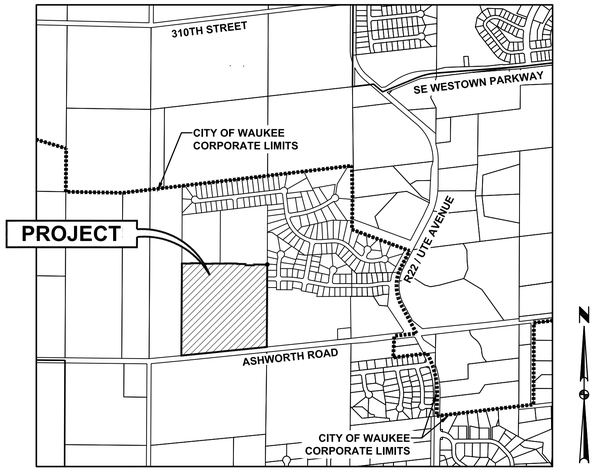
CONSTRUCTION PLANS FOR:

ASHWORTH ACRES PLAT 1

WAUKEE, IOWA

VICINITY MAP

NOT TO SCALE



WAUKEE, IOWA

INDEX OF SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
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3–4	DETAILS
5	QUANTITIES, GENERAL NOTES AND BID ITEM REFERENCE NOTES
6	HYDRANT COVERAGE AND LANDSCAPE PLAN
7–9	GRADING PLAN
10–12	EROSION AND SEDIMENT CONTROL PLAN
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48	ASHWORTH ROAD DETOUR PLAN

GENERAL LEGEND

PROPOSED

- SECTION LINE
- CENTER LINE
- RIGHT OF WAY
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- TYPE SW–501 STORM INTAKE
- TYPE SW–503 STORM INTAKE
- TYPE SW–505 STORM INTAKE
- TYPE SW–506 STORM INTAKE
- TYPE SW–513 STORM INTAKE
- TYPE SW–401 STORM MANHOLE
- TYPE SW–402 STORM MANHOLE
- TYPE SW–301 SANITARY MANHOLE
- STORM/SANITARY CLEANOUT
- WATER VALVE
- FIRE HYDRANT ASSEMBLY
- SIGN
- DETECTABLE WARNING PANEL
- WATER CURB STOP
- STORM SEWER STRUCTURE NO. (ST–10)
- STORM SEWER PIPE NO. (L–10)
- SANITARY SEWER STRUCTURE NO. (S–10)
- SANITARY SEWER PIPE NO. (P–10)
- SANITARY SEWER WITH SIZE (8"S)
- SANITARY SERVICE
- STORM SEWER
- STORM SERVICE
- WATERMAIN WITH SIZE (8"W)
- WATER SERVICE
- SAWCUT (FULL DEPTH)
- SILT FENCE
- USE AS CONSTRUCTED (UAC)
- TOP OF PROPOSED GROUND TG
- MINIMUM PROTECTION ELEVATION MPE
- MINIMUM GRADE AT EXPOSED STRUCTURE MGS

EXISTING

- SANITARY MANHOLE
- WATER VALVE BOX
- FIRE HYDRANT
- WATER CURB STOP
- WELL
- STORM SEWER MANHOLE
- STORM SEWER SINGLE INTAKE
- STORM SEWER DOUBLE INTAKE
- FLARED END SECTION
- DECIDUOUS TREE
- CONIFEROUS TREE
- DECIDUOUS SHRUB
- CONIFEROUS SHRUB
- ELECTRIC POWER POLE
- GUY ANCHOR
- STREET LIGHT
- POWER POLE W/ TRANSFORMER
- UTILITY POLE W/ LIGHT
- ELECTRIC BOX
- ELECTRIC TRANSFORMER
- ELECTRIC MANHOLE OR VAULT
- TRAFFIC SIGN
- TELEPHONE JUNCTION BOX
- TELEPHONE MANHOLE/VAULT
- TELEPHONE POLE
- GAS VALVE BOX
- CABLE TV JUNCTION BOX
- CABLE TV MANHOLE/VAULT
- MAIL BOX
- BENCHMARK
- SOIL BORING
- UNDERGROUND TV CABLE
- GAS MAIN
- FIBER OPTIC
- UNDERGROUND TELEPHONE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- FIELD TILE
- SANITARY SEWER W/ SIZE
- STORM SEWER W/ SIZE (15" RCP)
- WATER MAIN W/ SIZE

AS-BUILT DRAWINGS

AS–BUILT PLANS ARE BASED ON SURVEYED INVERT ELEVATIONS AND INFORMATION SUPPLIED BY THE CONTRACTOR. CIVIL DESIGN ADVANTAGE TAKES NO RESPONSIBILITY FOR UNAUTHORIZED CHANGES TO THE PLANS WITHOUT CITY/OWNER KNOWLEDGE. FIELD VERIFICATION OF UTILITIES OR OTHER PLAN ELEMENTS IS ALWAYS RECOMMENDED.

DEVELOPER / APPLICANT

ASHWORTH ACRES LLC
6400 WESTOWN PKWY
WEST DES MOINES, IA 50266

ENGINEER / SURVEYOR

CIVIL DESIGN ADVANTAGE, LLC
3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PH: 515–369–4400
CONTACT: ERIN OLLENDIKE

ZONING

EXISTING: A–1: AGRICULTURAL DISTRICT

PROPOSED: R–2: ONE AND TWO–FAMILY RESIDENTIAL DISTRICT

DEVELOPMENT SUMMARY:

TOTAL AREA OF SITE = 40.66 ACRES (1,771,157 SF)

PARKLAND DEDICATION

PARKLAND REQUIRED:
LOW DENSITY RESIDENTIAL: 45 UNITS * 3 PRESONS/HOUSEHOLD * 6/1000 = 0.81 AC

PARKLAND PROVIDED:
2.30 AC

DATE OF SURVEY:

DECEMBER 22, 2017

SUBMITTALS

FIRST SUBMITTAL:	04/30/2018
SECOND SUBMITTAL:	06/05/2018
THIRD SUBMITTAL:	06/26/2018
FOURTH SUBMITTAL:	07/05/2018
FINAL SUBMITTAL:	07/18/2018
REVISED MAILBOX PADS:	06/28/2019
AS–BUILT SUBMITTAL:	01/09/2020
AS–BUILT SUBMITTAL:	01/27/2020

BULK REGULATIONS:

R–2

FRONT YARD: 30 FEET

SIDE YARD: A TOTAL OF 15 FEET; ONE SIDE MAY BE REDUCED TO NOT LESS THAN 7 FEET

REAR YARD: 30 FEET

BENCHMARKS

CAPPED REBAR ON EAST BOUNDARY LINE 35 FEET SOUTH OF DAYBREAK DRIVE.
ELEVATION=1019.51

CAPPED 1/2" REBAR ON EAST BOUNDARY LINE 500 FEET +/– NORTH OF DAY BREAK DRIVE.
ELEVATION=1028.95

DALLAS COUNTY BM# G121, EAST SIDE OF R16 0.1 MILE SOUTH OF 300TH STREET.
ELEVATION=1032.82

BURY BOLT ON HYDRANT @ NW CORNER OF DAYBREAK DRIVE & CRESCENT DRIVE.
ELEVATION=1023.95

NOTES

1. ANY CHANGES PROPOSED TO THE CONSTRUCTION DRAWINGS DURING CONSTRUCTION SHALL BE APPROVED IN WRITING BY THE DEVELOPMENT SERVICES DEPARTMENT.

2. THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES MADE DURING CONSTRUCTION THAT HAVE NOT BEEN GRANTED APPROVAL IN WRITING BY THE DEVELOPMENT SERVICES DEPARTMENT.

3. THE RESULTS OF THE GEOTECHNICAL REPORT ARE TO BE PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT. THE CONSTRUCTION DRAWINGS ARE SUBJECT TO ANY CHANGES REQUIRED BY THE REPORT.

4. THE CONTRACTOR IS RESPONSIBLE FOR THE TRAFFIC CONTROL NEEDS FOR PAVING ASHWORTH ROAD. IF ASHWORTH ROAD IS CLOSED DURING CONSTRUCTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING A SIGNED DETOUR ROUTE. A MESSAGE BOARD WILL BE REQUIRED AT LEAST 1 WEEK IN ADVANCE OF ANY LANE CLOSURES.

LEGAL DESCRIPTION

PARCEL A AND PARCEL B OF THE SOUTHEAST 1/4, AS SHOWN ON THE PLAT OF SURVEY RECORDED IN BOOK 1998, PAGE 360 ALL BEING IN SECTION 6, TOWNSHIP 78N, RANGE 26 WEST OF THE 5TH P.M., DALLAS COUNTY, IOWA AND CONTAINS 65.75 ACRES.

UTILITY NOTE

ANY UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY AND RECORDS OBTAINED BY THIS SURVEYOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL THE UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION SHOWN.

CIVIL DESIGN ADVANTAGE
3405 SE CROSSROADS DR. SUITE G GRIMES, IOWA 50111
PH: (515) 369-4400 Fax: (515) 369-4410
PROJECT NO. 1802.054

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL CONFORM TO THE PROJECT SPECIFICATIONS AND THE SOILS REPORT PREPARED BY CONSTRUCTION MATERIALS TESTING (CMT), (PN 1802025AAA) DATED MAY 4, 2018.

THIS PROJECT REQUIRES AN IOWA NPDES PERMIT #2. CIVIL DESIGN ADVANTAGE WILL PROVIDE THE PERMITS AND THE INITIAL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE CONTRACTORS USE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING THE SWPPP THROUGHOUT CONSTRUCTION AND MEETING LOCAL, STATE AND FEDERAL REQUIREMENTS.

THIS DESIGN SPECIFICALLY PREPARED FOR USE AT THE LOCATION SHOWN. USE IN ANY OTHER MANNER EXCEEDS THE INTENDED PURPOSE OF THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS.

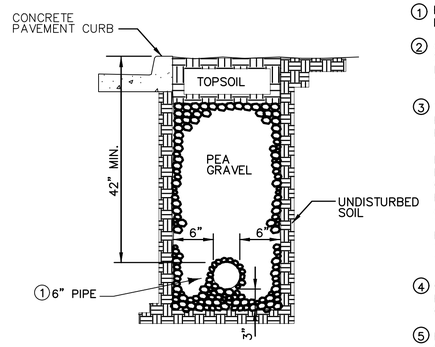
THE MOST RECENT EDITION OF THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2018 EDITION OF SUDAS STANDARD SPECIFICATIONS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.

LICENSED PROFESSIONAL ENGINEER
ERIN K. OLLENDIKE
16926
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.

ERIN K. OLLENDIKE, P.E. DATE

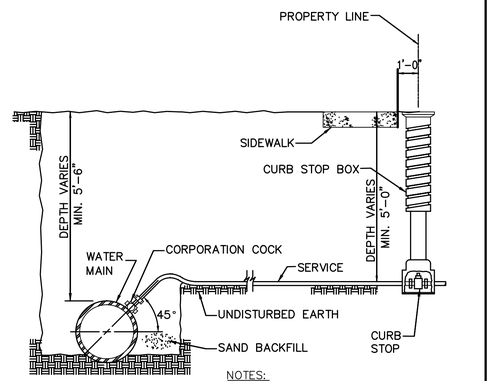
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2019
PAGES OR SHEETS COVERED BY THIS SEAL: 1–48



1. PLACE PERFORATIONS DOWN FOR ALL INSTALLATIONS.
2. ALL SUBDRAINS ARE TO BE TIED INTO STORM SEWER STRUCTURES AND THEIR LOCATIONS ARE TO BE INCLUDED IN THE AS-BUILTS FOR THE SUBDIVISION.
3. THE GEOTECHNICAL ENGINEER SHALL BE PRESENT ONSITE DURING SUBGRADE PREPARATION AND PROOF ROLL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE GEOTECHNICAL ENGINEER IS PRESENT ONSITE AND A COPY OF ALL REPORTS AND FINDINGS REQUIRING ALTERATION FROM THE APPROVED PLAN SET BE PROVIDED TO THE WAUKEE ENGINEERING DEPARTMENT FOR REVIEW AND DISCUSSION PRIOR TO COMMENCING WITH PAVING WITHIN THE PROJECT.
4. CORE DRILL ALL STORM SEWER AND PLACE NON-SHRINK GROUT COLLAR AT CONNECTION.
5. RODENT GUARDS ARE TO BE INSTALLED WHERE THE PIPE TIES INTO THE STRUCTURE.

6" PERFORATED SUBDRAIN

NOT TO SCALE

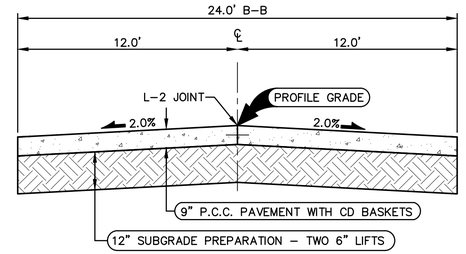


NOTES:

1. TERMINATE CURB STOP BOX ROD 1'-6" BELOW FINISHED GRADE.

WATER SERVICE CONNECTION

NOT TO SCALE

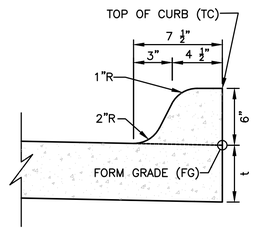


NOTES:

1. PREPARE SUBGRADE IN 2 – 6" LIFTS.
2. MAXIMUM CD JOINT SPACING IS 15'.

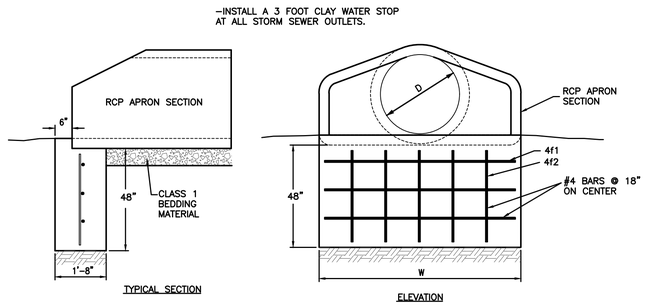
24' P.C.C. ROADWAY

NOT TO SCALE **ASHWORTH ROAD**



INTEGRAL 6" STANDARD SPOT ELEVATION REFERENCE DETAIL

NOT TO SCALE



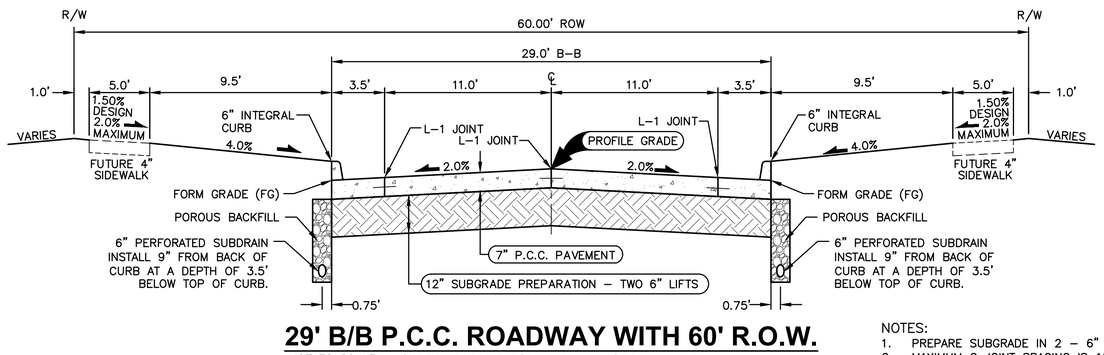
REINFORCING BAR LIST

D	W	Mark	Size	Length	Count
12"	2'-4"	4f1	4	2'-0"	3
		4f2	4	3'-8"	2
15"	2'-10"	4f1	4	2'-6"	3
		4f2	4	3'-8"	2
18"	3'-5"	4f1	4	3'-1"	3
		4f2	4	3'-8"	3
24"	4'-6"	4f1	4	4'-2"	3
		4f2	4	3'-8"	3
30"	5'-7"	4f1	4	5'-3"	3
		4f2	4	3'-8"	4
36"	6'-8"	4f1	4	6'-4"	3
		4f2	4	3'-8"	5
42"	7'-3"	4f1	4	6'-11"	3
		4f2	4	3'-8"	5

D	W	Mark	Size	Length	Count
48"	7'-10"	4f1	4	7'-6"	3
		4f2	4	3'-8"	6
54"	8'-5"	4f1	4	8'-1"	3
		4f2	4	3'-8"	6
60"	8'-11"	4f1	4	8'-7"	3
		4f2	4	3'-8"	6
66"	8'-11"	4f1	4	8'-7"	3
		4f2	4	3'-8"	6
72"	10'-0"	4f1	4	9'-8"	3
		4f2	4	3'-8"	7
78"	10'-7"	4f1	4	10'-3"	3
		4f2	4	3'-8"	7
84"	11'-1"	4f1	4	10'-9"	3
		4f2	4	3'-8"	8

RCP APRON FOOTING DETAIL

NOT TO SCALE

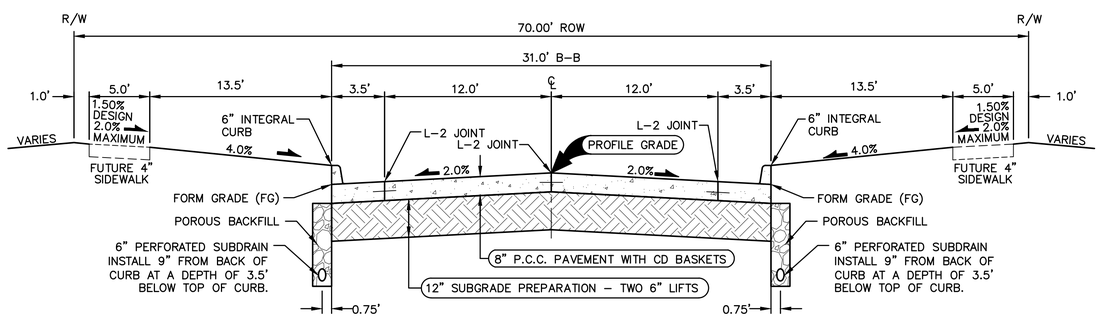


NOTES:

1. PREPARE SUBGRADE IN 2 – 6" LIFTS.
2. MAXIMUM C JOINT SPACING IS 15'.

29' B/B P.C.C. ROADWAY WITH 60' R.O.W.

NOT TO SCALE **SERENITY DRIVE (STA 80+62.91 - STA 82+31.74), AUGUSTA COURT, ADOBE DRIVE, AVALON DRIVE, DAYBREAK DRIVE AND ABBOTT DRIVE**



NOTES:

1. PREPARE SUBGRADE IN 2 – 6" LIFTS.
2. MAXIMUM CD JOINT SPACING IS 15'.

31' B/B P.C.C. ROADWAY WITH 70' R.O.W.

NOT TO SCALE **SERENITY DRIVE (STA 69+13.66 - STA 80+62.91)**

REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
FINAL SUBMITTAL	07/18/18
FOURTH SUBMITTAL	07/05/18
THIRD SUBMITTAL	06/26/18

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE

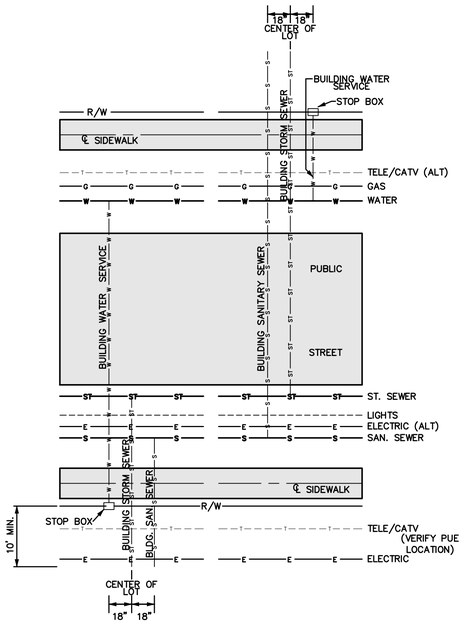
ASHWORTH ACRES PLAT 1
TYPICAL SECTIONS AND DETAILS

WAUKEE, IOWA

2 / 48

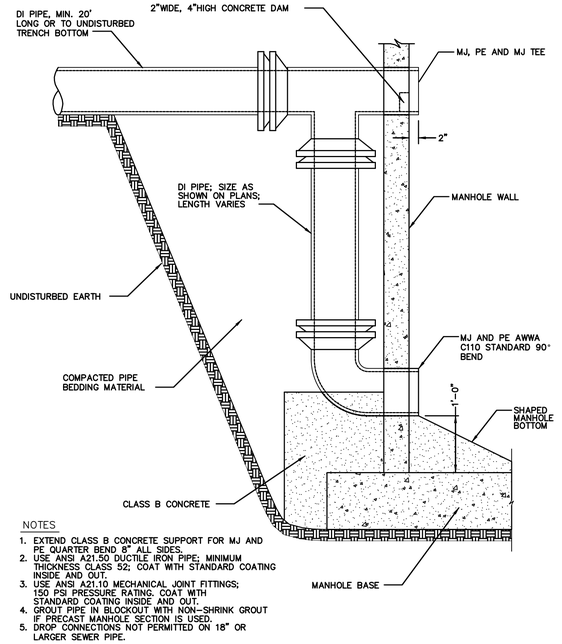
1802.054

FILE: N:\2018\1802054\DWG\1802054-CSV-DET-TAB-ASBUILT.DWG
PLOT DATE: 7/27/2020 11:06 AM
PLOTTED BY: JONATHON MCDONALD
COMMENT:
TEDH: ENG.



CITY OF WAUKEE
UTILITY SERVICE LOCATIONS

NOT TO SCALE

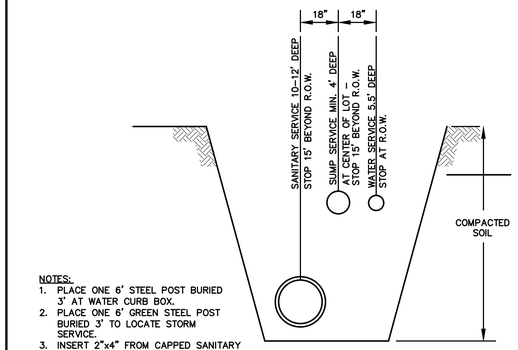


NOTES

1. EXTEND CLASS B CONCRETE SUPPORT FOR MJ AND PE QUARTER BEND 8" ALL SIDES.
2. USE ANSI A21.50 DUCTILE IRON PIPE; MINIMUM THICKNESS CLASS 52; COAT WITH STANDARD COATING INSIDE AND OUT.
3. USE ANSI A21.10 MECHANICAL JOINT FITTINGS; 150 PSI PRESSURE RATING. COAT WITH STANDARD COATING INSIDE AND OUT.
4. GROUT PIPE IN BLOCKOUT WITH NON-SHRINK GROUT IF PRECAST MANHOLE SECTION IS USED.
5. DROP CONNECTIONS NOT PERMITTED ON 18" OR LARGER SEWER PIPE.

CITY OF WAUKEE
OUTSIDE DROP CONNECTION

NOT TO SCALE

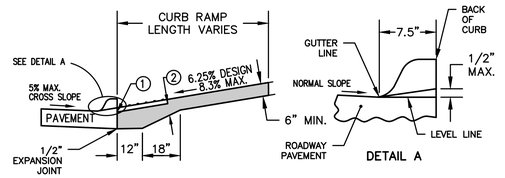


NOTES:

1. PLACE ONE 6' STEEL POST BURIED 3' AT WATER CURB BOX.
2. PLACE ONE 6' GREEN STEEL POST BURIED 3' TO LOCATE STORM SERVICE.
3. INSERT 2"x4" FROM CAPPED SANITARY SERVICE TO 2 FOOT ABOVE GRADE.

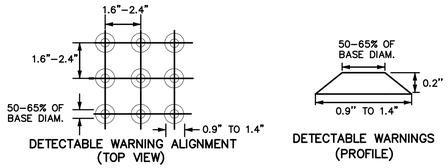
SERVICE LOCATION DETAIL

NOT TO SCALE



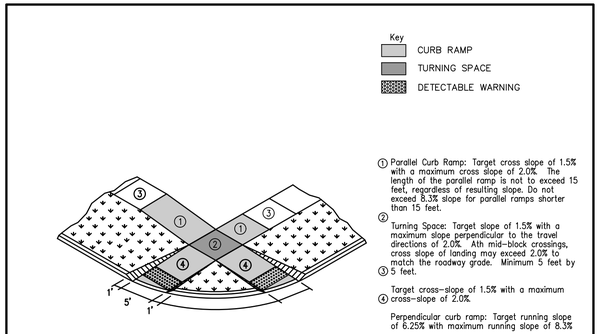
① INSTALL A 24 INCH WIDE (MIN.) STRIP OF DETECTABLE WARNINGS AT THE BACK OF CURB. EXTEND THE DETECTABLE WARNINGS ACROSS THE FULL WIDTH OF THE RAMP.

② PROVIDE A MINIMUM OF 6 INCHES OF CONCRETE BELOW THE DETECTABLE WARNING PANEL.



DETECTABLE WARNING DETAIL

NOT TO SCALE



① Parallel Curb Ramp: Target cross slope of 1.5% with a maximum cross slope of 2.0%. The length of the parallel ramp is not to exceed 15 feet, regardless of resulting slope. Do not exceed 8.3% slope for parallel ramps shorter than 15 feet.

② Turning Space: Target slope of 1.5% with a maximum slope perpendicular to the travel directions of 2.0%. Ath mid-block crossings, cross slope of landing may exceed 2.0% to match the roadway grade. Minimum 5 feet by 5 feet.

③ Target cross-slope of 1.5% with a maximum

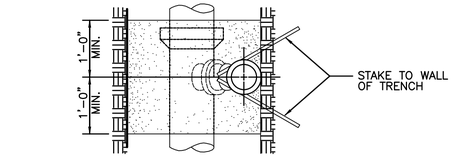
④ cross-slope of 2.0%.

Perpendicular curb ramp: Target running slope of 6.25% with maximum running slope of 8.3%

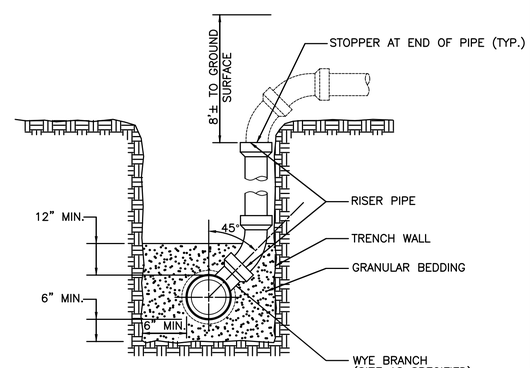
The minimum pavement depth for ramps and landings shall be 6-inches.

CURB RAMPS OUTSIDE OF INTERSECTION RADIUS

NOT TO SCALE



PLAN



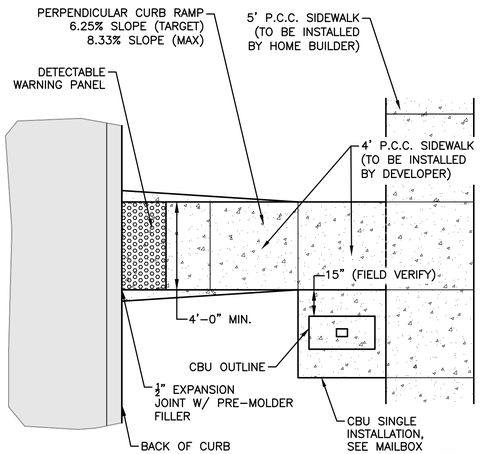
NOTES

1. INSTALL RISER TO BEAR FIRMLY AGAINST UNDISTURBED WALL OF TRENCH. STAKE RISER PIPE IN PLACE PRIOR TO BACK-FILLING TO PREVENT MOVEMENT OF PIPE
2. NOTCH WALL OF TRENCH TO RECEIVE PIPE WHERE POSSIBLE.

SECTION

SANITARY SEWER SERVICE RISER

NOT TO SCALE

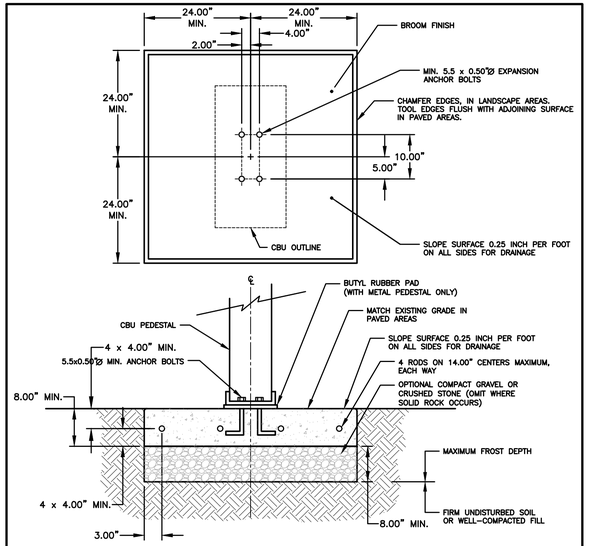


INSTALLATION NOTE:

1. MAILBOX PADS TO BE INSTALLED BY DEVELOPER.
2. CLUSTER MAILBOX TO BE LOCATED ON THE NO PARKING/STREET LIGHT SIDE OF STREET.
3. DO NOT LOCATE AT INTERSECTION.
4. LOCATE NEAR SHARED PROPERTY LINE PER APPROVED PLAN.
5. DETERMINE SIDEWALK SIDE OF MAILBOX PAD ELEVATION ASSUMING CONSTANT 4% SLOPE FROM BACK OF CURB TO SIDEWALK SIDE OF MAILBOX PAD. RESULTING SLOPE FROM BACK OF CURB TO STREET SIDE OF MAILBOX PAD WILL BE GREATER THAN 4% FOR EXAMPLE, FOR A 29' WIDE PAVEMENT WITH A 60' WIDE R.O.W. AND A 2% MAILBOX PAD CROSS SLOPE, THE RESULTING SLOPE FROM THE BACK OF CURB TO THE STREET SIDE OF MAILBOX PAD IS 6.2%.

MAILBOX RAMP DETAIL

NOT TO SCALE

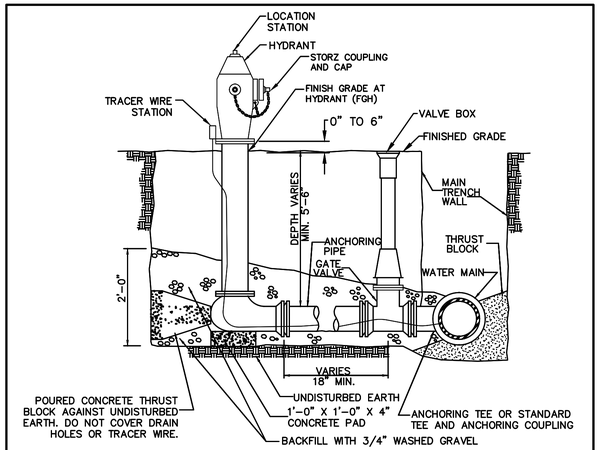


NOTES:

1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS, CONTAIN 4% MIN. - 6% MAX. AIR ENTRAINMENT AND BE PLACED WITH A 3.50" - 4.00" SLUMP IN ACCORDANCE WITH ACI 301.
2. REINFORCING STEEL RODS SHALL CONFORM TO ASTM A615, GRADE 60.
3. EXPANSION BOLTS SHALL BE EQUIVALENT TO THE FOLLOWING PROVIDERS:
   A. HILTI KWIK BOLT (WWW.USHILTI.COM) II-1/2" DIAMETER X 5-1/2" OVERALL LENGTH. GALVANIZED, CATALOG # 000-453-696 KB II 12-512, STAINLESS STEEL: CATALOG # 000-454-744. ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 3-1/2"
   B. ITW RAMSET REDHEAD TRUBOLT (WWW.RAMSET-REDHEAD.COM) GALVANIZED, 1/2" DIAMETER X 7" OVERALL LENGTH; CATALOG NUMBER: WS-12700. ENSURE THAT MIN. EMBEDMENT IS CONCRETE IS AT LEAST 4-1/8".
   C. RAWL STUD (WWW.RAWL.COM) GALVANIZED, 1/2" X 5-1/2" OVERALL LENGTH; CATALOG NUMBER: 7724. ENSURE THAT MIN. EMBEDMENT IN CONCRETE IS AT LEAST 4".

MAILBOX CLUSTER PAD DETAIL

NOT TO SCALE



NOTES

1. MINIMUM SIZE FOR PIPING, VALVES AND FITTINGS FROM WATER MAIN TO HYDRANT INLET: 6".
2. PROVIDE TRACER WIRE AND TRACER WIRE STATION.
3. WRAP HYDRANT, PIPE AND FITTINGS WITH POLYETHYLENE ENCASEMENT.

HYDRANT ASSEMBLY DETAIL

NOT TO SCALE

REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
FINAL SUBMITTAL	07/18/18
FOURTH SUBMITTAL	07/05/18
THIRD SUBMITTAL	06/26/18

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE

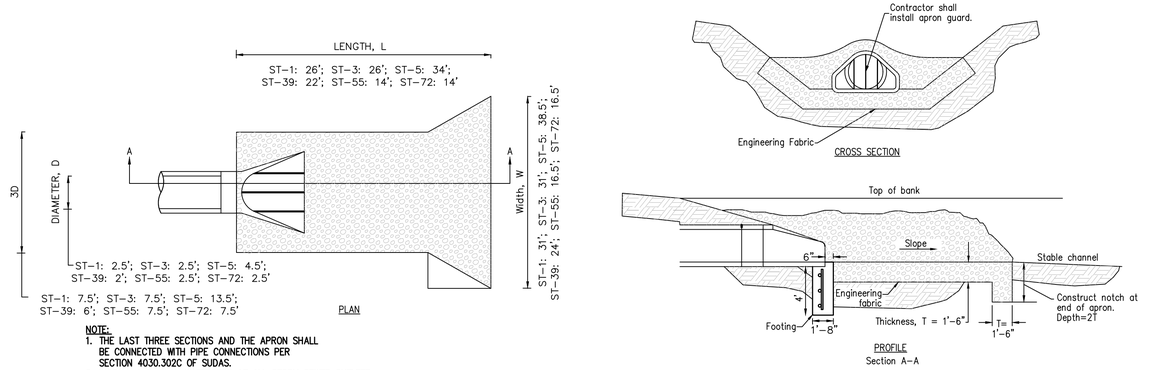
ASHWORTH ACRES PLAT 1
DETAILS

WAUKEE, IOWA

3/48

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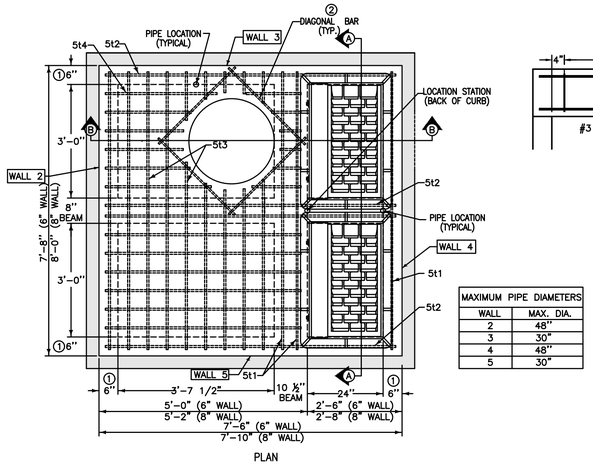
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PLOTTED BY: JONATHON MCDONALD
COMMENT:
TECH: ENG:



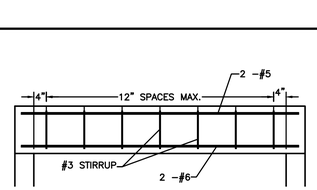
NOTE:
1. THE LAST THREE SECTIONS AND THE APRON SHALL BE CONNECTED WITH PIPE CONNECTIONS PER SECTION 4030.302C OF SUDAS.
2. INSTALL A 3' CLAY WATERSTOP AT ALL STORM SEWER OUTLETS.

ROCK APRON FOR PIPE OUTLET

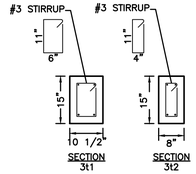
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MAXIMUM PIPE DIAMETERS	
WALL	MAX. DIA.
2	48"
3	30"
4	48"
5	30"



10 1/2" AND 8" BEAM DETAIL



SECTION 3t1 SECTION 3t2

REINFORCING BAR LIST									
MARK	SIZE	LOCATION	SHAPE	COUNT		LENGTH		SPACING	
				6" WALL	8" WALL	6" WALL	8" WALL	6" WALL	8" WALL
3t1	3	TOP		7	7	3'-2" *	3'-2" *	12"	12"
3t2	3	TOP		7	7	2'-10" *	2'-10" *	11 5/8"	11 5/8"
5b1	5	BASE		9	9	7'-10"	8'-2"	11 1/2"	12"
5b2	5	BASE		9	9	7'-8"	8'-0"	11 3/4"	12 1/4"
6w1	6	WALLS		28	28	WALL HEIGHT MINUS 4"		12"	12"
6w2	6	WALLS		VARIES	VARIES	7'-2"	7'-6"	12"	12"
6w3	6	WALLS		VARIES	VARIES	7'-4"	7'-8"	12"	12"
5t1	5	TOP		4	4	7'-4"	7'-8"	SEE DETAIL	SEE DETAIL
5t2	5	TOP		6	6	7'-2"	7'-6"	SEE DETAIL	SEE DETAIL
5t3	5	TOP		16	16	7'-4"	7'-8"	6 1/8"	6 1/4"
5t4	5	TOP		24	24	4'-8"	4'-10"	5 7/8"	6"
6t1	6	TOP		2	2	7'-4"	7'-8"	SEE DETAIL	SEE DETAIL
6t2	6	TOP		2	2	7'-2"	7'-6"	SEE DETAIL	SEE DETAIL

① USE 8" WALL OPTION FOR INTAKE DEPTHS GREATER THAN 7'-0" AND LESS THAN 10'-0".

② INSTALL FOUR #5 DIAGONAL BARS AT MANHOLE OPENING AND AT ALL PIPE OPENINGS.

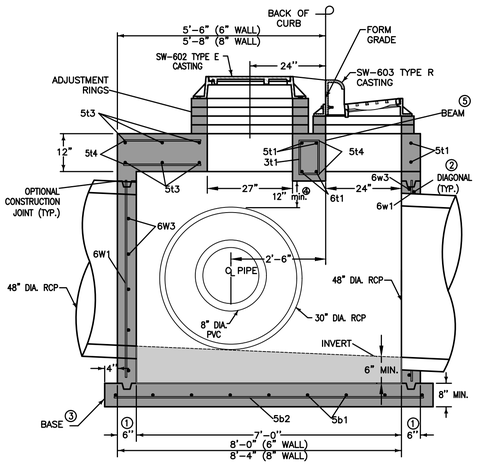
③ CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTEGRAL WITH WALLS, THE FOOTPRINT OF BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.

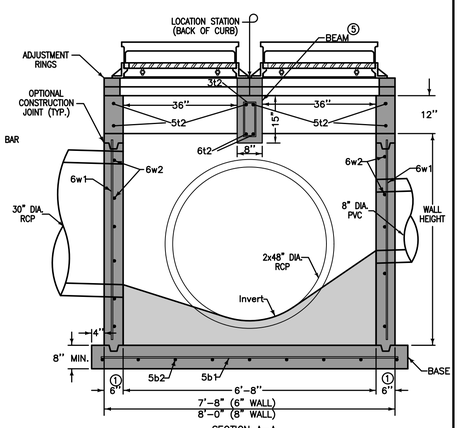
④ 12 INCH MINIMUM WALL HEIGHT ABOVE ALL PIPES.

⑤ CONSTRUCT 8"X15" AND 10 ½"X15" P.C. CONCRETE BEAMS INTEGRAL WITH 12" P.C. CONCRETE FLAT TOP.

SW-506 MODIFIED DOUBLE GRATE INTAKE WITH MANHOLE (ST-9)

NOT TO SCALE





ASHWORTH ACRES PLAT 1
TYPICAL SECTIONS AND DETAILS

WAUKEE, IOWA

REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
FINAL SUBMITTAL	07/18/18
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GRIMES, IOWA 50111
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ENGINEER: EKO | EI: GH
CIVIL DESIGN ADVANTAGE

FILE: N:\2018\1802054\DWG\1802054-CDV-DET-749-ASBUILT.DWG
LAST REVISED: 1/27/2020 11:09 AM
PLOTTED BY: JONATHON MCDONALD
COMMENT:
TECH: ENG.

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
1	COMBINED CLEARING AND GRUBBING	AC	48.84
2	STRIPPING, SALVAGING AND SPREAD TOPSOIL	LS	1
3	CLASS 10 EXCAVATION	LS	1
4	SUBGRADE PREPARATION	SY	18,099
5	SANITARY SEWER GRAVITY MAIN, 8" DIA	LF	4,849
6	SANITARY SEWER GRAVITY MAIN, 12" DIA	LF	842
7	SANITARY SEWER SERVICE STUB, 4" DIA	EA	63
8	SUBDRAIN, 6" PERFORATED PVC	LF	3,083
9	STORM SEWER, TRENCHED, 8" PERFORATED PVC	LF	656
10	STORM SEWER, TRENCHED, 15" RCP	LF	1,242
11	STORM SEWER, TRENCHED, 18" RCP	LF	871
12	STORM SEWER, TRENCHED, 24" RCP	LF	630
13	STORM SEWER, TRENCHED, 30" RCP	LF	1,678
14	STORM SEWER, TRENCHED, 48" RCP	LF	226
15	STORM SEWER, TRENCHED, 54" RCP	LF	54
16	STORM SEWER SERVICE STUB, 4" DIA	EA	45
17	STORM SEWER, 15" RCP APRON W/ APRON GUARD	EA	1
18	STORM SEWER, 18" RCP APRON W/ APRON GUARD	EA	2
19	STORM SEWER, 24" RCP APRON W/ APRON GUARD	EA	1
20	STORM SEWER, 15" RCP APRON W/ FOOTING & APRON GUARD	EA	4
21	STORM SEWER, 24" RCP APRON W/ FOOTING & APRON GUARD	EA	1
22	STORM SEWER, 30" RCP APRON W/ FOOTING & APRON GUARD	EA	8
23	STORM SEWER, 48" RCP APRON W/ FOOTING & APRON GUARD	EA	1
24	STORM SEWER, 54" RCP APRON W/ FOOTING & APRON GUARD	EA	1
25	WATER MAIN, 8" DIA	LF	3,547
26	WATER MAIN, 16" DIA	LF	1,328
27	WATER SERVICE STUB, 1" DIA	EA	45
28	VALVE, 8" DIA	EA	15
29	VALVE, 16" DIA	EA	4
30	FIRE HYDRANT ASSEMBLY	EA	14
31	TEMPORARY FIRE HYDRANT ASSEMBLY	EA	7
32	TEMPORARY FIRE HYDRANT ASSEMBLY (RELOCATED)	EA	1
33	MANHOLE, SW-301, 48" (SANITARY SEWER)	EA	23
34	MANHOLE, SW-401, 48" (STORM SEWER)	EA	6
35	MANHOLE, SW-401, 72" (STORM SEWER)	EA	2
36	MANHOLE, SW-401, 84" (STORM SEWER)	EA	1
37	MANHOLE, SW-401, 96" (STORM SEWER)	EA	1
38	INTAKE, SW-501	EA	8
39	INTAKE, SW-503	EA	8
40	INTAKE, SW-505	EA	8
41	INTAKE, SW-506	EA	7
42	INTAKE, MODIFIED SW-506	EA	1
43	INTAKE, SW-512	EA	3
44	PAVEMENT, 7" P.C.C.	SY	7,366
45	PAVEMENT, 8" P.C.C. WITH CD BASKETS	SY	4,022
46	PAVEMENT, 9" P.C.C. WITH CD BASKETS	SY	4,632
47	PAVEMENT, 6" P.C.C. SHARED USE PATH	SY	343
48	PAVEMENT, 4" P.C.C. SIDEWALK	SY	51
49	PAVEMENT, 6" P.C.C. SIDEWALK RAMPS	SY	183
50	DETECTABLE WARNING PANELS	SF	260
51	SEEDING, FERTILIZING, AND MULCHING	AC	45.40
52	PERMANENT ROAD CLOSURE, URBAN, SI-182	EA	20
53	PERMANENT ROAD CLOSURE, URBAN, SI-182 (RELOCATED)	EA	5
54	TRAFFIC CONTROL	LS	1
55	EROSION CONTROL	LS	1
56	ROCK OUTLET PROTECTION, CLASS 'E' RIP RAP	TONS	155
57	STORM SEWER CLEANOUT	EA	7
58	PAINTED PAVEMENT MARKINGS, DURABLE	STA	11
59	PAINTED SYMBOLS AND LEGENDS, DURABLE	EA	4
60	GROOVES CUT FOR PAVEMENT MARKINGS	STA	11
61	GROOVES CUT FOR SYMBOLS AND LEGENDS	EA	4
62	MAILBOX PAD	EA	3
63	LANDSCAPING	LS	1

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND TO THE 2018 EDITION OF SUDAS STANDARD SPECIFICATIONS. THE WAUKEE STANDARD SPECIFICATIONS SHALL GOVERN IF ANY DISCREPANCIES.
2. WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS. THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.
3. THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY ONE-CALL SERVICE AT 800-292-8989 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
4. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING HIS EQUIPMENT ON THE PAVEMENT OR SIDEWALK. PAVEMENT REPLACEMENT SHALL COMPLY WITH THE WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.
5. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK BETWEEN ALL SUPPLIERS AND SUBCONTRACTORS INVOLVED IN THE PROJECT. INCLUDING STAGING OF CONSTRUCTION DETAILS.
6. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE PROPOSED AND EXISTING RIGHT OF WAY, CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. ANY DAMAGE TO PROPERTIES OUTSIDE THE SITE BOUNDARY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

ESTIMATE REFERENCE INFORMATION

Data listed below is for informational purpose only and shall not constitute a basis for any extra work orders.

ITEM NO.	DESCRIPTION
	THE MOST RECENT EDITION OF THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE 2018 EDITION OF SUDAS STANDARD SPECIFICATIONS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.
	ALL REFERENCES TO SECTIONS AND FIGURES ARE TO THE SUDAS STANDARD SPECIFICATIONS. CITY OF WAUKEE STANDARD DETAILS SHALL GOVERN IF ANY DISCREPANCIES.
1	CLEAR AND GRUB ALL AREAS AFFECTED BY GRADING OPERATIONS. THE CONTRACTOR SHALL FIELD VERIFY CLEARING AND GRUBBING NEEDS PRIOR TO BIDDING. INCLUDES REMOVAL OF ANY EXISTING FIELD FENCE. ALL MATERIAL THAT IS REMOVED FROM THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR. INCLUDED REMOVAL OF EXISTING CROPS FOR CONSTRUCTION OF TEMPORARY ACCESS. DO NOT DISTURB CROPS OUTSIDE OF THE PROJECT LIMITS. AREA SHOWN FOR REFERENCE ONLY.
2	STRIP, SALVAGE AND RE-SPREAD TOPSOIL PER SECTION 2010 OF SUDAS STANDARD SPECIFICATIONS OR PROVIDE THE CITY WITH A TOPSOIL PRESERVATION PLAN. TOPSOIL TO BE RESPREAD SHALL BE FREE OF ROCK AND DEBRIS AND BE SUITABLE FOR THE GROWTH OF GRASS. COORDINATE LOCATION OF STOCKPILE WITH OWNER.
3	EXCAVATION INCLUDES ALL WORK NECESSARY TO ACHIEVE PROPER GRADES AS SHOWN IN THE PLANS. NO PAYMENT FOR OVERHAUL SHALL BE ALLOWED.
4	REFER TO SHEET 2 FOR TYPICAL LOCATIONS AND THICKNESS.
5-6	SANITARY SEWER FOR 8" AND 12" SHALL BE PVC TRUSS PIPE. ANY CONNECTIONS TO EXISTING SANITARY SEWER SHALL BE CONSIDERED INCIDENTAL. REFER TO FIG. 3010.101 AND 3010.103 FOR PIPE EMBEDMENT DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. EXISTING SANITARY SEWER WILL NEED TO BE RETESTED AFTER SADDLE WYE INSTALLATION.
5-16	REFER TO FIGURE 3010.102 FOR TRENCH BEDDING AND BACKFILL ZONE DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. CONNECTIONS TO EXISTING STORM SEWER PIPE AND STRUCTURES SHALL BE CONSIDERED INCIDENTAL. WRAP ALL PIPE JOINTS IN ENGINEERING FABRIC. CLEAN AND TELEVISE SANITARY AND STORM SEWER PRIOR TO PAVING AND PROVIDE TELEVISING REPORT TO CITY IN HARD COPY AND DISC FORMAT. TELEVISING SHALL BE CONSIDERED INCIDENTAL. ALL STORM SEWER PIPE THAT CROSSES OVER WATERMAIN SHALL HAVE O-RING GASKETS JOINT RATED AT 13 PSI OR GREATER. O-RING GASKET JOINTS SHALL BE INSTALLED ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WATER TO THE SEWER IS AT LEAST 10 FEET.
7, 16, 27	REFER TO DETAILS ON SHEETS 2, 3 AND PLAN AND PROFILE SHEETS FOR LOCATION AND DEPTH. STORM SEWER SERVICES TYING INTO EXISTING RCP PIPE ARE TO BE CORE DRILLED.
17-24	THE LAST THREE SECTIONS AND APRON SHALL BE CONNECTED WITH PIPE CONNECTORS. REFER TO FIG. 4030.221 - RCP APRON SECTION FOOTING FOR FOOTING CONSTRUCTION DETAILS. APRON GUARD REQUIRED ON ALL APRONS. RCP APRON FOOTING, PIPE APRON GUARD AND PIPE CONNECTORS TO BE CONSIDERED INCIDENTAL. INSTALL CLAY WATERSTOPS AT ALL RCP APRONS, MIN. 3' LONG.
25-29	REFER TO FIG. 3010.101 AND FIG. 3010.104 FOR TRENCH BEDDING AND BACKFILL ZONE DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. REFER TO FIG. 5010.101 FOR THRUST BLOCK DETAILS. REFER TO FIG. 5010.102 FOR TRACER SYSTEM DETAILS. ALL FITTINGS, POLYETHYLENE WRAP, THRUST BLOCKS, AND TRACER WIRE SYSTEM SHALL BE CONSIDERED INCIDENTAL.
30	REFER TO FIG. 5020.201 - FIRE HYDRANT ASSEMBLY FOR FIRE HYDRANT CONSTRUCTION DETAILS. INCLUDES ANCHORING TEE, ANCHORING ELBOW, GATE VALVE, VALVE BOX, ANCHORING PIPE, ANCHORING COUPLING, ELBOWS, STORZ FITTINGS, POLYETHYLENE WRAP, THRUST BLOCK AND TRACER WIRE SYSTEM AND FIRE HYDRANT.
30-32	REFER TO WATERMAIN PLAN AND PROFILE SHEETS FOR LOCATIONS OF HYDRANTS. ANY RELOCATED FIRE HYDRANTS ARE TO INCLUDE 4-INCH STORZ FITTINGS.
33	REFER TO FIG.6010.301 - CIRCULAR SANITARY SEWER MANHOLE (SW-301) FOR CONSTRUCTION DETAILS. CASTINGS IN PAVEMENT SHALL BE TYPE B RING AND COVER. WHEN CASTINGS ARE NOT IN PAVEMENT, INSTALL MANHOLE CONE SECTION, MANHOLE STEPS, AND RING/COVER CASTING SUCH THAT SEPARATION IS MAINTAINED BETWEEN MANHOLE COVERS AND PAVED AREAS (BACK OF CURB, SIDEWALK PAVEMENT, SIDEWALK APPROACHES/RAMPS). ALL SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED.
34-37	REFER TO FIG. 6010.401 - CIRCULAR STORM SEWER MANHOLE (SW-401) FOR CONSTRUCTION DETAILS. MANHOLE INSIDE DIAMETERS GREATER THAN 48" SHALL BE CONSIDERED INCIDENTAL.

ESTIMATE REFERENCE INFORMATION

Data listed below is for informational purpose only and shall not constitute a basis for any extra work orders.

ITEM NO.	DESCRIPTION
38-42	REFER TO FIG. 6010.514 - BOXOUTS FOR GRATE INTAKES. REFER TO FIG. 6010.603 - CASTINGS FOR GRATE INTAKES FOR TYPE R GRATE DETAILS AND FIG. 6010.602 - CASTINGS FOR STORM SEWER MANHOLES FOR TYPE E CASTING DETAILS. THE MAXIMUM HEIGHT OF ADJUSTING RINGS ALLOWED FOR INTAKE CASTINGS IS 6". THE MAXIMUM HEIGHT OF ADJUSTING RINGS ALLOWED FOR MANHOLE CASTINGS IS 12".
38	REFER TO FIG. 6010.501 - SINGLE GRATE INTAKE (SW-501) FOR CONSTRUCTION DETAILS.
39	REFER TO FIG. 6010.503 - SINGLE GRATE INTAKE WITH MANHOLE (SW-503) FOR CONSTRUCTION DETAILS.
40	REFER TO FIG. 6010.505 - DOUBLE GRATE INTAKE (SW-505) FOR CONSTRUCTION DETAILS.
41	REFER TO FIG. 6010.506 - DOUBLE GRATE INTAKE WITH MANHOLE (SW-506) FOR CONSTRUCTION DETAILS.
42	REFER TO SHEET 4 FOR CONSTRUCTION DETAILS.
43	REFER TO FIG. 6010.512 - CIRCULAR AREA INTAKE FOR CONSTRUCTION DETAILS.
44-46	REFER TO FIG. 7010.101 - JOINTS (PV-101) FOR JOINT DETAILS. MAXIMUM C AND CD JOINT SPACING IS 15 FEET.
49	REFER TO FIG. 7030.204 - GENERAL SIDEWALK AND ACCESSIBLE RAMP DETAILS AND FIG. 7030.208 - CURB RAMPS WITHIN INTERSECTION RADIUS FOR CLASS B OR C SIDEWALK FOR CONSTRUCTION DETAILS. DETECTABLE WARNING PANELS TO BE ARMOR TILE, ADA SOLUTIONS OR APPROVED EQUAL, BRICK RED IN COLOR. ACCESSIBLE CURB RAMPS INCLUDING TURNING SPACES SHALL BE 6" THICK P.C.C.
50	REFER TO SHEET 3 FOR CONSTRUCTION DETAILS.
51	THE SITE SEEDING SHALL CONFORM TO THE SPECIFICATION FOR TYPE (1) PERMANENT LAWN MIXTURE AND TYPE (4) URBAN TEMPORARY EROSION CONTROL SEED MIXTURE. SEEDING QUANTITIES -TYPE 1 PERMANENT LAWN MIXTURE = 3.77 AC -TYPE 4 URBAN TEMPORARY EROSION CONTROL MIXTURE = 41.18 AC
52-53	REFER TO PLAN AND PROFILE SHEETS FOR LOCATIONS. REFER TO IDOT STANDARD ROAD PLAN SI-182 FOR CONSTRUCTION DETAILS. EACH LOCATION CONSISTS OF FIVE SIGNS WITH POSTS PER SI-182.
54	ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ROAD BARRICADES AT END OF EXISTING PAVEMENTS UNTIL THE PROJECT IS ACCEPTED. THE CONTRACTOR IS RESPONSIBLE FOR THE TRAFFIC CONTROL NEEDS FOR PAVING ASHWORTH ROAD. THE MESSAGE BOARD WILL BE REQUIRED AT LEAST 1 WEEK IN ADVANCE OF ANY LANE CLOSURES.
55	REFER TO SHEETS 10-12 OF THE CONSTRUCTION DRAWINGS FOR EROSION AND SEDIMENT CONTROLS. REFER TO SEPARATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR SPECIFIC DETAILS.
56	INSTALL ENGINEERING FABRIC UNDER ALL RIP RAP. ENGINEERING FABRIC SHALL BE CONSIDERED INCIDENTAL. REFER TO STORM AND SANITARY PLAN AND PROFILE SHEETS FOR LOCATION.
57	REFER TO FIG. 4040.232 - SUBDRAIN CLEANOUTS FOR CONSTRUCTION DETAILS.
58-61	REFER TO DOT STD. RD. PLAN PM-110 - LINE TYPES. ALL PAINTED PAVEMENT MARKINGS AND SYMBOLS SHALL BE DURABLE LIQUID PAVEMENT MARKING (LPM) AND INSTALLED IN GROOVES CUT INTO THE PAVEMENT SURFACE.

QUANTITY

SERENITY DRIVE	STA	to	STA	LENGTH		FACTOR	TOTAL
SLW4 SOLID LANE LINE (WHITE)	69+64,	6.0' LT -	70+64, 6.0' LT	100'	x	1.0	100
DCY4 DOUBLE CENTERLINE (YELLOW)	69+64,	5.5' RT -	71+09, 2.5' RT	145'	x	2.0	290
SLW2 STOP LINE (WHITE)	69+63,	18.0' LT -	69+63, 6.0' RT	24'	x	6.0	144
CBW6 CROSSWALK BAR (WHITE)	69+53,	16.0' LT -	69+53, 16.0' RT	(9)10'	x	6.0	540
				TOTAL			1074

62	REFER TO SHEET 3 FOR CONSTRUCTION DETAILS. MAILBOX PADS ARE LOCATED BETWEEN LOTS 17/18, 30/31 AND 39/40. SPOT ELEVATION DETAILS ARE LOCATED ON SHEETS 7 AND 8.
63	REFER TO SHEET 6 FOR QUANTITIES AND LANDSCAPING MATERIALS.

7. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL NOTIFY (48 HRS NOTICE) THE FOLLOWING:
   A. CITY OF WAUKEE ENGINEERING DEPARTMENT
   B. APPROPRIATE UTILITY COMPANIES
   C. OWNER
   D. CIVIL DESIGN ADVANTAGE
* 48 HOUR NOTICE SHALL BE GIVEN TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT PRIOR TO WEEKEND AND HOLIDAY WORK.
8. PRIOR TO CONSTRUCTION, THE PROJECT MANAGER SHALL CONTACT THE WAUKEE ENGINEERING DEPARTMENT AND SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST ONE WEEK PRIOR TO THE ANTICIPATED START OF CONSTRUCTION.
9. SPECIAL CARE SHALL BE TAKEN WHEN FORMING AT INTERSECTIONS SO THE PROFILES SHOWN ON THE PLANS AND THE ELEVATIONS SHOWN ON THE INTERSECTION DETAILS ARE OBTAINED. SHORT LENGTHS OF FORMS OR FLEXIBLE FORMS MAY BE NECESSARY AT THESE LOCATIONS.
10. TO OBTAIN THE CORRECT FORM GRADES AT LOW POINTS WHERE INTAKES ARE LOCATED, THE CONTRACTOR MUST EXERCISE ADDITIONAL CARE WHEN PAVING FULL WIDTH PAVEMENTS. THIS MAY REQUIRE POURING ONE HALF OF THE PAVEMENT AT A TIME OR OTHER METHODS APPROVED BY THE ENGINEER.
11. THE CONTRACTOR MAY BE REQUIRED AS DIRECTED BY THE ENGINEER OR THE CITY, TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY. THE IS BE INCIDENTAL TO THE BID ITEM TRAFFIC CONTROL. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ROAD BARRICADES AT END OF EXISTING PAVEMENTS UNTIL THE PROJECT IS ACCEPTED.
12. PLAN AND PROFILE SHEETS INCLUDED IN THE PROJECT ARE FOR THE PURPOSE OF ALIGNMENT, LOCATION AND SPECIFIC DIRECTIONS FOR WORK TO BE PERFORMED UNDER THIS CONTRACT. IRRELEVANT DATA ON THESE SHEETS IS NOT TO BE CONSIDERED A PART OF THIS CONTRACT.
13. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
14. THE CONTRACTOR IS REQUIRED TO BE FAMILIAR WITH AND COMPLY WITH OSHA STANDARDS. NOTHING WITHIN THESE PLANS SHALL RELIEVE THE CONTRACTOR OF THIS REQUIREMENT.
15. ALL MATERIAL TESTING SHALL BE CONSIDERED INCIDENTAL TO OTHER CONSTRUCTION.
16. PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER, ENGINEER, AND/OR ARCHITECT, AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
17. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. (MUTCD)
18. ALL SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
19. SIDEWALKS, ACCESSIBLE CURB RAMPS AND SIDEWALK RAMPS INCLUDING RAISED TRUNCATED DOME AND DETECTABLE WARNINGS AND WARNING PANELS SHALL BE DESIGNED AND INSTALLED TO THE LATEST P.R.O.W.A.G. AND A.D.A. REQUIREMENTS.
20. PLACE 3/4" EXPANSION JOINT BETWEEN ALL P.C.C. PAVEMENT/SIDEWALKS AND BUILDINGS. PLACE 1/2" EXPANSION JOINT BETWEEN SIDEWALKS AND P.C.C PAVEMENT. THE PCC RAMP JOINT LOCATED AT THE BACK OF CURB AND ALL EXPANSION JOINTS SHALL BE SEALED.
21. REMOVE DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY AND BEFORE RAIN EVENTS.
22. DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE R.O.W.
23. ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
24. IN THE EVENT OF A DISCREPANCY BETWEEN DETAILED PLANS AND QUANTITIES, THE DETAILED PLANS SHALL GOVERN.
25. ALL FIELD TILES ENCOUNTERED SHALL BE REPAIRED AND CONNECTED TO STORM SEWERS WHERE POSSIBLE. LOCATIONS SHALL BE PROVIDED TO THE ENGINEER FOR NOTATION ON AS-BUILTS.
26. ALL CONSTRUCTION STAKING TO BE COMPLETED UNDER THE DIRECTION OF A LICENSED ENGINEER OR LAND SURVEYOR. ALL CURB DROPS AND SIDEWALK/SHARED USE PATH SHALL ALSO BE STAKED UNDER THE DIRECTION OF A LICENSED ENGINEER OR LAND SURVEYOR
27. THE CONTRACTOR SHALL SUBMIT A LIST OF CONSTRUCTION MATERIALS TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.
28. A GEOTECHNICAL ENGINEER SHALL BE ONSITE DURING CONSTRUCTION AND FOR PROOF ROLLING TO INSPECT SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE GEOTECHNICAL ENGINEER IS PRESENT. A COPY OF ALL REPORTS AND FINDING REQUIRING ALTERATION FROM THE APPROVED PLAN SET IS TO BE PROVIDED TO THE WAUKEE ENGINEERING DEPARTMENT FOR REVIEW AND DISCUSSION PRIOR TO COMMENCING WITH PAVING WITHIN THE PROJECT.
29. THE CONTRACTOR SHALL COORDINATE ALL EXISTING PUBLIC UTILITY CONNECTIONS WITH THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
30. ALL TESTING SHALL BE COMPLETED ACCORDING TO THE CITY OF WAUKEE STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS AND THE WAUKEE ENGINEERING DEPARTMENT SHALL BE PRESENT TO WITNESS ALL TESTING.
31. AS-BUILTS SHALL BE PROVIDED TO THE WAUKEE ENGINEERING DEPARTMENT INCLUDING ALL UTILITIES AND AS-BUILT GRADES FOR DRAINAGE SWALES, OVERFLOWS, ACCESSIBLE RAMPS AND DETENTION FACILITIES. THE CONTRACTOR SHALL PROVIDE INFORMATION TO THE DESIGN ENGINEER FOR INCLUSION ON THE RECORD AS-BUILT DRAWINGS.
32. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING AND TELEVISING ALL STORM AND SANITARY SEWERS. THE CITY OF WAUKEE ENGINEERING DEPARTMENT SHALL WITNESS AND APPROVE ALL CLEANING AND TELEVISING PRIOR TO PAVING. A COPY OF THE VIDEOS AND A HARD COPY OF THE INSPECTION REPORT SHALL BE PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT. ALL SANITARY SEWER MANHOLES ARE TO BE VACUUM TESTED.
33. ALL FIRE HYDRANTS INCLUDING ANY RELOCATED HYDRANTS SHALL HAVE 4-INCH STORZ FITTINGS.
34. ALL PROPOSED PEDESTRIAN CROSSINGS SHALL BE INSTALLED AS PART OF THE PLAT IMPROVEMENTS.
35. ALL CONNECTIONS TO EXISTING MANHOLES ARE TO BE CORE DRILLED AND USE A LINK SEAL.
36. ANY FIELD FENCE LOCATED WITHIN THE PROPERTY IS TO BE REMOVED.
37. ALL EXISTING AND PROPOSED MANHOLES SHALL HAVE A MINIMUM OF 1 - 4" ADJUSTING RING TO ALLOW FOR FUTURE ADJUSTMENT SHOULD THE STRUCTURE END UP IN A DRIVEWAY.
38. THE RESULTS OF THE GEOTECHNICAL EXPLORATION ARE TO BE PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT AND THE PLAN IS SUBJECT TO ANY CHANGES REQUIRED BY THE REPORT.
39. THIS SITE WILL HAVE SAWCUTTING AND CONCRETE GRINDING SO PROTECTION OF STORM SEWERS AND DRAINAGE WAYS FROM SLURRY WILL NEED TO OCCUR FOR ALL OFFSITE DISCHARGE.

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO | EI: GH

REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
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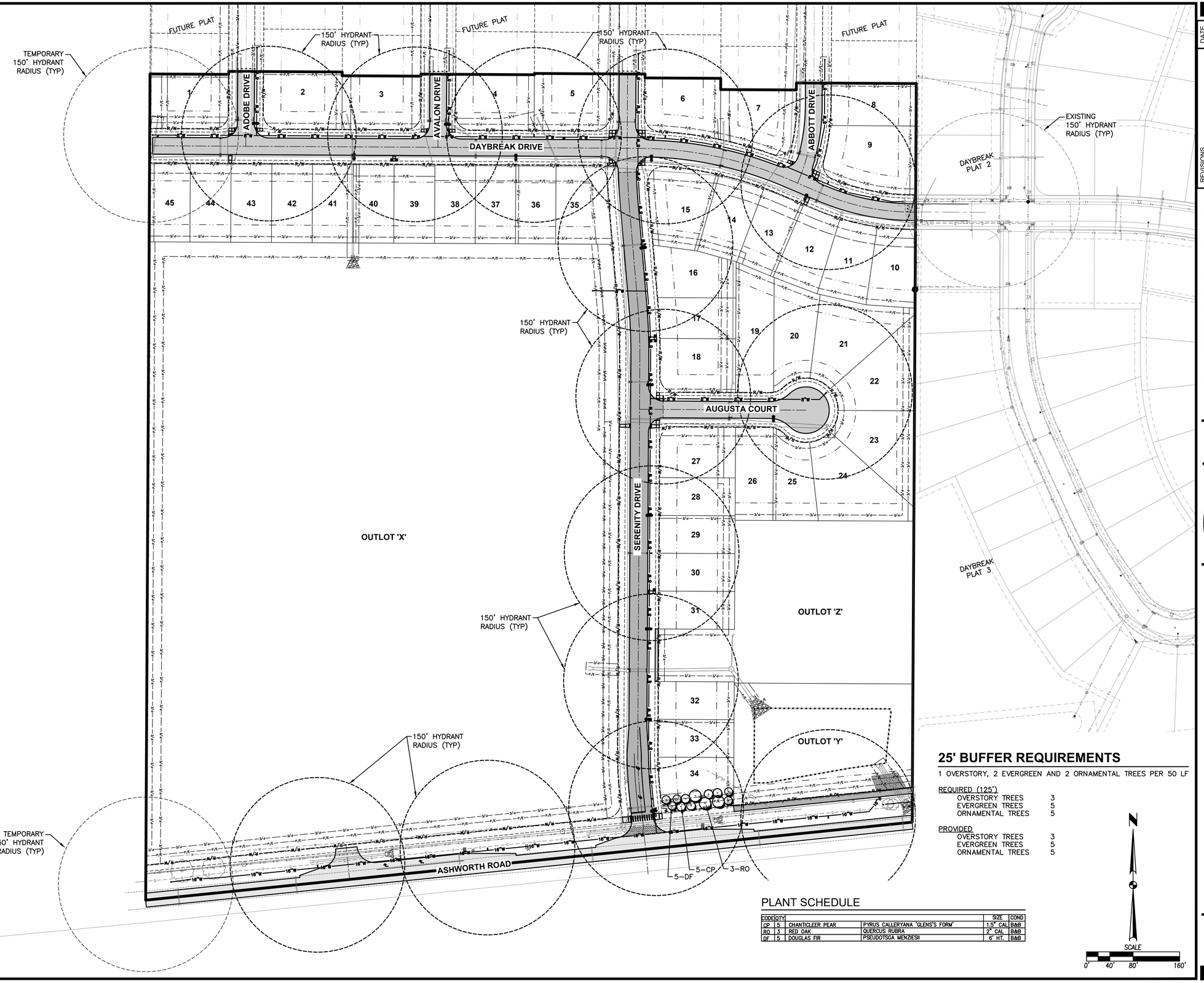
CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

QUANTITIES, GENERAL NOTES AND BID ITEM REFERENCE NOTES

WAUKEE, IOWA

FILE: H:\2018\1802054\DWG\1802054-COV-DET-TAB-ASBUILT.DWG
PLOTTED BY: JONATHON MCDONALD PLOTTED: 1/27/2020 11:06 AM
COMMENT:
TECH: ENG:



25' BUFFER REQUIREMENTS

1 OVERSTORY, 2 EVERGREEN AND 2 ORNAMENTAL TREES PER 50 LF

REQUIRED (125')	
OVERSTORY TREES	3
EVERGREEN TREES	5
ORNAMENTAL TREES	5
PROVIDED	
OVERSTORY TREES	3
EVERGREEN TREES	5
ORNAMENTAL TREES	5

PLANT SCHEDULE

CODE	QTY			SIZE	COND
CP	5	CHANTICLEER PEAR	PYRUS CALLERYANA 'GLENS'S FORM'	1.5" CAL	B&B
RO	3	RED OAK	QUERCUS RUBRA	2" CAL	B&B
DF	5	DOUGLAS FIR	PSEUDOTSGA MENZIESII	6' HT.	B&B

SCALE 0 40' 80' 160'

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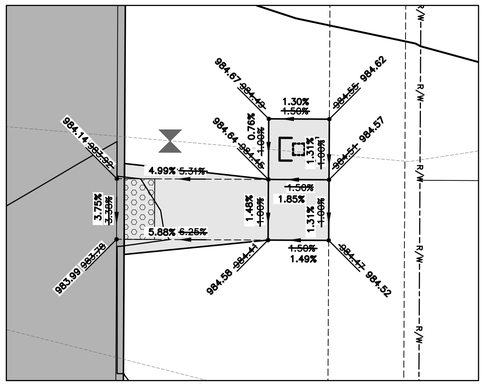
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CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1
HYDRANT COVERAGE AND LANDSCAPE PLAN

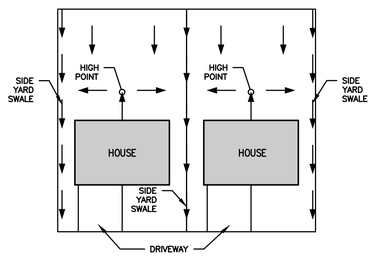
WAUKEE, IOWA

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PLOTTED BY: JONATHON MCDONALD
DATE PLOTTED: 1/27/2020 11:09 AM
COMMENT:
TEMPLATE: ENG



MAILBOX PAD DETAIL 'A'

SCALE: 1"=5'



TYPICAL BACK TO FRONT GRADING

NOT TO SCALE

OUTLOT 'X'

OVERFLOW PATH

SERENITY DRIVE

REFER TO MAILBOX PAD DETAIL 'A'

100-YEAR ELEVATION =981.60

POND 1A-3
100-YEAR ELEVATION=981.60

OVERFLOW ELEVATION ~~=982.75~~ 982.75

GRADING LIMITS

ASHWORTH RD

100-YEAR ELEVATION =989.80

OVERFLOW ELEVATION ~~=991.23~~ 990.75

OVERFLOW ROUTE

100-YEAR ELEVATION =980.78

OVERFLOW ELEVATION ~~=982.50~~ 982.28

OVERFLOW PATH

18 MPE=999.75

100-YEAR ELEVATION =998.26

OVERFLOW ELEVATION ~~=998.71~~ 998.87

OVERFLOW ELEVATION ~~=998.51~~ 998.44

AUGUSTA COURT

OVERFLOW PATH

21

22

10' OVERLAND FLOWAGE EASEMENT

23 MGS=996.16

100-YEAR ELEVATION =998.09

27 MGS=994.76

26 MGS=994.04

25 MGS=994.35

24 MGS=994.79

28 MGS=993.42

29 MGS=990.18

30 MGS=986.93

31 MPE=984.25

100-YEAR ELEVATION =981.96

OVERFLOW ELEVATION ~~=983.25~~ 983.32

OVERFLOW PATH

DETENTION EASEMENT

32 MPE=977.25

33 MPE=977.25

34 MPE=977.25

POND 1A-1
NORMAL POOL ELEVATION=967.50
100-YEAR ELEVATION=975.62

OUTLOT 'Y'

OUTLOT 'Z'

PROPERTY BOUNDARY

SPOT ELEVATIONS ARE LOCATED 5' FROM PROPERTY LINE

SPOT ELEVATIONS ARE LOCATED 5' FROM PROPERTY LINE

SPOT ELEVATIONS ARE LOCATED 5' OFF OF PROPERTY LINE

GRADING LIMITS

100-YEAR ELEVATION =981.16

100-YEAR ELEVATION =975.62

TOP OF BANK ELEVATION=976.50

INSTALL 1200 SF OF TYPE 1 TURF REINFORCEMENT MAT
OVERFLOW ELEVATION ~~=976.00~~ 973.01

OVERFLOW PATH

PROPERTY BOUNDARY

TOP OF BANK ELEVATION=976.50

GRADING NOTES

1. IT IS THE APPLICANT'S RESPONSIBILITY TO PROVIDE THE WAUKEE ENGINEERING DEPARTMENT WITH A CERTIFIED AS-BUILT GRADING PLAN PRIOR TO ACCEPTANCE OF IMPROVEMENTS.
2. REMOVE ANY FARM FENCING ON THE PROPERTY AS PART OF THE IMPROVEMENTS.
3. LOTS 8-9 AND 19-22 WILL REQUIRE A DETAILED GRADING PLAN FOR INDIVIDUAL LOT DEVELOPMENT.

AREA OF DISTURBANCE = 51.23 AC

N

SCALE
0' 25' 50' 100'

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ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE

WAUKEE, IOWA

ASHWORTH ACRES PLAT 1

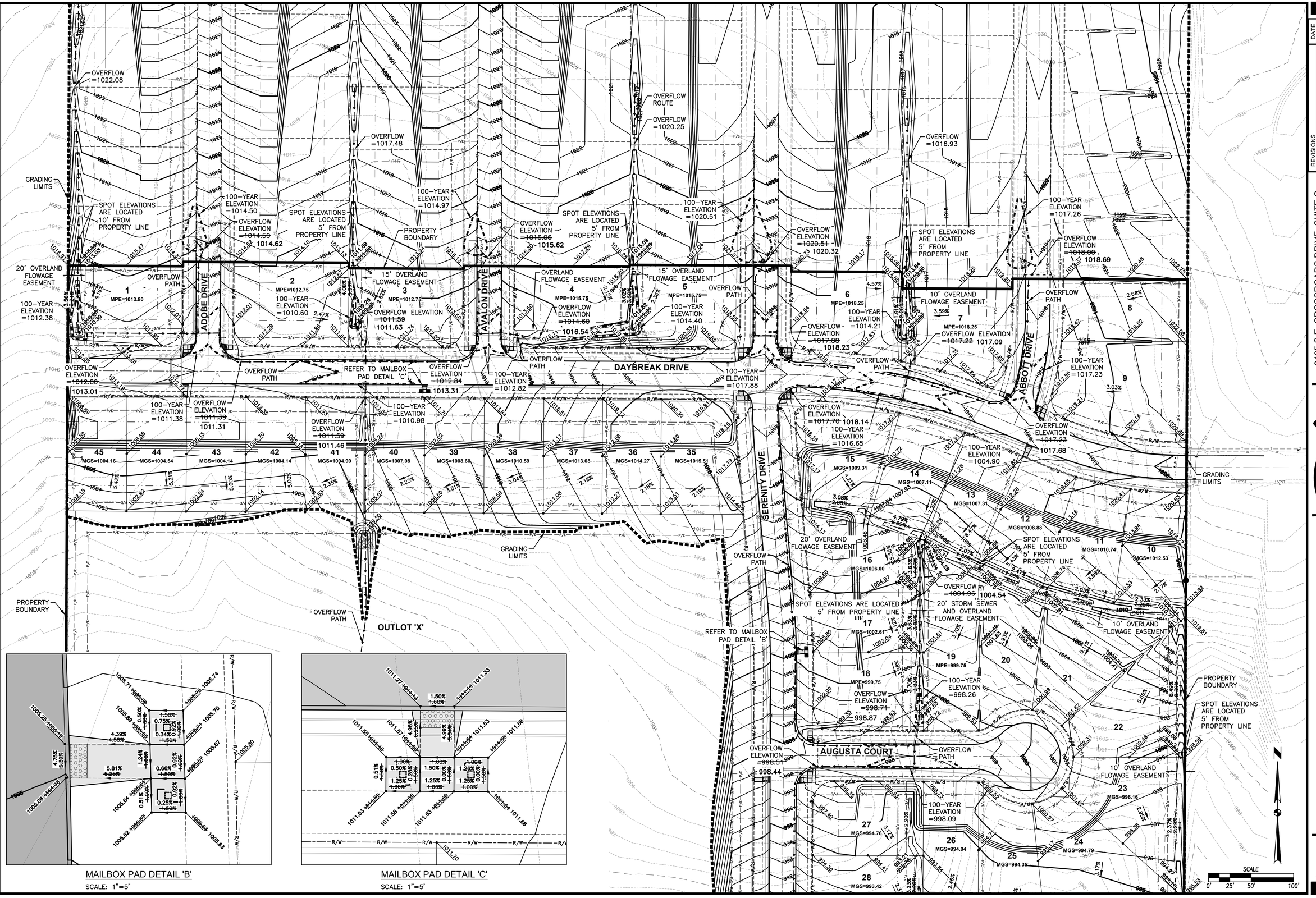
GRADING PLAN

7/48

1802.054

FILE: N:\2018\1802054\GIS\1802054-GRADING PLAN-ASBUILT.DWG
PLOT DATE/TIME: 1/27/2020 11:06 AM
PLOTTED BY: JONATHON MCDONALD

COMMENT:
TECH: ENG:



MAILBOX PAD DETAIL 'B'

SCALE: 1"=5'

MAILBOX PAD DETAIL 'C'

SCALE: 1"=5'

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CIVIL DESIGN ADVANTAGE

WAUKEE, IOWA

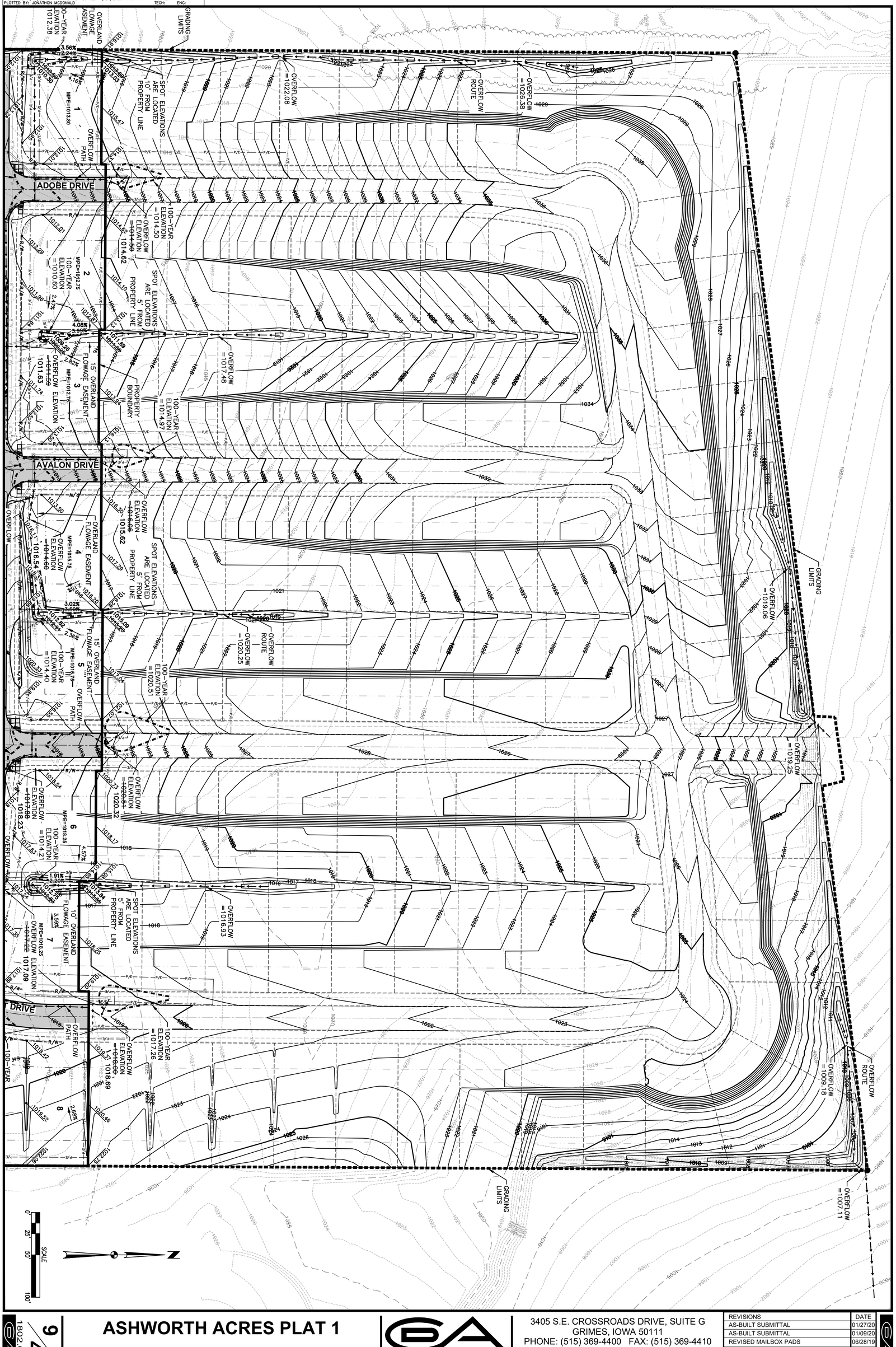
ASHWORTH ACRES PLAT 1

GRADING PLAN

8 / 48

1802.054

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PLOT DATE: 1/27/2020 11:08 AM
PLOTTED BY: JONATHON MCDONALD
COMMENT:
TECH: ENG



9 / 48	**ASHWORTH ACRES PLAT 1**		3405 S.E. CROSSROADS DRIVE, SUITE G GRIMES, IOWA 50111 PHONE: (515) 369-4400 FAX: (515) 369-4410		
1802_054	**GRADING PLAN**	WAUKEE, IOWA	CIVIL DESIGN ADVANTAGE	ENGINEER: EKO	EI: GH

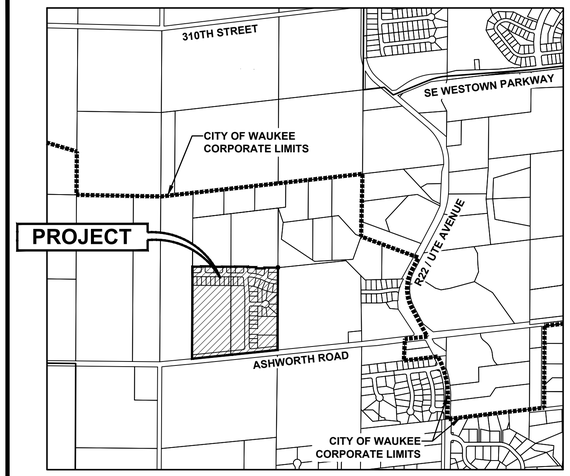
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ASHWORTH ACRES PLAT 1

EROSION AND SEDIMENT CONTROL PLAN

VICINITY MAP

NOT TO SCALE



WAUKEE, IOWA

STABILIZATION QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	9,620
2	SEEDING, FERTILIZING, AND MULCHING	AC	48.04
3	INLET PROTECTION DEVICES	EA	22
4	CONCRETE WASHOUT PIT	EA	1
5	24" HDPE OR CMP TEMPORARY STANDPIPE	EA	2

DISCHARGE POINT SUMMARY

DISCHARGE POINT #1 ±300' INTO AN UNNAMED TRIBUTARY OF SUGAR CREEK
TOTAL AREA DISTURBED TO DISCHARGE POINT — 47.42 ACRES
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT) — 170,712 CU FT

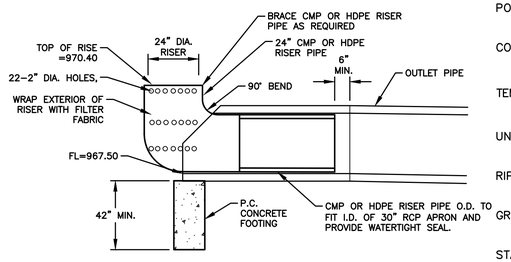
VOLUME PROVIDED IN TSB #1 — 178,687 CU FT
VOLUME PROVIDED IN SILT FENCE (7,366 LF @ 4.5 CU FT/LF OF FENCE) — 33,147 CU FT
TOTAL VOLUME PROVIDED — 211,834 CU FT

DISCHARGE POINT #2 ±1500 FT TO AN UNNAMED TRIBUTARY OF SUGAR CREEK
TOTAL AREA DISTURBED TO DISCHARGE POINT — 3.81 ACRES
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT) — 13,716 CU FT

VOLUME PROVIDED IN SILT FENCE (2,254 LF @ 10 CU FT/LF OF FENCE) — 22,540 CU FT
TOTAL VOLUME PROVIDED — 22,540 CU FT

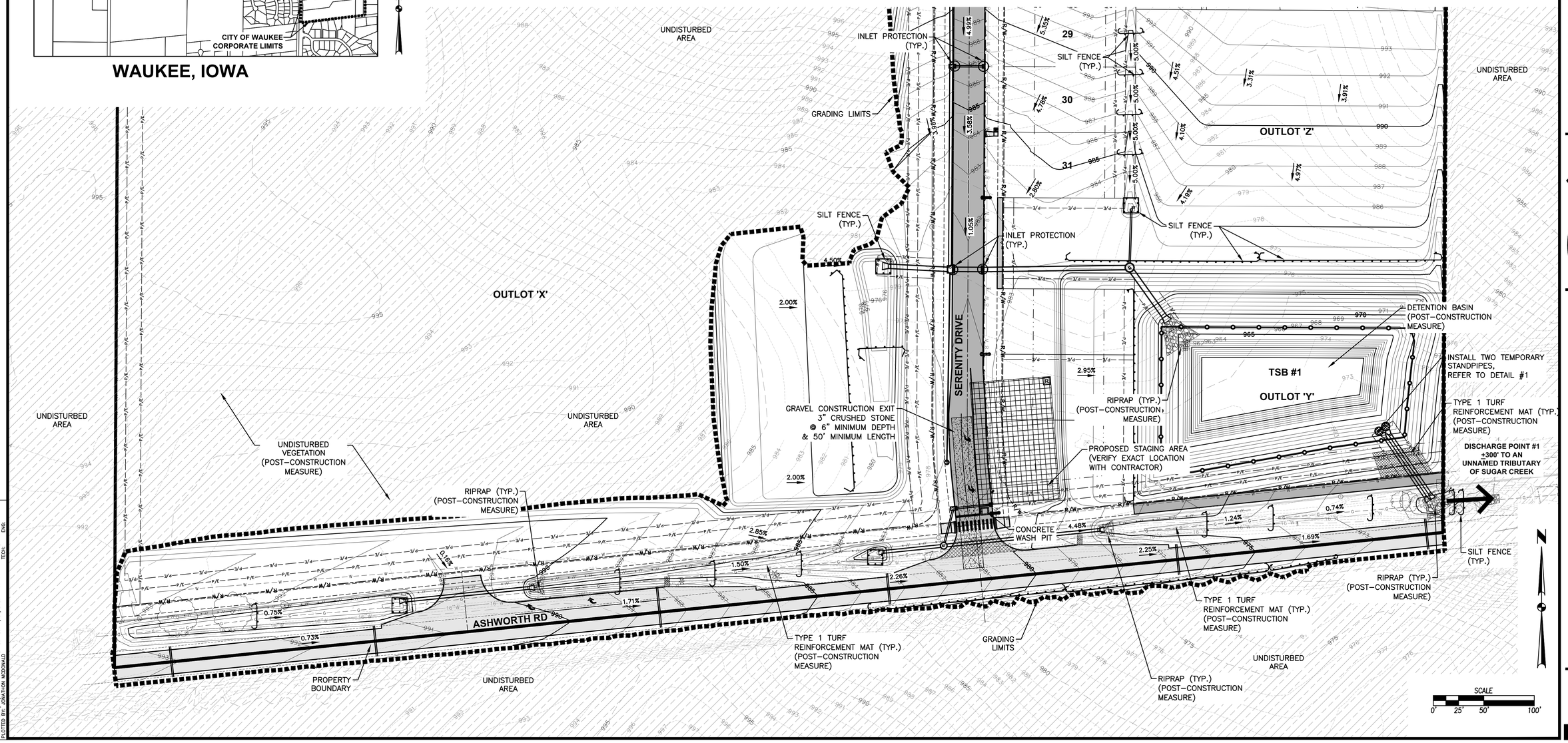
TEMPORARY STAND PIPE DETAIL #1

NOT TO SCALE



SWPPP LEGEND

- DRAINAGE ARROW — X.XX %
- GRADING LIMITS
- FILTER SOCK
- SILT FENCE
- INLET PROTECTION
- PORTABLE RESTROOM — R
- CONCRETE WASHOUT PIT
- TEMPORARY STANDPIPE
- UNDISTURBED AREA
- RIPRAP
- GRAVEL ENTRANCE
- STAGING AREA



REVISIONS	DATE
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CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

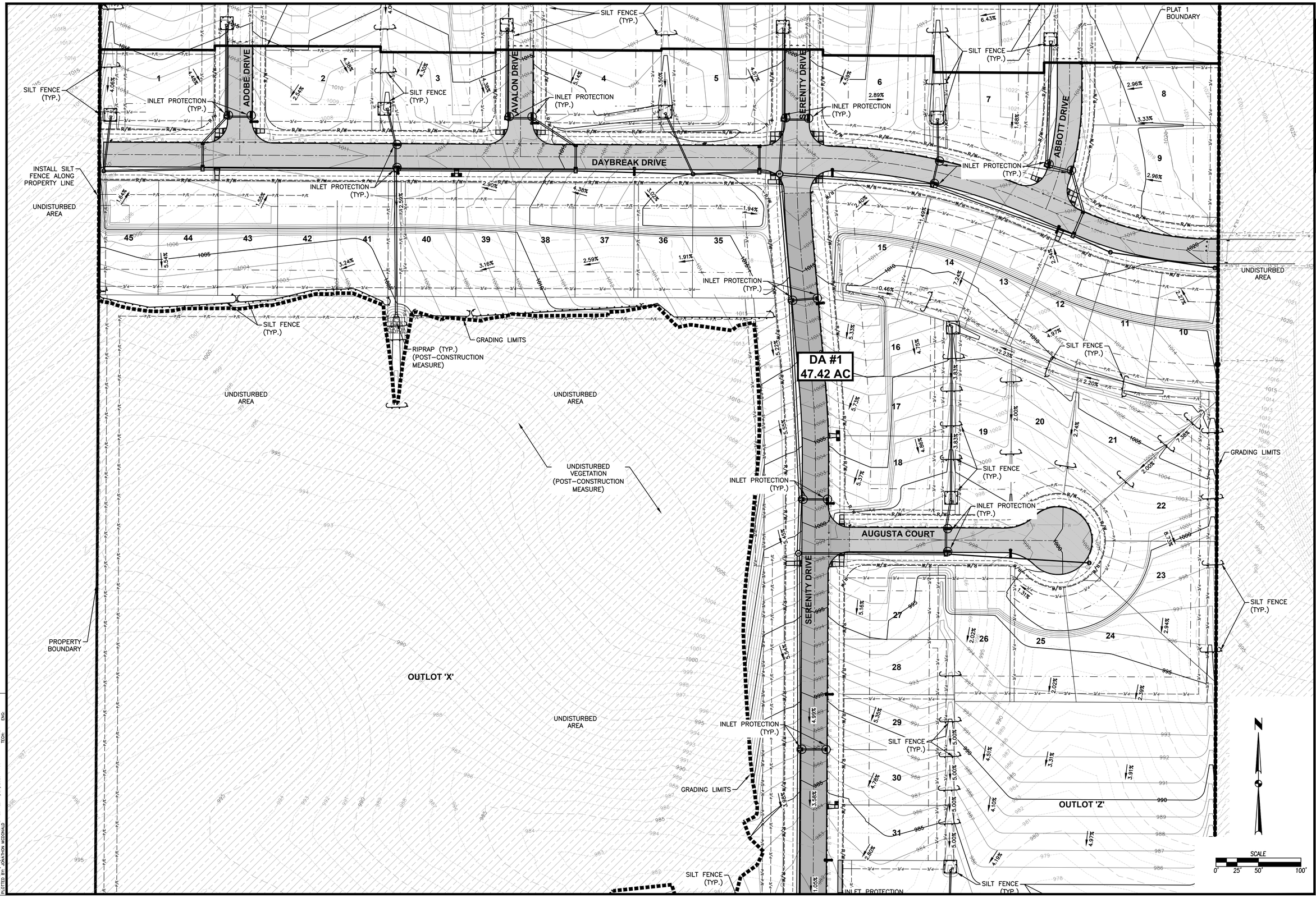
EROSION AND SEDIMENT CONTROL PLAN

WAUKEE, IOWA

10/48

1802.054

FILE: H:\2018\1802054\DWG\1802054-SWPPP-ASBUILT.DWG
PLOT DATE: 1/27/2020 11:06 AM
PLOTTED BY: JONATHON MCDONALD
COMMENT:
TECH:
ENG:



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CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

EROSION AND SEDIMENT CONTROL PLAN

WAUKEE, IOWA

11/48

1802.054

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PLOTTED BY: JONATHON MCDONALD
COMMENT:
TECH:
ENG:

DISCHARGE POINT #2
±1500 FEET TO AN
UNNAMED TRIBUTARY OF
SUGAR CREEK

ADDITIONAL EROSION CONTROL MEASURES MAY BE NECESSARY IF CONSTRUCTION BETWEEN THIS PROJECT AND THE RESERVE AT DAYBREAK DON'T SYNC.

DA #2
3.81 AC

UNDISTURBED AREA

GRADING LIMITS

SILT FENCE (TYP.)

POTENTIAL TOPSOIL STOCKPILE LOCATION

PLAT 1 BOUNDARY

INLET PROTECTION (TYP.)

ADOBE DRIVE

AVALON DRIVE

SERENITY DRIVE

ABBOTT DRIVE

DAYBREAK DRIVE

1 2 3 4 5 6 7 8 9

SCALE
0' 25' 50' 100'

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CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

EROSION AND SEDIMENT CONTROL PLAN

WAUKEE, IOWA

12/48

1802.054

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LAST SAVED: 7/27/2020 11:06 AM COMMENT:
PLOTTED BY: JONATHON MCDONALD PLOTTED: 7/27/2020 11:06 AM TECH: ENG:

REFER TO SHEET 29 FOR WATERMAIN PLAN AND PROFILE.

REFER TO SHEET 46 FOR INTERSECTION DETAILS.

REMOVE EXISTING FIELD FENCE

10.00' PUE

25.00' LANDSCAPE BUFFER EASEMENT

PLAT BOUNDARY

OUTLOT 'X'

10.00' PUE

15.00' SANITARY SEWER EASEMENT

EXISTING GAS AND WATERMAIN. VERIFY LOCATION AND DEPTH PRIOR TO CONSTRUCTION.

REMOVE EXISTING TREES

EXISTING XENIA WATERMAIN TO REMAIN THROUGHOUT CONSTRUCTION (MAP LOCATION)

10' SHARED USE PATH (FUTURE)

GAS MAIN (MAP LOCATION)

11+00 12+00 13+00 14+00 15+00 16+00

60.00' HALF ROW

24.00' B-B

INSTALL 20 TONS OF CLASS 'E' RIP RAP

REMOVE EXISTING FIELD FENCE

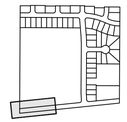
ASHWORTH ROAD

9" P.C.C.

STA 11+00.00 BEGIN PAVEMENT

OUTLOT 'X' ENTRANCE STA 14+51.95, 0.00' T

SHEET INDEX



DATE	REVISIONS
01/27/20	AS-BUILT SUBMITTAL
01/09/20	AS-BUILT SUBMITTAL
06/28/19	REVISED MAILBOX PADS
07/18/18	FINAL SUBMITTAL
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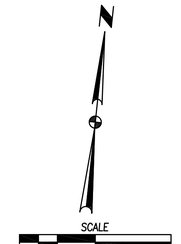
ASHWORTH ACRES PLAT 1

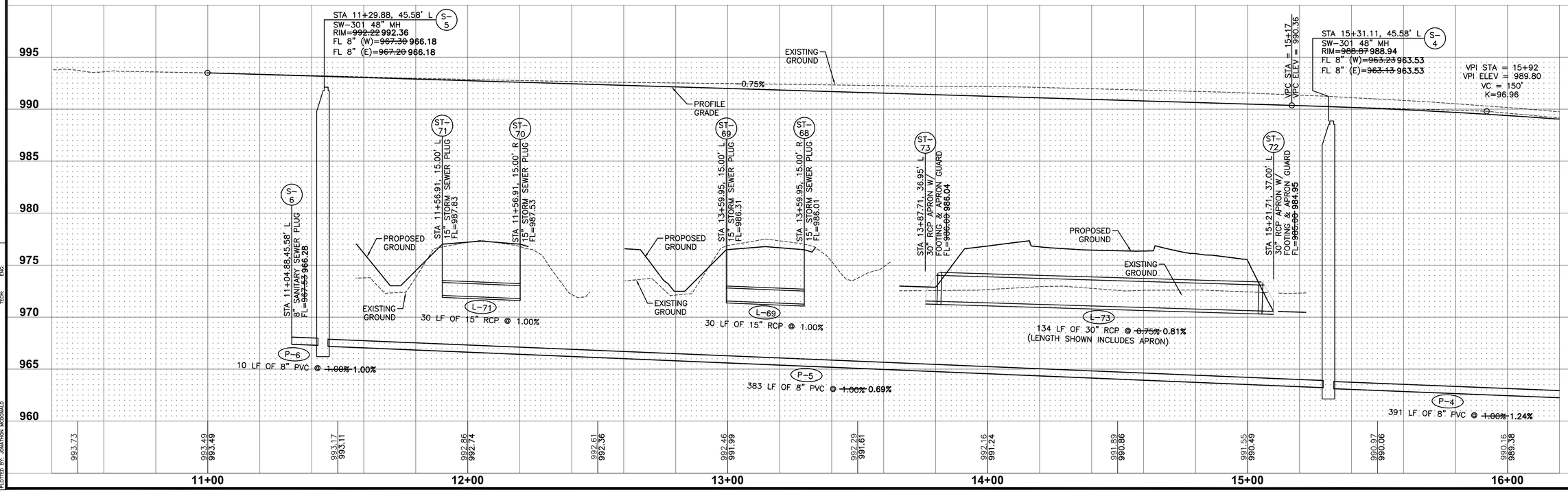
STORM AND SANITARY SEWER PLAN AND PROFILE

WAUKEE, IOWA









FILE: H:\2018\1802054\DWG\1802054-PNP-STORM AND SANITARY-ASBUILT-WM.DWG
LAYOUT: 1802054 PLOTTED: 7/7/2020 11:57 AM
PLOTTED BY: JONATHON MCDONALD ENGR: TECH: ENG:

REFER TO SHEET 27 FOR L-56 AND L-59 PLAN AND PROFILE.

REFER TO SHEET 30 FOR WATERMAIN PLAN AND PROFILE.

REFER TO SHEET 44 FOR INTERSECTION DETAILS.

OUTLOT 'X'

LOT 34

SERENITY DRIVE

ASHWORTH ROAD

PLAT BOUNDARY

SHEET INDEX

EXISTING XENIA WATERMAIN TO REMAIN THROUGHOUT CONSTRUCTION (MAP LOCATION)

INSTALL 50 SF OF TYPE 1 TRM

10.00' PUE

15.00' SANITARY SEWER EASEMENT

25.00' LANDSCAPE BUFFER EASEMENT

10' SHARED USE PATH (FUTURE)

10' SHARED USE PATH

5' SIDEWALK (FUTURE)

30' SETBACK

REMOVE EXISTING FIELD FENCE

REMOVE AND REINSTALL EXISTING SIGN

REMOVE EXISTING TREES

REMOVE EXISTING 12" STORM SEWER

INSTALL 20 TONS OF CLASS 'E' RIPRAP

INSTALL 50 SF OF TYPE 1 TRM

CRITICAL CROSSING:
BOTTOM OF EX. WATER=970.73 (VERIFY)
TOP OF SANITARY=968.72

CRITICAL CROSSING
BOTTOM OF WATER=975.08
TOP OF SANITARY=959.66

CRITICAL CROSSING
BOTTOM OF STORM=975.16
TOP OF WATER=973.66
INSTALL GASKETED JOINTS ON STORM SEWER

CRITICAL CROSSING
BOTTOM OF STORM=976.58
TOP OF SANITARY=960.17

CRITICAL CROSSING
BOTTOM OF STORM=976.71
TOP OF EX. WATER=971.14 (VERIFY)
INSTALL GASKETED JOINTS ON STORM SEWER

STA 19+62.91 (ASHWORTH ROAD)
STA 68+98.66 (SERENITY DRIVE)

PC 69+98.80

60.00' HALF ROW

24.00' B-B

9" P.C.C.

8" P.C.C.

16+00 17+00 18+00 19+00 20+00 21+00 70+00 69+00

P-4 P-7 P-3

L-67 L-65 L-59 L-57 L-58 L-56 L-63

ST-67 ST-66 ST-64 ST-65 ST-59 ST-56 ST-57 ST-58 ST-55 ST-63 ST-62 ST-10 S-3 ST-1

S-1 3

SCALE 0' 10' 20' 40'

VPI STA = 15+92
VPI ELEV = 989.80
VC = 150'
K=96.96

VPT STA = 16+6
VPT ELEV = 988.

EXISTING GROUND

PROFILE GRADE

STA 16+42.95, 25.00' L
15" STORM SEWER PLUG
FL=983.13

STA 16+42.95, 15.00' R
15" STORM SEWER PLUG
FL=982.73

40 LF OF 15" RCP @ 1.00%

391 LF OF 8" PVC @ ~~1.00%~~ 1.24%

STA 18+70.91, 15.00' L
15" STORM SEWER PLUG
FL=978.17

STA 18+70.91, 15.00' R
15" STORM SEWER PLUG
FL=977.87

30 LF OF 15" RCP @ 1.00%

STA 19+25.69, 45.58' L
SW-301 48" MH
RIM=~~992.14~~ 982.28
FL 8" (N)=~~967.07~~ 967.28
FL 8" (W)=~~959.22~~ 958.68
FL 12" (E)=~~950.12~~ 958.63

-2.30%

396 LF OF 12" PVC @ ~~1.00%~~ 0.97%

STA 21+58+91, 15.00' L
15" STORM SEWER PLUG
FL=977.55

STA 21+58.91, 15.00' R
15" STORM SEWER PLUG
FL=977.23

30 LF OF 15" RCP @ 1.00%

990.16 989.38 | 989.09 988.45 | 987.80 987.32 | 986.49 986.17 | 985.13 985.02 | 983.72 983.87 | 982.29 982.72 | 980.95 981.58 | 979.73 980.43 | 978.53 979.28 | 977.31 978.13 | 976.12 976.98

16+00 17+00 18+00 19+00 20+00 21+00

990 985 980 975 970 965 960 955

DATE	REVISIONS
01/27/20	AS-BUILT SUBMITTAL
01/09/20	AS-BUILT SUBMITTAL
06/28/19	REVISED MAILBOX PADS
07/18/18	FINAL SUBMITTAL
07/05/18	FOURTH SUBMITTAL
06/26/18	THIRD SUBMITTAL

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

STORM AND SANITARY SEWER PLAN AND PROFILE

WAUKEE, IOWA

FILE: H:\2018\1802054\DWG\1802054-PHP-STORM AND SANITARY-ASBUILT.DWG
PLOTTED: 7/7/2020 11:09 AM
PLOTTED BY: JONATHON MCDONALD
DESIGNMENT: ENG:
TECH:

REFER TO SHEET 28 FOR L-2 AND L-4 PLAN AND PROFILE.

REFER TO SHEET 31 FOR WATERMAIN PLAN AND PROFILE.

LOT 34

OUTLOT 'Y'

10.00' PUE

NORMAL POOL

25.00' LANDSCAPE BUFFER EASEMENT

30' SETBACK

25.00' STORM SEWER EASEMENT

10.00' SANITARY SEWER EASEMENT

INSTALL 1200 SF OF TYPE 1 TRM

REMOVE EXISTING TREES

BP 236+00.00

236+00

STA 21+20.84 BEGIN PAVEMENT

10' SHARED USE PATH

REMOVE EXISTING FIELD FENCE

ASHWORTH ROAD

9" P.C.C.

60.00' HALF ROW

24.00' B-B

PLAT BOUNDARY

EP 237+12.24

237+00

237+12

CRITICAL CROSSING
BOTTOM OF STORM=966.90
TOP OF EX. WATER=965.39 (VERIFY)
INSTALL GASKETED JOINTS ON STORM SEWER

CRITICAL CROSSING
BOTTOM OF STORM=966.89
TOP OF EX. WATER=965.39 (VERIFY)
INSTALL GASKETED JOINTS ON STORM SEWER

CRITICAL CROSSING
BOTTOM OF STORM=966.81
TOP OF SANITARY=954.99

CRITICAL CROSSING
BOTTOM OF STORM=966.79
TOP OF SANITARY=954.92

STA 24+28.77
END PAVEMENT

CRITICAL CROSSING
BOTTOM OF STORM=966.74
TOP OF WATER=962.55
INSTALL GASKETED JOINTS ON STORM SEWER

INSTALL 30 TONS OF CLASS 'E' RIPRAP

STA 24+22.97
END PAVEMENT

EXISTING XENIA WATERMAIN TO REMAIN THROUGHOUT CONSTRUCTION (MAP LOCATION)

CONTRACTOR TO COORDINATE SANITARY SEWER CONSTRUCTION WITH DAYBREAK PLAT 3 CONSTRUCTION.

RETAINING WALL (UAC)

CRITICAL CROSSING
BOTTOM OF EX. STORM=965.87 (VERIFY)
TOP OF SANITARY=954.65

CRITICAL CROSSING
BOTTOM OF STORM=966.72
TOP OF WATER=962.49
INSTALL GASKETED JOINTS ON STORM SEWER

TIE INTO EXISTING SANITARY SEWER STUB. VERIFY DEPTH AND LOCATION PRIOR TO CONSTRUCTION.

STA 26+87.25, 45.22' L
SW-301 48" MH
RIM=~~976.79~~ 976.88
FL 12" (W)=~~951.49~~ 951.54
FL 12" (S)=~~951.39~~ 951.54

STA 26+69.96, 45.94' R
EX SW-301 48" MH
RIM=~~969.39~~ 970.70
FL 12" (N)=~~960.50~~ 950.50
FL 12" (SE)=~~960.46~~ 950.46 (VERIFY)

EXISTING GROUND

SCALE 0' 10' 20' 40'

SHEET INDEX

1	3405 S.E. CROSSROADS DRIVE, SUITE G GRIMES, IOWA 50111 PHONE: (515) 369-4400 FAX: (515) 369-4410
2	ENGINEER: EKO | EI: GH
3	CIVIL DESIGN ADVANTAGE
4	ASHWORTH ACRES PLAT 1
5	STORM AND SANITARY SEWER PLAN AND PROFILE
6	WAUKEE, IOWA
7	15/48
8	1802.054

REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
FINAL SUBMITTAL	07/18/18
FOURTH SUBMITTAL	07/05/18
THIRD SUBMITTAL	06/26/18

VPI STA = 23+00
VPI ELEV = 973.54
VC = 150'
K=113.88

VPC STA = 22+25
VPC ELEV = 975.26

VPT STA = 23+75
VPT ELEV = 972.80

-2.30%

-0.98%

PROFILE GRADE

EXISTING GROUND

PROPOSED GROUND

STA 23+25.91, 45.58' L
SW-301 48" MH
RIM=~~977.09~~ 972.80
FL 12" (W)=~~955.16~~ 954.80
FL 12" (E)=~~956.06~~ 954.74

STA 24+06.91, 15.00' L
15" STORM SEWER PLUG
FL=967.25

STA 24+06.91, 15.00' R
15" STORM SEWER PLUG
FL=966.95

L-61
30 LF OF 15" RCP @ 1.00%

P-3
396 LF OF 12" PVC @ ~~1.00%~~ 0.97%

P-2
357 LF OF 12" PVC @ ~~1.00%~~ 0.90%

P-1
85 LF OF 12" PVC @ ~~1.00%~~ 1.00%

STA 26+71.13, 39.75' R
SEWER CONNECTION
FL 12" (N)=~~950.54~~ 950.54 (VERIFY)

TIE INTO EXISTING SANITARY SEWER STUB. VERIFY DEPTH AND LOCATION PRIOR TO CONSTRUCTION.

980 975 970 965 960 955 950

976.12 976.98 | 975.01 975.83 | 974.05 974.71 | 973.30 973.78 | 972.71 973.07 | 972.41 972.56 | 972.24 | 972.36 | 973.03 | 974.22 | 975.63 | 977.40

22+00 23+00 24+00 25+00 26+00 27+

FILE: N:\2018\1802054\VWC\1802054-PHP-STORM AND SANITARY+ASBUILT.DWG
PLOT DATE: 1/27/2020 11:07 AM
PLOTTED BY: JONATHON MCDONALD
DESC EDITED:
CONSULT:
TECH:
ENG:

REFER TO SHEET 27 FOR L-56 THROUGH L-59 PLAN AND PROFILE

REFER TO SHEET 26 FOR L-8, L-9 AND L-11 PLAN AND PROFILE.

REFER TO SHEET 32 FOR WATERMAIN PLAN AND PROFILE.

REFER TO SHEET 44 AND 45 FOR INTERSECTION DETAILS.

SHEET INDEX

REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
FINAL SUBMITTAL	07/18/18
FOURTH SUBMITTAL	07/05/18
THIRD SUBMITTAL	06/26/18

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

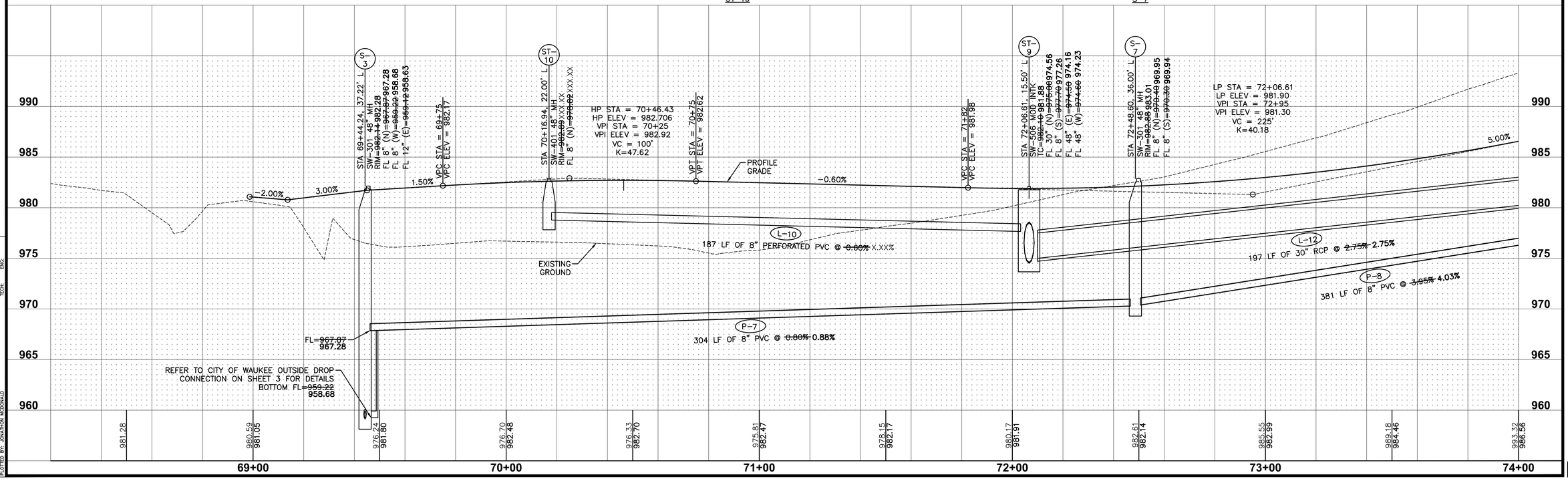
STORM AND SANITARY SEWER PLAN AND PROFILE

WAUKEE, IOWA

16/48

1802.054

ASHWORTH ROAD
SERENITY DRIVE
OUTLOT 'X'
OUTLOT 'Z'
LOT 34
LOT 33
LOT 32
LOT 31
LOT 30
10' SHARED USE PATH (FUTURE)
15.00' SANITARY SEWER EASEMENT
10.00' PUE
CRITICAL CROSSING
BOTTOM OF EX. WATER=970.73 (VERIFY)
TOP OF SANITARY=968.72
CROSSWALK BAR (WHITE) CBW6 (TYP)
STOP LINE SLW2 (WHITE)
SOLID LANE LINE SLW4 (WHITE)
LEFT TURN ARROW LTAW (WHITE) (TYP)
20.00' STORM SEWER EASEMENT
25.00' LANDSCAPE BUFFER EASEMENT
CRITICAL CROSSING
BOTTOM OF STORM=974.26
TOP OF SANITARY=970.75
9" P.C.C.
8" P.C.C.
31.00' B-B
70.00' ROW
18.50' (TYP.)
57.00' B-B
PC 69+38.80
Mid 70+13.48
PT 70+58.15
STREET LIGHT (TYP.)
6" SUBDRAIN FL=978.60
6" SUBDRAIN FL=983.65
STA 71+87.73 BEGIN PAVEMENT
STA 72+77.94 END PAVEMENT
5' SIDEWALK
5' SIDEWALK (FUTURE)
MAILBOX PAD (TYP.)
STA 68+98.66 (SERENITY DRIVE)
STA 19+62.91 (ASHWORTH ROAD)
PROVIDE ADDITIONAL PAVEMENT REINFORCEMENT ACROSS ENTIRE PANEL. INSTALL #4 REBAR ON 30" CENTERS, EACH WAY
STORM CLEANOUT RIM=982.49 FL=978.99
DOUBLE CENTERLINE DCY4 (YELLOW) (TYP)
220 LF OF 6" PERFORATED SUBDRAIN (TYP.)
200 LF OF 6" PERFORATED SUBDRAIN (TYP.)
CRITICAL CROSSING
BOTTOM OF STORM=973.45
TOP OF WATER=971.95
INSTALL GASKETED JOINTS ON STORM SEWER
CRITICAL CROSSING
BOTTOM OF STORM=975.16
TOP OF WATER=973.66
INSTALL GASKETED JOINTS ON STORM SEWER
CRITICAL CROSSING
BOTTOM OF WATER=975.08
TOP OF SANITARY=959.66
70+24 TG=983.63
70+91 TG=983.61
71+56 TG=983.28
73+11 TG=984.44
73+76 TG=986.67
30' SETBACK
5.00' ELECTRIC EASEMENT
Δ = 6°06'47"
L = 69.35'
R = 650.00'
CH = 69.32'
CHB = N2°45'20"W
178°
SCALE 0' 10' 20' 40'



FILE: H:\2018\1802054\DWG\1802054-PNP-STORM AND SANITARY-ASBUILT.DWG
PLOT DATE: 1/27/2020 11:57 AM
PLOTTED BY: JONATHON MCDONALD

REFER TO SHEET 19 FOR AUGUSTA COURT PLAN AND PROFILE.

REFER TO SHEET 33 FOR WATERMAIN PLAN AND PROFILE.

REFER TO SHEET 43 FOR INTERSECTION DETAILS.

OUTLOT 'X'

BP 30+00.00

30+00

STA 76+54.94 (SERENITY DRIVE)
STA 31+00.00 (AUGUSTA COURT)

Δ = 5°12'39"
L = 90.94'
R = 1000.00'
CH = 90.91'
CHB = N2°18'10"W

10.00' PUE

25.00' LANDSCAPE BUFFER EASEMENT

15.00' SANITARY SEWER EASEMENT

25.00' SANITARY SEWER EASEMENT

10.00' PUE

10' SHARED USE PATH (FUTURE)

74+00 75+00 76+00 77+00 78+00 79+00

P-8 P-10 P-11

S-8 S-10

ST-12 ST-13 ST-14 ST-19 ST-20

L-12 L-13 L-14 L-19 L-20 L-21

CRITICAL CROSSING
BOTTOM OF STORM=988.06
TOP OF SANITARY=986.50

CRITICAL CROSSING
BOTTOM OF WATER=989.73
TOP OF SANITARY=986.96

CRITICAL CROSSING
BOTTOM OF STORM=991.51
TOP OF WATER=990.01
INSTALL GASKETED JOINTS ON STORM SEWER

SERENITY DRIVE

8" P.C.C.

31.00' B-B

70.00' ROW

18.50' (TYP.)

PC 77+59.23

Mid 77+90.71

PT 78+36.18

31+00

6" SUBDRAIN FL=983.65

6" SUBDRAIN FL=998.35

MAILBOX PAD (TYP.)

200 LF OF 6" PERFORATED SUBDRAIN (TYP.)

294 LF OF 6" PERFORATED SUBDRAIN (TYP.)

237 LF OF 6" PERFORATED SUBDRAIN (TYP.)

STREET LIGHT (TYP.)

5' SIDEWALK (FUTURE)

73+11 TG=984.44
73+76 TG=986.67
74+41 TG=989.80
75+06 TG=993.05
75+67 TG=996.10
77+47 TG=1005.07
78+10 TG=1008.22
78+90 TG=1012.24

30' SETBACK

5' ELECTRIC EASEMENT

15' SANITARY SEWER EASEMENT

AUGUSTA COURT

7" P.C.C.

32+00

LOT 31 LOT 30 LOT 29 LOT 28 LOT 27 LOT 18 LOT 17 LOT 16

176'

SCALE 0' 10' 20' 40'

SHEET INDEX

REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
FINAL SUBMITTAL	07/18/18
FOURTH SUBMITTAL	07/05/18
THIRD SUBMITTAL	06/26/18

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

STORM AND SANITARY SEWER PLAN AND PROFILE

WAUKEE, IOWA

1802.054

EXISTING GROUND
PROPOSED GROUND
PROFILE GRADE

STA 177+59.50, 0.00' L
SW-503 INTK
TC=987.15=986.97
FL 30" (N)=981.19=980.84
FL 15" (E)=981.09=981.25
FL 30" (S)=980.42=979.98

27 LF OF 15" RCP @ ~~1.00%~~ 1.00%

STA 177+90.50, 0.00' L
SW-501 INTK
TC=987.15=986.95
FL 15" (W)=981.05=981.52

STA 74+07.94, 15.50' L
SW-503 INTK
TC=987.15=986.97
FL 30" (N)=981.19=980.84
FL 15" (E)=981.09=981.25
FL 30" (S)=980.42=979.98

VPT STA = 74+08
VPT ELEV = 986.93

5.00%

197 LF OF 30" RCP @ ~~2.75%~~ 2.75%

381 LF OF 8" PVC @ ~~3.95%~~ 4.03%

STA 77+01.94, 15.50' L
SW-503 INTK
TC=1001.64=995.00
FL 30" (N)=995.00=995.90
FL 30" (S)=994.72=994.99
FL 15" (E)=995.35=996.36

27 LF OF 15" RCP @ ~~1.00%~~ 3.22%

STA 77+01.94, 15.50' R
SW-501 INTK
TC=1001.65=1001.66
FL 15" (W)=995.62=996.51

STA 76+33.26, 36.00' L
SW-301 48" MH
RIM=999.18=999.18
FL 8" (N)=985.56=985.32
FL 8" (E)=985.56=985.41
FL 8" (S)=985.46=985.30

STA 76+38.44, 19.50' L
SW-401 72" MH
RIM=998.83=999.07
FL 18" (E)=991.46=991.48
FL 30" (N)=992.80=992.77
FL 30" (S)=988.45=988.53

5.00%

60 LF OF 30" RCP @ ~~3.20%~~ 3.70%

227 LF OF 30" RCP @ ~~3.20%~~ 3.39%

STA 77+01.94, 15.50' L
SW-503 INTK
TC=1001.65=1001.64
FL 30" (N)=995.80=995.90
FL 30" (S)=994.72=994.99
FL 15" (E)=995.35=996.36

231 LF OF 30" RCP @ ~~3.20%~~ 3.08%

210 LF OF 8" PVC @ ~~2.33%~~ 2.36%

221 LF OF 8" PVC @ ~~0.62%~~ 0.67%

STA 78+49.94, 36.00' L
SW-301 48" MH
RIM=~~1009.66~~1009.85
FL 8" (N)=~~999.55~~ 999.31
FL 8" (S)=~~999.45~~ 999.27

1010 1005 1000 995 990 985 980 975

989.18 994.46
993.32 986.56
997.27 989.05
1000.75 991.55
1003.88 994.05
1005.37 996.55
1006.52 999.05
1007.63 1001.55
1008.30 1004.05
1009.21 1006.55
1011.01 1009.05
1013.02 1011.55

74+00 75+00 76+00 77+00 78+00 79+00

FILE: N:\2018\1802054\MWO\1802054-PHP-STORM AND SANITARY+ASBUILT.DWG
PLOT DATE: 1/27/2020 11:07 AM
PLOTTED BY: JONATHON MCDONALD
XREFS: ENG

REFER TO SHEET 34 FOR WATERMAIN PLAN AND PROFILE.

REFER TO SHEET 42 FOR INTERSECTION DETAILS.

REFER TO SHEET 21 FOR DAYBREAK DRIVE PLAN AND PROFILE.

OUTLOT 'X'

LOT 35

LOT 5

LOT 16

LOT 17

LOT 15

LOT 6

SERENITY DRIVE

DAYBREAK DRIVE

PLAT BOUNDARY

FUTURE PLAT

FUTURE PLAT

25.00' LANDSCAPE BUFFER EASEMENT

10.00' PUE

30' SETBACK

25.00' SANITARY SEWER EASEMENT

27.00' SANITARY SEWER EASEMENT

CRITICAL CROSSING
BOTTOM OF WATER=998.29
TOP OF SANITARY=991.38

CRITICAL CROSSING
BOTTOM OF STORM=1011.65
TOP OF SANITARY=1005.15

CRITICAL CROSSING
BOTTOM OF STORM=1007.94
TOP OF SANITARY=1004.45

CRITICAL CROSSING
BOTTOM OF STORM=1000.46
TOP OF WATER=998.96
INSTALL GASKETED JOINTS
ON STORM SEWER

CRITICAL CROSSING
BOTTOM OF WATER=1011.41
TOP OF SANITARY=1004.68

CRITICAL CROSSING
BOTTOM OF STORM=1008.49
TOP OF WATER=1006.99
INSTALL GASKETED JOINTS
ON STORM SEWER

CRITICAL CROSSING
BOTTOM OF WATER=1012.72
TOP OF SANITARY=1006.48

CRITICAL CROSSING
BOTTOM OF STORM=1010.20
TOP OF WATER=1008.70
INSTALL GASKETED JOINTS
ON STORM SEWER

10' SHARED USE PATH (FUTURE)

5' SIDEWALK (FUTURE)

5' SIDEWALK (FUTURE)

5' SIDEWALK (FUTURE)

5' SIDEWALK (FUTURE)

79+00

80+00

81+00

82+00

83+00

84+00

49+00

50+00

PT 78+36.08

PC 80+05.54

PT 80+99.48

Mid 80+51.01

PC 49+43.04

70.00' ROW

31.00' B-B

18.50' (TYP.)

29.00' B-B

60.00' ROW

8" P.C.C.

7" P.C.C.

6" SUBDRAIN
FL=1010.13

124 LF OF 6" PERFORATED SUBDRAIN (TYP.)

237 LF OF 6" PERFORATED SUBDRAIN (TYP.)

6" SUBDRAIN
FL=1014.53

80 LF OF 6" PERFORATED SUBDRAIN (TYP.)

STORM CLEANOUT
RIM=1017.88
FL=1014.38

STA 81+04.04 (SERENITY DRIVE)
STA 49+20.00 (DAYBREAK DRIVE)

STA 82+31.74
END PAVEMENT

CAP 6" SUBDRAIN AT BOUNDARY

INSTALL 5 ROAD CLOSURE SIGNS (TYPE SI-182)

35.00' SANITARY SEWER EASEMENT

15.00' WATER MAIN EASEMENT

78+10
TG=1008.21

78+90
TG=1012.24

81+95
TG=1019.65

82+62
TG=1022.90

83+34
TG=1026.34

81+96
TG=1019.68

82+67
TG=1023.14

83+38
TG=1026.48

Δ = 5°12'39"
L = 90.94'
R = 1000.00'
CH = 90.91'
CHB = N2°18'10"W

10.00' OVERLAND FLOWAGE EASEMENT

SANITARY SEWER EASEMENT

S-11

ST-23

S-12

SCALE
0' 10' 20' 40'

SHEET INDEX

84+00

REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
FINAL SUBMITTAL	07/18/18
FOURTH SUBMITTAL	07/05/18
THIRD SUBMITTAL	06/26/18

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

STORM AND SANITARY SEWER PLAN AND PROFILE

WAUKEE, IOWA

1802.054

EXISTING GROUND

PROPOSED GROUND

PROFILE GRADE

PROPOSED TEMPORARY SWALE

STA 79+37.68, 15.50' L
SW-503 INTK
TC=~~1013.63~~ 1013.50
FL 30" (N)=~~1006.69~~ 1005.61
FL 15" (E)=~~1008.52~~ 1008.70
FL 30" (S)=~~1003.19~~ 1003.01

STA 79+37.62, 15.50' R
SW-501 INTK
TC=~~1013.63~~ 1013.50
FL 15" (W)=~~1008.79~~ 1008.89

STA 78+49.94, 36.00' L
SW-301 48" MH
RIM=~~1009.85~~ 1009.85
FL 8" (N)=~~999.55~~ 990.31
FL 8" (S)=~~990.46~~ 990.27

L-22
27 LF OF 15" RCP @ ~~1.00%~~ 0.70%

VPI STA = 79+50
VPI ELEV = 1014.05
VPC STA = 79+50
VPC ELEV = 1014.05

VPI STA = 80+00
VPI ELEV = 1016.55
VC = 100'
K=30.34

STA 80+72.50, 37.31' L
SW-301 48" MH
RIM=~~1018.58~~ 1018.58
FL 8" (W)=~~992.02~~ 991.78
FL 8" (N)=~~1004.00~~ 1003.63
FL 8" (E)=~~1003.58~~ 1003.16
FL 8" (S)=~~991.99~~ 991.78

VPT STA = 80+50
VPT ELEV = 1017.40

1.70%

2.00%

-2.00%

-1.00%

STA 80+85.41, 20.31' L
SW-401 84" MH
RIM=~~1018.63~~ 1018.13
FL 30" (N)=~~1009.36~~ 1008.45
FL 30" (E)=~~1008.56~~ 1008.45
FL 15" (W)=~~1011.66~~ 1011.57
FL 30" (S)=~~1008.46~~ 1008.35

VPC STA = 81+40
VPC ELEV = 1017.87

STA 81+51.04, 14.50' L
SW-506 INTK
TC=~~1018.00~~ 1018.11
FL 15" (E)=~~1013.23~~ 1013.09
FL 18" (N)=~~1011.26~~ 1011.36
FL 18" (S)=~~1011.16~~ 1011.28

LP STA = 81+51.67
LP ELEV = 1017.81
VPI STA = 81+75
VPI ELEV = 1017.52
VC = 70'
K=11.67

VPT STA = 82+10
VPT ELEV = 1019.27

VPC STA = 87+04
VPC ELEV = 1023.94

STA 82+56.74, 16.50' L
18" RCP APRON W/ APRON GUARD
FL=~~1013.38~~ 1013.21

L-28
106 LF OF 18" RCP @ ~~2.00%~~ 1.75%
(LENGTH SHOWN INCLUDES APRON)

L-23
145 LF OF 30" RCP @ ~~1.80%~~ 1.89%

L-26
60 LF OF 18" RCP @ ~~3.00%~~ 3.35%

P-12
298 LF OF 8" PVC @ ~~3.50%~~ 3.54%

L-21
231 LF OF 30" RCP @ ~~3.20%~~ 3.08%

FL=~~1004.00~~ 1003.63

REFER TO CITY OF WAUKEE OUTSIDE DROP CONNECTION ON SHEET 3 FOR DETAILS
BOTTOM FL=~~992.02~~ 991.78

P-10
210 LF OF 8" PVC @ ~~2.33%~~ 2.36%

P-11
221 LF OF 8" PVC @ ~~0.62%~~ 0.67%

STA 83+73.74, 31.00' L
SW-301 48" MH
RIM=~~1027.32~~ 1027.28
FL 8" (S)=~~1014.43~~ 1014.19

STA 81+51.04, 14.50' R
SW-505 INTK
TC=~~1018.00~~ 1017.83
FL 15" (W)=~~1013.48~~ 1013.53

L-27
25 LF OF 15" RCP @ ~~1.00%~~ 1.76%

VPI STA = 83+66
VPI ELEV = 1027.07
VC = 125'
K=28.42

1011.01 1009.05
1013.02 1011.55
1015.74 1014.05
1018.05 1016.14
1020.42 1017.40
1022.64 1018.28
1023.50 1017.81
1024.22 1018.81
1025.07 1021.27
1025.60 1023.77
1026.07 1025.89
1026.83 1027.13

1025 1020 1015 1010 1005 1000 995 990

79+00 80+00 81+00 82+00 83+00 84+00

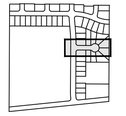
FILE: N:\2018\1802054\DWG\1802054-PNP-STORM AND SANITARY+ASBUILT.DWG
PLOT DATE: 1/27/2020 11:09 AM
PLOTTED BY: JONATHON MCDONALD

REFER TO SHEET 27 FOR L-17A PLAN AND PROFILE.

REFER TO SHEET 35 FOR WATERMAIN PLAN AND PROFILE.

REFER TO SHEET 43 FOR INTERSECTION DETAILS.

SHEET INDEX



SCALE
0' 10' 20' 40'

REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
FINAL SUBMITTAL	07/18/18
FOURTH SUBMITTAL	07/05/18
THIRD SUBMITTAL	06/26/18

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

ASHWORTH ACRES PLAT 1

STORM AND SANITARY SEWER PLAN AND PROFILE

FILE: H:\2018\1802054\DWG\1802054-PHP-STORM_AND_SANITARY-ASBUILT.DWG
LAYOUT: 19 of 1802054-PHP-STORM_AND_SANITARY-ASBUILT
PLOTTED: 1/7/2020 11:59 AM
PLOTTED BY: JONATHON MCDONALD
CONSTRUCT:
TECH:
ENG:

REFER TO SHEET 23 FOR ADOBE DRIVE PLAN AND PROFILE.

REFER TO SHEET 26 FOR L-40, L-41, AND L-42 PLAN AND PROFILE.

REFER TO SHEET 36 FOR WATERMAIN PLAN AND PROFILE.

REFER TO SHEET 41 FOR INTERSECTION DETAILS.

SHEET INDEX

LOT 1 | LOT 2 | LOT 3

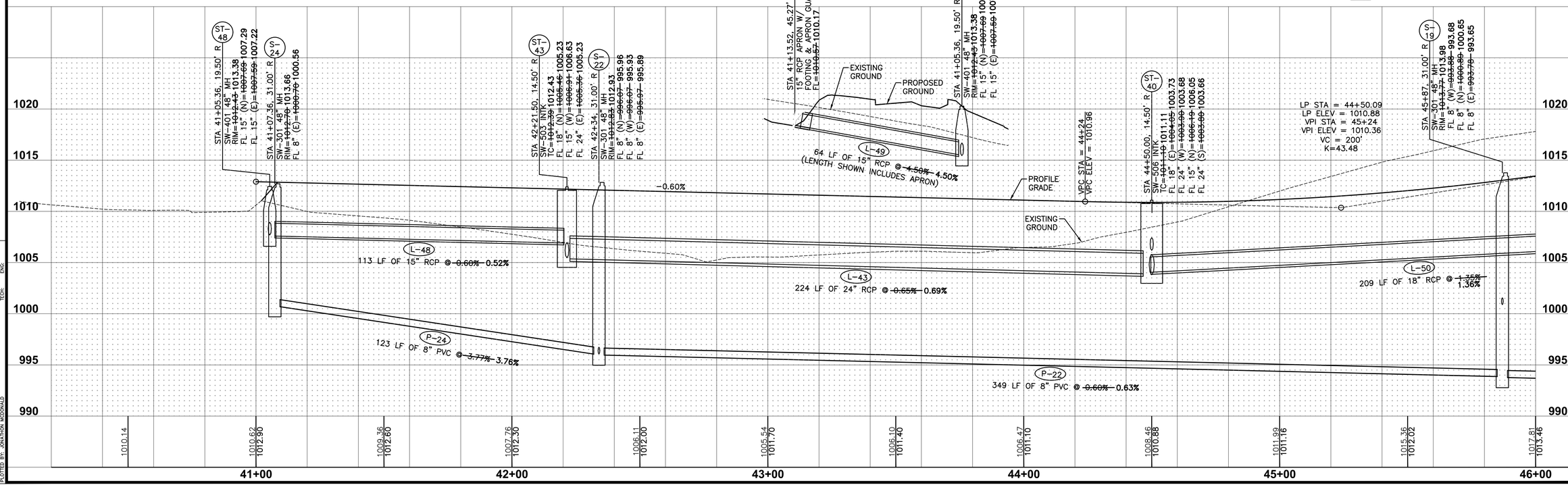
ADOBE DRIVE | DAYBREAK DRIVE | AVALON DRIVE

20.00' OVERLAND FLOWAGE EASEMENT
REMOVE EXISTING FIELD FENCE
10.00' PUE
30' SETBACK
15.00' SANITARY SEWER EASEMENT
20.00' STORM SEWER EASEMENT
CRITICAL CROSSING
BOTTOM OF STORM=1009.15
TOP OF WATER=1007.65
INSTALL GASKETED JOINTS ON STORM SEWER
STORM CLEANOUT
RIM=1013.10
FL=1009.60
5' SIDEWALK (FUTURE)
INSTALL 5 ROAD CLOSURE SIGNS (TYPE SI-182)
STA 41+05.00 BEGIN PAVEMENT
108 LF OF 6" PERFORATED SUBDRAIN (TYP.)
6" SUBDRAIN FL=1008.48
CRITICAL CROSSING
BOTTOM OF STORM=1006.13
TOP OF SANITARY=999.41
CRITICAL CROSSING
BOTTOM OF STORM=1005.91
TOP OF WATER=1004.41
INSTALL GASKETED JOINTS ON STORM SEWER
7" P.C.C.
STA 42+65.00 (DAYBREAK DRIVE)
STA 101+00.00 (ADOBE DRIVE)
227 LF OF 6" PERFORATED SUBDRAIN (TYP.)
29.00' B-B
60.00' ROW
18.50' (TYP.)
CRITICAL CROSSING
BOTTOM OF STORM=1006.66
TOP OF WATER=1005.16
INSTALL GASKETED JOINTS ON STORM SEWER
209 LF OF 6" PERFORATED SUBDRAIN (TYP.)
6" SUBDRAIN FL=1007.60
STA 45+95.00 (DAYBREAK DRIVE)
STA 116+00.00 (AVALON DRIVE)
CRITICAL CROSSING
BOTTOM OF WATER=1005.98
TOP OF SANITARY=1001.95
STREET LIGHT (TYP.)
MAILBOX PAD (TYP.)
5' SIDEWALK (FUTURE)
20.00' SANITARY SEWER EASEMENT
CRITICAL CROSSING
BOTTOM OF STORM=1003.25
TOP OF SANITARY=995.47
CRITICAL CROSSING
BOTTOM OF STORM=1005.64
TOP OF SANITARY=1001.69
20.00' STORM SEWER EASEMENT AND OVERLAND FLOWAGE EASEMENT
5.00' ELECTRIC EASEMENT
8.00' PUE
PLAT BOUNDARY
41+36 TG=1013.69
42+06 TG=1013.27
42+76 TG=1012.85
17.00' SANITARY SEWER EASEMENT
43+46 TG=1012.43
44+16 TG=1012.01
44+86 TG=1012.04
45+56 TG=1013.19

LOT 45 | LOT 44 | LOT 43 | LOT 42 | LOT 41 | LOT 40 | LOT 39

ST-48 | S-24 | S-22 | S-19

SCALE 0' 10' 20' 40'



REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
FINAL SUBMITTAL	07/18/18
FOURTH SUBMITTAL	07/05/18
THIRD SUBMITTAL	06/26/18

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO | EI: GH
CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1
STORM AND SANITARY SEWER PLAN AND PROFILE

WAUKEE, IOWA

20/48
1802.054

FILE: H:\2018\1802054\DWG\1802054-PNP-STORM AND SANITARY-ASBUILTDWG
LAST PLOTTED: 1/27/2020 11:05 AM
PLOTTED BY: JONATHON MCDONALD
CURRENT:
ENG:
TECH:

REFER TO SHEET 24 FOR AVALON DRIVE PLAN AND PROFILE.

REFER TO SHEET 37 FOR WATERMAIN PLAN AND PROFILE.

REFER TO SHEET 41 AND 42 FOR INTERSECTION DETAILS.

REFER TO SHEET 18 FOR SERENITY DRIVE PLAN AND PROFILE.

LOT 3 LOT 4 LOT 5 LOT 6 LOT 40 LOT 39 LOT 38 LOT 37 LOT 36 LOT 35 LOT 15

AVALON DRIVE 7" P.C.C.

DAYBREAK DRIVE 7" P.C.C.

SERENITY DRIVE 7" P.C.C.

117+00 116+00 115+00 45+00 46+00 47+00 48+00 49+00 50+00 81+00 82+00

30' SETBACK

15.00' SANITARY SEWER EASEMENT

20.00' SANITARY SEWER EASEMENT

10.00' PUE

15.00' OVERLAND FLOWAGE EASEMENT

OVERLAND FLOWAGE EASEMENT

20.00' STORM SEWER EASEMENT

27.00' SANITARY SEWER EASEMENT

5.00' ELECTRIC EASEMENT

SANITARY SEWER EASEMENT

5' SIDEWALK (FUTURE)

10' SHARED USE PATH (FUTURE)

CRITICAL CROSSING
BOTTOM OF STORM=1007.77
TOP OF WATER=1006.27
INSTALL GASKETED JOINTS ON STORM SEWER

CRITICAL CROSSING
BOTTOM OF STORM=1007.27
TOP OF WATER=1005.77
INSTALL GASKETED JOINTS ON STORM SEWER

CRITICAL CROSSING
BOTTOM OF STORM=1012.49
TOP OF WATER=1010.99

CRITICAL CROSSING
BOTTOM OF STORM=1010.20
TOP OF WATER=1008.70
INSTALL GASKETED JOINTS ON STORM SEWER

CRITICAL CROSSING
BOTTOM OF WATER=1012.72
TOP OF SANITARY=1006.48

CRITICAL CROSSING
BOTTOM OF WATER=1005.98
TOP OF SANITARY=1001.95

CRITICAL CROSSING
BOTTOM OF STORM=1005.64
TOP OF SANITARY=1001.69

CRITICAL CROSSING
BOTTOM OF STORM=1011.65
TOP OF SANITARY=1005.15

CRITICAL CROSSING
BOTTOM OF STORM=1008.49
TOP OF WATER=1006.99
INSTALL GASKETED JOINTS ON STORM SEWER

CRITICAL CROSSING
BOTTOM OF WATER=1011.41
TOP OF SANITARY=1004.68

STORM CLEANOUT
RIM=1019.90
FL=1016.40

STORM CLEANOUT
RIM=1019.90
FL=1016.40

6" SUBDRAIN
FL=1012.54

209 LF OF 6" PERFORATED SUBDRAIN (TYP.)

150 LF OF 6" PERFORATED SUBDRAIN (TYP.)

277 LF OF 6" PERFORATED SUBDRAIN (TYP.)

STA 45+95.00 (DAYBREAK DRIVE)
STA 116+00.00 (AVALON DRIVE)

STA 49+20.00 (DAYBREAK DRIVE)
STA 81+04.04 (SERENITY DRIVE)

PC 49+43.04

PC 80+05.54

ST 80+96.48

Mid 80+51.01

Mid Sta

29.00' B-B

60.00' ROW

18.50' (TYP.)

MAILBOX PAD (TYP.)

STREET LIGHT (TYP.)

44+86 TG=1012.04

45+56 TG=1013.19

46+26 TG=1015.47

46+96 TG=1018.25

47+65 TG=1020.25

48+28 TG=1020.58

50+40 TG=1017.74

Δ = 22°40'55"
L = 257.32'
R = 650.00'
CH = 255.64'
CHB = S78°21'20"E

SCALE 0' 10' 20' 40'

S-20 S-19 S-11 S-1 S-1g

ST-50 ST-51 ST-52 ST-53 ST-24 ST-25 ST-23 ST-23A ST-23B ST-26 ST-27

L-50 L-51 L-52 L-53 L-54 L-24 L-24A L-24B L-25 L-26 L-27 L-28 L-29 L-23 L-23A L-23B

P-19 P-20 P-21 P-22 P-11 P-12 P-13

ST-24
55° 114°

STA 47+98.00, 19.50' R
SW-401 48" MH
RIM=~~1020.01~~ 1019.95
FL 15" (NW)=~~1012.44~~ 1012.35
FL 15" (E)=~~1012.34~~ 1012.32
FL 8" (W)=~~1016.06~~ 1015.97

STA 47+64.78, 52.42' L
15" RCP APRON W/ FOOTING & APRON GUARD
FL=~~1012.31~~ 1012.82

EXISTING GROUND

PROPOSED GROUND

STA 48+75.99, 14.50' L
SW-501 INTK
TC=~~1019.20~~ 1018.98
FL 15" (S)=~~1014.56~~ 1014.37

STA 48+75.99, 14.50' R
SW-503 INTK
TC=~~1019.20~~ 1018.94
FL 15" (W)=~~1011.66~~ 1011.83
FL 15" (N)=~~1014.25~~ 1013.96
FL 15" (E)=~~1011.78~~ 1011.82

STA 48+99.75, 18.86' R
SW-401 84" MH
RIM=~~1018.19~~ 1018.13
FL 18" (N)=~~1009.36~~ 1009.27
FL 30" (E)=~~1008.56~~ 1008.45
FL 15" (W)=~~1011.66~~ 1011.57
FL 30" (S)=~~1008.46~~ 1008.35

STA 48+82.98, 32.44' R
SW-301 48" MH
RIM=~~1019.02~~ 1018.58
FL 8" (W)=~~992.02~~ 991.78
FL 8" (N)=~~1004.00~~ 1003.63
FL 8" (E)=~~1003.66~~ 1003.16
FL 8" (S)=~~991.92~~ 991.78

STA 48+11.11
HP ELEV = 1019.617
VPI STA = 47+75
VPI ELEV = 1020.40
VC = 150'
K=27.78

VPT STA = 48+50
VPT ELEV = 1019.34

STA 47+88, 19.50' R
SW-401 48" MH
RIM=~~1020.01~~ 1019.95
FL 15" (NW)=~~1012.44~~ 1012.35
FL 15" (E)=~~1012.34~~ 1012.32
FL 8" (W)=~~1016.06~~ 1015.97

STA 46+60.00, 14.50' R
SW-503 INTK
TC=~~1019.03~~ 1015.71
FL 18" (N)=~~1006.97~~ 1006.72
FL 8" (E)=~~1012.04~~ 1011.52
FL 18" (W)=~~1006.87~~ 1006.57

VPC STA = 47+00
VPC ELEV = 1017.40

VPT STA = 46+24
VPT ELEV = 1014.36

STA 45+87, 31.00' R
SW-301 48" MH
RIM=~~1013.77~~ 1013.98
FL 8" (W)=~~993.88~~ 993.68
FL 8" (N)=~~1000.89~~ 1000.85
FL 8" (E)=~~993.78~~ 993.65

LP STA = 44+50.09
LP ELEV = 1010.88
VPI STA = 45+24
VPI ELEV = 1010.36
VC = 200'
K=43.48

VPC STA = 50+29
VPC ELEV = 1016.97

4.00%

-1.40%

PROFILE GRADE

L-25
78 LF OF 15" RCP @ ~~0.60%~~ 0.60%
(LENGTH SHOWN INCLUDES APRON)

L-23B
25 LF OF 15" RCP @ ~~1.00%~~ 0.64%

L-24B
135 LF OF 8" PERFORATED PVC @ ~~3.00%~~ 3.30%

L-24A
76 LF OF 15" RCP @ ~~0.60%~~ 0.64%

L-23A
20 LF OF 15" RCP @ ~~0.60%~~ 1.25%

L-29
176 LF OF 30" RCP @ ~~0.60%~~ 0.59%

P-13
191 LF OF 8" PVC @ ~~0.60%~~ 0.85%

L-50
209 LF OF 18" RCP @ ~~1.35%~~ 1.36%

P-22
349 LF OF 8" PVC @ ~~0.60%~~ 0.63%

P-19
292 LF OF 8" PVC @ ~~0.60%~~ 0.64%

1003.16
FL=~~1003.50~~

REFER TO CITY OF WAUKEE OUTSIDE DROP CONNECTION ON SHEET 3 FOR DETAILS
BOTTOM FL=~~992.92~~ 991.78

1011.99 1011.16 | 1015.36 1012.02 | 1017.81 1013.46 | 1019.41 1015.40 | 1019.72 1017.40 | 1018.64 1018.94 | 1018.78 1018.60 | 1021.43 1019.34 | 1022.88 1018.64 | 1022.27 1017.94 | 1020.49 1017.24 | 1018.03 1016.64

1025 1020 1015 1010 1005 1000 995

45+00 46+00 47+00 48+00 49+00 50+00

SHEET INDEX

DATE	REVISIONS
01/27/20	AS-BUILT SUBMITTAL
01/09/20	AS-BUILT SUBMITTAL
06/28/19	REVISED MAILBOX PADS
07/18/18	FINAL SUBMITTAL
07/05/18	FOURTH SUBMITTAL
06/26/18	THIRD SUBMITTAL

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

ASHWORTH ACRES PLAT 1

STORM AND SANITARY SEWER PLAN AND PROFILE

21/48

1802.054

FILE: H:\2018\1802054\DWG\1802054-PHP-STORM AND SANITARY-ASBUILT.DWG
PLOT DATE: 1/27/2020 11:09 AM PLOTTED BY: JONATHAN MCDONALD
COMMENT:
TECH: ENG

REFER TO SHEET 25 FOR ABBOTT DRIVE PLAN AND PROFILE.

REFER TO SHEET 38 FOR WATERMAIN PLAN AND PROFILE.

REFER TO SHEET 42 FOR INTERSECTION DETAILS.

SHEET INDEX

REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
FINAL SUBMITTAL	07/18/18
FOURTH SUBMITTAL	07/05/18
THIRD SUBMITTAL	06/26/18

3405 S.E. CROSSROADS DRIVE, SUITE G
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PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1
STORM AND SANITARY SEWER PLAN AND PROFILE

WAUKEE, IOWA

22/48

1802.054

FILE: H:\2018\1802054\DWG\1802054-PHP-STORM AND SANITARY-ASBUILT.DWG
PLOT DATE: 1/27/2020 11:59 AM
PLOTTED BY: JONATHON MCDONALD

REFER TO SHEET 39 FOR WATERMAIN PLAN AND PROFILE.

REFER TO SHEET 41 FOR INTERSECTION DETAILS.

LOT 45

LOT 44

LOT 43

LOT 42

LOT 1

LOT 2

FUTURE PLAT

PLAT BOUNDARY

10.00' OVERLAND FLOWAGE EASEMENT

10.00' PUE

5' SIDEWALK (FUTURE)

CRITICAL CROSSING
BOTTOM OF STORM=1005.91
TOP OF WATER=1004.41
INSTALL GASKETED JOINTS ON STORM SEWER

CRITICAL CROSSING
BOTTOM OF WATER=1005.53
TOP OF SANITARY=998.96

CRITICAL CROSSING
BOTTOM OF STORM=1006.13
TOP OF SANITARY=999.41

CRITICAL CROSSING
BOTTOM OF STORM=1005.05
TOP OF SANITARY=997.26

17.00' SANITARY SEWER EASEMENT

15.00' SANITARY SEWER EASEMENT

30.00' SANITARY SEWER EASEMENT

15.00' STORM SEWER EASEMENT

30' SETBACK

ADOBE DRIVE

DAYBREAK DRIVE

7" P.C.C.

29.00' B-B

60.00' ROW

18.50' (TYP.)

STA 102+28.50
END PAVEMENT

INSTALL 5 ROAD CLOSURE SIGNS (TYPE SI-182)

6" SUBDRAIN
FL=1007.99

81 LF OF 6" PERFORATED SUBDRAIN (TYP.)

15.00' WATER MAIN EASEMENT

CAP 6" SUBDRAIN AT BOUNDARY

STA 101+00.00 (ADOBE DRIVE)
STA 42+65.00 (DAYBREAK DRIVE)

BP 100+00.00

42+00

43+00

100+00

101+00

102+00

103+00

104+00

105+00

101+90
TG=1013.10

102+56
TG=1016.34

103+26
TG=1019.84

103+96
TG=1023.34

101+95
TG=1013.32

102+65
TG=1016.74

103+38
TG=1020.40

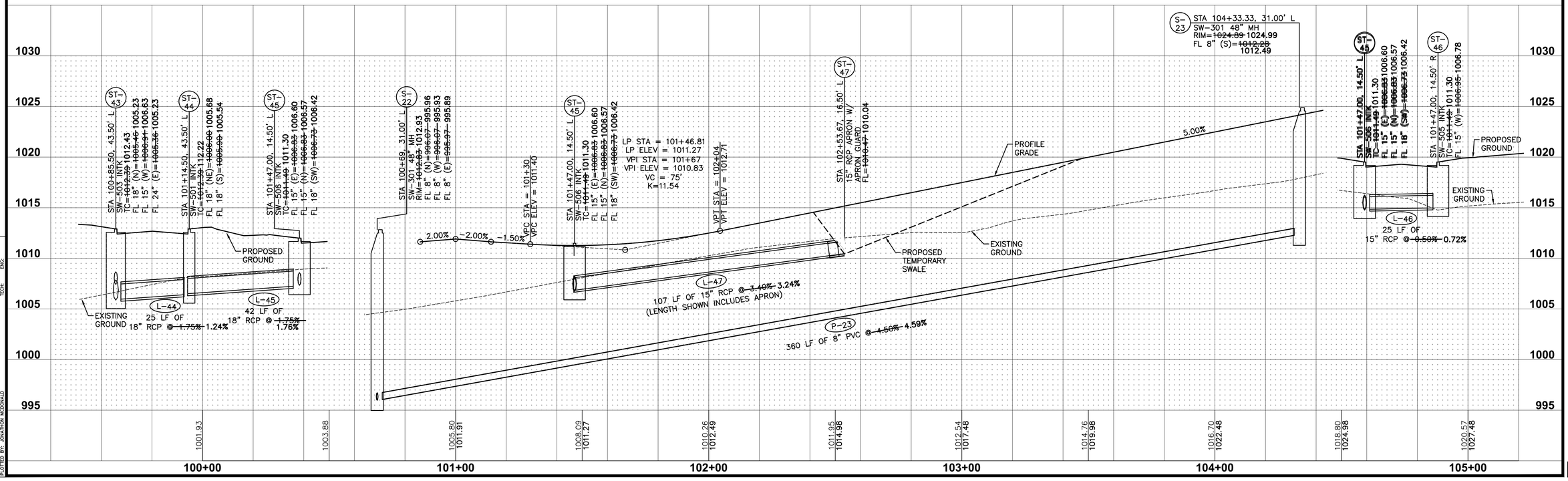
104+11
TG=1024.05

S-23

SCALE
0' 10' 20' 40'

SHEET INDEX

1	1802.054
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41	1802.054
42	1802.054
43	1802.054
44	1802.054
45	1802.054
46	1802.054
47	1802.054
48	1802.054



REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
FINAL SUBMITTAL	07/18/18
FOURTH SUBMITTAL	07/05/18
THIRD SUBMITTAL	06/26/18

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410

ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

STORM AND SANITARY SEWER PLAN AND PROFILE

WAUKEE, IOWA

23/48

1802.054

FILE: H:\2018\1802054\DWG\1802054-PNP-STORM AND SANITARY-ASBUILT.DWG
PLOT DATE/TIME: 1/27/2020 11:09 AM
PLOTTED BY: JONATHON MCDONALD

REFER TO SHEET 39 FOR WATERMAIN PLAN AND PROFILE.

REFER TO SHEET 41 FOR INTERSECTION DETAILS.

LOT 40

LOT 39

LOT 38

LOT 37

LOT 3

LOT 4

DAYBREAK DRIVE

7" P.C.C.

5' SIDEWALK (FUTURE)

AVALON DRIVE

7" P.C.C.

30' SETBACK

20.00' SANITARY SEWER EASEMENT

10.00' PUE

15.00' SANITARY SEWER EASEMENT

15.00' STORM SEWER EASEMENT

30.00' SANITARY SEWER EASEMENT

15.00' WATER MAIN EASEMENT

10.00' OVERLAND FLOWAGE EASEMENT

PLAT BOUNDARY

FUTURE PLAT

115+00

116+00

117+00

118+00

45+00

46+00

BP 115+00.00

CRITICAL CROSSING
BOTTOM OF STORM=1005.64
TOP OF SANITARY=1001.69

CRITICAL CROSSING
BOTTOM OF WATER=1005.98
TOP OF SANITARY=1001.95

CRITICAL CROSSING
BOTTOM OF STORM=1007.77
TOP OF WATER=1006.27
INSTALL GASKETED JOINTS
ON STORM SEWER

CRITICAL CROSSING
BOTTOM OF STORM=1007.27
TOP OF WATER=1005.77
INSTALL GASKETED JOINTS
ON STORM SEWER

STA 116+00.00 (AVALON DRIVE)
STA 45+95.00 (DAYBREAK DRIVE)

6" SUBDRAIN
FL=1009.46

78 LF OF 6" PERFORATED SUBDRAIN (TYP.)

CAP 6" SUBDRAIN AT BOUNDARY

116+88
TG=1014.77

117+57
TG=1018.18

118+27
TG=1021.68

116+94
TG=1015.04

117+62
TG=1018.44

118+35
TG=1022.11

STA 117+25.50
END PAVEMENT

INSTALL 5 ROAD CLOSURE SIGNS (TYPE SI-182)

18.50' (TYP.)

29.00' B-B

60.00' ROW

P-22 | P-19 | P-20 | P-21

L-50 | L-51 | L-52 | L-53 | L-54

S-19 | S-20 | S-21

ST-50 | ST-51 | ST-52 | ST-53 | ST-54

S-20

165°

SCALE
0' 10' 20' 40'

SHEET INDEX

S-21

REVISIONS	DATE
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ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

STORM AND SANITARY SEWER PLAN AND PROFILE

WAUKEE, IOWA

1802.054

STA 115+85.50, 65.00' R
ST-50
SW-503 INTK
TC=1010.01 1015.71
FL 18" (N)=1006.37 1006.72
FL 8" (E)=1012.01 1011.52
FL 18" (W)=1006.87 1006.57

STA 116+14.50, 65.00' R
ST-51
SW-501 INTK
TC=1010.01 1015.87
FL 18" (NW)=1007.37 1006.97
FL 18" (S)=1007.27 1006.85

STA 116+47.00, 14.50' R
ST-52
SW-505 INTK
TC=1012.06 1012.66
FL 18" (W)=1008.15 1007.76
FL 18" (SE)=1008.05 1007.73

STA 115+69, 8.00' L
S-19
SW-301 48" MH
RIM=1013.77 1013.98
FL 8" (N)=993.68 1000.65
FL 8" (E)=993.78 993.65

STA 116+47.00, 14.50' L
ST-53
SW-506 INTK
TC=1012.06 1012.79
FL 18" (N)=1008.54 1008.32
FL 18" (E)=1008.44 1008.24

STA 116+55, 31.00' L
S-20
SW-301 48" MH
RIM=1013.52 1013.42
FL 8" (N)=1001.56 1001.27
FL 8" (S)=1001.46 1001.22

STA 117+50.67, 16.50' L
ST-54
18" RCP APRON W/ APRON GUARD
FL=1009.74 1009.66

STA 118+62.00, 31.00' L
S-21
SW-301 48" MH
RIM=1023.15 1023.14
FL 8" (S)=1011.14 1011.10

STA 116+47.00, 14.50' L
ST-53
SW-506 INTK
TC=1012.06 1012.79
FL 18" (N)=1008.54 1008.32
FL 18" (E)=1008.44 1008.24

STA 116+47.00, 14.50' R
ST-52
SW-505 INTK
TC=1012.06 1012.66
FL 18" (W)=1008.15 1007.76
FL 18" (SE)=1008.05 1007.73

EXISTING GROUND

PROPOSED GROUND

PROFILE GRADE

PROPOSED TEMPORARY SWALE

2.00% | -2.00% | -1.00% | 5.00%

VPC STA = 116+36
VPC ELEV = 1012.79

LP STA = 116+45.67
LP ELEV = 1012.74
VPI STA = 116+64
VPI ELEV = 1012.51
VC = 55'
K=9.17

VPT STA = 116+92
VPT ELEV = 1013.89

L-51
25 LF OF 18" RCP @ ~~1.20%~~ 0.52%

L-52
59 LF OF 18" RCP @ ~~1.15%~~ 1.29%

L-53
25 LF OF 18" RCP @ ~~1.15%~~ 1.92%

L-54
104 LF OF 18" RCP @ ~~1.15%~~ 1.29%
(LENGTH SHOWN INCLUDES APRON)

P-20
85 LF OF 8" PVC @ ~~0.60%~~ 0.67%

P-21
203 LF OF 8" PVC @ ~~4.75%~~ 4.84%

1000.65
FL=~~1000.89~~

EXTERNAL DROP CONNECTION
REFER TO FIG. 6010.307
FOR DETAILS
BOTTOM FL=~~993.88~~ 993.68

1025 | 1020 | 1015 | 1010 | 1005 | 1000 | 995

1014.66 | 1016.51 | 1017.62 1013.29 | 1018.60 1012.75 | 1020.05 1014.31 | 1020.86 1016.81 | 1020.72 1019.31 | 1019.97 1021.81

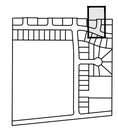
115+00 | 116+00 | 117+00 | 118+00

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DOCUMENT: ENG
TECH:

REFER TO SHEET 40 FOR WATERMAIN PLAN AND PROFILE.

REFER TO SHEET 42 FOR INTERSECTION DETAILS.

SHEET INDEX



LOT 14

LOT 13

LOT 7

LOT 9

LOT 8

DAYBREAK DRIVE

7" P.C.C.

ABBOTT DRIVE

7" P.C.C.

PLAT BOUNDARY

PLAT BOUNDARY

FUTURE PLAT

FUTURE PLAT

51+00

52+00

53+00

131+00

132+00

133+00

134+00

30' SETBACK

30' SETBACK

30' SETBACK

30' SETBACK

30' SETBACK

10.00' PUE

10.00' PUE

5' SIDEWALK (FUTURE) R/W

5' SIDEWALK (FUTURE) R/W

5' SIDEWALK (FUTURE) R/W

5' SIDEWALK (FUTURE) R/W

5' SIDEWALK (FUTURE) R/W

15.00' SANITARY SEWER EASEMENT

SANITARY SEWER EASEMENT

15.00' STORM SEWER EASEMENT

30.00' SANITARY SEWER EASEMENT

15.00' WATER MAIN EASEMENT

CRITICAL CROSSING
BOTTOM OF STORM=1009.76
TOP OF SANITARY=1006.20

CRITICAL CROSSING
BOTTOM OF WATER=1011.44
TOP OF SANITARY=1006.44

CRITICAL CROSSING
BOTTOM OF STORM=1011.13
TOP OF WATER=1009.63
INSTALL GASKETED JOINTS
ON STORM SEWER

CRITICAL CROSSING
BOTTOM OF STORM=1010.74
TOP OF WATER=1009.24
INSTALL GASKETED JOINTS
ON STORM SEWER

PC 131+17.69

PT 52+00.34

PC 54+67.42

Mid 132+85.01

PT 132+49.34

STA 131+14.19 (ABBOTT DRIVE)
STA 52+21.17 (DAYBREAK DRIVE)

6" SUBDRAIN
FL=1013.94

127 LF OF 6"
PERFORATED
SUBDRAIN (TYP.)

131+95
TG=1018.54

132+33
TG=1018.90

132+54
TG=1019.34

133+15
TG=1020.01

133+26
TG=1020.31

133+89
TG=1021.01

133+99
TG=1021.28

STA 132+89.98
END PAVEMENT

RELOCATED 5 ROAD
CLOSURE SIGNS
(TYPE SI-182)

CAP 6" SUBDRAIN
AT BOUNDARY

Δ = 22°40'55"
L = 131.83'
R = 333.00'
CH = 130.97'
CHB = N11°38'40"E

29.00' B-B

60.00' ROW

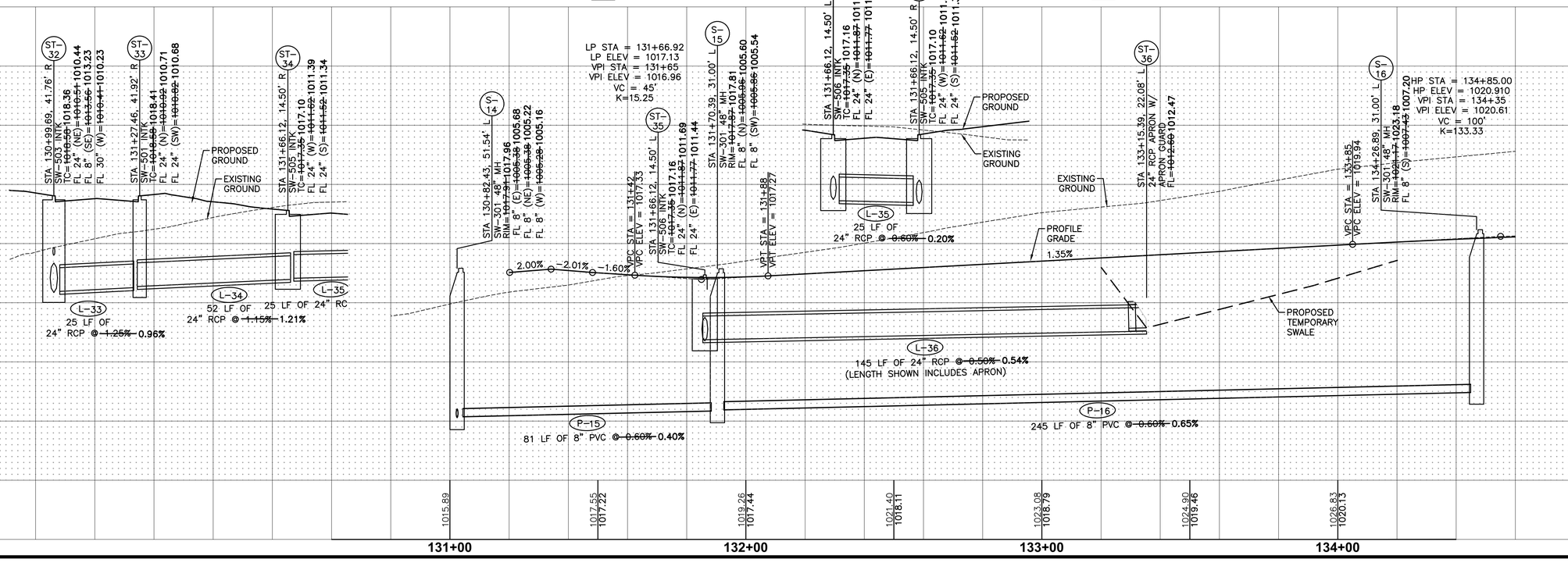
S-14 S-15 S-16 S-17

ST-32 ST-33 ST-34 ST-35 ST-36 ST-37

P-14 P-15 P-16 P-17 P-18

L-32 L-33 L-34 L-35 L-36 L-37 L-38

SCALE
0' 10' 20' 40'



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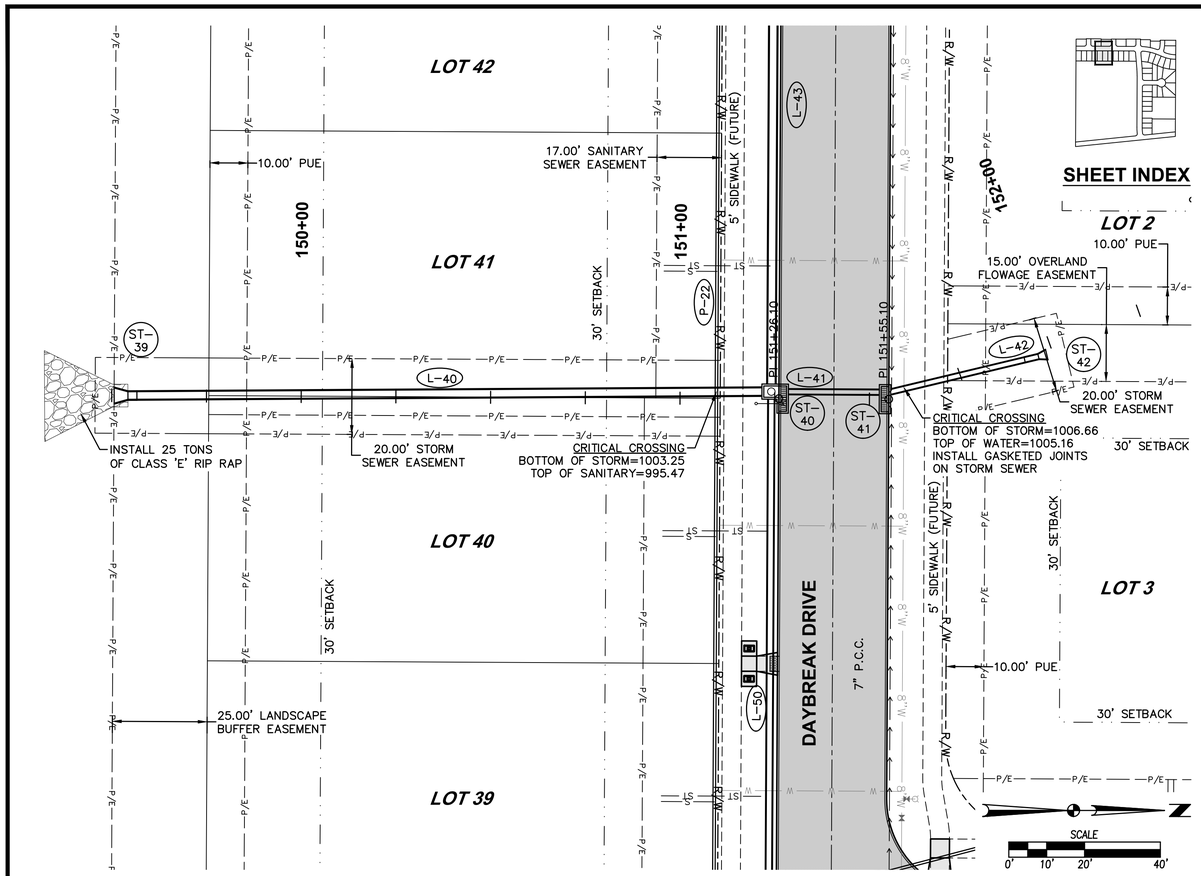
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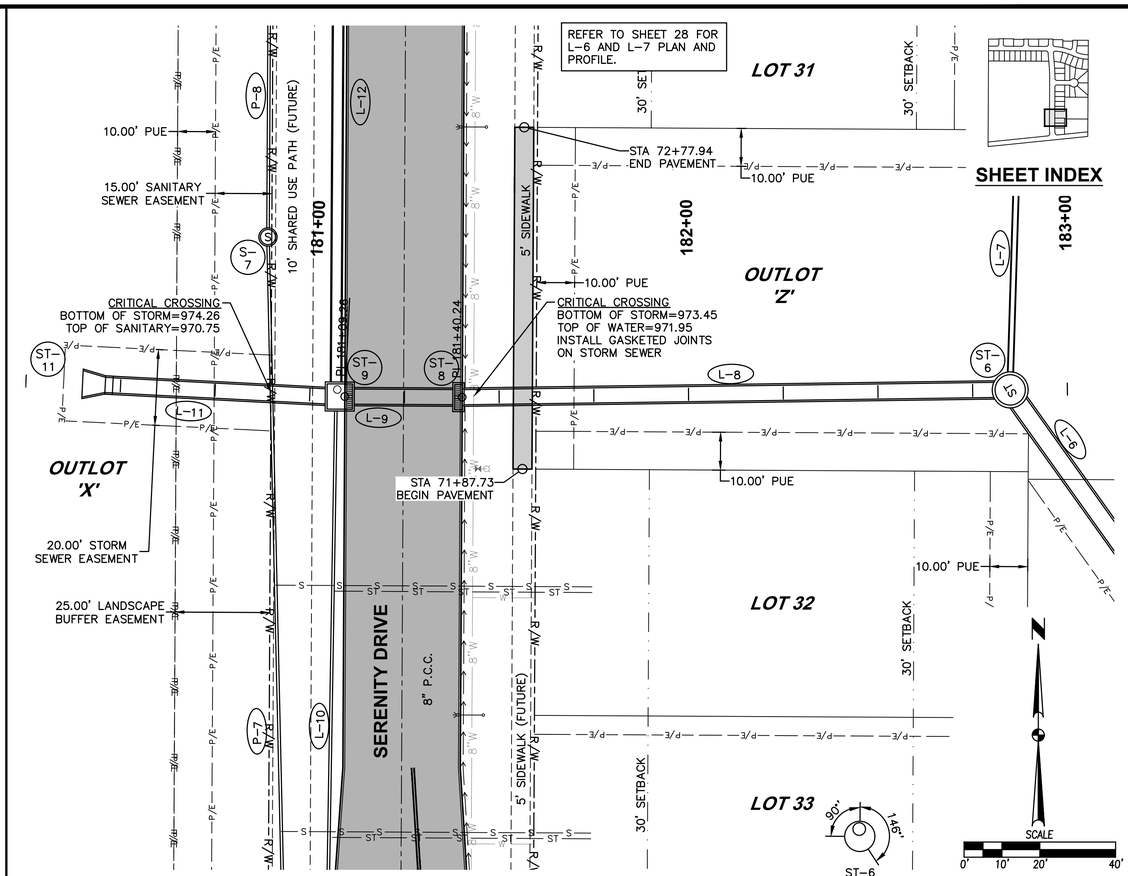
ASHWORTH ACRES PLAT 1

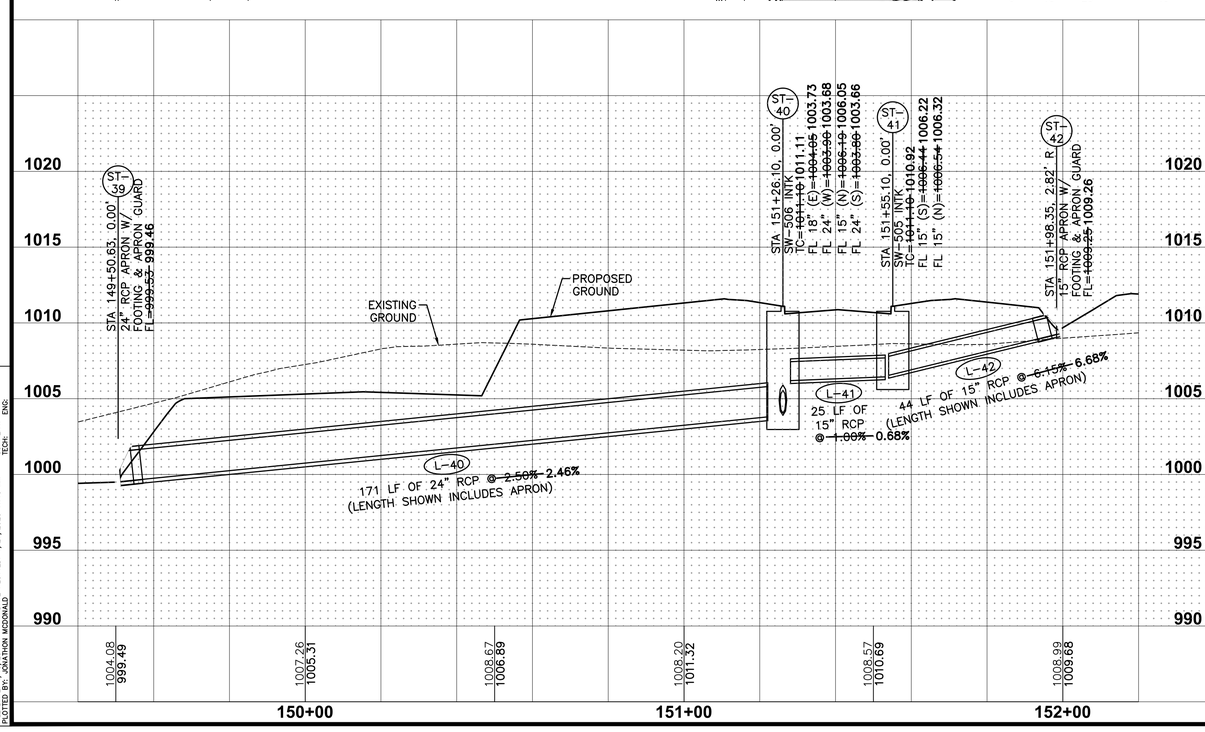
STORM AND SANITARY SEWER PLAN AND PROFILE

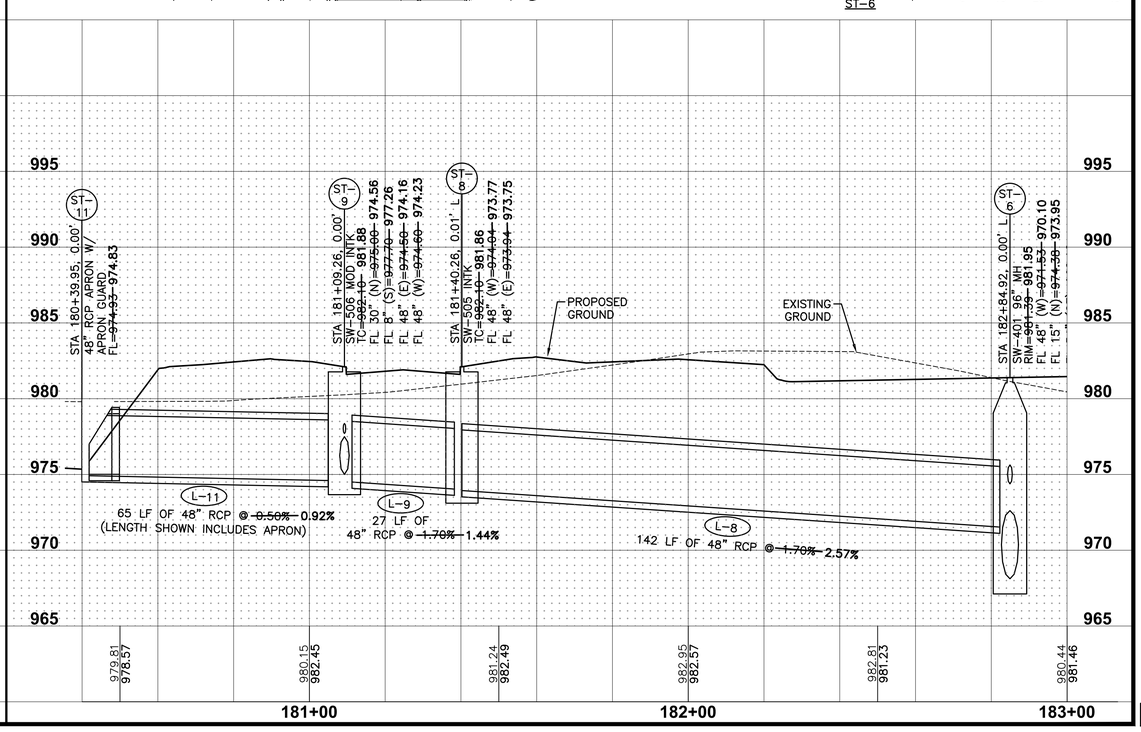
WAUKEE, IOWA

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PLOTTED BY: JONATHON MCDONALD









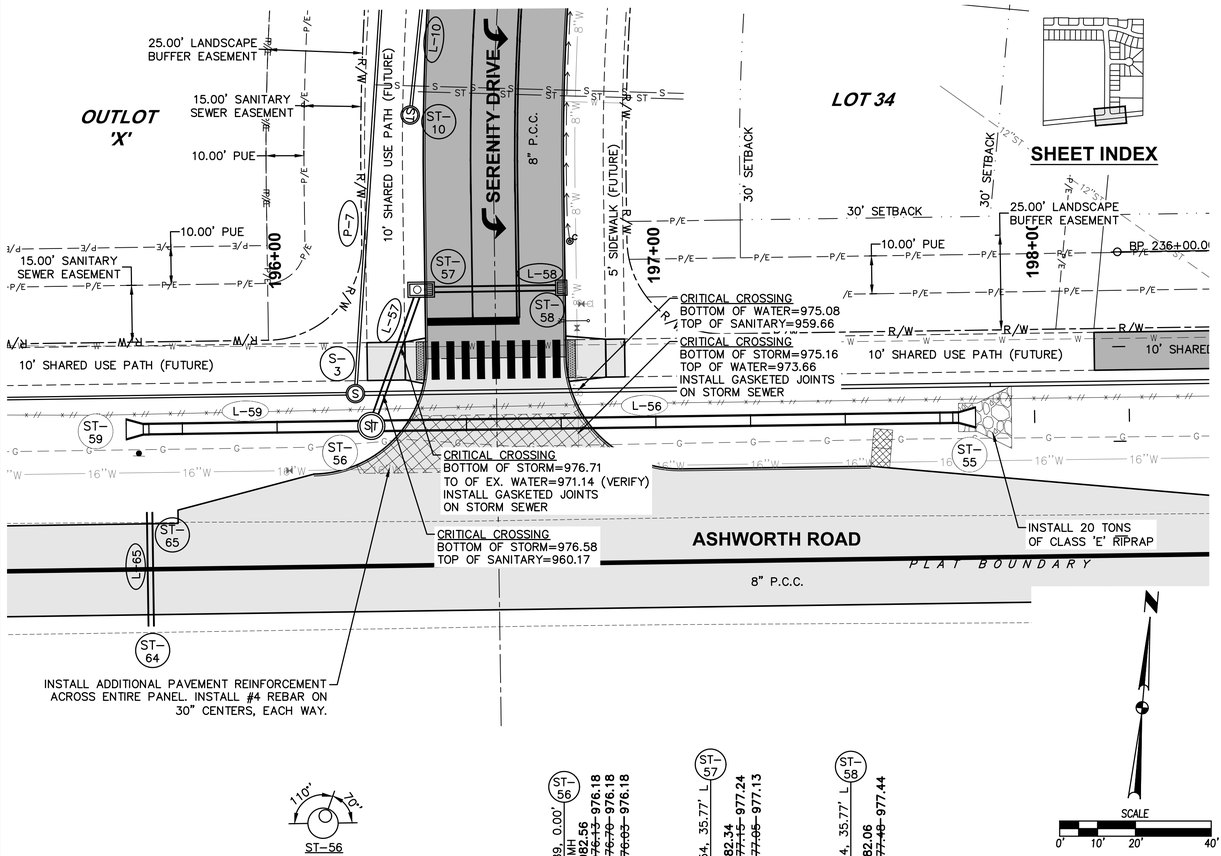
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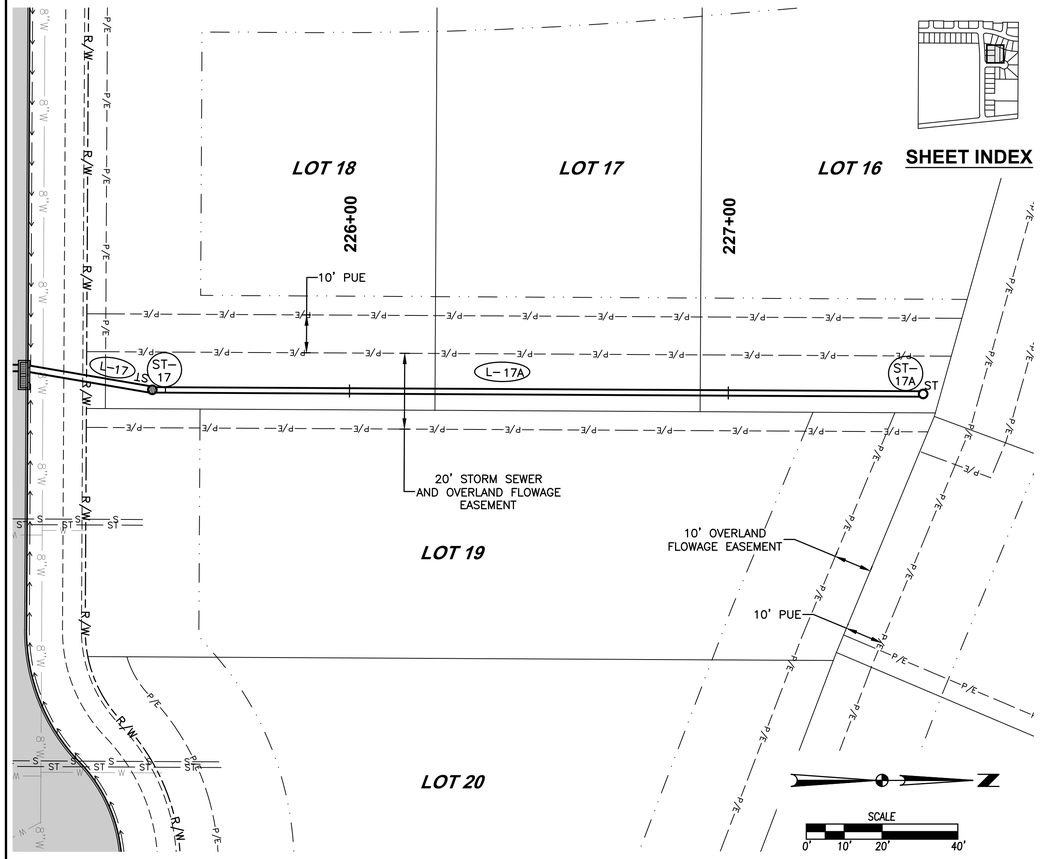
3405 S.E. CROSSROADS DRIVE, SUITE G
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ENGINEER: EKO | EI: GH
CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

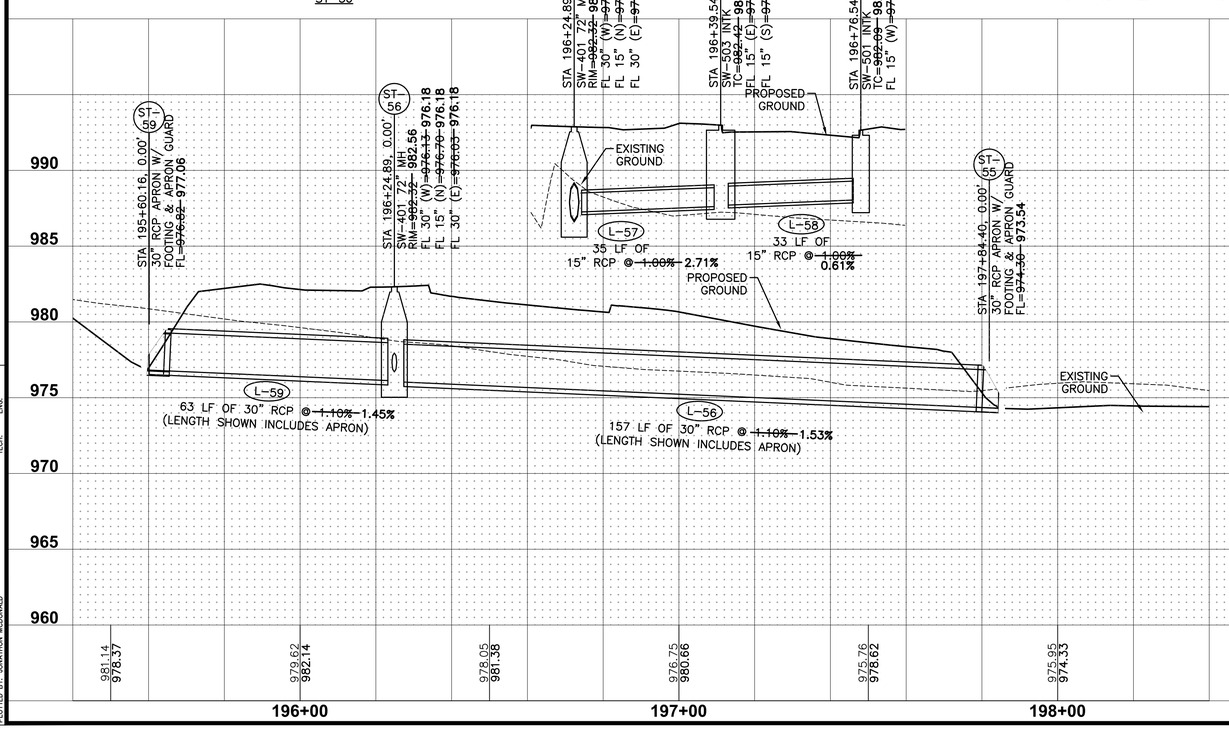
ASHWORTH ACRES PLAT 1
STORM AND SANITARY SEWER PLAN AND PROFILE

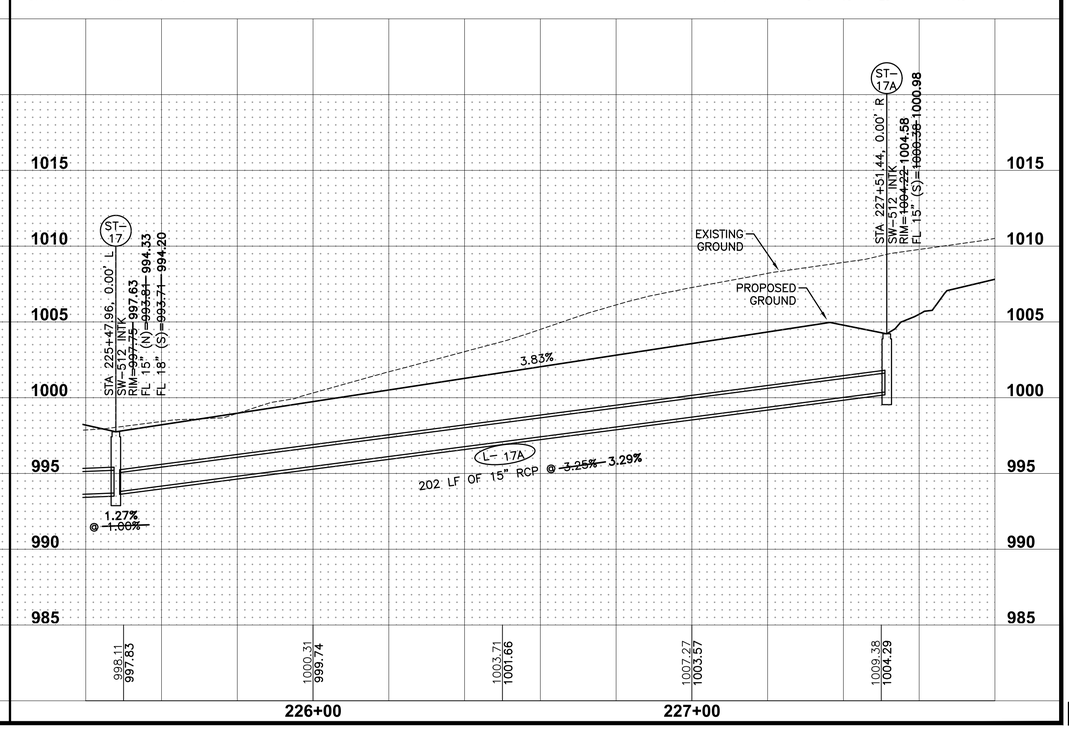
26/48
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PLOTTED BY: JONATHON MCDONALD
COMMENT:
ENG:
TECH:









DATE	REVISIONS
01/27/20	AS-BUILT SUBMITTAL
01/09/20	AS-BUILT SUBMITTAL
06/28/19	REVISED MAILBOX PADS
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CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

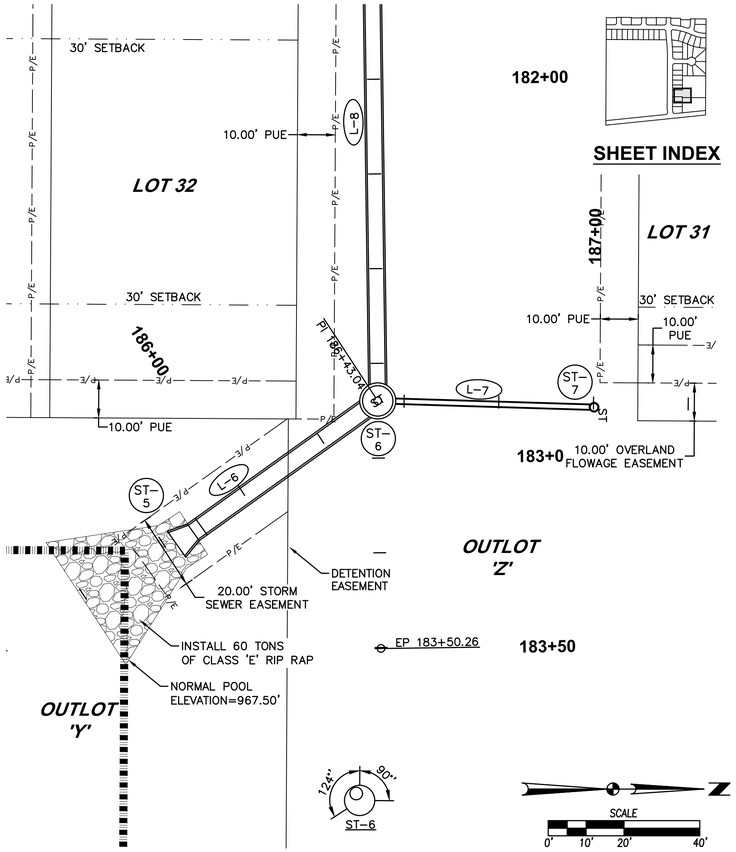
STORM AND SANITARY SEWER PLAN AND PROFILE

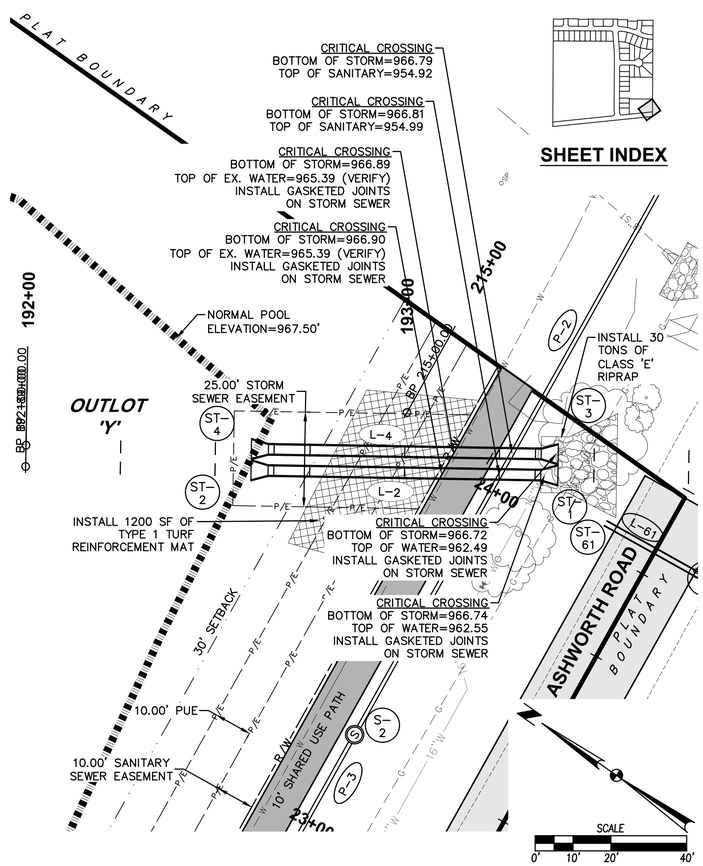
WAUKEE, IOWA

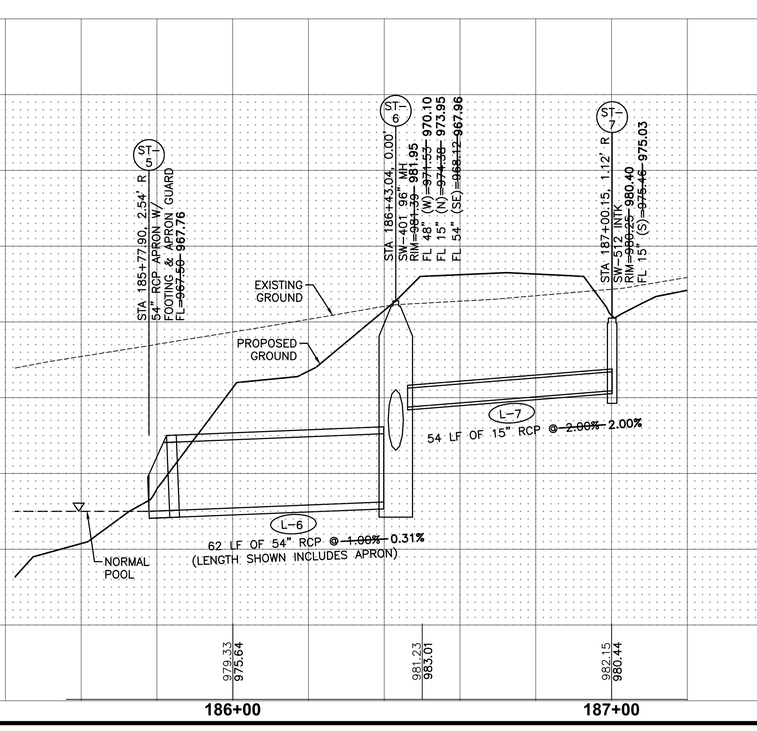
27/48

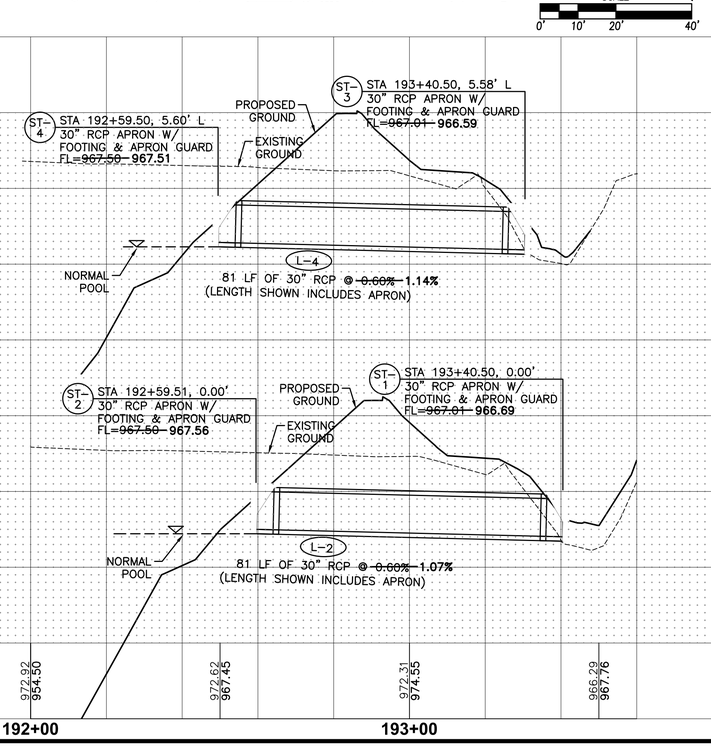
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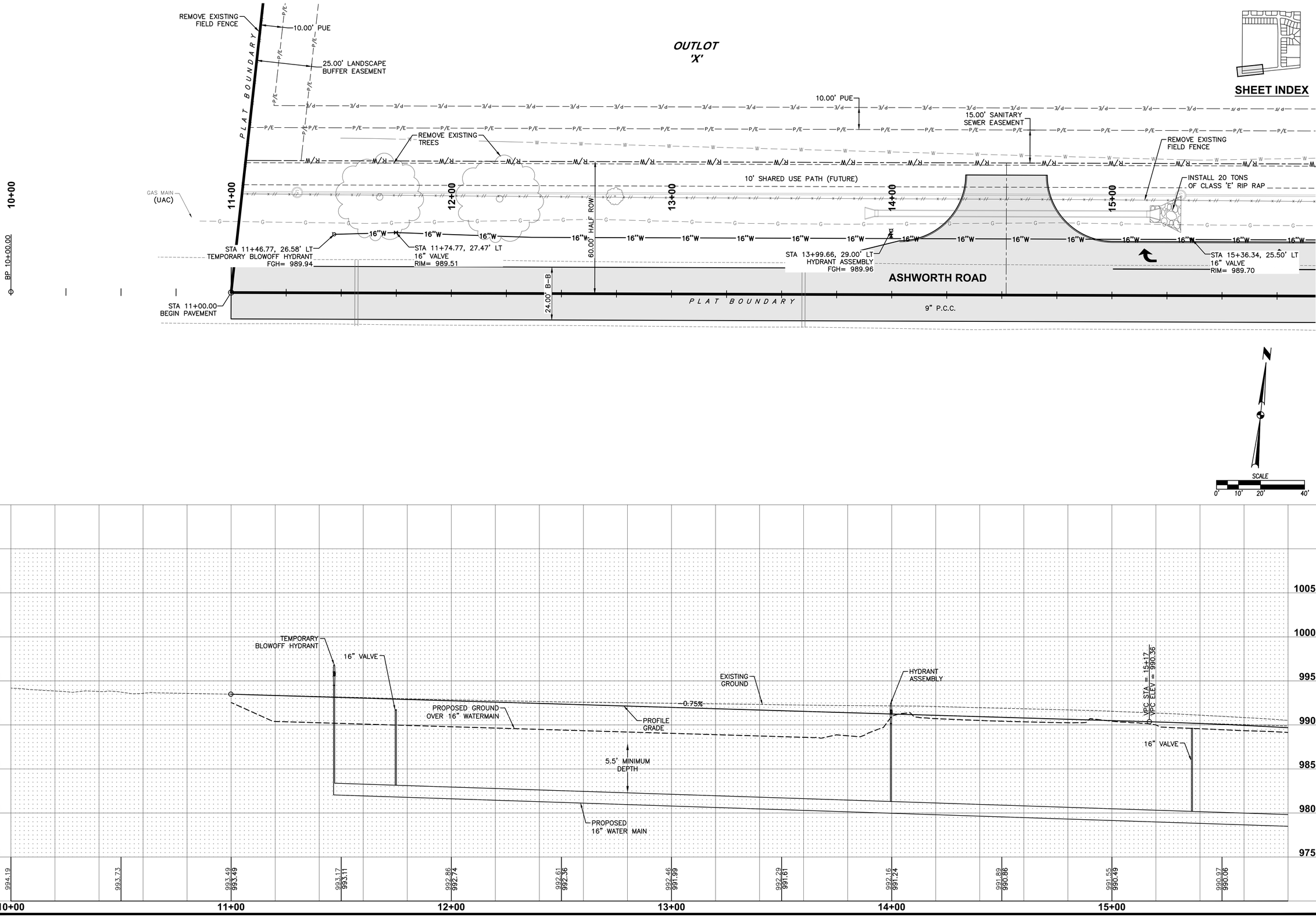
STORM AND SANITARY SEWER PLAN AND PROFILE

WAUKEE, IOWA

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ASHWORTH ACRES PLAT 1

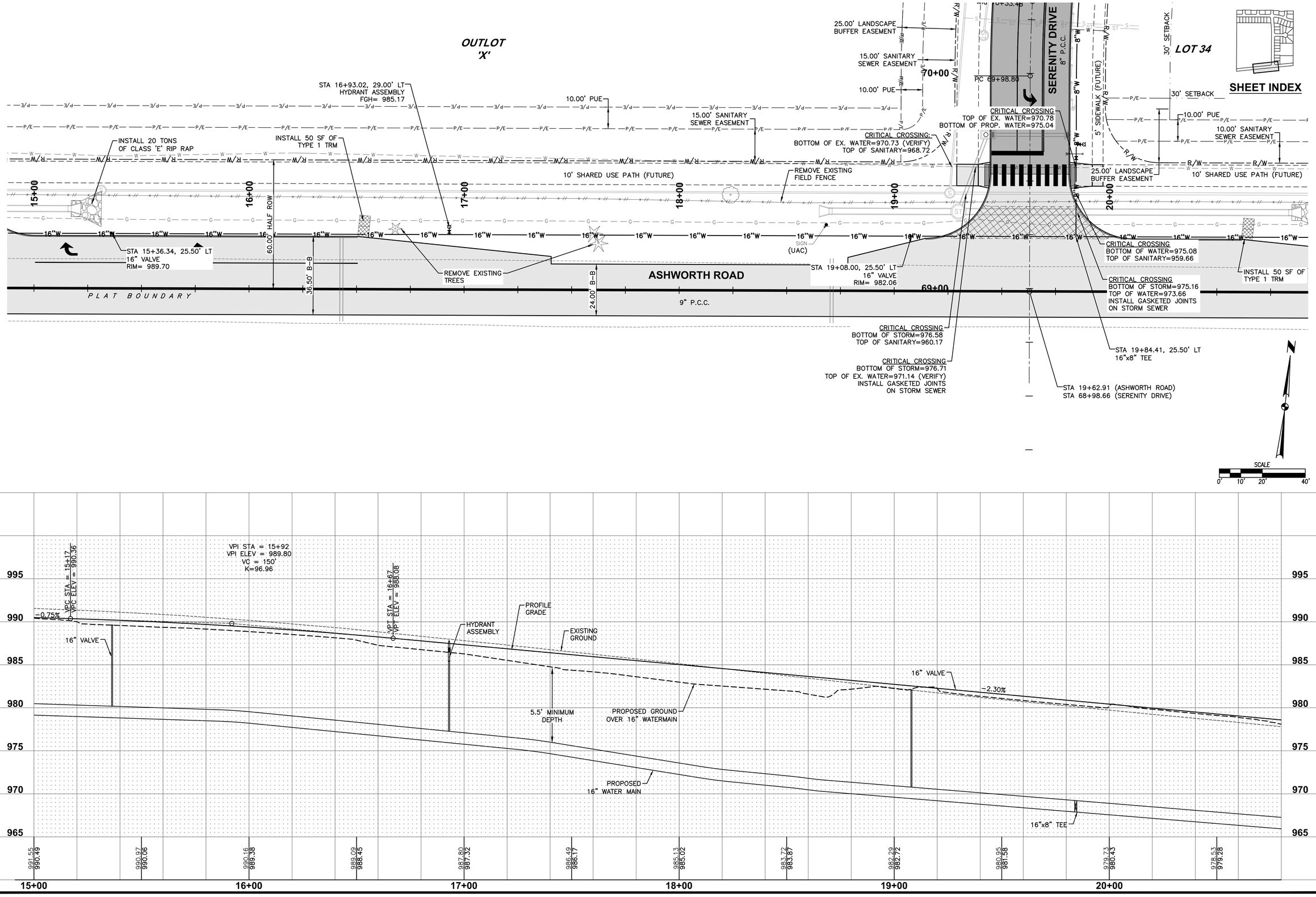
WATERMAIN PLAN AND PROFILE

WAUKEE, IOWA

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1802.054

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REVISIONS	DATE
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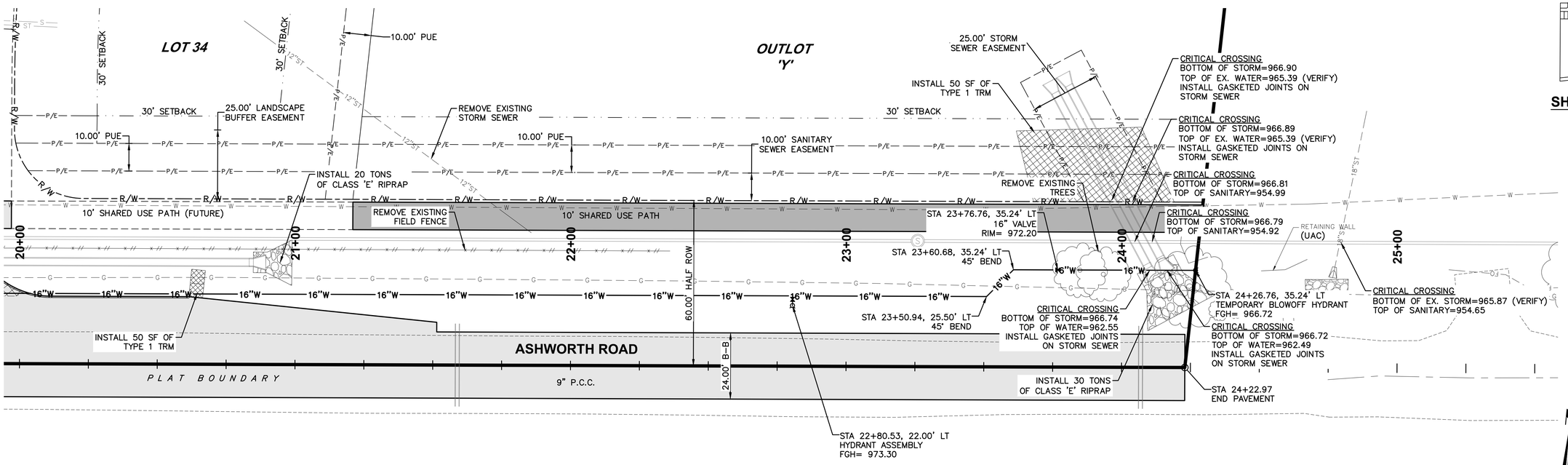
WAUKEE, IOWA

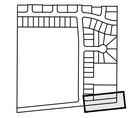
ASHWORTH ACRES PLAT 1

WATERMAIN PLAN AND PROFILE

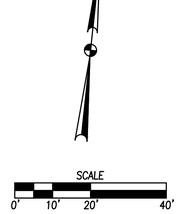
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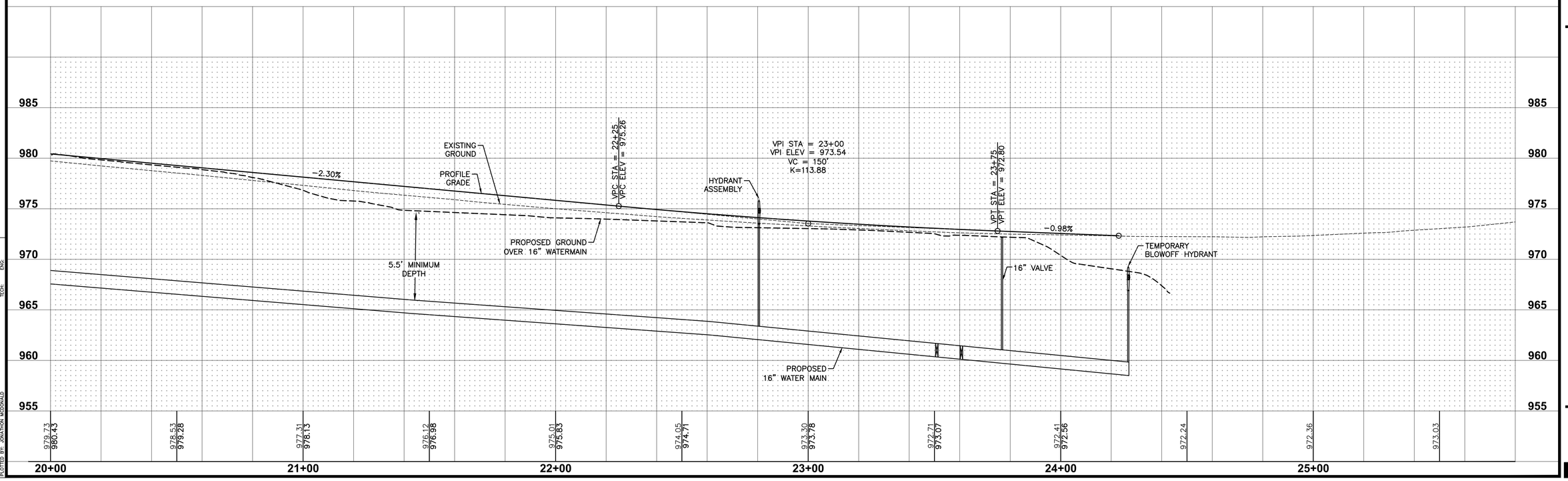
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COMMENT:
TECH: ENG:





SHEET INDEX





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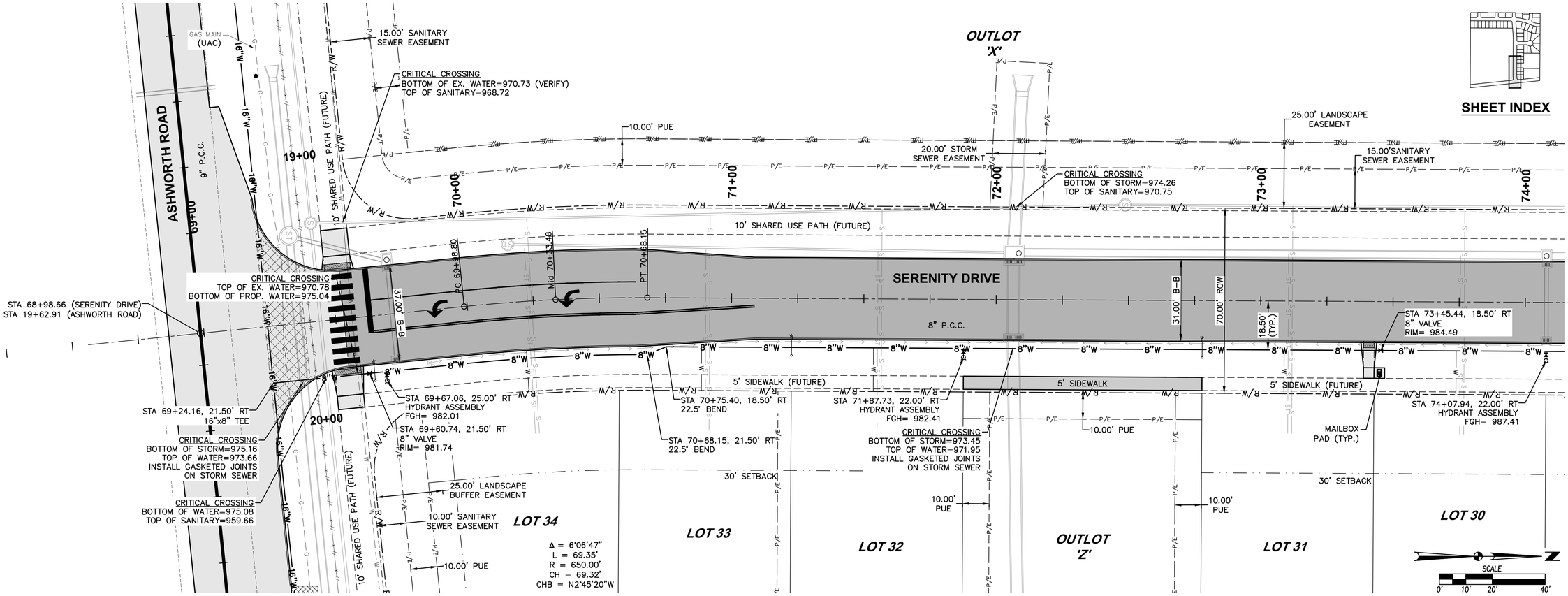
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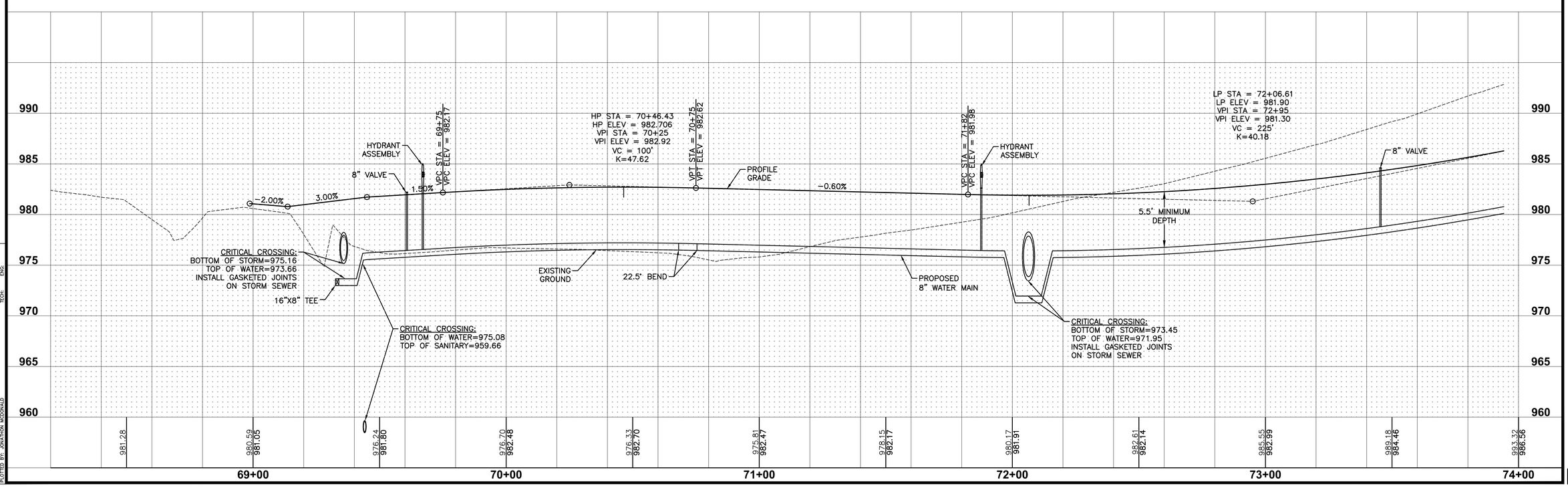
ASHWORTH ACRES PLAT 1

WATERMAIN PLAN AND PROFILE

WAUKEE, IOWA

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PLOTTED BY: JONATHON MCDONALD
COMMENT:
TECH:
ENG:





SHEET INDEX

REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
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THIRD SUBMITTAL	06/26/18

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

ASHWORTH ACRES PLAT 1
WATERMAIN PLAN AND PROFILE

32/48
1802.054

FILE: H:\2018\1802054\DWG\1802054-PNP-WATERMAIN-ASBUILT.DWG
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COMMENT:
TECH:
ENG:

OUTLOT 'X'

BP 30+00.00

30+00

STA 78+65.14, 74.93' LT
TEMPORARY BLOWOFF HYDRANT
FGH= 1011.83

Δ = 5°12'39"
L = 90.94'
R = 1000.00'
CH = 90.91'
CHB = N2°18'10"W

25.00' SANITARY SEWER EASEMENT

10.00' PUE

25.00' LANDSCAPE EASEMENT

STA 76+54.94 (SERENITY DRIVE)
STA 31+00.00 (AUGUSTA COURT)

15.00'SANITARY SEWER EASEMENT

CRITICAL CROSSING
BOTTOM OF WATER=998.29
TOP OF SANITARY=991.38

CRITICAL CROSSING
BOTTOM OF STORM=1000.46
TOP OF WATER=998.98
INSTALL GASKETED JOINTS ON STORM SEWER

74+00 | 75+00 | 76+00 | 77+00 | 78+00 | 79+00

10' SHARED USE PATH (FUTURE)

CRITICAL CROSSING
BOTTOM OF STORM=988.06
TOP OF SANITARY=986.50

SERENITY DRIVE

31.00' B-B | 70.00' ROW | 18.50' (TYP.)

8" P.C.C.

PC 77+45.23 | Mid 77+90.71 | PT 78+36.18

STA 78+61.51, 35.09' LT
8" VALVE
RIM= 1010.36

STA 73+45.44, 18.50' RT
8" VALVE
RIM= 984.49

CRITICAL CROSSING
BOTTOM OF WATER=989.73
TOP OF SANITARY=986.96

CRITICAL CROSSING
BOTTOM OF STORM=991.51
TOP OF WATER=990.01
INSTALL GASKETED JOINTS ON STORM SEWER

31+00

5' SIDEWALK (FUTURE)

MAILBOX PAD (TYP.)

STA 74+07.94, 22.00' RT
HYDRANT ASSEMBLY
FGH= 987.41

STA 76+94.44, 18.50' RT
8" VALVE
RIM= 1001.59

STA 76+73.44, 18.50' RT
8" TEE

MAILBOX PAD (TYP.)

STA 78+56.62, 18.50' RT
8" TEE

15.00' SANITARY SEWER EASEMENT

30' SETBACK

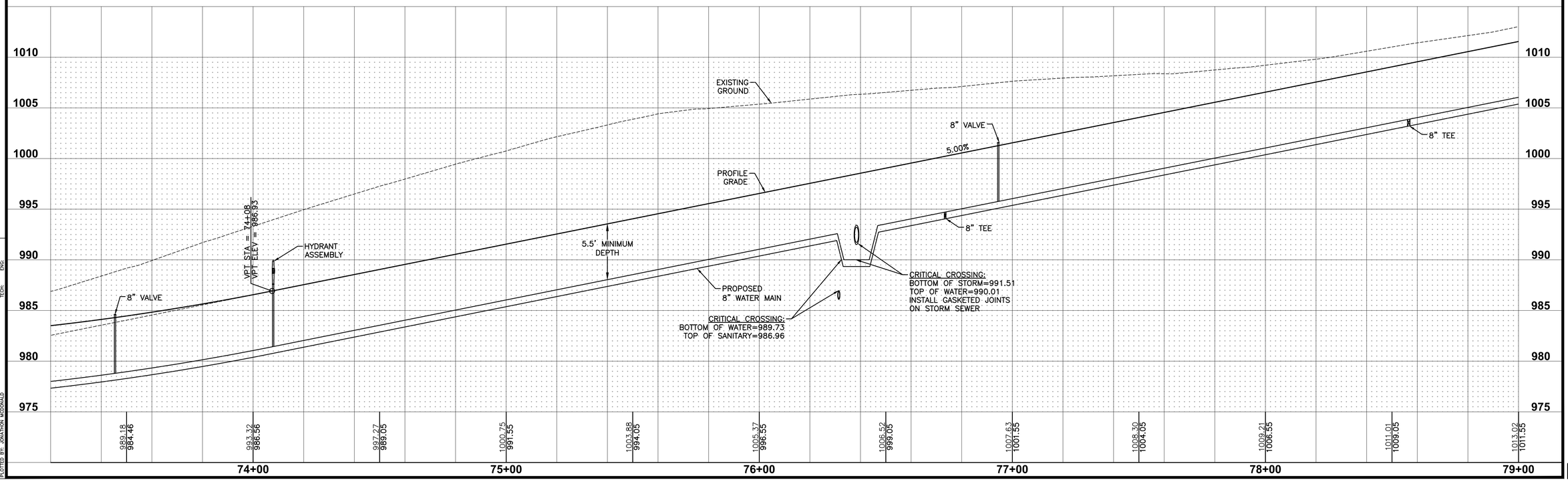
LOT 31 | LOT 30 | LOT 29 | LOT 28 | LOT 27 | LOT 18 | LOT 17 | LOT 16

AUGUSTA COURT

7" P.C.C.

32+00

SCALE 0' 10' 20' 40'



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CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

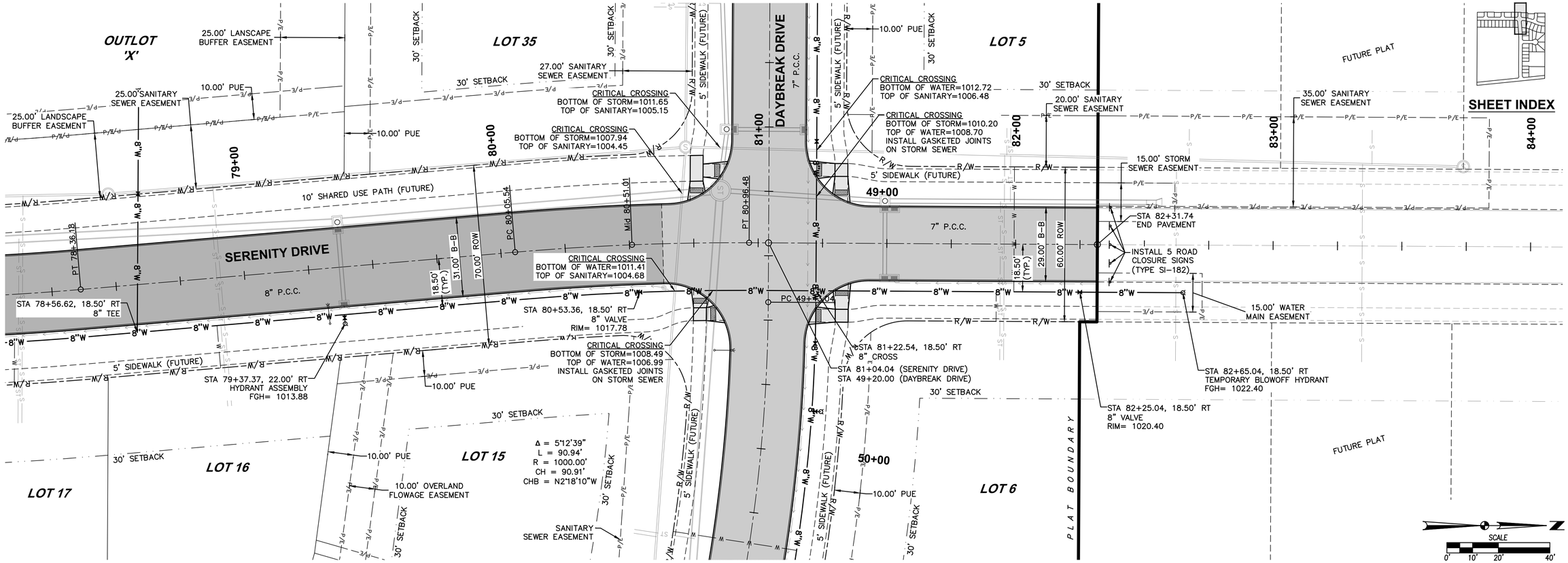
ASHWORTH ACRES PLAT 1

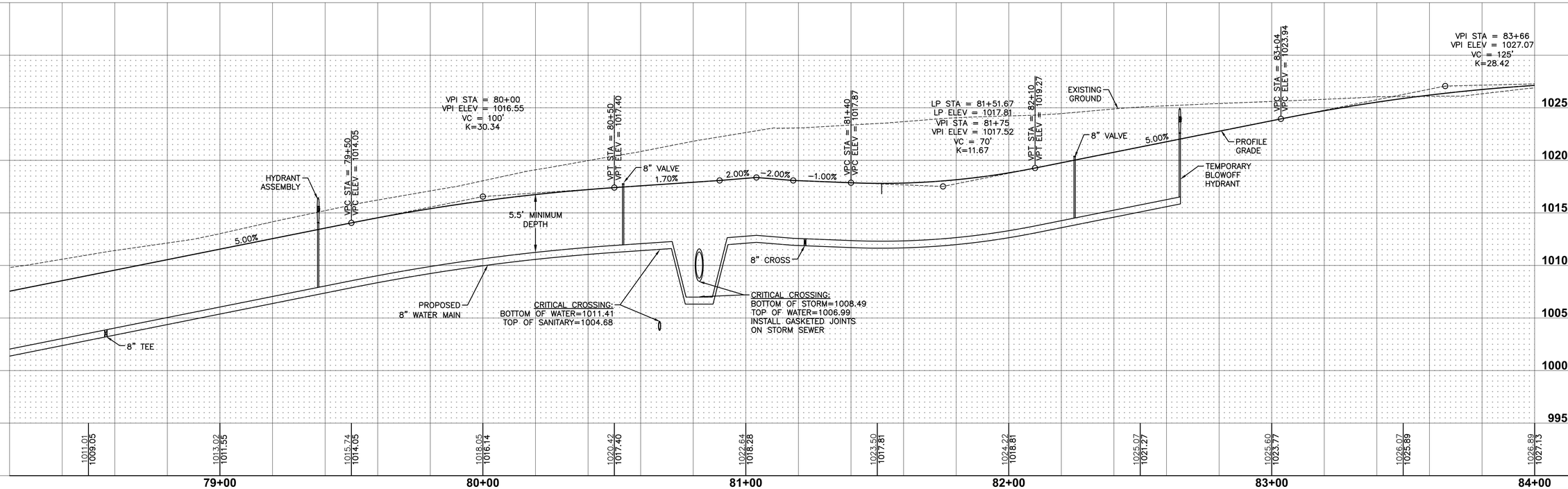
WATERMAIN PLAN AND PROFILE

33/48

1802.054

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COMMENT:
TECH:
ENG:





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WAUKEE, IOWA

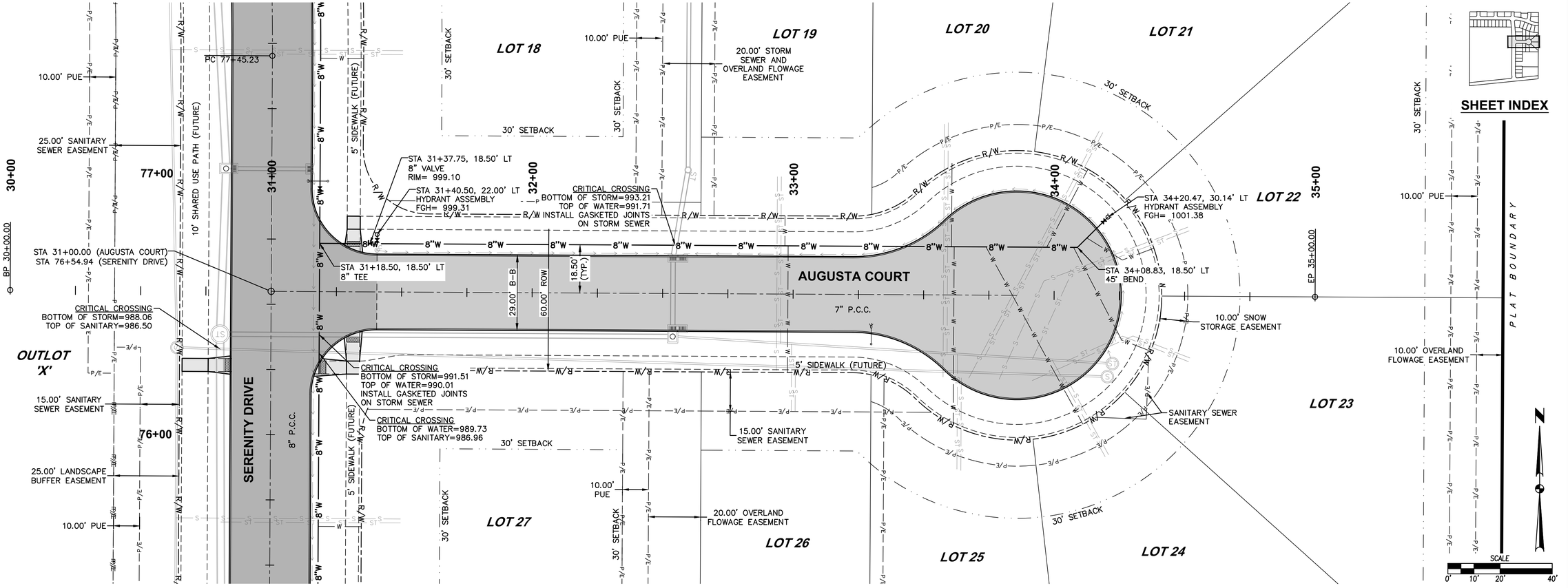
ASHWORTH ACRES PLAT 1

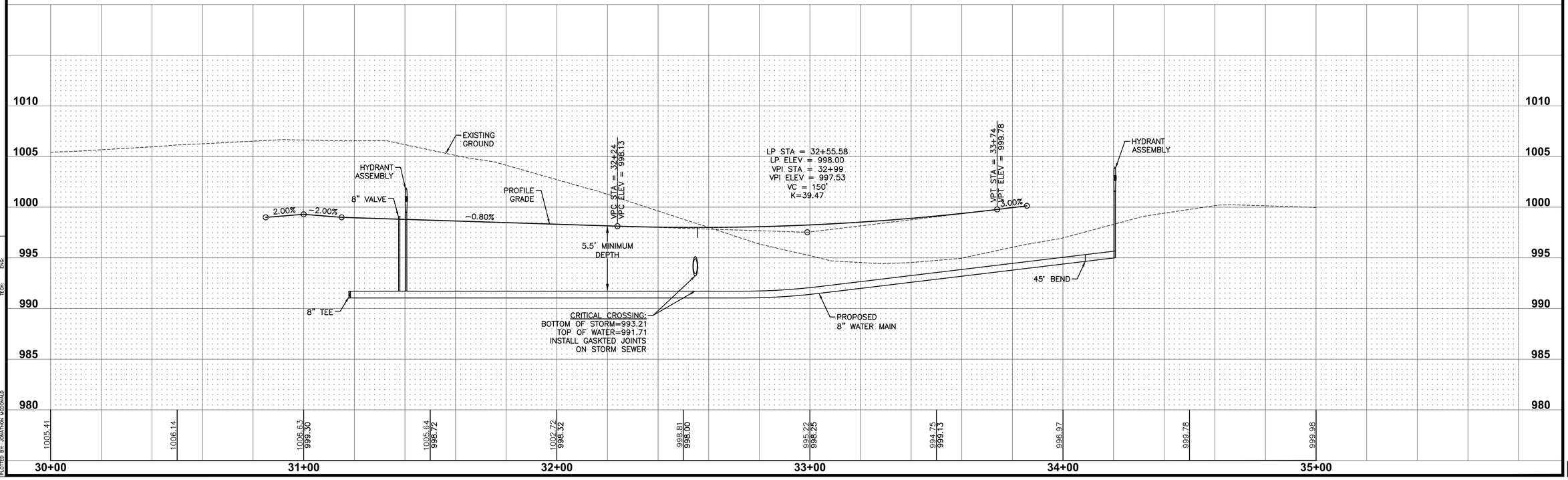
WATERMAIN PLAN AND PROFILE

34/48

1802.054

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CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

WATERMAIN PLAN AND PROFILE

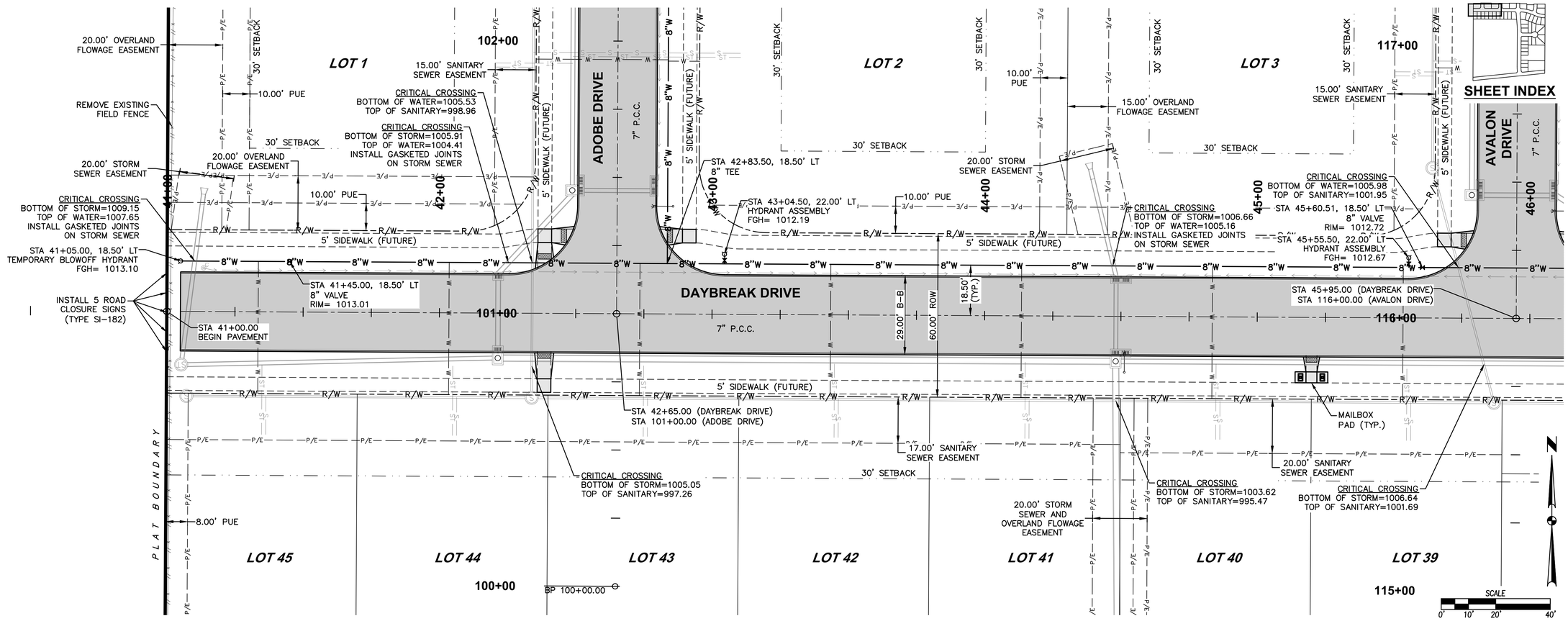
WAUKEE, IOWA

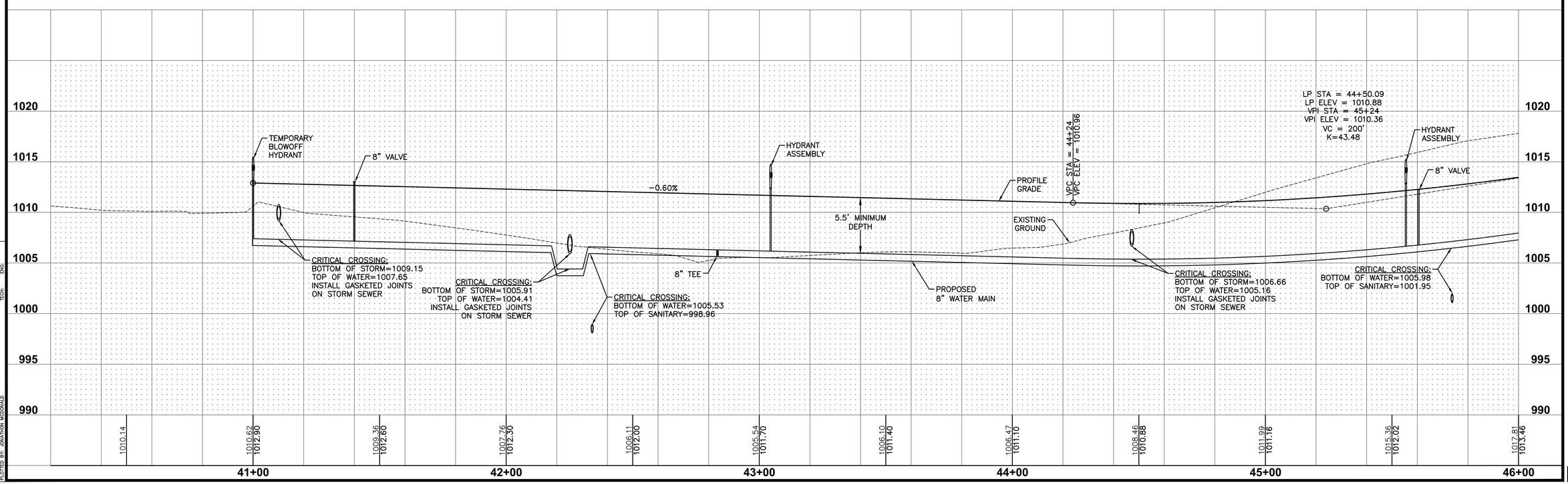
35/48

1802.054

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COMMENT:
TECH: ENG:





DATE	REVISIONS
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07/05/18	FOURTH SUBMITTAL
06/26/18	THIRD SUBMITTAL

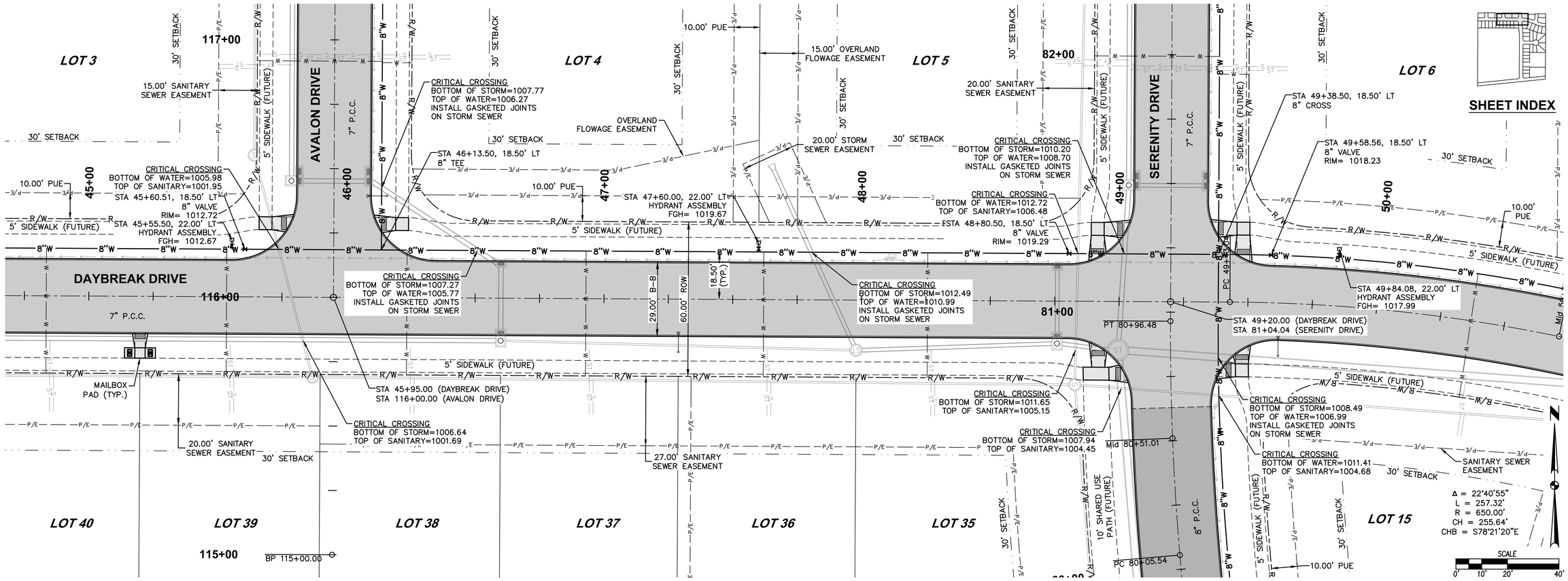
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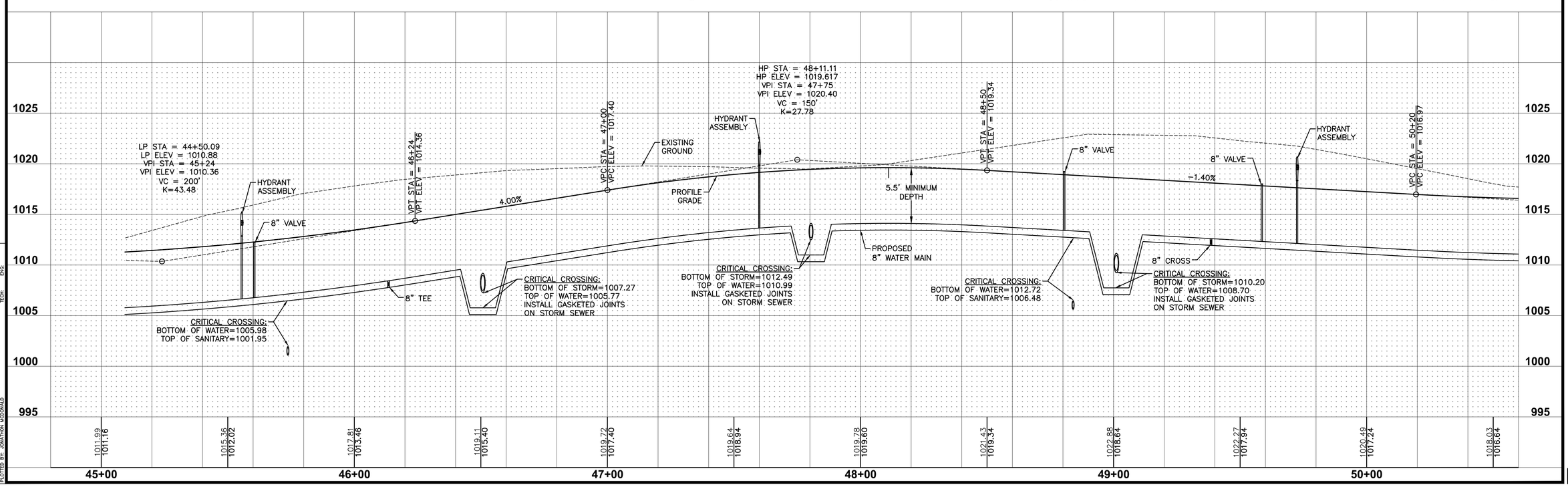
ENGINEER: EKO | EI: GH

CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

ASHWORTH ACRES PLAT 1
WATERMAIN PLAN AND PROFILE

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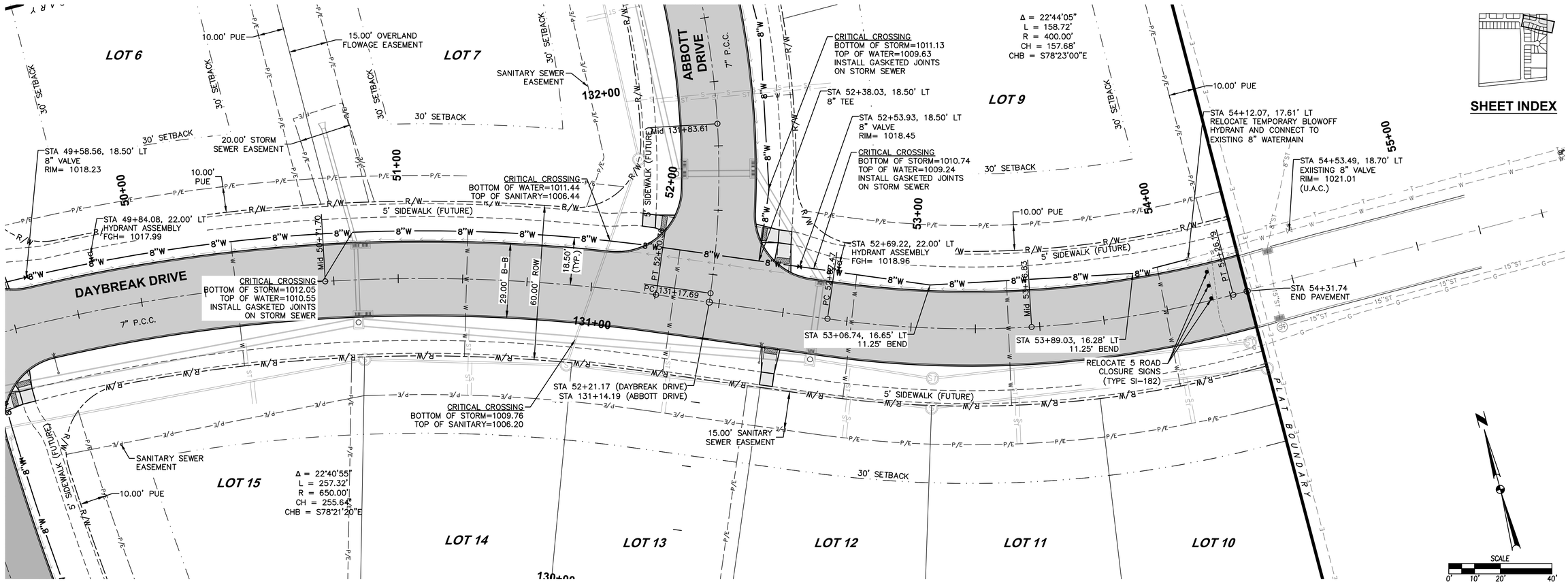
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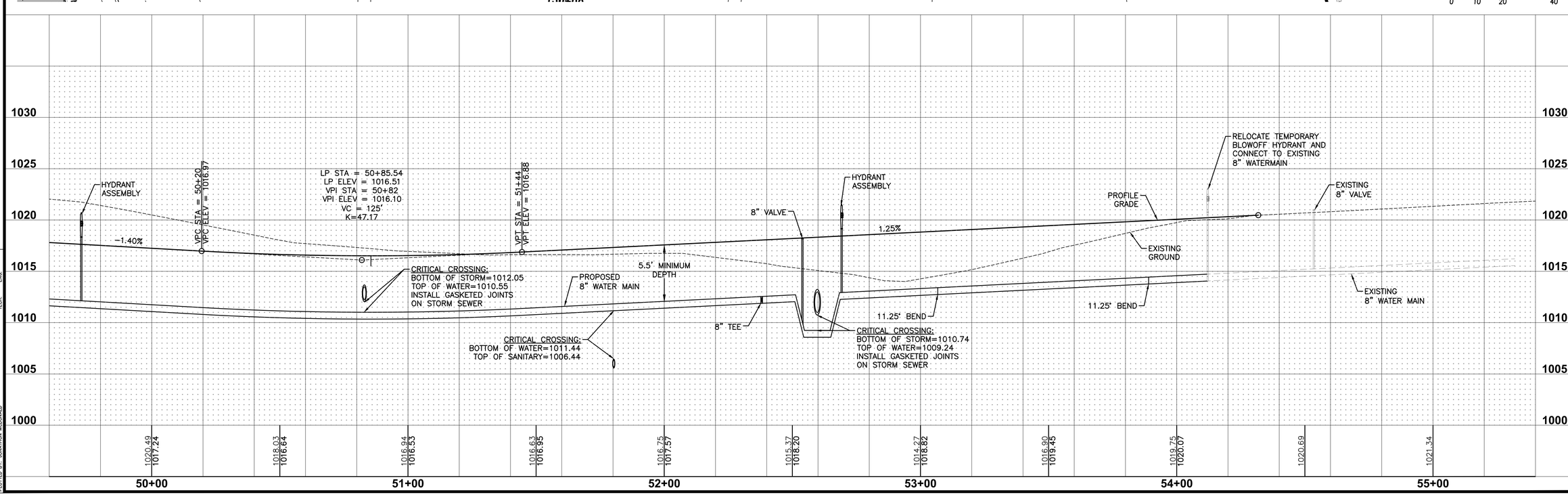
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WAUKEE, IOWA

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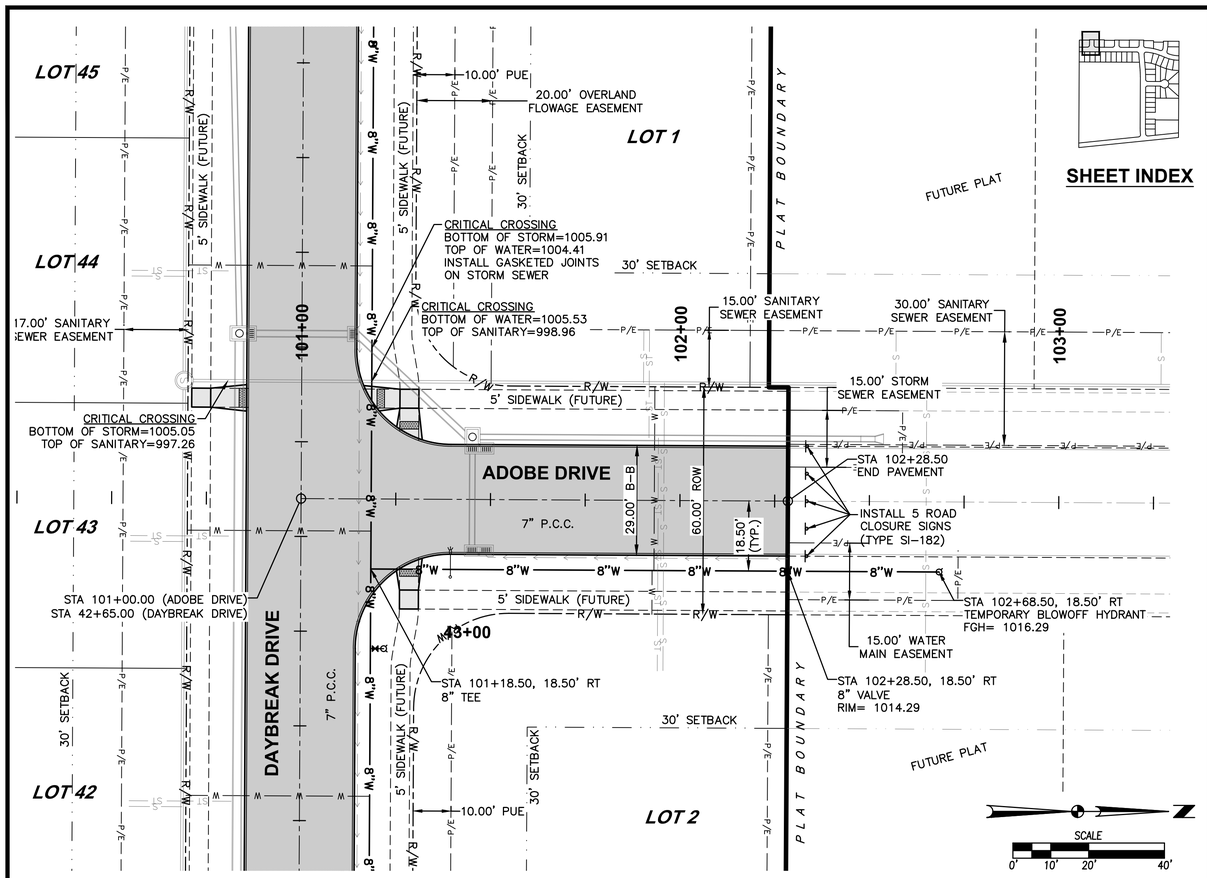
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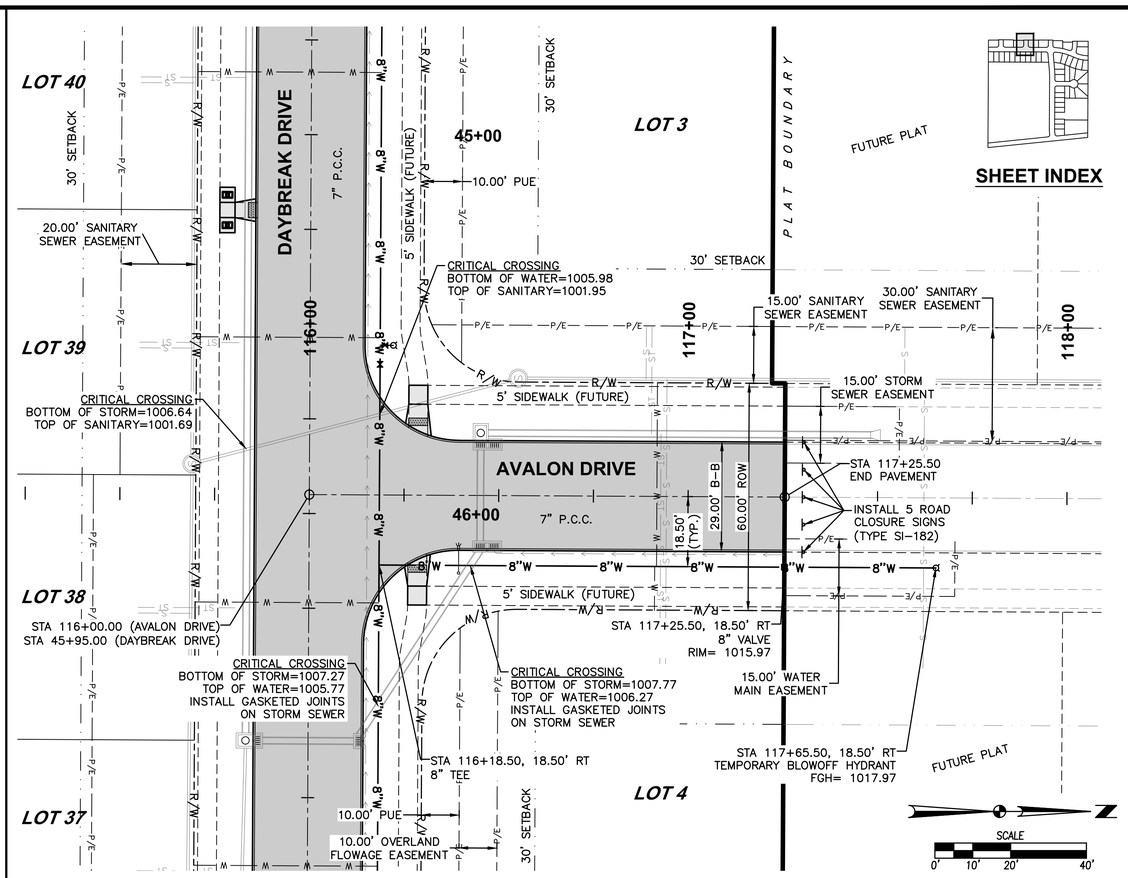
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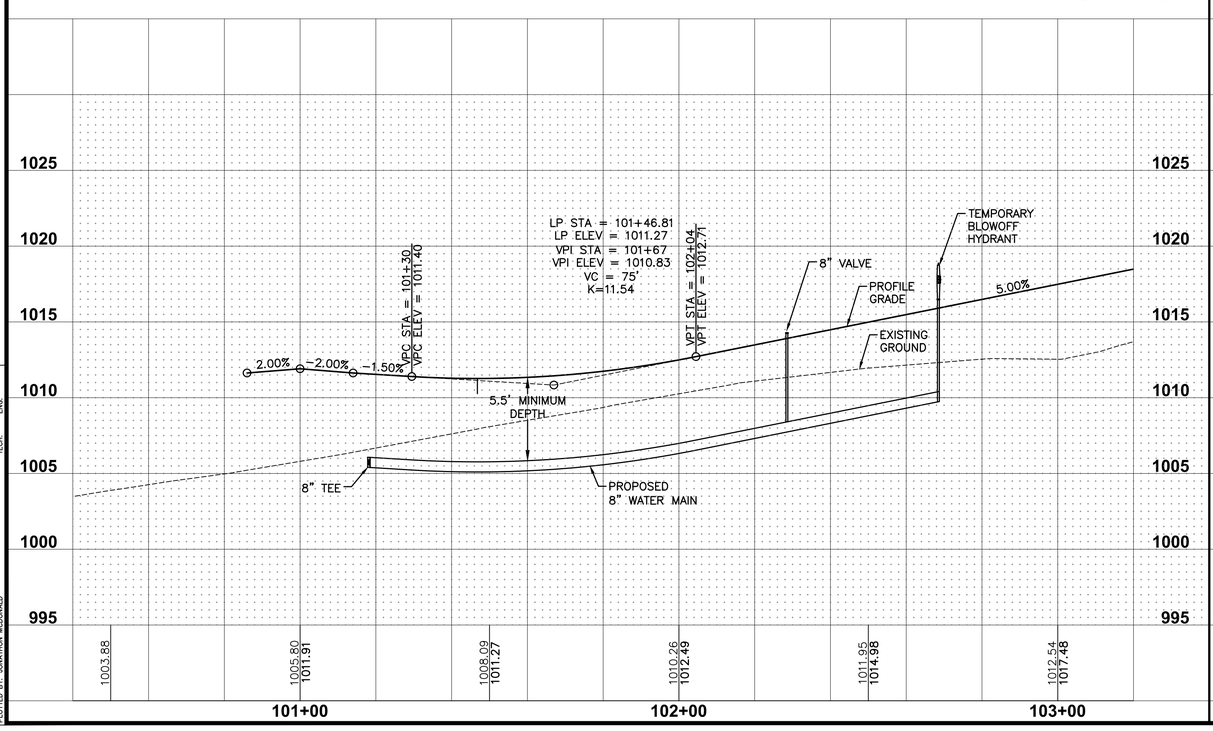
CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

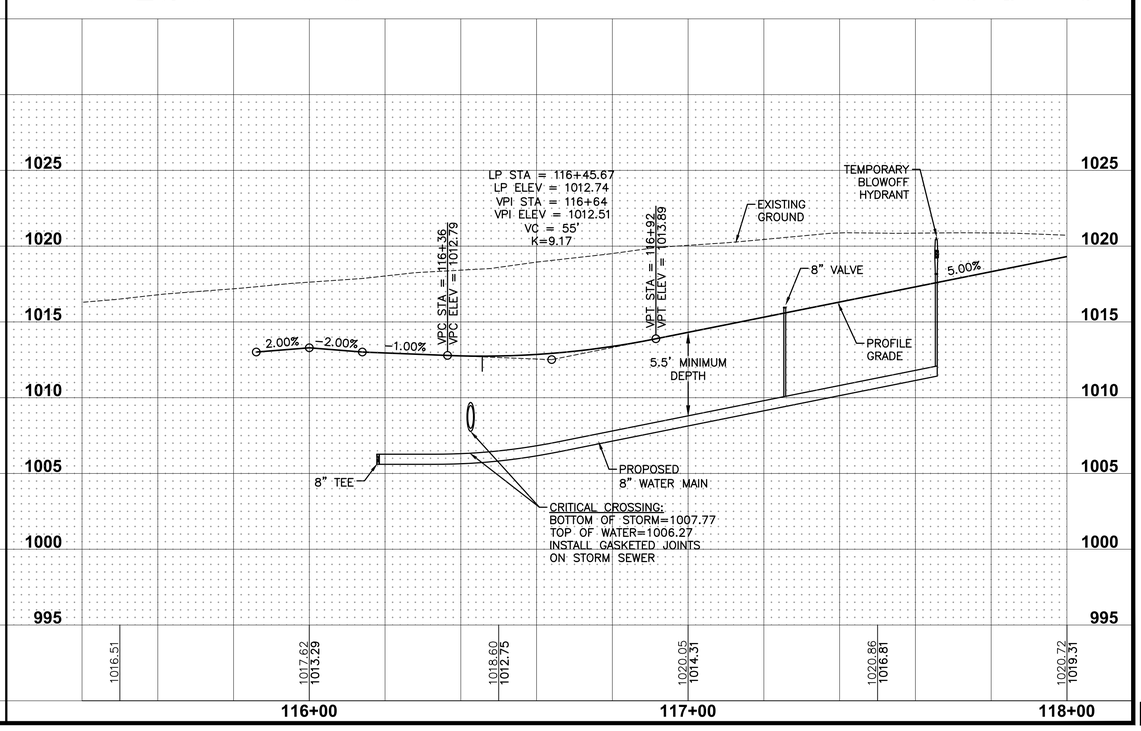
ASHWORTH ACRES PLAT 1
WATERMAIN PLAN AND PROFILE

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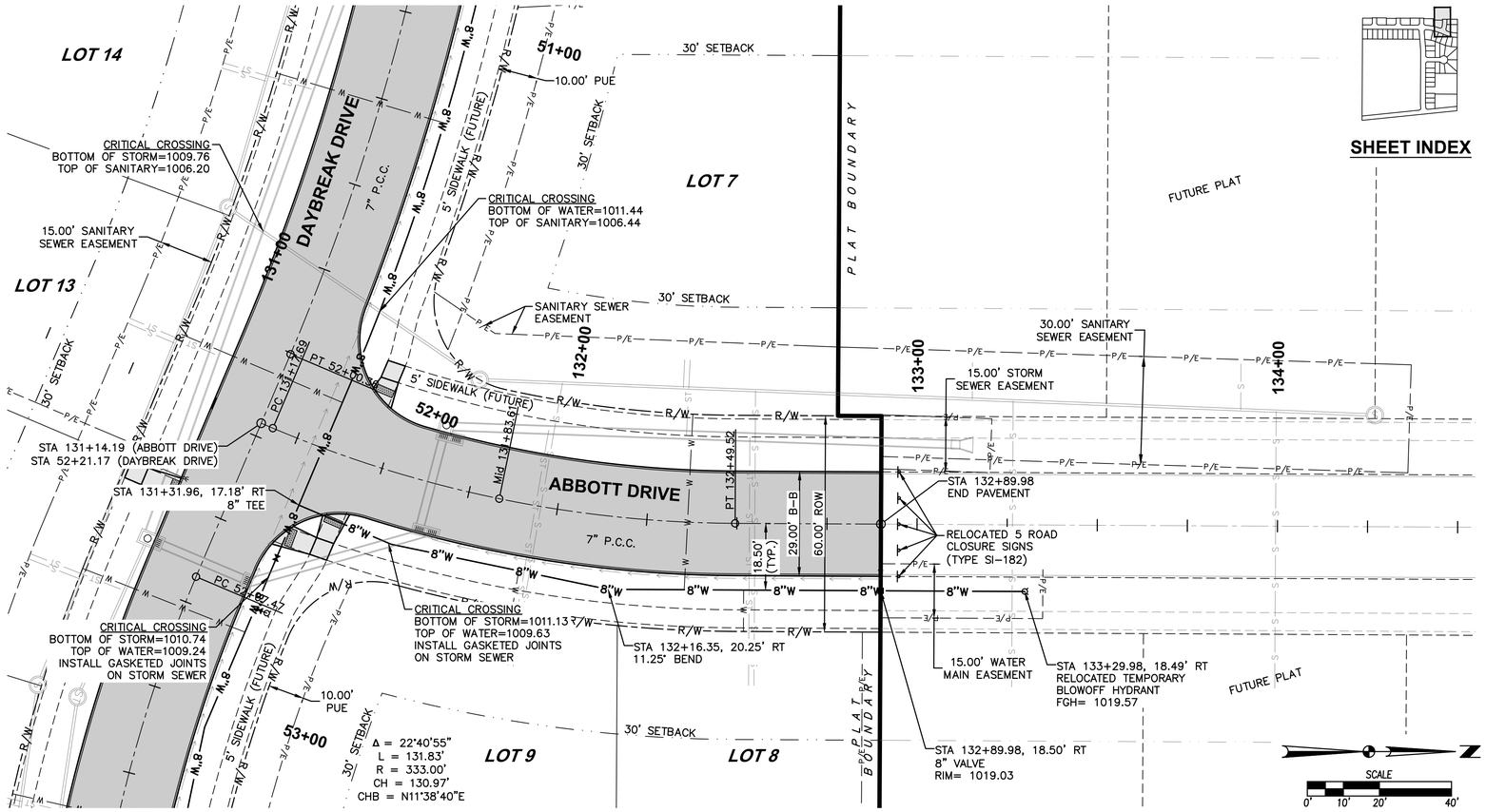
CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

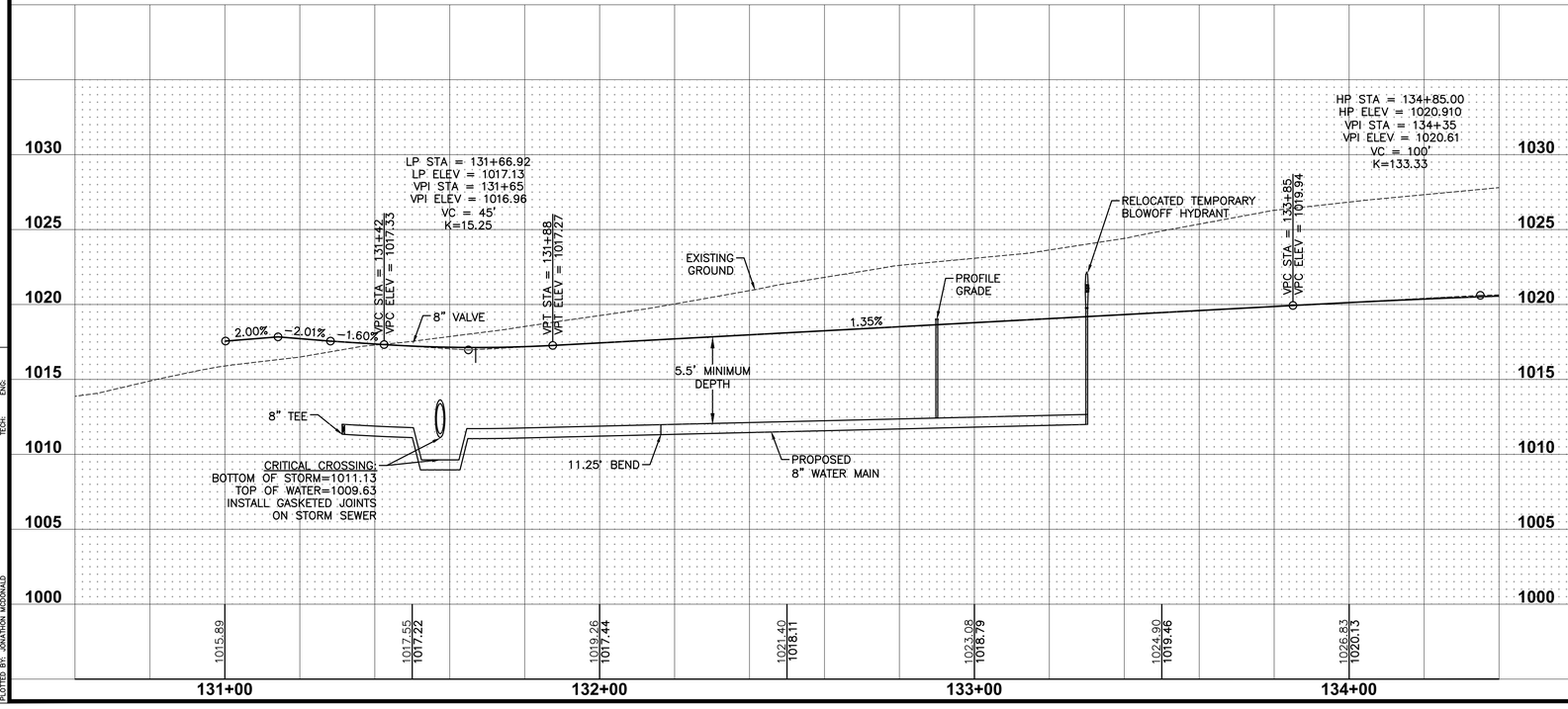
WATERMAIN PLAN AND PROFILE

WAUKEE, IOWA

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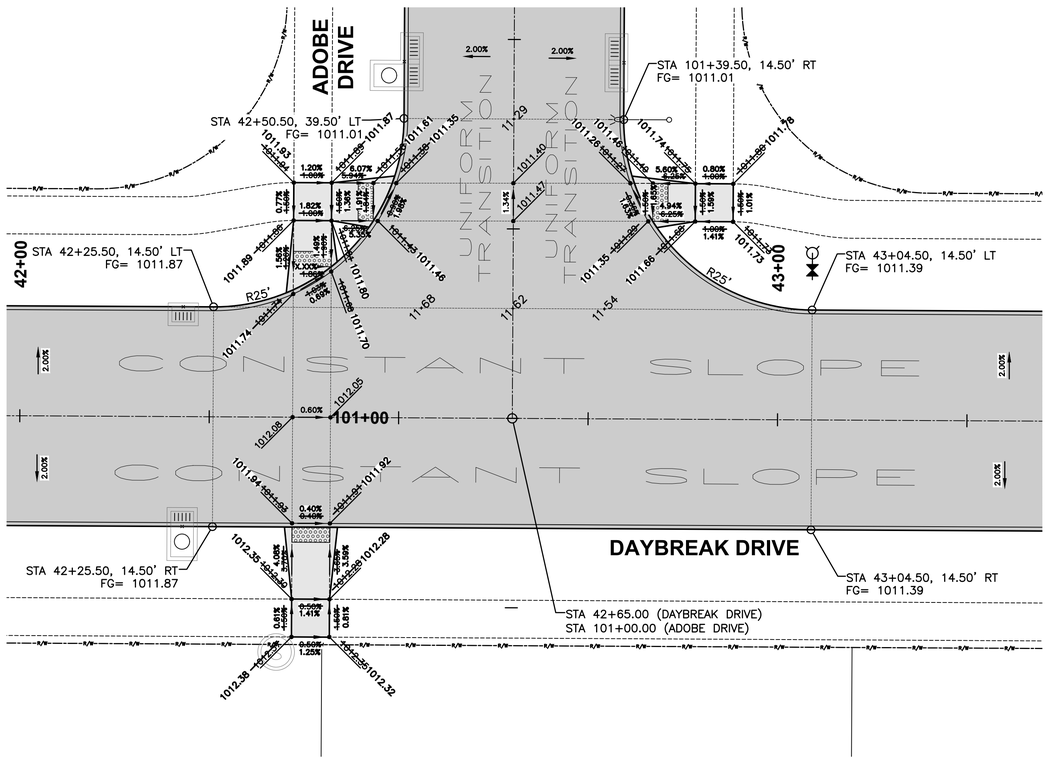
CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1

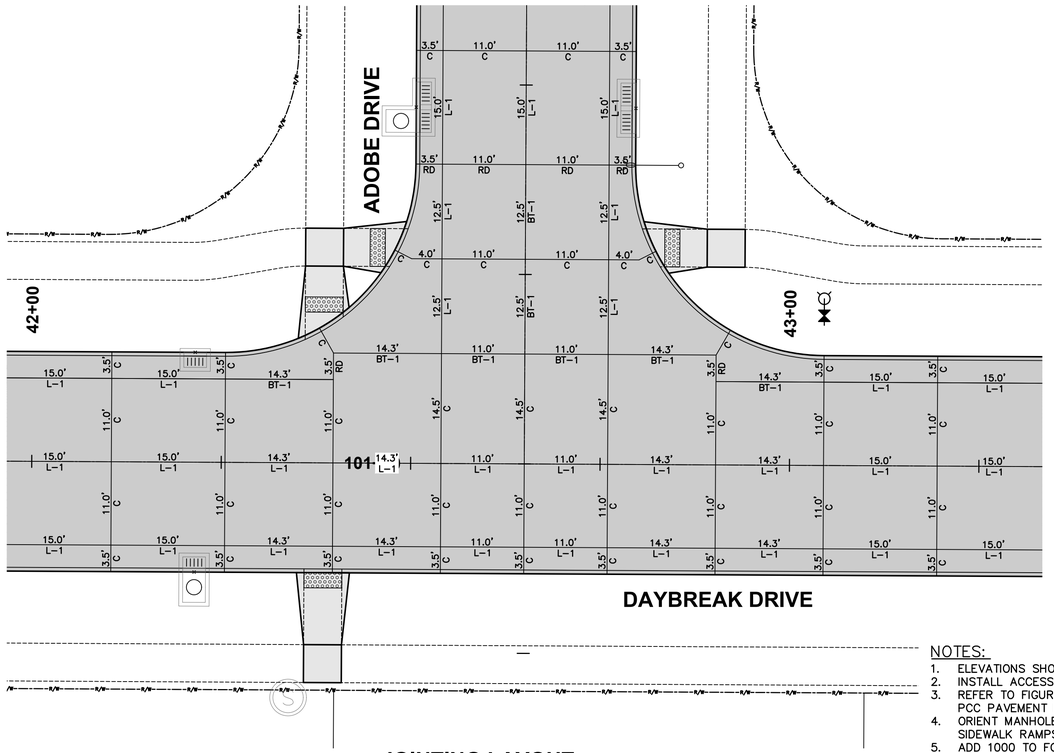
WATERMAIN PLAN AND PROFILE

WAUKEE, IOWA

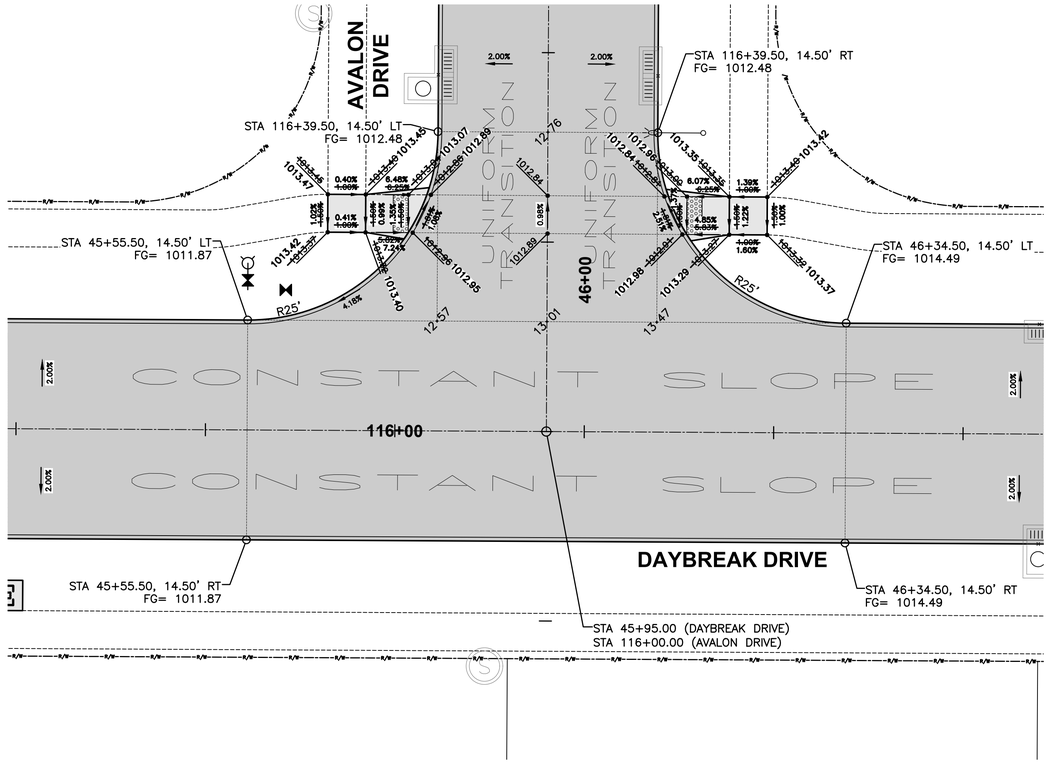
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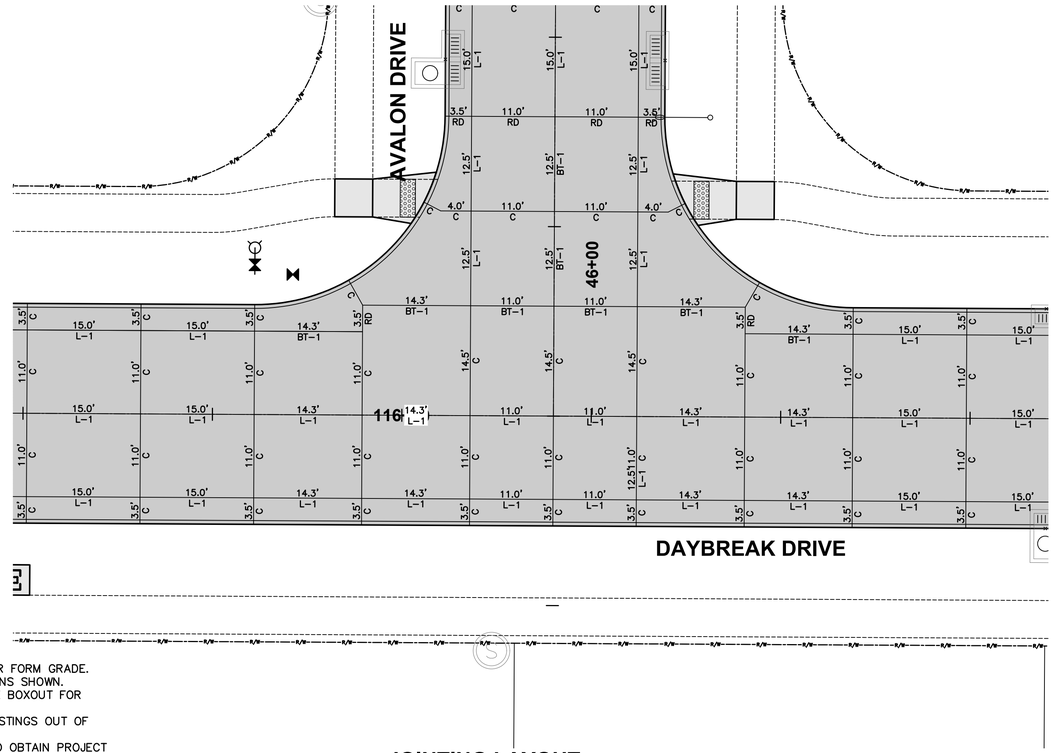
GEOMETRICS AND STAKING LAYOUT



JOINTING LAYOUT



GEOMETRICS AND STAKING LAYOUT



JOINTING LAYOUT

SCALE
0' 5' 10' 20'

NOTES:
1. ELEVATIONS SHOWN ARE TOP OF SLAB AND/OR FORM GRADE.
2. INSTALL ACCESSIBLE CURB RAMPS AT LOCATIONS SHOWN.
3. REFER TO FIGURE 6010.514 FOR GRATE INTAKE BOXOUT FOR PCC PAVEMENT DETAILS.
4. ORIENT MANHOLE CONE SECTIONS TO KEEP CASTINGS OUT OF SIDEWALK RAMPS.
5. ADD 1000 TO FOUR DIGIT SPOT ELEVATIONS TO OBTAIN PROJECT DATUM.

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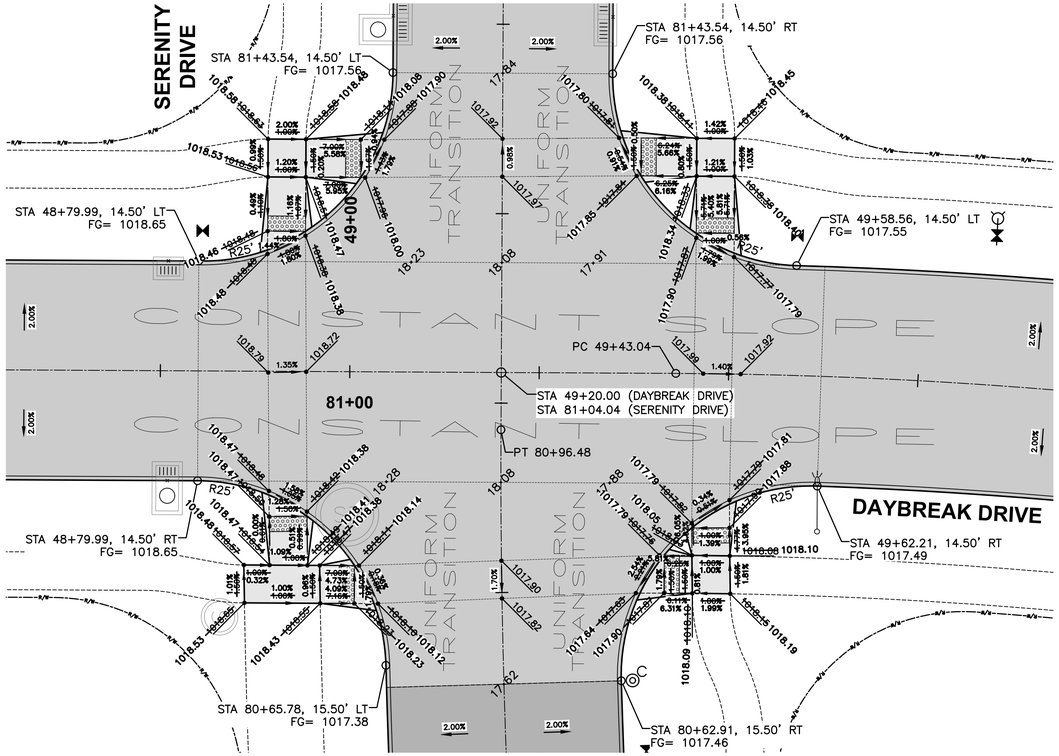
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WAUKEE, IOWA

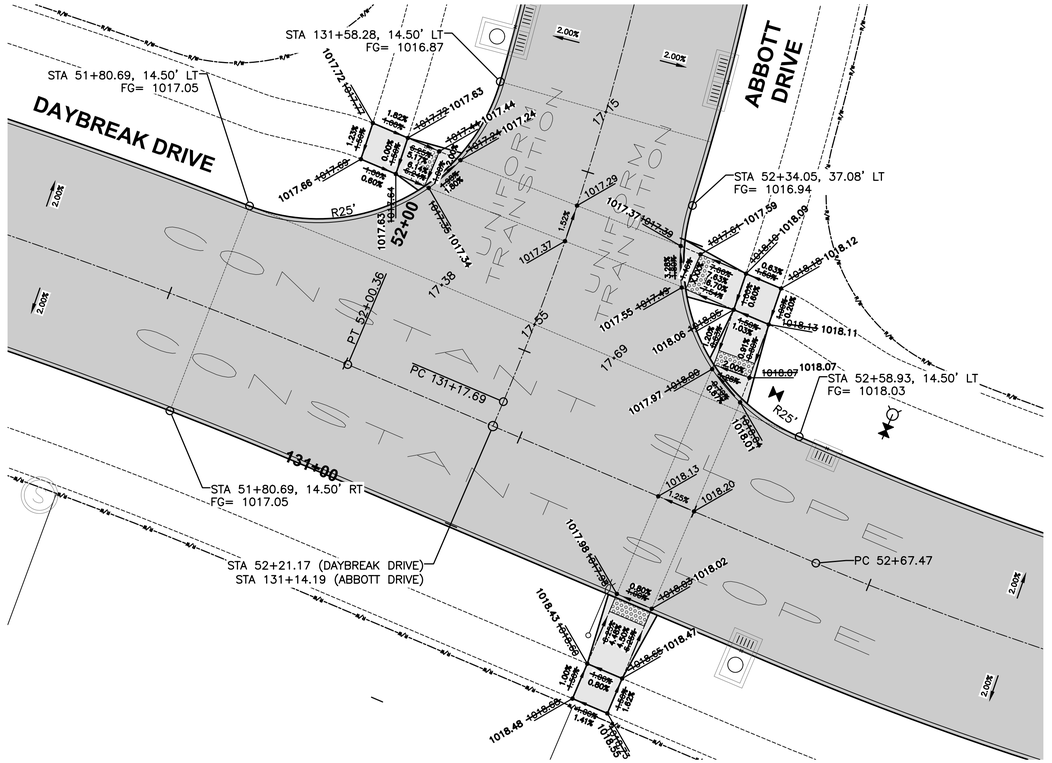
ASHWORTH ACRES PLAT 1
INTERSECTION DETAILS

1802.054

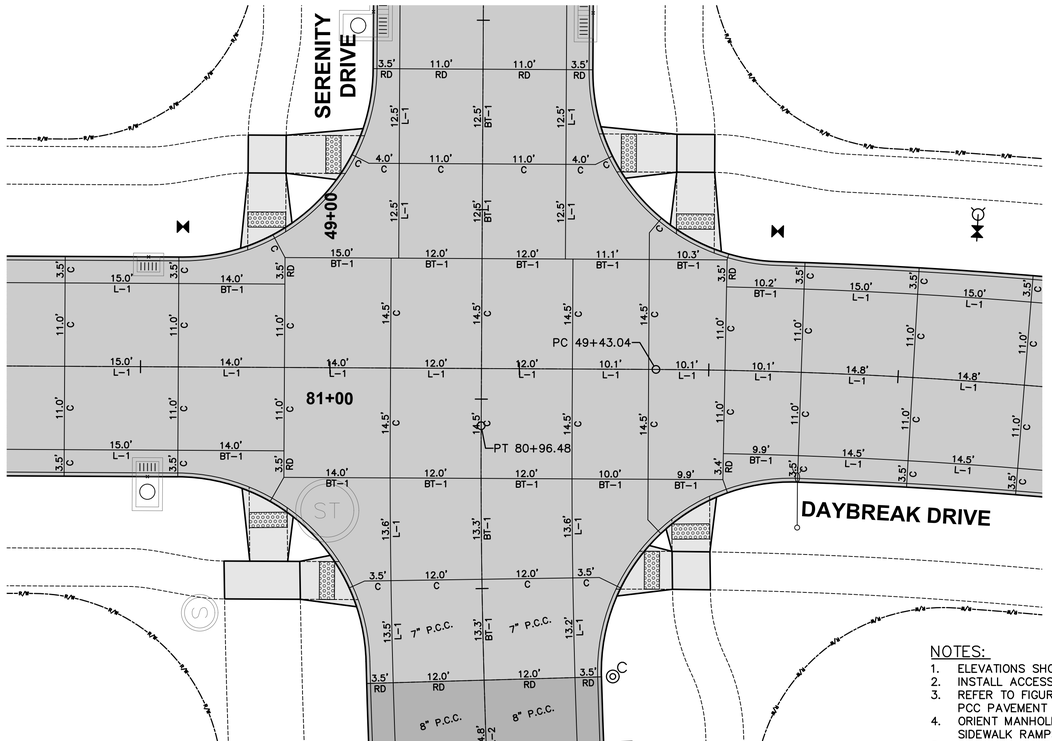
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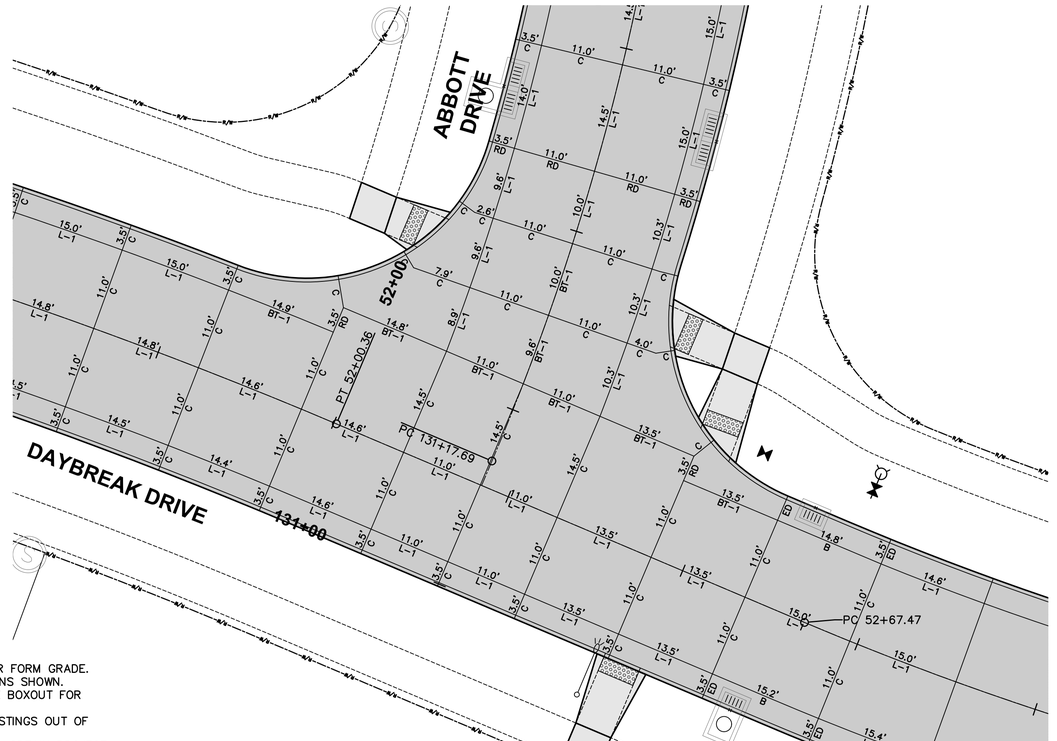
GEOMETRICS AND STAKING LAYOUT



GEOMETRICS AND STAKING LAYOUT



JOINTING LAYOUT



JOINTING LAYOUT

SCALE
0' 5' 10' 20'

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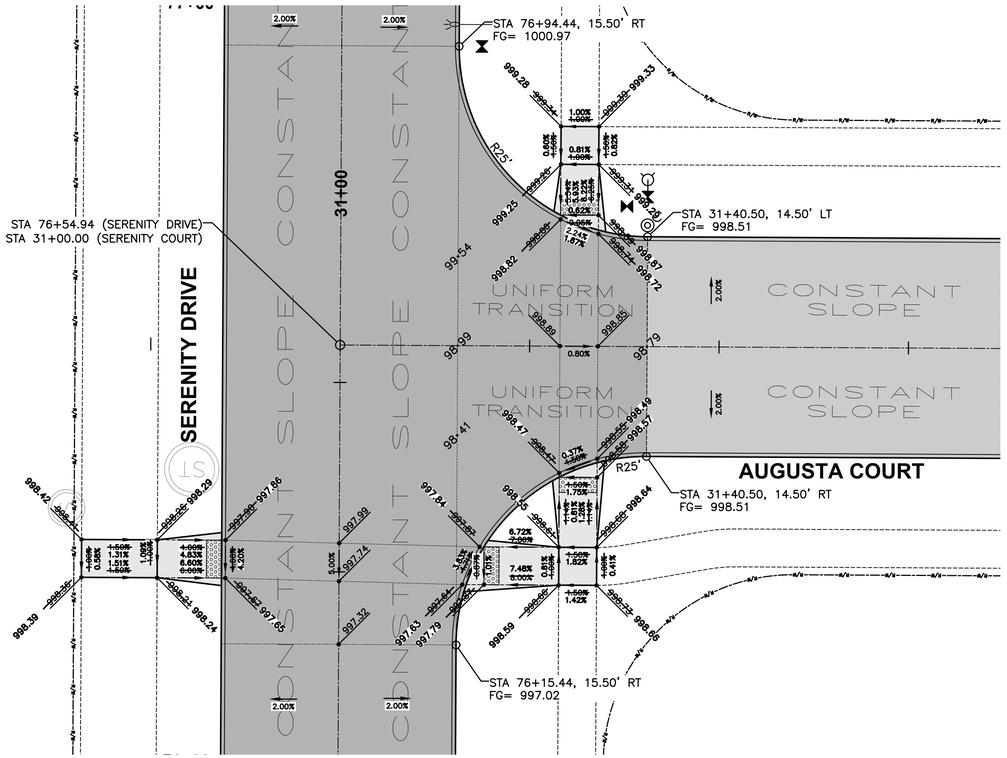
CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1
INTERSECTION DETAILS

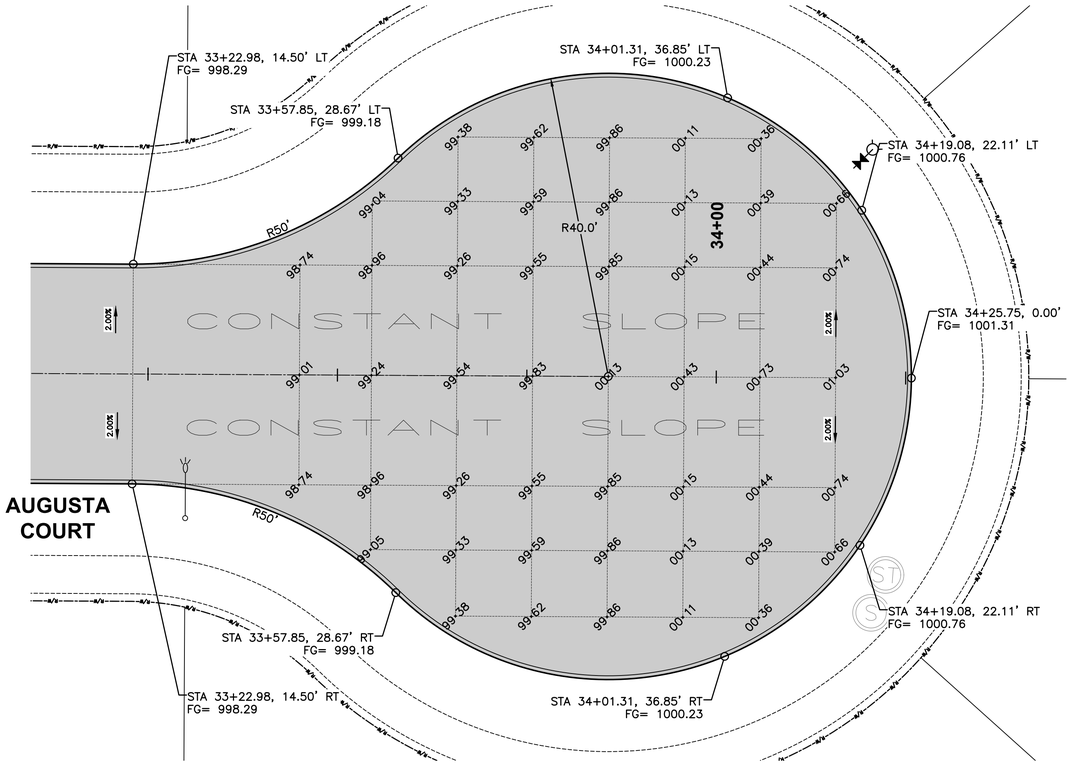
WAUKEE, IOWA

1802.054

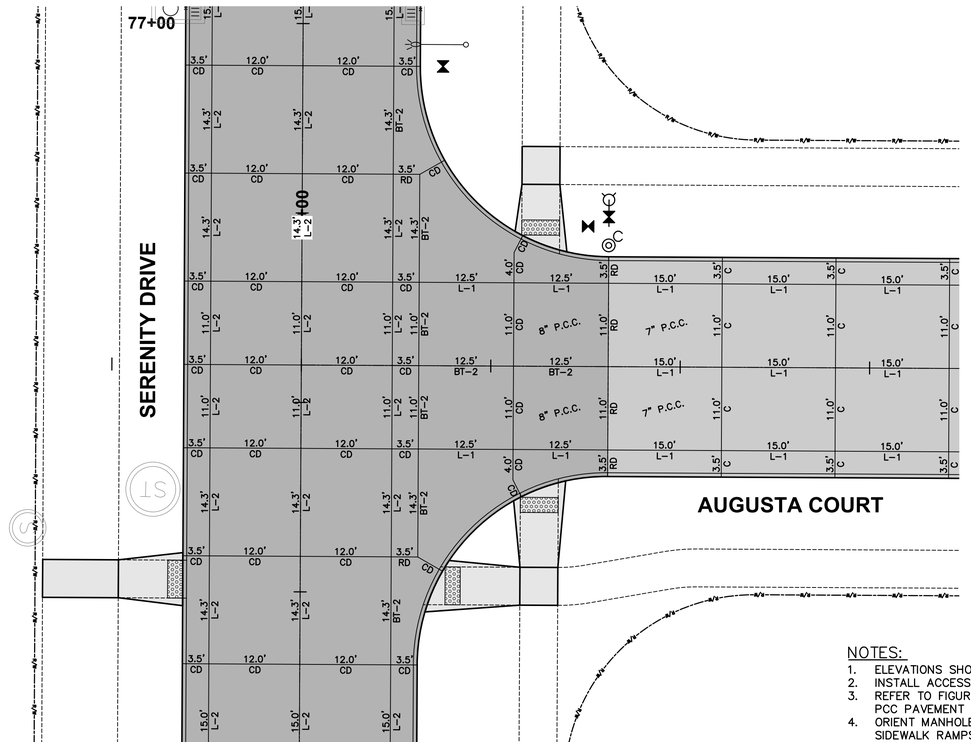
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TECH: ENG:



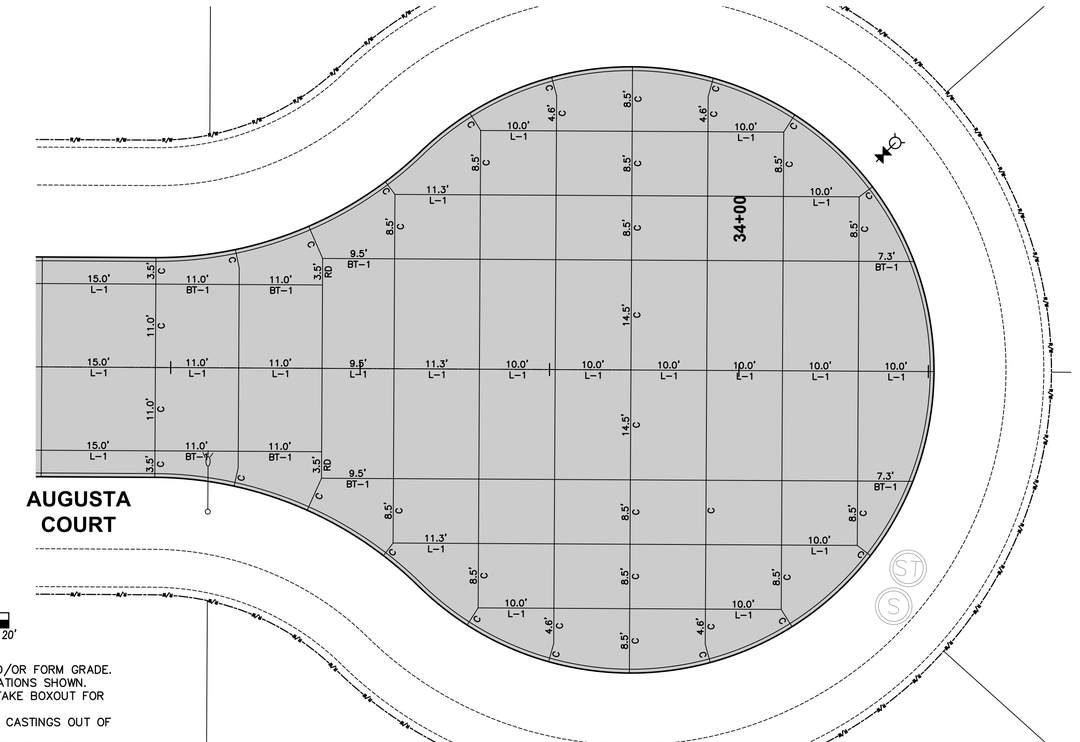
GEOMETRICS AND STAKING LAYOUT



GEOMETRICS AND STAKING LAYOUT



JOINTING LAYOUT



JOINTING LAYOUT

SCALE
0' 5' 10' 20'

NOTES:
1. ELEVATIONS SHOWN ARE TOP OF SLAB AND/OR FORM GRADE.
2. INSTALL ACCESSIBLE CURB RAMPS AT LOCATIONS SHOWN.
3. REFER TO FIGURE 6010.514 FOR GRATE INTAKE BOXOUT FOR PCC PAVEMENT DETAILS.
4. ORIENT MANHOLE CONE SECTIONS TO KEEP CASTINGS OUT OF SIDEWALK RAMPS.
5. ADD 900 OR 1000 TO FOUR DIGIT SPOT ELEVATIONS TO OBTAIN PROJECT DATUM.

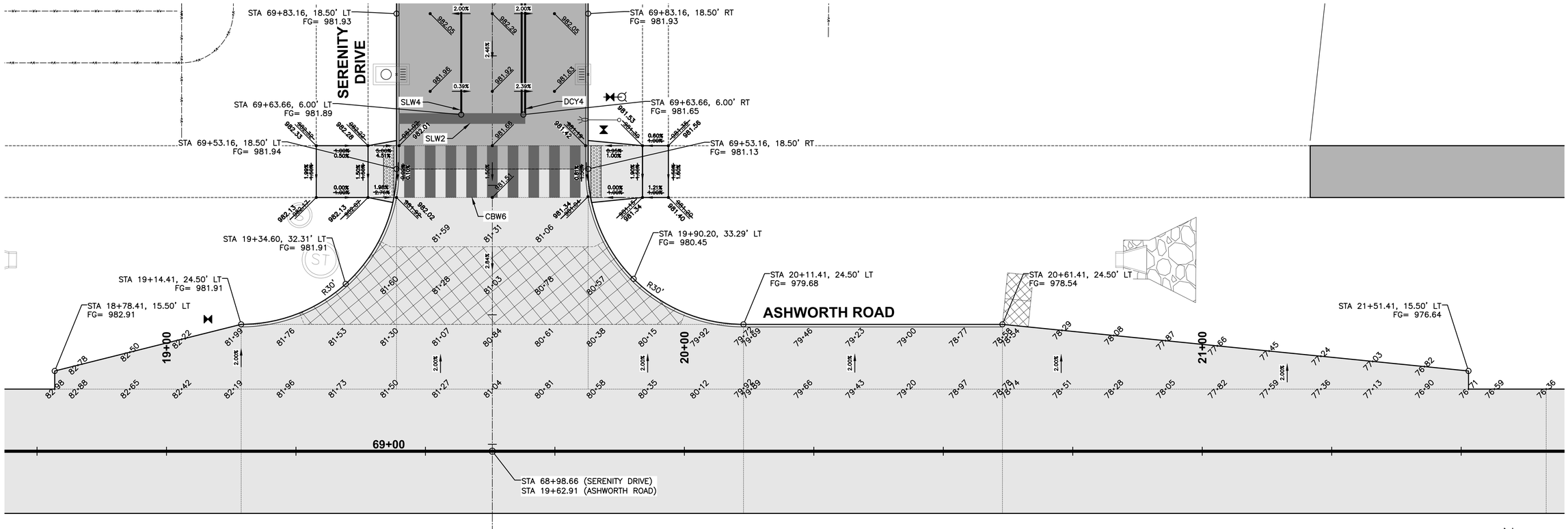
REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
AS-BUILT SUBMITTAL	01/09/20
REVISED MAILBOX PADS	06/28/19
FINAL SUBMITTAL	07/18/18
FOURTH SUBMITTAL	07/05/18
THIRD SUBMITTAL	06/26/18

3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
PHONE: (515) 369-4400 FAX: (515) 369-4410
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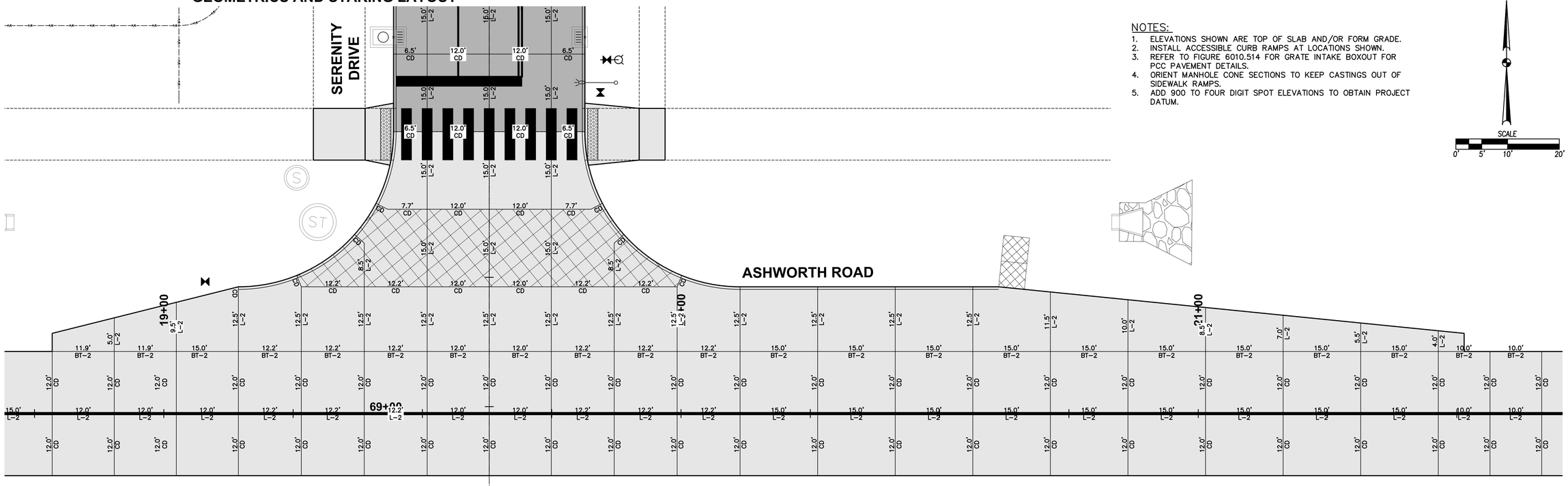
CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

ASHWORTH ACRES PLAT 1
INTERSECTION DETAILS

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PLOTTED BY: JONATHON MCDONALD
COMMENT:
TECH: ENG:



GEOMETRICS AND STAKING LAYOUT



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5. ADD 900 TO FOUR DIGIT SPOT ELEVATIONS TO OBTAIN PROJECT DATUM.

N

SCALE
0' 5' 10' 20'

JOINTING LAYOUT

REVISIONS	DATE
AS-BUILT SUBMITTAL	01/27/20
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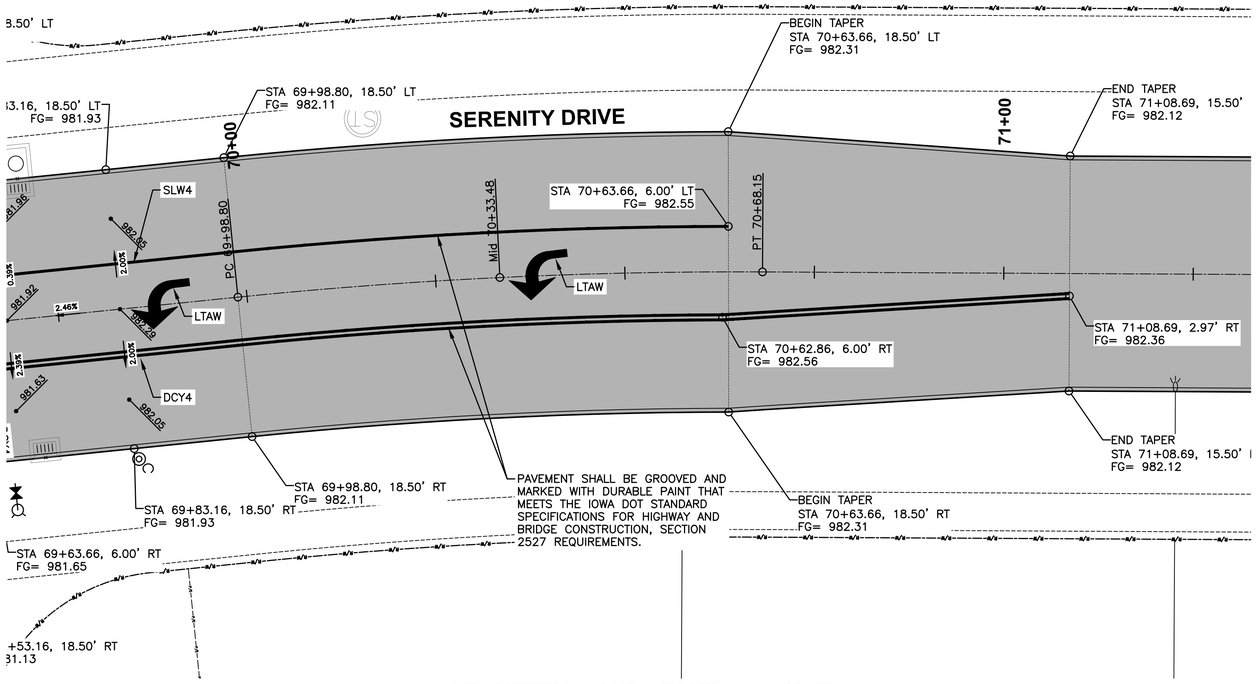
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CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

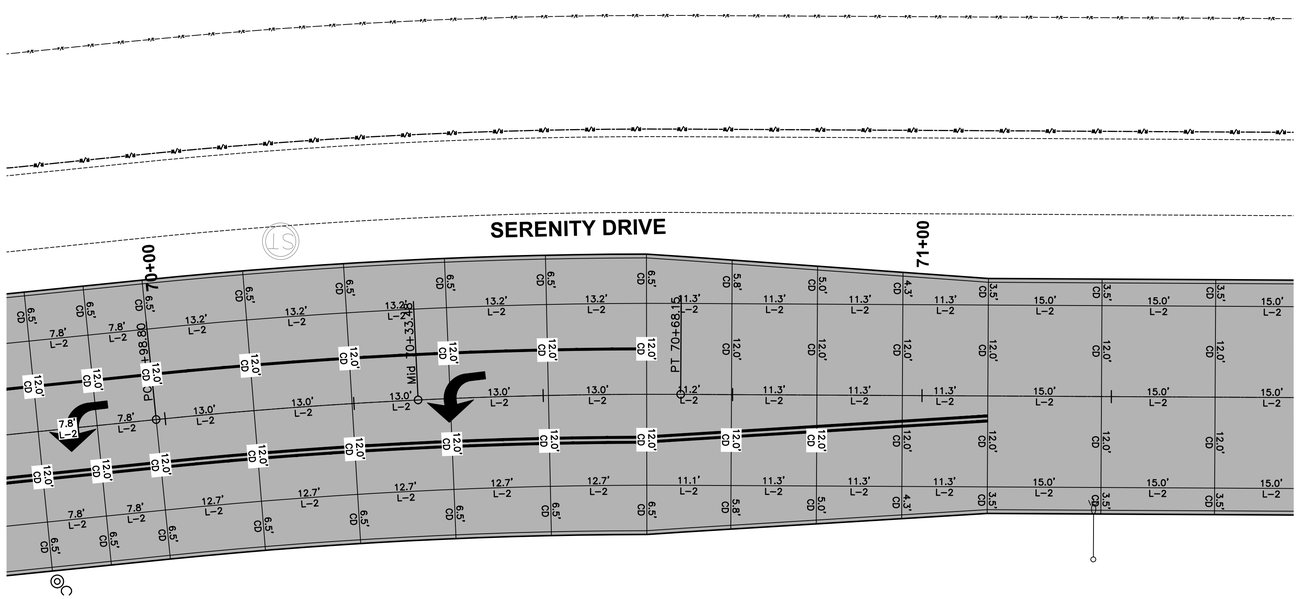
ASHWORTH ACRES PLAT 1
INTERSECTION DETAILS

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COMMENT:
TECH:
ENG:



GEOMETRICS AND STAKING LAYOUT



JOINTING LAYOUT

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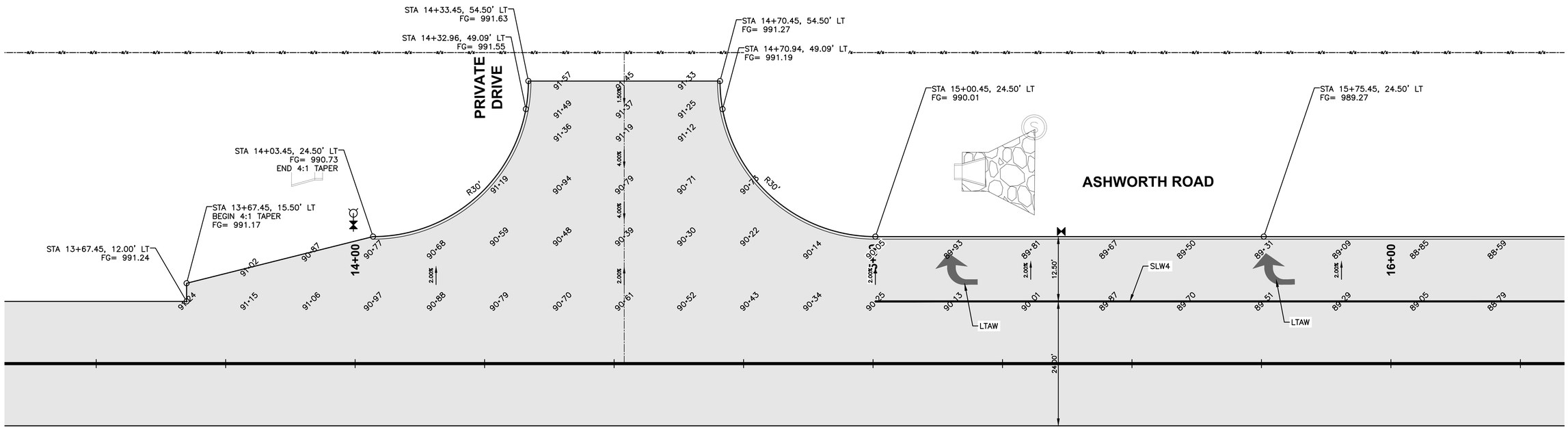
WAUKEE, IOWA

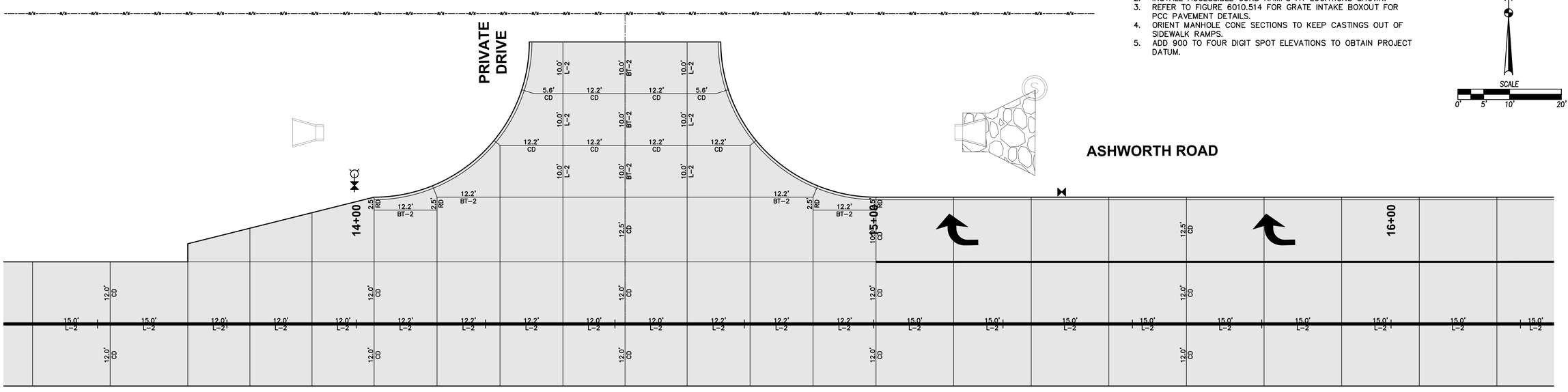
ASHWORTH ACRES PLAT 1
INTERSECTION DETAILS

1802.054

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COMMENT:
TECH: ENG:

GEOMETRICS AND STAKING LAYOUT





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N

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JOINTING LAYOUT

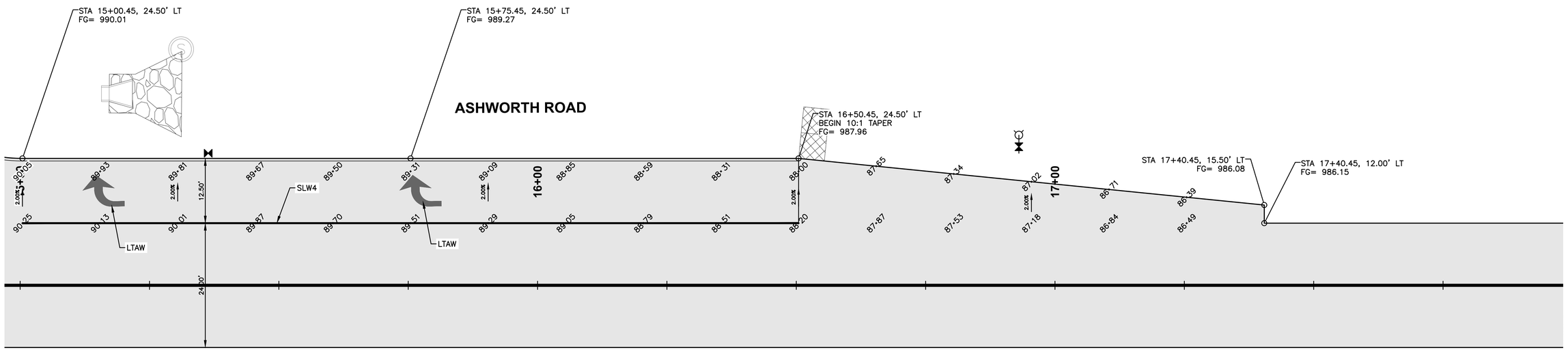
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CIVIL DESIGN ADVANTAGE
WAUKEE, IOWA

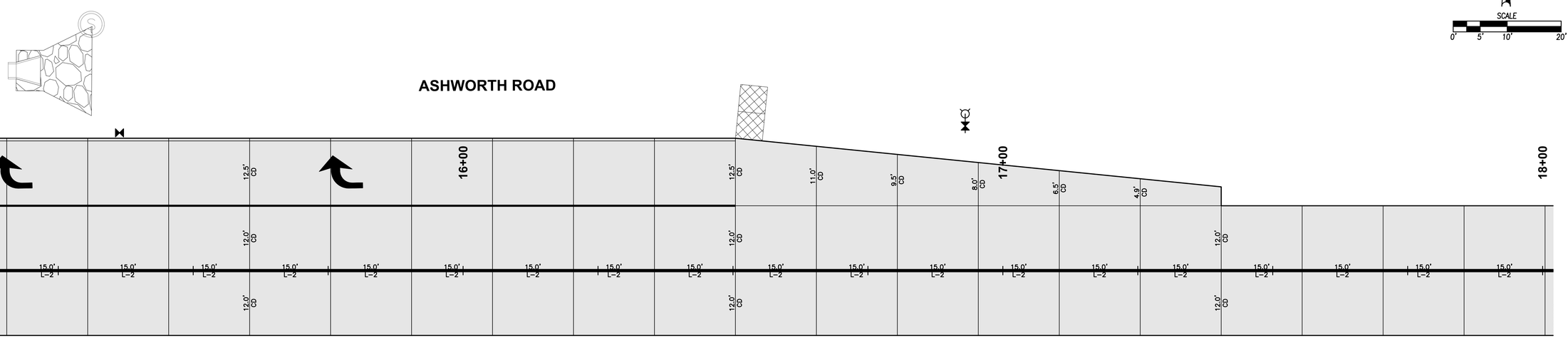
ASHWORTH ACRES PLAT 1
INTERSECTION DETAILS

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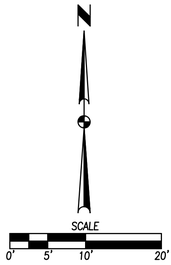


GEOMETRICS AND STAKING LAYOUT

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JOINTING LAYOUT



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CIVIL DESIGN ADVANTAGE

ASHWORTH ACRES PLAT 1
INTERSECTION DETAILS

WAUKEE, IOWA

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PLOTTED BY: JONATHON MCDONALD TECH: ENG:



ASHWORTH ACRES PLAT 1
ASHWORTH ROAD DETOUR PLAN

WAUKEE, IOWA

CIVIL DESIGN ADVANTAGE
3405 S.E. CROSSROADS DRIVE, SUITE G
GRIMES, IOWA 50111
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