

LEGEND**

DESCRIPTION	EXISTING	PROPOSED
CONTOUR (1' OR 2' INTERVAL)	-----122-----	-----122-----
CONTOUR (INDEX)	-----120-----	-----120-----
SANITARY SEWER	-----S-----	-----S-----
FORCE MAIN	-----FM-----	-----FM-----
STORM DRAIN	-----SD-----	-----SD-----
UNDERDRAIN	-----UD-----	-----UD-----
WATER MAIN	-----W-----	-----W-----
UNDERGROUND ELECTRIC	-----E-----	-----E-----
UNDERGROUND TELEPHONE	-----T-----	-----T-----
UNDERGROUND TELEVISION	-----TV-----	-----TV-----
GAS LINE	-----G-----	-----G-----
OVERHEAD ELECTRIC	-----OE-----	-----OE-----
ABANDONED SEWER	-----AS-----	-----AS-----
ABANDONED WATER MAIN	-----AW-----	-----AW-----
CULVERT	INV. IN. EL. XXX.XX ----- INV. OUT. EL. XXX.XX	INV. IN. EL. XXX.XX ----- INV. OUT. EL. XXX.XX
HOUSE SERVICE / LATERAL	-----S-----	-----S-----
PROPERTY LINE	-----P-----	-----P-----
RIGHT OF WAY	-----R/W-----	-----R/W-----
EASEMENT	-----E-----	-----E-----
EDGE OF VEGETATION	-----EV-----	-----EV-----
FENCE	-----F-----	-----F-----
CENTERLINE	-----CL-----	-----CL-----
RETAINING WALL	-----RW-----	-----RW-----
STONEWALL	-----SW-----	-----SW-----
CURB	-----C-----	-----C-----
EDGE OF PAVEMENT	-----EP-----	-----EP-----
EDGE OF GRAVEL	-----EG-----	-----EG-----
GUARDRAIL	-----GR-----	-----GR-----
RAILROAD TRACKS	-----RT-----	-----RT-----
DRAINAGE DITCH / SWALE	-----DD-----	-----DD-----
SANITARY SEWER MANHOLE	○	●
SANITARY SEWER SERVICE CLEANOUT	○o	●o
STORM DRAIN MANHOLE	○	●
CATCH BASIN	□	■
TELECOMM MANHOLE	○	●
TELECOMM SERVICE BOX	□	■
ELECTRIC MANHOLE	○	●
TRANSFORMER	⊗	⊗
UTILITY POLE W/GUY	⊕	⊕
UTILITY POLE	⊕	⊕
LIGHTPOST	⊕	⊕
GAS METER BOX	⊕	⊕
GAS VENT	⊕	⊕
GAS GATE	⊕	⊕
WATER GATE	⊕	⊕
CURB STOP	⊕	⊕
HYDRANT	⊕	⊕
WATER WELL	⊕	⊕
WATER METER BOX	⊕	⊕
SIGN	⊕	⊕
MAILBOX	⊕	⊕
FLAGPOLE	⊕	⊕
WETLAND HATCHING	⊕	⊕
TREE LINE	⊕	⊕
TREE	⊕	⊕
STONE CHECK DAM	⊕	⊕
SURVEY STATION	⊕	⊕
IRON PIN	⊕	⊕
MONUMENTS	⊕	⊕
SPOT ELEVATION	⊕	⊕
TEST PIT & NUMBER	⊕	⊕
BORING & NUMBER	⊕	⊕
SURFACE WATER MONITORING LOC.	⊕	⊕
MONITORING WELL	⊕	⊕
PIEZOMETER	⊕	⊕

SHEET INDEX

GENERAL
G-01 LEGEND, SHEET INDEX, ABBREVIATIONS AND GENERAL NOTES

CIVIL
C-01 MEMC DRIVE PLAN & PROFILE STA. 0+00 TO STA. 11+00
C-02 MEMC DRIVE PLAN & PROFILE STA. 11+00 TO STA. 22+00
C-03 MEMC DRIVE PLAN & PROFILE STA. 22+00 TO STA. 31+00
C-04 CIVIL DETAILS 1
C-05 CIVIL DETAILS 2

GENERAL NOTES

- THIS PROJECT GENERALLY CONSISTS OF PROVIDING WATER MAINS, VALVES, AND ACCESSORIES. THE PROJECT INCLUDES, BUT IS NOT LIMITED TO APPROXIMATELY 2,800 LINEAR FEET OF PVC WATER MAIN TO CONNECT EXISTING WATER MAIN AT PEARL DRIVE TO AN EXISTING WATER MAIN ON THE NORTH SIDE OF NORFOLK AND WESTERN RAILROAD, AND ALL OTHER WORK AND MATERIALS AS SPECIFIED, NOTED, AND APPURTENANT. PROVIDE ALL SURFACE RESTORATION, EROSION CONTROL, TRAFFIC CONTROL, AND OTHER WORK AS SPECIFIED OR APPURTENANT.
- THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS AS REQUIRED TO PERFORM THE WORK AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL CODES.
- LAYOUT OF THE PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE APPROVED BY THE ENGINEER.
- THE WORK SHALL INCORPORATE EROSION CONTROL MEASURES WHICH ARE COMPLIANT WITH THE LATEST VERSION OF MISSOURI'S "PROTECTING WATER QUALITY: A CONSTRUCTION SITE WATER QUALITY FIELD GUIDE."
- BASE PLAN AND UTILITY RECORD PLAN COMPILED FROM SURVEY BY COLE & ASSOCIATES (JUNE 25, 2010)
- THE LOCATION, TYPE AND SIZE OF EXISTING PIPES, DUCTS, CONDUITS AND OTHER UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS ARE NOT WARRANTED TO BE EXACT NOR IS IT WARRANTED THAT ALL UNDERGROUND STRUCTURES ARE SHOWN. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. EXCAVATING TEST PITS AS NECESSARY TO VERIFY UTILITY LOCATIONS AND DEPTHS SHALL BE INCIDENTAL TO THIS PROJECT.
- THE LOCATIONS OF ALL PROPERTY LINES AND RIGHT OF WAYS ARE BASED ON A SURVEY BY COLE & ASSOCIATES (JUNE 25, 2010)
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH THE CITY OF O'FALLON, MISSOURI, UTILITY COMPANIES, DIG RITE, EMERGENCY SERVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION (MoDOT) WHERE APPLICABLE. CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO COMMENCING WORK TO ALLOW SUFFICIENT TIME TO LOCATE AND MARK THE LOCATION OF ALL BURIED UTILITIES. CONTRACTOR SHALL ALSO CONTACT "DIG RITE", TELEPHONE NO 800-344-7483. REPAIR OF ANY DAMAGED UTILITY WILL BE INCIDENTAL TO THIS PROJECT.
- MEMC DRIVE IS A PRIVATE WAY. USE OF MEMC DRIVE FOR CONSTRUCTION ACTIVITIES IS STRICTLY FORBIDDEN WITHOUT PRIOR APPROVAL FROM MEMC AUTHORIZED REPRESENTATIVES.
- INSULATE ALL WATER MAINS WITH LESS THAN 3.5 FEET OF COVER, OR WHERE DIRECTED BY THE ENGINEER. RIGID INSULATION REQUIRED: CLOSED-CELL RIGID FOAMED POLYSTYRENE, EQUAL TO "STYROFOAM" HI-60, BY DOW CHEMICAL. 2" THICK BY 4' WIDE, UNLESS OTHERWISE NOTED.
- ALL NEW WATER MAIN AND OTHER PIPING WILL HAVE A MINIMUM 3.5 FEET OF COVER UNLESS NOTED OTHERWISE OR APPROVED BY THE ENGINEER. ALL SERVICES ARE TO HAVE A MINIMUM OF 3.5 FEET OF COVER.
- THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION ACTIVITIES RELATED TO THE PROJECT WITHIN THE CONFINES OF THE CONSTRUCTION EASEMENTS OBTAINED BY THE CITY OF O'FALLON, ANY ACTIVITY, MATERIAL STORAGE ETC., TAKING PLACE ON PRIVATE PROPERTY SHALL BE WITH THE EXPRESS WRITTEN PERMISSION OF THE PROPERTY OWNER AND COORDINATED BY THE PROPERTY OWNER.
- THE CONTRACTOR SHALL SUPERVISE AND INSPECT THE WORK OF THIS PROJECT IN AN EFFICIENT AND COMPETENT MANNER. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCE AND PROCEDURES USED TO COMPLETE THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE WORK IS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. A REPRESENTATIVE OF THE GENERAL CONTRACTOR SHALL BE PRESENT DURING ALL PHASES OF THE WORK.
- SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. PERFORM ALL WORK IN ACCORDANCE WITH SAFETY STANDARDS OF APPLICABLE LAWS, BUILDING AND CONSTRUCTION CODES, THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA, THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND THE REQUIREMENTS OF TITLE 9 OF THE CODE OF FEDERAL REGULATIONS, PART 1926, "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION".
- AT THE END OF EACH DAY'S WORK, THE CONTRACTOR SHALL SPRAY THE INSIDE OF THE END OF WATER PIPE WITH SODIUM HYPOCHLORITE AND BLOCK PIPE OVERNIGHT WITH SANITARY WATERTIGHT PLUG TO PREVENT ANIMALS FROM ENTERING PIPE.
- PROVIDE 10 FEET OF HORIZONTAL SEPARATION BETWEEN WATER AND SEWER MAINS. FOR WATER MAIN CROSSING SEWER MAIN TRENCHES, PROVIDE AT LEAST 36 INCHES OF VERTICAL SEPARATION BETWEEN THE TOP OF THE SEWER MAIN AND THE BOTTOM OF THE WATER MAIN.
- THE CONTRACTOR SHALL PROVIDE THRUST BLOCKS AT ALL TEES AND BENDS IN THE NEW WATER MAIN PIPING UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL MAINTAIN TRAFFIC IN A SAFE MANNER AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MAINTAIN CONTINUOUS TRAFFIC FLOW DURING CONSTRUCTION. NO ROADS SHALL BE CLOSED TO TRAFFIC WITHOUT PERMISSION FROM THE CITY OF O'FALLON.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT EQUIPMENT FLUIDS FROM REACHING ANY WATER COURSE. ANY INADVERTENT FLUID DISCHARGES SHALL BE IMMEDIATELY CLEANED FROM THE WATERS USING WHATEVER MEANS NECESSARY, AS DETERMINED BY THE ENGINEER.
- PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT WILL BE RESET AT THE CONTRACTOR'S EXPENSE, BY A REGISTERED LAND SURVEYOR APPROVED BY THE ENGINEER.
- RESTORE ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL CONDITION (GRAVEL, PAVEMENT, GRASS, ETC.) UNLESS NOTED OTHERWISE ON PLANS. RESTORATION OF GRAVEL ROAD AND DRIVEWAY SURFACES AND LAWNS DAMAGED BY CONTRACTOR SHALL BE INCIDENTAL TO THE PROJECT.
- EXISTING FACILITIES AND IMPROVEMENTS (I.E. TREES, LIGHT POLES, SIGNS, ETC.) SHALL BE REMOVED AND REPLACED OR PROTECTED AS REQUIRED DURING CONSTRUCTION. THE ASSOCIATED COSTS ARE INCIDENTAL TO THE PROJECT. BRACING OF UTILITY POLES, WHERE REQUIRED, SHALL BE INCIDENTAL TO THE PROJECT AND NO SEPARATE PAYMENT SHALL BE MADE.
- CONTRACTOR SHALL MAINTAIN WATER AND SEWER SERVICE AT ALL TIMES. CONTRACTOR SHALL PRESSURE TEST, DISINFECT, AND FLUSH NEW WATER MAINS.
- DECHLORINATION OF DISINFECTION WATER WILL BE A REQUIREMENT DURING THE PIPE DISINFECTION PROCESS.
- IT IS ASSUMED THAT THERE IS NO BEDROCK WITHIN THE PROJECT LIMITS, BUT A PROVISION WITHIN THE BID FORM PROVIDES FOR A UNIT COST IN THE EVENT THAT BEDROCK OR ROCKS EXCEEDING 2 CY IN VOLUME ARE ENCOUNTERED. PAYMENT WILL BE IN A UNIT PRICE BASIS AS INDICATED IN THE SPECIFICATIONS.
- WHENEVER POSSIBLE, EXISTING PLANTINGS SHALL BE PRESERVED BY WHATEVER METHOD NECESSARY INCLUDING TRANSPLANTING AND/OR TEMPORARY RELOCATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING RECORD DRAWINGS TO THE OWNER.

ABBREVIATIONS**

AB	ANCHOR BOLTS	FE	FIRE EXTINGUISHER	PE	POLYETHYLENE
AC	ASBESTOS CEMENT	FF:FIN FLR	FINISH FLOOR	PE	PLAIN END
ACC	ACCESS	FIN	FINISHED	PEN	PENETRATION
AFF	ABOVE FINISHED FLOOR	FIN GR	FINISH GRADE	PL	PLATE
AGGR	AGGREGATE	FLG	FLANGED	PLYWD	PLYWOOD
ALT	ALTERNATE	FLR	FLOOR	PP	POLYPROPYLENE
ALUM	ALUMINUM	FLRG	FLOORING	PSF	POUNDS PER SQUARE FOOT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	FM	FORCE MAIN	PSI	POUNDS PER SQUARE INCH
APA	AMERICAN PLYWOOD ASSOCIATION	FOS	FACE OF STUD	PT	PRESSURE TREATED
APPROX.±	APPROXIMATELY	FTG	FOOTING	PTD	PAINTED
AR	AIR RELEASE	FT	FOOT/FEET	PVC	POLYVINYL CHLORIDE
AWWA	AMERICAN WATER WORKS ASSOCIATION				
BLDG	BUILDING	GAL	GALLON	R	RADIUS
BOF	BOTTOM OF FOOTING	GALV	GALVANIZED	RCEP	REINFORCED CONCRETE ELLIPTICAL PIPE
BOT	BOTTOM	GPH	GALLONS PER HOUR	REINF	REINFORCED
		GPM	GALLONS PER MINUTE	REQ'D	REQUIRED
		GR	GROUND	RESIL	RESILIENT
		GWB	GYPSUM WALLBOARD	RM	ROOM
				R.O.	RIGHT OPENING
				R/W	RIGHT OF WAY
CB	CENTERLINE	HC	HOSE CLEANOUT	S	SLOPE
CL	CATCH BASIN	HM	HOLLOW METAL	SCH	SCHEDULE
CLG	CAST IRON	HORIZ	HORIZONTAL	SDR	STANDARD DIMENSION RATIO
CLR	CLEARING LIMITS	H P	HIGH POINT	SECT	SECTION
CL	CLEAR	HP	HORSEPOWER	SHT	SHEET
CMP	CHLORINATION	HT	HEIGHT	SPEC	SPECIAL
CMU	CORRUGATED METAL PIPE	ID	INSIDE DIAMETER	SPEC'S	SPECIFICATIONS
CO	CONCRETE MASONRY UNIT	IF	INSIDE FACE	SQ	SQUARE
COL	CLEANOUT	IN	INCHES	SS	STAINLESS STEEL
CONC	CONCRETE	INF	INFLUENT	STD	STANDARD
CONN	CONNECTION	INSUL	INSULATION	SUSP	SUSPENDED
CONST	CONSTRUCTION	INT	INTERIOR		
CONT	CONTINUOUS	INV	INVERT		
CTRSK	COUNTERSINK	IPS	IRON PIPE SIZE	TBM	TEMPORARY BENCH MARK
CU	COPPER	KD	KILN DRIED	T&B	TOP AND BOTTOM
		LF	LINEAR FEET	THR	THRESHOLD
DBC	DIRECT BURIAL CABLE	LG	LONG	TOP	TOP OF FOOTING
		LP	LOW POINT	TOP	TOP OF PLATE
DIA:φ	DIAMETER	MAX	MAXIMUM	TYP	TYPICAL
DIAG	DIAGONAL	MC	MOISTURE CONTENT	UNO	UNLESS NOTED OTHERWISE
DN	DOWN	MCC	MOTOR CONTROL CENTER		
DW	DOMESTIC WATER	MECH	MECHANICAL	VB	VAPOR BARRIER
		MFG	MANUFACTURER	VFD	VARIABLE FREQUENCY DRIVE
EA	MODULUS OF ELASTICITY	MFG	MANUFACTURER	VERT.	VERTICAL
EF	EACH FACE	MH	MANHOLE		
EL-ELEV	EACH ELEVATION	MIN	MINIMUM	W/	WITH
EOP	END OF PIPE	MJ	MECHANICAL JOINT	WC	WATER CLOSET
EQUIP	EQUIPMENT	MDNR	MISSOURI DEPARTMENT OF NATURAL RESOURCES	WD	WOOD
EW	EACH WAY	MET	METAL	WH	WATER HEATER
EX	EXISTING	NES	NATIONAL ELECTRICAL CODE	WLY	WESTERLY
EXP	EXPANSION	NESC	NATIONAL ELECTRICAL SAFETY CODE	WR	WATER RESISTANT
EXT	EXTERIOR	NO	NOT IN CONTRACT	WS	WATERSTOP
		NTC	NATIONAL ELECTRICAL CODE	WWF	WELDED WIRE FABRIC
Fb	BENDING STRESS	NTS	NOT TO SCALE	WWM	WELDED WIRE MESH
Fc	COMPRESSIVE STRESS	OC	ON CENTER		
Ft	TENSILE STRESS	OD	OUTSIDE DIAMETER		
FC	FIRE CODE	OF	OUTSIDE FACE		
FDD	FLOOR DRAIN	OH	OVERHEAD		
FDN	FOUNDATION	OPER	OPERATOR		

**THESE ARE GENERAL ABBREVIATIONS. NOT ALL APPEAR ON THESE DRAWINGS.

**THIS IS A GENERAL LEGEND. NOT ALL ITEMS APPEAR ON THESE DRAWINGS

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COMMITMENT & INTEGRITY DRIVE RESULTS

REV	DESCRIPTION	DATE

LEGEND, SHEET INDEX, ABBREVIATIONS, AND GENERAL NOTES

CITY OF O'FALLON, MISSOURI
PEARL DRIVE
WATER MAIN EXTENSION

JOB NO.: 213456.00
DATE: JULY, 2010
SCALE: AS NOTED
SHEET: 1 OF 6

G-01

95% REVIEW SET
NOT FOR CONSTRUCTION