
**DATA REPORT
FRA-270-3060 FIRE DAMAGE
PID 124598
FRANKLIN COUNTY, OHIO**

Prepared For:

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1. INTRODUCTION

1.1. General

NEAS presents our MSE wall panel core report for the FRA-270-3060 project in Franklin County, Ohio. The intent of this project is to collect information regarding the extent of fire damage to MSE wall 12 at the intersection of I270 and SR161.

This report presents a summary of the project encountered material during coring exploration and its testing results in the lab.

The scope of work to be performed includes:

1. Four (4) wall cores.
2. Laboratory testing program including four (4) unconfined strength tests
3. Development of a summary report.

2. GEOTECHNICAL EXPLORATION

2.1. Exploration Program

The project exploration performed was conducted by NEAS Inc. on October 28, 2025, and consisted of four (4) wall cores. The proposed coring locations were determined by others as shown in Appendix A.

Project cores were drilled using a portable electric coring drill with a 4.25-inch (outer diameter) diamond tipped coring bit utilizing water as a cooling fluid. Core lengths were measured in the field after the cores were extracted, and down-hole measurements were made. Each core sample was logged and stored in airtight containers for transportation to NEAS's laboratory.

Following field documentation, the core holes were filled with quick-set concrete. Once in the laboratory, the cores were: 1) re-measured for thickness verification and photographed; 2) checked for composition, assessed condition, and checked for presence and location of rebar; 3) reviewed for individual layer identification and subsequent measurements; and 4) sampled for additional laboratory testing. A summary of the MSE wall panel cores is presented in Table 1 below.

Table 1: Core Summary

Sample ID	Diameter of Core (in)	Length of Core (in)	Rebar Encountered	Known Defects in Core
X-001-0-25	4.00	6.25	#4 rebar @ 2.0" and 2.5" depths	3.0" fracture along axis, propagating from interior. Moderately friable surface (exterior 1.0"-1.5")
X-002-0-25	4.00	6.00	#4 rebar @ 2.0" depth	Moderately friable surface (exterior 1.0"-1.5")
X-003-0-25	4.00	6.25	Not Encountered	Moderately friable surface (exterior 1.0"-1.5")
X-004-0-25	4.00	6.50	Not Encountered	Slightly friable surface (1.0")

2.2. Laboratory Testing Program

Laboratory testing on each project core included unconfined compressive strength testing, core length measurements, and review of core specimen conditions. Data from the laboratory-testing program including core photos were incorporated onto the reports contained within the Appendices. Core samples are retained at the laboratory for 2 years following report submittal, after which time they will be discarded.

2.2.1. Unconfined Compressive Strength Testing

Unconfined compressive strength testing was performed on the wall cores in accordance with ASTM procedures C42 "Standard Test Method for Obtaining and Testing Drilled Cores" and ASTM C39 "Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens". Testing was performed using a Forney F40-EX compression machine. Unconfined strength of each core was tested diametrically to the direction of application of load with respect to the as placed concrete. A summary of the unconfined compressive strength testing results is presented in Table 2 below. Laboratory test reports can be found in Appendix B.

Table 2: Summary of Unconfined Compressive Strength Testing Results

Sample ID	Length to Diameter Ratio	Maximum Load (lbs)	Correction Factor	Corrected Compressive Strength (10psi)
X-001-0-25	1.26	54,461	0.93	4,070
X-002-0-25	1.26	60,314	0.93	4,510
X-003-0-25	1.24	59,067	0.93	4,420
X-004-0-25	1.24	76,369	0.93	5,710

3. FINDINGS

The results contained herein represent NEAS's interpretation of the conditions encountered at each coring location based on our site observations, and visual review of the core samples by NEAS's geologists, and laboratory testing results. The concrete cores sample characterizations included herein, including summary test data, are based on the findings from the geotechnical explorations performed by NEAS as part of the reference project.

A Core Photo Log containing thickness/length measurements, condition ratings, and the depth and size of any rebar encountered are reported in Appendix C.

4. QUALIFICATIONS

This investigation was performed in accordance with accepted geotechnical engineering practice for the purpose of characterizing the existing MSE wall condition for the FRA-270-3060 project in Franklin County, Ohio. This report has been prepared for Carpenter Marty Transportation. and their design consultants to be used solely in evaluating the MSE wall conditions within the project limits. The assessment of general site environmental conditions or the presence of pollutants in the soil, rock and groundwater of the site was beyond the scope of this geotechnical exploration. The results of the field exploration and laboratory tests are presented in the appendices as noted. This report does not reflect any variations that may occur between the core locations or elsewhere on the site, or variations whose nature and extent may not become evident until a later stage of the project. In the event that any changes occur in the nature, design or location of the proposed work, the conclusions contained in this report should not be considered valid until they are reviewed and have been modified or verified in writing by a geotechnical engineer.

It has been a pleasure to be of service to Carpenter Marty Transportation in performing this geotechnical exploration for the FRA-270-3060 project. Please call if there are any questions, or if we can be of further service.

Respectfully Submitted,

Loren Rosenbeck

Loren Rosenbeck, PG
Engineering Geologist | Laboratory Manager

Enoch Chipukaizer

Enoch Chipukaizer
Principle | Project Manager

APPENDIX A

CORING LOCATION PLAN



APPENDIX B

LABORATORY TESTING REPORTS

Compressive Strength of Cylindrical Concrete Specimens

Project: FRA-270-3060 Fire Repair
Type of Specimens: Concrete Core
Test Procedures: ASTM C42, ASTM C39, ASTM C1542

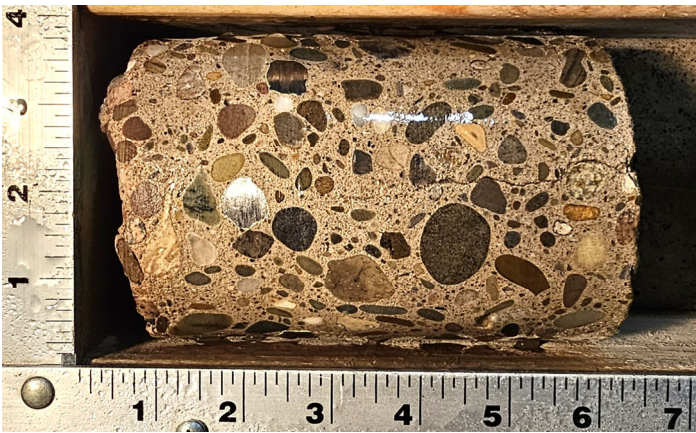
Specimens Cored By: R. Webb
Tests Performed By: L. Rosenbeck
Checked By: L. Rosenbeck

Core Identification	X-001-0-25	X-002-0-25	X-003-0-25	X-004-0-25
Date concrete placed	Unknown	Unknown	Unknown	Unknown
Date concrete cored	10/28/2025	10/28/2025	10/28/2025	10/28/2025
Date of end preparation	10/30/2025	10/30/2025	10/30/2025	10/30/2025
Date of Compressive Strength Testing	10/30/25	10/30/25	10/30/25	10/30/25
Length before cutting, (.25in)	6.25	6.00	6.25	6.50
Length after prep, (.05in)	5.00	5.00	4.95	4.95
Average Diameter, (.01in)	3.98	3.98	3.98	3.98
Length/Diameter Ratio	1.26	1.26	1.24	1.24
Area, (in ²)	12.44	12.44	12.44	12.44
Maximum Load, (lbs)	54,461	60,314	59,067	76,369
Compressive Strength, (10psi)	4380	4850	4750	6140
Correction Factor	0.93	0.93	0.93	0.93
Corrected Compressive Strength, (psi)	4070	4510	4420	5710
Break Type	5	5	5	5
Direction of application of load with respect as placed	All cores tested diametrically to as placed			
Specimen Properties				
Weight of Cylinder (lbs)	5.30	5.04	4.88	4.87
Volume of Cylinder	62.21	62.21	61.58	61.58
Density of Cylinder (lb/ft ³)	147	140	137	137
Nominal Aggregate Size (in)	1.00	1.00	1.00	1.00
Notes				
Location, shape, size of embedded metal:	#4 @ 2.0, 2.5	#4 @2.0	N/E	N/E
Any Defects in core:	V. Fracture	None	None	None
Deviation from standard:	None	None	None	None

APPENDIX C

CORE PHOTO LOG

Core Photo: X-001-0-25



Core Information				
Core Diameter (in):			4.00	
Core Total Length (in):			6.25	
Layers	Core Composition & Thickness (in)			Remarks/ Condition
	Asphalt	Concrete	Brick	
1		6.25		Fractured
2				
3				
4				
Rebar Encountered	#4 rebar @ 2.0" and 2.5" depth			



Pavement & Core Photo Log

Roadway Project

FRA-270-3060 FIRE REPAIR



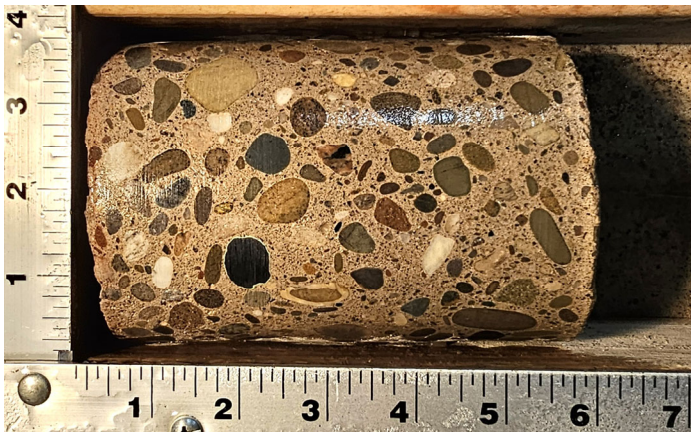
PID#: 124598

Date: 10/28/2025

Taken By: LR

Scale: N/A

Core Photo: X-002-0-25



Core Information				
Core Diameter (in):			4.00	
Core Total Length (in):			6	
Layers	Core Composition & Thickness (in)			Remarks/ Condition
	Asphalt	Concrete	Brick	
1		6		Good
2				
3				
4				
Rebar Encountered	#4 rebar @ 2.0" depth			



Pavement & Core Photo Log

Roadway Project

FRA-270-3060 FIRE REPAIR



PID#: 124598

Date: 10/28/2025

Taken By: LR

Scale: N/A

Core Photo: X-003-0-25



Core Information				
Core Diameter (in):			4.00	
Core Total Length (in):			6.25	
Layers	Core Composition & Thickness (in)			Remarks/ Condition
	Asphalt	Concrete	Brick	
1		6.25		Good
2				
3				
4				
Rebar Encountered	N/E			



Pavement & Core Photo Log

Roadway Project

FRA-270-3060 FIRE REPAIR



PID#: 124598

Date: 10/28/2025

Taken By: LR

Scale: N/A

Core Photo: X-004-0-25



Core Information				
Core Diameter (in):			4.00	
Core Total Length (in):			6.5	
Layers	Core Composition & Thickness (in)			Remarks/ Condition
	Asphalt	Concrete	Brick	
1		6.5		Good
2				
3				
4				
Rebar Encountered	N/E			



Pavement & Core Photo Log

Roadway Project

FRA-270-3060 FIRE REPAIR



PID#: 124598

Date: 10/28/2025

Taken By: LR

Scale: N/A