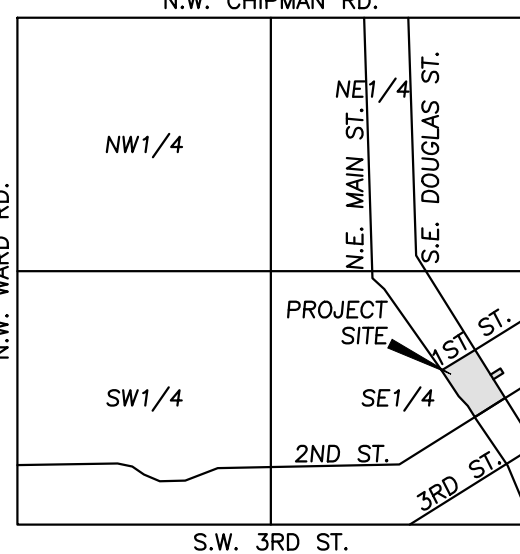
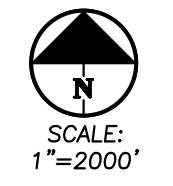


Know what's below.
Call before you dig.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.



VICINITY MAP
SEC. 6-T47N-R31W



SITE GRADING NOTES:

- CONTOURS AND ELEVATIONS: Existing and proposed contours are shown on plans at one foot (1') contour intervals, unless otherwise noted. Proposed contours and elevations shown represent approximate finish grade. Contractor shall hold made at his expense, a topographic survey by a registered land surveyor and submit it to the owner for review.
- If the contractor does not accept existing topography as shown on the plans, without exception, he shall have made at his expense, a topographic survey by a registered land surveyor and submit it to the owner for review.
- CLEARING AND GRUBBING: Prior to beginning preparation of subgrade, all areas under pavements or building shall be stripped of all topsoil, vegetation, large rock fragments (greater than 6 inches in any dimension) and any other deleterious material. The actual stripping depth should be based on visual examination during construction and the results of proof-rolling operations. The root systems of all trees (not designated to remain) shall be removed in their entirety. Stripping materials shall not be incorporated into structural fills.
- TOPSOIL STRIPPING: Prior to the start of site grading, the contractor shall strip all topsoil from areas to be graded, and stockpiled at a location on or adjacent to the site as directed by the owner. At completion of grading operations and related construction, the contractor will be responsible for redistribution of topsoil over all areas disturbed by the construction activities. Topsoil shall be placed to a minimum depth of six inches (6") and in accordance with specifications for landscaping. At that time, and prior to the installation of landscaping or irrigation, all topsoil graded areas shall be visually inspected and accepted by the owner and ILL.
- Contractor shall adjust and/or cut existing pavement as necessary to assure a smooth fit and continuous grade. Contractor shall assure positive drainage away from buildings for all natural and paved areas.
- SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be proofrolled and approved under the direction of the Geotechnical Engineer or his representative.
- PROOFROLLING: Subsequent to completion of stripping and over-excavation, all building and pavement areas to receive engineered fill shall be systematically proof-rolled using a tandem axle dump truck loaded to approximately 20,000 pounds per axle. Also, any finished subgrade areas to receive paving shall be proof-rolled within 48 hours of paving. Unsuitable soils that are detected and that cannot be recompacted should be over-excavated and replaced with controlled structural fill.
- EARTHWORK:
 - A) GEOTECHNICAL: All earthwork shall conform to the recommendations of the Geotechnical report. Said report and its recommendations are herein incorporated into the project requirements by reference. Prior to beginning construction, the contractor shall obtain a copy of and become familiar with the geotechnical report. Unless specifically noted on the plans, the recommendations in the geotechnical report are hereby incorporated into the project requirements and specifications.
 - B) SURFACE WATER: Surface water shall be intercepted and diverted during the placement of fill.
 - C) FILLS: All fills shall be considered controlled or structural fill and shall be free of vegetation, organic matter, topsoil and debris. In areas where the thickness of the engineered fill is greater than five feet, building and pavement construction shall not commence until so authorized by the on-site geotechnical engineer to allow for consolidation.
 - D) BUILDING SUBGRADE: As specified in the Geotechnical Engineering Report, the upper section of building subgrade shall consist of Low Volume Change (LVC) material defined as approved, compacted granular fill or low to moderate plasticity cohesive soil materials stabilized with Class C Flyash. Granular fill shall consist of compacted granular materials with a maximum particle size of two (2) inches or less, such as limestone screenings. Refer to geotechnical report for complete requirements.
 - E) EXISTING SLOPES: Where fill material is to be placed on existing slopes greater than 5:1 (horizontal to vertical), existing slope shall be benched providing a minimum vertical face of twelve inches (12"). The benches should be cut wide enough to accommodate the compaction equipment. Fill material shall be placed and compacted in horizontal lifts not exceeding nine inches (9") (loose lift measurement), unless otherwise approved by the Geotechnical Engineer.
 - F) COMPACTION REQUIREMENTS: The upper 9 inches of pavement subgrade areas shall be compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall be within a range of 0% below to 4% above optimum moisture content as defined by the standard proctor compaction procedure. The moisture content shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.
- All cut or fill slopes shall be 3:1 or flatter. All asphalt parking areas shall be a minimum of 1% slope but not more than 5% slope unless otherwise noted. All pavements within ADA parking areas shall not exceed 2% total slope. All grades around building shall be held down 6" from finish floor and slope away another 6" in 10 feet. Contractor shall notify engineer prior to final subgrade construction of any areas not within this slope requirement.
- TESTING AND INSPECTION: Owner's Independent Testing Laboratory (ITL) shall make tests of earthwork during construction and observe the placement of fills and other work performed on this project to verify that work has been completed in accordance with Geotechnical Engineering Report, Project Specifications and within industry standards. The ITL will be selected by the owner and the cost of testing will be the owner's responsibility.
- CLASSIFICATION: All excavation shall be considered unclassified. No separate or additional payments shall be made for rock excavation.
- PERMANENT RESTORATION: All areas disturbed by earthwork operations shall be sodded, unless shown otherwise by the landscaping plan or erosion control plan.
- UTILITIES: 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 companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.
- LAND DISTURBANCE: The contractor shall adhere to all terms & conditions as outlined in the EPA or applicable state N.P.D.E.S. permit for storm water discharge associated with construction activities. Refer to project S.W.P.P. requirements.

FLOOD NOTE:

THE SUBJECT PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0417C, AND DATED JANUARY 20, 2017.

WATERSHED NOTE:

THIS PROPERTY IS PART OF THE LITTLE BLUE RIVER WATERSHED.

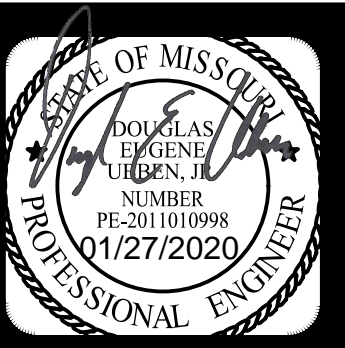
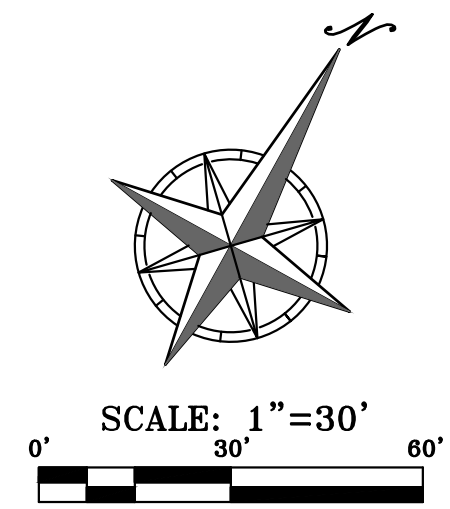
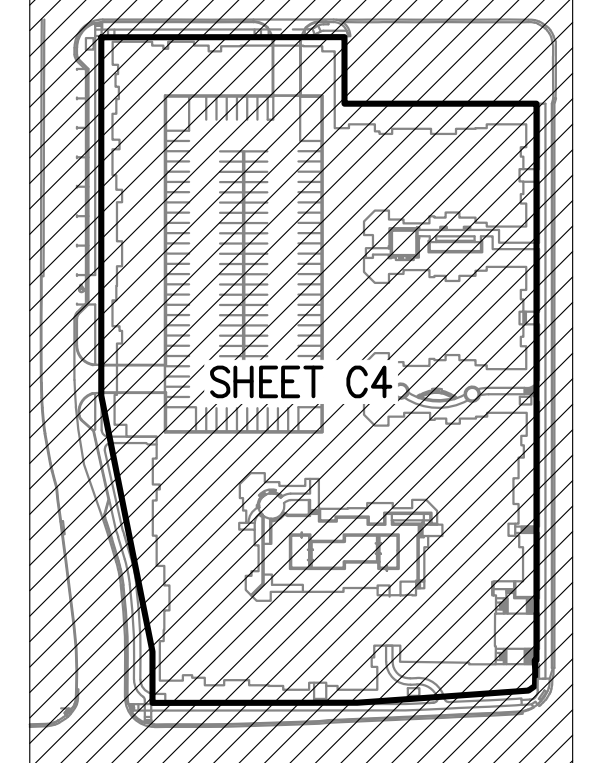
BENCHMARK:

- VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MOODT VRS.
- RAILROAD SPIKE IN POWER POLE AT NORTHWEST QUADRANT OF 1ST STREET AND DOUGLAS STREET. ELEVATION =1043.06
 - SQUARE CUT ON BACK OF CURB AT THE SOUTHWEST QUADRANT OF 2ND STREET AND DOUGLAS STREET. ELEVATION =1026.56
 - SQUARE CUT ON THE NORTHWEST CORNER OF SIGNAL POLE BASE AT SOUTHEAST QUADRANT OF 2ND STREET AND MAIN STREET. ELEVATION =1029.82
 - RAILROAD SPIKE IN POWER POLE AT NORTHEAST QUADRANT OF 1ST STREET AND MAIN STREET. ELEVATION =1049.87

LEGEND

- PL PROPERTY LINE
- LOT LINE
- R/W- RIGHT-OF-WAY
- 2' CURB & GUTTER
- 920- EXISTING CONTOURS
- 918- PROPOSED CONTOURS
- PROPOSED SPOT ELEVATION
 - LG UP OF GUTTER
 - TC TOP OF CURB
 - SW SIDEWALK
 - ME MATCH EXISTING
 - HP HIGH POINT
 - LP LOW POINT
 - P TOP OF PAVEMENT
 - TE TOP OF STRUCTURE
 - GR GROUND ELEVATION
 - BS BOTTOM OF STEPS
 - TS TOP OF STEPS
 - BW BOTTOM OF WALL
 - TW TOP OF WALL
 - FG FINISHED GRADE

KEY PLAN



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Olathe, Kansas 66061
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www.phelpsengineering.com

PLANNING
ENGINEERING
IMPLEMENTATION



GRADING PLAN
DOWNTOWN LEE'S SUMMIT APARTMENTS
114 S.E. DOUGLAS STREET
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

Project No.	Date	By	App.
171125			

No.	Date	Revisions:

SHEET
C4