- 1. Gas, Water and other underground utilities shall not conflict with the depth or horizontal location of existing and proposed sanitary and storm sewers including house laterals.
- 2. 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.
- 3. Polyvinyl chloride (PVC) shall conform to the requirements of ASTM D-3034 Standard Specifications for the PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings, SDR 35.
- 4. Storm Sewers 18" diameter or smaller shall be ASTM C-14.
- 5. Storm Sewers 21" diameter or larger shall be ASTM C-76, Class II.
- 6. All storm sewer pipe under pavement, regardless of size, shall be reinforced concrete pipe (ASTM C-76, Class II) unless noted otherwise on these plans.
- 7. All filled 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 the AASHTO T-99 test. All fill placed in proposed roads shall be compacted from the bottom of the fill up. All tests shall be verfied by a soils engineer concurrent with grading and backfilling operations. Note that 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.
- 8. The moisture content of the soil in fill areas is to correspond to the compactive effort as defined by the Standard or Modifies 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 applicable laws and regulations. Landfill tickets for such disposal shall be stability at the discretion of the City of O'Fallon.
- 9. All paving to be in accordance with St. Charles County Standards and specifications except as modified by the City of O'Fallon ordinances.
- 10. All storm and sanitary trench backfills will be water jetted. Granular backfill will be used under pavement areas.
- 11. Easements shall be provided for storm sewers, sanitary sewers and all utilities on the record plat. See record plat for location and size of easements. This does not apply to house laterals. All existing and proposed monuments will be shown on the final record plat.
- 12. No area shall be cleared without permission of the developer.
- 13. All grade shall be within 0.2 feet more or less of those shown on the grading plan.
- 14. No slope shall be greater than 3:1 and shall be either sodded or seeded and mulched. All disturbed ground in the Hwy. K R.O.W. shall be sodded.
- 15. All manhole and catch basin tops built without elevations furnished by the Engineer will be the responsibility of the sewer contractor. At the time of construction stake-out of the sewer lines, all curb and grate inlets will be staked. If normal face stakes fall in line with sewer construction the Enaineer will set these stakes on a double off set. It shall be the responsibility of the sewer contractor to preserve all face stakes from destruction.
- 16. All standard street curb inlets to have front of inlet 2 feet behind curb.
- 17. 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).
- 18. Water lines, valves, sleeves, meters and etc. shall meet all specifications and installation requirements of the local governing authority.
- 19. All cast iron pipe for water mains shall conform to A.W.W.A. specification 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.
- 20. All water hydrants and valves shall be cast iron and installed in accordance with plans and details. Hydrants shall meet all specifications and installation requirements of the local governing authority.
- 21. All sanitary and storm sewers shall meet all specification and installation requirements of the local governing authority.
- 22. All P.V.C. water pipe shall have a minimum pressure rating of PR-200
- 23. All P.V.C. sanitary sewer pipe to be DR-35 or equal with crushed stone bedding uniformly graded between 1" and 1/4" size. This bedding shall extend from 6" below the pipe to 7/10 the pipe diameter above the bottom of the pipe. Areas under new pavement shall be granular backfilled.
- 24. All grading on Missouri State Highway Right-of-Way shall be sodded and all disturbed Right-of-Way Markers shall be reset at the completion
- 25. All sign posts and backs and bracket arms shall be painated black using Carboline Rustbond Penetrating Sealer SG and Carboline 133 HB paint (or equivalent as approved by City and MODOT). Signs designating street name shall been the opposite side of the street from traffic control signals.
- 26. Graded areas that are to remain bare for over two weeks shall be seeded and mulched.
- 27. All erosion control systems shall be inspected and necessary corrections made within 24 hours of any rainstorm resulting in one-half inch of rain or more.
- 28. This tract is served by:
 - A. COTTLEVILLE FIRE PROTECTION DISTRICT
 - B. DUCKETT CREEK SANITARY DISTRICT CUIVRE RIVER ELECTRIC COOP.
 - LACLEDE GAS CO.
 - E. ST. CHARLES PUBLIC WATER DISTRICT NO. 2
- 29. Sidewalks, curb ramps, ramp and accessible parking spaces shall be constructed in accordance with the 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. (Note that at least one eight (8) foot wide handicap access aisle is provided and curb ramps do not project into handicap access aisle.
- 30. All Water System Extensions shall be in accordance with the Water Distribution System Specifications of Public Water System No. 2 of St. Charles County, dated June, 2004 and as approved b MDNR under Review No. 61996-04. compactive effort as defined by the Standard of Modified Proctor Test.

- 31. Lighting values will be reviewed on site prior to the final occupancy inspection. Corrections will need to be made if not compatible
- 32. Brick shall not be used in the construction of sanitary or storm sewer construction. Precast concrete structures are to be used unless otherwise approved by the city.
- 33. The City of O'Fallon shall aso be contacted for utility locates under its maintenace responsibility. This may include water, sanitary, storm, and traffic locates.
- 34. Rip rap shown at flared ends will be evalluated in the field after installation of effectiveness and field modified if necessary to reduce erosion on and off site.
- 35. Joints shall be gasketed O-ring type.
- 36. Grades for entrances should ot exceed 2% at walks, 4% from street and 10% overall. Typically 2% from back of curb through the right of way is disired.
- 37. Flood data provided per FIRM Map of St. Charles County, Missouri and incorporated areas, panel 430E. Map number 290316, revised August 2, 1996. Data verified with FEMA on-line web site.
- 38. All sanitary laterals and sanitary mains crossing under
- roadways must have the proper rock backfill and compactive effort.
- 39. All proposed fencing to require separate permit through planning division. 40. All sign locations and sizes must be approved separately through the
- planning division. Sign locations to be shown on the plans. 41. At new entrance construction, all pavement is to be removed to the
- nearest curb joint. 42. If the proposed entrance is intersecting with an existing roadway that is not curbed, then the curbing on the new entrance shall begin 10' from the edge
- 43. HDPE pipe is to be N-12WT or equal and to meet ASTM F1417 water tight field test.
- 44. Trees, organic debris, rubble, foundations and other deletrious material shall be removed from the site and disposed of in compliance with all maintained on file by the developer. Burning on site shall be allowed only by permit from the local fire district. If a burn pit is proposed, the location and mitigation shall be shown on the grading plan and documented by the soils engineer. 45. All siltation and erosion control measures (silt fences, siltation basins, etc.)
- to follow "St. Charles County Soil and Water Conservation District Erosion and Sediment Control Guidelines".
- 46. Note 36" cover required over storm and sanitary lines.
- 47. All area inlets to have incoming swales at 2% minimum.
- 48. All drop manholes to be 48" diameter.

of the existing roadway.

- 49. Provide 20' of ductile iron pipe when the sanitary line crosses over the storm line and/or sewer lines.
- 50. Illumination attributable to exterior lighting, as measured at the property line, shall not exceed 0.5 foot-candles.
- 51. All utilities crossing under existing streets of collector size and greater shall
- be in conduit or casing pipe. 52. All proposed utilities under exisitng city of O'Fallon streets shall be bored.
- 53. Existing agricultrual use in future development area to remain until future phases are developed. 54. Future curb cuts shown are for conceptual planning purposes and are
- subject to change when additional phases are developed 55. 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 and implementation as required to prevent erosion and the depositing of silt. the owners 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 siltsor mud on new or

existing pavement or in new or existing storm sewers or swales shall

56. Developer must supply city construction inspectors with soil reports prior to or during site soil testing. The soil reports will be required to contain the following information on soil test curves (proctor

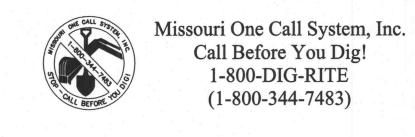
be removed after each rain and affected areas cleaned to the

satisfaction of the owner and/or the City of O"Fallon and/or MODOT.

- reports) for projects within the city: a. maximum dry density
 - b. optimum moisture content c. maximum and minimum allowable moisture
 - d. curve must be plotted to show density from a minimum of 90% compaction and above as determined by the "modified aashto t-180 compaction test 9a.s.t.m. d-1157) or from a minimum of 95% as determined by the "standard proctor test asshtot-99, method c" (a.s.t.m. d-698), proctor type must be designated on
 - document. e. curve must have at least 5 density points with moisture content and sample locations listed
 - on document. f. specific gravity
 - a. natural moisture content
 - h. liquid limit
- i. plastic limit.

Provide a marking on the storm sewer inlets. the city will allow the following markers and adhesive procedures only as shown in the table below or an approved equal by

Almetek Industries.	"Peel an	nd stick" adhesi	ive pads will not be	allowed.	
manufacturer	size	adhesive	style	message (part #)	website
ACP International	3 7/8"	ероху	crystal cap	no dumping drains to waterways (sd-w-cc)	www.acpinternational.com
DAS Manufacturing, Inc.	4"	ероху	standard style	no dumping drains to stream (#sds)	www.dasmanufacturing.com

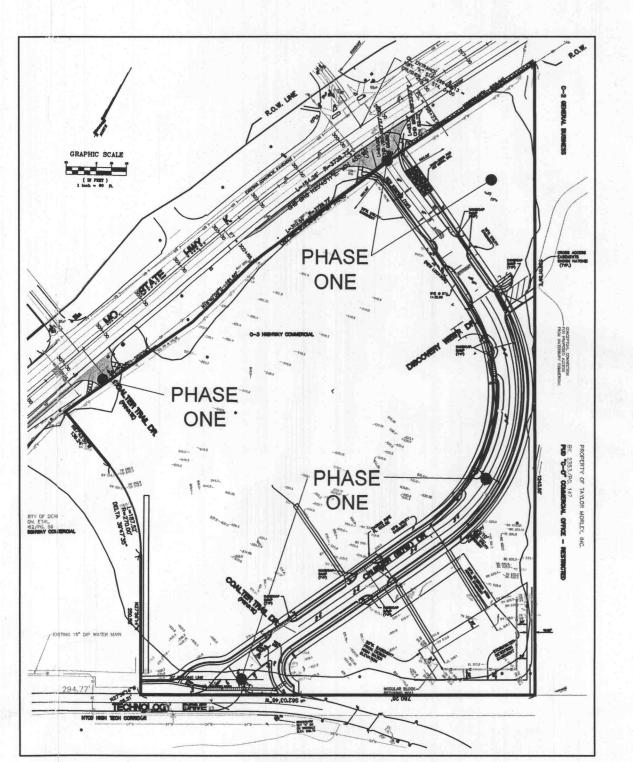


IMPROVEMENT PLANS FOR

KINGSMILL CROSSING

PHASE ONE

A TRACT OF LAND BEING PART OF LOT 25 OF THE JOHN D. COALTER'S SUBDIVISION OF HOWELL'S PRAIRIE TRACT IN U.S. SURVEY 1669, T.46N., R.3.E. ST. CHARLES COUNTY, MISSOURI



PHASE ONE=CRUSHER DRIVE, HWY K ENTRANCES & WATERWAY SITE

NOT TO SCALE

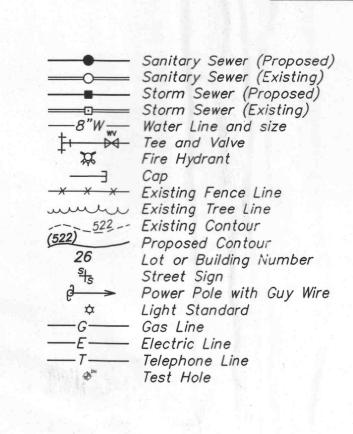
LOCATION MAP

NOT TO SCALE

BENCHMARK PROJECT

#5208 OLD CROSS ON SIDEWALK AT QUIK TRIP DRIVEWAY ELEV. 558.51 #60092 CUT "X" ON SIDEWALK AT TECHNOLOGY DR. (WELDON SPRINGS RD.) ELEV. 528.79

LEGEND



INDEX

SHEET NO.

12

C.P.	Concrete Pipe
R.C.P.	Reinforced Concrete Pipe
C.M.P.	Corregated Metal Pipe
P.V.C.	Polyvinyl Choride Pipe
C.I.P.	Cast Iron Pipe
V.C.P.	Vitrified Clay Pipe
E.P.	End Pipe
F.E.	Flared End Section
C.O.	Clean Out
V. T.	Vent Trap
M.H.	Manhole
C.1.	Curb Inlet
D. C.1.	Double Curb Inlet
A.1.	Area Inlet
D. A.I.	Double Area Inlet
G.1.	Grate Inlet
C.C.	Concrete Collar
U.I.P	Use In Place
T.B.R.	To Be Removed
T.B.R.&R.	To Be Removed & Relocated/Replaced
Set I.R.	Set Iron Rod with Cap
C.M.	Concrete Monument
	e-ii-i-i- iii-ii-iiii

Old Iron Pipe

SHEETS

COVER SHEET

GRADING PLAN

STREET PROFILES

DRAINAGE AREA MAP

EROSION CONTROL PLAN

CONSTRUCTION DETAILS

CONSTRUCTION DETAILS

CONSTRUCTION DETAILS

CONSTRUCTION DETAILS

RETAINING WALL PLANS

FLAT PLAN

DESCRIPTION

SANITARY & STORM PROFILES



	7/26/06 REV. SHTS. 2,3 & 8 PER CITY COMMENTS	7/12/06 REV. PER DUCKETT CREEK	6/23/06 REV. PER CITY COMMENTS	Date Accioing
	1	2 7/	/9	-

ER SHEET	xa!	
s Professional Services, inc.	8	7/2
EERING LAND SURVEYING SITE PLANNING	7	1/1
17813 EDISON AVE. SUITE 201 CHESTERFIELD, MO 63005	-	6/2
555 636 - 449 - 0148 FAX www.zavradinos.com	No.	Da

KINGSMIL

KINGSMILI
DEVELOPMEN
14151 CLAY
CHESTERFIELD
636–394



P & Z CASE NO. 9984.04 APPROVED APRIL 6, 2006