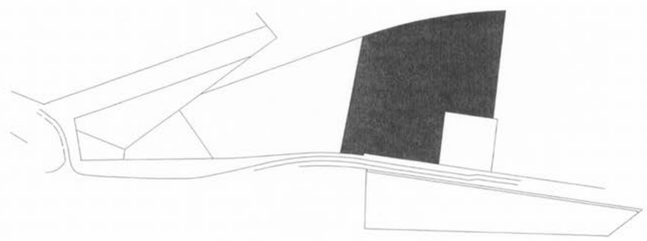
A SET OF CONSTRUCTION PLANS FOR

PERUQUE CROSSING – PHASE I

TWO TRACTS OF LAND IN U.S. SURVEY 54, AND FRACTIONAL SECTION 26, TOWNSHIP 47 NORTH, RANGE 2 EAST OF THE FIFTH PRINCIPAL MERIDIAN 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. The developer must supply the city construction inspectors with soil reports prior to or during site soil testing.

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. All filled places, including trench backfills, under buildings, proposed storm and sanitary sewer lines and/or paved areas, shall be compacted to 90% of maximum density as determined by the "Modified A.A.S.H.T.O. T–180 Compaction Test," (A.S.T.M.–D–1557), or 95% maximum density as determined by the Standard Proctor Test A.A.S.H.T.O. T–99. All filled places within public roadways shall be compacted from the bottom of the fill up to 90% maximum density as determined by the Modified A.A.S.H.T.O. T–180 Compaction Test or 95% of maximum density as determined by the Standard Proctor Test A.A.S.H.T.O. T–99, Method "C" (A.S.T.M.–D–698). All test shall be verified by a soils engineer concurrent with grading and backfilling operations.

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

7. 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.

8. All trash and debris on site, either existing or from construction, must be removed and properly disposed of off–site.

9. 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.

10. 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.

11. 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 roller shall be designed so as to avoid the creation of a layered fill without proper blending of successive fill layers.

12. 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.

13. 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.

14. 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.

15. 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.

16. 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.

17. 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 (A.S.T.M.–D–1557).

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

GRADING QUANTITIES:

10,849 C.Y. CUT (INCLUDES SUBGRADE)
10,849 C.Y. FILL (INCLUDES 15% SHRINKAGE)
BALANCED

THE ABOVE GRADING QUANTITY IS APPROXIMATE ONLY, NOT FOR BIDDING PURPOSES. CONTRACTOR SHALL VERIFY QUANTITIES PRIOR TO CONSTRUCTION.

LEGEND

C.I.	CURB INLET		STREET LIGHT
D.C.I.	DOUBLE CURB INLET	582	EXISTING CONTOUR
A.I.	AREA INLET	582	PROPOSED CONTOUR
M.H.	MANHOLE		
F.E.	FLARED END SECTION		
E.P.	END PIPE	S X/S	STREET SIGN
C.P.	CONCRETE PIPE		
R.C.P.	REINFORCED CONCRETE PIPE		NO PARKING SIGN
C.M.P.	CORRUGATED METAL PIPE		
C.I.P.	CAST IRON PIPE		WATER VALVE
P.V.C.	POLY VINYL CHLORIDE (PLASTIC)		
C.O.	CLEAN OUT	B.O.	BLOW OFF ASSEMBLY
	FIRE HYDRANT		FLOWLINE ELEVATION OF HOUSE CONNECTION
	STORM SEWER		
	SANITARY SEWER		FLOWLINE ELEVATION OF SEWER MAIN

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.

MISSOURI ONE CALL SYSTEM, INC. 1-800-344-7483 STOP! CALL BEFORE YOU DIG!

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1–800–DIG–RITE

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 trench backfills under paved areas shall be granular backfill, and shall be compacted to 90% of the maximum density as determined by the "Modified A.A.S.H.T.O. 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.

3. No area shall be cleared without the permission of the Project Engineer.

4. The City of O'Fallon shall be notified 48 hours prior to construction for coordination and inspection.

5. All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match pre–construction conditions.

6. All construction and materials shall conform to the current construction standards of the City of O'Fallon.

7. Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.

8. No slopes shall exceed 3(H) : 1(V).

9. 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 siltaion fabric fences (possible methods of control are detailed in the plan). Control shall commence with grading and be maintained throughout the project until accpetance 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 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 and/or MODOT.

10. Erosion control systems shall not be limited to what is shown on the plan. Whatever means necessary shall be taken to prevent siltation and erosion from entering natural streams and adjacent roadways, properties and ditches.

11. Developer must supply the city construction inspectors with soil reports prior to or during site soil testing.

12. Brick shall not be used in the construction of storm sewer structures.

13. All proposed utilities are to be bored under existing City of O'fallon streets.

14. All sign locations and sizes must be approved seperately through the Planning division.

15. All sign post and backs and bracket arms shall be painted black using Carboline Rustbond Penetrating Sealer SG and Carboline 133 HB paint (or equivalent as approved by City and Modot).

16. All utilities will be located underground (electric, gas, water, telephone, cable etc.)

17. All future sidewalks, curb ramps, ramp and accessible parking spaces shall be constructed in accordance with current approved "American with Disabilities Act Accessibility Guidelines" (ADAAG) along with the required grades, 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 (1) 8' wide handicapped access aisle is provided and curb ramps do not project into handicap access aisle.)

SHEET INDEX

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14....LANDSCAPE PLAN
15....SIGHT DISTANCE PLAN
16....STRIPING PLAN

DEVELOPMENT NOTES

1. Area of Tract: 8.37 of 19.15 Acres
2. Existing Zoning: C–2 (City of O'Fallon)
3. Proposed Use: Commercial Development
4. Setbacks: 25' Front
   0' Side
   0' Rear
   50' Maximum Building Height
5. Current Owner & Developer of Property:
   S.S. & D. PROPERTIES, L.L.C.
   501 FIRST CAPITOL DR.
   ST. CHARLES, MO 63301
   (636) 946–9753
6. Site is served by:
   AmerenUE
   Laclede Gas Company
   Missouri American Public Water District No. 2
   Verizon Telephone Company
   Wentzville School District
   Lake St. Louis Fire Protection District
   City of O'Fallon Sewers
7. No Flood Plain exists on this site per F.I.R.M. #29183 C 0220, dated Aug. 2, 1996.
8. Topographic information is per Walker and Associates on USGS datum.
9. Boundary information is per Box Engineering Survey during June 2001.

9/22/03
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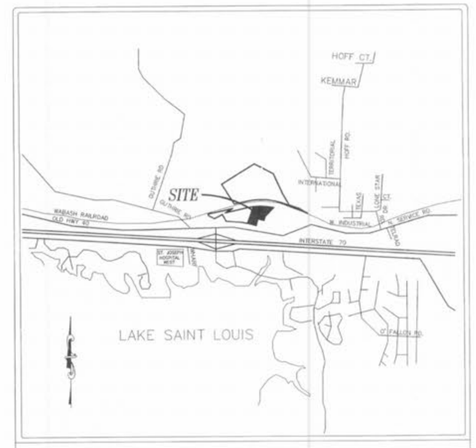
APPROVED



LOCATION MAP

PRINCIPALS & STANDARDS

1. All excavations, grading, or filling shall have a finished grade not to exceed a 3:1 slope (33%). Steeper grades may be approved by the designated official if the excavation is through rock or the excavation or the fill is adequately protected (a designed head wall or toe wall may be required). Retaining walls that exceed a height of four (4) feet shall require the construction of safety guards as identified in the appropriate section(s) of the adopted BOCA Codes and must be approved by the City Building Department. Permanent safety guards will be constructed in accordance with the appropriate section(s) of the adopted BOCA Codes.

2. Sediment and erosion control plans for sites that exceed 20,000 square feet of grading shall provide for sediment or debris basins, silt traps or filters, staked straw bales or other approved measures to remove sediment from run–off waters. Temporary siltation control measures shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site.

3. 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 during the next seeding period after grading has been completed.

4. When grading operations are completed or suspended for more than 30 days permanent grass must be established at sufficient density to provide erosion control on the site. Between permanent grass seeding periods, temporary cover shall be provided.

   All finished grades (areas not to be disturbed by future improvement) in excess of 20% slopes (5:1) shall be mulched and tacked at the rate of 100 pounds per 1,000 square feet when seeded.

5. Provisions shall be made to accommodate the increased runoff caused by changed soils and surface conditions during and after grading. Unvegetated open channels shall be designed so that gradients result in velocities of 2 fps (feet per second) or less. Open channels with velocities more than 2 fps and less that 5 fps shall be established in permanent vegetation by use of commercial erosion control blankets or lined with rock riprap or concrete or other suitable materials. Detention basins, diversions or any other appropriate structures shall be constructed to prevent velocities above 5 fps.

6. The adjoining ground to development sites (lots) shall be provided with protection from accelerated and increased surface water, silt from erosion, and any other consequence of erosion. Run–off water from developed areas (parking lots, paved sites and buildings) above the area to be developed shall be directed to diversions, detention basins, concrete gutters and/or underground outlet systems. Sufficiently anchored straw bales may be temporarily substituted.

7. Development along natural watercourses shall have residential lot lines, commercial or industrial improvements, parking areas or driveways set back a minimum of 25 feet from the top of the existing stream bank. The watercourse shall be maintained and made the responsibility of the subdivision trustees or in the case of a site plan by the property owner. Permanent vegetation should be left intact. Variances will include designed stream bank erosion control measures. FEMA and U.S. Army Corps of Engineers guidelines shall be followed where applicable regarding site development areas designated as flood plains and wetlands.

8. All lots shall be seeded and mulched or sodded before an occupancy permit shall be issued except that a temporary occupancy permit may be issued by the Building Department in cases of undue hardship because of unfavorable ground conditions.

REFERENCE BENCHMARK

R.M. #45 – ELEV.=526.16 (U.S.G.S. DATUM) CHISELED SQUARE ON THE SOUTHEAST WINGWALL OF THE LAKE ST. LOUIS BOULEVARD BRIDGE OVER THE SPILLWAY OF LAKE ST. LOUIS.

CITY FILE NUMBER 2001.00

PREPARED FOR: S.S.&D. PROPERTIES, L.L.C.
501 FIRST CAPITOL DRIVE
ST. CHARLES, MISSOURI 63301
(636) 946–9753

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I hereby specify that the documents intended to be authenticated by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

STATE OF MISSOURI
RICHARD FRANCIS WILLMANN
NUMBER E-25553
9/19/03
REGISTERED PROFESSIONAL ENGINEER

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REVISIONS

1–29–03	BID SET
2–18–03	BID UPDATE SET
4–17–03	BID UPDATE SET
7–9–03	CITY COMMENTS
8–12–03	CITY COMMENTS
9–15–03	CITY COMMENTS

BAX
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SURVEYING
1052 South Cloverleaf Drive
St. Peters, MO. 63376–6445
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FAX 928–1718

12–30–02
DATE

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PROJECT NUMBER

1 OF 16
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FILE NAME

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DRAWN

SWR RLF
DESIGNED CHECKED