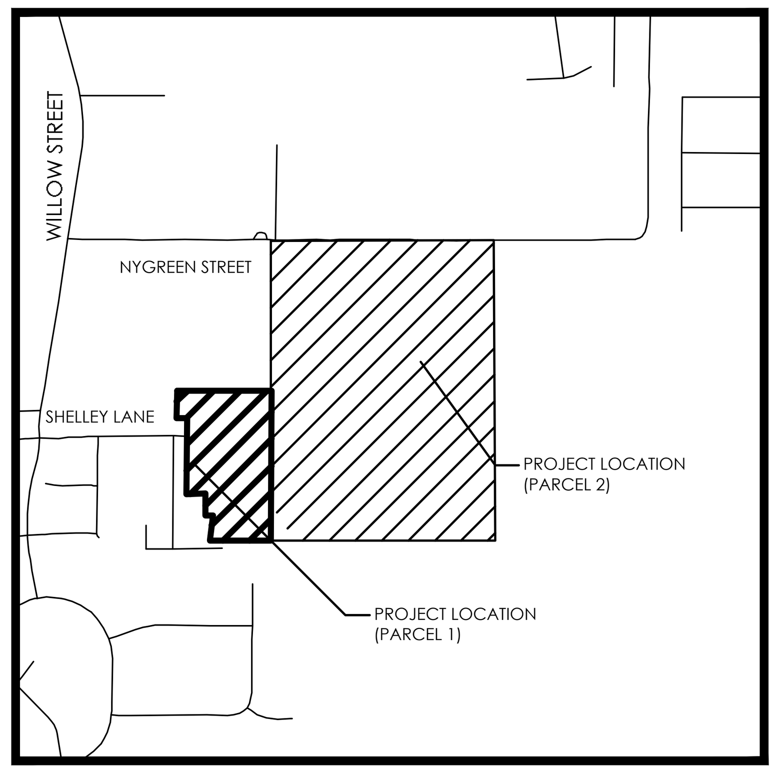
HERITAGE FARMS PHASE 1

PREPARED FOR:

GTM BUILDERS

LOCATED IN:

GRANTSVILLE CITY, UT



VICINITY MAP

NTS

CONTACTS

ENGINEER & SURVEYOR
FOCUS ENGINEERING & SURVEYING, LLC
6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047
(801) 352-0075
PROJECT MANAGER: MATT CHRISTENSEN
SURVEY MANAGER: TIM ATWOOD

OWNER/DEVELOPER
GTM BUILDERS
1676 PROGRESS WAY
TOOELE, UTAH 84074
(801) 301-8591
CONTACT: SHAWN HOLSTE

GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.

2. ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.

3. ALL CONSTRUCTION SHALL ADHERE TO GRANTSVILLE CITY STANDARD PLANS AND SPECIFICATIONS.

4. ALL UTILITIES AND ROAD IMPROVEMENTS SHOWN ON THE PLANS HEREIN SHALL BE CONSTRUCTED USING REFERENCE TO SURVEY CONSTRUCTION STAKES PLACED UNDER THE SUPERVISION OF A PROFESSIONAL LICENSED SURVEYOR WITH A CURRENT LICENSE ISSUED BY THE STATE OF UTAH. ANY IMPROVEMENTS INSTALLED BY ANY OTHER VERTICAL OR HORIZONTAL REFERENCE WILL NOT BE ACCEPTED OR CERTIFIED BY THE ENGINEER OF RECORD.

5. THIS DRAWING SET IS SCALED TO BE PRINTED ON A 24" X 36" SIZE OF PAPER (ARCH. D). IF PRINTED ON A SMALLER PAPER SIZE, THE DRAWING WILL NOT BE TO SCALE AND SHOULD NOT BE USED TO SCALE MEASUREMENTS FROM THE PAPER DRAWING. ALSO USE CAUTION, AS THERE MAY BE TEXT OR DETAIL THAT MAY BE OVERLOOKED DUE TO THE SMALL SIZE OF THE DRAWING.

NOTICE

BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER.

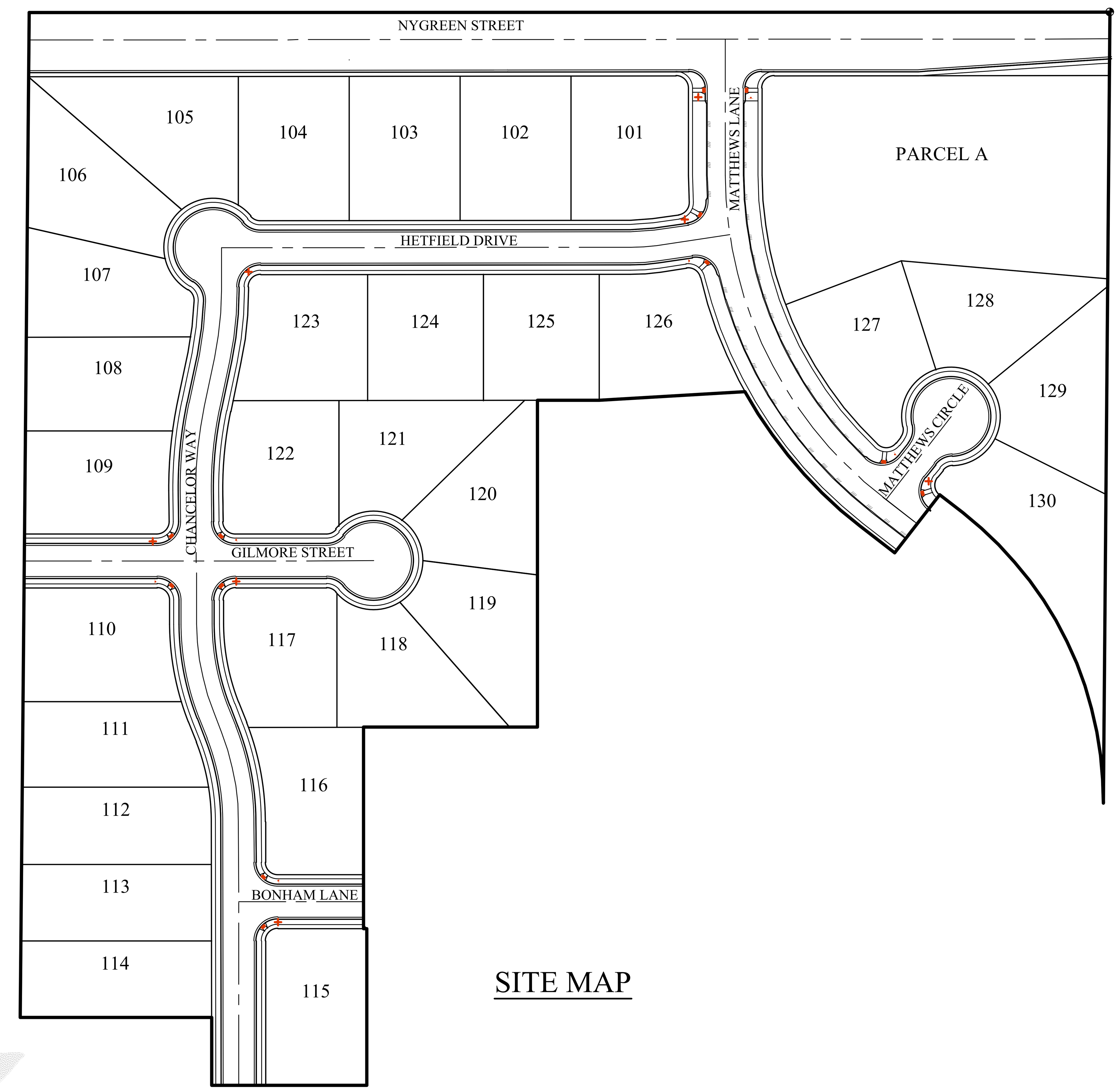
"APPROVED FOR CONSTRUCTION"

BY:________________ DATE:__________
GRANTSVILLE CITY PUBLIC WORKS DIRECTOR

APPROVED BY CITY ENGINEER: GRANTSVILLE CITY, UTAH
FOR PUBLIC IMPROVEMENTS ONLY (SHEETS _______)

BY:________________ DATE:__________
GRANTSVILLE CITY ENGINEER

"Approval of these plans does not release the developer from responsibility for correction of mistakes, errors or omissions contained therein. If during the course of construction, the public interest requires a modification or departure from the city specifications, or the approved plans, the city shall have he authority to require such modification or departure, and specify the manner which the same is made"



SITE MAP

ENGINEER'S NOTES TO CONTRACTOR

1. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS, TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS. IF UTILITY LINES ARE ENCOUNTERED DURING CONSTRUCTION THAT ARE NOT IDENTIFIED BY THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.

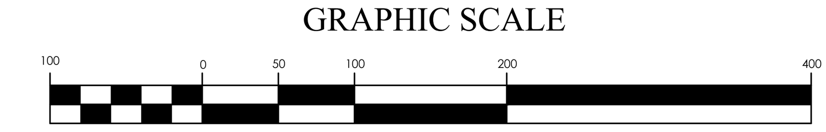
2. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE CITY, THE OWNER, AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

3. UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

4. ALL CONTOUR LINES SHOWN ON THE PLANS ARE AN INTERPRETATION BY CAD SOFTWARE OF FIELD SURVEY WORK PERFORMED BY A LICENSED SURVEYOR. DUE TO THE POTENTIAL DIFFERENCES IN INTERPRETATION OF CONTOURS BY VARIOUS TYPES OF GRADING SOFTWARE BY OTHER ENGINEERS OR CONTRACTORS, FOCUS DOES NOT GUARANTEE OR WARRANTY THE ACCURACY OF SUCH LINEWORK. FOR THIS REASON, FOCUS WILL NOT PROVIDE ANY GRADING CONTOURS IN CAD FOR ANY TYPE OF USE BY THE CONTRACTOR. SPOT ELEVATIONS AND PROFILE ELEVATIONS SHOWN IN THE DESIGN DRAWINGS GOVERN ALL DESIGN INFORMATION ILLUSTRATED ON THE APPROVED CONSTRUCTION SET. CONSTRUCTION EXPERTISE AND JUDGMENT BY THE CONTRACTOR IS ANTICIPATED BY THE ENGINEER TO COMPLETE BUILD-OUT OF THE INTENDED IMPROVEMENTS.

Sheet List Table

GRAPHIC SCALE



(IN FEET)
1 inch = 100ft.

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

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ENGINEERING AND SURVEYING, LLC
6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
www.focusutah.com

LICENSED PROFESSIONAL ENGINEER
No. 8028950-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
COVER

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
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COVER

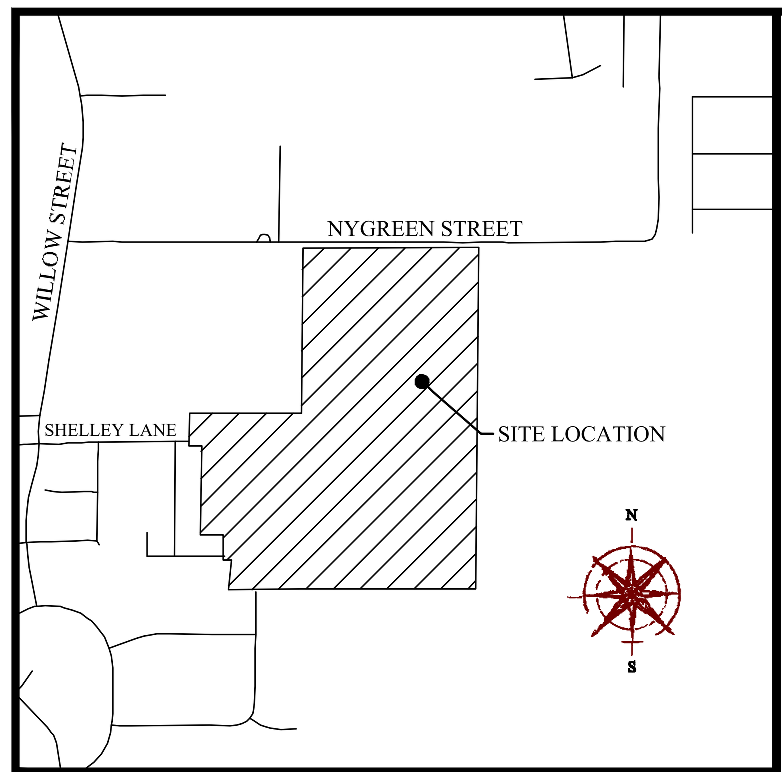
Scale: 1"=100'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C1	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C1 COVER.dwg

HERITAGE FARMS SUBDIVISION, PHASE 1

FINAL PLAT

LOCATED IN THE NW 1/4 OF SECTION 8, T3S, R5W,
SALT LAKE BASE & MERIDIAN
GRANTSVILLE CITY, TOOELE COUNTY, UTAH



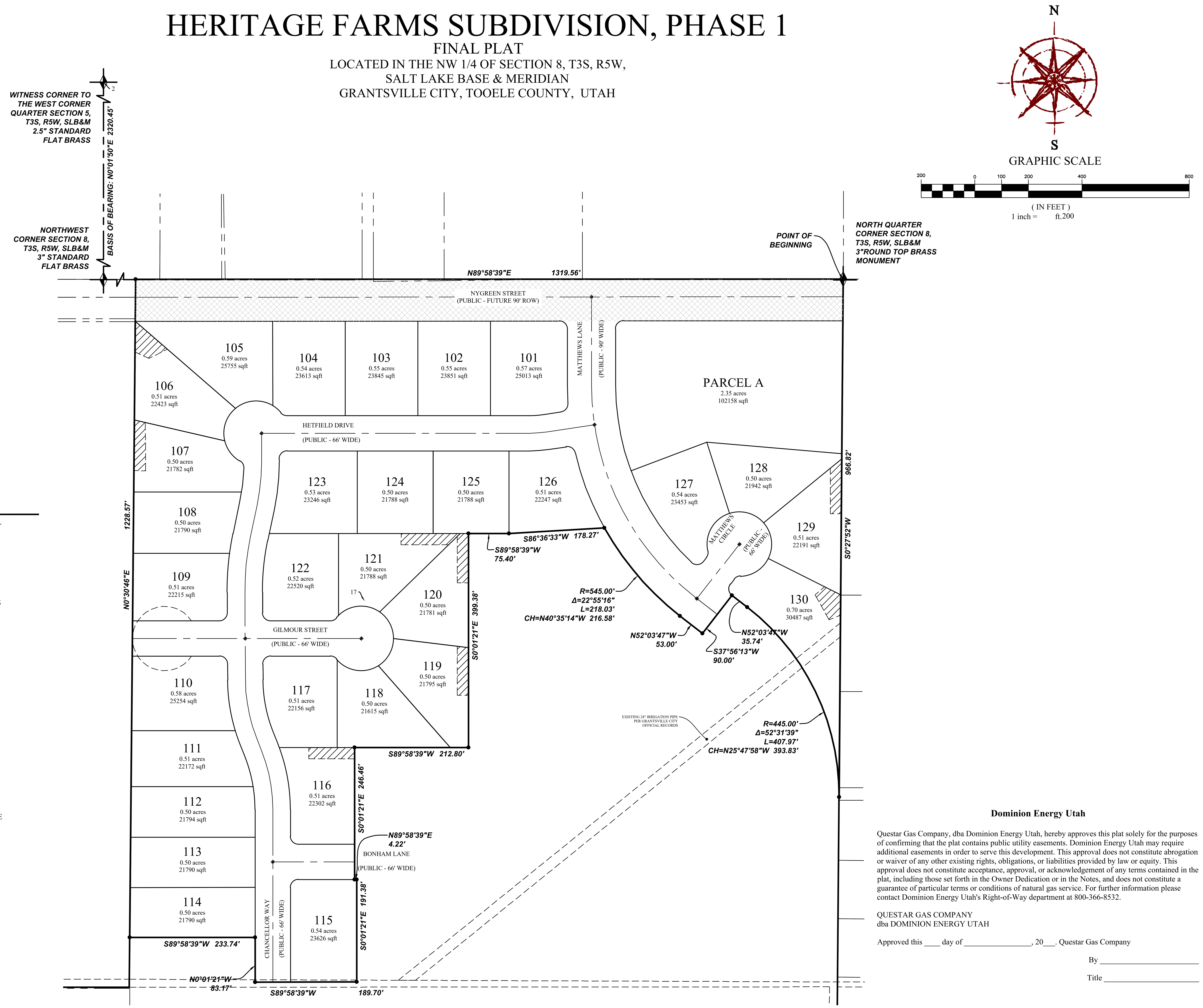
VICINITY MAP
N.T.S

LEGEND

BOUNDARY
SECTION LINE
EASEMENT
RIGHT-OF-WAY LINE
CENTERLINE
BUILDING SETBACK
EXISTING PROPERTY LINE
SECTION MONUMENT (FOUND)
STREET MONUMENT (TO BE SET)
BOUNDARY MARKERS
RETENTION POND EASEMENT
ROW DEDICATION AREA

GENERAL NOTES

1. A 5/8" X 24" REBAR & CAP (FOCUS ENGINEERING) TO BE SET AT ALL LOT CORNERS. NAILS OR PLUGS TO BE SET IN TOP BACK OF CURB AT THE EXTENSION OF SIDE LOT LINES, IN LIEU OF REBAR AND CAPS AT FRONT LOT CORNERS.
2. PARCEL A TO BE OWNED AND MAINTAINED BY THE HOA.
3. PARCEL A INTENDED TO BE STORM DRAIN RETENTION AREAS.
4. NO SECONDARY ACCESS ONTO NYGREEN STREET NOR MATTHEWS LANE.
5. 15' WIDE PERPETUAL UNDERGROUND PIPELINE EASEMENT TO BE VACATED WITH IRRIGATION LINE BEING RE-LOCATED TO RIGHT-OF-WAY.
6. LOTS 111-122, 124-127, & 129-130 PROPERTY OWNERS AGREE TO MAINTAIN THE RETENTION AREAS AS APPROVED BY THE CITY ENGINEER, AND CONSTRUCTED BY THE DEVELOPER/BUILDER, AND THAT THEY WILL NOT ALTER THE GRADING, NOR ALLOW ANY DRAINAGE TO DISCHARGE ON THE NEIGHBORING PROPERTIES, OR PUT ANY IMPERVIOUS SURFACES IN THE AREA SHOWN ON THE PLAT. THIS REQUIREMENT WILL RUN WITH THE PROPERTY AND APPLY TO ALL FUTURE PROPERTY OWNERS. IF AT ANYTIME THE PROPERTY OWNER FAILS TO PROPERLY MAINTAIN THE BASIN TO THE REASONABLE SATISFACTION OF THE CITY ENGINEER, GRANTSVILLE CITY MAY MAKE ALL NECESSARY IMPROVEMENTS, CORRECTIONS, REPAIRS, OR REPLACEMENTS AND COLLECT FROM THE PROPERTY OWNER ALL INCURRED COSTS, FEE, AND INTEREST.
7. LOTS 111-122, 124-127, & 129-130 PROPERTY OWNERS AND ITS SUCCESSORS AND ASSIGNS HEREBY GRANTS A PERPETUAL PRIVILEGE AND EASEMENT TO GRANTSVILLE CITY TO ACCESS THE STORM DRAIN RETENTION AREA AT ANY TIME FOR THE PURPOSE OF MAINTENANCE, INSPECTION, REPAIR, OR REPLACEMENT OF ANY STORM WATER OR OTHER UTILITY ABOVE OR BELOW THE GROUND, INCLUDING BUT NOT LIMITED TO THE STORM DRAIN RETENTION AREA.



SURVEYOR'S CERTIFICATE

I, Justin Lundberg, do hereby certify that I am a Professional Land Surveyor, and that I hold License No. 12554439 in accordance with Title 58, Chapter 22 of Utah State Code. I further certify by authority of the owners(s) that I have completed a Survey of the property described on this Plat in accordance with Section 17-23-17 of said Code, and have subdivided said tract of land into lots, parcels, streets, and easements, and the same has, or will be correctly surveyed, staked and monumented on the ground as shown on this Plat.

FOR REVIEW

Justin Lundberg
PROFESSIONAL LAND SURVEYOR
LICENSE NO. 12554439

DATE

BOUNDARY DESCRIPTION

A part of the NW1/4 of Section 8, Township 3 South, Range 5 West, Salt Lake Base & Meridian being more particularly described as follows:

Beginning at a point located on the center of a 3" rounded-top brass monument marking the North 1/4 Corner of Section 8, Township 3 South, Range 5 West, Salt Lake Base & Meridian, thence S00°27'52"W 966.82 feet to and along the westerly Subdivision line of President's Park Subdivision, recorded on December 16, 2021 as Entry No. 562369 in Book 21 at Page 110 of official records; thence Northwesterly along the arc of a non-tangent curve to the left having a radius of 445.00 feet (radius bears: N89°32'08"W) a distance of 407.97 feet through a central angle of 52°31'39" Chord: N25°47'58"W 393.83 feet; thence N52°03'47"W 35.74 feet; thence S37°56'13"W 90.00 feet; thence N52°03'47"W 53.00 feet; thence Northwesterly along the arc of a non-tangent curve to the right having a radius of 545.00 feet (radius bears: N37°57'08"E) a distance of 218.03 feet through a central angle of 22°55'16" Chord: N40°35'14"W 216.58 feet; thence S86°36'33"W 178.27 feet; thence S89°58'39"W 75.40 feet; thence S00°01'21"E 399.38 feet; thence S89°58'39"W 212.80 feet; thence S00°01'21"E 246.46 feet; thence N89°58'39"E 4.22 feet; thence S00°01'21"E 191.38 feet; thence S89°58'39"W 189.70 feet; thence N00°01'21"W 83.17 feet; thence S89°58'39"W 233.74 feet; thence N00°30'46"E 1,228.57 feet; thence N89°58'39"E 1,319.56 feet to the point of beginning.

Contains: 1,113,459 square feet or 25.56 acres+/-

OWNER'S DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT THE UNDERSIGNED ARE THE OWNERS OF THE HEREON DESCRIBED TRACT OF LAND AND HEREBY CAUSE THE SAME TO BE DIVIDED INTO LOTS, PARCELS AND STREETS TOGETHER WITH EASEMENTS AS SET FORTH HEREAFTER TO BE KNOWN AS

HERITAGE FARMS SUBDIVSION, PHASE 1

THE UNDERSIGNED OWNERS HEREBY DEDICATE TO GRANTSVILLE CITY ALL THOSE TRACTS OF LAND DESIGNATED ON THIS PLAT AS STREETS, THE SAME TO BE USED AS PUBLIC THOROUGHFARES FOREVER. THE UNDERSIGNED OWNERS ALSO HEREBY CONVEY TO GRANTSVILLE CITY AND TO ANY AND ALL PUBLIC UTILITY COMPANIES A PERPETUAL, NON-EXCLUSIVE EASEMENT OVER THE PUBLIC UTILITY AND DRAINAGE EASEMENTS SHOWN ON THIS PLAT, THE SAME TO BE USED FOR DRAINAGE AND THE INSTALLATION, MAINTENANCE AND OPERATION OF UTILITY SERVICE LINES AND FACILITIES.

IN WITNESS WHEREOF _____________ HAVE HEREUNTO SET ______________________________
HAND THIS ________ DAY OF __________ A.D. 20__

Dominion Energy Utah

Questar Gas Company, dba Dominion Energy Utah, hereby approves this plat solely for the purposes of confirming that the plat contains public utility easements. Dominion Energy Utah may require additional easements in order to serve this development. This approval does not constitute abrogation or waiver of any other existing rights, obligations, or liabilities provided by law or equity. This approval does not constitute acceptance, approval, or acknowledgement of any terms contained in the plat, including those set forth in the Owner Dedication or in the Notes, and does not constitute a guarantee of particular terms or conditions of natural gas service. For further information please contact Dominion Energy Utah's Right-of-Way department at 800-366-8532.

QUESTAR GAS COMPANY
dba DOMINION ENERGY UTAH

Approved this ____ day of ________________, 20___. Questar Gas Company

By ____________________

Title ____________________

DATE: 5/31/2022

LIMITED LIABILITY ACKNOWLEDGMENT

STATE OF UTAH
S.S.
COUNTY OF __________

ON THE ____ DAY OF ____________________ A.D. 20____ PERSONALLY APPEARED BEFORE ME , THE UNDERSIGNED NOTARY PUBLIC, IN AND FOR THE COUNTY OF ____________________, IN SAID STATE OF UTAH, ____________________, WHO AFTER BEING DULY SWORN, ACKNOWLEDGED TO ME THAT HE/SHE IS THE ____________ OF ____________ L.L.C., A UTAH L.L.C. AND THAT HE/SHE SIGNED THE OWNER'S DEDICATION FREELY AND VOLUNTARILY FOR AND IN BEHALF OF SAID LIMITED LIABILITY COMPANY FOR THE PURPOSES THEREIN MENTIONED.

MY COMMISSION EXPIRES:______________ A NOTARY PUBLIC COMMISSIONED IN UTAH RESIDING IN ___________ COUNTY

MY COMMISSION No.____________________

PRINTED FULL NAME OF NOTARY

PREPARED FOR

OWNER/DEVELOPER
GTM BUILDERS
1676 PROGRESS WAY
TOOELE, UT 84074
(435)849-5409
CONTACT: SHAWN HOLSTE

CITY ATTORNEY

APPROVED AS TO FORM ON THIS ________
DAY OF ________________ A.D. 20____.

GRANTSVILLE CITY ATTORNEY

TOOELE COUNTY TREASURER

APPROVED THIS__________DAY OF____________________ A.D. 20________BY THE TOOELE COUNTY TREASURER. PROPERTY TAXES DUE AND OWING HAVE BEEN PAID IN FULL.

TOOELE COUNTY TREASURER

CITY MAYOR

APPROVED THIS____DAY OF____________________ A.D. 20________ BY THE GRANTSVILLE CITY MAYOR:

ATTEST: CITY RECORDER MAYOR

RECORD OF SURVEY

PER STATE STATUTE 17-23-17, A SURVEY THAT INCLUDES THE LANDS SHOWN HEREON HAS BEEN COMPLETED AND FILED IN THE OFFICE OF THE TOOELE COUNTY SURVEYOR AND ASSIGNED FILE No. __________________.

HERITAGE FARMS SUBDIVISION, PHASE 1

FINAL PLAT

LOCATED IN THE NW 1/4 OF SECTION 8, T3S, R5W,
SALT LAKE BASE & MERIDIAN
GRANTSVILLE CITY, TOOELE COUNTY, UTAH

PREPARED BY

FOCUS
ENGINEERING AND SURVEYING, LLC
6949 SOUTH HIGH TECH DRIVE SUITE 200
MIDVALE, UT 84047 PH: (801) 352-0075
www.focusutah.com

GRANTSVILLE CITY PUBLIC WORKS

APPROVED THIS _________ DAY OF ______A.D. 20__
BY THE DIRECTOR OF PUBIC WORKS FOR GRANTSVILLE CITY

DIRECTOR, GRANTSVILLE CITY PUBLIC WORKS

GRANTSVILLE CITY FIRE DEPARTMENT

APPROVED THIS _________ DAY OF ______A.D. 20__
BY THE GRANTSVILLE CITY FIRE DEPARTMENT

GRANTSVILLE CITY FIRE DEPARTMENT

GRANTSVILLE CITY PLANNING COMMISSION

APPROVED THIS _________ DAY OF__________ A.D. 20__ BY THE GRANTSVILLE CITY PLANNING COMMISSION.

CHAIRMAN, GRANTSVILLE CITY PLANNING COMMISSION

TOOELE COUNTY SURVEYOR

APPROVED THIS ________ DAY OF________ A.D. 20__

ROS #

TOOELE COUNTY SURVEY DIRECTOR

GRANTSVILLE CITY ENGINEER

APPROVED THIS _________ DAY OF
_________ A.D. 20__

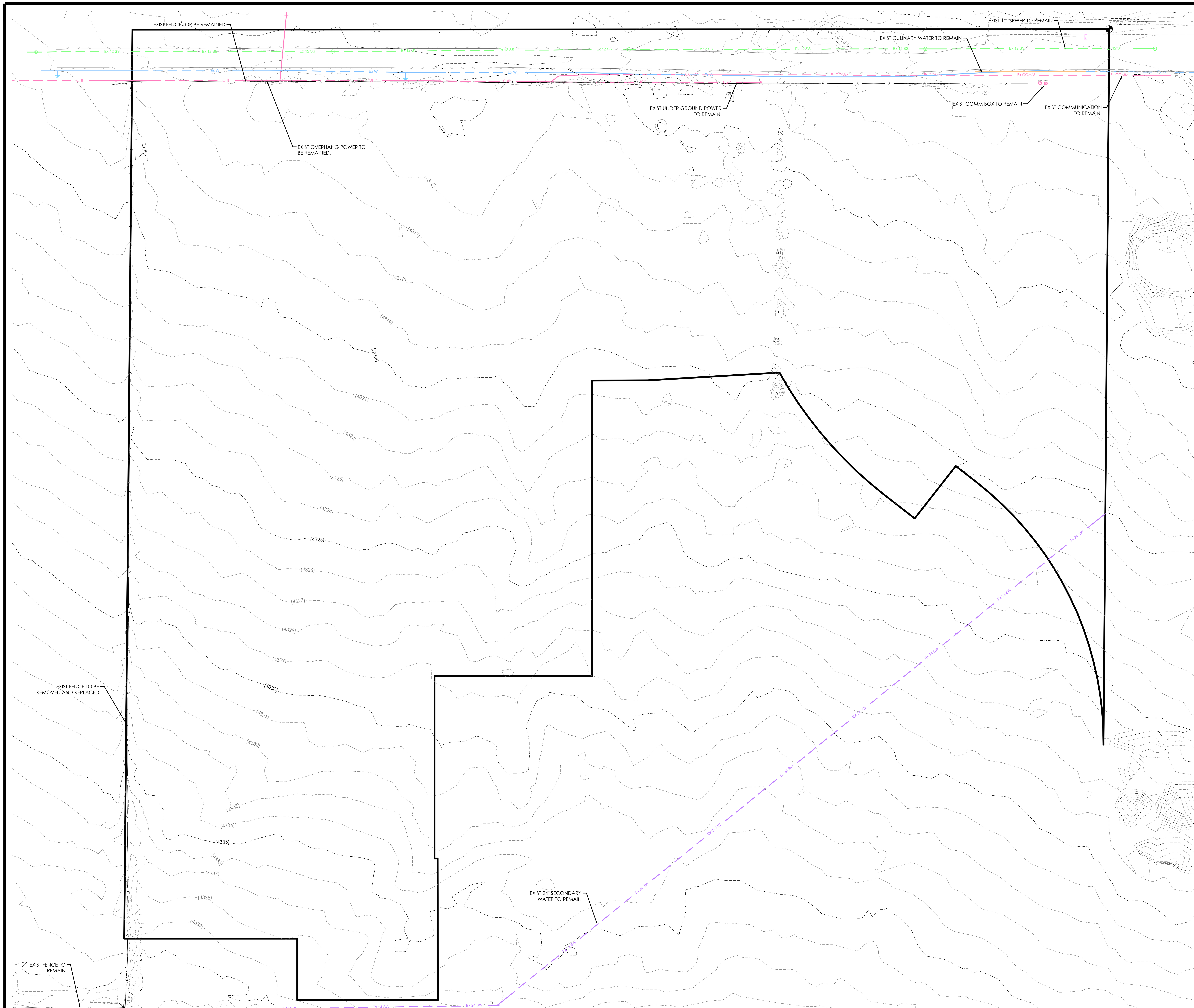
GRANTSVILLE CITY ENGINEER

TOOELE COUNTY RECORDER

NO.____________________
STATE OF UTAH, COUNTY OF TOOELE, RECORDED & FILED AT THE REQUEST OF ____________________
DATE _________ TIME _________ BOOK _________ PAGE _________

FEE $ TOOELE COUNTY RECORDER

Z:_2023\23-0359 HERITAGE FARMS PHASE 1\DESIGN 23-0359\DWG\SHEETS\C2 FINAL PLAT.DWG



LEGEND

	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
15 SD	15" STORM DRAIN
8 SS	8" SANITARY SEWER
8 W	8" CULINARY WATER
8 SW	8" SECONDARY WATER
XXXX	CONTOUR MAJOR
XXXX	CONTOUR MINOR
Ex SD	EXIST. STORM DRAIN
Ex SS	EXIST. SANITARY SEWER
Ex W	EXIST. CULINARY WATER
X X X	EXIST. FENCE
(XXXX)	EXIST. CONTOUR MAJOR
(XXXX)	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
	SD MH, INLET, AND COMBO
	SEWER MANHOLE
	CULINARY VALVE, TEE & BEND
	SECONDARY VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
	EXIST. SD INLET & MH
	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
o XXXX.XX	SPOT ELEVATION
	BACKYARD SWALE

N

S

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

811
Know what's below.
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6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
www.focusutah.com

LICENSED PROFESSIONAL ENGINEER
No. 8028950-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
EXISTING CONDITIONS PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
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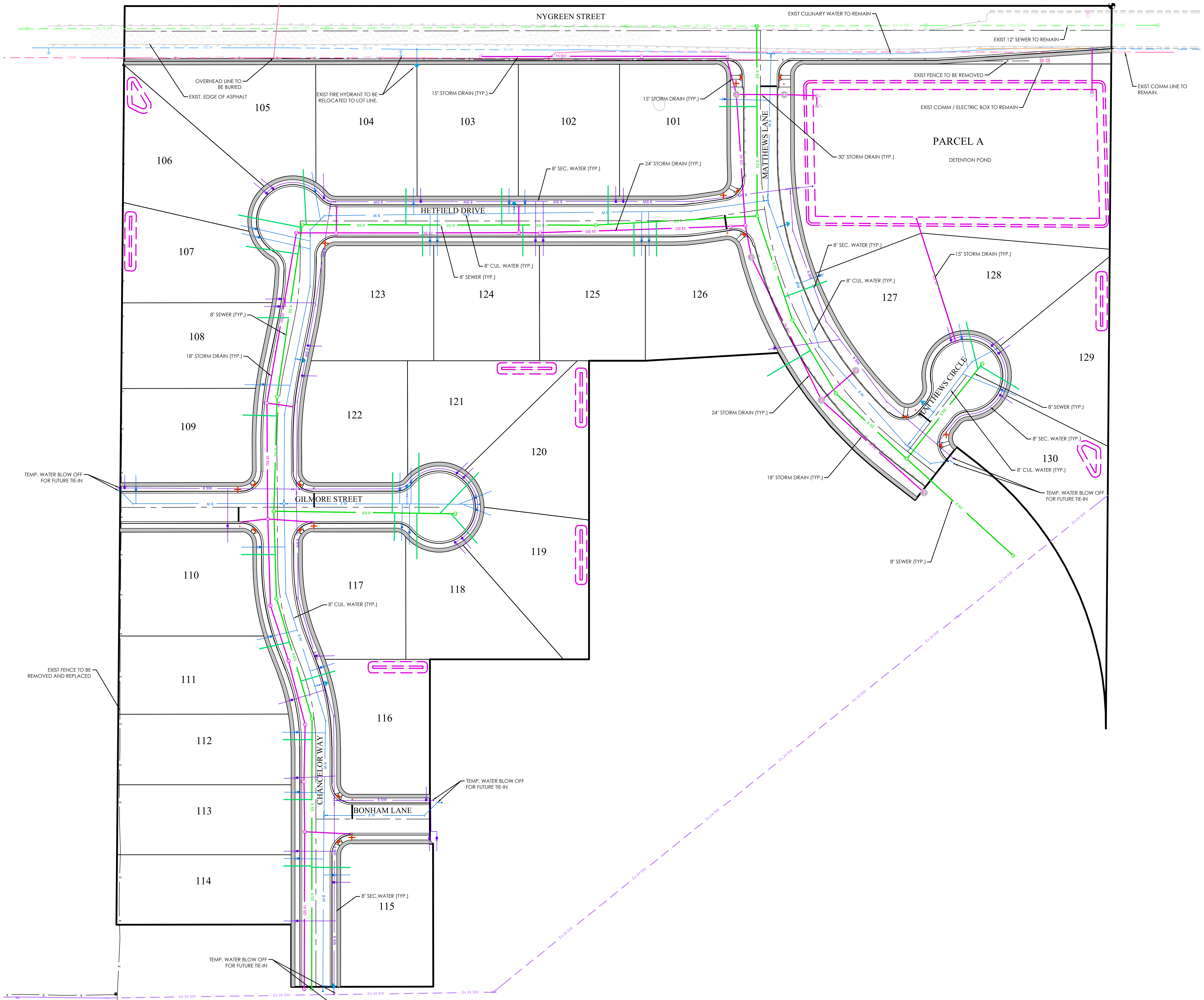
EXISTING CONDITIONS PLAN

Scale:	1"=60'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	C3		

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C3.EXISTING CONDITIONS PLAN.dwg



LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
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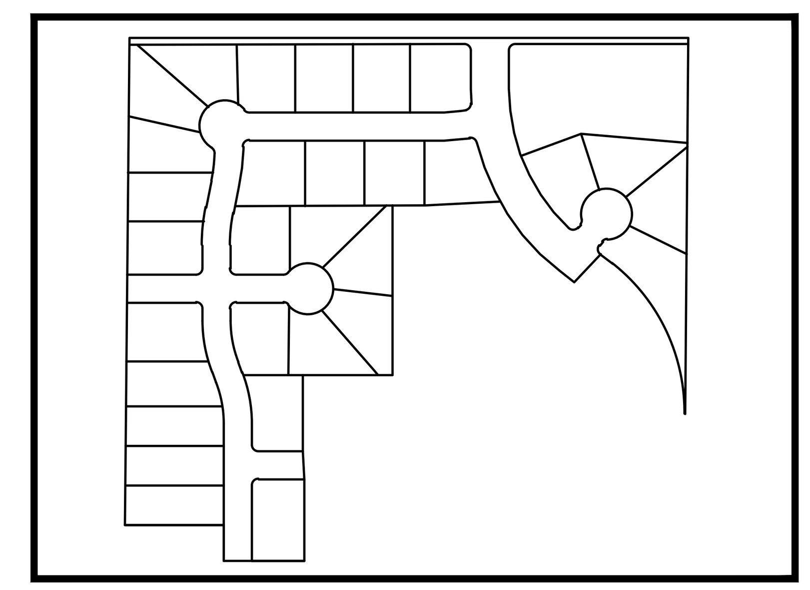

KEY MAP
N.T.S

GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.

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

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www.focusutah.com

LICENSED PROFESSIONAL ENGINEER
THOMAS M. ROMNEY
STATE OF UTAH
12/14/23

HERITAGE FARMS PHASE 1

GRANTSVILLE CITY, UT

OVERALL SITE PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1		
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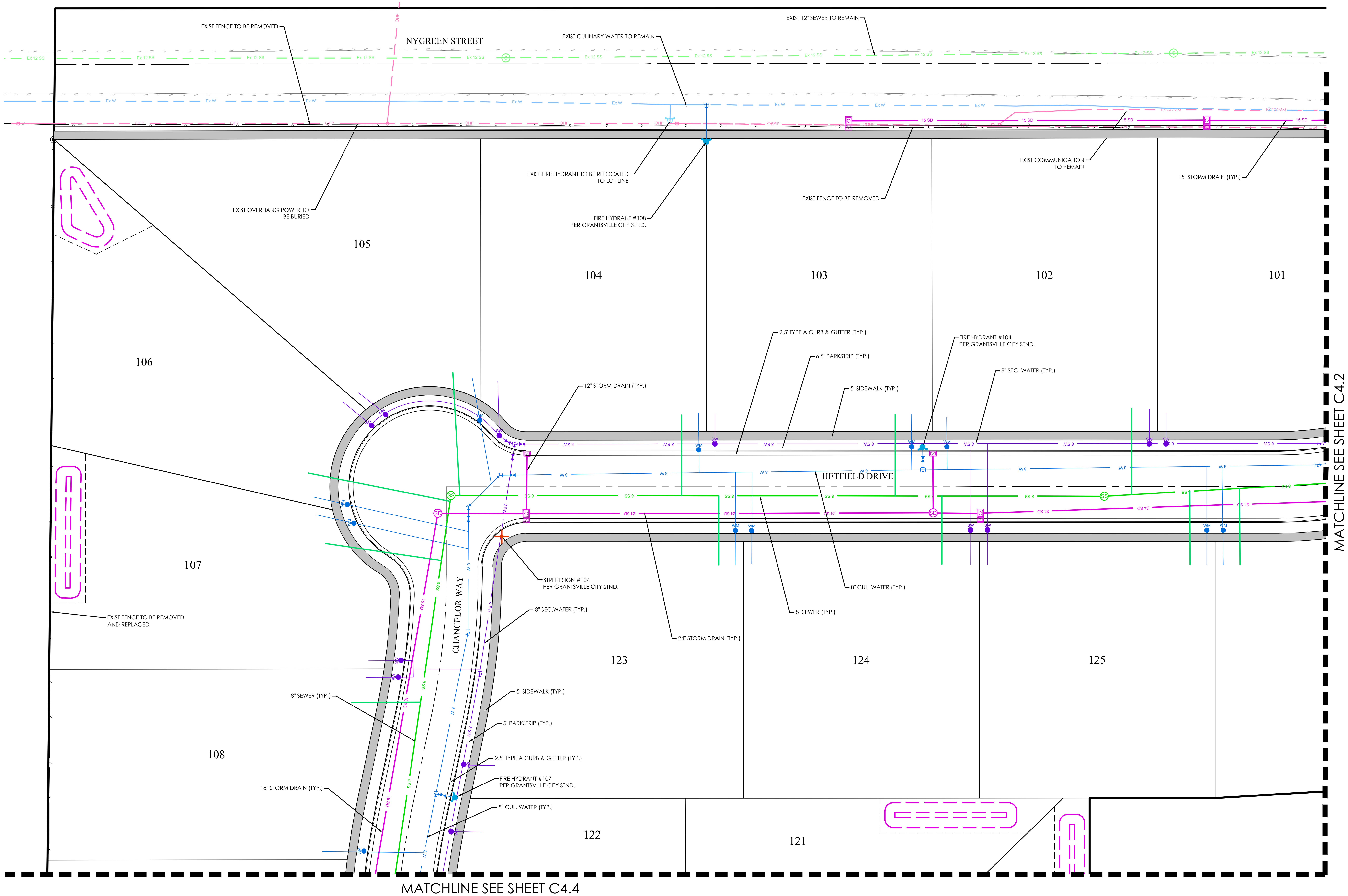
6		

OVERALL SITE PLAN

Scale: 1"=60'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C4	



LEGEND

	BOUNDARY
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15 SD	15" STORM DRAIN
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X	EXIST. FENCE
(XXXX)	EXIST. CONTOUR MAJOR
(XXXX)	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
SD	SD MH, INLET, AND COMBO
SS	SEWER MANHOLE
	CULINARY VALVE, TEE & BEND
	SECONDARY VALVE, TEE & BEND
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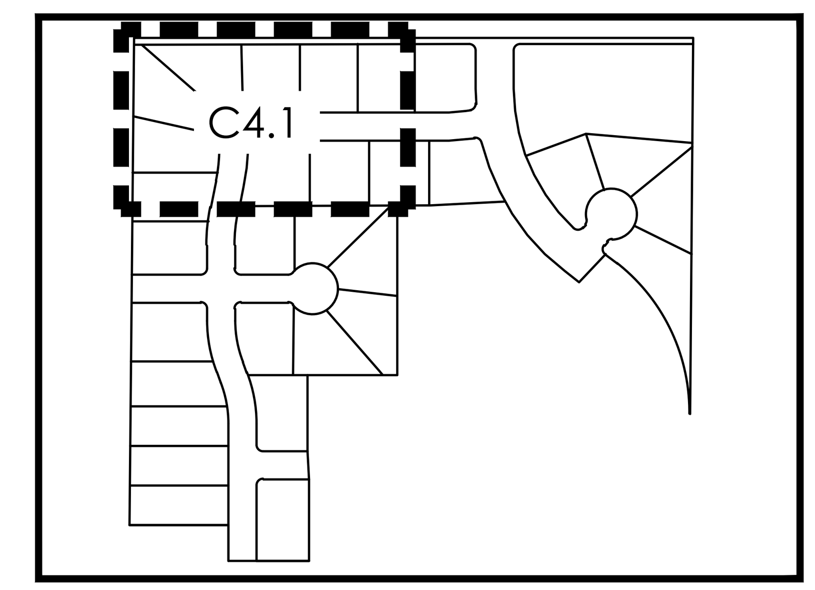
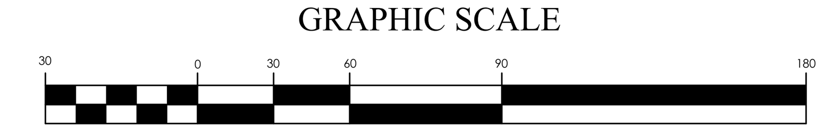
	EXIST. FIRE HYDRANT
o XXXX.XX	SPOT ELEVATION
	BACKYARD SWALE

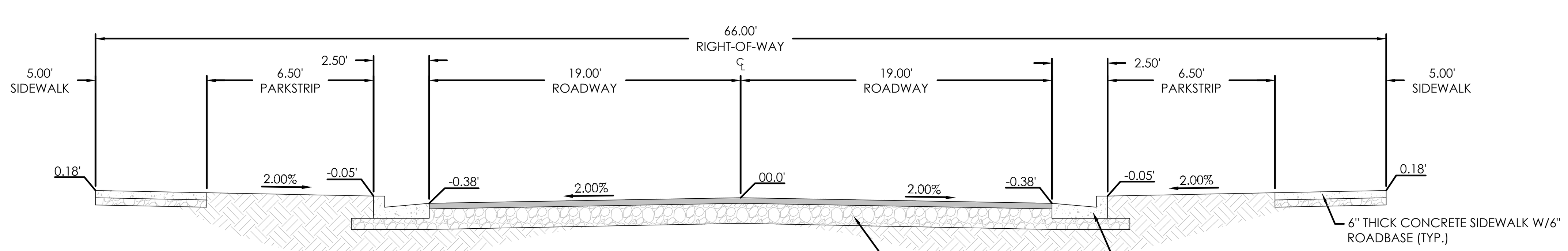


KEY MAP
N.T.S

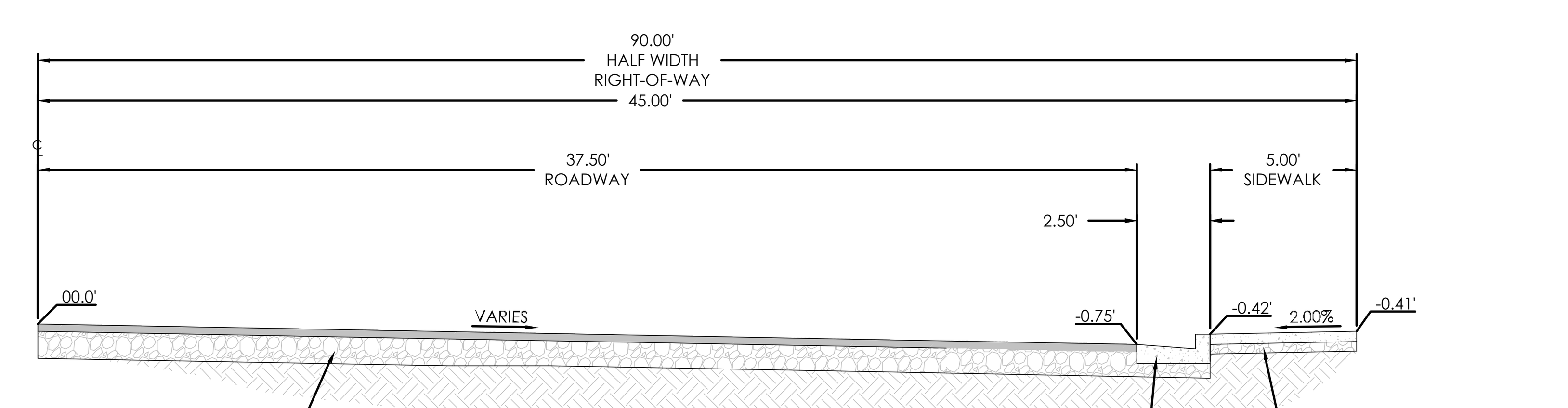
GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.



66' RESIDENTIAL ROAD
N.T.S.



90' ARTERIAL HALF WIDTH (NYGREEN STREET)
N.T.S.

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

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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
SITE PLAN

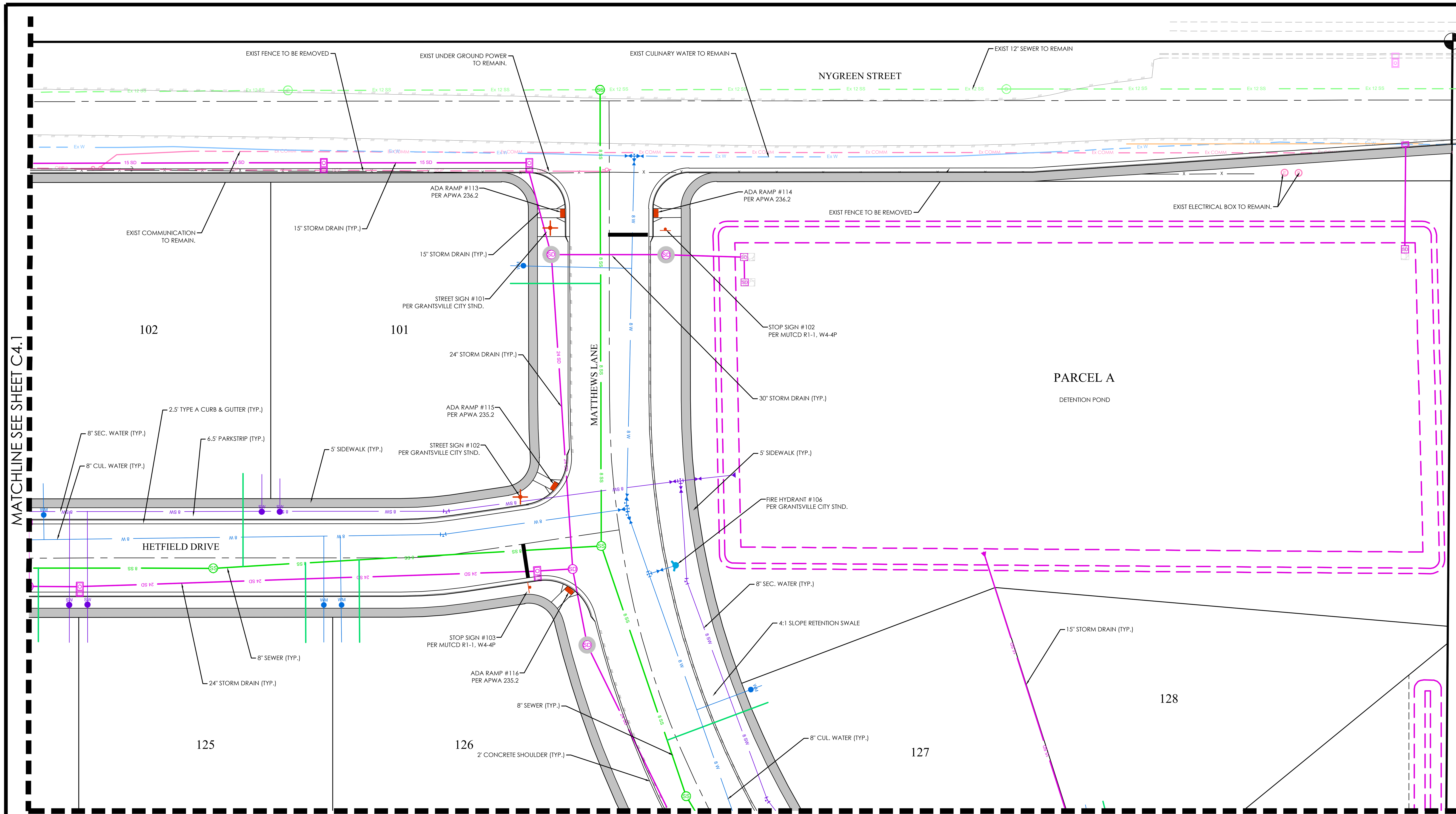
REVISION BLOCK

#	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

SITE PLAN

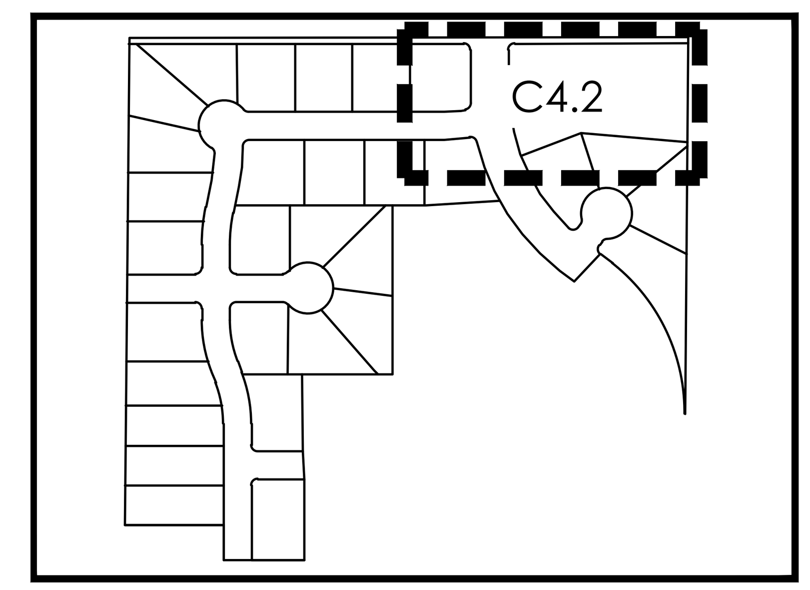
Scale: 1"=30'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C4.1	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C4.1 SITE PLAN.dwg

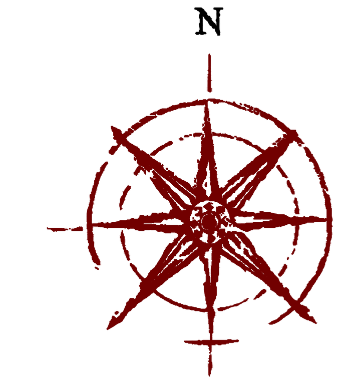


LEGEND

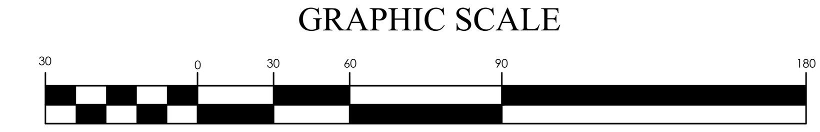
- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN (15 SD)
- 8" SANITARY SEWER (8 SS)
- 8" CULINARY WATER (8 W)
- 8" SECONDARY WATER (8 SW)
- CONTOUR MAJOR (XXXX)
- CONTOUR MINOR (XXXX)
- EXIST. STORM DRAIN (Ex SD)
- EXIST. SANITARY SEWER (Ex SS)
- EXIST. CULINARY WATER (Ex W)
- EXIST. FENCE
- EXIST. CONTOUR MAJOR ((XXXX))
- EXIST. CONTOUR MINOR ((XXXX))
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- SPOT ELEVATION (o XXXX.XX)
- BACKYARD SWALE



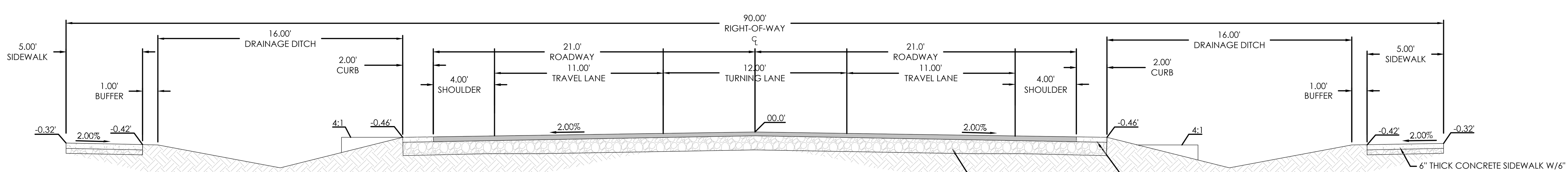
KEY MAP
N.T.S



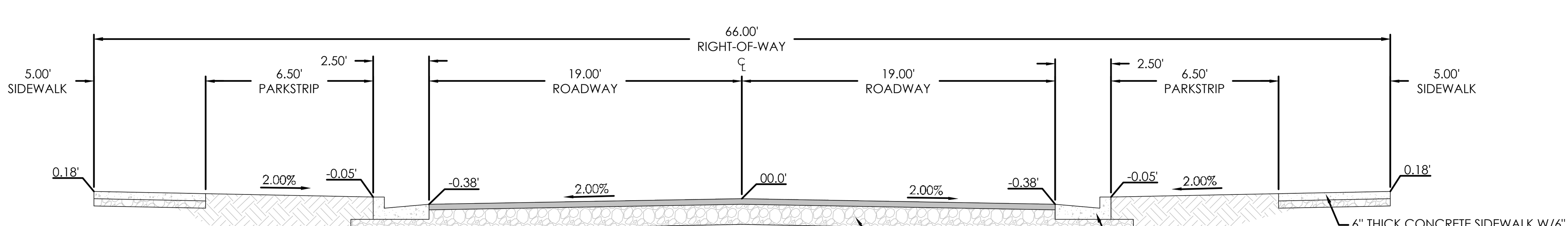
GRAPHIC SCALE



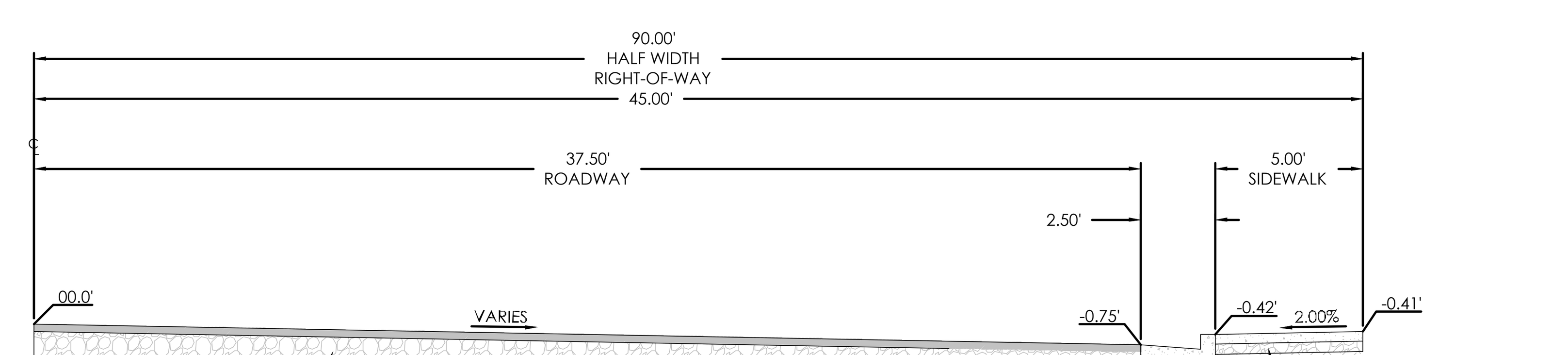
(IN FEET)
1 inch = 30 ft.



90' STANDARD COLLECTOR (MATTHEWS LANE)
N.T.S.



66' RESIDENTIAL ROAD
N.T.S.



90' ARTERIAL HALF WIDTH (NYGREEN STREET)
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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
SITE PLAN

REVISION BLOCK

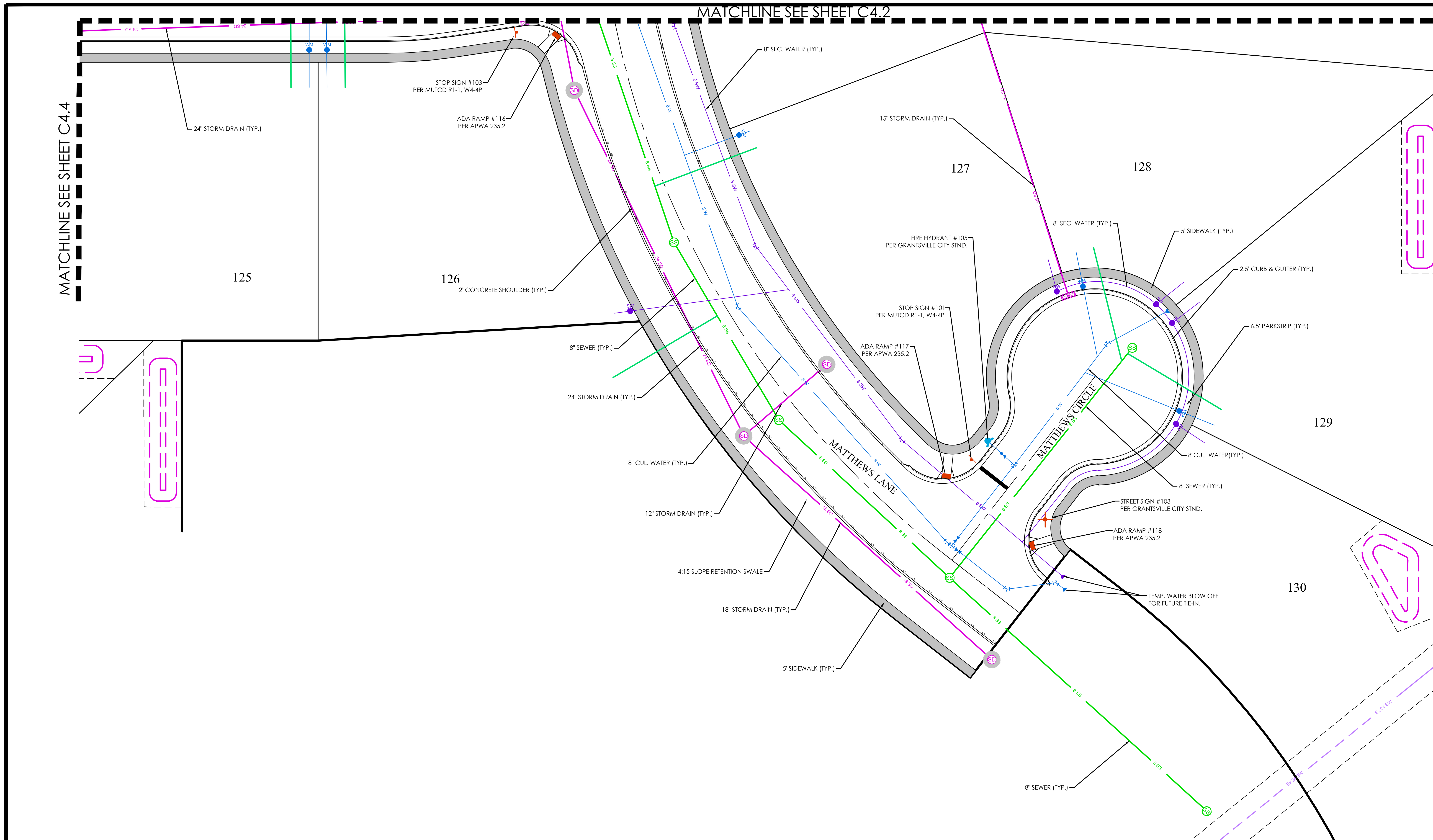
#	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

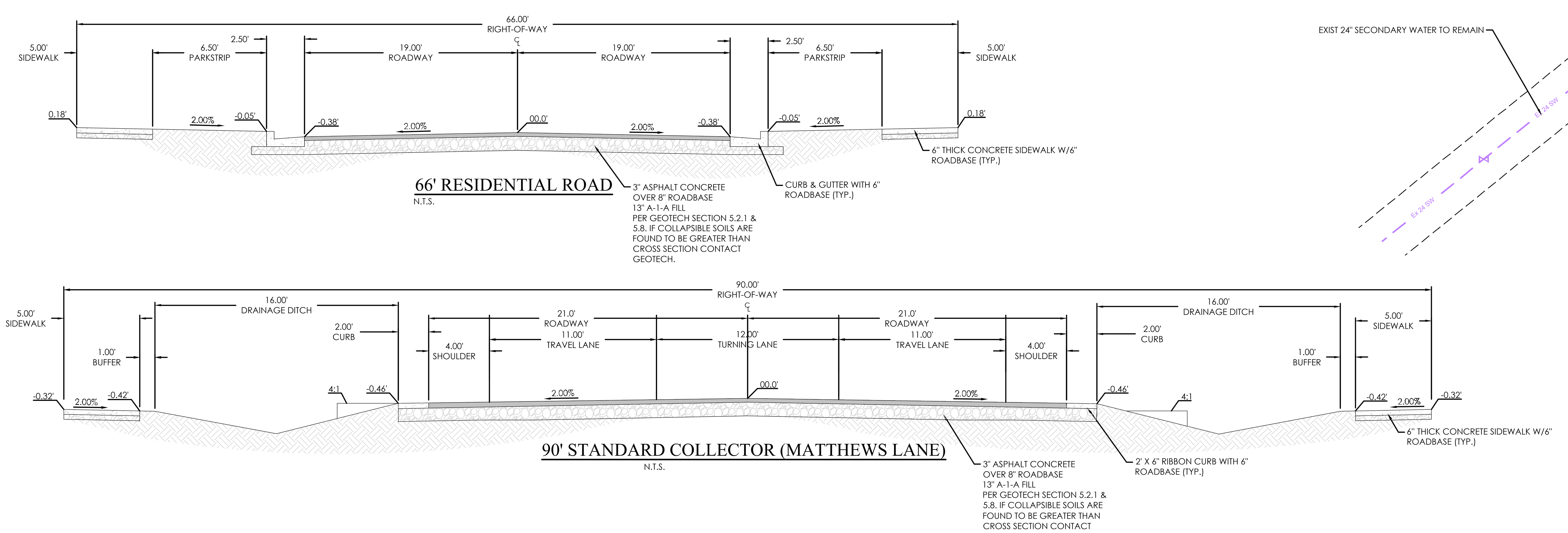
SITE PLAN

Scale: 1"=30'	Drawn: GIM	Date: 12/14/23	Job #: 23-0359

Sheet: C4.2

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C4.2 SITE PLAN.dwg



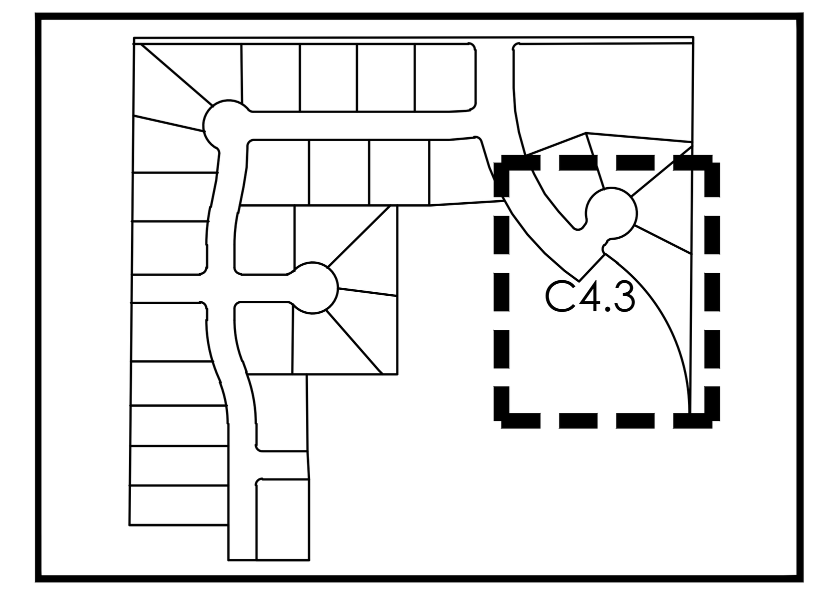


66' RESIDENTIAL ROAD
N.T.S.

90' STANDARD COLLECTOR (MATTHEWS LANE)
N.T.S.

LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15 SD — 15" STORM DRAIN
- 8 SS — 8" SANITARY SEWER
- 8 W — 8" CULINARY WATER
- 8 SW — 8" SECONDARY WATER
- XXXX — CONTOUR MAJOR
- XXXX — CONTOUR MINOR
- Ex SD — EXIST. STORM DRAIN
- Ex SS — EXIST. SANITARY SEWER
- Ex W — EXIST. CULINARY WATER
- x — EXIST. FENCE
- (XXXX) — EXIST. CONTOUR MAJOR
- (XXXX) — EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD — SD MH, INLET, AND COMBO
- SS — SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- sd — EXIST. SD INLET & MH
- S — EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- o XXXX.XX — SPOT ELEVATION
- BACKYARD SWALE



KEY MAP
N.T.S

GRAPHIC SCALE

30 0 30 60 90 180

(IN FEET)
1 inch = 30 ft.

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THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
SITE PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
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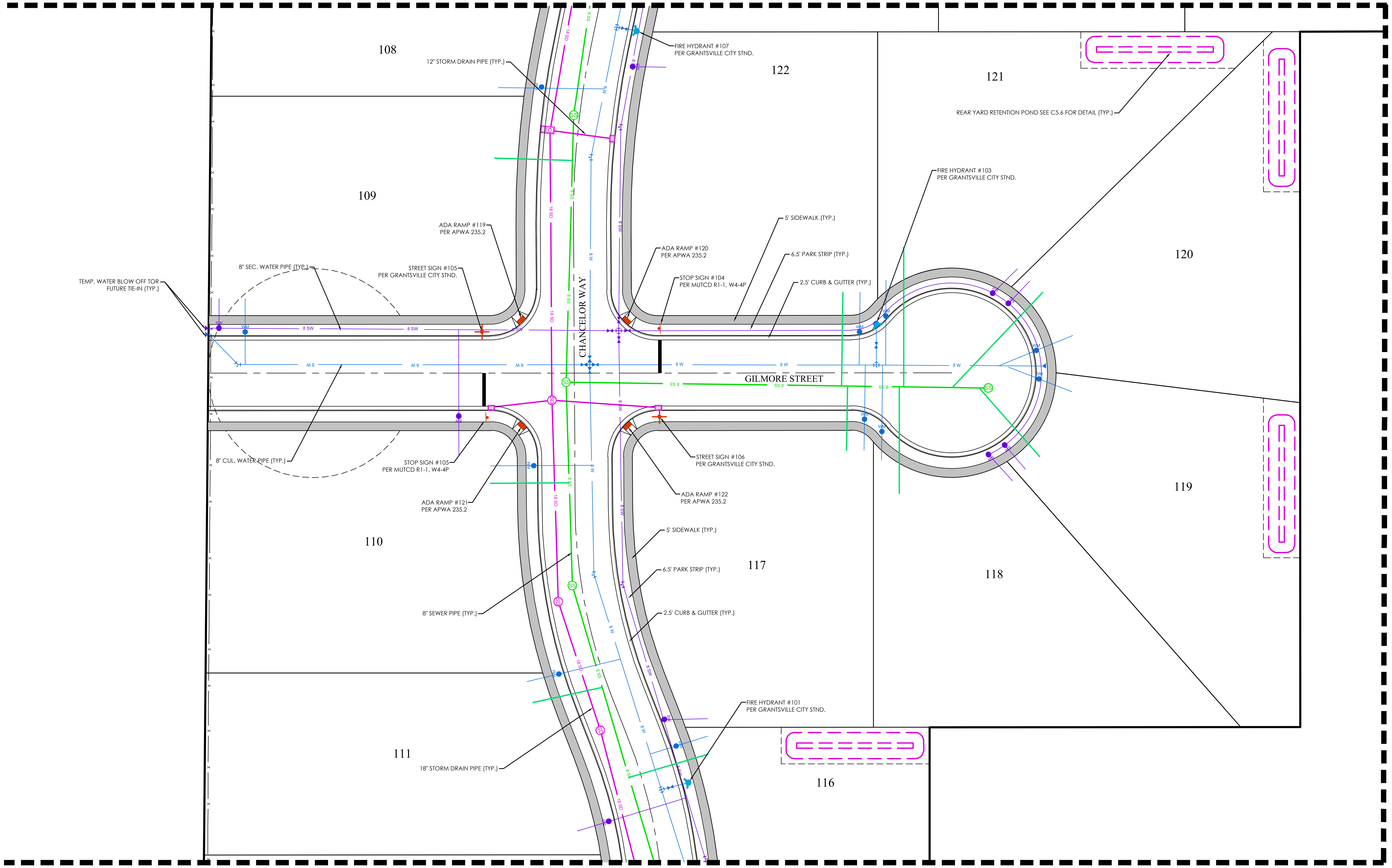
SITE PLAN

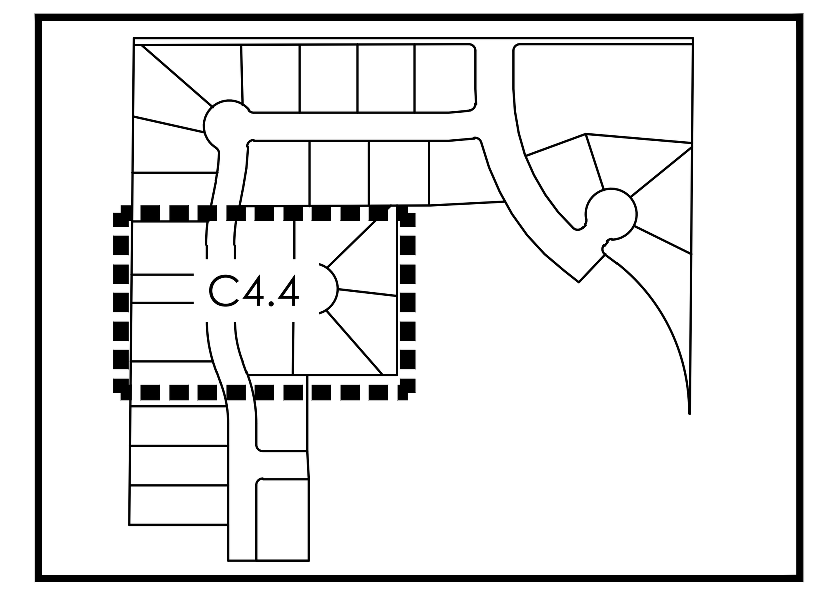
Scale:	1"=30'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	C4.3		

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C4.3 SITE PLAN.dwg



LEGEND

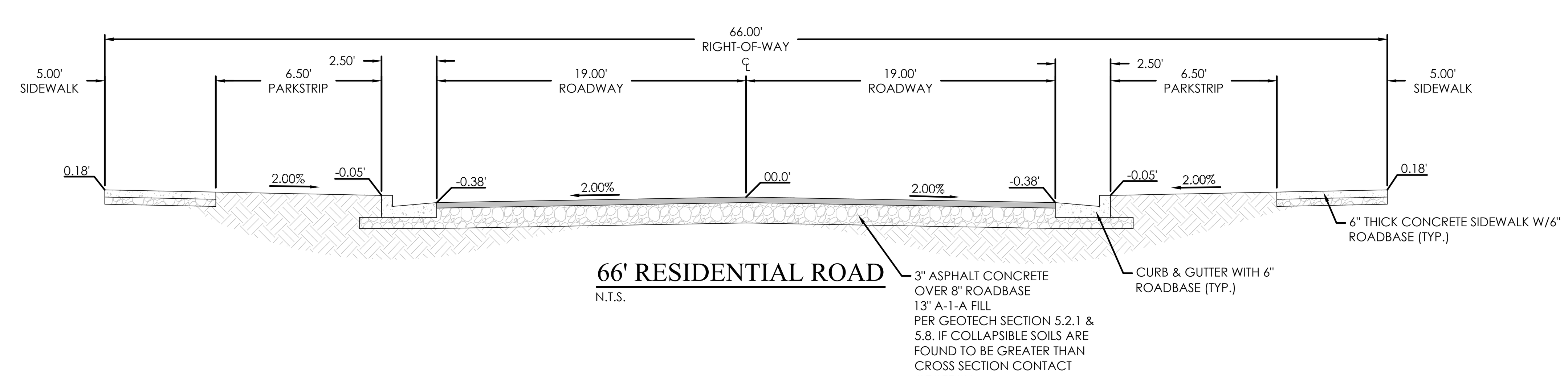
- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15 SD — 15" STORM DRAIN
- 8 SS — 8" SANITARY SEWER
- 8 W — 8" CULINARY WATER
- 8 SW — 8" SECONDARY WATER
- XXXX — CONTOUR MAJOR
- XXXX — CONTOUR MINOR
- Ex SD — EXIST. STORM DRAIN
- Ex SS — EXIST. SANITARY SEWER
- Ex W — EXIST. CULINARY WATER
- x — EXIST. FENCE
- (XXXX) — EXIST. CONTOUR MAJOR
- (XXXX) — EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- o XXXX.XX — SPOT ELEVATION
- BACKYARD SWALE



KEY MAP
N.T.S

N
S

GRAPHIC SCALE
30 0 30 60 90 180
(IN FEET)
1 inch = 30 ft.



66' RESIDENTIAL ROAD
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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
SITE PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
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5	----	----
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SITE PLAN

Scale: 1"=30'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C4.4	

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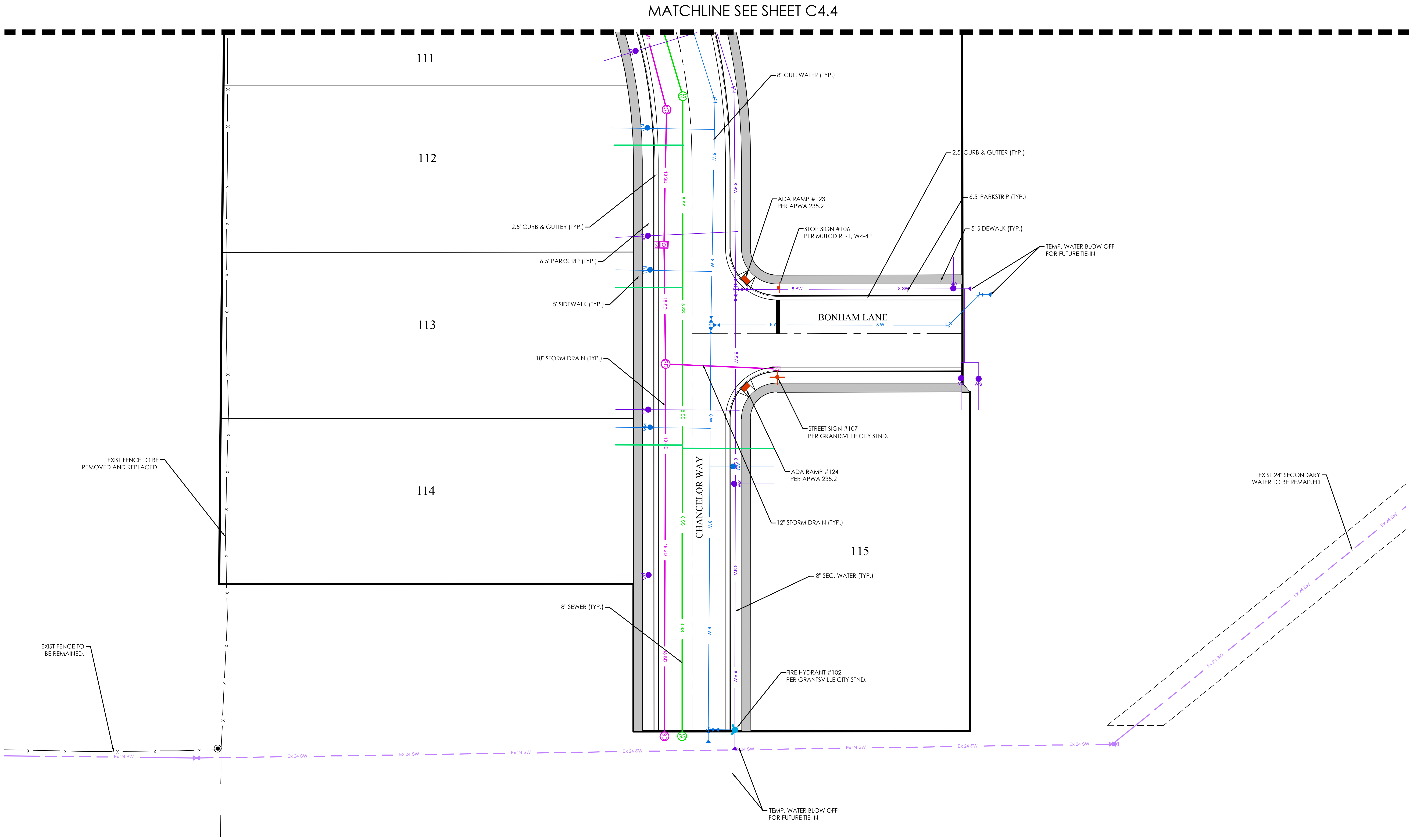
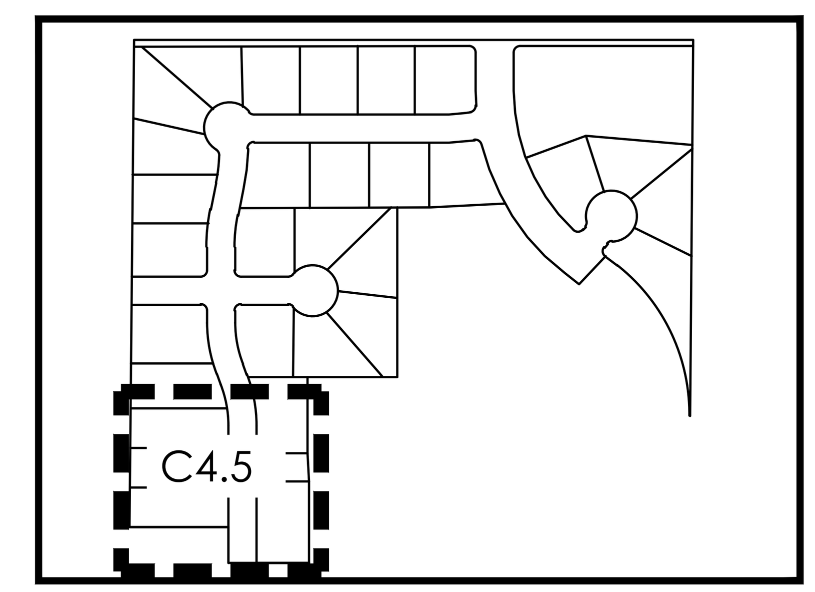
Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C4.4 SITE PLAN.dwg

MATCHLINE SEE SHEET C4.4

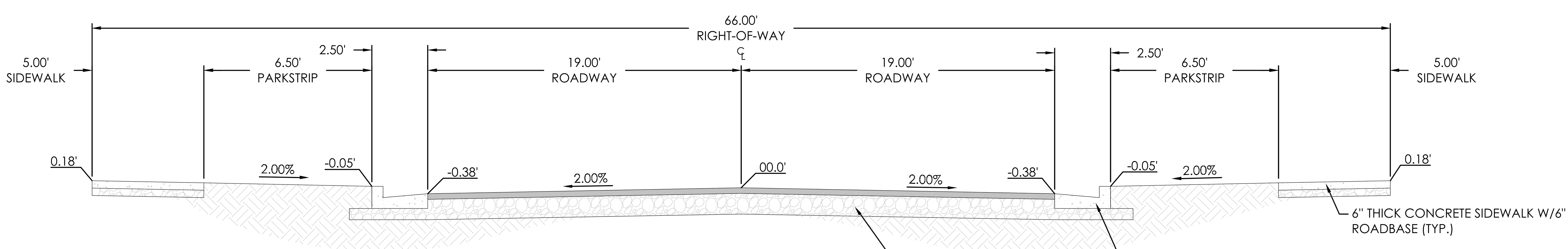


LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN (15 SD)
- 8" SANITARY SEWER (8 SS)
- 8" CULINARY WATER (8 W)
- 8" SECONDARY WATER (8 SW)
- CONTOUR MAJOR (XXXX)
- CONTOUR MINOR (XXXX)
- EXIST. STORM DRAIN (Ex SD)
- EXIST. SANITARY SEWER (Ex SS)
- EXIST. CULINARY WATER (Ex W)
- EXIST. FENCE
- EXIST. CONTOUR MAJOR ((XXXX))
- EXIST. CONTOUR MINOR ((XXXX))
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- SPOT ELEVATION (o XXXX.XX)
- BACKYARD SWALE

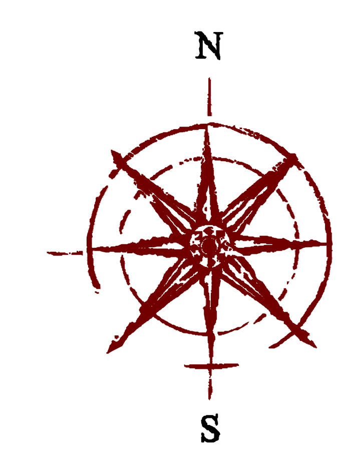


KEY MAP
N.T.S

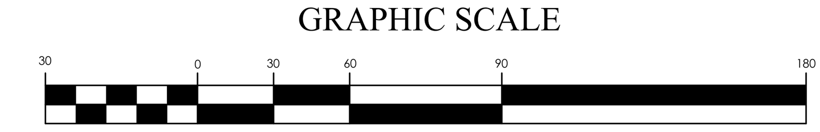


66' RESIDENTIAL ROAD

N.T.S.



GRAPHIC SCALE



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12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1

GRANTSVILLE CITY, UT

SITE PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
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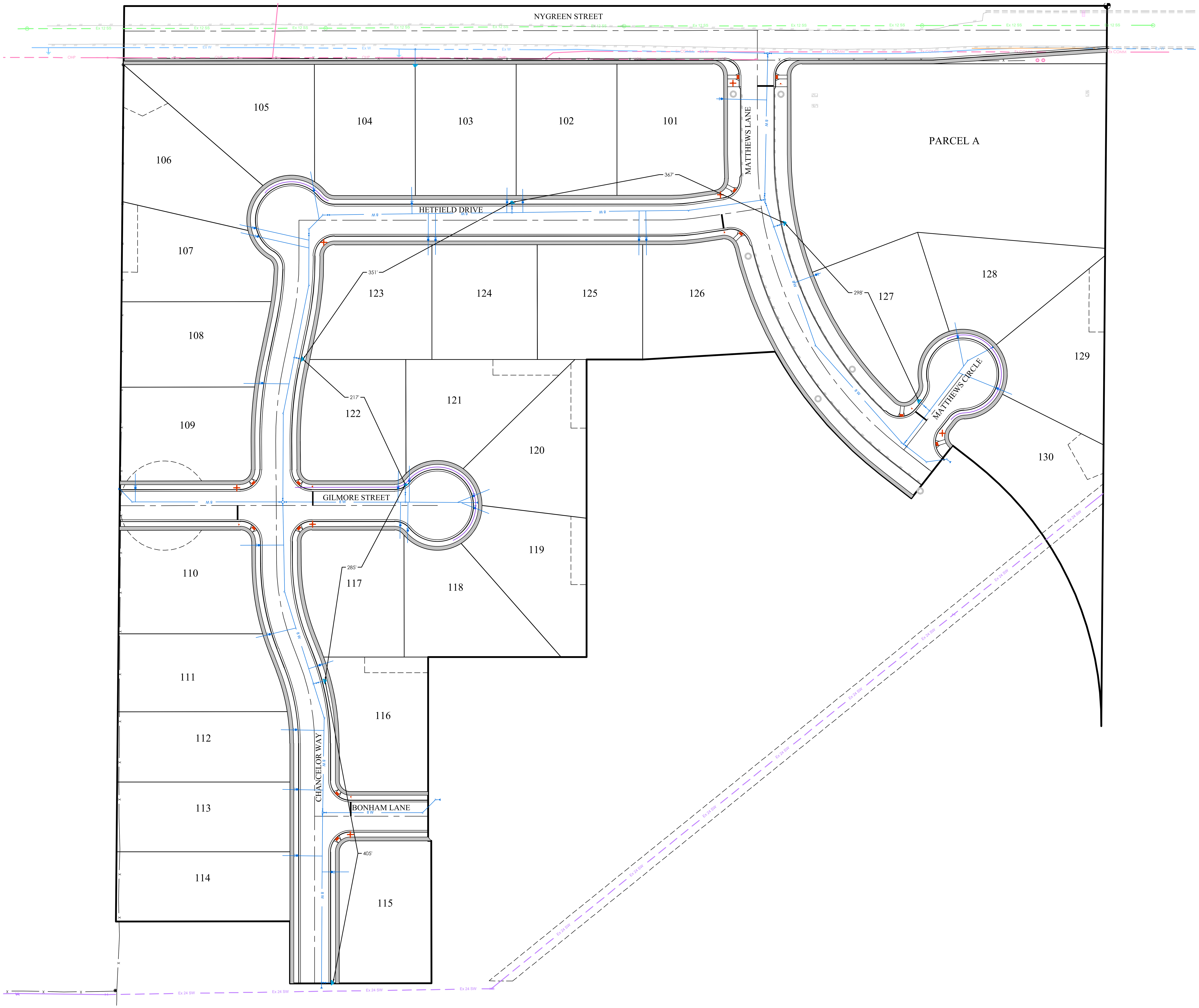
SITE PLAN

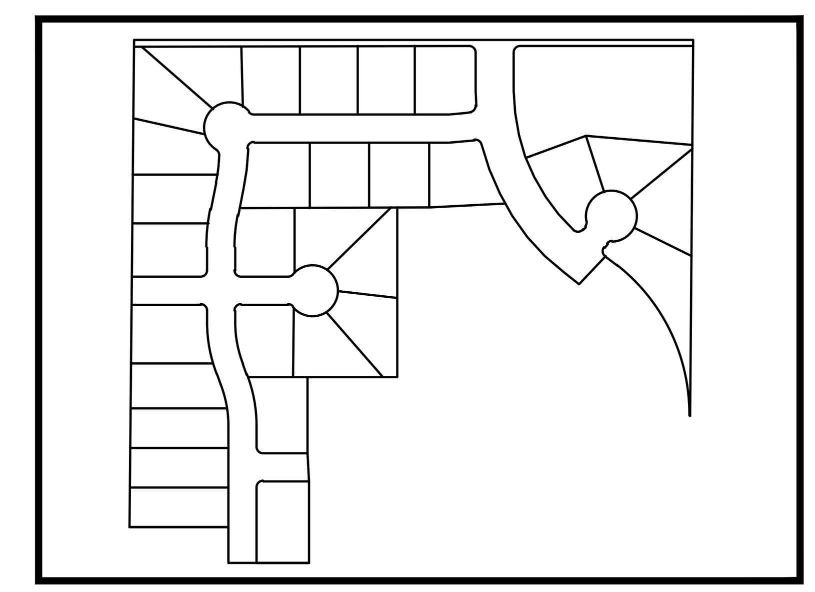
Scale: 1"=30'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C4.5	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C4.5 SITE PLAN.dwg

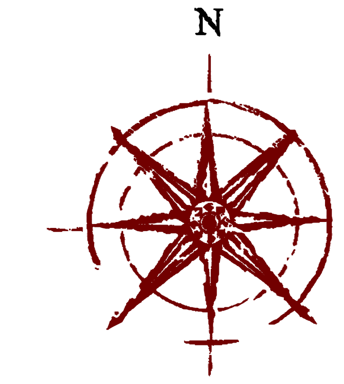


LEGEND

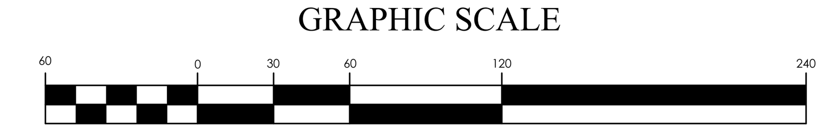
	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
15 SD	15" STORM DRAIN
8 SS	8" SANITARY SEWER
8 W	8" CULINARY WATER
8 SW	8" SECONDARY WATER
XXXX	CONTOUR MAJOR
XXXX	CONTOUR MINOR
Ex SD	EXIST. STORM DRAIN
Ex SS	EXIST. SANITARY SEWER
Ex W	EXIST. CULINARY WATER
X X X	EXIST. FENCE
(XXXX)	EXIST. CONTOUR MAJOR
(XXXX)	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
SD	SD MH, INLET, AND COMBO
SS	SEWER MANHOLE
	CULINARY VALVE, TEE & BEND
	SECONDARY VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
sd	EXIST. SD INLET & MH
S	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
o XXXX.XX	SPOT ELEVATION
	BACKYARD SWALE



KEY MAP
N.T.S



GRAPHIC SCALE



(IN FEET)
1 inch = 60 ft.

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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
FIRE HYDRANT PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
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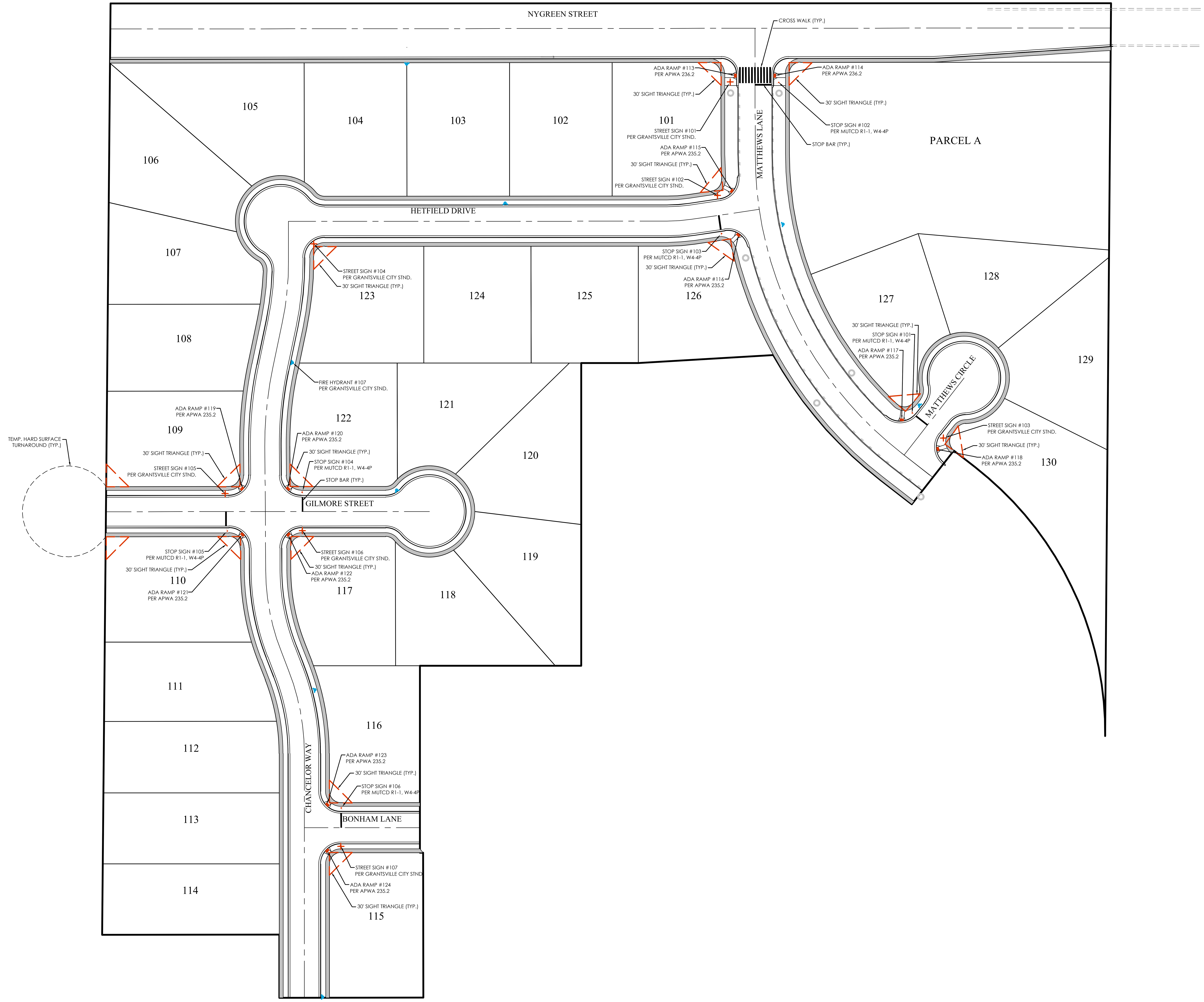
FIRE HYDRANT PLAN

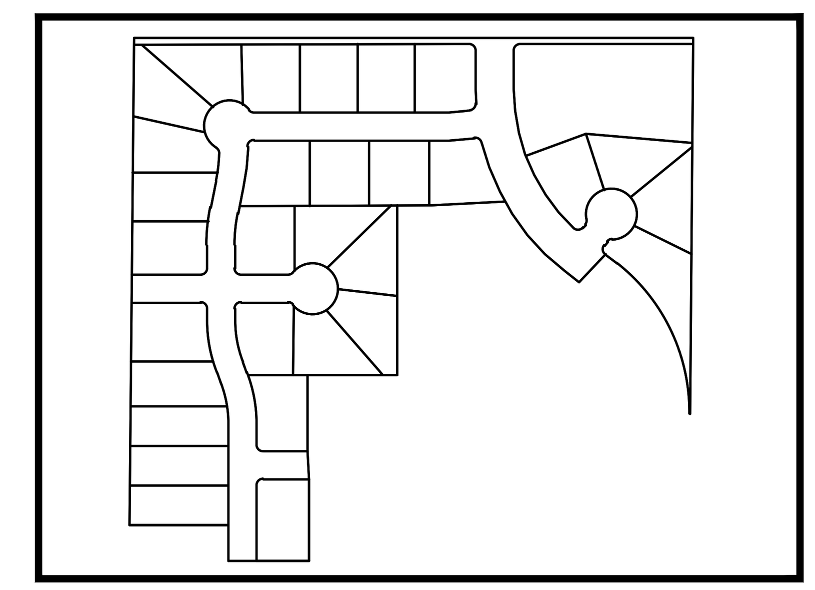
Scale: 1"=60'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C4.6	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C4.6 FIRE HYDRANT PLAN.dwg

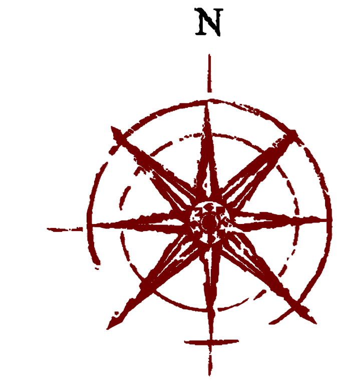


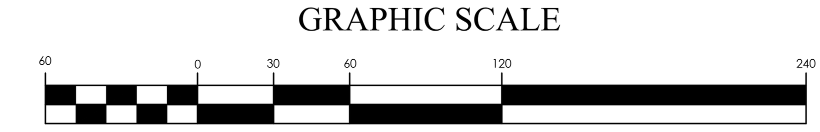
LEGEND

	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
15 SD	15" STORM DRAIN
8 SS	8" SANITARY SEWER
8 W	8" CULINARY WATER
8 SW	8" SECONDARY WATER
XXXX	CONTOUR MAJOR
XXXX	CONTOUR MINOR
Ex SD	EXIST. STORM DRAIN
Ex SS	EXIST. SANITARY SEWER
Ex W	EXIST. CULINARY WATER
x	EXIST. FENCE
(XXXX)	EXIST. CONTOUR MAJOR
(XXXX)	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
	SD MH, INLET, AND COMBO
	SEWER MANHOLE
	CULINARY VALVE, TEE & BEND
	SECONDARY VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
	EXIST. SD INLET & MH
	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
o XXXX.XX	SPOT ELEVATION
	BACKYARD SWALE



KEY MAP
N.T.S





GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

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12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
TRAFFIC CONTROL PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1	.....	.....
2	.....	.....
3	.....	.....
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6	.....	.....

TRAFFIC CONTROL PLAN

Scale: 1"=60'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C4.7	

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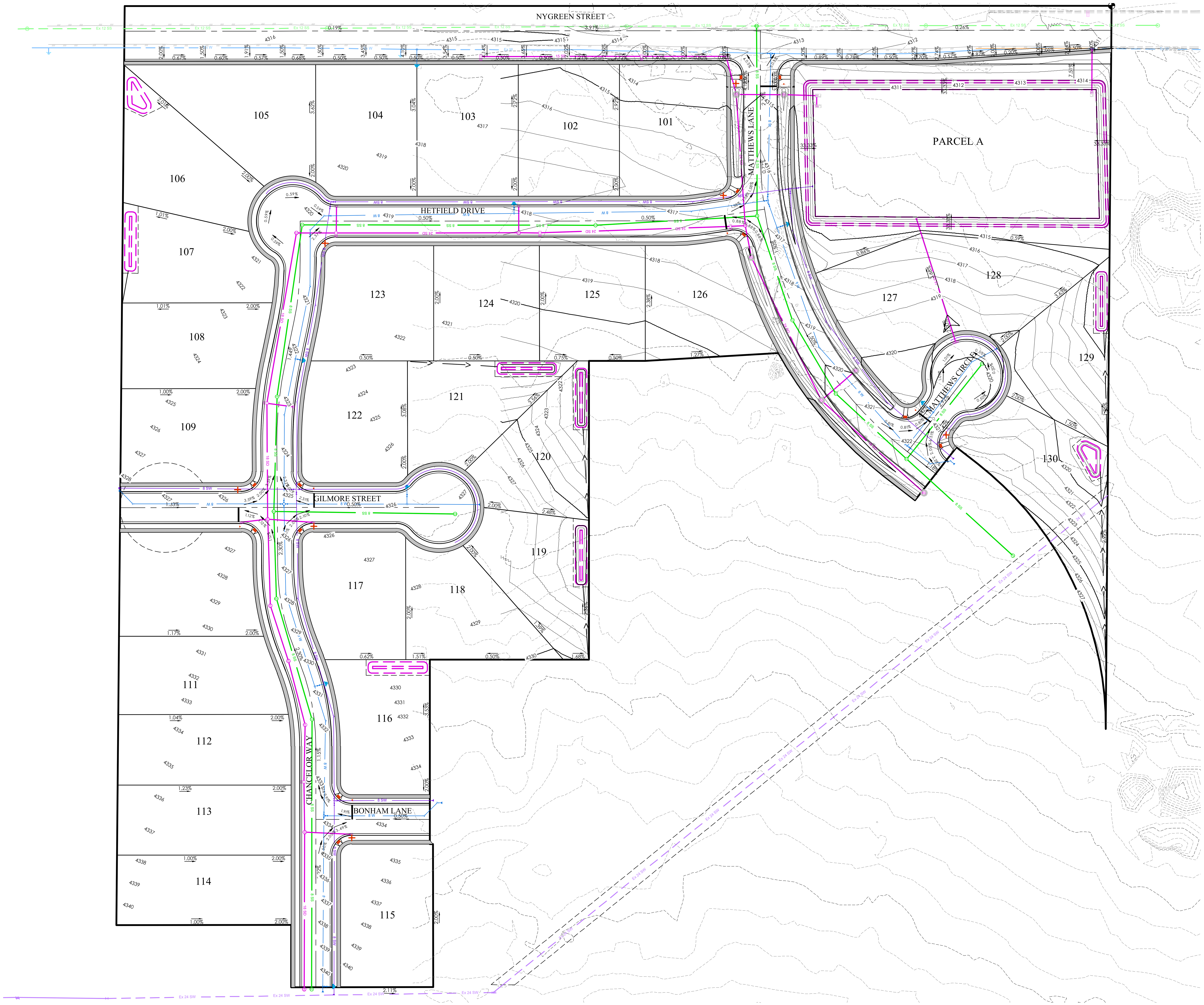
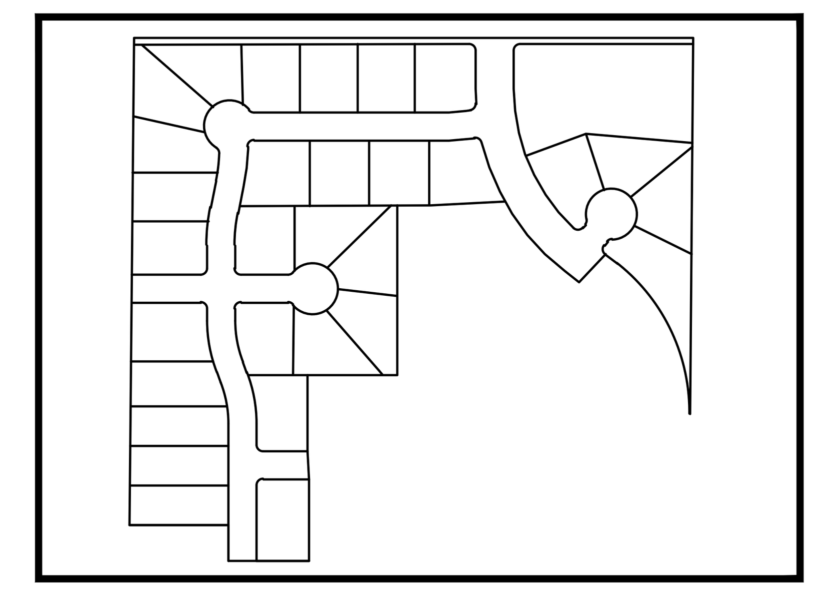
Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C4.7 TRAFFIC CONTROL PLAN.dwg

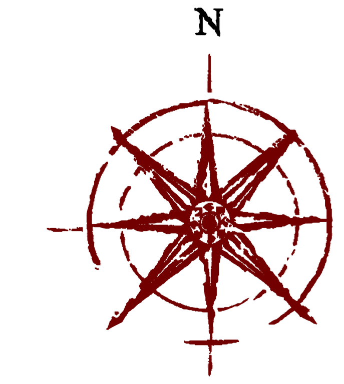


LEGEND

	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
15 SD	15" STORM DRAIN
8 SS	8" SANITARY SEWER
8 W	8" CULINARY WATER
8 SW	8" SECONDARY WATER
XXXX	CONTOUR MAJOR
XXXX	CONTOUR MINOR
Ex SD	EXIST. STORM DRAIN
Ex SS	EXIST. SANITARY SEWER
Ex W	EXIST. CULINARY WATER
X X X	EXIST. FENCE
(XXXX)	EXIST. CONTOUR MAJOR
(XXXX)	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
SD	SD MH, INLET, AND COMBO
SS	SEWER MANHOLE
	CULINARY VALVE, TEE & BEND
	SECONDARY VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
sd	EXIST. SD INLET & MH
S	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
o XXXX.XX	SPOT ELEVATION
	BACKYARD SWALE



KEY MAP
N.T.S



GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
OVERALL GRADING & DRAINAGE PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
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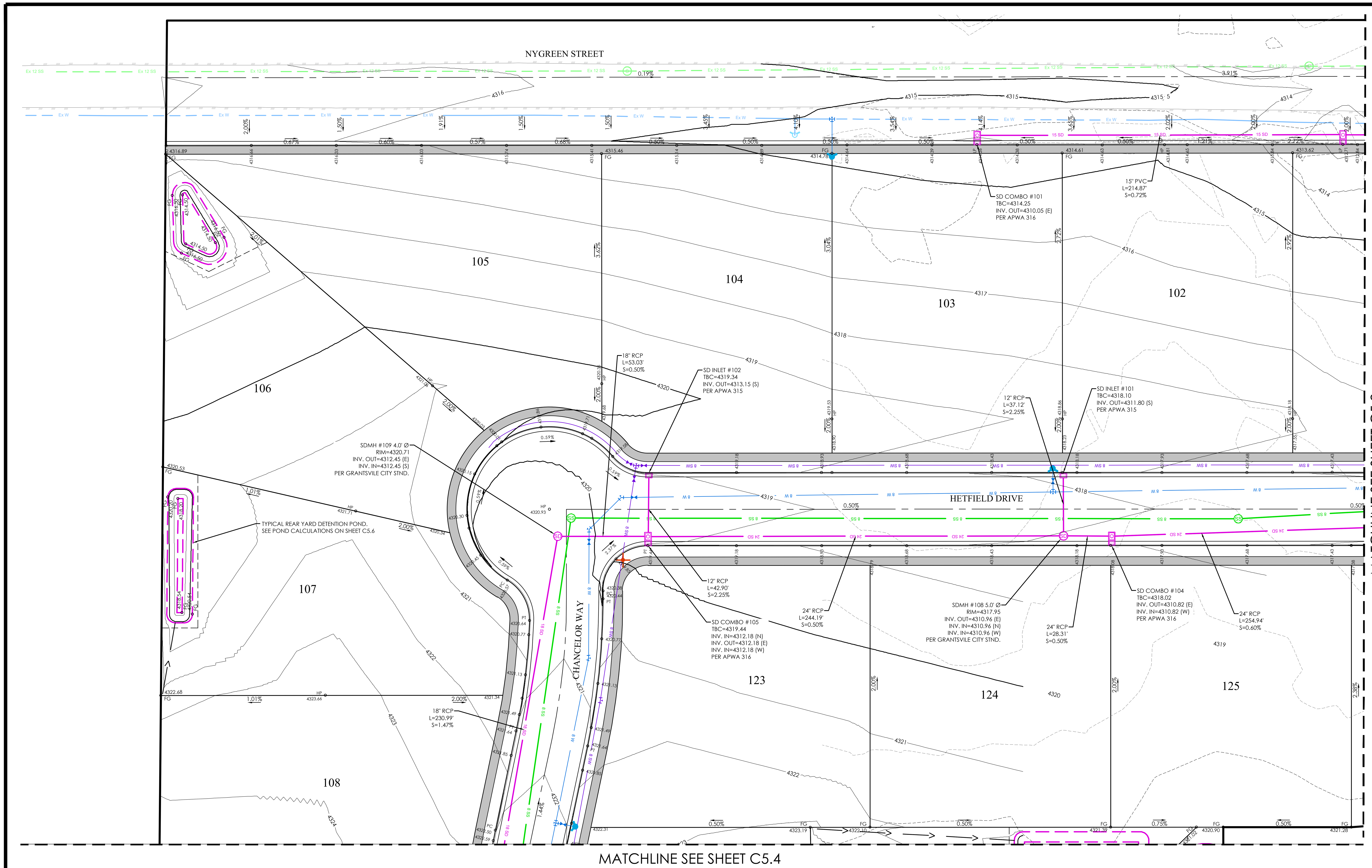
OVERALL GRADING & DRAINAGE PLAN

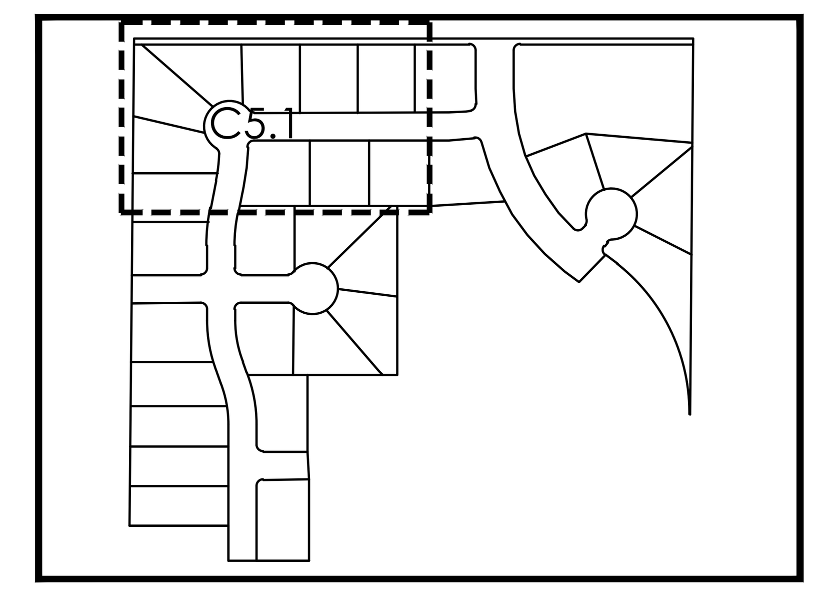
Scale: 1"=60'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C5	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C5 OVERALL GRADING & DRAINAGE PLAN.dwg

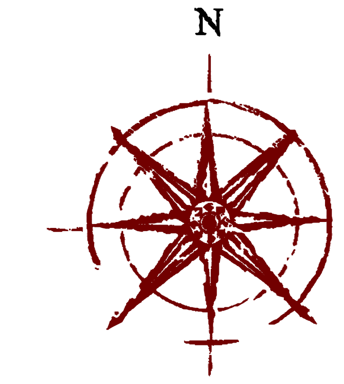


LEGEND

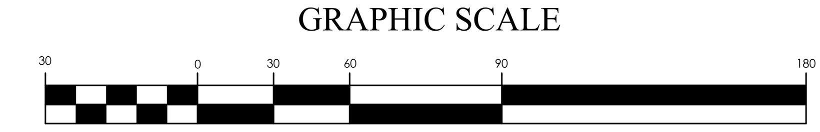
	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
15 SD	15" STORM DRAIN
8 SS	8" SANITARY SEWER
8 W	8" CULINARY WATER
8 SW	8" SECONDARY WATER
XXXX	CONTOUR MAJOR
XXXX	CONTOUR MINOR
Ex SD	EXIST. STORM DRAIN
Ex SS	EXIST. SANITARY SEWER
Ex W	EXIST. CULINARY WATER
X	EXIST. FENCE
(XXXX)	EXIST. CONTOUR MAJOR
(XXXX)	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
SD	SD MH, INLET, AND COMBO
SS	SEWER MANHOLE
	CULINARY VALVE, TEE & BEND
	SECONDARY VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
sd	EXIST. SD INLET & MH
S	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
o XXXX.XX	SPOT ELEVATION
	BACKYARD SWALE



KEY MAP
N.T.S



GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

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No. 8028950-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
GRADING & DRAINAGE PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
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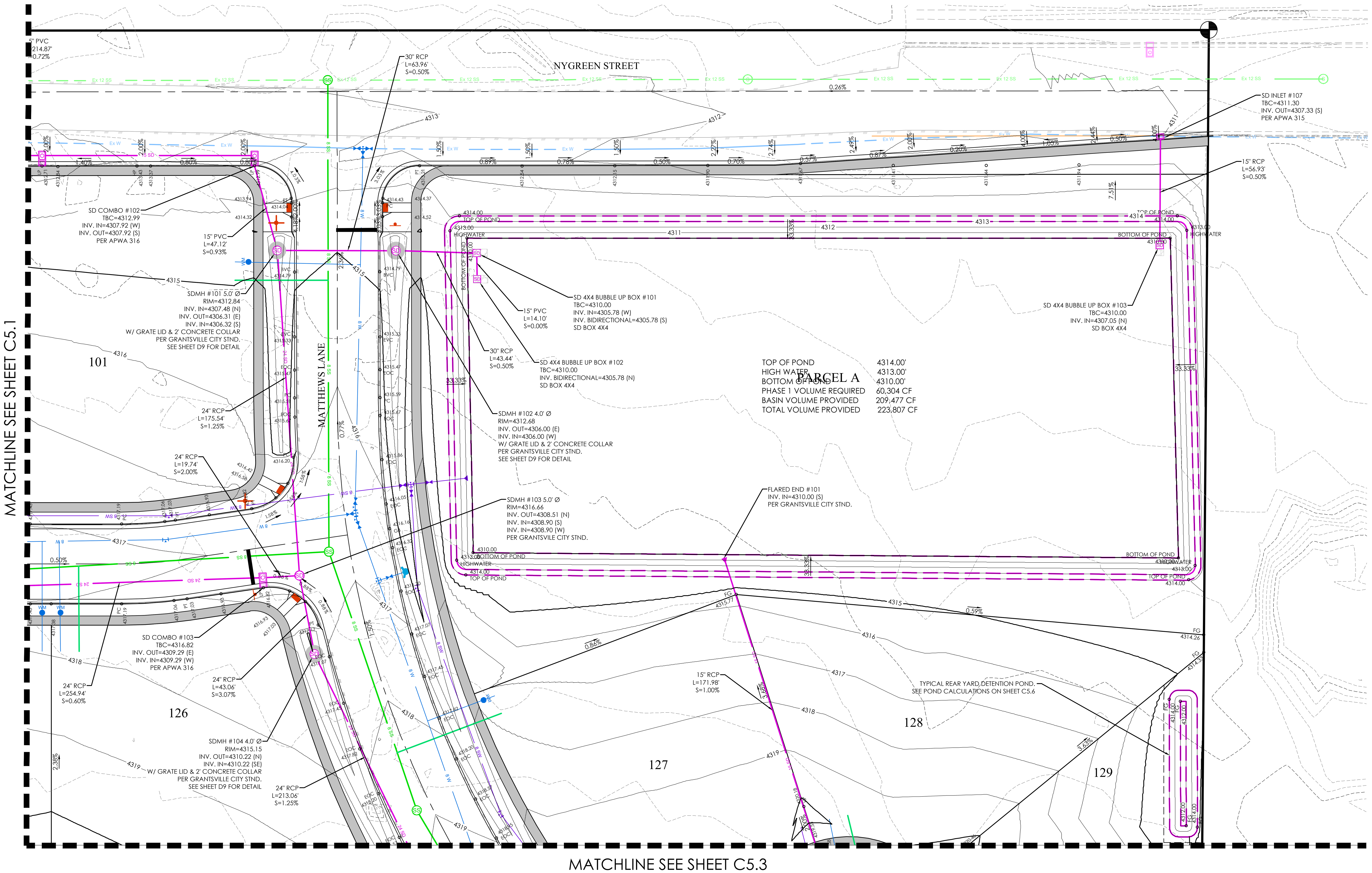
GRADING & DRAINAGE PLAN

Scale: 1"=30'		Drawn: GIM	
Date: 12/14/23		Job #: 23-0359	
Sheet: C5.1			

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C5.1 GRADING & DRAINAGE PLAN.dwg



LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
- EXIST. FENCE
- EXIST. CONTOUR MAJOR
- EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
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- WATER BLOW-OFF
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- STREET MONUMENT (TO BE SET)
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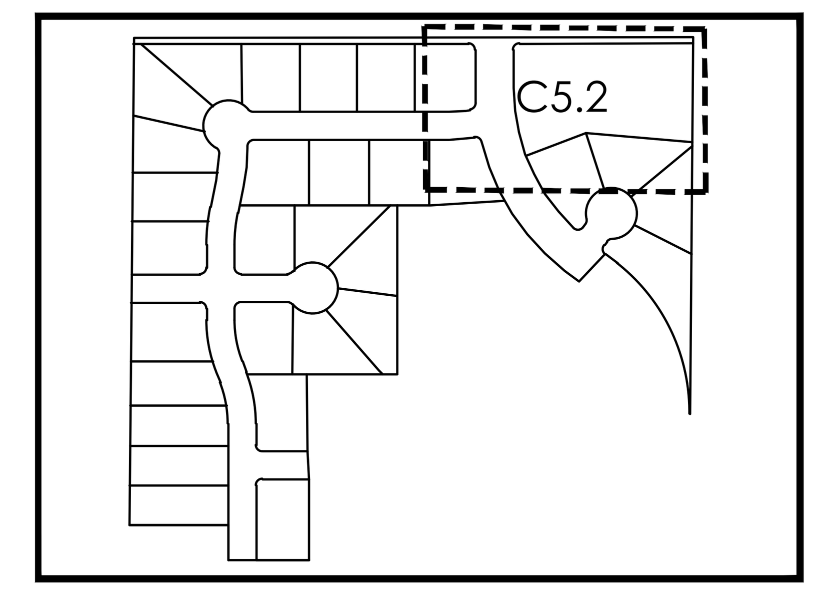
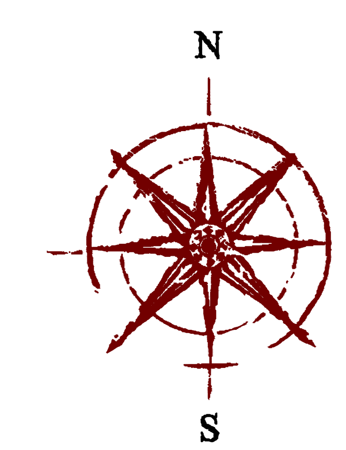
- EXIST. FIRE HYDRANT
- SPOT ELEVATION
- BACKYARD SWALE



KEY MAP
N.T.S



GRAPHIC SCALE

30 0 30 60 90 180

(IN FEET)
1 inch = 30 ft.

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12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1

GRANTSVILLE CITY, UT

GRADING & DRAINAGE PLAN

REVISION BLOCK		
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GRADING & DRAINAGE PLAN

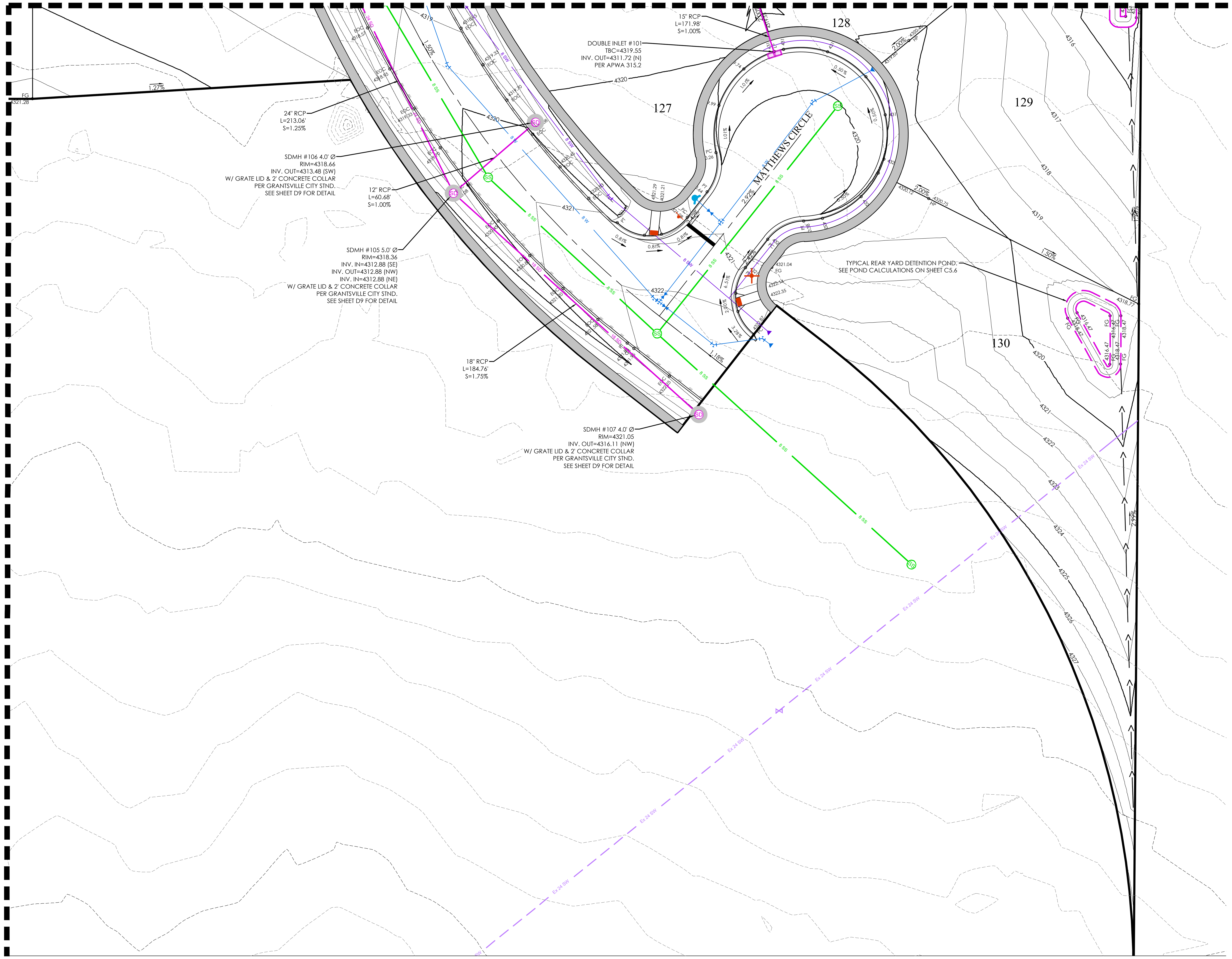
Scale: 1"=30'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C5.2	

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

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C5.2 GRADING & DRAINAGE PLAN.dwg

MATCHLINE SEE SHEET C5.2

MATCHLINE SEE SHEET C5.4



LEGEND

	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
15 SD	15" STORM DRAIN
8 SS	8" SANITARY SEWER
8 W	8" CULINARY WATER
8 SW	8" SECONDARY WATER
XXXX	CONTOUR MAJOR
XXXX	CONTOUR MINOR
Ex SD	EXIST. STORM DRAIN
Ex SS	EXIST. SANITARY SEWER
Ex W	EXIST. CULINARY WATER
X	EXIST. FENCE
[XXXX]	EXIST. CONTOUR MAJOR
[XXXX]	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
	SD MH, INLET, AND COMBO
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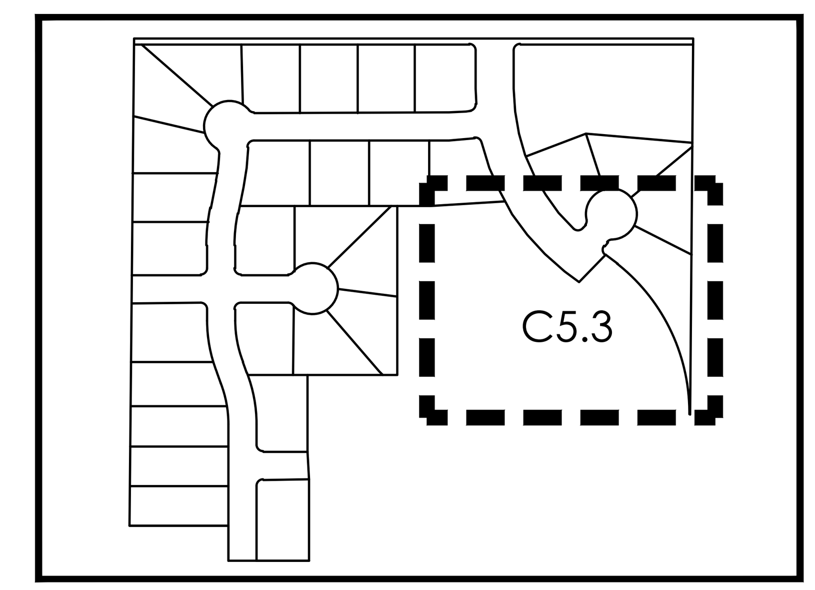
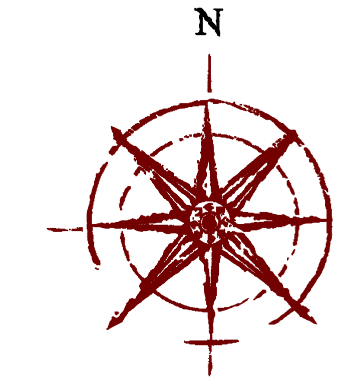
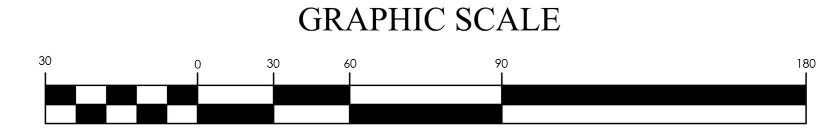
	EXIST. FIRE HYDRANT
o XXXX.XX	SPOT ELEVATION
	BACKYARD SWALE



KEY MAP
N.T.S



GRAPHIC SCALE



(IN FEET)
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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
GRADING & DRAINAGE PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
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3	----	----
4	----	----
5	----	----
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GRADING & DRAINAGE PLAN

Scale: 1"=30'	Drawn: GIM		
Date: 12/14/23	Job #: 23-0359		
Sheet: C5.3			

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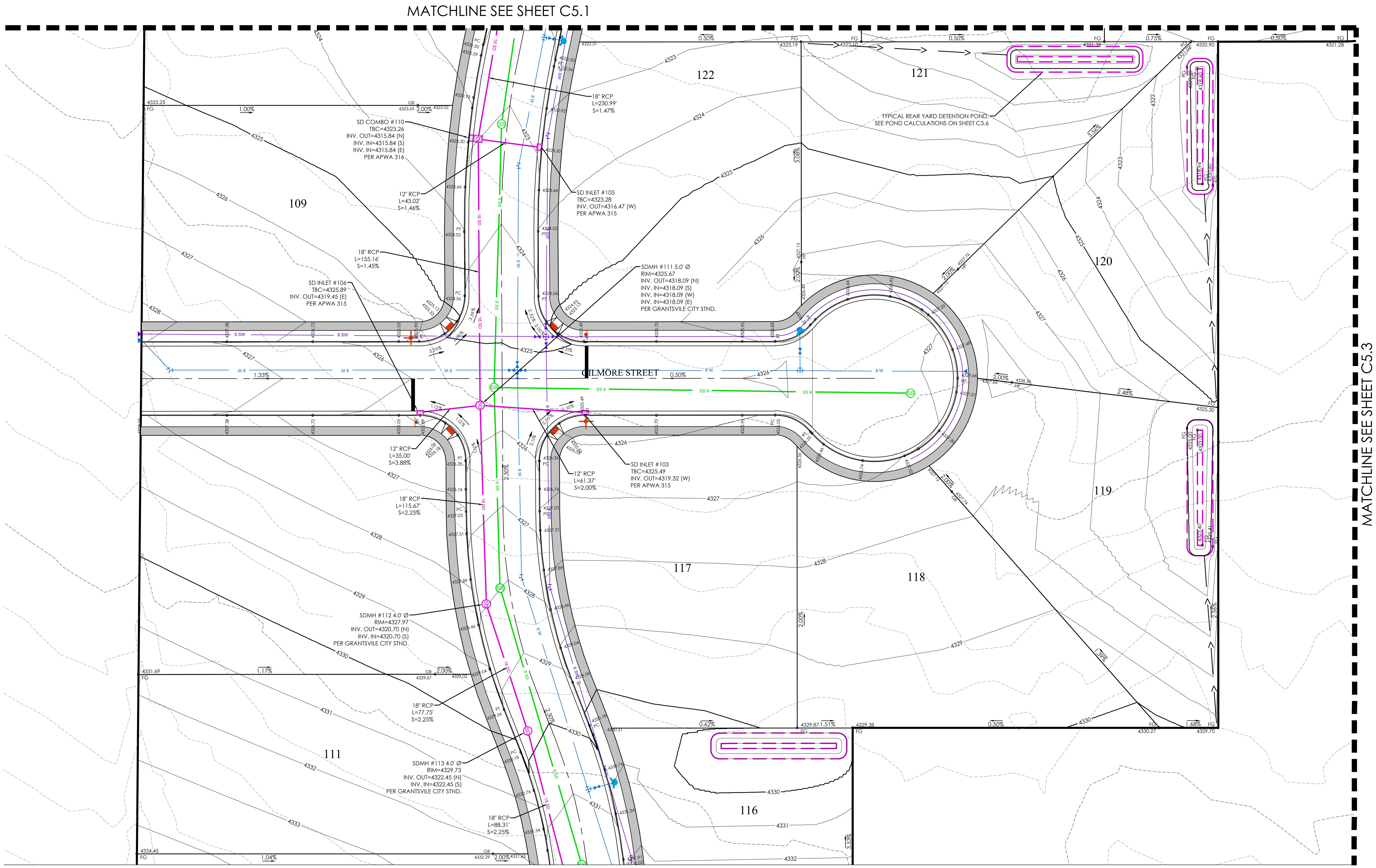
Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C5.3 GRADING & DRAINAGE PLAN.dwg



LEGEND

	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
15 SD	15" STORM DRAIN
8 SS	8" SANITARY SEWER
8 W	8" CULINARY WATER
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XXXX	CONTOUR MAJOR
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Ex SD	EXIST. STORM DRAIN
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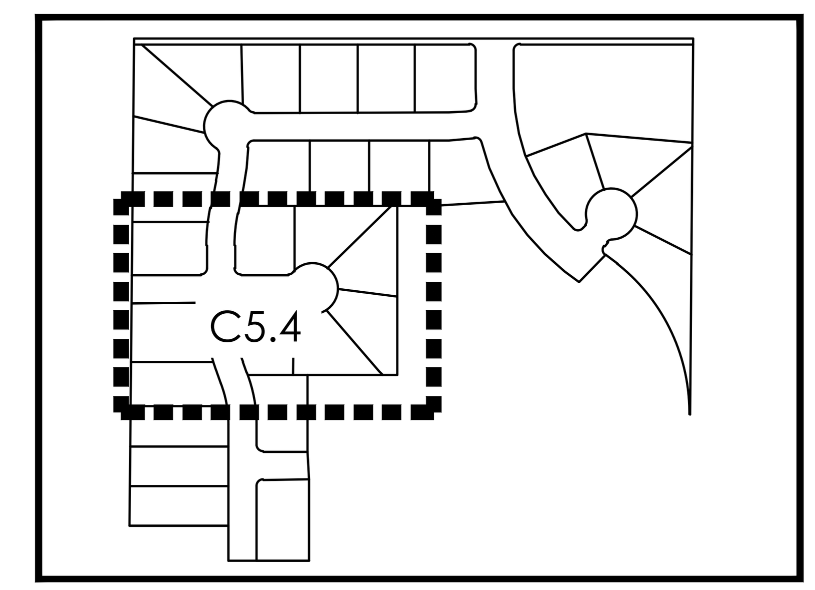
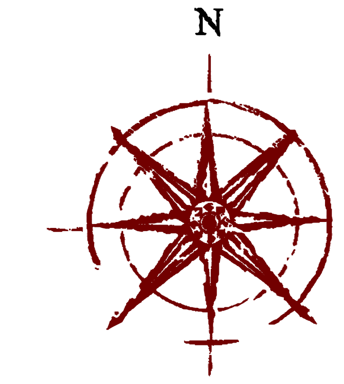
o XXXX.XX	SPOT ELEVATION
	BACKYARD SWALE



KEY MAP
N.T.S



GRAPHIC SCALE
30 0 30 60 90 180
(IN FEET)
1 inch = 30 ft.

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12/14/23
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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
GRADING & DRAINAGE PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
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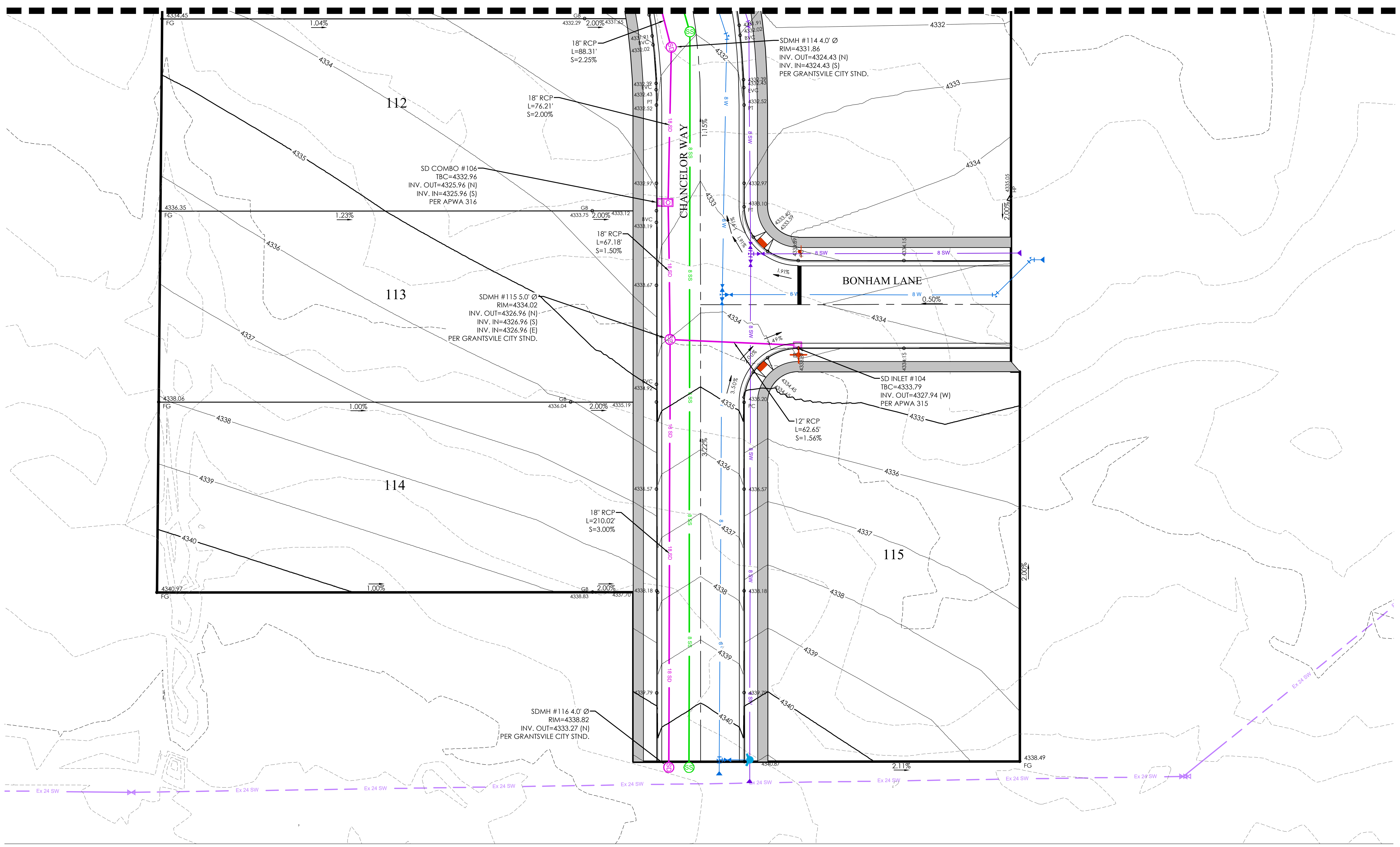
GRADING & DRAINAGE PLAN

Scale:	1"=30'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	C5.4		

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C5.4 GRADING & DRAINAGE PLAN.dwg

MATCHLINE SEE SHEET C5.4



LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
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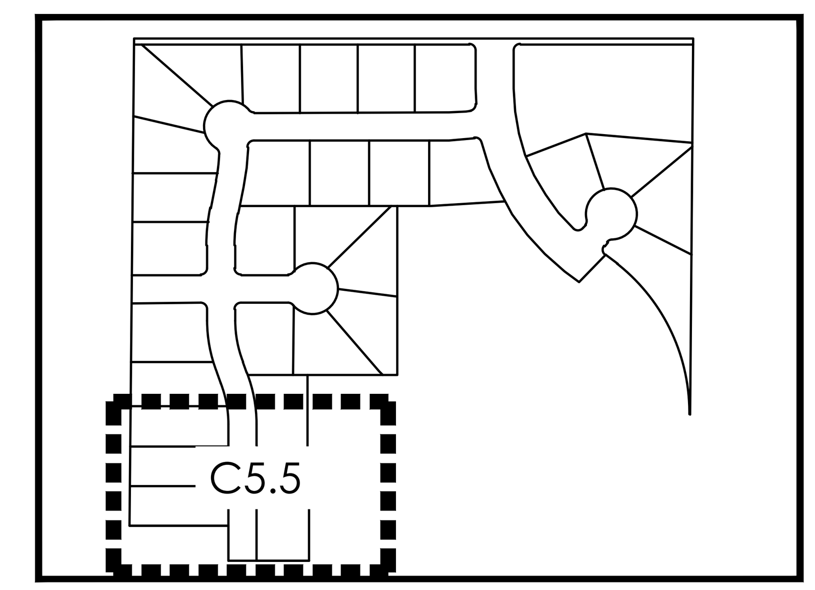

KEY MAP
N.T.S

N
S

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
GRADING & DRAINAGE PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
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GRADING & DRAINAGE PLAN

Scale: 1"=30'		Drawn: GIM	
Date: 12/14/23		Job #: 23-0359	
Sheet: C5.5			

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C5.5 GRADING & DRAINAGE PLAN.dwg

Detention Pond

Project: **Heritage Farms Overall Preliminary**
Location: **Grantsville, Utah**
Date: **7/10/2023**
Designer: **MEC**

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100-Year Detention Sizing

Design Criteria

Intensity Table: Per NOAA Atlas 14
Return Period: **100 year**
Allowable Discharge: **0.00 cfs/acre** Per Grantsville City Standards

Allowable Discharges

Storm Drain Discharge: 0.00 cfs
Other Discharge: 0.62 cfs Source: Infiltration Rate
Total Discharge: **0.622 cfs**

Weighted "C" Value

Surface Type	Area (sf)	"C" Value	C*A
Building	657,600	0.85	558,960
Drives	82,200	0.85	69,870
Roadway and Sidewalk	363,042	0.85	308,586
Landscape	3,209,160	0.15	481,374
Totals	4,312,002		1,418,790
Weighted "C" Value		**0.33**	

Drainage Calculations

Duration	Intensity	Runoff C	Area	Rainfall	Accumulated Flow	Allowable Discharge	Discharge	Required Storage
min	in/hr		Ac	cfs	cf	cfs	cf	cf
15.0	3.82	0.33	98.99	124.42	111,979	0.62	560	111,419
30.0	2.57	0.33	98.99	83.71	150,673	0.62	1,119	149,554
60.0	1.59	0.33	98.99	51.79	186,436	0.62	2,239	184,197
120.0	0.84	0.33	98.99	27.42	197,458	0.62	4,478	192,980
180.0	0.56	0.33	98.99	18.34	198,044	0.62	6,716	191,328
360.0	0.30	0.33	98.99	9.64	208,245	0.62	13,433	194,813
720.0	0.17	0.33	98.99	5.47	236,387	0.62	26,865	209,521
1440.0	0.10	0.33	98.99	3.16	272,970	0.62	53,731	219,239

Maximum Storage Requirement: ***219,239***
Maximum Storage Requirement (ac-ft): 5.03

Detention Basin Design

Storage Requirement: 219,239 cf
Allowable Depth: 1.0 ft
Retention Pond Volume: 209,477 cf
Gravel Sump Storage: 14,330 cf

Total Storage **223,807** ***DETENTION ADEQUATE***

Detention Pond

Project: **Heritage Farms Phase 1**
Location: **Grantsville, Utah**
Date: **11/28/2023**
Designer: **MEF**

FOCUS ENGINEERING & SURVEYING

100-Year Detention Sizing

Design Criteria

Intensity Table: Per NOAA Atlas 14
Return Period: **100 year**
Allowable Discharge: **0.00 cfs/acre** Per Grantsville City Standards

Allowable Discharges

Storm Drain Discharge: 0.00 cfs
Other Discharge: 0.62 cfs Source: Infiltration Rate
Total Discharge: **0.622 cfs**

Weighted "C" Value

Surface Type	Area (sf)	"C" Value	C*A
Building	144,000	0.85	122,400
Drives	12,000	0.85	10,200
Roadway and Sidewalk	279,737	0.85	237,776
Landscape	633,968	0.15	95,095
Totals	1,069,705		465,471
Weighted "C" Value		**0.44**	

Drainage Calculations

Duration	Intensity	Runoff C	Area	Rainfall	Accumulated Flow	Allowable Discharge	Discharge	Required Storage
min	in/hr		Ac	cfs	cf	cfs	cf	cf
15.0	3.82	0.44	24.56	40.82	36,738	0.62	560	36,178
30.0	2.57	0.44	24.56	27.46	49,432	0.62	1,119	48,313
60.0	1.59	0.44	24.56	16.99	61,165	0.62	2,239	58,926
120.0	0.84	0.44	24.56	9.00	64,781	0.62	4,478	60,304
180.0	0.56	0.44	24.56	6.02	64,974	0.62	6,716	58,257
360.0	0.30	0.44	24.56	3.16	68,320	0.62	13,433	54,888
720.0	0.17	0.44	24.56	1.80	77,553	0.62	26,865	50,687
1440.0	0.10	0.44	24.56	1.04	89,555	0.62	53,731	35,824

Maximum Storage Requirement: ***60,304***
Maximum Storage Requirement (ac-ft): 1.38

Detention Basin Design

Storage Requirement: 60,304 cf
Allowable Depth: 4.0 ft
Retention Pond Volume: 209,477 cf
Gravel Sump Storage: 14,330 cf

Total Storage **223,807** ***DETENTION ADEQUATE***

Rear Lot Retention Pond

Project: **Heritage Farms**
Location: **Grantsville, Utah**
Date: **6/2/2022**
Designer: **MEF**

FOCUS ENGINEERING & SURVEYING

100-Year Retention Sizing

Design Criteria

Intensity Table: Per NOAA Atlas 14
Return Period: **100 year**
Allowable Discharge: **0.00 cfs/acre** Per Grantsville City Standards

Allowable Discharges

Storm Drain Discharge: 0.00 cfs
Other Discharge: 0.00 cfs Source:
Total Discharge: **0 cfs**

Weighted "C" Value

Surface Type	Area (sf)	"C" Value	C*A
Homes (rooftops)	2,400	0.85	2,040
Drives	0	0.85	0
Roadway and Sidewalk	0	0.85	0
Landscape	16,226	0.15	2,434
Totals	18,626		4,473.90
Weighted "C" Value		**0.24**	

Drainage Calculations

Duration	Intensity	Runoff C	Area	Rainfall	Accumulated Flow	Allowable Discharge	Discharge	Required Storage
min	in/hr		Ac	cfs	cf	cfs	cf	cf
15.0	3.82	0.24	0.43	0.39	353	0.00	0	353
30.0	2.57	0.24	0.43	0.26	475	0.00	0	475
60.0	1.59	0.24	0.43	0.16	588	0.00	0	588
120.0	0.84	0.24	0.43	0.09	623	0.00	0	623
180.0	0.56	0.24	0.43	0.06	624	0.00	0	624
360.0	0.30	0.24	0.43	0.03	657	0.00	0	657
720.0	0.17	0.24	0.43	0.02	745	0.00	0	745
1440.0	0.10	0.24	0.43	0.01	861	0.00	0	861

Maximum Storage Requirement: ***861***
Maximum Storage Requirement (ac-ft): 0.02

Retention Basin Design

Storage Requirement: 861 cf
Allowable Depth: 2.0 ft — Retention Calculated Using Basic Geometry
Retention Pond Volume: 1,366 cf — of a Trapezoidal Trench
Roadway Sump Storage: 0 cf

Total Storage **1,366** ***RETENTION ADEQUATE***

THE DETENTION POND VOLUME IS 209,477 CF. THE STORAGE REQUIREMENT FOR PHASE 1 IS 60,304 CF WHICH IS APPROXIMATELY 29% OF THE POND CAPACITY.

1' DEPTH IN THE POND IS APPROXIMATELY 66,471 CF. THE MEASURED PERCOLATION RATE WAS 40 MINUTES PER INCH PER THE GEOTECH.

12 IN X 40 MINUTES PER IN = 8 HOURS FOR PERCOLATION.

OR

CONVERTING PERCOLATION TEST OF 45 MINUTES PER INCH FOR PERCOLATION CALCULATION THROUGH THE BOTTOM ABOUT 3 TIMES AND ADDING A SAFETY FACTOR OF 2:

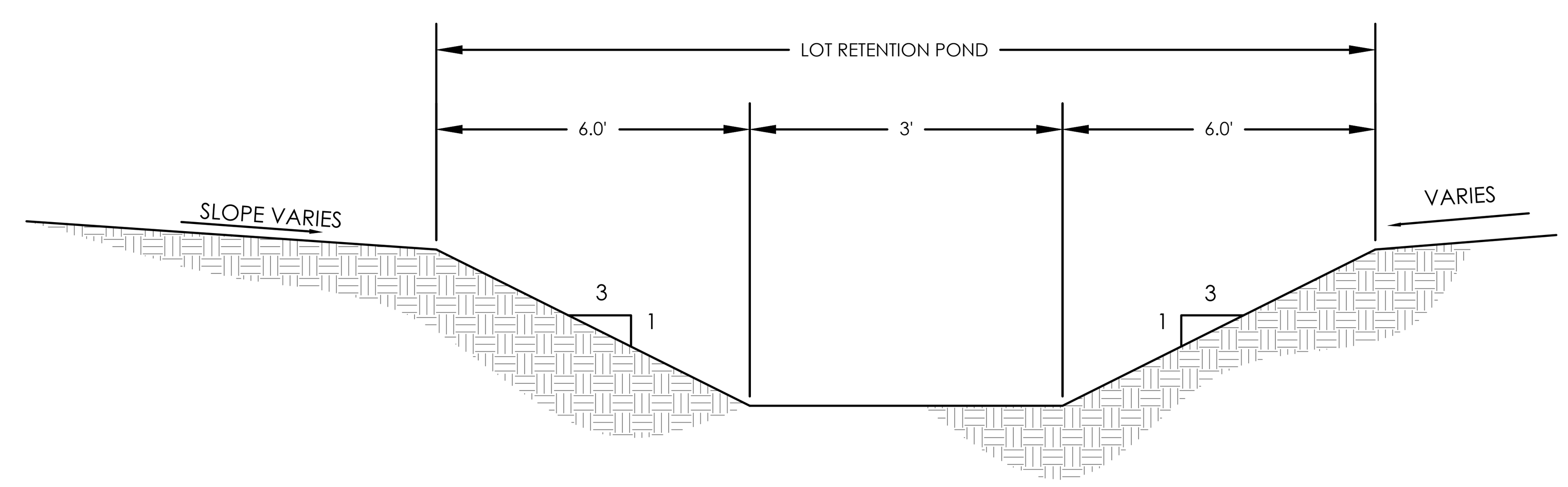
45MIN PER INCH X 3 X 2 = 270 MINUTES PER INCH
12 INCHES DEEP
12 IN X 270 MINUTES PER INCH = 54 HOURS OR 2.25 DAYS

INCREASED GRAVEL STORAGE WILL BE ADDED IN FUTURE PHASES TO ENSURE PERCOLATION WITHIN 3 DAYS.

MEASURED PERCOLATION RATE WAS 40 MINUTES PER INCH IN CLAY MATERIAL

MEASURED INFILTRATION RATE WAS 5 MINUTES PER INCH IN SANDY SOIL BELOW CLAY (SAFETY FACTOR OF 2 APPLIED FOR DISCHARGE RATE)

SEE GEO-TECH REPORT FOR DETAILS



LOT RETENTION POND DETAIL
N.T.S.

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MIDVALE, UTAH 84047 PH: (801) 352-0075
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12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
DRAINAGE CALCULATIONS

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
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DRAINAGE CALCULATIONS

Scale: N/A	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C5.6	

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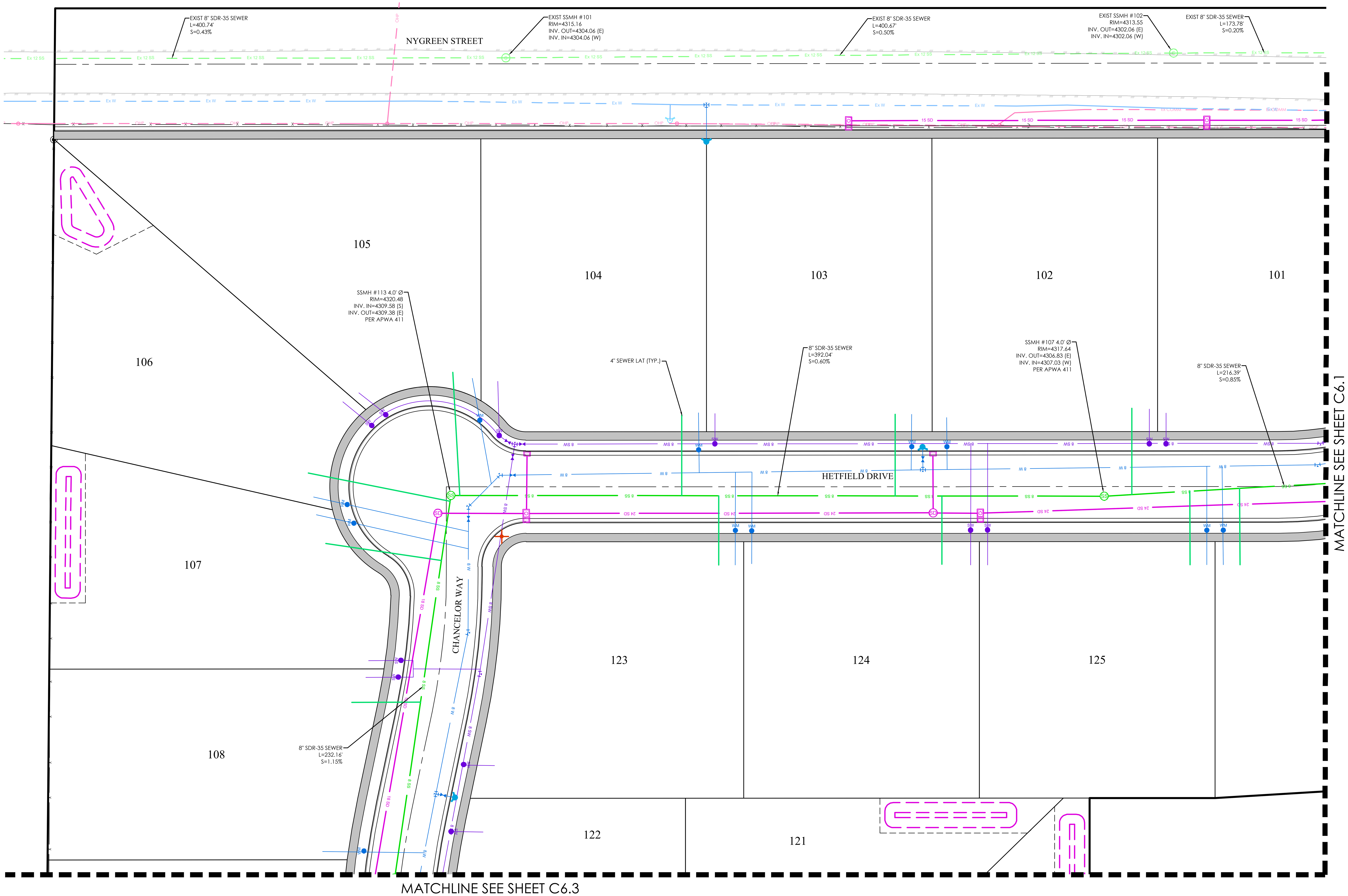
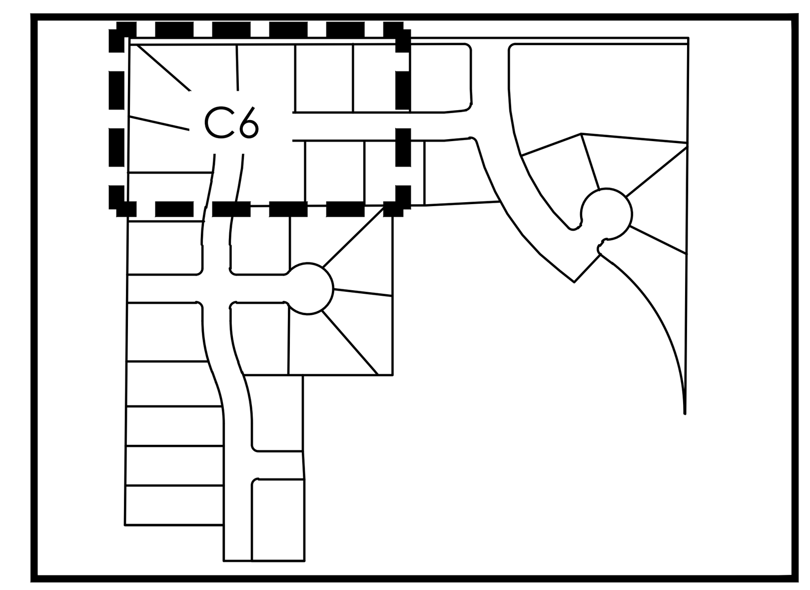
Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C5.6 DRAINAGE CALCULATIONS.dwg



LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
- EXIST. FENCE
- EXIST. CONTOUR MAJOR
- EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- SPOT ELEVATION
- BACKYARD SWALE



KEY MAP
N.T.S

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

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LICENSED PROFESSIONAL ENGINEER No. 8028950-2202 THOMAS M. ROMNEY 12/14/23 STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
SEWER PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
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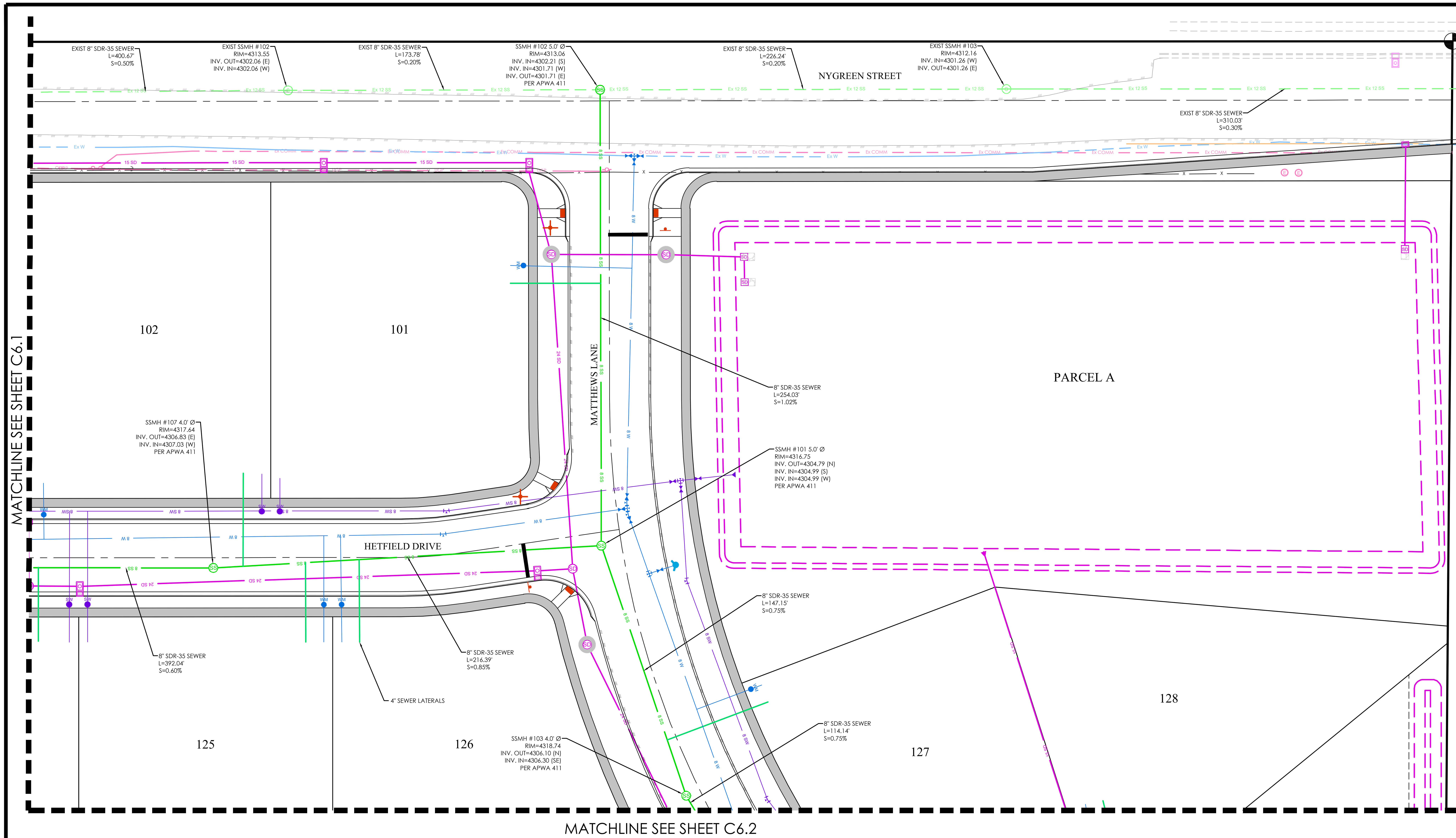
SEWER PLAN

Scale:	1"=30'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	C6		

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C6 SEWER PLAN.dwg



LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15 SD — 15" STORM DRAIN
- 8 SS — 8" SANITARY SEWER
- 8 W — 8" CULINARY WATER
- 8 SW — 8" SECONDARY WATER
- XXXX — CONTOUR MAJOR
- XXXX — CONTOUR MINOR
- Ex SD — EXIST. STORM DRAIN
- Ex SS — EXIST. SANITARY SEWER
- Ex W — EXIST. CULINARY WATER
- EXIST. FENCE
- (XXXX) — EXIST. CONTOUR MAJOR
- (XXXX) — EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
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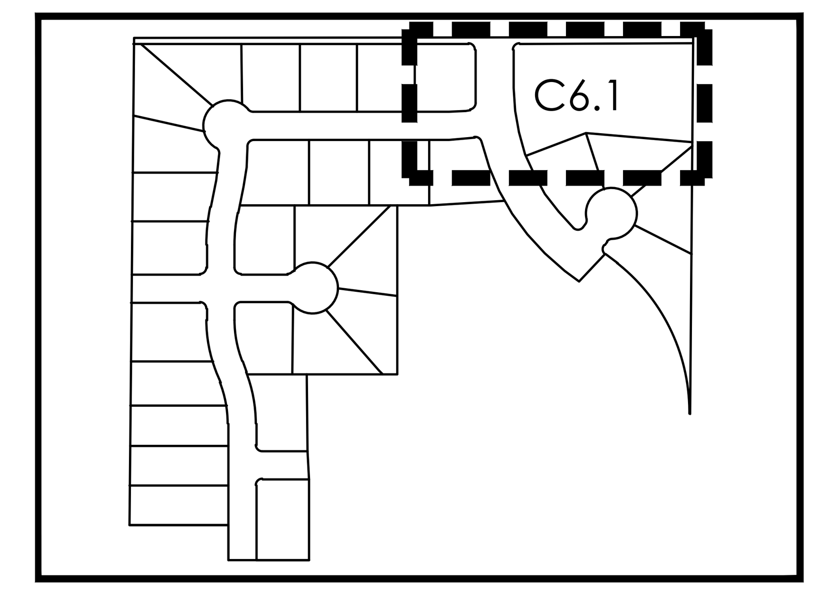
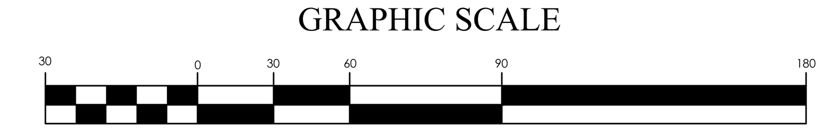
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- o XXXX.XX — SPOT ELEVATION
- BACKYARD SWALE



KEY MAP
N.T.S

GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

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No. 8028950-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
SEWER PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1	.....	.....
2	.....	.....
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6	.....	.....

SEWER PLAN

Scale: 1"=30'		Drawn: GIM	
Date: 12/14/23		Job #: 23-0359	
Sheet: C6.1			

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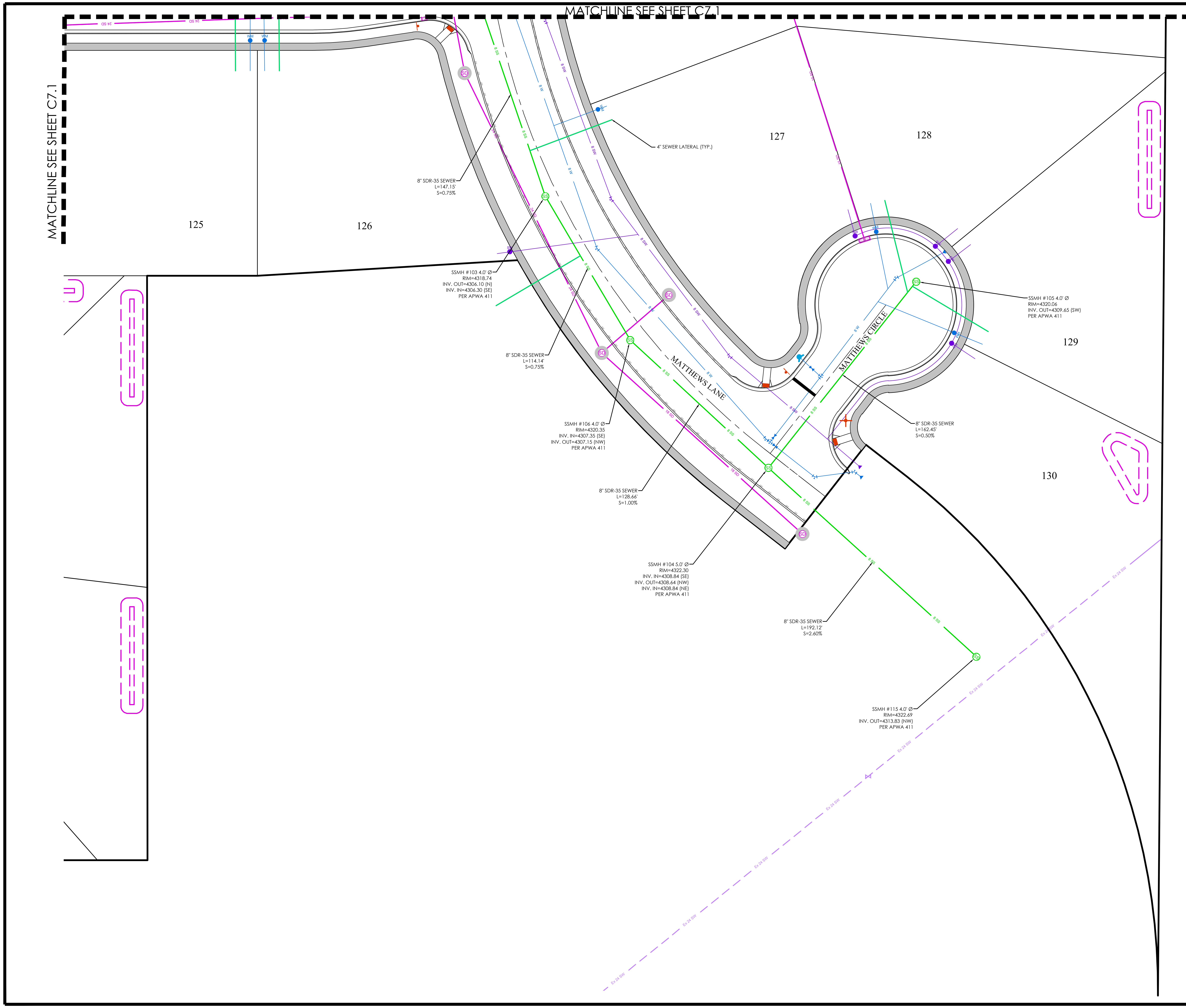
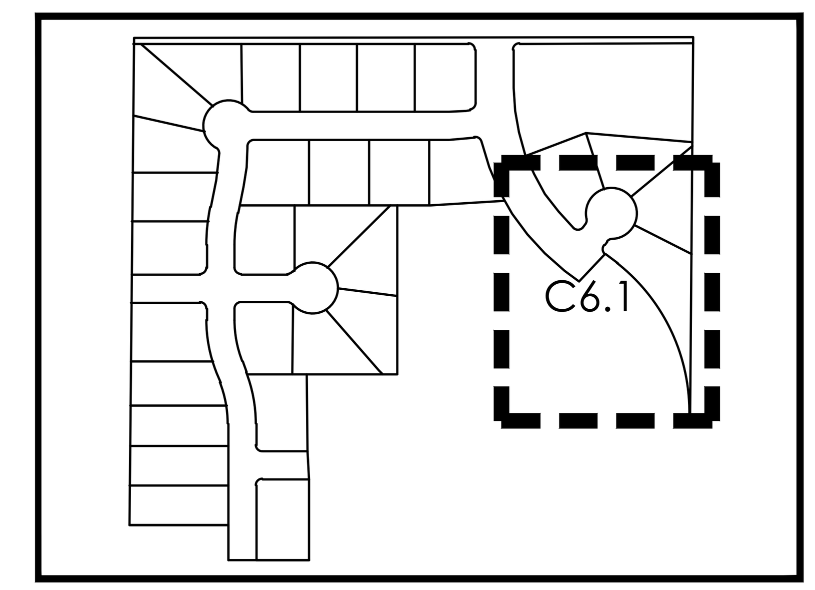
Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C6.1 SEWER PLAN.dwg



LEGEND

BOUNDARY	
ROW	
CENTERLINE	
LOT LINE	
EASEMENT	
15 SD	15" STORM DRAIN
8 SS	8" SANITARY SEWER
8 W	8" CULINARY WATER
8 SW	8" SECONDARY WATER
XXXX	CONTOUR MAJOR
XXXX	CONTOUR MINOR
Ex SD	EXIST. STORM DRAIN
Ex SS	EXIST. SANITARY SEWER
Ex W	EXIST. CULINARY WATER
X	EXIST. FENCE
(XXXX)	EXIST. CONTOUR MAJOR
(XXXX)	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
SD	SD MH, INLET, AND COMBO
SS	SEWER MANHOLE
	CULINARY VALVE, TEE & BEND
	SECONDARY VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
sd	EXIST. SD INLET & MH
S	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
o XXXX.XX	SPOT ELEVATION
	BACKYARD SWALE



KEY MAP
N.T.S

N
S

GRAPHIC SCALE
30 0 30 60 90 180
(IN FEET)
1 inch = 30 ft.

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

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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
SEWER PLAN

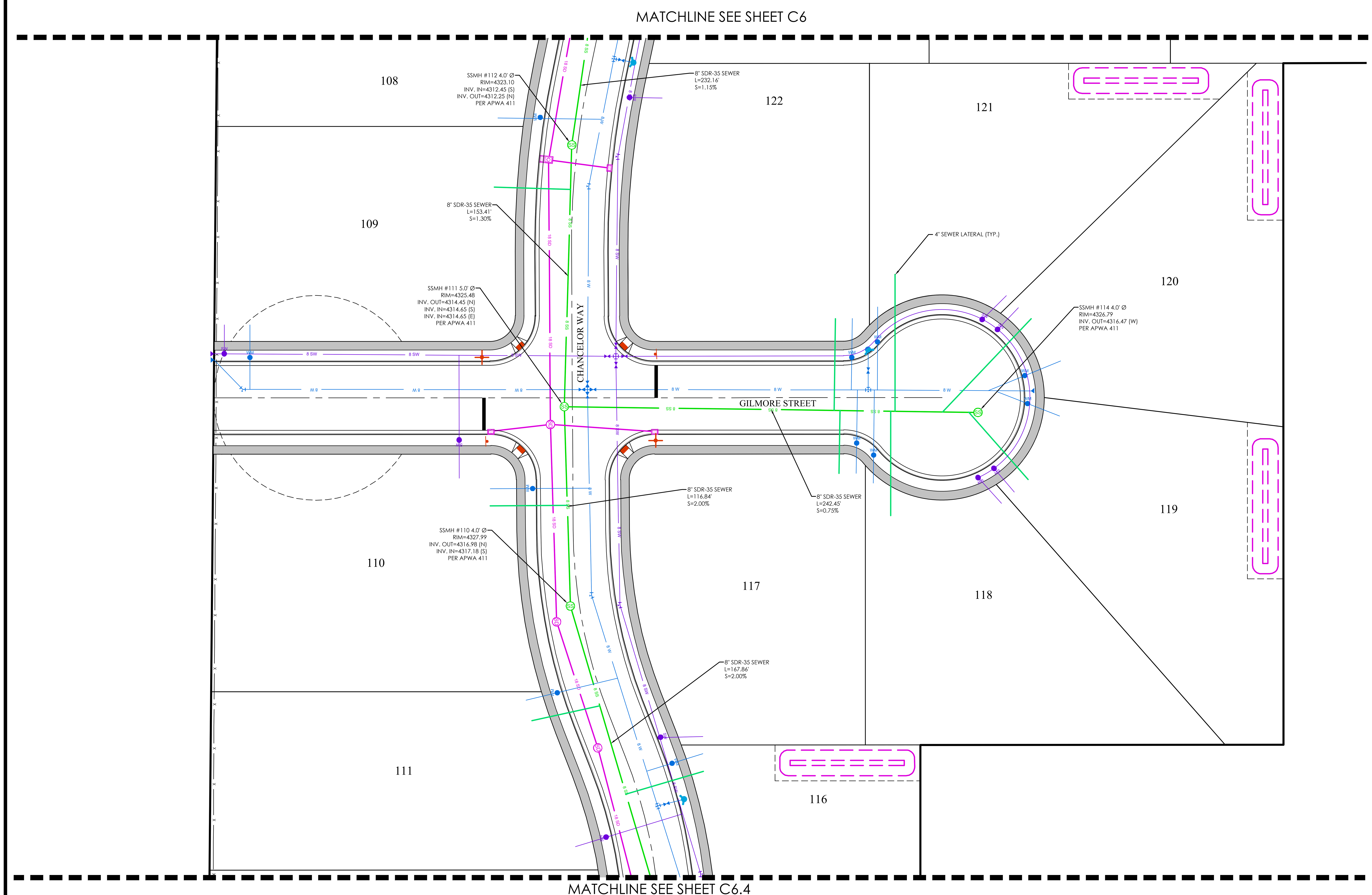
REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

SEWER PLAN

Scale:	1"=30'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	C6.2		

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C6.2 SEWER PLAN.dwg



LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15 SD — 15" STORM DRAIN
- 8 SS — 8" SANITARY SEWER
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- XXXX — CONTOUR MAJOR
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- Ex SS — EXIST. SANITARY SEWER
- Ex W — EXIST. CULINARY WATER
- X — EXIST. FENCE
- (XXXX) — EXIST. CONTOUR MAJOR
- (XXXX) — EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
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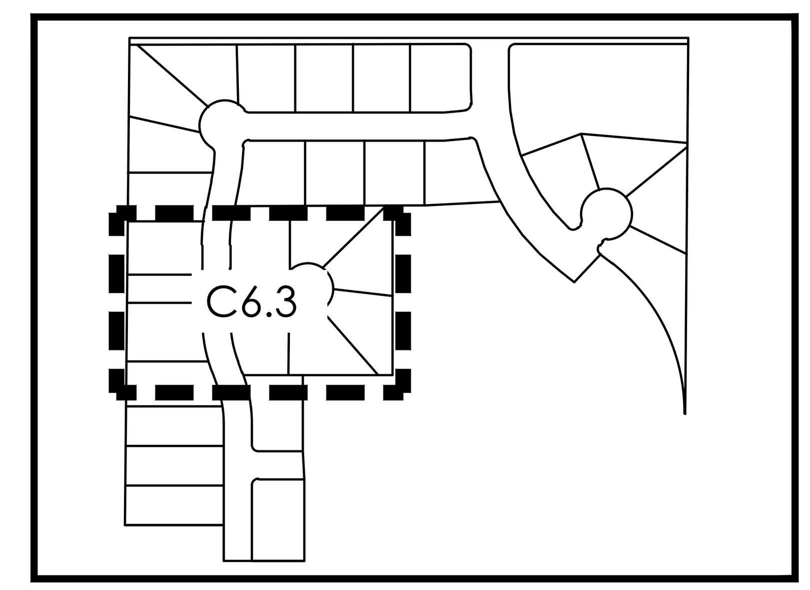
- EXIST. FIRE HYDRANT
- o XXXX.XX — SPOT ELEVATION
- BACKYARD SWALE



KEY MAP
N.T.S

N
S

GRAPHIC SCALE
30 0 30 60 90 180
(IN FEET)
1 inch = 30 ft.

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12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
SEWER PLAN

REVISION BLOCK

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5	----	----
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SEWER PLAN

Scale: 1"=30'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C6.3	

811
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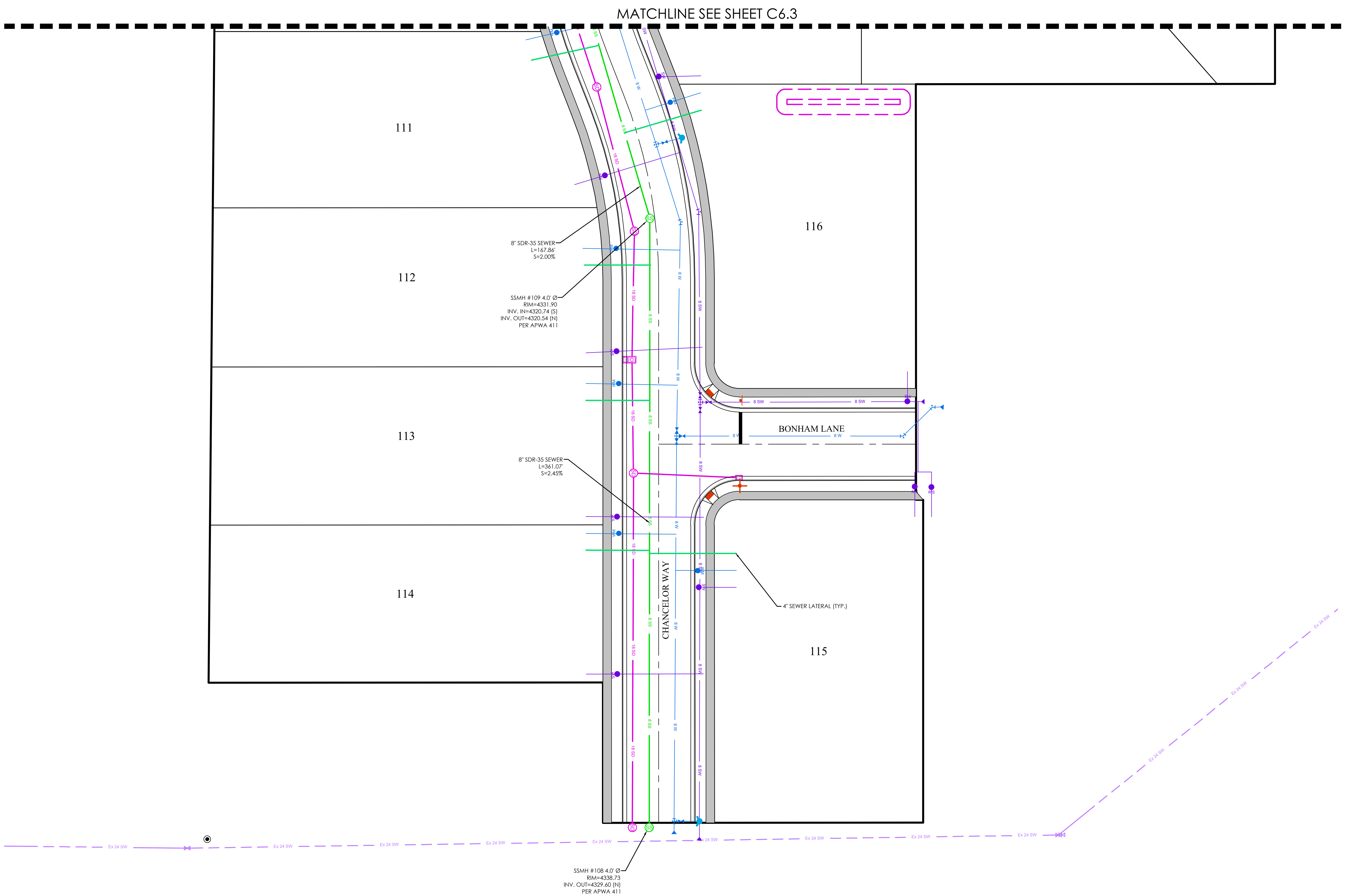
Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C6.3 SEWER PLAN.dwg



LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15 SD — 15" STORM DRAIN
- 8 SS — 8" SANITARY SEWER
- 8 W — 8" CULINARY WATER
- 8 SW — 8" SECONDARY WATER
- XXXX — CONTOUR MAJOR
- XXXX — CONTOUR MINOR
- Ex SD — EXIST. STORM DRAIN
- Ex SS — EXIST. SANITARY SEWER
- Ex W — EXIST. CULINARY WATER
- X X X — EXIST. FENCE
- (XXXX) — EXIST. CONTOUR MAJOR
- (XXXX) — EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
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- EXIST. SEWER MH
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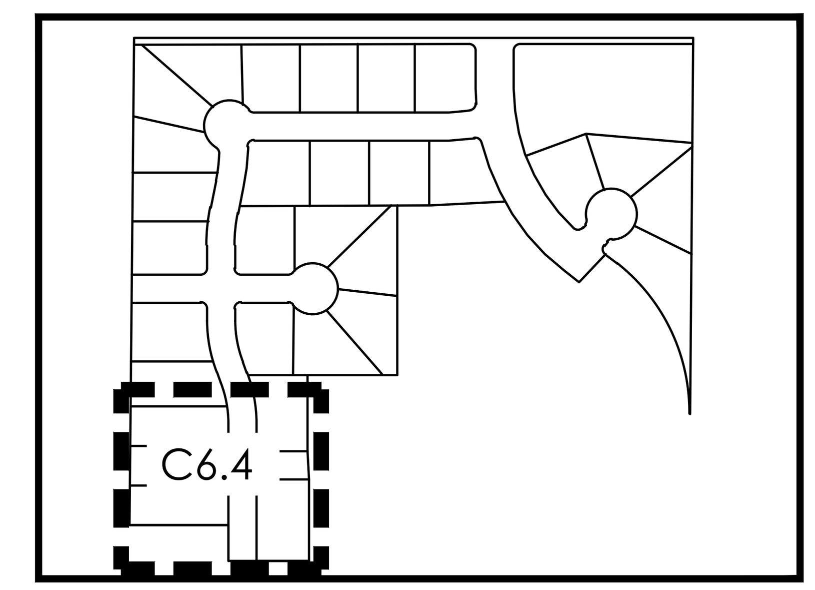
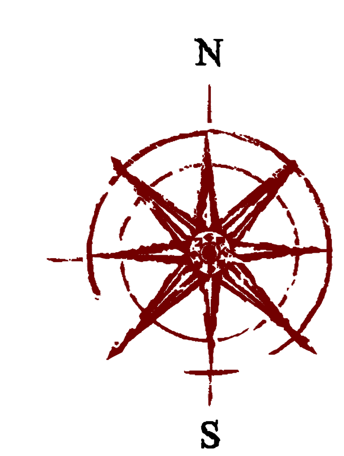
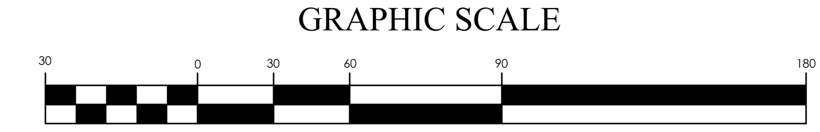
- EXIST. FIRE HYDRANT
- o XXXX.XX — SPOT ELEVATION
- BACKYARD SWALE



KEY MAP
N.T.S



GRAPHIC SCALE



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THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
SEWER PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
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4	----	----
5	----	----
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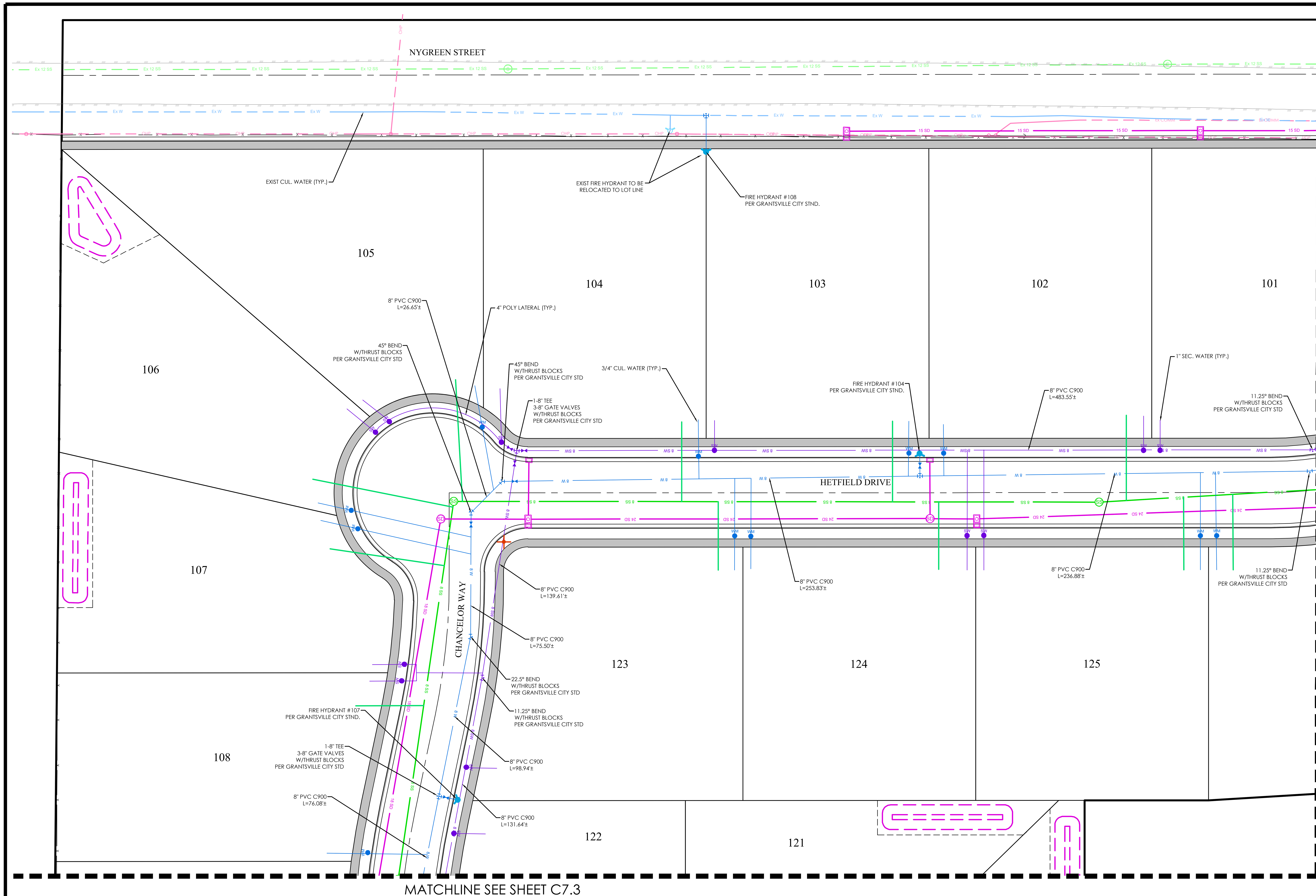
SEWER PLAN

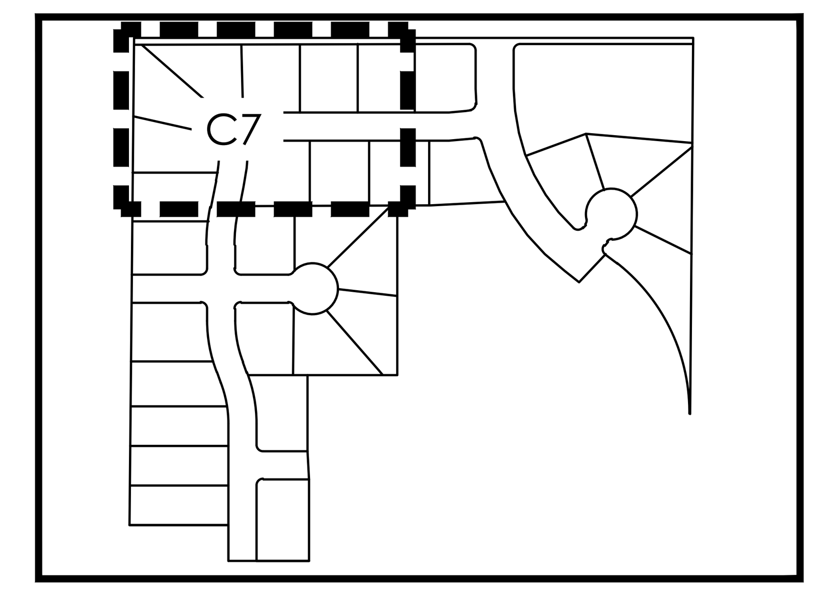
Scale:	1"=30'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	C6.4		

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C6.4 SITE PLAN.dwg

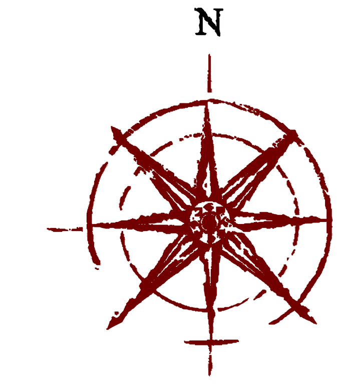


LEGEND

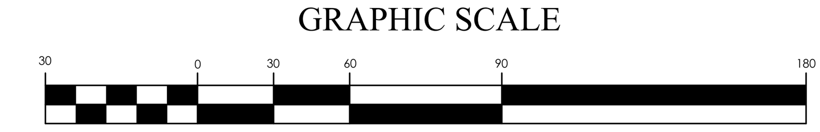
- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
- EXIST. FENCE
- EXIST. CONTOUR MAJOR
- EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- SPOT ELEVATION
- BACKYARD SWALE



KEY MAP
N.T.S



GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

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LICENSED PROFESSIONAL ENGINEER No. 8028950-2202 THOMAS M. ROMNEY 12/14/23 STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
WATER PLAN

REVISION BLOCK

#	DATE	DESCRIPTION
1	.....	.....
2	.....	.....
3	.....	.....
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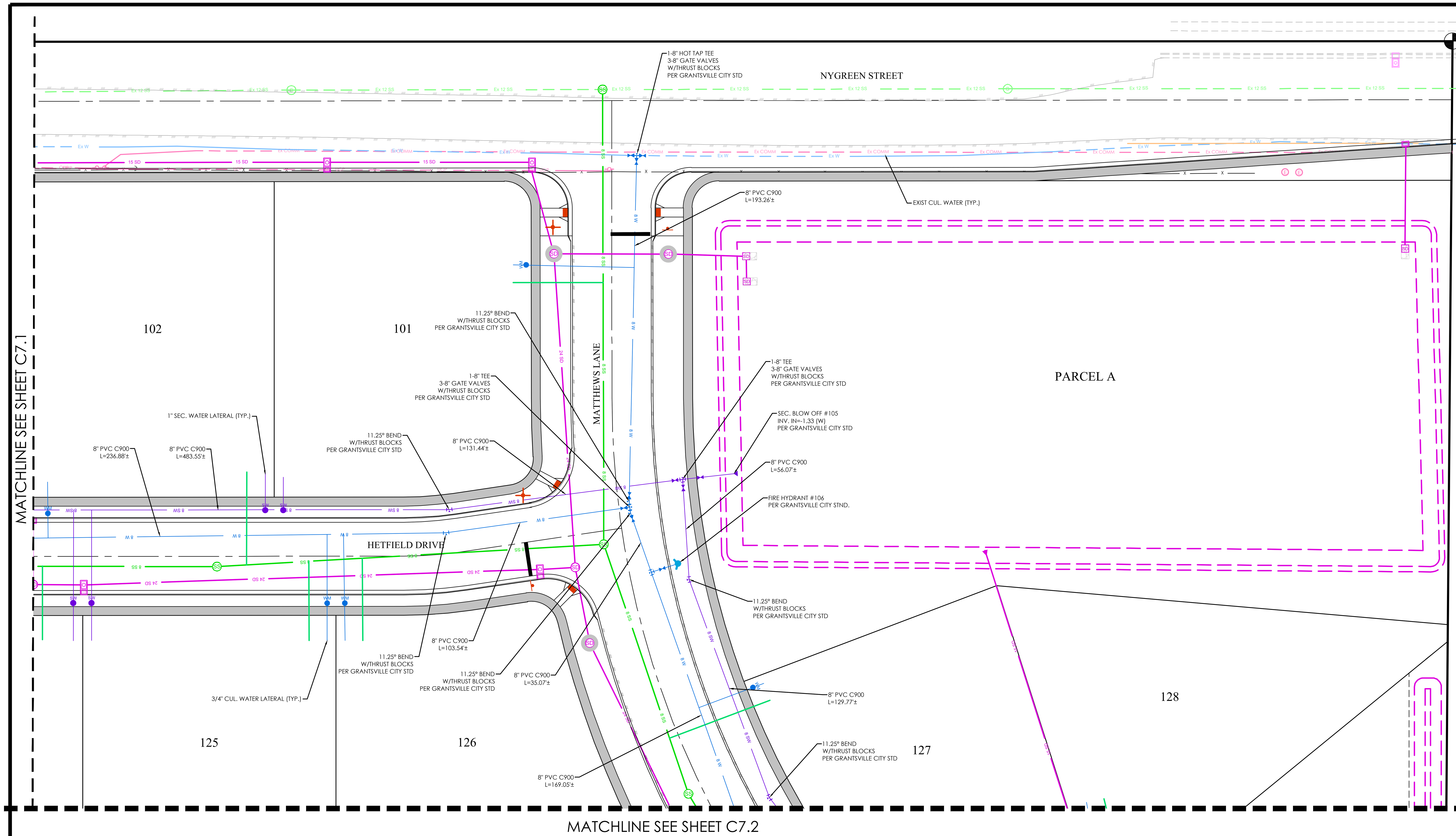
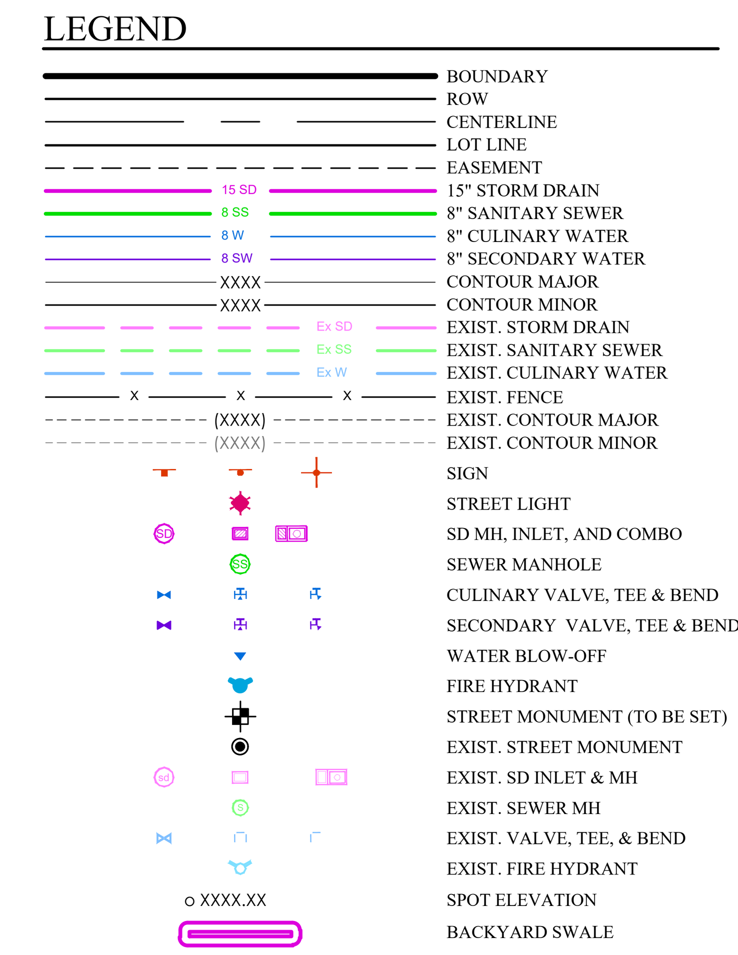
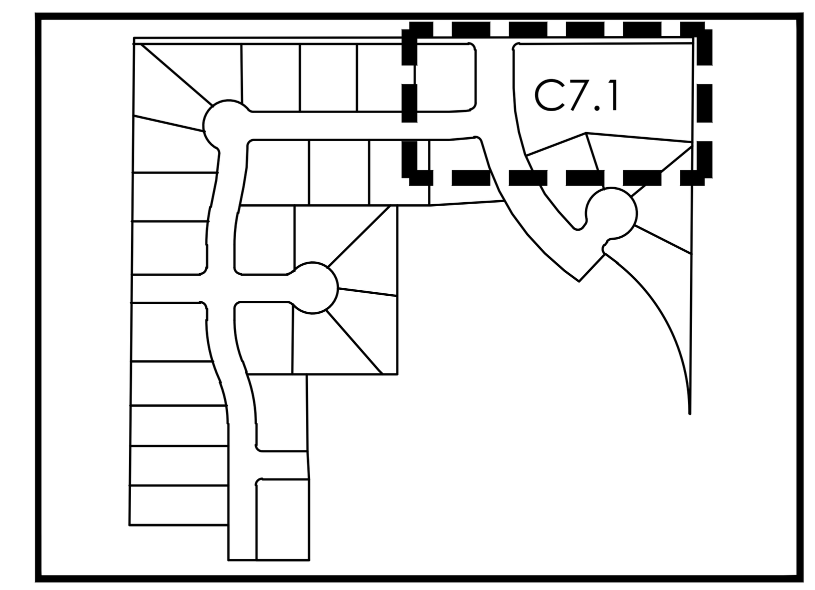
WATER PLAN

Scale: 1"=30'	Drawn: GJM		
Date: 12/14/23	Job #: 23-0359		
Sheet: C7			

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C7 WATER PLAN.dwg







KEY MAP
N.T.S

GRAPHIC SCALE

30 0 30 60 90 180

(IN FEET)
1 inch = 30 ft.

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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
WATER PLAN

REVISION BLOCK

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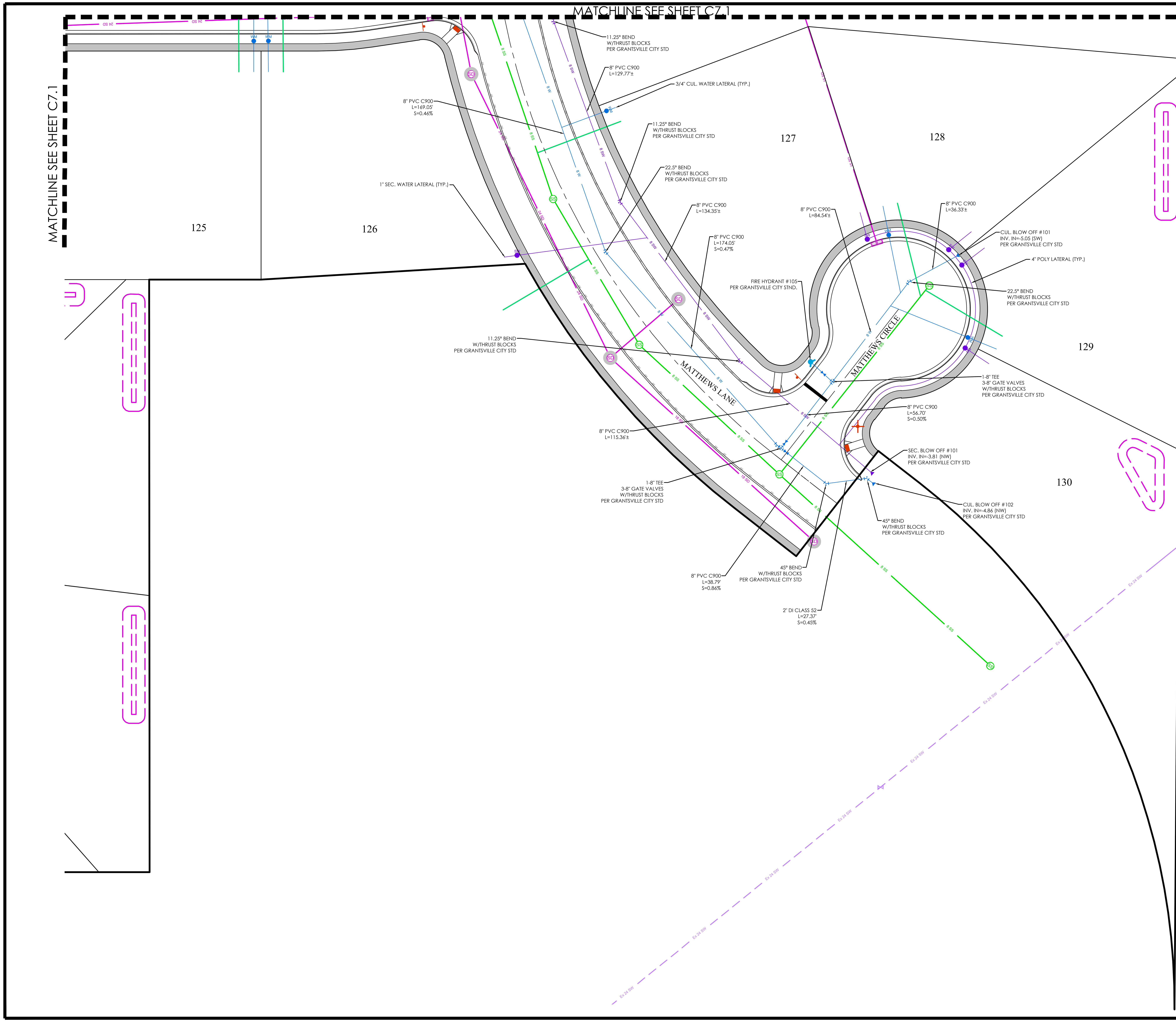
WATER PLAN

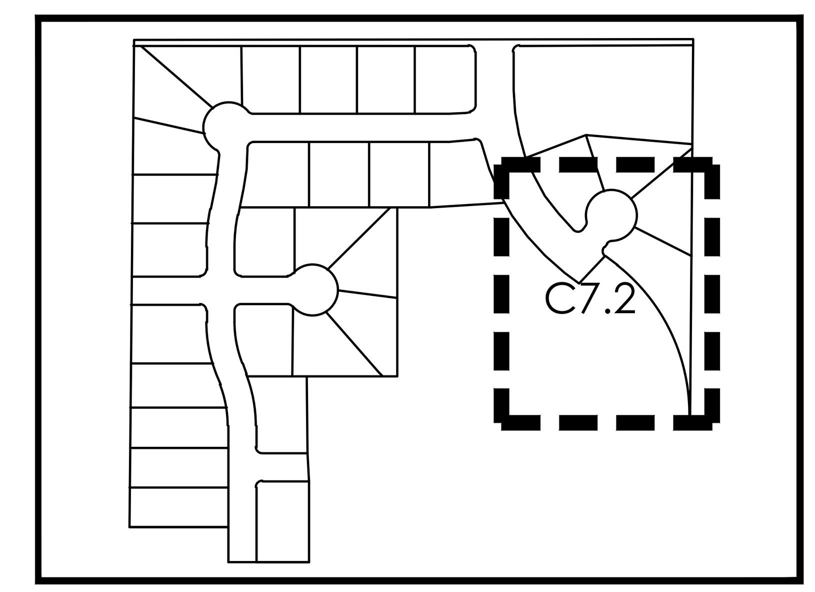
Scale: 1"=30'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C7.1	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C7.1 WATER PLAN.dwg



LEGEND

	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
15 SD	15" STORM DRAIN
8 SS	8" SANITARY SEWER
8 W	8" CULINARY WATER
8 SW	8" SECONDARY WATER
XXXX	CONTOUR MAJOR
XXXX	CONTOUR MINOR
Ex SD	EXIST. STORM DRAIN
Ex SS	EXIST. SANITARY SEWER
Ex W	EXIST. CULINARY WATER
x x x	EXIST. FENCE
(XXXX)	EXIST. CONTOUR MAJOR
(XXXX)	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
SD	SD MH, INLET, AND COMBO
SS	SEWER MANHOLE
	CULINARY VALVE, TEE & BEND
	SECONDARY VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
sd	EXIST. SD INLET & MH
S	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
o XXXX.XX	SPOT ELEVATION
	BACKYARD SWALE



KEY MAP
N.T.S

GRAPHIC SCALE

30 0 30 60 90 180

(IN FEET)
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THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1

GRANTSVILLE CITY, UT

WATER PLAN

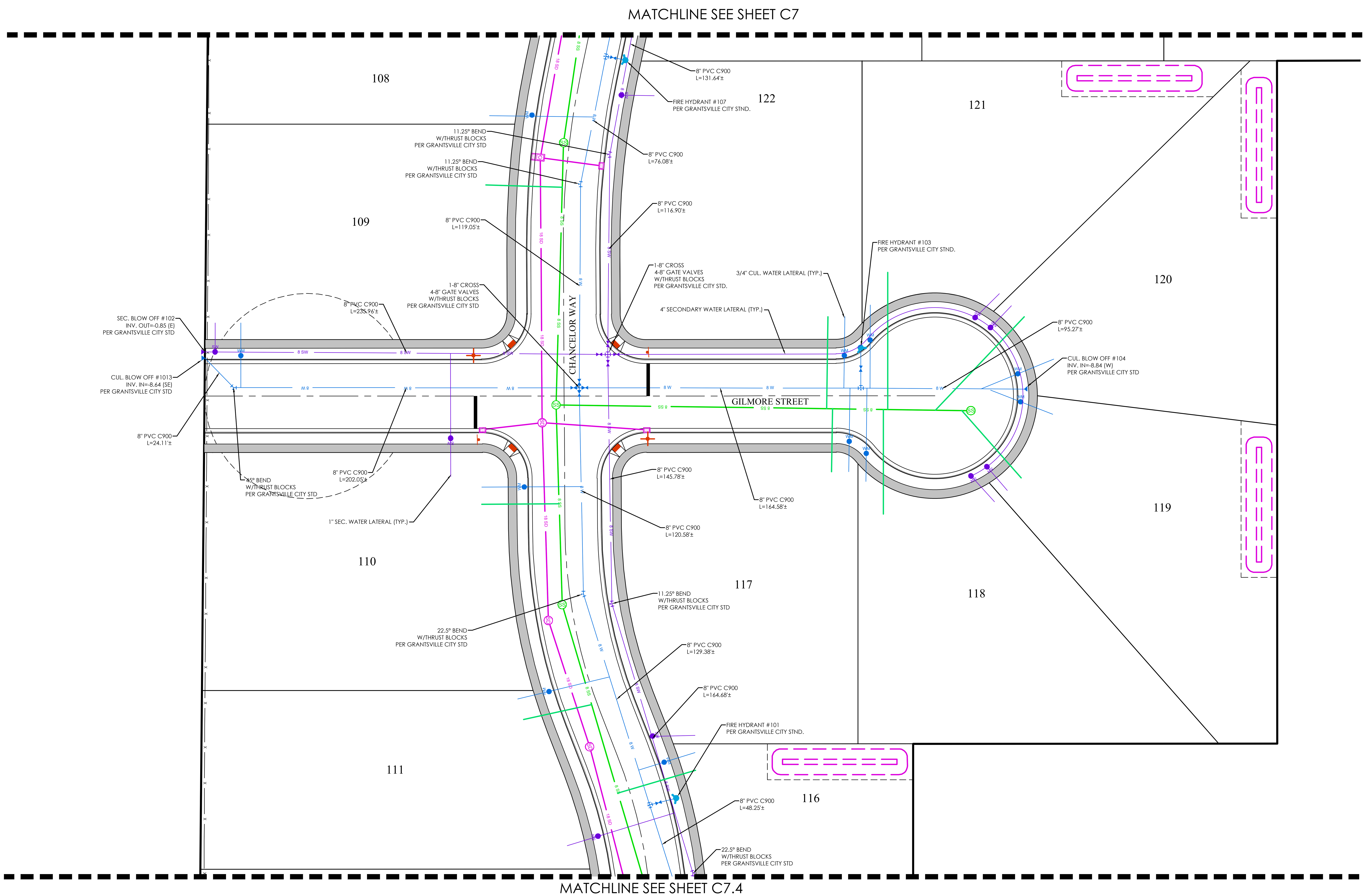
REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

WATER PLAN

Scale: 1"=30'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C7.2	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C7.2 WATER PLAN.dwg



LEGEND

BOUNDARY
ROW
CENTERLINE
LOT LINE
EASEMENT
15" STORM DRAIN
8" SANITARY SEWER
8" CULINARY WATER
8" SECONDARY WATER
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CONTOUR MINOR
EXIST. STORM DRAIN
EXIST. SANITARY SEWER
EXIST. CULINARY WATER
EXIST. FENCE
EXIST. CONTOUR MAJOR
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CULINARY VALVE, TEE & BEND
SECONDARY VALVE, TEE & BEND
WATER BLOW-OFF
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EXIST. SD INLET & MH
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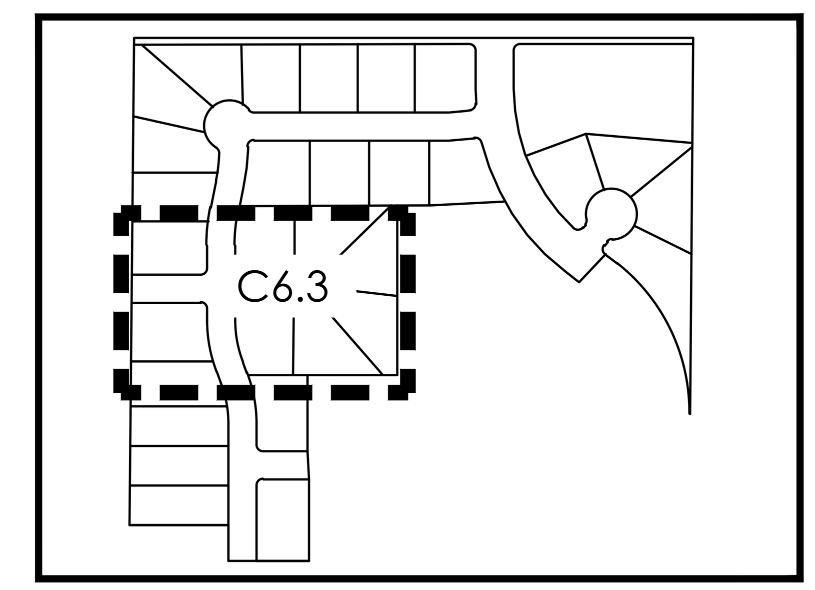
SPOT ELEVATION
BACKYARD SWALE



KEY MAP
N.T.S

N
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GRAPHIC SCALE
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(IN FEET)
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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
WATER PLAN

REVISION BLOCK

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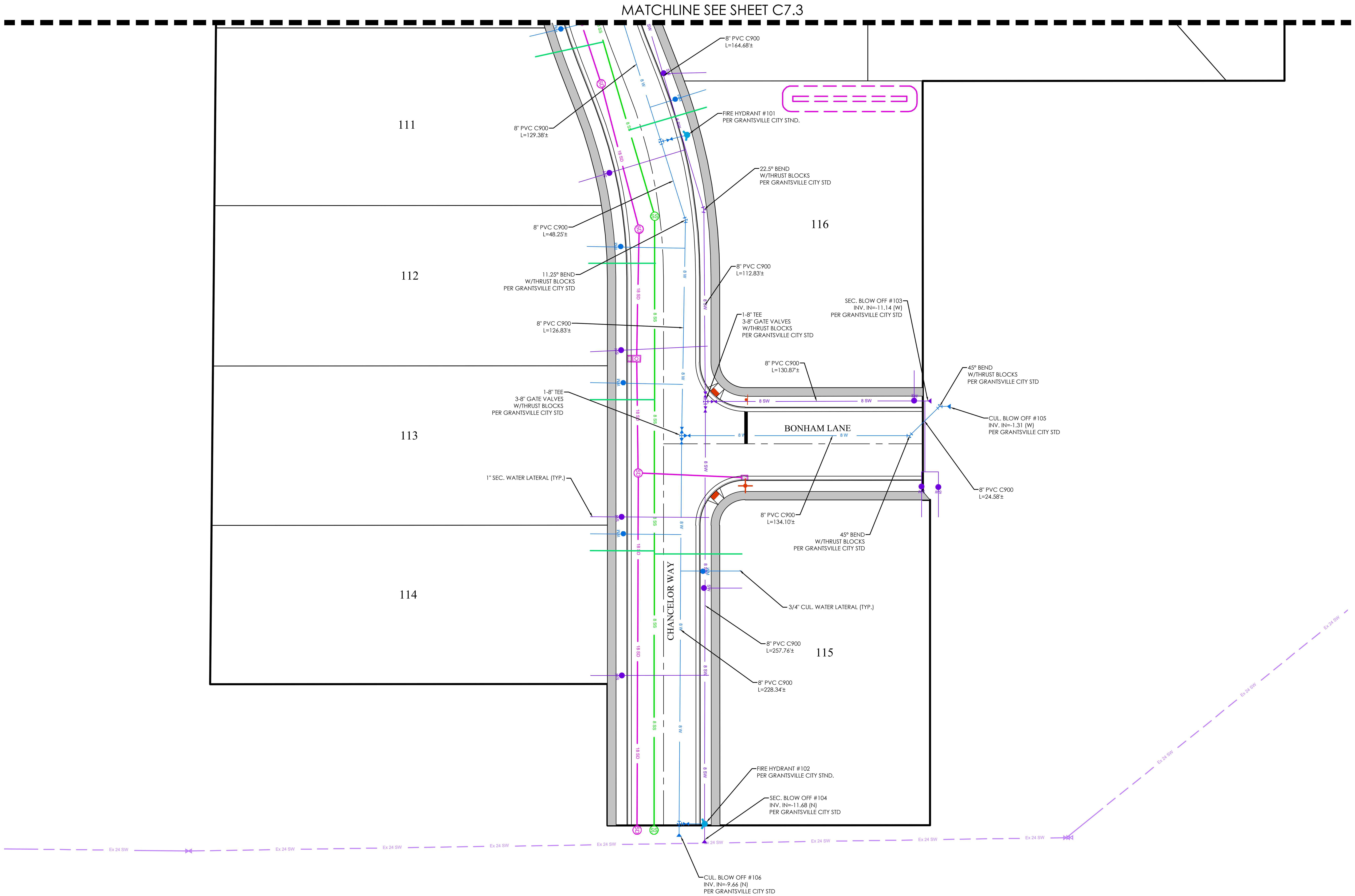
6	----	----

WATER PLAN

Scale: 1"=30'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: C7.3	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C7.3 WATER PLAN.dwg



LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15 SD — 15" STORM DRAIN
- 8 SS — 8" SANITARY SEWER
- 8 W — 8" CULINARY WATER
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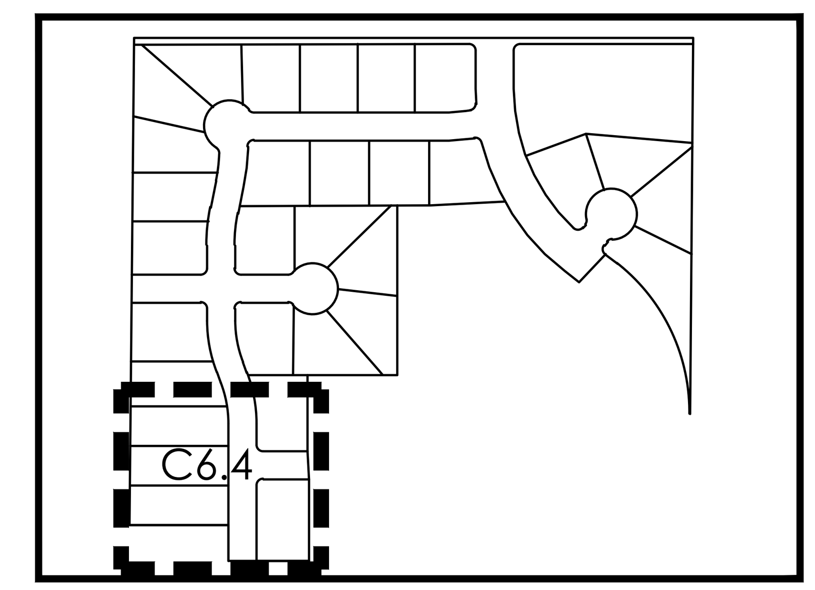
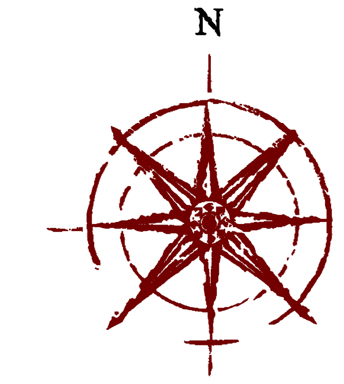
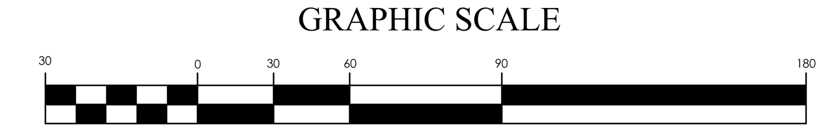
- XXXX — CONTOUR MAJOR
- XXXX — CONTOUR MINOR
- Ex SD — EXIST. STORM DRAIN
- Ex SS — EXIST. SANITARY SEWER
- Ex W — EXIST. CULINARY WATER
- X — EXIST. FENCE
- (XXXX) — EXIST. CONTOUR MAJOR
- (XXXX) — EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- XXXX.XX — SPOT ELEVATION
- BACKYARD SWALE



KEY MAP
N.T.S



GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

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No. 8028950-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
WATER PLAN

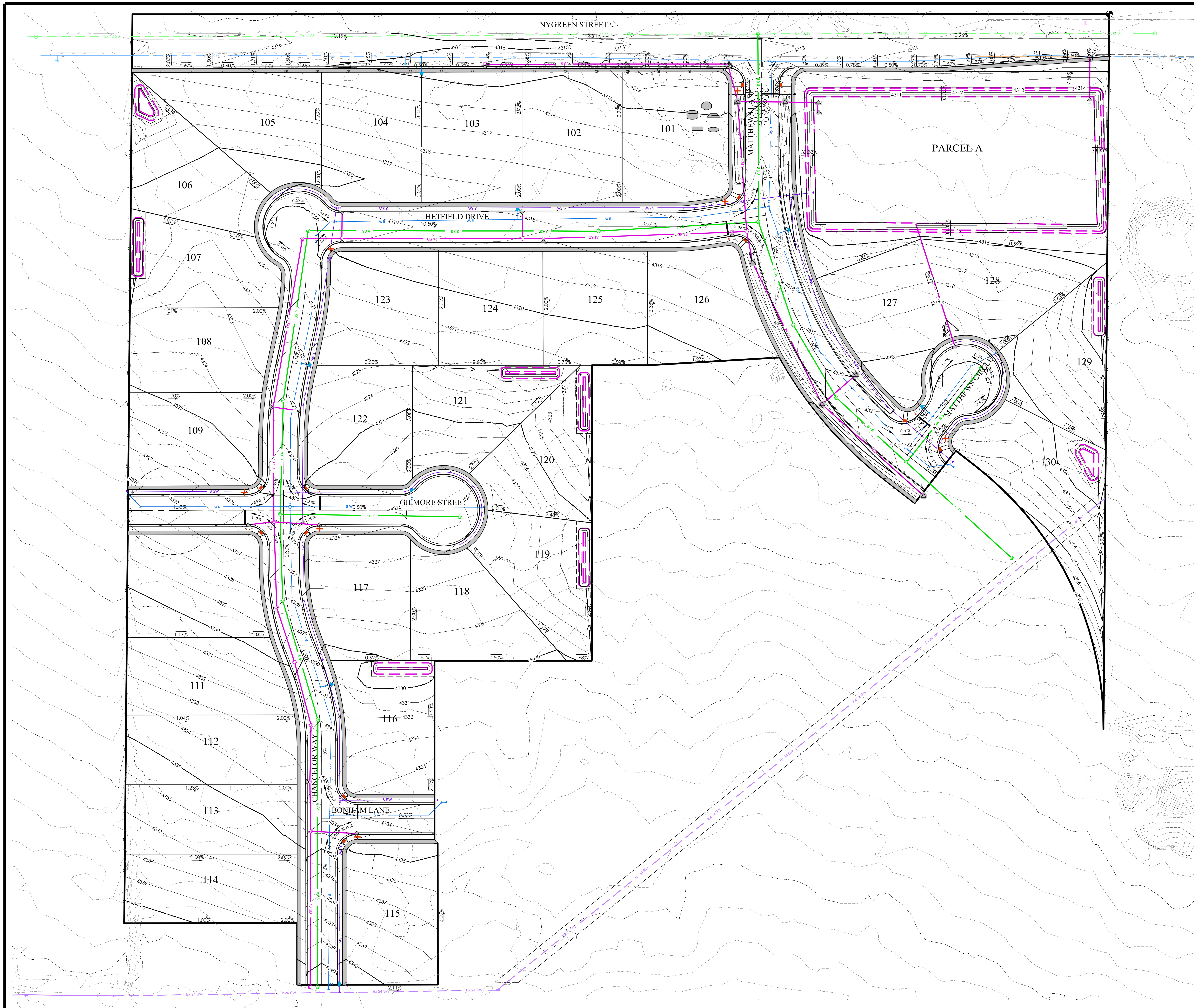
REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

WATER PLAN

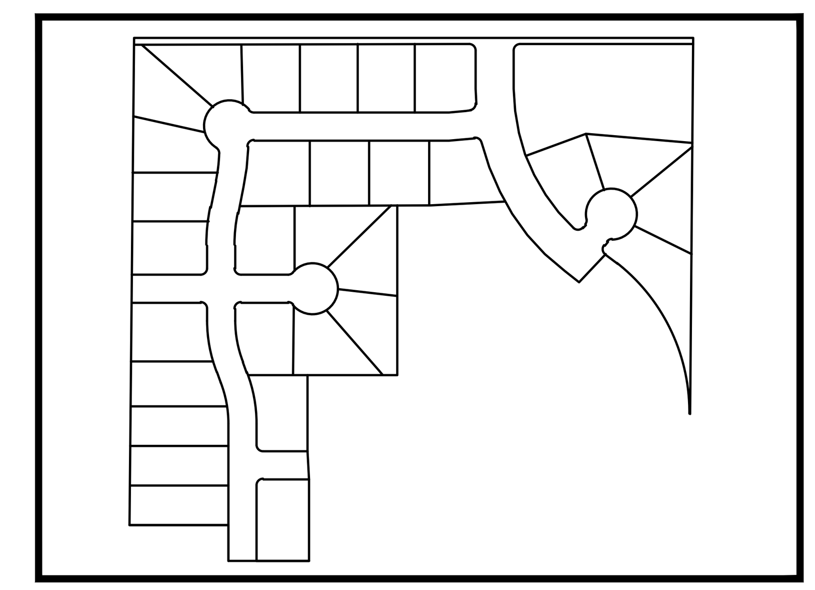
Scale:	1"=30'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	C7.4		

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\C7.4 WATER PLAN.dwg



EROSION CONTROL LEGEND

- CONSTRUCTION ENTRANCE
- MATERIALS STORAGE
- FUEL TANKS
- CONCRETE WASHOUT
- TRASH BIN
- PORTABLE TOILET
- CONSTRUCTION TRAILER
- INLET PROTECTION
- SURFACE WATERS
- OUTFALL
- SILT FENCE
- CUTBACK CURB
- FIBER ROLL



KEY MAP
N.T.S

GRAPHIC SCALE

0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

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THOMAS M. ROMNEY
12/14/23
LICENSED PROFESSIONAL ENGINEER
STATE OF UTAH

HERITAGE FARMS PHASE 1

GRANTSVILLE CITY, UT

EROSION CONTROL PLAN

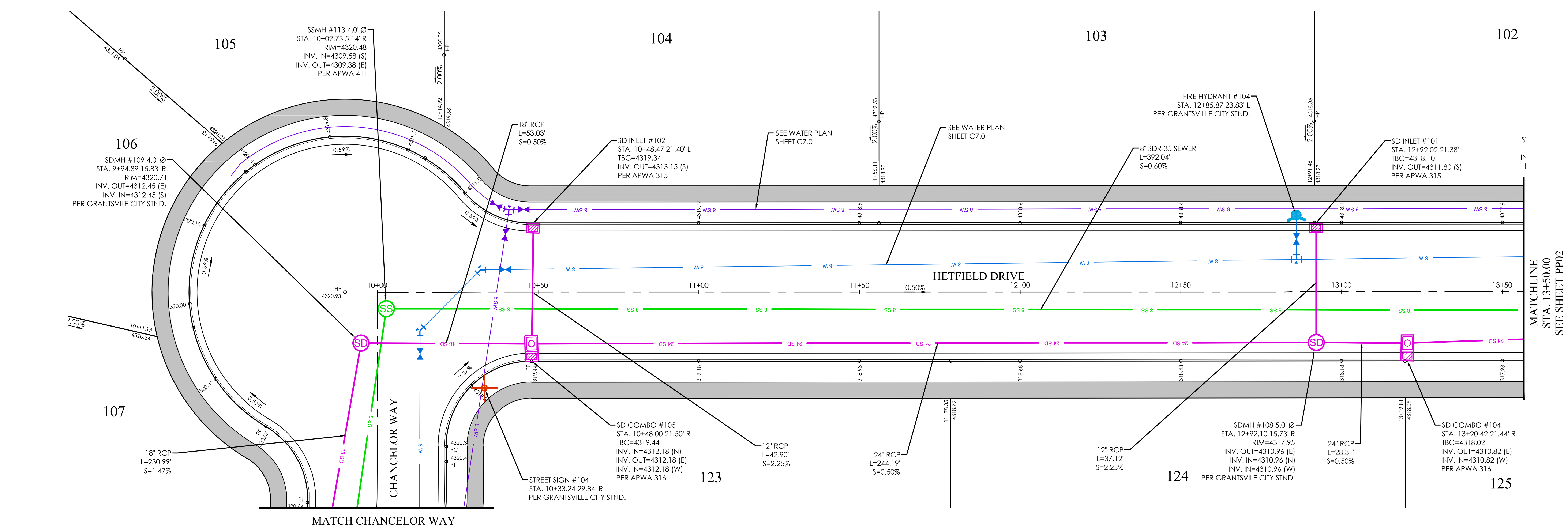
REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

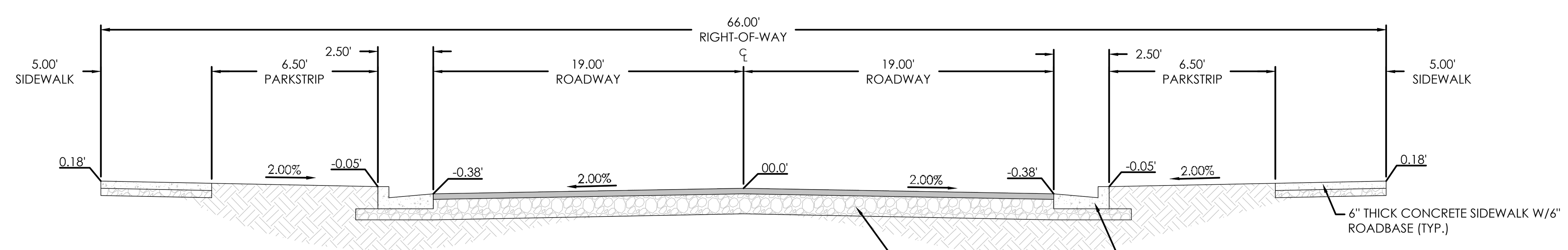
EROSION CONTROL PLAN

Scale: 1"=60'		Drawn: GIM	
Date: 12/14/23		Job #: 23-0359	
Sheet: C8			

Z:\2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\C8 EROSION CONTROL PLAN.dwg

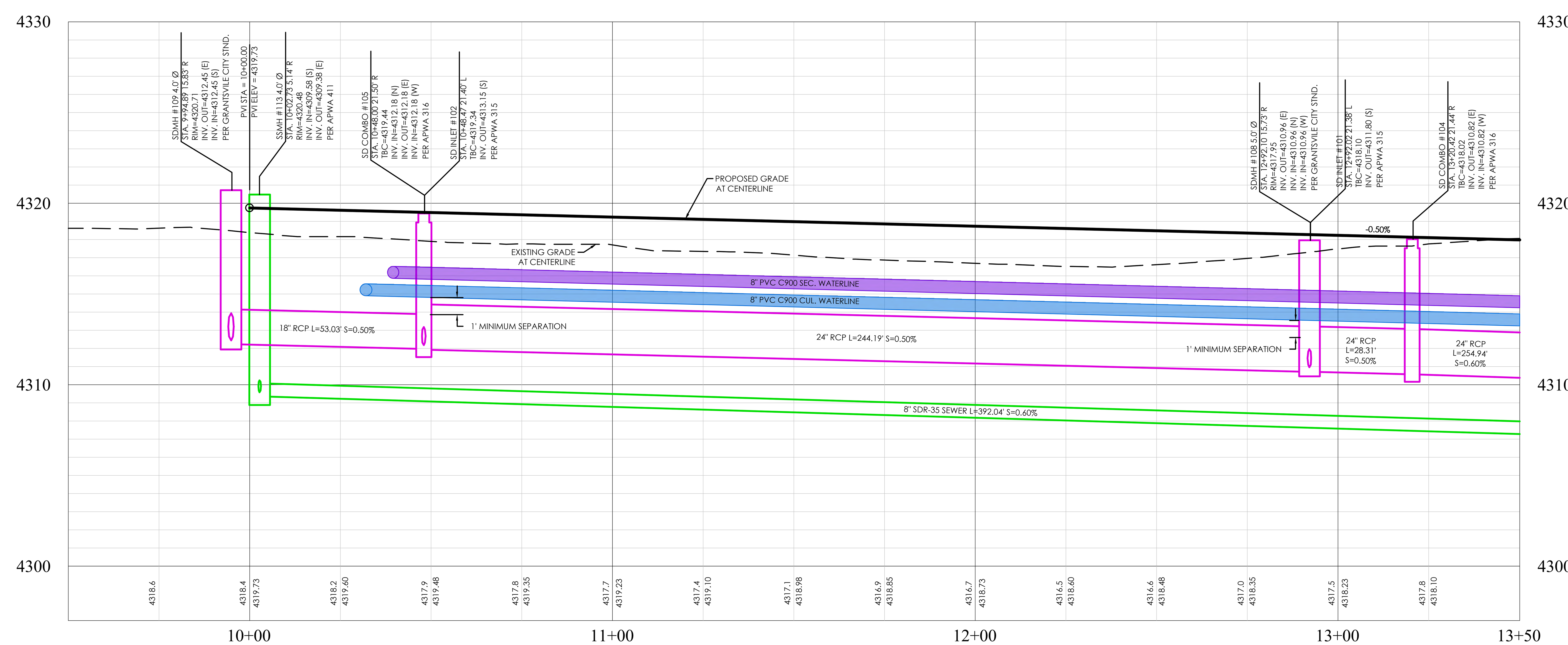


HETFIELD DRIVE PLAN



66' RESIDENTIAL ROAD

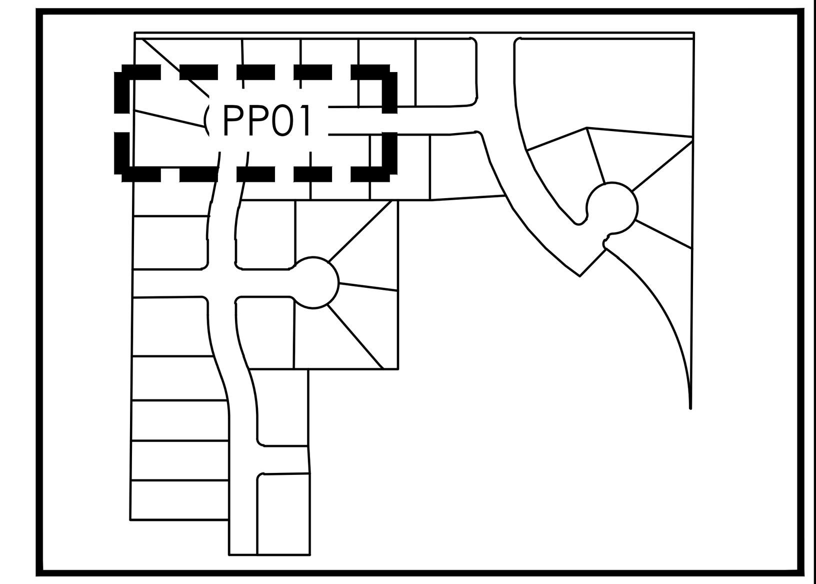
N.T.S.



HETFIELD DRIVE PROFILE

LEGEND

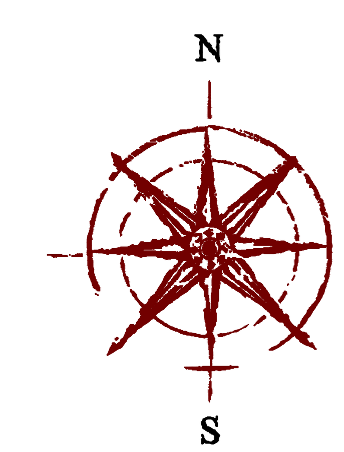
- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
- EXIST. FENCE
- EXIST. CONTOUR MAJOR
- EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- SPOT ELEVATION
- BACKYARD SWALE



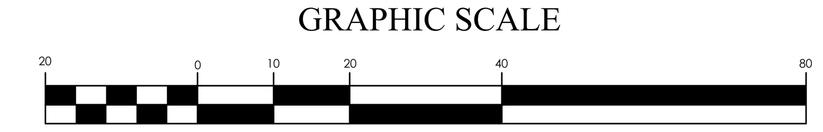
KEY MAP
N.T.S

BENCHMARK

NORTH QUATER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
DATUM:XXXXXX



GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

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No. 8028950-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1

GRANTSVILLE CITY, UT

HETFIELD DRIVE

REVISION BLOCK

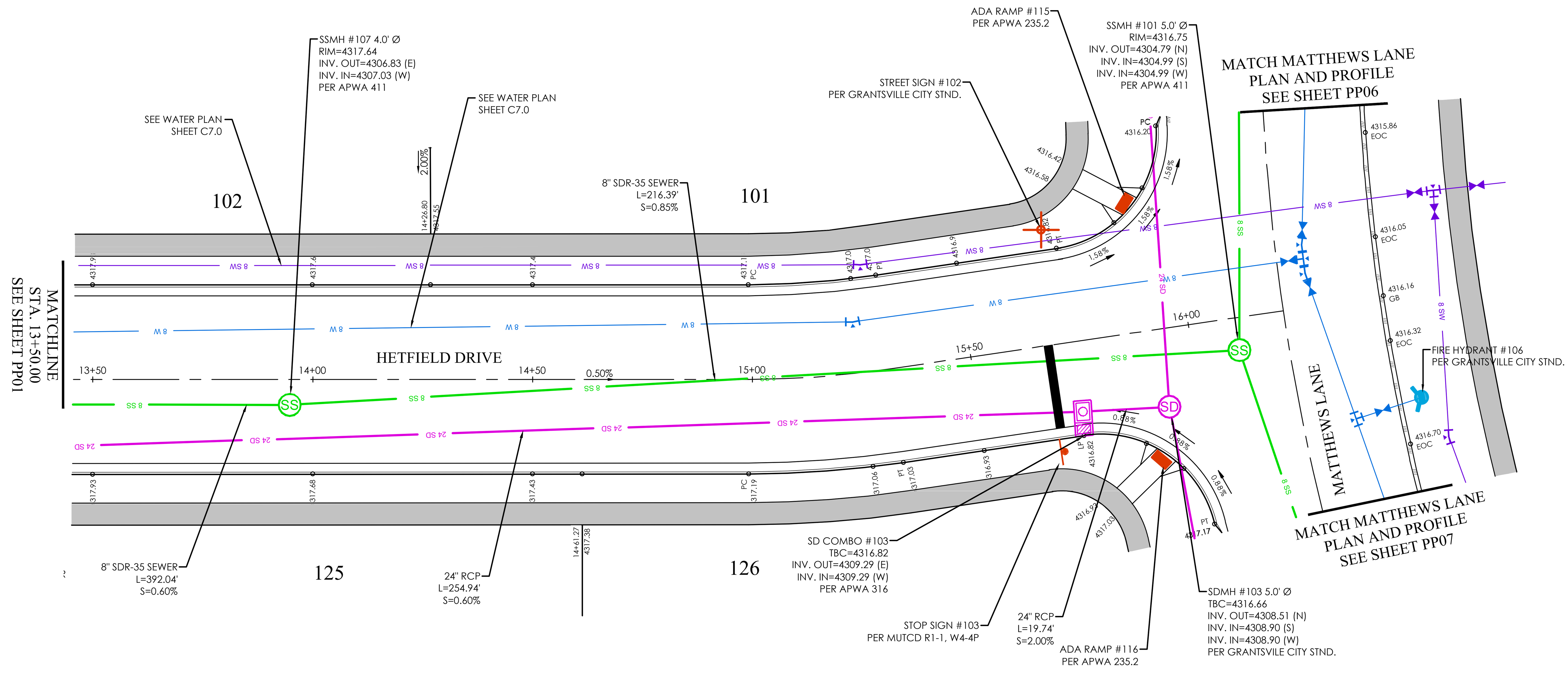
#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

HETFIELD DRIVE

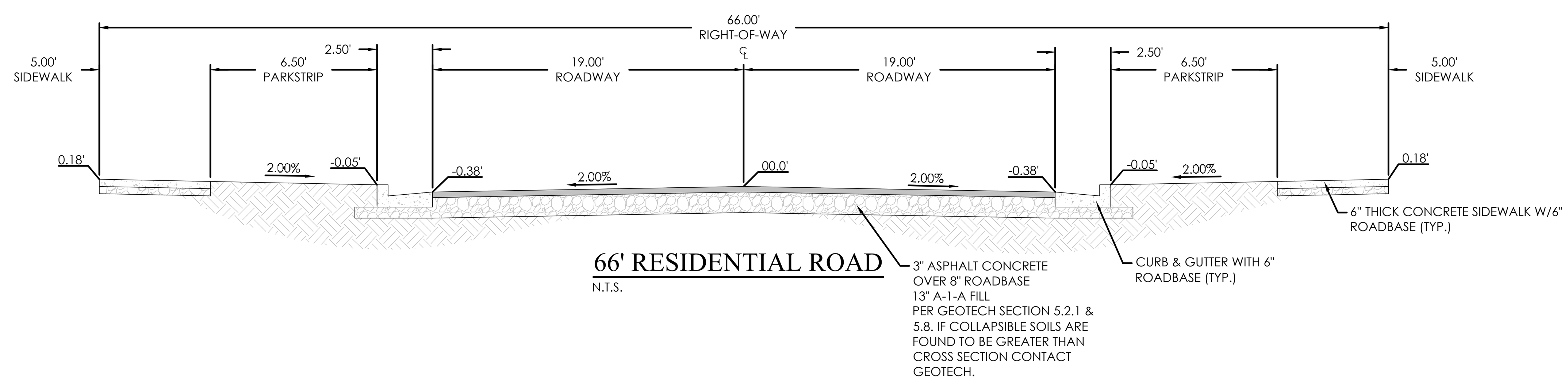
Scale: 1"=20'	Drawn: GIM	Date: 12/14/23	Job #: 23-0359

Sheet: PP01

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\PP01-HETFIELD DR.dwg

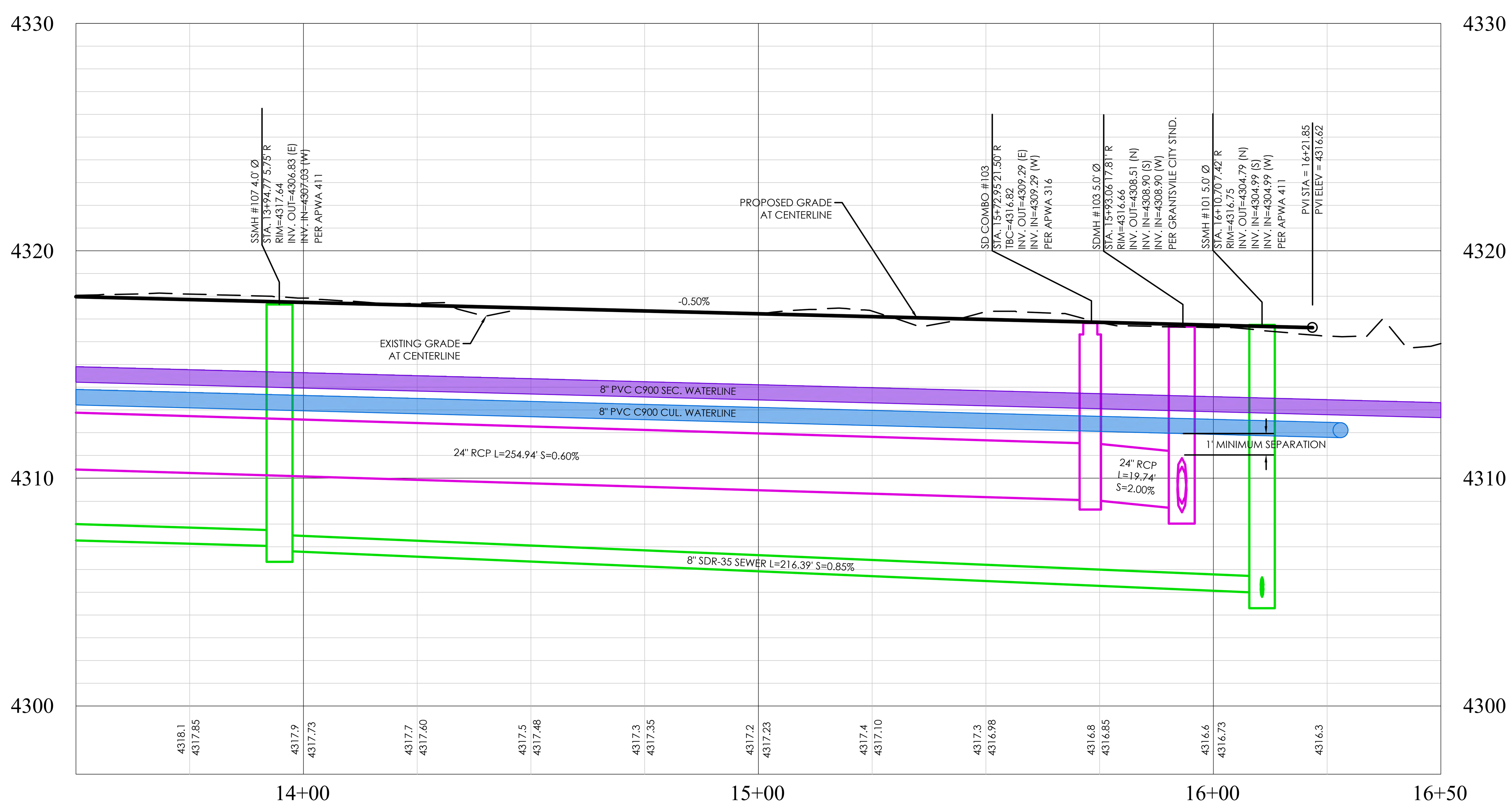


HETFIELD DRIVE PLAN



66' RESIDENTIAL ROAD

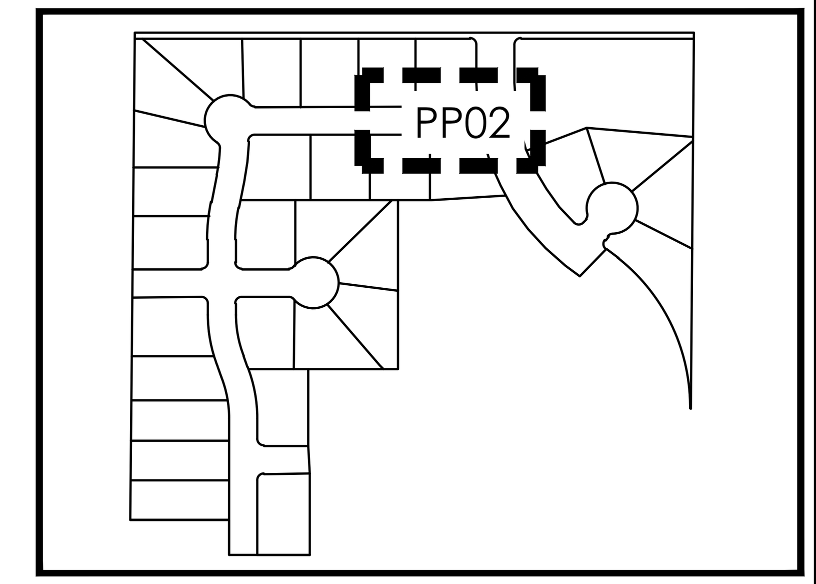
N.T.S.



HETFIELD DRIVE PROFILE

LEGEND

	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
15 SD	15" STORM DRAIN
8 SS	8" SANITARY SEWER
8 W	8" CULINARY WATER
8 SW	8" SECONDARY WATER
XXXX	CONTOUR MAJOR
XXXX	CONTOUR MINOR
Ex SD	EXIST. STORM DRAIN
Ex SS	EXIST. SANITARY SEWER
Ex W	EXIST. CULINARY WATER
X	EXIST. FENCE
(XXXX)	EXIST. CONTOUR MAJOR
(XXXX)	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
SD	SD MH, INLET, AND COMBO
SS	SEWER MANHOLE
	CULINARY VALVE, TEE & BEND
	SECONDARY VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
sd	EXIST. SD INLET & MH
S	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
o XXXX.XX	SPOT ELEVATION
	BACKYARD SWALE

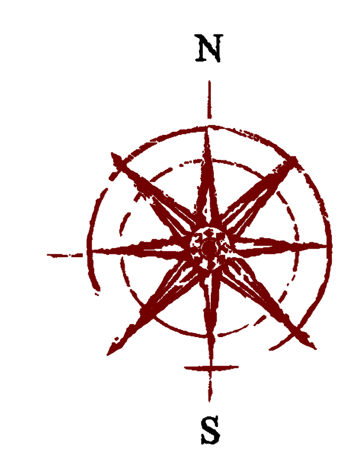


KEY MAP

N.T.S

BENCHMARK

NORTH QUATER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
DATUM:XXXXXX



GRAPHIC SCALE

0 20 40 80

(IN FEET)
1 inch = 20 ft.

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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
HETFIELD DRIVE

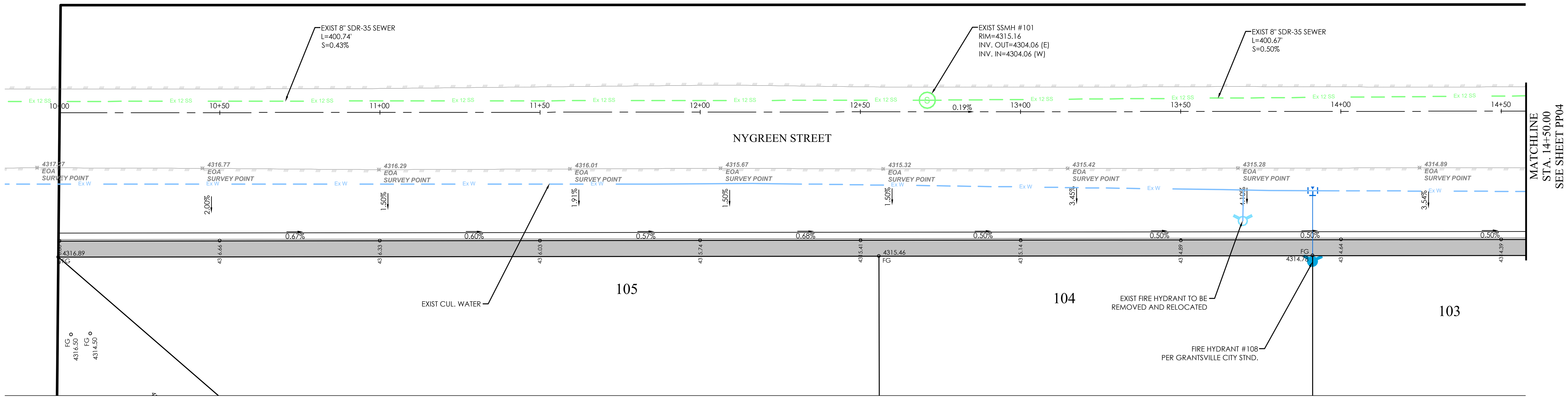
REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

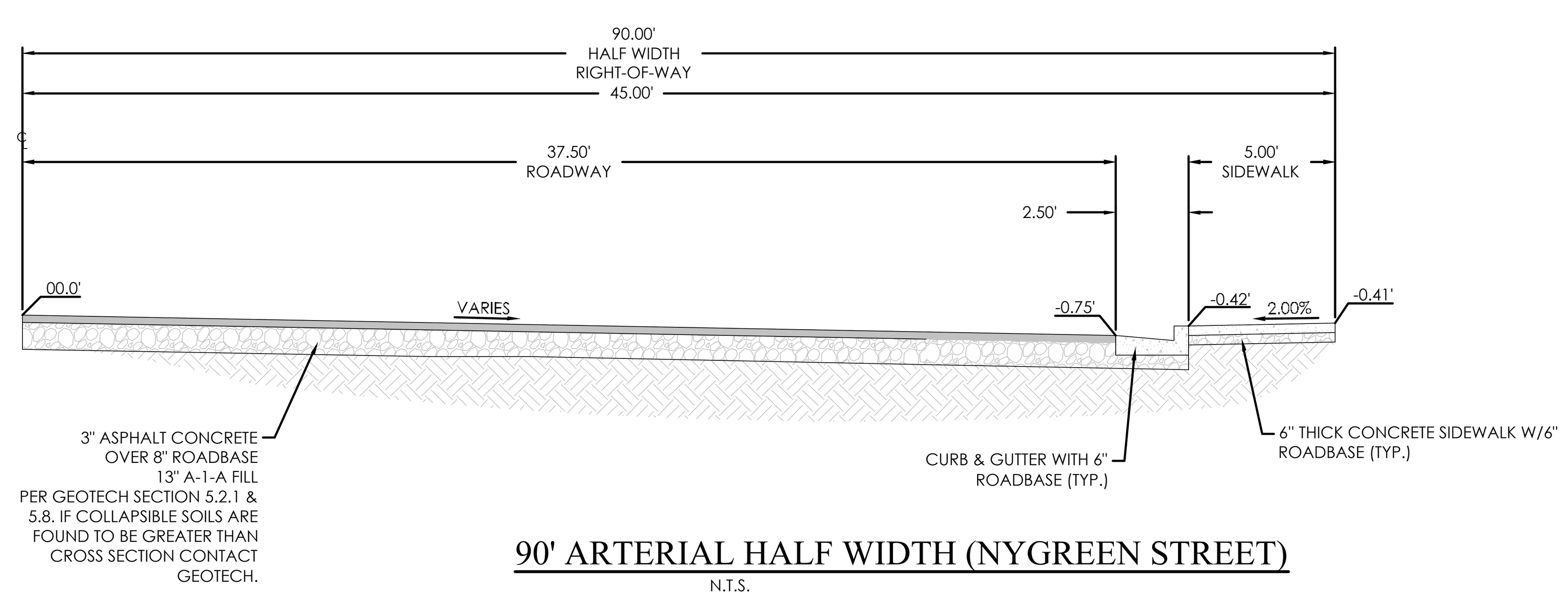
HETFIELD DRIVE

Scale:	1"=20'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	PP02		

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\sheets\PP02-HETFIELD DR.dwg

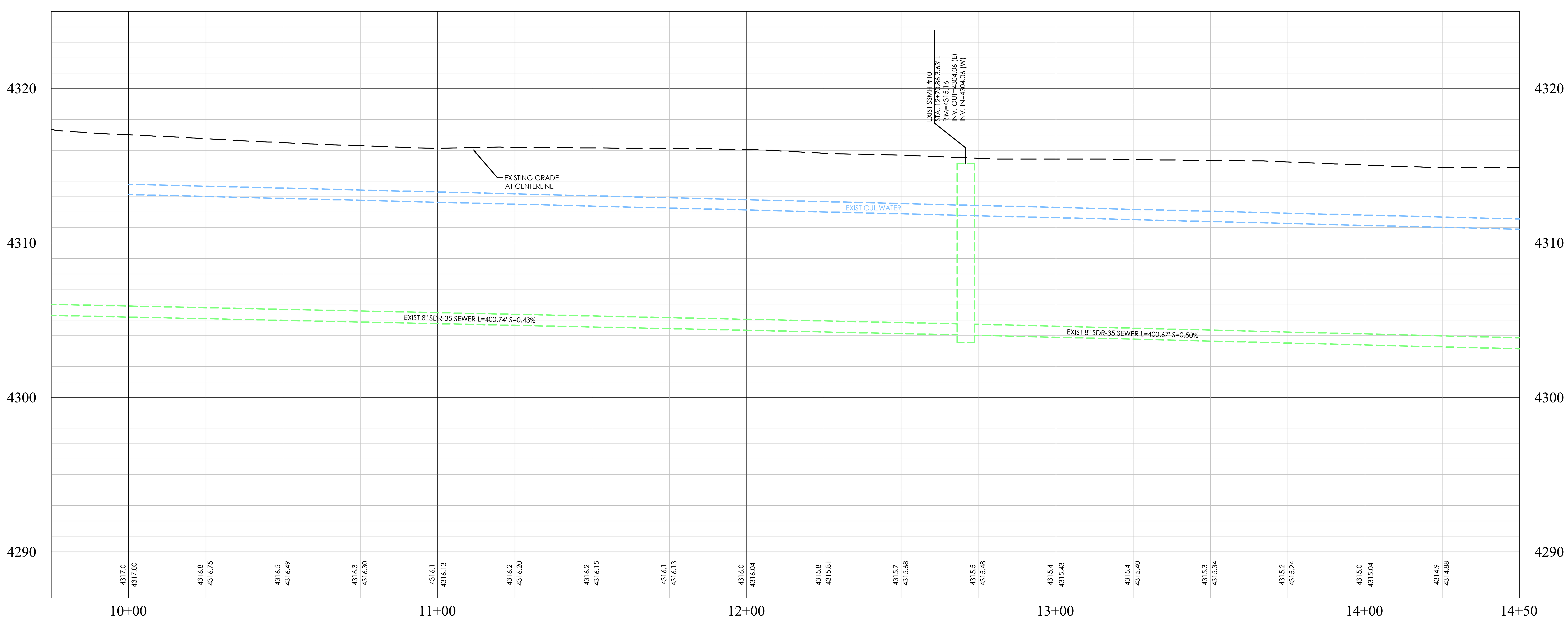


NYGREEN STREET PLAN



90' ARTERIAL HALF WIDTH (NYGREEN STREET)

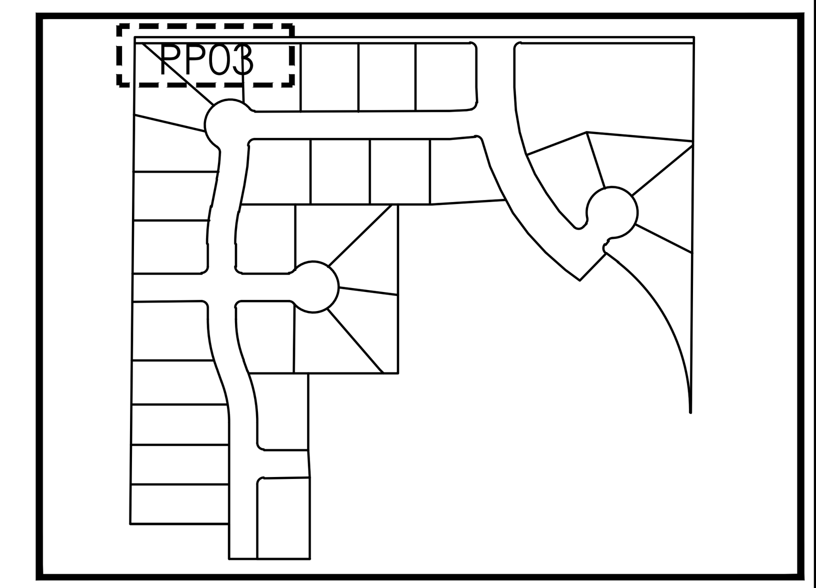
N.T.S.



NYGREEN STREET PROFILE

LEGEND

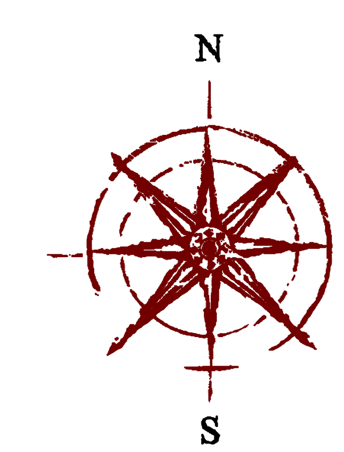
- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15 SD — 15" STORM DRAIN
- 8 SS — 8" SANITARY SEWER
- 8 W — 8" CULINARY WATER
- 8 SW — 8" SECONDARY WATER
- XXXX — CONTOUR MAJOR
- XXXX — CONTOUR MINOR
- Ex SD — EXIST. STORM DRAIN
- Ex SS — EXIST. SANITARY SEWER
- Ex W — EXIST. CULINARY WATER
- X — EXIST. FENCE
- (XXXX) — EXIST. CONTOUR MAJOR
- (XXXX) — EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- o XXXX.XX — SPOT ELEVATION
- BACKYARD SWALE



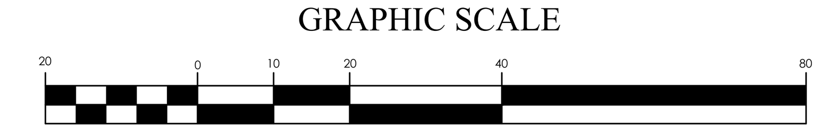
KEY MAP
N.T.S

BENCHMARK

NORTH QUATER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
DATUM:XXXXXX



GRAPHIC SCALE



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THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1

GRANTSVILLE CITY, UT

NYGREEN STREET

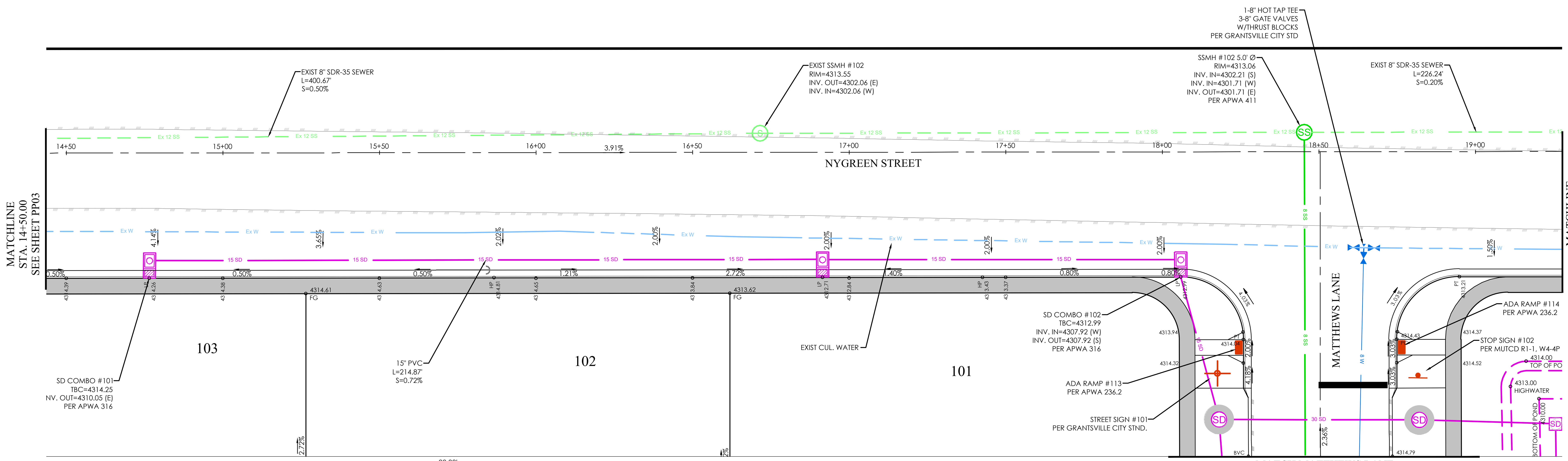
REVISION BLOCK

#	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

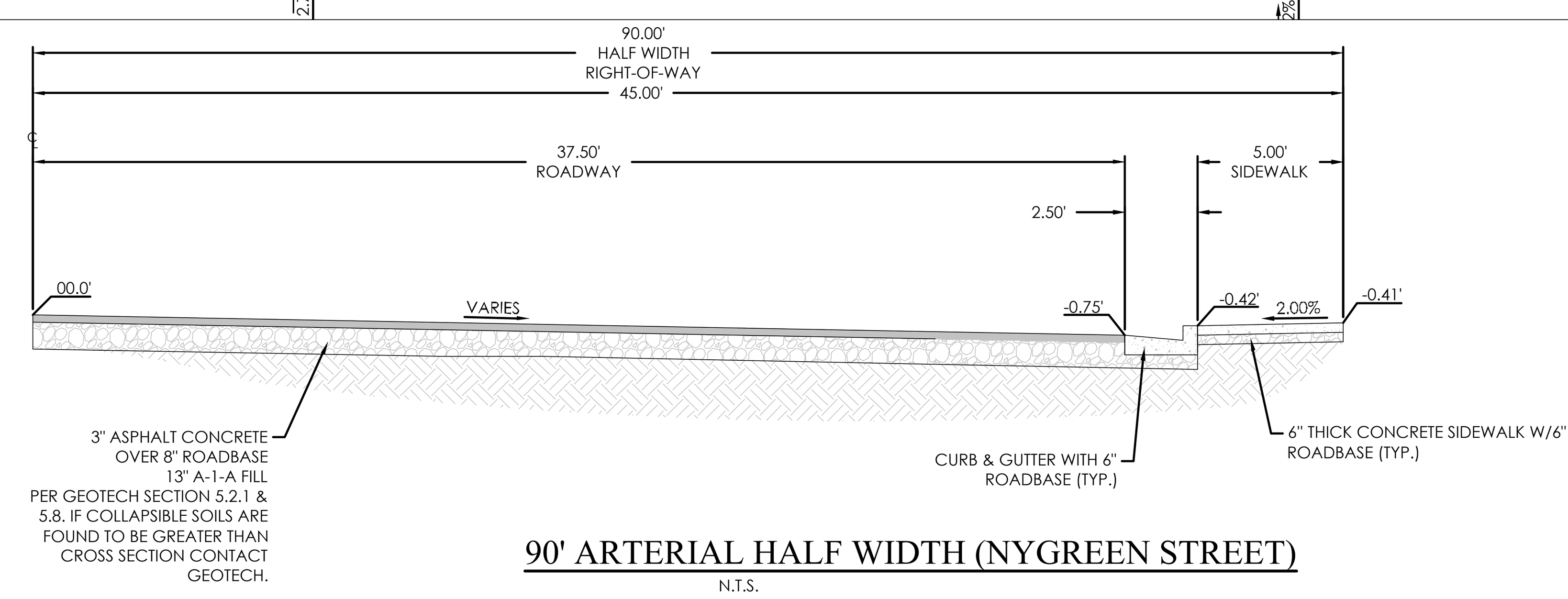
NYGREEN STREET

Scale: 1"=20'	Drawn: GIM		
Date: 12/14/23	Job #: 23-0359		
Sheet: PP03			

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\PP03-NYGREEN STREET.dwg

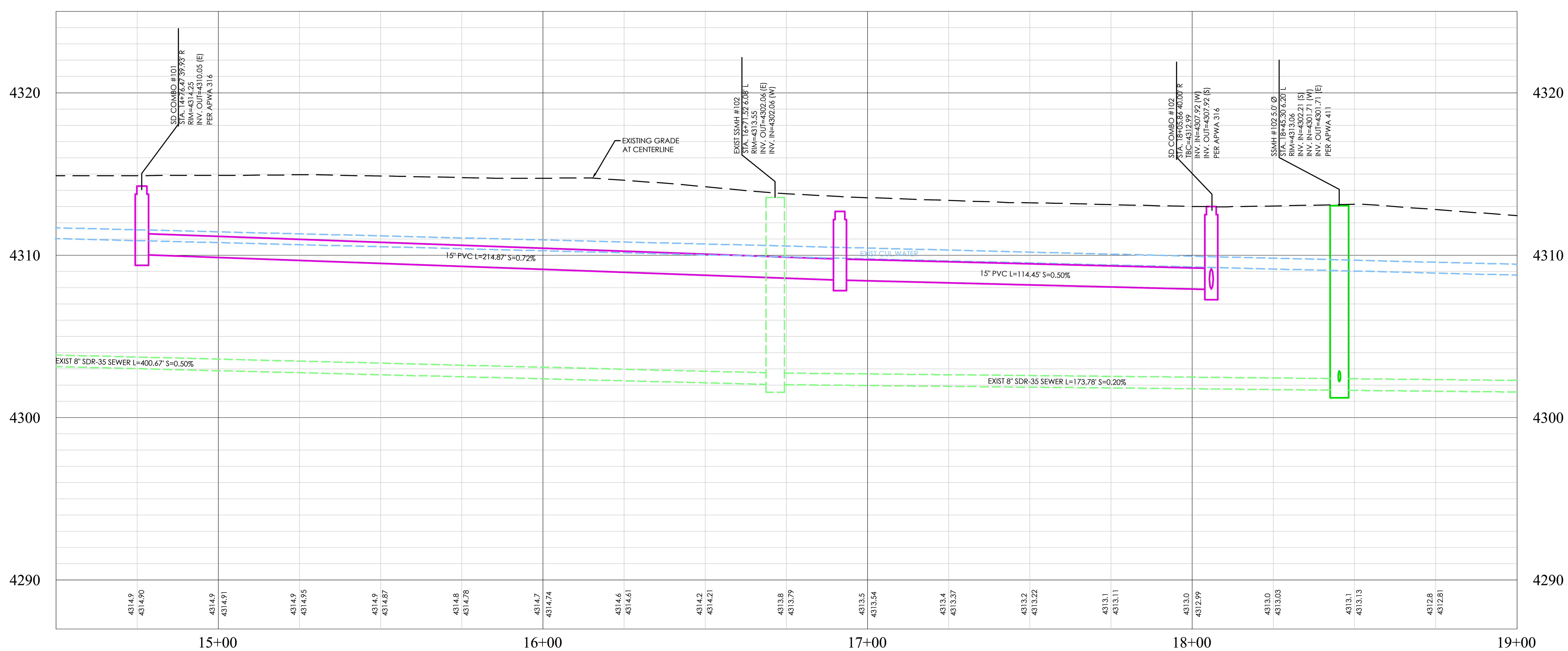


NYGREEN STREET PLAN



90' ARTERIAL HALF WIDTH (NYGREEN STREET)

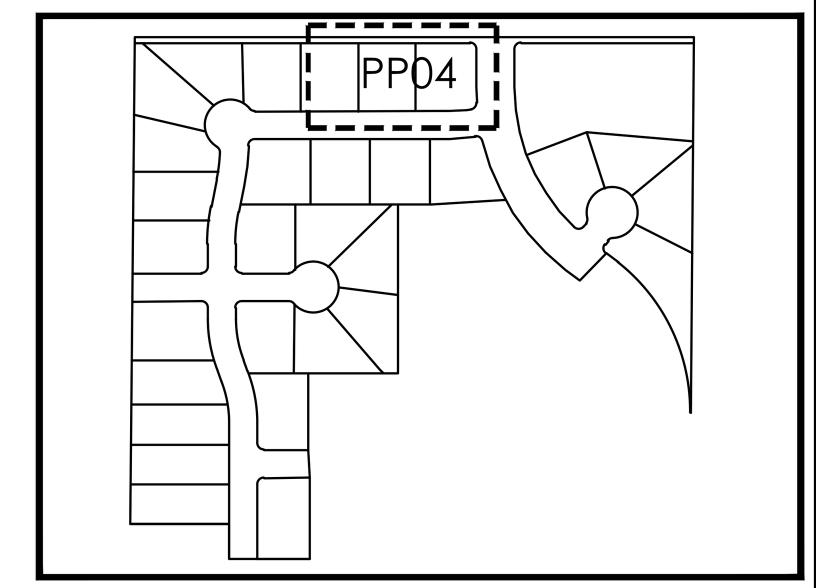
N.T.S.



NYGREEN STREET PROFILE

LEGEND

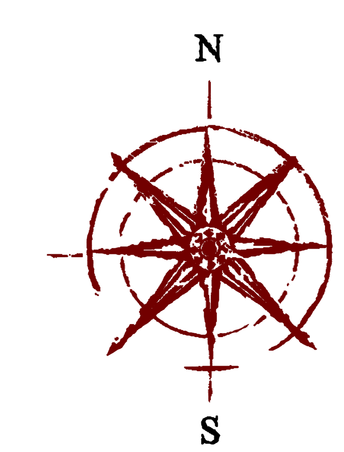
- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
- EXIST. FENCE
- EXIST. CONTOUR MAJOR
- EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- SPOT ELEVATION
- BACKYARD SWALE



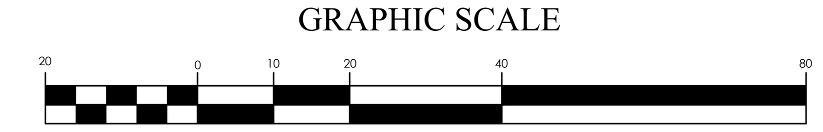
KEY MAP
N.T.S

BENCHMARK

NORTH QUATER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
DATUM:XXXXXX



GRAPHIC SCALE



(IN FEET)
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HERITAGE FARMS PHASE 1

GRANTSVILLE CITY, UT

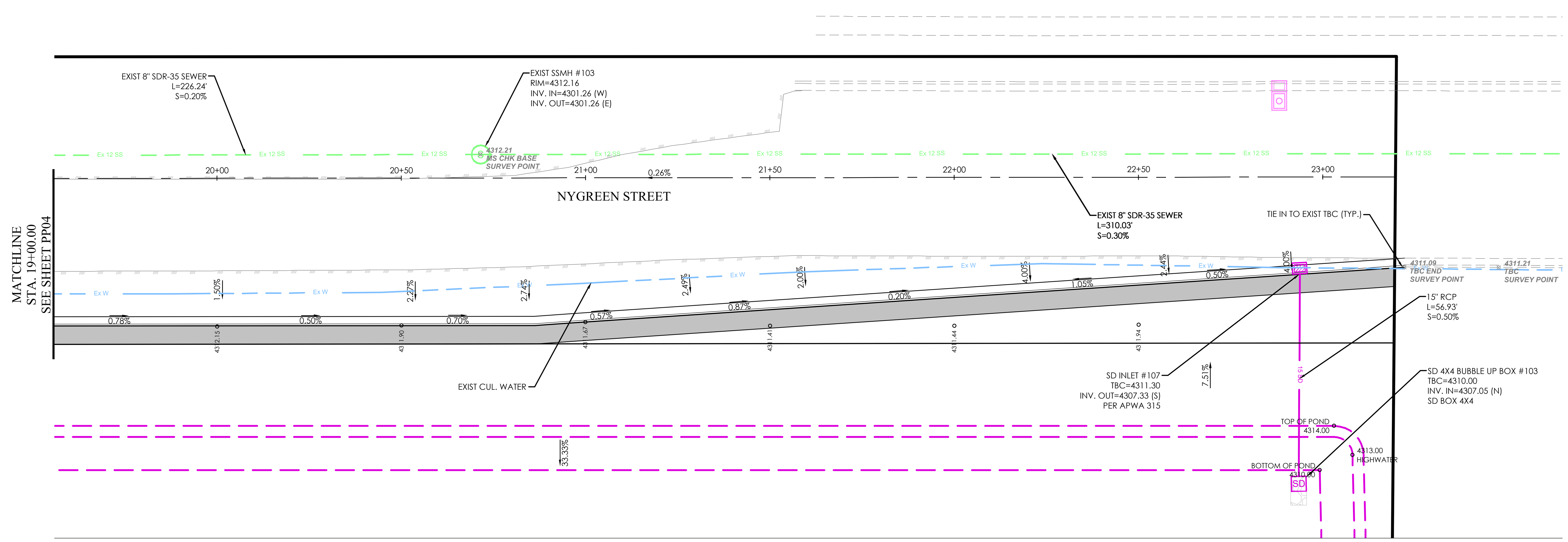
NYGREEN STREET

REVISION BLOCK		
#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

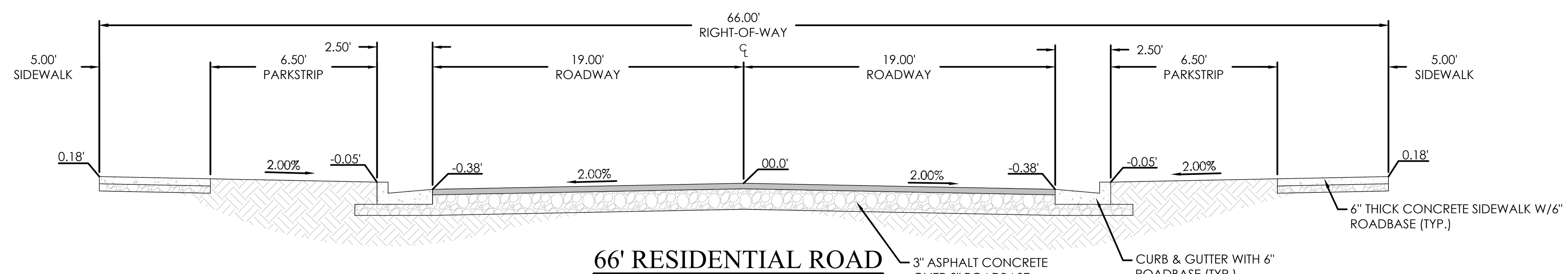
NYGREEN STREET

Scale:	1"=20'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	PP04		

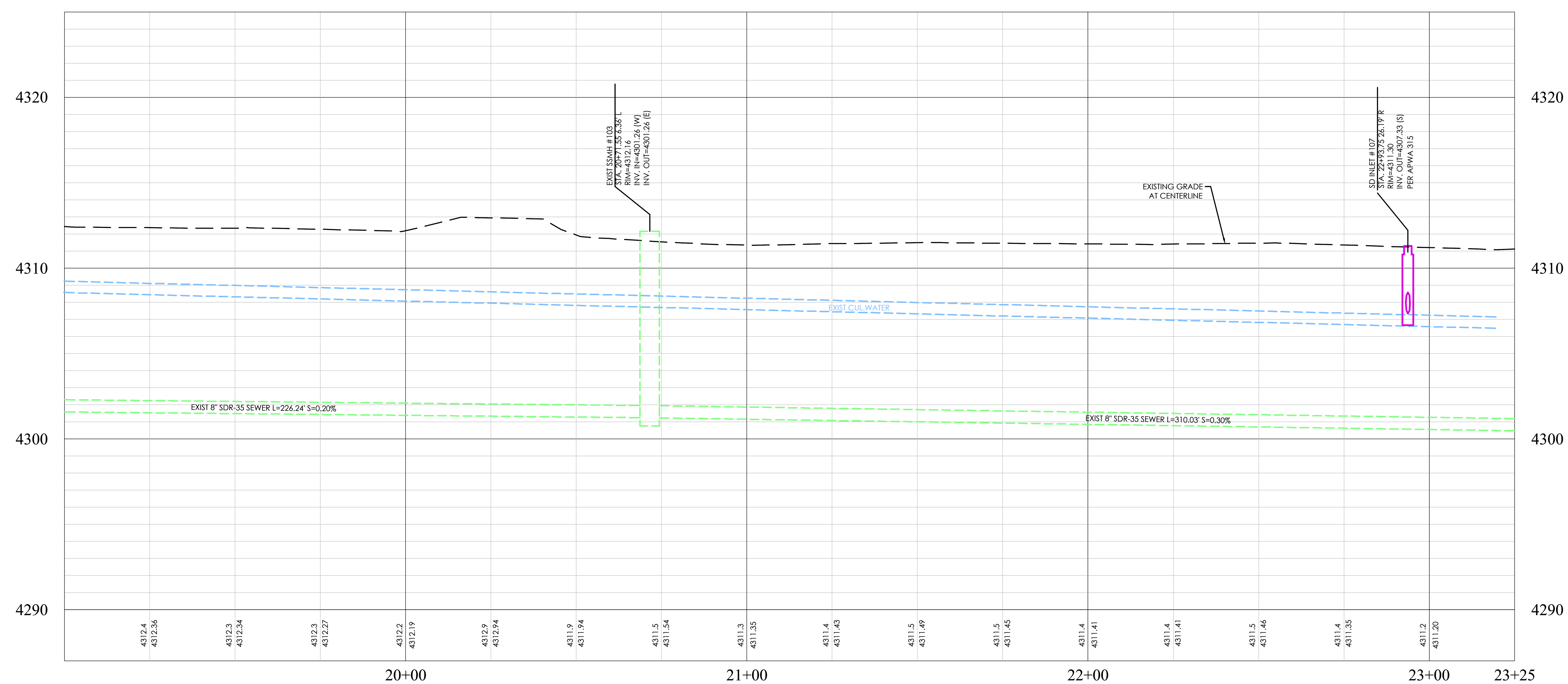
Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\PP04-NYGREEN STREET.dwg



NYGREEN STREET PLAN



66' RESIDENTIAL ROAD
N.T.S.



NYGREEN STREET PROFILE

LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
- EXIST. FENCE
- EXIST. CONTOUR MAJOR
- EXIST. CONTOUR MINOR
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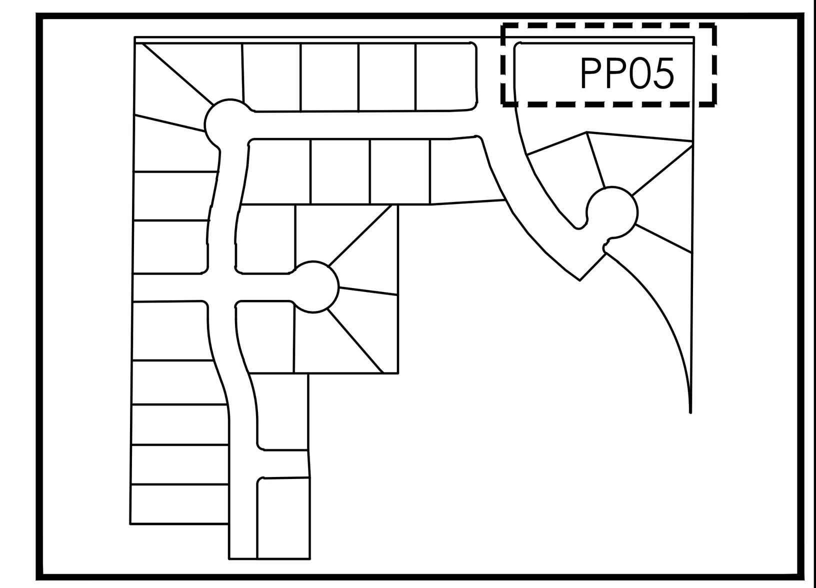
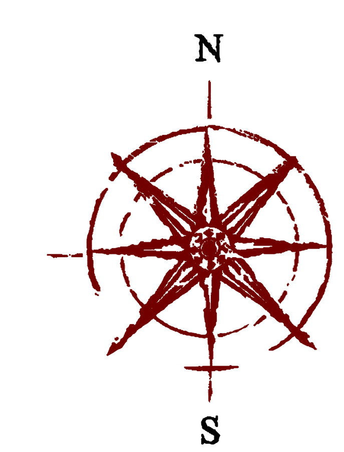
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- o XXXX.XX SPOT ELEVATION
- BACKYARD SWALE



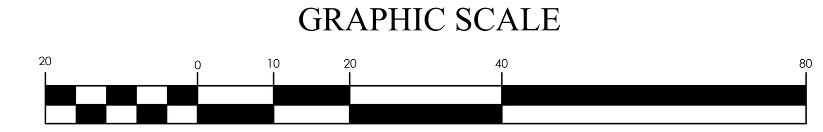
KEY MAP
N.T.S

BENCHMARK

NORTH QUATER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
DATUM:XXXXXX



GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
NYGREEN STREET

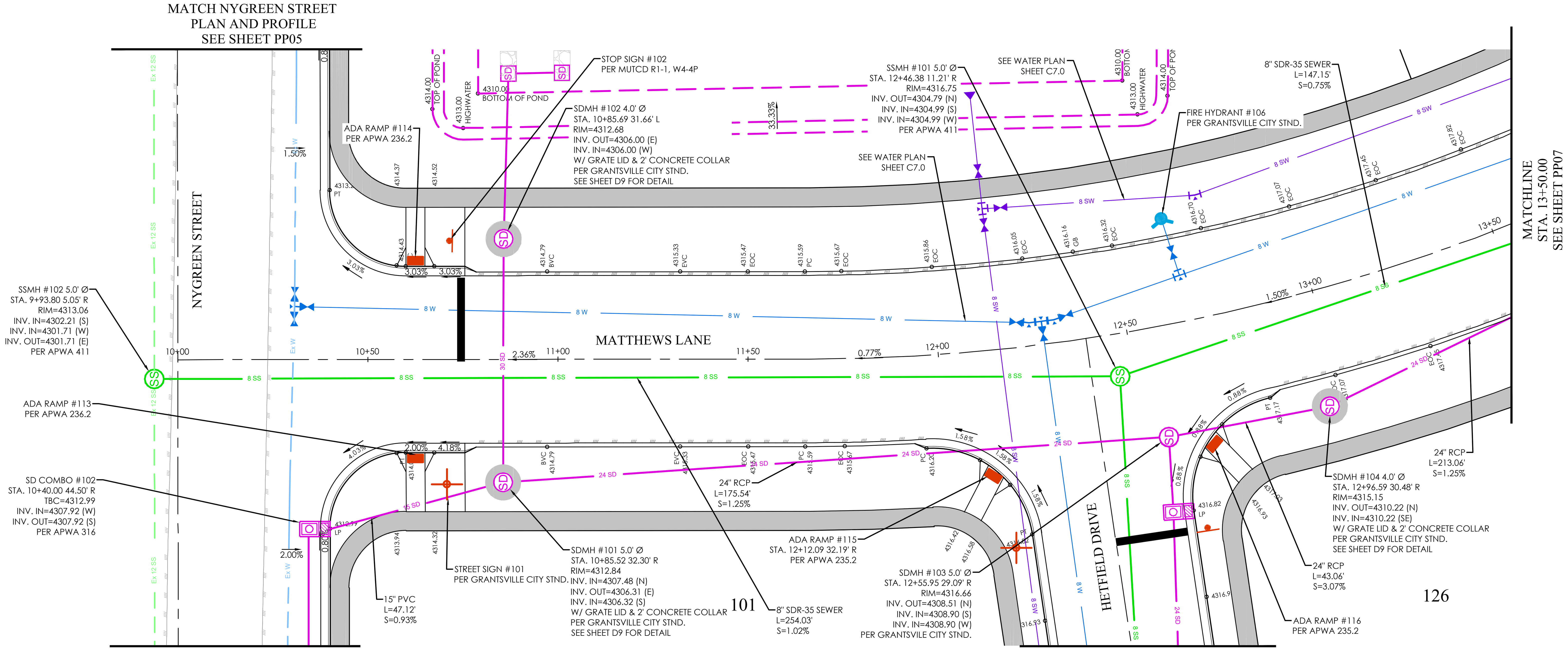
REVISION BLOCK

#	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

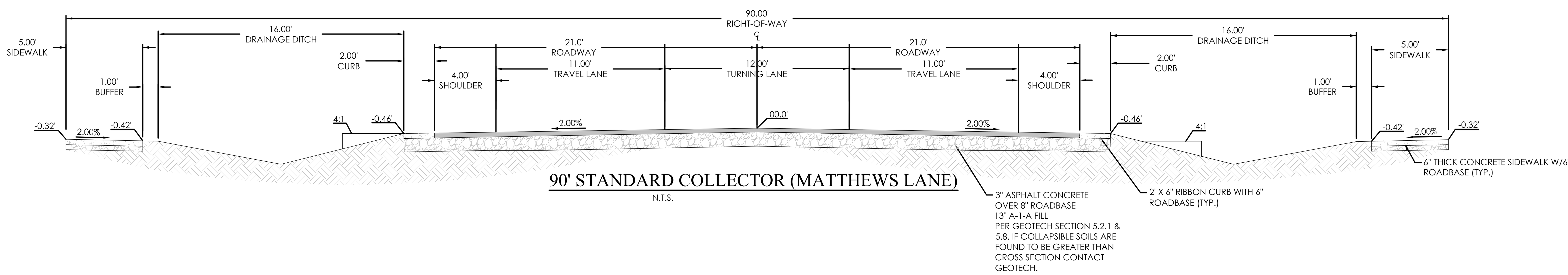
NYGREEN STREET

Scale: 1"=20'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: PP05	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\PP05-NYGREEN STREET.dwg

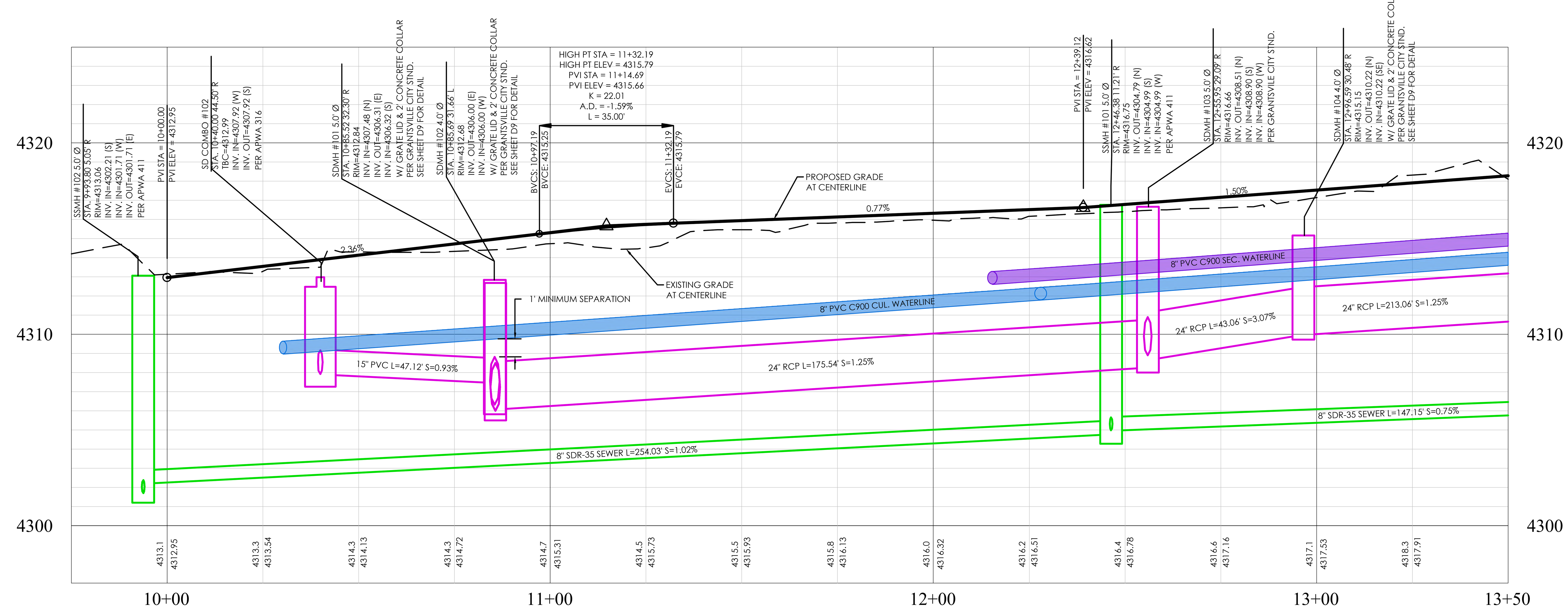


MATTHEWS LANE PLAN



90' STANDARD COLLECTOR (MATTHEWS LANE)

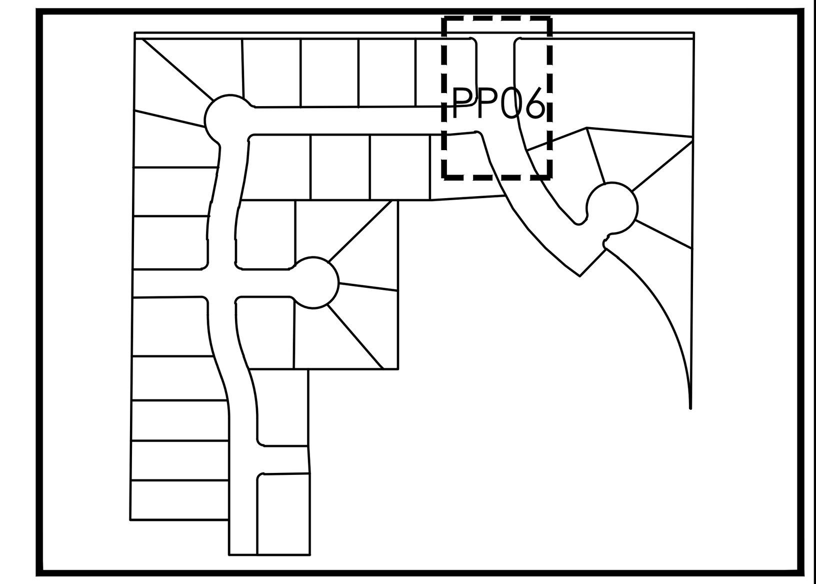
N.T.S.



MATTHEWS LANE PROFILE

LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
- EXIST. FENCE
- EXIST. CONTOUR MAJOR
- EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- SPOT ELEVATION
- BACKYARD SWALE

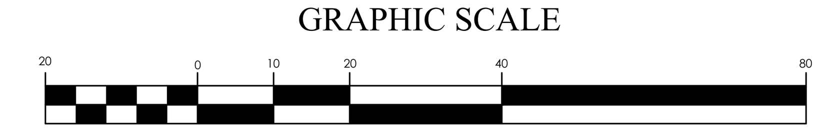


KEY MAP
N.T.S

BENCHMARK

NORTH QUATER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
DATUM:XXXXXX

GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

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LICENSED PROFESSIONAL ENGINEER
No. 8028950-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
MATTHEWS LANE

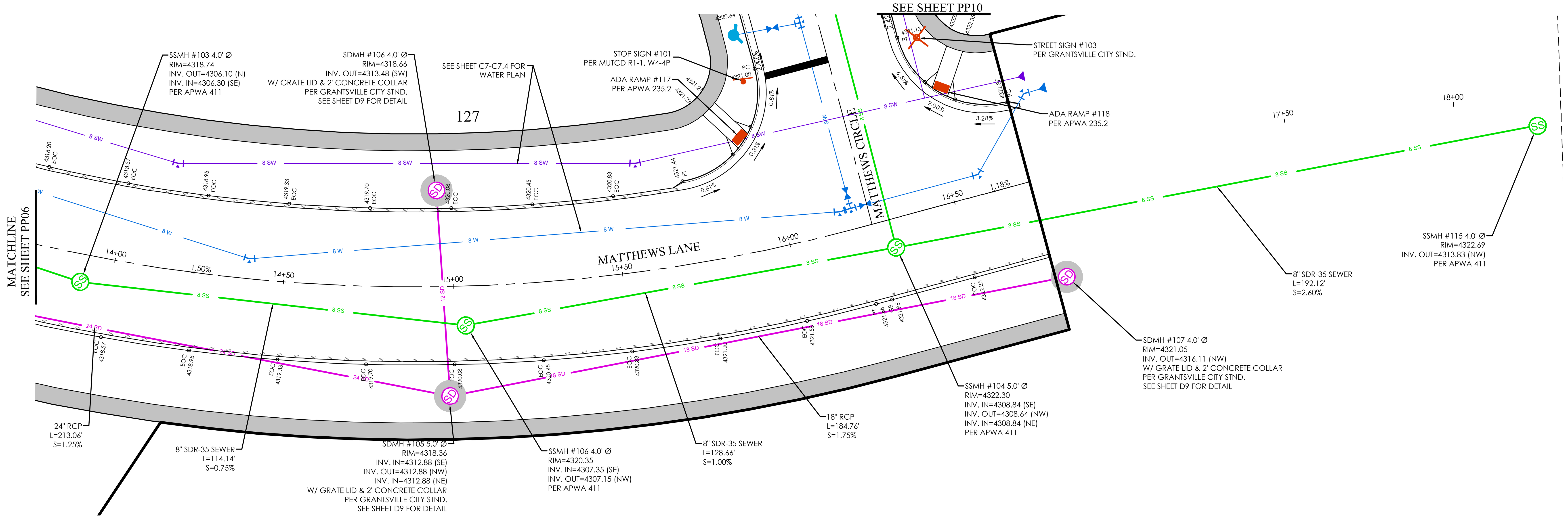
REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

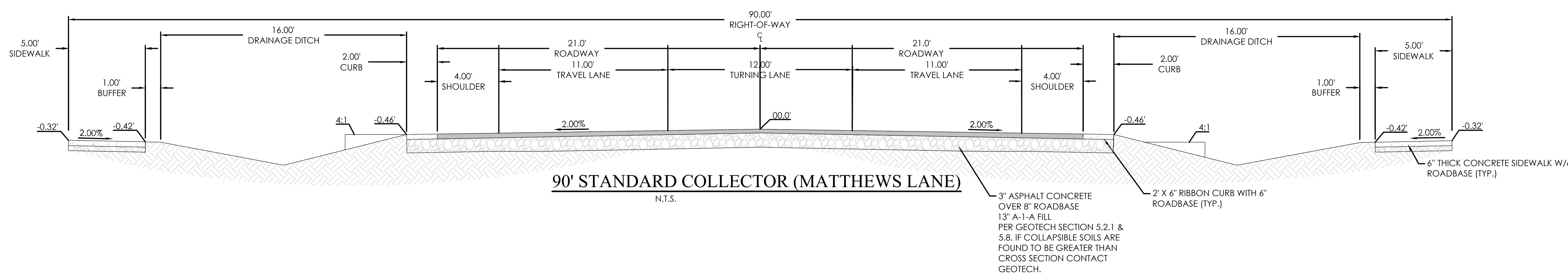
MATTHEWS LANE

Scale: 1"=20'	Drawn: GJM
Date: 12/14/23	Job #: 23-0359
Sheet: PP06	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\PP06-MATTHEWS LANE.dwg

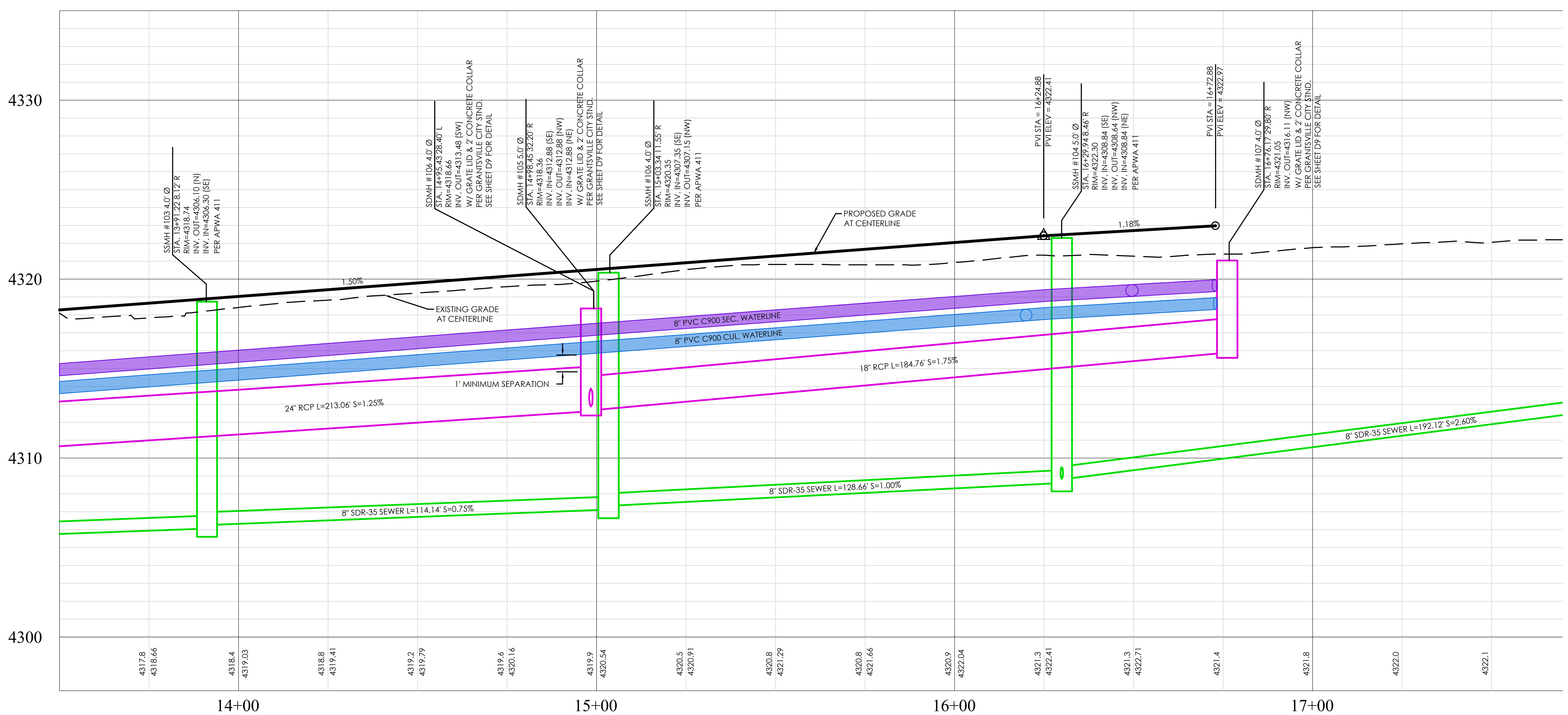


MATTHEWS LANE PLAN



90' STANDARD COLLECTOR (MATTHEWS LANE)

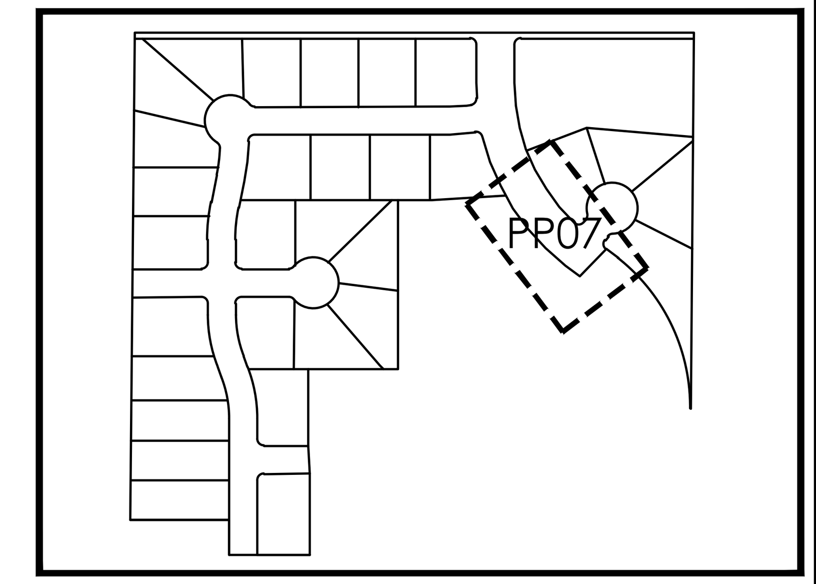
N.T.S.



MATTHEWS LANE PROFILE

LEGEND

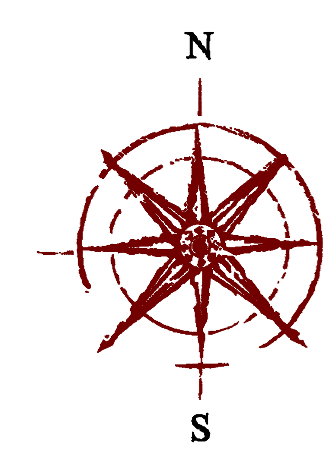
- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
- EXIST. FENCE
- EXIST. CONTOUR MAJOR
- EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- SPOT ELEVATION
- BACKYARD SWALE



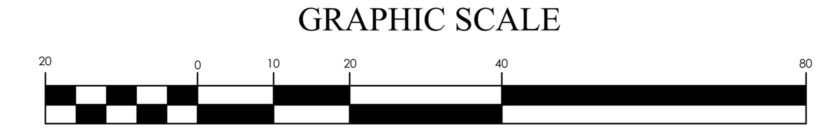
KEY MAP
N.T.S

BENCHMARK

NORTH QUATER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
DATUM:XXXXXX



GRAPHIC SCALE



(IN FEET)
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LICENSED PROFESSIONAL ENGINEER
THOMAS M. ROMNEY
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
MATTHEWS LANE

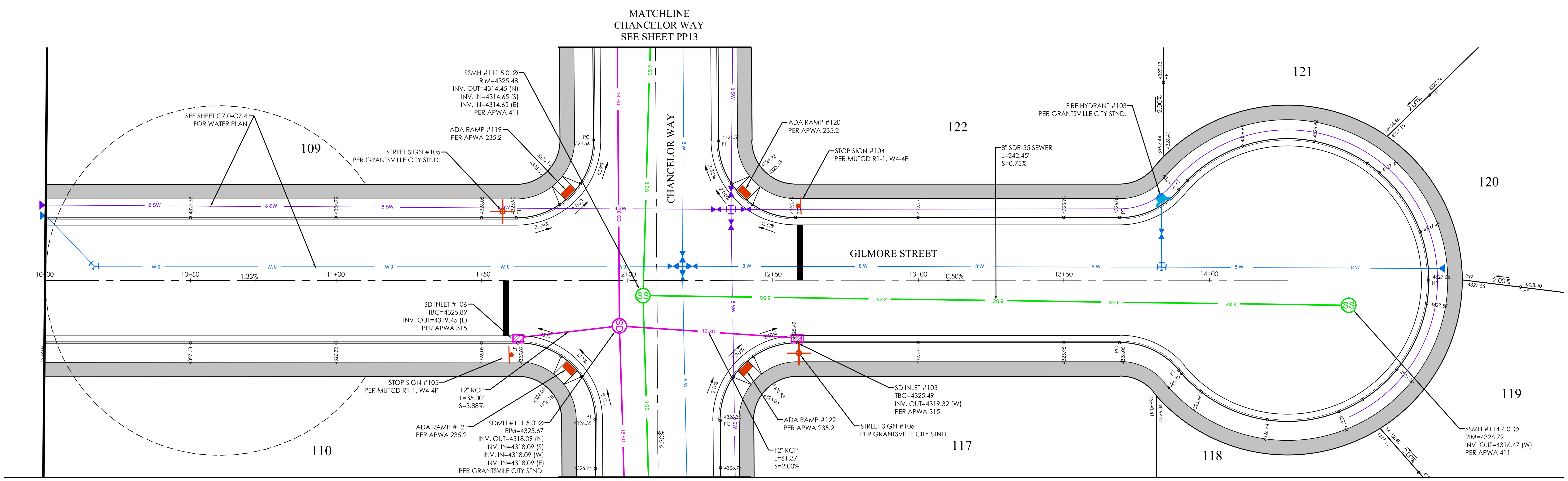
REVISION BLOCK

#	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

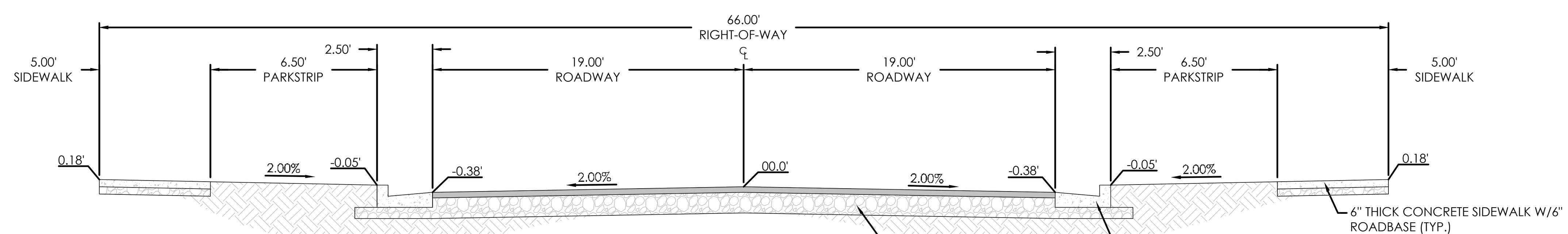
MATTHEWS LANE

Scale: 1"=20'	Drawn: GIM		
Date: 12/14/23	Job #: 23-0359		
Sheet: PP07			

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\PP07-MATTHEWS LANE.dwg

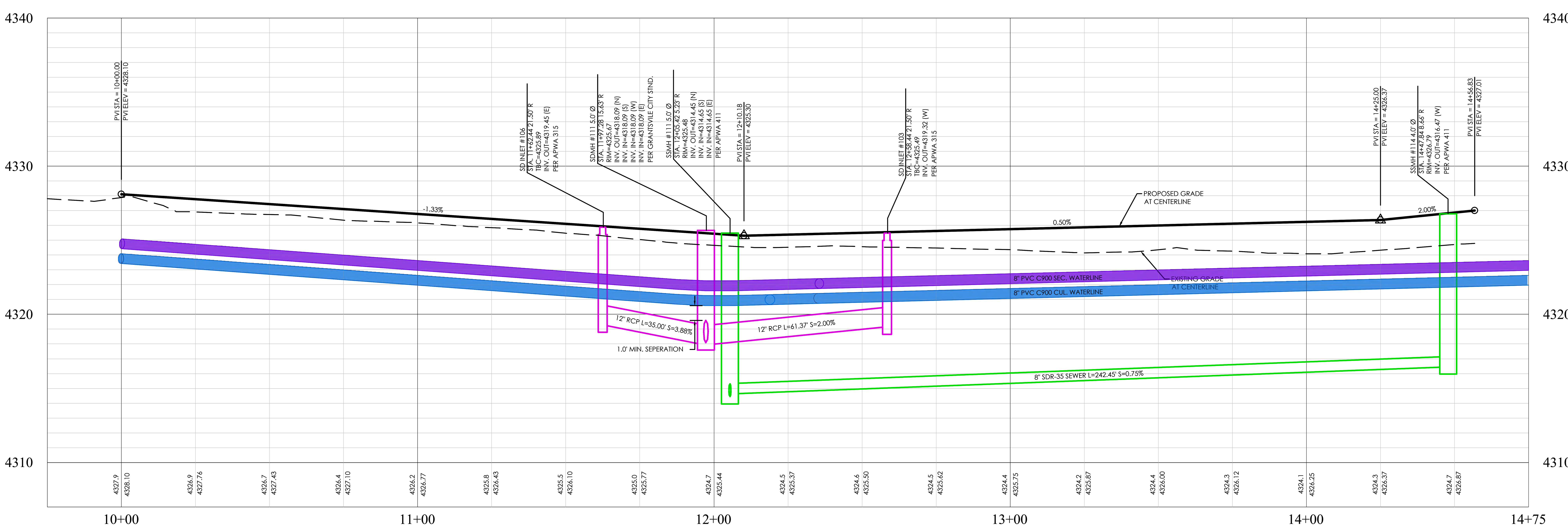


GILMORE STREET PLAN



66' RESIDENTIAL ROAD

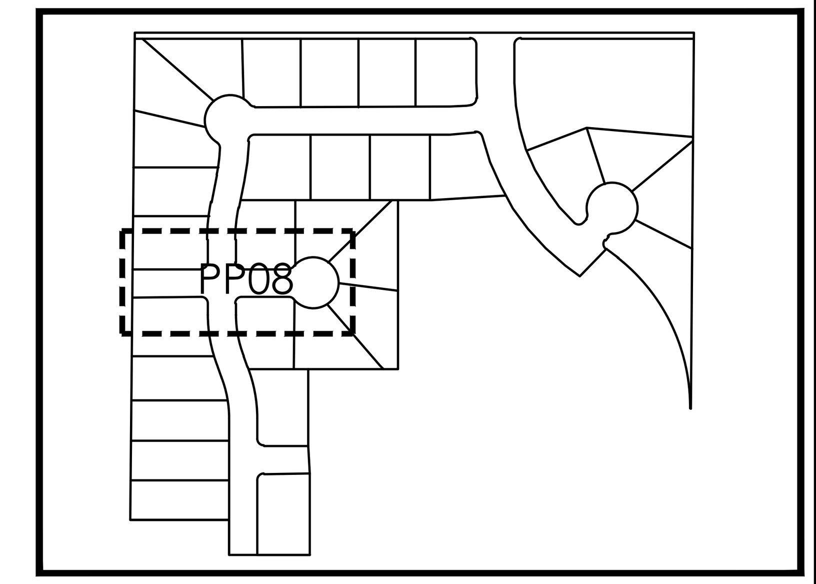
N.T.S.



GILMORE STREET PROFILE

LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
- EXIST. FENCE
- EXIST. CONTOUR MAJOR
- EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- SPOT ELEVATION
- BACKYARD SWALE

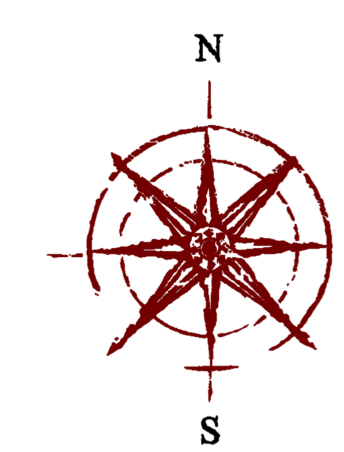


KEY MAP

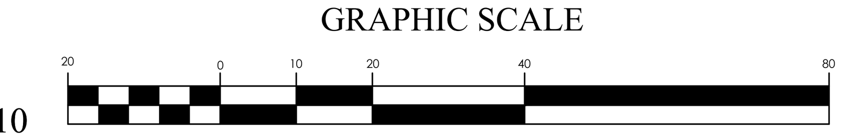
N.T.S

BENCHMARK

NORTH QUATER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
DATUM:XXXXXX



GRAPHIC SCALE



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THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1

GRANTSVILLE CITY, UT

GILMORE STREET

REVISION BLOCK		
#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
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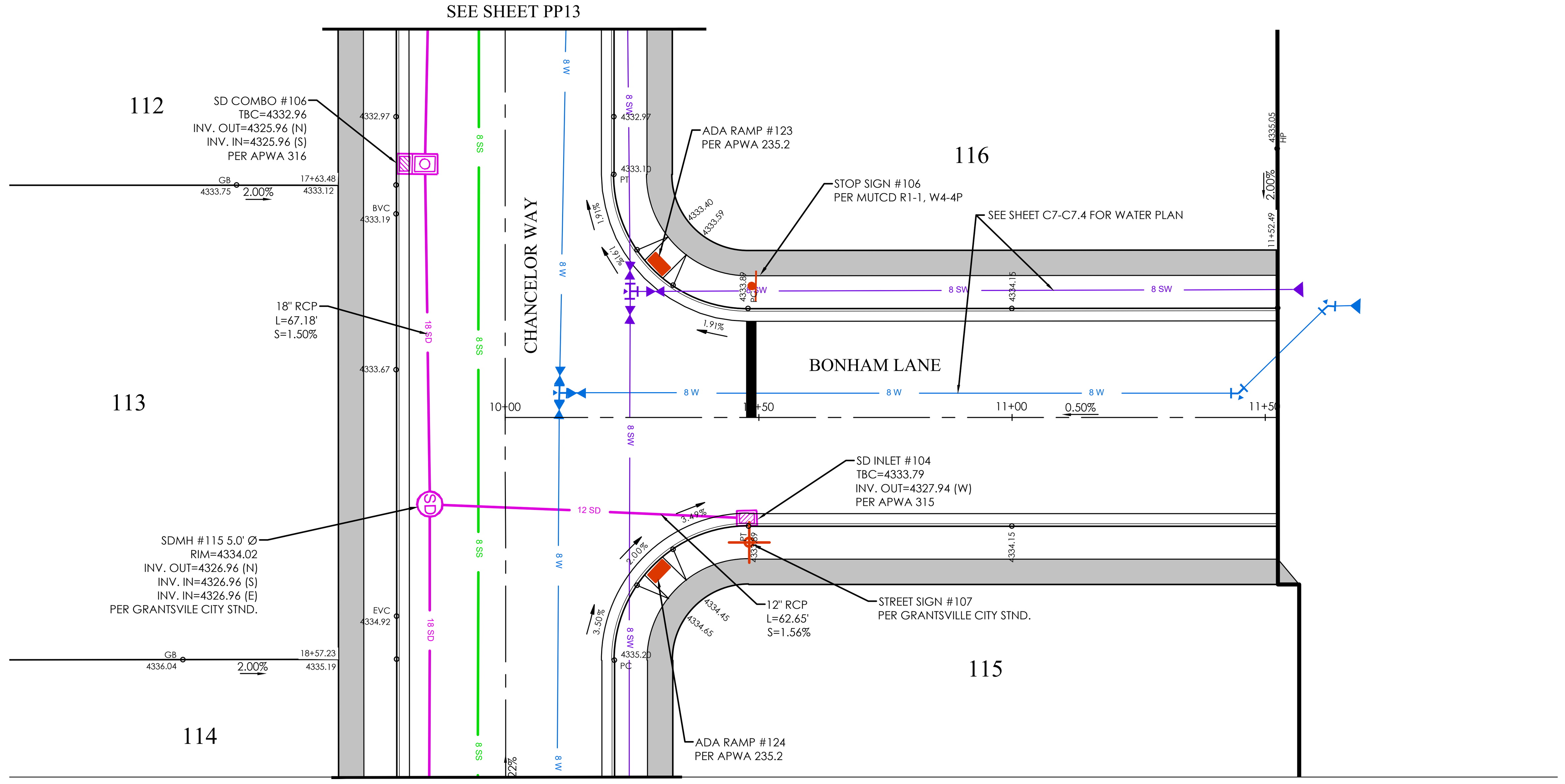
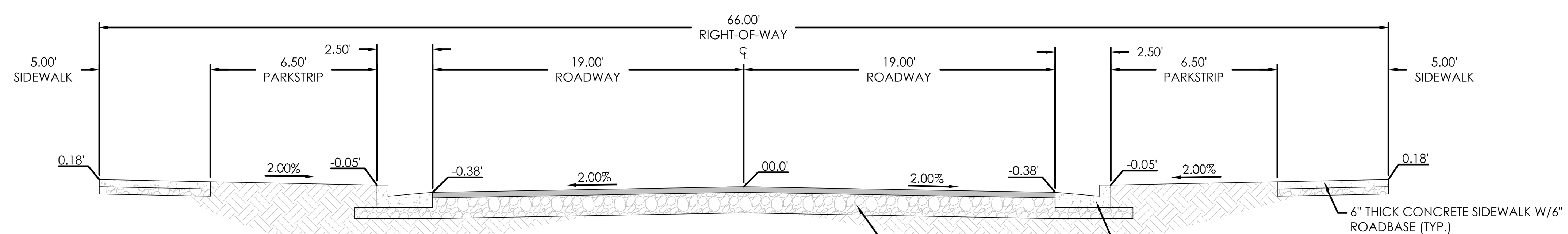
GILMORE STREET

Scale:	1"=20'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	PP08		

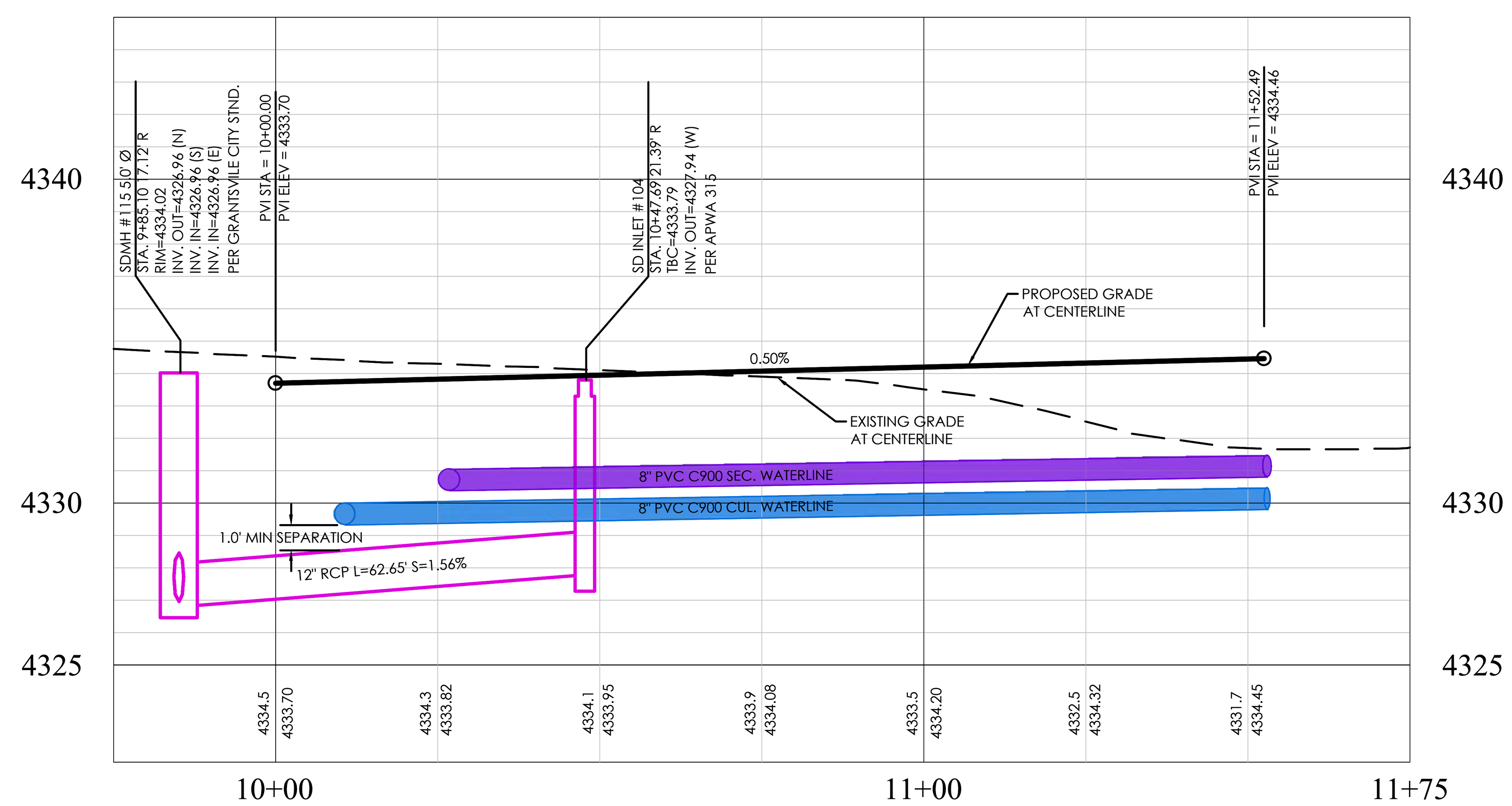
Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\PP08-GILMORE STREET.dwg



BONHAM LANE PLAN



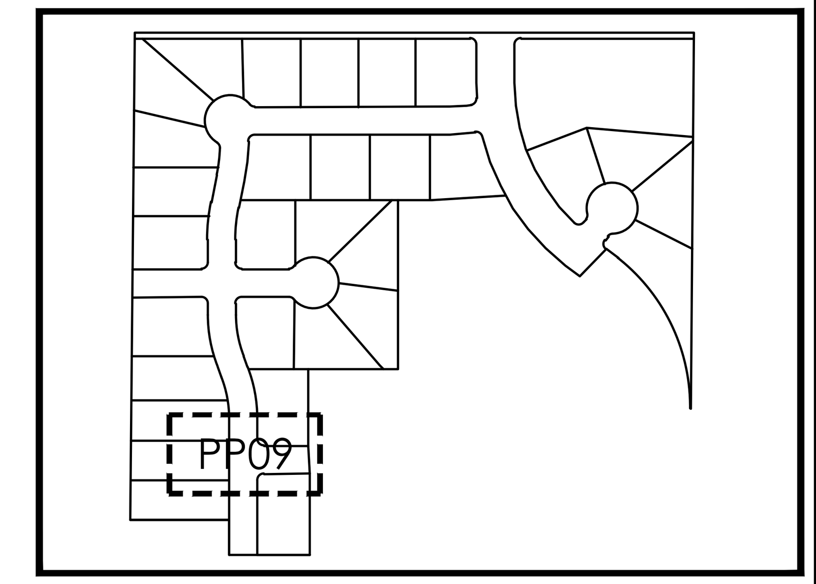
66' RESIDENTIAL ROAD
N.T.S.



BONHAM LANE PROFILE

LEGEND

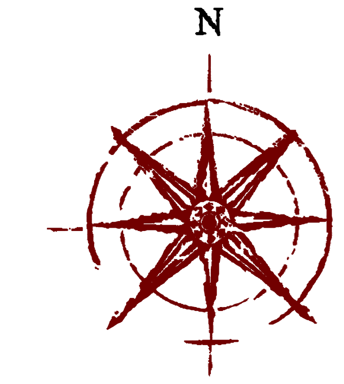
	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
15 SD	15" STORM DRAIN
8 SS	8" SANITARY SEWER
8 W	8" CULINARY WATER
8 SW	8" SECONDARY WATER
XXXX	CONTOUR MAJOR
XXXX	CONTOUR MINOR
Ex SD	EXIST. STORM DRAIN
Ex SS	EXIST. SANITARY SEWER
Ex W	EXIST. CULINARY WATER
x	EXIST. FENCE
(XXXX)	EXIST. CONTOUR MAJOR
(XXXX)	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
	SD MH, INLET, AND COMBO
	SEWER MANHOLE
	CULINARY VALVE, TEE & BEND
	SECONDARY VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
	EXIST. SD INLET & MH
	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
o XXXX.XX	SPOT ELEVATION
	BACKYARD SWALE



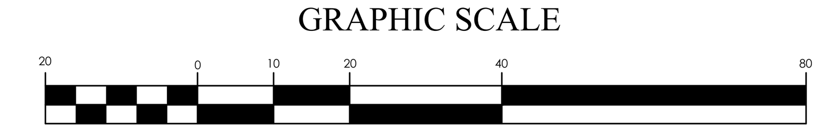
KEY MAP
N.T.S

BENCHMARK

NORTH QUARTER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
DATUM:XXXXXX



GRAPHIC SCALE



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THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
BONHAM LANE

REVISION BLOCK

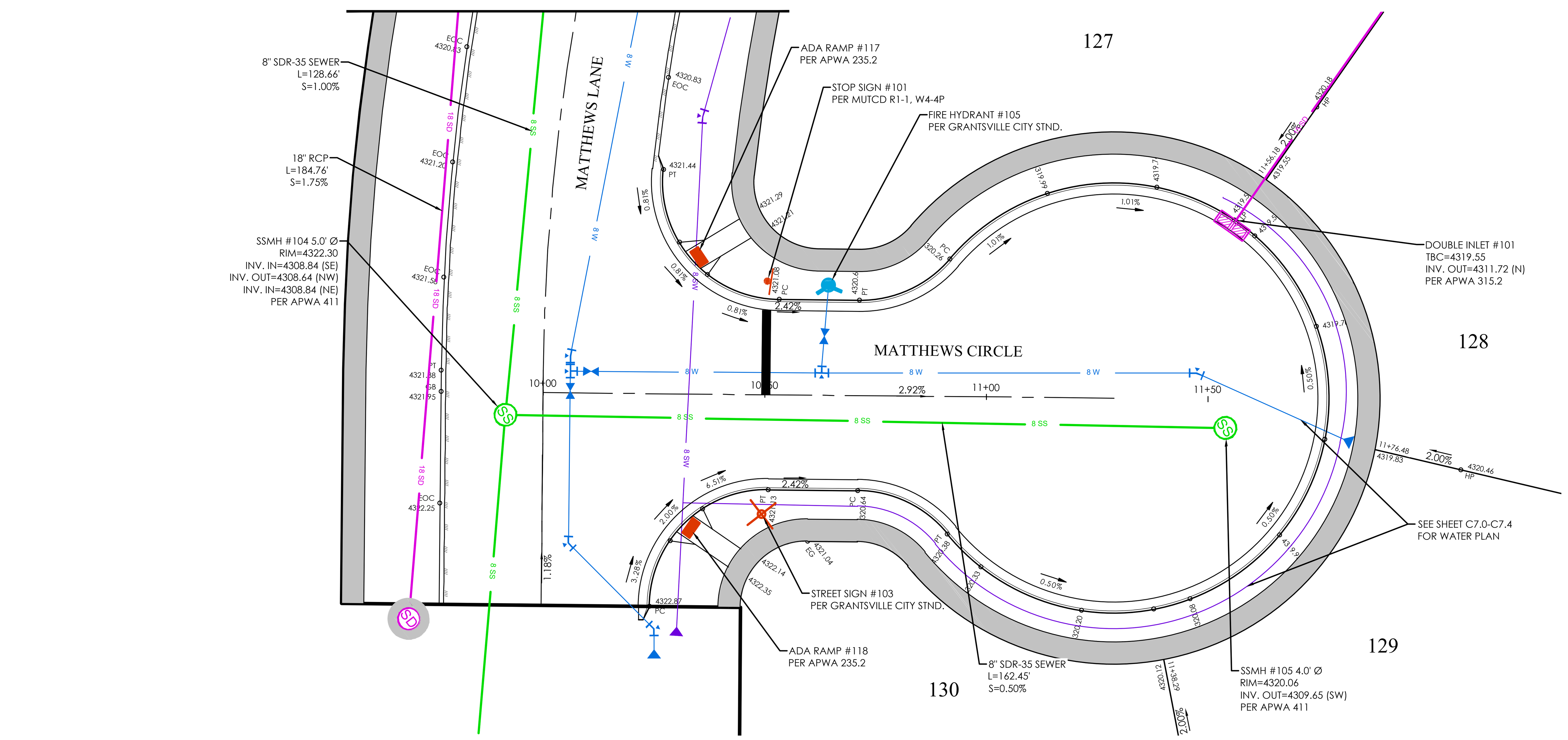
#	DATE	DESCRIPTION
1	.....	.....
2	.....	.....
3	.....	.....
4	.....	.....
5	.....	.....
6	.....	.....

BONHAM LANE

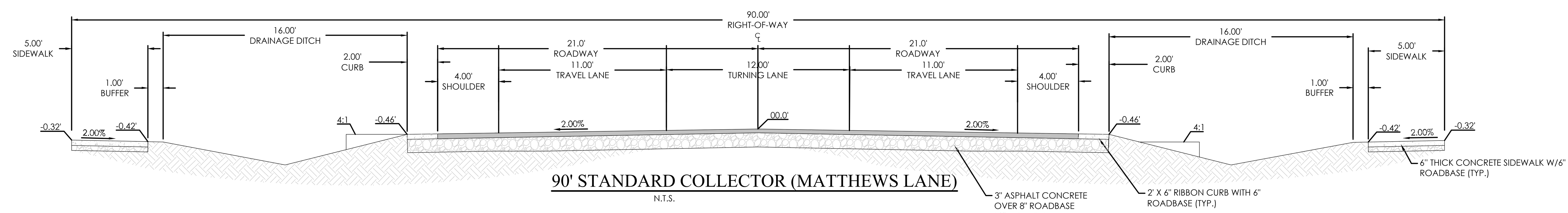
Scale: 1"=20'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: PP09	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\PP09-BONHAM LANE.dwg

MATCH MATTHEWS LANE
PLAN AND PROFILE
SEE SHEET PP07

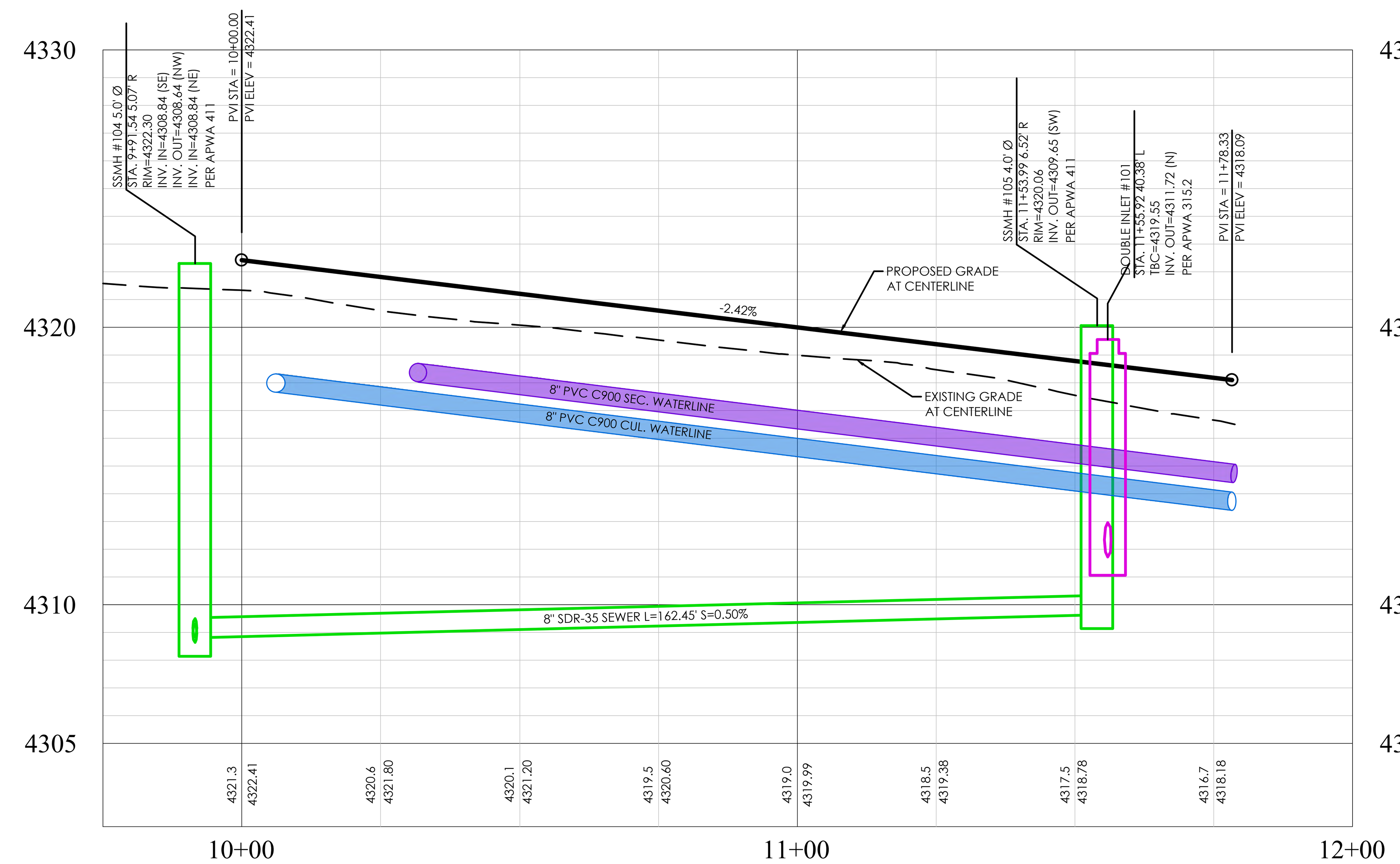


MATTHEWS CIRCLE PLAN



90' STANDARD COLLECTOR (MATTHEWS LANE)

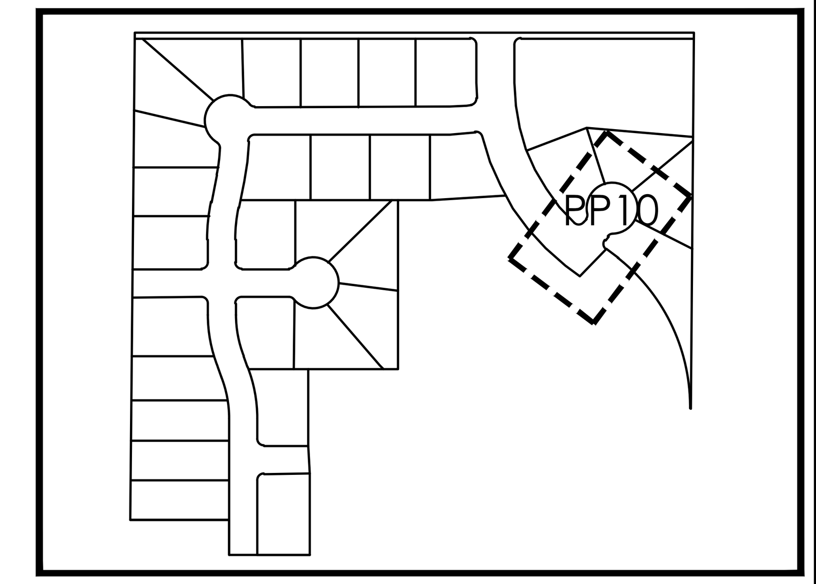
N.T.S.



MATTHEWS CIRCLE PROFILE

LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
- EXIST. FENCE
- EXIST. CONTOUR MAJOR
- EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- SPOT ELEVATION
- BACKYARD SWALE

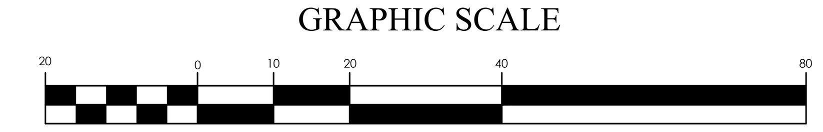


KEY MAP
N.T.S

BENCHMARK

NORTH QUATER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
DATUM:XXXXXX

GRAPHIC SCALE



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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
MATTHEWS CIRCLE

REVISION BLOCK

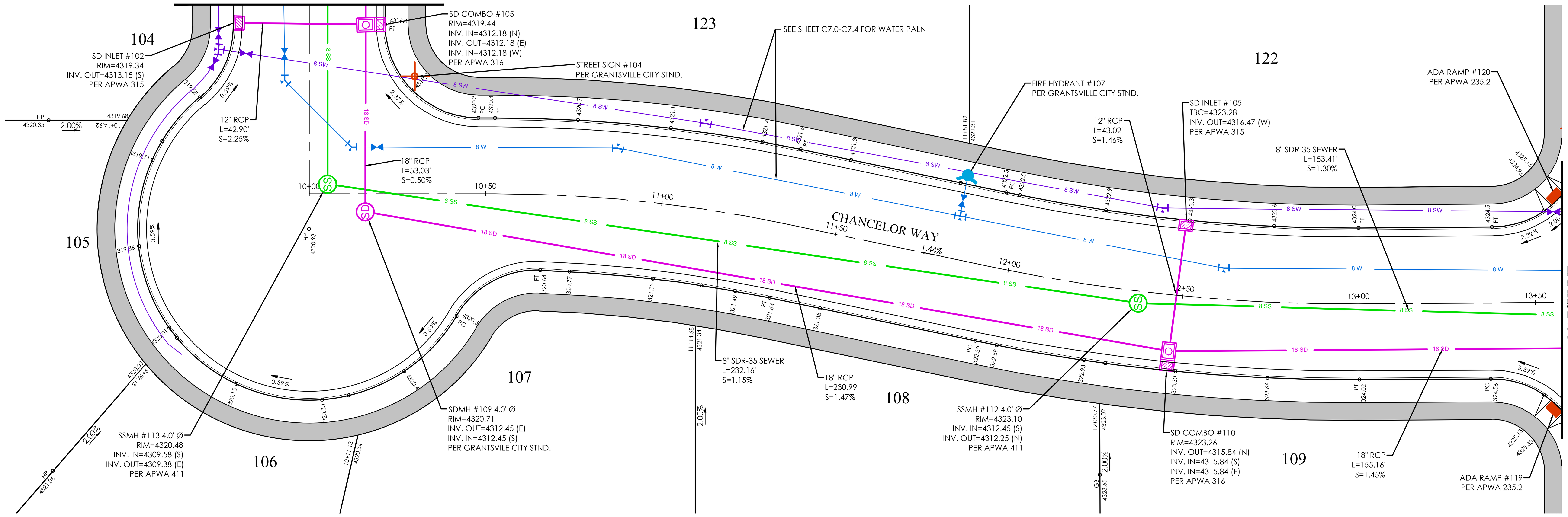
#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

MATTHEWS CIRCLE

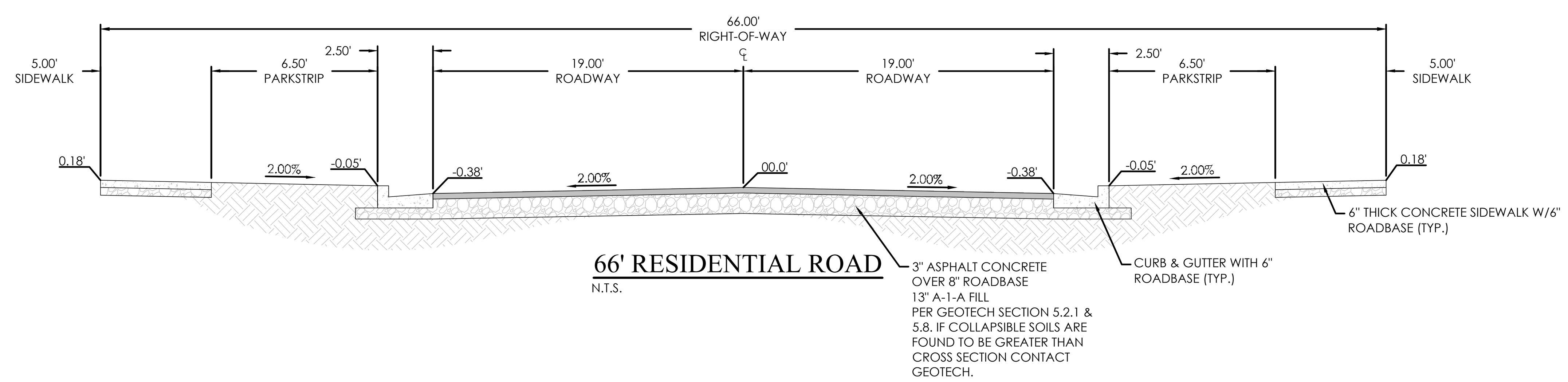
Scale:	1"=20'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	PP10		

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\PP10-MATTHEWS CIRCLE.dwg

MATCH HETFIELD DRIVE
PLAN AND PROFILE
SEE SHEET PP01

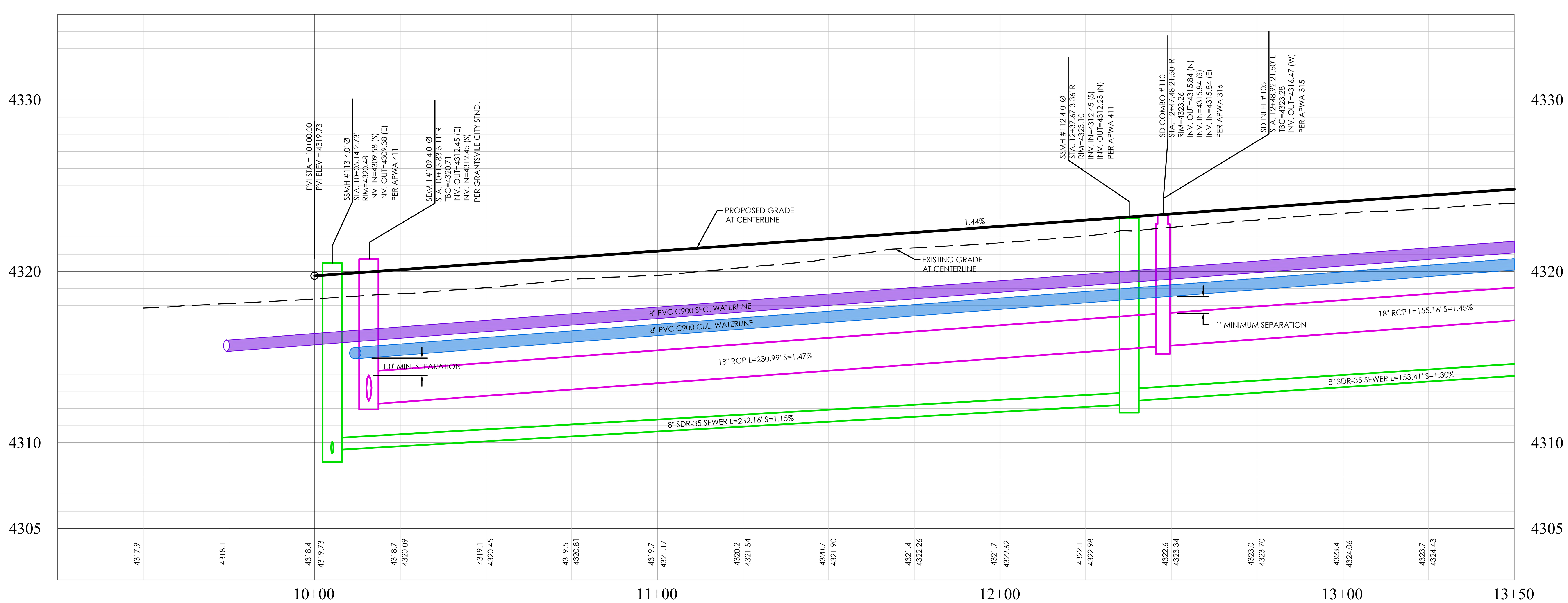


CHANCELOR WAY PLAN



66' RESIDENTIAL ROAD

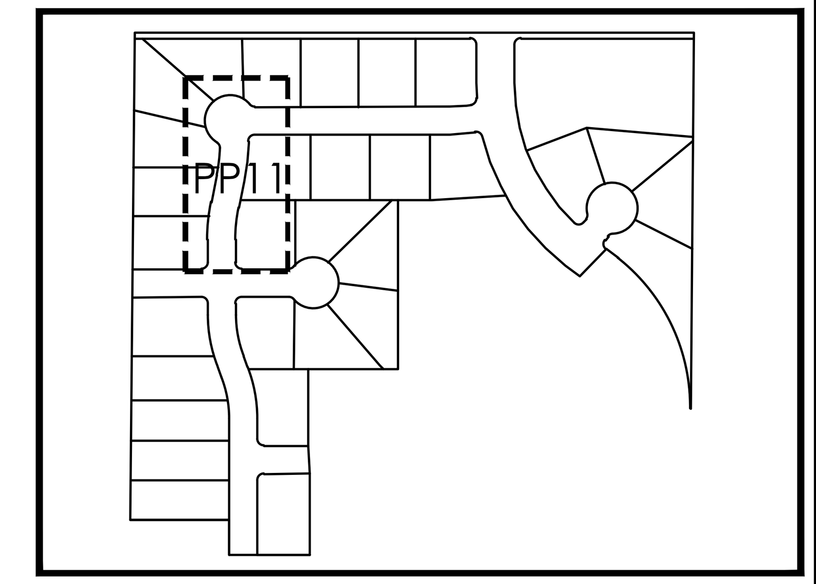
N.T.S.



CHANCELOR WAY PROFILE

LEGEND

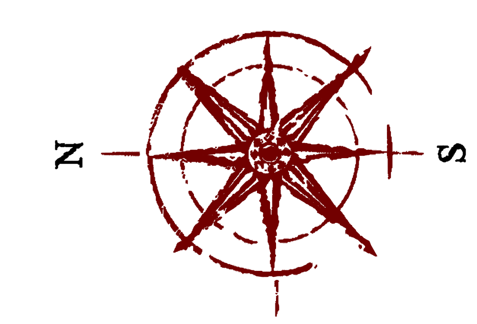
BOUNDARY	
ROW	
CENTERLINE	
LOT LINE	
EASEMENT	
15" STORM DRAIN	
8" SANITARY SEWER	
8" CULINARY WATER	
8" SECONDARY WATER	
CONTOUR MAJOR	
CONTOUR MINOR	
EXIST. STORM DRAIN	
EXIST. SANITARY SEWER	
EXIST. CULINARY WATER	
EXIST. FENCE	
EXIST. CONTOUR MAJOR	
EXIST. CONTOUR MINOR	
SIGN	
STREET LIGHT	
SD MH, INLET, AND COMBO	
SEWER MANHOLE	
CULINARY VALVE, TEE & BEND	
SECONDARY VALVE, TEE & BEND	
WATER BLOW-OFF	
FIRE HYDRANT	
STREET MONUMENT (TO BE SET)	
EXIST. STREET MONUMENT	
EXIST. SD INLET & MH	
EXIST. SEWER MH	
EXIST. VALVE, TEE, & BEND	
EXIST. FIRE HYDRANT	
SPOT ELEVATION	o XXXX.XX
BACKYARD SWALE	



KEY MAP
N.T.S

BENCHMARK

NORTH QUATER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
DATUM:XXXXXX



GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

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

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LICENSED PROFESSIONAL ENGINEER
No. 8028950-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1

GRANTSVILLE CITY, UT

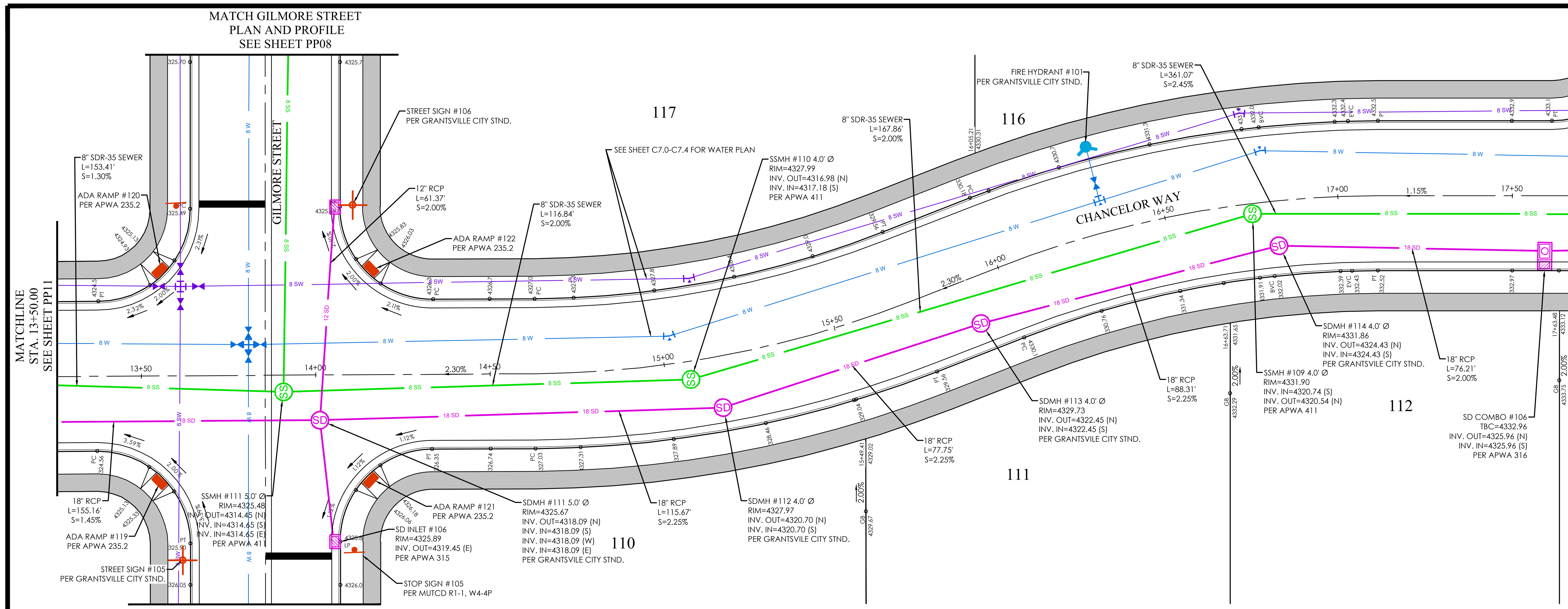
CHANCELOR WAY

REVISION BLOCK #	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

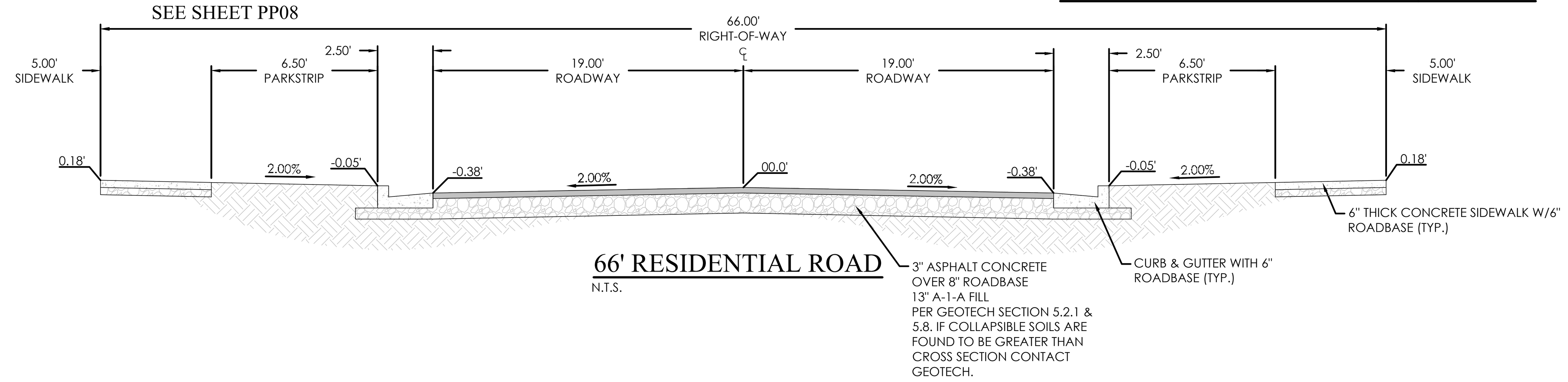
CHANCELOR WAY

Scale:	1"=20'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	PP11		

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\PP11-CHANCELOR WAY.dwg

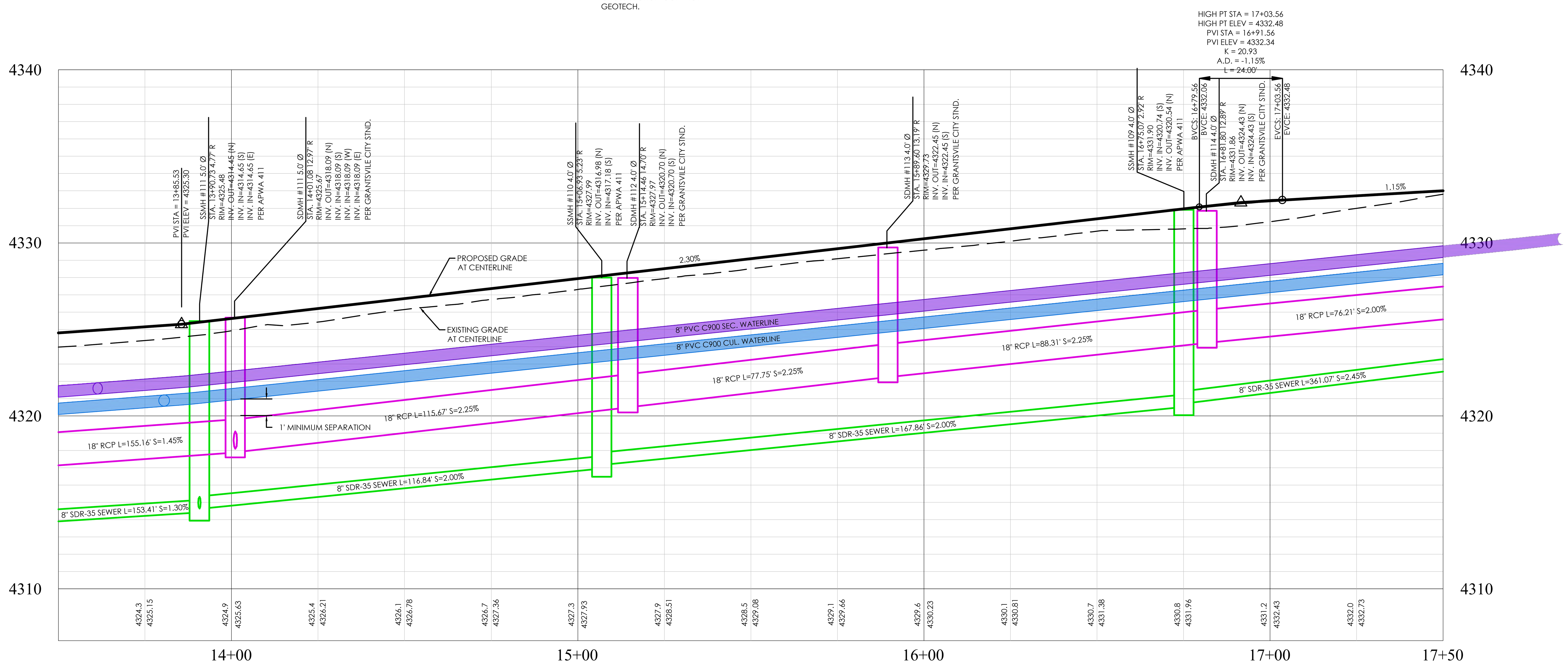


CHANCELOR WAY PLAN



66' RESIDENTIAL ROAD

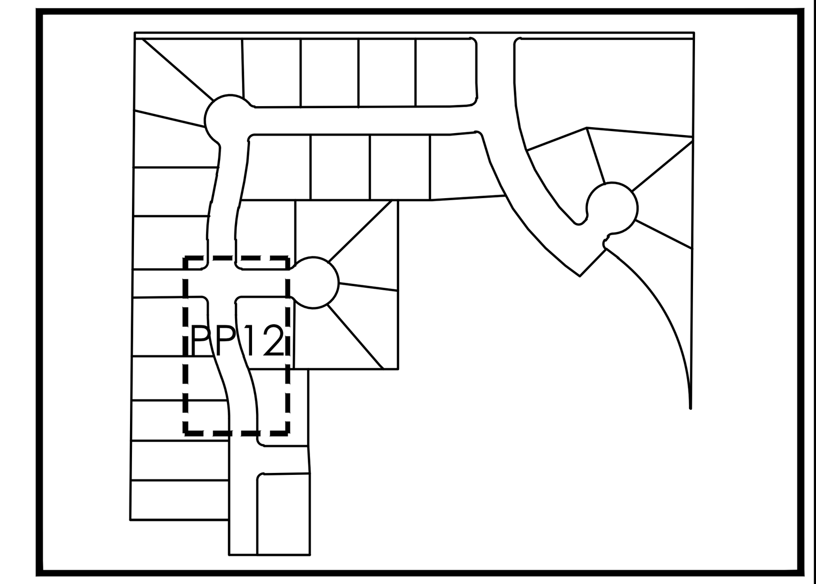
N.T.S.



CHANCELOR WAY PROFILE

LEGEND

- BOUNDARY
- ROW
- CENTERLINE
- LOT LINE
- EASEMENT
- 15" STORM DRAIN
- 8" SANITARY SEWER
- 8" CULINARY WATER
- 8" SECONDARY WATER
- CONTOUR MAJOR
- CONTOUR MINOR
- EXIST. STORM DRAIN
- EXIST. SANITARY SEWER
- EXIST. CULINARY WATER
- EXIST. FENCE
- EXIST. CONTOUR MAJOR
- EXIST. CONTOUR MINOR
- SIGN
- STREET LIGHT
- SD MH, INLET, AND COMBO
- SEWER MANHOLE
- CULINARY VALVE, TEE & BEND
- SECONDARY VALVE, TEE & BEND
- WATER BLOW-OFF
- FIRE HYDRANT
- STREET MONUMENT (TO BE SET)
- EXIST. STREET MONUMENT
- EXIST. SD INLET & MH
- EXIST. SEWER MH
- EXIST. VALVE, TEE, & BEND
- EXIST. FIRE HYDRANT
- SPOT ELEVATION
- BACKYARD SWALE

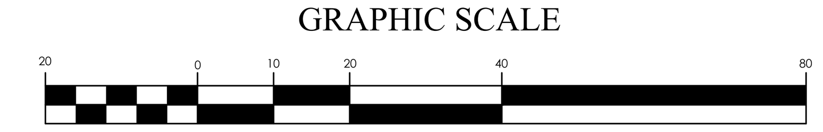


KEY MAP
N.T.S

BENCHMARK

NORTH QUATER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
DATUM:XXXXXX

GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

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HERITAGE FARMS PHASE 1

GRANTSVILLE CITY, UT

CHANCELOR WAY

REVISION BLOCK		
#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
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CHANCELOR WAY

Scale: 1"=20'	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: PP12	

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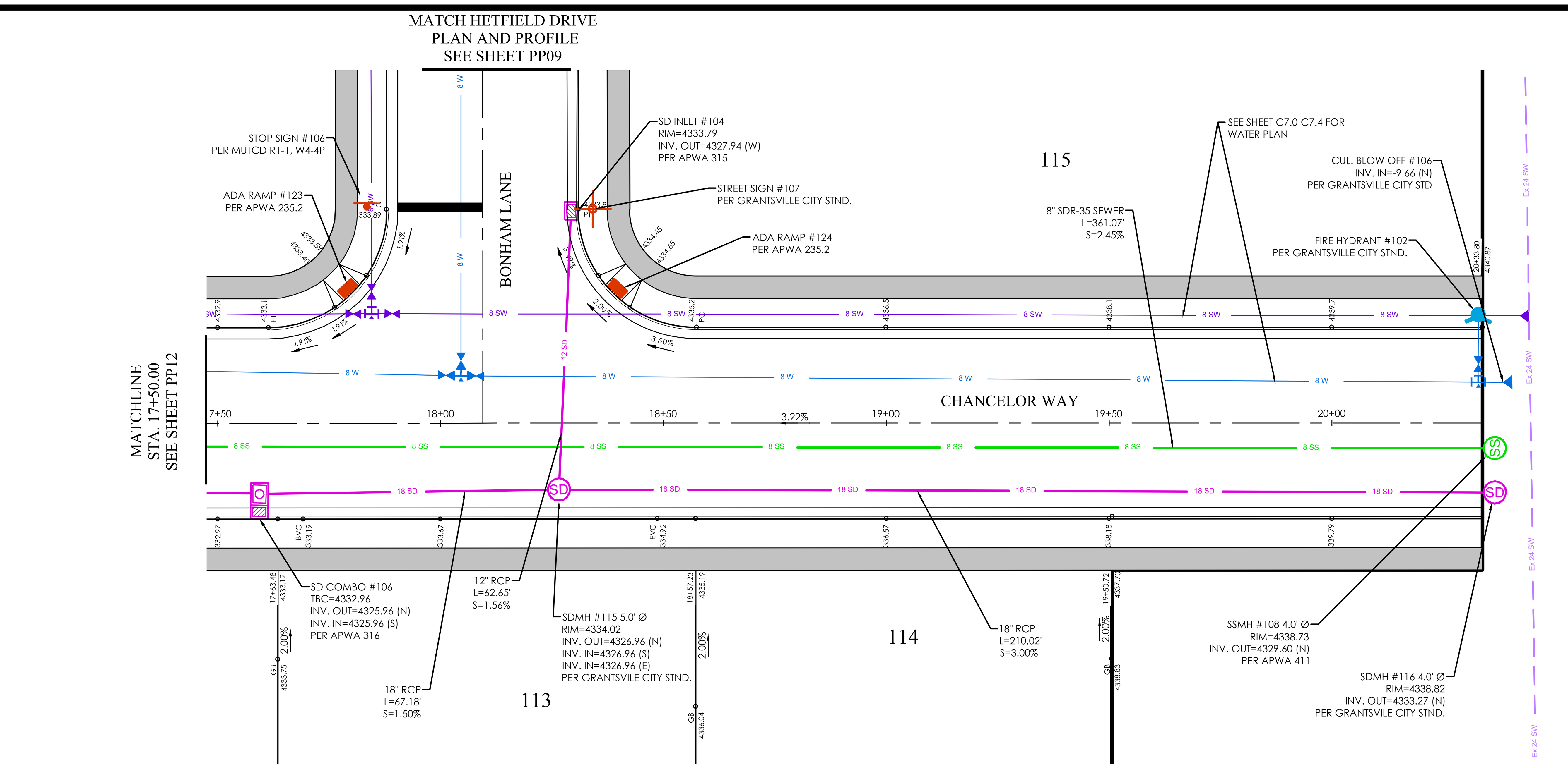
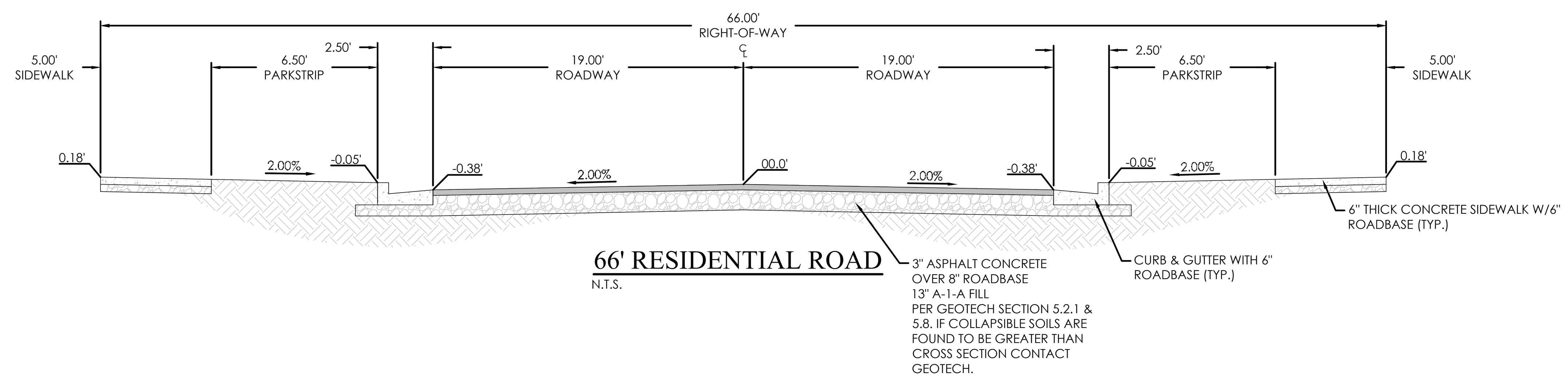
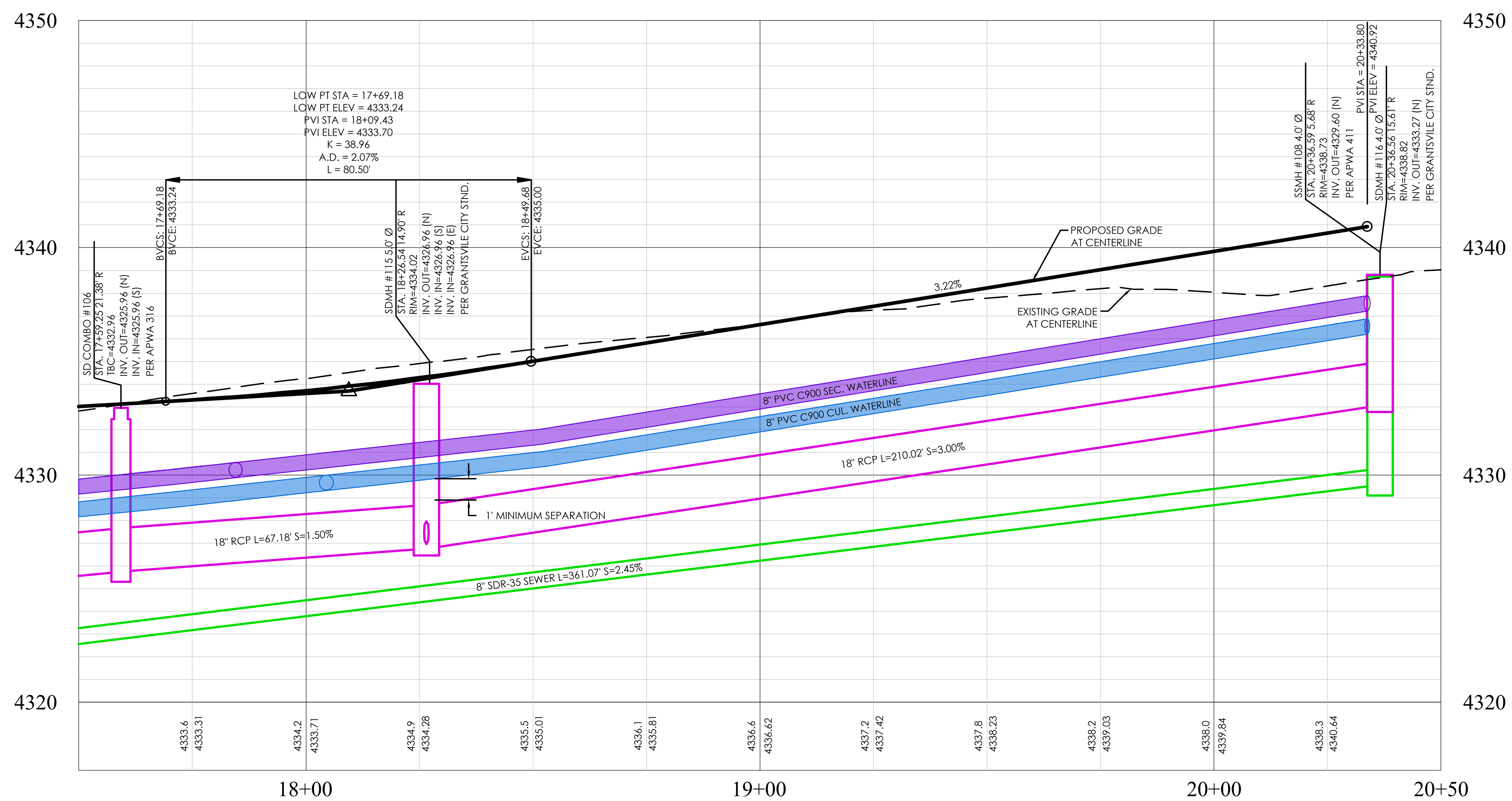


CHANCELOR WAY PLAN



66' RESIDENTIAL ROAD
N.T.S.



CHANCELOR WAY PROFILE

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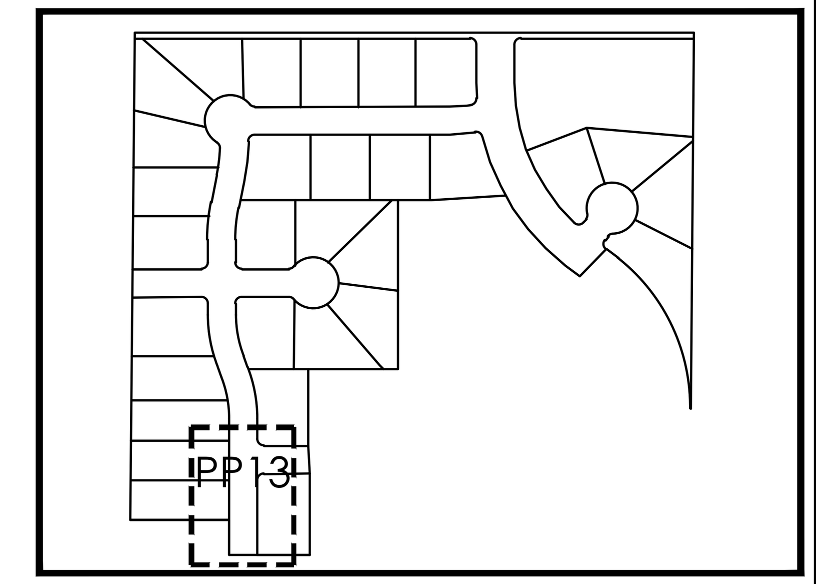

KEY MAP
N.T.S

BENCHMARK

NORTH QUATER CORNER OF SECTION 8
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
ELEV: 4309.46
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GRAPHIC SCALE

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LICENSED PROFESSIONAL ENGINEER
No. 8028950-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
CHANCELOR WAY

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
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CHANCELOR WAY

Scale:	1"=20'	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359

Sheet:
PP13

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GRANTSVILLE CITY GENERAL NOTES

1. ALL WORK DONE OR IMPROVEMENTS INSTALLED WITHIN GRANTSVILLE CITY INCLUDING BUT NOT LIMITED TO EXCAVATION, CONSTRUCTION, ROADWORK AND UTILITIES SHALL CONFORM TO THE GRANTSVILLE CITY CONSTRUCTION STANDARDS AND SPECIFICATIONS, CITY MUNICIPAL CODE, THE LATEST EDITION OF THE APWA MANUAL OF STANDARD SPECIFICATIONS AND MANUAL OF STANDARD PLANS, THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ANY STATE OR FEDERAL REGULATIONS AND PERMIT REQUIREMENTS OF VARIOUS GOVERNING BODIES. THE CONTRACTOR IS RESPONSIBLE TO HAVE A COPY OF THESE SPECIFICATIONS AND TO KNOW AND CONFORM TO THE APPROPRIATE CODES, REGULATIONS, DRAWINGS, STANDARDS AND SPECIFICATIONS.

2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR THE PROTECTION OF UTILITIES AND THE ENGINEER BEARS NO RESPONSIBILITY FOR UTILITIES NOT SHOWN ON THE PLANS OR NOT IN THE LOCATION SHOWN ON THE PLANS. THIS INCLUDES ALL SERVICE LATERALS OF ANY KIND. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCES, WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE OF THE SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.

3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES, SURVEY MONUMENTS AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.

4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR.

5. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.

6. CURB, GUTTER, AND SIDEWALK, FOUND TO BE UNACCEPTABLE PER CITY STANDARDS AND APWA SHALL BE REMOVED AND REPLACED.

7. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF TRANSITIONS TO BE AS SHOWN ON PLANS.

8. ANY SURVEY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER TOOELE COUNTY SURVEYORS REQUIREMENTS.

9. ALL PRIVACY WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. ALL WALLS SHALL HAVE A MINIMUM 2 FT X 2 FT X 30 INCH DEEP SPOT FOOTINGS. BOTTOM OF ALL FOOTINGS ON ALL WALLS SHALL BE A MINIMUM OF 30 INCHES BELOW FINISHED GRADE. WALLS GREATER THAN 6 FEET REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.

10. ALL CONSTRUCTION MATERIALS PER APWA MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY. GRANTSVILLE PUBLIC WORKS WILL APPROVE PIPE ZONE MATERIAL TO BE PLACED.

11. REQUEST FOR INSPECTION BY THE GRANTSVILLE CITY ENGINEERING DEPT. SHALL BE MADE BY THE CONTRACTOR AT LEAST 48 HOURS BEFORE THE INSPECTION SERVICES WILL BE REQUIRED.

12. WORK IN PUBLIC WAY, ONCE BEGUN, SHALL BE PROSECUTED TO COMPLETION WITHOUT DELAY AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC. PLEASE SEE CODE 17 GENERAL PROVISIONS FOR MORE DETAILS.

13. THE CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK IN CONNECTION WITH CONSTRUCTION.

14. POWER POLES AND/OR OTHER EXISTING FACILITIES NOT IN PROPER LOCATION BASED ON PROPOSED IMPROVEMENTS SHOWN HEREON WILL BE RELOCATED AT NO EXPENSE TO THE GRANTSVILLE CITY. POWER LINES AND ALL OTHER AERIAL UTILITIES ARE TO BE BURIED AND POLES REMOVED AS DETERMINED BY THE CITY ENGINEER.

15. CURB AND GUTTER WITH A GRADE OF LESS THAN FOUR-TENTHS OF ONE PERCENT SHALL BE CONSTRUCTED BY FORMING. EACH JOINT SHALL BE CHECKED FOR A GRADE PRIOR TO CONSTRUCTION AND WATER TESTED AS SOON AS POSSIBLE AFTER CONSTRUCTION.

16. CONTRACTOR TO FOLLOW GRANTSVILLE CITY NOISE ORDINANCE STANDARDS CODE ORDINANCE 2018-19

17. CONTRACTORS ARE RESPONSIBLE FOR ALL OSHA REQUIREMENTS ON THE PROJECT SITE.

18. A UPDES (UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR ALL CONSTRUCTION ACTIVITIES AS PER STATE LAW AS WELL AS PROVIDING A STORM WATER POLLUTION PREVENTION PLAN TO THE CITY.

19. ALL CITY MAINTAINED UTILITIES INCLUDING; WATERLINE, FIRE HYDRANTS, STREETLIGHT WIRING, AND STORM DRAIN MUST BE IN PUBLIC RIGHT OF WAY OR IN RECORDED EASEMENTS.

20. CONTRACTOR SHALL WORK GRANTSVILLE CITY REGULAR WORKING HOURS OF MONDAY THROUGH FRIDAY 7:00 AM TO 4:00 PM

21. PRIOR TO 90% BOND RELEASE, A LEGIBLE AS-BUILT DRAWING MUST BE SUBMITTED TO THE GRANTSVILLE CITY STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER. AS-BUILTS MUST SHOW ALL CHANGES AND ACTUAL FIELD LOCATIONS OF STORM DRAINAGE, WATERLINES, IRRIGATION, STREET LIGHTING, AND POWER. AS-BUILTS WILL BE HELD TO THE SAME STANDARD AS APPROVED DESIGN DRAWINGS, NO "REDLINED PLANS" ALLOWED. IN THE ABSENCE OF CHANGES, COPIES OF THE APPROVED DRAWINGS WILL BE REQUIRED STATING "INSTALLED AS PER DRAWINGS". AS-BUILT DRAWINGS FOR NEW DEVELOPMENTS SHALL BE SUBMITTED TO THE CITY IN THE FOLLOWING FORMATS AND QUANTITIES PRIOR TO THE 90% BOND RELEASE: 1 .DXF COPY, 1 .PDF COPY, AND 1 GIS SHAPE FILE CONTAINING THE SAME.

22. FILTER FABRIC WRAPPED AROUND AN INLET GRATE IS NOT AN ACCEPTABLE INLET SEDIMENT BARRIER. SEE GRANTSVILLE CITY CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR DETAILS OF APPROVED STORM WATER BMPS WHICH SPECIFICALLY STATES THE UTILIZATION OF AN OIL WATER SNOUT SEPARATOR.

23. ASPHALT PAVING IS NOT ALLOWED WITHOUT A WRITTEN EXCEPTION FROM THE ENGINEERING DEPARTMENT AND PUBLIC WORKS DEPARTMENT BELOW AN AMBIENT TEMPERATURE OF 50 DEGREES AND RISING.

24. TO ENSURE PROPER PLANTING, PROTECTION AND IRRIGATION OF TREES, MITIGATING RISK OF TREE FAILURE OR FUTURE DAMAGE TO INFRASTRUCTURE, CONTRACTORS ARE REQUIRED TO FOLLOW THE STANDARDS AND SPECIFICATIONS OF THE ISA - INTERNATIONAL SOCIETY OF ARBORICULTURE.

25. WHEN A PROPOSED DEVELOPMENT BORDERS A COLLECTOR, MINOR COLLECTOR OR ARTERIAL STREET AND IS REQUIRED TO CONSTRUCT COLLECTOR STREET FENCING ALONG THE BACK OF SIDEWALK, THE DEVELOPMENT SHALL ALSO BE REQUIRED PUT IN A CONCRETE MOW STRIP FROM THE BACK OF SIDEWALK TO UNDERNEATH THE FENCE PANELS. CONCRETE MOW STRIPS SHALL ALSO BE REQUIRED BETWEEN THE SIDEWALK AND FENCING ALONG THE REAR OF DOUBLE FRONTAGE LOTS.

26. CONCRETE FOR ALL SURFACE IMPROVEMENTS INCLUDING BUT NOT LIMITED TO; SIDEWALK, DRIVEWAY ENTRANCES, PEDESTRIAN RAMPS, CURB AND GUTTER, WATER WAYS, MANHOLE, VAULT AND VALVE COLLARS, AND ANY OTHER CAST IN PLACE SURFACE CONCRETE FEATURES SHALL BE CONSTRUCTED WITH MINIMUM 4,500 PSI CONCRETE.

27. CULINARY WATER AND SEWER SERVICE LATERALS SHALL BE MARKED ON THE TOP BACK OF CURB AND LIP OF CURB AT THEIR ACTUAL LOCATION OF CROSSING THE CURB AND GUTTER. PINS OR STAMPS SHALL BE USED AND MUST BE INSTALLED WHILE THE CONCRETE IS STILL WET AND WILL READILY ACCEPT THE MARKER. GRINDING MARKING DUE TO DRY CEMENT IS NOT ALLOWED.

GRANTSVILLE CITY TRAFFIC NOTES

1. WHEN A DESIGNATED "SAFE ROUTE TO SCHOOL" IS ENCROACHED UPON BY A CONSTRUCTION WORK ZONE THE SAFE ROUTE SHALL BE MAINTAINED IN A MANNER ACCEPTABLE TO GRANTSVILLE CITY.

2. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY ENGINEER, PUBLIC WORKS DIRECTOR OR DESIGNEE.

3. THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS AND THE LATEST MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) MANUAL. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS AND THE LATEST MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) MANUAL.

5. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HEREUNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR PER APPROVED CONSTRUCTION DRAWINGS UNLESS APPROVED BY THE CITY ENGINEER & PUBLIC WORKS DIRECTOR.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTAH TRANSIT AUTHORITY (UTA) IF APPLICABLE, IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.

7. BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING PUBLIC STREETS. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PER THE CURRENT EDITION ADOPTED BY UDOT AND BE APPROVED BY THE GRANTSVILLE CITY BEFORE CONSTRUCTION BEGINS. TRAFFIC CONTROL PLANS SHALL BE SUBMITTED AS PART OF THE ENGINEERING CONSTRUCTION PACKAGE AND APPROVED BY THE GRANTSVILLE CITY ENGINEER AND PUBLIC WORKS DIRECTOR.

8. ALL SIGNS LARGER THAN 36" X 36" OR 1296 SQUARE INCHES PER SIGN POLE SHALL BE MOUNTED ON A SLIP BASE SYSTEM PER UDOT STANDARD DRAWING SN 10B (DETAIL DRAWING ATTACHED TO STANDARD DRAWINGS) WITH A "Z" BAR BACKING. SIGNS OF THIS SIZE ARE NOT ALLOWED TO BE MOUNTED ON A YIELDING POLE.

9. SIGN COMPONENTS SUCH AS SHEETING, EC FILM, INKS, LETTERS AND BORDERS ARE ALL REQUIRED TO BE FROM THE SAME MANUFACTURER. ONLY EC FILM MAY BE USED TO ACHIEVE COLOR. VINYL EC FILM IS NOT ACCEPTED.

10. ALL NEW ROUNDABOUTS, CROSSWALKS, STOP BARS AND LEGENDS SHALL BE INSTALLED WITH PAINT AND GLASS BEAD.

11. PAVING ASPHALT BINDER GRADE SHALL BE PG 58-28 UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. ASPHALT AGGREGATE SIZE SHALL BE ½ INCH FOR RESIDENTIAL AND COLLECTOR ROADS. NO MORE THAN 15% RAP (RECLAIMED ASPHALT PAVEMENT) BY WEIGHT WILL BE ALLOWED IN THE ASPHALT MIX DESIGN FOR THE PAVING OF PUBLIC AND PRIVATE STREETS. UP TO THE 15 PERCENT WILL BE ALLOWED WITH NO CHANGE IN THE SPECIFIC BINDER GRADE. THE ASPHALT MIX DESIGN SHALL HAVE NO MORE THAN 3½ % AIR VOIDS.

14. POTHOLING: ALL POTHOLES MUST BE SAW CUT SQUARE AND HAVE A MINIMUM SIZE OF 1 SQUARE FOOT. WHEN REPAIRING A POTHOLE, SAND OR PEA GRAVEL MEETING GRANTSVILLE CITY STANDARDS SHALL BE PLACED OVER THE EXPOSED UTILITY TO A DEPTH OF 6 INCHES. FOLLOWING THE PEA GRAVEL WILL BE FLOWABLE FILL UP TO 1 INCH BELOW THE BOTTOM EDGE OF THE EXISTING ASPHALT. THE REMAINING PORTION OF THE HOLE SHALL BE FILLED WITH ASPHALT, WHICH WILL HAVE AN OVERALL THICKNESS OF THE EXISTING ASPHALT PLUS 1 INCH.

15. ALL FILL WITHIN THE PUBLIC RIGHT OF WAY SHALL BE A-1-A TO A-3, WITH THE EXCEPTION OF TOP SOIL IN THE PARK STRIP FOR LANDSCAPING AND TRENCH BACKFILL. TRENCH BACKFILL MATERIAL UNDER PAVEMENTS OR SURFACE IMPROVEMENTS SHALL BE CLEAN, NONCLUMPING, GRANULAR AND FLOWABLE, 2" MINUS, A-1-A TO A-2-7 SOILS ACCORDING TO AASHTO 145 SOIL CLASSIFICATION SYSTEM. LIME TREATED FLOWABLE FILLS, IF APPROVED, SHALL HAVE A 28-DAY STRENGTH OF 65 PSI. 16. ALL TRAFFIC ROAD CLOSURES INVOLVING 1 OR MORE LANES OF TRAFFIC MUST RECEIVE PRIOR APPROVAL FROM THE CITY ENGINEER, PUBLIC WORKS DIRECTOR OR HIS/HER REPRESENTATIVE. VMS PCMS BOARDS MUST BE PLACED A MINIMUM OF 7 DAYS IN ADVANCE OF ANY LANE CLOSURE ON COLLECTOR, MINOR COLLECTOR OR ARTERIAL STREET. VMS PCMS BOARDS MUST ALSO BE PLACED IN ADVANCE OF ANY LANE CLOSURES ON A SUBDIVISION STREET PER THE CITY ENGINEER'S DIRECTION.

17.ROUNDABOUTS, INCLUDING THEIR INGRESS AND EGRESS, SHALL BE CONSTRUCTED WITH CONCRETE PAVEMENT. ENGINEER SHALL DESIGN CROSS SECTION AND SUBMIT TO THE CITY FOR REVIEW AND APPROVAL.

GRANTSVILLE CITY GRADING NOTES

1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER AND CITY ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.

2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.

3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.

4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.

5. CONTRACTOR SHALL GRADE THE PAVEMENT AREA SUBGRADE TO THE LINES (HORIZONTAL) AND ELEVATIONS (VERTICAL) SHOWN ON THE PLANS WITHIN A TOLERANCE OF 0.1 + TO 0.1 -.

6. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.

7. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER FROM GRANTSVILLE CITY ENGINEERING AND UTILITIES DEPARTMENT.

8. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.

9. IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, THE DEVELOPER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

10. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE SOILS ENGINEER AND APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.

11. ALL QUALITY CONTROL TESTING SHALL BE PERFORMED BY AN INDEPENDENT LICENSED AND CERTIFIED THIRD-PARTY TESTING SERVICE.

GRANTSVILLE CITY FIRE DEPARTMENT NOTES

1. ON ANY NEW HOME OR BUILDING INSTALLATION, ACCESSIBLE FIRE HYDRANTS SHALL BE INSTALLED BEFORE COMBUSTIBLE CONSTRUCTION COMMENCES AND SAID FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER WITH AN ADEQUATE WATER SUPPLY.

2. CONTRACTOR SHALL CALL THE PUBLIC WORKS DEPARTMENT AND ENGINEERING DEPARTMENT FOR UNDERGROUND INSPECTION, PRESSURE AND FLUSH VERIFICATION OF ALL FIRE HYDRANTS AND FIRE LINES BEFORE BACK FILLING.

3. PAINTING OF THE CURBS AND HYDRANT AND ANY WORK NECESSARY FOR PROTECTION OF HYDRANTS FROM PHYSICAL DAMAGE SHALL BE APPROVED BEFORE BEING CONSTRUCTED. HYDRA-FINDERS WILL BE INSTALLED PER GRANTSVILLE CITY STANDARDS DETAIL.

4. A FLOW TEST MUST BE WITNESSED BY THE FIRE DEPARTMENT PRIOR TO OCCUPANCY FOR VERIFICATION OF REQUIRED ON-SITE WATER SUPPLY.

5. ALL ON-SITE FIRE MAIN MATERIALS MUST BE U.L. LISTED AND A.W.W.A. APPROVED.

6. THE TURNING RADIUS FOR ANY FIRE APPARATUS ACCESS ROAD AND/OR FIRE LANE, PUBLIC OR PRIVATE, SHALL BE NOT LESS THAN FORTY-EIGHT FEET (48') OUTSIDE RADIUS EQUALING 96' OR LARGER AND TWENTY-TWO FEET (22') INSIDE RADIUS AND SHALL BE PAVED.

7. A FIRE APPARATUS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN ONE-HUNDRED FIFTY FEET (150') FROM FIRE DEPARTMENT VEHICLE ACCESS ROADS AND/OR FIRE LANES, PUBLIC OR PRIVATE, IN EXCESS OF ONE HUNDRED FIFTY FEET (150') IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND AREA. CONTRACTOR/ENGINEER SHALL FOLLOW LATEST INTERNATIONAL FIRE CODE REGULATIONS AT ALL TIMES IN REGARDS TO DISTANCE.

8. ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WIDTH SIGNS AT INTERVALS OF ONE-HUNDRED FEET (100') ALONG ALL DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS SHALL BE INSTALLED AT LEAST 5', MEASURED FROM THE BOTTOM EDGE OF THE SIGN TO THE NEAR EDGE OF PAVEMENT. WHERE PARKING OR PEDESTRIAN MOVEMENTS OCCUR, THE CLEARANCE TO THE BOTTOM OF THE SIGN SHALL BE AT LEAST 7'. THE CURB ALONG OR ON THE PAVEMENT OR CEMENT IF CURB IS NOT PRESENT, SHALL BE PAINTED WITH RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS.

9. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE GRANTSVILLE CITY F.D. APPROVAL. GATES ARE ONLY ALLOWED WITH PRIOR APPROVAL.

10. ALL PRIVATE UNDERGROUND FIRE LINES THAT SERVICE AUTOMATIC FIRE SPRINKLER SYSTEMS SHALL BE NO SMALLER THAN EIGHT (8) INCHES IN DIAMETER AND HAVE A POST INDICATOR VALVE (PIV) BETWEEN THE WATER MAIN AND THE BUILDING. IF A PIV ISN'T FEASIBLE DUE TO SITE CONSTRAINTS, A WATER INDICATOR VALVE (WIV) MAY BE USED WITH THE APPROVAL OF THE CITY ENGINEER OR FIRE CODE OFFICIAL. FOR A WIV TO BE ALLOWED, ANOTHER VALVE MUST BE INSTALLED ON THE FIRE SERVICE LINE BACK AT THE CONNECTION TO THE WATER MAIN, WHICH WILL BE MAINTAINED BY THE CITY AS PART OF IT'S CULINARY WATER SYSTEM. ALL FIRE LINES MATERIAL SHALL BE DUCTILE IRON. (DUCTILE IRON FROM THE PIV TO THE BUILDING SHALL BE PERMITTED OR DUCTILE IRON FROM THE MAIN WATER LINE TO THE WIV).

11. POST INDICATOR VALVES (PIV) SHALL BE BETWEEN 6 AND 40 FEET FROM BUILDINGS NOT EXCEEDING THREE STORIES OR EQUIVALENT IN HEIGHT AND BETWEEN 30 AND 40 FEET ON BUILDINGS IN EXCESS OF THREE OR MORE STORIES IN HEIGHT OR EQUIVALENT.

12. ROADS AND ACCESSES SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS. SURFACE SHALL BE PAVED BEFORE THE APPLICATION OF COMBUSTIBLE MATERIAL.

13. ALL NEW BUILDINGS EQUIPPED WITH A FIRE DEPARTMENT CONNECTION (FDC) MUST HAVE INLETS SECURED WITH KNOX BRAND LOCKING FDC CAP(S) WITH A SWIVEL COLLAR. ALL NEW BUILDINGS ARE ALSO REQUIRED TO HAVE A KNOX BRAND KEY LOCK BOX MOUNTED ON THE EXTERIOR BUILDING, SUCH THAT FIRE DEPARTMENT PERSONNEL MAY GAIN ACCESS IN CASE OF AN EMERGENCY.

GRANTSVILLE CITY WATER NOTES

1. THE FOLLOWING GRANTSVILLE CITY WATER NOTES ARE INTENDED FOR GENERAL WATER STANDARDS ONLY AND ARE NOT ALL INCLUSIVE. THE CITY HAS INCLUDED THE CULINARY WATER DESIGN AND CONSTRUCTION STANDARDS WITHIN THE CITY CONSTRUCTION STANDARDS AND SPECIFICATIONS.

2. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN RELEASED FOR CONSTRUCTION BY THE ENGINEERING DEPARTMENT. FOLLOWING WATER PLAN APPROVAL, FORTY-EIGHT (48) HOUR NOTICE SHALL BE GIVEN TO THE ENGINEERING DEPARTMENT AND THE PUBLIC WORKS DEPARTMENT PRIOR TO THE START OF CONSTRUCTION. NOTICE MUST BE GIVEN BY 2:00 P.M. THE BUSINESS DAY PRIOR TO AN INSPECTION.

3. ALL WORK WITHIN GRANTSVILLE CITY SHALL CONFORM TO GRANTSVILLE CITY STANDARDS AND SPECIFICATIONS, AWWA AND APWA.

4. FOR RESIDENTIAL DEVELOPMENTS - THE DEVELOPER SHALL PURCHASE AND INSTALL METER BOXES AND SETTERS ACCORDING TO CITY STANDARDS ON NEWLY DEVELOPED LOTS AND REAL PROPERTY AT THE TIME OF WATER MAIN INSTALLATION. WATER METERS WILL BE SUPPLIED AND INSTALLED BY THE GRANTSVILLE UTILITIES DEPARTMENT (AT DEVELOPER'S EXPENSE). THE DEVELOPER SHALL ALSO PROVIDE THE SITE ADDRESS, LOT NUMBER, METER SIZE AND PAY METER FEES PRIOR TO BUILDING PERMIT APPROVAL. THE DEVELOPER SHOULD ALSO PAY FOR RENTAL OF A HYDRANT METER, AND/OR USE THE GRANTSVILLE CITY PUBLIC WATER STANDPIPE LOCATED BY THE PUBLIC WORKS BUILDING.

5. FOR COMMERCIAL AND CONDOMINIUM DEVELOPMENTS - THE DEVELOPER SHALL PURCHASE AND INSTALL METER BOXES AND SETTERS ACCORDING TO CITY STANDARDS. WATER METERS WILL BE SUPPLIED BY GRANTSVILLE CITY PUBLIC WORKS DEPARTMENT (AT DEVELOPER'S EXPENSE) AND INSTALLED BY DEVELOPER.

6. ALL WATER FACILITIES SHALL BE FILLED, DISINFECTED, PRESSURE TESTED, FLUSHED, FILLED AND AN ACCEPTABLE WATER SAMPLE OBTAINED PRIOR TO COMMISSIONING THE NEW WATER LINE TO THE GRANTSVILLE CITY CULINARY WATER DISTRIBUTION SYSTEM.

7. GRANTSVILLE CITY UTILITIES DEPARTMENT MUST APPROVE WATER SHUT DOWN WHICH MAY REQUIRE EVENING AND WEEKEND SHUT DOWN AS DEEMED NECESSARY, REQUIRING THE CONTRACTOR TO BE BILLED FOR OVERTIME. 48 HOUR NOTICE IS REQUIRED.

8. WATER STUB-OUT INSTALLATIONS WILL NOT BE CONSTRUED AS A COMMITMENT FOR WATER SERVICE.

9. CONDITIONAL APPROVAL OF VALVED OUTLET (6" AND LARGER): IN THE EVENT THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS, INSTALLATIONS OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH THE CITY STANDARDS AND AT THE DEVELOPER'S EXPENSE.

10. ALL LINES TO BE PRESSURE TESTED ACCORDING TO GRANTSVILLE CITY AND AWWA STANDARDS AND CHLORINATED PRIOR TO USE AND FINAL ACCEPTANCE.

11. ALL FITTINGS TO BE COATED WITH POLY FM GREASE AND WRAPPED WITH 8-MIL THICK POLYETHYLENE.

12. NO OTHER UTILITY LINES MAY BE PLACED IN THE SAME TRENCH WITH WATER LINE UNLESS APPROVED BY THE CITY ENGINEER.

13. ANY CONFLICT WITH EXISTING UTILITIES SHALL BE IMMEDIATELY CALLED TO THE ATTENTION OF THE CITY ENGINEER OR DESIGNEE.

14. ALL WATER VAULTS WILL BE CONSTRUCTED PER GRANTSVILLE CITY STANDARD DRAWINGS AND SPECIFICATIONS. NO VAULTS ARE ALLOWED IN TRAFFIC AREAS WITHOUT PRIOR APPROVAL OF THE CITY ENGINEER.

15. LANDSCAPING AND IRRIGATION ADJACENT TO VAULTS SHALL DRAIN AWAY FROM VAULTS.

16. ONCE THE WATERLINE HAS BEEN TESTED, APPROVED AND CITY WATER IS FLOWING THROUGH THE PIPE, ONLY CITY PERSONNEL ARE AUTHORIZED TO SHUT DOWN AND CHARGE THE WATERLINE.

17. MEGALUG FOLLOWING RING OR AN APPROVED EQUIVALENT SHALL BE USED ON ALL FITTINGS.

18. APWA PLAN 562, CITY REQUIRES STAINLESS STEEL TIE-DOWN RESTRAINTS WITH TURNBUCKLES ONLY. 5/8" REBAR IS NOT ACCEPTABLE. MEGALUG FOLLOWERS REQUIRED ON ALL FITTINGS AND ALL DIMENSIONS OF THRUST BLOCKING STILL APPLY. THRUST BLOCKS MAY BE ELIMINATED IF HORIZONTAL TIE DOWN RESTRAINTS HAVE BEEN PRE-ENGINEERED AND RECEIVE PRIOR CITY APPROVAL.

19. WATER MAINS WILL BE HOT TAPPED AS CALLED OUT ON THE APPROVED PLANS. UNDER SPECIAL CIRCUMSTANCES, WHEN A CONTRACTOR SUBMITS A REQUEST FOR A SHUTDOWN CONTRARY TO THE APPROVED PLANS AND THE REQUEST IS APPROVED AT THE DISCRETION OF THE CITY ENGINEER OR DESIGNEE, THE CONTRACTOR MUST PROVIDE 48-HOUR NOTICE TO NEIGHBORS AND THOSE AFFECTED. IF BUSINESSES ARE IMPACTED BY THE SHUTDOWN IT WILL BE DONE AFTER HOURS AND ALL OVERTIME FEES FOR CITY PERSONNEL, EQUIPMENT AND VEHICLES MUST BE PAID IN ADVANCE.

20. CONTRACTORS ARE REQUIRED TO WRITE THE LOT NUMBER WITH A BLACK PERMANENT MARKER ON THE INSIDE OF THE WATER METER BARRELS AS THEY ARE INSTALLED.

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6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
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LICENSED PROFESSIONAL ENGINEER
No. 8028050-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1

GRANTSVILLE CITY, UT

NOTES

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

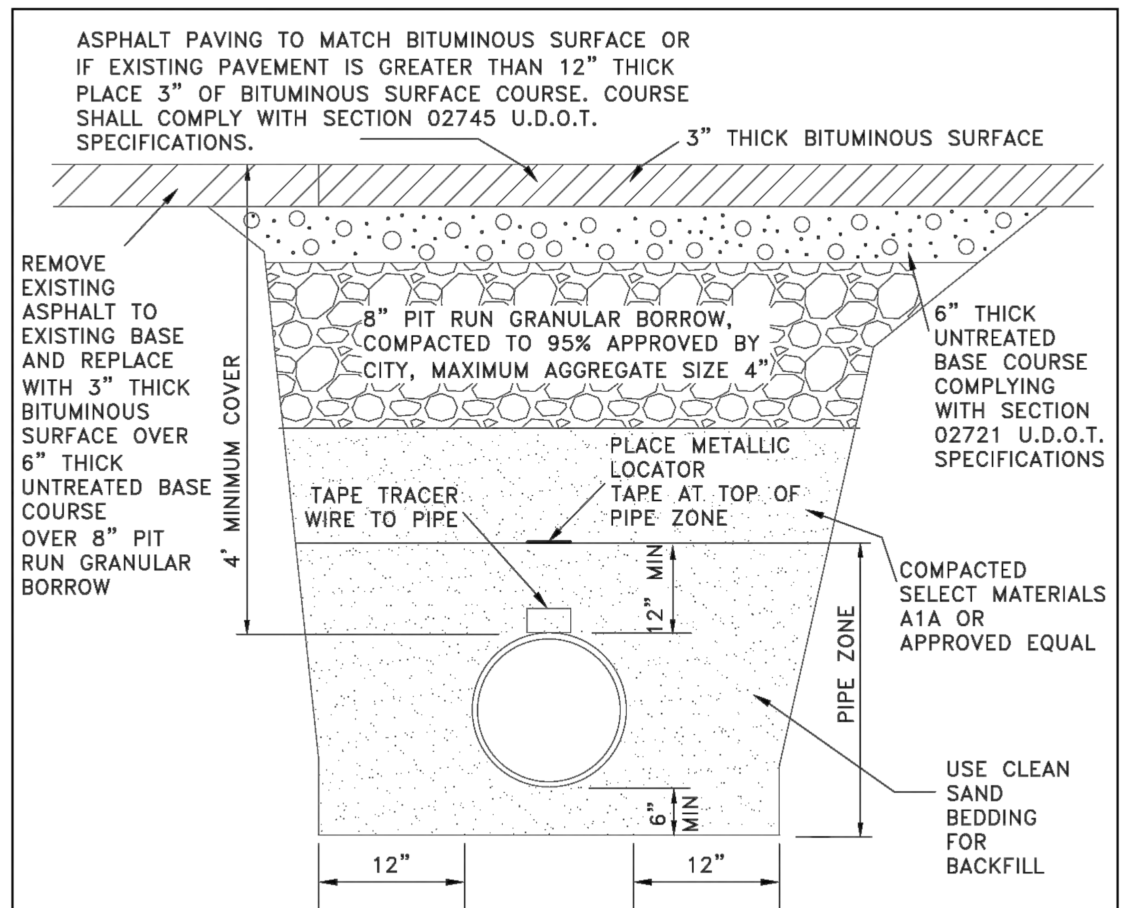
NOTES

Scale: N/A	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: D1	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\D1 - Notes.dwg

NOTE:

1. ALL SURFACE CONCRETE TO BE 4500 PSI.
2. SIDEWALK SHALL BE 6" THICK ON 6" OF COMPACTED BASEROCK



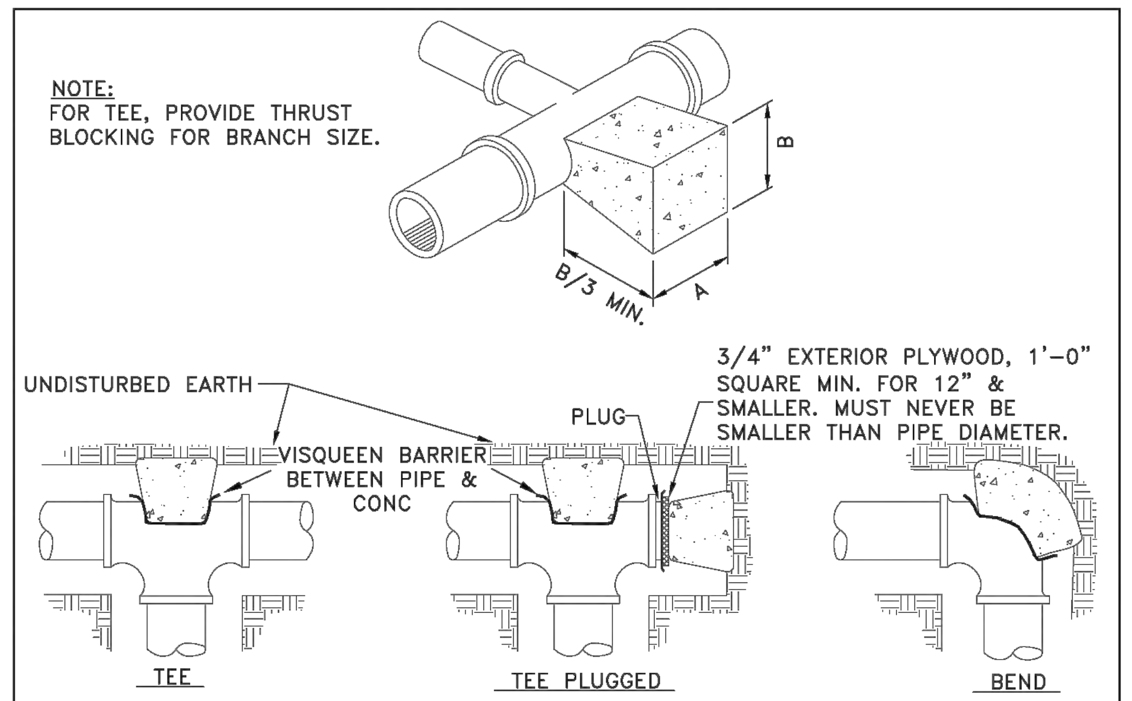
NOTES:
1. PIPES & FITTINGS SHALL BE LEAD FREE.
2. ASBESTOS CEMENT PIPE SHALL NOT BE ALLOWED.
3. WATER MAINS & SEWER LINES SHALL NOT BE INSTALLED IN THE SAME TRENCH.
4. ALL PIPES, FITTINGS & APPURTENANCES SHALL BE NSF-61 CERTIFIED.
5. ALL NEW OR REPLACED WATER LINES SHALL BE FLUSHED & DISINFECTED PER AWWA STANDARD C651 LATEST EDITION.
6. MATERIAL THICKNESS MAY CHANGE AS DIRECTED BY THE CITY ENGINEER BASED UPON FINDINGS AND RECOMMENDATIONS IN GEOTECHNICAL REPORT.
7. FOR WATER METERS NOT CONNECTED TO FIRE HYDRANTS, THE MINIMUM LINE SIZE SHALL BE 4" IN DIAMETER, UNLESS THEY SERVE PICNIC SITES, PARKS, SEMI-DEVELOPED CAMPS, PRIMITIVE CAMPS, OR ROADWAY REST-STOPS. MINIMUM WATER MAIN SIZE SERVICING A FIRE HYDRANT LATERAL SHALL BE 8 INCHES IN DIAMETER UNLESS A HYDRAULIC ANALYSIS INDICATES THAT REQUIRED FLOW AND PRESSURES CAN BE MAINTAINED BY 6" LINES. [UAC R309-550-5(4)].
8. ALL TYPES OF INSTALLED PIPE SHALL BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH AWWA C600 (LATEST EDITION).
9. UNDER NO CIRCUMSTANCES SHALL THE PIPE OR ACCESSORIES BE DROPPED INTO THE TRENCH.

LOCATED IN SURFACED ROAD

REV. 8-23

GRANTSVILLE CITY
UTILITY TRENCH FOR WATER MAIN

NOTE:
FOR TEE, PROVIDE THRUST BLOCKING FOR BRANCH SIZE.

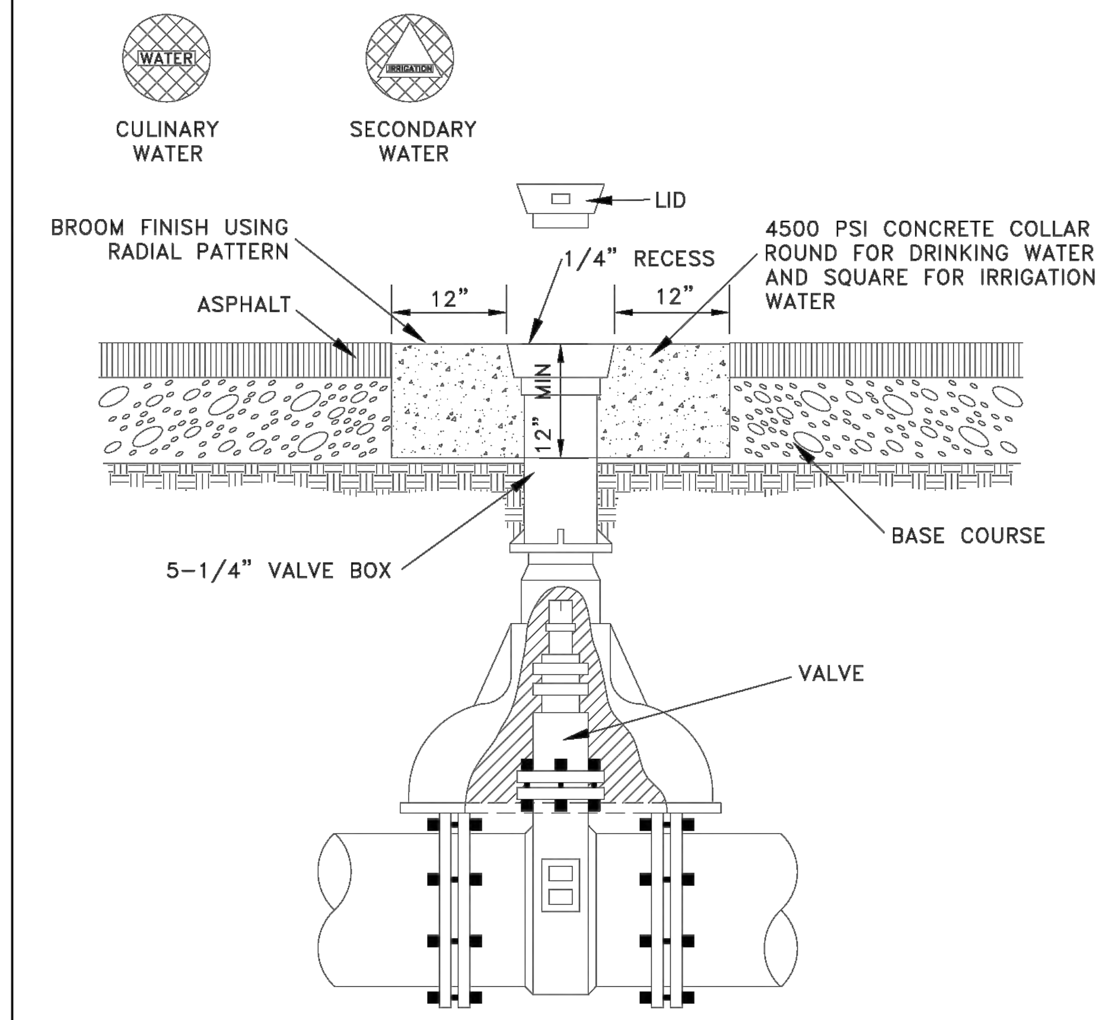


DIMENSIONS FOR THRUST BLOCKING								
FITTING	TEES & PLUGS		90° BENDS		45° BENDS & "Y"S		22 1/2° BENDS	
SIZES	A	B	A	B	A	B	A	B
4"	1'-6"	1'-6"	1'-6"	1'-9"	1'-3"	0'-6"	1'-0"	0'-6"
6"	2'-0"	1'-0"	2'-0"	2'-0"	1'-3"	1'-6"	1'-0"	1'-5"
8"	2'-0"	1'-6"	2'-3"	2'-3"	1'-8"	1'-8"	1'-0"	1'-3"
10"	2'-6"	2'-3"	2'-9"	2'-10"	2'-3"	1'-10"	1'-3"	2'-0"
12"	3'-0"	2'-9"	3'-6"	3'-3"	2'-6"	2'-4"	2'-0"	1'-6"
14"	3'-5"	3'-0"	4'-0"	3'-8"	3'-6"	2'-4"	2'-0"	2'-3"
16"	4'-0'	3'-6"	5'-0"	4'-0"	3'-6"	3'-0"	2'-6"	2'-3"
18"	4'-0"	4'-3"	6'-0"	4'-0"	4'-0"	3'-3"	2'-9"	2'-6"
20"	5'-0"	4'-3"	6'-0"	5'-0"	4'-3"	4'-0"	3'-0"	2'-9"
24"	6'-0"	5'-3"	8'-0"	5'-6"	6'-0"	4'-0"	4'-0"	3'-0"

NOTES:

1. THIS TABLE IS BASED ON 200 P.S.I. MAIN PRESSURE AND 2000 P.S.F. SOIL BEARING PRESSURE. ADJUST BEARING AREAS IN ACCORDANCE WITH SOIL CONDITIONS AND PRESSURES ENCOUNTERED.
2. USE POLYETHYLENE ENCASEMENT BETWEEN CONCRETE AND PIPE.
3. REFER TO CONCRETE STANDARD SPECIFICATIONS.
4. THE "THRUST BLOCKING DETAILS" IN NO WAY LIMITS THE LOCATION OR SIZE OF ADDITIONAL BLOCKING WHEN SO WARRANTED OR REQUIRED BY THE ENGINEER.
5. THRUST BLOCKS NEED TO BE INSPECTED BY CITY PRIOR TO BACKFILL.

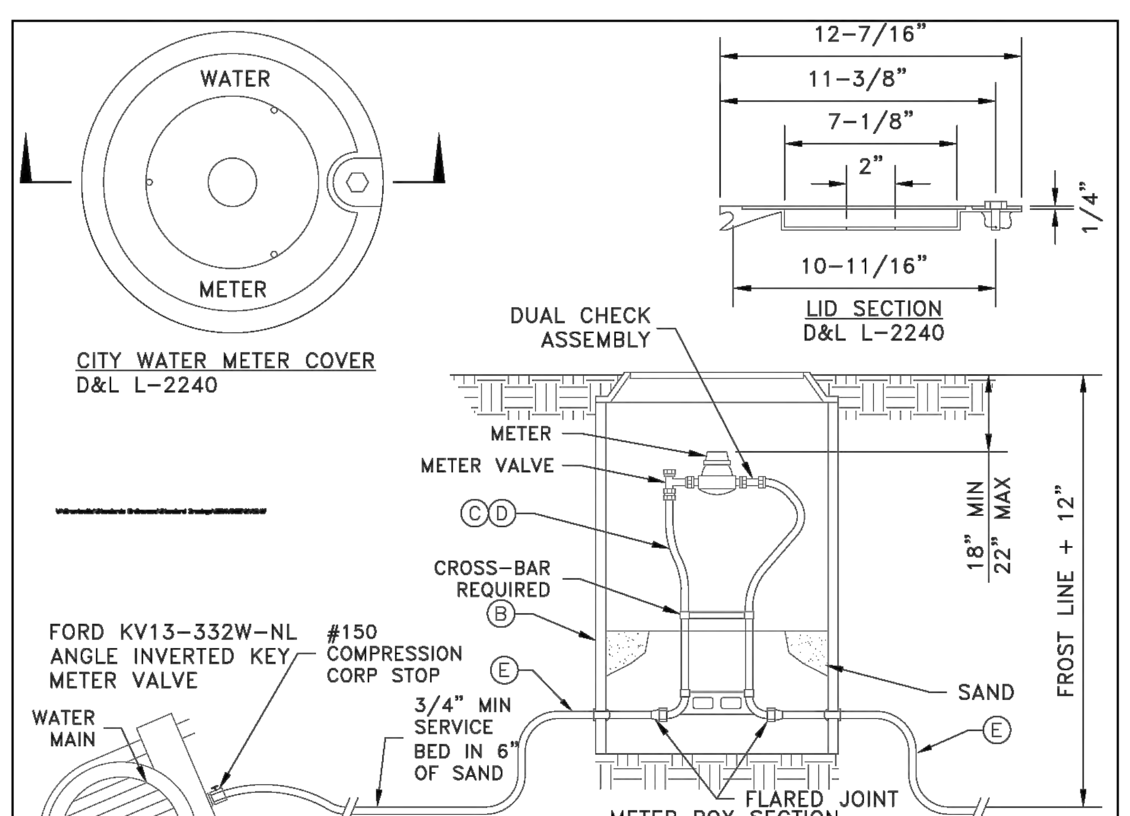
GRANTSVILLE CITY
THRUST BLOCK DETAIL



NOTES:
1. RAISE VALVE BOX AND PLACE CONCRETE COLLAR AFTER PAVING OPERATION IS COMPLETED.
2. ALL PIPES, FITTINGS & APPURTENANCES SHALL BE NSF-61 CERTIFIED.
3. BURIED GATE VALVES SHALL BE USED FOR LINES 10-INCHES AND SMALLER. BURIED BUTTERFLY VALVES SHALL BE USED FOR LINES 12-INCHES AND LARGER.
4. ISOLATION VALVES SHALL BE PROVIDED AT NO MORE THAN 500-FOOT INTERVALS IN COMMERCIAL DISTRICTS AND AT NOT MORE THAN ONE BLOCK OR 800-FOOT INTERVALS IN OTHER DISTRICTS, [UAC 309-550-5(8)].

REV. 01-22

GRANTSVILLE CITY
VALVE BOX COLLAR DETAIL



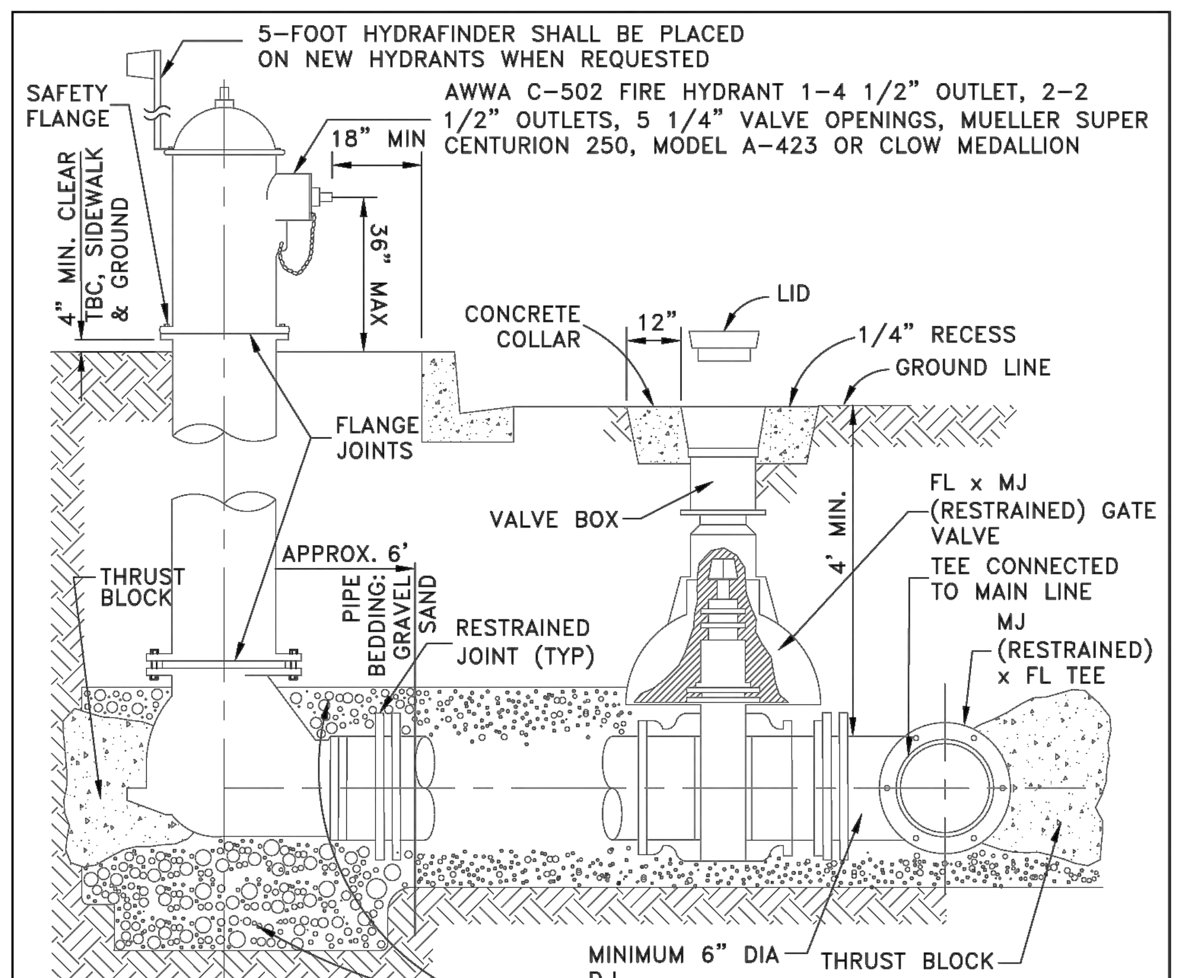
NOTES:
1- PIPES AND FITTINGS SHALL BE "LEAD FREE" AND NSF 61 CERTIFIED.
2- INSTALL TRACER WIRE FROM MAIN CONNECTION THROUGH METER PIT WITH 30 FEET EXCESS TO EXTEND TO DWELLING.
3- SERVICE CONNECTIONS AND METER ASSEMBLIES LARGER THAN 1-INCH NEED TO COMPLY WITH THE LATEST APWA STANDARD DETAILS.
4- INSTALL SERVICE LATERALS AND METERS WITHIN 5 FEET OF LOT LINES ONE ON EACH SIDE OF COMMON LOT LINE (ALTERNATE WITH SECONDARY WATER).
5- STAMP OR PIN GUTTER LIP AND TOP OF CURB WITH A "W" IN TWO PLACES, NEAR CURB LIP AND TOP OF CURB.

LEGEND

No	*	ITEM	DESCRIPTION
A		FRAME AND COVER	CAST IRON COVER (GRASS) DUCTILE IRON COVER (DRIVEWAY)
B		METER BOX (21" DIAMETER) (30" TO 36" DEEP)	WHITE CORRUGATED PE
C		3/4" METER YOKE	DUAL CHECK ASSEMBLY REQUIRED
D		1" METER YOKE	OPTIONAL BACKFLOW PROTECTION PER AGENCY REQUIREMENTS
E		3/4" AND 1" SERVICE LINE	HDPE IPS SDR 11

REV 10-22

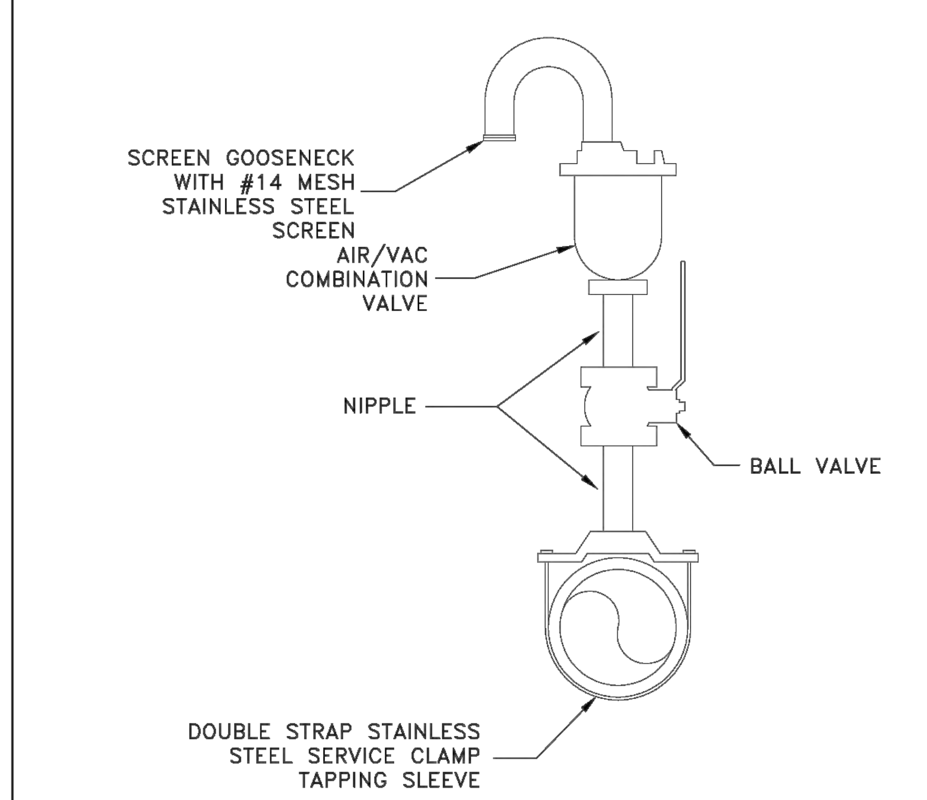
GRANTSVILLE CITY
SERVICE CONNECTION & METER ASSEMBLY



NOTES:
1. ALL FIRE HYDRANTS SHALL BE LOCATED AS SHOWN ON THE PLANS.
2. ALL FIRE HYDRANTS WILL STAND PLUMB WITH THE PUMPER NOZZLE FACING THE STREET.
3. THE VALVE WILL BE LOCATED AS APPROVED BY CITY. PIPE MATERIAL SHALL BE DUCTILE.
4. FOR DETAILED INFORMATION SEE SPECIFICATIONS.
5. RESTRAIN ALL JOINTS FROM MAIN TO FIRE HYDRANT.
6. CONCRETE VALVE COLLAR SHALL BE BROOM FINISHED IN RADIAL PATTERN.
7. ALL NEW OR REPLACED WATER LINES SHALL BE FLUSHED & DISINFECTED PER AWWA STANDARD C651 LATEST EDITION.
8. PROVIDE 3-FOOT CLEAR SPACE AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS (IFC 507.5.5)
9. HYDRANT DRAINS SHALL NOT BE CONNECTED TO, OR LOCATED WITHIN, 10 FEET OF SANITARY SEWERS. WHERE POSSIBLE, HYDRANT DRAINS SHALL NOT BE LOCATED WITHIN 10 FEET OF STORM DRAINS. [UAC R309-550-6(5)(a)]
10. MINIMUM WATER MAIN SIZE SERVICING A FIRE HYDRANT LATERAL SHALL BE 8 INCHES IN DIAMETER UNLESS A HYDRAULIC ANALYSIS INDICATES THAT REQUIRED FLOW AND PRESSURES CAN BE MAINTAINED BY 6" LINES. [UAC R309-550-5(4)]

REV. 10-16

GRANTSVILLE CITY
FIRE HYDRANT ASSEMBLY



NOTES:

1- ALL PIPES, FITTINGS & APPURTENANCES SHALL BE NSF-61 CERTIFIED.

GRANTSVILLE CITY
COMBINATION AIR RELEASE VALVE

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6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
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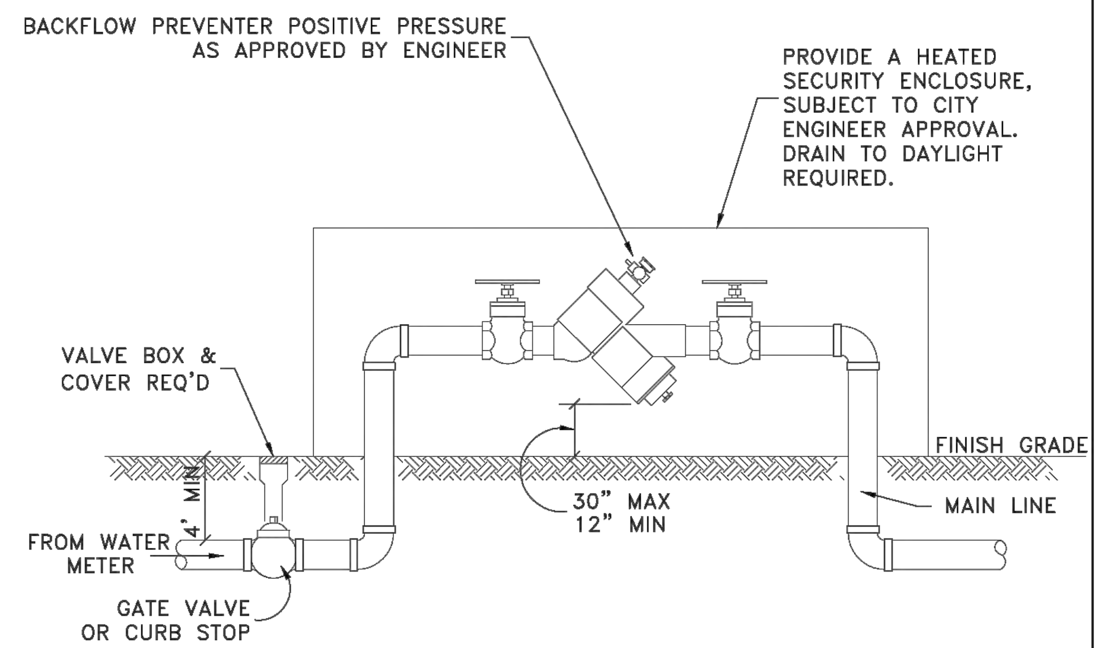
HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
DETAILS

REVISION BLOCK		
#	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		

DETAILS

Scale:	N/A	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	D2		

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\D2 DETAILS.dwg



NOTES:

1. ALL PIPES, FITTING & APPURTENANCES SHALL BE NSF-61 CERTIFIED.
2. ALL NEW OR REPLACED WATER LINES SHALL BE FLUSHED & DISINFECTED PER AWWA STANDARD C651 LATEST EDITION.

GRANTSVILLE CITY
TYPICAL BACKFLOW PREVENTER INSTALLATION

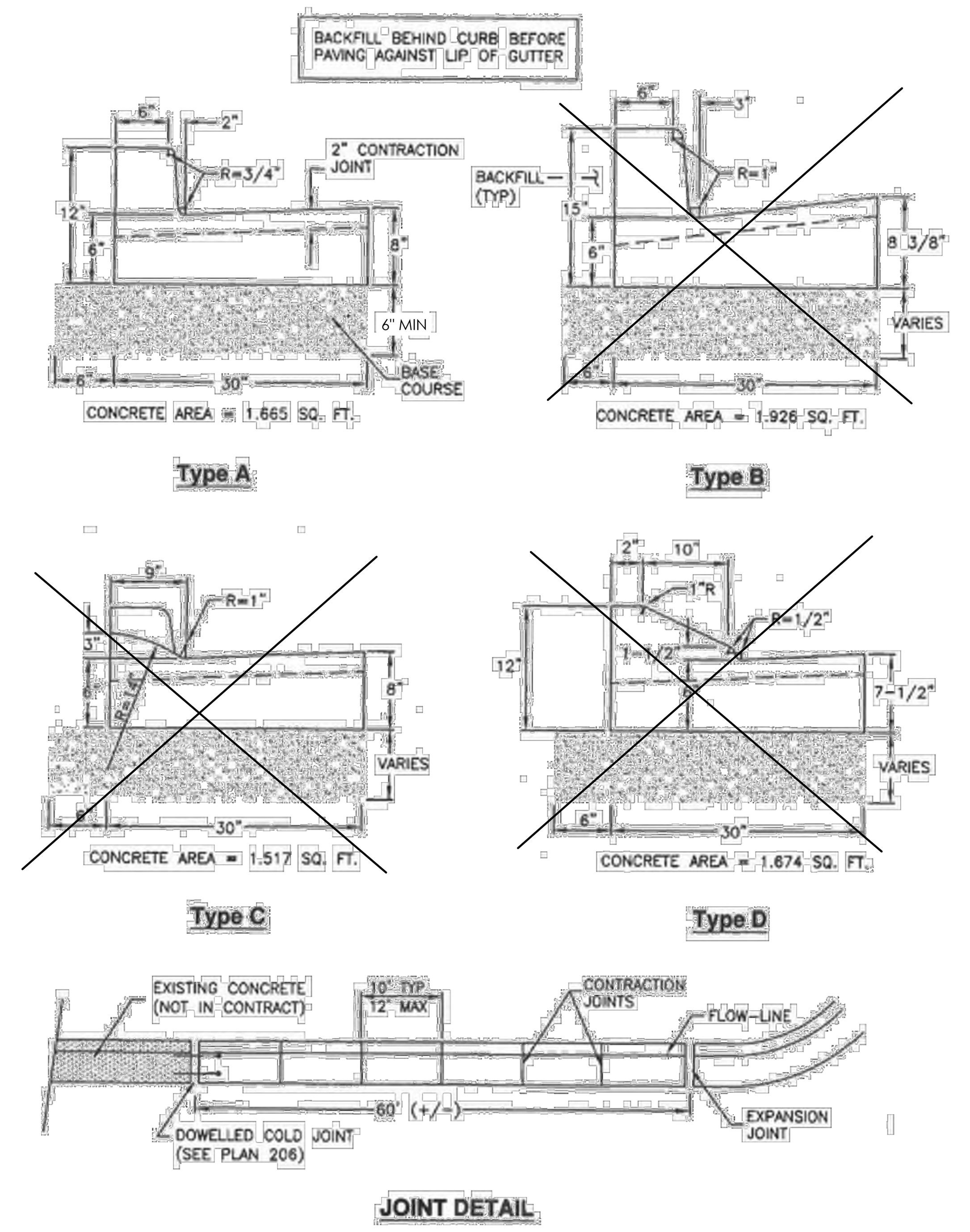
Curb and gutter

1. **GENERAL**
   A. Variance from specified dimensions and slopes must be acceptable to the ENGINEER. System configuration may be changed at ENGINEER's discretion.
   B. Additional requirements are specified in APWA Section 32 16 13.

2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73.
   C. Concrete: Class 4500 APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however, as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.
   D. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.

3. **EXECUTION**
   A. Base Course Placement: APWA Section 32 05 10. Thickness is 6-inches if flow-line grade is 0.5 percent (s=0.005) or greater. If slope is less, provide 8-inches. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Concrete Placement: APWA Section 03 30 10.
      1) Install expansion joints vertical, full depth, with top of filler set flush with concrete surface. Install at the start or end of a street intersection curb return. Expansion joints are not required in concrete placement using slip-form construction.
      2) Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slab is greater than 8-inches thick. Match joint location in adjacent Portland-cement concrete roadway pavement.
      3) Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   C. Protection and Repair: Protect concrete from deicing chemicals during cure. Repair construction that does not drain. If necessary, fill flow-line with water to verify.

205.1



APWA Utah Chapter

Curb and gutter

Plan 205.1
December 2008

NOTE:
1. ALL SURFACE CONCRETE TO BE 4500 PSI.

Corner curb cut assembly

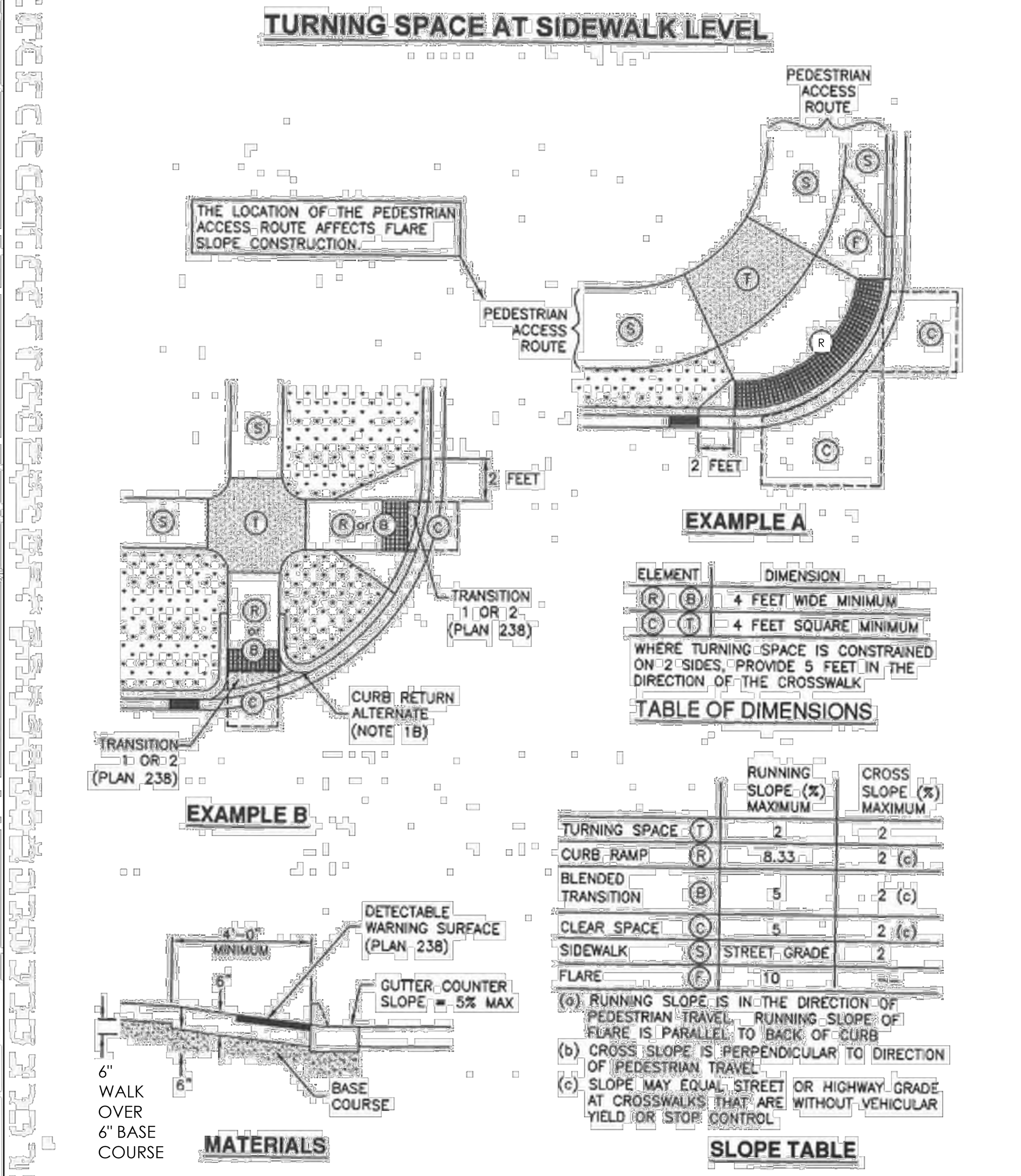
1. **GENERAL**
   A. Where existing elements or spaces are altered to receive an assembly, slopes and dimensions shall comply with slopes and dimensions shown on the drawing, or to the maximum extent feasible permitted by the ENGINEER. Final configuration of the assembly may be different than shown. Where physical constraints (e.g. utility covers, poles, vaults, etc.) prevent compliance, a single diagonal curb cut assembly may serve both pedestrian street crossings.
   B. Installation of flares or curb returns is ENGINEER's choice.
   C. Definitions and supplemental requirements are specified in APWA Section 32 16 14.

2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73.
   C. Detectable Warning Surface: Paver, ribbed composite panel, or tile. Provide a color that contrasts with adjacent walking surface, either light-on-dark or dark-on-light. ENGINEER to select type and color unless indicated elsewhere.
   D. Concrete: Class 4500 APWA Section 03 30 04.
   E. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.

3. **EXECUTION**
   A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Curb Modifications:
      1) The sloped surface created to accommodate a flare area shall be perpendicular to the back of curb.
      2) No grade break shall exist between the flow-line and the foot of the curb ramp or blended transition. Length of the curb modification abutting the curb ramp or transition is 4 feet minimum for each crosswalk served.
   C. Curb Ramp: Length not required to exceed 15 feet. Grade breaks are perpendicular to the direction of ramp run and are not permitted on ramp or turning space surface. Sides are parallel to each other and perpendicular to the ends. At the bottom grade break it may be necessary to install a transition zone, (APWA Plan 238).
   D. Concrete Placement: APWA Section 03 30 10.
      1) Maximum length to width ratio for rectangular panel joints is 1.5 to 1. Joint spacing measured in feet not to exceed twice slab thickness measured in inches or a maximum of 15 feet.
      2) Install expansion joints vertical, full depth, with top of filler set flush with concrete surface. Install contraction joints vertical, 1/8-inch wide, and 1/4 of the depth of the concrete flatwork.
      3) Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   E. Clear Space: No trip hazards in the clear space.

235.1

TURNING SPACE AT SIDEWALK LEVEL



ELEMENT	DIMENSION
R B	4 FEET WIDE MINIMUM
C T	4 FEET SQUARE MINIMUM

WHERE TURNING SPACE IS CONSTRAINED ON 2 SIDES, PROVIDE 5 FEET IN THE DIRECTION OF THE CROSSWALK

TABLE OF DIMENSIONS

		RUNNING SLOPE (%) MAXIMUM	CROSS SLOPE (%) MAXIMUM
TURNING SPACE	T	2	2
CURB RAMP	R	8.33	2 (c)
BLENDED TRANSITION	B	5	2 (c)
CLEAR SPACE	C	5	2 (c)
SIDEWALK	S	STREET GRADE	2
FLARE	F	10	

(a) RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL. RUNNING SLOPE OF FLARE IS PARALLEL TO BACK OF CURB
(b) CROSS SLOPE IS PERPENDICULAR TO DIRECTION OF PEDESTRIAN TRAVEL
(c) SLOPE MAY EQUAL STREET OR HIGHWAY GRADE AT CROSSWALKS THAT ARE WITHOUT VEHICULAR YIELD OR STOP CONTROL

SLOPE TABLE

APWA Utah Chapter

Corner curb cut assembly

Plan 235.1
September 2011

FOCUS ENGINEERING AND SURVEYING, LLC
6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
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LICENSED PROFESSIONAL ENGINEER No. 8028502-2202 THOMAS M. ROMNEY 12/14/23 STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
DETAILS

#	DATE	DESCRIPTION
1		
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REVISION BLOCK

DETAILS

Scale: N/A
Drawn: GIM
Date: 12/14/23
Job #: 23-0359
Sheet: D3

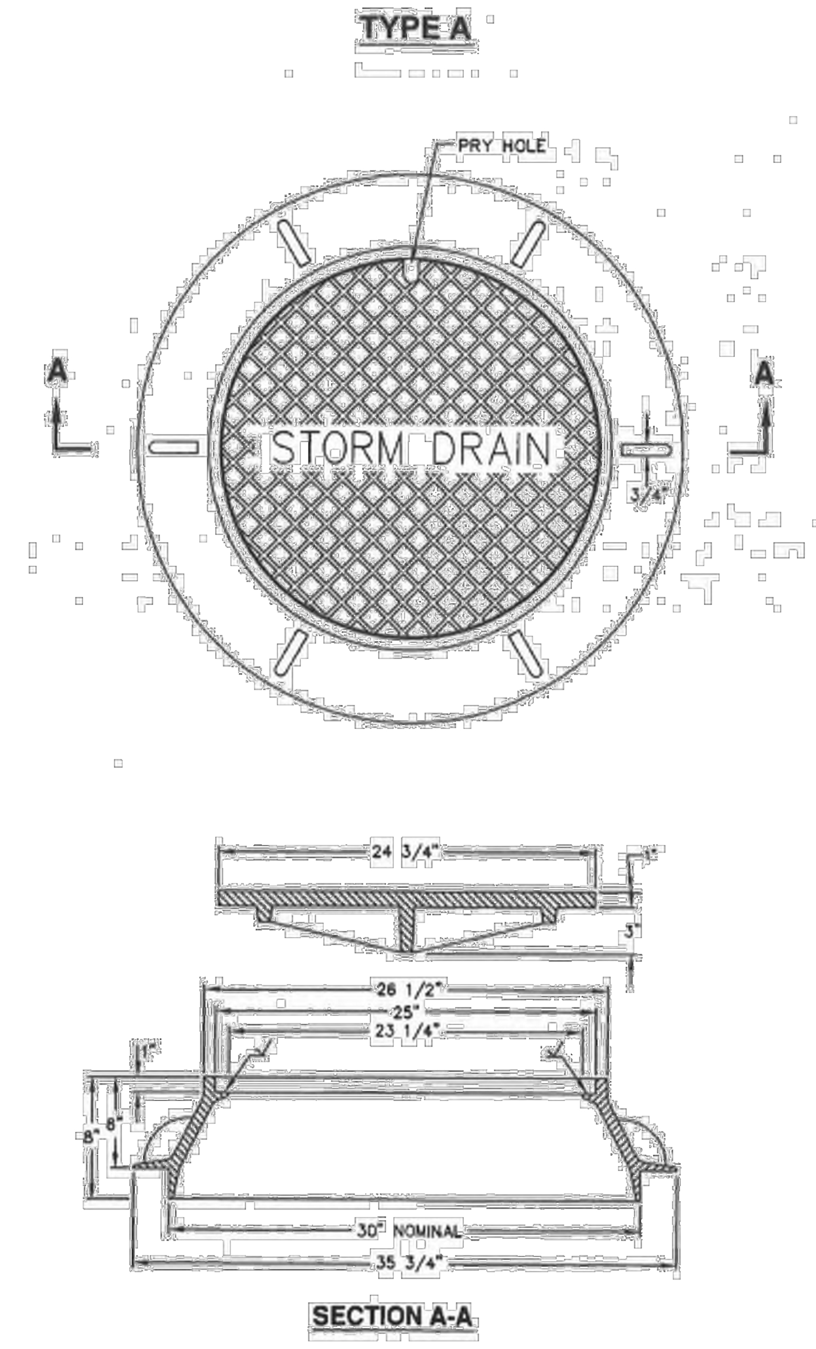
Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\D3 - DETAILS.dwg

30" Frame and cover

1. **GENERAL**
   A. The frame and cover fits:
      1) Cleanout box type B in Plan 331, and
      2) Precast manhole in Plan 341.
2. **PRODUCTS**
   A. Castings: Grey iron class 35 minimum, ASTM A48.
      1) Coated with asphalt based paint or better (except on machined surfaces).
      2) Cast the heat number on the frame and cover.
      3) Give the frame and cover a machine finish so the cover will not rock.
      4) √ designates a machine finished surface.
      5) Cast the words "STORM DRAIN" on the cover in upper case flush with the surface finish.
3. **EXECUTION**
   A. Except in paved streets, provide locking manhole covers in easements, alleys, parking lots, and all other places. Drill and tap two holes to a depth of 1-inch at 90 degrees to pry hole and install 3/4 x 3/4-inch allen socket set screws.

NOTE:
1. ALL CONCRETE TO BE 4500 PSI.

302.1



APWA Utah Chapter

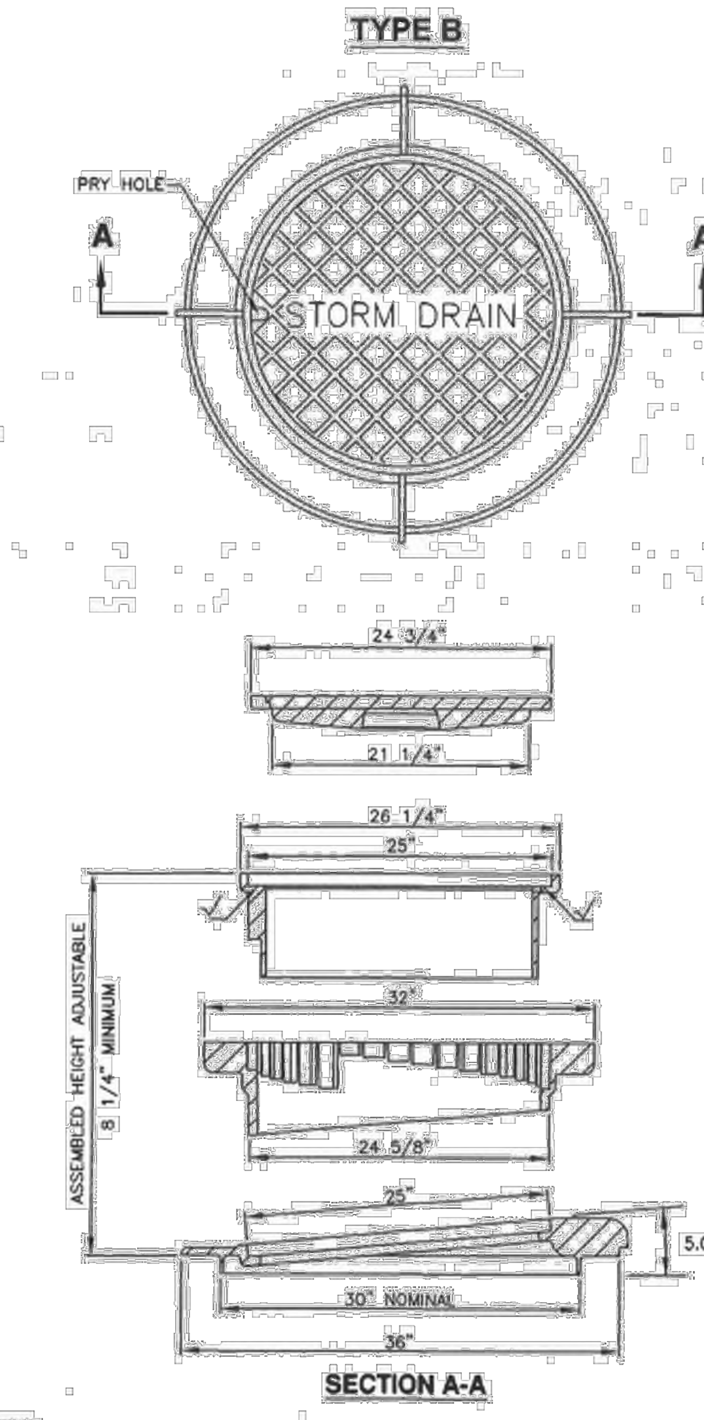
30" Frame and cover

Plan 302.1
September 2001

30" Frame and cover

1. **GENERAL**
   A. The frame and cover fits:
      1) Cleanout box type B in Plan 331, and
      2) Precast manhole in Plan 341.
2. **PRODUCTS**
   A. Castings: Grey iron class 35 minimum, ASTM A48.
      1) Coated with asphalt based paint or better (except on machined surfaces).
      2) Cast the heat number on the frame and cover.
      3) Give the frame and cover a machine finish so the cover will not rock.
      4) √ designates a machine finished surface.
      5) Cast the words "STORM DRAIN" on the cover in upper case flush with the surface finish.
3. **EXECUTION**
   A. Except in paved streets, provide locking manhole covers in easements, alleys, parking lots, and all other places. Drill and tap two holes to a depth of 1-inch at 90 degrees to pry hole and install 3/4 x 3/4-inch allen socket set screws.

302.2

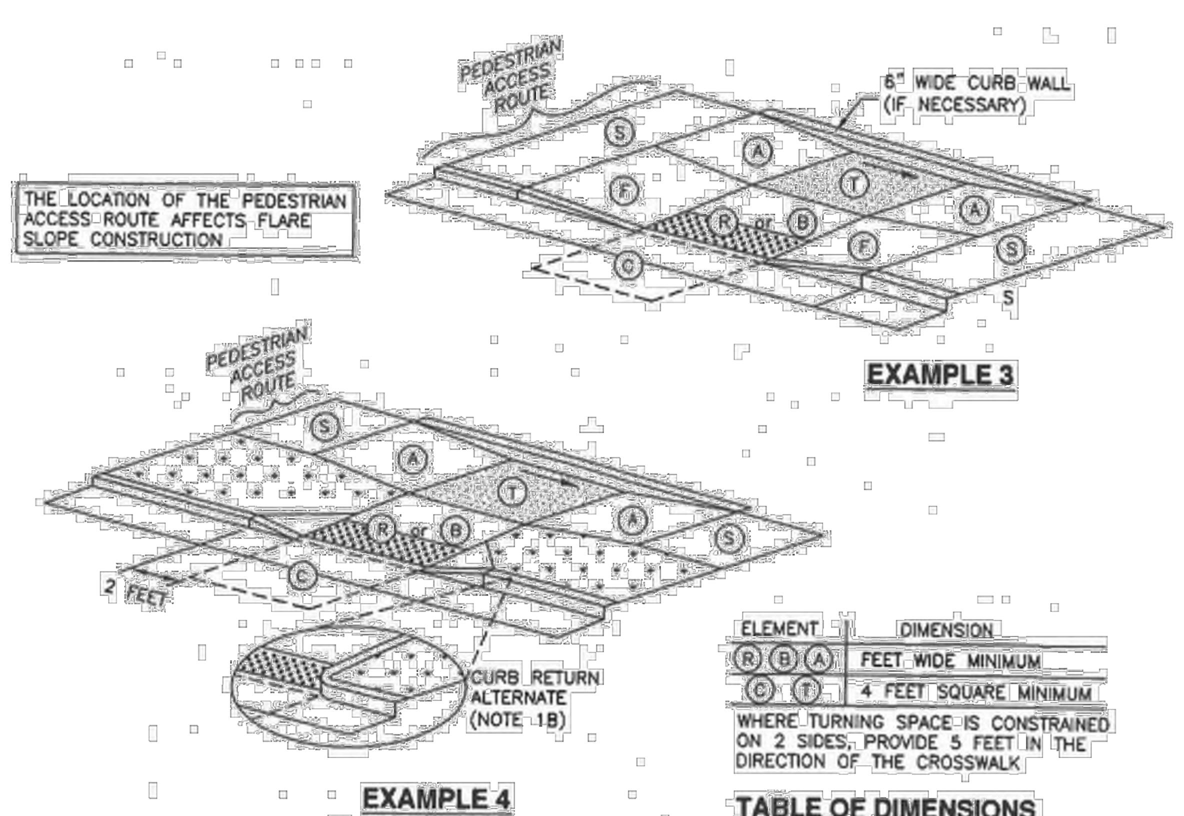


APWA Utah Chapter

30" Frame and cover

Plan 302.2
September 2001

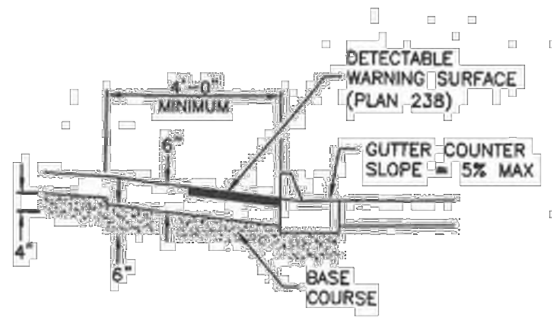
TURNING SPACE BETWEEN SIDEWALK AND STREET LEVELS



ELEMENT	DIMENSION
R B A	FEET WIDE MINIMUM
C T	4 FEET SQUARE MINIMUM

WHERE TURNING SPACE IS CONSTRAINED ON 2 SIDES, PROVIDE 5 FEET IN THE DIRECTION OF THE CROSSWALK

TABLE OF DIMENSIONS



MATERIALS

		RUNNING SLOPE (%) MAXIMUM	CROSS SLOPE (%) MAXIMUM
TURNING SPACE	T	STREET GRADE	2
CURB RAMP	R	8.33	STREET GRADE
BLENDED TRANSITION	B	5	STREET GRADE
CLEAR SPACE	C	5	STREET GRADE
SIDEWALK	S	STREET GRADE	2
FLARE	F	10	
APPROACH	A	8.33	2

(a) RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL. RUNNING SLOPE OF FLARE IS PARALLEL TO BACK OF CURB
(b) CROSS SLOPE IS PERPENDICULAR TO DIRECTION OF PEDESTRIAN TRAVEL

SLOPE TABLE

APWA Utah Chapter

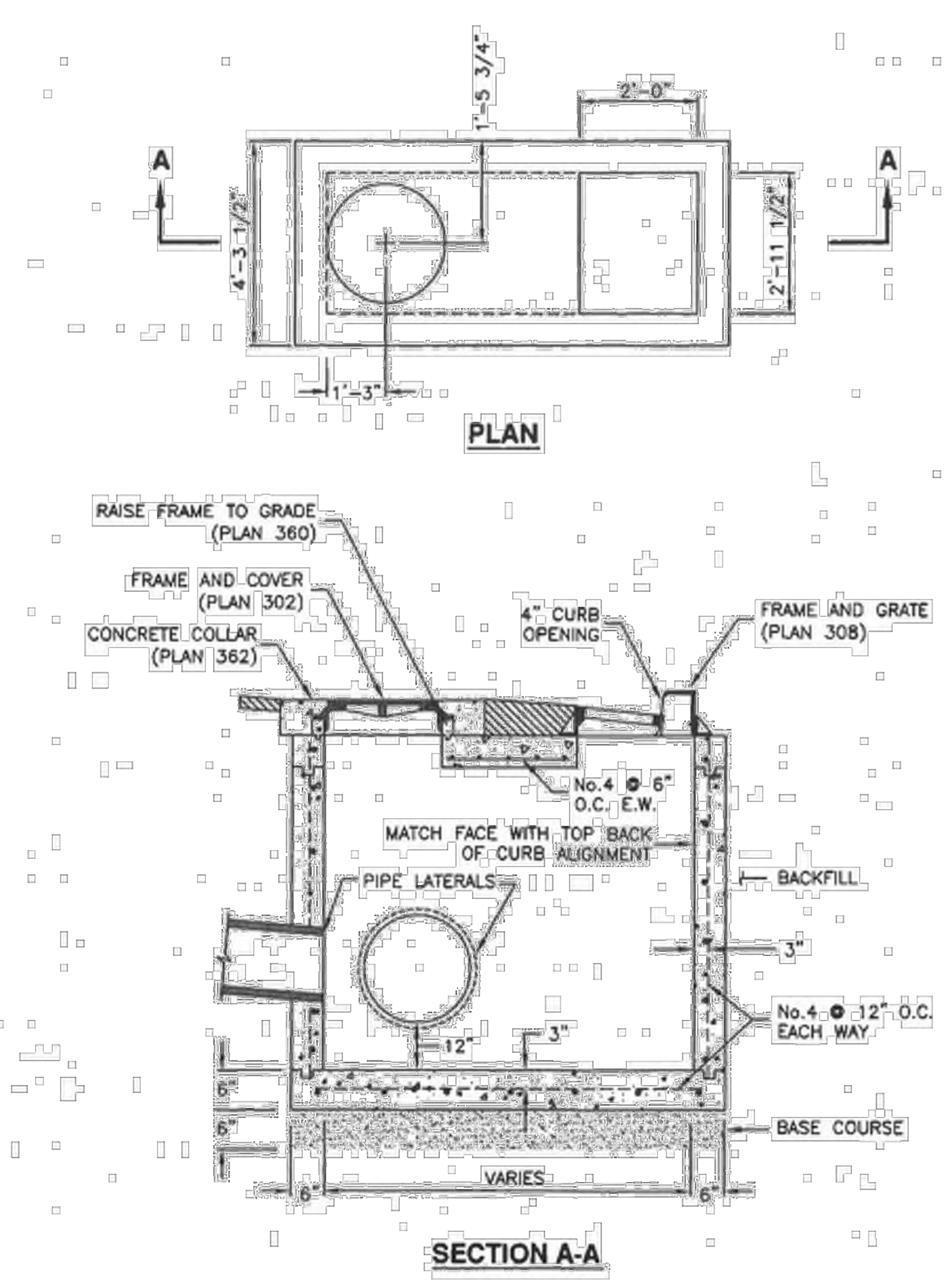
Mid-block curb cut assembly

Plan 236.2
September 2011

Combination catch basin and cleanout box

1. **GENERAL**
   A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the box.
2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Concrete: Class 4000, APWA Section 03 30 04.
   D. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A615.
   E. Ladder Rungs: Plastic, or plastic coated steel typically 8-inches wide.
3. **EXECUTION**
   A. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Curb Face Opening: Make opening at least 4-inches high. Provide at least a 2-inch drop between the "begin warp" line in the gutter flow-line and the top of the grate at the curb face opening.
   C. Ladder Rungs: Provide rungs in boxes over 6 feet deep. When measured from the floor of the box, place bottom rung the greater distance of 4 feet from the floor of the box or 1 foot above the top of the pipe. Place top rung within 3 feet of bottom of box ceiling.
   D. Concrete Placement: APWA Section 03 30 10. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   E. Backfill: Provide backfill against all sides of the box. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.

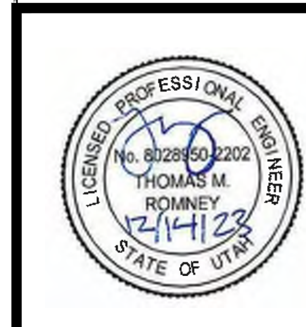
316



APWA Utah Chapter

Combination catch basin and cleanout box

Plan 316
March 2011



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6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
www.focusutah.com

LICENSED PROFESSIONAL ENGINEER
No. 8028950-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
DETAILS

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
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DETAILS

Scale:	N/A	Drawn:	GIM
Date:	12/14/23	Job #:	23-0359
Sheet:	D4		

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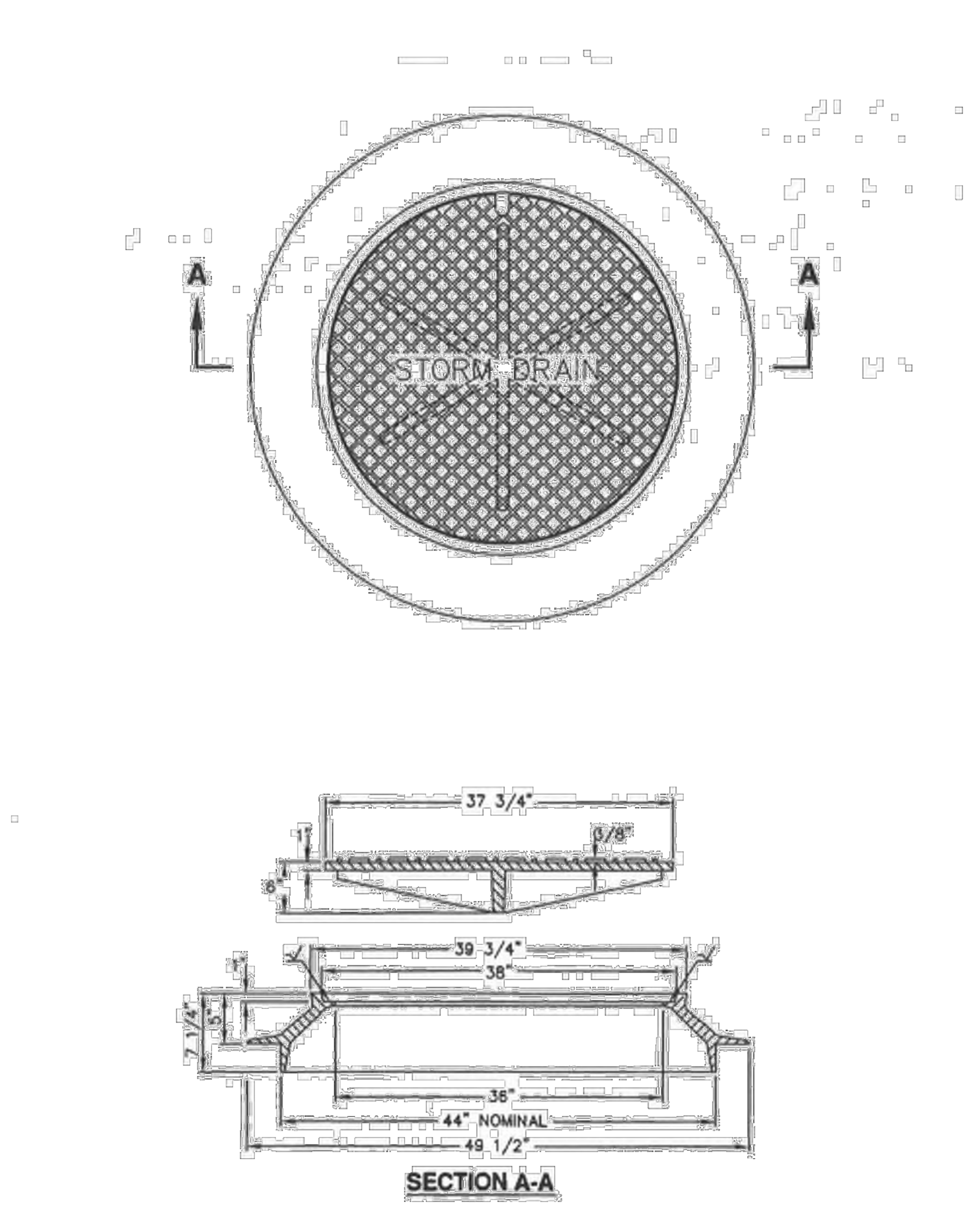
44" Frame and cover

1. **GENERAL**
   A. The frame and cover fits.
      1) Cleanout box type B in Plan 331, and
      2) Precast manhole in Plan 341.
2. **PRODUCTS**
   A. Castings: Grey iron class 35 minimum, ASTM A48, coated with asphalt based paint or better (except on machined surfaces).
      1) Cast the heat number on the frame and cover.
      2) Give the frame and cover a machine finish so the cover will not rock.
      3) √ designates a machine-finished surface.
      4) Cast the words "STORM DRAIN" on the cover in upper case flush with the surface finish.
3. **EXECUTION**
   A. Except in paved streets, provide locking manhole covers in easements, alleys, parking lots, and all other places. Drill and tap two holes to a depth of 1-inch at 90 degrees to pry hole and install 3/4 x 3/4-inch allen socket set screws.

NOTE:
1. ALL CONCRETE TO BE 4500 PSI.

303



APWA Utah Chapter

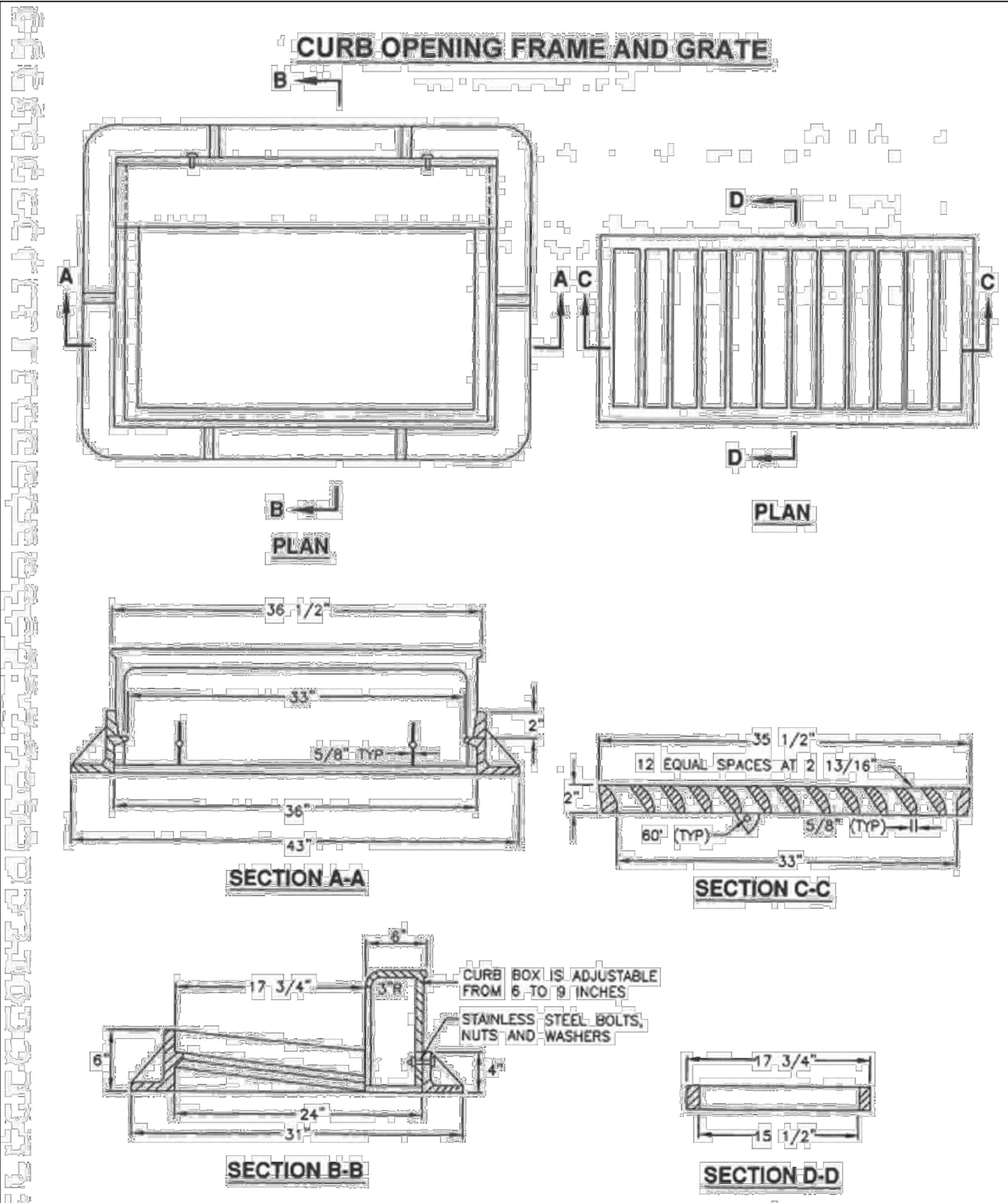
44" Frame and cover

Plan 303
November 2001

35 1/2" Grate and frame

1. **GENERAL**
   A. The grate and frame fits concrete boxes in Plan 315.
2. **PRODUCTS**
   A. Castings: Grey iron class 35 minimum per ASTM A48, coated with asphalt based paint or better.
   B. Bolts, Nuts, Washers, Accessories: Stainless steel, APWA Section 05 05 23.
3. **EXECUTION** (Not used)

308



APWA Utah Chapter

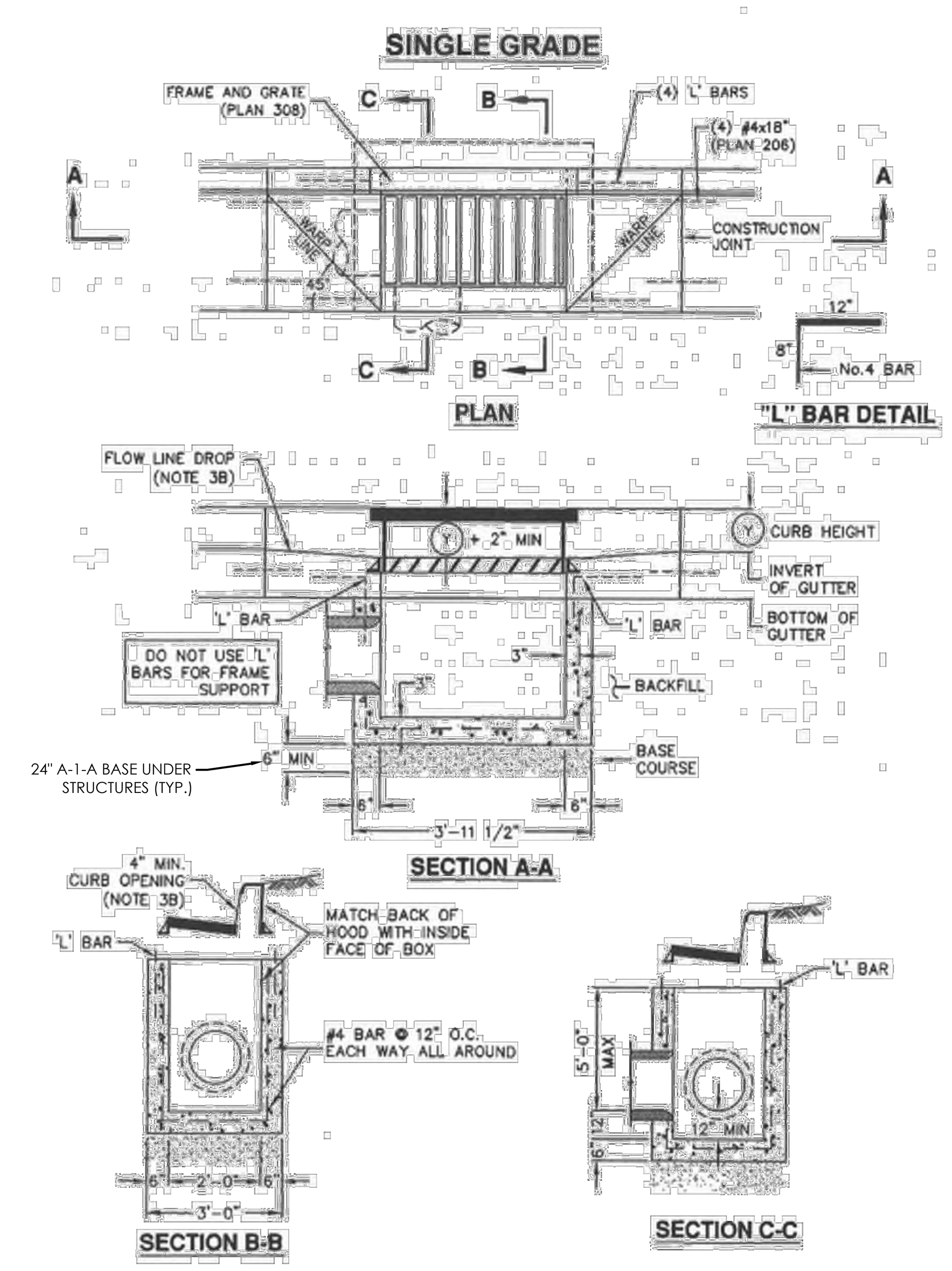
35 1/2" Grate and frame

Plan 308
January 1999

Catch basin

1. **GENERAL**
   A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the box.
2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Concrete: Class 4500 APWA Section 03 30 04.
   D. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A615.
3. **EXECUTION**
   A. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Curb Face Opening: Make opening at least 4-inches high. Provide at least a 2-inch drop between the "warp line" in the gutter flow-line and the top of the grate at the curb face opening.
   C. Concrete Placement: APWA Section 03 30 10. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   D. Backfill: Place backfill against the basin wall. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.

315.1



APWA Utah Chapter

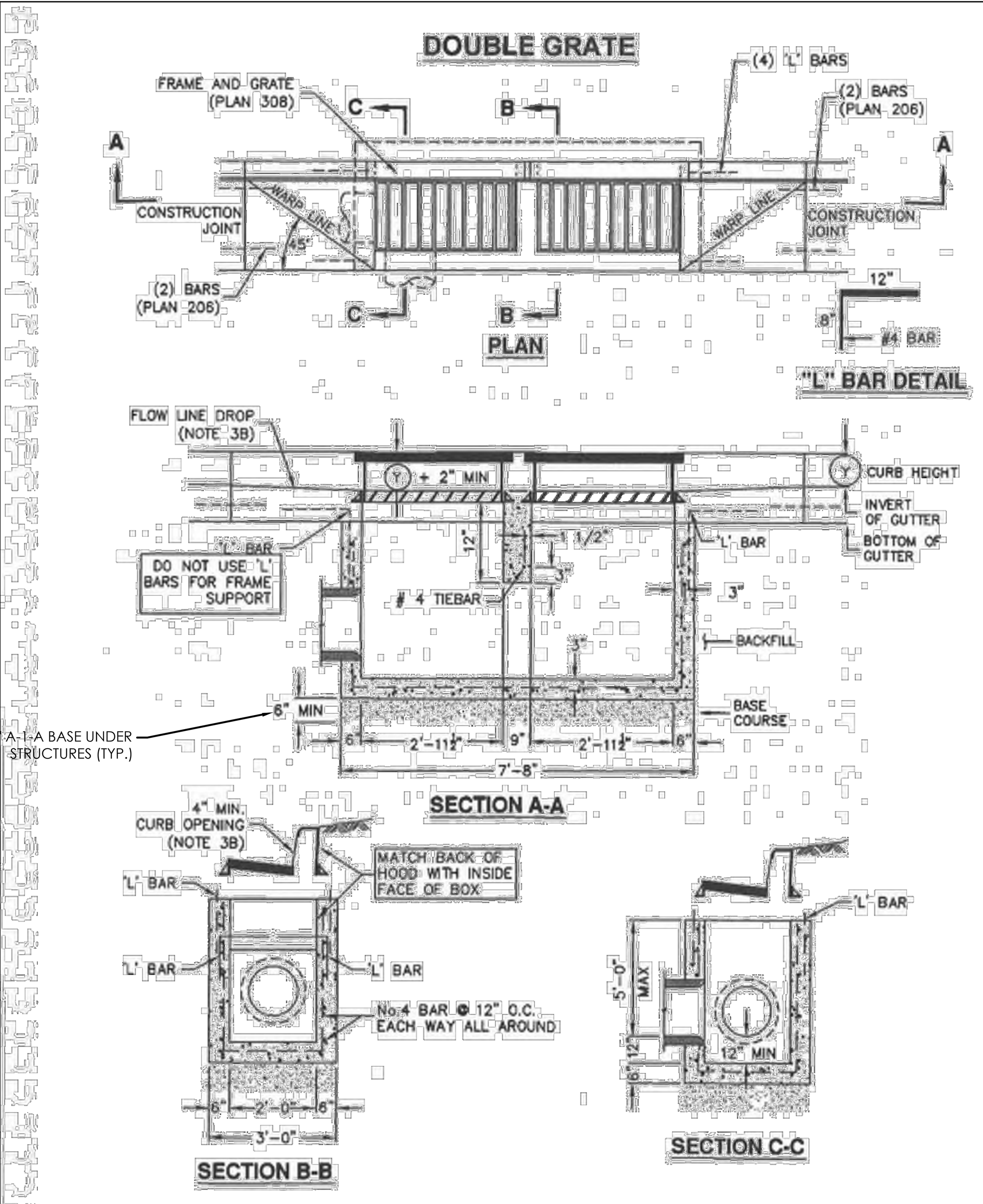
Catch basin

Plan 315.1
September 2010

Catch basin

1. **GENERAL**
   A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the box.
2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Concrete: Class 4500 APWA Section 03 30 04.
   D. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A615.
3. **EXECUTION**
   A. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Curb Face Opening: Make opening at least 4-inches high. Provide at least a 2-inch drop between the "warp line" in the gutter flow-line and the top of the grate at the curb face opening.
   C. Concrete Placement: APWA Section 03 30 10. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   D. Backfill: Place backfill against the basin wall. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.

315.2



APWA Utah Chapter

Catch basin

Plan 315.2
September 2010

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ENGINEERING AND SURVEYING, LLC
6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
www.focusutah.com

LICENSED PROFESSIONAL ENGINEER
No. 8028150-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
DETAILS

REVISION BLOCK

#	DATE	DESCRIPTION
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DETAILS

Scale: N/A		Drawn: GJM	
Date: 12/14/23		Job #: 23-0359	

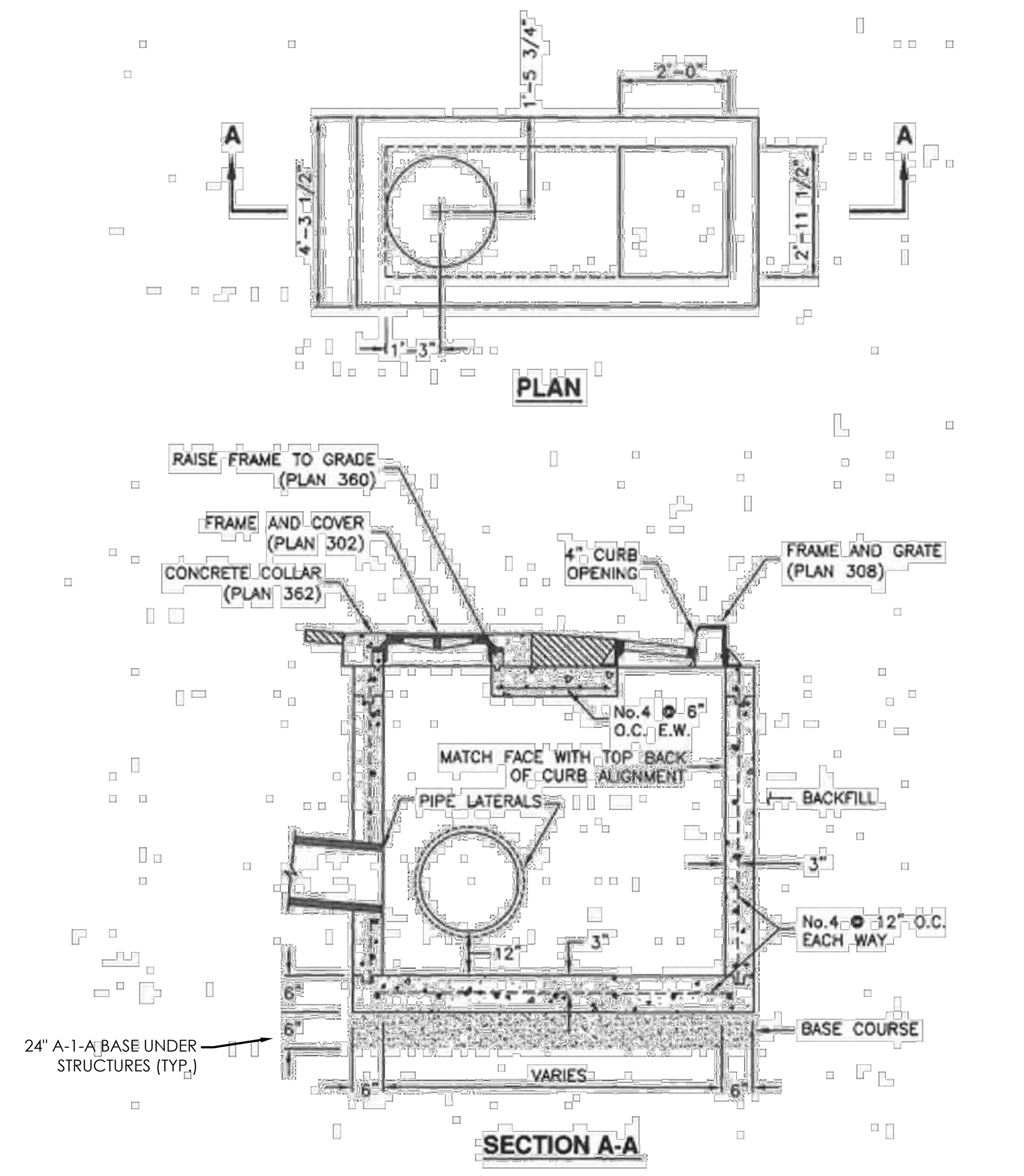
Sheet: D5

Combination catch basin and cleanout box

1. **GENERAL**
   A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the box.
2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Concrete: Class 4500 APWA Section 03 30 04.
   D. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A615.
   E. Ladder Rungs: Plastic, or plastic coated steel typically 8-inches wide.
3. **EXECUTION**
   A. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Curb Face Opening: Make opening at least 4-inches high. Provide at least a 2-inch drop between the "begin warp" line in the gutter flow-line and the top of the grate at the curb face opening.
   C. Ladder Rungs: Provide rungs in boxes over 6 feet deep. When measured from the floor of the box, place bottom rung the greater distance of 4 feet from the floor of the box or 1 foot above the top of the pipe. Place top rung within 3 feet of bottom of box ceiling.
   D. Concrete Placement: APWA Section 03 30 10. Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   E. Backfill: Provide backfill against all sides of the box. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.

NOTE:
1. ALL CONCRETE TO BE 4500 PSI.

316

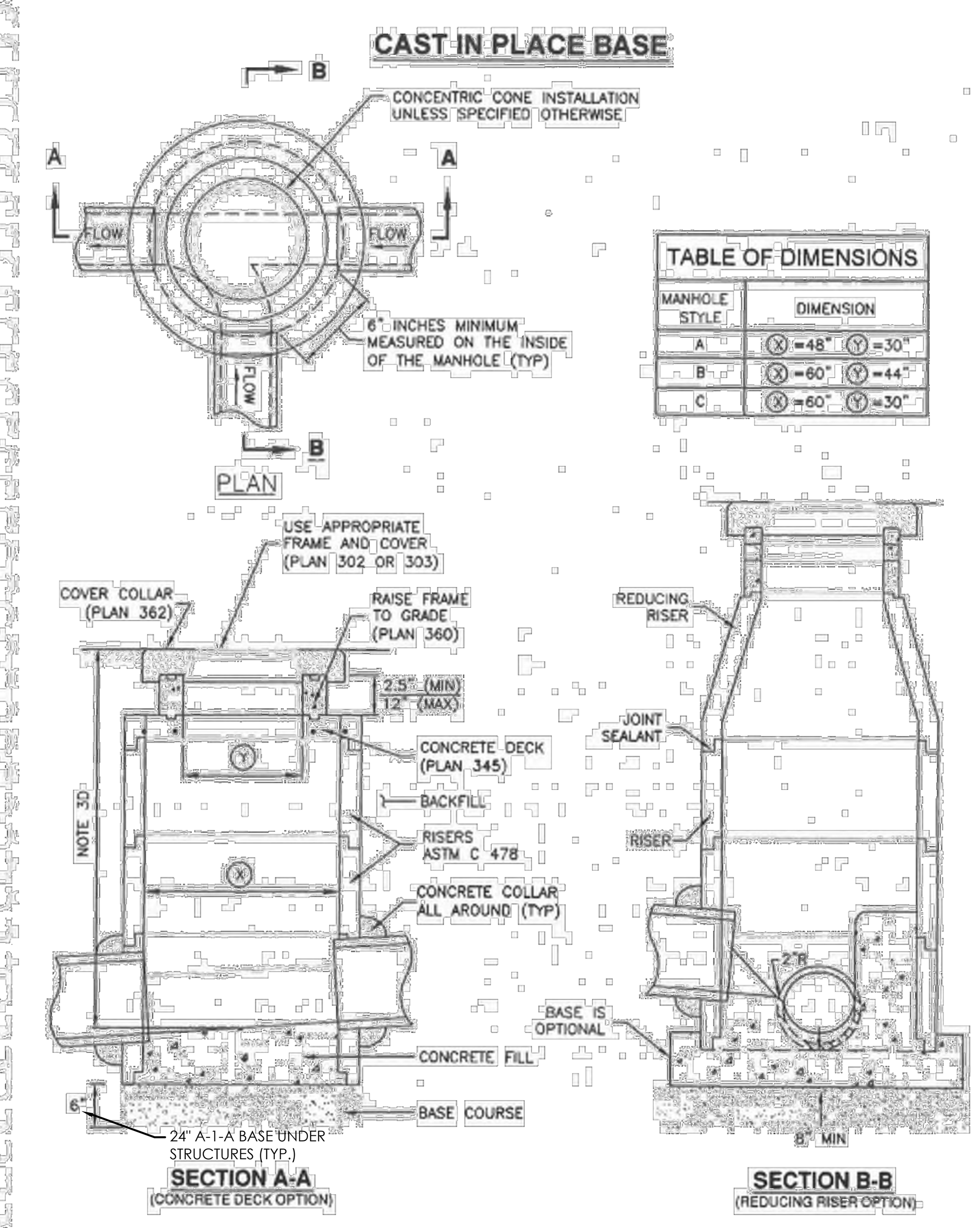


APWA Utah Chapter — Combination catch basin and cleanout box — Plan 316, March 2011

Precast manhole

1. **GENERAL**
   A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the manhole.
   B. Manhole size.
      1) Diameter is 4-feet: For pipe under 12" diameter.
      2) Diameter is 5-feet: For pipe 12" and larger, or when 3 or more drain pipes intersect the manhole.
   C. Wall thickness:
      1) Precast reinforced concrete walls 4 3/4" minimum.
      2) Cast-in-place concrete to be 8 inches thick minimum.
2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Concrete: Class 4500 APWA Section 03 30 04.
   D. Riser and Reducing Riser: ASTM C478.
   E. Joint Sealant: Rubber based, compressible.
   F. Grout: 2 parts sand to 1 part cement mortar, ASTM C1329.
   G. Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR's choice, APWA Section 31 05 19.
3. **EXECUTION**
   A. Foundation Stabilization: Get ENGINEER's permission to use a sewer rock or a sewer rock in a geotextile wrap to stabilize an unstable foundation.
   B. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   C. Invert cover. During construction, place invert covers over the top of pipe in manholes that currently convey sewerage. See Plan 412.
   D. Concrete Deck or Reducing Riser: When depth of manhole from pipe invert to finish grade exceeds 7 feet, use an ASTM C478 reducing riser.
   E. Pipe Connections: Grout around all pipe openings.
   F. Pipe Seal: Install rubber-based pipe seals on all plastic pipes when connecting plastic pipes to manholes. Hold water-stop in place with stainless steel bands.
   G. Joints: Place flexible sealant in all riser joints. Finish with grout.
   H. Adjustment: If the required manhole adjustment is more than 1'-0", remove the cone and grade rings and adjust the manhole elevation with the appropriate manhole section, the cone section, and the grade rings or plastic form to make frame and lid match finish grade.
   I. Finish: Provide smooth and neat finishes on interior of cones, shafts, and rings. Imperfect moldings or honeycombs will not be accepted.
   J. Backfill: Provide backfill against the manhole shaft. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.

341.1



MANHOLE STYLE	DIMENSION
A	X = 48" Y = 30"
B	X = 60" Y = 44"
C	X = 60" Y = 30"

APWA Utah Chapter — Precast manhole — Plan 341.1, November 2010

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6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
www.focusutah.com

LICENSED PROFESSIONAL ENGINEER No. 8028150-2202 THOMAS M. ROMNEY 12/14/23 STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
DETAILS

REVISION BLOCK

#	DATE	DESCRIPTION
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DETAILS

Scale: N/A		Drawn: GIM	
Date: 12/14/23		Job #: 23-0359	
Sheet: D6			

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\D6 - DETAILS.dwg

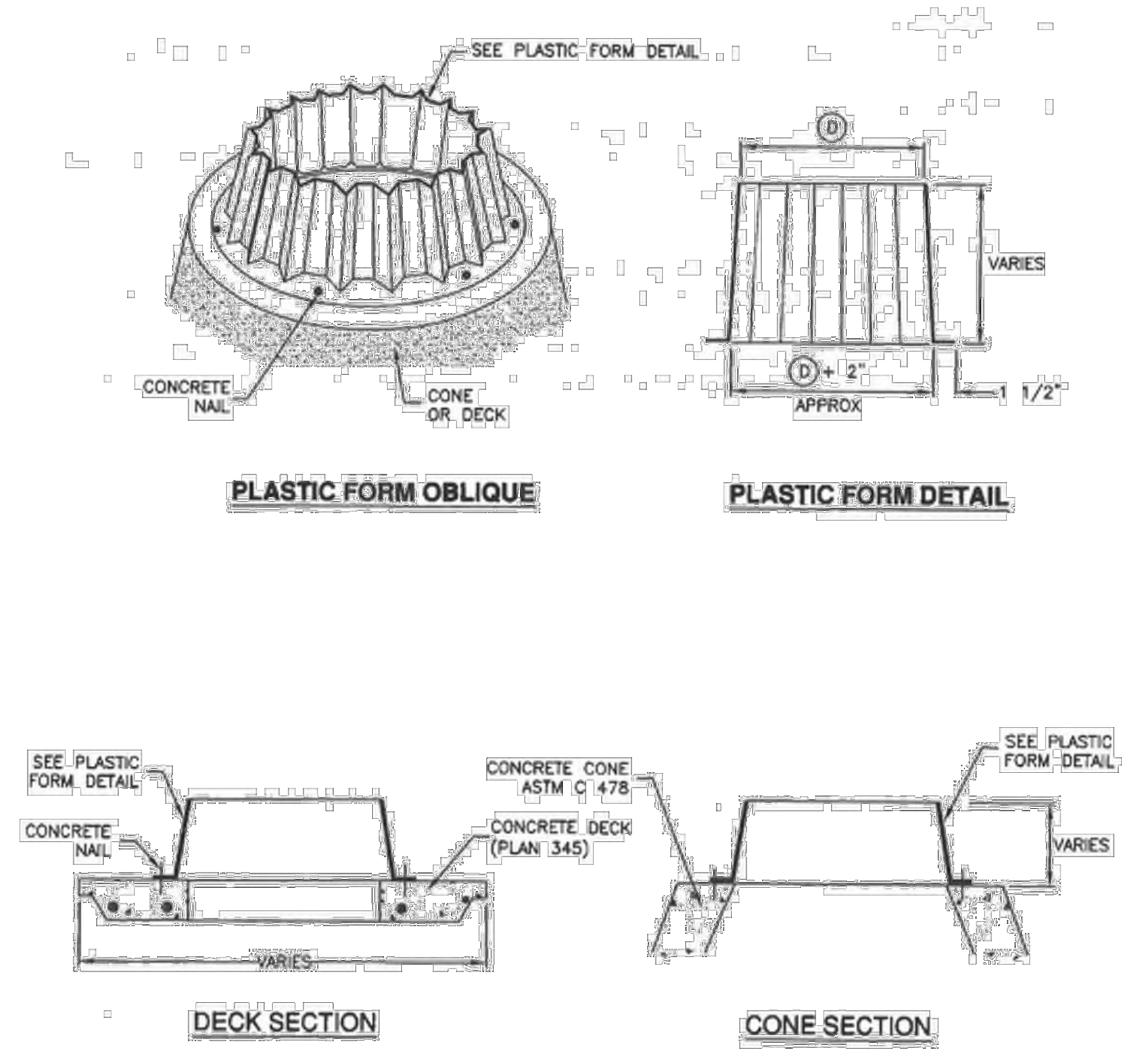
Raise frame to grade

1. **GENERAL**
   A. The plastic form is used to keep concrete in the annular space when fabricating cover collars for storm drain manholes, sanitary sewer manholes or other utilities.
2. **PRODUCTS**
   A. Concrete Nails: CONTRACTOR's choice.
3. **EXECUTION**
   A. Adjust plastic form height so that the top of the manhole frame and cover matches longitudinal slope and cross slope of the pavement surface, and cover is 1/2-inch lower than the pavement surface.

NOTE:
1. ALL CONCRETE TO BE 4500 PSI.

360.2

PLASTIC FORM

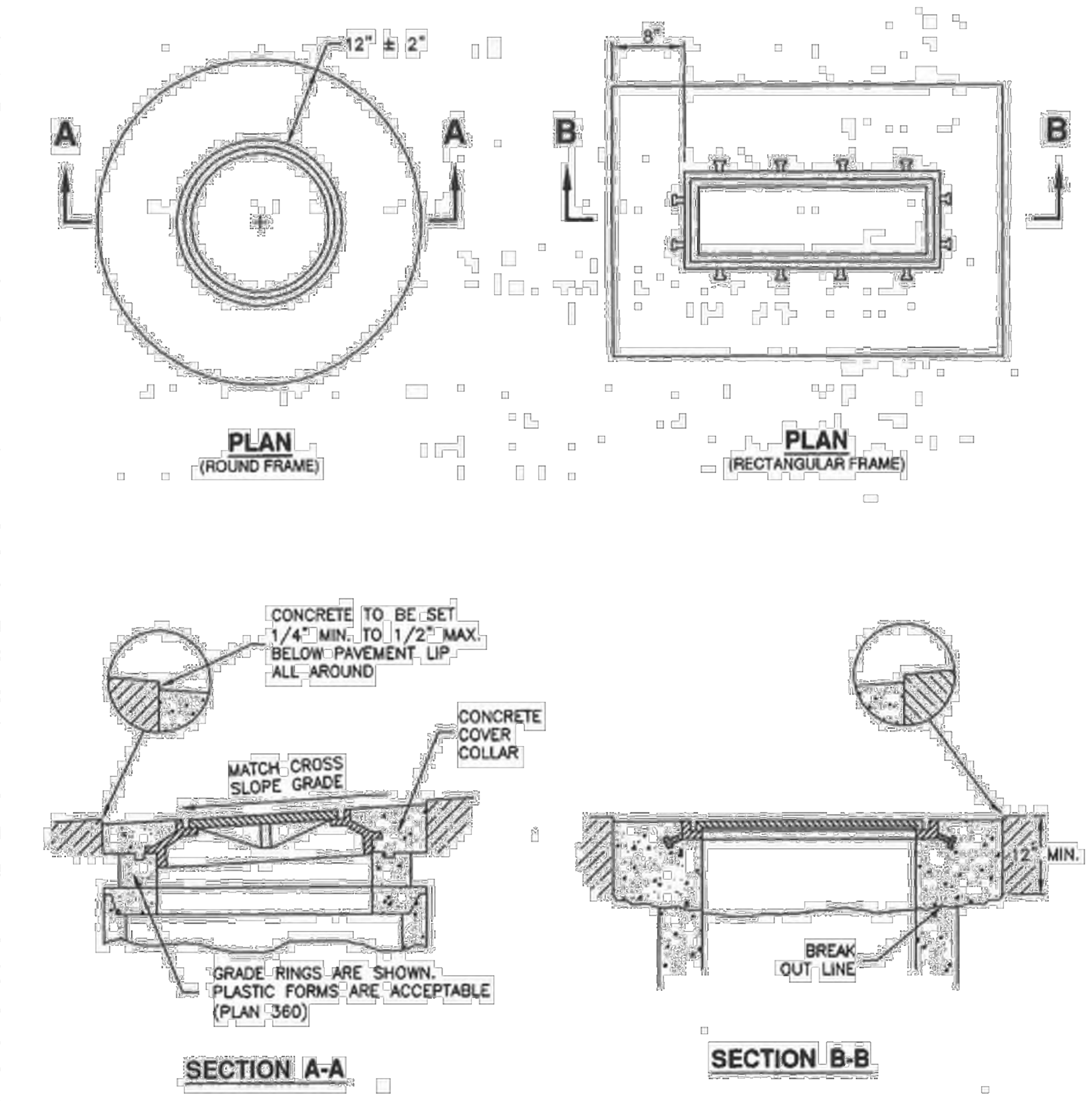


APWA Utah Chapter — *Raise frame to grade* — Plan 360.2 — January 2010

Cover collar for storm drains

1. **GENERAL**
   A. In a pavement surface, the concrete will support the frame under traffic loadings.
2. **PRODUCTS**
   A. Concrete: Class 4500 APWA Section 03 30 04.
   B. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.
3. **EXECUTION**
   A. Pavement Preparation: Provide a neat vertical and concentric joint between concrete and existing bituminous concrete surfaces. Clean edges of all dirt, oil, and loose debris.
   B. Concrete Placement: APWA Section 03 30 10. Fill the annular space around the frame and cover casting with concrete. Apply a broom finish. Apply a curing agent.

362



APWA Utah Chapter — *Cover collar for storm drains* — Plan 362 — December 2010

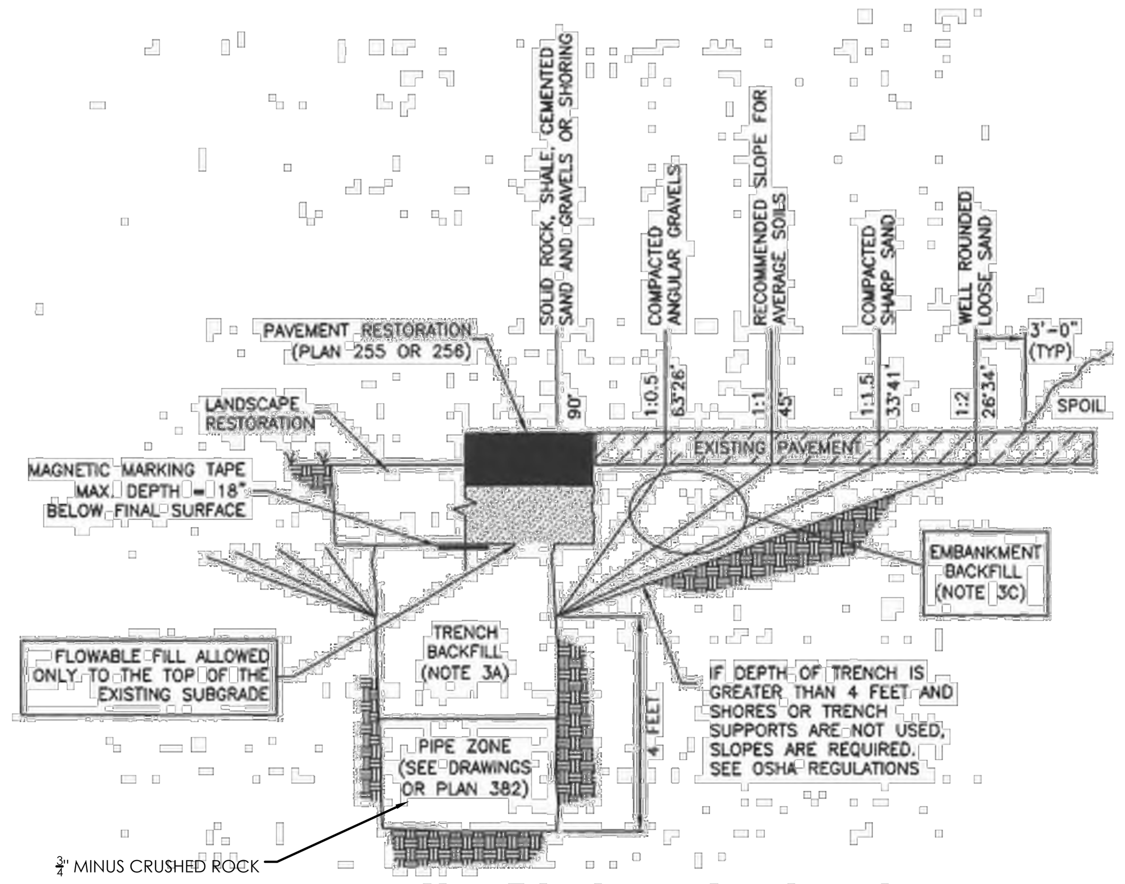
Trench backfill

1. **GENERAL**
   A. The drawing applies to backfilling a trench (and embankment) above the pipe zone.
2. **PRODUCTS**
   A. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 3-inches.
   B. Flowable Fill: APWA Section 31 05 15. Target is 60 psi in 28 days with 90 psi maximum in 28 days. It must flow easily requiring no vibration for consolidation.
3. **EXECUTION**
   A. Trench Backfill Above the Pipe Zone: Follow requirement indicated in APWA Section 33 05 20 and the following provisions. See Standard Plan 382 for backfilling the pipe zone.
      1) DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate as trench backfill.
      2) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.
      3) Water jetting is NOT allowed.
   B. Flowable Fill: If controlled low strength material is placed in the trench. Cure the material before placing surface restorations.
   C. Embankment Backfill: When trench sides are sloped proceed as follows.
      1) Maximum lift thickness is 8-inches before compaction.
      2) Compact per APWA Section 31 23 26 to 95 percent or greater relative to a standard proctor density.
      3) Submission of quality control compaction test result data may be requested by ENGINEER at any time. Provide results of tests immediately upon request.
   D. Surface Restoration:
      1) Landscaped Surface: Follow APWA Section 32 92 00 (turf or grass) or APWA Section 32 93 13 (ground cover) requirements. Rake to match existing grade. Replace vegetation to match pre-construction conditions.
      2) Paved Surface: Follow APWA Section 33 05 25 (bituminous pavement surfacing), or APWA Section 33 05 25 (concrete pavement surfacing). Do not install surfacing until compaction density is acceptable to ENGINEER.

NOTE:
1. GRANTSVILLE CITY MODIFICATION TO APWA 381 2.B: BACKFILL SHALL BE A-1-A OR AS APPROVED BY THE CITY.

381

NARRATIVE: THIS PLAN SHOWS VARIOUS SLOPES RECOMMENDED FOR VARIOUS TYPES OF SLOPE STABILITY PROBLEMS. THE VERTICAL TEXT INDICATES VARIOUS MATERIALS THAT MAY BE ENCOUNTERED. THE SERVICES OF A PROFESSIONAL SOILS ENGINEER SHOULD BE USED TO VERIFY SLOPE STABILITY.



SEWER AND STORM DRAIN

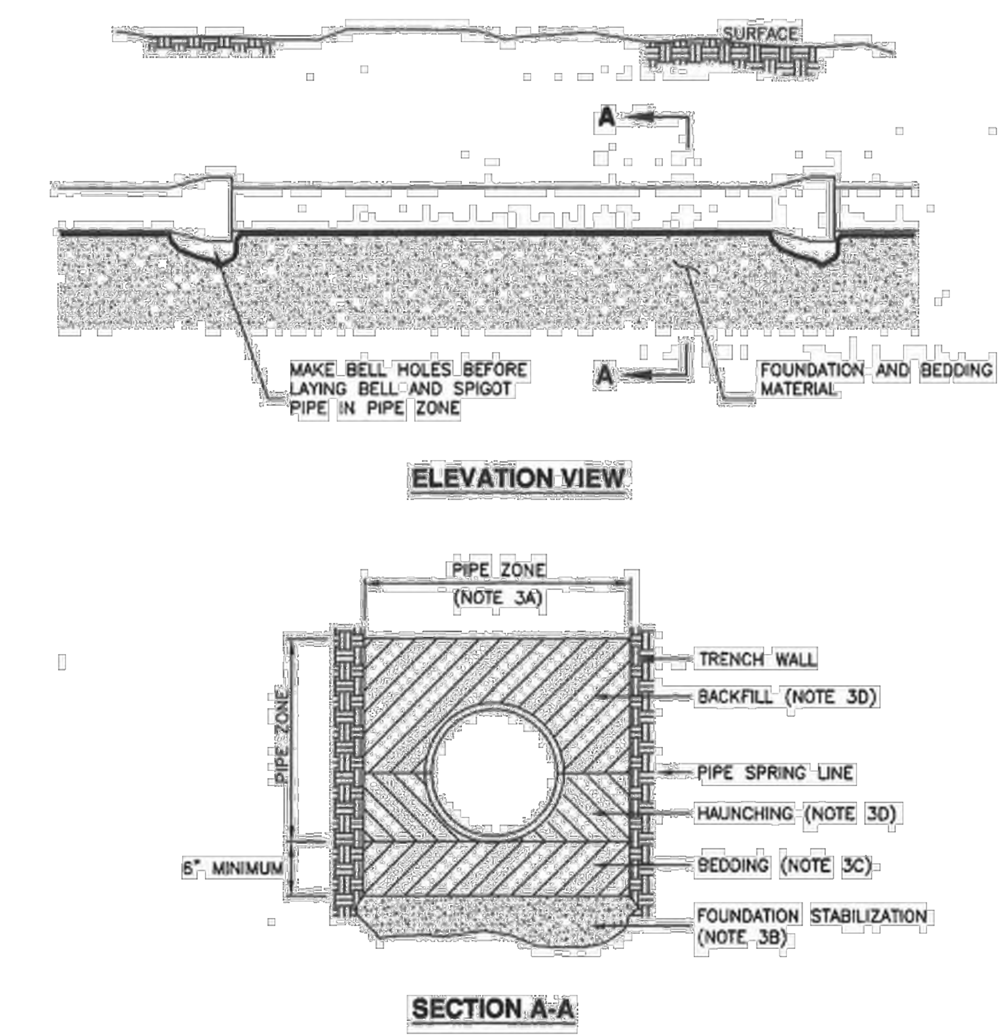
APWA Utah Chapter — *Trench backfill* — Plan 381 — July 2016

Pipe zone backfill

1. **GENERAL**
   A. Install the pipe in the center of the trench or no closer than 6-inches from the wall of the pipe to the wall of the trench.
2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Concrete: APWA Section 03 30 04.
   D. Flowable Fill: Target is 60 psi in 28 days with 90 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation.
   E. Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR's choice, APWA Section 31 05 19.
3. **EXECUTION**
   A. Excavate the Pipe Zone: Width is measured at the pipe spring line and includes any necessary sheathing. Provide width recommended by pipe manufacturer. Follow manufacturer's recommendations when using trench boxes.
   B. Foundation Stabilization: Get ENGINEER's permission before installing common fill. Vibrate to stabilize. Installation of stabilization-separation geotextile will be required to separate backfill material and native subgrade materials if common fill cannot provide a working surface or prevent soils migration.
   C. Bedding: Follow APWA Section 33 05 20 requirements and the following provisions.
      1) Furnish untreated base course material unless specified otherwise by pipe manufacturer.
      2) Maximum lift thickness is 8-inches.
      3) Bedding immediately under the pipe should not be compacted, but loosely placed.
      4) Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
      5) When using concrete, provide at least Class 2,000, APWA Section 03 30 04.
   D. Pipe Zone: DO NOT USE sewer rock, pea gravel, or recycled RAP aggregate in the pipe zone. Water jetting is NOT allowed. USE 3/4" DRAIN ROCK FOR PIPE ZONE MATERIAL PER CITY MODIFICATION
      1) Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26 unless pipe manufacturer requires more stringent installation.
      2) Submission of quality control compaction test result data developed for the haunch zone may be requested by ENGINEER at any time. CONTRACTOR is to provide results of tests immediately upon request.
   E. Flowable Fill (when required and if allowed by pipe manufacturer):
      1) Place the controlled low strength material, APWA Section 31 05 15.
      2) Prevent pipe flotation by installing in lifts and providing pipe restraints as required by pipe manufacturer.
      3) Reset pipe to line and grade if pipe "floats" out of position.

NOTE:
1. GRANTSVILLE CITY MODIFICATION TO APWA 382 2.B: BACKFILL SHALL BE A-1-A OR AS APPROVED BY THE CITY.

382



INSTALLATION

CONCRETE PIPE: FOLLOW ASTM C 1479 "STANDARD PRACTICE FOR INSTALLATION OF PRECAST CONCRETE SEWER, STORM DRAIN, AND CULVERT PIPE USING STANDARD INSTALLATIONS."

PLASTIC PIPE: FOLLOW ASTM D 2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS"

CORRUGATED METAL PIPE: FOLLOW ASTM A 798 "STANDARD PRACTICE FOR INSTALLING FACTORY-MADE CORRUGATED STEEL PIPE FOR SEWERS AND OTHER APPLICATIONS."

VITRIFIED CLAY PIPE: FOLLOW ASTM C 12. "STANDARD RECOMMENDED PRACTICE FOR INSTALLING VITRIFIED CLAY PIPE LINES."

APWA Utah Chapter — *Pipe zone backfill* — Plan 382 — January 2011

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LICENSED PROFESSIONAL ENGINEER No. 8028150-2202 THOMAS M. ROMNEY 12/14/23 STATE OF UTAH

HERITAGE FARMS PHASE 11

GRANTSVILLE CITY, UT

DETAILS

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

DETAILS

Scale: N/A	Drawn: GIM		
Date: 12/14/23	Job #: 23-0359		
Sheet: D7			

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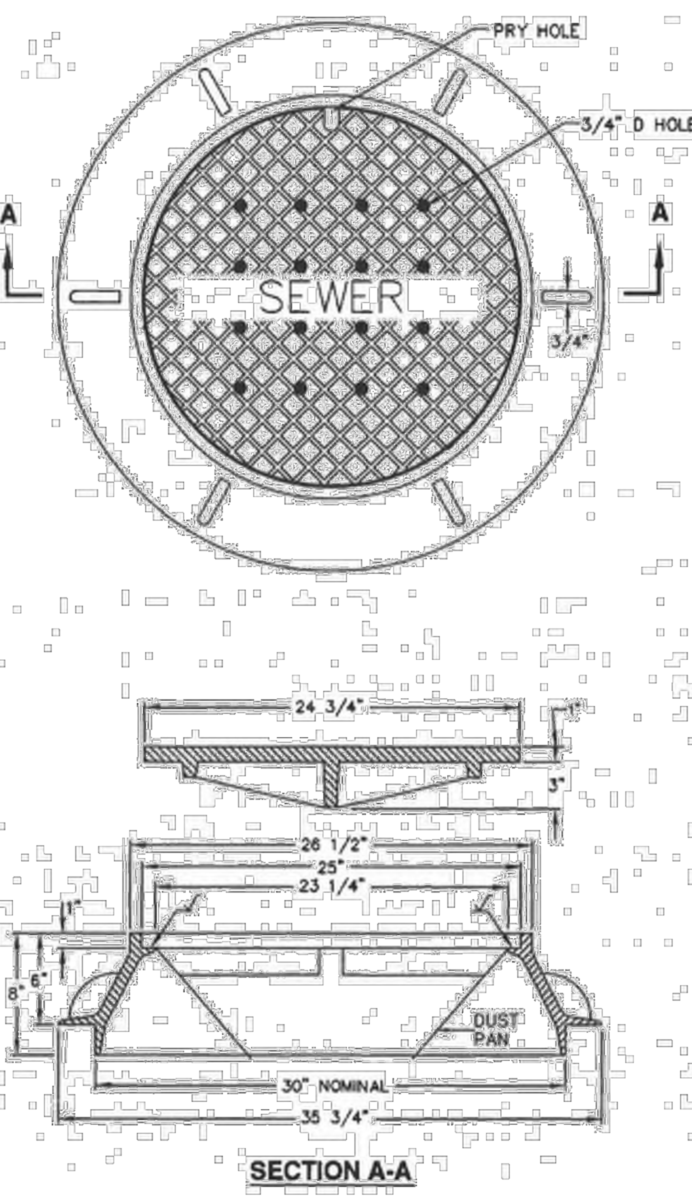
30" Frame and cover

1. GENERAL
   A. The frame and cover fits the manhole in Plan 411.
2. PRODUCTS
   A. Castings: Grey iron class 35 minimum, ASTM A48, coated with asphalt based paint or better (except on machined surfaces).
      1) Cast the heat number on the frame and cover.
      2) Give the frames and cover a machine finish so the cover will not rock.
      3) √ designates machined surface.
      4) Cast the words "SEWER" on the cover in upper case flush with the surface finish.
3. EXECUTION
   A. Except in paved streets, provide locking manhole covers in easements, alleys, parking lots, and all other places. Drill and tap two holes to a depth of 1-inch at 90 degrees to pry hole and install 3/4 x 3/4-inch allen socket set screws.

NOTE:
1. ALL CONCRETE TO BE 4500 PSI.

402



APWA Utah Chapter

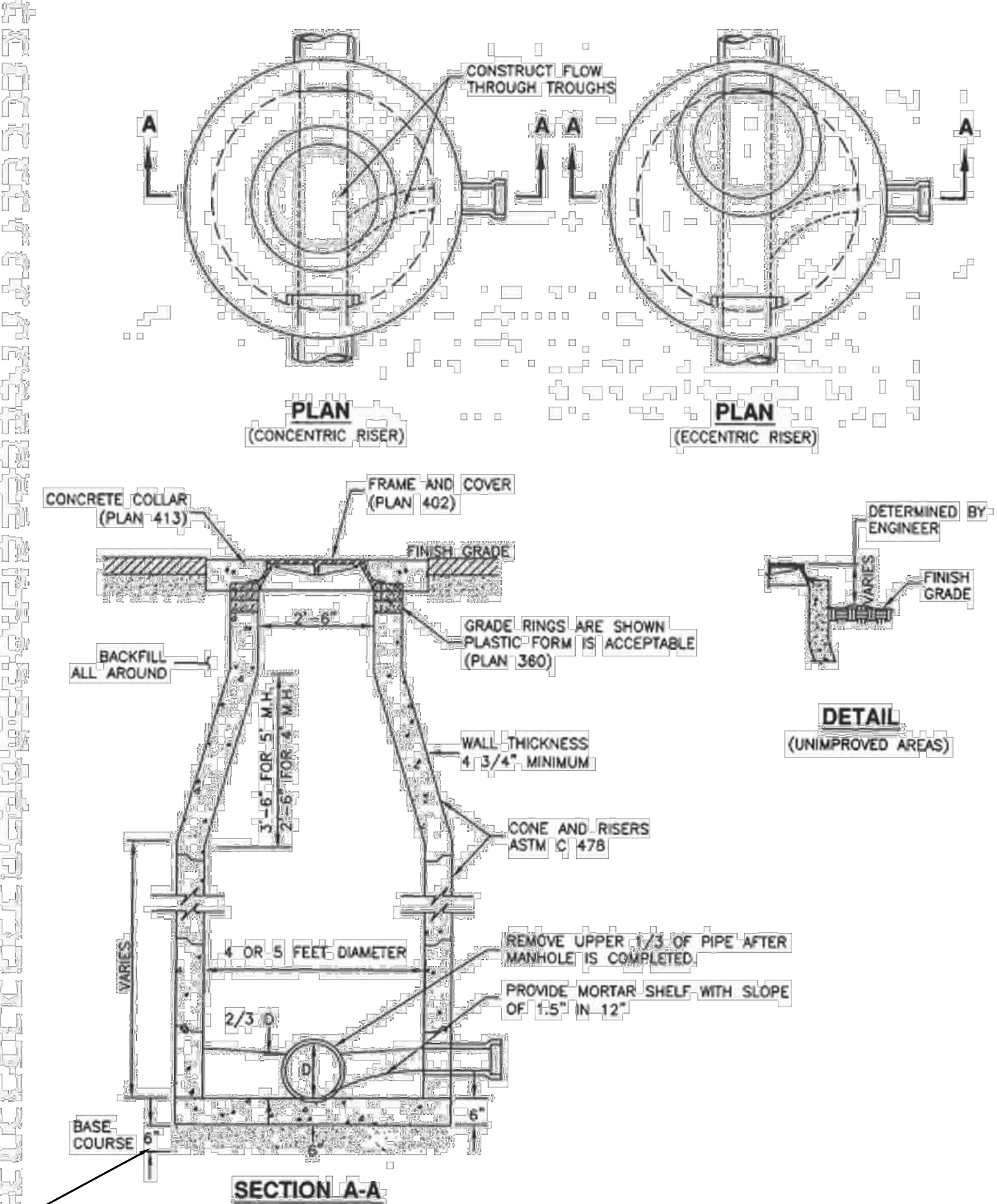
30" Frame and cover

Plan 402
April 1997

Sanitary sewer manhole

1. GENERAL
   A. The drawing shows typical pipe connections. Refer to construction drawings for connection locations or refer to field location of existing piping when engineering pipe connection to the manhole.
   B. Manhole size.
      1) Diameter is 4 feet: For sewers under 12" diameter.
      2) Diameter is 5 feet: For sewers 12" and larger, or when 3 or more pipes intersect the manhole.
2. PRODUCTS
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Concrete: Class 4500 APWA Section 03 30 04.
   D. Riser and Reducing Riser: ASTM C478.
   E. Reinforcement: Deformed, 60 ksi yield grade steel, ASTM A615.
   F. Grout: 2 parts sand to 1 part cement mortar, ASTM C1329.
   G. Stabilization-Separation Geotextile: Moderate or high at CONTRACTOR's choice, APWA Section 31 05 19.
3. EXECUTION
   A. Foundation Stabilization: Get ENGINEER's permission to use a sewer rock or a granular backfill borrow in a geotextile wrap to stabilize an unstable foundation.
   B. Base Course Placement: APWA Section 32 11 23. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   C. Invert Cover: During construction, place invert covers over the top of pipe in manholes that currently convey sewerage. See Plan 412.
   D. Pipe Connections: Grout around all pipe openings.
   E. Pipe Seal: Install rubber-based pipe seals on all plastic pipes when connecting plastic pipes to manholes. Hold water-stop in place with stainless steel bands.
   F. Joints: Place flexible gasket-type sealant in all riser joints. Finish with grout.
   G. Adjustment: If the required manhole adjustment is more than 1'-0", remove the cone and grade rings and adjust the manhole elevation with the appropriate manhole section, the cone section, and the grade rings or plastic form to make frame and lid match finish grade.
   H. Finish: Provide smooth and neat finishes on interior of cones, shafts, and rings. Imperfect moldings or honeycombs will not be accepted.
   I. Backfill: Provide backfill against the manhole shaft. Pea gravel and recycled RAP aggregate is NOT ALLOWED. Water jetting is NOT allowed. Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.

411



APWA Utah Chapter

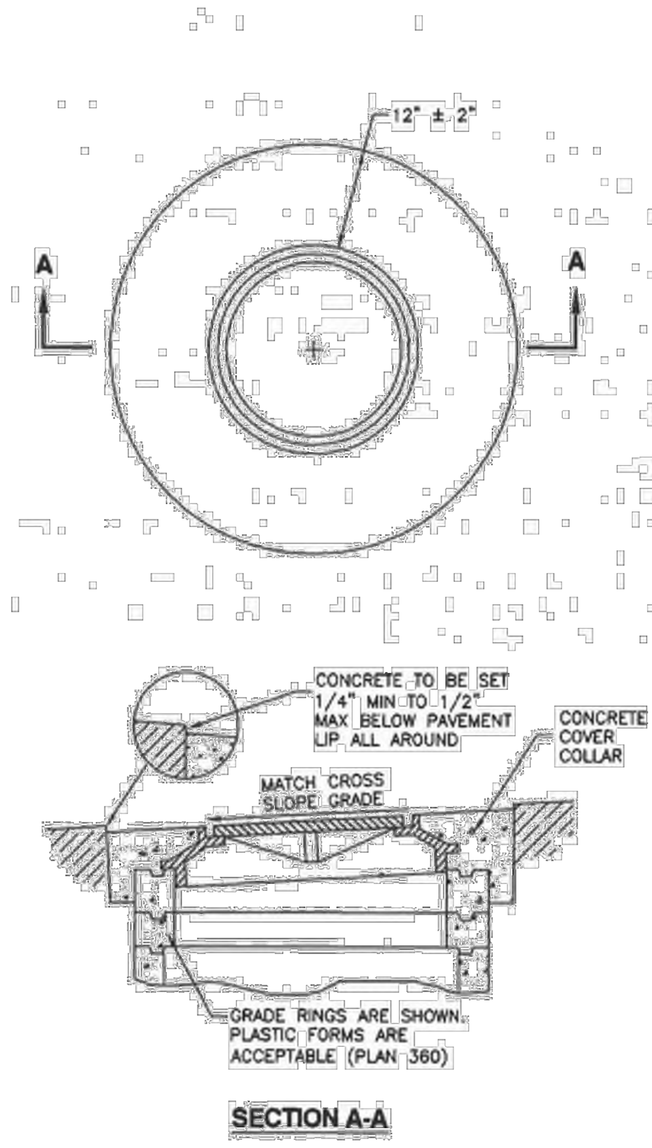
Sanitary sewer manhole

Plan 411
April 2011

Cover collar for sanitary sewer manhole

1. GENERAL
   A. In a pavement surface, the concrete will support the frame under traffic loadings.
2. PRODUCTS
   A. Concrete: Class 4500 APWA Section 03 30 04.
   B. Concrete Curing Agent: Type ID Class A (clear with fugitive dye), membrane forming compound, APWA Section 03 39 00.
3. EXECUTION
   A. Pavement Preparation: Provide a neat vertical and concentric joint between the concrete collar and the bituminous pavment surface. Clean edges of all dirt, oil, and loose debris.
   B. Concrete Placement: Fill the annular space around the frame and cover casting with concrete. Apply a broom finish. Apply a curing agent.

413



APWA Utah Chapter

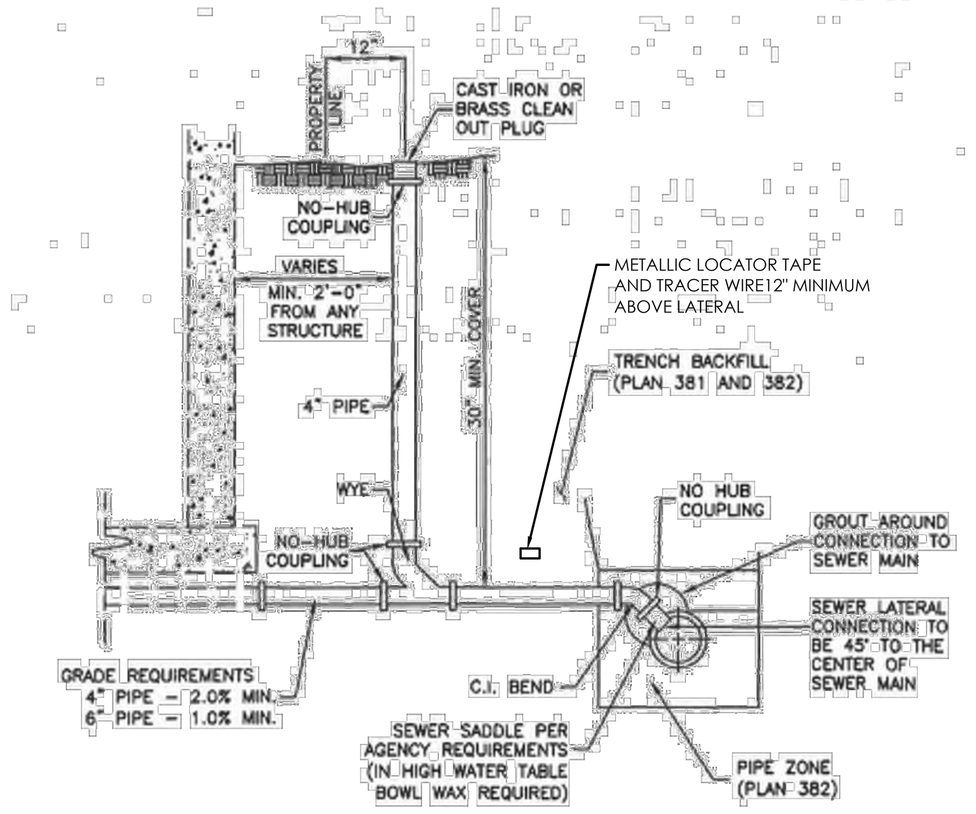
Cover collar for sanitary sewer manhole

Plan 413
September 2001

Sewer lateral connection

1. GENERAL
   A. Before installation, secure acceptance by ENGINEER for all pipe, fittings, and couplings to be used.
   B. Before backfilling, secure inspection of installation by ENGINEER. Give at least 24 hours notice.
   C. Verify if CONTRACTOR or agency is to install the wye.
2. PRODUCTS
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Provide agency approved wye or tee with appropriate donut.
   D. Stainless steel straps required.
3. EXECUTION
   A. Tape wrap pipe as required by soil conditions.
   B. Remove core plug from sewer main. Do not break into sewer main to make connection.
   C. Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a standard proctor density, APWA Section 31 23 26.

431



APWA Utah Chapter

Sewer lateral connection

Plan 431
January 2011

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No. 8028150-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
DETAILS

REVISION BLOCK		
#	DATE	DESCRIPTION
1	----	----
2	----	----
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4	----	----
5	----	----
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DETAILS

Scale: N/A	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: D8	

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SUSTAINABLE TECHNOLOGIES

INSTALLATION SPECIFICATION

PERIMETER CONTROL - Compost Filter Sock

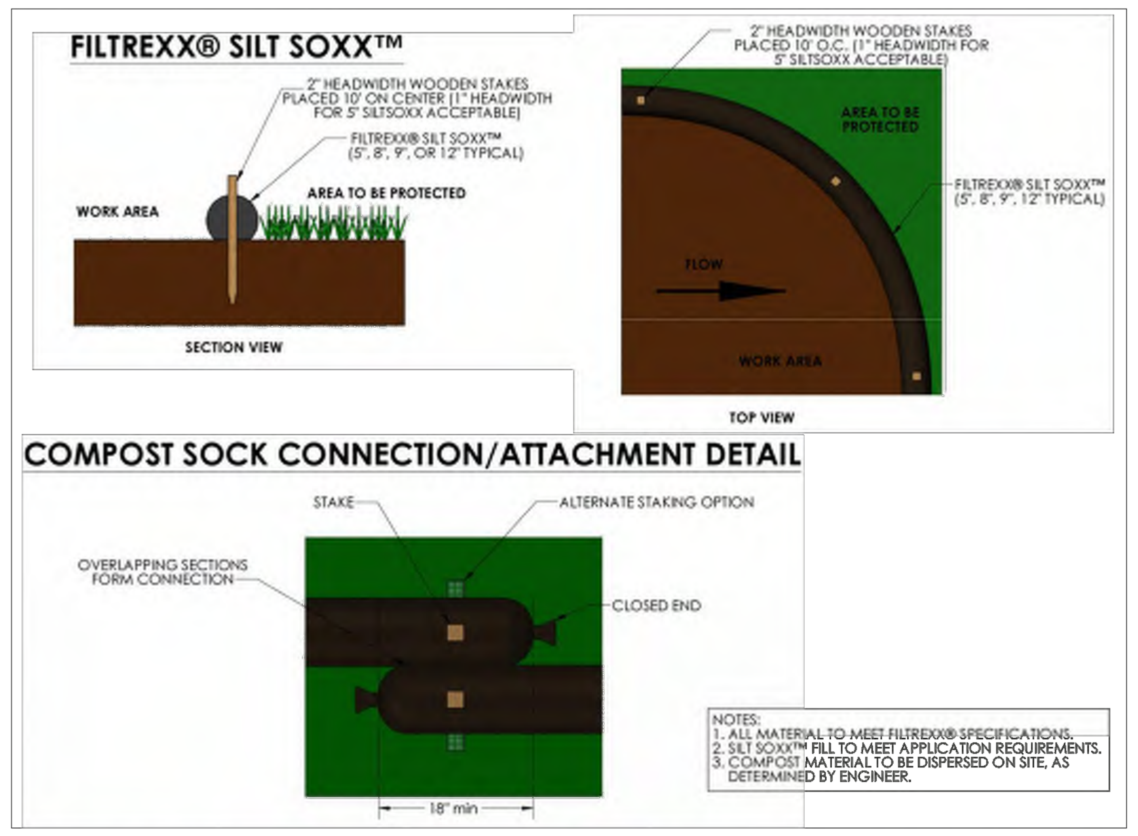
INSTALLATION

1. Perimeter control will be placed at locations indicated on plans and in a manner as directed by the Engineer or Manufacturer.
2. Perimeter control should be installed parallel to the base of the slope or other disturbed area. In challenging conditions (i.e., 2:1 slopes), a second perimeter control shall be constructed at the top of the slope, or staking may be increased.
3. Effective Soxx height in the field should be as follows: 5" diameter Soxx = 4" high; 8" diameter Soxx = 6.5" high; 12" diameter Soxx = 9.5" high; 18" diameter Soxx = 14.5" high; 24" diameter Soxx = 19" high.
4. Stakes should be installed through the middle of the perimeter control on 10 ft (3m) centers, using 2 in (50mm) by 2 in (50mm) by 3 ft (1m) wooden stakes. 5" diameter Soxx may use 1" (25 mm) x 1" (25 mm) x 18" (0.5 m) wooden stakes. In the event staking is not possible, i.e., when perimeter control is used on pavement, heavy concrete blocks shall be used behind the perimeter control to help stabilize during rainfall/runoff events.
5. Staking depth for sand and silt loam soils shall be 12 in (300mm), and 8 in (200mm) for clay soils.
6. Straighten or position the Soxx as needed on the ground, ensuring there is good ground contact and no void spaces under the Soxx.
7. Do not drag Soxx across rough surfaces. If dragging across a rough surface is necessary, place a barrier such as plastic or a tarp under Soxx to prevent tearing.
8. Loose compost may be backfilled along the upslope side of the perimeter control, filling the seam between the soil surface and the device, improving filtration and sediment retention.
9. If the perimeter control is to be left as a permanent filter or part of the natural landscape, it may be seeded at time of installation for establishment of permanent vegetation. The Engineer will specify seed requirements.

MAINTENANCE & DISPOSAL

1. The contractor shall remove sediment at the base of the upslope side of the perimeter when accumulation has reached 1/2 of the effective height of the sock, or as directed by the Engineer. Alternatively, a new perimeter control sock can be placed on top of and slightly behind the original one creating more sediment storage capacity without soil disturbance.
2. Perimeter control shall be maintained until disturbed area above the device has been permanently stabilized and construction activity has ceased.
3. The FilterMedia will be dispersed on site once disturbed area has been permanently stabilized, construction activity has ceased, or as determined by the Engineer.

FILTREXX® SILT SOXX™



Refer to Design Specification for complete application, design, installation, maintenatnce, and removal documentation.

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SUSTAINABLE TECHNOLOGIES

INSTALLATION SPECIFICATION

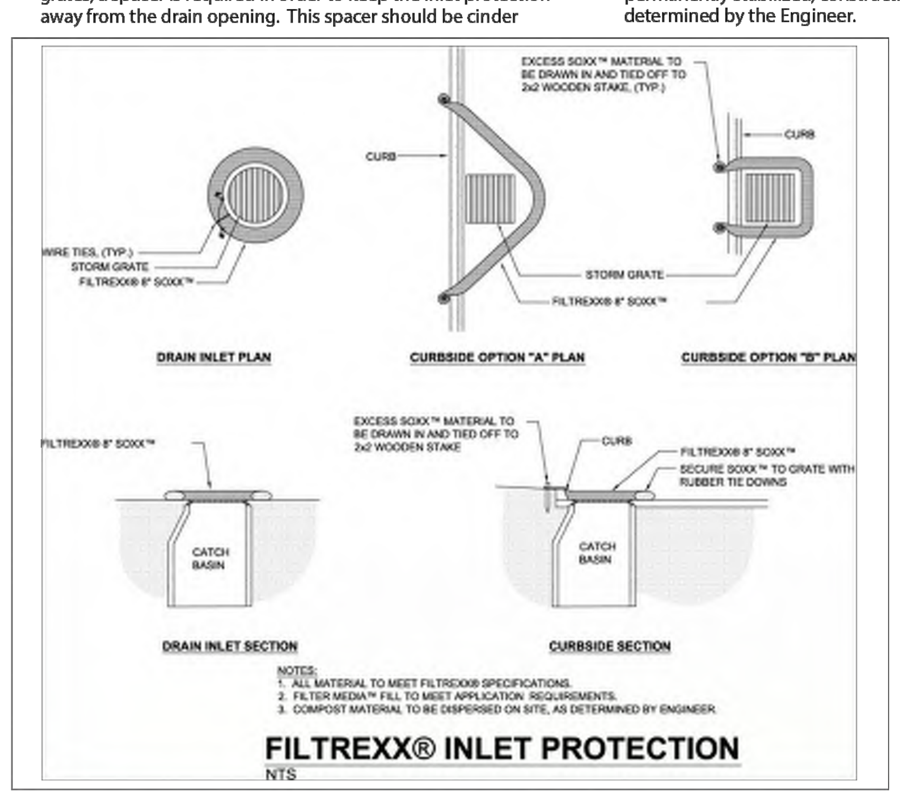
INLET PROTECTION - Compost Filter Sock

INSTALLATION

1. Inlet protection shall be placed at locations indicated on plans as directed by the Engineer. Inlet protection should be installed in a pattern that allows complete protection of the inlet area.
2. Installation of curb inlet protection will ensure a minimal overlap of at least 1 ft (300mm) on either side of the opening being protected. Inlet protection will be anchored to the soil behind the curb using staples, stakes or other devices capable of holding the inlet protection in place.
3. Standard inlet protection for curb inlet protection and curb sediment containment will use 8 in (200mm) diameter inlet protection, and drain inlets on soil will use 12 in (300mm) or 18 in (450mm) diameter inlet protection. In severe flow situations, larger inlet protection may be specified by the Engineer. During curb installation, inlet protection shall be compacted to be slightly shorter than curb height.
4. If inlet protection becomes clogged with debris and sediment, they shall be maintained so as to assure proper drainage and water flow into the storm drain. In severe storm events, overflow of the inlet protection may be acceptable in order to keep the area from flooding.
5. Curb and drain inlet protection shall be positioned so as to provide a permeable physical barrier to the drain itself, allowing sediment to collect on the outside of the inlet protection.
6. For drains and inlets that have only curb cuts, without street grates, a spacer is required in order to keep the inlet protection away from the drain opening. This spacer should be cinder blocks or a hog wire screen bent to overlap the grate opening and keep the sock from falling into the opening. Use at least one spacer for every 4 ft (1.2m) of curb drain opening. The wire grid also prevents other floatable waste from passing over the inlet protection.
7. Stakes shall be installed through the middle of the drain inlet protection on 5 ft (1.5m) centers, using 2 in (50mm) by 2 in (50mm) by 3 ft (1m) wooden stakes.
8. Staking depth for sand and silt loam soils shall be 12 in (300mm), and 8 in (200mm) for clay soils.

MAINTENANCE & DISPOSAL

1. The Contractor shall remove sediment at the base of the upslope side of the inlet protection when accumulation has reached 1/2 of the effective height of the inlet protection, or as directed by the Engineer. Alternatively, for drain inlet protection, a new Soxx may be placed on top of the original increasing the sediment storage capacity without soil disturbance.
2. Inlet protection shall be maintained until disturbed area above or around the device has been permanently stabilized and construction activity has ceased. Regular maintenance includes lifting the inlet protection and cleaning around and under them as sediment collects.
3. The FilterMedia will be removed from paved areas or dispersed on site soil or behind curb once disturbed area has been permanently stabilized, construction activity has ceased, or as determined by the Engineer.



FILTREXX® INLET PROTECTION
NTS

Refer to Design Specification for complete application, design, installation, maintenatnce, and removal documentation.

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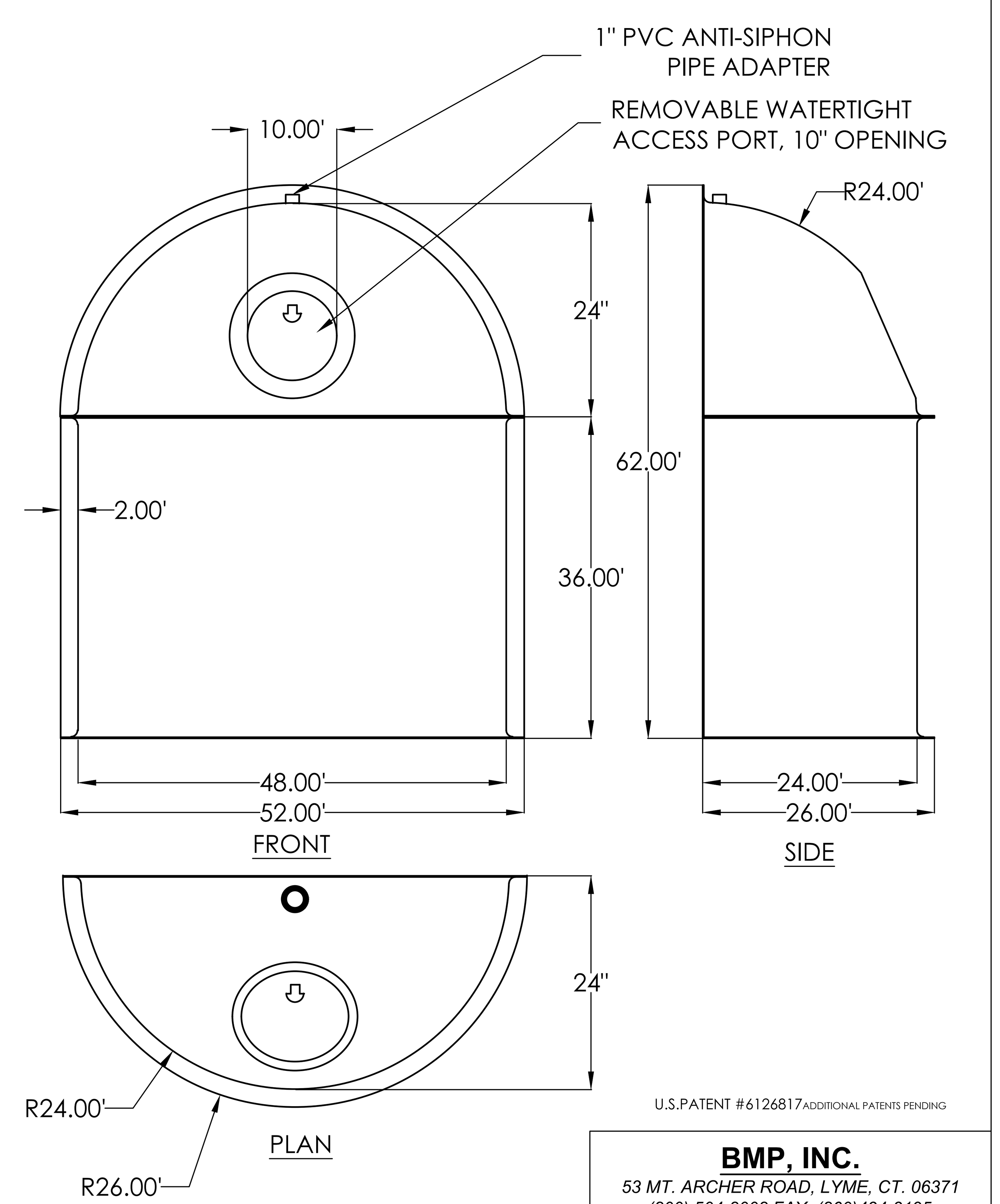
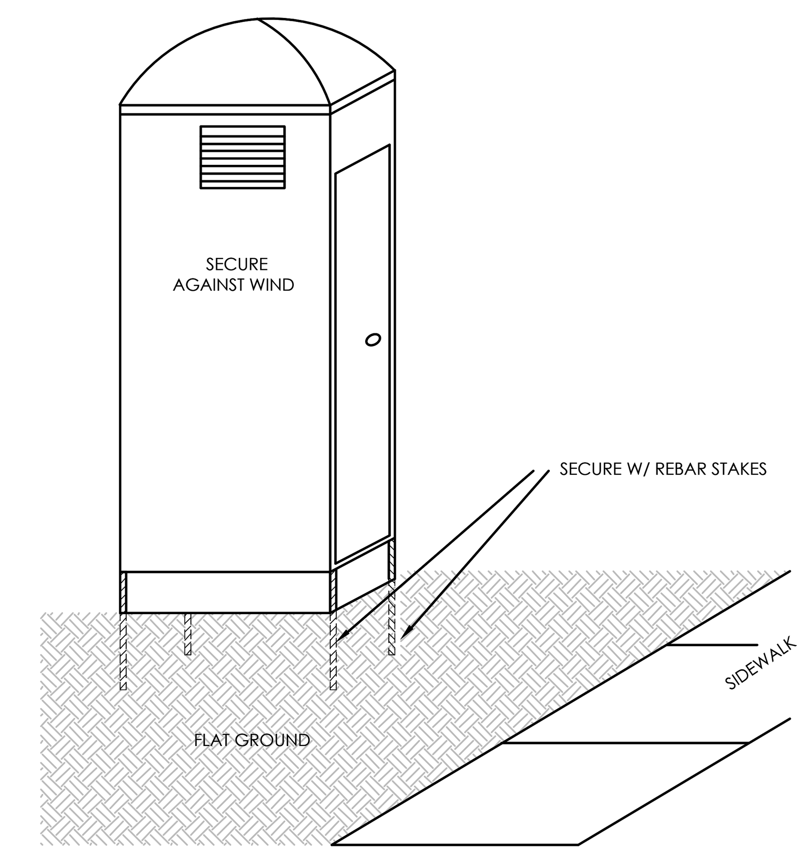
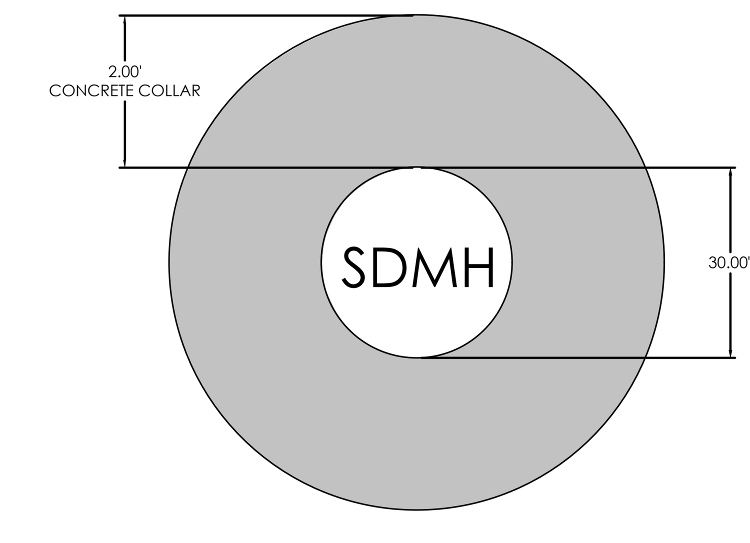


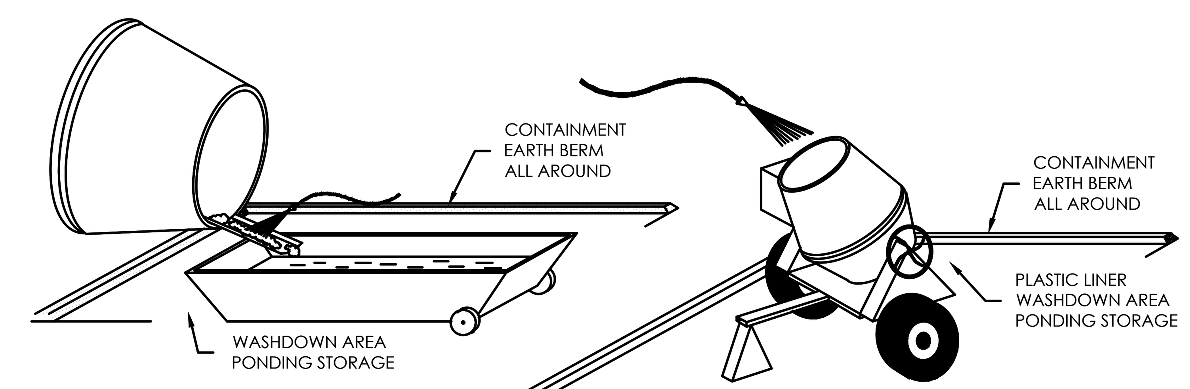
BMP, INC. 53 MT. ARCHER ROAD, LYME, CT. 06371 (800) 504-8008 FAX: (860)434-3195		
DESCRIPTION	DATE	SCALE
48FTB SNOUT OIL & DEBRIS STOP	09/28/99	NONE
	DRAWING NUMBER	
	48FTB	



PORTABLE TOILET
NTS

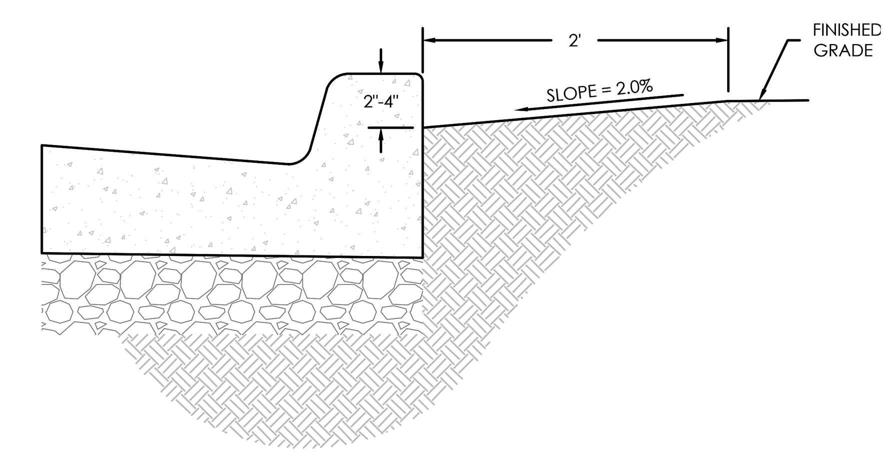


SD COLLAR FOR SWALE
N.T.S.

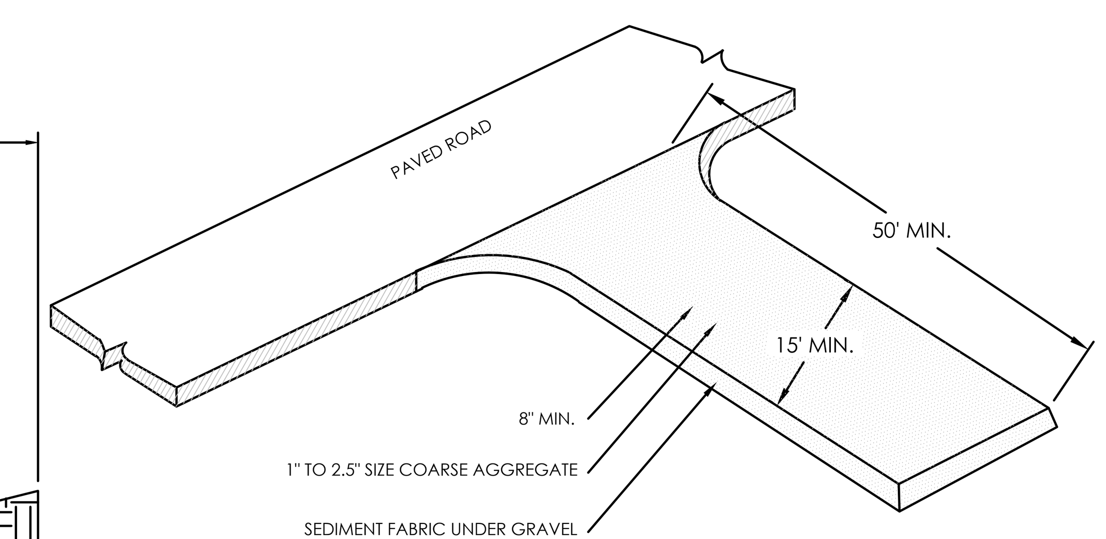


OPTION A OPTION B

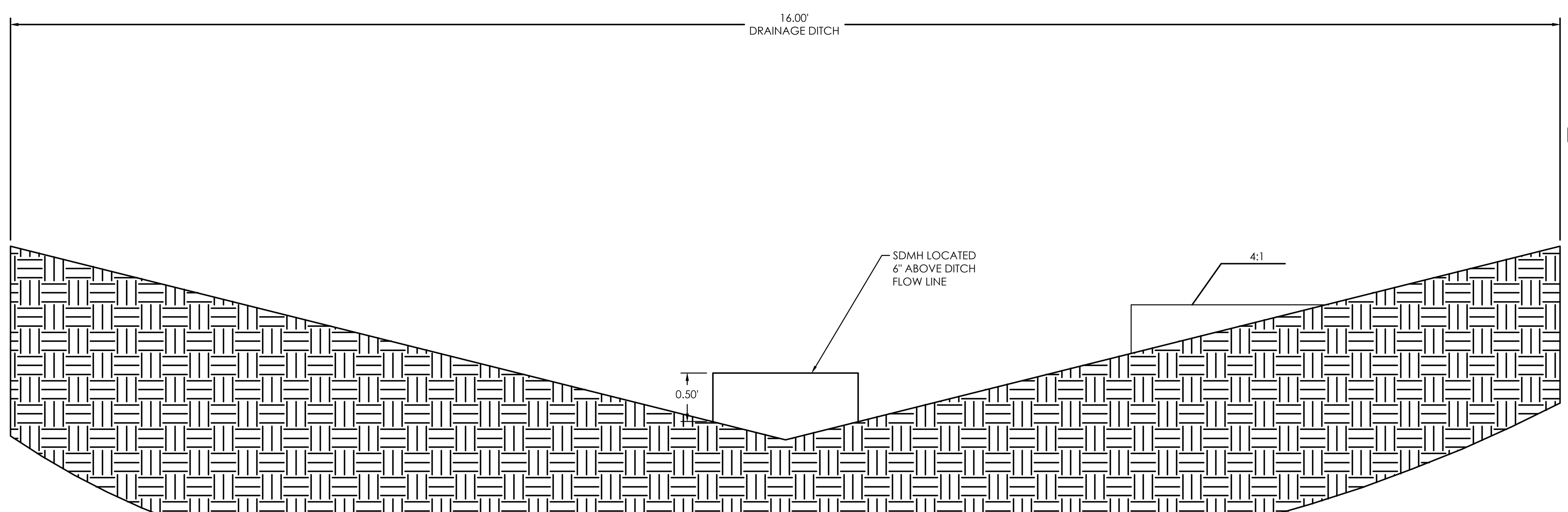
CONCRETE WASTE MANAGEMENT
NTS



CURB SEDIMENTATION TRAP
NTS



STABILIZED CONSTRUCTION ENTRANCE
NTS



SDMH IN DRAINAGE DITCH
N.T.S.

NOTE:
1. ALL CONCRETE TO BE 4500 PSI.

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HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
DETAILS

REVISION BLOCK

#	DATE	DESCRIPTION
1		
2		
3		
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DETAILS

Scale: N/A	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: D9	

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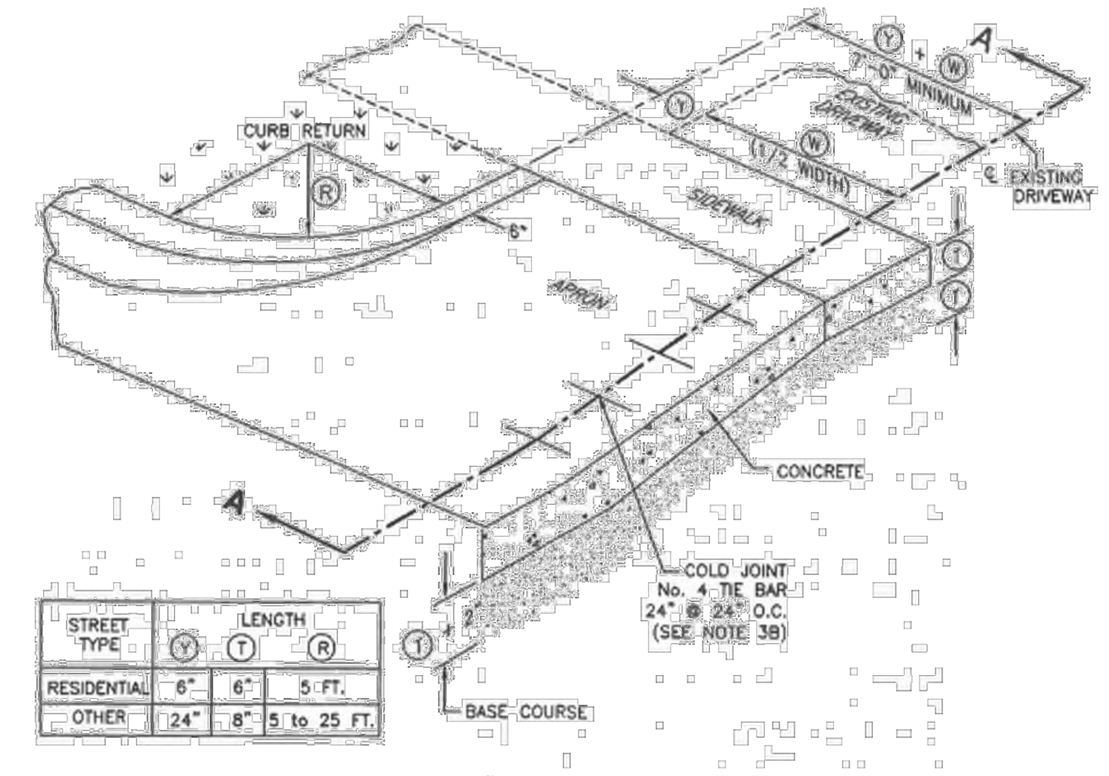
Open driveway approach

1. **GENERAL**
   A. Variance from specified dimensions and slopes must be acceptable to the ENGINEER. System configuration may be changed at ENGINEER's discretion.
   B. Field Changes to Slope Requirements:
      1) Grades may have a 6 percent change in slope over a 11 feet wheel base run for both crest or sag vertical curves.
      2) Where heavy truck use and fire truck access applies, or to improve design speed, design grades should be cut in half.
      3) Specific uses or site conditions may require profile design submittal for review and acceptance.
   C. Additional requirements are specified in APWA Section 32 16 13.

2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Expansion Joint Filler: 1/2-inch thick type F1 full depth, APWA Section 32 13 73.
   C. Concrete: Class 4500 APWA Section 03 30 04. If necessary, provide concrete that achieves design strength in less than 7 days. Use caution; however, as concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.
   D. Reinforcement: Galvanized or epoxy coated, deformed, 60 ksi yield grade steel, ASTM A615.
   E. Concrete Curing Agent: Clear membrane forming compound with fugitive dye (Type ID Class A), APWA Section 03 39 00.

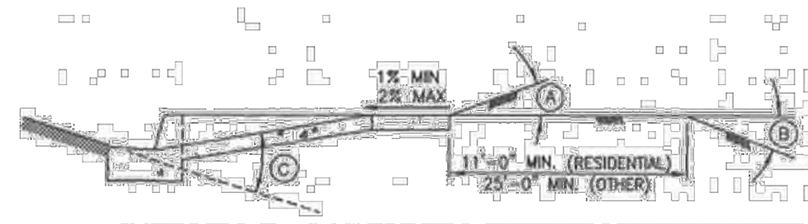
3. **EXECUTION**
   A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
   B. Reinforcement: Not required if driveway apron is constructed without a cold joint.
   C. Concrete Placement: APWA Section 03 30 10.
      1) Install expansion joints vertical, full depth, with top of filler set flush with concrete surface.
      2) Install contraction joints vertical, 1/8-inch wide or 1/4 slab thickness if the slab is greater than 8-inches thick. Maximum length to width ratio for non-square panels is 1.5 to 1. Maximum panel length (in feet) is 1.5 times the slab thickness (in inches).
      3) Provide 1/2-inch radius edges. Apply a broom finish. Apply a curing agent.
   D. Protection and Repair: Protect concrete from deicing chemicals during cure. Repair construction that does not drain. If necessary, fill flow-line with water to verify.

225



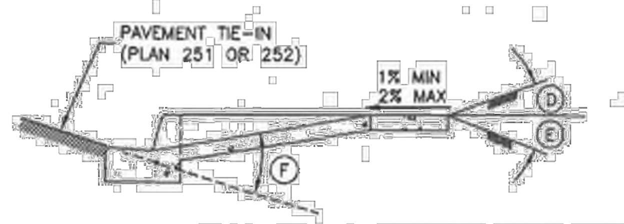
STREET TYPE	LENGTH (Y)	(T)	(R)
RESIDENTIAL	6"	6"	5 FT.
OTHER	24"	8"	5 to 25 FT.

OBLIQUE



STREET TYPE	BREAK OVER ANGLE (MAXIMUM) (A)	(B)	(C)
RESIDENTIAL	16%	12%	16%
OTHER	6%	8%	10%

SECTION A-A - APPROACH REQUIRING SERVICE TRUCK ACCESS



STREET TYPE	BREAK OVER ANGLE (MAXIMUM) (D)	(E)	(F)
RESIDENTIAL	16%	12%	16%
OTHER	6%	8%	10%

SECTION A-A - TYPICAL DRIVEWAY APPROACH

APWA Utah Chapter

Open driveway approach

Plan 225
December 2009

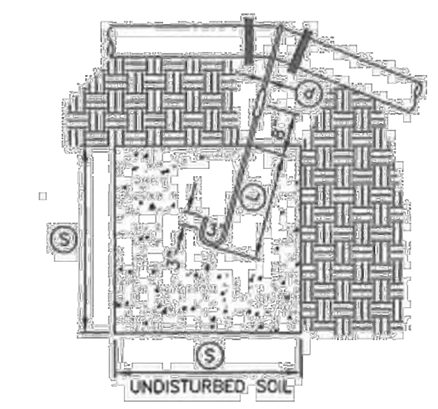
Tie-down thrust restraints

1. **GENERAL**
   A. Thrust design for pipe sizes or configurations not shown require special design.
   B. Bearing areas, volumes, and special thrust blocking details shown on Drawings take precedence over this plan.
   C. Restraint sizing is based upon a maximum operating pressure of 150 psi and a test pressure of 200 psi, and a minimum soil bearing strength of 2,000 psf. Operating pressures in excess of 150 psi or soils with less than 2,000 pound bearing strength will require special design.
   D. Before backfilling around thrust block, secure inspection of installation by ENGINEER.

2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Concrete: Class 4500 minimum, APWA Section 03 30 04.
   D. Reinforcement: Deformed, steel, ASTM A615. Give bars an epoxy coating at least 15 mils thick. Minimum stress yield strength of steel tie-down bars is 70,000 ksi.
   E. Grease: Non-oxide poly-FM.

3. **EXECUTION**
   A. Pour concrete against undisturbed soil. Concrete must be allowed to cure in thrust restraints for 5 days before pressurizing water lines or have additional approved thrust restraints installed before pressurizing the water line.
   B. Pipe Joints: Do not cover with concrete. Leave completely accessible.
   C. Grease: Apply grease to all buried metal surfaces. Wrap with polyethylene sheet and tape wrap.
   D. Locking restraint devices may be used in conjunction with concrete thrust blocking (at discretion of ENGINEER).
   E. Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.

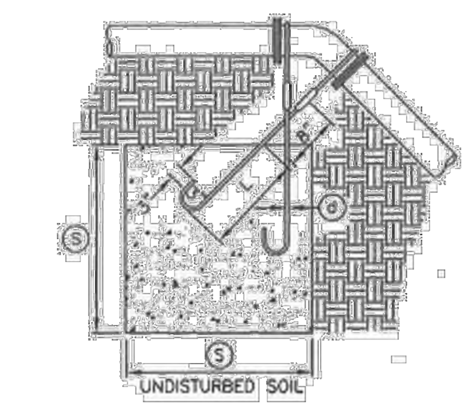
562



TYPE A RESTRAINT
FOR 11 1/4" - 22 1/2" VERTICAL BENDS

TABLE OF DIMENSIONS

PIPE SIZE NOMINAL DIAMETER - INCH	VERTICAL BEND IN DEGREES	CONCRETE BLOCKING IN CUBIC FEET	(S) SIDE OF CUBE - FEET	(d) DIAMETER OF SHANK OR REBAR RODS - INCH	(L) DEPTH OF ROD CONCRETE - FEET
4"	11 1/4"	8	2.0	5/8"	1.5
	22 1/2"	15.6	2.5	5/8"	2.0
6"	11 1/4"	15.6	2.5	5/8"	2.0
	22 1/2"	34.3	3.25	5/8"	2.0
8"	11 1/4"	27	3.0	5/8"	2.0
	22 1/2"	64	4.0	5/8"	2.0
12"	11 1/4"	64	4.0	5/8"	2.0
	22 1/2"	125	5.0	3/4"	3.0
16"	11 1/4"	107	4.25	7/8"	3.0
	22 1/2"	216	6.0	7/8"	3.0
20"	11 1/4"	138	5.17	1"	3.5
	22 1/2"	334	6.94	1"	4.0
24"	11 1/4"	240	6.22	1"	4.0
	22 1/2"	476	7.81	1"	4.0
30"	11 1/4"	369	7.17	1"	4.0
	22 1/2"	733	9.02	1"	4.0



TYPE B RESTRAINT
FOR 45° VERTICAL BENDS

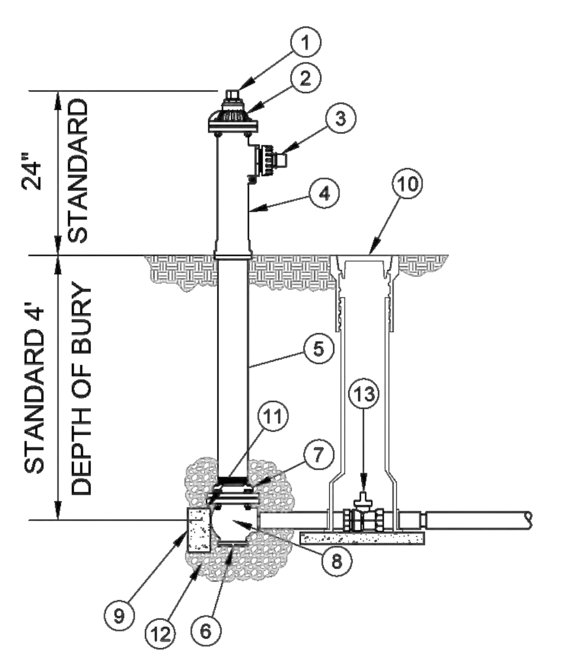
TABLE OF DIMENSIONS

PIPE SIZE NOMINAL DIAMETER - INCH	VERTICAL BEND IN DEGREES	CONCRETE BLOCKING IN CUBIC FEET	(S) SIDE OF CUBE - FEET	(d) DIAMETER OF SHANK OR REBAR RODS - INCH	(L) DEPTH OF ROD CONCRETE - FEET
4"	45°	1	3.0	5/8" / 5/8"	2.0
6"		2.37	4.0	5/8" / 5/8"	2.5
8"		3.97	4.75	5/8" / 5/8"	3.0
12"		9.04	6.25	5/8" / 5/8"	4.0
16"		17.24	7.75	3/4" / 3/4"	4.0
20"		26.52	92.17	3/4" / 3/4"	4.0
24"		37.82	10.07	3/4" / 3/4"	4.0
30"		58.26	11.63	3/4" / 3/4"	4.0

APWA Utah Chapter

Tie-down thrust restraints

Plan 562
April 1997



GENERAL NOTES:

1. #2 ECLIPSE POST HYDRANT SHALL BE SELF-DRAINING, NON-FREEZING, COMPRESSION TYPE WITH 2-3/16" MAIN VALVE OPENING. INLET CONNECTION SHALL BE 2" FIP. OUTLET SHALL BE 2 1/2". STANDARD DEPTH OF BURY IS 4'.
2. ALL WATER FLOW SHALL PASS THRU A 3-1/2" FBE COATED STEEL PIPE AND CAST IRON TOP STOCK WATERWAY.
3. ALL WORKING PARTS SHALL BE SERVICEABLE FROM ABOVE GROUND WITH NO DIGGING OR REPLACEMENT NEEDED.
4. HYDRANT SHALL BE SET IN 4 CUBIC FEET OF CRUSHED STONE TO ALLOW FOR PROPER DRAINAGE OF HYDRANT.
5. THE #2 ECLIPSE POST HYDRANT AS MANUFACTURED BY THE KUPFERLE FOUNDRY, ST. LOUIS MO. 63102.

SIDE VIEW
SCALE: NTS

ITEM	ITEM / DESCRIPTION	NOTES
1	OPERATING SCREW	
2	TOP CAP	
3	SIDE CAP	
4	TOP STOCK	
5	3-1/2" FBE COATED STEEL PIPE	
6	DRAIN HOLE	
7	COUPLING	
8	INLET VALVE BODY	
9	UNDISTURBED EARTH	
10	VALVE BOX	
11	THRUST BLOCK	
12	CRUSHED ROCK	
13	HYDRANT SHUT-OFF VALVE	

REV.	DATE	APPR.	DESCRIPTION

SCALE			SHEET
-	GRANTSVILLE	GRANTSVILLE CITY ABOVE GRADE 2" BLOW-OFF INSTALLATION	6-56

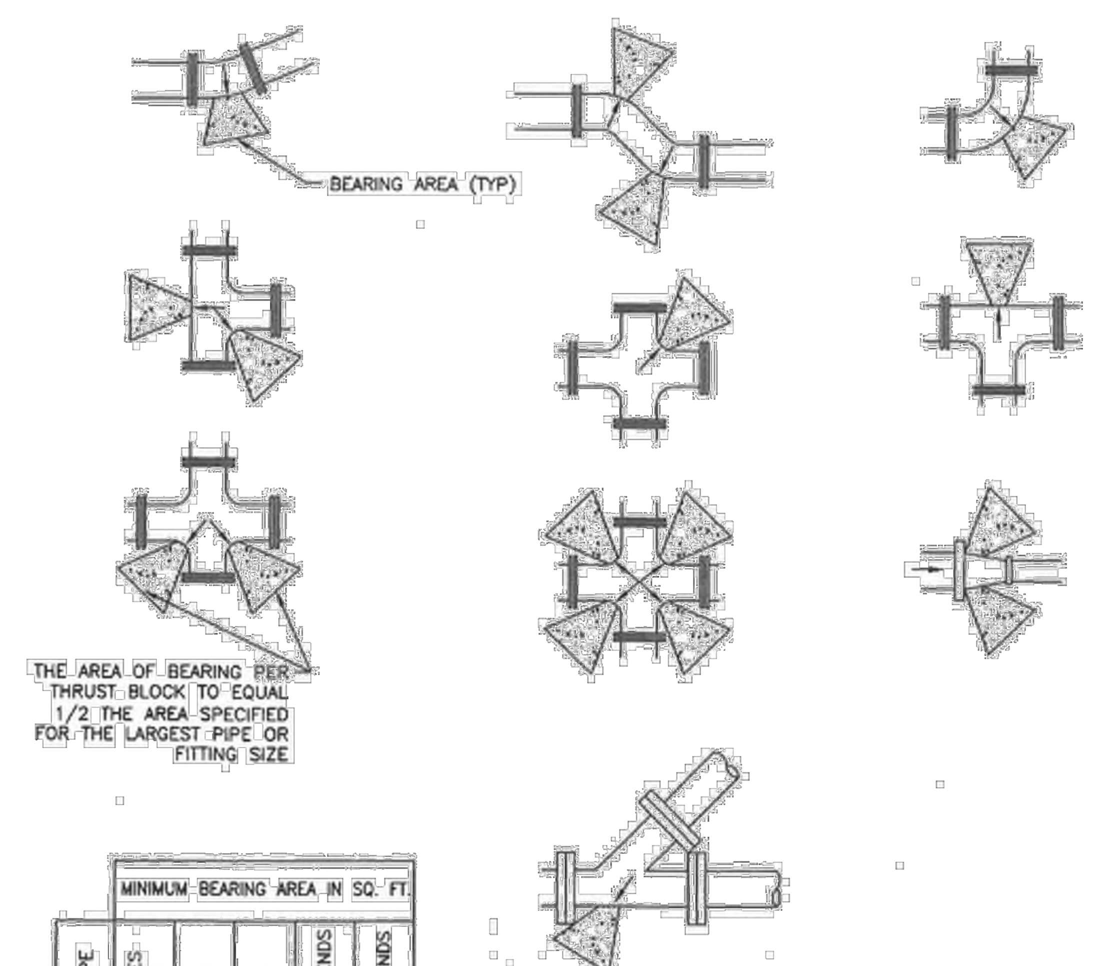
Direct bearing thrust block

1. **GENERAL**
   A. Thrust design for pipe sizes or configurations not shown require special design.
   B. Bearing areas, volumes, and special thrust blocking details shown on Drawings take precedence over this plan.
   C. Restraint sizing is based upon a maximum operating pressure of 150 psi and a test pressure of 200 psi, and a minimum soil bearing strength of 2,000 psf. Operating pressures in excess of 150 psi or soils with less than 2,000 pound bearing strength will require special design.
   D. Before backfilling around thrust block, secure inspection of installation by ENGINEER.

2. **PRODUCTS**
   A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
   B. Backfill: Common fill, APWA Section 31 05 13. Maximum particle size 2-inches.
   C. Thrust Bocks: Concrete Class 4000, APWA Section 03 30 04.
   D. Grease: Non-oxide poly-FM.

3. **EXECUTION**
   A. Pour concrete against undisturbed soil.
   B. Pipe Joints: Do not cover with concrete. Leave completely accessible.
   C. Grease: Apply grease to all buried metal surfaces. Wrap with polyethylene sheet and tape wrap.
   D. Locking restraint devices may be used in conjunction with concrete thrust blocking (at discretion of ENGINEER).
   E. Base Course and Backfill Placement: Maximum lift thickness is 8-inches before compaction. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.

561



SIZE OF PIPE	MINIMUM BEARING AREA IN SQ. FT. TEES, VALVES DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS	11 1/4° BENDS
4"	2	3	2	2	2
6"	4	5.5	3	2.5	2
8"	6.5	9.5	5	2.75	2.5
12"	14	20	11	5.5	3
14"	19	26.5	14.5	7.5	4
16"	24	34	18.5	9.5	6
20"	27	52	28.5	14.5	9
24"	53	74	41	21	12
30"	81	114	62	32	16

APWA Utah Chapter

Direct bearing thrust block

Plan 561
August 2010

NOTE
WHEN UNDISTURBED EARTH IS UNAVAILABLE FOR THRUST BLOCKING, REFER TO APWA 562 FOR ALTERNATIVE THRUST BLOCKING METHOD.

FOCUS ENGINEERING AND SURVEYING, LLC
6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
www.focusutah.com

LICENSED PROFESSIONAL ENGINEER
No. 8028850-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
DETAILS

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

DETAILS

Scale: N/A	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: D10	

Z:_2023\23-0359 Heritage Farms Phase 1\design 23-0359\dwg\Sheets\D10- DETAILS.dwg

MODIFICATIONS TO APWA PLAN DETAILS

APWA PLAN NO.	GRANTSVILLE CITY MODIFICATION
205.1	USE TYPE "A" UNLESS APPROVED OTHERWISE.
205.1	2.C. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
211	2.C. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
213	2.C. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
215	2.C. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
216	2.C. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
221.1	2.C. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
221.2	2.C. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
225	2.C. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
231	THE MINIMUM CONCRETE THICKNESS SHALL BE 6" AND THE MINIMUM BASE COURSE THICKNEWW SHALL BE 6'.
231	THE MINIMUM WIDTH OF THE SIDEWALK SHALL BE 5'.
231	2.C. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
235.1	THE MINIMUM CONCRETE THICKNESS SHALL BE 6" AND THE MINIMUM BASE COURSE THICKNEWW SHALL BE 6'.
235.1	THE MINIMUM WIDTH OF THE SIDEWALK SHALL BE 5'.
235.1	2.D. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
235.2	2.D. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
235.3	2.D. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
235.4	2.D. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
236.1	THE MINIMUM CONCRETE THICKNESS SHALL BE 6" AND THE MINIMUM BASE COURSE THICKNEWW SHALL BE 6'.
236.1	THE MINIMUM WIDTH OF THE SIDEWALK SHALL BE 5'.
236.1	2.D. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
236.2	2.D. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
236.3	2.D. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
237	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
238	GRANTSVILLE CITY IS REQUIRING TYPE "T".
245	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
256.2	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
274	2.C. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
275	2.A. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
275	REBAR HOOP SHALL BE EPOXY COATED.
292	MATCH GRANTSVILLE CITY STANDARD.
315.1	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
315.1	2.D. REBAR SHALL BE EPOXY COATED.

APWA PLAN NO.	GRANTSVILLE CITY MODIFICATION
315.1	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY.
315.1	2.B. BACKFILL AND BASE COURSE SHALL BE A-1-a OR AS APPROVED BY THE CITY.
315.2	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
315.2	2.D. REBAR SHALL BE EPOXY COATED.
315.2	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY.
315.2	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
316	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
316	2.D. REBAR SHALL BE EPOXY COATED.
316	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY.
316	2.B. BACKFILL AND BASE COURSE SHALL BE A-1-a OR AS APPROVED BY THE CITY.
317	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
317	2.D. REBAR SHALL BE EPOXY COATED.
317	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY.
320	DEBRIS GRATE INLET SHALL BE GALVANIZED
322	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
322	2.D. REBAR SHALL BE EPOXY COATED.
322	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY.
322	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
323.3	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
331.1	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
331.1	2.D. REBAR SHALL BE EPOXY COATED.
331.1	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY.
331.1	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
331.2	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
331.2	2.D. REBAR SHALL BE EPOXY COATED.
331.2	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY.

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APWA PLAN NO.	GRANTSVILLE CITY MODIFICATION
331.2	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
331.3	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
331.3	2.D. REBAR SHALL BE EPOXY COATED.
331.3	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY.
331.3	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
332	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
332	2.D. REBAR SHALL BE EPOXY COATED.
332	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY.
332	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH
332	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
335	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
335	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
335	2.D. REBAR SHALL BE EPOXY COATED.
341.1	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
341.1	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY
341.1	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
341.2	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
341.2	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY
341.2	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
362	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
381	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
382	PIPE ZONE MATERIAL FOR SANITARY SEWER PIPE SALL BE ¾" DRAIN ROCK. DETAIL – SEWER PIPE SHALL BE SDR-35.
382	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
411	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
411	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY.

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APWA PLAN NO.	GRANTSVILLE CITY MODIFICATION
411	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
413	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
431	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY. DETAIL - SEWER PIPE SHALL BE SDR-35 PIPE MATERIAL
432	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY. DETAIL - SEWER PIPE SHALL BE SDR-35 PIPE MATERIAL
441	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE OF A-1-a UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY.
505	ALL EXPOSED CONCRETE SHALL BE 4500 PSI MINIMUM STRENGTH.
505	THERE SHALL BE A MINIMUM OF 24" OF BASE COURSE UNDER THE STRUCTURE FOR THE DISTANCE OF 24" BEYOND THE BASE OF THE STRUCTURE UNLESS APPROVED OTHERWISE BY GRANTSVILLE CITY.
505	2.B. BACKFILL SHALL BE A-1-a OR AS APPROVED BY THE CITY.
511	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
521	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
522	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
523	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
525	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
527	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
529	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
541	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
542	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
543.1	2.B. BACKFILL SHALL BE A-1-a WITH 18" SEPARATION BETWEEN UNTILITIES.
543.2	2.B. BACKFILL SHALL BE A-1-a WITH 18" SEPARATION BETWEEN UNTILITIES.
546	6" LATERAL ON FH
551	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
552	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
571	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
572	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
573	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
574	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
575	REFER TO GRANTSVILLE CITY STANDARD DETAIL.
681	ADD 1" PVP PIPE FROM BOTTOM OF ROOT BALL TO SURFACE FOR ROOT WATERING. WRAP BOTTOM OF PIPE WITH CLOTH AND ½ CUBIC FOOT DRAIN ROCK.

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MIDVALE, UTAH 84047 PH: (801) 352-0075
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LICENSED PROFESSIONAL ENGINEER
No. 8028950-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
DETAILS

REVISION BLOCK

#	DATE	DESCRIPTION
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

DETAILS

Scale: N/A	Drawn: GIM
Date: 12/14/23	Job #: 23-0359

Sheet: D11

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GRANTSVILLE CITY
PRE-CONSTRUCTION NOTES

CHAIN OF COMMUNICATION

- FIRST CONTACT: BRAD PACE PUBLIC WORKS INSPECTOR
- SECOND CONTACT: GLEN MILLWARD (WATER), MARKUS SEAT (SEWER), TRAVIS DANIELS (FIRE CHIEF), JASON SMITH (ASSISTANT FIRE CHIEF).

PLEASE COMMUNICATE THROUGH E-MAIL TO MAINTAIN A WRITTEN RECORD.

MAIN CONSTRUCTION CONTACT

- PROJECT FOREMAN:

CONSTRUCTION SCHEDULE

- CONSTRUCTION STARTS:
- PLEASE PROVIDE A CONSTRUCTION SCHEDULE. HELPS CITY TO PLAN FOR WHAT IS HAPPENING. PROVIDE TO JAMES AND HE WILL DISSEMINATE TO OTHERS.

PERMITTING

CONSTRUCTION STAKING

- SURVEYING & STAKING:
- WE ARE HAVING SOME ALIGNMENT ISSUES ON CITY UTILITIES PLEASE MAKE SURE YOU GET ADEQUATE STAKING.

GEOTECHNICAL
- DOES THE CONTRACTOR HAVE A COPY OF THE GEOTECHNICAL REPORT AND IS HE FAMILIAR WITH THE REQUIREMENTS?
- DOES THE CITY INSPECTOR HAVE A COPY OF THE GEOTECHNICAL REPORT AND IS HE FAMILIAR WITH THE REQUIREMENTS? THE CITY INSPECTORS WILL BE GIVEN A COPY.
- GEO-TECH SHALL MONITOR THE EXCAVATION AND DETERMINE THE LOCATIONS THAT REQUIRE ADDITIONAL GRANULAR SUB-BASE AND SPECIFY THE DEPTH REQUIRED. CITY WOULD LIKE A DRAWINGS SHOWING THE AREAS THAT REQUIRE ADDITIONAL WORK.
- WHO WILL DO SOILS, COMPACTION TESTING?

SUBMITTALS:
- THE CONTRACTOR SHALL PROVIDE SUBMITTALS FOR MATERIAL TO THE CITY FOR APPROVAL PRIOR TO PURCHASE OF MATERIALS AND INSTALLATION. THE CITY WANTS TO CHECK THAT THE MATERIALS MEET SPEC BEFORE THEY ARE ORDERED SO THEY DON'T GET REJECTED WHEN THEY HAVE BEEN INSTALLED. SUBMIT TO CHRISTY MONTIERTH IN PUBLIC WORKS.
  THE CITY IS FINE WITH THE MATERIALS THAT HAVE PREVIOUSLY BEEN USED.

SEWER

- PIPE MATERIAL: PVC ASTM D-3034 SDR-35
- FOLLOW OSHA REQUIREMENTS FOR TRENCHING (4' VERTICAL WITH 1:1 SLOPING OR STEPPING OR USE TRENCH BOXES).
- SEWER LATERALS PER CITY STANDARD. (APWA 431).
- UTAH REQUIREMENT OF 10' HORIZONTAL SEPARATION BETWEEN SEWER AND WATER LATERALS.
- 18" MINIMUM VERTICAL SEPARATION BETWEEN WATER AND SEWER.
- CRUSHED ROCK ¾-INCH MINUS IN PIPE ZONE (3/8-INCH ROUNDED PEA GRAVEL IS NOT ALLOWED BY THE CITY).
- SEWER LATERALS, GRAVEL BEDDING TO BE EXTENDED TO DWELLING.
- NATIVE SOILS MAY BE USED ABOVE THE PIPE ZONE IF THEY ARE SUITABLE TO THE CITY AND CAN MEET COMPACTION REQUIREMENTS (BLENDING MAY BE REQUIRED).
- OFFSET TEES FOR SEWER LATERALS; GASKET TYPE.
- COMPACTION - 95% IN ROADS, 90% OFF-ROAD (ASTM D-1557, MODIFIED PROCTOR).
- INSTALLATION AS PER ASTM D-2321
- ALL PRECAST MANHOLES TO BE PROVIDED WITH RUBBER BOOTS AND STAINLESS-STEEL BANDS AT PIPE PENETRATIONS.
- INTERIOR PIPE PENETRATIONS IN ALL SEWER MANHOLES SHALL BE GROUTED.
- TRACER WIRE EXTENDING FROM MAIN TO LATERAL STUB ON ALL LATERALS AND EXTENDED TO SURFACE AT STUB MARKER. INCLUDE AN EXTRA 30-FEET TO EXTEND ALONG THE SERVICE TO THE DWELLING.
- STAMP (WHEN WET) OR PIN (DO NOT GRIND) GUTTER BOTH AT THE LIP AND TOP OF CURB AN "S" AT ALL SERVICE LATERALS (TWO PLACES FOR EACH SERVICE). MAKE SURE THESE ARE LOCATED ABOVE THE LATERALS IN THE PROPER LOCATIONS.
- EXTEND UTILITY LATERAL STUB MARKERS BEYOND THE 15-FOOT PU&DE (15-FEET BEHIND BACK OF WALK).
- END OF SEWER LATERALS SHALL BE PLUGGED.

TESTING:

- AIR TEST MANDATORY - CERTIFICATION REQUIRED.
- VACUUM TEST REQUIRED FOR THE MANHOLES.
- VIDEO INSPECTION AFTER FLUSHING - THE CITY DOES NOT NEED TO OBSERVE THE VIDEO INSPECTION. VIDEO RECORD TO BE PROVIDED FOR CITY REVIEW.
- PLEASE PROVIDE THE CITY 48 HOURS' NOTICE PRIOR TO TESTING.

EMERGENCY SERVICES

- INSTALL A SILT FENCE FIVE FEET OUT AROUND LIVE FIRE HYDRANTS AND ELECTRICAL TRANSFORMERS. THIS HELPS MAINTAIN A CLEAR SPACE AROUND THEM AND MAKES THEM VISIBLE IF EMERGENCY SERVICES ARE NEEDING TO FIND THEM DURING CONSTRUCTION.
- INSTALL TEMPORARY SIGNAGE AT THE BEGINNING OF WORK ON THE SITE.
- PARK ONLY ON ONE SIDE OF ACCESS ROADS SO EMERGENCY ACCESS IS CLEAR.
- COORDINATE WITH FIRE CHIEF FOR HIS INSPECTIONS. ROADS: FACE OF CURB IS PROPER DISTANCE AND HYDRANTS ARE PROPERLY PLACED. THE HEIGHT OF THE HYDRANTS WILL ALSO BE INSPECTED. 18" ABOVE GROUND FROM THE PUMPER NOZZLE.
- PAINT RED CURB TEN FEET EITHER DIRECTION FIRE HYDRANTS.

CULINARY WATER

- PIPE MATERIAL: PVC C900 DR18
- USE BEDDING SAND FOR BACKFILL IN THE PIPE ZONE (CITY NEEDS TO PREAPPROVE SAND BEDDING.) CITY WANTS CLEANED WASHED SAND. THE CITY WANTS A BUCKET AHEAD OF TIME SO THE CITY CAN WET IT AND SEE IF IT SETS UP LIKE CONCRETE OR NOT. IT CAN'T SET UP LIKE CONCRETE. THEY CAN PULL FROM THE STAKER PIT BUT THE SAND NEEDS TO BE WASHED. THE CITY CAN PROVIDE AN EXAMPLE FOR WHAT THEY ARE LOOKING FOR.
- WATER LATERALS SAND BEDDING NEEDS TO GO TO THE DWELLING.
- NATIVE SOILS MAY BE USED ABOVE THE PIPE ZONE IF THEY ARE SUITABLE TO THE CITY AND CAN MEET COMPACTION REQUIREMENTS (BLENDING MAY BE REQUIRED)
- VALVES SHALL BE CLUSTERED IN INTERSECTIONS
- VALVES & TEMP. BLOW-OFF ARE LOCATED AT THE DEAD-END MAIN OF PHASE LINES TO ALLOW FOR FLUSHING, ISOLATION AND CONTINUED SERVICE TO EXISTING CONNECTIONS WHEN FUTURE PHASES ARE CONSTRUCTED.
- METER AND SERVICES SHALL BE ¾-INCH POLYETHYLENE SDR11 IPS. INSTALL SERVICE LATERALS AND METERS WITHIN 5-FEET OF LOT LINES (AS CLOSE TO LOT LINE AS PRACTICABLE), ONE ON EACH SIDE OF COMMON LOT LINE (ALTERNATE WITH SECONDARY WATER).
- USE 150# CORP STOPS.
- 10' HORIZONTAL SEPARATION OF WATER AND SEWER LATERAL PER STATE REQUIREMENTS. WATER LATERAL TO BE LOCATED UPSLOPE OF SEWER LATERAL TO THE EXTENT PRACTICABLE.
- 18" MINIMUM VERTICAL SEPARATION BETWEEN WATER AND SEWER.
- 10' HORIZONTAL SEPARATION OF WATER AND STORMWATER.
- METER BARRELS SHALL BE 21-INCH DIAMETER WHITE CORRUGATED POLYETHYLENE
- METER TO BE INSTALLED 18 TO 22 INCHES BELOW THE LID.
- PLACE SAND AROUND THE WATER SERVICE SETTER BASES AND ABOVE TO STABILIZE SETTER AND PROVIDE INSULATION. GRAVEL IS NOT ALLOWED.
- TAPPING SADDLES SHALL BE BRASS WITH DOUBLE STAINLESS STEEL OR BRASS STRAPS WRAPPED WITH POLYSOCK.
- USE DUAL CHECK AND HEAVY-DUTY ANGLE VALVES FOR ALL SERVICES.
- INSTALL TRACER WIRE AND LOCATING TAPE ABOVE WATER MAIN.
- INSTALL TRACER WIRE FROM MAIN CONNECTION THROUGH METER PIT TO STUB MARKER WITH 30' EXCESS TO EXTEND TO THE DWELLING.
- STAMP (WHEN WET) OR PIN (DO NOT GRIND) GUTTER BOTH AT THE LIP AND TOP OF CURB WITH A "W" AT ALL SERVICE LATERALS (2 PLACES EACH SERVICE). MAKE SURE THESE ARE LOCATED ABOVE THE LATERALS IN THE PROPER LOCATIONS.
- THRUST BLOCKS NEED TO BE INSPECTED BY THE CITY PRIOR TO BACKFILL. SIZE BASED ON TEST PRESSURES
- MAKE SURE FIRE HYDRANTS NEED TO BE INSTALLED TO THE PROPER HEIGHT TO HELP THE BREAK A WAY FUNCTION WORKS.
- HYDRO FINDERS MUST BE INSTALLED.

TESTING:
- HYDROSTATIC PRESSURE TEST: 200 PSI FOR A MINIMUM OF 2 HOURS FOR MAIN ONLY AND 150 PSI IF TESTING WITH TAPPING SADDLES AND CORPORATIONS IN PLACE - INSPECTOR (GLEN MILLWARD OR ASSIGNED CITY INSPECTOR) MUST BE PRESENT FOR THE ENTIRE DURATION OF THE TEST.

DISINFECTION:
- HYPOCHLORITE POWDER
- CHLORINE RESIDUALS WILL BE TESTED ONCE BY THE CITY, BUT ANY RETESTS WILL BE PERFORMED BY THE CONTRACTOR/DEVELOPER
- ONLY ONE SERIES OF BAC-T TESTING WILL BE PERFORMED BY THE CITY TO ACCEPT WATER LINES AND ANY RETESTS WILL BE PERFORMED BY THE CONTRACTOR/DEVELOPER (PRELIMINARY INVESTIGATIVE TESTS BY THE CONTRACTOR/DEVELOPER ARE ENCOURAGED) THE CITY NEEDS TO DO THE GRAB ON ANY SAMPLES.
  PER AWWA C651, BAC-T TESTING SHALL BE COMPLETED FOR EVERY 1,200 FEET OF NEW WATER MAIN, AT THE END OF THE LINE, AND AT EACH BRANCH. TWO CONSECUTIVE SAMPLE SETS SHALL BE COLLECTED AT THE AFOREMENTIONED LOCATIONS AT LEAST 24 HOURS APART.

THE CITY WILL NOT SWING METER BOXES TO ACCOMMODATE THE DRIVEWAY. THINK ABOUT THE LATERAL LOCATIONS BEFORE LOCATING THE DWELLING.

STORM WATER

PIPE MATERIAL:
- REINFORCED CONCRETE (RCP) AND/OR ADS N-12-WT
- INSTALLATION AND COMPACTION TO FOLLOW MANUFACTURERS RECOMMENDATIONS.
- ALL CATCH BASIN BOXES INCLUDE A SUMP. FOR BOXES WITH SNOUTS THE SUMP DEPTH IS BASED UPON THE SNOUT MODEL MANUFACTURES RECOMMENDATION. FOR ALL OTHER BOXES THE DEPTH IS 12" BELOW THE FLOW LINE OF THE PIPES.

FRANCHISE UTILITIES

- GAS: DOMINION
- POWER: ROCKY MOUNTAIN POWER
- CABLE: COMCAST
- PHONE: CENTURY LINK
- PLEASE INSTALL STUBS FOR FUTURE PHASES FOR FRANCHISED UTILITIES SO THAT NEW STREETS AND CONCRETE DON'T HAVE TO BE CUT TO EXTEND TO A FUTURE PHASE.

SURFACE IMPROVEMENTS

PAVEMENT:
- ½" OR ¾-INCH ASPHALT AGGREGATE (1/2" IS THE CITY PREFERENCE). THE CITY STANDARD PAVEMENT SECTION IS 3-INCH ASPHALT ON 6-INCH UBC ON 8-INCH GRANULAR BORROW. (FABRIC)
- MARSHALL MIX REQUIRED PRIOR TO PAVING
- ROAD BASE AND CROSS-SECTION PER APPROVED DRAWINGS.
- PROVIDE PROPER SIGNAGE PER UTAH MUTCD.
- PROVIDE STOPS BARS AT STOP SIGNS.
- ADA TRUNCATED DOME INSERTS NEED TO BE YELLOW IN PED RAMPS. THE SPACING IS REQUIRED TO BE 2" TO FRONT OF RAMP AND NO MORE THAN 2" OFF THE SIDES OF THE WALKING PATH.
- INSTALL "NO PARKING" SIGNS IN TEMPORARY TURNAROUNDS. HOMEOWNERS ARE PARKING VEHICLES IN THEM.

CONCRETE:
- AIR TEST EVERY 50 YARDS UNLESS RESULTS ARE OUT OF SPEC (5% - 7%)
- 3 CYLINDERS EVERY 50 YARDS
- 4,500 PSI CONCRETE FOR ALL SURFACE IMPROVEMENTS.
- SIDEWALK SECTION IS 6" PCC ON 6" UBC.

EARTHWORK:
- PROVIDE COMPACTION AND SIEVE ANALYSIS ON ALL INITIAL PROCTORS AND NEW MATERIAL.
- COMPACTION TESTS EVERY 100 FEET OF PIPE TRENCH. VARY DEPTHS TO PROVIDE RESULTS THROUGHOUT STRATA.
- ROAD WORK AND BASE - BOTH SHOULDERS AND CENTERLINE WITH A MAXIMUM OF 200' BETWEEN TESTS.
- PROOF ROLL TRENCHES, SUBGRADE, AND BASE
- MINIMUM OF FOUR COMPACTION TESTS AROUND EACH MANHOLE AND CLEANOUT.
- USE APWA DETAIL 255 FOR PIPE TRENCH PATCHING.

TESTING AND QA/QC

- 48-HOUR NOTICE IS REQUIRED PRIOR TO ANY TESTING. MAKE SURE THE TEST IS SCHEDULED.
- INSPECTOR(S) REPRESENTING THE CITY MUST BE PRESENT FOR ALL TESTING INCLUDING THOSE PERFORMED BY AN INDEPENDENT AGENCY.
- PUBLIC WORKS HOURS ARE 7 AM TO 3:30 PM MONDAY THROUGH FRIDAY. HOWEVER, THE CITY WILL WORK WITH CONTRACTOR IF CONTRACTOR IS WORKING OUTSIDE THESE HOURS.
- COMPACT FILL IN 8" LIFT'S.

CONSTRUCTION WATER

- CONTRACTOR SHALL OBTAIN WATER FOR CONSTRUCTION FROM A CITY APPROVED FIRE HYDRANT USING A HYDRANT METER RENTED FROM THE CITY. THERE IS A $1600 REFUNDABLE DEPOSIT FOR HYDRANT METERS AND A CHARGE OF $6 PER 1000 GALLONS FOR ALL WATER USED. $75 A MONTH RENTAL CHARGE.
- PLEASE DON'T DAMAGE THE METERS AND DON'T TAKE ANYTHING OFF THE METER.

EROSION CONTROL / STORM WATER SYSTEM PROTECTION

- MINIMIZE POTENTIAL FOR OFF-SITE RUN-OFF
- MINIMIZE DISTURBED AREAS.
- KEEP WORKING AREA WETTED TO MINIMIZE DUST
- PROVIDE SILT FENCE TO PREVENT SEDIMENT TRANSPORT DOWNSTREAM.
- CONTAIN ALL SEDIMENT ON SITE.
- MAINTAIN BMPS AS PER SWPPP.
- SWPPP TO BE ON-SITE AT ALL TIMES.
- PROOF OF COVERAGE UNDER UPDES REQUIRED
  - CITY WILL NEED A COPY OF THE NOI.
- THE CITY IS ON COMPLIANCE GO. MAKE SURE UPDATES ARE LOADED IN COMPLIANCE GO. ADD THE CITY PUBLIC WORKS E-MAIL CONTACT. HAVE A RSI AND PTOE ON SITE.
- THE CITY WILL CHECK WITH THE CONTRACTOR AFTER AN EVENT.
- THE CITY WILL SHARE INSPECTION REPORTS WITH THE CONTRACTOR.
- INSPECT AFTER RAINFALL AND OTHER EVENTS (WEATHER, AND CONSTRUCTION AROUND BMPS) THAT MAY AFFECT BMPS.
- MAKE SURE TO FOLLOW THE SWPPP AS SHOWN ON THE PLANS.
- PROVIDE VEGETATIVE COVER ON COMPLETED OR LONG-TERM TEMPORARY GRADING WITHIN 14 DAYS.
- PUT THE SWPPP SIGN ON SITE AND VISIBLE SO THE STATE CAN SEE IT ON A DRIVE BY.

CONSTRUCTION DEBRIS DISPOSAL

- MAINTAIN A WORK SITE THAT IS CLEAN AS POSSIBLE AND PROPERLY DISPOSE OF DEBRIS AND TRASH.
- NO GARBAGE PITS ALLOWED
- NO ON-SITE CONCRETE WASHOUT ALLOWED UNLESS HAULED FROM SITE AT END OF PROJECT OR OTHER PROVISIONS ARE MADE.

SITE SAFETY

- CONFORM TO OSHA STANDARDS.
- CLOSE TRENCHES AT NIGHT.
- SECURE OPEN TRENCHES AND PLUG LINES.

SECURITY

- SECURE CONSTRUCTION EQUIPMENT WHEN NOT IN USE.

SANITATION

- CLEAN AND PROPERLY MAINTAINED PORT-A-JOHN(S) ON SITE AT ALL TIMES.

HAZARDOUS MATERIAL STORAGE ON SITE

- IF THERE ARE HAZARDOUS MATERIALS ON SITE, MAKE SURE THE CITY HAS APPROVED IT AND THAT IT HAS SECONDARY CONTAINMENT. THE FIRE CHIEF NEEDS TO KNOW WHAT IS ON SITE, HOW IT IS SECURED AND WERE IT IS LOCATED.

SITE ACCESS

AS SHOWN ON THE SWPPP DON'T DEVIATE FROM IT.

CONSTRUCTION OBSERVATION

- CITY PERSONNEL WILL INSPECT REGULARLY AS NEEDED.

CONSTRUCTION DRAWINGS

- KEEP AN ACCURATE SET OF AS-BUILTS.
- PROVIDE COPIES OF AS-BUILTS AT COMPLETION OF PROJECT PRIOR TO OCCUPANCY.
- MAKE SURE CHANGES IN AS-BUILTS ARE BUBBLED AND CLEAR AS WHAT CHANGES HAVE OCCURRED.
- CITY HAS STORM BASIN PLAN CERTIFICATION THE DESIGNING ENGINEER NEEDS TO SIGN AND STAMP.
- PROVIDE DIGITAL SET OF AS-BUILTS (PDF, DWG AND SHAPE FILES ARE REQUIRED.) FOR CITY PRIOR TO OCCUPANCY.
- CITY WILL PROVIDE A LIST OF ITEMS REQUIRED IN THE SHAPE FILE.
- KRISTY WILL PROVIDE HER REQUIREMENTS FOR THE CONSTRUCTION DRAWINGS.
- IF THERE ARE QUESTIONS ABOUT THE PLANS AND CONDITIONS ON THE GROUND FIRST REQUEST THE DESIGN ENGINEER'S INTERPRETATION AND BRING THAT INTERPRETATION TO THE CITY WHEN QUESTIONS COME UP. THE ONSITE INSPECTORS CANNOT MAKE APPROVALS TO CHANGES. DOCUMENT CHANGES.

CONSTRUCTION DRAWINGS:

DON'T PRINT ANY PLANS UNTIL ALL OF THE CHANGES HAVE BEEN MADE AND YOU HAVE RECEIVED A COPY OF THE SIGNED PLANS FROM KRISTY CLARK.
- PROVIDE KRISTY CLARK WITH ONE 24X36 AND FOUR 11X17'S.

PROJECT CONCERNS OR QUESTIONS:

SHARE THIS DOCUMENT WITH THOSE ON SITE TO USE AS CONSTRUCTION STANDARDS.

END

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ENGINEERING AND SURVEYING, LLC
6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
www.focusutah.com

LICENSED PROFESSIONAL ENGINEER
No. 8028650-2202
THOMAS M. ROMNEY
12/14/23
STATE OF UTAH

HERITAGE FARMS PHASE 1
GRANTSVILLE CITY, UT
PRE-CON NOTES

REVISION BLOCK

#	DATE	DESCRIPTION
1	-----	-----
2	-----	-----
3	-----	-----
4	-----	-----
5	-----	-----
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PRE-CON NOTES

Scale: N/A	Drawn: GIM
Date: 12/14/23	Job #: 23-0359
Sheet: D12	

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