

LEGAL DESCRIPTION

Lot 6 of Progress Point Village
 A tract of land being Lot 6 of Progress Point Village, a subdivision in the City of O'Fallon, Missouri, according to the plat thereof recorded in Plat Book 40, Pages 280 through 293 of the Recorder of Deeds Office in St. Charles, Missouri, and being located in U.S. Survey 1689 and 1786, Township 48 North, Range 3 East of the Fifth Principal Meridian, St. Charles County, Missouri, and being more particularly described as follows:

Beginning at the most Southwesterly corner of aforesaid Lot 6, being the intersection of the Eastern line of Missouri State Highway 40 (Variable width) and the Northern line of Missouri State Highway 40 (U.S. Route 40-81) (Variable width), thence departing said solid Northerly line and along said Eastern line North 05 degrees 30 minutes 10 seconds East (beats of bearing taken from aforesaid plat of Progress Point Village) 53.83 feet; thence departing said solid Eastern line South 89 degrees 28 minutes 29 seconds East 134.39 feet; thence North 60 degrees 43 minutes 53 seconds East 48.43 feet; thence North 31 degrees 45 minutes 48 seconds East 271.43 feet; thence North 64 degrees 25 minutes 01 second East 58.58 feet; thence North 88 degrees 56 seconds 01 minute East 98.00 feet; thence North 87 degrees 11 minutes 32 seconds East 100.00 feet; thence South 81 degrees 28 minutes 40 seconds East 100.00 feet; thence North 87 degrees 11 minutes 15 seconds East 70.00 feet; thence North 49 degrees 10 minutes 37 seconds East 25.00 feet; thence North 07 degrees 23 minutes 43 seconds East 55.00 feet; thence North 09 degrees 04 minutes 50 seconds East 68.00 feet; thence North 21 degrees 08 minutes 37 seconds East 100.00 feet; thence North 27 degrees 23 minutes 25 seconds East 100.00 feet; thence North 25 degrees 14 minutes 27 seconds East 100.00 feet; thence North 41 degrees 29 minutes 57 seconds East 100.00 feet; thence North 29 degrees 14 minutes 00 seconds East 43.63 feet; thence South 60 degrees 02 minutes 00 seconds East 189.00 feet; thence along the curve to the left for which the radius point bears North 29 degrees 14 minutes 00 seconds East 74.00 feet; thence Eastern along said curve, with a chord which bears South 88 degrees 27 minutes 27 seconds East 63.89 feet on an arc distance of 66.06 feet to a point of tangency; thence North 08 degrees 02 minutes 00 seconds East 273.24 feet; thence North 63 degrees 24 minutes 07 seconds East 154.87 feet; thence North 53 degrees 08 minutes 53 seconds East 223.32 feet to the Southwesterly line of Missouri State Highway 40 (Variable width) and a point on a curve to the right for which the radius point bears South 85 degrees 12 minutes 54 seconds West 40.00 feet; thence along said solid Southwesterly line and distances; thence South along said curve, with a chord which bears South 02 degrees 14 minutes 37 seconds East 3.55 feet, on an arc distance of 3.55 feet to a point of reverse curvature to the left for which the radius point bears South 08 degrees 22 minutes 02 seconds East 40.00 feet; thence along said curve, with a chord which bears South 71 degrees 27 minutes 04 seconds East of 33.70 feet, on an arc distance of 34.79 feet to a point of reverse curvature to the right for which the radius point bears North 43 degrees 27 minutes 52 seconds West 663.00 feet; thence Southwesterly along said curve, with a chord which bears South 38 degrees 55 minutes 30 seconds East of 220.00 feet, on an arc distance of 223.15 feet to a point of tangency; thence South 27 degrees 15 minutes 05 seconds East 287.49 feet to a point of curve to the right for which the radius point bears South 82 degrees 44 minutes 55 seconds West 40.00 feet; thence Southwesterly along said curve, with a chord which bears South 03 degrees 02 minutes 00 seconds East of 223.15 feet, on an arc distance of 33.80 feet to a point of reverse curvature to the left for which the radius point bears North 43 degrees 27 minutes 28 seconds East 76.00 feet; thence Southwesterly along said curve, with a chord which bears South 12 minutes 54 seconds West 3.04 feet, on an arc distance of 8.05 feet to a point of reverse curvature to the right for which the radius point bears North 75 degrees 39 minutes 42 seconds East 42 seconds East; thence Southwesterly along said curve, with a chord which bears South 32 minutes 37 seconds West 32.80 feet on an arc distance of 33.80 feet to a point of curve to the right for which the radius point bears South 45 degrees 32 minutes 05 seconds East 630.00 feet; thence Southwesterly along said curve, with a chord which bears South 19 degrees 48 minutes 30 seconds West 525.20 feet, on an arc distance of 541.74 feet to a point of tangency; thence South 04 degrees 48 minutes 11 seconds East 17.38 feet to a point of curve to the right for which the radius point bears South 85 degrees 11 minutes 46 seconds West 970.00 feet; thence Southwesterly along said curve, with a chord which bears South 02 degrees 58 minutes 55 seconds East 61.68 feet, on an arc distance of 61.69 feet to a point on a curve to the right for which the radius point bears North 58 degrees 18 minutes 30 seconds West 203.46 feet, on an arc distance of 203.87 feet to a point on a curve to the right for which the radius point bears North 78 degrees 39 minutes 02 seconds East 955.00 feet; thence Southwesterly along said curve, with a chord which bears South 11 degrees 38 minutes 51 seconds West 24.85 feet, on an arc distance of 24.85 feet to a point of curve to the right for which the radius point bears North 12 degrees 23 minutes 08 seconds West 125.80 feet to the northerly line of aforesaid Missouri State Highway 40; thence along said solid Northerly line the following course and distances: thence North 77 degrees 47 minutes 47 seconds West 229.97 feet; thence North 79 degrees 35 minutes 48 seconds West 495.30 feet; thence North 61 degrees 02 minutes 01 second West 34.67 feet to a point on a curve to the right for which the radius point bears North 12 degrees 14 minutes 34 seconds East 87.03 feet; thence Northwesterly along said curve, with a chord which bears North 70 degrees 39 minutes 05 seconds West 215.72 feet on an arc distance of 216.27 feet; thence departing said curve North 62 degrees 10 minutes 19 seconds West 800.56 feet; thence North 12 degrees 06 minutes 15 seconds West 396.25 feet to the POINT OF BEGINNING containing 61,963.342 square feet or 47,942 acres, more or less according to calculations performed by Stock and Associates Consulting Engineers, Inc. on November 18, 2003.

Also known as:
 Lot 6 of PROGRESS POINT VILLAGE, a Subdivision in St. Charles County, Missouri, as per plat thereof recorded in Plat Book 40 Pages 290 through 293 of the St. Charles County Recorder's.

EROSION AND SEDIMENT CONTROL NOTES

- Installation of perimeter sediment control shall be implemented as the first step of grading and within seven (7) days of grubbing the site.
- Inspection of siltation control devices shall take place every seven days and within 24 hours of any 0.57/24 hour rain event. Any siltation control in need of repair shall occur immediately.
- Any disturbed areas which will remain unworked for 14 days or more shall be stabilized with seeding and mulching per specifications within 7 days, if seasonal conditions prohibit seeding, mulching or matting shall be used.
- All slopes or drainage channels, once constructed to final grade, shall be seeded and mulched per specifications within seven (7) days.
- Silt fences shall be installed immediately around each storm sewer structure once final construction of each individual structure is complete.
- All siltation control devices shall remain in place until upslope areas have been permanently stabilized.
- The Contractor shall assume complete responsibility for controlling all siltation and erosion of the project area. The Contractor 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 grading and be maintained throughout the project until acceptance of the work by the Owner and/or the City of O'Fallon and/or MoDOT. The Contractor's responsibilities include all design and implementation as required to prevent erosion and the depositing of silt. The Owner and/or the City of O'Fallon and/or MoDOT may at their option direct the Contractor in his methods as deemed fit to protect property and improvements. Any depositing of silts or mud on new or existing pavement or on existing storm sewers or swales shall be removed after each rain and affected areas cleaned to the satisfaction of the Owner and/or the City of O'Fallon and/or MoDOT. Owner shall be responsible for structure to remain as permanent after construction is complete.
- When deemed necessary, positive steps should be

Siltation Control Schedule Implementation

- Perimeter siltation control and construction entrances to be installed.
- Begin placing aggregate base in parking areas once area has reached final grade to prevent erosion.
- Place silt fence around each storm sewer structure as it is completed.
- Immediately seed areas upon reaching final grade that are to be permanently seeded.

Temporary Access Roads and Parking Areas Specifications

- Temporary roads shall follow the contour of the natural terrain to the extent possible. Slopes should not exceed 10 percent.
- Grades should be sufficient to provide drainage, but should not exceed 10 percent.
- Silt Fence Specifications
- All cuts and fills shall be 3:1 or flatter to the extent possible.
- Drainage ditches shall be provided as needed.
- The roadbed or parking surface shall be cleared of all vegetation, roots and other objectionable material.
- A 10-inch course of 2" MINUS aggregate shall be applied immediately after grading or the completion of utility installation within the right-of-way. Filter fabric may be applied to the roadbed for additional stability in accordance with fabric manufacturer's specifications.

Vegetation

All roadside ditches, cuts, fills and disturbed areas adjacent to parking areas and roads shall be stabilized with appropriate temporary or permanent vegetation according to the applicable standards and specifications.

Maintenance

Both temporary and permanent roads and parking areas may require periodic top dressing with new gravel. Seeded areas of the roads and parking areas should be checked periodically to ensure that a vigorous stand of vegetation is maintained. Roadside ditches and other drainage structures should be checked regularly to ensure that they do not become clogged with silt or other debris.

All erosion control systems shall be inspected and necessary corrections made within 24 hours of any rainstorm resulting in 1/2 inch of rain or more.

Straw Bale Siltation Control Specifications

Sheet Flow Applications

- Bales shall be placed in a single row, lengthwise on the contour, with both ends of adjacent bales tightly abutting one another.
- All bales shall be either wire-bound or string-tied. Straw bales shall be installed so that buildings are oriented around the sides rather than along the tops and bottoms of the bales (in order to prevent deterioration of the bindings). See Detail this sheet.
- The barrier shall be entrenched and backfilled. A trench shall be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. After the bales are staked and chinked, the excavated soil shall be backfilled against the barrier. Backfill soil shall conform to the ground level on the downhill and shall be built up to 4 inches against the uphill side of the barrier (See detail this sheet).
- Each bale shall be securely anchored by at least two stakes or rebars driven through the bale. The first stake in each bale shall be driven toward the uphill side of the barrier to force the bales together. Stakes or rebars shall be driven deep enough into the ground to securely anchor the bales.
- The gaps between bales shall be chinked (filled by wedging) with straw to prevent water from escaping between the bales. (Loose straw scattered over the area immediately uphill from a straw bale barrier tends to increase barrier efficiency).
- Inspection shall be frequent and repair when they have served their usefulness, but not before the upslope areas have been permanently stabilized.

Channel Flow Applications

- Bales shall be placed in a single row, lengthwise, oriented perpendicular to the contour, with ends of adjacent bales tightly abutting one another.
- The remaining steps for installing a straw bale barrier for sheet flow applications apply here, with the following addition.
- The barrier shall be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale (see detail) to assure that sediment-laden runoff will flow either through or over the barrier but not around it.

Maintenance

- Straw bale barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- Close attention shall be paid to the repair of damaged fence, end runs and undercutting beneath fence.
- Necessary repairs to barriers or replacement of silt fence shall be accomplished promptly.
- Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.
- Any sediment deposits remaining in place after the straw bale barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

Silt Fence Specifications

- Silt Fence to be woven geotextile fabric Mirafix 100X or equal.
- Fabric to be supported by metal tee post with welded base spaced on 5' centers with 6 x 6/10 x 10 gage galvanized wire fence. See detail this sheet.
- Fabric shall be entrenched and backfilled. A trench shall be excavated a minimum of 6 inches deep for the length of the fence. The excavated soil shall be backfilled against the fence. See detail this sheet.
- Fence height shall be a minimum of 4 feet in height, with the fabric installed on the fence on the upstream side.
- Silt fences shall be used only on sheet flow conditions.
- Silt fences shall be installed around all storm sewer structures.

Maintenance

- Silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.
- Close attention shall be paid to the repair of damaged bales, end runs and undercutting beneath bales.
- Necessary repairs to barriers or replacement of bales shall be accomplished promptly.
- Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.
- Any sediment deposits remaining in place after the silt fence barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

GENERAL NOTES

- BOUNDARY AND TOPOGRAPHIC SURVEY BY STOCK & ASSOCIATES.
- ALL UTILITIES SHOWN HAVE BEEN LOCATED BY SURVEY AND RECORD INFORMATION. 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 SLOPE SHALL BE STEEPER THAN 3:1.
- FEMA MAP 29183C0430 E DATED 8/2/96 ZONE "X" AND OTHER AREAS.
- 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 ROOF TOP 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 APPROVED BY THE PLANNING AND ZONING COMMISSION.
- ALL CONSTRUCTION AND MATERIALS USED SHALL CONFORM TO CURRENT CITY OF O'FALLON STANDARDS.
- SEE ARCHITECTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS AND DETAILS.
- HANDICAP STALL LOCATIONS ARE TO BE DETERMINED AND COORDINATED WITH THE CITY OF O'FALLON.
- ALL PROPOSED BUILDINGS LOCATED ON THE PROPERTY AND ARE DESIGNATED "AREA DEVELOPMENT". SHALL REQUIRE THE SUBMISSION AND APPROVAL OF A COMPLETED SITE PLAN THAT INDICATES THAT ALL SITE REQUIREMENTS HAVE BEEN MET OR EXCEEDED, PRIOR TO CONSTRUCTION.

29. Cont.)

- Medical Office Building
 - Physicians - 0.65 spaces/physician present at 19 physicians = 12 spaces
 - Staff - 2 spaces/physician present at 19 physicians = 38 spaces
 - Patients - 3 spaces/physician present at 19 physicians = 57 spaces
 - TOTAL: 311 parking spaces

GRAND TOTAL: 311 Total Parking Spaces (x) 10% = 342 parking spaces

METHODOLOGY 2

- Hospital:
 - Physicians/Staff - Peak shift 2/3 FTE, 3 FTE/bed at 72 beds = 144 spaces
 - Visitors - 1 space per bed at 72 beds = 72 parking spaces
 - TOTAL: 216 parking spaces

Medical Office Building
 All - 5 spaces / 1000 DGSF at 22,800 DGSF = 114 spaces
 TOTAL: 114 parking spaces

GRAND TOTAL: 330 Total Parking Spaces (x) 10% = 363 parking spaces

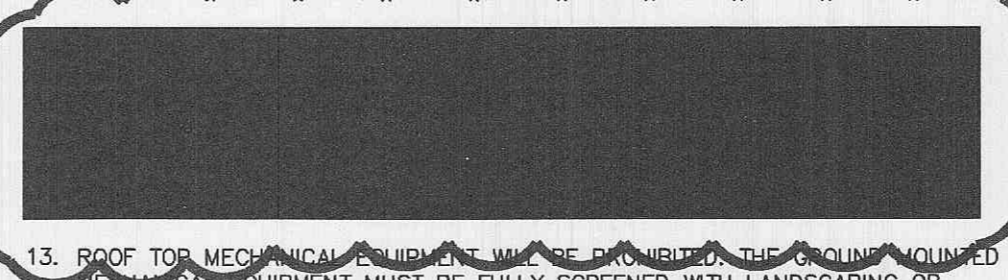
PHASE 1 PARKING (as shown on plan)

- 170 parking spaces - South Lot
- 181 parking spaces - North Lot
- 44 ED parking spaces

GRAND TOTAL: 395 Total Parking Spaces Provided

Required Bicycle Parking:

- Required bicycle parking is 27 spaces.
- Provided automobile parking spaces is 403 spaces.
- One (1) space per fifteen automobile parking spaces



- 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 FILL PLACED IN FRONT OF ROADS SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY 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. PROOF ROLLING MAY BE REQUIRED TO VERIFY SOIL STABILITY AT THE DISCRETION OF THE CITY OF O'FALLON.

- DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH SOIL REPORTS PRIOR TO OR DURING SITE SOIL TESTING.
- ENSURE SIDEWALKS, CURB RAMPS, RAMP AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT APPROVED AMERICAN WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) ALONG WITH THE REQUIRED GRADING, CONSTRUCTION MATERIALS, SPECIFICATIONS AND SIGNAGE. IF ANY CONFLICT OCCURS BETWEEN THE ABOVE INFORMATION AND THE PLANS, THE ADAAG GUIDELINES SHALL TAKE PRECEDENCE AND THE CONTRACTOR PRIOR TO ANY CONSTRUCTION SHALL NOTIFY THE PROJECT ENGINEER. (ENSURE AT LEAST ONE 8' WIDE HANDICAP AISLE IS PROVIDED AND CURB RAMPS DO NOT PROJECT INTO THE HANDICAP ACCESS AISLE). ALL HANDICAP RAMPS ARE TO BE CONCRETE.

- LIGHTING VALVES 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 PAVED ROADWAYS GOING ON AND OFFSITE WILL BE KEPT FREE OF DIRT, ROCKS, GRAVEL OR OTHER MATERIALS DURING CONSTRUCTION.
- 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.

- ALL PAVING TO BE IN ACCORDANCE WITH ST. CHARLES COUNTY 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.
- ALL PROPOSED FENCING REQUIRES A SEPERATE PERMIT THROUGH THE PLANNING DIVISION.
- ALL SIGN LOCATIONS AND SIZES MUST BE APPROVED SEPERATELY THROUGH THE PLANNING DIVISION. SIGN LOCATIONS ARE SHOWN ON PLANS.
- ALL SIGN POSTS AND BACKS AND BRACKET ARMS SHALL BE PAINTED BLACK USING CARBOLINE RUBSTON PENETRATING SEALER SG AND CARBOLINE 133 HB PAINT (OR EQUIVALENT AS APPROVED BY THE CITY AND MoDOT). SIGNS DESIGNATING STREET NAME SHALL BE ON THE OPPOSITE SIDE OF THE STREET FROM TRAFFIC CONTROL SIGNS.

- CONTRACTOR TO FOLLOW GEOTECHNICAL ENGINEER RECOMMENDATIONS PREPARED BY MIDWEST TESTING; REPORTS DATED DECEMBER 18,2000 (MT #3964), MARCH 19,2004 (MT #1400), MAY 10, 2004 (MT #10429), JULY 22, 2004 (MT #10507).
- CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ANY ROCK ENCOUNTERED. CONTRACTOR SHOULD FAMILIARIZE THEMSELVES WITH ALL THE GEOTECHNICAL REPORTS LISTED ABOVE AND REVIEW THE RECOMMENDATIONS OF THE GEOTECH ENGINEER.

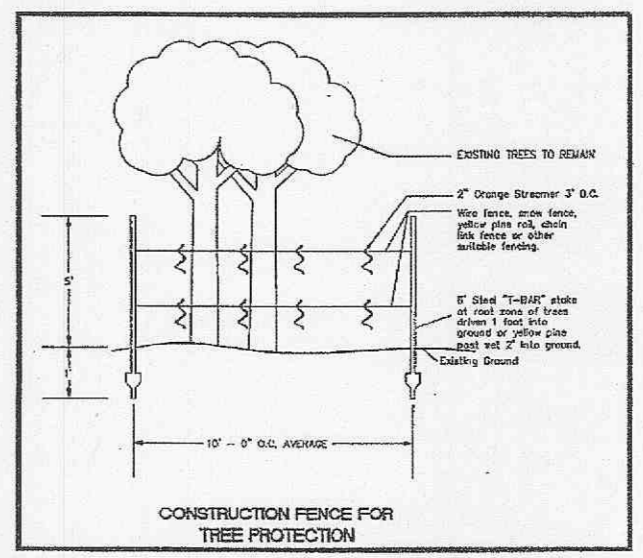
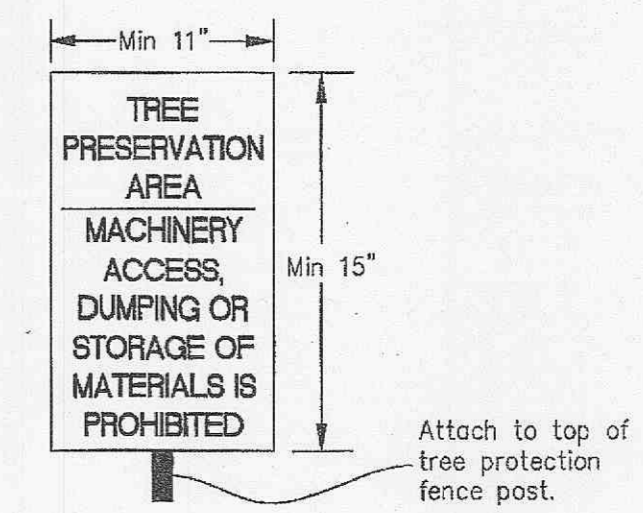
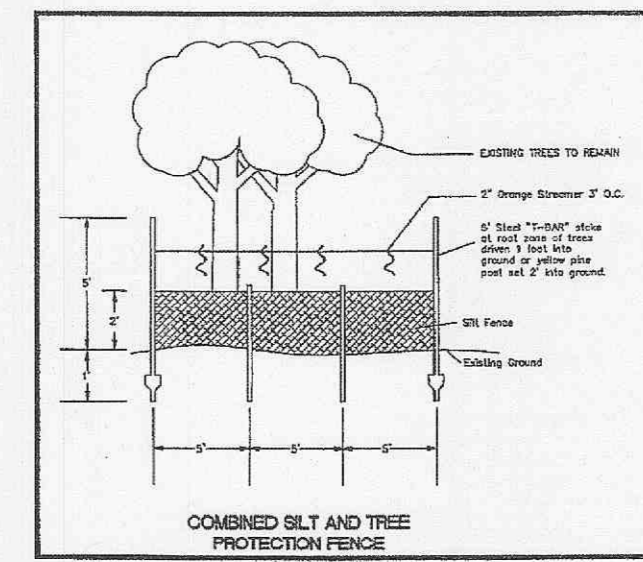
- SITE COVERAGE CALCULATIONS:
 LOT 6 = 47,942 Acres ± (100%)
 BUILDING AREA = 1.69 Acres ± (3.53%)
 PAVEMENT AREA = 6.55 Acres ± (13.66%)
 GREEN SPACE = 39.70 Acres ± (82.81%)
- PRESENT ZONING: "HTCD" (HIGH TECH CORRIDOR DISTRICT)
 BUILDING SETBACK REQUIREMENTS PER ZONING:
 (A) FRONT YARD - THIRTY FEET (30')
 (B) SIDE YARD - THIRTY FEET (30')
 (C) REAR YARD - THIRTY FIVE FEET (35')

- O'Fallon P&Z Parking Requirements
 Hospital:
 * 1 space per 4 beds.
 * 1 space per each staff doctor.
 * 1 space for each 3 employees (including nurses).
 * Adequate space for ER vehicles.

- Medical Offices:
 * 7 spaces per staff physician
 * 2 spaces per each 3 employees or 1 space for every 120 SF of gross floor area, whichever is greater.

- Handicapped Spaces:
 * 500-1000: 2% of total
 * Over 1000: 20 plus 1 per 100
- *Presently, we do not know the exact number of physicians, nurses, employees, etc. We derived our parking numbers from the two methodologies below, ultimately using the larger number. These methodologies were created based upon a factor of spaces per use. These factors or percentages were taken from a national average of hospitals / medical office buildings across the country.

- METHODOLOGY 1**
- Hospital:
 * Physicians - 0.25 spaces/physician at 108 physicians = 27 spaces
 * Staff - 0.40 spaces/physician at 216 staff = 86 spaces
 * Volunteers - 0.40 spaces/volunteer at 25 volunteers = 10 spaces
 * Students - 0.50 spaces/student at 20 students = 10 spaces
 * Visitors ED - 1.50 spaces/ED keyroom at 12 rooms = 18 spaces
 * Visitors Outpatient - 0.30 spaces/outpatient at 90 outpatients = 27 spaces
 * Visitors Inpatient - 0.35 spaces/occupied bed at 72 beds = 25 spaces
 * TOTAL: 204 parking spaces



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 including paved areas under proposed storm and sanitary sewer lines and places under including trench backfills within and of 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.
- 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.
- 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 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 Missouri Dept. of Natural Resources specification 10 CSR-8.120(7)(C).
- 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.
- 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.

H.D.P.E. STORM SEWER NOTES:

- STORM SEWER PIPE DESIGNATED AS HIGH DENSITY POLYETHYLENE (H.D.P.E.) SHALL HAVE WATER TIGHT GASKETED JOINTS WITH RUBBER O-RING GASKETS MEETING ASTM F477. O-RING GASKET SHALL BE INSTALLED ON THE SPIGOT END OF PIPE.
- 12" TO 36" PIPE SHALL CONFORM TO THE AASHTO M284 CLASSIFICATION "TYPE 5" AND 42" TO 48" SHALL CONFORM TO AASHTO M8-99 CLASSIFICATION "TYPE D."
- ALL PIPE JOINTS SHALL CONSIST OF BELL AND SPIGOT JOINTING SYSTEM WITH THE BELL COVERING TWO PIPE CORRUGATIONS AS RECOMMENDED IN AASHTO M284.
- PIPE MANUFACTURED FOR THIS SPECIFICATION SHALL COMPLY WITH THE REQUIREMENTS FOR TEST METHODS, DIMENSIONS AND MARKINGS FOUND IN AASHTO DESIGNATIONS M282 AND M284. PIPE AND FITTINGS SHALL BE MADE FROM VIRGIN PE COMPOUNDS WHICH CONFORM WITH THE REQUIREMENTS OF CELL CLASS 335420C AS DEFINED AND DESCRIBED IN ASTM D3350.
- FITTINGS MAY BE EITHER MOLDED OR FABRICATED AND SHALL CONFORM TO THE REQUIREMENTS AASHTO M282 AND M284. THE FITTINGS SHALL NOT REDUCE OR IMPAIR THE OVERALL INTEGRITY OR FUNCTION OF THE PIPE LINE. ONLY FITTINGS SUPPLIED OR RECOMMENDED BY THE PIPE MANUFACTURER SHALL BE USED.
- INSTALLATION OF THE PIPE SPECIFIED ABOVE SHALL BE IN ACCORDANCE WITH THE ASTM RECOMMENDED PRACTICE D2231.
- BOTH BELL AND SPIGOT (WITH O-RING GASKET) ENDS OF THE PIPE SHALL BE LUBRICATED AS RECOMMENDED BY MANUFACTURER AND INSERTED TO THE HOMING MARK ON THE SPIGOT END OF THE PIPE.
- MINIMUM RECOMMENDED TRENCH WIDTH SHALL BE NOT LESS THAN THE GREATER OF EITHER PIPE OUTSIDE DIAMETER PLUS 16 INCHES OR THE PIPE OUTSIDE DIAMETER TIMES 1.25, PLUS 12 INCHES AS OUTLINED HEREIN:

NOMINAL PIPE DIAMETER	MINIMUM TRENCH WIDTH
12" (300mm)	31"
15" (375mm)	34"
24" (600mm)	39"
30" (750mm)	42"
36" (900mm)	58"
42" (1050mm)	68"
48" (1200mm)	71"

- REVISIONS 7/29/05 PER CITY OF O'FALLON COMMENT LETTER 6/16/05 BID PACKAGE #6
- REVISIONS 5/18/05 PER CITY OF O'FALLON COMMENT LETTER 6/6/05 BUILDING PERMIT APPLICATION SET

PROGRESS WEST SPECIFICATION SHEET

STOCK & ASSOCIATES
 Consulting Engineers, Inc.
 257 Chesterfield Business Parkway
 St. Louis, MO 63005
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 FAX (636) 530-9130
 e-mail: general@stockassoc.com
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July 29, 2005

 GEORGE M. STOCK E-25116

DRAWN BY: J.E.F.	DATE: 05.09.05	CHECKED BY: G.M.S.	DATE: 05.09.05	DATE: 05.09.05	NO. 204-3224	SHEET: C2 of 36
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STORM SEWER NOTES

- ALL CONCRETE SHALL BE REINFORCED, AND CONFORM TO A.S.T.M. DESIGNATION C76-80 CLASS III UNLESS NOTED.
- ALL STORM SEWER STRUCTURES WITHIN PROJECT SITE TO BE CONSTRUCTED IN ACCORDANCE WITH ST. CHARLES COUNTY HIGHWAY DEPARTMENT.
- TYPE "C" BEDDING IS REQUIRED FOR PIPES IN ROCK.
- ALL TRENCH BACKFILLS UNDER PAVEMENT SHALL BE GRANULAR BACKFILLED.
- JETTING IS NOT A PERMITTED METHOD OF COMPACTION ON SEWER TRENCHES BACKFILL MUST BE SUITABLE SOILS & COMPACTED TO 95 % OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY. (APPLIES TO TRENCHES THAT DO NOT REQUIRE GRANULAR BACKFILL)
- ALL CURB INLETS AND AREA INLETS TO HAVE 5/8" TRASH BAR ACROSS INLET OPENINGS.
- "O" RING PIPE TO BE USED ON ALL STORM SEWERS.
- GRANULAR BACKFILL TO BE PLACED WITH A MINIMUM OF 1" H:1" V SLOPE FROM EDGE OF PAVEMENT.
- BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES.
- PROVIDE 36" MINIMUM COVER FOR STORM SEWERS
- PROVIDE CONCRETE CRADLES FOR RCP AND CONCRETE ENCASEMENTS FOR HDPE AT CROSSING WITH SANITARY SEWER.
- COMPACTED ROCK BACKFILL IS REQUIRED IN THE DISTURBED GROUND AROUND THE STRUCTURE OF ALL DROP STRUCTURES.
- ALL STORM SEWERS ARE TO BE CONSIDERED PRIVATE, UNLESS OTHERWISE NOTED.
- CONTRACTORS TO PROVIDED ALTERNATE BID FOR ADS N-12 ULTRA WT OR EQUAL (SMOOTH INTERIOR) AASHTO TYPE "S" (N-12 ULTRA WT).

VEGETATION ESTABLISHMENT

TILLAGE PREPARATIONS

- *TILL TOP 4" OF SOIL

FERTILIZER

- * PER SOIL TEST OR FOLLOWING TABLE:

	LBS./1,000 S.F.			LIME
	N	P	K	
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	FESCUE	150 L