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File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Bridge 4
Location: Wichita, Kansas
Contractor: Martin K. Eby, Contractor
Architect: Black & Veatch
Owner: City of Wichita
Date Submitted at Lab: 9-12-55- Late for 28 day break

Lab. No. 809194 (Refer to This Number)

Date September 15 1955
Report No. EOC # 26
Specimens Made by: Contractor
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P.S.I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 6308 (12-d)	8-12	3 1/2	1385	1755	611	26.2	4252	DS-AF	31	0	Unknown

Required 28 day strength: 3500

READY-MIXED CONCRETE Furnished by Walt Keeler Company, Inc.

TYPE FRACTURE: RC–regular cone; VS–vertical shear; DS–diagonal shear; HS–horizontal rupture; MB–mortar bond failure; AF–aggregate failure.

Brand of Cement Monarch
Admixture Amber Air
Fine Aggregate Keeler
Coarse Aggregate Moline
Mixed Aggregate None

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FLEXURE AND COMPRESSION TEST REPORT

Project _____ Lab. No. _____ (Refer to This Number)

Date _____

Report No. _____

Specifications

Made by: _____

Structure _____

Location: _____

Contractor _____

Architect _____

Owner: _____

Date Submitted at Lab: _____

Specimen Number	Date Made	Slump Inches	Mixture				Compressive Strength P.S.I.	Type Fracture	Age In Days	Date Tested and Location of Test	Remarks
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					

TYPE FRACTURE: RC–regular cone; VS–vertical shear; DS–diagonal shear; HS–horizontal shear; MO–mortar bond failure.

Brand of Cement _____

Admixture _____

Fine Aggregate _____

Coarse Aggregate _____

Mixed Aggregate _____

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File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Bridge 4
Lab. No. 809138 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Construction Co.
Architect: Black & Veatch
Owner: City of Wichita
Date Submitted at Lab: 8-17-55

Date: September 12, 1955
Report No. EOC #25
Specimens
Made by: Contractor
Structure: Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P.S.I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No.5768 (#12-b)	8-12	3-1/2	1385	1755	611	26.2	4394	DS-AF	28	23	Pier #9 @ 3:30 P.M.

Required 28 day strength: 3500 P.S.I.

READY-MIXED CONCRETE
Furnished by
Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement: Monarch
Admixture: Amber Air
Fine Aggregate: Keeler
Coarse Aggregate: Moline
Mixed Aggregate: None

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FLEXURE AND COMPRESSION TEST REPORT

Project: Overland Drive Lab. No. 29028

(Refer to This Number)

Mix No. 11

Location: 71st N. Date: September 15, 1954

Contractor: Wm. Keller Ready Mix Concrete Co. Report No. 45

Architect: Weber Specifications

Owner: Wm. Keller Co. Made by Inspector

Date Submitted at Lab: 9-15-54 Structure Weber

Specimen Number	Date Made	Slump Inches	Mixture: Fine Aggregate	Mixture: Coarse Aggregate	Mixture: Cement	Mixture: Water	Compressive Strength P.S.I.	Type Fracture	Age in Days	Days Lab. Cured Standard Conditions	Remarks and Location of Pour
W-1953 (A-1-2)	9-12	7-1/2	1955	1755	611	264	4355	Shear	28	25	Pier #2 @ 21'6"

READY-MIXED CONCRETE
Furnished by
Wm. Keller Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal shear; SMP—mortar bond failure

Brand of Cement

Admixture

Type Aggregate

Coarse Aggregate

Mixed Aggregate

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File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossings - Bridge 4
Lab. No. 902336 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Construction Co.
Architect: Black & Veatch
Owner: City of Wichita
Date Submitted at Lab: 8-22-55

Date: August 24, 1955
Report No. ECC #24
Specimens Made by: Contractor
Structure: Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE: Fine Aggregate	MIXTURE: Coarse Aggregate	MIXTURE: Cement	MIXTURE: Total Water	Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
No. 5904 (12C)	8-12	3-1/2	1385	1755	611	26.2	3757	RC-AF	10	0	Pier 9 - Bridge 4
			Required 28 day strength:				3500 P.S.I.				

READY-MIXED CONCRETE Furnished by Walt Kepler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement: Monarch
Admixture: Amber Air
Fine Aggregate: Keeler
Coarse Aggregate: Moline
Mixed Aggregate: None

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READY-MIXED CONCRETE
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FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossings - Water Transmission Lines- Contr. #3 Lab. No. 808274 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch, Cons. Engrs.
Owner: City of Wichita
Date Submitted at Lab: 8-17-55

Date August 22, 1955
Report No. BCC #23
Specimens
Made by: Contractor
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 5767 (12-A)	8-12	3-1/2	1385	1755	611	26.2	3581	DS-MB	7	2	Pier #9 @ 3:30 P.M.
			Required 28 day strength:				3500 P.S.I.				
			Class of Concrete "B"								

READY-MIXED CONCRETE Furnished by Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch
Admixture Amber Air
Fine Aggregate Keeler
Coarse Aggregate Moline
Mixed Aggregate None

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FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossings Water Transmission Lines Contr. #5
Lab. No. 807071 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch, Cons. Engrs.
Owner: City of Wichita
Date Submitted at Lab: 7-5-55 (Late for 7 day break)

Date July 8, 1955
Report No. EOC #21
Specimens
Made by: Contractor
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 5140 (10D)	5-57	3"	1385	1755	611	26.2	5700	RC-AF	8	0	North Abutment Slab @ ?
No. 5141 (11D)	6-8	3"	1385	1755	611	26.2	4623	RC-AF	28	1	Pier #1 @ 5:00 P.M

Required 28 day strength: 3500 P.S.I.
Class of Concrete "B"

READY-MIXED CONCRETE
Furnished by
Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement: Monarch
Admixture: Amber Air
Fine Aggregate: Keeler
Coarse Aggregate: Moline Limestone 1"
Mixed Aggregate: None

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FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Water Transmission Lines
Lab. No. 806181 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch, Cons. Engrs.
Owner: - - -
Date Submitted at Lab: 5-23-55

Date June 20, 1955
Report No. 300 #19
Specimens
Made by: Contractor
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No.4326 (9-b)	5-20	3"	1385	1755	611	26.2	3670	DS-MB	28	25	Expansion Pier Bridge 4 ½
No.4611 (1)	6-3	-	1385	1755	611	26.2	3722	RC-AF	8	0	Water Line - Reservior
No.4664 (11-a)	6-9	-	1385	1755	611	26.2	3195	RC-AF	7	2	Br. #3 Pier 1
No.4665 (11-b)	6-9	-	1385	1755	611	26.2	2878	RC-MB	7	2	Br. #3 Pier 1
No.4666 (11-c)	6-9	-	1385	1755	611	26.2	3283	DS-MB	7	2	Br. #3 Pier 1
No.4667 (9-d)	5-20	-	1385	1755	611	26.2	4800	RC-MB	28	3	Br. #4 Pier 6
			Required 28 day strength Class of Concrete "B"				3500 P.S.I.				READY-MIXED CONCRETE Furnished by Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch
Admixture Amber Air
Fine Aggregate Keeler
Coarse Aggregate Moline Limestone 1"
Mixed Aggregate None

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SPECIMEN NUMBER	CAST MADE	CURING METHOD	MIX TYPE: Fine Aggregate	MIX TYPE: Coarse Aggregate	MIX TYPE: Cement	MIX TYPE: Total Water	Compressive Strength P.S.I.	Type Specimen	Age in Days	Date Lab Cured Specimens Received	Remarks and Location of Pour

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FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Water Transmission Lines
Lab. No. 806148 (Refer to This Number)
Location: Wichita to Halstead
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch
Owner: - - -
Date Submitted at Lab: 6-14-55

Date June 15, 1955
Report No. FOC #18
Specimens
Made by: Contractor
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 4668 (7-D)	5-5	-	1385	1755	611	26.2	2582	RC-MB	40	0	South Abut. Walls Br. 4
No. 4669 (8-D)	5-16	-	1385	1755	611	26.2	5100	RC-AF	29	0	Br. 4 - Pier 6 Ftg.

Required 28 day strength: 3500 P.S.I.
Class of Concrete "B"

READY-MIXED CONCRETE Furnished by Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement: Monarch
Admixture: Amber Air
Fine Aggregate: Keeler
Coarse Aggregate: Moline Limestone 1"
Mixed Aggregate: None

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FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 556113 (Refer to This Number)

Location: Wichita, Kansas

Contractor: Martin K. Eby Constr. Co.

Architect: Black & Veatch, Cons. Engrs.

Owner: " " "

Date Submitted at Lab: 5-18-55

Date June 13, 1955

Report No. 50-C-#17

Specimens Made by: Contractor

Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 4750 (#8-b)	5-16	2"	1385	1755	611	26.2	4659	RC-AF	28	26	Pier #6 Footings of Bridge #4

Required 28 day strength: 3500 P.S.I.

Class of Concrete "B"

READY-MIXED CONCRETE Furnished by Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch

Admixture Amber Air

Fine Aggregate Keeler

Coarse Aggregate Molline Limestone 1"

Mixed Aggregate None

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R. L. Phillips
KANSAS
REGISTERED PROFESSIONAL ENGINEER

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File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing Lab. No. 805076-B (Refer to This Number)

Location: Wichita, Kansas

Contractor: Martin K. Eby Constr. Co.

Architect: Black & Veatch, Cons. Engrs.

Owner:

Date Submitted at Lab: 5-6-55

Date June 3, 1955

Report No. EOC #16

Specimens Made by: Contractor

Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
*No. 4123 (#4d)	4-8	3"	1385	1755	611	26.2	3846	DS-MB	28	0	South Abutment Walls of Bridge #2
	* Our records do not indicate that you have received a copy of this specimen report.										
No. 4125 (#7b)	5-5	3"	1385	1755	611	26.2	2808	DS-MB	28	27	South Abutment Walls of Bridge #4
No. 4419 (#10a)	5-27	3"	1385	1755	611	26.2	3775	RC-MB	7	3	North Abutment Wall Slab
			Class of Concrete "B"								
			Required 28 day strength:				3500 P.S.I.				

READY-MIXED CONCRETE Furnished by Watt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch

Admixture Amber Air

Fine Aggregate Keeler

Coarse Aggregate Moline Limestone 1"

Mixed Aggregate None

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FLEXURE AND COMPRESSION TEST REPORT

Project: _____ Lab. No. _____

(Refer to This Number)

Location: _____

Contractor: _____

Architect: _____

Owner: _____

Date Submitted at Lab: _____

Date: _____

Report No. _____

Specimens

Made by: _____

Structure: _____

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE			Compressive Strength P.S.I.	TYPE Products	Age In Days	Days Lab. Cured Standard Conditions	Remarks and Location of Piers
			Type Aggregate	Coarse Aggregate	Cement	Sand Water				

(TYPE FRACTURES: RC—regular cone; VS—vertical slicing; DS—diagonal slicing; HS—horizontal slicing; MB—mortar bond failing)

Brand of Cement _____

Aggregates _____

Sand Aggregate _____

Coarse Aggregate _____

Mixed Aggregate _____

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File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossings Lab. No. 805282 (Refer to This Number)

Location: Bentley, Kansas

Contractor: Martin K. Hoy Constr. Co.

Architect: Black & Veatch, Cons. Engrs.

Owner: [illegible]

Date Submitted at Lab: 5-28-55

Date May 31, 1955

Report No. 300 #15

Specimens Made by: Contractor

Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE: Fine Aggregate	MIXTURE: Coarse Aggregate	MIXTURE: Cement	MIXTURE: Total Water	Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
No. 4413 (9-C)	5-20	-	1385	1755	611	26.2	2388	RC-MB	8	C	Expansion Pier Bridge #4
No. 4418 (6-D)	4-28	-	1385	1755	611	26.2	1779	RC-MB	30	C	Abut. Slab. Downstairs @ 4:00 PM
			Required 28 day strength:				3500 P.S.I.				

READY-MIXED CONCRETE
Furnished by
Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement: Monarch

Admixture: Amber Air

Fine Aggregate: Keeler

Coarse Aggregate: Moline Limestone 1"

Mixed Aggregate: None

WICHITA CHEMICAL & TESTING LABORATORIES

By: R. L. Phillips

JAMES E. MYERS LICENSED PROFESSIONAL ENGINEER 1182

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1128 N. MOSLEY AVE. PHONE MOhawk 4-3042
WICHITA 4, KANSAS

FLEXURE AND COMPRESSION TEST REPORT

Project: Lab. No.

(Tracer to Tile Plumber)

Location: Date

Contractor: Report No.

Architect: Sheathing

Owner: Made By

Date Submitted at Lab.: Structure

CYLINDER NUMBER	DATE MADE	SLUMP (INCHES)	MIX STUDY: Pint Aggregate	Cement Asbestos	Cement	Total Water	Compressive Strength P.S.I.	Type Fracture	Age In Days	Days Stored Standard Condition	Days Stored Job Condition	Remarks and Location of Test

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ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HOBART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing 9th & Big River
Lab. No. 805251 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch
Owner:
Date Submitted at Lab: 4-29-55

Date May 27, 1955
Report No. ECC #14
Specimens
Made by: Barley
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water Gal.					
No.4051 (6-B)	4-28	2-1/2	1385	1755	611	26.2	3002	RC-MB	28	27	Abut. Slab - Downstairs @ 4:00 P.M.
No.4325 (9-A)	5-20	3"	1385	1755	611	26.2	3564	RC-MB	7	4	Expansion Pier Bridge 4 -

Required 28 day strength: 3500 P.S.I.
Class of Concrete "B"

READY-MIXED CONCRETE
Furnished by
Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch
Admixture Amber Air
Fine Aggregate Keeler
Coarse Aggregate Moline Limestone #1
Mixed Aggregate None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

JAMES E. MARTIN LICENSED PROFESSIONAL ENGINEER KANSAS

Form 601

Wichita Chemical and Testing Laboratories

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RESEARCH ON MANUFACTURING PROBLEMS

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WICHITA 4, KANSAS

FLEXURE AND COMPRESSION TEST REPORT

Project: Lab. No.

Location: (Refer to This Number)

Contractor: Date

Architect: Report No.

Owner: Specimens

Date Submitted at Lab: Made by:

Structure:

SPECIMEN NUMBER	DATE M-D-Y	VOLUME INCHES	WIDTH IN Line Approx.	Coarse Aggregate	Cement	Total Water	Compressive Strength lb. p. i.	Type Fracture	Age in Days	Days Lab. Cured, Moisture Conditions	Remarks and Location of Pour

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RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HOBART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing 9th & Big River
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch
Owner: - - -
Date Submitted at Lab: 5-18-55

Lab. No. 805221 (Refer to This Number)

Date May 25, 1955
Report No. KCC #13
Specimens
Made by: Billy Dopps
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water Gal.					
No.4249 (8E)	5-16	2"	1385	1755	611	26.2	4748	RC-AF	7	5	Pier #6 Footing of Bridge #4
No.4310 (8C)	5-16	3"	1385	1755	611	26.2	4058	DS-AF	7	0	Footing for Pier #6 Bridge #4

Required 28 day strength: 3500 P.S.I.

Class of Concrete "B"

READY-MIXED CONCRETE Furnished by Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch
Admixture Amber Air
Fine Aggregate Keeler
Coarse Aggregate Moline Limestone #1
Mixed Aggregate None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

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ANALYTICAL CHEMISTS · BACTERIOLOGISTS · TESTING ENGINEERS

RESEARCH ON MANUFACTURING PROBLEMS

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WICHITA 4, KANSAS

File:

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FLEXURE AND COMPRESSION TEST REPORT

Project: .... Lab. No. .... (Refer to This Number)

Date ....

Report No. ....

Specimens ....

Made by ....

Structure ....

Location: ....

Contractor: ....

Architect: ....

Owner: ....

Date Submitted at Lab: ....

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE: Fine Aggregate	Coarse Aggregate	Cement	Total Water	Compressive Strength P.S.I.	Type Fracture	Age in Days	Days Lab. Cured Standard Conditions	Remarks and Location of Pour
[illegible]											[illegible]
[illegible]											[illegible]

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horiz. shear

Brand of Cement ....

Admixture ....

Fine Aggregate ....

Coarse Aggregate ....

Mixed Aggregate ....

WICHITA CHEMICAL & TESTING LABORATORIES

By ....

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1428 N. MOSLEY AVE. PHONE HOBART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing — 9th & Big River
Lab. No. 805173 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch
Owner: - - -
Date Submitted at Lab: 4-22-55

Date May 19, 1955
Report No. EOC #11
Specimens
Made by: Burley
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE: Fine Aggregate	MIXTURE: Coarse Aggregate	MIXTURE: Cement	MIXTURE: Total Water	Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
						Gal.					
No. 3924	4-20	4"	1385	1755	611	26.2	3687	RC-MB	28	26	Abutment-Upstream

Required 28 day strength: 3500 P.S.I.

READY-MIXED CONCRETE Furnished by Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement: Monarch
Admixture: Amber Air
Fine Aggregate: Keeler
Coarse Aggregate: Moline Limestone 1"
Mixed Aggregate: None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

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File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing 9th & Big River
Lab. No. 805191 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch
Owner: - - -
Date Submitted at Lab: 5-16-55

Date May 19, 1955
Report No. ECC #12
Specimens
Made by: Burley Kinney
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
						Gal.					
No. 4201 (7c)	5-5	3"	1385	1755	611	26.2	1761	RC-MB	14	3	South Abutment Wall of Bridge #4
			Required 28 day strength:				3500 P.S.I.				

READY-MIXED CONCRETE
Furnished by
Walt Keeter Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch
Admixture Amber Air
Fine Aggregate Keeler
Coarse Aggregate Moline Limestone #1
Mixed Aggregate None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

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Specimen Identification	Date Received	Date Tested	Size and Description	Type Specimen	Compressive Strength P.S.I.	Moisture Content	Density Lbs. per Cu. Ft.	Absorption	Gross Area Sq. In.	Net Area Sq. In.	Ultimate Load Lbs.	Remarks
(2a)												

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File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing 9th & Big River
Lab. No. 805114 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch
Owner: - - -
Date Submitted at Lab: 5-6-55

Date May 16, 1955
Report No. KCC #10
Specimens
Made by: Mr. Kinney
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No.4124 (7a)	5-5-	3"	1385	1755	611	26.2	1832	DS-MB	7	6	South Abutment Walls of Bridge #4 (P.M.)

Required 28 day strength: 3500 P.S.I.

READY-MIXED CONCRETE
Furnished by
Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement: Monarch
Admixture: Amber Air
Fine Aggregate: Keeler
Coarse Aggregate: Moline Limestone 1"
Mixed Aggregate: None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

JAMES E. [illegible] LICENSED PROFESSIONAL ENGINEER

Form 601

STRUCTURE No.	DATE MADE	SLUMP INCHES	MIX TYPE				Comprehensive Strength P.S.I.	Type Tri-calcium	Age in Days	Days Lab. Cured Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					

CC: 2-Eby Constr. Co.
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File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing 9th & Big River
Lab. No. 205061 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr.
Architect: Black & Veatch
Owner: A.T.&S.F.
Date Submitted at Lab: 5-5-55 & 4-12-55 & 4-29-55

Date May 11, 1955
Report No. FCC #9
Specimens
Made by: Mr. Kinney & Burley
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No.4108 (6-C)	4-28	3"	1385	1755	611	26.2	1557	RC-MB	8	0	South Abutment Slab of Bridge #4
No.3774 (4-B)	4-8	4"	1385	1755	611	26.2	4606	DS-MB	28	24	Abutment - Down Stairs
No.4050 (6-A)	4-28	2-1/2"	1385	1755	611	26.2	1902	RC-MB	7	6	Abutment - Down Stairs

Required 28 day strength: 3500 P.S.I.

READY-MIXED CONCRETE
Furnished by
Walt Keeler Company, Inc.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch
Admixture Amber Air
Fine Aggregate Walt Keeler
Coarse Aggregate Moline Limestone 1"
Mixed Aggregate None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

Form 601

1428 N. MOSLEY AVE.

HOBART 4-3948

BATCH PLANT CHECK NO. 8

PROJECT: Overhead Crossing Project 21-55

LOCATION: Wichita, Kansas

ENGINEER/ARCHITECT Black & Veatch

CONTRACTOR Martin K. Eby Constr. Co.

Wichita CHEMICAL AND TESTING Laboratories

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 805022 (REFER TO THIS NUMBER)

DATE 5-4-55

BATCH PLANT Walt Keeler Co.

WEATHER Fair-Mild

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.					AGGREGATE DATA / FIELD TESTS				
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE FREE WATER	FINE AGGREGATE ABSORPTION	COARSE AGGREGATE FREE WATER	COARSE AGGREGATE ABSORPTION	TIME CHECKED
1	65	4-1/2 Yd.	10:30AM	B-3500	1400	1735	611	*		5.92%	0.8 %	-1.34 %	2.7 %	10:30AM
2	54	4-1/2 Yd.	10:30AM	B-3500	1400	1735	611	*		5.92	0.8	-1.34	2.7	10:30

THEORETICAL BATCH WEIGHTS (DRY)

	TYPE	AMOUNT
FINE AGG:	Keeler Sand	1325
COARSE AGG:	Moline Stone	1755
CEMENT:	Monarch	611
SPECIAL:	City Water	28.0 gal/yd.
ADMIX.:	Amber Air	1/2 oz/sk.

TIME INSPECTION AT PLANT

START 10:00 A.M. STOP 11:00 A.M.

TOTAL CU. YDS. CHECKED

TOTAL CU. YDS. THIS PROJECT

COMPRESSION TEST DATA

TIME TAKEN

SLUMP:

TEST SPECIMEN NO.

YIELD:

POUR LOCATION:

ENTRAINED AIR:

PER INSPECTOR:

JAMES E. MYERS LICENSED 1162 KANSAS PROFESSIONAL ENGINEER

PLANT INSPECTOR

REMARKS: 6 # Concrete Hauled dry to Job Site - Water Added There.

CC: 2-Eby Constr.
2-Weiler
1-Knoll
1-Hess

FILE 1

PAGE 1 OF 1

FORM 507

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WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing 9th & Big Bixer
Lab. No. 804312 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr. Co.
Architect: Black & Veatch
Owner:
Date Submitted at Lab: 4-22, 4-27,

Date April 28, 1955
Report No. ECC #8
Specimens
Made by: Burley
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No.3923 (5-A)	4-20	4"	1385	1755	611	26.2	2984	RC-MB	7	5	Abutment - Upstrean
No.4024 (5-C)	4-20	4"	1385	1755	611	26.2	3334	DS-MB	7	0	A & B Walls
No.3637 (3-B)	3-31	4"	1385	1755	611	26.2	3510	DS-MB	28	24	Downstream Abut. Slab
No.4025 (3-D)	3-31	4"	1385	1755	611	26.2	3318	RC-MB	28	1	A & B Wall
			Required 28 day strength: 3500 P.S.I.								
			Class of Concrete "B"								

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch
Admixture Amber Air
Fine Aggregate Walt Keeler
Coarse Aggregate Moline Limestone 1"
Mixed Aggregate None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

Form 601

Specimen Number	Date Received	Sieve Test	Mixture: Type Aggregate	Mixture: Coarse Aggregate	Mixture: Fine Aggregate	Mixture: Test Weight	Compressive Strength	Age in Days	Remarks and Location of Core

1428 N. MOSLEY AVE. — HOBART 4-3948

BATCH PLANT CHECK NO. 7

Wichita CHEMICAL AND TESTING Laboratories

CONCRETE BATCH PLANT INSPECTION LOG

PROJECT: Overhead Crossing Project #21-55
LOCATION: Wichita, Kansas - 13th & Big Ditch
ENGINEER/ARCHITECT Black & Veatch
CONTRACTOR Martin K. Eby Constr. Co.

LAB. NO 804232 (REFER TO THIS NUMBER)
DATE 4-21-55
BATCH PLANT Welt Keeler Co.
WEATHER Fair - Mild

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD. FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	AGGREGATE DATA FINE AGGREGATE FREE WATER	FINE AGGREGATE ABSORPTION	COARSE AGGREGATE FREE WATER	COARSE AGGREGATE ABSORPTION	FIELD TESTS TIME CHECKED
1	44	5 yds.	12:45PM	B-3500	1385	1755	611	20.8		4.5 %	0.8 %	0.0 %	2.7 %	12:30PM
2	49	5 yds.	12:55	B-3500	1385	1755	611	20.8		4.5	0.8	0.0	2.7	12:30
3	66	5 yds.	1:45	B-3500	1385	1755	611	20.8		4.5	0.8	0.0	2.7	12:30
4	44	5 yds.	2:25	B-3500	1385	1755	611	20.8		4.5	0.8	0.0	2.7	12:30
5	49	5 yds.	2:40	B-3500	1385	1755	611	20.8		4.5	0.8	0.0	2.7	12:30
6	66	5 yds.	3:40	B-3500	1385	1755	611	20.8		4.5	0.8	0.0	2.7	12:30

THEORETICAL BATCH WEIGHTS (DRY)

	TYPE	AMOUNT
FINE AGG:	Keeler Sand	1325
COARSE AGG:	Moline 1" Stone	1755
CEMENT:	Monarch	611
SPECIAL:	City Water	28.0 Gal.
ADMIX.:	Amber Air	1/2 oz./sk.

TIME INSPECTION AT PLANT

START 12:30 P.M. STOP 4:00 P.M.

TOTAL CU. YDS. CHECKED 30

TOTAL CU. YDS. THIS PROJECT

COMPRESSION TEST DATA

TIME TAKEN
SLUMP:
TEST SPECIMEN NO.
YIELD:
POUR LOCATION:
ENTRAINED AIR:
PER INSPECTOR:

PLANT INSPECTOR

JAMES E. MYERS — 6811 — KANSAS — PROFESSIONAL ENGINEER

REMARKS: R. L. Phillips

CC: 2-Eby Constr.
2-Weller
1-Knoll
1-Hess
FILE 1

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FORM 507

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WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing — 9th & Big River
Lab. No. 804190 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr. Co.
Architect: Black & Veatch
Owner:
Date Submitted at Lab: 4-15-55

Date April 20, 1955
Report No. BCC #7
Specimens
Made by: Burley
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 3828	4-8	4"	1272	1685	611	26.2	3053	RC-AF	7	1	Abutment Wall
			Required 28 day strength:				3500 P.S.I.				
			Class of Concrete "B"								

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement: Monarch
Admixture: Amber Air
Fine Aggregate: Walt Keeler
Coarse Aggregate: Moline Limestone 1"
Mixed Aggregate: None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

Form 601

Sample Number	Date Sampled	Material Represented	Mixed	Aggregates			Admixture	Cement	Slump	Air Content	Unit Weight	Compressive Strength P.S.I.	Type Fracture	Age Days	Date Tested	Remarks
				Fine	Coarse	Total Water										

1428 N. MOSLEY AVE.

HOBART 4-3941

BATCH PLANT CHECK NO. 6

PROJECT: Overhead Crossing Project #21-55

LOCATION: Wichita, Kansas

ENGINEER/ARCHITECT Black & Veatch

CONTRACTOR Martin K. Eby

Wichita CHEMICAL AND TESTING Laboratories

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 804154
(REFER TO THIS NUMBER)

DATE 4-14-55

BATCH PLANT Walt Keeler Co.

WEATHER Fair - Wind

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.					AGGREGATE DATA				FIELD TESTS
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE		COARSE AGGREGATE		TIME CHECKED
										FREE WATER	ABSORPTION	FREE WATER	ABSORPTION	
1	44	5 yds.	8:00AM	B-3500	1385	1765	611	19.7		4.0%	0.8%	0.5%	2.7	AM
2	64	5 yds.	8:10	B-3500	1385	1765	611	19.7		4.0	0.8	0.5	2.7	8:00
3	67	5 yds.	8:40	B-3500	1385	1765	611	19.7		4.0	0.8	0.5	2.7	8:00
4	44	5 yds.	10:15	B-3500	1385	1765	611	19.7		4.0	0.8	0.5	2.7	8:00
5	63	5 yds.	11:30	B-3500	1385	1765	611	19.7		4.0	0.8	0.5	2.7	8:00
6	67	5 yds.	12:10PM	B-3500	1385	1765	611	19.7		4.0	0.8	0.5	2.7	8:00

JAMES E. MYERS LICENSED 1162 PROFESSIONAL ENGINEER

PLANT INSPECTOR

THEORETICAL BATCH WEIGHTS (DRY)

	TYPE	AMOUNT
FINE AGG:	Keeler Sand	1325
COARSE AGG:	Moline Stone	1755
CEMENT:	Monarch	611
SPECIAL:	City Water	28.0
ADMIX.:	Amber Air	1/2 oz/sk.

TIME INSPECTION AT PLANT

START 8:00 A.M. STOP 12:30 P.M.

TOTAL CU. YDS. CHECKED 30

TOTAL CU. YDS. THIS PROJECT

COMPRESSION TEST DATA

TIME TAKEN

SLUMP:

TEST SPECIMEN NO.

YIELD:

POUR LOCATION:

ENTRAINED AIR:

PER INSPECTOR:

REMARKS:

CC: 2-Eby Constr.
2-Weller
1-Knoll
1-Hess

FILE 1

PAGE OF

FORM 507

WE TEST EVERYTHING — UNDER THE SUN

CC: 2-Eby Constr.
2-Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

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RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HOBART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing 9th & Big River
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr. Co.
Architect: Black & Veatch
Owner: - - -
Date Submitted at Lab: 3-8-55

Lab. No. 804028 (Refer to This Number)

Date April 5, 1955
Report No. EOC #4
Specimens Made by: Dapps
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No.1-B (3306)	3-7-	3"	1272	1685	611	262	5718	DS-AF	28	27	West Abutment

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement: Monarch
Admixture: Amber - Air
Fine Aggregate: Walt Keeler
Coarse Aggregate: Moline Limestone 1"
Mixed Aggregate: None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

JAMES E. [illegible] KANSAS REGISTERED PROFESSIONAL ENGINEER

Form 601

SPECIMEN NUMBER	DATE SAMPLED	SPECIMEN NUMBER	MIX PROPORTIONS Fine Aggregate	Coarse Aggregate	Cement	Total Water	COMPRESSIVE STRENGTH Compressive Strength P.S.I.	TYPE Test Type	AGE In Days	CURE Lab Cured or Standard	Remarks and Location of Core

1428 N. MOSLEY AVE.

HOBART 4-3948

BATCH PLANT CHECK NO. #6

PROJECT: Overhead Crossing

LOCATION: 13th & Big Ditch

ENGINEER/ARCHITECT: Black & Veatch

CONTRACTOR: Iby Constr. Co.

Wichita CHEMICAL AND TESTING Laboratories

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 804699 (REFER TO THIS NUMBER)

DATE 4-8-55

BATCH PLANT Wolf Keeler

WEATHER Fair & Warm

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.					AGGREGATE DATA FIELD TESTS				
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE		COARSE AGGREGATE		TIME CHECKED
										FREE WATER	ABSORPTION	FREE WATER	ABSORPTION	
1	58	5 yds.	7:00AM	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00 A.M.
2	64	5 yds.	7:05	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
3	50	5 yds.	7:15	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
4	65	5 yds.	7:20	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
5	58	5 yds.	9:25	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
6	64	5 yds.	9:45	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
7	50	5 yds.	10:00	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
8	58	5 yds.	10:50	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
9	49	5 yds.	11:00	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
10	64	5 yds.	11:10	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
11	50	5 yds.	11:30	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
12	58	5 yds.	12:05	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
13	49	5 yds.	12:25	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00

THEORETICAL BATCH WEIGHTS (DRY)

	TYPE	AMOUNT
FINE AGG:	Keeler Sand	1325
COARSE AGG:	Moline Stone	1755
CEMENT:	Monarch	611
SPECIAL:	City Water	28.0
ADMIX.:		

TIME INSPECTION AT PLANT

START 7:00 A.M. STOP 12:30 P.M.

TOTAL CU. YDS. CHECKED

TOTAL CU. YDS. THIS PROJECT

COMPRESSION TEST DATA

TIME TAKEN

SLUMP:

TEST SPECIMEN NO.

YIELD:

POUR LOCATION:

ENTRAINED AIR:

PER INSPECTOR:

JAMES E. MYERS LICENSED 1162 PROFESSIONAL ENGINEER

PLANT INSPECTOR

REMARKS:

CC: 2-Iby Constr.
2-Keller
1-Knoll
1-Hess

FILE 1

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FORM 507

1428 N. MOSLEY AVE.

BATCH PLANT CHECK NO. #4A

HOBART 4-3948

PROJECT: Overhead Crossing

LOCATION: 13th & Big Ditch

ENGINEER/ARCHITECT Black & Veatch

CONTRACTOR Iby Construction Co.

Wichita CHEMICAL AND TESTING Laboratories

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 904099 (REFER TO THIS NUMBER)

DATE 4-8-55

BATCH PLANT Walt Keeler

WEATHER Fair & Warm

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.					AGGREGATE DATA				FIELD TESTS
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE		COARSE AGGREGATE		TIME CHECKED
										FREE WATER	ABSORPTION	FREE WATER	ABSORPTION	
1	58	5 yds.	7:00 A.M.	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00 A.M.
2	64	5 yds.	7:05	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
3	50	5 yds.	7:15	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
4	65	5 yds.	7:20	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
5	58	5 yds.	9:25	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
6	64	5 yds.	9:45	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
7	50	5 yds.	10:00	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
8	58	5 yds.	10:50	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
9	49	5 yds.	11:00	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
10	64	5 yds.	11:10	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
11	50	5 yds.	11:30	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
12	58	5 yds.	12:05	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00
13	49	5 yds.	12:25	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	7:00

THEORETICAL BATCH WEIGHTS (DRY)

	TYPE	AMOUNT
FINE AGG:	Keeler Sand	1325
COARSE AGG:	Holine Stone	1755
CEMENT:	Monarch	611
SPECIAL:	City Water	28.6
ADMIX.:		

TIME INSPECTION AT PLANT

START 7:00 A.M. STOP 12:30

TOTAL CU. YDS. CHECKED

TOTAL CU. YDS. THIS PROJECT

COMPRESSION TEST DATA

TIME TAKEN

SLUMP:

TEST SPECIMEN NO.

YIELD:

POUR LOCATION:

ENTRAINED AIR:

PER INSPECTOR:

JAMES E. MILLER 1162 STATE OF KANSAS PROFESSIONAL ENGINEER

PLANT INSPECTOR

REMARKS:

CC: 2-Iby Constr.
2-Keller
1-Knoll
1-Hase

FILE 1

PAGE 1 OF 1

FORM 507

CC: 2-Eby Constr.
2-Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

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LICENSED PROFESSIONAL ENGINEERS

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HOBART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing 9th & Big River
Lab. No. 804085 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr. Co.
Architect: Black & Veatch
Owner: ----
Date Submitted at Lab: 4-4-55

Date April 8, 1955
Report No. ECC #5
Specimens
Made by: Burley Kinney
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No.3636 (No.3A)	3-31	4"	1272	1685	611	262	2511	DS-MB	7	3	Downstream Abut. Slab.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement: Monarch
Admixture: Amber - Air
Fine Aggregate: Walt Keeler
Coarse Aggregate: Moline Limestone 1"
Mixed Aggregate: None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

Form 601

Wichita Testing Laboratories

CHEMICAL AND TESTING

ANALYTICAL CHEMISTS · BACTERIOLOGISTS · TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS

1629 N. MOSLEY AVE. PHONE MOhawk 4-3942
WICHITA 4, KANSAS

FLEXURE AND COMPRESSION TEST REPORT

Project
Location
Client
Architect
Owner
Date Submitted at Lab:

Lab No. (Refer to This Number)

Date
Report No.
Specimens
Made by
Signature

Specimen Number	Date Made	Submitted	Flexure: Size Aggregate	Coarse Aggregate	Cement	Total Water	Compressive Strength P.S.I.	Type Fracture	Age In Days	Days Submitted Cured (Condition)	Tension and Location of Break

1428 N. MOSLEY AVE.

HOBART 4-3948

BATCH PLANT CHECK NO. 5 - b

PROJECT: Overhead Crossing - Proj. #21-55

LOCATION: Wichita, Kansas

ENGINEER/ARCHITECT Black & Veatch

CONTRACTOR Iby Constr. Co.

Wichita CHEMICAL AND TESTING Laboratories

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 03272 (REFER TO THIS NUMBER)

DATE 3-24-55

BATCH PLANT Weir Keeler

WEATHER Fair & Cool

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.					AGGREGATE DATA				FIELD TESTS
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE		COARSE AGGREGATE		TIME CHECKED
										FREE WATER	ABSORPTION	FREE WATER	ABSORPTION	
1	53	5 yds.	9:50	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
2	44	5 yds.	10:05	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
3	62	5 yds.	10:30	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
4	53	5 yds.	11:10	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
5	44	5 yds.	11:40	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
6	62	5 yds.	11:50	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
7	53	5 yds.	12:30	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
8	44	5 yds.	12:55	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
9	62	5 yds.	1:15	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30

THEORETICAL BATCH WEIGHTS (DRY)

	TYPE	AMOUNT
FINE AGG:	Keeler Sand	1325
COARSE AGG:	Moline Stone	1770
CEMENT:	Monarch	611
SPECIAL:	City Water	28.0
ADMIX.:		

TIME INSPECTION AT PLANT

START 9:30 A.M. STOP 1:30 P.M.

TOTAL CU. YDS. CHECKED 45-1/2

TOTAL CU. YDS. THIS PROJECT

COMPRESSION TEST DATA

TIME TAKEN

SLUMP:

TEST SPECIMEN NO.

YIELD:

POUR LOCATION:

ENTRAINED AIR:

PER INSPECTOR:

JAMES E. MYERS LICENSED 1162 PROFESSIONAL ENGINEER

PLANT INSPECTOR

REMARKS:

CC: 2-Iby Construction Co.
2-Keller
1-Knoll

FILE 1-Hess
1

PAGE OF

FORM 507

1428 N. MOSLEY AVE.

HOBART 4-3945

BATCH PLANT CHECK NO. 2

PROJECT: Overhead Crossing Proj.

LOCATION: Wichita, Kansas

ENGINEER/ARCHITECT Black & Veatch

CONTRACTOR Martin K. Eby Constr. Co.

Wichita CHEMICAL AND TESTING Laboratories

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 803327 (REFER TO THIS NUMBER)

DATE March 31, 1955

BATCH PLANT Kalt Keeler Co.

WEATHER Clear - Cool

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.					AGGREGATE DATA				FIELD TESTS
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE		COARSE AGGREGATE		TIME CHECKED
										FREE WATER	ABSORPTION	FREE WATER	ABSORPTION	
1	54	5 yds.	10:40	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	10:30 A.M.
2	51	5 yds.	10:50	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	10:30
3	54	5 yds.	12:10	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	10:30
4	51	5 yds.	12:20	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	10:30
5	57	3½ yds.	1:15	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	10:30

THEORETICAL BATCH WEIGHTS (DRY)

	TYPE	AMOUNT
FINE AGG:	Keeler Sand	1325
COARSE AGG:	Kelline Stone	1770
CEMENT:	Monarch	611
SPECIAL:	Water	18.0
ADMIX.:	Amber Air	1/2 oz/sk.

TIME INSPECTION AT PLANT

START 10:30 STOP 1:00 P.M.

TOTAL CU. YDS. CHECKED 23-1/2

TOTAL CU. YDS. THIS PROJECT

COMPRESSION TEST DATA

TIME TAKEN

SLUMP:

TEST SPECIMEN NO.

YIELD:

POUR LOCATION:

ENTRAINED AIR:

PER INSPECTOR:

JAMES E. MYERS LICENSED PROFESSIONAL ENGINEER KANSAS

PLANT INSPECTOR

REMARKS:

CC: 2-Eby Constr.
2-Keller
1-Rose
1-Knoll
1

FILE

PAGE OF

FORM 507

WE TEST EVERYTHING — UNDER THE SUN

CC: 2-Eby Construction
2-Black & Veatch

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RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HOBART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing 9th & Big River
Lab. No. 803269 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Construction Co.
Architect: Black & Veatch
Owner:
Date Submitted at Lab:

Date March 25, 1955
Report No. MCC - #2
Specimens
Made by: Kenney
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 2A	3-17	4"	1272	1685	611	262	4128	DS-AF	7		East Abut. Slab

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement: Monarch
Admixture: Amber-Air
Fine Aggregate: Walt Keeler
Coarse Aggregate: Moline Limestone 1"
Mixed Aggregate: None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

Form 601

| | | |

WE TEST EVERYTHING — UNDER THE SUN

CC: 2-Dby Constr.
2-Black & Ventch

Wichita CHEMICAL AND TESTING Laboratories

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LICENSED PROFESSIONAL ENGINEERS

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HOBART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossing 9th & Big River
Location: Wichita, Kansas
Contractor: Martin K. Eby Constr. Co.
Architect: Black & Veatch
Owner:
Date Submitted at Lab: 3-25-55

Lab. No. 803284 (Refer to This Number)

Date March 25, 1955
Report No. ECC - 43
Specimens
Made by: Kenney
Structure Bridge

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 20	3-17	4"	1272	1685	611	262	3213	DS-MB	8	0	Abutment Slab @ 11:00 A.M.

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch
Admixture Amber-Air
Fine Aggregate Walt Keeler
Coarse Aggregate Moline Limestone 1"
Mixed Aggregate None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

Form 601

NUMBER	DATE MADE	SECURE ORDERS	MIXTURE			Consistency Slump in.	Type Reinforcing	Type In Piles	Days Stood, Steamed Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water				

1428 N. MOSLEY AVE.

BATCH PLANT CHECK NO. 5

HOBART 4-3948

PROJECT: Overhead Crossing Project #21-55

LOCATION: Wichita, Kansas

ENGINEER/ARCHITECT Black & Veatch

CONTRACTOR Eby Construction Co.

Wichita CHEMICAL AND TESTING Laboratories

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 803272 (REFER TO THIS NUMBER)

DATE March 24, 1955

BATCH PLANT Walt Keeler

WEATHER Fair & Cool

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.					AGGREGATE DATA				FIELD TESTS
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE		COARSE AGGREGATE		TIME CHECKED
										FREE WATER	ABSORPTION	FREE WATER	ABSORPTION	
1	53	5 yds.	9:50	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
2	44	5 yds.	10:05	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
3	62	5 yds.	10:30	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
4	53	5 yds.	11:10	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
5	44	5 yds.	11:45	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
6	62	5 yds.	11:50	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
7	53	5 yds.	12:30	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
8	44	5 yds.	1:55	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
9	62	5 yds.	1:15	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	9:30
										5.0				

THEORETICAL BATCH WEIGHTS (DRY)

	TYPE	AMOUNT
FINE AGG:	Keeler Sand	1325
COARSE AGG:	Moline Stone	1770
CEMENT:	Monarch	611
SPECIAL:	City Water	28.0
ADMIX.:		

TIME INSPECTION AT PLANT

START 9:30 A.M. STOP 1:30 P.M.

TOTAL CU. YDS. CHECKED 45-1/2

TOTAL CU. YDS. THIS PROJECT

COMPRESSION TEST DATA

TIME TAKEN

SLUMP:

TEST SPECIMEN NO.

YIELD:

POUR LOCATION:

ENTRAINED AIR:

PER INSPECTOR:

JAMES E. MI... LICENSED 1162 KANSAS PROFESSIONAL ENGINEER

PLANT INSPECTOR

REMARKS:

CC: 2-Eby Constr.
2-Weller
1-Knoll
1-Hess

FILE 1

PAGE ____ OF ____

FORM 507

1428 N. MOSLEY AVE.

HOBART 4-3948

BATCH PLANT CHECK NO. 4

PROJECT: Overhead Crossing Proj. #21-55

LOCATION: Wichita, Kansas

ENGINEER/ARCHITECT Black & Veatch

CONTRACTOR Martin K. Eby Constr. Co.

Wichita CHEMICAL AND TESTING Laboratories

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 803183 (REFER TO THIS NUMBER)

DATE March 17, 1955

BATCH PLANT Walt Keeler

WEATHER Cloudy & Cool

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.					AGGREGATE DATA				FIELD TESTS
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE		COARSE AGGREGATE		TIME CHECKED
										FREE WATER	ABSORPTION	FREE WATER	ABSORPTION	
1	54	5 yds.	8:20	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	8:00AM
2	51	5 yds.	8:30	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	8:00
3	58	5 yds.	8:35	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	8:00
4	49	5 yds.	9:00	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	8:00
5	54	5 yds.	9:40	B-3500	1390	1770	611	18.4		5.0	0.8	1.0	2.7	8:00

THEORETICAL BATCH WEIGHTS (DRY)

	TYPE	AMOUNT
FINE AGG:	Keeler Sand	1325
COARSE AGG:	Moline Stone	1755
CEMENT:	Monarch	611
SPECIAL:	City Water	28.0
ADMIX.:	Amber Air	1/2 oz/sk.

TIME INSPECTION AT PLANT

START 8:00 A.M. STOP 10:00 A.M.

TOTAL CU. YDS. CHECKED

TOTAL CU. YDS. THIS PROJECT

COMPRESSION TEST DATA

TIME TAKEN

SLUMP:

TEST SPECIMEN NO.

YIELD:

POUR LOCATION:

ENTRAINED AIR:

PER INSPECTOR:

PLANT INSPECTOR

REMARKS:

CC: 2-Eby
2-Keller
1-Hess
1-Knoll
1

FILE

PAGE OF

FORM 507

WE TEST EVERYTHING UNDER THE SUN

CC: 2-Eby Constr.
2- Black & Veatch

Wichita CHEMICAL AND TESTING Laboratories

Principals Are
MEMBERS OF:
AMERICAN CHEMICAL SOCIETY
AMERICAN SOCIETY FOR TESTING MATERIALS
AMERICAN SOCIETY OF CIVIL ENGINEERS
ASS'N OF ASPHALT PAVING TECHNOLOGISTS
LICENSED PROFESSIONAL ENGINEERS

ANALYTICAL CHEMISTS - BACTERIOLOGISTS - TESTING ENGINEERS
RESEARCH ON MANUFACTURING PROBLEMS
1428 N. MOSLEY AVE. PHONE HOBART 4-3948
WICHITA 4, KANSAS

File: 1

FLEXURE AND COMPRESSION TEST REPORT

Project: Overhead Crossings 9th & Big River
Lab. No. 803146 (Refer to This Number)
Location: Wichita, Kansas
Contractor: Martin K. Eby Construction Co.
Architect: Black & Veatch
Owner:
Date Submitted at Lab: 3-8-55 & 3-14-55

Date March 15, 1955
Report No. EOC - #1
Specimens
Made by: Doppe
Structure

SPECIMEN NUMBER	DATE MADE	SLUMP INCHES	MIXTURE				Compressive Strength P. S. I.	Type Fracture	Age In Days	Days Lab. Cured, Standard Conditions	Remarks and Location of Pour
			Fine Aggregate	Coarse Aggregate	Cement	Total Water					
No. 1A	3-7	3"	1272	1685	611	262	4005	RC-MB	7	6	West Abutment
No. 1C	3-7	3"	1272	1685	611	262	4270	RC-MB	7	1	West Abutment

TYPE FRACTURE: RC—regular cone; VS—vertical shear; DS—diagonal shear; HS—horizontal rupture; MB—mortar bond failure; AF—aggregate failure.

Brand of Cement Monarch
Admixture Amber-Air
Fine Aggregate Walt Keeler
Coarse Aggregate Moline Limestone 1"
Mixed Aggregate None

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

Form 601

1428 N. MOSLEY AVE.

HOBART 4-3948

BATCH PLANT CHECK NO. 3

PROJECT: Overhead Crossing Project #21-55

LOCATION: Wichita, Kansas, Constr. No. 5

ENGINEER/ARCHITECT Black & Veatch

CONTRACTOR Martin K. Eby Construction Co.

Wichita CHEMICAL AND TESTING Laboratories

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 103154 (REFER TO THIS NUMBER)

DATE March 14, 1955

BATCH PLANT Holt Keeler Co.

WEATHER Fair-Mild-Windy

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.					AGGREGATE DATA				FIELD TESTS
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE		COARSE AGGREGATE		TIME CHECKED
										FREE WATER	ABSORPTION	FREE WATER	ABSORPTION	
1	43	5 yds.	12:35pm	B-3500	1385	1765	611	20.6		4.5%	0.8%	0.5%	2.7%	11:45am
2	57	5 yds.	12:45	B-3500	1385	1765	611	20.6		4.5%	0.8%	0.5%	2.7%	11:45
3	53	5 yds.	1:30	B-3500	1385	1765	611	20.6		4.5%	0.8%	0.5%	2.7%	11:45
4	43	5 yds.	1:50	B-3500	1385	1765	611	20.6		4.5%	0.8%	0.5%	2.7%	11:45
5	57	5 yds.	2:10	B-3500	1385	1765	611	20.6		4.5%	0.8%	0.5%	2.7%	11:45

THEORETICAL BATCH WEIGHTS (DRY)

	TYPE	AMOUNT
FINE AGG:	Keeler Sand	1325
COARSE AGG:	Moline 1"	1755
CEMENT:	Monarch	611
SPECIAL:	City Water	20.0
ADMIX.:	Amber Air	1/2 oz/sk.

TIME INSPECTION AT PLANT

START 11:30 A.M. STOP 2:30 P.M.

TOTAL CU. YDS. CHECKED 25

TOTAL CU. YDS. THIS PROJECT 87

COMPRESSION TEST DATA

TIME TAKEN

SLUMP:

TEST SPECIMEN NO.

YIELD:

POUR LOCATION:

ENTRAINED AIR:

PER INSPECTOR:

JAMES E. AYERS LICENSED PROFESSIONAL ENGINEER

PLANT INSPECTOR R. L. Phillips

REMARKS:

CC: 2-Eby Constr.
2-Weller
1-Knoll 1-Voss

FILE 1

PAGE ____ OF ____

FORM 307

BLACK & VEATCH
CONSULTING ENGINEERS
TEL. WESTPORT 7474

4706 BROADWAY
KANSAS CITY 2, MISSOURI

March 8, 1955

Subject: Wichita, Kansas
Water Transmission Mains
Overhead Crossings
Contract No. 5
Project 2155, G5.1

COPY

Martin K. Eby Construction Co., Inc.
610 North Main Street
Wichita, Kansas

Attention Mr. I. S. Barnett

Gentlemen:

The concrete mix design and aggregate sieve analyses for the concrete aggregate you propose to use for subject contract are both satisfactory. Since this mix is identical to the one being used at the water treatment plant, we are hereby approving it, although since it does contain an admixture, it is somewhat different than was actually contemplated for this particular contract. However, the air entraining concrete should be perfectly satisfactory for the construction under this contract and is, therefore, approved.

Very truly yours,

BLACK & VEATCH

L. W. Weller

LWW:fl

cc J. J. Knoll w/enc.
R. H. Hess w/enc.

BLACK & VEATCH
CONSULTING ENGINEERS

TEL. WESTPORT 7474

4706 BROADWAY
KANSAS CITY 2, MISSOURI

WE TEST EVERYTHING — UNDER THE SUN

CC: 6-Day Constr. Co.

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS · BACTERIOLOGISTS · TESTING ENGINEERS

RESEARCH ON MANUFACTURING PROBLEMS

File:1

1428 N. MOSLEY AVE. PHONE HOBART 4-3948

WICHITA 4, KANSAS

Date: March 1, 1955 (November 30, 1953)

Aggr. Report No. DWT - A

REPORT ON CONCRETE AGGREGATE

LAB NUMBER 803002 - b (Refer to this Number)

Contractor: Martin K. Eby Construction Co. 610 North Main Wichita, Kansas

Project: City of Wichita Overhead Crossings Water & Transmission Line Contract No. 5 - Project 21-55

Engineer:

Location: Wichita

Sample taken by: Lab. Inspector from batch Plant Stockpile @ 3:00 P.M. Time: Date: 11-5-53

Car or sample number	GRADING, Percent Retained sieve number								% Ret.	IMPURITIES				
	1"	3/4"	1/2"	3/8"	#4	#8	#16	#50	#200	Organic Matter	Silt P-200	Clay Lumps, Shale	Unsound Particles	Coal Sticks, Etc.
	ASTM D75 & C136									ASTM C40	ASTM C117	ASTM C142 AASHO T10	ASTM C88 *	ASTM C123
COARSE AGGREGATE: Moline Stone (1")	1.6	32.1	67.2	79.4 (F.M. - 6.86)	90.1	93.8	96.8	98.0	98.2	-	1.2	0	-	0
Specs. (par. 2-4) (Page 2-3) & ASTM C33-52T	0-10	15-50	40-75	-	90-100	-					1.5	0.25 & 1.0	12% 5cy	1.0
FINE AGGREGATE: Keeler Concrete Sand	0	0	0	0.4 (F.M. - 2.80)	2.3	9.5	27.2	97.5	97.6	O.K. No.1	1.2	0.2	-	0
Specs. (Par. 2-3) (Pg. 2-2) & ASTM C33-52T	-	-	-	-	0-5 (Minimum F.M. 2.50)	-	-	70-98	92-98	Type I	3.0	1.0	-	0.5

ADDITIONAL AGGREGATE DATA

	Bulk Spec. Grav.	Sat'd. Spec. Grav.	ASTM C127-128 App. Spec. Grav.	Absorption
1" Stone	2.44	2.52	2.71	2.7%
Keeler Sand	2.55	2.58	2.60	0.9%

Remarks: Sources: Moline Stone - Concrete Materials & Construction Co. - Moline, Kansas
Concrete Sand - The Walt Keeler Concrete Co. - Wichita, Kansas

* Reported as separate analysis.

AGGREGATE MEET REQUIREMENTS ABOVE

(Soundness Tests & Mortar Strength will follow when completed.)

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

WE TEST EVERYTHING — UNDER THE SUN

CC: 6-3by Constr. Co.

LAB NUMBER 603002 - a
(Refer to this Number)

Wichita CHEMICAL AND TESTING Laboratories

WICHITA 4, KANSAS

File: 1

Actual Lab. Batch Mix

PRELIMINARY DESIGN DATA
Identical Mix to Contract 13 to be used on this project.

DAILY LOG OF CONCRETING OPERATION

Project: Overhead Crossings, Water Transmission Contract No. 5, City of Wichita Line

Contractor: Martin K. Eby Construction Co.

Structure: Waterworks Project 21-55

Black & Veatch, Consulting Engineers

Fine Aggregate (FA): Walt Zeeler Concrete Sand

Coarse Aggregate (CA): Medline Limestone 1"

Type Mix: 6.5 SACK - CLASS WB" MIX

Date: March 1, 1955 (December 8, 1953)

Weather: - - -

Class of Concrete: Class B - 3500 P.S.I. @ 28 da

Slump Ordered: 3 inch max.

Nominal Mix: 1: : 2.76

Maximum Water: 5.5 gal./sk. cmt.

Batch Wts., Lbs.

Dry Basis: Cmt. 611 FA 1670 CA 1685

COMPUTATION FOR ACTUAL BATCH PROPORTIONS—WEIGHTS MOIST AS USED

TIME MOISTURE TEST MADE

	No. 1 per ONE YARD			No. 2 per ONE SACK		
	% Moisture	Free Water	Actual Batch Wts.	% Moisture	Free Water	Actual
FA	0	None lb.	1670 lb.	0	None lb.	195 lb.
CA	0	None lb.	1685 lb.	0	None lb.	259 lb.
Total Free water	- - -	- - - lb.	- - - gal.		- - - lb.	- - - gal.
Added at Mixer	262	262 lb.	31.5 gal.		40.3 lb.	4.85 gal.
Total Water	262	262 lb.	31.5 gal.		40.3 lb.	4.85 gal.
Gal./sk. cement		4.85				4.85
Slump		3 inch			(454 lbs. agg/sk)	3 inch
Entrained air:		4.1%				4.1%

Test Cylinder Nos:

For 7-day tests DWM-1,3,5,7

For 28-day tests DWM-2,4,6,8

YIELD CALCULATIONS

	Wt./cu. ft.	Wt./cu. yd.	Vol.	Yield	Actual Cement Content
	141.8 lb.	3830 lbs.	27.0 cf.	100.0%	6.5 sks/yd.

Sieve Analysis of Aggregates

Sieve	Coarse	Fine
Opening	% Ret.	% Ret.
2 inch		
1½ inch	0	
1 inch	1.6	
¾ inch	32.1	0
½ inch	67.2	0
3/8 inch	79.4	0.4
No. 4	90.1	2.3
No. 8	93.8	9.5
No. 10	-	-
No. 16	96.8	27.2
No. 20	-	-
No. 30	97.9	55.6
No. 40	-	-
No. 50	98.0	87.5
No. 100	98.2	97.6
F M	6.86	2.80

Concreting Started ..... Finished .....

No. Batches Delivered ..... Batch Vol. .....

Ticket Nos. .....

Concrete laid ..... cu. yds.

Cement Used 6.5 per yd. sks. Brand Monarch

ADMIX: "Amber-Air" (AVA) sks. Brand National Gelatin

Remarks: See Lab. No. 611043 for aggregate tests. Admix: 1/2 oz. per sack. Mix very workable. Aggregate Ratio by wt: 43% Sand, 57% Rock *mfgr. - Wichita, Kansas

MIX MEETS PROPORTION REQUIREMENTS

WICHITA CHEMICAL & TESTING LABORATORIES
1428 N. MOSLEY AVE. PHONE HOBART 4-3948

% P200 WASH

Coarse: 1.2

Fine: 1.2

FORM 505

By R. L. Phillips

REGISTERED PROFESSIONAL ENGINEER — STATE OF KANSAS

BLACK & VEATCH
CONSULTING ENGINEERS

TEL. WESTPORT 7474

4706 BROADWAY
KANSAS CITY 2, MISSOURI

March 8, 1955

Subject: Wichita, Kansas
Water Transmission Main
Contract No. 5
Overhead Crossing
Project 2155, G5.1

COPY

Martin K. Eby Construction Co., Inc.
610 North Main Street
Wichita 5, Kansas

Attention Mr. I. S. Barnett

Gentlemen:

We are enclosing two copies each of Solar Aircraft Company shop drawings 01-9081, 01-9083, 01-9084, 01-9085, 01-9086 and 01-9087, covering the expansion joints for the subject contract. These drawings are approved so far as layout and dimensions of the joints are concerned.

By letter of February 11 we requested that Solar confirm in writing that their joints will act in such a manner as not to impose a thrust load of more than 117,000 lbs. against the anchors. In this same letter we also requested that Solar provide us with stress diagram showing the distribution and magnitude of the stresses around the bellows in these joints and that Solar also provide us with a statement as to the period of time for which they will guarantee these joints under the actual operating conditions on this job.

It is imperative that this information be furnished to us at once by Solar's home office. This information must be in writing and should be signed either by Solar's chief engineer or by some other responsible official of the company. It will not be satisfactory for Solar to have their Kansas City representative pass along this information, either by word of mouth or by letter from the Kansas City representative, since they do not maintain an engineering staff in Kansas City and since their local representatives are not technical experts on expansion joints.

We believe that Solar should be in a position to furnish this information at once, since in the case of the stress diagrams, at least, it was requested immediately following the letting on this contract. We will expect

BLACK & VEATCH
CONSULTING ENGINEERS

TEL. VALENTINE 1-2424

4706 BROADWAY
KANSAS CITY 2, MISSOURI

March 8, 1955

to receive a signed letter from Solar, through your office, covering these points by not later than the 19th of March.

Very truly yours,

BLACK & VEATCH

LWW:fl

L. W. Weller

cc J. J. Knollw/enc.
R. H. Hess w/enc.

1428 N. MOSLEY AVE. Overhead Crossings

BATCH PLANT CHECK NO. #2

HOBART 4-3948

PROJECT: Water Pipeline

LOCATION: 9th & Arkansas River

ENGINEER/ARCHITECT Black & Veatch

CONTRACTOR Martin K. Eby Constr. Co.

Wichita CHEMICAL AND TESTING Laboratories

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 007088 (REFER TO THIS NUMBER)

DATE March 7, 1955

BATCH PLANT Walt Kesler Co.

WEATHER Fair-Mild

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD.					AGGREGATE DATA / FIELD TESTS				
					FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	FINE AGGREGATE FREE WATER	FINE AGGREGATE ABSORPTION	COARSE AGGREGATE FREE WATER	COARSE AGGREGATE ABSORPTION	TIME CHECKED
1	53	5 yds.	11:15am	B-3500	1365	1755	611	23.2		3.0%	0.8%	0.0%	2.7%	10:30am
2	52	5 yds.	11:20	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
3	47	5 yds.	11:24	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
4	52	5 yds.	12:53pm	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
5	53	5 yds.	1:19	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
6	47	5 yds.	1:38	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
7	52	5 yds.	2:05	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
8	53	5 yds.	2:25	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
9	47	5 yds.	2:55	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30
10	43	5 yds.	3:30	B-3500	1365	1755	611	23.2		3.0	0.8	0.0	2.7	10:30

THEORETICAL BATCH WEIGHTS (DRY)

	TYPE	AMOUNT
FINE AGG:	Kesler Sand	1365
COARSE AGG:	Moline Stone	1755
CEMENT:	Monarch	611
SPECIAL:	City Water	23.0
ADMIX.:	Amber Air	1/2 oz/sk.

TIME INSPECTION AT PLANT

START 10:15 AM STOP 3:30 P.M.

TOTAL CU. YDS. CHECKED 50

TOTAL CU. YDS. THIS PROJECT

COMPRESSION TEST DATA

TIME TAKEN 2:00 P.M.

SLUMP: 3"

TEST SPECIMEN NO. 1A & 1B

YIELD: ——

POUR LOCATION: West Abutment

ENTRAINED AIR: ——

PER INSPECTOR: Dupre

JAMES E. MYERS LICENSED PROFESSIONAL ENGINEER

J. L. Phillips

PLANT INSPECTOR

REMARKS: Check #1 @ 1:00 P.M. Coarse Aggregate Check #1 @ 1:00 P.M.

CC: 2-Eby Constr.
2-Weller
1-Knoll
1-Hess

FILE 1

PAGE ____ OF ____

FORM 507

1428 N. MOSLEY AVE.

HOBART 4-3948

BATCH PLANT CHECK NO. #1

PROJECT: Overhead Crossings Project No. 21-55

LOCATION: Wichita, Kansas, Constr. No. 5

ENGINEER/ARCHITECT Black & Veatch

CONTRACTOR Martin K. Eby

Wichita CHEMICAL AND TESTING Laboratories

CONCRETE BATCH PLANT INSPECTION LOG

LAB. NO. 502055 (REFER TO THIS NUMBER)

DATE March 3, 1955

BATCH PLANT Walt Keeler

WEATHER Fair & Warm

BATCH NO.	TRUCK NO.	BATCH VOLUME	DEPARTURE FROM PLANT	CLASS OF CONCRETE	ACTUAL BATCH WEIGHTS / CU. YD. FINE AGG.	COARSE AGG.	CEMENT	WATER	(OTHER)	AGGREGATE DATA FINE AGGREGATE FREE WATER	FINE AGGREGATE ABSORPTION	COARSE AGGREGATE FREE WATER	COARSE AGGREGATE ABSORPTION	FIELD TESTS TIME CHECKED
1	53	5 yds.	12:00	3500	1700	1400	560	20.0		5.0	0.8	1.0	2.7	12:00
2	58	5 yds.	12:40	3500	1700	1400	560	20.0		5.0	0.8	1.0	2.7	12:00
3	58	2 yds.	3:05	3500	1700	1400	560	40.		5.0	0.8	1.0	2.7	12:00

NOTE: The Transit Mix Co. has been informed that the mix on this project is to be Class "B-3500 P.S.I." as prescribed by Black & Veatch for the Water Treatment Plant, Project. Contractor has been supplied with copies of this mix, and all concrete in the future will be so designed.

THEORETICAL BATCH WEIGHTS (DRY)

	TYPE	AMOUNT
FINE AGG:	Keeler Sand	1700
COARSE AGG:	Kaline Stone	1400
CEMENT:	Monarch	560
SPECIAL:	City Water	20 Gals.
ADMIX.:		

TIME INSPECTION AT PLANT

START 12:00 Noon STOP 3:00 P.M.

TOTAL CU. YDS. CHECKED 12

TOTAL CU. YDS. THIS PROJECT 12

COMPRESSION TEST DATA

TIME TAKEN

SLUMP:

TEST SPECIMEN NO.

YIELD:

POUR LOCATION:

ENTRAINED AIR:

PER INSPECTOR:

JAMES E. MYERS LICENSED ENGINEER

PLANT INSPECTOR

REMARKS:

CC: 2-Eby Constr.
2-Weller
1-Knoll
1-Ness
1

FILE

PAGE OF

FORM 507

MARTIN K. EBY CONSTRUCTION CO., INC.

610 NORTH MAIN · AMHERST 7-1371 · WICHITA 5, KANSAS

March 2, 1955

Black & Veatch
4706 Broadway
Kansas City, Missouri

Re: Overhead Crossings,
Contract No. 5,
Wichita, Kansas.

Gentlemen:

We enclose four (4) copies of design mix of concrete as prepared by the Wichita Chemical & Testing Laboratory for the above referenced project.

Also included is four (4) copies of the sieve analysis for the coarse and fine aggregate being used by the Walt Keeler Company in this concrete. We propose to use the same concrete design mix as is being used on the Water Treatment Plant addition here in Wichita, which concrete is also being furnished by the Walt Keeler Company.

These are for your approval.

Sincerely yours,

MARTIN K. EBY CONSTRUCTION CO., INC.

BY I. S. Barnett
I. S. Barnett

ISB/bk
Enclosures
cc Mr. Knoll
file
B. Dopps

WE TEST EVERYTHING — UNDER THE SUN

CC: 6-Eby Constr. Co.

Wichita CHEMICAL AND TESTING Laboratories

ANALYTICAL CHEMISTS · BACTERIOLOGISTS · TESTING ENGINEERS

RESEARCH ON MANUFACTURING PROBLEMS

File:1

1428 N. MOSLEY AVE. PHONE HOBART 4-3948

WICHITA 4, KANSAS

Date March 1, 1955 (November 30, 1953)

Aggr. Report No. DOT - A

REPORT ON CONCRETE AGGREGATE — LAB NUMBER 803062 - b (Refer to this Number)

Contractor: Martin K. Eby Construction Co. — Project: City of Wichita Overhead Crossings Water & Transmission Line Contract No. 5 - Project 21-55

610 North Main, Wichita, Kansas

Engineer: — Location: Wichita

Sample taken by: ~~Lab. Inspector from batch Plant Stockpile~~ — Time: 3:00 P.M. — Date: 11-5-53

Car or sample number	GRADING, Percent Retained sieve number 1"	3/4"	1/2"	3/8"	#4	#8	#16	#50	#100	% Ret. #100	IMPURITIES Organic Matter	% Silt P-200	Clay Lumps, Shale	Unsound Particles	Coal Sticks, Etc.
			ASTM D75 & C136								ASTM	ASTM	ASTM	ASTM	ASTM
COARSE AGGREGATE:											C40	C117	C142 AASHO	C88 *	C123
Moline Stone (1")	1.6	32.1	67.2	79.4 (F.M. - 6.86)	90.1	93.8	96.8	98.0	98.2	-	1.2	T10 0	-	0	
Specs. (par. 3-4) (Page 2-3) & ASTM C33-52T	0-10	15-50	40-75	-	90-100	-					1.5	6.25 & 1.0	12% 5cy	1.0	
FINE AGGREGATE:															
Keeler Concrete Sand	0	0	0	0.4 (F.M. - 2.80)	2.3	9.5	27.2	87.5	97.6		O.K. No.1	1.2	0.2	-	0
Specs. (Par. 2-3) (Pg. 2-2) & ASTM C33-52T	-	-	-	- (Minimum F.M. 2.50)	0-5	-	-	70-88	92-98		Type I	3.0	1.0	-	0.5

ADDITIONAL AGGREGATE DATA — ASTM C127-128

	Bulk Spec. Grav.	Sat'd. Spec. Grav.	App. Spec. Grav.	Absorption
1" Stone	2.44	2.52	2.71	2.7%
Keeler Sand	2.55	2.58	2.60	0.9%

Remarks: Sources: Moline Stone - Concrete Materials & Construction Co. - Moline, Kansas
Concrete Sand - The Walt Keeler Concrete Co. - Wichita, Kansas

* Reported as separate analysis.

AGGREGATE MEET REQUIREMENTS ABOVE

(Soundness Tests & Mortar Strength will follow when completed.)

WICHITA CHEMICAL & TESTING LABORATORIES

By R. L. Phillips

JAMES E. MYERS LICENSED PROFESSIONAL ENGINEER

WE TEST EVERYTHING — UNDER THE SUN

CC: 6-Eby Constr. Co.

LAB NUMBER 803002 - a
(Refer to this Number)

Wichita CHEMICAL AND TESTING Laboratories

WICHITA 4, KANSAS

File: 1

Actual Lab. Batch Mix

PRELIMINARY DESIGN DATA
Identical Mix to Contract 13 to be used on this project.

DAILY LOG OF CONCRETING OPERATION

Type Mix: 6.5 SACK- CLASS "B" MIX
Date March 1, 1955 (December 8, 1953)
Weather - - -
Class of Concrete Class B - 3500 P.S.I. @ 28 da
Slump Ordered 3 inch max.
Nominal Mix 1: 2.09 : 2.76
Maximum Water 5.5 gal./sk. cmt.
Batch Wts., Lbs.
Dry Basis: Cmt. 611 FA 1272 CA 1685

Project Overhead Crossings, Water Transmission Contract No. 5, City of Wichita Line
Contractor Martin K. Eby Construction Co.
Structure Waterworks Project 21-55
Black & Veatch, Consulting Engineers
Fine Aggregate (FA) Walt Kesler Concrete Sand
Coarse Aggregate (CA) Medina Limestone 1"

COMPUTATION FOR ACTUAL BATCH PROPORTIONS—WEIGHTS MOIST AS USED

TIME MOISTURE TEST MADE

	No. 1 per CUB YARD			No. 2 per ONE SACK		
	% Moisture	Free Water	Actual Batch Wts.	% Moisture	Free Water	Actual
FA	0	None lb.	1272 lb.	0	None lb.	195 lb.
CA	0	None lb.	1685 lb.	0	None lb.	259 lb.
Total Free water	- - -	- - - lb.	- - - gal.		- - - lb.	- - - gal.
Added at Mixer	262	lb. 31.5	gal.		40.3 lb.	4.85 gal.
Total Water	262	lb. 31.5	gal.		40.3 lb.	4.85 gal.
Gal./sk. cement		4.85				4.85
Slump		3 inch			(454 lbs. agg/sk)	3 inch
Entrained air:		4.1%				4.1%

Test Cylinder Nos:
For 7-day tests DWP-1,3,5,7
For 28-day tests DWP-2,4,6,8

YIELD CALCULATIONS

Wt./cu. ft.	Wt./cu. yd.	Vol.	Yield	Actual Cement Content
141.0 lb.	3690 lbs.	27.0 cf.	100.0%	6.5 sks/yd.

Sieve Analysis of Aggregates

Sieve	Coarse	Fine
Opening	% Ret.	% Ret.
2 inch		
1½ inch	0	
1 inch	1.6	
¾ inch	32.1	0
½ inch	67.2	0
3/8 inch	79.4	0.4
No. 4	90.2	2.9
No. 8	93.8	9.5
No. 10	-	-
No. 16	96.8	27.2
No. 20		
No. 30	97.9	55.6
No. 40	-	-
No. 50	98.0	87.5
No. 100	98.2	97.6
F M	6.86	2.80

Concreting Started ..... Finished .....
No. Batches Delivered ..... Batch Vol. .....
Ticket Nos. .....
Concrete laid ..... cu. yds.
Cement Used 6.5 per yd. sks. Brand Monarch
ADMIX: "Amber-Air" (NVR) sks. Brand National Sales*
Remarks: See Lab. No. 611043 for aggregate tests. Admix: 1/2 oz. per sack. Mix very workable. Aggregate Ratio by wt: 43% Sand, 57% Rock
*Mfgr. - Wichita, Kansas

WICHITA CHEMICAL & TESTING LABORATORIES
1428 N. MOSLEY AVE. PHONE HOBART 4-3948

% P200 WASH MIX MEETS PROPORTION REQUIREMENTS.
Coarse: 1.2
Fine: 1.2

By R. E. Phillips
R. E. Phillips

FORM 505

REGISTERED PROFESSIONAL ENGINEER STATE OF KANSAS