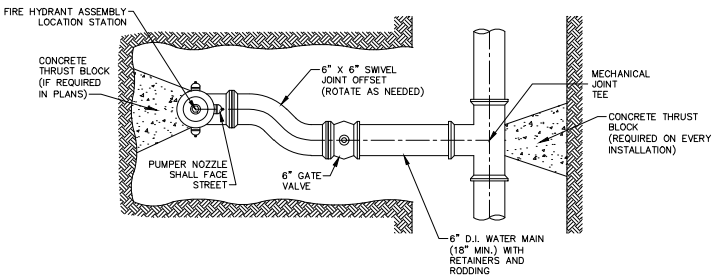
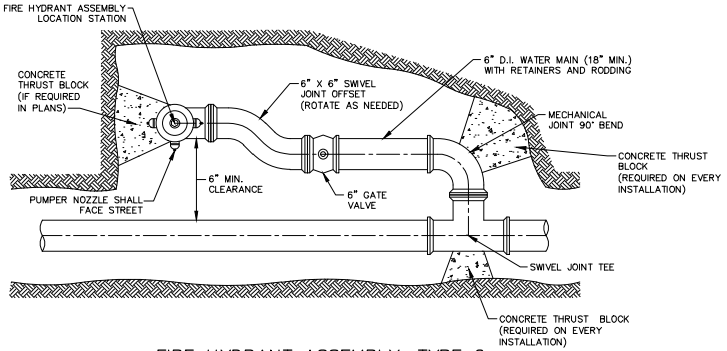
Exhibit A



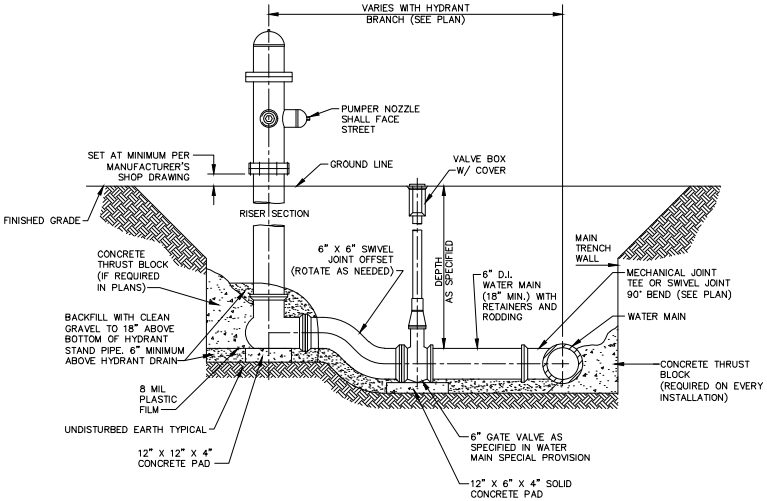
FIRE HYDRANT ASSEMBLY, TYPE 1
PLAN VIEW
NO SCALE



FIRE HYDRANT ASSEMBLY, TYPE 2
PLAN VIEW
NO SCALE

TABLE OF FIRE HYDRANT
CONCRETE THRUST BLOCKS REQUIRED
BY LOCATION

HYDRANT LOCATION	DESCRIPTION	THRUST BLOCK REQUIRED	
		YES	NO
STA. 1+34, 29' RT	SE CORNER OF WEST GRAHAM AVE AND HIGH ST		X
STA. 3+86, 29' RT	SW CORNER OF WEST GRAHAM AVE AND TOSTEVIN ST		X
STA. 9+30, 29' RT	SW CORNER OF WEST GRAHAM AVE AND MARIAN AVE		X
TOTALS			3



FIRE HYDRANT ASSEMBLY DETAIL
NO SCALE

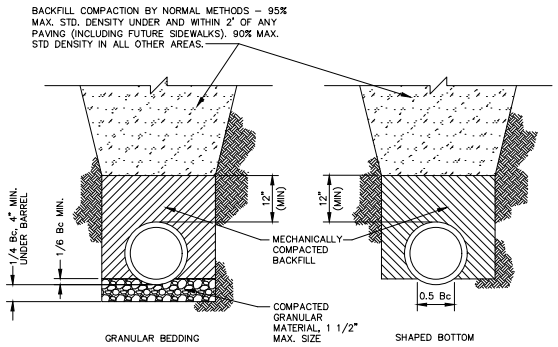
WM-1A
2-13

NOTES:

1. REFER TO SECTION 5-FIRE HYDRANTS IN THE WATER MAIN SPECIAL PROVISION FOR ADDITIONAL FIRE HYDRANT REQUIREMENTS.
2. 8 MIL POLYETHYLENE ENCASEMENT REQUIRED ON WATER MAIN, FITTINGS, VALVES, AND RISER SECTION OF FIRE HYDRANT TO THE GROUND LINE.
3. 6" WATER MAIN BRANCH SHALL NOT BE MEASURED FOR PAYMENT UNLESS NOTED OTHERWISE ON PLANS.
4. LOCKING CAPS REQUIRED FOR 3 NOZZLE OUTLETS WHEN SPECIFIED ON PLANS.
5. INSTALL SWIVEL JOINT 90° BEND AND/OR SWIVEL OFFSET AS NECESSARY TO COMPLY WITH HYDRANT LOCATION/ELEVATION REQUIREMENTS.
6. CONTRACTOR SHALL LOCATE THE NEW FIRE HYDRANTS AS NOT TO CONFLICT WITH ANY EXISTING UNDERGROUND UTILITIES THAT ARE NOT BEING RECONSTRUCTED. ANY NECESSARY WORK REQUIRED BY THE CONTRACTOR TO WORK AROUND EXISTING UNDERGROUND UTILITIES TO CONSTRUCT THE NEW FIRE HYDRANTS SHALL BE CONSIDERED INCIDENTAL.
7. BOTTOM OF BOTTOM FIRE HYDRANT FLANGE SHALL BE AT OR WITHIN ½" MORE THAN THE MANUFACTURER'S SPECIFIED MINIMUM AS NOTED IN THE SHOP DRAWING SUBMITTAL, MEASURED AT GROUND LINE DIRECTLY BELOW THE PUMPER NOZZLE. CONTRACTOR SHALL ROTATE SWIVEL JOINT OFFSET AS NECESSARY TO MEET THE REQUIRED ELEVATION.
8. CONTRACTOR SHALL ROD THE 6" D.I. WATER MAIN USING MATERIALS PROVIDED BY THE CBWW.
9. CONTRACTOR SHALL HAVE FINISH GRADE STAKED PRIOR TO INSTALLATION OF THE FIRE HYDRANT ASSEMBLY. IF CONTRACTOR DETERMINES, AND CBWW CONFIRMS, THAT THE 6" SWIVEL JOINT OFFSET WILL NOT ALLOW THE FIRE HYDRANT TO BE PLACED AT THE REQUIRED ELEVATION, CBWW WILL PROVIDE A LONGER OFFSET TO BE INSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST. CONTRACTOR SHALL PROVIDE THE SUPPLIED 6" OFFSET TO THE CBWW.
10. CONTRACTOR SHALL ALLOW 1 CALENDAR MONTH FOR A CBWW SUPPLIED SWIVEL OFFSET IF REQUIRED. CONTRACTOR SHALL PICK UP THE CBWW SUPPLIED OFFSET, AND DELIVER THE CONTRACTOR SUPPLIED 6" SWIVEL OFFSET AT THE CBWW DISTRIBUTION OFFICE AT 2000 NORTH 25TH STREET.

FILENAME: S:\Purple_Team\Projects\164624_West Graham Reconstruction\Engineering\Dwgs\Design\164624_FRONT END SHEETS.dwg
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Exhibit A



TYPE 1 TYPE 2

CLASS C

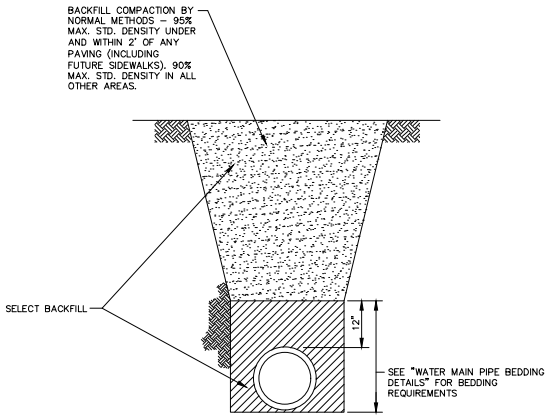
GENERAL NOTES:

1. Bc = OUTSIDE DIAMETER OF PIPE BARREL
2. TYPE 1 REQUIRED ONLY AS DIRECTED BY THE WATER WORKS. GRANULAR MATERIAL WILL BE PAID FOR SEPARATELY.

WATER MAIN AND WATER SERVICE PIPE BEDDING DETAILS

NO SCALE

WM-3
5-09



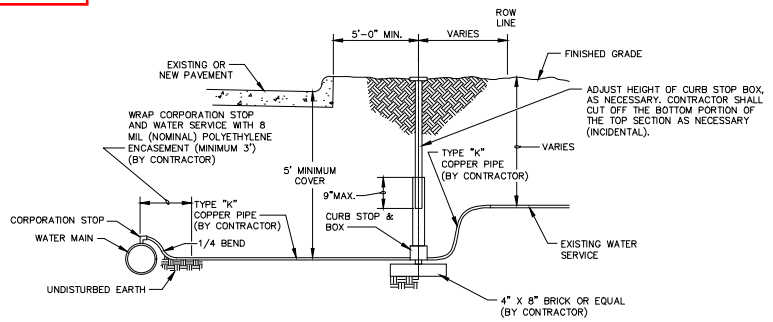
GENERAL NOTES:

1. SELECT BACKFILL SHALL ONLY BE USED WHEN AUTHORIZED BY THE WATER WORKS.
2. SELECT BACKFILL WILL BE PAID FOR SEPARATELY.

SELECT BACKFILL FOR WATER MAIN DETAIL

NO SCALE

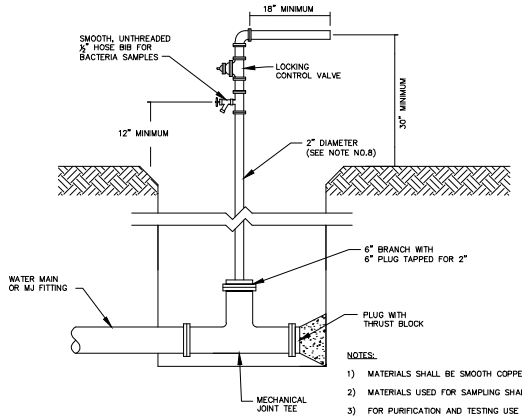
WM-6
12-02



DETAIL OF WATER SERVICE

NO SCALE

WM-2
10-06



NOTES:

1) MATERIALS SHALL BE SMOOTH COPPER, SCHEDULE 80 P.V.C., AND/OR BRASS FITTINGS.
2) MATERIALS USED FOR SAMPLING SHALL BE SANITIZED BEFORE TAKING ANY SAMPLES.
3) FOR PURIFICATION AND TESTING USE ON WATER MAINS WITH LESS THAN 12" DIAMETER.
4) SUITABLE FOR "FLUSHING ONLY" ON ALL SIZE WATER MAINS.
5) SUPPORT, INSULATE AND PROTECT AS NECESSARY (INCIDENTAL).
6) CONTRACTOR SHALL PROVIDE ACCEPTABLE DISCHARGE PIPING TO AN APPROVED LOCATION.
7) WATER WORKS MAY UTILIZE BLOWOFF FOR FLUSHING EXISTING MAINS.
8) CONTRACTOR SHALL PROVIDE FITTINGS AND MATERIAL NECESSARY TO PLACE THE BLOWOFF OUTSIDE OF ACTIVE ROADWAYS / SIDEWALKS.

TEMPORARY COMBINATION BLOWOFF AND SAMPLING TAP

NO SCALE

WM-14
2-15

FILENAME: S:\Purple_Team\Projects\164624_West Graham Reconstruction\Engineering\Dwgs\Design\164624_FRONT END SHEETS.dwg
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DESIGN TEAM – HGM * CADD * PRODUCED	STATE OF IOWA			CITY OF COUNCIL BLUFFS	PROJECT NUMBER STP-U-1642(690)--70-78	SHEET NUMBER MWM.02

Exhibit A

GENERAL NOTES

1. ALL WATER MAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROVED STANDARD SPECIFICATIONS CURRENTLY ON FILE WITH THE IOWA DEPARTMENT OF NATURAL RESOURCES, WHICH WERE APPROVED ON 3/16/13. REFER TO THE WATER MAIN SPECIAL PROVISIONS FOR THE APPROVED STANDARD SPECIFICATIONS. – REFER TO GENERAL NOTE NO. 33 FOR TESTING REVISIONS. ALL PROPOSED WATER MAIN SHALL MAINTAIN 5.0' MINIMUM COVER, UNLESS OTHERWISE NOTED WITHIN THE PLANS.

2. THE CONTRACTOR SHALL FIELD VERIFY THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTING THE WATER MAIN IMPROVEMENTS.

   FIELD VERIFICATION FOR ALL UTILITIES INCLUDING WATER MAINS IS REQUIRED AND SHALL BE INCIDENTAL TO THE PROJECT AND SHALL NOT RESULT IN ADDITIONAL COSTS TO THE OWNERS.

   CONTRACTOR SHALL NOT DISTURB THE EXISTING UNDERGROUND UTILITIES, UNLESS OTHERWISE NOTED, WHILE CONSTRUCTING THE WATER MAIN. DEFLECT THE NEW WATER MAIN OR USE FITTINGS (AS NOTED ON THE PLANS) TO CHANGE THE WATER MAIN ALIGNMENT, AS NECESSARY. THE WATER MAIN IS TO GO OVER OR UNDER THE EXISTING UTILITIES WITH A MINIMUM 0.5' CLEARANCE, 1.5' CLEARANCE REQUIRED FOR ALL SEWERS. MAINTAIN THE MINIMUM 5.0' COVER, UNLESS OTHERWISE NOTED.

   IF A DIRECT CONFLICT EXISTS AFTER FIELD VERIFICATION, THE ENGINEER RESERVES THE RIGHT TO REVISE THE WATER MAIN ALIGNMENT TO ELIMINATE THE CONFLICT WITH THE EXISTING UTILITIES WITHOUT ADJUSTMENTS TO THE EXISTING CONTRACT UNIT PRICES OR COMPLETION DATE.

3. THE CONTRACTOR SHALL OBTAIN PERMISSION FROM THE CITY FOR THE USE OF STORM SEWER AS NECESSARY TO TRANSPORT THE FLUSHING WATER. THE FLUSHING SHALL BE DONE IN A MANNER SUCH THAT THE SEWER IS NOT SURCHARGED.

   IF CITY SEWERS ARE NOT AVAILABLE FOR USE TO TRANSPORT THE FLUSHING WATER, THE CONTRACTOR SHALL FLUSH THE WATER MAIN IN A MANNER SUCH THAT NO SOIL EROSION, SURCHARGING OF DRAINAGE STRUCTURES, OVER TOPPING OF EXISTING ROADWAY DITCHES, OR PONDING OF FLUSHING WATER OCCURS.

4. ALL ABANDONED PIPE ENCOUNTERED, EITHER KNOWN OR UNKNOWN, SHALL BE REMOVED OR PLUGGED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER, AND SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND SHALL NOT RESULT IN ADDITIONAL COSTS TO THE WATER WORKS OR ANY TIME EXTENSIONS BY THE WATER WORKS.

5. ANY DAMAGED POLYETHYLENE ENCASEMENT AROUND PIPE OR FITTINGS NOTICED PRIOR TO PLACEMENT IN THE WATER MAIN TRENCH AND/OR ANY DAMAGE DUE TO INSTALLATION OF WATER SERVICES SHALL BE REPAIRED BY THE CONTRACTOR, AS DIRECTED BY THE WATER WORKS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND SHALL NOT RESULT IN ADDITIONAL COSTS TO THE OWNERS. WHEN HANDLING POLYETHYLENE ENCASED PIPE, THE CONTRACTOR SHALL USE A FABRIC TYPE SLING OR A SUITABLY PADDED CABLE OR CHAIN TO PREVENT DAMAGE TO THE POLYETHYLENE ENCASEMENT.

6. ANY DELAYS IN OBTAINING NECESSARY MATERIALS NOT SHOWN ON THE PLANS, AND DELAYS DURING REVISIONS OF THE WATER MAIN ALIGNMENT AND/OR ANY DELAYS CAUSED BY OBSTRUCTIONS ENCOUNTERED DURING CONSTRUCTION SHALL NOT RESULT IN ANY ADDITIONAL COSTS TO THE OWNERS OR ANY TIME EXTENSIONS BY THE WATER WORKS.

7. THE CONTRACTOR SHALL NOT BACKFILL FITTINGS OR OTHER WATER MAIN APPURTENANCES UNTIL THE WATER WORKS OBSERVER/FIELD REPRESENTATIVE HAS SEEN THE COMPLETED WORK AND RECORDED THE LOCATIONS. THE WATER WORKS MAY REQUIRE THE CONTRACTOR TO EXPOSE THE WORK, AT THE CONTRACTOR'S EXPENSE, IF BACKFILLING PROCEEDS PRIOR TO THE WORK BEING OBSERVED AND RECORDED.

8. THE WATER WORKS OBSERVER/FIELD REPRESENTATIVE DOES NOT HAVE THE AUTHORITY TO CHANGE THE PLANS OR AUTHORIZE ADDITIONAL WORK DURING CONSTRUCTION. IF THE CONTRACTOR WANTS TO REQUEST CHANGES TO THE WATER MAIN PLANS OR WANTS AUTHORIZATION FOR ADDITIONAL WORK, THE CONTRACTOR OR THE WATER WORKS OBSERVER/FIELD REPRESENTATIVE SHALL NOTIFY BRIAN CADY (WATER WORKS) OR THE WATER WORKS CONSULTANT ENGINEER.

   CHANGES TO THE WATER MAIN PLANS OR ADDITIONAL WORK THAT IS PERFORMED PRIOR TO PROPER AUTHORIZATION, INCLUDING AN APPROVED ADDITIONAL COST, SHALL NOT BE ACCEPTED, AND SHALL NOT RESULT IN ANY ADDITIONAL COSTS TO THE OWNERS.

9. NO WATER MAIN IMPROVEMENTS SHALL BE BUILT WITHOUT CONSTRUCTION STAKING APPROVED BY THE WATER WORKS.

   THE WATER WORKS TYPICALLY REQUIRES ALL STATION/OFFSETS CALLS FOR THE WATER MAIN CONSTRUCTION, AS SHOWN ON THE PLANS, BE STAKED WITH A 10' OFFSET AND ALL PROPOSED STORM AND SANITARY SEWER CROSSINGS BE STAKED WITH A CUT/FILL MARKED FOR FINISH GRADE AND SEWER INVERT.

   THE WATER WORKS TYPICALLY REQUIRES THE WATER MAIN ALIGNMENT BE STAKED AT 50' INTERVALS, LOW POINTS, AND HIGH POINTS WITH A CUT/FILL MARKED FOR FINISH GRADE USING A 10' OFFSET. ADDITIONAL STAKING SHALL BE PROVIDED UPON REQUEST OF THE COUNCIL BLUFFS WATER WORKS.

   THE CONTRACTOR SHALL NOT REMOVE OR DISTURB ANY STAKING OF THE WATER MAIN UNTIL AUTHORIZED BY THE WATER WORKS OBSERVER/FIELD REPRESENTATIVE OR THE ENGINEER.

10. CONTRACTOR SHALL HAVE PROPOSED UNDERGROUND STORM AND SANITARY SEWERS STAKED AT NEW WATER MAIN CROSSINGS AND AT PROPOSED STORM INLETS WITH POTENTIAL CONFLICTS PRIOR TO INSTALLING THE NEW WATER MAIN.

    IF A DIRECT CONFLICT IS CREATED BY THE CONTRACTOR, THE ENGINEER MAY REQUIRE THE WATER MAIN ALIGNMENT BE REVISED TO ELIMINATE THE CONFLICT AT NO ADDITIONAL COST TO THE OWNERS OR TIME EXTENSIONS BY THE WATER WORKS.

GENERAL NOTES

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE WATER WORKS OBSERVER/FIELD REPRESENTATIVE 24 HOURS IN ADVANCE (IN ADDITION TO THE BELOW NOTIFICATION REQUIREMENTS) OF WANTING WATER SHUT-OFF NOTICES DELIVERED TO AFFECTED RESIDENTS AND/OR BUSINESSES. THE DISTRIBUTION OF WATER SHUT-OFF NOTICES TO RESIDENTS AND/OR BUSINESSES SHALL ONLY BE PERFORMED BY THE WATER WORKS OBSERVER/FIELD REPRESENTATIVE.

    A MINIMUM OF 24 HOURS ADVANCE NOTICE IS REQUIRED FOR WATER SHUT-OFF OF RESIDENTIAL USERS AND 48-HOURS ADVANCE NOTICE IS REQUIRED FOR WATER SHUT-OFF OF COMMERCIAL OR BUSINESS USERS. THE HOURS OF ADVANCE NOTIFICATION TO RESIDENTS AND/OR BUSINESSES SHALL NOT INCLUDE SATURDAYS, SUNDAYS, AND HOLIDAYS. WATER MAINS SHALL NOT BE SHUT OFF UNTIL AFTER THE MINIMUM NOTICE TIMES HAVE BEEN MET. ANY ADDITIONAL COSTS OR DELAYS TO THE CONTRACTOR RESULTING FROM FAILURE BY THE CONTRACTOR TO COMPLY WITH STATED NOTIFICATION REQUIREMENTS SHALL BE CONTRACTOR'S RESPONSIBILITY AND SHALL NOT RESULT IN ANY ADDITIONAL COSTS TO THE OWNERS OR TIME EXTENSIONS BY THE WATER WORKS.

    THE WATER WORKS RESERVES THE RIGHT TO HAVE THE CONTRACTOR RESCHEDULE THE WORK FOR EMERGENCIES, WATER SUPPLY CONCERNS, MAIN BREAKS AND OTHER CAUSES AS DEEMED NECESSARY BY THE WATER WORKS, WITHOUT NOTICE, ADDITIONAL COMPENSATION OR ADDITIONAL WORKING DAYS. REFER TO THE WATER MAIN SPECIAL PROVISION FOR ADDITIONAL INFORMATION.

    CONTRACTOR SHALL HAVE THE NECESSARY EXCAVATION COMPLETED AND THE PIPE ASSEMBLIES CONSTRUCTED BEFORE THE WATER MAIN(S) ARE SHUT DOWN FOR 'CUT AND CONNECT' OR 'CUT AND PLUG' OPERATIONS TO REDUCE WATER SHUT-OFF TIME.

12. THE CONTRACTOR SHALL NOT COMMENCE ANY WATER MAIN WORK ON THE PROJECT UNTIL AFTER DOUG ADKINS (WATER WORKS (712) 328-1006- EXT. 1024) HAS BEEN NOTIFIED, A MINIMUM OF 48 HOURS IN ADVANCE, OF THE DATE WHEN THE CONTRACTOR INTENDS TO COMMENCE ANY WATER MAIN IMPROVEMENTS.

13. THE WATER WORKS WILL PROVIDE ALL TIE ROD MATERIALS WHEN NOTED ON THE PLANS OR AS REQUESTED AT OTHER LOCATIONS BY THE WATER WORKS. THE CONTRACTOR SHALL CUT AND INSTALL THE MATERIAL AS DIRECTED BY THE WATER WORKS. THE INSTALLATION OF THIS MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND SHALL NOT RESULT IN ADDITIONAL COSTS TO THE OWNERS OR TIME EXTENSIONS BY THE WATER WORKS.

14. WATER MAIN DISINFECTION AND TESTING (PERFORMED BY THE CONTRACTOR) SHALL NOT BE PERFORMED WITHOUT THE WATER WORKS OBSERVER/FIELD REPRESENTATIVE PRESENT.

15. CONTRACTOR SHALL USE EXTREME CAUTION WHEN EXPOSING OR CONNECTING TO EXISTING WATER MAINS OR WATER SERVICES TO PREVENT MOVEMENT OR DAMAGE TO THE EXISTING FITTINGS AND/OR PIPES WHICH ARE NOTED ON THE PLANS TO REMAIN IN SERVICE. THIS WORK SHALL NOT BE PERFORMED WITHOUT THE WATER WORKS OBSERVER/FIELD REPRESENTATIVE PRESENT.

16. CONTRACTOR SHALL ADEQUATELY SUPPORT AND PROTECT THE EXISTING OR NEW WATER MAINS NOTED ON THE PLANS TO REMAIN IN SERVICE WHEN EXCAVATION IS REQUIRED UNDERNEATH OR ALONG SIDE THE EXISTING OR NEW WATER MAINS. THE CONTRACTOR SHALL SUBMIT THEIR PROPOSED METHOD OF SUPPORTING THE EXISTING OR NEW WATER MAINS TO THE WATER WORKS FOR REVIEW AND APPROVAL PRIOR TO PERFORMING ANY STORM OR SANITARY SEWER RECONSTRUCTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND SHALL NOT RESULT IN ADDITIONAL COSTS TO THE OWNERS.

17. CONTRACTOR SHALL COMPACT SUITABLE BACKFILL UNDER THE EXISTING OR NEW WATER MAINS NOTED ON THE PLANS TO REMAIN IN SERVICE WHEN EXCAVATION IS REQUIRED UNDER THE WATER MAINS FOR STORM, SANITARY SEWER MAINS, AND SANITARY SEWER LATERALS. THE BACKFILL MATERIAL MAY BE SOIL, SAND OR GRAVEL AND COMPACTED TO 95F STANDARD PROCTOR DENSITY AT 0 TO +4 OPTIMUM MOISTURE CONTENT. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND SHALL NOT RESULT IN ADDITIONAL COSTS TO THE OWNERS.

18. ALL ABANDONED PIPE ENCOUNTERED SHALL BE REMOVED OR PLUGGED IN ACCORDANCE WITH THE PLAN AND SPECIFICATIONS.

    THE CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF-SITE ALL ENCOUNTERED ABANDONED PIPE AS NECESSARY FOR CONSTRUCTION OF THE WATER MAIN IMPROVEMENTS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND SHALL NOT RESULT IN ADDITIONAL COSTS TO THE OWNER.

19. PAYMENT SHALL BE WITHHELD FROM THE CONTRACTOR UNTIL SHOP DRAWINGS FOR THE MATERIALS INCORPORATED INTO THE WATER MAIN IMPROVEMENTS ARE ACCEPTED BY THE ENGINEER.

20. REPLACEMENT OF ANY PORTION OF NEW OR EXISTING SANITARY LATERALS SHALL BE CONSIDERED INCIDENTAL TO THE WATER MAIN WORK.

21. NEW AND EXISTING WATER SERVICES BEING CROSSED DURING STORM OR SANITARY SEWER WORK SHALL BE PROTECTED AT ALL TIMES. IF NECESSARY, DISCONNECT THE WATER SERVICE FROM THE CORP OR STOP BOX, MOVE IT OUT OF THE WAY AND RECONNECT THE SAME DAY AS IT IS REMOVED. THIS WORK SHALL NOT BE PERFORMED WITHOUT THE CBWW OBSERVER/FIELD REPRESENTATIVE FIRST BEING INFORMED AND ON SITE DURING THE SERVICE DISCONNECTION AND RECONNECTION. ANY DAMAGE OR LEAKS RESULTING FROM THE WORK SHALL BE FIXED OR REPLACED BY THE CONTRACTOR, AS DIRECTED BY THE CBWW, AT THE CONTRACTOR'S EXPENSE. WATER SERVICE INTERRUPTION SHALL BE SUBJECT TO THE ABOVE SERVICE INTERRUPTION NOTIFICATION REQUIREMENTS.

22. REMOVAL OF EXCESS MOISTURE FROM OTHERWISE SUITABLE TRENCH BACKFILL SHALL BE CONSIDERED INCIDENTAL TO THE WATER MAIN WORK, DETERMINATION OF BACKFILL SUITABILITY SHALL BE MADE BY THE ENGINEER. REMOVAL OF EXCESS MOISTURE SHALL NOT RESULT IN ANY ADDITIONAL COSTS TO THE OWNERS OR TIME EXTENSIONS BY THE WATER WORKS.

GENERAL NOTES

23. WATER MAIN PURIFICATION SHALL BE PERFORMED BY THE CONTRACTOR USING EITHER THE CONTINUOUS-FEED METHOD OR THE SLUG METHOD. THE CONTRACTOR SHALL IDENTIFY THE SELECTED PURIFICATION METHOD AND ANTICIPATED START DATE TO THE CBWW OBSERVER/FIELD REPRESENTATIVE A MINIMUM OF 24 HOURS PRIOR TO THE PLANNED START DATE OF THE WATER MAIN PURIFICATION PROCESS. REFER TO SECTION 13.1.4 OF THE WATER MAIN SPECIAL PROVISION FOR ADDITIONAL INFORMATION REGARDING THE APPROVED PURIFICATION METHODS.

24. THE CONTRACTOR SHALL PROVIDE AND PLACE STEEL FENCE POSTS WITH BLUE PAINT NEAR ALL VALVE BOXES AND CURB STOP BOXES DURING INSTALLATION TO MARK THEIR LOCATION FOR ALL THOSE WORKING IN THE AREA. THOSE MATERIALS SHALL REMAIN IN PLACE UPON COMPLETION OF ALL PAVING AND GRADING (EXCEPT FOR BOXES LOCATED IN AREAS OF FUTURE PAVEMENT THAT ARE UNPAVED AT THE TIME OF WATER MAIN INSTALLATION). THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND SHALL NOT RESULT IN ADDITIONAL COSTS TO THE OWNER.

25. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL VALVE BOXES DURING CONSTRUCTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND SHALL NOT RESULT IN ADDITIONAL COSTS TO THE OWNER.

26. A PRECONSTRUCTION MEETING SHALL BE HELD PRIOR TO COMMENCEMENT OF ANY WORK ON THE PROJECT AND SHALL BE ATTENDED BY THE CONTRACTOR, ENGINEER, WATER WORKS OBSERVER/FIELD REPRESENTATIVE AND OTHERS TO DISCUSS THE PROJECT.

27. ANY NEGATIVE IMPACT TO EXISTING CBWW FACILITIES WHETHER FORESEEN OR NOT SHALL BE REMEDIED BY AND AT THE EXPENSE OF THE CONTRACTOR.

28. THE CONTRACTOR SHALL NOT USE CUSTOMER WATER FOR ANY REASON DURING CONSTRUCTION. IF WATER IS NEEDED FOR CONSTRUCTION, THE CONTRACTOR SHALL SECURE AN APPROVED MEANS TO OBTAIN CONSTRUCTION WATER. THE CBWW MAY HAVE A HYDRANT METER AVAILABLE. IF A HYDRANT METER IS DESIRED, THE CONTRACTOR SHALL CONTACT TRAVIS ANDERSON AT (712) 328-1006, EXT. 1033. THE CONTRACTOR SHALL PAY ALL REQUIRED FEES AND CHARGES AND SHALL MEET ALL REQUIREMENTS TO OBTAIN THE FIRE HYDRANT METER FROM THE CBWW.

29. WATER MAIN PURIFICATION TAPS SHALL BE REMOVED BY THE CONTRACTOR AFTER THE WATER MAIN HAS PASSED ALL TESTS. THE WATER WORKS MAY ASSESS A PENALTY TO ALL PURIFICATION TAPS THAT HAVE NOT BEEN REMOVED WITHIN TWO WORKING DAYS AFTER THE WATER MAIN HAS PASSED ALL TESTS.

30. ALL STOCKPILED PIPE AND APPURTENANCES SHALL BE PLUGGED AND/OR HAVE THE ENDS OF THE PIPE COVERED FOR STOCKPILE PAYMENT.

31. AFTER TWO FAILED PURIFICATION BACTERIA TESTS (POSITIVE FOR PATHOGENIC BACTERIA) THE WATER WORKS MAY REQUIRE TEMPORARY HYDRANTS IN PLACE OF BLOWOFFS.

32. CONTRACTOR SHALL SUBMIT A STAGING PLAN AND/OR FLUSHING PLAN FOR CBWW AND CBWW CONSULTANT ENGINEER TO REVIEW PRIOR TO ANY WATER MAIN WORK COMMENCING. CONTRACTOR SHALL ALLOW 7 DAYS FOR REVIEW. THESE PLANS SHALL BE SUBMITTED AS SHOP DRAWINGS.

33. PER AWWA C651: MINIMUM FLUSHING RATE SHALL BE 3.0 FT/SEC. BACTERIOLOGICAL SAMPLING OF NEW MAINS SHALL HAVE TWO OPTIONS FOR COMPLETIONS.

    OPTION A – SAMPLES ARE 16 HOURS APART.

    OPTION B – SAMPLES ARE 15 MINUTES APART AFTER A 16 – HOUR REST PERIOD. CONTRACTOR SHALL ESTABLISH SAMPLING OPTION WITH CBWW PRIOR TO COMMENCEMENT OF WATER MAIN DISINFECTIONS.

34. HYDRANTS SHALL BE FACTORY PAINTED PER THE PAINT MANUFACTURER'S SPECIFICATIONS. PAINT SHALL BE YELLOW PRIMER, WITH A YELLOW FINISH COAT REQUIRED.

35. THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE TO THE CITY OF COUNCIL BLUFFS TRAFFIC DEPARTMENT PRIOR TO NEEDING SIGN REMOVAL SO THAT THE REMOVAL OF THE PERMANENT SIGNS MAY BE COMPLETED BY THE CITY. DURING THE PERIOD THAT PERMANENT SIGNAGE IS REMOVED, TEMPORARY SIGNAGE SHALL BE PLACED IN ACCORDANCE WITH THE CITY OF COUNCIL BLUFFS TRAFFIC DEPARTMENT REQUIREMENTS. ONCE CONSTRUCTION IN AN AREA IS COMPLETE, THE CONTRACTOR SHALL GIVE IMMEDIATE NOTICE TO THE CITY OF COUNCIL BLUFFS TRAFFIC DEPARTMENT SO THAT REPLACEMENT OF THE PERMANENT SIGNS MAY BE ERECTED BY THE CITY BEFORE THE STREET IS OPENED. THIS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

36. ANY DAMAGE TO THE COATING ON PIPE/FITTINGS SHOULD BE REPAIRED WITH A NEW COATING MEETING ANSI/AWWA C-151/A21.51 STANDARDS.

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Exhibit A

WATER SERVICES						
ADDRESS NO.	AVENUE OR STREET	BUSINESS	TYPE AND SIZE OF SERVICE			
			3/4" NEAR SIDE	3/4" FAR SIDE	1" NEAR SIDE	1" FAR SIDE
1605	HIGH ST	SINGLE FAMILY DWELLING		X		
117	W GRAHAM AVE	SINGLE FAMILY DWELLING	X			
121	W GRAHAM AVE	SINGLE FAMILY DWELLING	X			
184	W GRAHAM AVE	SINGLE FAMILY DWELLING				X
178	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
174	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
1625/1627	TOSTEVIN ST	DUPLEX/CONDO			X	
157	W GRAHAM AVE	SINGLE FAMILY DWELLING	X			
170	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
162	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
155	W GRAHAM AVE	SINGLE FAMILY DWELLING	X			
153	W GRAHAM AVE	SINGLE FAMILY DWELLING	X			
151	W GRAHAM AVE	SINGLE FAMILY DWELLING	X			
137	W GRAHAM AVE	SINGLE FAMILY DWELLING	X			
131	W GRAHAM AVE	SINGLE FAMILY DWELLING	X			
140	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
132	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
126	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
125	W GRAHAM AVE	SINGLE FAMILY DWELLING	X			
305	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
6	MARIAN AVE	SINGLE FAMILY DWELLING	X			
3	MARIAN AVE	SINGLE FAMILY DWELLING		X		
12	MARIAN AVE	SINGLE FAMILY DWELLING	X			
400	W GRAHAM AVE	SINGLE FAMILY DWELLING	X			
401	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
404	W GRAHAM AVE	SINGLE FAMILY DWELLING	X			
403	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
407	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
413	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
416	W GRAHAM AVE	SINGLE FAMILY DWELLING	X			
419	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
1506	FAIRMOUNT AVE	SINGLE FAMILY DWELLING	X			
427	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
501	W GRAHAM AVE	SINGLE FAMILY DWELLING		X		
1504	FAIRMOUNT AVE	SINGLE FAMILY DWELLING	X			

NOTES:

SEE "DETAIL OF WATER SERVICE" ON SHEET MWM.02 AND THE WATER MAIN SPECIAL PROVISION (SECTION 16) FOR ADDITIONAL INFORMATION. ALL NEW CURB STOP BOXES SHALL BE LOCATED WITHIN THE EXISTING PUBLIC RIGHT-OF-WAYS SHOWN ON THE PLANS. CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE NEW WATER SERVICES AND CURB STOP BOXES ARE NOT IN CONFLICT WITH OTHER PROPOSED IMPROVEMENTS. MAINTAIN 4.5' MINIMUM COVER WHEN CROSSING EXISTING OR PROPOSED SEWERS.

CONTRACT UNIT PRICE SHALL INCLUDE ALL COSTS FOR THE CONTRACTOR TO FURNISH AND INSTALL ALL THE "TYPE K" SEAMLESS COPPER PIPE AND THE REQUIRED 4" x 8" BRICK OR EQUAL UNDER EACH CURB STOP VALVE.

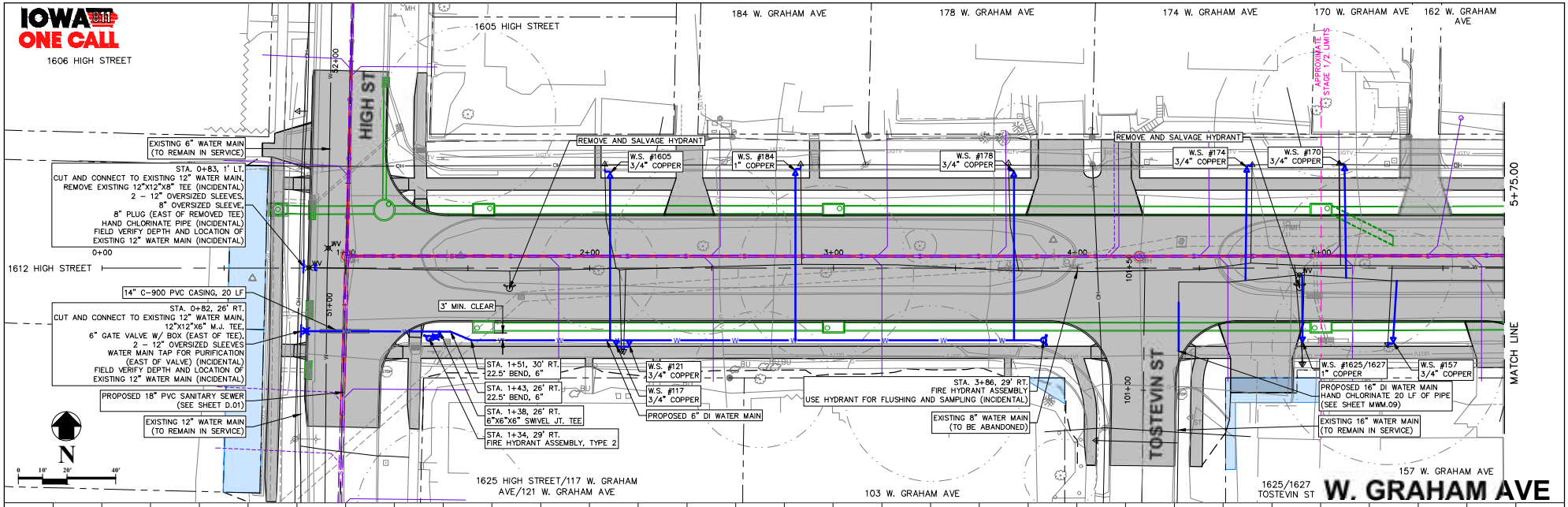
THE NEW WATER SERVICE PIPE CONNECTION TO THE EXISTING, SMALLER, WATER SERVICE PIPE SHALL BE LOCATED ON THE HOUSE SIDE OF THE EXISTING CURB STOP BOX LOCATION UNLESS DIRECTED OTHERWISE BY THE WATER WORKS OR ENGINEER.

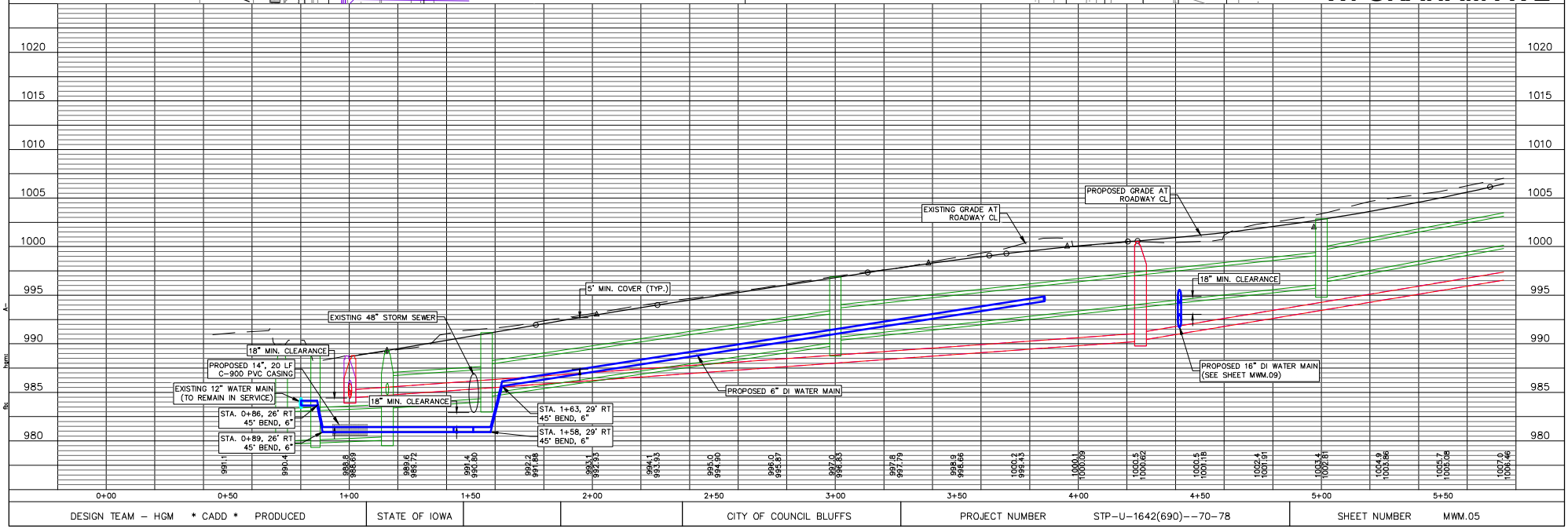
CURB STOP BOXES SHALL ONLY BE PLACED WITHIN PAVEMENT WITH PRIOR CBWW APPROVAL.

WATER WORKS SHALL PROVIDE A "TOP HAT" WHEN SERVICE BOX IS LOCATED IN PAVEMENT. CONTRACTOR MAY PICK UP TOP HAT FROM THE WATER WORKS, OR GIVE 24 HOUR NOTICE TO CBWW FOR DELIVERY BY THE WATER WORKS.

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Exhibit A

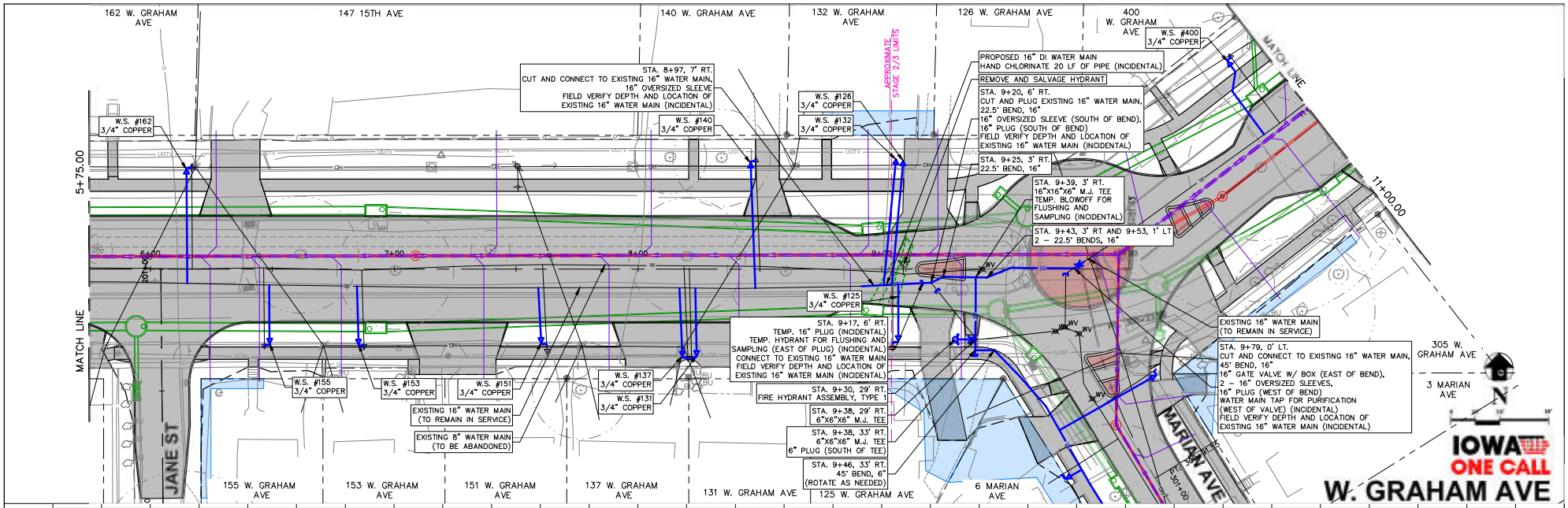


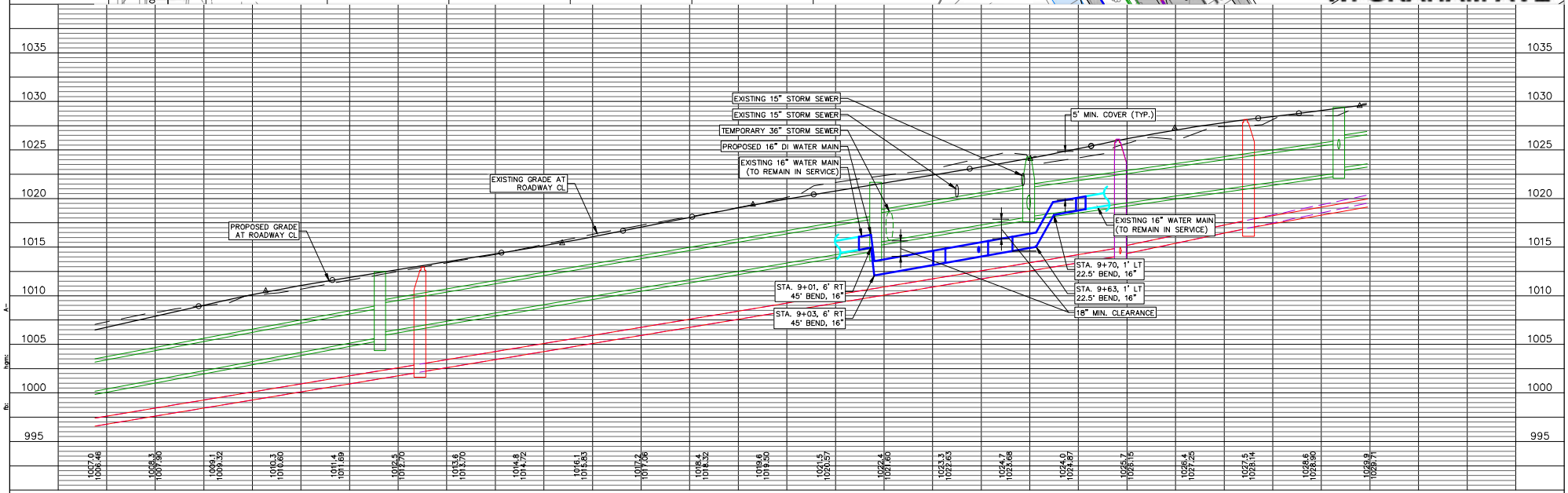


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DESIGN TEAM – HGM * CADD * PRODUCED	STATE OF IOWA			CITY OF COUNCIL BLUFFS	PROJECT NUMBER STP-U-1642(690)--70-78	SHEET NUMBER MWM.05

Exhibit A

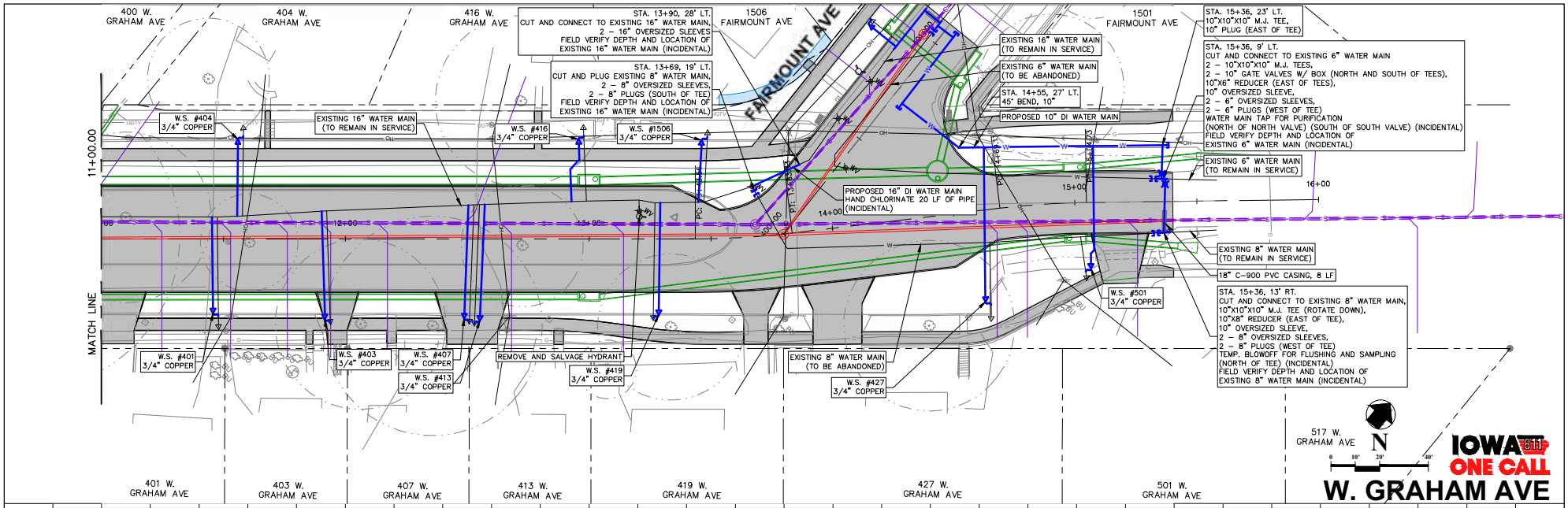


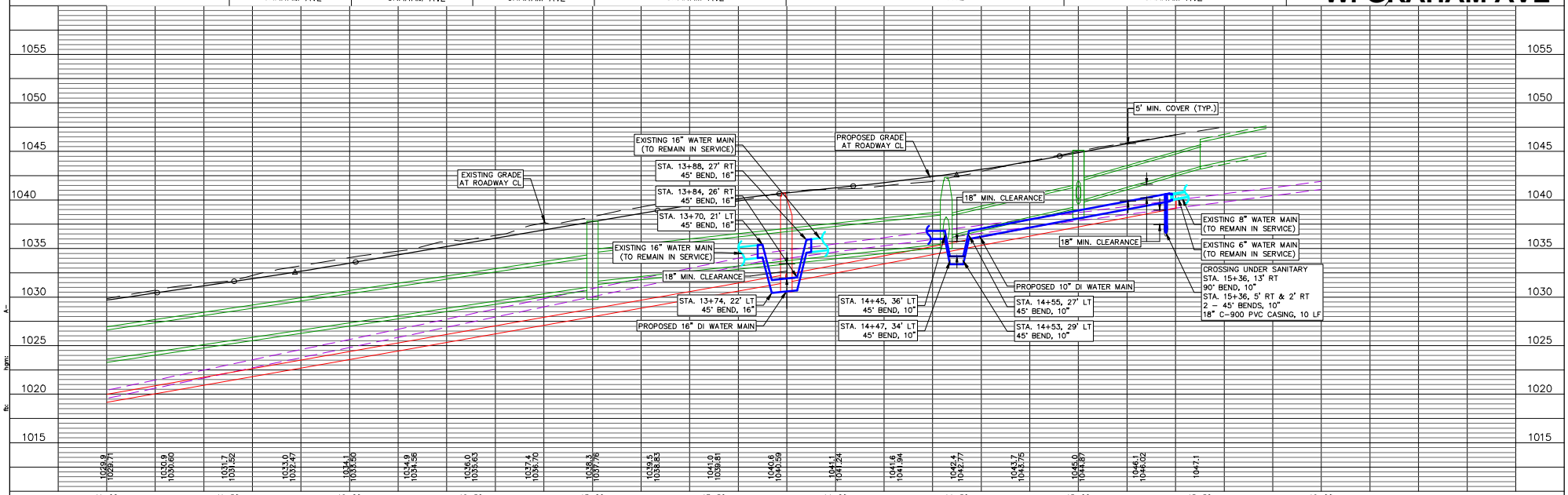


DESIGN TEAM – HGM * CADD * PRODUCED | STATE OF IOWA | CITY OF COUNCIL BLUFFS | PROJECT NUMBER STP–U–1642(690)––70–78 | SHEET NUMBER MWM.06

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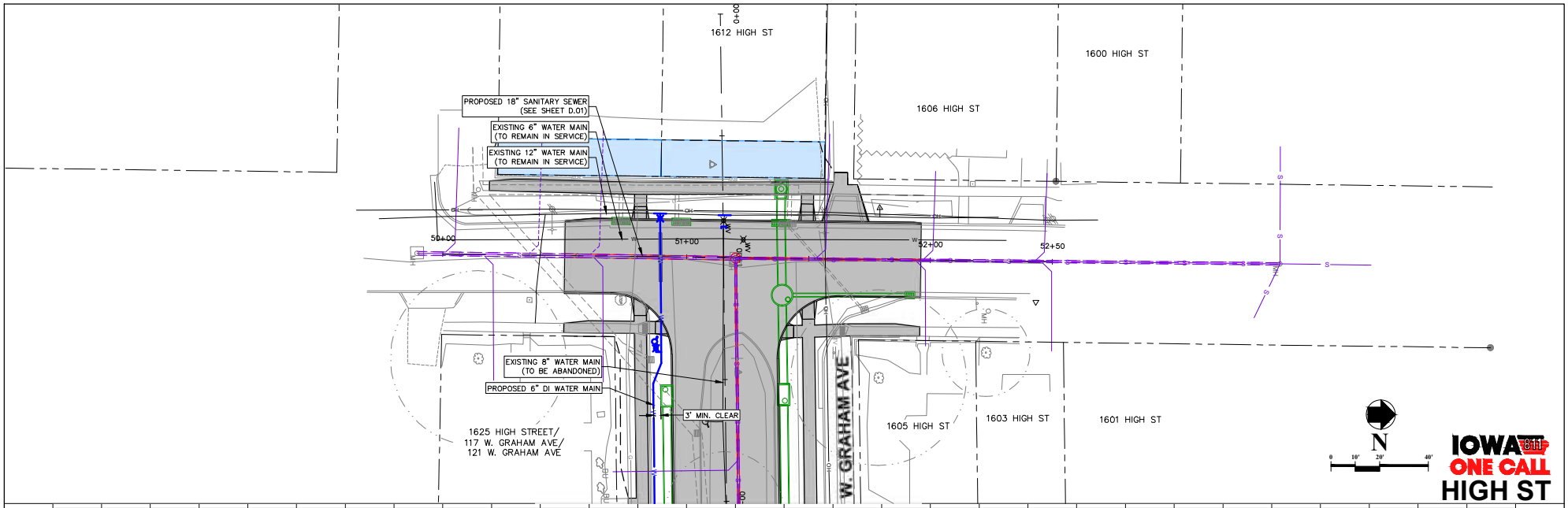


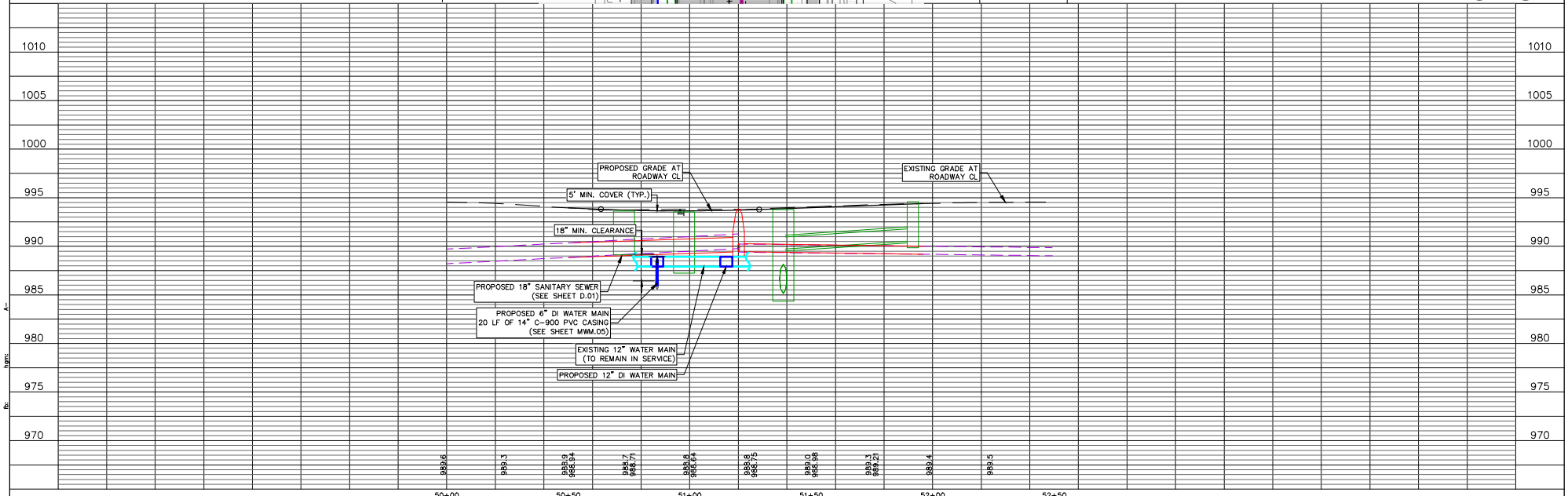


DESIGN TEAM – HGM * CADD * PRODUCED	STATE OF IOWA			CITY OF COUNCIL BLUFFS	PROJECT NUMBER STP–U–1642(690)––70–78	SHEET NUMBER MWM.07

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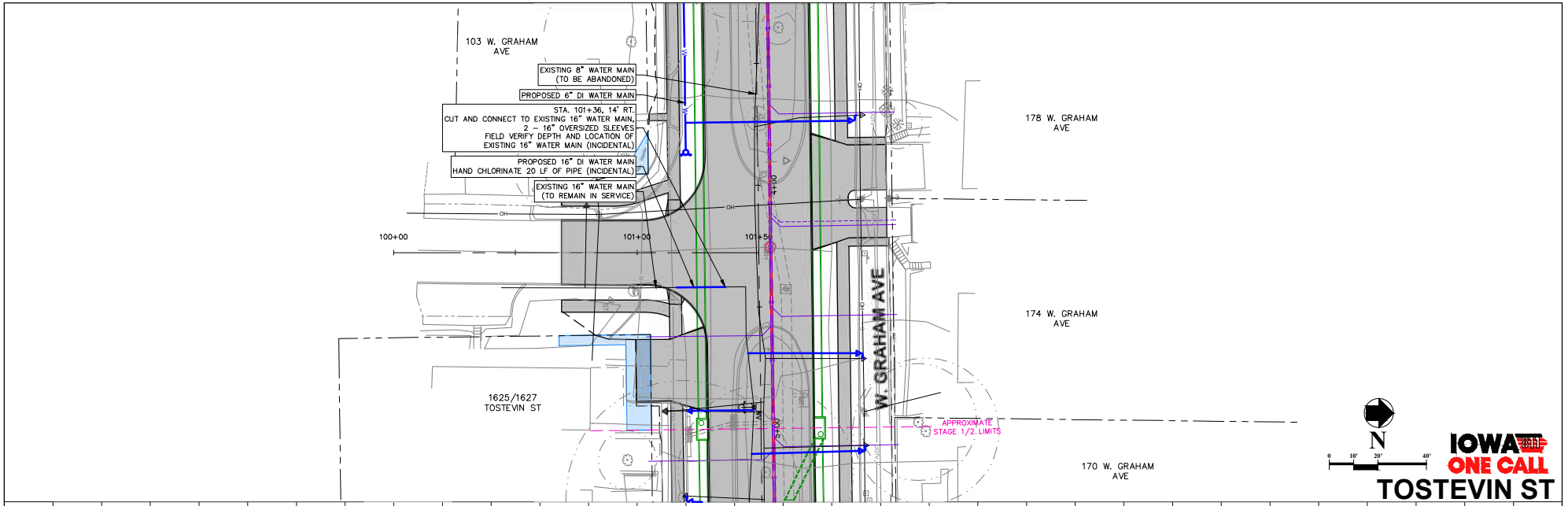


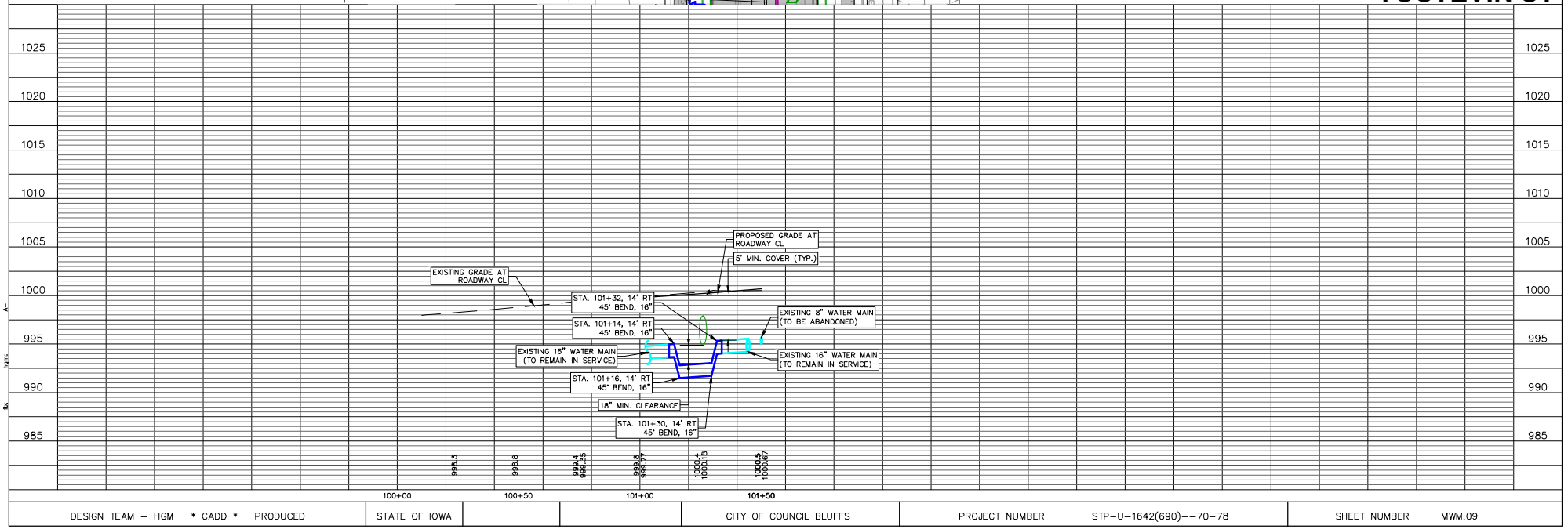


DESIGN TEAM – HGM * CADD * PRODUCED	STATE OF IOWA			CITY OF COUNCIL BLUFFS	PROJECT NUMBER STP-U-1642(690)--70-78	SHEET NUMBER MWM.08

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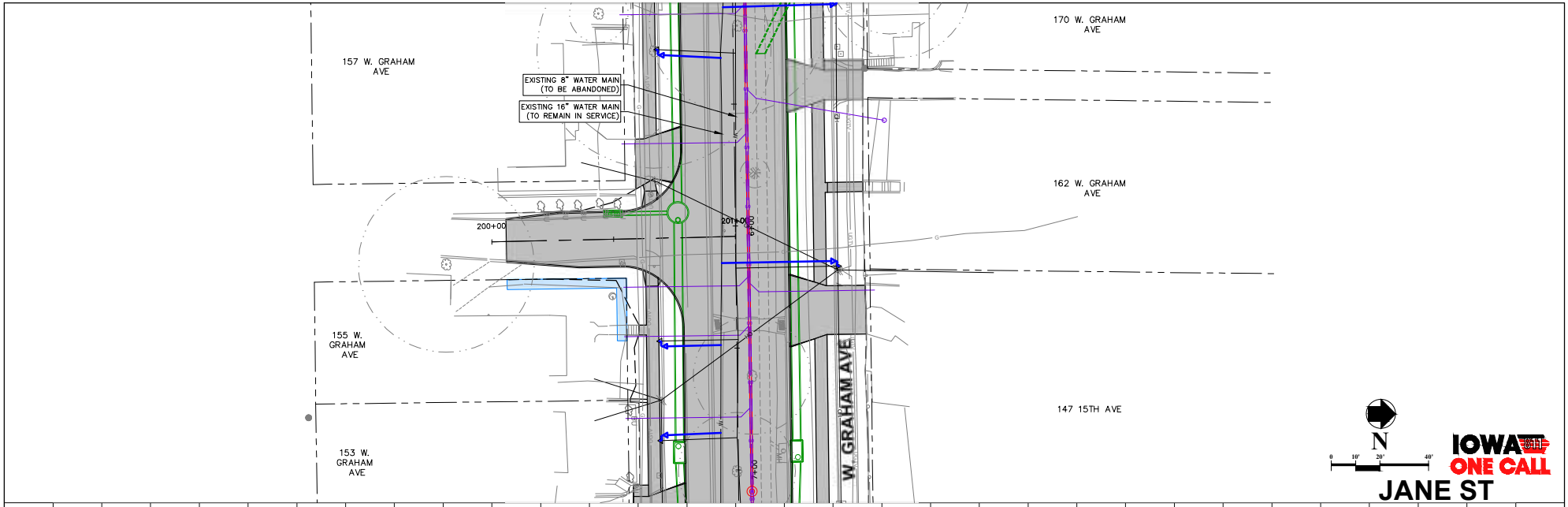


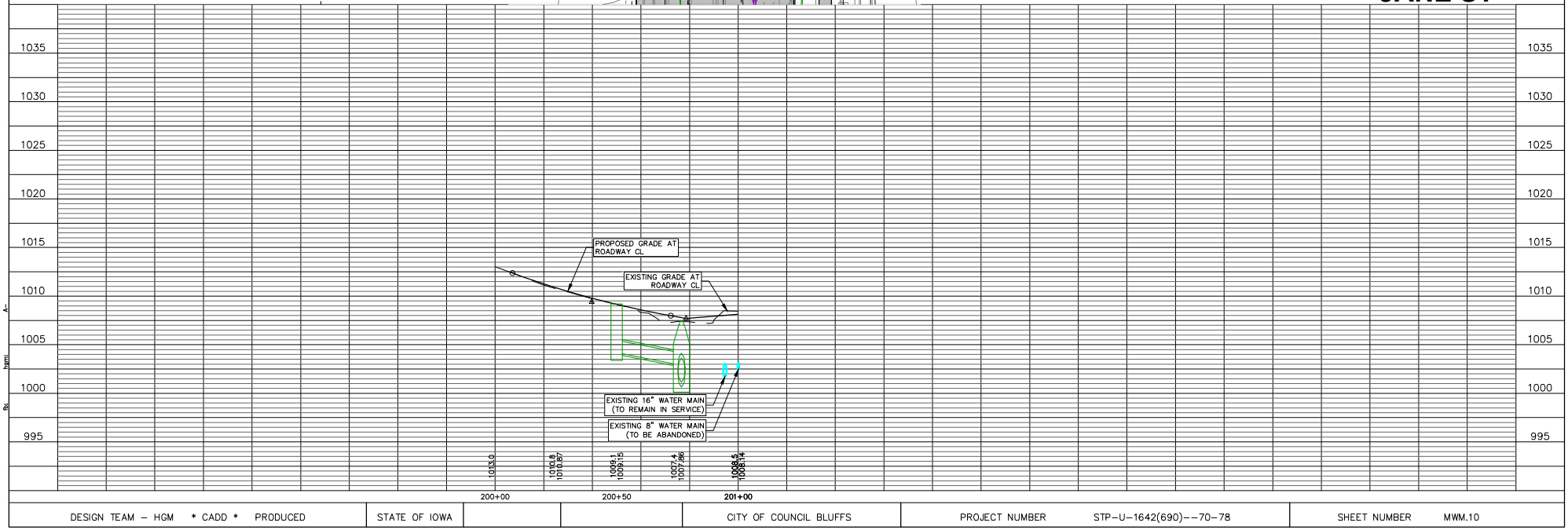


DESIGN TEAM – HGM * CADD * PRODUCED	STATE OF IOWA			CITY OF COUNCIL BLUFFS	PROJECT NUMBER STP-U-1642(690)--70-78	SHEET NUMBER MWM.09

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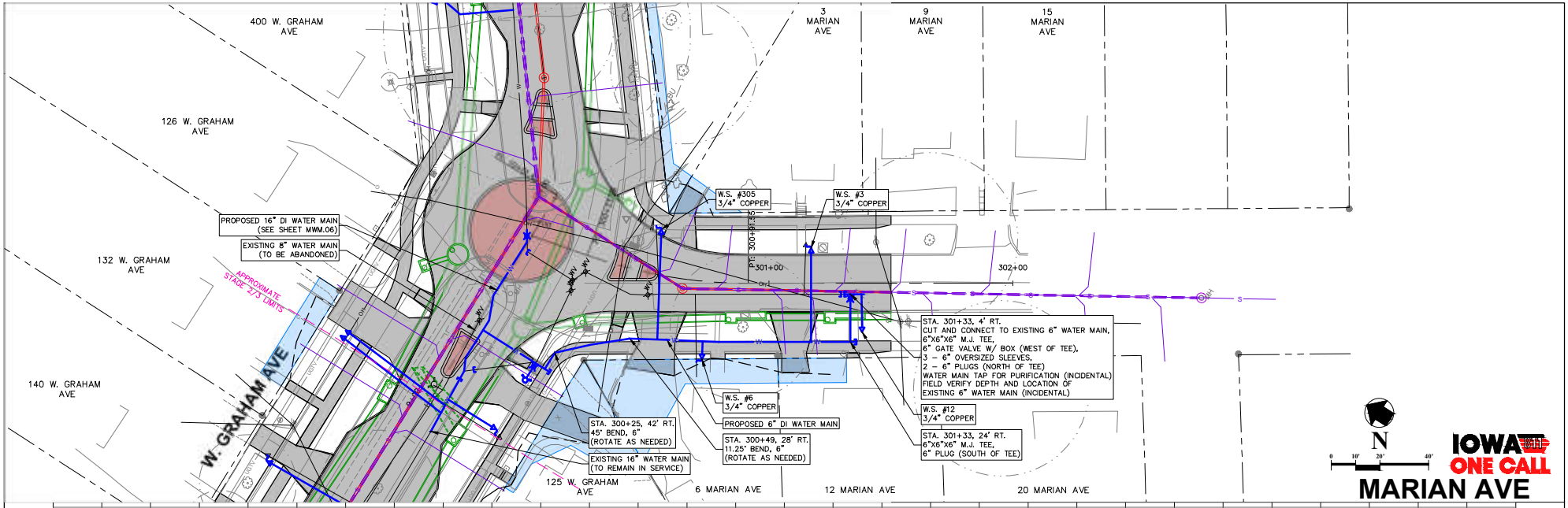


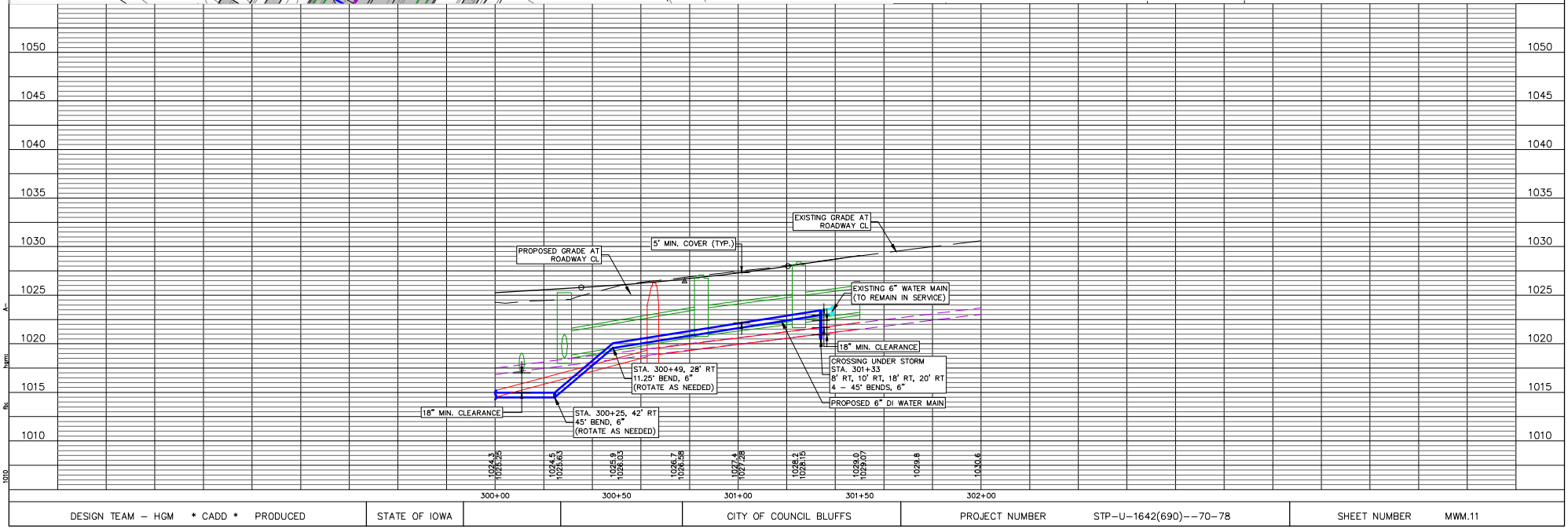


DESIGN TEAM – HGM * CADD * PRODUCED	STATE OF IOWA			CITY OF COUNCIL BLUFFS	PROJECT NUMBER STP–U–1642(690)––70–78	SHEET NUMBER MWM.10

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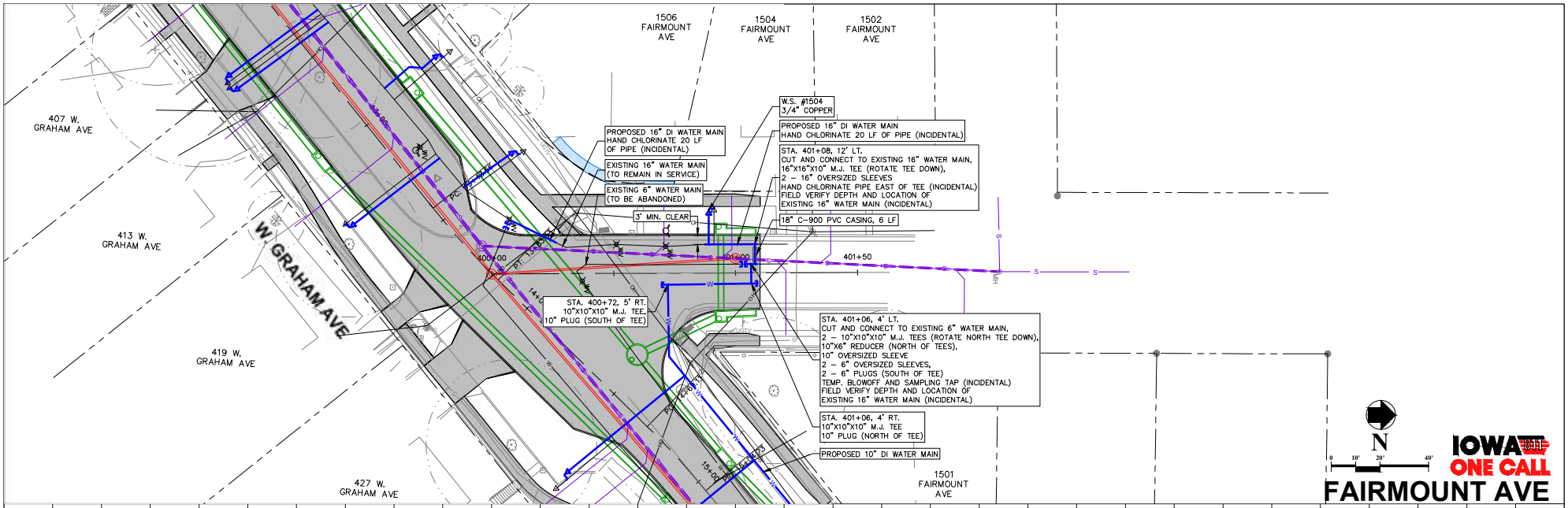


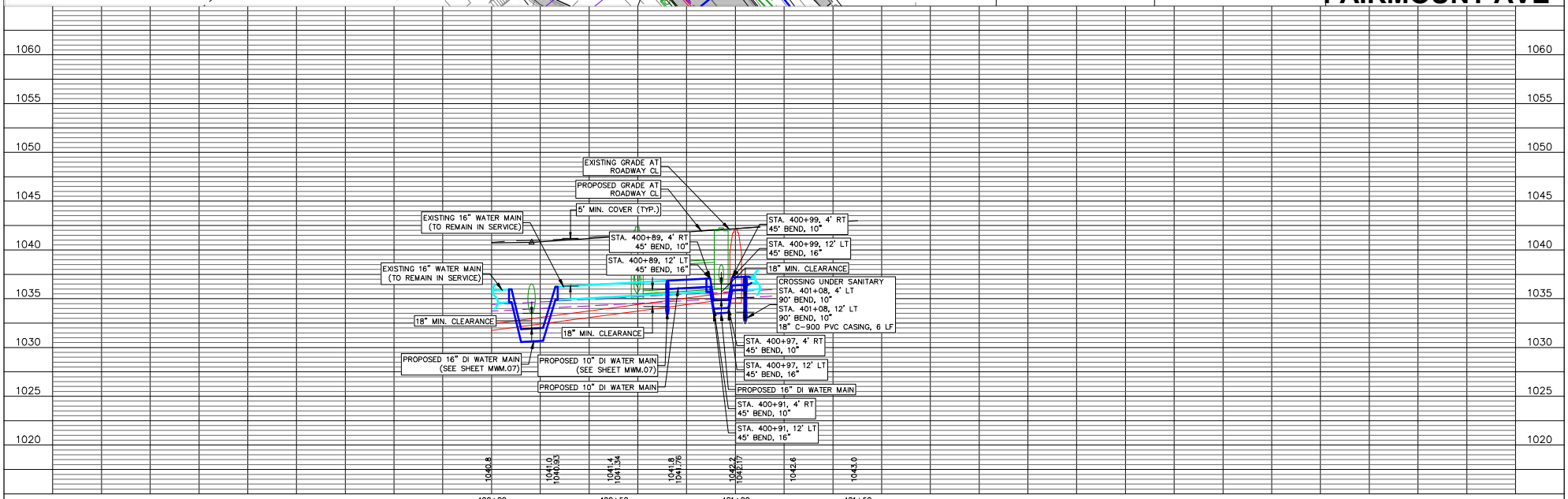


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DESIGN TEAM – HGM * CADD * PRODUCED	STATE OF IOWA			CITY OF COUNCIL BLUFFS	PROJECT NUMBER STP–U–1642(690)––70–78	SHEET NUMBER MWM.11

Exhibit A





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