A SET OF AS-BUILT PLANS FOR

# BROOK HOLLOW

## PHASE ONE, PLAT ONE, P.B. 39, PG. 155

A TRACT OF LAND BEING PART OF FRACTIONAL SECTION 6,
TOWNSHIP 46 NORTH, RANGE 3 EAST
OF THE FIFTH PRINCIPAL MERIDIAN,
CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI

## GRADING NOTES

1. 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.
2. 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.
3. The Contractor shall notify the Soils Engineer at least two days in advance of the start of the grading operation.
4. All areas shall be allowed to drain. All low points shall be provided with temporary ditches.
5. 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.
6. 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.
7. All trash and debris on site, either existing or from construction, must be removed and properly disposed of off-site.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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.

## 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 or construction of the improvements.
2. All manhole tops & flowlines built without elevations furnished by the Engineer will be the responsibility of the sewer contractor.
3. 8" P.V.C. sanitary sewer pipe shall meet the following standards. A.S.T.M.-D-3034 SDR-35, with wall thickness compression joint A.S.T.M.-D-3212. An appropriate rubber seal waterstop as approved by the sewer district shall be installed between P.V.C. pipe and masonry structures.
4. 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).
5. 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.
6. All sanitary house connections have been designed so that the minimum vertical distance from the low point of the basement to the flow line of a sanitary sewer at the corresponding house connection is not less than the diameter of the pipe plus the vertical distance of 2 1/2 feet.
7. No area shall be cleared without the permission of the Project Engineer.
8. All P.V.C. sanitary sewer is to be SDR-35 or equal with clean 1/2" to 1" granular stone bedding uniformly graded. This bedding shall extend from 4" below the pipe to the springline of the pipe. immediate backfill over pipe shall consist of same size "clean" or minus stone from springline of pipe to 6" above the top of pipe.
9. All soils test shall be verified by a Soils Engineer concurrent with the grading and backfilling operations.
10. Easements shall be provided for sanitary sewers, and all utilities on the Record Plat. See Record Plat for location and size of easements.
11. Maintenance and upkeep of the common ground area shall be the responsibility of the developer and/or successors.
12. A 25' building line shall be established along all Public Rights-Of-Way.
13. 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 cross 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.
14. 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.
15. 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.
16. 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.
17. All sanitary manholes shall be waterproofed on the exterior in accordance with Missouri Department of Natural Resources specifications 10 CSR-8.120 (7)E.
18. Brick will not be used in the construction of sanitary sewer manholes.
19. All pipes shall have positive drainage through manholes. No flat base structures are allowed.
20. The City of O'Fallon and Ducket Creek Sanitary District shall be notified 48 hours prior to construction for coordination and inspection.
21. 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.
22. All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match pre-construction conditions.
23. The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
24. All construction and materials shall conform to the current construction standards of the City of O'Fallon and Ducket Creek Sanitary District.
25. All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.

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28. All existing areas disturbed during construction of the off-site sanitary sewer line shall be seeded and mulched to prevent erosion.
29. All sanitary sewer laterals shall be a minimum of 4" in diameter per City of O'Fallon & Duckett Creek sanitary sewer districts.
30. No flushing hydrants or water meters shall be located in driveways and or walkways.
31. 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".
32. The ADS N-12 pipe shall have a smooth interior wall.
33. 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 gaskets depending entirely on cement for adhesion and resistance to displacement during jointing shall not be used.
34. When HDPE pipe is used, City of O'Fallon specifications or manufacturers specifications, which ever are more stringent, shall be followed.
35. 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.
36. All flared end sections and inlet structures will be concrete.
37. All storm sewer pipe installed in the Public Right-of-Way shall be Reinforced concrete Class III pipe.
38. 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.
39. All Fire Hydrants and Water Meters shall not be located in driveways and/or sidewalks.
40. All creek crossings shall be grouted rip-rap as directed by District inspectors. (All grout shall be high slump ready-mix concrete.)
41. Existing sanitary sewer service shall not be interrupted.
42. Pre-manufactured adapters shall be used at all PVC to DIP connections. Rubber boot / Mission-type couplings will not be allowed.
43. Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
44. No slopes shall exceed 3(H) : 1(V).
45. Driveway locations shall not interfere with the sidewalk handicap ramps in the cul-de-sacs.
46. Developer must supply City construction inspectors with soil reports prior to or during site soil testing if reports have been prepared for the project.
47. All storm inlets must be installed with a 5/8" trash bar.
48. City approval of the construction site plans does not mean that single family and two family dwellings units can be constructed on the lots without meeting the building setbacks as required by the Zoning Code.
49. All signposts, sign backs and bracket arms shall be painted black using Carboline Rustbound penetrating sealer SG and Carboline 133 HB paint (or equivalent as approved by the City).
50. All sidewalks, curb ramps shall be constructed in accordance with the current approved "Americans with Disabilities Act Accessibility Guidelines".
51. 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. The contractors responsibilities include all design and implementation as required to prevent erosion and the depositing of silt. The Owner and/or theCity 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 City of O'Fallon.

VEGETATIVE ESTABLISHMENT
For Urban Development Sites
APPENDIX A

Seeding Rates:
Permanent:
Tall Fescue - 30 lbs./ac.
Smooth Brome - 20 lbs./ac.
Combined Fescue @ 15 lbs./ac. and Brome @ 10 lbs./ac.
Temporary:
Wheat or Rye - 150 lbs./ac. (3.5 lbs. per square foot)
Oats - 120 lbs./ac. (2.75 lbs. per square foot)
Seeding Periods:
Fescue or Brome - March 1 to June 1
August 1 to October 1
Wheat or Rye - March 15 to November 1
Oats - March 15 to September 15
Mulch Rates: 100 lbs. per 1,000 sq. feet (4,356 lbs. per acre)
Fertilizer Rates: Nitrogen 30 lbs./ac.
Phosphate 30 lbs./ac.
Potassium 30 lbs./ac.
Lime 600 lbs./ac. ENM*

* ENM = effective neutralizing material as per State evaluation of quarried rock.

## REFERENCE BENCHMARK

*R.M. #65- ELEV.=509.47(U.S.G.S. DATUM)*
*CHISLED "L" ON THE SOUTH END OF THE WEST HEADWALL OF COUNTY HIGHWAY K BRIDGE OVER BELLEAU CREEK.*

## SITE BENCHMARK

*ELEV.=667.66 NAVD 1929 DATUM (U.S.G.S.)*
*ST. CHARLES COUNTY GEOGRAPHIC REFERENCE STATION "ORF" STANDARD BRASS DISK STAMPED "ORF 1931" IN A SQUARE CONCRETE POST IN A SMALL MOUND 0.1' TO 10.7' NORTHWEST OF THE NORTHWEST CORNER OF A SHED ADDITION TO AN OLDER BARN; 20'-25' SOUTHWEST OF A SMALL POND; 39' NORTHEAST OF A LONE PEAR TREE AND 24.9' NORTHEAST OF A METAL WITNESS POST AND SIGN. LOCATED AT 1301 BRYAN ROAD .350' NORTHWEST OF HOUSE.*

## STORM SEWER MEASUREMENTS

THE EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT P

ALL PUBLIC SEWERS ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEME EXCEPT AS FOLLOWS.

SIGNED:
P.E./L.S. RANDOLPH BOLLMEIER NUMBER 2003 — DATE 10/1/03

AS-BUILTS NOTE:
ALL DISTANCE AND SLOPE CALCULATIONS ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

LOCATION MAP

## DEVELOPMENT NOTES

1. Area of Residential Tract: 38.42 Acres
2. Existing Zoning: R-1 (City of O'Fallon)
3. Proposed Use: Single Family Residential
4. Number of Lots Proposed: 92 Lots
5. Area in Common Ground: 4.36 Acres
6. Area in Right-of-Way: 6.42 Acres
7. Area in Lots: 25.64 Acres
8. Average Lot Area (not including common ground): 12,140 Square Feet
9. Average Lot Area (including common ground): 14,204 Square Feet
10. 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
11. Current Owner of Property:
    First Land Company of St. Charles County, Inc.
    P.O. Box 176
    St. Peters, MO 63376
12. Site is served by:
    Duckett Creek Sanitary Sewer District
    AmerenUE
    St. Charles Gas Company
    St. Charles County P.W.S.D.No. 2
    Verizon Telephone Company
    Fort Zumwalt School District
    O'Fallon Fire Protection District
13. No Floodplain exists on this tract per F.I.R.M #29183C0240 E. dated Aug. 2, 1995.
14. Topographic information is by Walker & Associates.
15. Boundary information is per survey completed by Bax Engineering in September of 2001.
16. One tree shall be planted for every lot. Every corner lot shall have two street trees planted in the right-of-way.
17. All local streets will be constructed to City of O'Fallon standards. Streets will consist of 26 foot wide concrete pavement with integral rolled curb centered in a 50 foot right-of-way. Minimum radius shall be 150 feet.
18. All cul-de-sacs and bubbles will have pavement radii of 42 feet with right-of-way radii of 54 feet. Street intersections shall have a minimum rounding radius of 25 feet with of 37 feet.
19. Minimum street grades shall be 1%
20. A 4 foot wide concrete ... of streets where ind...
21. All homes shall ha... with 2-car ga...
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23. The dev... Pre... s...
24. ...
27. Det...
28. All ... dis... the ... det...
29. Prop... to ...
30. Stre... stan... Tree... mini...

BROOK HOLLOW PLAT ONE AS-BUILT PLANS
PHASE ONE, PLAT ONE

PREPARED FOR: FIRST LAND COMPANY OF ST. CHARLES COUNTY, INC.
... BOX 176
...TERS, MISSOURI 63376
928-4988