

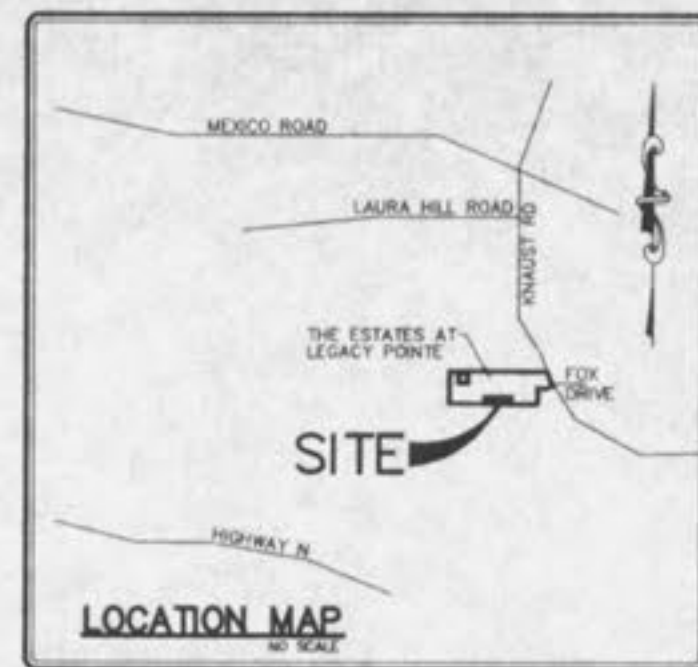
**GRADING NOTES**

- A Geotechnical Engineer shall be employed by the owner and be on site during grading operations. All soils tests shall be verified by the Geotechnical Engineer concurrent with the grading and backfilling operations.
- The grading contractor shall perform a complete grading and compaction operation as shown on the plans, stated in these notes, or reasonably implied there from, all in accordance with the plans and notes as interpreted by the Geotechnical Engineer.
- The Contractor shall notify the Soils Engineer at least two days in advance of the start of the grading operation.
- All areas shall be allowed to drain. All low points shall be provided with temporary ditches.
- A sediment control plan that includes monitored and maintained sediment control basins and/or straw bales should be implemented as soon as possible. No graded area is to be allowed to remain bare without being seeded and mulched. Care should be exercised to prevent soil from damaging adjacent property and silting up existing downstream storm drainage system.
- Debris and foundation material from any existing on-site building or structure which is scheduled to be razed for this development must be disposed of off-site.
- All trash and debris on site, either existing or from construction, must be removed and properly disposed of off-site.
- Soft soil in the bottom and banks of any existing or former pond sites or tributaries or on any sediment basins or traps should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed public right-of-way locations or on any storm sewer locations.
- Site preparation includes the clearance of all stumps, trees, bushes, shrubs, and weeds; the grubbing and removal of roots and other surface obstructions from the site; and the demolition and removal of any man-made structures. The material shall be properly disposed of off-site. Topsoil and grass in the fill areas shall be thoroughly disced prior to the placement of any fill. The Soils Engineer shall approve the discing operation.
- Compaction equipment shall consist of tamping rollers, pneumatic-tired rollers, vibratory roller, or high speed impact type drum rollers acceptable to the Soils Engineer. The roller shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.
- The Soils Engineer shall observe and test the placement of the fill to verify that specifications are met. A series of fill density tests will be determined on each lift of fill. Interim reports showing fill quality will be made to the Owner at regular intervals.
- The Soils Engineer shall notify the Contractor of rejection of a lift of fill or portion thereof. The Contractor shall rework the rejected portion of fill and obtain notification from the Soils Engineer of its acceptance prior to the placement of additional fill.
- All areas to receive fill shall be scarified to a depth of not less than 6 inches and then compacted in accordance with the specifications given below. Natural slopes steeper than 1 vertical to 5 horizontal to receive fill shall have horizontal benches, cut into the slopes before the placement of any fill. The width and height to be determined by the Soils Engineer. The fill shall be loosely placed in horizontal layers not exceeding 8 inches in thickness and compacted in accordance with the specifications given below. The Soils Engineer shall be responsible for determining the acceptability of soils placed. Any unacceptable soils placed shall be removed at the Contractor's expense.
- The sequence of operation in the fill areas will be fill, compact, verify acceptable soil density, and repetition of the sequence. The acceptable moisture contents during the filling operation are those at which satisfactory dry densities can be obtained. The acceptable moisture contents during the filling operation in the remaining areas are from 2 to 8 percent above the optimum moisture control.
- The surface of the fill shall be finished so that 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.
- Fill and backfill should be compacted to the criteria specified in the following table:

CATEGORY	MINIMUM PERCENT COMPACTION
Fill in building areas below footings	90%
Fill under slabs, walks, and pavement	90%
Fill other than building areas	88%
Natural subgrade	88%
Pavement subgrade	90%
Pavement base course	90%

Measured as a percent of the maximum dry density as determined by modified Proctor Test (ASTM-D-1557).

Moisture content must be within 2 percent below or 4 percent above optimum moisture content if fill is deeper than 10 feet.

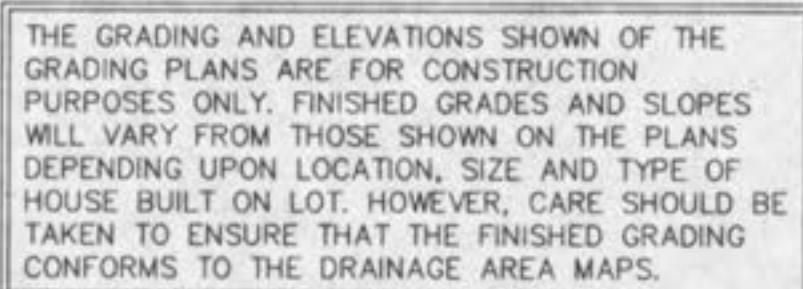


**REFERENCE BENCHMARK**

R.M. #74 - ELEV.=493.07 (U.S.G.S. DATUM)  
Chiseled square on top of east concrete headwall of Birdie Hills Road Bridge over Tributary No. 2 (Approx. 500 feet south of Eisenhower Dr.)

**SITE BENCHMARK**

ELEV: 580.09 - "0" in open on top of fire hydrant at S. E. corner of High Trail Drive and Knauts Road. Approximately 205' from N. E. corner of Avondale Heights, Plat One



**GENERAL NOTES**

- Underground utilities have been plotted from available information and therefore their locations 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 the improvements.
- All manhole tops built without elevations furnished by the Engineer will be the responsibility of the sewer contractor.
- All filled places, including trench backfills, under buildings, proposed storm and sanitary sewer lines and/or paved areas, shall be compacted to 90% maximum density as determined by the "Modified AASHTO T-180 Compaction Test," (A.S.T.M.-D-1557). All filled places within public roadways shall be compacted to 95% of maximum density as determined by the "Standard Proctor Test AASHTO T-99, Method C" (A.S.T.M.-D-698).
- All trench backfills under paved areas shall be granular backfill, and shall be compacted to 90% of the maximum density as determined by the "Modified AASHTO T-180 Compaction Test," (A.S.T.M.-D-1557). All other trench backfills may be earth material (free of large clods or stones). All trench backfills shall be water jetted.
- No area shall be cleared without the permission of the Project Engineer.
- All soils test shall be verified by a Soils Engineer concurrent with the grading and backfilling operations.
- Easements shall be provided for sanitary sewers, and all utilities on the Record Plat. See Record Plat for location and size of easements.
- Maintenance and upkeep of the common ground area shall be the responsibility of the developer and/or successors.
- A 25' building line shall be established along all Public Rights-Of-Way.
- All water lines shall be laid at least 10 feet horizontally, from any sanitary sewer, storm sewer, or manhole. 18" vertical clearance from outside of pipe to outside of pipe shall be maintained wherever water lines must cross sanitary sewers, laterals, or storm drains the water line shall be laid at such an elevation that the bottom of the water line is above the top of the drain or sewer. A full length of water pipe shall be centered over the sewer line to be crossed so that the joints will be equally distant from the sewer and as remote therefrom as possible. This vertical separation shall be maintained for that portion of the water line located within 10 feet horizontally, of any sewer or drain it crosses.
- All PVC water pipe shall conform to A.S.T.M.-D-2241, SDR 21 Standard Specification for P.V.C. Pressure Pipe, 200 P.S.I. working pressure for water, with approved joint.
- Water lines, valves, sleeves, meters, and fittings shall meet all specifications and installation requirements of Public Water Supply District No. 2 of St. Charles County.
- All water hydrants and valves shall be ductile iron and installed in accordance with plans and details. All ductile iron pipe for water mains shall conform to A.W.W.A. Specifications C-106 and/or C-108. The ductile iron fittings shall conform to A.W.W.A. Specification CC-110. All rubber gasket joints for water ductile iron pressure pipe and fittings shall conform to A.W.W.A. Specification C-111.
- All pipes shall have positive drainage through manholes. No flat base structures are allowed.
- The City of O'Fallon shall be notified 48 hours prior to construction for coordination and inspection.
- Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary or storm sewers, including house laterals.

**A SET OF IMPROVEMENT PLANS FOR LEDENDARY POINT**

A TRACT OF LAND BEING PART OF SECTIONS 3 AND 4, TOWNSHIP 46 NORTH, RANGE 3 EAST, OF THE FIFTH PRINCIPAL MERIDIAN, SAINT CHARLES COUNTY, MISSOURI



**KEY MAP**

NOT TO SCALE

**GENERAL NOTES (CONTINUED)**

- All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match pre-construction conditions.
- All construction and materials shall conform to the current construction standards of the City of O'Fallon.
- All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.
- No flushing hydrants or water meters shall be located in driveways and/or walkways.
- Concrete pipe for storm sewers shall be Class III, A.S.T.M. C-76 with a minimum diameter of 12", except in the R.O.W. it shall be 15".
- The ADS N-12 pipe shall have a smooth interior wall.
- Concrete pipe joints shall be MSD type "A" approved compression-type joints and shall conform to the requirements of the specifications for joints for circular concrete sewer and culvert pipe, using flexible, watertight, rubber-type gaskets (A.S.T.M.-C-443). Band-type depending entirely on cement for adhesion and resistance to displacement during jointing shall not be used.
- When HDPE pipe is used, City of O'Fallon specifications or manufacturer's specifications, which ever are more stringent, shall be followed.
- The use of High Density Polyethylene Corrugated pipe, ADS N-12 or equal will be permitted as an acceptable alternative to reinforced concrete pipe, ADS N-12 HC, shall be used for all ADS pipe greater than 36". Pipe shall meet A.S.T.M. D-2321 and A.A.S.H.T.O. M-294-291.
- All flared end sections and inlet structures will be concrete.
- All storm sewer pipe installed in the Public Right-of-Way shall be reinforced concrete Class III pipe.
- All concrete pipe or ADS N-12 pipe shall be installed with "O-Ring" Rubber type gaskets per M.S.D. standard construction specifications or manufacturer.
- All Fire Hydrants and Water Meters shall not be located in driveways and/or sidewalks.
- Any permits, licenses, easements or approvals required to work on public or private properties or roadways are the responsibility of the developer.
- No slopes shall exceed 3 (horizontal) to 1 (vertical).
- Additional traffic signage may be added as required by the City traffic engineer.
- City approval of the construction plans does not mean that single family dwelling units can be constructed on the lots without meeting building setbacks as required by the Zoning Code.
- Contractor shall assume complete responsibility for controlling all sediment, siltation and erosion 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. The contractor's responsibilities include all design and implementation as required to prevent erosion and the depositing of silt. The Owner and/or City of O'Fallon 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 in new or 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.

**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 pre-construction conditions.
- All fill, including places under proposed storm and 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 D 1557)". 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 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 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 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 to work on public or private properties or roadways are the responsibility of the developer.
- All sanitary sewer laterals shall be a minimum of 4" in diameter.

**DEVELOPMENT NOTES**

- Area of Total Tract: 2.66 Acres
  - Existing Zoning: R-1 (City of O'Fallon)
  - Proposed Use: Single Family Homes
  - Number of Lots Proposed: 6 Lots
  - The proposed height and lot setbacks are as follows:  
Minimum Front Yard: 25 feet  
Minimum Side Yard: 6 feet  
Minimum Rear Yard: 25 feet  
Minimum Lot Area: 10,000 square feet  
Maximum Height of Building: 2 1/2 stories or 35 feet
  - Current Owner/Developer: William & Joan Schneider  
401 Donnie Lane  
St. Peters, Missouri 63376
  - Site is served by: Duckett Creek Sewer District  
American  
St. Charles Gas Company  
St. Charles County Public Water District No. 2  
Verizon Telephone Company  
Fort Zumwalt School District  
O'Fallon Fire Protection District
  - The entirety of this tract lies within Zone X, "areas determined to be outside 500-year floodplain", per F.I.R.M. No. 29183C0243E, dated August 2, 1996.
  - Topographic information is per Walker Associates Topo on a U.S.G.S. Datum.
  - Boundary information from survey by Box Engineering, Inc.
  - All lots shall have one (1) tree (deciduous) planted in front yard for every fifty (50) of street frontage, as required by City code.
  - All homes shall have a minimum of 2 off-street parking places with 2-car garages.
  - All utilities must be located underground.
  - The developer realizes that they will comply with current Tree Preservation Ordinance Number 1689 and provide landscaping as set forth in Article 23 of the City of O'Fallon Zoning Ordinances.
  - Additional lighting may be required by the City of O'Fallon.
  - All sign posts, backs, and bracket arms shall be painted black using Corboline Rustbond Penetrating Sealer SG and Corboline 133 paint or equivalent as approved by the City of O'Fallon.
  - All sign sizes and locations must be approved separately through the City of O'Fallon Planning Division.
  - The developer must supply city construction inspectors with soil reports prior to or during site soil testing.
  - Calculations in accordance to the Tree Preservation Ordinance: (For Entire Development)  
Existing trees: 0.20 acres  
Saved trees: 0.17 acres  
Trees removed: 0.03 acres  
Trees Required:  
0.20 acres X 20% = 0.04 acres  
No trees Required
  - Landscaping Requirements (Phase Two & Future Development):  
Length of Centerline of Streets = 574 L.F.  
574 L.F. / 50 L.F. = 12 Trees
- Street trees shall be centered within the area between back of curb and sidewalk or back of curb and property line.

**LEGEND**



**SHEET INDEX**

- 1 COVER SHEET
- 2 SITE/GRADING PLAN
- 3 DRAINAGE AREA MAP
- 4-5 CONSTRUCTION DETAILS

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CITY OF O'FALLON, MO

12-12-01 RAH  
APPROVED



CALL BEFORE YOU DIG!  
1-800-DIG-RITE

LEGENDARY POINT

WILLIAM & JOAN SCHNEIDER  
401 DONNIE LANE  
ST. PETERS, MO  
(636) 240-

PREPARED FOR:

DISCLAIMER OF RESPONSIBILITY  
I hereby certify that the documents prepared by me and my staff are true and correct to the best of my knowledge and belief, and I am not aware of any falsification of data or information. I am not responsible for any errors or omissions in the drawings, specifications, estimates, reports or other documents or instruments prepared by me or my staff, or for any part or parts of the architectural or engineering project or survey.



REVISIONS

NO.	DATE	DESCRIPTION
12-03-01		CITY COMMENTS



ENGINEERING PLANNING SURVEYING  
1052 South Cloverley  
St. Peters, MO. 63377  
636-928-5552  
FAX 928-1718

OCTOBER 2  
DATE  
99-10589  
PROJECT NO.  
1 OF 5  
SHEET NO.  
10589D  
FILE NAME  
JL  
DRAWN  
RA  
DESIGN

file