

STORM SEWER NOTES

- ALL STORM SEWER PIPES SHALL BE REINFORCED CONCRETE PIPE, CLASS II MINIMUM. ANY CONCRETE PIPE, CONDUIT, OR CULVERT BENEATH A STREET RIGHT-OF-WAY OR WITH REASONABLE PROBABILITY OF BEING SO LOCATED SHALL BE A MINIMUM OF CLASS III, BUT ALSO SHALL ACCOUNT FOR ALL VERTICAL LOADS. IN NO CASE SHALL THE DESIGN PROVIDE FOR LESS THAN HS-20 LOADING PER MSHTD. FOR OTHER LOCATIONS, THE MINIMUM DESIGN LIVE LOAD SHALL BE THE HS-10 LOADING.
- ALL STORM SEWER STRUCTURES WITHIN PROJECT SITE TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF O'FALLON STORMWATER MANAGEMENT CONSTRUCTION SPECIFICATIONS.
- ALL TRENCHES UNDER AREAS TO BE PAVED AND UNDER EXISTING PAVING SHALL BE GRANULARLY FILLED WITH 3/4" MINUS CRUSHED LIMESTONE ONLY. BACKFILL SHALL BE PLACED IN ACCORDANCE WITH CITY OF O'FALLON STANDARD CONSTRUCTION SPECIFICATIONS.
- ALL TRENCH BACK FILLS UNDER PAVEMENT WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACKFILLED. TRENCH BACK FILLS UNDER PAVED AREAS, OUTSIDE OF PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACKFILL ALSO IN LIEU OF THE COMPACTED EARTH BACKFILL.
- "O" RING RUBBER GASKETED WATER TIGHT JOINTS SHALL BE USED FOR ALL STORM SEWER REACHES ON THE STORM SEWER PROFILE SHEETS.
- A 5/8" TRASH BAR WILL BE INSTALLED AND CENTERED ACROSS ALL AREA INLET AND CURB INLET OPENINGS.
- RIP-RAP SHOWN AT FLARED ENDS WILL BE EVALUATED IN THE FIELD AFTER INSTALLATION FOR EFFECTIVENESS AND FIELD MODIFIED, IF NECESSARY, TO REDUCE EROSION ON AND OFF-SITE.
- BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES.
- ALL CONCRETE PIPES WILL BE INSTALLED WITH O-RING RUBBER TYPE GASKETS.
- CONNECTIONS AT ALL STORM SEWER STRUCTURES TO BE MADE WITH A-LOK JOINT OR EQUAL.
- ALL STORM SEWER INLETS SHALL BE INSTALLED WITH A MARKER, BELOW IS THE RECOMMENDATIONS:
THE CITY WILL ALLOW THE FOLLOWING MARKERS AND ADHESIVE PROCEDURES ONLY AS SHOWN IN THE TABLE BELOW OR AN APPROVED EQUAL. FEEL AND STICK ADHESIVES PADS WILL NOT BE ALLOWED.

MANUFACTURER	SIZE	ADHESIVE	STYLE	MESSAGE (PART #)	WEBSITE
ACIP INTERNATIONAL	3/7/8"	EPOXY	CRYSTAL CAP	NO DUMPING WATERS (SD-W-CC)	WWW.ACIPINTERNATIONAL.COM
DAS MANUFACTURING, INC.	4"	EPOXY	STANDARD STYLE	NO DUMPING DRAINS TO STREAM (SD-W-CC)	WWW.DASMANUFACTURING.COM

- ALL TRENCHES SHALL BE PROPERLY BACKFILLED AND COMPACTED TO CONFORM TO CITY OF O'FALLON REQUIREMENTS BY EITHER MECHANICAL COMPACTION OR WATER JETTING.
JETTING: GRANULAR MATERIAL AND EARTH MATERIAL ASSOCIATED WITH NEW CONSTRUCTION OUTSIDE OF PAVEMENTS MAY BE JETTED, TAKING CARE TO AVOID DAMAGE TO NEWLY LAID SEWERS. THE JETTING SHALL BE PERFORMED WITH A PROBE ROUTE ON NOT GREATER THAN 7.5-FOOT CENTERS WITH THE JETTING PROBE CENTERED OVER AND PARALLEL WITH THE DIRECTION OF THE PIPE. TRENCH WIDTHS GREATER THAN 10-FOOT WILL REQUIRE MULTIPLE PROBES EVERY 7.5-FOOT CENTERS.
a. DEPTH: TRENCH BACKFILL LESS THAN 8-FOET IN DEPTH SHALL BE PROBED TO A DEPTH EXTENDING TO HALF THE DEPTH OF THE TRENCH BACKFILL, BUT NOT LESS THAN 3-FOET. TRENCH BACKFILL GREATER THAN 8-FOET IN DEPTH SHALL BE PROBED TO HALF THE DEPTH OF THE TRENCH BACKFILL BUT NOT GREATER THAN 8-FOET.
b. EQUIPMENT: THE JETTING PROBE SHALL BE A METAL PIPE WITH AN EXTERIOR DIAMETER OF 1.5 TO 2-INCHES.
c. METHOD: JETTING SHALL BE PERFORMED FROM THE LOW SURFACE TOPOGRAPHIC POINT AND PROCEED TOWARD THE HIGH POINT, AND FROM THE BOTTOM OF THE TRENCH BACKFILL TOWARDS THE SURFACE. THE FLOODING OF EACH JETTING PROBE SHALL BE STARTED SLOWLY ALLOWING SLOW SATURATION OF THE SOIL. WATER IS NOT ALLOWED TO FLOW AWAY FROM THE DITCH WITHOUT FIRST SATURATION THE TRENCH.
d. SURFACE BRIDGING: THE CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF THE SURFACE BRIDGING (THE TENDENCY FOR THE UPPER BACKFILL CRUST TO ARCH OVER THE TRENCH RATHER THAN COLLAPSE AND CONSOLIDATE DURING THE JETTING PROCESS). THE CONTRACTOR SHALL BREAKDOWN THE BRIDGED AREAS USING AN APPROPRIATE METHOD SUCH AS WHEELS OR BUCKET OF A BACKHOE. WHEN THE SURFACE CRUST IS COLLAPSED, THE VOID SHALL BE BACKFILLED WITH THE SAME MATERIAL USED AS TRENCH BACKFILL AND RE-JETTED. COMPACTION OF THE MATERIALS WITHIN THE SUNKEN/JETTED AREA SHALL BE COMPACTED SUCH THAT NO FURTHER SURFACE SUBSIDENCE OCCURS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST ALL STORM SEWER MANHOLES (THAT ARE AFFECTED BY THE DEVELOPMENT) TO FINISH GRADE, THIS SHOULD BE DONE BY USING GRADE RINGS.
- ALL STORM SEWER TRENCH BACK FILLS SHALL BE WATER JETTED. GRANULAR BACK FILL WILL BE USED UNDER PAVEMENT AREAS.
- GAS, WATER AND OTHER UNDERGROUND UTILITIES SHALL NOT CONFLICT WITH THE DEPTH OR HORIZONTAL LOCATION OF EXISTING OR PROPOSED STORM SEWERS.

SANITARY SEWER NOTES

- UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE LOCATION SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF IMPROVEMENTS.
- GAS, WATER AND OTHER UNDERGROUND UTILITIES SHALL NOT CONFLICT WITH THE DEPTH OR HORIZONTAL LOCATION OF EXISTING OR PROPOSED SANITARY SEWERS, INCLUDING HOUSE LATERALS.
- ALL EXISTING SITE IMPROVEMENTS DISTURBED, DAMAGED, OR DESTROYED SHALL BE REPAIRED OR REPLACED TO CLOSELY MATCH PRE-CONSTRUCTION CONDITIONS.
- THE CONTRACTOR SHALL PREVENT ALL STORM, SURFACE WATER, MUD AND CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER SYSTEM.
- ALL SANITARY SEWER FLOW LINES AND TOPS BUILT WITHOUT ELEVATIONS FURNISHED BY THE ENGINEER WILL BE THE RESPONSIBILITY OF THE SEWER CONTRACTOR.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS OF THE CITY OF O'FALLON.
- THE CITY OF O'FALLON SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION FOR COORDINATION OF INSPECTION (636)-379-5561.
- ALL SANITARY SEWER BUILDING CONNECTIONS SHALL BE DESIGNED SO THAT THE MINIMUM VERTICAL DISTANCE FROM THE LOW POINT OF THE BASEMENT TO THE FLOW LINE OF A SANITARY SEWER AT THE CORRESPONDING BUILDING CONNECTION SHALL NOT BE LESS THAN THE DIAMETER OF THE PIPE PLUS THE VERTICAL DISTANCE OF 2-1/2 FEET.
- ALL SANITARY SEWER MANHOLES SHALL BE WATERPROOFED ON THE EXTERIOR IN ACCORDANCE WITH THE MISSOURI DEPT. OF NATURAL RESOURCES SPECIFICATION 10 CSR-8.129(7)(c).
- ALL PVC SANITARY SEWER PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3034 STANDARD SPECIFICATION FOR PVC POLYVINYL CHLORIDE SEWER PIPE, SDR-35 OR EQUAL, WITH "CLEAN" 1/2 INCH TO 1 INCH GRANULAR STONE BEDDING UNIFORMITY GRADED. THIS BEDDING SHALL EXTEND FROM 4 INCHES BELOW THE PIPE TO SPRING LINE OF PIPE. IMMEDIATE BACK FILL OVER PIPE SHALL CONSIST OF SAME SIZE "CLEAN" OR "MINUS" STONE FROM SPRING LINE OF PIPE TO 12 INCHES ABOVE THE TOP OF PIPE.
- ALL SANITARY SEWER TRENCH BACK FILLS SHALL BE WATER JETTED. GRANULAR BACK FILL WILL BE USED UNDER PAVEMENT AREAS.
- BRICK SHALL NOT BE USED ON SANITARY SEWER MANHOLES.
- EXISTING SANITARY SEWER SERVICE SHALL NOT BE INTERRUPTED.
- PRE-MANUFACTURED ADAPTERS SHALL BE USED AT ALL PVC TO DIP CONNECTIONS. RUBBER BOOT/MISSION-TYPE COUPLINGS WILL NOT BE ALLOWED.
- ANY PERMITS, LICENSES, EASEMENTS, OR APPROVALS REQUIRED TO WORK ON PUBLIC OR PRIVATE PROPERTIES OR ROADWAYS ARE THE RESPONSIBILITY OF THE DEVELOPER.
- "TYPE N" LOCK-TYPE COVER AND LOCKING DEVICE (LOCK-LUG) SHALL BE USED WHERE LOCK-TYPE COVERS ARE REQUIRED.
- ALL MANHOLES ARE 42" IN DIAMETER UNLESS NOTED OTHERWISE.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST ALL SANITARY SEWER MANHOLES (THAT ARE AFFECTED BY THE DEVELOPMENT) TO FINISH GRADE, THIS SHOULD BE DONE BY USING GRADE RINGS.
- SERVICE LATERALS SHALL BE 6" DIAMETER (MINIMUM).
- CONNECTIONS AT ALL SANITARY SEWER STRUCTURES TO BE MADE WITH A-LOK JOINT OR EQUAL.
- ALL SANITARY LATERALS AND SANITARY MAINS CROSSING UNDER ROADWAYS MUST HAVE THE PROPER ROCK BACKFILL AND TO REQUIRED COMPACTION.
- ALL TRENCHES SHALL BE PROPERLY BACKFILLED AND COMPACTED TO CONFORM TO CITY OF O'FALLON REQUIREMENTS BY EITHER MECHANICAL COMPACTION OR WATER JETTING.
JETTING: GRANULAR MATERIAL AND EARTH MATERIAL ASSOCIATED WITH NEW CONSTRUCTION OUTSIDE OF PAVEMENTS MAY BE JETTED, TAKING CARE TO AVOID DAMAGE TO NEWLY LAID SEWERS. THE JETTING SHALL BE PERFORMED WITH A PROBE ROUTE ON NOT GREATER THAN 7.5-FOOT CENTERS WITH THE JETTING PROBE CENTERED OVER AND PARALLEL WITH THE DIRECTION OF THE PIPE. TRENCH WIDTHS GREATER THAN 10-FOET WILL REQUIRE MULTIPLE PROBES EVERY 7.5-FOOT CENTERS.
a. DEPTH: TRENCH BACKFILL LESS THAN 8-FOET IN DEPTH SHALL BE PROBED TO A DEPTH EXTENDING TO HALF THE DEPTH OF THE TRENCH BACKFILL, BUT NOT LESS THAN 3-FOET. TRENCH BACKFILL GREATER THAN 8-FOET IN DEPTH SHALL BE PROBED TO HALF THE DEPTH OF THE TRENCH BACKFILL BUT NOT GREATER THAN 8-FOET.
b. EQUIPMENT: THE JETTING PROBE SHALL BE A METAL PIPE WITH AN EXTERIOR DIAMETER OF 1.5 TO 2-INCHES.
c. METHOD: JETTING SHALL BE PERFORMED FROM THE LOW SURFACE TOPOGRAPHIC POINT AND PROCEED TOWARD THE HIGH POINT, AND FROM THE BOTTOM OF THE TRENCH BACKFILL TOWARDS THE SURFACE. THE FLOODING OF EACH JETTING PROBE SHALL BE STARTED SLOWLY ALLOWING SLOW SATURATION OF THE SOIL. WATER IS NOT ALLOWED TO FLOW AWAY FROM THE DITCH WITHOUT FIRST SATURATION THE TRENCH.
d. SURFACE BRIDGING: THE CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF THE SURFACE BRIDGING (THE TENDENCY FOR THE UPPER BACKFILL CRUST TO ARCH OVER THE TRENCH RATHER THAN COLLAPSE AND CONSOLIDATE DURING THE JETTING PROCESS). THE CONTRACTOR SHALL BREAKDOWN THE BRIDGED AREAS USING AN APPROPRIATE METHOD SUCH AS WHEELS OR BUCKET OF A BACKHOE. WHEN THE SURFACE CRUST IS COLLAPSED, THE VOID SHALL BE BACKFILLED WITH THE SAME MATERIAL USED AS TRENCH BACKFILL AND RE-JETTED. COMPACTION OF THE MATERIALS WITHIN THE SUNKEN/JETTED AREA SHALL BE COMPACTED SUCH THAT NO FURTHER SURFACE SUBSIDENCE OCCURS.
- ALL SANITARY SEWER PIPE SHALL BE SDR35 PVC PIPE OR EQUAL AND TESTING OF PIPE SHALL BE DONE IN ACCORDANCE TO THE REQUIREMENTS OF THE CITY OF O'FALLON.

WATER LINE NOTES

- ALL MATERIALS AND METHODS OF CONSTRUCTION FOR WATER MAINS TO MEET THE REQUIREMENTS OF THE CITY OF O'FALLON SPECIFICATIONS AND STANDARDS APPROVED BY MDNR UNDER REVIEW NO. 66196-04R.
- WATER MAINS SHALL BE POLY VINYL CHLORIDE (PVC) CLASS 200, SDR 21 PIPE CONFORMING TO A.S.T.M. SPECIFICATION 02241. THE PIPE SHALL BE PRESSURE RATED F OR A HYDROSTATIC WORKING PRESSURE OF 200 PSI AT 73.4 DEGREES F AND SHALL MEET ALL APPLICABLE REQUIREMENTS AS SET FORTH UNDER COMMERCIAL STANDARD (CS) 256-63.
- DUCTILE IRON PIPE MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL THE REQUIREMENTS OF U.S.A. STANDARD A2151 (A.W.W.A. C-151-65). THE PIPE SHALL BE FURNISHED WITH MECHANICAL, PUSH ON, OR FLANGE JOINTS AS REQUIRED. THE INTERIOR SURFACE OF PIPE SHALL BE COATED WITH A CEMENT-MORTAR LINING IN ACCORDANCE WITH U.S.A. STANDARD A 214 (A.W.W.A. C 104). AFTER DRYING, THE CEMENT LINING SHALL BE SEAL COATED WITH SIMILAR A.W.W.A. APPROVED BITUMINOUS VARNISH. ALL FITTINGS AND BENDS SHALL BE CONSTRUCTION OF CAST OR DUCTILE IRON.
- WATER MAIN TRACER TAPE TO BE INSTALLED WITH ALL WATER MAIN AND SHALL CONSIST OF THREE INCH WIDE TAPE MADE OF BONDED LAYER PLASTIC WITH A METALLIC FOIL CORE. TAPE SHALL BE "TERRA TAPE D" AS MANUFACTURED BY THE GRIFFOLYN COMPANY OF HOUSTON, TEXAS, OR APPROVED EQUAL.
- WATER MAIN LOCATOR WIRE SHALL BE INSTALLED WITH ALL WATER MAIN, FITTINGS, AND VALVE INSTALLATION AND SHALL CONSIST OF A STANDARD ELECTRIC SERVICE WIRE, A SINGLE NO. 12 U.L. APPROVED COPPER WIRE OF THE SOLID OR STRAND TYPE WITH INSULATION FOR 600 VOLTS.
- ALL VALVES FOR EXTERIOR USE SHALL BE BURIED GATE VALVES WITH A VALVE BOX AND TWO INCH SQUARE NUT ATTACHMENT FOR MANUAL OPERATION WITH STANDARD VALVE WRENCH. GATE VALVES SHALL BE IRON BODIED WITH BRASS OR BRONZE MOUNTED DOUBLE DISC GATE. GATE VALVES SHALL BE OF THE NON-RISING STEM TYPE, OPENED BY TURNING COUNTER-CLOCKWISE. THE VALVE STEM SHALL HAVE DOUBLE "O" RING SEALS AND TERMINATE AT TOP WITH TWO INCH SQUARE NUT. GATE VALVE CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST GOVERNING SPECIFICATIONS OF THE A.S.T.M. AND A.W.W.A. ALL GATE VALVES FOR USE SHALL BE "MUELLER" OR APPROVED EQUAL.
- VALVE BOXES FOR USE SHALL BE THE SCREW-TYPE, EXTENSION SLEEVE KIND. ALL BOXES SHALL BE FITTED WITH A RECESSED COVER HAVING THE WORD "WATER" CAST IN THE TOP. ALL VALVE ACCESS TUBES SHALL BE 6" SDR21 PVC.
- FIRE HYDRANTS SHALL BE MUELLER "CENTURION" OR THE AMERICAN DARLING MODEL NO. "B-84-B". HYDRANTS SHALL BE TRAFFIC MODEL TYPE WITH A WORKING PRESSURE OF 150 PSI IN FULL COMPLIANCE WITH A.W.W.A. STANDARD SPECIFICATIONS C-502 OF THE LATEST REVISION. HYDRANTS TO BE THREE-WAY WITH TWO 2 1/2 INCH CONNECTIONS AND ONE 4 1/2 INCH CONNECTION AND SHALL HAVE A 5 1/4" VALVE. A 6 INCH BARGE AND SHALL BE OF A BREAKAWAY DESIGN, FROST FREE WITH CHAIN, LEFT HAND OPEN, AND HAVE NATIONAL STANDARD THREADS.
- ALL FIRE HYDRANTS SHALL BE SET SO THE CENTER OF A HOSE NOZZLE SHALL NOT BE LESS THAN 18" ABOVE FINISHED GRADE. FIRE HYDRANT OUTLETS MUST FACE THE STREET OR ACCESS DRIVE.
- THERE SHALL BE NO OBSTRUCTIONS WITHIN 6 FEET OF ANY FIRE HYDRANT AND/OR FIRE DEPARTMENT CONNECTION TO AN AUTOMATIC SPRINKLER SYSTEM.
- FIRE HYDRANT SHALL BE IN ACCORDANCE WITH LOCAL FIRE PROTECTION DISTRICT.
- CONCRETE FOR THRUST BLOCKING AT BENDS, TEES, VALVES, HYDRANTS, ETC., SHALL BE 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
- BEFORE WATER MAINS SHALL BE ACCEPTED AND PUT INTO SERVICE THEY SHALL BE TESTED. REQUIREMENTS ARE AS FOLLOWS:
CHLORINE TEST: TWO CONSECUTIVE DAYS
1ST DAY-50 PPM RESIDUAL
2ND DAY-30 PPM RESIDUAL
TEST POINTS TO BE DETERMINED BY WATER DISTRICT PERSONNEL
HYDROSTATIC TEST: 150 PSI FOR 2 HOURS. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE STATE OF ALL VALVES WITHIN THE AFFECTED AREA OF THE TEST IN THE PRESENCE OF THE INSPECTOR WITNESSING THE TEST.
BACTERIA (COLIFORM) TEST: TWO CONSECUTIVE DAYS TEST POINTS TO BE DETERMINED BY WATER DISTRICT PERSONNEL. ALL TESTING WILL BE WITNESSED BY WATER DISTRICT PERSONNEL.
TRACER WIRE WILL BE TESTED FOR CONTINUITY IN THE PRESENCE OF WATER DISTRICT PERSONNEL.
ALL CONNECTIONS TO EXISTING WATER MAINS WILL BE WITNESSED AND INSPECTED BY WATER DISTRICT PERSONNEL.
- ALL WATER LINES AND SERVICE LINES SHALL HAVE A MINIMUM OF 42" OF COVERAGE.
- VERTICAL CLEARANCE BETWEEN SEWERS AND WATER MAINS SHALL BE A MINIMUM OF 2'-0".
- ALL MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SANITARY SEWER MAIN. THE DISTANCES SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL, TO MAINTAIN A 10-FOOT SEPARATION, THE DEPARTMENT OF NATURAL RESOURCES MAY ALLOW DEVIATION, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF A WATER MAIN CLOSER TO A SANITARY SEWER, PROVIDED THAT THE WATER MAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELVE LOCATED ON ONE SIDE OF THE SEWER AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER. WATER MAINS CROSSING SANITARY SEWERS SHALL BE LAID TO PROVIDED A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR A POSSIBLE FROM THE WATER JOINTS, WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION, THE SANITARY SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER PIPES, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING. A 3-FOOT HORIZONTAL SEPARATION WILL BE PROVIDED FROM OTHER UNDERGROUND UTILITIES TO INCLUDE GAS, ELECTRIC, TELEPHONE, CABLE TV, ETC.
- CONTRACTOR TO COORDINATE WATER LINE UTILITY CROSSINGS WITH SEWER PROFILES.
- THE CITY OF O'FALLON SHALL BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION.
- ALL TRENCHES SHALL BE PROPERLY BACKFILLED AND COMPACTED TO CONFORM TO CITY OF O'FALLON REQUIREMENTS BY EITHER MECHANICAL COMPACTION OR WATER JETTING.
JETTING: GRANULAR MATERIAL AND EARTH MATERIAL ASSOCIATED WITH NEW CONSTRUCTION OUTSIDE OF PAVEMENTS MAY BE JETTED, TAKING CARE TO AVOID DAMAGE TO NEWLY LAID SEWERS. THE JETTING SHALL BE PERFORMED WITH A PROBE ROUTE ON NOT GREATER THAN 7.5-FOOT CENTERS WITH THE JETTING PROBE CENTERED OVER AND PARALLEL WITH THE DIRECTION OF THE PIPE. TRENCH WIDTHS GREATER THAN 10-FOET WILL REQUIRE MULTIPLE PROBES EVERY 7.5-FOOT CENTERS.
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- WATER METERS ARE PLACED IN A DEDICATED EASEMENT OR HAVE THE LOCATION APPROVED BY CITY OF O'FALLON WATER RESOURCES PRIOR TO INCORPORATION INTO THE PLANS.
- BACKFLOW PREVENTER DEVICES WILL BE LOCATED WITHIN THE BUILDING.

This approval would be contingent upon the following:

- The traffic study that was received by the City on October 16, 2008, shall be reviewed by the City's traffic consultant. The study should address impacts to Main Street and the surrounding street network, confirm if acceleration/deceleration lanes are needed on Main Street for the entrance at Road A, provide traffic generation projections and ADT's for roadways (both internal and external), determine the entrance configuration of Road A at Main Street, signal at Road A and Main Street. The City will then review this information to determine if the roadways, entrances, intersections, etc. are acceptable. In addition, the study should provide recommendations for signal timing and interconnection along Main Street. (Include consideration to flashing yellow during the work week for Third Street signal.) The recommendations and conclusions of the traffic study and the review of the City's consultant shall be addressed on the Construction Site Plans.
- Due to their high visibility, the commercial buildings shall have facade treatments on all sides including the rear elevation. The rear elevations shall incorporate projections, recesses and offsets, as well as any other available architectural device, shall be employed to prevent building facades from being static and monolithic.
- Provide complete elevations for all four sides of each proposed office building. (The labels on the elevations shall match the labels used on the plans.)
- Following the path established by the main drive aisle, provide a cross access easement that runs north to south through outlot 1 (the lot containing commercial buildings 1 & 2) connecting the internal roadway to the existing commercial lot at the northwest corner of the development (fronting on Main St).
- The extension of Sonderen north from the proposed termination point at the Independent Living Villa intersection to the termination point east of the retail area shall be constructed in conjunction with Phase II. No occupancy permits for any buildings within Phase II will be granted until the Sonderen extension is complete and open to traffic. In addition, a letter of credit as reviewed and approved by the City Attorney shall be established for the future Sonderen connection in conjunction with Phase I approval as well as any infrastructure deemed necessary.
- A striped crosswalk shall be installed connecting the sidewalk on the south side of proposed "Street B", north of the villas, to the sidewalk on the north side of the road, south of the single family lots. At the intersection east of villa #7.
- Existing Sonderen (At Eggering) is offset from the proposed ROW. Please indicate the concept alignment for the roadway sheets C0.4 and C0.6 that will insure there is not a conflict with the proposed detention basin and provide traffic island control and striping for the transition in pavement width in this area.
- The sidewalk along the south side of the O'Fallon Sr Center needs to be extended around the east side of the center adjacent to Sonderen Rd and connected to the proposed sidewalk adjacent to the Sonderen extension.
- The sidewalks adjacent to Sonderen are to be built to a six (6) foot width as you move north along Sonderen.
- Detailed plans will need to be provided for the improvements along Main Street as part of the construction plan submittal.
- Move the detention basin in the south east corner of the site out of the 50 foot wide strip reserved for the Sonderen Roadway extension.
- The proposed parking lot on the west side of villa unit number 48 needs to be reconfigured so that the drive aisle is in the center and the parking spaces are on the perimeter.
- Provide documentation from the O'Fallon Fire Protection District that states that placing parking spaces on the north side of the existing cemetery will not impede fire trucks and equipment from accessing and extinguishing a fire on the north side of the St. Mary's building expansion.
- No parking will be allowed along any point of the Sonderen Extension within either Phase I or II. Therefore, Staff is concerned with the type of townhouse units proposed in Phase II. Visitor parking for this type of unit is typically in front of the unit. This area will need to be redesigned to accommodate off-street visitor parking.
- The improvements and widening of the access drive on the west side of City Hall and connecting the properties shall be constructed as part of Phase I.
- Provide evergreen trees on ten (10) foot center along the entire length of the east side of the Sonderen Extension where it abuts homes within the Forest Park subdivision.
- Remove cul-de-sac islands at the ends of the streets in the villas.
- Extend the sidewalk along right-of-way through parking lot west of villa unit 48, this sidewalk shall provide a connection to the continued care facility.
- Indicate how the existing buildings on the site will be served by trash and delivery vehicles and provide turning radius information.
- The lighting elements within the new signalized intersection shall be LEDs.
- The bike rack shown within the sidewalk in front of the southwest corner of commercial building three (3) shall be relocated.
- The developer and the City should formally document the cross access connections between the City Hall and subject property.
- The Construction Site Plans shall address the Municipal Code requirements listed below.

The approval is also conditional upon the following Municipal Code requirements being provided in conjunction with the Construction Site Plans:

- The parking calculations for the commercial buildings will need to be revised; the spec retail buildings shall be parked at a rate of 5.5 spaces per 1,000 square feet of gross floor area. Should you choose to park the commercial building at a rate other than this, you must support your recommendation with an "Alternative Parking Study" as required by code and approved by the Planning and Zoning Commission.
- Provide street name approval for all of the proposed roadways to be constructed in Phase I.
- In conjunction with the Record Plat, a complete listing of Covenants, Codes, and Restrictions shall be submitted to the City for review and approval. City of O'Fallon review criteria is located in the Subdivision Code.
- All retention basins shall meet the minimum depth requirements at the time of initial occupancy of Phase I and shall be required to escrow for the silt clean out until the site development is 95% occupied in Phase II.
- Provide easements for the wet retention basins, a 20 foot wide access easement from public right of way to the basin; also, call out the high water mark in all detention basins; all wet detention basins shall be a minimum depth of ten (10) feet.
- Water line hydraulics will be required with construction plans.
- Align handicap ramps to provide a shorter roadway crossing. In many locations, this will require the construction of two HC ramps on the same corner. The HC ramps should not be aligned where as to direct pedestrians, especially those who are visually impaired, into the middle of intersections.
- The proposed streets within the independent living villa portion of the development shall only be allowed to remain private if they are built to City standards. In addition, signage shall be provided at each subdivision entrance that reads: "Private Streets Maintained by Property Owners" to be installed in a manner compliant with City Code. These roads shall remain maintained privately for perpetuity.