

<div>STAGE 2</div>	PROJECT NO: 23002731	PROJECT NAME CARRERA COMMONS SUBDIVISION	LOCATION: LOT 5 OF CURTIS AND MAJOR ADDITION SECTION 20, T:13N., R:19W., MISSOULA COUNTY PREPARED FOR: HOMES FOR MISSOULA LLC	DESIGNED: <u>CD</u> DRAFTED: <u>LTM</u> CHECKED: <u>CD</u> DATE: <u>MAR. 2024</u>	REVISIONS	DATE	
	SHEET: 0 OF 4	SHEET TITLE: UTILITY CONSTRUCTION PLANS CITY TITLE SHEET					



1817 SOUTH AVE. W. STE. A
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FAX: 406.721.5224
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UTILITY CONSTRUCTION PLANS

CARRERA COMMONS SUBDIVISION
LOCATED IN SECTION 20, T13N, R19W, P.M.M., MISSOULA COUNTY, MONTANA.



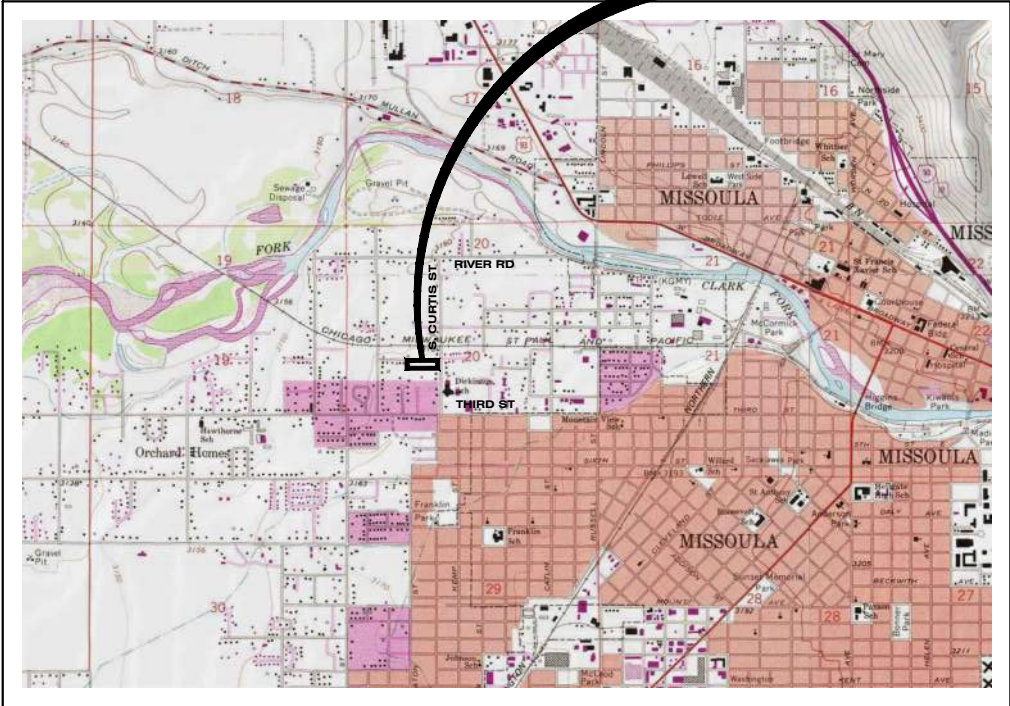
CALL UTILITY NOTIFICATION
CENTER OF MONTANA
1-800-424-5555
CALL FOR THE MARKING OF
UNDERGROUND UTILITIES
2 BUSINESS DAYS BEFORE
YOU DIG, GRADE, OR EXCAVATE



SHEET INDEX

DESCRIPTION	SHEET NO.
LEGEND & NOTES SHEET	SHEET 2 OF 4
PLAN - SEWER SERVICES	SHEET 3 OF 4
PLAN & PROFILE - WATER	SHEET 4 OF 4
DETAIL SHEET	SHEET D1 OF D2
DETAIL SHEET	SHEET D2 OF D2

VICINITY MAP



MISSOULA, MISSOULA COUNTY



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DATE	
REVISIONS	

DESIGNED:	CD
DRAFTED:	LTM
CHECKED:	CD
DATE:	MAR. 2024

LOCATION:	LOT 5 OF CURTIS AND MAJOR ADDITION SECTION 20, T.13N., R.19W., MISSOULA COUNTY
PREPARED FOR:	HOMES FOR MISSOULA LLC

PROJECT NAME	CARRERA COMMONS SUBDIVISION
PROJECT NO.	23002731
SHEET:	1 OF 4
SHEET TITLE:	UTILITY CONSTRUCTION PLANS COVER SHEET

STAGE 2

PROJECT STATUS

THESE PLANS REQUIRE, AT A MINIMUM, APPROVAL FROM THE AGENCIES LISTED BELOW. THEREFORE, THE OWNER & CONTRACTOR ARE ADVISED THAT BIDS & CONTRACTS SHOULD NOT BE FINALIZED UNTIL INDICATED BELOW.

AGENCIES REVIEW STATUS:	REFERENCE #	APPROVAL DATE
CITY OF MISSOULA DEV. SERVICES		
MONTANA DEPT. OF ENV. QUALITY		

PLAN SET IS READY FOR CONSTRUCTION ☐ YES ☒ NO

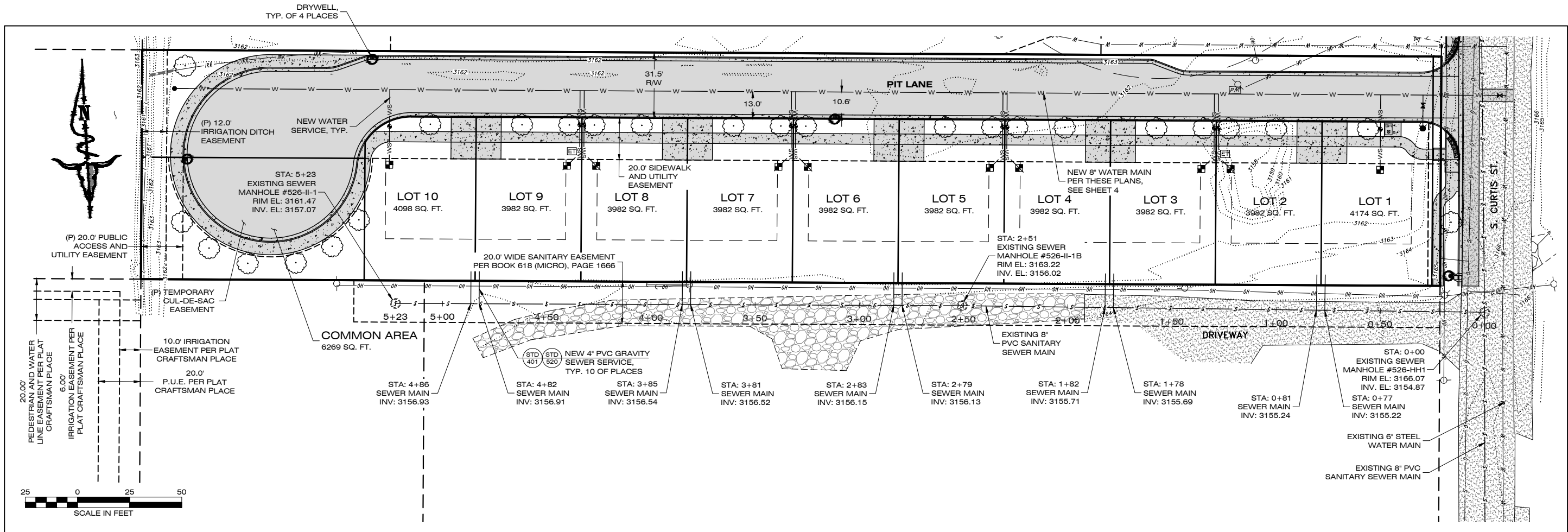
AS-BUILT DATE:
PROJECT HAS BEEN CONSTRUCTED IN GENERAL CONFORMANCE WITH THE ABOVE APPROVALS, STATED SPECIFICATIONS, AND SHOWN HERE IN, UNLESS OTHERWISE SPECIFIED.

PROJECT NOTES: MISSOULA CITY PUBLIC WORKS
STANDARDS & SPECIFICATIONS
(MCPWSS) EDITION JAN. 2024

DEVELOPER: WADE GOODEN
email: wade@goodenconstruction.com

CITY OF MISSOULA CHECKLIST DATA

LINEAR FOOTAGE OF SEWER GRAVITY MAINS ESTIMATED FOR CONSTRUCTION
LINEAR FOOTAGE OF SEWER FORCE MAINS ESTIMATED FOR CONSTRUCTION
NUMBER OF PROPOSED SEWER STUBS TO BE CONSTRUCTED
LINEAR FOOTAGE ESTIMATED FOR WATER MAINS TO BE INSTALLED
WATER STUBS TO BE CONSTRUCTED



PLAN VIEW

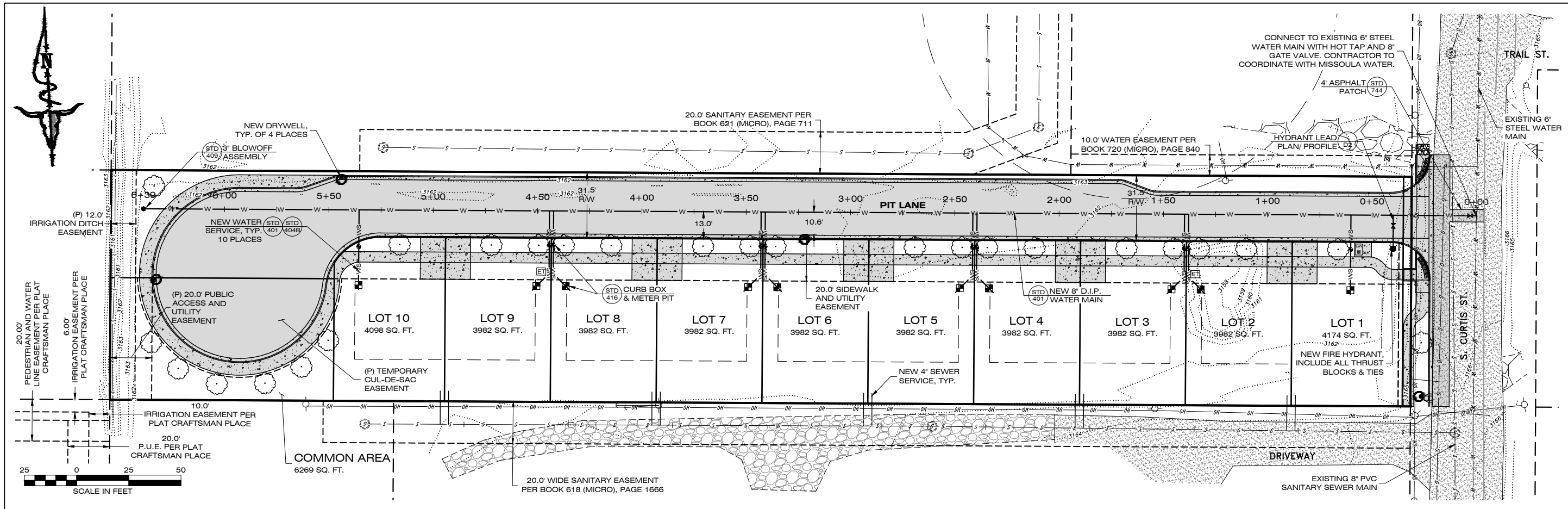
REVISIONS	DATE

DESIGNED: CD
DRAFTED: LTM
CHECKED: CD
DATE: MAR. 2024

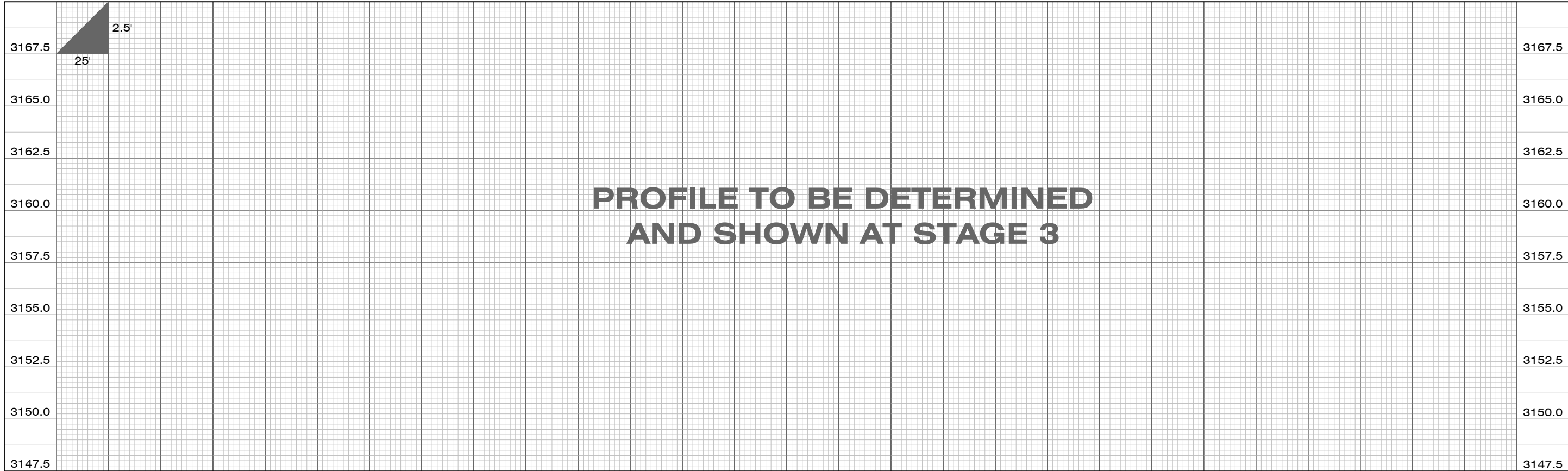
LOCATION: LOT 5 OF CURTIS AND MAJOR ADDITION SECTION 20, T.13N., R.19W., MISSOULA COUNTY
PREPARED FOR: HOMES FOR MISSOULA LLC

PROJECT NO. 23002731
PROJECT NAME CARRERA COMMONS SUBDIVISION
SHEET: 3 OF 4
SHEET TITLE: UTILITY CONSTRUCTION PLANS
SEWER PLAN SHEET

STAGE 2



PLAN VIEW



PROFILE VIEW

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DATE: _____

REVISIONS: _____

DESIGNED: CD

DRAFTED: LTM

CHECKED: CD

DATE: MAR. 2024

LOCATION: LOT 5 OF CURTIS AND MAJOR ADDITION SECTION 20, T.13N., R.19W., MISSOULA COUNTY

PREPARED FOR: HOMES FOR MISSOULA LLC

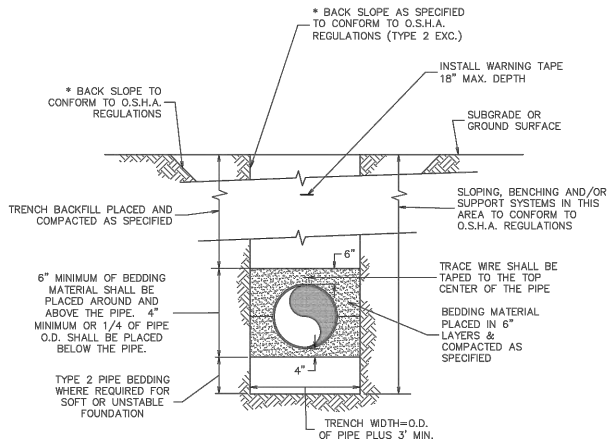
PROJECT NAME: CARRERA COMMONS SUBDIVISION

PROJECT NO.: 23002731

SHEET: 4 OF 4

SHEET TITLE: UTILITY CONSTRUCTION PLANS WATER PLAN AND PROFILE SHEET

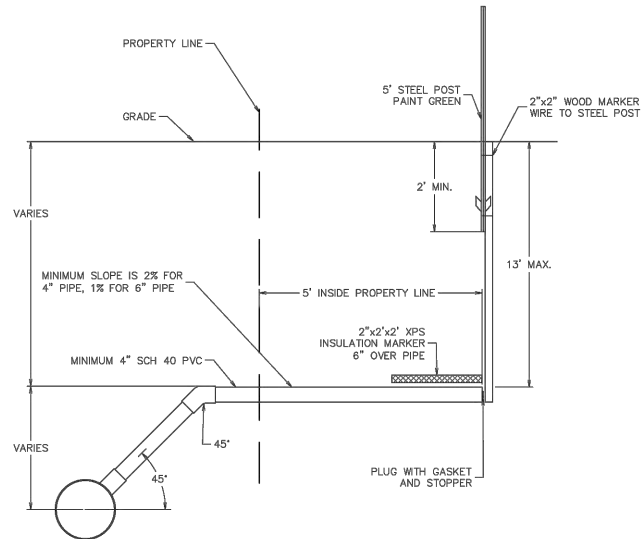
STAGE 2



* SEE O.S.H.A. CONSTRUCTION STANDARDS FOR EXCAVATIONS, SECTION 1926, SUBPART P.

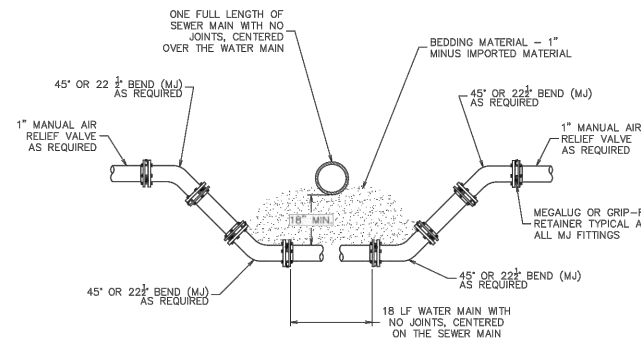
GENERAL NOTES:

- CONSTRUCTION MATERIALS AND PROCEDURES SHALL COMPLY WITH MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS (MPWSS), 7TH EDITION, APRIL 2021, AS MODIFIED BY THE MISSOULA CITY PUBLIC WORKS STANDARDS AND SPECIFICATIONS MANUAL, APPENDIX 2-A (STANDARD MODIFICATIONS TO MPWSS), CURRENT EDITION.
- CASING PIPE (IF ANY) INSTALLED BY TRENCH CONSTRUCTION METHODS SHALL BE BEDDED AS SHOWN IN THIS DETAIL.



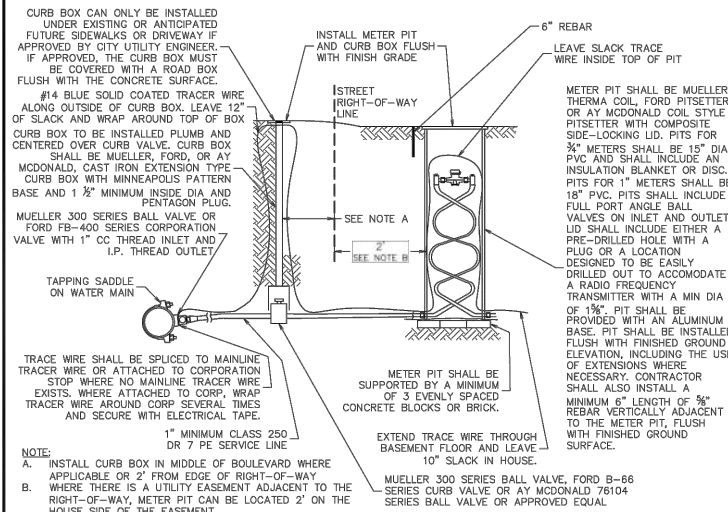
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- MAXIMUM LINE DEPTH IS 13'. DEVIATIONS MAY BE ALLOWED BY CITY ENGINEERING.
- CONNECTIONS TO EXISTING SEWER MAINS SHALL BE TAPPED AT THE CONTRACTOR'S EXPENSE, AND PRECISO FAST FIT SADDLES OR APPROVED EQUAL SHALL BE USED. WHEN THE SEWER MAIN AND SEWER SERVICE LATERALS ARE INSTALLED UNDER ONE CONTRACT, IN-LINE TEES ONLY SHALL BE PROVIDED FOR THE SERVICE LATERALS. TEES SHALL BE ROLLED TO A 45 DEGREE ANGLE.
- AN EXCAVATION PERMIT IS REQUIRED FOR EACH STUB.
- SEWER SERVICE STUBS SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS OR AS SPECIFIED BY CITY ENGINEERING.
- IN ORDER TO KEEP SERVICE LINES DEEP ENOUGH TO SERVE EACH HOME AND PASS UNDER WATER MAINS, A 22 DEGREE FITTING MAY BE ALLOWED BY THE CITY ENGINEER AT THE SEWER MAIN TAP.
- ALL COMMERCIAL SERVICE STUBS SHALL BE 6" MINIMUM DIAMETER.
- ALL SINGLE DWELLING UNIT SERVICE STUBS SHALL BE 4" MINIMUM DIAMETER.



GENERAL NOTES:

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GENERAL NOTES:

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- WATER SERVICES SHALL BE BURIED A MINIMUM OF 6" DEEP.
- THIS DETAIL APPROPRIATE FOR 3/4" OR 1" METERS. CONTRACT CITY UTILITY ENGINEER FOR RESIDENTIAL METERS LARGER THAN 1". IRRIGATION METERS LARGER THAN 1" MUST BE INSTALLED IN A CONCRETE PIT PER STD-412 OR OTHER APPROVED DRAWING.
- PLASTIC METER PITS ARE NOT TRAFFIC RATED. METER PITS ARE NOT ALLOWED IN SIDEWALKS OR IN A TRAFFIC AREA UNLESS APPROVED BY THE CITY UTILITY ENGINEER. IF APPROVED BY THE CITY UTILITY ENGINEER, INSTALLATION SHALL HAVE A FLUSH MOUNTED, TRAFFIC RATED CASTING INSTALLED OVER THE PIT. THE CASTING DIA SHALL BE AT LEAST 3" LARGER THAN THE METER PIT. THE METER TRANSMITTER SHALL BE INSTALLED ON THE BUILDING WALL WITH A 1/2" CONDUIT BETWEEN THE PIT AND THE WALL.
- NO OBSTRUCTIONS SHALL BE PLACED WITHIN A MIN 4' RADIUS AROUND THE METER PIT TO ENSURE ACCESS TO THE PIT.
- NO PRVS, CHECK VALVES, OR BACKFLOW DEVICES ALLOWED IN METER PIT.
- THIS DIAGRAM IS NOT PROJECT SPECIFIC AND IS NOT INTENDED TO BE A DESIGN DRAWING. THE OWNER IS RESPONSIBLE TO COMPLY WITH ALL APPLICABLE BUILDING CODES. THIS DETAIL MAY CHANGE AT ANY TIME AND IT IS THE OWNER'S RESPONSIBILITY TO OBTAIN THE MOST CURRENT VERSION OF THIS AND OTHER CITY REQUIREMENTS.
- IF PROPERTY DOES NOT FRONT A STREET WITH A WATER MAIN, CONTACT CITY FOR SPECIFIC REQUIREMENTS RELATED TO EASEMENTS AND METER PIT LOCATIONS.
- WHERE NEW WATER SERVICE LINE TRANSITIONS TO EXISTING GALVANIZED SERVICE LINE, THE NEW TRACER WIRE SHOULD BE ATTACHED TO THE GALVANIZED PIPE USING A CHRISTY'S OR APPROVED EQUAL UL APPROVED BRONZE GRONDING CLAMP SUITABLE FOR DIRECT BURIAL.
- IF METER PIT IS INSTALLED TOO LOW THE CONTRACTOR/DEVELOPER SHALL BE RESPONSIBLE FOR THE PURCHASE AND INSTALLATION OF A METER RESETTER TO BRING TO FINISHED GRADE.

Typical Utility Trench Detail

Engineering Division

Approved By
Utilities Engineer
Logan McInnis, PE

Adopted: 09/28/2020
Revised: 01/01/2023

STD - 401

Standard Sewer Service Stub

Engineering Division

Approved By Utility
Project Manager
Ross Mollenhauer, PE

Adopted: 09/28/2020
Revised: 01/01/2023

STD - 520

Typical Water Main Crossing @ Sewer Mains

Engineering Division

Approved By
Utilities Engineer
Logan McInnis, PE

Adopted: 09/28/2020
Revised: 01/01/2023

STD - 402

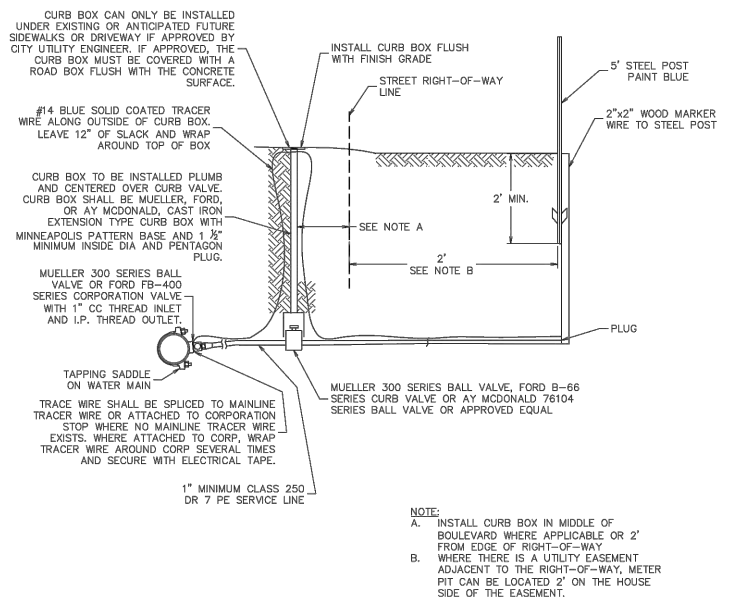
Typical Residential Water Service Detail

Engineering Division

Approved By
Utilities Engineer
Logan McInnis, PE

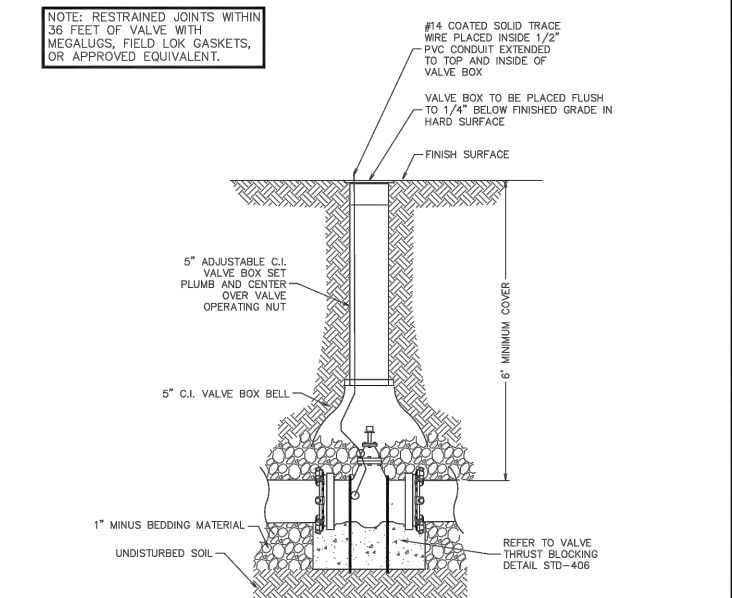
Adopted: 09/28/2020
Revised: 01/01/2023

STD - 404A



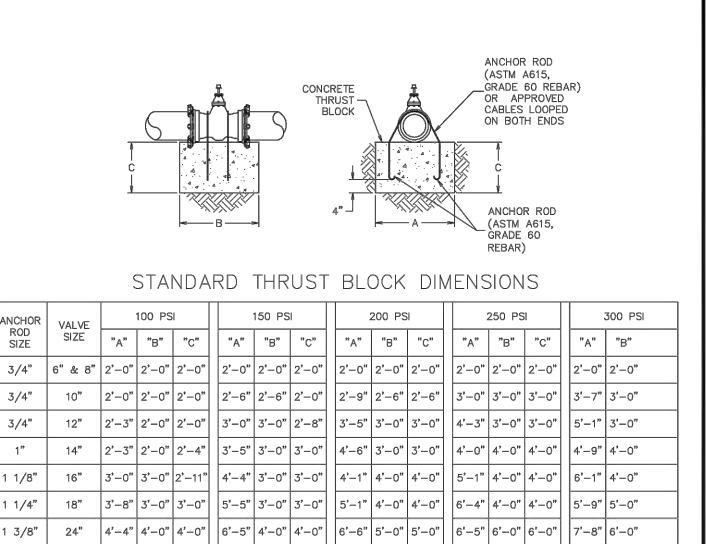
GENERAL NOTES:

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- WATER SERVICES SHALL BE BURIED A MINIMUM OF 6" DEEP.
- FOR WATER SERVICES STUBS LARGER THAN 2" SEE CITY STANDARD DETAIL STD-413.
- IF PROPERTY DOES NOT FRONT A STREET WITH A WATER MAIN, CONTACT CITY FOR SPECIFIC REQUIREMENTS RELATED TO EASEMENTS.
- SERVICE LINE SHALL END AT WOOD POST; NO ABOVE GROUND WHIPS ALLOWED. IT IS THE INSTALLER'S RESPONSIBILITY TO REMOVE AIR FROM THE SERVICE LINES AS NECESSARY.
- WATER SERVICE STUBS SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS OR AS SPECIFIED BY CITY ENGINEERING.



GENERAL NOTES:

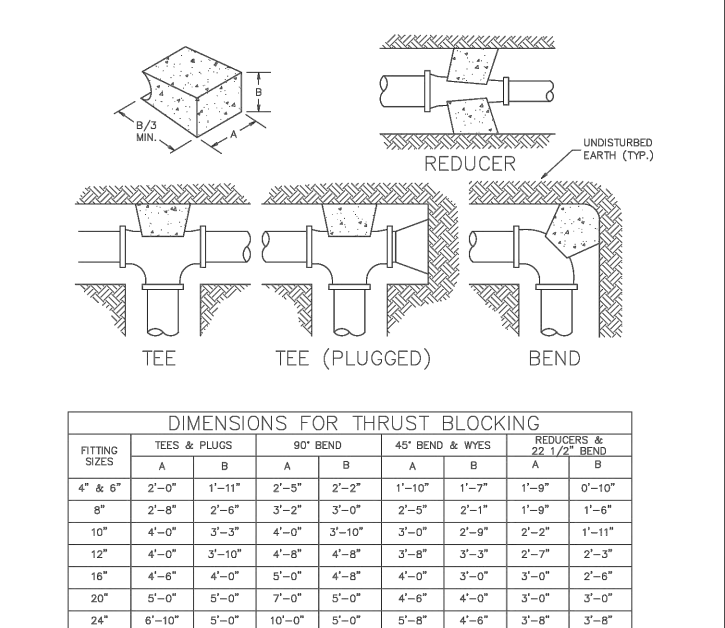
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NOTE: PRESSURES SHOWN ABOVE ARE MAXIMUM WORKING PRESSURE IN SYSTEM.

GENERAL NOTES:

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- DIAGRAM DEPICTS GATE VALVES ONLY. VALVES 12 INCH AND LARGER TO BE BUTTERFLY, AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS WITH BLOCKS CENTERED UNDER LOAD BEARING PORTION OF VALVE.
- STEEL CABLE (3/4" MINIMUM DIA. OR AS APPROVED BY THE ENGINEER) W/ANCHOR BOLTS MAY BE SUBSTITUTED FOR ANCHOR ROD.



GENERAL NOTES:

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- THIS TABLE IS BASED ON 2000 PSF SOIL BEARING PRESSURE AND 150 PSI MAIN PRESSURE.
- WRAP ALL FITTINGS WITH POLYETHYLENE PRIOR TO PLACING CONCRETE.

Typical Residential Water Service Stub Detail

Engineering Division

Approved By
Utilities Engineer
Logan McInnis, PE

Adopted: 09/28/2020
Revised: 01/01/2023

STD - 404B

Valve Detail

Engineering Division

Approved By
Utilities Engineer
Logan McInnis, PE

Adopted: 09/28/2020
Revised: 01/01/2023

STD - 405

Valve Thrust Blocking Detail

Engineering Division

Approved By
Utilities Engineer
Logan McInnis, PE

Adopted: 09/28/2020
Revised: 01/01/2023

STD - 406

Thrust Block Detail

Engineering Division

Approved By
Utilities Engineer
Logan McInnis, PE

Revised: 01/01/2023

STD - 407

IMEG

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www.imegcorp.com 59801

DATE: _____

REVISIONS: _____

DESIGNED: CD

DRAFTED: LTM

CHECKED: CD

DATE: MAR. 2024

LOT 5 OF
COURTIS AND MAJOR ADDITION
SECTION 20, T.13N., R.19W.,
MISSOULA COUNTY

PREPARED FOR:
HOMES FOR MISSOULA LLC

PROJECT NAME: **CARRERA COMMONS SUBDIVISION**

PROJECT NO: **23002731**

SHEET: **D1 OF D2**

SHEET TITLE: **UTILITY CONSTRUCTION PLANS
DETAIL SHEET**

STAGE 2