

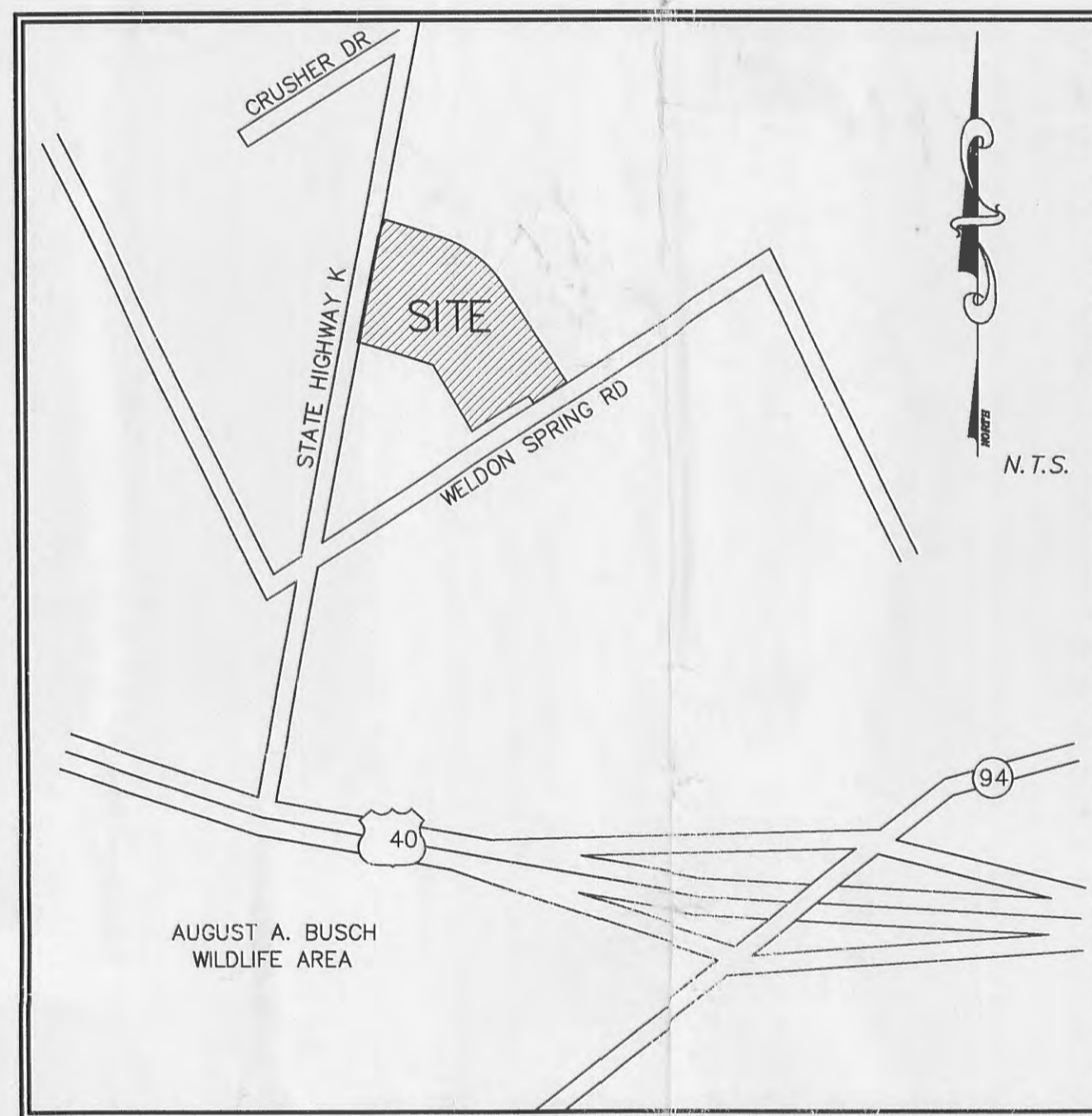
CITY OF O'FALLON GENERAL NOTES

- Gas, water and other underground utilities shall not conflict with the depth or horizontal locations of existing and proposed sanitary and storm sewers, including house laterals.
- 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.
- 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.
- Storm sewers 18" in diameter or smaller shall be ASTM C-14.
- Storm sewers 21" in diameter or larger shall be ASTM C-76, Class II.
- All storm sewer pipe under pavement, regardless of size, shall be reinforced concrete pipe (ASTM C-76, Class III) unless noted otherwise in the plans.
- Corrugated metal pipe shall conform to the standard specifications for corrugated culvert pipe M-36, A.A.S.H.T.O. See plans for gauge.
- All filled places under proposed roads, proposed sanitary and storm sewer lines, and/or paved areas including trench backfills 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 filled places 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.
- All earthen filled places within State, County, or City roads (Highways) shall be compacted to 95% of maximum density as determined by the "Standard Proctor Test A.A.S.H.T.O. T-99" (ASTM D-698) unless otherwise specified by local governing authority specifications. All tests will be verified by a soils engineer.
- All storm and sanitary trench backfills shall be water jetted. Granular fill will be used under paved areas.
- 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.
- No area shall be cleared without the permission of the developer.
- All grades shall be within 0.2 feet (more or less) of those shown on the grading plan.
- No slope shall be steeper than 3' (horizontal) to 1' (vertical) sodded or mulched.
- Hazard markers will consist of three (3) standard specification, "Manual on Uniform Traffic Control Devices," and of roadway markers mounted on two (2) pound "J" channel sign post. Each marker shall consist of an eighteen (18) inch diamond reflectorized red panel. The bottom of each panel shall be mounted a minimum of four (4) feet above the elevation of the pavement surface.
- All manhole and curb inlet tops built without elevations furnished by the Engineer will be the responsibility of the sewer contractor. At the time of construction stakeout of the sewer lines, all curb and grate inlets will be face staked. If normal face stakes fail in line with sewer construction, the Engineer will set these stakes on a double offset. It shall be the responsibility of the sewer contractor to preserve all face stakes from destruction.
- All standard street curb inlets to have front of inlet 2 feet behind curb.
- The minimum vertical distance from the low point of the basement to the flowline of a at the corresponding house connection shall not be less than the diameter of the plus a vertical distance not less than two and one-half feet (2-1/2').
- Water lines, valves, sleeves, meters and etc., shall meet all specifications and installation requirements of the local governing authority. Water mains shall have a minimum of 42" of cover.
- 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.
- All water hydrants and valves shall be cast iron and installed in accordance with plans and details.
- All sanitary and storm sewers shall meet all specifications and installation requirements of the local governing authority.
- All PVC water pipe shall have a minimum pressure rating of PR-200 or SDR-21. All new utilities under City streets shall be bored.
- All PVC pipe shall 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 12" above the top of the pipe.
- All grading on Missouri State Highway Right-of-Way shall be seeded and mulched and all disturbed right-of-way markers shall be reset at the completion of grading.
- All streets must meet the specifications and installation requirements of the City of O'Fallon.
- All sanitary manholes top shall be set 0.2' higher than the proposed ground except in pavement areas.
- All sanitary manholes shall have a 31 mil thick coat of coal tar pitch waterproofing.
- All sanitary service lines shall have a 6" diameter. Sanitary mains shall have minimum 8" diameter.
- Manhole frame and cover shall be Clay and Bailey No. 2008 or Neenah R-1736 or Deeter 1315 or approved equal.
- A drop of 0.2 feet is required through each sanitary manhole. Minimum cover of 42" is required on all mains.
- The City of O'Fallon shall be notified at least 48 hours prior to construction of sanitary sewers for coordination and inspection.
- Brick shall not be used on in the construction of sanitary or storm sewer structures.
- 5/8" diameter trash bars shall be provided for all inlets.
- Waterproofing: Waterproofing will be required on the exterior of all manholes. The bitumen shall consist of two coats of asphalt, coat-tar pitch, or a coating meeting American Society for Testing and Materials (ASTM) D-41. Asphalt shall conform to the requirements of ASTM D-449. Coat-tar pitch shall conform to the requirements of ASTM D-450. Coating shall be 31 mils thickness.
- 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.
- 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 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 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.
- Developer must supply City construction inspectors with soils reports prior to or during site soil testing.
- All paving to be in accordance with St. Charles County standards and specifications except as modified by the City of O'Fallon ordinances.
- Owner shall provide a copy of the soils report to grading contractor. Contractor shall be responsible for adhering to all recommendations outline in the soils report.
- All new utilities under City streets shall be bored.
- All sanitary laterals and sanitary mains crossing under roadways must have the proper rock backfill and to required compaction.
- HDPE pipe is to be N-12WT or equal and shall meet ASTM F1417 water tight field test.
- Trees, organic debris, rubble, foundations and other deleterious material shall be removed from the site and disposed of in compliance with all applicable laws and regulations. Landfill tickets for such disposal shall be 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.
- If intersecting roadway does not have a curb, then the curb on the new entrance shall begin 10' from the edge of the existing roadway line.
- Project is Served By:
WATER - PWSO #2
SEWER - DUCKETT CREEK SANITARY DISTRICT
ELECTRIC - AMERENUE
TELEPHONE - SWB TELEPHONE COMPANY
GAS - LACLEDE GAS
FIRE - COTTLEVILLE FIRE PROTECTION DISTRICT
SCHOOL DISTRICT - FRANCIS HOWELL SCHOOL DISTRICT
All utilities shall be located underground.
- This property lies within Zone X (areas outside 500-year floodplain) per the Flood Insurance Rate Map, Community Panel No. 291830430 E, Map 430 of 525, effective date August 2, 1996.
- All grading for this development shall conform to the specifications in the soils report for this development.
- The developer shall contract with a soil consultant firm registered in the State of Missouri during the grading operation to monitor cut and fill and to verify proper compaction has been achieved. A report shall be prepared by the soils consultant and provided to the City for verification of the grading operation.

WALGREENS

A TRACT OF LAND BEING LOT 2 OF QUIKTRIP 632 SUBDIVISION AS RECORDED IN PLAT BOOK 36 PAGE 264 LOCATED IN U.S. SURVEY 1669, TOWNSHIP 46 NORTH, RANGE 3 EAST ST. CHARLES COUNTY, MISSOURI

IMPROVEMENT PLANS



LOCATION MAP

DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

- 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 on these plans, shall be the responsibility of the contractor and shall be located prior to any grading or construction of improvements.
- Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary and storm sewers, including house laterals.
- All existing site improvements disturbed, damaged or displaced shall be repaired or replaced to closely match preconstruction conditions.
- All fill including 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 percent of maximum density as determined by the "Modified AASHTO T-180 Compaction Test (ASTM D-1557)". 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-separating during preloading and erection.
- The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system.
- All sanitary sewer lines and tops built without elevations furnished by the engineer will be the responsibility of the sewer contractor.
- Easements shall be provided for all sanitary sewers, storm sewers and all utilities on the record plat.
- All sanitary sewer construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
- The Duckett Creek Sanitary District shall be notified at least 48 hours prior to construction for coordination and inspection.
- All sanitary sewer building connections shall be designed so that the minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding building connection shall not be less than the diameter of the pipe plus the vertical distance of 2-1/2 feet.
- All sanitary sewer manholes shall be waterjetted on the interior in accordance with Missouri Dept. of Natural Resources specification 10-C28-01(2007).
- All PVC sanitary sewer pipe shall conform to the requirements of ASTM D-3034 Standard Specification for PSM Polyvinyl Chloride Sewer Pipe, SDR-35 or equal, with "clean" 1/2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe. Immediate backfill over pipe shall consist of some size "clean" or "open" stone from springline of pipe to 8 inches above the top of pipe.
- All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.
- All pipes shall have positive drainage through manholes to flat invert structures are allowed.
- All creek crossings shall have grouted rip-rap as directed by district inspectors. (all grout shall be high slump ready-mix concrete).
- Brick shall not be used on sanitary sewer manholes.
- Existing sanitary sewer service shall not be interrupted.
- Maintain access to existing residential driveways and streets.
- Pre-manufactured copings shall be used at all PVC to DIP connection. Rubber boot/Mislon-type couplings will not be allowed.
- Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
- "Type N" Lock-Type Cover and Locking Device (Lock-Lug) shall be used where lock-type covers are required.

Sheet	Description
1	COVER SHEET
2	SITE PLAN
3	GRADING PLAN
4	DRAINAGE AREA MAP
5	EROSION AND SEDIMENT CONTROL PLAN
6	CONSTRUCTION DETAILS
7	EROSION AND SEDIMENTATION CONTROL DETAILS
8	STORM SEWER PROFILES
9	STORM SEWER AND WATER MAIN DETAILS

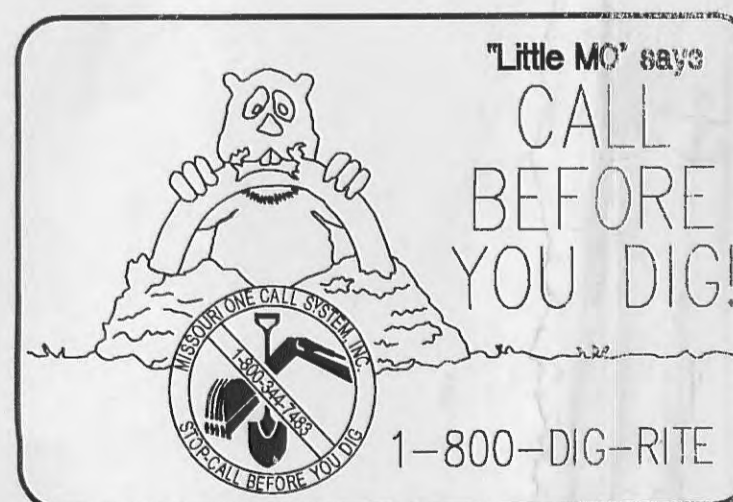
LEGEND

	Sanitary Sewer (Proposed)	R.C.P.	Reinforced Concrete Pipe
	Sanitary Sewer (Existing)	C.M.P.	Corrugated Metal Pipe
	Storm Sewer (Proposed)	C.I.P.	Cast Iron Pipe
	Storm Sewer (Existing)	P.V.C.	Polyvinyl Chloride
	Water Line & Size	V.C.P.	Vitrified Clay Pipe
	Existing water line		
	Tee & Valve		
	Hydrant		
	Cap		
	Lot or Building Number		
	Existing Fence Line		
	Existing Tree Line		
	Street Sign		
	Proposed Contour		
	Grouted Rip-Rap		
	End of Lateral		
	Asphalt Pavement		
	Concrete Pavement		
	Sanitary Structure		
	Storm Structure		
	Hole		
	Pole		
	Light Standard		
	Double Water Meter Setting		
	Single Water Meter Setting		
	Curb Inlet		
	Skewed Curb Inlet		
	Double Curb Inlet		
	Grate Inlet		
	Area Inlet		
	Double Area Inlet		
	Concrete Collar		
	Flared End Section		
	End Pipe		
	Energy Dissipator		
	Manhole		
	Concrete Pipe		
	R.C.P.	Reinforced Concrete Pipe	
	C.M.P.	Corrugated Metal Pipe	
	C.I.P.	Cast Iron Pipe	
	P.V.C.	Polyvinyl Chloride	
	V.C.P.	Vitrified Clay Pipe	
	C.O.	Clean Out	
	V.T.	Vent Trap	
	T.B.R.	To Be Removed	
	T.B.P.	To Be Protected	
	T.B.A.	To Be Abandoned	
	B.C.	Base Of Curb	
	T.C.	Top Of Curb	
	T.W.	Top Of Wall	
	B.W.	Base Of Wall	
	(TYP)	Typical	
	U.N.O.	Unless Noted Otherwise	
	U.I.P.	Use In Place	

CITY OF O'FALLON
COMMUNITY DEVELOPMENT DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY: DATE: 7-11-07
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN

FEMA BENCH MARKS
RM 42 - Chiseled square on east end of concrete pier on south bank of Dardennes Creek at Henning Road
ELEVATION = 486.37

SITE BENCH MARK
"O" in open on fire hydrant 8 1/2 feet south of the southwest property corner.
ELEVATION = 561.09



PICKETT RAY & SILVER

Civil Engineers
Planners
Land Surveyors

333 Mid Rivers Mall Dr.
St. Peters, MO 63376
397-1211 FAX 397-1104

NOTE
Underground utilities and structures have been plotted from available information and therefore, their location must be considered approximate only. It is the responsibility of the individual contractors to notify the utility companies before actual construction.

RECEIVED
JUN 26 2007

PICKETT RAY & SILVER

CIVIL ENGINEERS
PLANNERS
LAND SURVEYORS

140 SOUTH BRENTWOOD, SUITE 100
ST. LOUIS, MISSOURI 63104
(314)968-9888

Prepared For:
PACE PROPERTIES, INC.

NO.	DATE	REVISIONS
1	03-06-07	PER WALGREENS COMMENTS
2	03-09-07	PER CITY OF O'FALLON COMMENTS
3	06-03-07	PER DUCKETT CREEK SANITARY & FIDELITY
4	06-21-07	PER DEVELOPER

ENGINEERS AUTH
The responsib
engineering lic
is hereby limi
authenticated
and sets her
Responsibility
other engine
this project o
revisions after
reauthentication

Professional Engineer's Seal
INDICATES RESPONSIBILITY FOR DESIGN

DRAWN
CHECKED
PROJECT #
TASK #

WALGRP
IMPP
SHEET
Copyright

Planning Department File # - 4206
Approved by Planning and Zoning - 1/4/07
NOT APPROVED FOR CONSTRUCTION