



LEGEND

EXISTING	PROPOSED
SANITARY MANHOLE	PROPOSED STORM SEWER PIPE
SANITARY SEWER LINE	LIMITS OF CONSTRUCTION
SANITARY SEWER SERVICE	CURB AND GUTTER
SEWER FORCE MAIN	DRAINAGE SLOPE AND DIRECTION
AIR RELEASE VALVE	PROPOSED SWALE/DITCH
FIRE HYDRANT	
WATER SERVICE	
WATER VALVE	
TEE	
TAP	
REDUCER	
BLOWOFF	
STUBOUT	
WATERLINE	
FIRE LINE	
WELL	
TYPE 1 CATCH BASIN	
TYPE 9 CATCH BASIN	
DROP INLET	
STORM DRAIN JUNCTION BOX	
STORM DRAIN	
MAJOR CONTOUR	
MINOR CONTOUR	
LIGHT POLE	
POWER POLE	
GUY WIRE	
ELECTRICAL TRANSFORMER	
ELECTRICAL BOX	
TELEPHONE PEDESTAL	
TRANSMISSION TOWER	
OVERHEAD ELECTRIC	
UNDERGROUND ELECTRIC	
GAS VALVE	
GAS LINE	
UNDERGROUND TELEPHONE	
SIGN	
MAIL	
TRAIL	
PROPERTY LINE	
PROPERTY BOUNDARY	
WOLFENCE	
CURB AND GUTTER	
PERMANENT EASEMENT	
TEMPORARY EASEMENT	
RIGHT OF WAY	

GENERAL GRADING & STORM DRAINAGE NOTES

- PRIOR TO INSTALLATION OF STORM OR SANITARY SEWER, WATER MAIN, OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY, AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSING AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS OR REQUIRED DEVIATIONS FROM THE PLAN PRIOR TO CONSTRUCTION. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.
- ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE THE APPROPRIATE TOPSOIL. THE AREA SHALL THEN BE SEED/SODDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY RELOCATED TREES SHALL BE MAINTAINED UNTIL SUCH POINT AS TREE IS RE-ESTABLISHED. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE 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 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- REFER TO GEOTECHNICAL REPORT FOR SPECIFIC SITE SOIL CONDITIONS AND CONSIDERATIONS.
- CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED TO ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.
- ALL HDPE PIPE IN SANDY OR HIGHLY EROSION, OR EXPANSIVE SOILS SHALL BE N-12 WT IB (OR EQUIVALENT WITH SMOOTH INTERIOR AND ANNUAL EXTERIOR CORRUGATIONS. 4" 48" SHALL MEET ASTM F2648 (OR AASHTO M252 TYPE S) REQUIREMENTS AND SHALL HAVE A MINIMUM MANNINGS "n" DESIGN VALUE OF 0.012. JOINTS SHALL BE WATERTIGHT ACCORDING TO ASTM D3212 (OR AASHTO M252, M254) REQUIREMENTS. GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F417. JOINT PERFORMANCE, FITTINGS, MATERIAL PROPERTIES AND INSTALLATION SHALL BE DONE PER THE COMPLETE ADS SPECIFICATION FOR ADS N-12 WT IB PIPE FOUND IN THE ADS, INC. DRAINAGE HANDBOOK, LATEST EDITION.
- ALL OTHER HDPE PIPE SHALL BE N-12 ST IB (OR EQUIVALENT WITH SMOOTH INTERIOR AND ANNUAL EXTERIOR CORRUGATIONS. 4" 48" SHALL MEET ASTM F2648 (OR AASHTO M252 TYPE S OR SP) REQUIREMENTS AND SHALL HAVE A MINIMUM MANNINGS "n" DESIGN VALUE OF 0.012. JOINT PERFORMANCE, FITTINGS, MATERIAL PROPERTIES AND INSTALLATION SHALL BE DONE PER THE COMPLETE ADS SPECIFICATIONS FOR ADS N-12 ST IB PIPE FOUND IN THE ADS, INC. HANDBOOK, LATEST EDITION.
- IF USING HDPE PERFORATED PIPE FOR SUBSURFACE DRAINAGE AND DETENTION/RETENTION SYSTEMS, THE PERFORMANCE SHALL MEET THE AASHTO CLASS II STANDARD PERFORATION PATTERN REQUIREMENTS.
- ALL STORM SEWER LINES 18"-54" DIAMETER ARE TO BE REINFORCED CONCRETE PIPE ACCORDING TO ASTM C-76 TYPE III UNLESS OTHERWISE INDICATED.
- CORRUGATED METAL PIPE, WHERE SPECIFICALLY SPECIFIED ON PLAN, SHALL BE TYPE II OF AASHTO M 36 GALVANIZED WITH TYPE 3 JOINTS.
- CONTRACTOR SHALL ESTABLISH GRADES OF FINISH PAVEMENT TO ENSURE PROPER (POSITIVE) DRAINAGE AND PREVENT PUDDLING OF WATER, SPECIFICALLY IN PEDESTRIAN WALKWAYS. UNPAVED AREAS OF SITE SHALL ALSO BE GRADED FOR POSITIVE DRAINAGE. CONSULT ENGINEER SHOULD THERE BE CONFLICTS WITH CRITICAL GRADES SHOWN HEREON.

N/F
BARNYARD OF COLUMBIA, LLC
DB 17808 - PG 45
TAX PARCEL # 005597-01-014

AUGUSTA ROAD - HWY 1
75' PUBLIC R/W
SPEED LIMIT: 45 MPH

OAK DRIVE
70' PUBLIC R/W
SPEED LIMIT: 35 MPH

SEE SHEET C-3.1 FOR BUILDING ROOF DRAINAGE AND CANOPY DRAINAGE

ALL CASTINGS SHALL BE COATED WITH BLACK ASPHALTIC VARNISH.

PROPOSED SPOT ELEVATIONS ARE SHOWN AT THE GUTTER LINE UNLESS OTHERWISE NOTED



SCALE: 1" = 20'



This drawing and the design shown are the property of Keck & Wood, Inc. The reproduction, copying or other use of this drawing without written consent is prohibited and any infringement will be subject to legal action.
© 2020 Keck & Wood, Inc.

Sheet No. C-3



REV	DATE	BY	CHK	APP	DESCRIPTION
REV-5	08/05/20	MM	PN	PM	DRW

Keck & Wood
COLLABORATION BY DESIGN
4825 Fisher Plaza Drive, Suite 210
North Charleston, SC 29405
(843) 278-8800
keckandwood.com

MURPHY OIL USA, INC.
200 PEACH STREET
EL DORADO, AR 71730
MURPHY OIL USA