

THE VILLAS AT TURTLE CREEK

A TRACT OF LAND BEING PART OF
FRACTIONAL SECTIONS 31,
TOWNSHIP 47 NORTH, RANGE 3 EAST,
ST. CHARLES COUNTY, MISSOURI

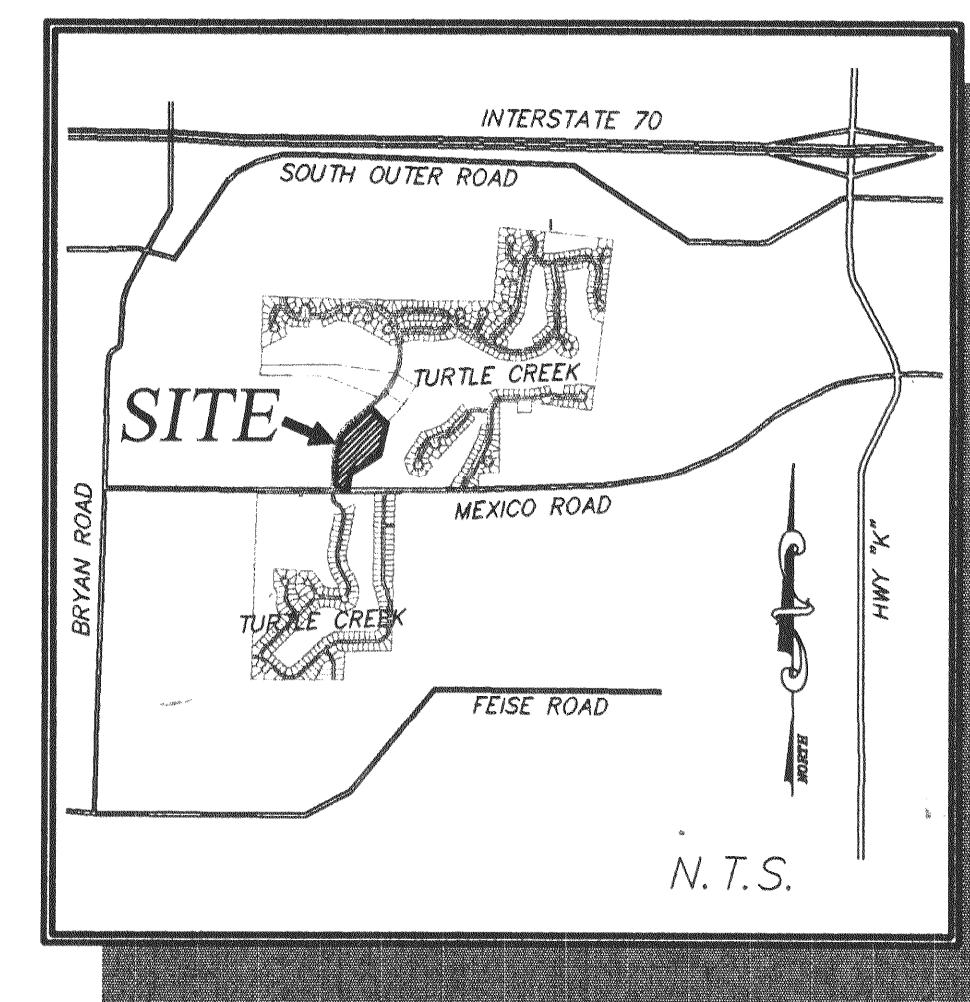
IMPROVEMENT PLANS

DRAWING INDEX

GENERAL NOTES

- Gas, water and other underground utilities shall not conflict with the depth or horizontal locations of existing and proposed sanitary and storm sewers, including house laterals.
- Underground utilities have been plotted from available information and, therefore, their locations must 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 grading or construction of improvements.
- Polyvinyl Chloride (PVC) shall conform to the requirements of ASTM D-3034 Standard Specifications for the PSU Polyvinyl Chloride (PVC) Sewer Pipe and Fittings, SDR-35.
- All storm sewer pipe under pavement, regardless of size, shall be reinforced concrete pipe (ASTM C-76, Class III) unless noted otherwise in the plans.
- All storm and sanitary trench backfills shall be water jetted. Granular fill will be used under paved areas.
- Easements shall be provided for storm sewers, sanitary sewers, and all utilities on the record plot. See record plot for location and size of easements. This does not apply to house laterals.
- Grading markers will consist of three (3) standard specification, "Manual on Uniform Traffic Control Devices," end of roadway markers mounted on two (2) pound "U" channel sign post. Each marker shall consist of an eighteen (18) inch diamond reflectorized red panel. The bottom of each panel shall be mounted a minimum of four (4) feet above the elevation of the pavement surface.
- All manhole and curb inlet tops built without elevations furnished by the Engineer will be the responsibility of the sewer contractor. At the time of construction stakeout of the sewer lines, all curb and grate inlets will be face staked. If normal face stakes fall in line with sewer construction, the Engineer will set these stakes on a double offset. It shall be the responsibility of the sewer contractor to preserve all face stakes from destruction.
- All standard street curb inlets to have front of Inlet 2 feet behind curb.
- The minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding house connection shall not be less than the diameter of the sanitary sewer plus a vertical distance not less than two and one-half feet (2-1/2').
- Water lines, valves, sleeves, meters and etc., shall meet all specifications and installation requirements of the local governing authority.
- All cast iron pipe for water mains shall conform to A.W.W.A. specifications C-106 and/or C-108. The cast iron fittings shall conform to A.W.W.A. specification C-110. All rubber gasket joints for water cast iron pressure pipe and fittings shall conform to A.W.W.A. specification C-111.
- All water hydrants and valves shall be cast iron and installed in accordance with plans and details.
- All sanitary and storm sewers shall meet all specifications and installation requirements of the local governing authority.
- All PVC water pipe shall have a minimum pressure rating of PR-200 or SDR-21.
- All PVC sanitary sewer pipe shall be 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 8 inches above the top of the pipe.
- All streets must meet the specifications and installation requirements of the City of O'Fallon.
- All sanitary manholes top shall be set 0.2' higher than the proposed ground except in pavement areas.
- All sanitary manholes shall have a 31 mil thick coat of coal tar pitch waterproofing.
- All sanitary service lines shall have a 6" diameter for Multi-family and a 4" diameter for single-family developments.
- Manhole frame and cover shall be Clay and Bailey No. 2008 or Neenah R-1736 or Deeter 1315 or approved equal.
- A drop of 0.2 feet is required through each sanitary manhole.
- The City of O'Fallon shall be notified at least 48 hours prior to construction of sanitary sewers for coordination and inspection.
- Brick shall not be used on manholes.
- Waterproofing: Waterproofing will be required on the exterior of all manholes. The bitumen shall consist of two coats of asphalt, coal-tar pitch, or a coating meeting American Society for Testing and Materials (ASTM) D-41. Asphalt shall conform to the requirements of ASTM D-449. Coal-tar pitch shall conform to the requirements of ASTM D-450. Coating shall be 3 mils thickness.
- Street Data: Pavement = 26' Wide
Right-of-Way = 50' Wide = 26' Wide
Cul-De-Sac R/W = 52' Radius
Cul-De-Sac Pmnt. = 40' Radius
- Total number of Multi-family units = 48
- As per previously approved Turtle Creek, RI-PUD Final Plan, the set backs are as follows:
A. Front yard - twenty five (25) feet
B. Back yard - twenty five (25) feet
- Distance Between Villa Buildings:
A. Front to front - fifty (50) feet
B. Back to back - fifty (50) feet
C. Side to side - twenty (20) feet
D. Front to side - thirty-five (35) feet
E. Back to side - thirty-five (35) feet
F. Corner to corner - fifteen (15) feet
G. Building line - twenty five (25) feet
- Project is Served By:
A. Public Water & Sewer Dist. No.2
B. St. Charles Gas Company
C. G.T.E. Telephone Company
D. The City of O'Fallon (Sanitary Sewer)
E. Ameren UE
F. O'Fallon Fire Protection District
G. Fort Zumwalt School District
- This site is not located within flood plain per FEMA map #29183300240 E, dated Aug. 2, 1995.
- All laterals under pavement and storm sewers shall have granular fill.

LOCATION MAP



Sheet	Description
1	COVER SHEET
2	FLAT PLAN
3	GRADING PLAN
4	PROFILES
5	DRAINAGE AREA PLAN
6-10	CONSTRUCTION DETAILS

GRADING NOTES

- No area shall be cleared without the permission of the developer.
- All grades shall be within 0.2 feet (more or less) of those shown on the grading plan.
- No slope shall be greater than 3:1 and shall be either sodded or mulched.
- The grading and elevations shown on the grading plans are for construction purposes only. Finished grades and slopes will vary in elevations from those shown on the plans depending upon the location, size and type of house built on the lot. However, care should be taken to insure that finished grading conforms to drainage area mops.
- As needed, siltation fence shall be installed as a protective barrier for trees to remain.
- 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 therefrom, 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 for more than 90 days 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 non-made structures. The material shall be properly disposed of off-site. Topsoil and grass in the fill areas shall be thoroughly diced prior to the placement of any fill. The Soils Engineer shall approve the dicing 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 content.
- 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).

BENCHMARKS

Site Bench Mark:
R.R. Spike, 0.5' high in east face of 8" Shingle Oak,
77± south of Sta. 50+39 (proposed Mexico Rd.)
near intersection of Hillman Rd. (existing Mexico Rd.)
and Glenmore Lane.
Elevation: 597.48
Based off bolt of fire hydrant at the northeast corner
of intersection of Hillman Rd. and Bryan Rd.

● Sanitary Sewer (Proposed)	Sanitary Structure	R.C.P. Reinforced Concrete Pipe
○ Sanitary Sewer (Existing)	Storm Structure	C.M.P. Corrugated Metal Pipe
--- Storm Sewer (Proposed)	Test Hole	C.I.P. Cast Iron Pipe
--- Storm Sewer (Existing)	Power Pole	P.V.C. Polyvinyl Chloride
8" Water Line & Size	Light Standard	V.C.P. Vitrified Clay Pipe
EX W Existing water line	●● Double Water Meter Setting	
Tee & Valve	● Single Water Meter Setting	C.O. Clean Out
Hydrant	C.I. Curb Inlet	V.T. Vent Trap
Cap	S.C.I. Skewed Curb Inlet	T.B.R. To Be Removed
18 Lot or Building Number	D.C.I. Double Curb Inlet	T.B.R.&R. To Be Removed & Relocated
Existing Fence Line	G.I. Grate Inlet	T.B.P. To Be Protected
Existing Tree Line	A.I. Area Inlet	T.B.A. To Be Abandoned
Street Sign	D.A.I. Double Area Inlet	B.C. Base Of Curb
Existing Contour	C.C. Concrete Collar	T.C. Top Of Wall
Proposed Contour	F.E. Flared End Section	T.W. Top Of Wall
Grouted Rip-Rap	E.P. End Pipe	B.W. Base Of Wall
End of Lateral	E.D. Energy Dissipator	(TYP) Typical
Asphalt Pavement	M.H. Manhole	U.N.O. Unless Noted Otherwise
Concrete Pavement	C.P. Concrete Pipe	U.I.P. Use In Place

File APPROVED 7/19/98
Joan Calloway
REVISIONS
Rev. 6-8-98 per City of O'Fallon RDW
Rev. 7-8-98 per City of O'Fallon RDW
THE VILLAS AT TURTLE CREEK

PICKETT RAY & SILVER

Civil Engineers
Planners
Land Surveyors
333 Mid Rivers Mall Dr.
St. Peters, MO 63376
397-1211 FAX 397-1104

ENGINEERS AUTHENTICATION The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in the project and specifically includes revisions after this date unless reauthenticated. PICKETT, RAY & SILVER, INC. Signature: <i>[Signature]</i> Date: 7/18/98	DEVELOPER GLEN EAGLE ASSOCIATES 13100 MANCHESTER ROAD SUITE G-55 ST. LOUIS, MO 63131 965-8000	© Copyright 1998 by Pickett, Ray & Silver Inc.
		CONFIDENTIAL PROPRIETARY MATERIAL The use, reproduction and sales rights of this drawing are reserved by Pickett, Ray & Silver Inc.
DRAWN R.D.W. DATE JUNE-1998 CHECKED DATE FIELD BOOK PROJECT # 89-204B JOB ORDER # DKO	1 10	