

# GENERAL NOTES

- TOPOGRAPHIC SURVEY AND BOUNDARY INFORMATION PROVIDED BY STOCK AND ASSOCIATES.
- ALL UTILITIES SHOWN HAVE BEEN LOCATED BY THE ENGINEER FROM AVAILABLE RECORDS. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED.
- NO GRADE SHALL EXCEED 3:1 SLOPE.
- ALL SLOPES TO BE STABILIZED IMMEDIATELY AFTER GRADING.
- ALL UTILITIES SERVING SITE ARE UNDERGROUND.
- ALL OUTSIDE TRASH CONTAINERS, HVAC UNITS, ELECTRIC, TELEPHONE AND GAS METERS, SATELLITE DISHES, AND ROOFTOP MECHANICAL APPARATUS SHALL BE THOROUGHLY SCREENED WITH MATERIALS AND/OR LANDSCAPING TO CONCEAL THE VISIBILITY OF SUCH ITEMS FROM THE VIEW OF RIGHTS-OF-WAY AND/OR ADJACENT PROPERTIES AS REVIEWED AND APPROVED BY THE PLANNING DIVISION.
- ALL CONSTRUCTION AND MATERIALS USED SHALL CONFORM TO CURRENT CITY OF O'FALLON STANDARDS.
- SEE ARCHITECTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS AND DETAILS.
- BUILDING HEIGHT = 58'-5"
- SITE CALCULATIONS:
 

BUILDING	24,980 S.F.	16.8%	(0.57 ACRES)
LANDSCAPING	60,422 S.F.	40.8%	(1.39 ACRES)
PAVEMENT	63,573 S.F.	42.6%	(1.46 ACRES)
TOTAL	148,975 S.F.	100.0%	(3.42 +/- ACRES)
- PARKING CALCULATIONS (BASED ON CLASSIFICATION "HOTEL")
  - ONE SPACE PER GUEST ROOM (108 ROOMS)
  - ONE SPACE FOR EVERY TWO EMPLOYEES
  - REQUIRED: 108 SPACES FOR GUESTS
  - 15 EMPLOYEES/2 = 8
  - 116 SPACES REQUIRED
  - PROVIDED: 116
- FEMA MAP 29183C0430 E DATED 8/2/96 ZONE "X" AND "SHADED X"
- ALL SIGN LOCATIONS & SIZES SHALL BE APPROVED SEPARATELY THROUGH THE PLANNING DIVISION.
- ALL TRASH ENCLOSURES SHALL CONSIST OF 6' HIGH SOLID WALL w/ SIGHT PROOF VINYL GATE. WALLS SHALL BE CONSISTENT w/ ARCHITECTURAL THEME OF BUILDING. GATE COLOR SHALL MATCH BUILDING.
- BICYCLE PARKING RACKS SHALL BE SECURELY ANCHORED TO THE GROUND AND BE OF VANDAL-RESISTANT CONSTRUCTION.
  - 1 BIKE SPACE PER 15 PARKING SPACES:
  - 116 / 15 = 8 REQ'D ; 8 PROVIDED
- TREE PRESERVATION CALCULATIONS: SEE LANDSCAPE PLAN.
- PARKING LOT LANDSCAPE CALCULATIONS:
  - 116 SPACES (x) 270 s.f. = 31,320 s.f.
  - 31,320 (x) 6% = 1879 s.f. REQ.
  - PROVIDED = 3,327 s.f.
- OWNER: CPX O'FALLON GATEWAY OPAG, LLC  
100 EAST RIVERCENTER BOULEVARD, SUITE 1100  
COVINGTON, KY 41011-1602  
PHONE: (859) 292-5562  
MR. JAMES KLEIN

- ESTIMATED SANITARY FLOW WILL BE 3915 GALLONS PER DAY. THIS VALUE IS BASED ON A FULL OCCUPANCY RATE AND STAFF OF EMPLOYEES (261 PERSONS) AND 15 GALLONS PER DAY PER PERSON.
- GRADES FOR ENTRANCES SHOULD NOT EXCEED 2% AT WALKS, 4% FROM STREET AND 10% OVERALL. TYPICALLY 2% FROM BACK OF CURB THROUGH THE RIGHT OF WAY IS DESIRED.

# WATER LINE NOTES

- ALL MATERIALS AND METHODS OF CONSTRUCTION FOR WATER MAINS TO MEET REQUIREMENTS OF THE CITY OF O'FALLON OR MISSOURI-AMERICAN WATER COMPANY DEPENDING UPON WHO IS SELECTED TO SERVE THE DEVELOPMENT.
- WATER MAINS SHALL BE POLYVINYL CHLORIDE (PVC) CLASS 200, SDR 21 PIPE CONFORMING TO A.S.T.M. SPECIFICATIONS D2241. THE PIPE SHALL BE PRESSURE RATED FOR 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 21.4 (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 CONSTRUCTED 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 SHALL BE INSTALLED WITH ALL WATER MAIN, FITTINGS, AND VALVE INSTALLATION AND SHALL CONSIST OF A STANDARD ELECTRICAL 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 VALVE 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, OR P.V.C. PIPE. ALL BOXES SHALL BE FITTED WITH A RECESSED COVER HAVING THE WORD "WATER" CAST IN THE TOP.
- 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 HOSE CONNECTIONS AND ONE PUMPER CONNECTION AND SHALL HAVE 5 1/4" VALVE OPENINGS. HYDRANTS TO BE YELLOW IN COLOR.
- CONCRETE FOR THRUST BLOCKING AT BENDS, TEES, VALVES, HYDRANTS, ETC., SHALL BE 3,500 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
- BEFORE WATER MAINS SHALL BE ACCEPTED AND PUT INTO SERVICE THEY SHALL BE TESTED FOR TWO HOURS ON EACH SEGMENT BETWEEN END POINTS AT A TEST PRESSURE OF AT LEAST 50% IN EXCESS OF NORMAL MAXIMUM OPERATING PRESSURE, NOT TO EXCEED 200 PSI. WATER MAINS SHALL BE STERILIZED AND FLUSHED IN ACCORDANCE WITH THE CITY OF O'FALLON OR MISSOURI-AMERICAN WATER COMPANY DEPENDING UPON WHO IS SELECTED TO SERVE THE DEVELOPMENT.
- 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".
- EACH FIRE HYDRANT SHALL HAVE A 6 INCH BARRIL AND SHALL BE OF THE BREAKAWAY DESIGN, FROST FREE WITH CHAIN, LEFT HAND OPEN DESIGN AND HAVE NATIONAL STANDARD THREADS.
- IN SETTING HYDRANTS, DUE REGARD SHALL BE GIVEN TO FINAL GRADELINE. THE CENTER OF A HOSE NOZZLE OUTLET SHALL NOT BE LESS THAN EIGHTEEN (18) INCHES ABOVE GRADE AND THE OUTLETS MUST FACE THE STREET OR ACCESS DRIVE.
- THERE SHALL BE NO OBSTRUCTION, I.E., PLANTINGS, BUSHES, TREES, SIGNS, LIGHT STANDARDS, MAILBOXES, etc. WITHIN SIX (6) FEET ON ANY FIRE HYDRANT, AND/OR FIRE DEPARTMENT CONNECTION TO AN AUTOMATIC SPRINKLER SYSTEM.
- PUBLIC HYDRANTS SHALL HAVE THE BONNETS COLOR CODED IN ACCORDANCE WITH ORDINANCE NO 13 OF THE COTTLEVILLE FIRE PROTECTION DISTRICT.

- ALL FILL PLACED UNDER PROPOSED STORM AND SANITARY SEWER, PROPOSED ROADS, AND/OR PAVED AREAS SHALL BE COMPACTED TO 90 % OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO T-180 COMPACTION TEST OR 95 % OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ALL FILLED PLACED IN PROPOSED ROADS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS. ENSURE THE MOISTURE CONTENT OF THE SOIL IN FILL AREAS IS TO CORRESPOND TO THE COMPACTIVE EFFORT AS DEFINED BY THE STANDARD OR MODIFIED PROCTOR TEST. OPTIMUM MOISTURE CONTENT SHALL BE DETERMINED USING THE SAME TEST THAT WAS USED FOR COMPACTION. SOIL COMPACTION CURVES SHALL BE SUBMITTED TO THE CITY OF O'FALLON PRIOR TO THE PLACEMENT OF FILL. PROOF ROLLING MAY BE REQUIRED TO VERIFY SOIL STABILITY AT THE DISCRETION OF THE CITY OF O'FALLON.
- BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM OR SANITARY SEWER STRUCTURES.
- A CONCRETE CRADLE FOR RCP AND ENCASMENT FOR HDPE WILL BE REQUIRED FOR ALL STORM SEWER LINES WHEN CROSSING MORE THAN THREE FEET ABOVE SANITARY LINES.
- LIGHTING VALUES WILL BE REVIEWED ON SITE PRIOR TO THE FINAL OCCUPANCY INSPECTION. CORRECTIONS WILL NEED TO BE MADE IF NOT IN COMPLIANCE WITH CITY STANDARDS.
- ALL PROPOSED FENCING REQUIRES A SEPARATE PERMIT THROUGH THE PLANNING DIVISION.
- ALL SIGN POSTS AND BACKS AND BRACKET ARMS SHALL BE PAINTED BLACK USING CARBOLINE RUSTBOND PENETRATING SEALER SG AND CARBOLINE 133 HB PAINT (OR EQUIVALENT AS APPROVED BY CITY AND MODOT). SIGNS DESIGNATING STREET NAME SHALL BE ON THE OPPOSITE SIDE OF THE STREET FROM TRAFFIC CONTROL SIGNS.
- ALL HDPE STORM DRAIN PIPE SHALL BE N-12WT OR EQUAL AND TO MEET ASTM F1417 WATER TIGHT FIELD TEST.
- INSTALLATION OF WATER SERVICE SHALL MEET THE SPECIFICATIONS OF THE ST. CHARLES WATER NO. 2 DISTRICT.
- ALL UTILITIES CROSSING EXISTING STREETS OF COLLECTOR SIZE AND GREATER SHALL BE IN CONDUIT OR CASING PIPE.
- ALL PROPOSED UTILITIES UNDER EXISTING CITY OF O'FALLON STREETS ARE TO BE BORED.
- TRAFFIC CONTROL IS TO BE PER MODOT OR MUTCD STANDARDS, WHICHEVER IS MORE STRINGENT.

# MISSOURI AMERICAN WATER LINE NOTES

- THE SERVICE CONNECTION WILL REQUIRE THE PLUMBER TO PURCHASE A TAP AT LEAST TWO WEEKS PRIOR TO WHEN HE NEEDS IT. AS A GENERAL RULE, MISSOURI AMERICAN WATER CO. MAKES THE TAPS IN THE ORDER IN WHICH THEY ARE RECEIVED, AND CANNOT GUARANTEE TWO WEEKS DURING A BUSY TIME OF THE YEAR. ONCE THE TAP IS PURCHASED THE PLUMBER HAS TO SCHEDULE IT WITH THE DISTRICT SUPERVISOR. THE PLUMBER HAS TO HAVE ALL REQUIRED INFORMATION, PLUS MISSOURI AMERICAN WATER REQUIRES TWO SETS OF A SITE PLANS SHOWING THE PROPOSED LAYOUT AND VALVING, ALONG WITH THIS MISSOURI AMERICAN WATER CO. CAN INSURE THAT THEY ARE ABLE TO PROVIDE THE REQUIRED FLOW. THE ONLY FEE IS THE ACTUAL COST OF THE TAP ITSELF. THE TAPPING FEE IS DIFFERENT FOR EVERY COMBINATION OF PIPE SIZE AND TAP SIZE AND IS BASED ON PREVIOUS YEAR'S ACTUAL COSTS.
- THE FOOTING OF THE BUILDING MUST BE IN BEFORE MISSOURI AMERICAN WATER CO. WILL MAKE A TAP. MISSOURI AMERICAN WATER DOES NOT MAKE TAPS FOR VACANT LOTS OR PREVIOUS TO SUBSTANTIAL BUILDING CONSTRUCTION.
- A MINIMUM CLASS 52 DUCTILE IRON PIPE, CONFORMING TO APPLICABLE AWWA STANDARDS, IS REQUIRED ON ANY SERVICE LINE THAT IS 4" OR GREATER IN SIZE BEFORE A METER. COPPER PIPING IS REQUIRED FOR SMALLER SERVICES FROM THE MAIN THROUGH THE METER BOX. FOR SERVICES SMALLER THAN 4" IN SIZE, FLEXIBLE TYPE "K" COPPER IS REQUIRED THROUGH THE STOP BOX. AFTER THE STOP BOX, FLEXIBLE OR RIGID TYPE "K" OR "L" COPPER IS REQUIRED TO FOUR FEET BEYOND THE METER BOX. FOR LARGER SERVICES, DUCTILE IRON PIPE SHOULD RUN FROM THE MAIN TO A POINT AT LEAST SIX FEET BEYOND THE METER BOX. FROM THE BUILDING FOUNDATION, COPPER OR DUCTILE IRON PIPE MUST EXTEND A MINIMUM OF TEN FEET OUTSIDE THE BUILDING WALL. ONCE A FIRE LINE IS PAST A DETECTOR CHECK METER IT IS CONSIDERED TO BE METERED AND ANY MATERIALS CAN BE USED THAT COMPLY WITH THE LOCAL PLUMBING CODES. A "MASTER SERVICE" WOULD NOT METERED.
- THE JOINTS ON COPPER SERVICE LINES (EXCLUDING JOINTS ON PRE-PURCHASED "METER SETTERS" SHALL BE EITHER FLARED, COMPRESSION, OR SILVER SOLDERED.
- EXISTING SERVICES WILL HAVE TO BE DESTROYED AT THE MAIN UNLESS THEY ARE BEING REUSED. PERMISSION TO REUSE A SERVICE (EITHER PERMANENTLY OR TEMPORARILY) MUST COME FROM THE DISTRICT SUPERVISOR. EXCAVATIONS IN THE PUBLIC RIGHT-OF-WAY WILL REQUIRE AN EXCAVATION PERMIT.
- MISSOURI AMERICAN WATER DOES NOT OWN, OPERATE, OR MAINTAIN SERVICE LINES. AS A GENERAL RULE, MISSOURI AMERICAN WATER DOES NOT RUN A WATER MAIN EXTENSION ON A PROJECT WHICH CAN BE SERVED BY A SERVICE LINE.
- MISSOURI AMERICAN WATER CO. REQUIRES A DETECTOR CHECK VALVE ON ALL FIRE PROTECTION LINES FOR SPRINKLER SYSTEMS. THEY ALSO REQUIRE A DETECTOR CHECK VALVE ON FIRE HYDRANTS, WITH THE POSSIBLE EXCEPTION OF HYDRANTS THAT ARE IMMEDIATELY ADJACENT AND VISIBLE FROM PUBLIC STREETS. MISSOURI AMERICAN WATER ALSO REQUIRES VALVES ON BOTH FIRE AND DOMESTIC LINES AFTER THEY SPLIT FROM A COMBINED SERVICE. THUS A TYPICAL SPLIT SERVICE WOULD HAVE VALVES ON BOTH FIRE AND DOMESTIC LINES AFTER A TEE. OF COURSE THIS WOULD ALSO REQUIRE A VALVE ON A LINE GOING TO A FIRE HYDRANT THAT CAME OFF OF A "MASTER WATER SERVICE".

BULK CUT =     XXX     ± CUBIC YARDS  
 BULK FILL =     XXX     ± CUBIC YARDS (INCLUDES 15% SHRINKAGE)  
 10" BUILDING SUBGRADE  
 11" FOR ALL P.V.M.T. AREAS  
 15% SHRINKAGE FACTOR FOR FILL

THE ABOVE QUANTITIES DO NOT INCLUDE TOPSOIL MATERIAL.

THE ENGINEER HAS CALCULATED THE ABOVE QUANTITIES OF EARTHWORK TO BE REGARDED AS AN ESTIMATE OF THE BULK MOVEMENT OR REDISTRIBUTION OF SOILS ON THIS PROJECT. AS AN ESTIMATE, THESE QUANTITIES ARE INTENDED FOR GENERAL USE, AND THE ENGINEER ASSUMES NO LIABILITY FOR COST OVERRUNS DUE TO EXCESS EXCAVATED MATERIALS OR SHORTAGES OF FILL.

THE QUANTITIES ESTIMATED FOR EACH OF THE IMPROVEMENT ITEMS LISTED ABOVE ARE BASED UPON THE HORIZONTAL AND VERTICAL LOCATION OF THE IMPROVEMENTS AS PROPOSED ON THE SITE ENGINEERING PLANS PREPARED BY STOCK AND ASSOCIATES CONSULTING ENGINEERS.

THE ENGINEER'S EARTHWORK ESTIMATE DOES NOT INCLUDE ANY OF THE FOLLOWING ITEMS REQUIRING EARTHWORK THAT MAY BE NECESSARY FOR COMPLETION OF THE PROJECT: MISCELLANEOUS UNDERGROUND CONDUITS, INCLUDING SEWER LINES AND WATER MAINS; STANDARD MANHOLES; PROCESS OR TRANSFER PIPING; ELECTRICAL OR TELEPHONE CONDUITS; BASES FOR LIGHT STANDARDS; BUILDING FOOTINGS AND FOUNDATIONS, ETC.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACTUAL SIZE OF THE FIELD EXCAVATIONS MADE FOR THE INSTALLATION OF UNDERGROUND STRUCTURES, AND AS SUCH, THE ACTUAL QUANTITIES OF EARTHWORK FROM SUCH ITEMS MAY VARY FROM THE ESTIMATE SHOWN ABOVE.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR COSTS INCURRED DUE TO UNSUITABLE MATERIAL WHICH MUST BE REMOVED FROM SITE.

THE ABOVE QUANTITIES ARE AN ESTIMATE AND SHOULD BE CONSIDERED AS SUCH. IT IS THE GRADING CONTRACTOR'S RESPONSIBILITY TO PREPARE A QUANTITY TAKEOFF AND NOTE ANY DISCREPANCIES TO THE ENGINEER.

# COTTLEVILLE FIRE PROTECTION DISTRICT

- THE REQUIRED FIRE HYDRANT FIRE FLOW SHALL BE IN ACCORDANCE WITH SECTION B105 OF THE 2004 INTERNATIONAL FIRE CODE.
- THE FIRE HYDRANTS WILL BE PRIVATE AND PAINTED ENTIRELY RED (PORTER 4119 OR EQUAL).
- FIRE APPARATUS ROADS SHALL BE MARKED WITH PERMANENT "NO PARKING-FIRE LANE" SIGNS COMPLYING WITH SECTION D103 PF APPENDIX D OF THE 2003 INTERNATIONAL FIRE CODE.

A = CONTACT BEARING AREA OF BLOCK WITH EARTH IN SQUARE FEET

PIPE DIA. IN.	PLUG	45° WYE	TEE CONNECTION	UP TO 22.5'	UP TO 45'	UP TO 90'
	A (SQ. FT.)	A (SQ.FT.)	A (SQ.FT.)	A (SQ.FT.)	A (SQ.FT.)	A (SQ.FT.)
4" and smaller	0.5	1.4	2.6	1.8	2.2	2.0
6"	1.5	3.0	6.0	4.0	4.5	4.5
8"	2.5	5.0	9.5	6.5	9.5	8.0
10"	4.1	8.0	13.0	9.5	12.5	12.5
12"	5.5	11.5	19.0	13.5	16.0	18.0
16"	9.0	18.0	33.0	23.0	27.0	32.0
20"	14.0	28.0	51.0	36.0	42.0	50.5

### NOTES:

- BEARING AREAS ARE BASED ON UNDISTURBED SOIL WITH A BEARING CAPACITY OF 1,000 POUNDS PER SQUARE FOOT. FOR A LESSER SOIL BEARING CAPACITY THESE AREAS SHALL BE INCREASED ACCORDINGLY.
- ALL CONCRETE THRUST BLOCKS SHALL BE 3000 P.S.I. CONCRETE.
- THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
- NO JOINT SHALL BE COVERED WITH CONCRETE.
- JOINTS THAT LOCATED AGAINST THRUST BLOCKS ARE TO BE WRAPPED IN A GLOM MATERIAL.
- APPROVED MECHANICAL JOINT RESTRAINTS ARE REQUIRED AT ALL VERTICAL BENDS AND MAY BE USED IN LIEU OF THRUST BLOCKS AT HORIZONTAL BENDS AT THE OPTION OF THE ENGINEER, AT NO ADDITIONAL COST TO THE OWNER.

### THRUST BLOCKING DETAILS

N.T.S.

# DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

- Underground utilities 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 and storm sewers, including house laterals.
- All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
- All fill including places under proposed sanitary sewer lines and paved areas including trench backfills within and off the road right-of-way shall be compacted to 90 percent of maximum density as determined by the "Modified AASHTO T-180 Compaction Test (ASTM D1557)". All tests shall be verified by a Soils Engineer concurrent with grading and backfilling operations. The compacted fill shall be free of rutting and shall be non-yielding and non-pumping during proofrolling and compaction. (Contractor shall verify requirements w/ City of O'Fallon prior to installation).
- The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
- All sanitary sewer flowlines and taps built without elevations furnished by the engineer will be the responsibility of the sewer contractor.
- Easements shall be provided for all sanitary sewers, storm sewers and all utilities on the record plat.
- All construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
- The Duckett Creek Sanitary District shall be notified at least 48 hours prior to construction for coordination of inspection.
- All sanitary sewer building connections shall be designed so that the minimum vertical distance from the low point of the basement to the flowline 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. The sanitary lateral shall be a minimum 6" diameter pipe.
- All sanitary sewer manholes shall be waterproofed on the exterior in accordance with Missouri Dept. of Natural Resources specification 10 CSR-8.120(7)(E).
- All PVC sanitary sewer pipe shall conform to the requirements of ASTM D-3034 Standard Specification for PSM Polyvinyl Chloride Sewer Pipe, SDR-35 or equal, with "clean" 1/2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe. Immediate backfill over pipe shall consist of same size "clean" or "minus" stone from springline of pipe to 6 inches above the top of pipe.
- All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas. (Contractor shall verify requirements w/ City of O'Fallon prior to installation).
- All pipes shall have positive drainage through manholes. No flat invert structures are allowed.
- All creek crossings shall be grouted rip-rap as directed by District inspectors. (All grout shall be high slump ready-mix concrete).
- Brick shall not be used on sanitary sewer manholes.
- Existing sanitary sewer service shall not be interrupted.
- Maintain access to existing residential driveways and streets.
- 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.

FILE NO. \_\_\_\_\_  
 INDEX NO. \_\_\_\_\_  
 ISSUED DATE \_\_\_\_\_  
 AMENDED DATE \_\_\_\_\_

Missouri-American Water Co.  
 ST. LOUIS COUNTY OPERATIONS

## METER BOX FOR SPLIT SERVICE

NOTES

GENERAL SERVICE	FIRE SERVICE													
	BYPASS			10"			6"			4"				
SIZE	MIN.	SIZE	A	B	C	D	E	F	G	H	I	J	K	L
1/2"	1"	3/8"	1/4	3/8	7/2	102	35	72	90	30	66	84	27	60
3/4"	1"	3/4"	1/2	3/4	156	35	78	156	30	72	150	27	72	
1"	1 1/2"	3/4"	1/2	3/4	156	35	84	156	30	84	156	27	156	
1 1/2"	2"	6/8"	1/2	3/4	174	36	84	174	31	78	174	27	174	
2"	2"	6/8"	1/2	3/4	184	37	84	186	37	84	186			

SUBJECT TO REVISION WITHOUT NOTICE 8-16-99  
 METER BOX FOR SPLIT SERVICE  
 CAD /DISTRIB/DETAILS/METERBOX.DGN

# VEGETATION ESTABLISHMENT

**TILLAGE PREPARATIONS**  
 \*TILL TOP 4" OF SOIL

**FERTILIZER**  
 \* PER SOIL TEST OR FOLLOWING TABLE:

	N	P	K	LIME
TEMPORARY SEEDING	0.7	0.7	0.7	14 ENM+
PERMANENT	1.0	1.4	1.4	14 ENM+

+ SOIL TEST RESULTS TAKE PRECEDENCE, DUE TO HIGHLY VARIABLE SOIL PH.

**SEEDING RATES**

TEMPORARY WHEAT OR RYE	150 LBS. / ACRE
PERMANENT FESCUES	150 LBS. / ACRE
KENTUCKY BLUEGRASS/ PERENNIAL RYEGRASS	6 LBS. / 1000 S.F.
FINE FESCUE	8 LBS. / 1000 S.F.
SEEDING PERIODS LISTED LEGUMES/GRASSES WHEAT/RYE	MARCH 1 - JUNE 1 AUGUST - OCTOBER 1 MARCH 15 - NOVEMBER 1

- Graded areas that are to remain bare for over 2 weeks are to be seeded and mulched.

- 06-20-06 REVISED PER CITY COMMENTS DATED 6-13-2006
- 05-31-06 REVISED PER CITY COMMENTS DATED 5-12-2006
- 05-05-06 WATER LINE CHANGED FROM 4" TO 3"
- 04-26-06 REVISED PER CITY COMMENTS
- 02-28-06 REVISED WALL PROFILE A, ADDED COTTLEVILLE FIRE NOTES ON SHEET C2
- 02-13-06 IN-HOUSE
- 01-09-06 REVISED PER ARCHITECTURAL FOOTPRINT AND FIRE DEPT. COMMENTS

## SPECIFICATION SHEET

RESIDENCE INN - PROGRESS POINT VILLAGE

**Stock & Associates**  
 Consulting Engineers, Inc.

257 Chesterfield Business Parkway  
 St. Louis, MO 63005  
 PH. (636) 530-9100  
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 e-mail: general@stockassoc.com  
 Web: www.stockassoc.com

P&Z NOS: 99-104.12  
 APPROVED ON 12/15/05

06-20-06

GEORGE M. STOCK E-25116

DRAWN BY:	DATE:	CHECKED BY:	DATE:	JOB NUMBER:	SHEET:
J.P.P.	1/13/06	G.M.S.	1/13/06	205-3718	C2 of 12