

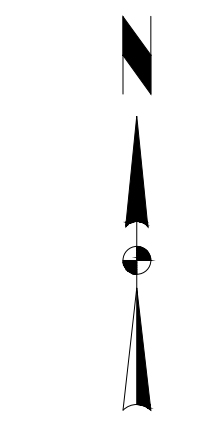
SITE PLAN

MAPLE GROVE PLACE

CITY OF WAUKEE, DALLAS COUNTY, IOWA



VICINITY MAP



SCALE 1"=500'

OWNER / DEVELOPER

MAPLE GROVE PLACE, LLC
 PO BOX 373
 JOHNSTON, IA 50131
 CONTACT: WILL VAN ZEE
 PHONE: 515-480-4560

ENGINEER

SNYDER AND ASSOCIATES, INC
 2727 SNYDER BLVD
 ANKENY, IA 50023
 CONTACT: ERIC CANNON
 515-964-2020

INDEX OF SHEETS

- C100 TITLE SHEET
- C200 PROJECT INFORMATION
- C300 EXISTING SITE SURVEY AND DEMOLITION PLAN
- C400 LAYOUT PLAN
- C500 OVERALL UTILITY PLAN
- C501 SANITARY SEWER PLAN
- C502 STORM SEWER PLAN
- C600 GRADING PLAN
- C601 EROSION AND SEDIMENT CONTROL PLAN
- C700 INTERSECTION DETAILS
- C701 INTERSECTION DETAILS
- C702 INTERSECTION DETAILS
- C703 INTERSECTION DETAILS
- C800 MISCELLANEOUS DETAILS

MAPLE GROVE PLACE

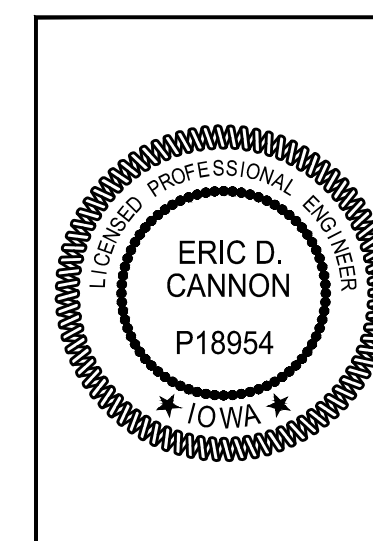
TITLE SHEET

WAUKEE, IA

SNYDER & ASSOCIATES, INC.

2727 S.W. SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | www.snyder-associates.com

3	REVISED AS PER CITY COMMENTS	JWM	4-19-22	JWM
2	REVISED AS PER CITY COMMENTS	JWM	4-05-22	JWM
1	REVISED AS PER CITY COMMENTS	JWM	3-17-22	JWM
MARK		REVISION	DATE	BY
Engineer: EDC		Checked By: EDC	Scale: 1"=500'	
Technician: JWM		Date: 2-11-22	T-R-S: TTN-RRW-SS	
Project No: 116.0698.01				Sheet C100



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.

Eric D. Cannon, P.E. Date _____

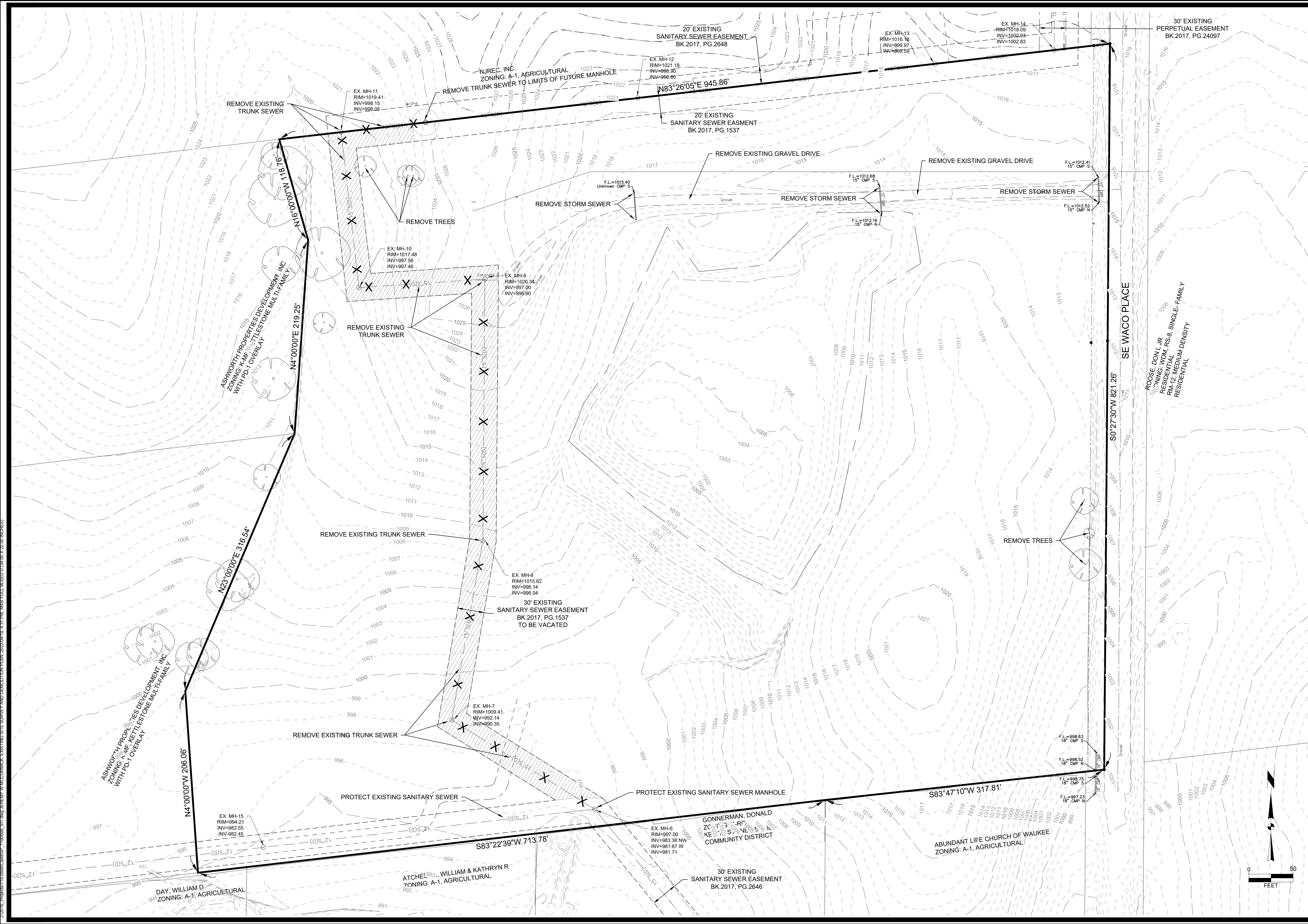
License Number P18954

My License Renewal Date is December 31, 2023

Pages or sheets covered by this seal: _____



C:\2016 - Project\116.0698.01\CDSP - 1160698 - TSN.dwg, JEREMY W MCCORMACK, TITLE SHEET, 2022/04/19, 4:31 PM, ANSI FULL BLEED D (34.00 X 28.00 INCHES)



MARK	REVISION	DATE	BY
3	REVISED AS PER CITY COMMENTS	4-19-22	LJWM
2	REVISED AS PER CITY COMMENTS	4-05-22	LJWM
1	REVISED AS PER CITY COMMENTS	3-17-22	LJWM


Engineer: EDC	Checked By: EDC	Scale: 1" = 50'
Technician: JWM	Date: 2-11-22	T-R-S: TTN-RRW-SS

MAPLE GROVE PLACE
EXISTING SITE SURVEY AND DEMOLITION PLAN

WAUKEE, IA

2727 S.W. SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | www.snyder-associates.com

SNYDER & ASSOCIATES, INC.

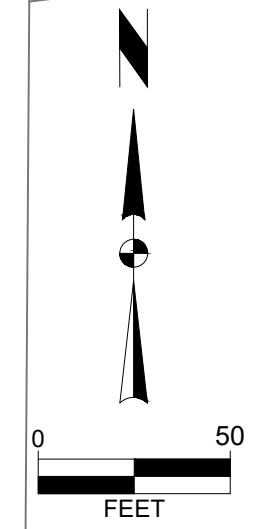
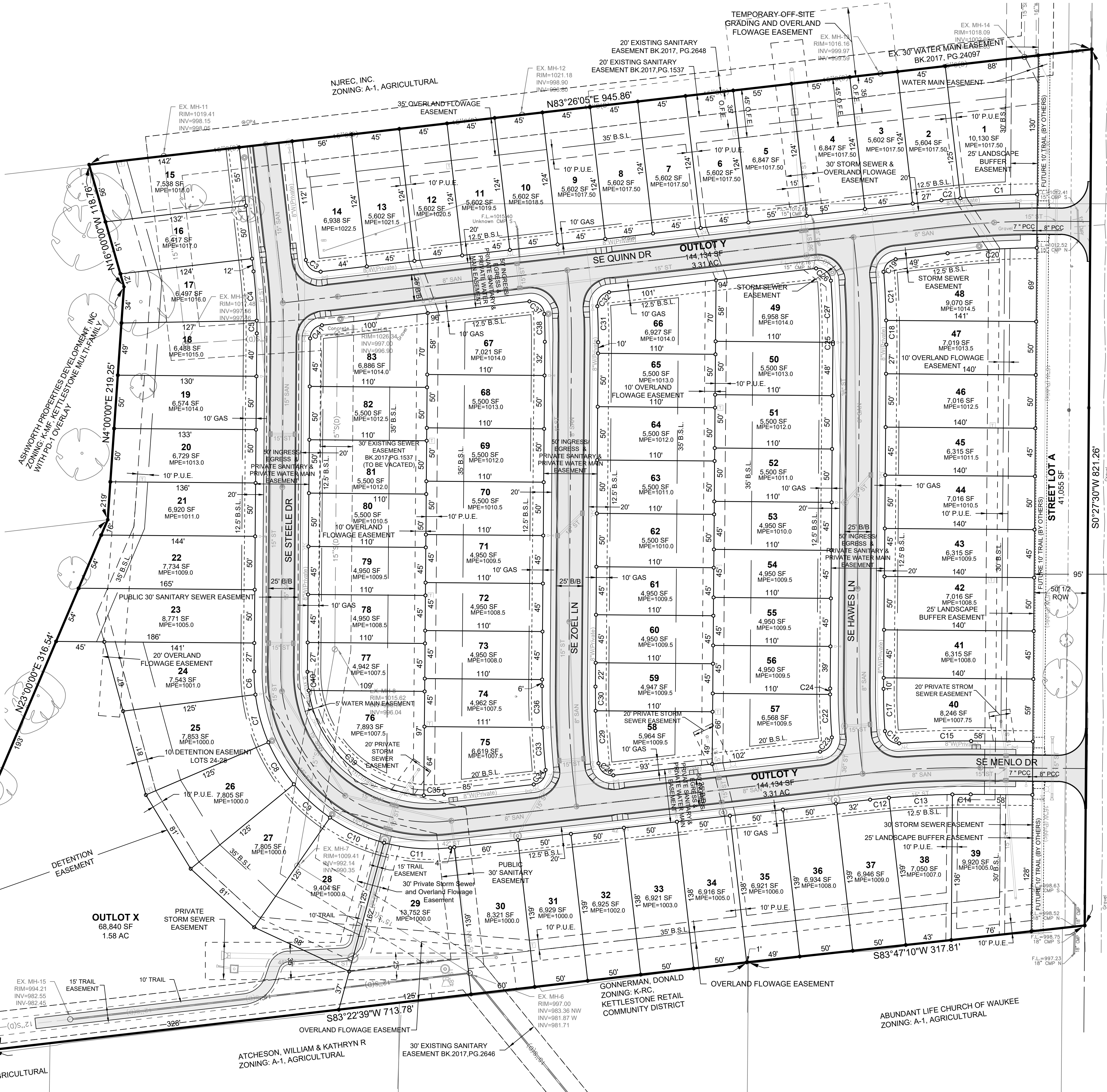
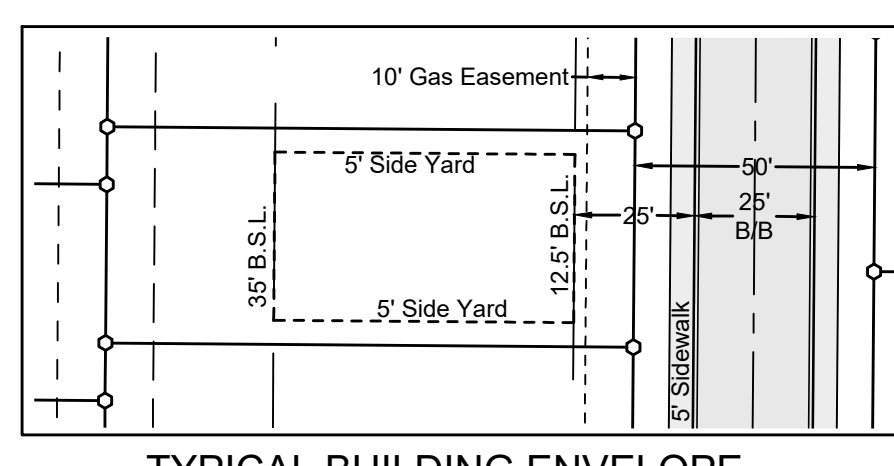


SNYDER & ASSOCIATES

Project No: 116.0698.01
 Sheet C300

Sheet C300

CURVE TABLE					
CURVE NO.	Δ	RADIUS	ARC LENGTH	TANGENT	CHORD BEARING/LENGTH
C1	5°00'23"	825.00'	72.09'	36.07'	S87°10'47"W 72.07'
C2	1°14'31"	825.00'	17.88'	8.94'	S84°03'20"W 17.88'
C3	90°00'00"	12.50'	19.63'	12.50'	N51°33'55"W 17.68'
C4	5°35'25"	475.00'	46.34'	23.19'	S3°46'13"E 46.33'
C5	1°26'00"	475.00'	11.88'	5.94'	S0°15'30"E 11.88'
C6	7°35'01"	165.00'	21.84'	10.94'	S3°20'01"E 21.82'
C7	16°08'13"	165.00'	46.47'	23.39'	S15°11'38"E 46.32'
C8	16°02'03"	165.00'	46.18'	23.24'	S31°16'46"E 46.02'
C9	16°02'03"	165.00'	46.18'	23.24'	S47°18'49"E 46.02'
C10	19°29'59"	165.00'	56.16'	28.35'	S65°04'50"E 55.88'
C11	21°41'34"	165.00'	62.47'	31.61'	S85°40'37"E 62.10'
C12	1°18'47"	775.00'	17.76'	8.88'	N84°07'59"E 17.76'
C13	4°24'04"	775.00'	59.53'	29.78'	N86°59'25"E 59.52'
C14	1°16'03"	775.00'	17.14'	8.57'	N89°49'28"E 17.14'
C15	4°40'57"	825.00'	67.42'	33.73'	S88°07'01"W 67.40'
C16	89°54'36"	12.50'	19.62'	12.48'	N49°16'09"W 17.66'
C17	4°46'21"	475.00'	39.56'	19.79'	N1°55'41"W 39.55'
C18	1°37'45"	795.00'	22.60'	11.30'	N0°21'23"W 22.60'
C19	87°46'43"	12.50'	19.15'	12.02'	N39°32'43"E 17.33'
C20	6°11'54"	775.00'	83.84'	41.96'	N86°32'02"E 83.80'
C21	3°10'23"	795.00'	44.03'	22.02'	N2°45'27"W 44.02'
C22	4°24'14"	525.00'	40.35'	20.19'	S2°20'56"E 40.34'
C23	88°01'38"	12.50'	19.20'	12.08'	S39°27'47"W 17.37'
C24	0°36'18"	525.00'	5.54'	2.77'	S0°09'20"W 5.54'
C25	0°07'50"	745.00'	1.70'	0.85'	S0°23'35"W 1.70'
C26	92°26'56"	12.50'	20.17'	13.05'	S50°20'27"E 18.05'
C27	4°26'39"	745.00'	57.78'	28.91'	S1°53'40"E 57.77'
C28	91°26'51"	12.50'	19.95'	12.82'	N50°47'59"W 17.90'
C29	3°47'19"	745.00'	49.26'	24.64'	N3°10'54"W 49.25'
C30	1°44'44"	745.00'	22.70'	11.35'	N0°24'52"W 22.70'
C31	3°41'07"	525.00'	33.77'	16.89'	N1°23'04"W 33.76'
C32	86°39'43"	12.50'	18.91'	11.79'	N40°06'14"E 17.16'
C33	2°52'14"	795.00'	39.83'	19.92'	S3°46'31"E 39.83'
C34	88°41'13"	12.50'	19.35'	12.22'	S39°07'59"W 17.47'
C35	9°28'25"	115.00'	19.01'	9.53'	S88°12'48"W 18.99'
C36	2°47'53"	795.00'	38.82'	19.42'	S0°56'27"E 38.82'
C37	93°52'49"	12.50'	20.48'	13.38'	S49°37'31"E 18.27'
C38	3°08'36"	475.00'	26.06'	13.03'	S1°06'48"E 26.06'
C39	78°44'52"	115.00'	158.06'	94.37'	N47°40'33"W 145.91'
C40	8°45'37"	115.00'	17.58'	8.81'	N3°55'19"W 17.57'
C41	82°58'35"	12.50'	18.10'	11.05'	N41°56'47"E 16.56'

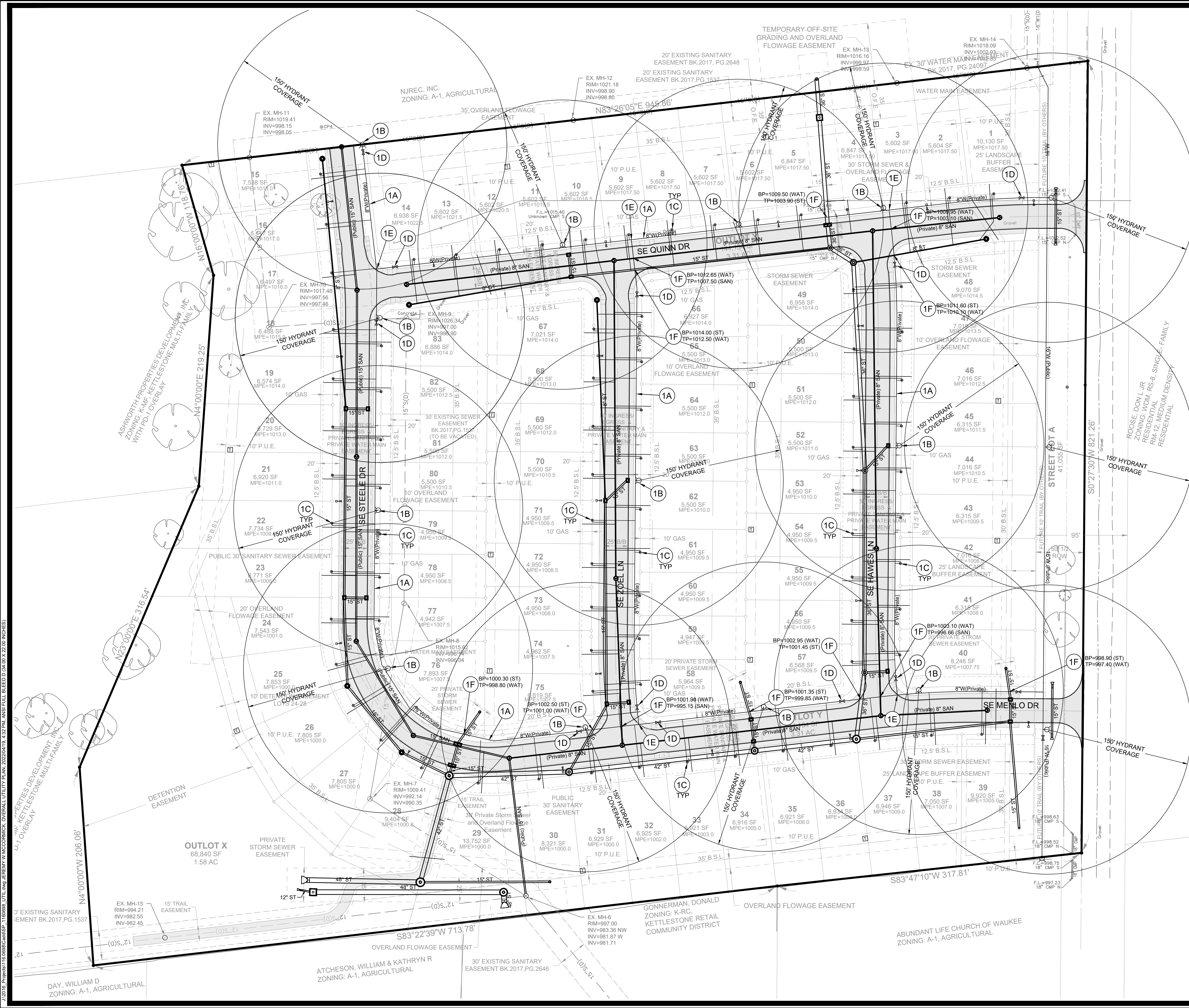


MARK	REVISION	DATE	BY
3	REVISED AS PER CITY COMMENTS	4-19-22	JWM
2	REVISED AS PER CITY COMMENTS	4-05-22	JWM
1	REVISED AS PER CITY COMMENTS	3-17-22	JWM

Checked By: EDC
 Engineer: EDC
 Technician: JWM
 Scale: 1"=50'
 Date: 2-11-22
 TTR-S: TTN-RRW-SS
 Project No: 116.0698.01

MAPLE GROVE PLACE
LAYOUT PLAN
SNYDER & ASSOCIATES, INC.
 WAUKEE, IA
 2727 S.W. SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | www.snyder-associates.com





UTILITY PLAN GENERAL NOTES

- CITY OF WAUKEE IS NOT RESPONSIBLE FOR PAVEMENT REPLACEMENT SHOULD THE CITY NEED TO EXCAVATE THE TRUNK SEWER FOR REPAIRS.
- CONTRACTOR TO REMOVE EXISTING SANITARY SEWER TO LIMITS SHOWN ON PLANS.
- CONTRACTOR TO USE NEENAH R-3067 CASTING, OR SIMILAR FOR INTAKE WHERE MOUNTABLE CURB BOX IS PROPOSED.
- CRITICAL CROSSING. CONTRACTOR TO VERIFY ALL CROSSINGS AND PROVIDE MINIMUM 18" CLEARANCE.
- CONTRACTOR TO PROVIDE GASKETED STORM SEWER WITHIN 10' OF WATER MAIN CROSSING.

UTILITY CONSTRUCTION NOTES

- PRIVATE WATER MAIN PROVIDE THE FOLLOWING:
 - A. 8" PRIVATE WATER SERVICE WITH FITTINGS AND BENDS AS NECESSARY. MINIMUM 5.5' DEEP.
 - B. HYDRANT ASSEMBLY.
 - C. 1" WATER SERVICE WITH CURB STOP.
 - D. 8" VALVE
 - E. 8"x8" TEE
 - F. CRITICAL CORSSINGS, CONTRACTOR TO VERIFY ALL CROSSINGS AND PROVIDE 18" MIN. CLEARANCE.

MARK	REVISION	Checked By:	Scale:
3	REVISED AS PER CITY COMMENTS	EDC	1"=50'
2	REVISED AS PER CITY COMMENTS	EDC	1"=50'
1	REVISED AS PER CITY COMMENTS	JMM	1"=50'

MARK	REVISION	Checked By:	Scale:
3	REVISED AS PER CITY COMMENTS	EDC	1"=50'
2	REVISED AS PER CITY COMMENTS	EDC	1"=50'
1	REVISED AS PER CITY COMMENTS	JMM	1"=50'

Project No: 116.0698.01
 Sheet C500

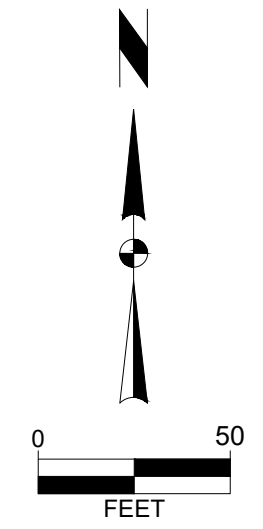
WAUKEE, IA
 OVERALL UTILITY PLAN

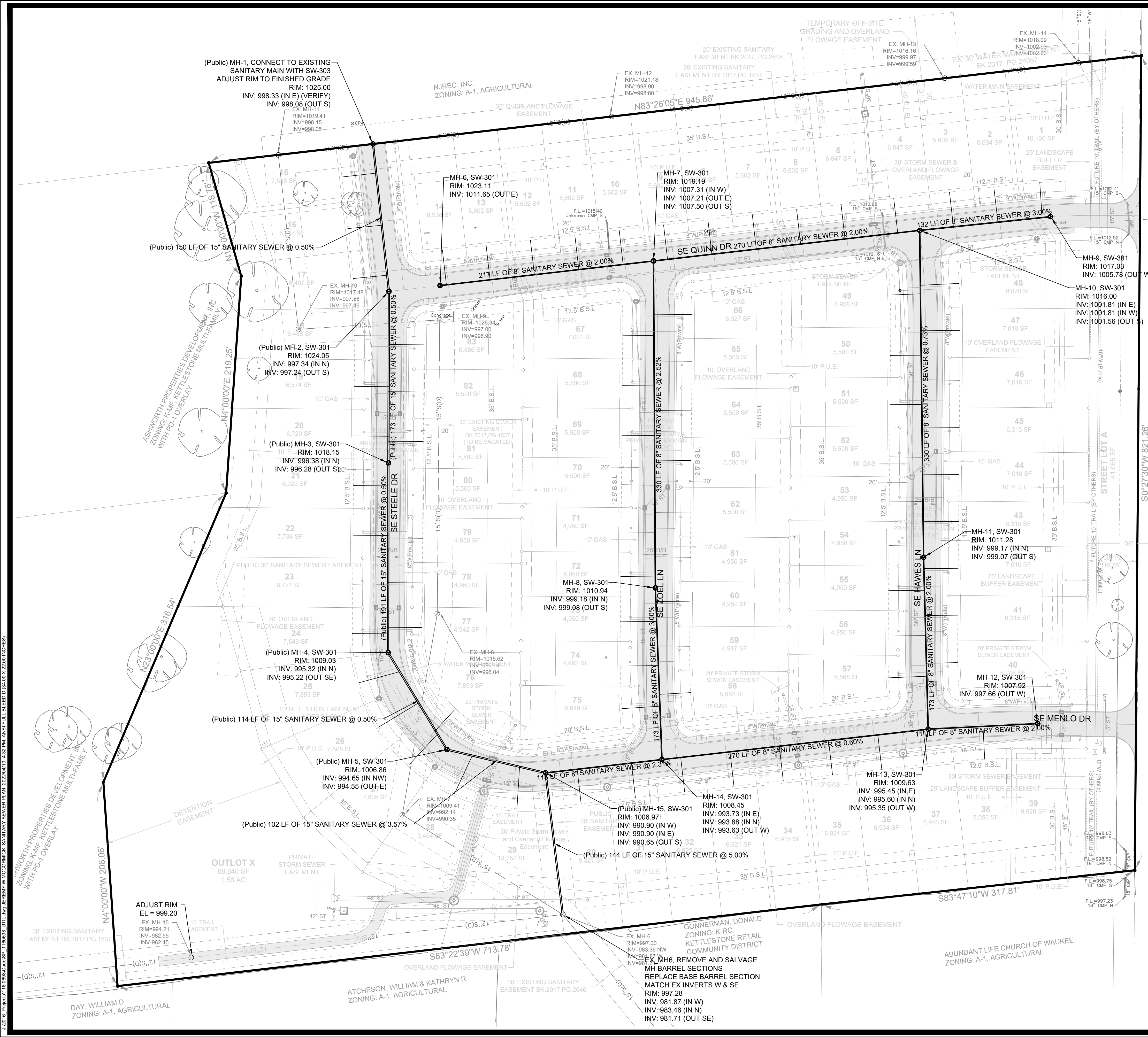
2727 S.W. SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | www.snyder-associates.com

MAPLE GROVE PLACE
OVERALL UTILITY PLAN
SNYDER & ASSOCIATES, INC.



Project No: 116.0698.01
 Sheet C500





UTILITY PLAN GENERAL NOTES

1. CITY OF WAUKEE IS NOT RESPONSIBLE FOR PAVEMENT REPLACEMENT SHOULD THE CITY NEED TO EXCAVATE THE TRUNK SEWER FOR REPAIRS
2. CONTRACTOR TO REMOVE EXISTING SANITARY SEWER TO LIMITS SHOWN ON PLANS.
3. CONTRACTOR TO USE NEENAH R-3067 CASTING, OR SIMILAR FOR INTAKE WHERE MOUNTABLE CURB BOX IS PROPOSED.
4. CRITICAL CORSSING, CONTRACTOR TO VERIFY ALL CROSSINGS AND PROVIDE MINIMUM 18" CLEARANCE.
5. CONTRACTOR TO PROVIDE GASKETED STORM SEWER WITHIN 10' OF WATER MAIN CROSSING.

UTILITY CONSTRUCTION NOTES

1. PRIVATE WATER MAIN PROVIDE THE FOLLOWING:
 - A. 8" PRIVATE WATER SERVICE WITH FITTINGS AND BENDS AS NECESSARY. MINIMUM 5.5' DEEP.
 - B. HYDRANT ASSEMBLY.
 - C. 1" WATER SERVICE WITH CURB STOP.
 - D. 8" VALVE
 - E. 8"x8" TEE
 - F. CRITICAL CORSSINGS, CONTRACTOR TO VERIFY ALL CROSSINGS AND PROVIDE 18" MIN. CLEARANCE.

**MAPLE GROVE PLACE
SANITARY SEWER PLAN**

SNYDER & ASSOCIATES, INC.

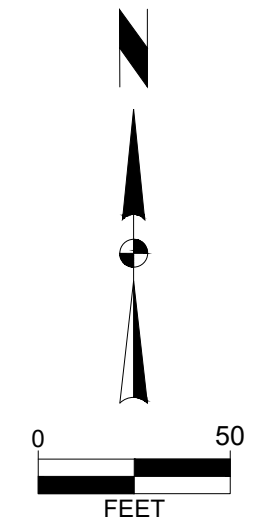


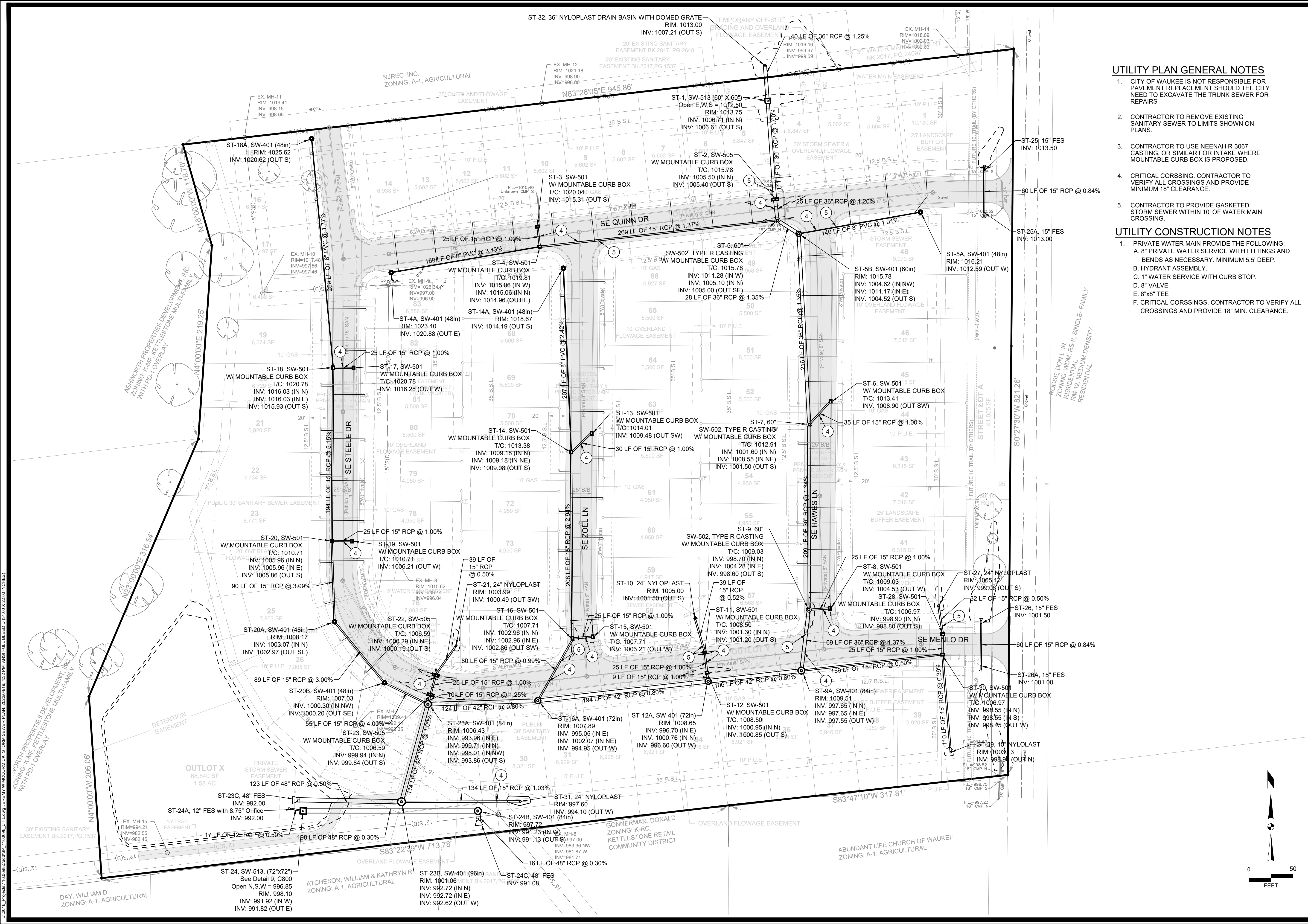
WAUKEE, IA

2727 S.W. SNYDER BLVD
ANKENY, IOWA 50023
515-964-2020 | www.snyder-associates.com

MARK	REVISION	DATE	BY
3	REVISED AS PER CITY COMMENTS	4-19-22	JWM
2	REVISED AS PER CITY COMMENTS	4-05-22	JWM
1	REVISED AS PER CITY COMMENTS	3-17-22	JWM

Scale: 1" = 50'
Checked By: EDC
Date: 2-11-22
Engineer: JWM
Technician: JMM
T-R-S: TTN-RRW-SS





UTILITY PLAN GENERAL NOTES

1. CITY OF WAUKEE IS NOT RESPONSIBLE FOR PAVEMENT REPLACEMENT SHOULD THE CITY NEED TO EXCAVATE THE TRUNK SEWER FOR REPAIRS
2. CONTRACTOR TO REMOVE EXISTING SANITARY SEWER TO LIMITS SHOWN ON PLANS.
3. CONTRACTOR TO USE NEENAH R-3067 CASTING OR SIMILAR FOR INTAKE WHERE MOUNTABLE CURB BOX IS PROPOSED.
4. CRITICAL CROSSING. CONTRACTOR TO VERIFY ALL CROSSINGS AND PROVIDE MINIMUM 18" CLEARANCE.
5. CONTRACTOR TO PROVIDE GASKETED STORM SEWER WITHIN 10' OF WATER MAIN CROSSING.

UTILITY CONSTRUCTION NOTES

1. PRIVATE WATER MAIN PROVIDE THE FOLLOWING:
 - A. 8" PRIVATE WATER SERVICE WITH FITTINGS AND BENDS AS NECESSARY. MINIMUM 5.5' DEEP.
 - B. HYDRANT ASSEMBLY.
 - C. 1" WATER SERVICE WITH CURB STOP.
 - D. 8" VALVE
 - E. 8"x8" TEE
 - F. CRITICAL CROSSINGS. CONTRACTOR TO VERIFY ALL CROSSINGS AND PROVIDE 18" MIN. CLEARANCE.

**MAPLE GROVE PLACE
STORM SEWER PLAN**



Project No: 116.0698.01
Sheet C502

WAUKEE, IA

SNYDER & ASSOCIATES, INC.

2727 S.W. SNYDER BLVD
ANKENY, IOWA 50023
515-964-2020 | www.snyder-associates.com

MARK	REVISION	DATE	BY
3	REVISED AS PER CITY COMMENTS	4-19-22	JWM
2	REVISED AS PER CITY COMMENTS	4-05-22	JWM
1	REVISED AS PER CITY COMMENTS	3-17-22	JWM

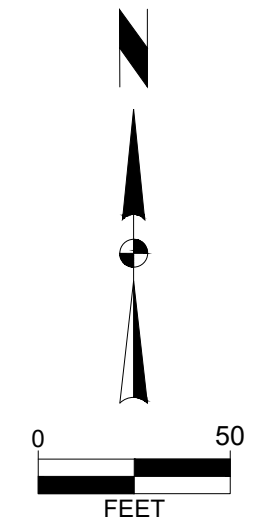
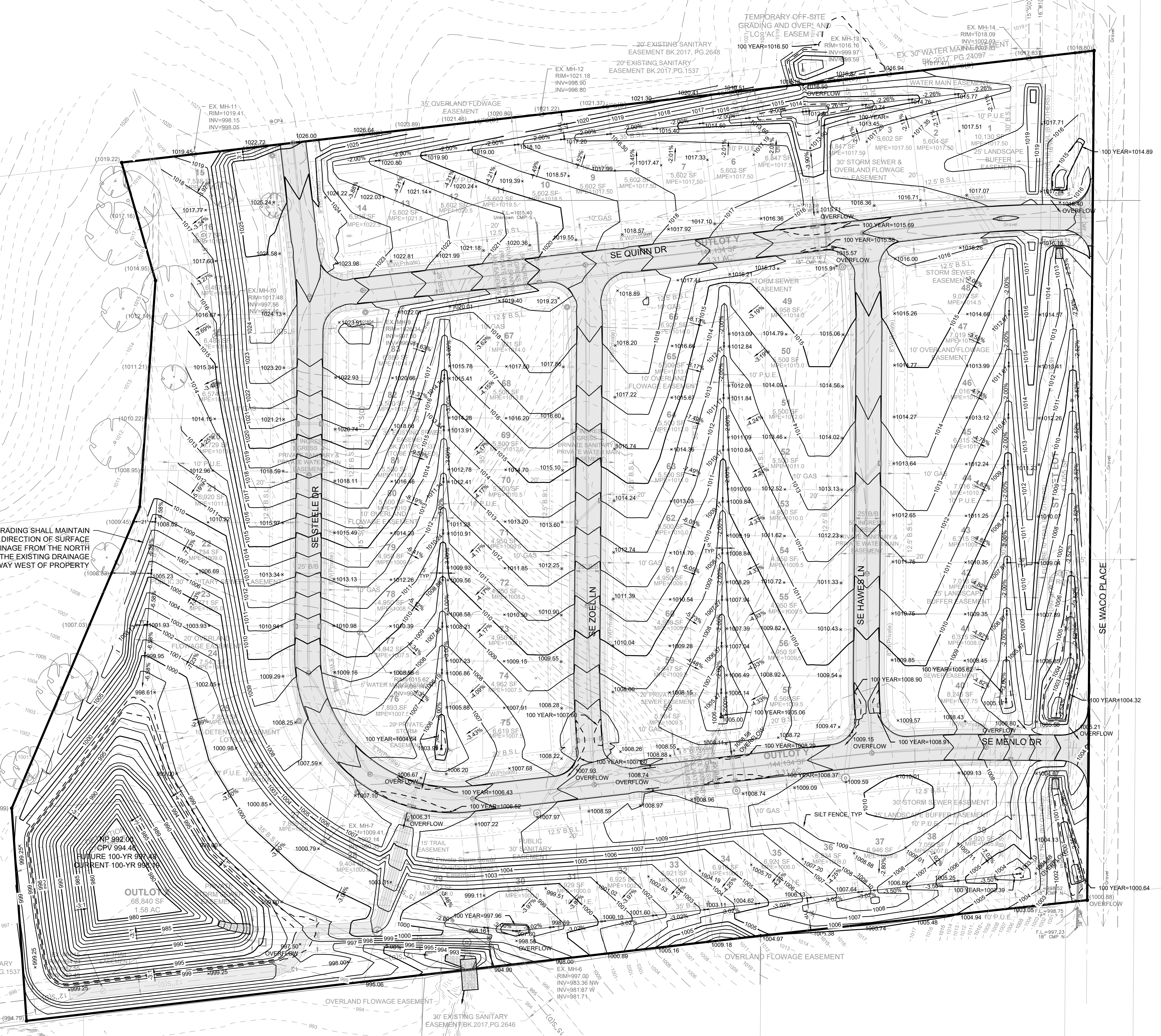
Scale: 1"=50'
Checked By: EDC
Date: 2-11-22
Engineer: JWM
Technician: JWM
T-R-S: TTN-RRW-SS
Project No: 116.0698.01
Sheet C502

12/2018: Project 116.0698.01 - 116088: Utility - Storm Sewer Plan - 2022/04/19, 4:32 PM. ASH FULL RELEASED 04/04/2022 09:20 AM (INCHES)

2/20/18 - Project: 116.0698.C600 - 110088 - GRADING AND OVERLAND FLOWAGE PLAN - 2022/04/19 4:53 PM - ANS FULL RELEASE TO 3/4/2022 (10 INCHES)

GRADING SHALL MAINTAIN THE DIRECTION OF SURFACE DRAINAGE FROM THE NORTH TO THE EXISTING DRAINAGE WAY WEST OF PROPERTY

OUTLOT
68,840 SF
1.58 AC
FUTURE 100-YR 99.99%
CURRENT 100-YR 99.99%



MAPLE GROVE PLACE

GRADING PLAN

WAUKEE, IA

SNYDER & ASSOCIATES, INC.



Project No: 116.0698.01
Sheet C600

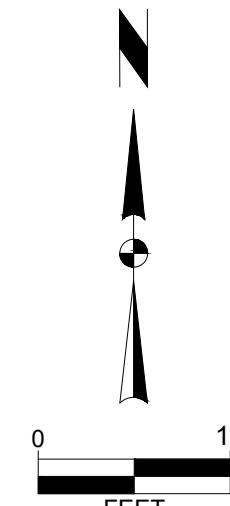
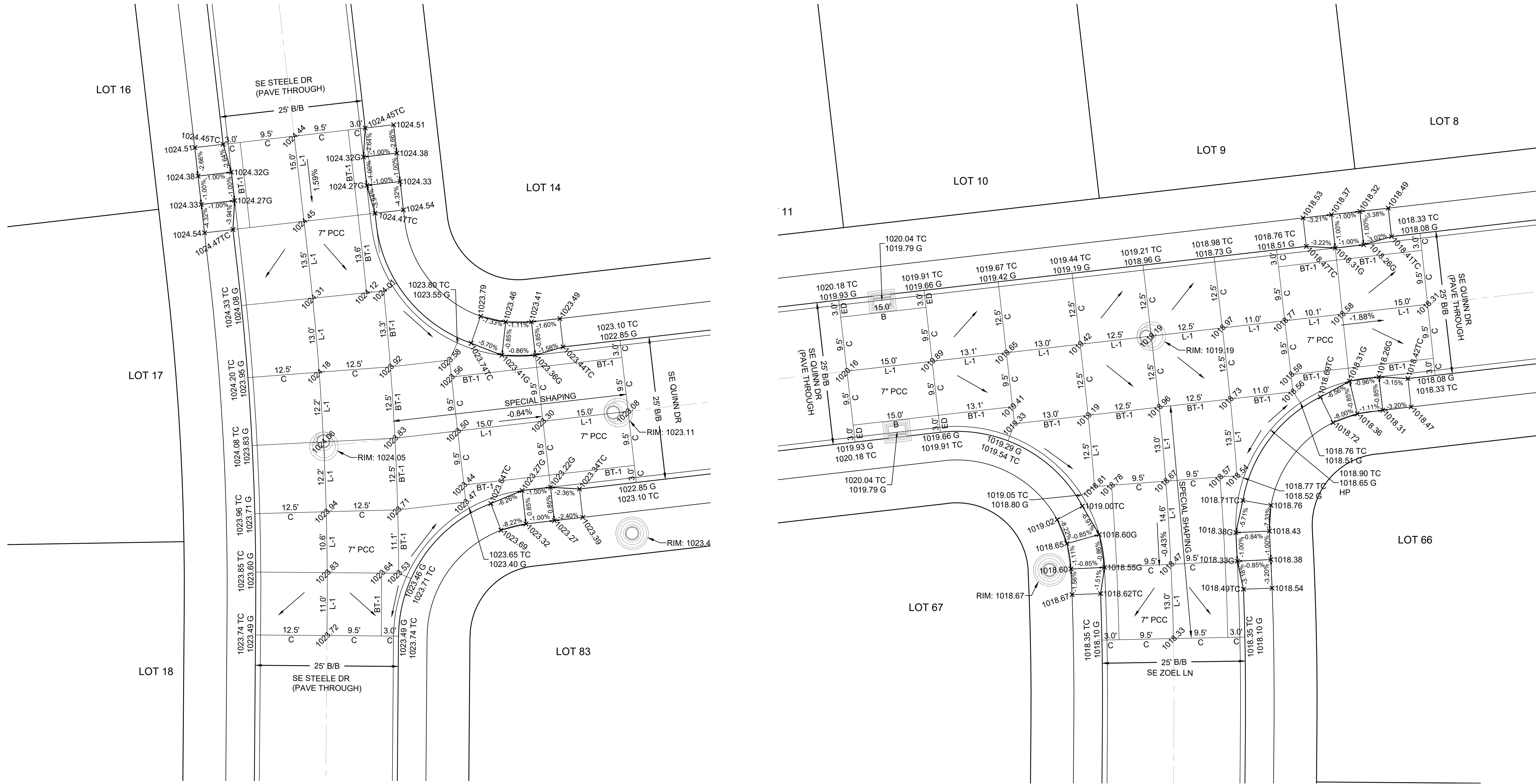
MARK	REVISION	DATE	BY
3	REVISED AS PER CITY COMMENTS	4-19-22	LJWM
2	REVISED AS PER CITY COMMENTS	4-05-22	LJWM
1	REVISED AS PER CITY COMMENTS	3-17-22	LJWM

Engineer: EDC	Checked By: EDC	Scale: 1" = 50'
Technician: JWM	Date: 2-11-22	T-R-S: TTN-RRW-SS

Project No: 116.0698.01
Sheet C600

2727 S.W. SNYDER BLVD
ANKENY, IOWA 50023
515-964-2020 | www.snyder-associates.com

1/20/18 - Project: 116.0698 C700 - 116098.DWG - JEREMY W. ACCORONICK - INTERSECTION DETAILS - 2022/01/18 - 4:34 PM - ANSI FULL BLEED D (8.50 X 11.00 INCHES)



**MAPLE GROVE PLACE
INTERSECTION DETAILS**



Project No: 116.0698.01
Sheet C700

WAUKEE, IA

SNYDER & ASSOCIATES, INC.

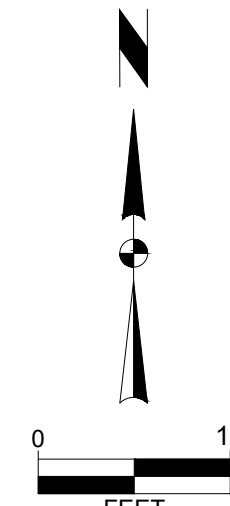
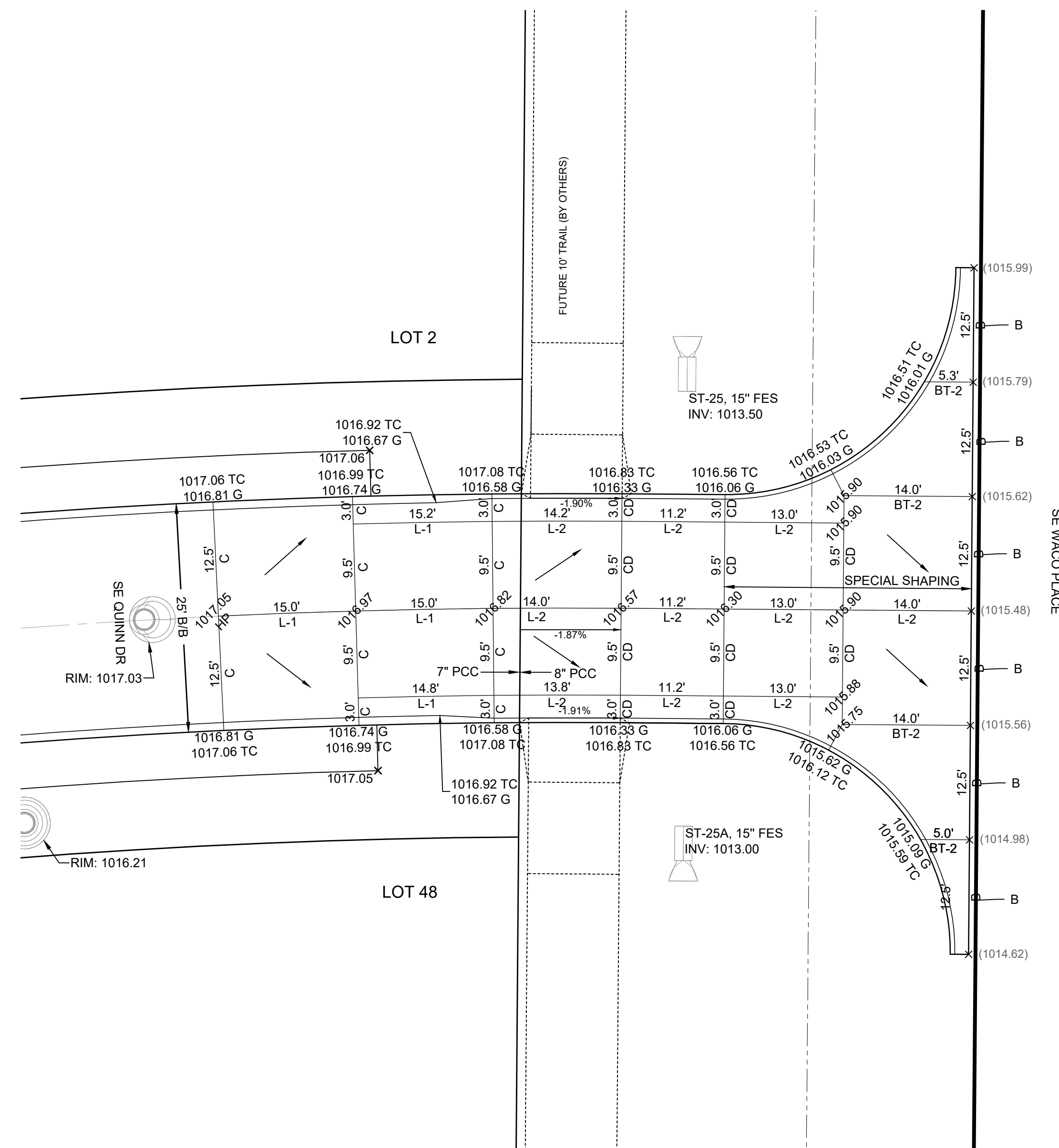
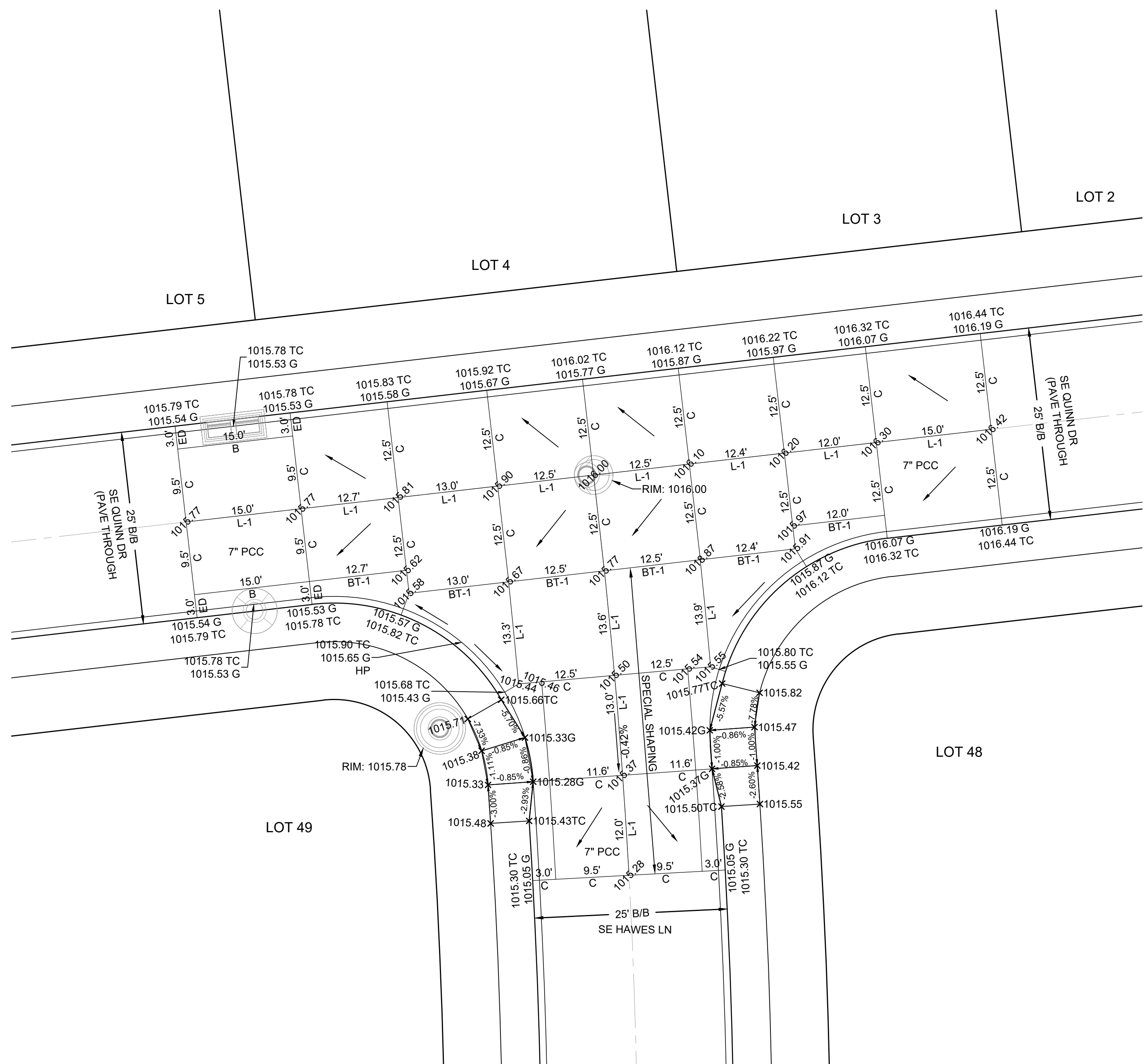
2727 S.W. SNYDER BLVD
ANKENY, IOWA 50023
515-964-2020 | www.snyder-associates.com

MARK	REVISION	DATE	BY
3	REVISED AS PER CITY COMMENTS	4-19-22	JWM
2	REVISED AS PER CITY COMMENTS	4-05-22	JWM
1	REVISED AS PER CITY COMMENTS	3-17-22	JWM

Engineer: EDC
Checked By: EDC
Technician: JWM
Date: 2-11-22
Scale: 1" = 10'
T-R-S: TTN-RRW-SS

Project No: 116.0698.01
Sheet C700

1/20/18 - Project: 116.0698 C701 - 1160698 - DTL - JERRY WYKACOR/ADCK - INTERSECTION DETAILS - 2022/01/18 - 4:34 PM - ANSI FULL BLEED D (8.50 X 11.00 INCHES)



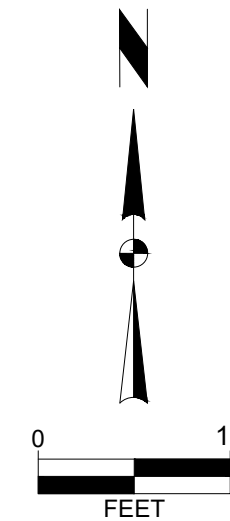
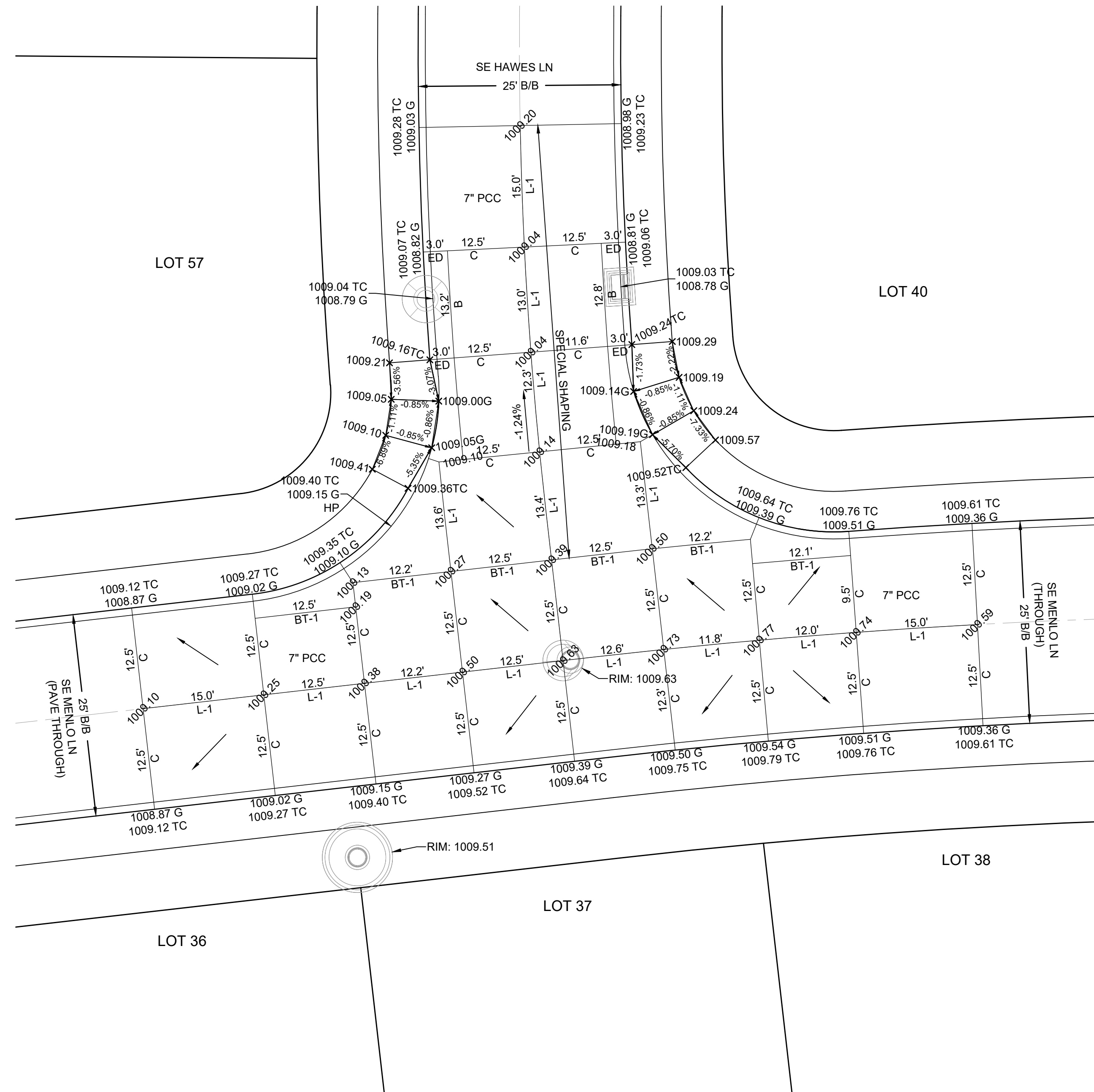
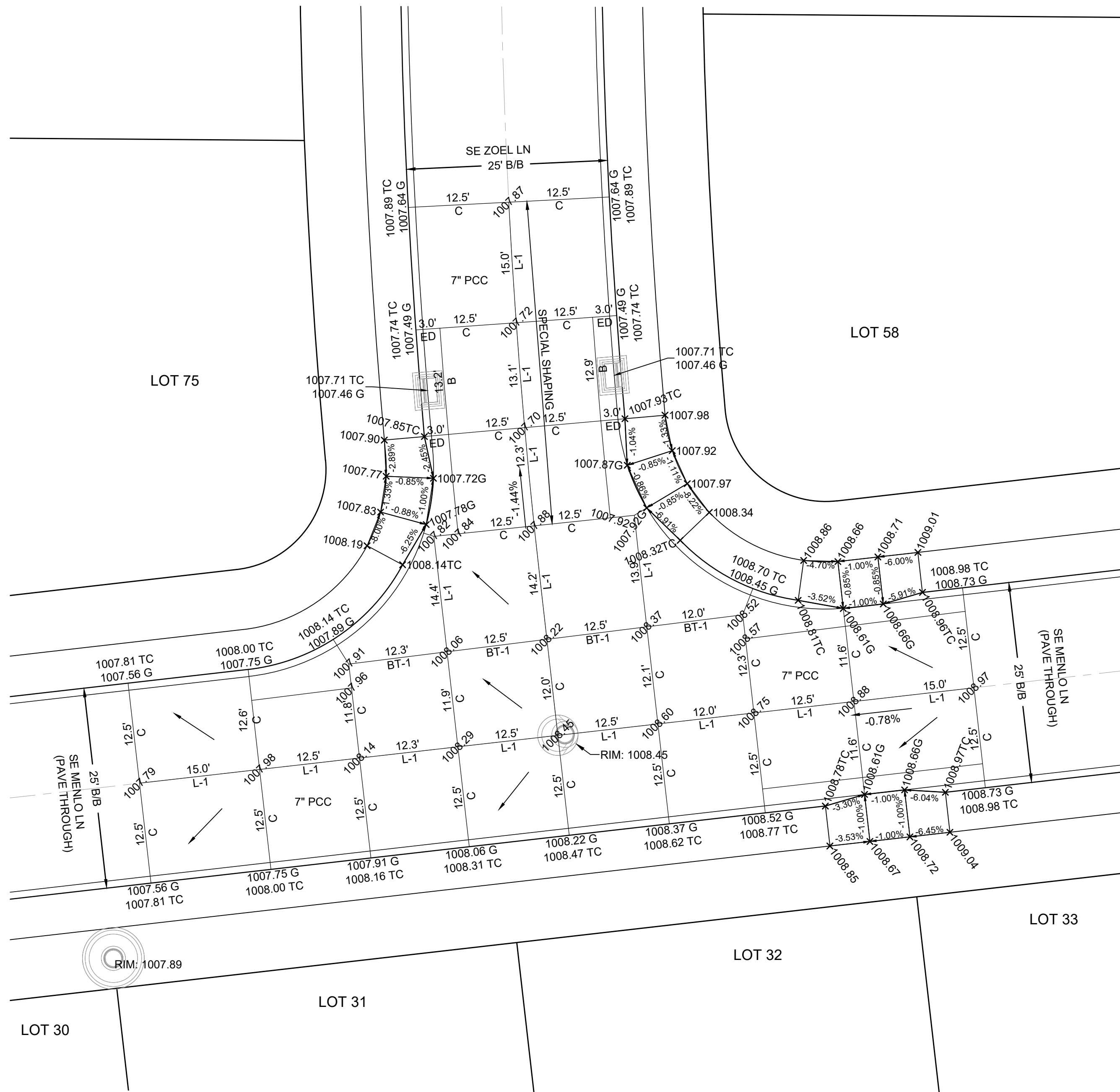
3	REVISED AS PER CITY COMMENTS	4-19-22	JWM
2	REVISED AS PER CITY COMMENTS	4-05-22	JWM
1	REVISED AS PER CITY COMMENTS	3-17-22	JWM
MARK	REVISION	DATE	BY
Engineer: EDC	Checked By: EDC	Scale: 1" = 10'	
Technician: JWM	Date: 2-11-22	T-R-S: TTN-RRW-SS	

Project No: 116.0698.01

MAPLE GROVE PLACE
INTERSECTION DETAILS
SNYDER & ASSOCIATES, INC.
 WAUKEE, IA
 2727 S.W. SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | www.snyder-associates.com



1/20/18, Project: 116.0698.C700 - 116098.DTL.dwg, JEREMY W. MCCORMACK, INTERSECTION DETAILS, 2022/01/18, 4:34 PM, ANSI FULL BLEED D (8.50 X 11.25 INCHES)



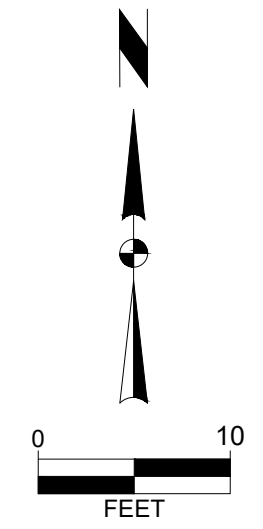
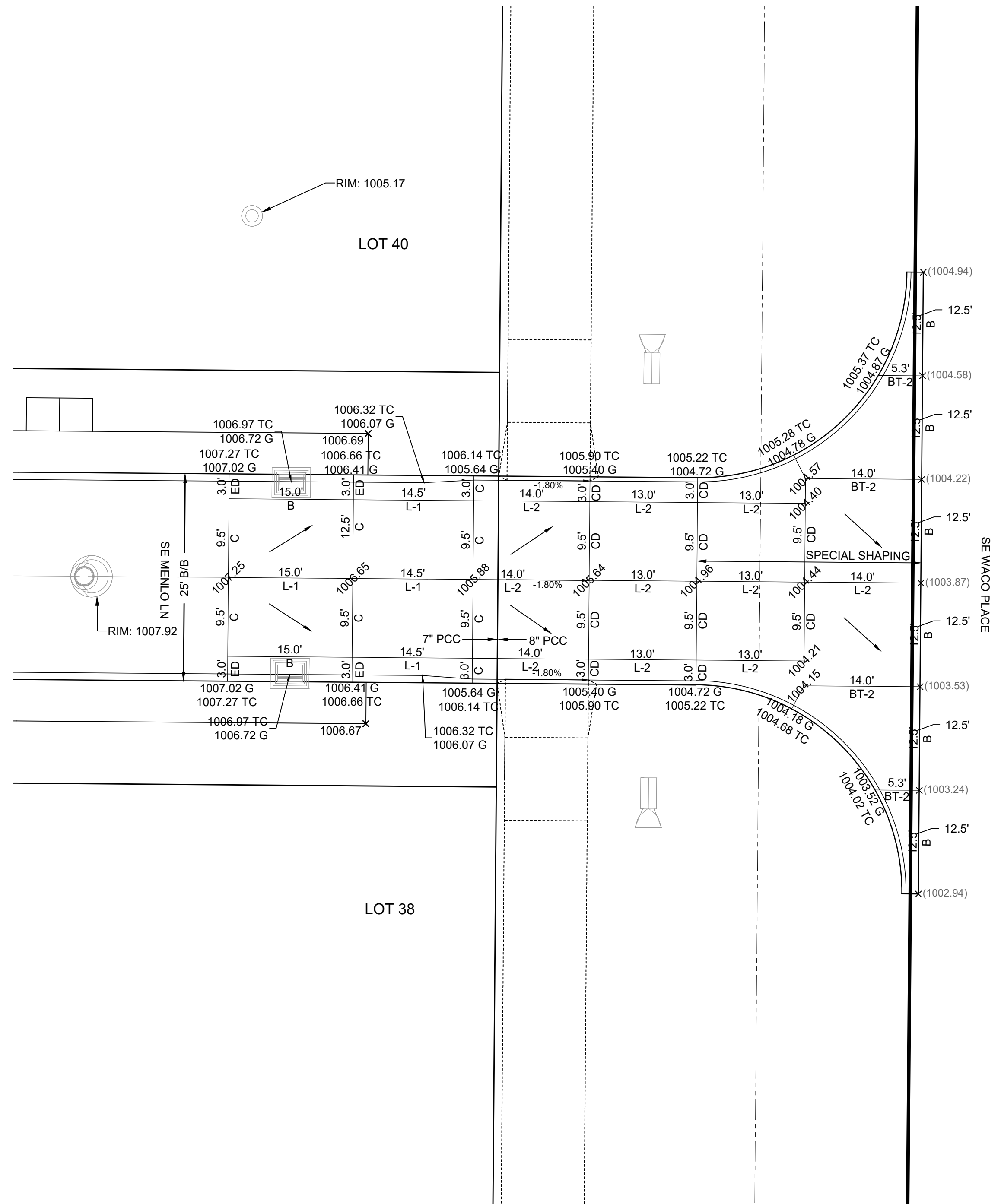
3	REVISED AS PER CITY COMMENTS	4-19-22	JWM
2	REVISED AS PER CITY COMMENTS	4-05-22	JWM
1	REVISED AS PER CITY COMMENTS	3-17-22	JWM
MARK	REVISION	DATE	BY
Engineer: EDC	Checked By: EDC	Scale: 1" = 10'	
Technician: JWM	Date: 2-11-22	T-R-S: TTN-RRW-SS	

MAPLE GROVE PLACE
INTERSECTION DETAILS
WAUKEE, IA
SNYDER & ASSOCIATES, INC.
 2727 S.W. SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | www.snyder-associates.com



Project No: 116.0698.01
 Sheet C702

1/20/18, Project: 116.0698.C703 - 116098.DTL.dwg, JEREMY W. ACCORONICK, INTERSECTION DETAILS, 2022/01/18, 4:34 PM, ANSI FULL BLEED D (8.50 X 11.00 INCHES)



**MAPLE GROVE PLACE
INTERSECTION DETAILS**

WAUKEE, IA

SNYDER & ASSOCIATES, INC.

2727 S.W. SNYDER BLVD
ANKENY, IOWA 50023
515-964-2020 | www.snyder-associates.com



Project No: 116.0698.01
Sheet C703

MARK	REVISION	DATE	BY
3	REVISED AS PER CITY COMMENTS	4-19-22	JWM
2	REVISED AS PER CITY COMMENTS	4-05-22	JWM
1	REVISED AS PER CITY COMMENTS	3-17-22	JWM

Engineer: EDC	Checked By: EDC	Scale: 1" = 10'
Technician: JWM	Date: 2-11-22	T-R-S: TTN-RRW-SS

Project No: 116.0698.01
Sheet C703

3	REVISED AS PER CITY COMMENTS	4-19-22	JWM
2	REVISED AS PER CITY COMMENTS	4-05-22	JWM
1	REVISED AS PER CITY COMMENTS	3-17-22	JWM
MARK	REVISION	DATE	BY
Engineer: EDC	Checked By: EDC	Scale: 1" = 20'	
Technician: JWM	Date: 2-11-22	T-R-S: TTN-RRW-SS	
Project No: 116.0698.01			
Sheet C800			

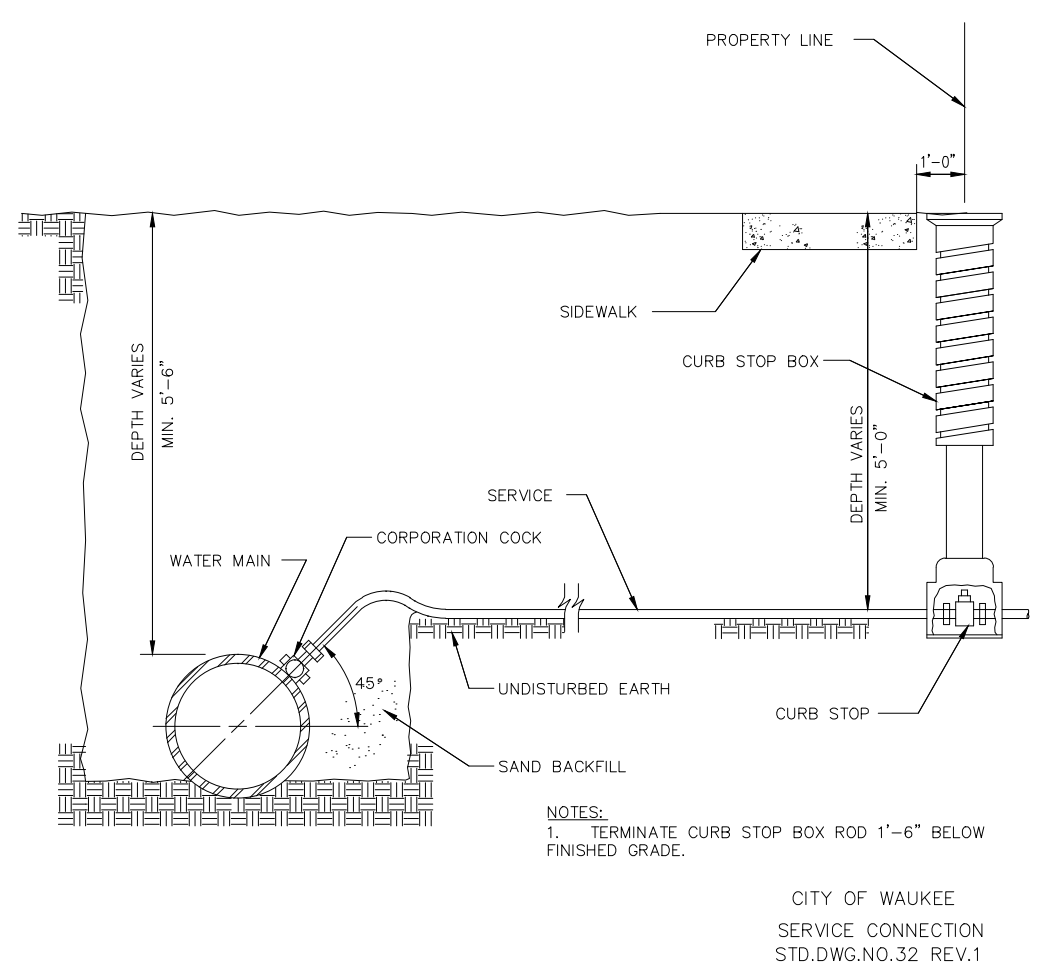
WAUKEE, IA

2727 S.W. SNYDER BLVD
ANKENY, IOWA 50023
515-964-2020 | www.snyder-associates.com

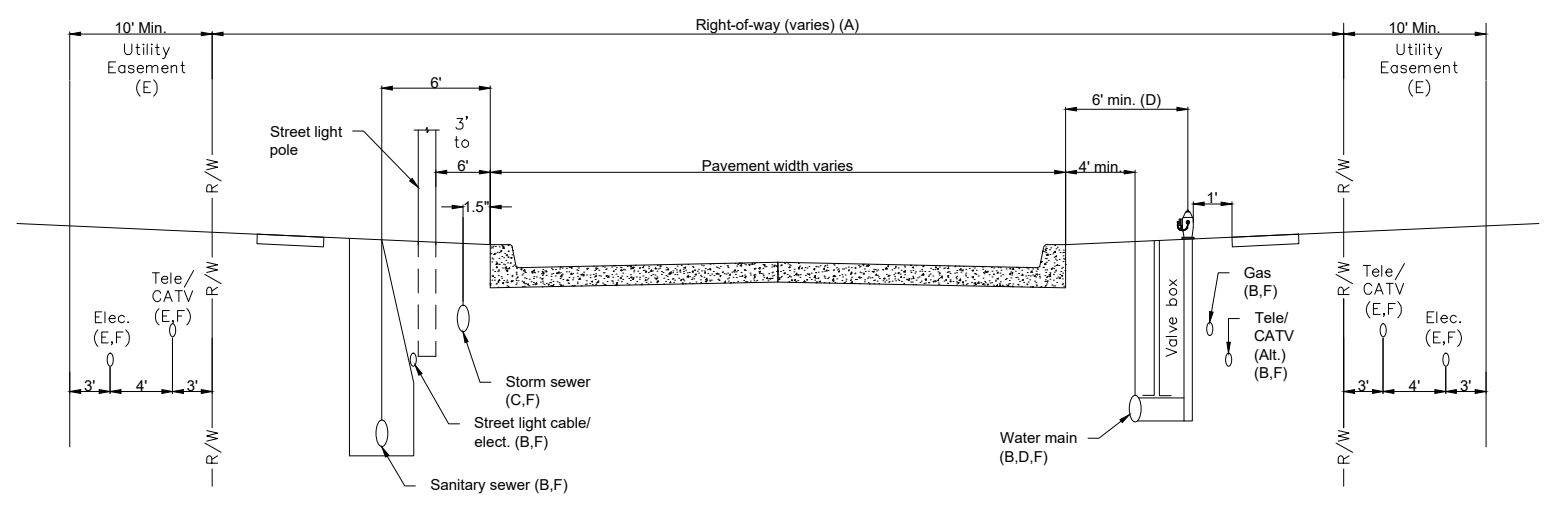
MAPLE GROVE PLACE

MISCELLANEOUS DETAILS

SNYDER & ASSOCIATES, INC.



4 CITY OF WAUKEE WATER SERVICE CONNECTION



GENERAL NOTES:

A. ROW width varies.

B. When utilities are in the ROW, the following should be adhered to utilities otherwise provided/approved:

- All utilities shall be buried. When overhead utilities are allowed to cross the roadway, then minimum vertical clearances are 20 feet for the main cable, and 18 feet for services.
- Telephone, cable TV, and water: install on the east and south side of the road.
- Gas and electric: install on the west and north side of the road.
- Sanitary sewer: install on the west and north side of the road.

C. Storm Sewers: The normal location for a storm sewer is 1.5 feet from back of curb. When combination manholes and intakes are used, the location increases to 5 feet.

D. Water mains, Valves, and Hydrants:

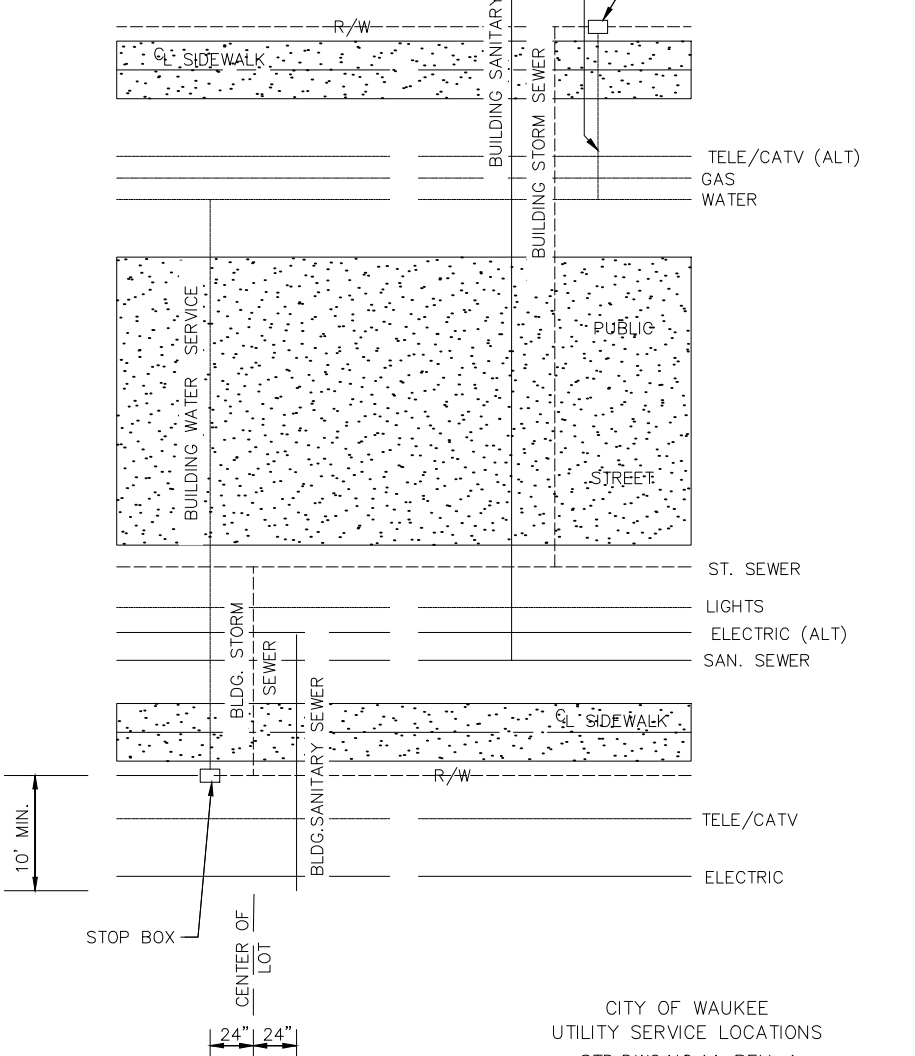
- The normal water main location is 4 feet behind the back of curb. In areas of combination manholes and intakes, this distance is increased to a minimum of 6 feet.
- For local streets and minor collectors with limited ROW, use a 90° anchoring elbow between the hydrant tee and the valve. For maintenance purposes, the minimum distance between the centerline of the valve box and the face of the hydrant is 18 inches.

E. Utility Easement: Telephone, fiber optic, cable TV, electric, and gas lines should be located in front or rear yard easements. Normally telephone and cable TV lines are placed in rear yard easements and fiber optic, electric, and gas lines in front yard easements. Upon approval of the jurisdiction, these utilities may be placed in the right of way at the alternative location when easements do not exist.

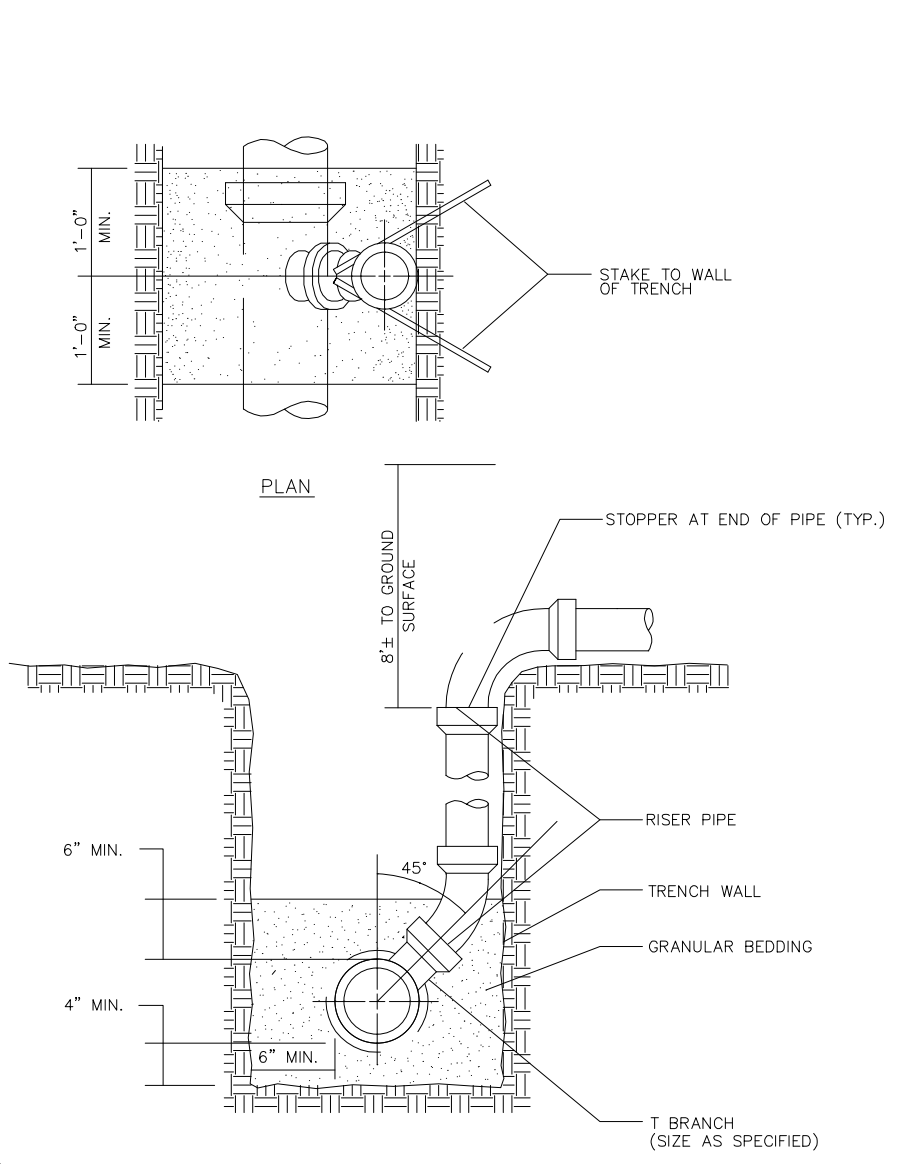
F. Depth of bury:

- Cable TV (CATV): 3 feet minimum.
- Electric (Elec.): The recommended depth of bury for electric cable is 4 feet. The minimum depth of bury for electric lines as per the National Electric Safety Code is:
 - 6kV to 5kV cable - 30 inches minimum.
 - Up to 600-volt cable - 24 inches minimum.
 - Street light cable - 18 inches minimum.
- Gas: 3 feet minimum.
- Water: varies.
- Sanitary Sewer: Varies.
- Storm sewer: Varies. Approximately 4 feet.
- Telephone (Tele./Fiber optic (F.O.)): 3 feet minimum.

3 CITY OF WAUKEE UTILITY SERVICE LOCATIONS



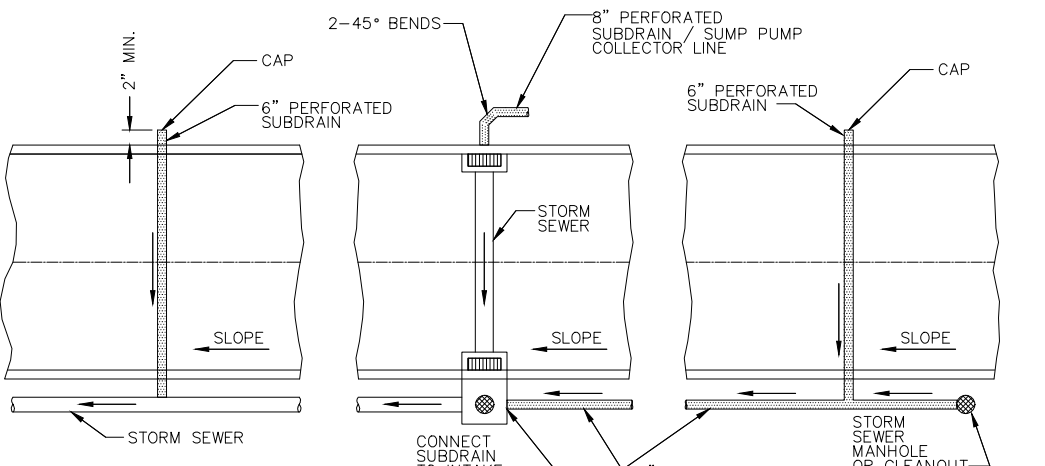
2 CITY OF WAUKEE UTILITY SERVICE LOCATIONS



NOTES:

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

1 CITY OF WAUKEE RISER



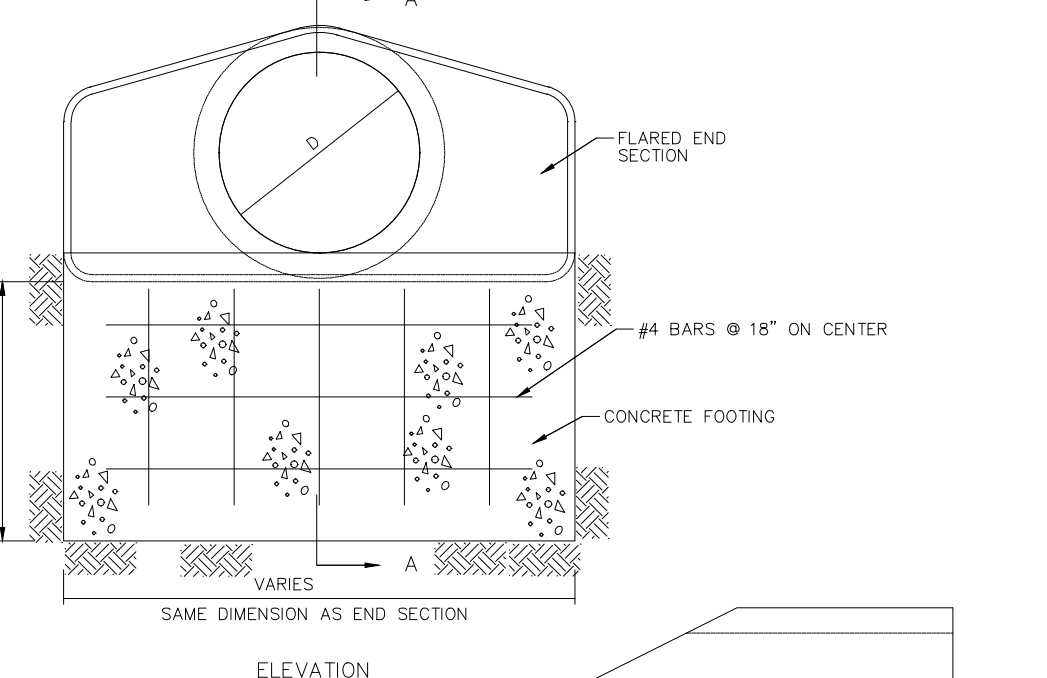
NOTE:

DRILL ALL STORM SEWER AND PLACE NON-SHRINK GROUT COLLAR AT CONNECTION.

NOTES:

- SLOPE SUBDRAINS TO DRAIN.
- 6" BACK OF CURB SUBDRAINS AND ALL BACK AND SIDE YARD SUBDRAINS USE P.A. GRAVEL FOR POROUS BACKFILL.
- DIRECT PERFORATIONS DOWN FOR SUBDRAINS AND UP FOR SUMP PUMP COLLECTOR LINES.

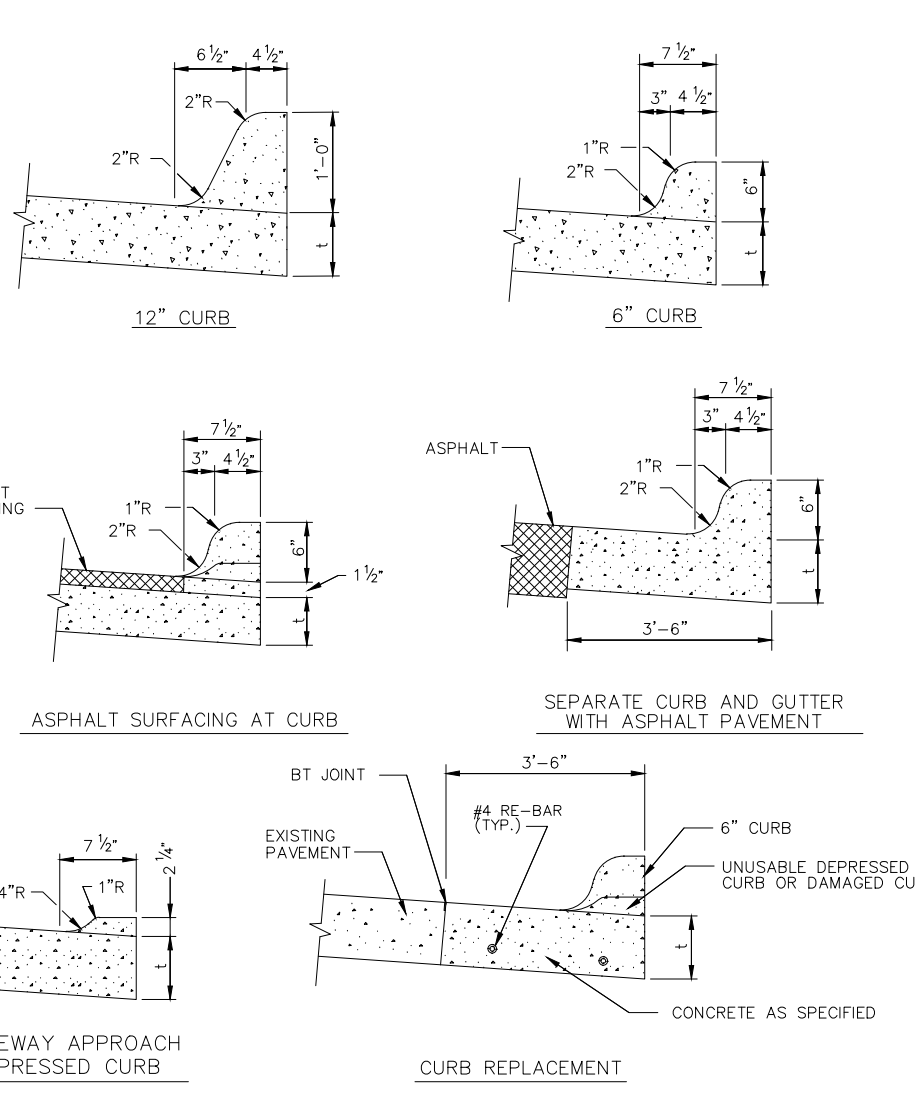
7 CITY OF WAUKEE SUBDRAINS



NOTES:

- D-DIFFERENCE IN ELEVATION BETWEEN FLARED END INVERT AND DRAINAGE WAY CHANNEL FLOW LINE 300 FT DOWNSTREAM OF FLARED END; MINIMUM D=42"
- INSTALL 3" WIDE CLAY WATERSTOP AT FLARED END SECTION PIPE JOINT.
- TRASH GUARDS ARE NOT ALLOWED ON PIPES 48" OR LARGER.

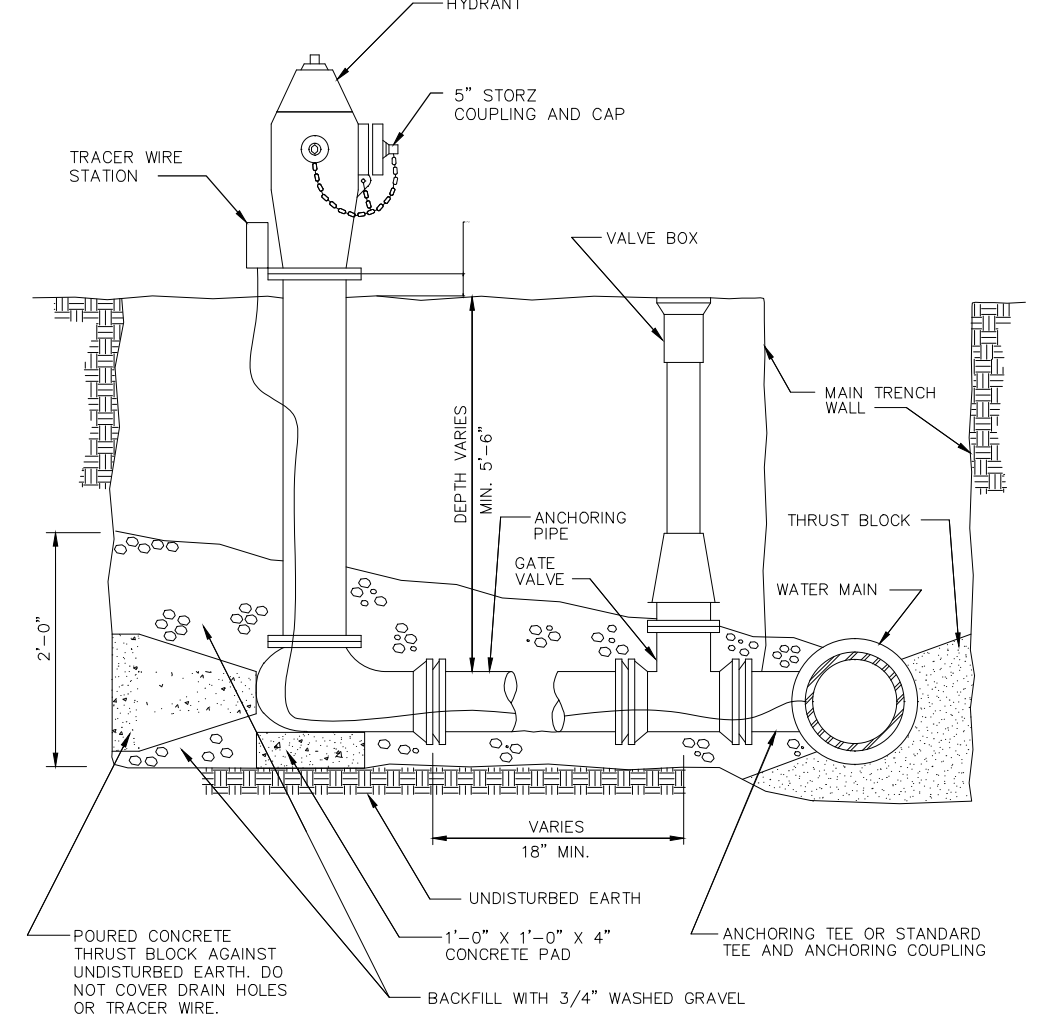
6 CITY OF WAUKEE FLARED END SECTION



NOTE:

1. = PAVEMENT THICKNESS IN INCHES; AS SPECIFIED.

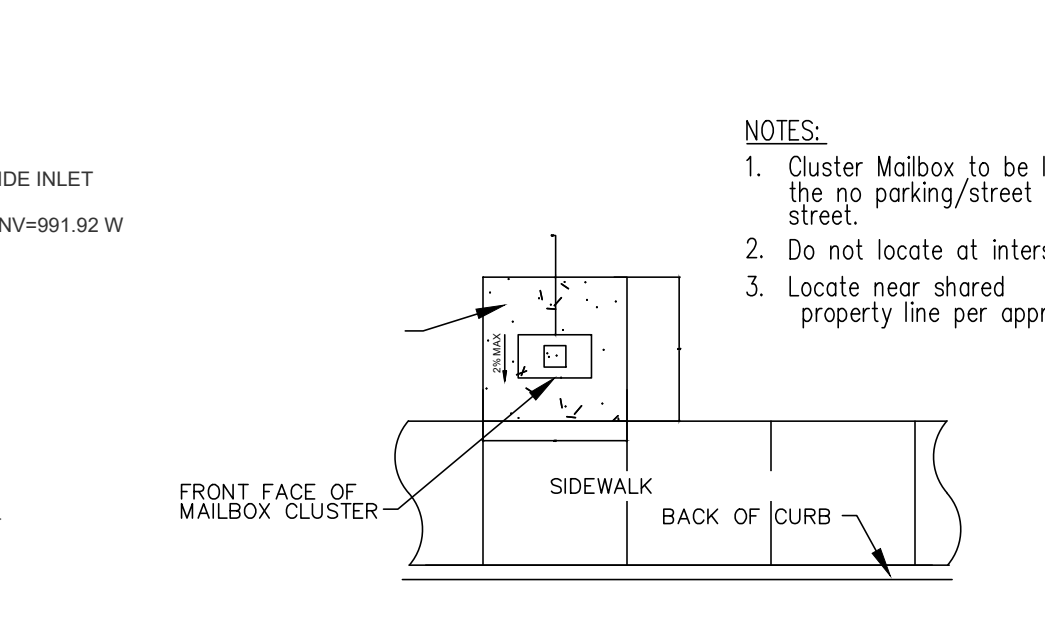
5 CITY OF WAUKEE CURB DETAILS



NOTES:

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

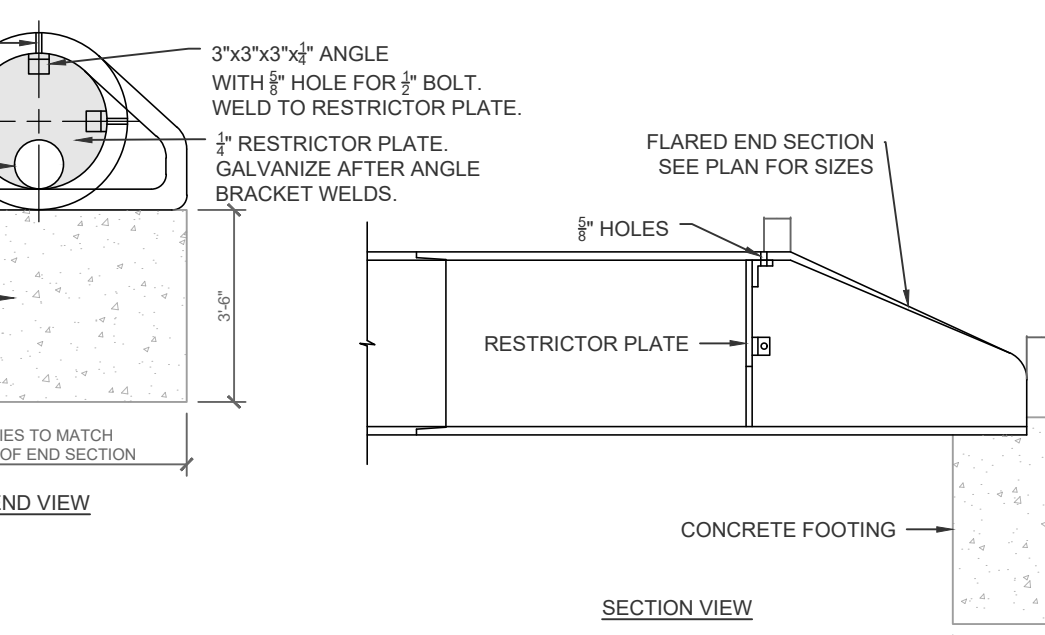
8 CITY OF WAUKEE HYDRANT



NOTES:

- Cluster Mailbox to be located on the no parking/street light side of street.
- Do not locate at intersection.
- Locate near shared property line per approved plan.

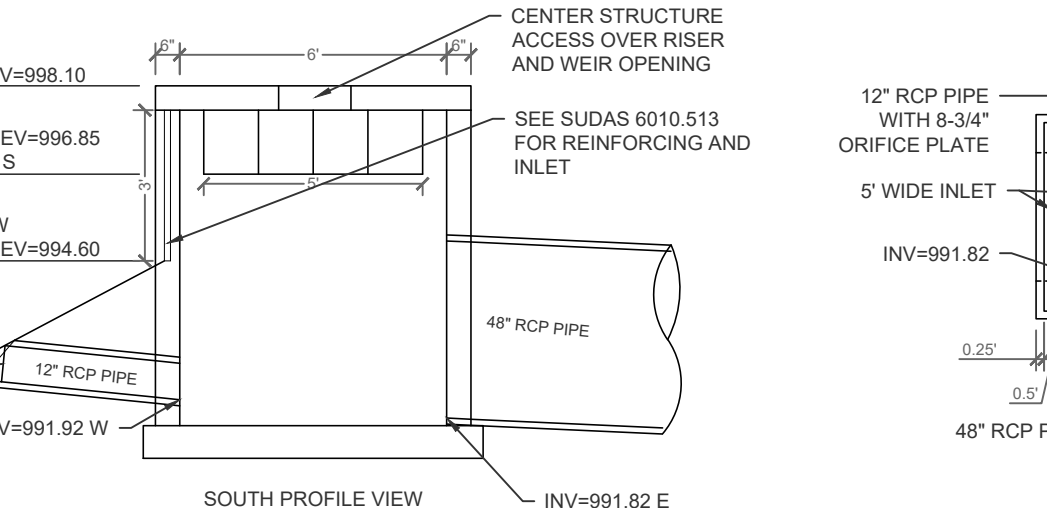
10 CITY OF WAUKEE CLUSTER MAILBOX PAD DETAIL



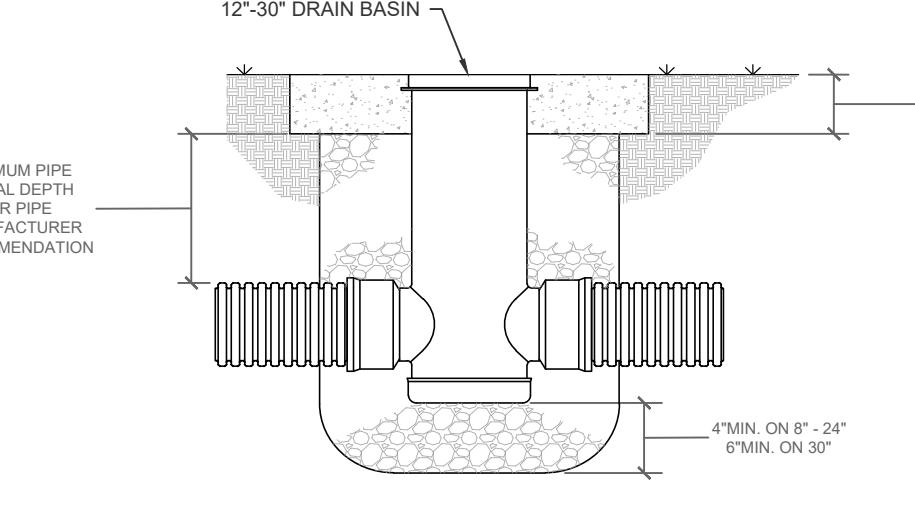
NOTES:

- Restrictor Plate to be located on the no parking/street light side of street.
- Do not locate at intersection.
- Locate near shared property line per approved plan.

10 CITY OF WAUKEE CIRCULAR ORIFICE PLATE DETAIL (ST-24A)



9 CITY OF WAUKEE ST-24, SW-513 OUTLET STRUCTURE



9 CITY OF WAUKEE NYLOPLAST DRAIN BASIN DETAIL