LAUREL SPRINGS
IMPROVEMENT PLANS

SEVERAL TRACTS OF LAND BEING PART OF U.S. SURVEY 1766 TOWNSHOP 47 NORTH, RANGE 3 EAST IN ST. CHARLES COUNTY, MISSOURI.

GENERAL NOTES

1. 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 and/or construction of improvements.

2. Erosion control shall not be limited to what is shown on the plans. The contractor shall take whatever means necessary to prevent siltation from entering adjacent roadways, properties, and ditches. Such control might include channeling runoff into sediment basins, channeling runoff into areas where an extra row of straw bales are used. A silt fence might be considered, if necessary.

3. No area shall be cleared without permission of the developer.

4. Owner/Developer assumes full responsibility as to the performance of the grading operation and assurance that all properties and County and State roads will be adequately protected.

5. Soil preparation and re-vegetation shall be performed according to City of St. Peters, Missouri Standards for Erosion and Sediment Management Practices.

6. Where natural vegetation is removed during grading, vegetation shall be re-established in such a density as to prevent erosion. Permanent type grasses shall be established as soon as possible or during the next seeding period after grading has been completed. Refer to City of St. Peters, Missouri Standards for Erosion and Sediment Management Practices.

7. 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 unsuitable 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.

8. Compaction equipment shall consist of tamping rollers, pneumatic-tired rollers, vibratory rollers or high speed impact type drum rollers acceptable to the Soils Engineer. The rollers shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.

9. 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 city of St. Peters shall be provided a copy of the final site compaction results.

10. The Soils Engineer shall notify the Contractor of rejections 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.

11. All Areas to receive fill shall be scarified to a depth of not less than 6 inches and then compacted to at least 85 percent of the maximum density as determined by the Modified AASHTO T-180 Compaction Test (ASTM-D1557). 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.

12. 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% above the optimum moisture content.

13. 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 far 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.

14. All cut and fill slopes should be a maximum of 33% slope (3:1) after grading.

15. All fill including filled 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% 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 proof rolling and compaction.

16. Fill placed within proposed street R.O.W. shall be compacted to 90% M.O.D. Proctor and be 2% below to 6% above optimum moisture content.

17. Soft soil in the bottom and banks of any existing or former pond site should be removed, spread out and permitted to dry sufficiently to be used as fill. None of this material should be placed in proposed right-of-way locations or on storm sewer locations.

18. Any wells and/or springs which may exist on this property should be located and sealed in a manner acceptable to The City of St. Peters.

19. Temporary siltation control measures (structural) shall be maintained until vegetative cover is established at a sufficient density to provide erosion contral on the site.

20. If straw bales or silt fences are destroyed by heavy rains, vandalism, etc., they are to be replaced immediately by contractor.

21. When grading operations are completed or suspended for more than thirty (30) days, permanent grass must be established at sufficient density to provide erosion control on the site. Temporary re-vegetation, shall be established no later than fourteen (14) calendar days from the completion or suspension of grading operations, to provide erosion control on the site. Temporary re-vegetation shall be provided according to the most current edition of the City of St. Peters, Missouri Standards for Erosion ad Sediment Management Practices, or recommendations of the City Engineer or his/her designee. All finished grades (areas not to be disturbed by improvement) in excess of 20% slopes (5:1) shall be mulched and tacked at the rate of 100 pounds per 1000 square feet when seeded.

22. All existing trash and debris on-site must be removed and disposed of off-site.

23. Debris and faundation material from any existing on-site building or structure which is scheduled to be razed for this development must be disposed of off-site.

24. The total yordage of this project is based on a 15% ± shrinkage factor.

25. The shrinkage factor is subject to change, due to soil conditions (types and moisture content), weather conditions, and the percentage of compaction actually achieved at the time of the year grading is performed. As a result, adjustments in final grade may be required. If adjustments need to be made, the contractor shall contact St. Charles Engineering and Surveying prior to completion of the grading.

26. Earth quantities were obtained from aerial grid mapping with contours at two foot intervals, with a tolerance of plus or minus one foot or one-half (2) contour intervals.

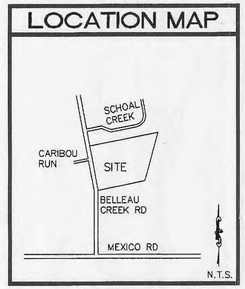
27. The vertical grading tolerance shall be plus or minus 0.2 feet for all rough grading.

28. The Contractor shall prevent all storm/surface water, mud or construction debris from entering the existing sanitary sewer system.

29. The site shall comply with chapter 530 of the city code regarding grading and sediment and erosion control.

30. The most stringent of the above requirements shall apply.

LOCATION MAP



General Development Notes:

1. Contract Purchaser:
Titan Homes
7421 Mexico Rd. Suite 200
St. Peters, MO 63376
Phone (636) 970-7789

2. Zoning: Planned Urban Development

3. Site is located in or served by:
City of St. Peters Sewer Phone (636) 477-6600
City of St. Peters Water Phone (636) 477-6600
LaClede Gas Company Phone (636) 978-2663
Ameren UE Phone (636) 925-3216
CenturyTel Phone (636) 332-3011
O'Fallon Fire Protection District
Fort Zumwalt School District

4. 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, whether shown or not shown on these plans, shall be the responsibility of the contractor; and shall be located prior to any grading and/or construction of improvements.

5. According to the Flood Insurance Rate Map (FIRM) of St. Charles County, Missouri; Map No. 29188C0241 E, effective August 2, 1996, this property is not in the 100 year Flood Plain.

6. Total acreage of site 12.52± acres

7. The site shall comply with Chapter 550 of the City Code, which includes storm water detention.

11/23/04
File Copy
APPROVED
Engineering

INDEX

LEGEND

M.H. 1102	SANITARY STRUCTURE	C.O.	CLEAN OUT
C.I. 5	STORM STRUCTURE	T.B.R.	TO BE REMOVED
	TEST HOLE	T.B.R.&R.	TO BE REMOVED & RELOCATED
PP	POWER POLE	T.B.P.	TO BE PROTECTED
	LIGHT STANDARD	T.B.A.	TO BE ABANDONED
C.I.	CURB INLET	B.C.	BASE OF CURB
D.C.I.	DOUBLE CURB INLET	T.C.	TOP OF CURB
G.I.	GRATE INLET (EXISTING)	T.W.	TOP OF WALL
A.I.	AREA INLET (EXISTING)	TYP.	TYPICAL
D.A.I.	DOUBLE AREA INLET	U.N.O.	UNLESS NOTED OTHERWISE
F.E.	FLARED END SECTION	U.I.P.	USE IN PLACE
E.P.	END PIPE	572	EXISTING CONTOUR
E.D.	ENERGY DISSIPATOR	578	PROPOSED CONTOUR
M.H.	MANHOLE		TREE LINE
R.C.P.	REINFORCED CONCRETE PIPE	8" EXS	SAN. SEWER (EXISTING)
C.M.P.	CORRUGATED METAL PIPE		SAN. SEWER (PROPOSED)
C.I.P.	CAST IRON PIPE	18" SDEX	STORM DRAIN (EXISTING)
PVC	POLYVINYL CHLORIDE		STORM DRAIN (PROPOSED)
VCP	VITRIFIED CLAY PIPE		PHONE BOX
	GUY WIRE	.IP	IRON PIPE
	SIGN	8"W	WATER LINE, SIZE
	POST	ST	HYDRANT
W	WATER METER		SEDIMENT TRAP CONCRETE PAVEMENT
SILT	SILT FENCE		PLACED RIP-RAP W/UNDERLAIN FABRIC
	DIVERSION SWALE PROVIDE DITCH CHECKS EVERY 150'		
	DITCH CHECK		

GRADING QUANTITY

16,000 CU YDS

The above yardage is an approximation only, NOT FOR BIDDING PURPOSES. Contractors shall verify quantities prior to construction.

It is the intention of the Engineer for the earthwork to balance on-site. The Engineer shall be notified if any difficulties arise in achieving the balance.

Call BEFORE you DIG
TOLL FREE
1-800-344-7483
MISSOURI ONE-CALL SYSTEM, INC.

BENCHMARK:

A STANDARD MISSOURI DNR GRS ALUMINUM DISK STAMPED "SC-06-1990", SET IN A 12 INCH CONCRETE MONUMENT. ELEVATION 529.13 ABOVE MSL. USGS 7.5' QUAD: O'FALLON.

DEVELOPER

Titan Homes, Inc.
7417 Mexico Road, Suite 102
St. Peters, MO 63376
(636) 970-7789

ENGINEERS AUTHENTICATION

The responsibility for the 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 excludes revisions after this date unless reauthenticated.

10/08/04	REV PER CITY COMMENTS
11/17/04	REV PER CITY/CLIENT COMMENTS

LAUREL SPRINGS
TITLE SHEET
IMPROVEMENT PLANS

ST. CHARLES ENGINEERING & SURVEYING, INC.
901 S. FIFTH STREET, SUITE 202
ST. CHARLES, MO 63301
TEL: (636) 947-0607 FAX: (636) 947-2448

RECEIVED
NOV 22 2004
ENGINEERING DEPARTMENT

STATE OF MISSOURI
MICHAEL MCCALL
NUMBER 2003012483
PROFESSIONAL ENGINEER

ORDER NO.
030849
DATE
08/13/04
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