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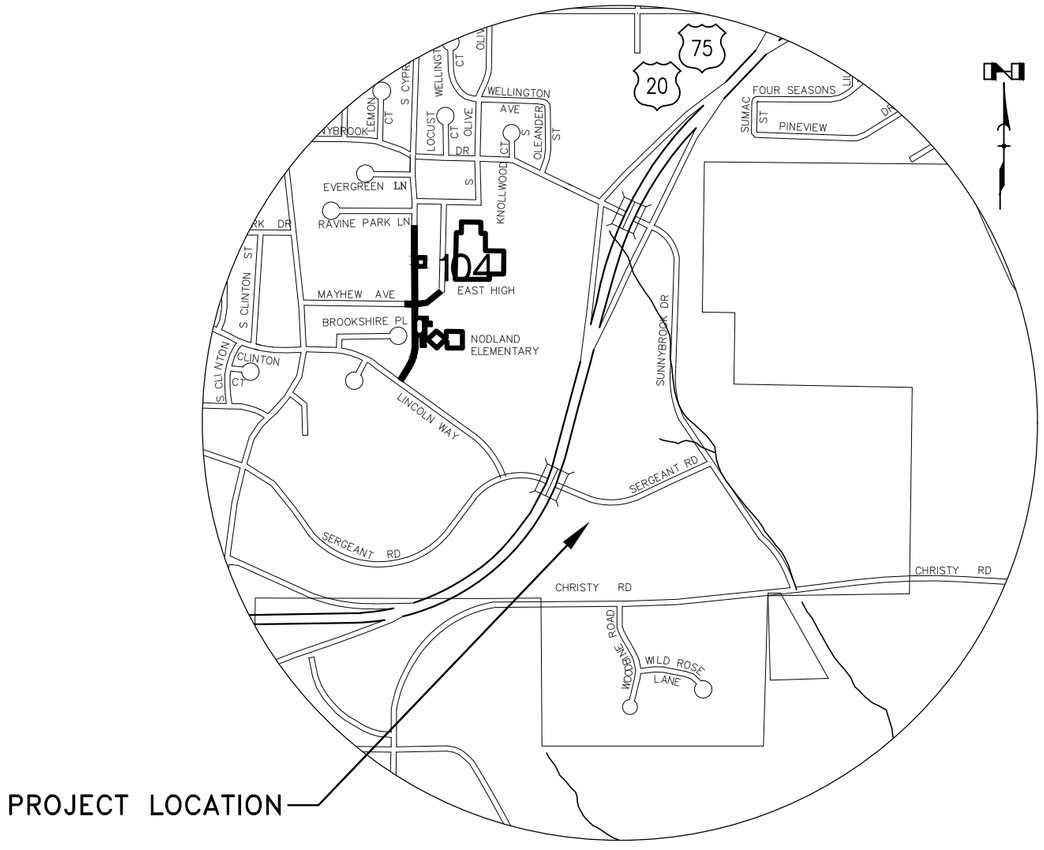
SERGEANT ROAD DEVELOPMENT
SITE IMPROVEMENTS

SIOUX CITY, IOWA



LOCATION MAP

NO SCALE

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE PERFORMED ACCORDING TO THE 2016 VERSION OF THE SUDAS STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2015 SIOUX CITY SUPPLEMENT UNLESS OTHERWISE MODIFIED.

2. BENCHMARKS (ELEVATIONS REFERENCE TOP OPERATING NUT OF FIRE HYDRANTS)
TOP OF HYDRANT AT

3. ALL UTILITIES ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION WITH OWNER OF UTILITIES.

SHEET INDEX

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B.02	TYPICAL SECTIONS AND DETAILS
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ALL

SERGEANT ROAD DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IOWA

TITLE SHEET

Project Manager: B. MASTBERGEN
Designer: K. MULLENIX
Project Number: 266002
Phone: (712) 266-1554

DGR ENGINEERING

Sheet
A.01

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UTILITY NOTES

ALL WORK TO BE PERFORMED ACCORDING TO THE 2016 SUDAS STANDARD SPECIFICATIONS (AVAILABLE AT WWW.IOWASUDAS.ORG) AND THE 2015 SIOUX CITY SUPPLEMENT TO SUDAS.

STORM SEWER

PIPE:

STORM SEWER PIPE AS DESIGNED ASSUMES CLASS III RCP. HPPP STORM SEWER MAY BE USED AT THE CONTRACTORS OPTION FOR ALL STORM SEWER SEGMENTS EXCEPT FOR PIPE P-15 WHICH SHALL REMAIN RCP.

HPPP STORM SEWER SHALL BE ADS N-12 HP OR APPROVED EQUAL. HPPP JOINTS AND STRUCTURE CONNECTIONS SHALL BE WATER TIGHT.

ALL RCP STORM SEWER SHALL HAVE RUBBER O-RING OR PROFILE GASKETS AT THE JOINTS. ALL JOINTS ON PIPE P-15 SHALL BE TIED ACCORDING TO IDOT STANDARD ROAD PLAN RF-14, TYPE 2 CONNECTION.

PROVIDE 10' MIN HORIZONTAL SEPARATION OF PARALLEL STORM SEWER AND WATER MAIN. PROVIDE 18" MIN CLEARANCE AT STORM SEWER AND WATER MAIN CROSSOVER. WHEN STORM SEWER CROSSES OVER OR LESS THAN 18" BELOW A WATER MAIN, CONSTRUCT STORM SEWER OF RCP WITH RUBBER PROFILE GASKET JOINTS OR HPPP WITH WATER TIGHT JOINTS.

RCP STORM SEWER DOES NOT REQUIRE PIPE BEDDING UNLESS SOFT TRENCH SUBGRADE SOILS ARE ENCOUNTERED IN WHICH CASE THE PIPE SHALL BE BEDDED WITH GRANULAR MATERIAL WITH A CLASS R-1 BEDDING PER FIGURE 3010.102. ADDITIONAL PIPE BEDDING SHALL BE PROVIDED AS NECESSARY TO PROVIDE ADEQUATE PIPE SUPPORT. HPPP STORM SEWER SHALL BE BEDDED WITH A CLASS F-3 BEDDING PER FIGURE 3010.103.

STRUCTURES:

ALL STORM SEWER INTAKES AND MANHOLES SHALL BE CONSTRUCTED ACCORDING TO THE CORRESPONDING SUDAS STANDARD DETAIL.

REINFORCING STEEL IN ALL CAST IN PLACE STRUCTURES SHALL BE EPOXY COATED.

THE SW-502-AD INTAKE SHALL BE CONSTRUCTED ACCORDING TO THE SW-502 DETAIL EXCEPT THE CASTING SHALL BE SW-604 TYPE 6 GRATE.

CASTINGS FOR THE SW-501, SW-502 AND SW-502 AD INTAKES SHALL BE A FLAT GRATE. VANE GRATES WILL NOT BE ACCEPTED.

SANITARY SEWER

PIPE:

8" SANITARY SEWER PIPE SHALL BE SDR 26 PVC. 6" SANITARY SEWER SERVICE PIPE SHALL BE SDR 23.5.

ALL PVC SANITARY SEWER PIPE BEDDING SHALL BE CLASS F-3 PER FIGURE 3010.103. CRUSHED CONCRETE SHALL NOT BE USED FOR CLASS I PIPE BEDDING.

STRUCTURES:

CONSTRUCT SANITARY MANHOLES ACCORDING TO FIGURE SC 6010.301 IN THE SIOUX CITY SUPPLEMENT.

WATER MAIN

PIPE:

WATER MAIN SHALL BE AWWA C900 CLASS 200 DR14 PVC WITH GRAY IRON PIPE EQUIVALENT OUTSIDE DIAMETER EXCEPT FOR THE WATER MAIN BORED OR PUSHED UNDER SERGEANT ROAD WHICH SHALL BE DIP THICKNESS CLASS 52 WITH RESTRAINED JOINTS. WATER MAIN SHALL BE INSTALLED WITH A 6' DEPTH OF BURY TO TOP OF PIPE UNLESS NOTED DIFFERENTLY.

PROVIDE 10' MIN HORIZONTAL SEPARATION OF PARALLEL STORM SEWER AND WATER MAIN. PROVIDE 18" MIN CLEARANCE AT STORM SEWER AND WATER MAIN CROSSOVER.

PIPE BEDDING: PIPE SHALL BE BEDDED WITH CLASS P-1 BEDDING PER FIGURE 3010.104 UNLESS THE TRENCH BASE IS UNSTABLE WHERE A CLASS P-2 BEDDING SHALL BE USED. PROVIDE 6' MINIMUM COVER OVER PIPE.

TRACER WIRE AND TEST STATIONS SHALL BE SUPPLIED WITH ALL WATER LINE ACCORDING TO CITY REQUIREMENTS. ALL DIP WATER MAIN AND FIXTURES SHALL BE ENCASED IN POLYETHYLENE PER SECTION 5010 3.05.

CHECK VALVES SHALL BE PRATT RD-SERIES CHECK VALVES.

CONTRACTOR SHALL CONTACT THE CITY WATER DEPARTMENT TO COORDINATE ALL WATER MAIN CONNECTIONS AND SHUTDOWNS.

TRENCH BACKFILL

TRENCH BACKFILL MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF STANDARD PROCTOR DENSITY WITH A MOISTURE CONTENT OF +2% OF OPTIMUM OR LOWER.

WHERE CONNECTION ELEVATIONS TO EXISTING OR PROPOSED UTILITIES ARE NOTED AS VERIFY, THE CONTRACTOR SHALL EXPOSE THE UTILITY AND HAVE THE SURVEYOR DETERMINE THE ELEVATION OF THE UTILITY PRIOR TO BEGINNING WORK SUCH THAT ADJUSTMENT TO GRADES CAN BE MADE WHEN NEEDED.

PAVING NOTES:

ALL WORK TO BE PERFORMED ACCORDING TO THE 2016 SUDAS STANDARD SPECIFICATIONS (AVAILABLE AT WWW.IOWASUDAS.ORG) AND THE 2015 SIOUX CITY SUPPLEMENT TO SUDAS.

IMMEDIATELY PRIOR TO PLACING PAVING SIDEWALK, THE SUBGRADE SHALL BE TESTED FOR MOISTURE AND DENSITY. THE TOP 12" OF SUBGRADE SHALL BE COMPACTED TO AT LEAST 95% OF STANDARD PROCTOR DENSITY. IF SUBGRADE DENSITY DOES NOT MEET REQUIREMENTS, THE SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF 12" AND RECOMPACTED TO AT LEAST 95% OF STANDARD PROCTOR DENSITY WITH A MOISTURE CONTENT OF -3% TO +2% OF OPTIMUM. SUBGRADE COMPACTION SHOULD EXTEND 2 FEET BEYOND THE EDGE OF THE PAVEMENT IN ALL DIRECTIONS. THE USE OF SAND OR OTHER GRANULAR MATERIAL UNDER ANY PAVED SURFACES IS NOT ALLOWED.

ALL CONCRETE PAVING SHALL BE AN IDOT C-4 MIX. COURSE AGGREGATE FOR CONCRETE SHALL BE CRUSHED LIMESTONE OR QUARTZITE. RIVER ROCK WILL NOT BE ACCEPTABLE FOR USE AS COURSE AGGREGATE.

CURB SHALL BE PLACED INTEGRALLY WITH THE CONCRETE. CURB BE A STANDARD 6" CURB. ALL CURB SHALL BE CONSTRUCTED ACCORDING TO FIGURE 7010.102.

ALL JOINTS SHALL BE PER FIGURE 7010.101. LONGITUDINAL CONSTRUCTION JOINTS SHALL BE BT-1, BT-5 OR KT-1. LONGITUDINAL CONTRACTION JOINTS SHALL BE C JOINTS. TRANSVERSE JOINTS SHALL BE C OR DW JOINTS. ALL LONGITUDINAL AND TRANSVERSE JOINTS SHALL BE SAWED AND SEALED PER DETAIL A. JOINT SEALANT SHALL COMPLY WITH SECTION 7010 2.01 K.

EROSION CONTROL NOTES:

ALL WORK TO BE PERFORMED ACCORDING TO THE 2016 SUDAS STANDARD SPECIFICATIONS (AVAILABLE AT WWW.IOWASUDAS.ORG) AND THE 2015 SIOUX CITY SUPPLEMENT TO SUDAS.

THE DEVELOPER HAS APPLIED FOR A STORM WATER DISCHARGE PERMIT FOR THIS PROJECT. ALL CONTRACTORS AND SUBCONTRACTORS WILL BE RESPONSIBLE FOR COMPLYING WITH ALL THE REQUIREMENTS OF THIS STORM WATER DISCHARGE PERMIT. MONITORING AND DOCUMENTATION REQUIRED BY THE STORM WATER DISCHARGE PERMIT WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

THE CONTRACTOR SHALL REMOVE AND REPLACE OR MODIFY EXISTING SILT FENCE AT ALL LOCATIONS WHERE SILT FENCE IS DISTURBED BY UTILITY OR PAVING CONSTRURCTION. INTAKE PROTECTION SHALL BE INSTALLED AROUND ALL EXISTING AND NEW PIPE INTAKES AT ALL TIMES. SILT FENCE LOCATIONS MAY NEED TO BE MODIFIED AND ADDITIONAL SILT FENCE MAY BE REQUIRED TO PROPERLY PROTECT THE SITE DEPENDING ON THE STAGE OF CONSTRUCTION AND CONTRACTOR SCHEDULING. THE CONTRACTOR WILL BE RESPONSIBLE FOR DAILY ERECTING OR CONSTRUCTING AND MAINTAINING SILT FENCE, SILT DIKES, SILT BERMS OR OTHER EROSION CONTROL PRACTICES NECESSARY TO RETAIN WATER CARRYING SEDIMENT ON SITE UNTIL SEDIMENT HAS BEEN DEPOSITED.

THE CONTRACTOR SHALL CONSTRUCT A ROCK CONSTRUCTION ENTRANCE AT ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC LEAVES THE SITE. THE CONSTRUCTION ENTRANCE SHALL BE 2" TO 3" CLEAN, CRUSHED AGGREGATE AND SHALL BE APPROXIMATELY 25' WIDE BY 50' LONG. THE CONTRACTOR WILL BE RESPONSIBLE FOR KEEPING THE ENTRANCE CLEAN AND SMOOTH AS WELL AS ADDING ROCK WHEN NEEDED. THE CONTRACTOR WILL BE RESPONSIBLE FOR KEEPING THE ADJACENT STREET FREE OF ANY SILT OR MATERIAL SPREAD BY VEHICLES AND EQUIPMENT LEAVING THE SITE. THE CONSTRUCTION ENTRANCES SHALL BE REMOVED WHEN PERMANENT PAVED ENTRANCES IN TO THE SITE ARE COMPLETED.

THE CONTRACTOR SHALL INSTALL INTAKE PROTECTION AT ALL INTAKES AFTER STORM SEWER INSTALLATION WHICH SHALL BE MAINTAINED UNTIL PAVING IS COMPLETED. AFTER PAVING IS COMPLETED, A FILTER TUBE SHALL BE USED AROUND INTAKES IN THE PAVEMENT TO KEEP SEDIMENT FROM CONTINUED CONSTRUCTION OPERATIONS OUT OF THE STORM SEWER .

THE CONTRACTOR SHALL CONSTRUCT A CONCRETE WASHOUT AREA BY EXCAVATING A 10'X10' AREA 1' DEEP AND MOUNDING THE EXCAVATED MATERIAL AROUND THE EXCAVATION TO CREATE A 1' HIGH BERM WITH 3:1 SIDESLOPES. CONCRETE WASHOUT PIT SHALL BE LINED WITH TWO LAYERS OF IMPERMEABLE PLASTIC LINER WITH A MINIMUM THICKNESS OF 10 MILS. PORTABLE DISPOSAL CONTAINERS ARE ALSO ACCEPTABLE. THE CONCRETE WASHOUT AREA SHALL BE CLEARLY SIGNED AND ALL CONCRETE DELIVERY DRIVERS SHALL BE REQUIRED TO USE THE DESIGNATED WASHOUT AREA. ONCE THE CONCRETE WASHOUT MATERIAL HAS HARDENED IT SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING, CLEANING OUT AND/OR REPLACING THE SILT FENCE AND INTAKE PROTECTION AS NECESSARY DURING CONSTRUCTION. SILT FENCE SHALL BE CLEANED OR REPLACED WHENEVER SILT BUILDS UP TO ONE-HALF THE HEIGHT OF THE SILT FENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTIONS OF THE EROSION CONTROL PRACTICES WEEKLY TO INSURE THEY ARE BEING MAINTAINED IN PROPER WORKING ORDER. AT THE TIME OF COMPLETION OF THE SITE, ALL SILT FENCE TO REMAIN IN PLACE SHALL BE IN PROPER WORKING ORDER AND SHALL BE LESS THAN ONE-HALF FULL OF SILT.

THE CONTRACTOR SHALL EMPLOY WHATEVER MEANS NECESSARY TO CONTROL DUST FROM AREAS WITHIN THE CONSTRUCTION LIMITS AND/OR ITS MIGRATION TO ADJACENT PROPERTIES. THIS MAY REQUIRE WATERING THE SITE MORE THAN ONCE PER DAY.

EROSION CONTROL WORK ON THE PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT VERSIONS OF THE IOWA STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS (SECTION 9040).

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY STABILIZING SEEDING OF ALL DISTURBED AREAS. IF CONSTRUCTION ACTIVITY IS NOT PLANNED TO OCCUR IN A DISTURBED AREA FOR AT LEAST 21 DAYS, THE AREA SHALL BE STABILIZED BY TEMPORARY SEEDING OR MULCHING WITHIN 14 DAYS OF THE LAST CONSTRUCTION ACTIVITY. TEMPORARY SEEDING SHALL BE A SUDAS TYPE 4 OR TYPE 5 TEMPORARY EROSION CONTROL MIXTURE OR APPROVED EQUAL. SEEDING SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT VERSIONS OF THE IOWA STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS (SECTION 9010).

PRIOR TO FINAL STABILIZATION, ALL DISTURBED AREAS SHALL BE TOPSOILED WITH A MINIMUM 4 INCH THICKNESS OF SOIL SUITABLE FOR SUPPORTING VEGETATION.

FINAL SEEDING WILL BE THE RESPONSIBILITY OF THE DEVELOPER.

SERGEANT DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IOWA

CONSTRUCTION NOTES

REVISIONS	1	2	3

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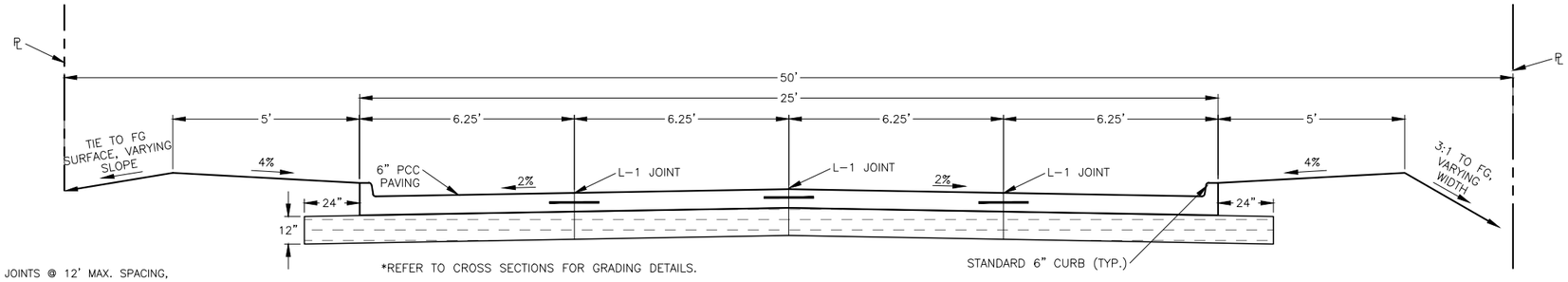
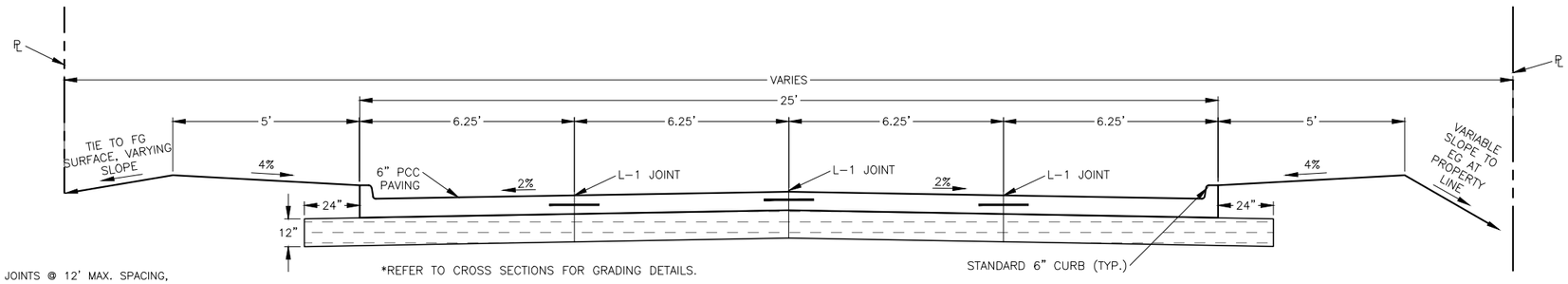


NOTES:

1. TRANSVERSE JOINTS TO BE TYPE "C" JOINTS @ 12' MAX. SPACING, UNLESS OTHERWISE NOTED.
2. ALL ROADWAY PAVING JOINTS TO BE SEALED WITH HOT POURED SEALANT.
3. 12" PREPARED SUBGRADE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY WITHIN -3% TO +2% OF OPTIMUM MOISTURE CONTENT FOR COHESIVE MATERIALS AND WITHIN -5% TO +2% OF OPTIMUM MOISTURE CONTENT FOR SILT MATERIALS (IF CONTRACTOR CANNOT ACHIEVE NECESSARY COMPACTION, MATERIAL SHALL BE COMPACTED IN (2) 6" LIFTS).

WEST DRIVE TYPICAL SECTION

NOT TO SCALE



NOTES:

1. TRANSVERSE JOINTS TO BE TYPE "C" JOINTS @ 12' MAX. SPACING, UNLESS OTHERWISE NOTED.
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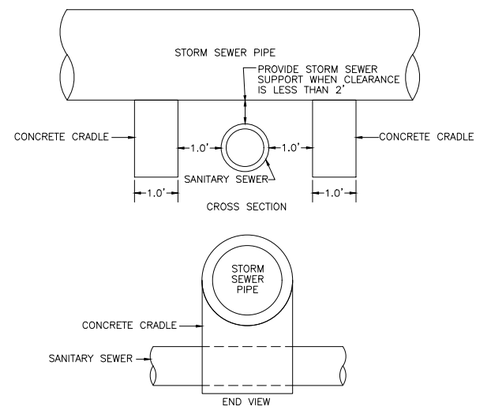
EAST DRIVE TYPICAL SECTION

NOT TO SCALE



STORM SEWER SUPPORT FOR SANITARY SEWER CROSSINGS

NOT TO SCALE

SERGEANT DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IOWA

TYPICAL SECTIONS AND DETAILS

REVISIONS
1
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3

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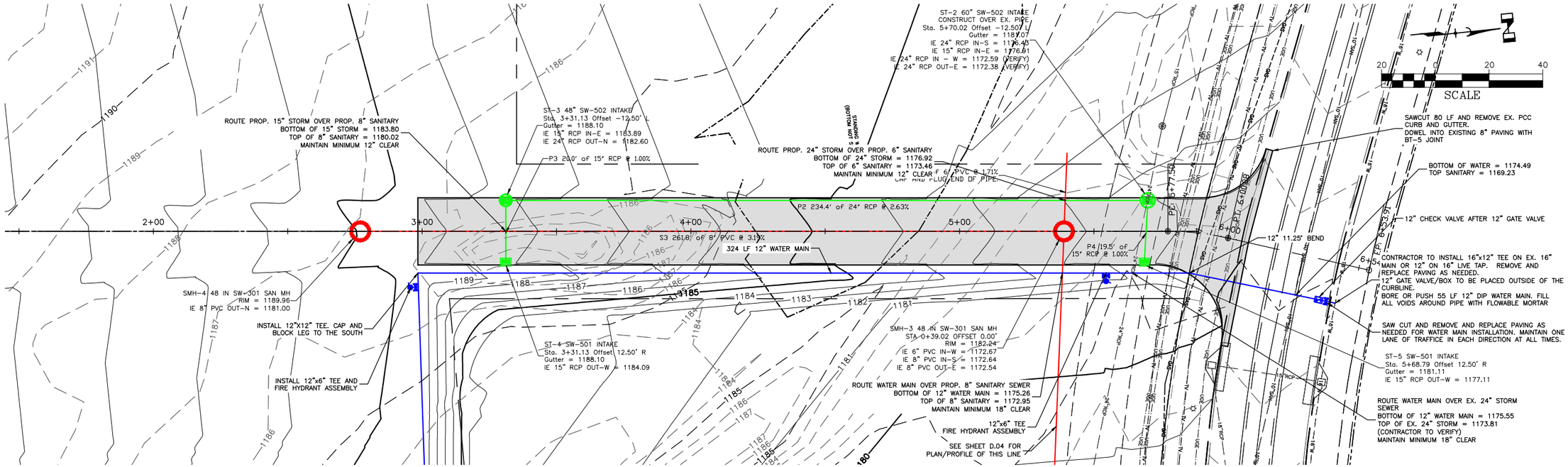

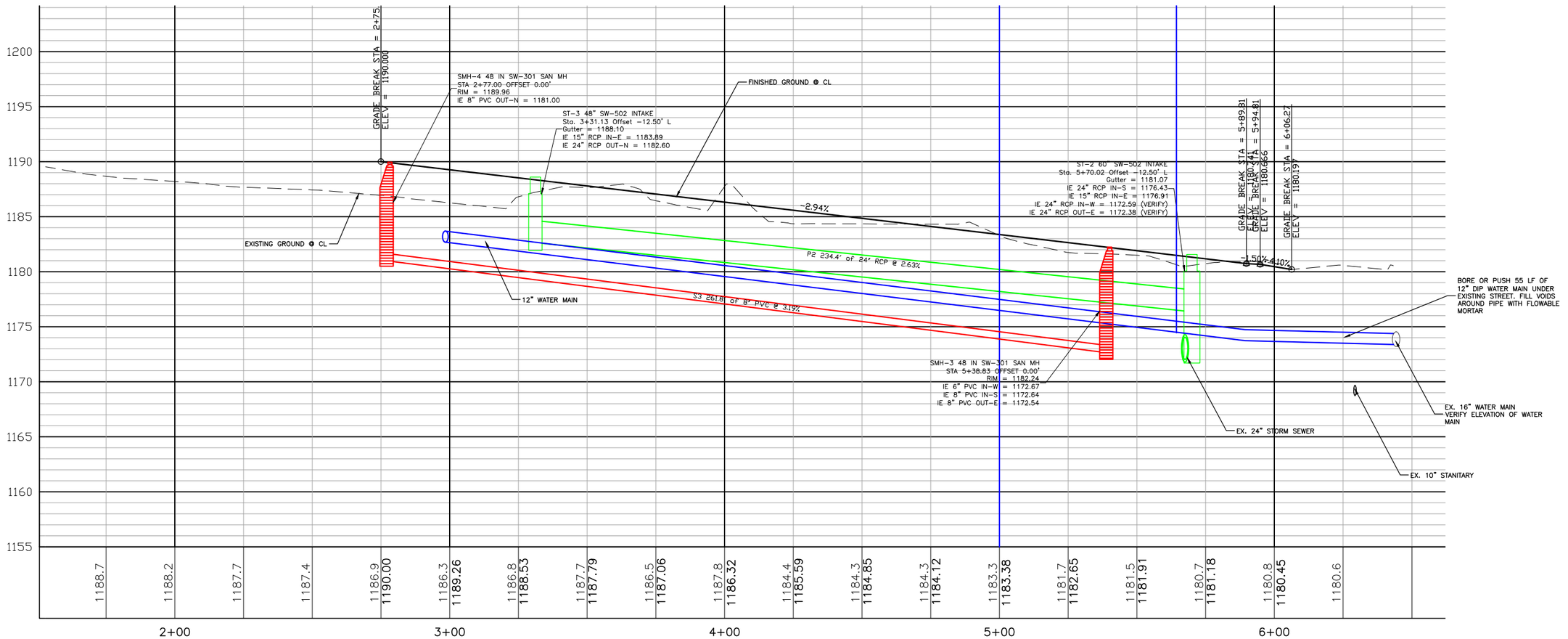

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SERGEANT DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IOWA

PLAN & PROFILE - WEST ACCESS ROAD

REVISIONS
1
2
3

Project Manager: B. MASTBERGEN
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Sheet
D.01

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SCALE 20 0 20 40

ROUTE SANITARY SEWER UNDER STORM SEWER
BOTTOM OF 15" STORM = 1175.15
TOP OF 8" SANITARY = 1174.27
MAINTAIN MINIMUM 6" CLEAR
ROUTE WATER MAIN UNDER STORM SEWER
BOTTOM OF 30" STORM = 1174.43
TOP OF 12" WATER MAIN = 1172.79
MAINTAIN MINIMUM 18" CLEAR

ST-17 SW-502-AD INTAKE
STA 4+26.98 OFFSET -10.00' L
RIM = 1182.59
IE 24" RCP IN-W = 1175.67
IE 30" RCP OUT-E = 1175.17
P12 24.4' of 30" RCP @ 4.10%

ST-8 84" SW-502 INTAKE
Sta. 3+87.46 Offset -12.50' L
Gutter = 1179.42
IE 30" RCP IN-S = 1174.17
IE 15" RCP IN-E = 1175.25
IE 30" RCP IN-W = 1174.17
IE 36" RCP OUT-N = 1173.67

S10 43.3' of 6" PVC @ 1.00%
ROUTE SANITARY SEWER SERVICE UNDER STORM SEWER
BOTTOM OF 36" STORM = 1172.52
TOP OF 6" SANITARY = 1171.79
MAINTAIN MINIMUM 6" CLEAR
PLACE CONCRETE PIPE SUPPORT UNDER STORM EACH SIDE OF SANITARY

SMH-5 48 IN SW-301 SAN MH
STA 6+40.11 OFFSET -35.43' L
RIM = 1172.68
IE 8" PVC IN-SE = 1166.40
IE 8" PVC OUT-W = 1165.32

ROUTE SANITARY SEWER OVER EX. STORM SEWER
TOP OF 36" STORM = 1165.10 (VERIFY)
BOTTOM OF 8" SANITARY = 1166.37
MAINTAIN MINIMUM 6" CLEAR

RAISE EXISTING BEEHIVE CASTING 2.39'
RIM = 1172.00

ST-7 60" SW-502 INTAKE
Sta. 5+46.89 Offset -12.50' L
Gutter = 1171.26
IE 36" RCP IN-S = 1165.26
IE 15" RCP IN-NE = 1164.82
IE 36" RCP OUT-NW = 1163.00

S6 107.5' of 8" PVC @ 0.70%

ST-10 60" SW-502 INTAKE
Sta. 2+35.15 Offset -12.50' L
Gutter = 1190.08
IE 24" RCP IN-SW = 1184.07
IE 15" RCP IN-E = 1185.80
IE 30" RCP OUT-NW = 1184.57

P8 56.4' of 30" RCP @ 6.86%

ST-9 60" SW-502 INTAKE
Sta. 2+90.73 Offset -12.50' L
Gutter = 1186.19
IE 30" RCP IN-SE = 1180.70
IE 15" RCP IN-E = 1181.95
IE 30" RCP OUT-N = 1180.70

P7 90.7' of 30" RCP @ 7.20%

P13 19.5' of 15" RCP @ 1.00%

P11 18.5' of 15" RCP @ 1.00%

P6 152.1' of 36" RCP @ 5.53%

P5 73.2' of 36" RCP @ 1.00%

S7 131.7' of 8" PVC @ 2.84%

P9 65.0' of 15" RCP @ 4.92%

ST-15 SW-501 INTAKE
Sta. 2+90.73 Offset 12.50' R
Gutter = 1186.19
IE 15" RCP OUT-W = 1182.14

ST-11 48 IN SW-401 ST MH
STA 1+69.32 OFFSET 0.00'
RIM = 1193.12
IE 15" RCP OUT-W = 1188.54

SEE SHEET D.07 FOR WATER MAIN CONTINUATION

12"x6" TEE
FIRE HYDRANT ASSEMBLY

12" WATER MAIN

12" 90° BEND

ROUTE SANITARY SEWER UNDER STORM SEWER
BOTTOM OF 15" STORM = 1185.88
TOP OF 8" SANITARY = 1182.39
MAINTAIN MINIMUM 18" CLEAR

ST-13 SW-501 INTAKE
Sta. 3+87.46 Offset 12.50' R
Gutter = 1179.42
IE 15" RCP OUT-W = 1175.43

ROUTE WATER MAIN UNDER SANITARY SEWER
BOTTOM OF 8" SANITARY = 1174.29
TOP OF 12" WATER MAIN = 1172.79
MAINTAIN MINIMUM 18" CLEAR

SMH-6 48 IN SW-301 SAN MH
RIM = 1171.68
IE 8" PVC IN-S = 1167.25
IE 8" PVC OUT-NW = 1167.15

ROUTE SANITARY SEWER OVER STORM SEWER
TOP OF 15" STORM = 1166.47
BOTTOM OF 8" SANITARY = 1167.01
MAINTAIN MINIMUM 6" CLEAR

ST-12 (1) SW-501 INTAKE
Sta. 5+46.89 Offset 12.50' R
Gutter = 1171.26
IE 15" RCP OUT-SW = 1165.50

ROUTE SANITARY SEWER OVER STORM SEWER
TOP OF 36" STORM = 1166.13
BOTTOM OF 8" SANITARY = 1166.81
MAINTAIN MINIMUM 6" CLEAR

ST-6 48 IN SW-401 ST MH
CONSTRUCT OVER EXG PIPE
STA 6+26.05 OFFSET -12.00' L
RIM = 1172.06
IE 36" RCP IN-SE = 1162.27
IE 36" RCP IN-W = 1161.30 (VERIFY)
IE 36" RCP OUT-E = 1161.17 (VERIFY)

P10 19.5' of 15" RCP @ 3.46%

SERGEANT DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IOWA

PLAN & PROFILE- EAST ACCESS ROAD

REVISIONS
1
2
3

Project Manager: B. MASTBERGEN
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Sheet
D.02

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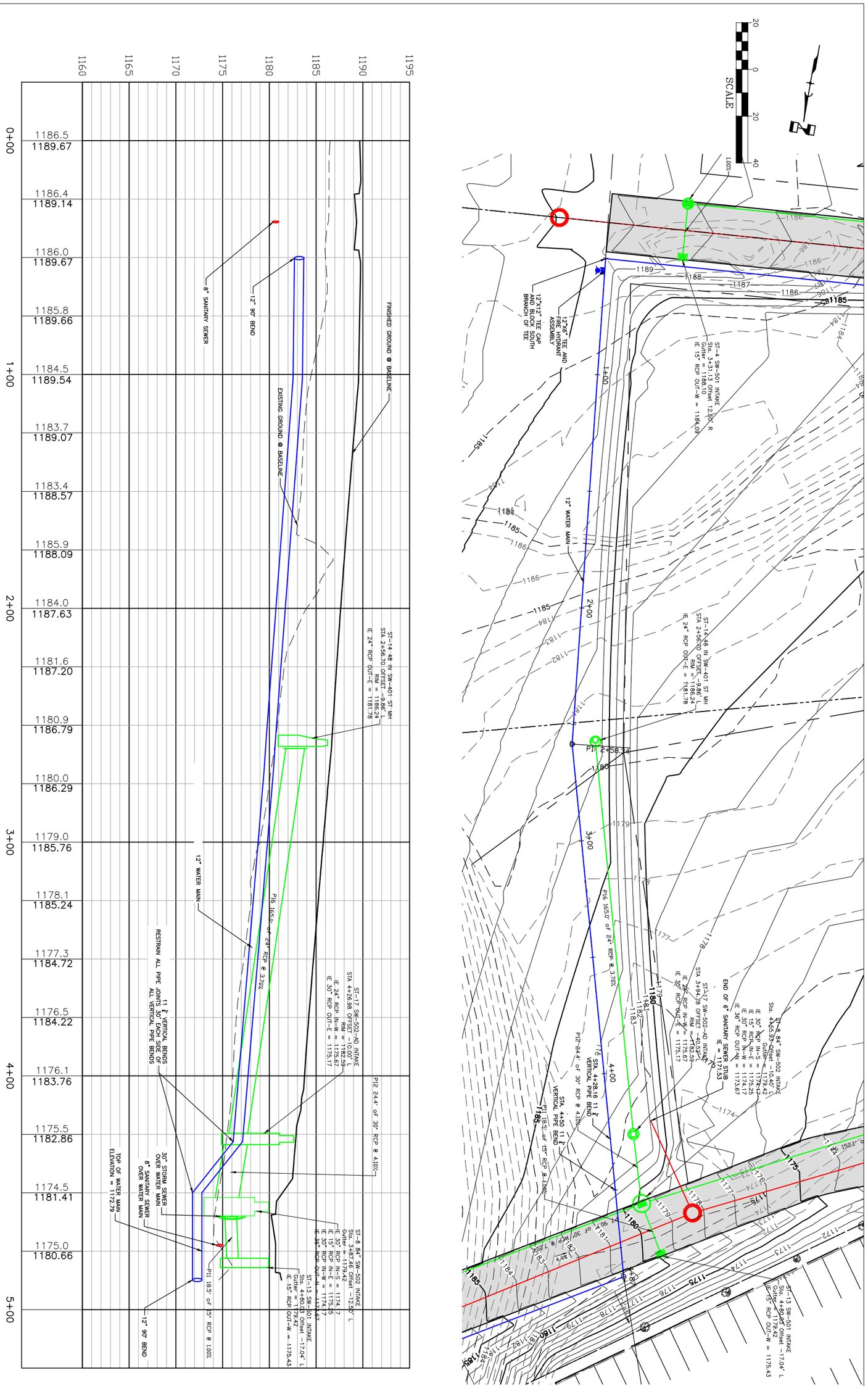

Sheet D.03	DGR ENGINEERING	Project Manager: B. MASTBERGEN Designer: K. MULLENIX Project Number: 266002 Phone: (712) 266-1554	PLAN & PROFILE - WATER MAIN AND STORM SEWER REVISIONS 1 2 3	SERGEANT DEVELOPMENT SITE IMPROVEMENTS SIOUX CITY, IOWA

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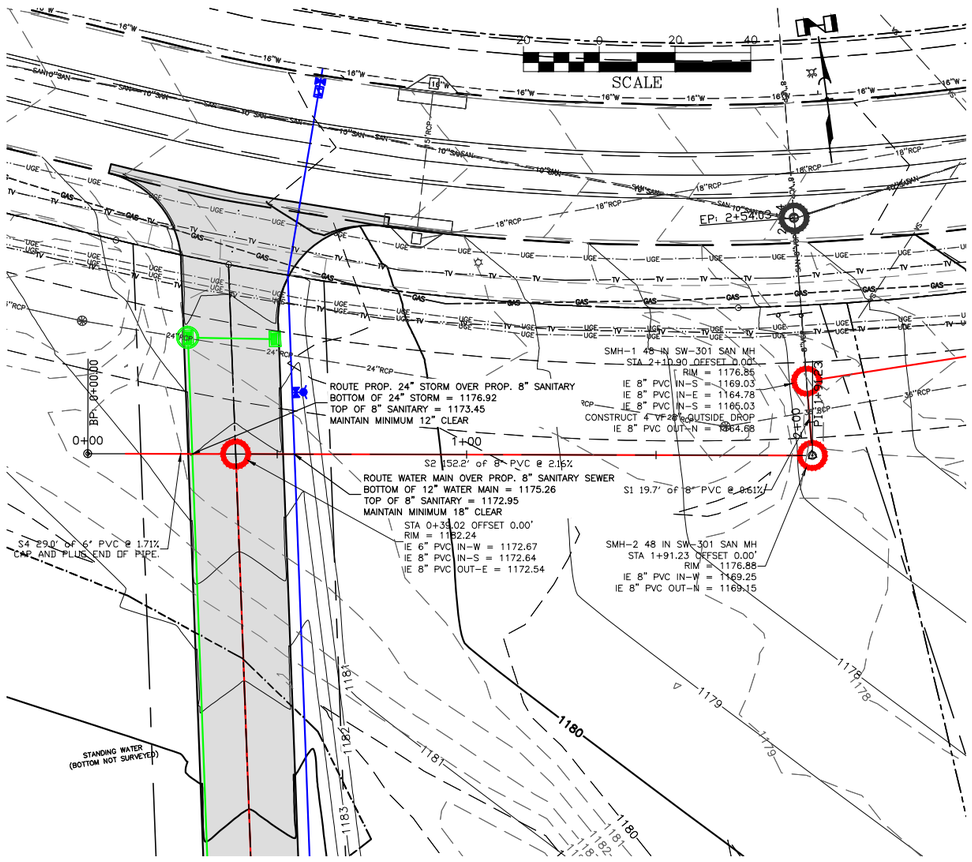

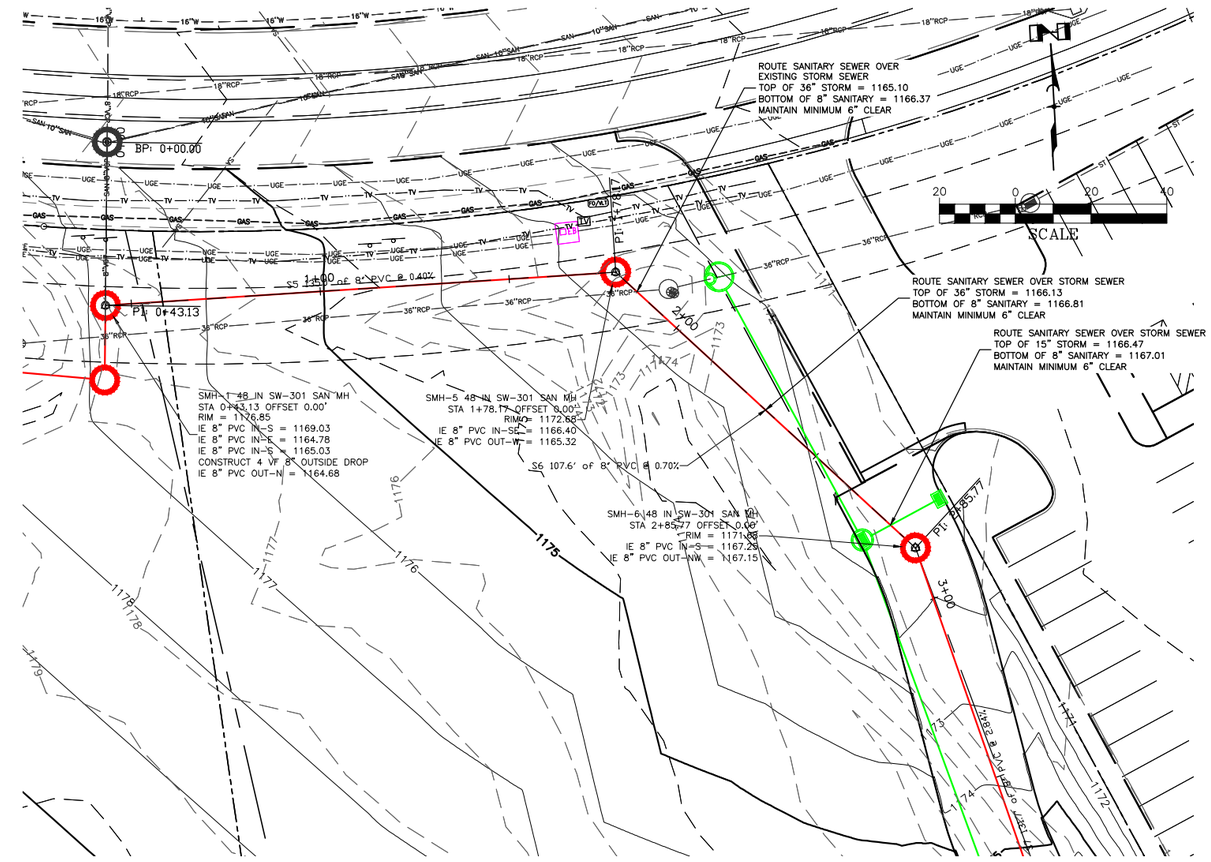

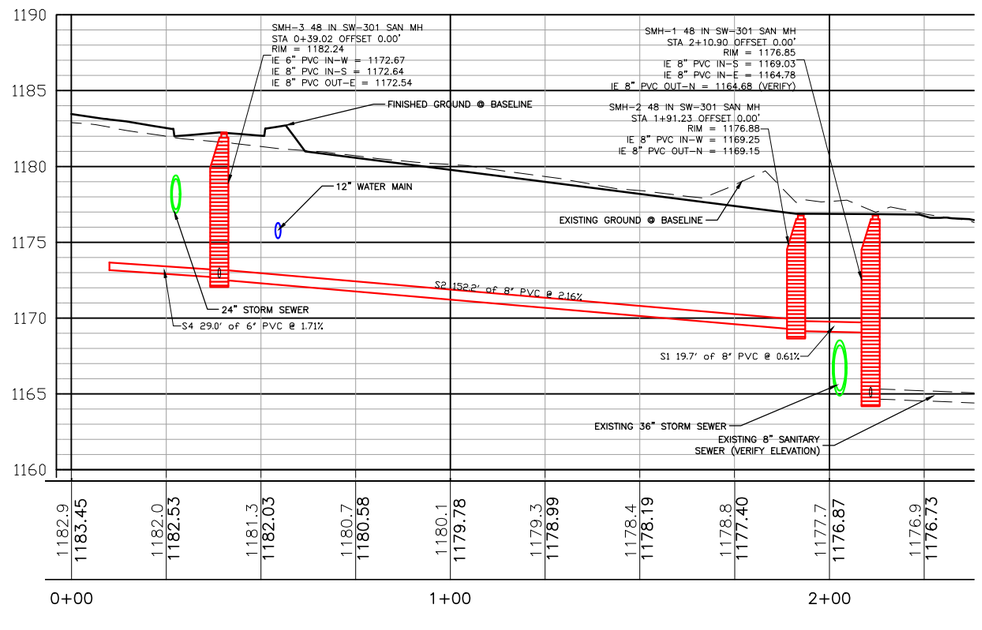

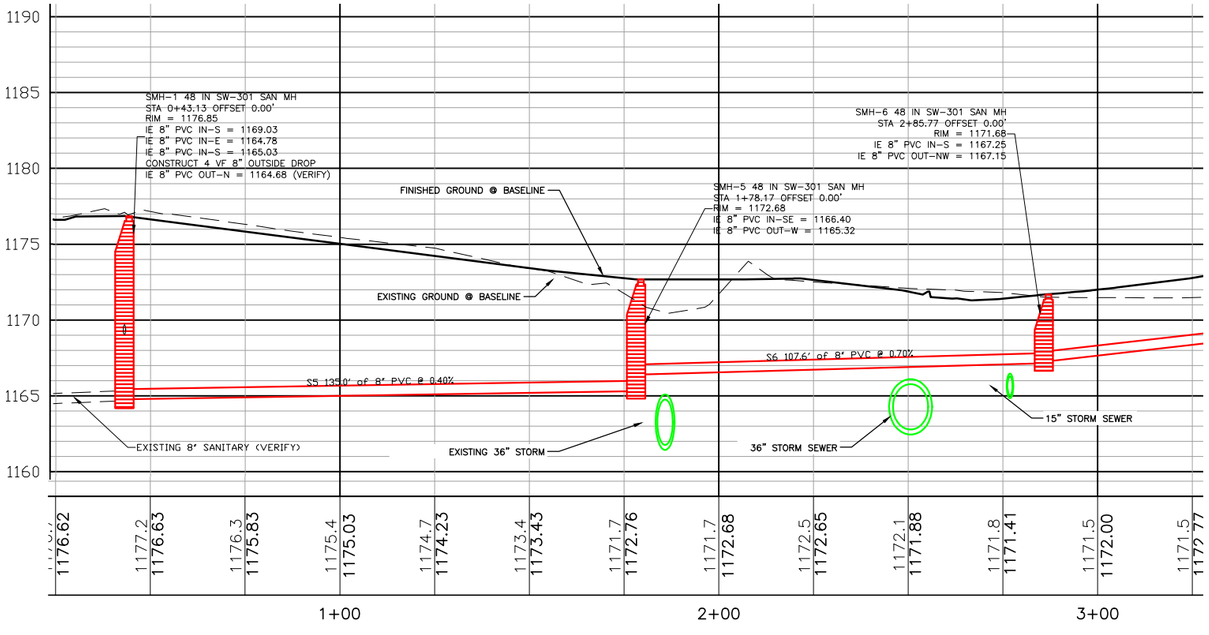

SERGEANT DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IOWA

PLAN & PROFILE - SANITARY LINES S1-S2 AND S5-S6

REVISIONS
1
2
3

Project Manager: B. MASTBERGEN
Designer: K. MULLENIX
Project Number: 266002
Phone: (712) 266-1554

DGR ENGINEERING

Sheet
D.04

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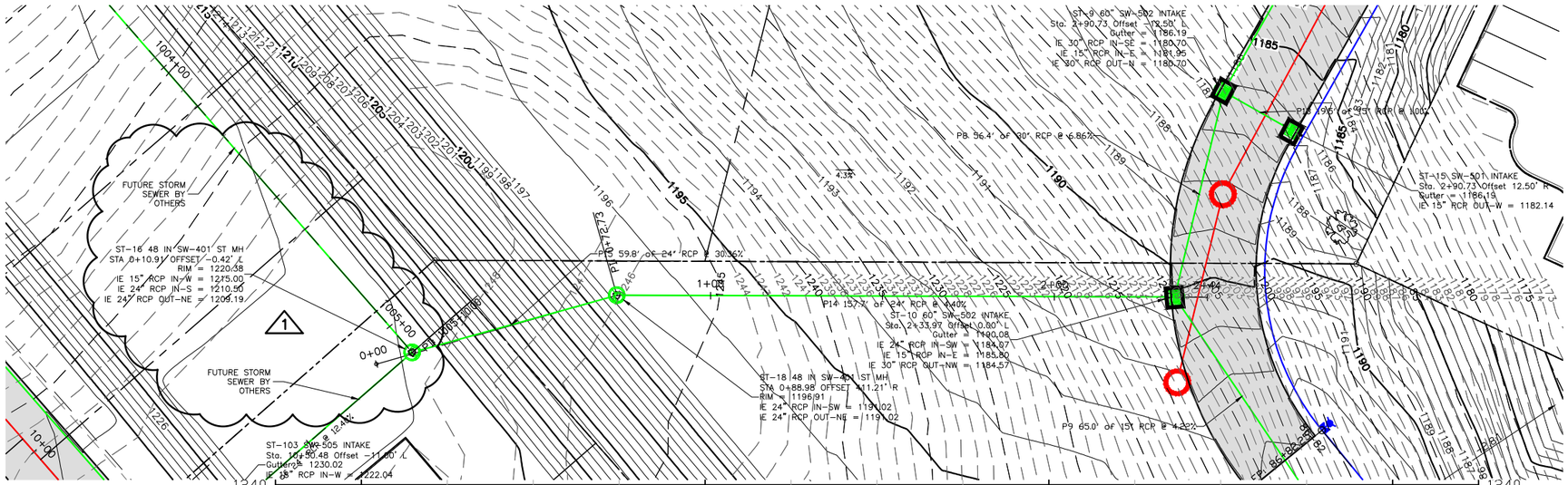

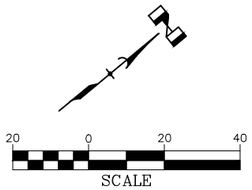

SERGEANT DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IOWA

PLAN & PROFILE - STORM LINE P14

REVISIONS		
1	06-16-16	ADDED FUTURE STORM SEWER INVERTS AND PIPE LOCATIONS
2		
3		

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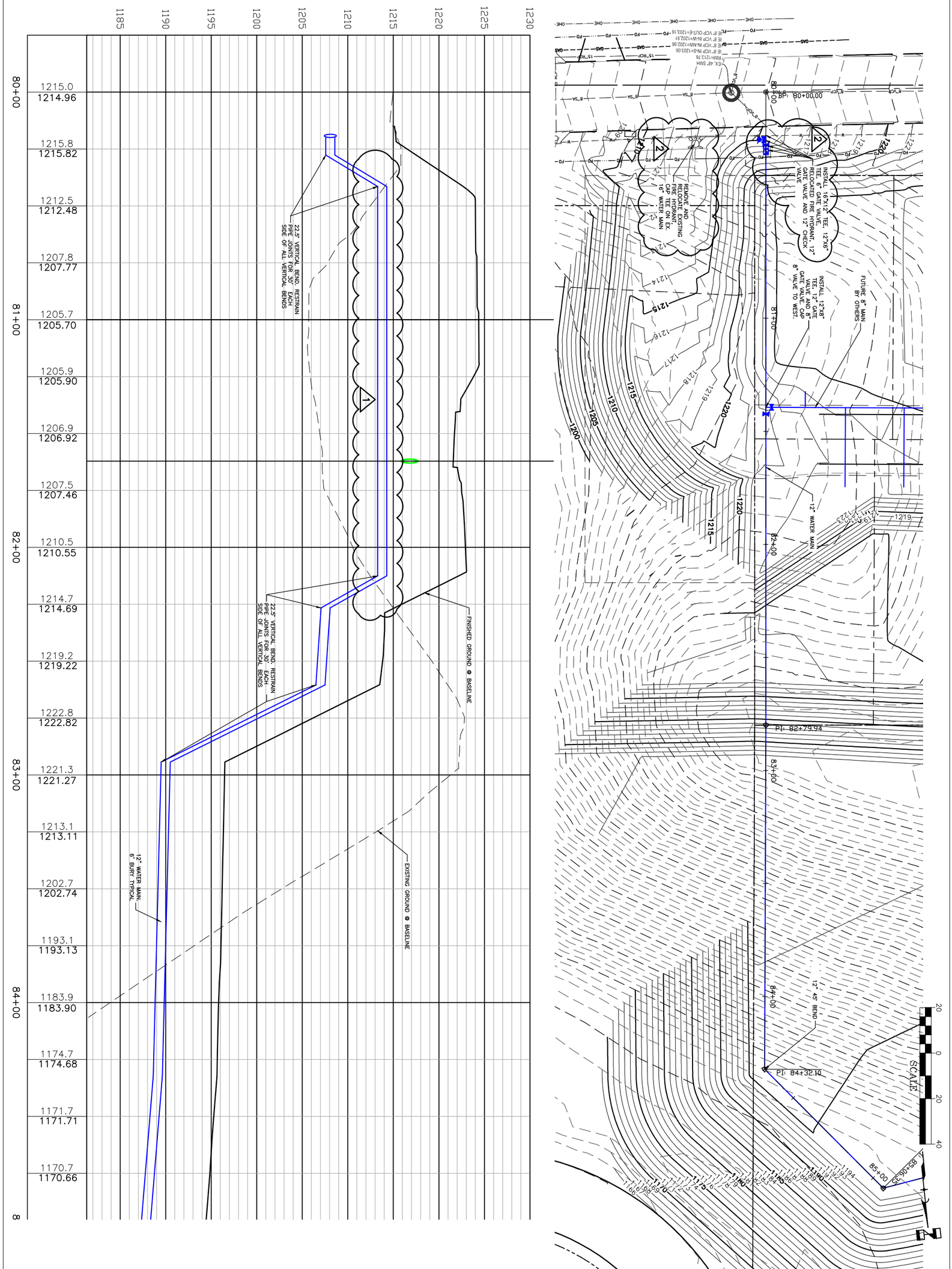

Sheet D.06	DGR ENGINEERING	Project Manager: B. MASTBERGEN Designer: K. MULLENIX Project Number: 266002 Phone: (712) 266-1554	PLAN & PROFILE- WATER MAIN

REVISIONS			
1	09-16-16	REVISED DEPTH OF WATER TO PROVIDE CLEARANCE FOR FUTURE UTILITIES
2	09-20-16	REVISED WATER MAIN CONNECTION, ADDED FIRE HYDRANT RELOCATION
3		

SERGEANT DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IOWA

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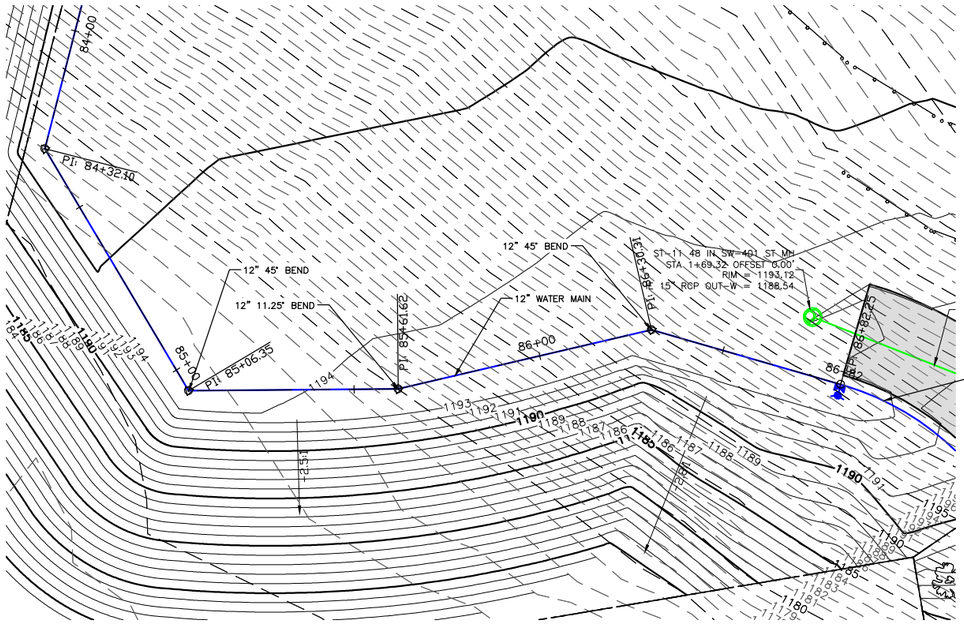

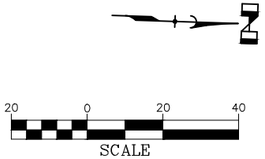

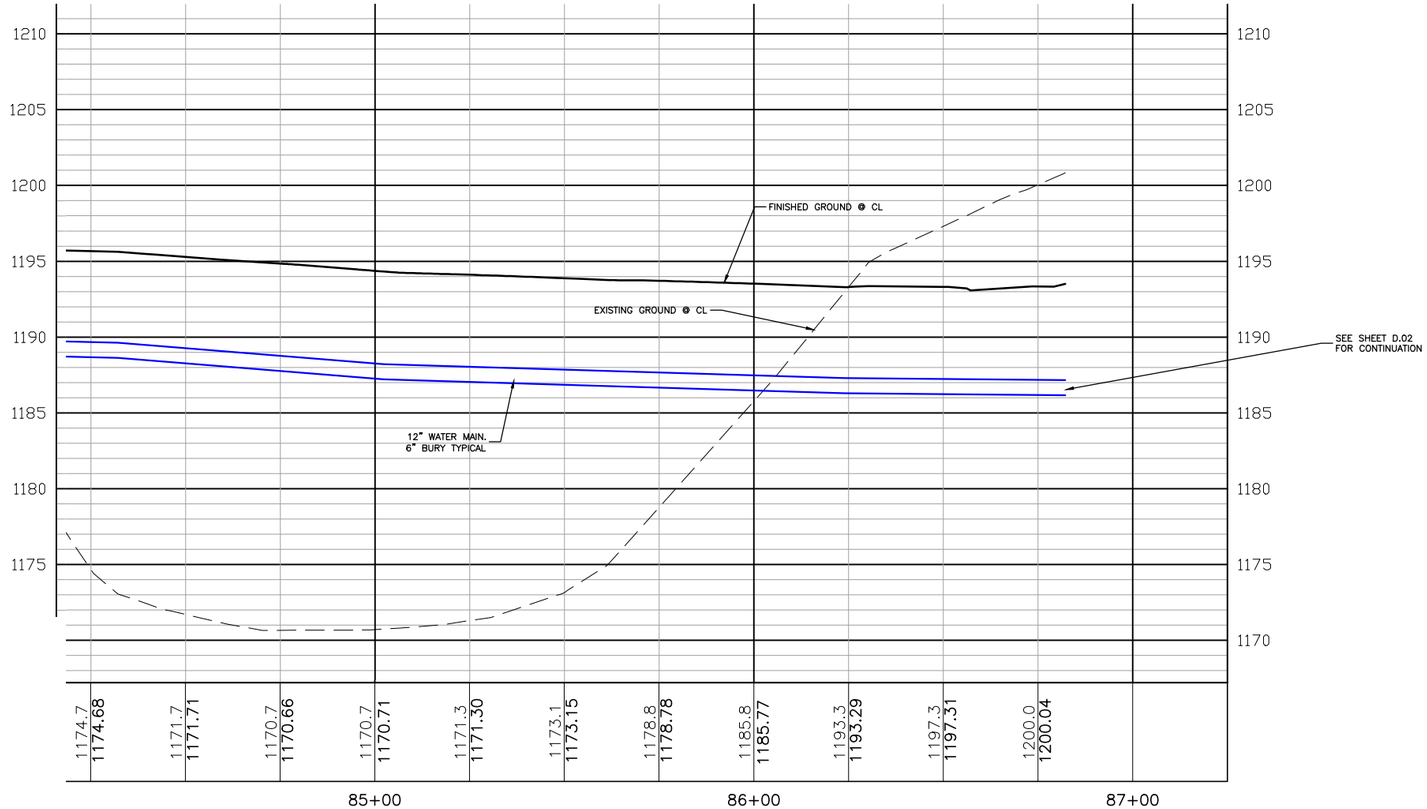

SERGEANT DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IOWA

PLAN & PROFILE- WATER MAIN

REVISIONS		
1		
2		
3		

Project Manager: B. MASTBERGEN
Designer: K. MULLENIX
Project Number: 266002
Phone: (712) 266-1554

DGR ENGINEERING

Sheet
D.07

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INSTALL AND MAINTAIN STABILIZED CONSTRUCTION ENTRANCE

CONCRETE WASHOUT JOB TRAILER AND PORTABLE, RESTROOMS

CONSTRUCT AND MAINTAIN SILT BERM (TYP.)

INSTALL AND MAINTAIN INTAKE PROTECTION (TYP.)

Lot 3
51,473.2 sq.ft.
1.18 acres

Lot 2
42,620.0 sq.ft.
0.98 acres

Lot 1
40,858.1 sq.ft.
0.94 acres

Lot 6
49,393.5 sq.ft.
1.13 acres

Lot 4
141,856.5 sq.ft.
3.26 acres

Lot 5
107,986.9 sq.ft.
2.48 acres

INSTALL AND MAINTAIN WATTLES (TYP.)

Outlot A
82,807.5 sq.ft.
1.90 acres

Lot 8
229,192.7 sq.ft.
5.26 acres

Erickson Property
104,519 sq.ft.
2.40 acres

INSTALL AND MAINTAIN SILT FENCE (TYP.)

CONSTRUCT SILT BERM TO DIRECT RUNOFF TO SURFACE INTAKE

INSTALL AND MAINTAIN WATTLES (TYP.)

INSTALL AND MAINTAIN INTAKE PROTECTION (TYP.)

INSTALL AND MAINTAIN SILT FENCE (TYP.)

60 0 60 120
SCALE

CHRISTY ROAD

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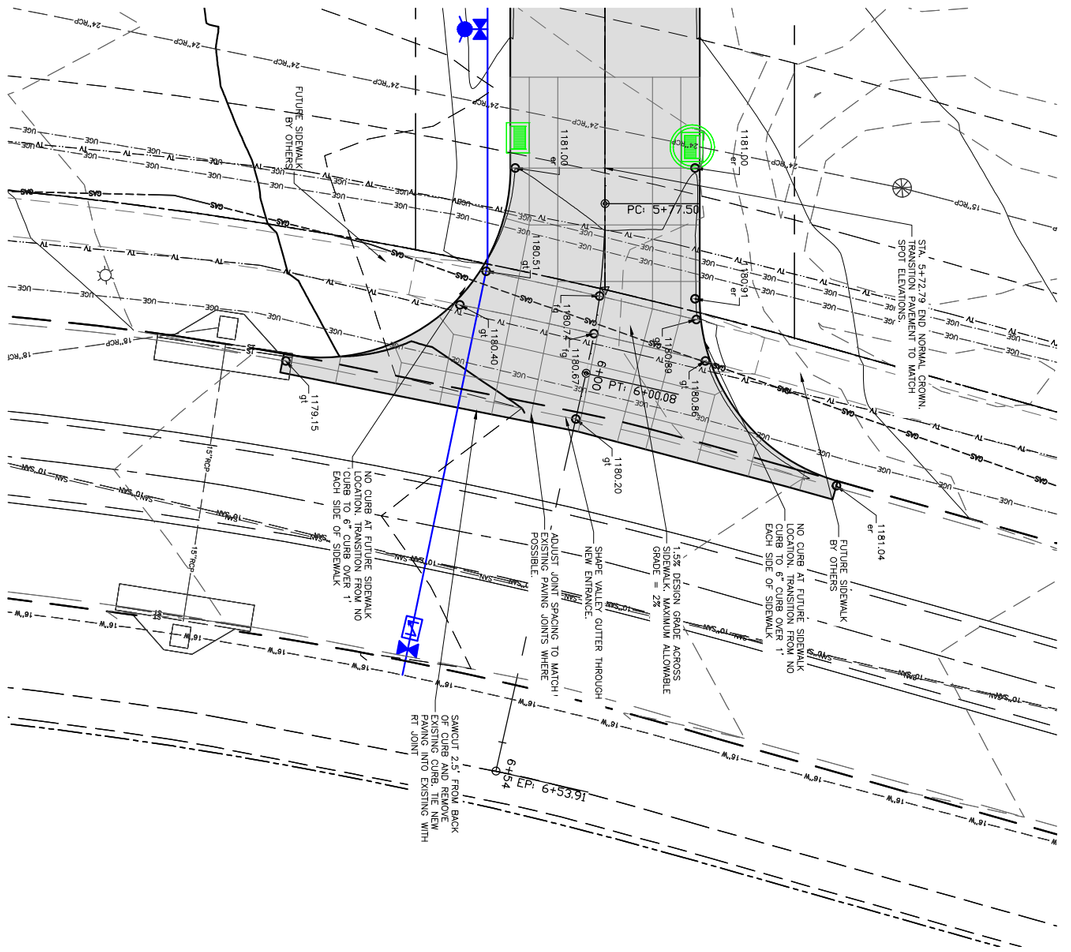
SERGEANT ROAD DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IA

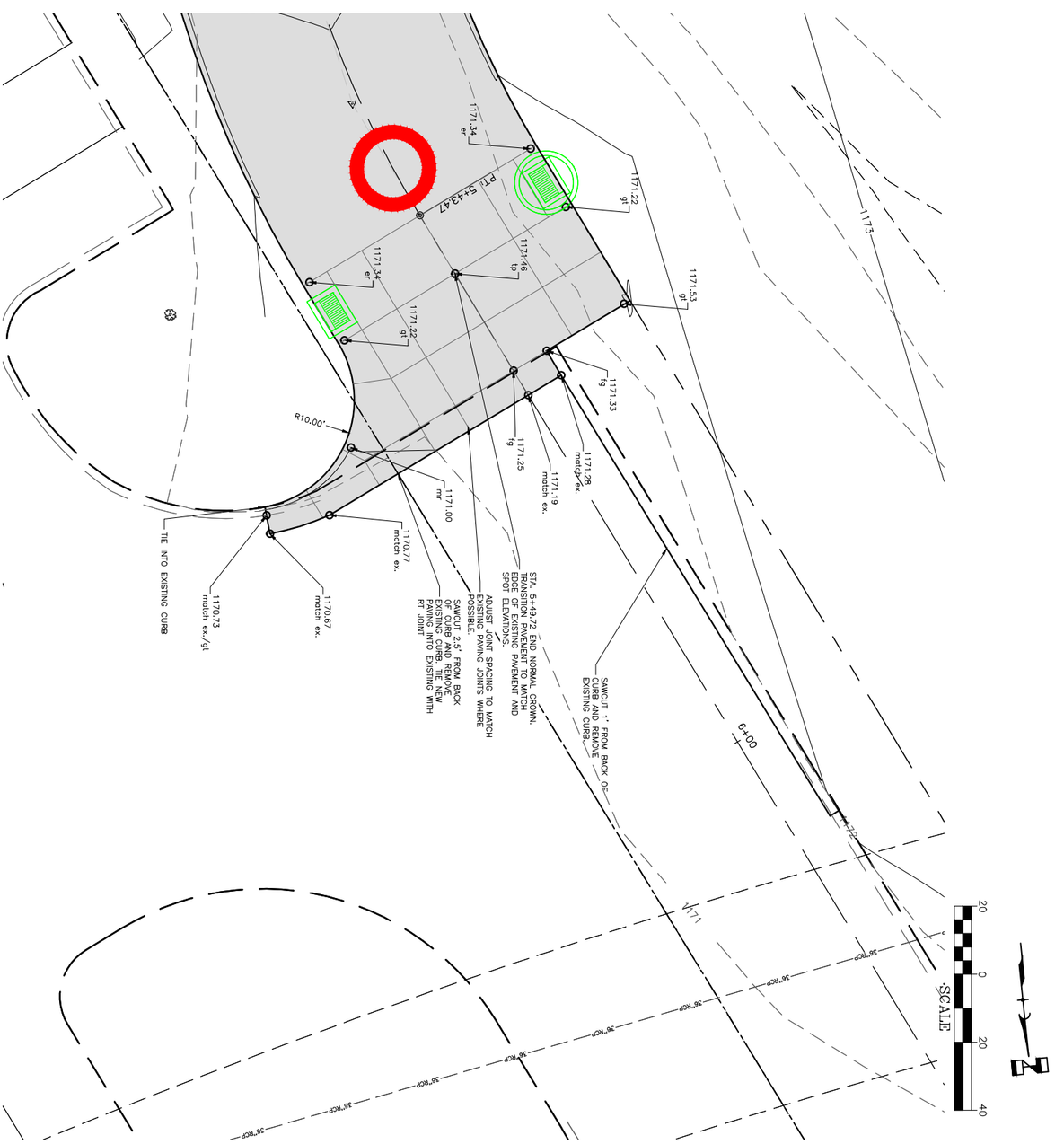
EROSION CONTROL PLAN

Project Manager: BKM
Designer: BKM
Project Number: 266002
Phone: (712) 266-1554

DGR ENGINEERING

Sheet
ER.01





Sheet L.01	DGR ENGINEERING	Project Manager: B. MASTBERGEN Designer: K. MULLENIX Project Number: 266002 Phone: (712) 266-1554	INTERSECTION DETAILS REVISIONS 1 2 3

SERGEANT DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IOWA

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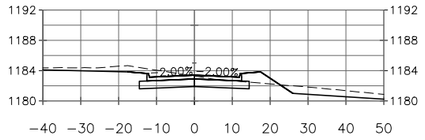

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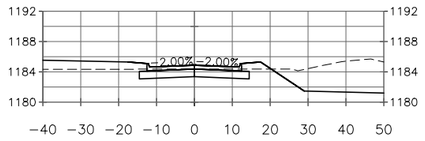

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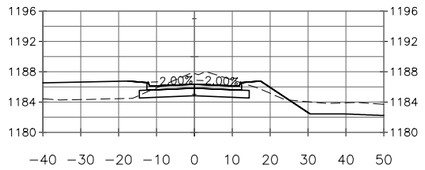

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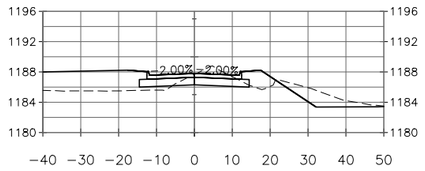

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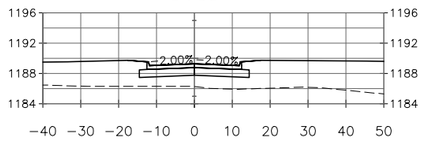

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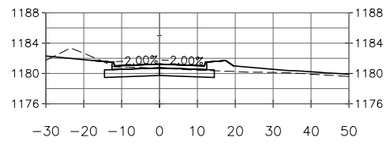

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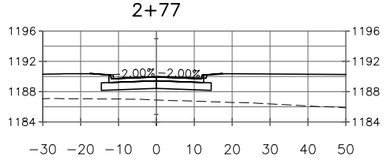

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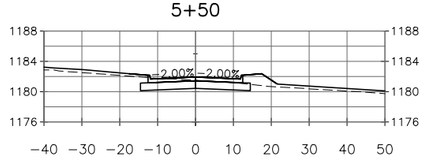

SERGEANT DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IOWA

CROSS SECTIONS
WEST ACCESS ROAD

REVISIONS		
1		
2		
3		

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DGR ENGINEERING

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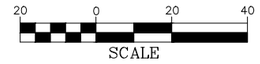

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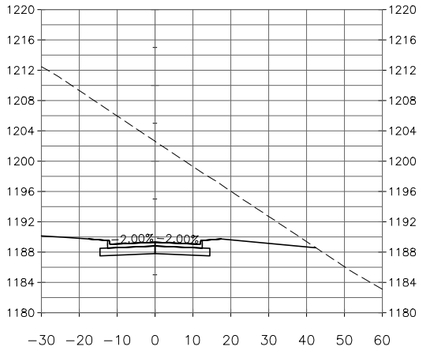

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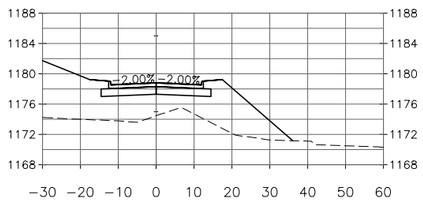

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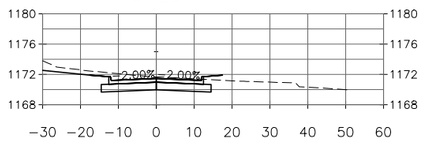

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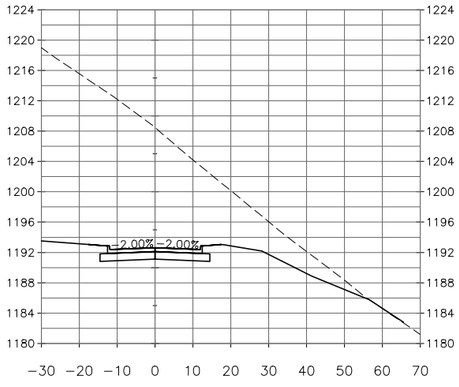

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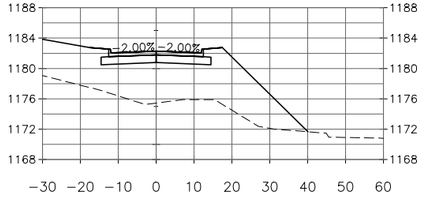

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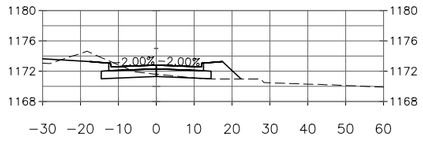

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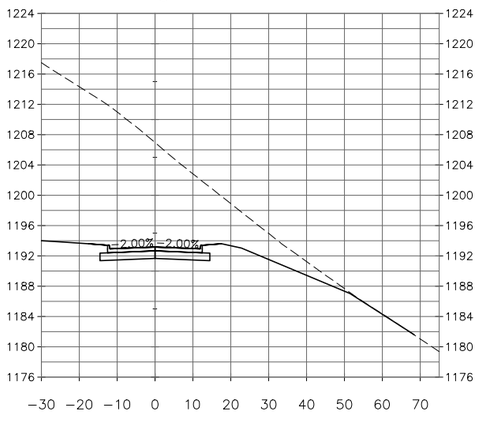

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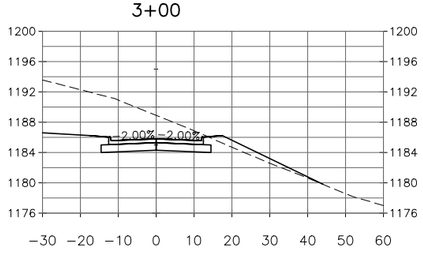

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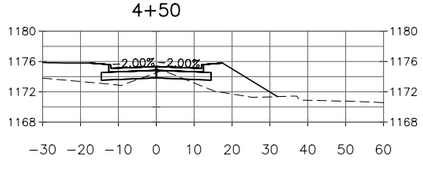

SERGEANT DEVELOPMENT
SITE IMPROVEMENTS
SIOUX CITY, IOWA

CROSS SECTIONS
EAST ACCESS ROAD

REVISIONS	1	2	3

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DGR ENGINEERING

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