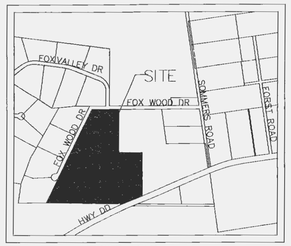

SITE MAP

A SET OF GRADING PLANS FOR THE WENTZVILLE SCHOOL DISTRICT "MIDDLE SCHOOL"

A TRACT OF LAND BEING PART OF FRACTIONAL SECTION 15, TOWNSHIP 46 NORTH, RANGE 2 EAST OF THE FIFTH PRINCIPAL MERIDIAN ST. CHARLES COUNTY, MISSOURI

STANDARD SYMBOLS & ABBREVIATIONS

TREE OR BUSH	
LIGHT POLE	
SANITARY SEWER & MANHOLE	
STORM SEWER & INLET	
MAILBOX	
ELECTRIC LINE	—E—
GAS LINE	—G—
WATER LINE	—W—
TELEPHONE LINE	—T—
CABLE TV LINE	—CATV—
OVERHEAD WIRE	—OHW—
UTILITY POLE	
UTILITY POLE W/ DOWN GUY	
FIRE HYDRANT	
WATER VALVE	WV
WATER METER	WM
GAS VALVE	GV
	TEL. PED.

PRINCIPLES & 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 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. The design to be approved by the Designated Official. Temporary siltation control measures (structural) 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 reestablished 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 according to the City Engineer's recommendations. 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 rip rap or concrete or other suitable materials as approved by the City Engineer. Detention basins, diversions, or 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 with the approval of the City Engineer.

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 and shall be approved by the City Engineer. 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 at the minimum rates defined in Appendix A 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.

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.

SITE NOTES:

1. Basis of bearings for this survey adopted from the record plat of "Weldon Springs Gardens" as recorded in plat book 4 page 179 of the St. Charles County records.
2. This property is currently vested in the name of Wentzville R-IV School District. by deed recorded in book 3700 page 1333 of the St. Charles County records.
3. This property is currently listed under parcel locator number 4-0046-s015-00-4 in the St. Charles County assessors office.
4. All ties shown on are perpendicular to the property lines to which they are tied unless noted otherwise.
5. Only above ground utilities which have been located are shown on this plat. Underground utilities have been shown based on the respective utility company base maps only. These utilities should be verified before design or construction, if any begins on this project.
6. According to the flood insurance rate map of St. Charles County, Missouri, unincorporated areas (community – panel number 290315 0410 E, dated August 2, 1996), this property lies within Zone X. A Zone X is defined as an area of minimal flood hazard.
7. Reference Bench-mark RM19 – Elevation 536.06 NGVD29 (USGS) datum chiseled square on wingwall at the northwest corner of county highway DD bridge over the Dardenne Creek
8. Site Benchmark: Elevation 583.97 old cross on curb 42'± north of and 235'± east of the northwest property corner of subject property. at the northeast corner of the intersection of Fox Wood drive and Fox Valley drive.
9. Missouri state highway DD established using plans obtained from Missouri Department of Transportation project no. AI-FAS-155-(A).

GENERAL NOTES:

1. Underground utilities have been plotted from available information and therefore locations shall be considered approximate only. The verifications 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 improvements.

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

3. All fill, including places under proposed storm and sanitary sewer lines and paved areas within and off the road right-of-way shall be compacted to 90% of maximum density as determined by the "Standard Proctor Test (ASTM-D-698). All tests shall be verified by a Soils Engineer concurrent with grading and back filling operations. The compacted fill shall be free of rutting and shall be non-yielding and non-pumping during proof rolling and compaction. All trench backfills in paved areas shall be granular fill.

4. The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.

5. Easements shall be provided for all public sanitary sewers, storm sewers and utilities on the record plat. See record plat (if required) for location and size of easement.

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

7. The City of O'Fallon shall be notified at least 48 hours prior to start of construction for coordination and inspection.

8. All storm sewer trench backfills shall be water jetted. Granular back fill will be used under pavement areas.

9. All pipes shall have positive drainage through manholes. No flat base structures are allowed.

10. All storm sewers shall meet all specifications and installation requirements of the local governing authority.

11. Storm sewers 18 inch diameter and smaller shall be A.S.T.M. C-14 unless otherwise shown on the plans.

12. Storm sewers 21 inch diameter and larger shall be A.S.T.M. C-76, Class II minimum,unless otherwise shown on the plans.

13. All storm sewer pipe in the right-of-way shall be reinforced concrete pipe (A.S.T.M. C-76, Class III minimum).

14. The grading yardage shown on these drawings is an approximation only, and not for bidding purposes. The contractor shall verify quantities prior to construction.

15. Rip-Rap shown at flared ends will be evaluated in the field after installation for effectiveness and field modified if necessary to reduce erosion on and off site.

16. Developer must supply City construction inspectors with soil reports prior to or during site soil testing.

17. 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 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 and/or Modot. The contractor's responsibilities include all design implementation as required to prevent erosion and the depositing of silt. The owner and/of 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 silt or mud in new or existing pavement shall be removed immediately. Any depositing of silts or mud 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.

18. All fill placed under proposed storm and sanitary sewer, proposed roads, and/or paved areas shall be compacted to 90% of maximum density as determined by the Modified AASHTO T-180 Compaction test or 95% of maximum density as determined by the Standard Proctor Test AASHTO T-99. All fill placed in proposed roads shall be compacted from the bottom of the fill up. All tests shall be verified by a soils engineer concurrent with grading and backfilling operations. Ensure the moisture content of the soil in fill areas is to correspond to the compactive effort as defined by the Standard or Modified Proctor Test. Optimum moisture content shall be determined using the same test that was used for compaction. Soil compaction curves shall be submitted to the City of O'fallon prior to the placement of fill. Proof rolling may be required to verify soil stability at the discretion of the City of O'fallon.

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

20. All joints on storm piping shall be O-ring type.

21. All graded areas that are to remain bare for over 2 weeks are seeded and mulched as per the Department of Natural Resources.

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 back filling 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 over the winter 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. Any existing trash and debris currently on this property must be removed and disposed of off-site.

7. Soft soil in the bottom and banks of any existing or former pond sites or tributaries 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.

8. 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.

9. 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.

10. 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.

11. 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.

12. 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.

13. 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.

14. 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.

15. All siltation control devices shall be inspected by the contractor after any rain of 1/2" or more with any appreciable accumulation of mud to be removed and siltation measures repaired where necessary.

16. No slope shall be steeper than 3(Horizontal):1(Vertical). All slopes shall be sodded or seeded and mulched.

17. Fill and back fill shall be compacted to the criteria specified in the following table:

CATEGORY	MINIMUM PERCENT COMPACTION %
Fill in building areas below footings	95 %
Fill under slabs, walks, and pavement	95 %
Fill other than building areas	90 %
Natural sub grade	90 %
Pavement sub grade	90 %
Pavement base course	90 %

Measured as a percent of the maximum dry density as determined by Standard Proctor Test (ASTM-D-698). Moisture content must be within 2 percent below or 4 percent above optimum moisture content if fill is deeper than 10 feet.

18. Any contaminated soil encountered during excavation shall be hauled and placed as directed by the owners environmental engineering representative.

19. Tree Preservation Calculations:
80% of trees being removed need not be replaced.
20% of trees being removed need to be replaced at a rate of 15 trees/acre. Site will have 4.40 acres of trees removed. 20% of 4.40 is .88 acres. So 15/.88 is 17 trees to be planted in addition to what is required on site per ordinance for greenspace.

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SHEET INDEX CIVIL:

SHEET C1.0 COVER SHEET
SHEET C2.0 DEMOLITION PLAN
SHEET C2.1 DEMOLITION PLAN
SHEET C3.0 GRADING PLAN
SHEET C3.1 GRADING PLAN
SHEET C4.0 DRAINAGE MAP
SHEET C4.1 DRAINAGE MAP
SHEET C5.0 PROFILES PIPELINES
SHEET C6.0 DETAILS
SHEET C6.1 DETAILS
SHEET C7.0 BORING PIT LOCATIONS
SHEET C7.1 BORING PIT LOCATIONS

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APPROVED
AS NOTED
Frank Holman

CITY FILE #6403.02

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JUL 13 2004
ENGINEERING DEPARTMENT

STATE OF MISSOURI
MICHAEL L. FRANK
NUMBER E-25631
7/13/04
REGISTERED PROFESSIONAL ENGINEER

HOENER ASSOCIATES, INC.
ARCHITECTS
ST. LOUIS, MISSOURI

ENGINEERING PLANNING SURVEYING
1002 South Cleveland Drive
St. Peters, MO. 63376-6445
636-928-5552
FAX 928-1718

NEW MIDDLE SCHOOL
WENTZVILLE, MISSOURI
WENTZVILLE R-IV SCHOOL DISTRICT

CONSULTING ENGINEERS:
ABS CONSULTING, INC. — STRUCTURAL
McCLURE ENGINEERING ASSOC. — MECH/ELEC/PLUMB
BAX ENGINEERING — CIVIL
DENNIS G. GLORE, INC. — FOOD SERVICE

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job no. 02-060
date issued 6-24-04
date revised
7-12-04 CITY COMMENTS

drawn by SWR
checked by SWR
sheet no. C1.00

COVER-SHEET

BAX# 03-12495

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