

EXISTING	LEGEND	NEW
	SANITARY SEWER MANHOLE	
	STREET SIGN	
	WATER VALVE	
	WATER METER	
	GAS VALVE	
	GAS METER	
	POWER POLE	
	LIGHT POLE	
	TELEPHONE OR CABLE BOX	
	GUY WIRE	
	ELECTRIC BOX OR METER	
	FENCE	
	BOLLARD	
	TREE	
	AREA INLET	
	MANHOLE	
	IDENT. OF NEW OR MOD. DRAINAGE STRUCT.	
	STORM SEWER	
	SANITARY SEWER	
	SITE BENCHMARK	
	FOUND PIPE/PIN	
	FOUND CUT ASSOSS	
	FOUND MONUMENT AS NOTED	
	SWALE	
	ROCK	
	WATER LINE	
	GAS LINE	
	UNDERGROUND ELECTRIC	
	OVERHEAD ELECTRIC	
	TELEPHONE	
	PROPERTY LINE	
	RIGHT OF WAY	
	CONCRETE PAVEMENT	
	CONCRETE CURB	
	EASEMENT	
	MAJOR CONTOUR	
	MINOR CONTOUR	
	CONSTRUCTION LIMITS	

- H&S GENERAL NOTES:**
- BOUNDARY AND TOPOGRAPHIC PERFORMED BY HORNER & SHIFRIN, 401 S. 18TH ST., ST. LOUIS, MO 63103.
 - DO NOT SCALE DRAWINGS. USE DIMENSIONS SHOWN. ANY DISCREPANCY SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
 - THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO ACCOMPLISH THIS WORK. THE COST OF THESE PERMITS SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
 - SITE DIMENSIONS ARE TO FACE OF CURB, PROPERTY LINE OR FACE OF BUILDING UNLESS OTHERWISE NOTED. ALL DIMENSIONS AND RADII TO OR FROM CURB LINES ARE TO FACE OF CURB.
 - DO NOT DISTURB ANY UTILITIES UNLESS NOTED OTHERWISE.
 - USE OF EXPLOSIVES AND BURNING ON-SITE WILL NOT BE PERMITTED.
 - CONSTRUCTION SIGNS, LIGHTS, AND BARRICADES SHALL BE INSTALLED AT LOCATIONS NECESSARY TO MAINTAIN A SAFE WORK SITE CONDITION AS DIRECTED/APPROVED BY THE CITY OF O'FALLON, AND IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), LATEST EDITION.
 - ALL CONSTRUCTION ACTIVITIES TO COMPLY WITH APPLICABLE OSHA REGULATIONS.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF O'FALLON STANDARDS.
 - ALL GROUND SURFACES DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.
 - FOR CONSTRUCTION STAKING PURPOSES, THE CONTRACTOR SHALL BE PROVIDED WITH A COPY OF THE ELECTRONIC DRAWINGS FOR THE SITE PLAN AND GRADING UPON REQUEST.
 - CONTRACTOR SHALL CONTROL DUST BY SPRINKLING OF WATER OR ANY OTHER NECESSARY MEANS APPROVED BY THE CONSTRUCTION MANAGER.
 - ALL INSTALLATIONS AND CONSTRUCTION SHALL CONFORM TO THE APPROVED ENGINEERING DRAWINGS. HOWEVER, IF THE DEVELOPER CHOOSES TO MAKE MINOR MODIFICATIONS IN DESIGN AND/OR SPECIFICATIONS DURING CONSTRUCTION, HE/SHE SHALL MAKE SUCH CHANGES AT HIS/HER OWN RISK, WITHOUT ANY ASSURANCE THAT THE CITY ENGINEER WILL APPROVE THE COMPLETED INSTALLATION OR CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO NOTIFY THE CITY OF ANY CHANGES FROM THE APPROVED DRAWINGS. THE DEVELOPER MAY BE REQUIRED TO CORRECT THE INSTALLED IMPROVEMENTS SO AS TO CONFORM TO THE APPROVED ENGINEERING DRAWINGS. THE DEVELOPER MAY REQUEST A LETTER FROM THE CONSTRUCTION INSPECTION DIVISION REGARDING ANY FIELD CHANGES APPROVED BY THE CITY INSPECTORS.
 - CONTRACTOR SHALL PROVIDE SUFFICIENT TEMPORARY TOILET FACILITIES TO SERVE THE NUMBER OF WORKERS ON THE SITE.
 - SURVEYING AND SUBMITTING AS-BUILTS TO THE CITY OF O'FALLON OR UTILITY COMPANIES PER THEIR REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN TO THE CITY FOR APPROVAL PRIOR TO CONSTRUCTION.
 - CONSTRUCTION WORK SHALL ONLY BE ALLOWED DURING THE FOLLOWING HOURS:

OCTOBER 1 - MAY 31	7:00 A.M. TO 7:00 P.M.	MONDAY - SUNDAY
JUNE 1 - SEPTEMBER 30	6:00 A.M. TO 8:00 P.M.	MONDAY - FRIDAY
	7:00 A.M. TO 8:00 P.M.	SATURDAY AND SUNDAY
- CONSTRUCTION WORK DONE OUTSIDE THESE HOURS REQUIRES PRIOR WRITTEN APPROVAL FROM THE CITY ADMINISTRATOR OR CITY ENGINEER.

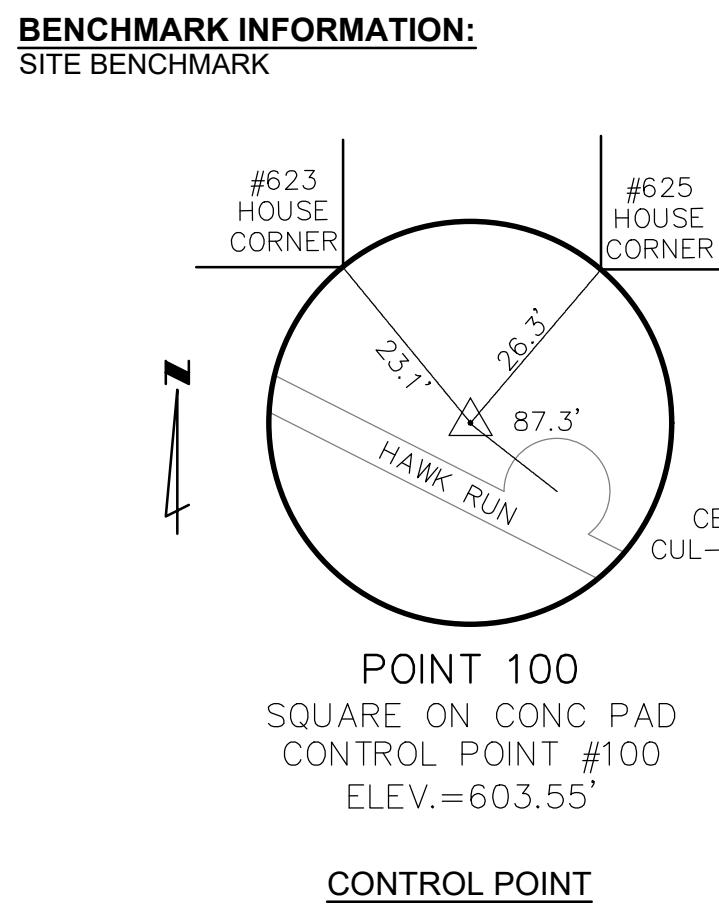
- H&S GRADING, SEDIMENT & EROSION CONTROL NOTES:**
- SEDIMENT AND EROSION CONTROL SHALL NOT BE LIMITED TO THE MEASURES SHOWN ON THE PLANS. THE CONTRACTOR, WITH THE APPROVAL OF THE CITY INSPECTOR, SHALL UTILIZE BEST MANAGEMENT PRACTICES TO PREVENT SEDIMENT FROM ENTERING ADJACENT PROPERTIES, ROADWAYS, STORM SEWERS AND DRAINAGEWAYS.
 - ALL TRUCKING OPERATIONS SHALL FOLLOW THE APPROVED TRUCKING HAUL ROUTE. CONCRETE TRUCKS SHALL HAVE PROPER WASHOUTS, AS APPROVED BY THE CITY. COUNTY AND STATE ROADS SHALL BE CLEANED AND KEPT CLEAR OF MUD, SEDIMENT, AND ANY OTHER DEBRIS AT ALL TIMES THROUGHOUT CONSTRUCTION.
 - ALL ON-SITE TRASH, LITTER, DISCARDED BUILDING MATERIALS, OTHER CONSTRUCTION SITE WASTES AND DEBRIS, EITHER EXISTING OR FROM CONSTRUCTION, MUST BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE.
 - CONTRACTOR SHALL PROVIDE THE CITY INSPECTOR INFORMATION CONCERNING STORAGE AND HANDLING OF ALL HAZARDOUS AND TOXIC SUBSTANCES BROUGHT ONTO THE SITE. THE CONTRACTOR WILL ADHERE TO APPLICABLE FEDERAL AND STATE REGULATIONS CONCERNING STORAGE AND DISPENSERS, SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANS FOR CLEAN-UP.
 - SOFT SOILS IN THE BOTTOM AND BANKS OF ANY EXISTING OR FORMER POND SITES OR TRIBUTARIES OR ANY SEDIMENT BASINS, TRAPS, OR OTHER ESC MEASURES SHOULD BE REMOVED, SPREAD OUT AND PERMITTED TO DRY SUFFICIENT TO BE USED AS FILL. NONE OF THIS MATERIAL SHOULD BE PLACED IN PROPOSED PUBLIC RIGHT-OF-WAY LOCATIONS OR ON ANY STORM SEWER LOCATION. ANY OTHER WET SOILS THAT ARE OUTSIDE THE OPTIMUM MOISTURE RANGE TO OBTAIN THE PROPER COMPACTION SHALL BE AIR DRIED SUFFICIENTLY BEFORE USE AS FILL.
 - ALL EXCAVATIONS, GRADING, OR FILLING SHALL HAVE A FINISHED GRADE NOT TO EXCEED A 3:1 SLOPE (33%).
 - TEMPORARY SILTATION CONTROL MEASURES (STRUCTURAL) SHALL BE MAINTAINED UNTIL VEGETATIVE COVER IS ESTABLISHED AT A DENSITY SUFFICIENT TO PROVIDE EROSION CONTROL ON THE SITE.
 - CONTRACTOR SHALL PROVIDE DUST CONTROL, AS DETERMINED BY THE CITY OF O'FALLON.
 - UPON COMPLETION OF STORM SEWERS, SILTATION CONTROL SHALL BE PROVIDED AROUND ALL OPEN SEWER INLETS AND SHALL REMAIN UNTIL THE DISTURBED DRAINAGE AREAS HAVE BEEN PROPERLY STABILIZED.
 - WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE RE-ESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION.

- H&S GRADING NOTES:**
- NO GRADING OR EXCAVATION ACTIVITIES SHALL BE PERFORMED ON THE SITE UNTIL ALL NECESSARY PERMITS HAVE BEEN SECURED AND EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED ON AND ADJACENT TO THE PROJECT SITE.
 - EROSION AND SEDIMENTATION CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MAY BE REQUIRED AS DIRECTED BY THE CITY ENGINEER OR HIS/HER DESIGNATED REPRESENTATIVE.
 - DAMAGE TO STREETS AND PROPERTIES DUE TO SOIL EROSION OR SILTATION SHALL BE PREVENTED BY ERECTING SILT FENCE BARRIERS, TEMPORARY BASINS OR BY UTILIZING SIMILAR DEVICES TO EFFECT SOIL STABILIZATION. SEE IMPROVEMENT PLAN. THE CONTRACTOR SHALL INSPECT AND MAKE ALL NECESSARY REPAIRS TO EROSION CONTROL MEASURES FOLLOWING PERIODS OF PRECIPITATION, AND / OR AS DIRECTED BY THE CITY OF O'FALLON. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR IF SO DIRECTED.
 - WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED, VEGETATION IN SUFFICIENT DENSITY TO PROVIDE EFFECTIVE EROSION CONTROL MUST BE RE-ESTABLISHED WITHIN 30 DAYS.
 - ALL TRENCHES BENEATH OR ADJACENT TO NEW PAVEMENT OR SIDEWALKS SHALL BE BACKFILLED TO SUBGRADE ELEVATION WITH COMPACTED 3/4" MINUS CRUSHED LIMESTONE. COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST.
 - ELEVATIONS AND CONTOURS SHOWN ARE TO TOP OF FINISHED GROUND OR PAVED SURFACE, UNLESS OTHERWISE NOTED.
 - CARE SHALL BE EXERCISED IN COMPACTION OF BACKFILL MATERIALS OVER THE TOP OF STRUCTURES OR PIPES IN ORDER TO PREVENT DAMAGE TO THE WATERPROOFING MEMBRANES, JOINTS, SEALS AND/OR THE PIPES AND STRUCTURES THEMSELVES.
 - CONTRACTOR SHALL MINIMIZE THE TRACKING OF MUD/DIRT AND DERBIES ONTO THE ROADWAY AND SHALL CLEAN THE ROADWAY OF MUD/DIRT AND DERBIES AT THE END OF EACH WORKING DAY.
 - ALL FILLED PLACES UNDER PROPOSED STORM SEWERS AND/OR PAVED AREAS SHALL BE AT A MINIMUM COMPACTED TO 90% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED COMPACTION TEST AASHTO T-180 OR AS DIRECTED BY THE SOILS ENGINEER.
 - ALL FILL PLACED IN PROPOSED ROADS SHALL AT A MINIMUM BE COMPACTED FROM THE BOTTOM OF THE FILL UP TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD COMPACTION TEST AASHTO T-99 OR AS DIRECTED BY THE SOILS ENGINEER. ALL TESTS SHALL BE VERIFIED BY THE SOILS ENGINEER CONCURRENT WITH GRADING AND BACKFILLING OPERATIONS.
 - ALL LOW PLACES, WHETHER ON-SITE OR OFF-SITE SHOULD BE GRADED TO PROVIDE POSITIVE DRAINAGE. CONTRACTOR TO PROVIDE COPIES OF TEMPORARY EASEMENT FOR WORK ON ADJACENT PROPERTIES AS REQUIRED.
 - ALL MUD AND DEBRIS FROM THE CONSTRUCTION SITE SHALL BE KEPT OFF CITY MAINTAINED STREETS.
 - SOD SHALL BE USED IN SWALES UNLESS VELOCITIES ARE EXCESSIVE (GREATER THAN 5FPS OR WHERE VELOCITIES ARE LESS THAN 2 FPS CAUSING DEPOSITION OF SOIL PARTICLES) THEN CONCRETE SWALES MAY BE USED. SOD PLACED ON SLOPES STEEPER THAN 10% SHOULD BE STAKED.
 - CONTRACTOR TO PROVIDE ALL AS-BUILTS REQUIRED BY THE CITY.
 - GRADING EARTHWORK QUANTITIES MUST BE VERIFIED BY CONTRACTOR AND SHOULD NOT BE ASSUMED TO BALANCE.
 - NO GRADED AREAS ARE TO REMAIN BARE FOR OVER 14 DAYS WITHOUT BEING SEEDED AND MULCHED.

- GENERAL UTILITY NOTES:**
- THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE AGENCY (AS SHOWN ON COVER SHEET) PRIOR TO THE COMMENCEMENT OF ANY WORK WHICH WILL AFFECT ANY EXISTING UTILITY.
 - ALL STORM SEWER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE METROPOLITAN ST. LOUIS SEWER DISTRICT STANDARD CONSTRUCTION SPECIFICATIONS FOR DRAINAGE FACILITIES, LATEST EDITION.
 - 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. THIS WORK SHALL BE COMPLETED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO PROTECT ALL SUCH UNDERGROUND UTILITIES DURING ALL PHASES OF WORK.
 - LOCATE EXISTING UNDERGROUND UTILITIES AND SEWERS IN THE AREAS OF WORK BEFORE STARTING OPERATIONS. WHEN UTILITIES OR SEWERS ARE TO REMAIN IN PLACE, PROVIDE ADEQUATE MEANS OF PROTECTION DURING OPERATIONS. SHOULD UNCHARTED, OR INCORRECTLY CHARTED, PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONSULT THE CONSTRUCTION MANAGER AND UTILITY OWNER IMMEDIATELY FOR DIRECTIONS. COOPERATE WITH THE SERVICES AND FACILITIES IN OPERATION. REPAIR DAMAGED UTILITIES TO THE SATISFACTION OF THE UTILITY OWNER. REMOVALS OR RELOCATIONS BY UTILITY COMPANIES ARE TO BE INITIATED AND COORDINATED BY THE CONTRACTOR.
 - WHERE SEWER, WATER LINES OR OTHER UTILITY LINES CROSS OVER OR UNDER EACH OTHER, PROVIDE CONCRETE ENCASEMENT OF THE TOP PIPE IF THE CLEARANCE IS LESS THAN 24 INCHES. ENCASEMENT SHALL EXTEND TO A MINIMUM DISTANCE OF 5 FEET ON BOTH SIDES OF THE CROSSING. WATER MAINS SHALL NOT BE INCASED IN CONCRETE. A MINIMUM OF 18 INCHES OF CLEARANCE SHALL BE MAINTAINED AROUND WATER DISTRICT UTILITIES.
 - ALL EXISTING UTILITY ACCESS COVERS SUCH AS MANHOLES, VALVE BOXES, VAULT COVERS, METER COVERS AND OTHER SURFACE APPURTENANCES SHALL BE ADJUSTED TO THE PROPER FINISH GRADE ELEVATION IN ACCORDANCE WITH THE REQUIREMENTS OF THE AFFECTED UTILITY COMPANY OR SERVICE PROVIDER.
 - DESIGN OF SHORING FOR UTILITY AND SEWER TRENCHES IS THE RESPONSIBILITY OF THE CONTRACTOR.
 - FOR SEWERS WITH A DESIGN GRADE OF LESS THAN ONE PERCENT (1%), FIELD VERIFICATION OF THE STORMSEWER GRADE WILL BE REQUIRED FOR EACH INSTALLED REACH OF SEWER. PRIOR TO ANY SURFACE RESTORATION OR INSTALLATION OF ANY SURFACE IMPROVEMENTS.
 - ALL STORM SEWER LIDS SHALL HAVE THE CITY LOGO PER CITY REQUIREMENTS.

UTILITY INFORMATION:
 THE UNDERGROUND STRUCTURES, UTILITIES AND EASEMENTS HAVE BEEN PLOTTED FROM READILY AVAILABLE RECORDS AND AVAILABLE MAPS AS WELL AS FIELD OBSERVED MARKINGS AT THE TIME OF THE FIELD VISIT. LOCATIONS ARE APPROXIMATE AND SHOULD BE VERIFIED PRIOR TO ANY CONSTRUCTION.

THE CLIENT IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. LOCATION, RELOCATION AND CONNECTION OF THE UTILITIES SHALL BE COORDINATED WITH THE UTILITY COMPANIES.



2018 STORM WATER
 IMPROVEMENT PROJECT
 WINGHAVEN / HAWK RUN DRIVE

HORNER & SHIFRIN
 101 LAURA K DRIVE, STE. 101 O'FALLON, MO 63366-3991
 636-329-6286 • FAX 636-344-5392-2910 • WWW.HORNERSHIFRIN.COM
 MISSOURI PROFESSIONAL ENGINEERING
 CERTIFICATE OF AUTHORITY #001659
 EXPIRATION DATE: DECEMBER 31, 2018

CITY OF O'FALLON
 100 N. MAIN ST.
 O'FALLON, MO 63366

LEGEND, CONTROL POINTS AND GENERAL NOTES

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 Approval Date
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