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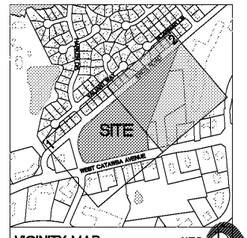

VICINITY MAP NTS

SURVEY DISCLAIMER

ALTA/NSPS LAND TITLE SURVEY ISSUE DATE: NOVEMBER 01, 2017, PROVIDED BY ATLAS SURVEYING, LLC PINEVILLE, NORTH CAROLINA PHONE: 980-849-8475, WWW.ATLASSURVEYING.COM

LEGEND

SYM.		DETAIL
	EXISTING WATER MAIN	-/-
	EXISTING SSWR MANHOLE	-/-
	EXISTING SSWR LINE	-/-
	PROPOSED WATER LINE	-/-
	PROPOSED METER AND BACKFLOW PREVENTION DEVICES	1,2,9,10,11/C-806
	PROPOSED SANITARY SEWER LINE/LATERAL	-/-
SSMH	PROPOSED SANITARY SEWER MANHOLE	3/C-806
SSCO	PROPOSED SANITARY SEWER CLEANOUT	3/C-805
	PROPOSED FIRE HYDRANT	4/C-806
	EXISTING FIRE HYDRANT	-/-
	BORING ENCASEMENT	-/-

UTILITY NOTES

1. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR THE COMPLETE INSTALLATION AND TESTING OF THE UTILITIES PER APPLICABLE BUILDING CODES AND NCDEQ REQUIREMENTS. ALL PIPES AND FITTINGS SHALL BE INSPECTED BY THE BUILDING INSPECTOR PRIOR TO BEING COVERED.
2. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND STANDARDS IMPOSED BY THE STATE OF NORTH CAROLINA AND BY THE LOCAL UTILITY AUTHORITY.
3. ALL NEW WATER LINES SHALL HAVE A MINIMUM COVER OF 36" ABOVE TOP OF PIPE.
4. CONTRACTOR SHALL ADJUST LOCATION OF PROPOSED WATER LINES AS REQUIRED TO AVOID CONFLICTS WITH STORM SEWER OR OTHER UTILITIES.
5. WHERE A WATER LINE CROSSES A STORM SEWER LINE OR UTILITY OTHER THAN SANITARY SEWER, A MINIMUM 12-INCHES VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE OUTSIDE OF THE WATER LINE AND OUTSIDE OF THE CROSSING UTILITY.
6. LATERAL SEPARATION OF SEWERS AND WATER MAINS: WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT LATERAL SEPARATION, IN WHICH CASE (1) THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER; OR (2) THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
7. CROSSING A WATER MAIN OVER A SEWER: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION, IN WHICH CASE BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
8. CROSSING A WATER MAIN UNDER A SEWER: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
9. LOCATION, SIZE AND INVERT ELEVATIONS OF SANITARY SEWER SHALL BE COORDINATED WITH THE APPROVED PLUMBING PLANS FOR THE BUILDING.
10. DRAIN CLEANOUTS SHALL BE SPACED AT A MAXIMUM OF 100 FEET ON ALL 4-INCH AND 6-INCH DRAIN LINES.
11. THE CONTRACTOR SHALL COORDINATE ALL NEW UTILITY TAP LOCATIONS WITH THE LOCAL UTILITY AUTHORITY AND SHALL OBTAIN AN ENCROACHMENT AGREEMENT OR STREET CUT PERMIT, AS APPLICABLE.
12. INSTALLATION AND REPAIR OF UNDERGROUND ELECTRICAL, GAS, AND TELEPHONE UTILITIES, AND REPAIR OF ALL DISTURBED AREAS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE DISTURBED AREAS BENEATH EXISTING OR NEW ASPHALT SHALL BE RE-COMPACTED TO THE REQUIRED SPECIFICATIONS, AND THE STONE BASE AND ASPHALT SHALL BE RETURNED TO IT'S ORIGINAL CONDITION.
13. REFER TO MECHANICAL/PLUMBING/ELECTRICAL SITE PLANS FOR ADDITIONAL UTILITY INFORMATION AND REQUIREMENTS.
14. CONTRACTOR SHALL INSTALL UNDERGROUND UTILITIES SUCH THAT NO TRENCH EXCAVATION SHALL OCCUR WITHIN THE DRIP LINE OF EXISTING TREES WHICH ARE TO REMAIN. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY LOCATIONS WHERE THIS REQUIREMENT CANNOT BE MET, PRIOR TO BEGINNING THE WORK.
15. CONTRACTOR SHALL INSTALL THRUST BLOCKS PER DETAIL 2/C-805 AT ALL BENDS AND TEES ON ALL WATER LINES 4" AND GREATER. THRUST BLOCKS SHALL BEAR ON UNDISTURBED TRENCH WALL. AT LOCATIONS IN WHICH THIS CANNOT BE ACCOMPLISHED, WATERLINE SHALL BE CONSTRUCTED WITH RESTRAINED JOINT DUCTILE IRON PIPE.
16. GENERAL CONTRACTOR SHALL INSTALL UTILITIES TO WITHIN 5' OF BUILDING. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR UTILITIES IN THE BUILDING AND WITHIN 5' OF THE BUILDING.
17. FIRE SERVICE MAINS INSTALLED BY SITE CONTRACTOR SHALL BE TERMINATED AT A FLANGE, CAP, PLUG, OR VALVE LOCATED INSIDE THE BUILDING, ONE FOOT ABOVE THE FINISHED FLOOR. ALL FIRE SERVICE MAINS SHALL COMPLY WITH THE NFPA STANDARDS FOR FIRE SERVICE MAINS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF BUILDING AND SITE UTILITY CONTRACTORS SO THAT HYDROSTATIC TESTING OF THE FIRELINE MAY OCCUR TO THE TERMINATION POINT WITHIN THE BUILDING.
18. UNLESS OTHERWISE NOTED ON PLANS, SEWER UNITS SHALL BE CONSTRUCTED OF SDR-35 PVC PIPE MEETING THE REQUIREMENTS OF ASTM D-3034 WITH BELL AND SPIGOT ENDS FOR GASKETED JOINTS. CLEANOUT RISER PIPE AND FITTINGS SHALL BE PVC SCHEDULE 40, DRAIN, WASTE AND VENT (DWV) WITH ASTM D 2466 SOCKET TYPE FITTINGS. INSTALLATION OF ALL THERMOPLASTIC SEWER PIPE SHALL BE IN ACCORDANCE WITH ASTM D-2321.
19. DUCTILE IRON WATER PIPE SHALL CONFORM TO ANSI/AWWA SPECIFICATION C151/A21.51 WITH CEMENT MORTAR LINING PER AWWA C-104, AND SHALL BE PRESSURE CLASS 350.
20. POLYVINYL CHLORIDE (PVC) WATER PIPE SIZE 4" AND LARGER SHALL CONFORM TO ANSI/AWWA C900, DR 14, CLASS 305. PVC WATER PIPE SIZE 3" AND SMALLER SHALL BE PVC 1120 MEETING THE REQUIREMENTS OF ASTM D-2241, SDR 21, WITH A PRESSURE RATING OF 200 PSI.
21. WATERLINE FITTINGS SHALL BE AWWA C153, DUCTILE IRON, COMPACT PATTERN WITH CEMENT MORTAR LINING PER AWWA C-104.
22. REFER TO DETAIL 15/C-805 FOR PIPE TRENCHING, BEDDING, AND BACKFILL REQUIREMENTS.
23. CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS PRIOR TO BEGINNING CONSTRUCTION OF WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS TO ALLOW FOR VISUAL INSPECTION BY THE ENGINEER.
24. WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS SHALL BE TESTED IN ACCORDANCE WITH NCDEQ REGULATIONS IN THE PRESENCE OF THE ENGINEER, CONTRACTOR SHALL FURNISH ALL TEST RESULTS TO THE ENGINEER.

BACKFLOW PREVENTION NOTES

1. 2" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY AS APPROVED BY CHARLOTTE WATER (CW) AND INSTALLED BY CONTRACTOR DURING CONSTRUCTION. ASSEMBLY TO BE INSTALLED ABOVE-GROUND WITHIN INSULATED ENCLOSURE PER CW REQUIREMENTS. ENCLOSURE TO INCLUDE DRAIN PORT(S) FOR DISCHARGE WATER PER CW REQUIREMENTS. ENCLOSURE TO BE LOCATED OUT OF SETBACK. SEE DETAIL 1/C-806.
2. 4" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY AS APPROVED BY CHARLOTTE WATER (CW) AND INSTALLED BY CONTRACTOR DURING CONSTRUCTION. ASSEMBLY TO BE INSTALLED ABOVE-GROUND WITHIN INSULATED ENCLOSURE PER CW REQUIREMENTS. ENCLOSURE TO INCLUDE DRAIN PORT(S) FOR DISCHARGE WATER PER CW REQUIREMENTS. ENCLOSURE TO BE LOCATED OUT OF SETBACK. SEE DETAIL 2/C-806
3. 6" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY AS APPROVED BY CHARLOTTE WATER (CW) AND INSTALLED BY CONTRACTOR DURING CONSTRUCTION. ASSEMBLY TO BE INSTALLED ABOVE-GROUND WITHIN INSULATED ENCLOSURE PER CW REQUIREMENTS. ENCLOSURE TO INCLUDE DRAIN PORT(S) FOR DISCHARGE WATER PER CW REQUIREMENTS. ENCLOSURE TO BE LOCATED OUT OF SETBACK. SEE DETAIL 2/C-806
4. THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPT. CONNECTION POINTS, OR OTHER WATER USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS CW-REQUIRED BACKFLOW PREVENTER.
5. EACH CW-REQUIRED BACKFLOW PREVENTION ASSEMBLY IS REQUIRED TO BE TESTED BY A CW-APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM IN SERVICE.
6. DUCTILE IRON, COPPER, OR OTHER METALLIC PIPING (NO PVC) IS TO BE USED WITHIN 5 FT. OF ALL BACKFLOW PREVENTION DEVICES.
7. TAMPER SWITCHES SHALL BE INSTALLED ON THE FIRE LINE BACKFLOW PREVENTER. INSTALL 3/4" CONDUIT FROM FIRE LINE BACKFLOW VAULT TO BUILDING ALARM SYSTEM INSIDE BUILDING. COORDINATE WITH ELECTRICAL DRAWINGS AND ALARM SYSTEM MANUFACTURER.

FIRE DEPARTMENT CONNECTION NOTES

1. ALL FIRE DEPARTMENT CONNECTIONS SHALL BE PROVIDED A CLEAR SPACE OF TEN FEET HORIZONTALLY AND VERTICALLY IN ALL DIRECTIONS. (GAS METERS, ELECTRICAL TRANSFORMERS, AND PARKED VEHICLES CANNOT BE LOCATED WITHIN THIS SPACE.)
2. ALL FIRE DEPARTMENT CONNECTIONS SHALL BE READILY VISIBLE AND NOT MORE THAN FIFTY FEET FROM A STREET, FIRE LANE, OR SIMILAR AREA PROVIDING ACCESS TO FIRE DEPARTMENT APPARATUS. THE AREA BETWEEN THE CONNECTION AND VEHICULAR ACCESS SHALL BE FREE OF OBSTRUCTIONS.
3. THERE SHALL BE AN APPROVED PUMPER FIRE HYDRANT WITHIN TWO HUNDRED FEET OF THE FIRE DEPARTMENT CONNECTION MEASURED ALONG AN APPROVED PATH OF TRAVEL FOR THE FIRE APPARATUS.
4. FOR ADDITIONAL INFORMATION OF FIRE PROTECTION SYSTEM INCLUDING LOCATION OF FIRE DEPARTMENT CONNECTION, ETC., REFER TO FIRE PROTECTION PLANS BY OTHERS.

WATER SERVICE NOTES

1. 2" WATER METER FOR IRRIGATION SERVICE FURNISHED AND INSTALLED BY CHARLOTTE WATER IN BELOW GRADE CONCRETE VAULT IN ACCORDANCE WITH CHARLOTTE WATER STANDARDS. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING INSTALLATION AND PAYING ALL FEES.
2. 4" FMCT WATER METER FOR DOMESTIC AND FIRE LINE SERVICE FURNISHED AND INSTALLED BY CHARLOTTE WATER IN BELOW GRADE CONCRETE VAULT IN ACCORDANCE WITH CHARLOTTE WATER STANDARDS. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING INSTALLATION AND PAYING ALL FEES.
3. 6" FMCT WATER METER FOR DOMESTIC AND FIRE LINE SERVICE FURNISHED AND INSTALLED BY CHARLOTTE WATER IN BELOW GRADE CONCRETE VAULT IN ACCORDANCE WITH CHARLOTTE WATER STANDARDS. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING INSTALLATION AND PAYING ALL FEES.
4. 6" FIRE SERVICE DETECTOR CHECK VALVE WITH 1" BYPASS METER FURNISHED AND INSTALLED BY CHARLOTTE WATER IN ACCORDANCE WITH CHARLOTTE WATER STANDARDS.

NOTICE TO CONTRACTOR

THIS LAND DEVELOPMENT PLAN HAS NOT BEEN REVIEWED OR APPROVED BY CHARLOTTE WATER.

PRIOR TO CONSTRUCTION:
PLEASE CONTACT MIKE GARBARK (704-432-5797 mgarbark@ci.charlotte.nc.us) WITH CHARLOTTE WATER REGARDING YOUR DEVELOPMENT.

LAND DEVELOPMENT PLAN REVISIONS DUE TO PLAN COMMENTS BY CHARLOTTE WATER COMMENTS WOULD RESULT IN SUBMISSION OF A REVISED CONSTRUCTION PLAN TO THE TOWN/COUNTY FOR REVIEW. ALL ADDITIONAL FEES DUE TO THE PLAN REVISION TO BE PAID BY THE OWNER/DEVELOPER/CONTRACTOR.

1. CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES USING FLAG MEN, ETC. AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.
3. ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND CHARLOTTE-MECKLENBURG UTILITIES SPECIFICATIONS.
4. SHORING SHALL BE IN ACCORDANCE WITH OSHA TRENCHING STANDARDS, 29 CFR, PART 1926, SUBPART P, OR AS AMENDED.

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PRIVATE UTILITY PLAN

Project No.
4493

Issued
03/28/19

Revised

COLEJENEST & STONE, P.A. SEAL C-103 REGISTERED LANDSCAPE ARCHITECTURE NORTH CAROLINA

DAVID S. MCAULEY SEAL 042089 ENGINEER
05/19/19

SCALE: 1"=30'
0 15' 30' 60'

C-501

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