

GENERAL NOTES

- ALL UTILITIES SHOWN HAVE BEEN LOCATED 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. THE CONTRACTOR SHALL BE ON RECORD WITH THE MISSOURI ONE CALL SYSTEM. ALL PROPOSED UTILITIES TO BE UNDERGROUND.
- ALL ELEVATIONS ARE BASED ON BENCHMARK NOTED ON THIS SHEET.
- BOUNDARY AND TOPOGRAPHIC SURVEY BY MARLER SURVEYING COMPANY, INC.
- ALL ON-SITE MATERIALS AND METHODS OF CONSTRUCTION TO MEET THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF O'FALLON DEPARTMENT OF PUBLIC WORKS.
- ALL GRADED AREAS SHALL BE PROTECTED FROM EROSION BY EROSION CONTROL DEVICES AND/OR SEEDING AND MULCHING AS REQUIRED BY THE CITY.
- PRIOR TO BEGINNING ANY WORK ON THE SITE, THE SUB-CONTRACTOR SHALL CONTACT THE GENERAL CONTRACTOR FOR SPECIFIC INSTRUCTIONS RELEVANT TO THE SEQUENCING OF WORK.
- GRADING CONTRACTOR SHALL INSTALL SILTATION CONTROL PRIOR TO STARTING THE GRADING. ADDITIONAL SILTATION CONTROL DEVICES SHALL BE INSTALLED AS DIRECTED BY THE CITY.
- ALL FILLS AND BACKFILLS SHALL BE MADE OF SELECTED EARTH MATERIALS, FREE FROM BROKEN MASONRY, ROCK, FROZEN EARTH, RUBBISH, ORGANIC MATERIAL AND DEBRIS.
- GRADING CONTRACTOR SHALL KEEP EXISTING ROADWAYS CLEAN OF MUD AND DEBRIS AT ALL TIMES.
- PROPOSED CONTOURS SHOWN ARE FINISHED ELEVATIONS ON PAVED AREAS.
- ALL GRADING & DRAINAGE TO BE IN CONFORMANCE WITH CITY STANDARDS.
- DRIVE ENTRANCES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CITY.
- SEEDING, SOEDING, MULCHING AND PLANTINGS FOR ALL DISTURBED AREAS SHALL BE SPECIFIED ON THE LANDSCAPE PLAN.
- SIDEWALKS ALONG THE ACCESSIBLE ROUTE SHALL NOT HAVE A SLOPE EXCEEDING 1% WITH SLOPES GREATER THAN 1% TO 20% MUST BE DESIGNED AS A RAMP. SIDEWALKS TO BE CONSTRUCTED TO ADA STANDARDS.
- SIDEWALKS, CURB RAMPS, RAMPS AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT APPROVED "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES" (ADAAC) ALONG WITH THE REQUIRED GRADES, CONSTRUCTION MATERIALS, SPECIFICATIONS AND SIGNAGE. IF ANY CONFLICT OCCURS BETWEEN THE ADAAC GUIDELINES AND THE INFORMATION ON THE PLANS, THE ADAAC GUIDELINES SHALL TAKE PRECEDENCE AND THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER PRIOR TO ANY CONSTRUCTION.
- BY GRAPHIC PLOTTING ONLY, THIS PROPERTY DOES NOT LIE WITHIN ANY SPECIAL FLOOD ZONE AREAS ACCORDING TO THE FLOOD INSURANCE RATE MAP PANEL NUMBER 29183C043036 AND COMMUNITY NUMBER 290316 (CITY OF O'FALLON) WHICH BEARS AN EFFECTIVE DATE OF JANUARY 20, 2016. THE PROPERTY LIES WITHIN UNSHADOWED ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN).
- NO GRADE SHALL EXCEED 3:1 SLOPE.
- STORMWATER SHALL BE DISCHARGED AT AN ADEQUATE NATURAL DISCHARGE POINT. SINKHOLES ARE NOT ADEQUATE NATURAL DISCHARGE POINTS.
- ALL LANDSCAPE AREAS TO BE FILLED WITH A MINIMUM OF 6" OF TOPSOIL.
- ALL LANDSCAPED AREAS DISTURBED BY OFF-SITE WORK SHALL BE IMMEDIATELY SEEDING OR SOODED, AS DIRECTED BY CITY DEPARTMENT OF PUBLIC WORKS UPON COMPLETION OF WORK IN AREA AFFECTED.
- ADEQUATE TEMPORARY OFF-STREET PARKING FOR CONSTRUCTION EMPLOYEES SHALL BE PROVIDED. PARKING ON NON-SURFACED AREAS SHALL BE PROHIBITED IN ORDER TO ELIMINATE THE CONDITION WHEREBY MUD FROM CONSTRUCTION AND EMPLOYEES' VEHICLES IS TRACKED ONTO THE PAVEMENT CAUSING HAZARDOUS ROADWAY AND DRIVEWAY CONDITIONS.
- ALL PUBLIC SEWER CONSTRUCTION MUST CONFORM TO 2000 M.S.D. "STANDARD CONSTRUCTION SPECIFICATION & DETAILS".
- NO STEP ALLOWED AT ACCESSIBLE ENTRANCE DOORS.
- ALL ROOF TOP UNITS SHALL BE SCREENED BY A PARAPET WALL THAT EXTENDS AROUND THE PERIMETER OF THE BUILDING.
- ALL PAVING TO BE TO ST. CHARLES COUNTY STANDARDS EXCEPT AS MODIFIED BY THE CITY OF O'FALLON. CONCRETE SHALL BE 4,000 PSI
- SETBACKS PER ZONING

BUILDING	PARKING
FRONT = 25'	FRONT = 10'
SIDE = 0'	SIDE = 0'
(EXCEPT SIDE YARD ON A ROAD OR STREET THEN 25 FEET)	
REAR = 0'	REAR = 0'
(EXCEPT WHERE A REAR LINE ABUTS LOTS ZONED RESIDENTIAL OR OFFICE NO LESS THAN 10')	

- ALL PROPOSED FENCING REQUIRES A SEPARATE PERMIT.
- ALL SIGN LOCATIONS AND SIZES MUST BE APPROVED SEPARATELY THROUGH THE PLANNING DIVISION.
- 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. LIGHTING ON SITE MUST BE ARMED AND SHIELDED SO THAT AMBIENT LIGHT LEVEL ON SITE DOES NOT EXCEED 0.5 FOOT CANDLES AT THE PROPERTY LINE.
- ALL PROPOSED UTILITIES TO BE LOCATED UNDERGROUND.
- ALL SILTATION CONTROL DEVICES (SILT FENCES AND SEDIMENTATION BASINS) SHALL FOLLOW ST. CHARLES COUNTY SOIL AND WATER CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL GUIDELINES.

- STORM WATER DETENTION SHALL BE PROVIDED IN THE EXISTING BASIN PROVIDED BY THE WATERBURY SUBDIVISION
- ALL SEWER LATERALS TO BE SCHEDULE 40 PVC.

34. PARKING CALCULATIONS

PARKING REQUIRED	
1.1) 1 SPACES PER 6 PUPILS PLUS 1 PER EMPLOYEE	
140/6 = 23.3 SPACES	
10 EMPLOYEES = 10 SPACES	
TOTAL PARKING REQUIRED = 34 SPACES	

PARKING PROVIDED

9'x19' = 44 SPACES	
ADA = 2 SPACES	
TOTAL PARKING PROVIDED = 46 SPACES	

BIKE PARKING

1 RACK SPACE PER 15 PARKING SPACES	
REQUIRED: 15/46 X 1 = 3.2	
TOTAL BIKE PARKING REQUIRED = 4 SPACES	
TOTAL BIKE PARKING PROVIDED = 4 SPACES	

- CHAIN LINK FENCING IS NOT PERMITTED IN THE COMMERCIAL ZONING DISTRICT.

GENERAL NOTES

- DRIVEWAY LOCATIONS SHALL NOT INTERFERE WITH THE SIDEWALK HANDICAP RAMPS, OR CURB INLET SUMPS
- SIDEWALKS, CURB RAMPS, RAMPS AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT APPROVED "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES" (ADAAG) ALONG WITH THE REQUIRED GRADES, CONSTRUCTION MATERIALS, SPECIFICATIONS AND SIGNAGE. IF ANY CONFLICT OCCURS BETWEEN THE ABOVE INFORMATION AND THE PLANS, THE ADAAC GUIDELINES SHALL TAKE PRECEDENCE AND THE CONTRACTOR PRIOR TO ANY CONSTRUCTION SHALL NOTIFY THE PROJECT ENGINEER.
- TRUNCATED DUMPS FOR CURB RAMPS LOCATED IN PUBLIC RIGHT OF WAY SHALL MEET ADA REQUIREMENTS AND SHALL BE CONSTRUCTED USING RED PRE CAST TRUNCATED DUMPS PER PAVEMENT DETAILS.
- ANY PROPOSED PAVILIONS OR PLAYGROUND AREAS WILL NEED A SEPARATE PERMIT FROM THE BUILDING DIVISION. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND THE CITY OF O'FALLON FOR THE LOCATION OF UTILITIES. CONTACT THE CITY OF O'FALLON (636) 379-3814 FOR THE LOCATION OF CITY MAINTAINED CABLE FOR STREET LIGHTS AND TRAFFIC SIGNALS. ALL OTHER UTILITIES CALL MISSOURI ONE CALL 1-800-DIG-RITE. 1-800-344-7483
- ALL PROPOSED UTILITIES AND/OR UTILITY RELOCATIONS SHALL BE LOCATED UNDERGROUND.
- ALL PROPOSED FENCING REQUIRES A SEPARATE PERMIT THROUGH THE PLANNING AND DEVELOPMENT DIVISION.
- ALL CONSTRUCTION OPERATIONS AND WORK ZONE TRAFFIC CONTROL WITHIN THE RIGHT OF WAY WILL FOLLOW MODOOT OR M.U.T.C.D. STANDARDS WHICHEVER IS MORE STRINGENT.
- ALL FREE STANDING SIGNS SHALL BE LOCATED A MINIMUM OF TEN (10) FEET AWAY FROM ANY RIGHT OF WAY LINE AND/OR PROPERTY LINE AND A MINIMUM OF THREE (3) FEET FROM THE BACK OF CURBING OR SIDEWALK. ALL SIGNS SHALL ABIDE BY THE REGULATIONS FOR VISIBILITY AT CORNERS, INCLUDING CORNERS FROM DRIVEWAYS AND CITY STREET IT INTERSECTS PER SECTION 400.260 OF THE O'FALLON ZONING CODE.
- ALL SUBDIVISION IDENTIFICATION OR DIRECTIONAL SIGN(S) MUST HAVE THE LOCATIONS AND SIZES APPROVED AND PERMITTED SEPARATELY THROUGH THE PLANNING AND DEVELOPMENT DIVISION.
- MATERIALS SUCH AS TREES, ORGANIC DEBRIS, RUBBLE, FOUNDATIONS, AND OTHER DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IF THE MATERIAL LISTED PREVIOUSLY ARE REUSED, A LETTER FROM A SOIL ENGINEER MUST CLARIFY AMOUNT, LOCATION, DEPTH, ETC. AND BE APPROVED WITH THE CONSTRUCTION PLANS. ALL LETTERS FOR THE DISPOSAL SHALL BE MAINTAINED ON FILE BY THE DEVELOPER. BURNING ON SITE SHALL BE ALLOWED ONLY BY PERMIT FROM THE LOCAL FIRE DISTRICT. IF A BURN PIT IS PROPOSED THE LOCATION AND MITIGATION SHALL BE SHOWN ON THE GRADING PLAN AND DOCUMENTED BY THE SOILS ENGINEER.
- THIRTY (30) HOURS PRIOR TO STARTING ANY OF THE WORK COVERED BY THE ABOVE PLANS AND AFTER APPROVAL THEREOF, THE DEVELOPER SHALL MAKE ARRANGEMENTS WITH THE CONSTRUCTION INSPECTION OFFICE TO PROVIDE FOR INSPECTION OF THE WORK, SUFFICIENT IN THE OPINION OF THE CITY ENGINEER, TO ASSURE COMPLIANCE WITH THE PLANS AND SPECIFICATIONS AS APPROVED.
- THE CITY ENGINEER OR THEIR DULY AUTHORIZED REPRESENTATIVE SHALL MAKE ALL NECESSARY INSPECTIONS OF CITY INFRASTRUCTURE, EXCEPT FOR INFRASTRUCTURE LOCATED ON THE APPROVED PLANS.
- ALL EXISTING CURB REMOVALS ARE TO BE TO THE NEXT JOINT.

EROSION CONTROL NOTES

- THE PERMITTEE SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE PERMITTEE SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES (POSSIBLE METHODS OF CONTROL ARE DETAILED IN THE PLAN). CONTROL SHALL COMMENCE WITH THE CLEARING OPERATIONS AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY CITY OF O'FALLON AND AS NEEDED BY MODOOT. THE PERMITTEE'S RESPONSIBILITIES INCLUDE THE FULL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE CITY OF O'FALLON AND AS REQUIRED BY MODOOT MAY AT THEIR OPTION DIRECT THE PERMITTEE IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT SHALL BE REMOVED IMMEDIATELY. ANY DEPOSITING OF SILTS OR MUD IN NEW OR EXISTING STORM SEWERS AND/OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED TO THE SATISFACTION OF THE CITY OF O'FALLON AND AS REQUIRED BY MODOOT.
- ALL EROSION CONTROL SYSTEMS ARE TO BE INSPECTED AND CORRECTED WEEKLY, ESPECIALLY WITHIN 48 HOURS OF ANY RAIN STORM RESULTING IN ONE-QUARTER INCH OF RAIN OR MORE. ANY SILT OR DEBRIS LEAVING THE SITE AND AFFECTING PUBLIC RIGHT OF WAY OR STORM WATER DRAINAGE FACILITIES SHALL BE CLEANED UP WITHIN 24 HOURS AFTER THE END OF THE STORM.
- EROSION CONTROL DEVICES (SILT FENCE, SEDIMENT BASIN, ETC.) SHALL BE IN ACCORDANCE WITH ST. CHARLES COUNTY SOIL AND WATER CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL GUIDELINES.
- THIS DEVELOPMENT IS REQUIRED TO PROVIDE LONG TERM POST CONSTRUCTION BMP'S SUCH AS; LOW IMPACT DESIGN, SOURCE CONTROL AND TREATMENT CONTROLS THAT PROTECTS WATER QUALITY AND CONTROLS RUN OFF TO MAXIMUM EXTENT PRACTICAL IN COMPLIANCE WITH PHASE II ILLICIT STORM WATER DISCHARGE GUIDELINES. (ORD. 5082, SECTION 405.045)
- GRADED AREAS SHALL BE SEEDED AND MULCHED (STRAWED) WITHIN 14 DAYS OF STOPPING LAND DISTURBANCE ACTIVITIES. UNLESS IT CAN BE SHOWN TO THE CITY ENGINEER THAT WEATHER CONDITIONS ARE NOT FAVORABLE, VEGETATIVE GROWTH IS TO BE ESTABLISHED WITHIN 6 WEEKS OF STOPPING GRADING WORK ON THE PROJECT. THE VEGETATIVE GROWTH ESTABLISHED SHALL BE SUFFICIENT TO PREVENT EROSION AND THE STANDARD SHALL BE AS REQUIRED BY EPA AND DNR. (70% COVERAGE PER SQUARE FOOT) ORD. 5242, SECTION 405.070

GRADING NOTES

- DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH SOIL REPORTS PRIOR TO AND DURING SITE GRADING. THE SOIL REPORT WILL BE REQUIRED TO CONTAIN THE FOLLOWING INFORMATION ON SOIL TEST CURVES (PROCTOR REPORTS) FOR PROJECTS WITHIN THE CITY:
 - MAXIMUM DENSITY
 - OPTIMUM MOISTURE CONTENT
 - MAXIMUM AND MINIMUM ALLOWABLE MOISTURE CONTENT
 - CURVE MUST BE PLOTTED TO SHOW DENSITY FROM A MINIMUM OF 90% COMPACTION AND ABOVE AS DETERMINED BY THE "MODIFIED" AASHTO T-99 COMPACTION TEST (A.S.T.M.-D-1157) OR FROM A MINIMUM OF 95% AS DETERMINED BY THE "STANDARD" PROCTOR TEST AASHTO T-99, METHOD "C" (A.S.T.M.-D-698). PROCTOR TYPE MUST BE DESIGNATED ON DOCUMENT.
 - CURVE MUST HAVE AT LEAST 5 DENSITY POINTS WITH MOISTURE CONTENT AND SAMPLE LOCATIONS LISTED ON DOCUMENT
 - SPECIFIC GRAVITY
 - NATURAL MOISTURE CONTENT
 - LIQUID LIMIT
 - PLASTIC LIMIT
- IT IS ADVISED THAT IF THIS INFORMATION IS NOT PROVIDED TO THE CITY'S CONSTRUCTION INSPECTOR THE CITY WILL NOT ALLOW GRADING OR CONSTRUCTION ACTIVITIES TO PROCEED ON ANY PROJECT WITHIN THE CITY.
- ALL FILL PLACED IN AREAS OTHER THAN PROPOSED STORM SEWERS, SANITARY SEWERS, PROPOSED ROADS, AND PAVED AREAS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP IN 8" LIFTS AND COMPACTED TO 90% MAXIMUM DENSITY AS DETERMINED BY MODIFIED AASHTO T-99 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ENSURE THE MOISTURE CONTENT OF THE SOIL IN FILL AREAS CORRESPONDING TO THE COMPACTIVE EFFORT AS DETERMINED 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. THE SURFACE OF THE FILL SHALL BE FINISHED SO IT WILL NOT IMPOUND WATER. IF AT THE END OF A DAYS WORK IT WOULD APPEAR THAT THERE MAY BE RAIN PRIOR TO THE NEXT WORKING DAY, THE SURFACE SHALL BE FINISHED SMOOTH. IF THE SURFACE HAS BEEN FINISHED SMOOTH FOR ANY REASON, IT SHALL BE SCARIFIED BEFORE PROCEEDING WITH THE PLACEMENT OF SUCCEEDING LIFTS. FILL SHALL NOT BE PLACED ON FROZEN GROUND, NOR SHALL FILLING OPERATIONS CONTINUE WHEN THE TEMPERATURE IS SUCH AS TO PERMIT THE LAYER UNDER PLACEMENT TO FREEZE.
- ALL SEDIMENT AND DETENTION BASINS ARE TO BE CONSTRUCTED DURING THE INITIAL PHASE OF THE GRADING OPERATION OR IN ACCORDANCE WITH THE APPROVED SWPPP.
- WHEN GRADING OPERATIONS ARE UNDERWAY FOR MORE THAN 14 DAYS, PERMANENT GRASS MUST BE ESTABLISHED AT SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON SITE BETWEEN PERMANENT GRASS SEEDING PERIODS. TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO ST. CHARLES SOIL AND WATER CONSERVATION DISTRICT - MODEL SEDIMENT AND EROSION CONTROL REGULATIONS. ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY IMPROVEMENTS) IN EXCESS OF 20% SLOPES (5:1) SHALL BE MULCHED AND TACKED AT A RATE OF 100 POUNDS PER 1000 SQUARE FEET WHEN SEEDED.
- NO SLOPES SHALL EXCEED 3 (HORIZONTAL): 1 (VERTICAL) UNLESS OTHERWISE APPROVED BY THE SOILS REPORT AND SPECIFICALLY LOCATED ON THE PLANS AND APPROVED BY THE CITY ENGINEER.
- ALL LOW PLACES WHETHER ON SITE OR OFF SHALL BE GRADED TO PROVIDE DRAINAGE WITH TEMPORARY DITCHES.
- ANY EXISTING WELLS AND/OR SPRINGS WHICH MAY EXIST ON THE PROPERTY MUST BE SEALED IN A MANNER ACCEPTABLE TO THE CITY OF O'FALLON CONSTRUCTION INSPECTION DEPARTMENT FOLLOWING MISSOURI DEPARTMENT OF NATURAL RESOURCES STANDARDS AND SPECIFICATIONS.
- ALL TRENCH BACK FILLS UNDER PAVED AREAS SHALL BE GRANULAR BACK FILL, AND COMPACTED MECHANICALLY. ALL OTHER TRENCH BACK FILLS SHALL BE EARTH TRENCH BACK FILL OF LARGE CLODS OR STONES) AND COMPACTED USING EITHER MECHANICAL OR WATER 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 FEET WILL REQUIRE MULTIPLE PROBES EVERY 7.5 FOOT CENTERS.
 - DEPTH, TRENCH BACK FILLS LESS THAN 8 FEET DEEP SHALL BE PROBED TO A DEPTH EXTENDING HALF THE DEPTH OF THE TRENCH BACK FILL, BUT NOT LESS THAN 3 FEET. TRENCH BACK FILL GREATER THAN 8 FEET IN DEPTH SHALL BE PROBED TO HALF THE DEPTH OF THE TRENCH BACK FILL BUT NOT GREATER THAN 8 FEET.
 - EQUIPMENT, THE JETTING PROBE SHALL BE A METAL PIPE WITH AN INTERIOR DIAMETER OF 1.5 TO 2 INCHES.
 - THE JETTING SHALL BE PERFORMED FROM THE LOWEST SURFACE TOPOGRAPHIC POINT AND PROCEED TOWARD THE HIGHEST POINT, AND FROM THE BOTTOM OF THE TRENCH BACK FILL TOWARD 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 TRENCH WITHOUT FIRST SATURATING THE TRENCH.
 - SURFACE BRIDGING, THE CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF THE SURFACE BRIDGING (THE TENDENCY FOR THE UPPER SURFACE TO CRUST AND ARCH OVER THE TRENCH RATHER THAN COLLAPSE AND CONSOLIDATE DURING THE JETTING PROCESS). THE CONTRACTOR SHALL BREAK DOWN THE BRIDGED AREAS USING AN APPROPRIATE METHOD SUCH AS WHEELS OR BUCKET OF A BACKHOE. WHEN SURFACE CRUST IS COLLAPSED, THE VOID SHALL BE BACK FILLED WITH THE SAME MATERIAL USED AS TRENCH BACK FILL AND REJETTED. COMPACTION OF THE MATERIALS WITHIN THE SUNKEN/JETTED AREA SHALL BE COMPACTED SUCH THAT NO FURTHER SURFACE SUBSIDENCE OCCURS.
- SITE GRADING.
 - WITHIN CITY RIGHT-OF-WAY. MATERIAL IS TO BE PLACED IN EIGHT (8) INCH TO TWELVE (12) INCH LOOSE LIFTS AND COMPACTED PER THE APPROVED COMPACTION REQUIREMENTS. ONE (1) COMPACTION TEST WILL BE PERFORMED EVERY TWO HUNDRED FIFTY (250) FEET ALONG THE CENTERLINE FOR EACH LIFT.
 - OUTSIDE OF CITY RIGHT-OF-WAY. MATERIAL IS TO BE PLACED IN EIGHT (8) INCH TO TWELVE (12) INCH LOOSE LIFTS AND COMPACTED PER THE APPROVED COMPACTION REQUIREMENTS. ONE (1) COMPACTION TEST WILL BE PERFORMED AT TWO (2) FOOT VERTICAL INTERVALS AND APPROXIMATELY EVERY ONE THOUSAND (1,000) CUBIC YARDS.

STORM SEWER NOTES

- ALL STORM SEWER INSTALLATION IS TO BE IN ACCORDANCE WITH M.S.D. 2007 STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF O'FALLON ORDINANCES.
- BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES. PRE CAST CONCRETE STRUCTURES ARE TO BE USED UNLESS OTHERWISE APPROVED BY THE CITY OF O'FALLON.
- A 5/8" TRASH BAR SHALL BE INSTALLED HORIZONTALLY IN THE CENTER OF THE OPENING(S) IN ALL CURB INLETS AND AREA INLETS.
- HOPE PIPE IS TO BE N-12WT OR EQUAL AND TO MEET ASTM F1417 WATER TIGHT FIELD TEST.
- ENCASE WITH CONCRETE BOTH SANITARY AND STORM SEWER AT CROSSING WHEN STORM SEWER IS WITHIN 18 INCHES ABOVE SANITARY SEWER. ADD CONCRETE CRADLE TO ONLY RCP STORM SEWER AND ENCASE HOPE STORM SEWER WHEN IT IS MORE THAN 18 INCHES ABOVE SANITARY LINE. SHOW ON PROFILE SHEET.
- THE STORM SEWERS SHOULD RUN DIAGONALLY THROUGH THE SIDE YARDS TO MINIMIZE ANY ADDITIONAL UTILITY EASEMENTS REQUIRED.
- ALL CONCRETE PIPES WILL BE INSTALLED WITH O-RING RUBBER TYPE GASKETS.
- CONNECTIONS AT ALL STORM STRUCTURES ARE TO BE MADE WITH A-LOCK JOINT OR EQUAL.
- PRE CAST CONCRETE INLET COVERS ARE NOT TO BE USED.
- ALL STORM SEWER SHALL BE REINFORCED CONCRETE PIPE OR H.D.P.E. PIPE. ALL STRUCTURES AND FLARED END SECTIONS MUST BE CONCRETE. MANUFACTURING SPECIFICATIONS MUST BE FOLLOWED AND DETAILS PROVIDED FOR THE INSTALLATION OF H.D.P.E. PIPE. H.D.P.E. PIPE WILL NOT BE ALLOWED FOR DETENTION BASIN OUTFLOWS, FINAL PIPE RUN TO DETENTION BASINS, CREEK DISCHARGE OR OTHER APPROVED MEANS.
- THE DISCHARGE POINT OF ALL FLARED END SECTIONS SHALL BE PROTECTED BY RIP RAP OR OTHER APPROVED MEANS.
- RIP RAP SHOWN AT FLARED END SECTIONS WILL BE EVALUATED IN THE FIELD BY THE ENGINEER, CONTRACTOR, AND CITY INSPECTORS AFTER INSTALLATION FOR EFFECTIVENESS AND FIELD MODIFIED, IF NECESSARY TO REDUCE EROSION ON AND OFF SITE.
- ADD 1" MINUS ROCK BACK FILL TO ALL STORM SEWER THAT LIE WITHIN THE 1:1 SHEAR PLANE OF THE ROAD.

RETAINING WALLS: TERRACED AND VERTICAL

- A PERMIT IS REQUIRED FOR ALL RETAINING WALLS THAT ARE 48 INCHES OR TALLER IN WALLS THAT SUPPORT A SURCHARGE LOAD OR THAT ALTERS THE CHANNELIZED DRAINAGE OF ANY LOT OR DRAINAGE AREA.
- RETAINING WALLS WILL NOT BE ALLOWED IN PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER.
- ANY RETAINING WALL MORE THAN THIRTY (30) INCHES TALL WHICH SUPPORTS A WALKING SURFACE THAT IS WITHIN TWO (2) FEET OF THE WALL WILL REQUIRE A GUARD ON THE RETAINING WALL.
- RETAINING WALLS THAT ALTER THE CHANNELLED DRAINAGE OF ANY LOT OR DRAINAGE AREA SHALL NOT BE CONSTRUCTED WITHOUT PRIOR APPROVAL AND PERMITTING FROM THE CITY OF O'FALLON ENGINEERING DEPARTMENT REGARDLESS OF THE HEIGHT OF THE WALL.
- SEE SECTION 405.275 OF THE CITY CODE FOR ADDITIONAL DESIGN REQUIREMENTS.

ROADWAY NOTES

- ALL PAVING (PUBLIC AND PRIVATE) TO BE IN ACCORDANCE WITH 2006 ST. CHARLES COUNTY STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF O'FALLON ORDINANCES.
- IF THE INTERSECTING ROAD DOES NOT HAVE A CURB, THEN THE CURB ON THE NEW ENTRANCE SHALL BEGIN 10' FROM THE EDGE OF THE EXISTING ROAD.
- PROVIDE 6" OF CONCRETE OVER 4" OF MODOOT TYPE 1 OR TYPE 5 AGGREGATE ROCK OR ASPHALT EQUIVALENT FOR MINOR RESIDENTIAL STREETS PER CITY CODE 405.370.
- MULTI-USE TRAIL (BEHIND REQUIRED) SHALL HAVE A MINIMUM OF 3" TYPE "C" ASPHALT OVER 4" AGGREGATE BASE PER CITY REQUIREMENTS.
- TYPE C (BP-1) COMPACTION REQUIREMENTS SHALL BE 98% MINIMUM DENSITY ACCORDING TO ST. CHARLES COUNTY STANDARD SPECIFICATIONS.
- PROVIDE PAVEMENT STRIPES AT ANY POINT WHERE THE MULTI-USE TRAIL CROSSES EXISTING OR PROPOSED PAVEMENT.
- ALL STREET STUB-OUTS OVER 250' IN LENGTH WILL REQUIRE A TEMPORARY TURNAROUND.
- ALL SUB GRADE IN CUT OR FILL WILL NEED TO CONFORM TO THE CITY OF O'FALLON COMPACTION REQUIREMENTS.
- MATERIAL TESTING AND FREQUENCY. MATERIALS FOR CONSTRUCTION SHALL BE TESTED AND INSPECTED PER THE APPROPRIATE ASTM CODE OR AT THE CITY ENGINEER'S DISCRETION. THE DEVELOPER'S ENGINEER SHALL PERFORM THE FOLLOWING QUALITY CONTROL GUIDELINES:
 - CONCRETE.
 - CYLINDERS/COMPRESSIVE STRENGTH. ONE (1) SET OF FOUR (4) CYLINDERS WITHIN THE FIRST FIFTY (50) CUBIC YARDS AND ONE (1) SET PER ONE HUNDRED (100) CUBIC YARDS THEREAFTER. ONE (1) CYLINDER MUST BE TESTED AT SEVEN (7) DAYS, ONE (1) AT FOURTEEN (14) DAYS AND TWO (2) AT TWENTY-EIGHT (28) DAYS. IF THE FIRST (1ST) CYLINDER DOES NOT MEET SPECIFICATIONS AT TWENTY-EIGHT (28) DAYS, THEN THE SECOND (2ND) CYLINDER MUST BE HELD AND TESTED AT DAY FIFTY-SIX (56).
 - PERCENT AIR AND TEMPERATURE. FIRST (1ST) TRUCK BATCH EACH DAY AND TWO (2) THEREAFTER UNTIL A CONSISTENCY IS ENCOUNTERED. ONCE A CONSISTENCY IS ENCOUNTERED, THEN TESTS WILL BE PERFORMED IN CONJUNCTION WITH THE CONCRETE CYLINDERS.
 - SUMP. FIRST (1ST) TRUCK BATCH EACH DAY AND TWO (2) THEREAFTER UNTIL A CONSISTENCY IS ENCOUNTERED. ONCE A CONSISTENCY IS ENCOUNTERED, THEN TESTS WILL BE PERFORMED IN CONJUNCTION WITH THE CONCRETE CYLINDERS.
 - IF CONCRETE IS BATCHED FROM MORE THAN ONE (1) PLANT, THEN THE FOREMENTIONED GUIDELINES WILL BE APPLICABLE TO EACH PLANT.
 - SUB GRADE AND BASE.
 - A PROOF ROLL AS DESCRIBED IN SECTION 405.210(B).
 - ONE (1) COMPACTION TEST PER TWO HUNDRED FIFTY (250) FEET OF MAINLINE PAVING, THREE (3) TESTS PER INTERSECTION, FIVE (5) TESTS WITHIN CUL-DE-SACS AND ONE (1) TEST PER REPAIR SLAB. C. GRADATION TEST FOR SUB BASE MATERIAL.
 - ASPHALT.
 - ONE (1) SET OF COMPACTION TESTS PER TWO HUNDRED FIFTY (250) FEET OF MAINLINE. ONE (1) SET INCLUDES THREE (3) TESTS ACROSS THE PAVED LANE AT THE SAME STATION.
 - ONE (1) BULK DENSITY TEST PER PAVING OPERATION.

- APPROVAL OF SUB GRADE AND BASE (SUB BASES). THE CITY ENGINEER OR REPRESENTATIVE SHALL APPROVE THE SUB GRADE BEFORE ANY BASE IS PLACED THEREON AND SHALL APPROVE THE BASE BEFORE CONCRETE OR SURFACE COURSE IS PLACED. THE SUB GRADE AND BASE SHALL BE SO CONSTRUCTED THAT IT WILL BE UNIFORM IN DENSITY THROUGHOUT THE ENTIRE WIDTH AND LENGTH OF THE PAVED AREA.
- IN ALL FILL AREAS IN THE ROADWAYS, SOIL TESTS SHALL BE SUBMITTED AND APPROVED BY THE CITY ENGINEER FOR EACH FOOT OF FILL AND AT LEAST ONE (1) TEST AND AN AVERAGE OF ONE (1) TEST WITHIN EVERY TWO HUNDRED FIFTY (250) FEET. NO TRAFFIC WILL BE ALLOWED ON SUB GRADE PAVEMENT UNTIL IT HAS CURED FOR SEVEN (7) DAYS AND IT REACHES THREE THOUSAND FIVE HUNDRED (3,500) PSI WITHIN 28 DAYS. CONCRETE PAVEMENTS SHALL NOT BE APPROVED UNLESS IT REACHES A STRENGTH OF FOUR THOUSAND (4,000) PSI/CYLINDERS/COMPRESSIVE STRENGTH. ONE (1) SET OF FOUR (4) CYLINDERS WITHIN THE FIRST FIFTY (50) CUBIC YARDS AND ONE (1) SET PER ONE HUNDRED (100) CUBIC YARDS THEREAFTER. ONE (1) CYLINDER MUST BE TESTED AT SEVEN (7) DAYS, ONE (1) AT FOURTEEN (14) DAYS AND TWO (2) AT TWENTY-EIGHT (28) DAYS. IF THE FIRST (1ST) CYLINDER DOES NOT MEET SPECIFICATIONS AT TWENTY-EIGHT (28) DAYS, THEN THE SECOND (2ND) CYLINDER MUST BE HELD AND TESTED AT DAY FIFTY-SIX (56). PRIOR TO PLACEMENT OF AGGREGATE BASE MATERIAL ON SUB GRADE AND PRIOR TO PLACEMENT OF PAVEMENT ON BASE MATERIAL, THE SUB GRADE AND BASE MUST BE PROOF-ROLLED WITH A FULLY LOADED (TEN (10) TON LOAD) TANDEM TRUCK OR EQUIVALENT TIRE VEHICLE WITH ONE (1) PASS DOWN EACH DRIVING LANE NO FASTER THAN THREE (3) MILES PER HOUR. IF SOFT SPOTS ARE DETECTED, OR PUMPING, RUTTING OR HEAVING OCCURS GREATER THAN ONE (1) INCH AT THE SUB GRADE, THE ROADBED SHALL BE CONSIDERED UNSATISFACTORY AND THE SOIL IN THESE AREAS SHALL BE REMEDIATED TO THE DEPTH INDICATED BY THE CONTRACTOR'S TESTING FIRM AND APPROVED BY A REPRESENTATIVE OF THE CITY ENGINEER.
- SUB GRADE AND BASE BENEATH PAVEMENTS SHALL BE COMPACTED TO ST. CHARLES COUNTY HIGHWAY DEPARTMENT SPECIFICATIONS. THE MOISTURE RANGE SHALL BE DETERMINED BY THE STANDARD OR MODIFIED PROCTOR DENSITY METHOD AASHTO T-99.
- THE ENTIRE WIDTH AND LENGTH WILL CONFORM TO LINE, GRADE AND CROSS SECTION SHOWN ON THE PLANS OR AS ESTABLISHED BY THE ENGINEER. IF ANY SETTLING OR WASHING OCCURS, OR WHERE HAULING RESULTS IN RUTS OR OTHER OBJECTIONABLE IRREGULARITIES, THE CONTRACTOR SHALL IMPROVE THE SUB GRADE OR BASE TO THE SATISFACTION OF THE CITY BEFORE THE PAVEMENT IS PLACED. ADDITIONAL TOLERANCE OR METHODS TO VERIFY COMPACTION SHALL BE AT THE DISCRETION OF THE CITY ENGINEER. TOLERANCE ALLOWED ON ALL LINES, GRADES AND CROSS SECTIONS SHALL BE PLUS OR MINUS FOUR-HUNDRETHS (+0.04) FEET.
- UTILITY WORK PRIOR TO BASE CONSTRUCTION. NO BASE COURSE WORK MAY PROCEED ON ANY STREET UNTIL ALL UTILITY EXCAVATIONS (STORM AND SANITARY SEWERS, WATER, GAS, ELECTRIC, ETC.) HAVE BEEN PROPERLY BACK FILLED WITH GRANULAR MATERIAL, CRUSHED STONE OR GRAVEL MECHANICALLY TAMPED IN TEN (10) INCH LIFTS. UTILITIES INSTALLED AFTER SUB GRADE PREPARATION SHALL BE BORED. COMPACTION REQUIREMENTS SHALL FOLLOW ST. CHARLES COUNTY STANDARDS (2006).
- EQUIPMENT CALIBRATION. THE DEVELOPER'S CONTRACTORS AND SUBCONTRACTORS MUST HAVE THEIR EQUIPMENT CALIBRATED BY THE FOLLOWING MINIMUM STANDARDS.
 - AIR METER--WEEKLY.
 - CYLINDER COMPRESSION--ANNUALLY BY INDEPENDENT CALIBRATION SERVICE.
 - BATCH SCALES--MONTHLY.
 - NUCLEAR TESTING DEVICES--EVERY SIX (6) MONTHS.
 - PROCTOR EQUIPMENT--EVERY SIX (6) MONTHS.
 - SLUMP CONE--MONTHLY.
- ALL PERMANENT TRAFFIC CONTROL WILL BE PER M.U.T.C.D. OR MODOOT STANDARDS. S1-1 FROM THE M.U.T.C.D. MANUAL WILL BE USED AT ALL CROSSWALK LOCATIONS ACCOMPANIED WITH ETHER W16-9P OR W16-7P SIGNS.
- ALL TRAFFIC SIGNALS, STREET SIGNS, SIGN POST, BACKS AND BRACKET ARMS SHALL BE PAINTED BLACK USING CARBOLINE RUST BOND PENETRATING SEALER 50 AND CARBOLINE 133 HB PAINT (OR EQUIVALENT AS APPROVED BY CITY OF O'FALLON AND MODOOT).
- ALL ENTRANCE PAVEMENT SECTIONS WITHIN THE RIGHT OF WAY SHALL BE A MINIMUM OF 7" PCC PAVEMENT ON A COMPACTED 4" ROCK BASE OR ARE TO MATCH THE PAVEMENT THICKNESS OF THE ADJOINING STREET WHICH EVER IS GREATER, UNLESS OTHERWISE APPROVED WITH THE SITE PLAN.

DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION 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 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 PLACED UNDER PROPOSED STORM AND SANITARY SEWERS, 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 FILL 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. 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.
- THE CONTRACTOR SHALL PREVENT ALL STORM, SURFACE WATER, MUD AND CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER SYSTEM.
- ALL SANITARY SEWER FLOWLINES AND TOPS BUILT WITHOUT ELEVATIONS FURNISHED BY THE ENGINEER WILL BE THE RESPONSIBILITY OF THE SEWER CONTRACTOR.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST ALL SANITARY SEWER MANHOLES (THAT ARE AFFECTED BY THE DEVELOPMENT) TO FINISH GRADE.
- EASEMENTS SHALL BE PROVIDED FOR ALL SANITARY SEWERS, STORM SEWERS AND ALL UTILITIES ON THE RECORD PLAT.
- ALL SANITARY SEWER CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS OF 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 FLOORING OF 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.
- ALL SANITARY SEWER MANHOLES SHALL BE WATERPROOFED ON THE EXTERIOR IN ACCORDANCE WITH MISSOURI DEPARTMENT 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 TRENCH BACKFILLS SHALL BE WATER JETTED. GRANULAR BACKFILL WILL BE USED UNDER PAVEMENT AREAS.
- ALL PIPES SHALL HAVE POSITIVE DRAINAGE THROUGH MANHOLES. FLAT INVERT STRUCTURES NOT ALLOWED.
- EPOXY COATING SHALL BE USED ON ALL SANITARY SEWER MANHOLES THAT RECEIVE PRESSURED MAINS.
- ALL CREEK CROSSINGS SHALL BE LINED WITH RIP-RAP AS DIRECTED BY DISTRICT INSPECTORS.
- 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.
- ALL SANITARY LATERALS AND SANITARY MAINS CROSSING UNDER PAVEMENT MUST HAVE PROPER ROCK BACKFILL AND REQUIRED CONSTRUCTION.
- "TYPE N" LOCK-TYPE COVER AND LOCKING DEVICE (LOCK-LUG) SHALL BE USED WHERE LOCK-TYPE COVERS ARE REQUIRED.
- ALL SANITARY SEWER SYSTEM WORK SHALL BE CONDUCTED UNDER THE INSPECTION OF A REPRESENTATIVE OF THE DISTRICT. ALL WORK MAY NOT REQUIRE INSPECTION BUT THE DISTRICT'S REPRESENTATIVE MAY DESIGNATE SPECIFIC AREAS THAT WILL BE INSPECTED BEFORE THE WORK IS BACKFILLED. ALL TESTING MUST BE WITNESSED BY THE DISTRICT'S INSPECTOR AND THE CONTRACTOR SHALL FURNISH ALL TESTING EQUIPMENT AS APPROVED BY THE DISTRICT. TESTING SHALL INCLUDE:
 - A MANDREL TEST OF ALL SANITARY SEWERS USING A MANDREL WITH A DIAMETER THAT IS 98% OF THE INSIDE PIPE DIAMETER. IF THE MANDREL TEST FAILS ON ANY SECTION OF PIPE, THAT SECTION OF PIPE SHALL BE UNCOVERED AND REPLACED. NO EXPANSION DEVICES WILL BE ALLOWED TO FORCE THE PIPE THAT IS DEFORMED BACK INTO ROUND. ANY STRING LINES USED IN MANDREL TESTING SHALL BE REMOVED AFTER TESTING IS COMPLETED.
 - AN AIR PRESSURE TEST OF ALL SANITARY SEWERS TO A PRESSURE OF 5 PSI WITH NO OBSERVED DROP IN PRESSURE DURING A TEST PERIOD OF 5 MINUTES.
 - A VACUUM TEST OF ALL MANHOLES FOR A PERIOD OF 1 MINUTE AND THE VACUUM SHALL BE A 10" OF MERCURY AND MAY NOT DROP BELOW 9" AT THE END OF THE 1 MINUTE TEST.

EARTHWORK NOTES

BULK CUT _____ 65 _____ +/- CUBIC YARD
BULK FILL _____ 1,500 _____ +/- CUBIC YARD (INCLUDES 15% FOR SHRINKAGE)

THE CALCULATED EARTHWORK QUANTITIES SHOULD BE RECALCULATED AS AN ESTIMATE OF THE BULK MOVEMENT AND/OR REDISTRIBUTION OF SOILS FOR THE SUBJECT PROPERTY. THE CALCULATED QUANTITIES ARE INTENDED FOR GENERAL USE, AND SHOULD BE USED AS A COMPARISON WITH THE QUANTITIES CALCULATED BY THE EARTHWORK SUBCONTRACTOR. THE ENGINEER ASSUMES NO LIABILITY FOR COST OVERRUNS DUE TO EXCESS EXCAVATED MATERIALS OR FILL SHORTAGES. DISCREPANCIES BETWEEN THE ENGINEER'S CALCULATED QUANTITIES AND

THE EARTHWORK SUBCONTRACTOR'S ESTIMATE SHOULD BE REPORTED TO THE ENGINEER IMMEDIATELY. THE EARTHWORK QUANTITIES ESTIMATED FOR THE SUBJECT SITE ARE BASED UPON HORIZONTAL AND VERTICAL LOCATION OF THE IMPROVEMENTS AS PROPOSED ON THE SITE ENGINEERING PLANS PREPARED BY CIVIL ENGINEERING DESIGN CONSULTANTS, INC.

THE ENGINEER'S ESTIMATE DOES NOT INCLUDE ANY OF THE FOLLOWING ITEMS PERTAINING TO EARTHWORK QUANTITIES THAT MAY BE NECESSARY FOR COMPLETION OF THE PROJECT:

- MISCELLANEOUS UNDERGROUND CONDUITS AND MANHOLES
- WATER MAINS LESS THAN TWENTY-FOUR INCHES IN DIAMETER.
- BUILDING FOOTINGS AND FOUNDATIONS
- UTILITY AND/OR LIGHT STANDARD BASES

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACTUAL SIZE OF THE FIELD EXCAVATIONS MADE FOR THE INSTALLATION OF UNDERGROUND STRUCTURES, AND THEREFORE, THE ACTUAL EARTHWORK QUANTITIES MAY VARY FROM THE ESTIMATED QUANTITIES. THE ENGINEER ALSO ASSUMES NO RESPONSIBILITY FOR COSTS INCURRED DUE TO THE REMOVAL OF UNSUITABLE MATERIAL WHICH