENANCES, EXCEPT TAPPING VALVE ASSEMBLY IF USED.
		HYDRANT CAPS AND BONNET SHOULD BE PAINTED GREEN TO COORDINATE WITH CITY.
		SEE CITY OF CARROLL SUPPLEMENTAL SPECIFICATIONS.
26	5010-108-D-0	FURNISHING AND INSTALLING CORPORATION STOP, SERVICE PIPING, AND CURB STOP & BOX; TRENCHLESS INSTALLATION MATERIALS AND EQUIPMENT, PIT EXCAVATION AND SHORING/SLOPING, DEWATERING AND PLACING BACKFILL MATERIAL; TRACER SYSTEM; CONNECTING TO EXISTING MAIN; CONNECTING TO EXISTING SERVICE; TESTING AND DISINFECTION ARE ALL INCIDENTAL TO BID ITEM.
		SEE CITY OF CARROLL SUPPLEMENTAL SPECIFICATIONS.
27	5020-108-K	SAWING, HAULING AND DISPOSAL OF MATERIALS REMOVED IS INCIDENTAL TO BID ITEM.
28, 29, 30, 31, 32	7030-108-A-0	SAWING, HAULING AND DISPOSAL OF MATERIALS REMOVED IS INCIDENTAL TO BID ITEM.
	7030-108-I-0	TO BE INSTALLED AT THE SAME LOCATION AND GRADE AS EXISTING.
		SUBBASE PREP INCIDENTAL TO BID ITEM.
33	7030-108-E-0	MINOR GRADE ADJUSTMENTS AT DRIVEWAYS AND OTHER INTERSECTIONS, SUBGRADE PREPARATION, FORMWORK, ADDITIONAL THICKNESS AT THICKENED EDGES, JOINTING, SAMPLING, SMOOTHNESS TESTING AND CORRECTION, AND TESTING ARE INCIDENTAL TO BID ITEM.
	7030-108-F-0	TO BE INSTALLED AT THE SAME LOCATION AND GRADE AS EXISTING.
		SUBBASE PREP AND "CUTS" AT NEAREST JOINT ARE INCIDENTAL TO BID ITEM.
34	7030-108-G-0	CITY SHALL PROVIDE THE CAST IRON DETECTABLE WARNINGS FOR CONTRACTOR INSTALLATION. CONTRACTOR SHALL NOTIFY THE CITY AT LEAST 48 HOURS PRIOR TO INSTALLATION OF THE DETECTABLE WARNINGS. DETECTABLE WARNINGS ARE NORMAL TO THE TRAVELED DIRECTION.
35	7030-108-H-1	EXCAVATION, SUBGRADE PREPARATION, JOINTING, SAMPLING AND TESTING ARE INCIDENTAL TO BID ITEM
		SUBBASE PREP AND "CUTS" AT NEAREST JOINT ARE INCIDENTAL TO BID ITEM.
		TO BE INSTALLED AT THE SAME LOCATION AND GRADE AS EXISTING.
36	7030-108-H-2	EXCAVATION AND SUBGRADE PREPARATION ARE INCIDENTAL TO BID ITEM.
37	7010-108-A-0	EXCAVATION, SUBGRADE PREPARATION, JOINTING, SAMPLING AND TESTING ARE INCIDENTAL TO BID ITEM
	7010-108-E-0	SUBBASE PREP AND "CUTS" AT NEAREST JOINT ARE INCIDENTAL TO BID ITEM.
		TO BE INSTALLED AT THE SAME LOCATION AND GRADE AS EXISTING.
38	4020-108-A	TRENCH EXCACATION, DEWATERING, FURNISHING BEDDING MATERIAL, PLACING AND BACKFILL MATERIAL, GEOGRID, JOINT WRAPPING, O-RING JOINTS, PIPE JOINTS, CONNECTIONS.
39	2010-108-A	REFER TO GENERAL NOTES. SEE D-SHEETS FOR LOCATION AND UNIT.
40	9010-108-A-0	TYPE 1 SEED MIXTURE (PERMANENT LAWN MIXTURE).
		REMOVAL OF ROCK AND OTHER DEBRIS FROM THE AREA, REPAIRING RILLS AND WASHES, PREPARING THE SEEDBED, FURNISHING AND PLACING SEED, INCLUDING ANY TREATMENT REQUIRED, AND FURNISHING WATER AND OTHER CARE DURING THE CARE PERIOD, UNLESS THESE ITEMS ARE BID SEPARATELY; SPREADING FERTILIZER AND MIXING IT INTO THE SOIL, IF SPECIFIED; PLACING AND TUCKING THE MULCH ARE INCIDENTAL TO BID ITEM.
41	3010-108-F	TESTING BY INDEPENDENT TESTING LABORATORY
42	1070-206	TRAFFIC CONTROL SHALL BE ACCORDING WITH SUDAS SPECIFICATIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AS APPROPRIATE. BID AMOUNT FOR TRAFFIC CONTROL SHALL COVER ALL ITEMS NECESSARY FOR TRAFFIC CONTROL AND MAINTENANCE THEREOF THROUGHOUT THE LENGTH OF THIS PROJECT.
		CITY WILL BE RESPONSIBLE FOR ANY DETOUR ROUTING SIGNS, IF DETERMINED TO BE NECESSARY

45	5010-108-A-1	FURNISHING AND INSTALLING PIPE; DOUBLE LAYER POLYWRAP FOR DUCTILE IRON PIPE; TRENCHLESS INSTALLATION MATERIALS AND EQUIPMENT; PIT EXCAVATION, DEWATERING, AND PLACING BACKFILL MATERIAL; TRACER SYSTEM (2-WIRE); TESTING; AND DISINFECTION. SEE CITY OF CARROLL SUPPLEMENTAL SPECIFICATIONS.

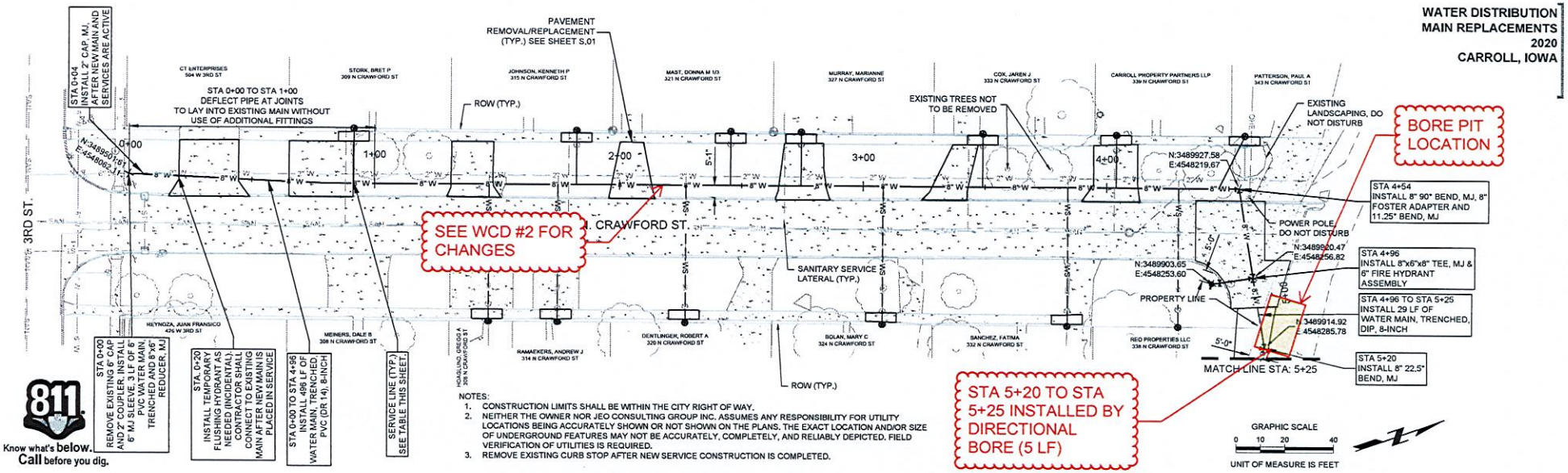
JEO CONSULTING GROUP
1-800-723-4367

WATER DISTRIBUTION
MAIN REPLACEMENTS
2020
CARROLL, IOWA

ESTIMATED QUANTITIES

PROJECT NO. 191586
DATE 3/13/2020
DRAWN BY NJD
FILE NAME S-191586-WAT.dwg
FIELD BOOK CITY OF CARROLL #47
FIELD CREW DJ
SURVEY FILE NO. SV-191586.00-Topo.dwg
PLAN IN HAND INITIALS CTW DATE 3/4/2020
70 PERCENT REVIEW INITIALS EEJ DATE 2/20/2020
95 PERCENT REVIEW INITIALS EEJ DATE 3/4/2020
REVISIONS

WATER DISTRIBUTION MAIN REPLACEMENTS 2020 CARROLL, IOWA

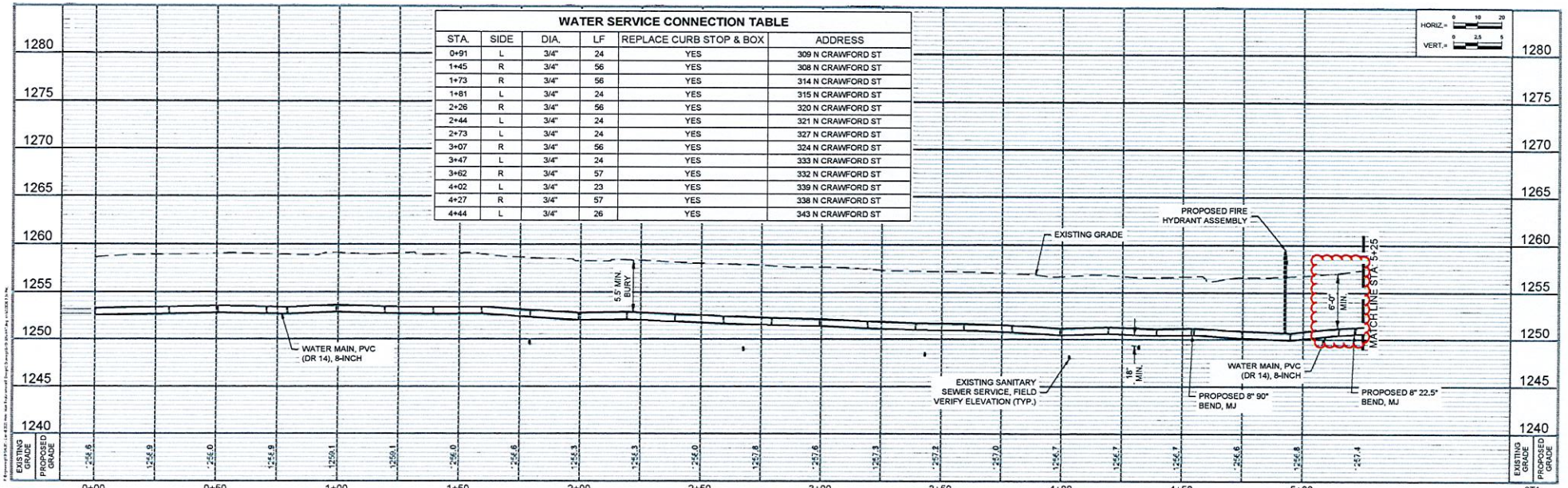


811 Know what's below. Call before you dig.

NOTES:
1. CONSTRUCTION LIMITS SHALL BE WITHIN THE CITY RIGHT OF WAY.
2. NEITHER THE OWNER NOR JEO CONSULTING GROUP INC. ASSUMES ANY RESPONSIBILITY FOR UTILITY LOCATIONS BEING ACCURATELY SHOWN OR NOT SHOWN ON THE PLANS. THE EXACT LOCATION AND/OR SIZE OF UNDERGROUND FEATURES MAY NOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. FIELD VERIFICATION OF UTILITIES IS REQUIRED.
3. REMOVE EXISTING CURB STOP AFTER NEW SERVICE CONSTRUCTION IS COMPLETED.

WATER SERVICE CONNECTION TABLE

STA.	SIDE	DIA.	LF	REPLACE CURB STOP & BOX	ADDRESS
0+91	L	3/4"	24	YES	309 N CRAWFORD ST
1+45	R	3/4"	56	YES	308 N CRAWFORD ST
1+73	R	3/4"	56	YES	314 N CRAWFORD ST
1+81	L	3/4"	24	YES	315 N CRAWFORD ST
2+26	R	3/4"	56	YES	320 N CRAWFORD ST
2+44	L	3/4"	24	YES	321 N CRAWFORD ST
2+73	L	3/4"	24	YES	327 N CRAWFORD ST
3+07	R	3/4"	56	YES	324 N CRAWFORD ST
3+47	L	3/4"	24	YES	333 N CRAWFORD ST
3+62	R	3/4"	57	YES	332 N CRAWFORD ST
4+02	L	3/4"	23	YES	339 N CRAWFORD ST
4+27	R	3/4"	57	YES	338 N CRAWFORD ST
4+44	L	3/4"	26	YES	343 N CRAWFORD ST

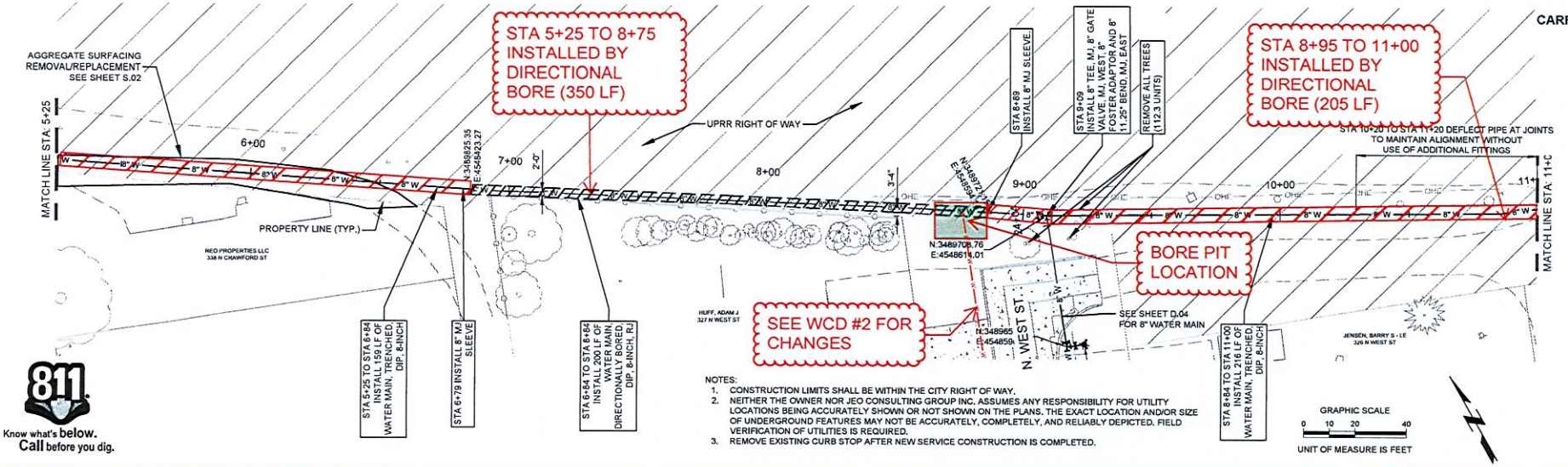


JEO CONSULTING GROUP

REVISION	REVISION	FIELD DATA	FIELD CREW	REVIEW BY	REVIEW DATE	DP MAP BY	DATE	PROJECT NO.	FILE NAME
		CITY OF CARROLL #47	DJ	EEJ	3/3/2020	NJD	5/13/2020	191586	S-191586-WAT.dwg

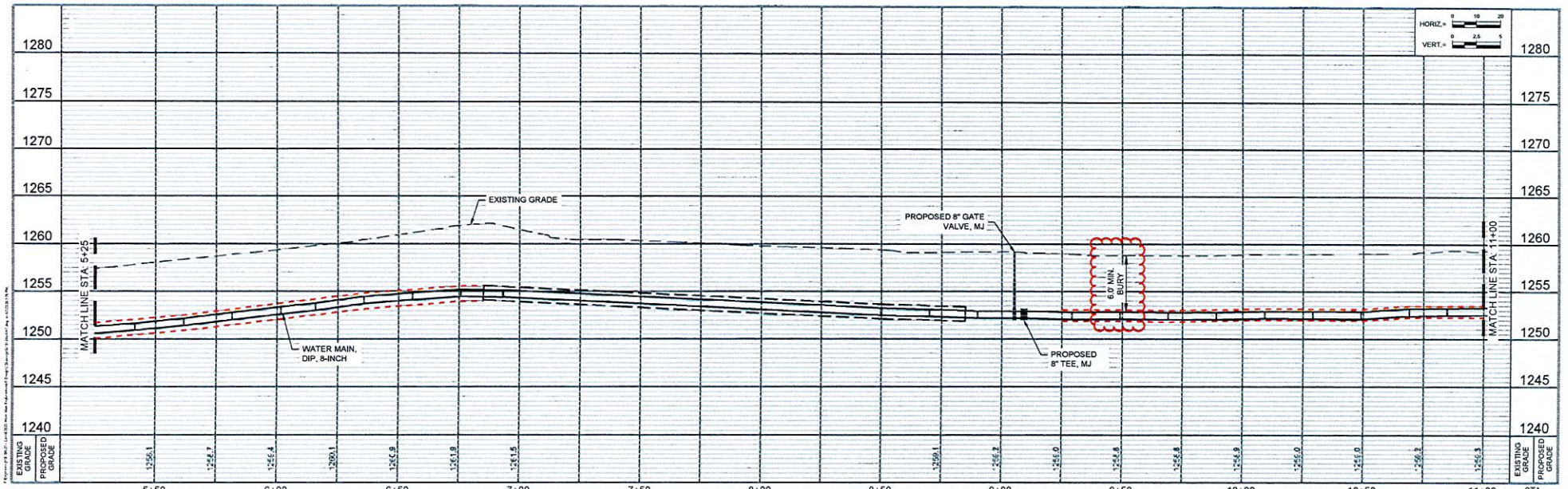
PLAN AND PROFILE D.01

WATER DISTRIBUTION
MAIN REPLACEMENTS
2020
CARROLL, IOWA



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

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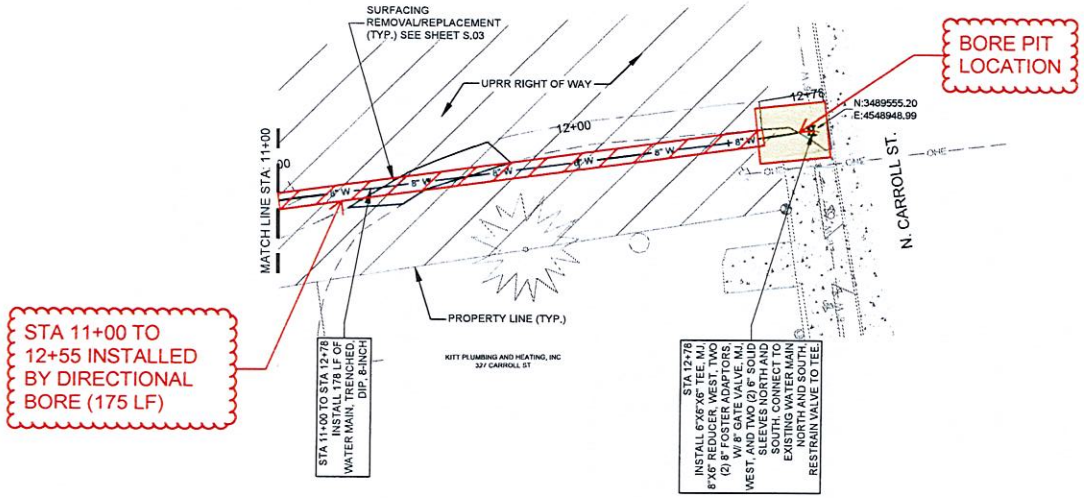
JEO CONSULTING GROUP

6/16/20		CITY OF CARROLL #47	DJ	EEJ	3/3/2020	NJD	5/13/2020	191586	S-191586-WAT.dwg

PLAN AND PROFILE

D.02

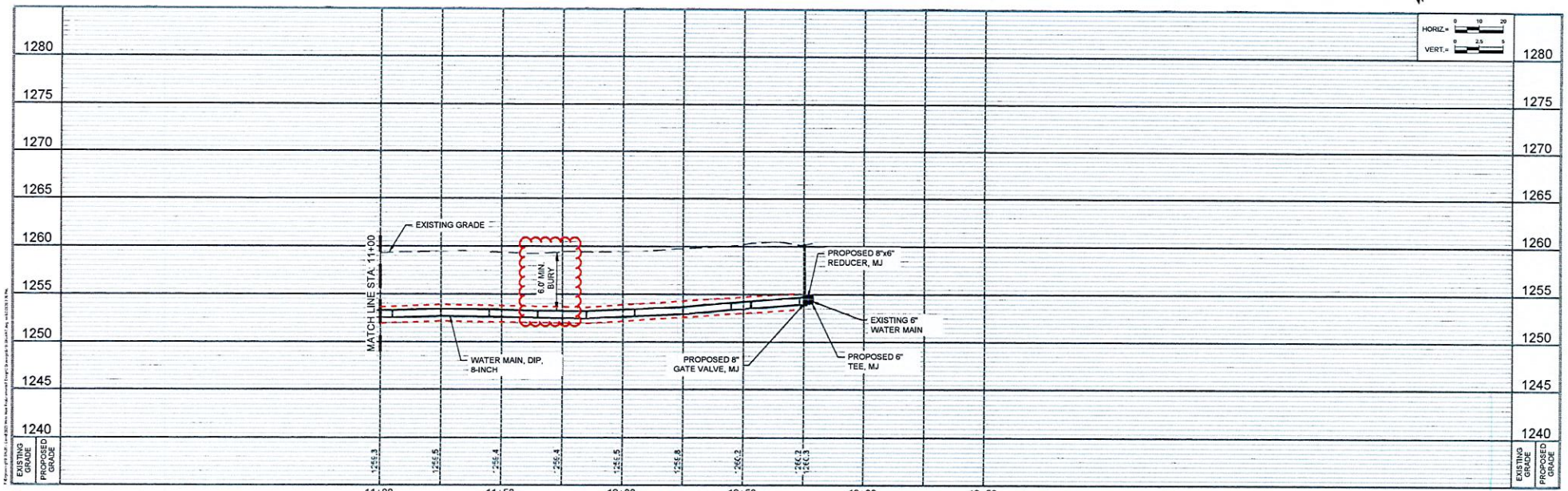
WATER DISTRIBUTION MAIN REPLACEMENTS 2020 CARROLL, IOWA



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

GRAPHIC SCALE
0 10 20 40
UNIT OF MEASURE IS FEET



JEO CONSULTING GROUP

REVISION	FIELD DATA	FIELD CREW	REVIEW BY	REVIEW DATE	DP MASTER	DATE	PROJECT NO.	FILE NAME
6/16/20	CITY OF CARROLL #47	DJ	EEJ	3/3/2020	NJD	5/13/2020	191586	S-191586-WAT.dwg

PLAN AND PROFILE D.03

ENGINEERING ■ ARCHITECTURE ■ SURVEYING ■ PLANNING

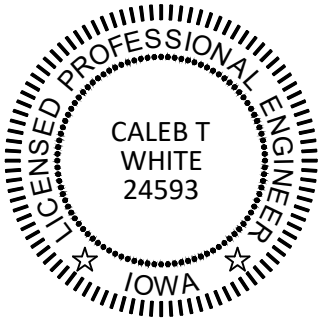
July 21, 2020

Iowa Department of Natural Resources
Water Supply Engineering Section
502 East 9th Street
Des Moines, IA 50319

RE: Carroll, Iowa
Water Supply Well Replacement - 2020
JEO Project No. 191658.00

Enclosed is a field directive for the subject project clarifying the AWWA and 10 state standards regard bentonite grout placement.

Please direct any questions or comments to me at 402.392.9918 or by email at cwhite@jeo.com.



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the state of Iowa.

07/21/2020

Caleb T White, P.E. Date

License Number: 24593

My license renewal date is December 31, 2021.

Pages or sheets covered by this seal:

Field Directive 01

Enclosures

- Field Directive 01

191658.00 - FD 01 to IDNR_07212020.docx

Field Order Form

FIELD ORDER NO. | 1
DATE | 7/20/20
PROJECT | Water Supply Well Replacements - 2020
JEO PROJECT NO. | 191658.00
LOCATION | Carroll, IA
OWNER | City of Carroll
CONTRACTOR | Sargent Drilling

Description of Modification Contractor shall install bentonite chips and bentonite slurry in accordance with 10 states standards and AWWA A100, as required by the contract documents. These requirements include:

Where allowed by the reviewing authority, this is a mixture of water and commercial sodium-bentonite clay manufactured for the purpose of water well grouting. Bentonite mixtures shall contain no less than 20 percent bentonite solids. Organic polymers used in the grout mixtures must meet ANSI/NSF Standard 60. (10 State Standards)

Bentonite grout. Bentonite grout shall consist of a high-solids bentonite grout and water mixture with a minimum of 20 percent solids, mixed and placed in accordance with the manufacturer's written instructions. Conventional bentonite drilling clay and water mixtures are not allowed. Such products shall not impart harmful characteristics to the well and shall be mixed and placed according to the manufacturer's instructions. (AWWA A100)

Will additional drawings be required? ☐ **Yes** ☒ **No**

This form is to be used only to record minor modifications which do not increase or decrease price, contract time, or change the intent of a specific provision of the contract. Any modification involving a change in contract price, contract time or contract requirement must be covered by a formal Change Order executed by the OWNER and the CONTRACTOR.

Recommended:	**Accepted:**
ENGINEER	**CONTRACTOR**
07/20/2020	7-20-2020
Date	**Date**

cc: Project Manager, Resident Project Representative, Contractor, Owner