#### STATE HIGHWAY COMMISSION OF KANSAS

March 1960

MEMORANDUM TO:

MR. H. O. REED, ENGINEER OF DESIGN

FROM:

MR. VIRGIL A. BURGAT, CHIEF GEOLOGIST

By Paul C. Clark, John L. Hood, Alvis H. Stallard,

and Phil Worley, Geologists

Wallace Taylor, Regional Geologist

SUBJECT:

Geological Report

Project 13-75-K 1071 (3)

Pottawatomie County Fostoria to Blaine

#### INTRODUCTION

This report presents geological information obtained by the Kansas State Highway Commission through field sutdy and is submitted for use in the design and construction of the above project with reference to the formations that occur and the engineering problems affected by the geology of the project.

The report is divided into three sections for the purpose of grouping the information and discussion of the different phases. This report is intended to be complete within itself, but is best used in connection with the Geo-Engineering Survey.

#### INDEX OF SECTIONS

Section I

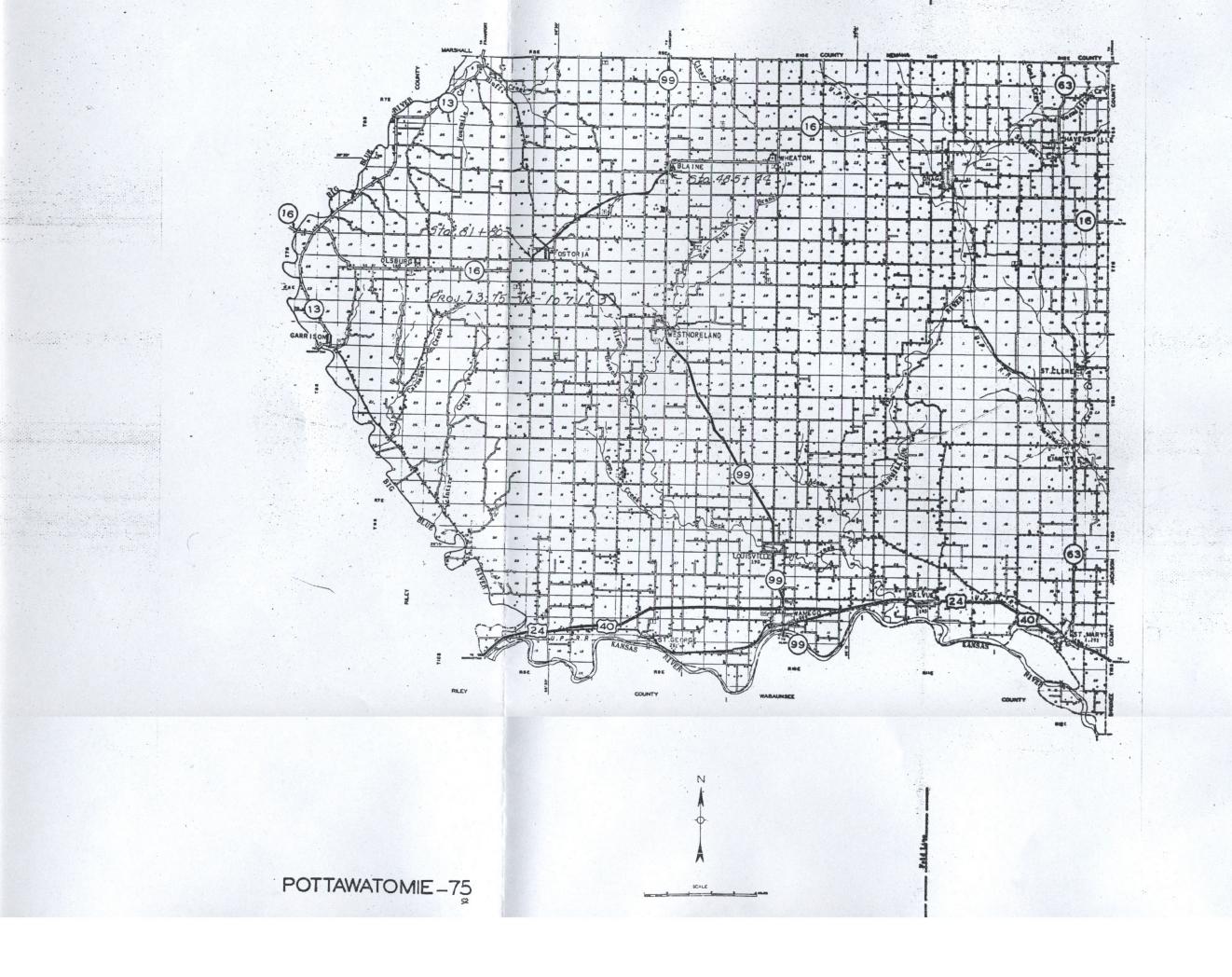
Geological Description and Formational Sequence

Section II

Geology of the Project

Section III

Geo-Engineering Aspects and Recommendations



# Quaternary System Recent Series Mantle Top Soil

1. Silty Clay, dark gray brown.

#### Glacial Drift

2. Silty clay, tan-brown to gray, contains bands of maroon and green, local deposits of chert gravel, small sand and gravel lenses, caliche zones and scattered small erratics.

Permian System
Woldcampian Series
Chase Group
Barneston Limestone
Ft. Riley Limestone Member

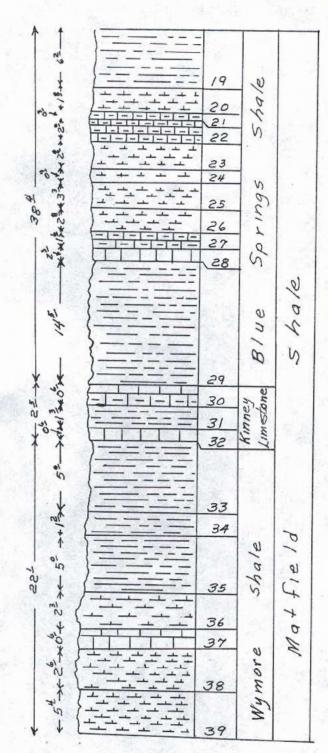
- 3. Limestone, shaly, very platy, light gray.
- 4. Limestone, blocky, dense, cellular, light gray.
- 5. Limestone, Shaly, platy, light gray.
- 6. Limestone, blocky, light gray to buff.
- 7. Limestone, blocky, very light gray, "Rim Rock".
- 8. Limestone, shaly, buff.

### Oketa Shale Member

- 9. Shale, limy, blue-gray.
- Limestone, shaly, scattered chert nodules, gray.
- 11. Shale, limy, blue-gray.

### Florence Limestone Member

- 12. Limestone, cherty, light gray.
- 13. Shale, limy, platy, light gray.
- 14. Shale, limy, platy, blue-gray.
- 15. Shale, limy, platy, blue-gray.
- 16. Limestone, light gray.
- 17. Shale, limy, platy green.
- 18. Limestone, blocky, weathers platy, light gray, weathers buff.



# Matfield Shale Blue Springs Shale Member

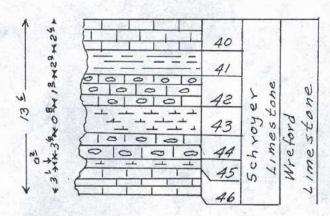
- 19. Shale, blocky, green.
- 20. Shale, Blocky, limy, maroon.
- 21. Limestone, shaly, light green.
- 22. Limestone, shaly, maroon, weathers to blocky shale
- 23. Shale, blocky, limy, maroon with a thin green band.
- 24. Shale, blocky, limy, green.
- 25. Shale, blocky, limy, marcon.
- 26. Shale, blocky, limy, green.
- 27. Limestone, blocky, shaly, light green.
- 28. Limestone, blocky, light brown.
- 29. Shale, blocky, weathers platy, dark gray.

#### Kinney Limestone Member

- 30. Limestone, blocky, light brown.
- 31. Shale, blocky, gray-green.
- 32. Limestone, blocky, light brown.

## Wymore Shale Member

- 33. Shale, platy, light olive green.
- 34. Shale, platy, somewhat clayey, buff.
- 35. Shale, blocky, dark green.
- 36. Shale, blocky, limy, maroon.
- 37. Limestone, impure, light gray.
- 38. Shale, blocky, limy, green and maroon bands.
- 39. Shale, blocky, limy, light green.



## Wreford Limestone Schroyer Limestone Member

- 40. Limestone, blocky, cellular, light gray.
- 41. Shale, platy, green.
- 42. Limestone, cherty, buff.
- 43. Shale, platy, limy, green.
- 44. Limestone, contain chert bands, buff.
- 45. Shale, platy, limy, green.
- 46. Limestone, blocky, light gray.