2135 South 116th Street
West Allis, WI 53227
414-321-8378

REPORT: **Aggregate Sieve Analysis Test Report**

LAB NO: 16-4401-1
Test Method: See Below

Project:	CTH M - CTH E - CTH GG, Union Pacific Railroad Bridge SP# 6723-00-71	Report Date:	09/07/2016
		Date Sampled:	09/06/2016
Location:		Sampled By:	Travis Kurey
Client:	Augelli Concrete & Excavating, LLC	By Order Of:	Client
Acct. No:	AUGELLI	Order Number:	
Client PO:		Report No:	16-4401-1
		Project No:	5174

Field Number: 1-1

TEST RESULTS

Attached are Sieve Analysis laboratory test report(s) for an aggregate sample(s).

Test Methods (If Applicable):ASTM C136, AASHTO T27

Orig: Augelli Concrete & Excavating, LLC
(Richland Center, WI) Attn: Tony Augelli
(1-ec copy)
1-ec Strand Assoc. Attn: Mr. Trenton Diehl

Respectfully Submitted,
GeoTest, Inc.

Andrew Davis, Operations Manager

WisDOT QUALITY MANAGEMENT PROGRAM
CONCRETE AGGREGATE SIEVE ANALYSIS

Project: CTH - M,D, GG Bridge

State No.: 6723-00-71

Sampled By: Travis Kurey (Full Name) DATE: 9/6/2016

SAMPLED FROM:
☐ BELT ☑ STOCKPILE ☐ BIN ☐ TRUCK

SAMPLED AT:
☐ PRODUCTION SITE
Carew
Waupun
☑ BATCH SITE

Mix ID: 4020420026 Ticket No.: 527776
Time: 9:16 Load (CY): 10

BATCH WEIGHTS (SSD)

Fine Aggregate	13970	Cement	4490	
#1 Stone	11230	Fly Ash	1120	
#2 Stone	6990	Slag	0	
Water	209 gal.	A. E.	79	oz.
Other	0	W. R.	114	oz.
Pea Gravel	0	Other		oz.

Fine Aggregate

Lot #: 1-1 **Sample No.** 16-4401 -1

Moisture Content

Wgt. Of Sample (Moist)	576
Wgt. Of Sample (Dry)	558.9
Moisture Loss	17.1
% Moisture	3.1%

Washed? ☑ Yes Washed Wgt. 556.3

Sieve	Wgt. Retained	% Retained	% Passing	Spec.
3/8" (9.5mm)	0	0	100	100
#4 (4.75mm)	3.8	1	99	90-100
#8 (2.36mm)	94.6	17	83	
#16 (1.18mm)	178.8	32	68	45-85
#30 (0.60mm)	266.9	48	52	
#50 (0.30mm)	430.1	77	23	5-30
#100 (0.150mm)	544.8	97	3	0-10
F.M.		2.72		
#200 (0.075mm)	554.8	99.3	0.7	0-3.5
Pan	555.2			

Tested By: David Hassman Reviewed By: Andy Davis

No. 2 Stone

Lot #: 1-1 **Sample No.** 16-4401 -3

Moisture Content

Wgt. Of Sample (Moist)	15886.8
Wgt. Of Sample (Dry)	15714.6
Moisture Loss	172.2
% Moisture	1.1%

Washed? ☑ Yes Washed Wgt. 15551.5

☑ Crushed Stone ☐ Crushed Gravel

Sieve	Wgt. Retained	% Retained	% Passing	Spec.
2" (50 mm)	0	0	100	100
1.5" (37.5 mm)	274.7	2	98	90-100
1" (25 mm)	7119.7	45	55	20-55
3/4" (19mm)	13427	85	15	0-15
1/2" (12.5mm)	14992.2	95	5	
3/8" (9.5mm)	15137.2	96	4	0-5
#4 (4.75mm)	15262.1	97	3	
#8 (2.36mm)	15307.8	97	3	
#16 (1.18mm)	15337.2	98	2	
#30 (0.60mm)	15365.2	98	2	
#50 (0.30mm)	15402.5	98	2	
#100 (0.150mm)	15456.6	98	2	
#200 (0.075mm)	15519.5	98.8	1.2	0-1.5
Pan	15535.5			

Tested By: David Hassman Reviewed By: Andy Davis

No. 1 Stone

Lot #: 1-1 **Sample No.** 16-4401 -2

Moisture Content

Wgt. Of Sample (Moist)	6192.6
Wgt. Of Sample (Dry)	6000.7
Moisture Loss	191.9
% Moisture	3.2%

Washed? ☑ Yes Washed Wgt. 5928.7

☑ Crushed Stone ☐ Crushed Gravel

Sieve	Wgt. Retained	% Retained	% Passing	Spec.
1.5" (37.5 mm)	0	0	100	
1" (25 mm)	0	0	100	100
3/4" (19mm)	155.1	3	97	90-100
1/2" (12.5mm)	2531.5	42	58	
3/8" (9.5mm)	3990.5	67	33	20-55
#4 (4.75mm)	5761.7	96	4	0-10
#8 (2.36mm)	5844.2	97	3	0-5
#16 (1.18mm)	5960.7	99	1	
#30 (0.60mm)	5867.6	98	2	
#50 (0.30mm)	5872.4	98	2	
#100 (0.150mm)	5885.8	98	2	
#200 (0.075mm)	5906.9	98.4	1.6	0-1.5
Pan	5911.3			

Tested By: David Hassman Reviewed By: Andy Davis

GeoTest
2135 S. 116th Street
West Allis, WI 53227
414.321.8378/414.321/3859

Combined Concrete Aggregate Gradation

Project:	CTH - M,D, GG Bridge	Fine Aggregate Source:	
State No.:	6723-00-71	Coarse Aggregate Source:	
Contractor:	Autelli Concrete	Concrete Batch Site:	Carew - Waupun
Technician:	Travis Kurey	Sample No.:	16-4401 1-1
Concrete Mix ID:	4020420026	Date Sampled:	9/6/2016

Aggregate Batch Proportions

Fine Aggregate	43%	(A)
Coarse Aggregate # 1	35%	(B)
Coarse Aggregate # 2	22%	(C)
Total	100%	

Aggregate Specification

WisDOT Fine Aggregate

WisDOT Coarse Aggregate #1 ☑ Crushed Stone ☐ Crushed Gravel

WisDOT Coarse Aggregate #2 ☑ Crushed Stone ☐ Crushed Gravel

Individual Sieve Analysis Data				Calculated Combined Gradation			
Sieve Size	(E) C.A. #1	(D) C.A. #2	(G) F.A.	C.A. #1 (ExB)	C.A. #2 (DxC)	F.A. (GxA)	Total (G)
2" (50 mm)	100.0	100.0	100.0	35.0	22.0	43.0	100
1.5" (37.5 mm)	100.0	98.3	100.0	35.0	21.6	43.0	100
1" (25 mm)	100.0	54.7	100.0	35.0	12.0	43.0	90
3/4" (19 mm)	97.4	14.6	100.0	34.1	3.2	43.0	80
1/2" (12.7 mm)	57.8	4.6	100.0	20.2	1.0	43.0	64
3/8" (9.5 mm)	33.5	3.7	100.0	11.7	0.8	43.0	56
#4 (4.75 mm)	4.0	2.9	99.3	1.4	0.6	42.7	45
#8 (2.36 mm)	2.6	2.6	83.1	0.9	0.6	35.7	37
#16 (1.16 mm)	0.7	2.4	68.0	0.2	0.5	29.2	30
#30 (0.6 mm)	2.2	2.2	52.2	0.8	0.5	22.5	24
#50 (0.3 mm)	2.1	2.0	23.0	0.7	0.4	9.9	11
#100 (0.15 mm)	1.9	1.6	2.5	0.7	0.4	1.1	2
#200 (0.075 mm)	1.6	1.2	0.7	0.5	0.3	0.3	1.1

Test Result and Combined Specification Limits			WisDOT Bridge	WisDOT Bridge	WisDOT Pvmt & Anc.	WisDOT Pvmt & Anc.
Sieve Size	Combined Gradation		Limits (Stone)	Limits (Gravel)	Limits (Stone)	Limits (Gravel)
2" (50 mm)	100		100	100	100	100
1.5" (37.5 mm)	100					
1" (25 mm)	90		<89	<89	<89 (Pvmt only)	<89 (Pvmt only)
3/4" (19 mm)	80					
1/2" (12.7 mm)	64					
3/8" (9.5 mm)	56					
#4 (4.75 mm)	45		<47	<42	<47	<42
#8 (2.36 mm)	37					
#16 (1.16 mm)	30					
#30 (0.6 mm)	24					
#50 (0.3 mm)	11					
#100 (0.15 mm)	2					
#200 (0.075 mm)	1.1		<2.3	<2.3	<2.3	<2.3

Reviewed By: J. Anderson

Rev. # : 1

Rev. Date: 3/28/12

GeoTest

2135 S. 116th St. West Allis, WI 53227

414.321.8378/414.321.8359

WisDOT Concrete Aggregate Sieve Analysis Lab Form

GeoTest Client: Augelli Concrete — GeoTest Job #: 5174

Project: CTH-M, E, GG Bridge
State No.: 6723-00-71
Sampled By: Travis Kurey (Full Name) — Date: 9-6-18

SAMPLED FROM: ☐ BELT ☒ STOCKPILE ☐ BIN ☐ TRUCK

SAMPLED AT: ☐ PRODUCTION SITE ☒ BATCH SITE — Carew - Waupun

Mix ID: 402042002 — Ticket No.: 527776
Time: 9:16 — Load (CY): 10

BATCH WEIGHTS (SSD)

Fine Aggregate	13970	Cement	4490
#1 Stone	11230	Fly Ash	1120
#2 Stone	6990	Slag	
Water	209 gal.	A. E.	79 oz.
Other		W. R	114 oz.
Pea Gravel		Other	oz.

Fine Aggregate

Lot #: 1-7 — Sample No. 16-4401-1

Moisture Content

Wgt. Of Sample (Moist)	576.0
Wgt. Of Sample (Dry)	558.9
Moisture Loss	17.1
% Moisture	3.1%

Washed? ☒ Yes — Washed Wgt. 556.3

Sieve	Wgt. Retained	% Retained	% Passing	Spec.
3/8" (9.5mm)	0	0	100	100
#4 (4.75mm)	3.8		99	90-100
#8 (2.36mm)	94.6		83	
#16 (1.18mm)	178.8		68	45-85
#30 (0.60mm)	266.9		52	
#50 (0.30mm)	430.1		25	5-30
#100 (0.150mm)	544.7		3	0-10
F.M.		2.70		
#200 (0.075mm)	554.8		0.7	0-3.5
Pan	555.2			

Tested By: Dave Hassman — Reviewed By:

No. 2 Stone

Lot #: 1-1 — Sample No. 16-4401-3

Moisture Content

Wgt. Of Sample (Moist)	15886.8
Wgt. Of Sample (Dry)	15714.6
Moisture Loss	172.2
% Moisture	1.1%

Washed? ☒ Yes ☒ Crushed Stone ☐ Crushed Gravel — Washed Wgt. 15551.5

Sieve	Wgt. Retained	% Retained	% Passing	Spec.
2" (50 mm)	0	0	100	100
1.5" (37.5 mm)	274.7		98	90-100
1" (25 mm)	7119.7		55	20-55
3/4" (19mm)	13427.0		15	0-15
1/2" (12.5mm)	14992.2		5	
3/8" (9.5mm)	15137.2		4	0-5
#4 (4.75mm)	15262.1		3	
#8 (2.36mm)	15307.8		3	
#16 (1.18mm)	15337.2		2	
#30 (0.60mm)	15365.2		2	
#50 (0.30mm)	15402.5		2	
#100 (0.150mm)	15456.6		2	
#200 (0.075mm)	15519.5		1.2	0-1.5
Pan	15535.5			

Tested By: Dave Hassman — Reviewed By:

No. 1 Stone

Lot #: 1-1 — Sample No. 16-4401-2

Moisture Content

Wgt. Of Sample (Moist)	6192.6
Wgt. Of Sample (Dry)	6000.7
Moisture Loss	191.9
% Moisture	3.2%

Washed? ☒ Yes ☒ Crushed Stone ☐ Crushed Gravel — Washed Wgt. 5928.7

Sieve	Wgt. Retained	% Retained	% Passing	Spec.
	0	0	100	
	0	0	100	
1" (25 mm)	0	0	100	100
3/4" (19mm)	156.1		97	90-100
1/2" (12.5mm)	2531.5		58	
3/8" (9.5mm)	3990.5		33	20-55
#4 (4.75mm)	5761.7		4	0-10
#8 (2.36mm)	5844.2		3	0-5
#16 (1.18mm)	5860.7		2	
#30 (0.60mm)	5867.6		2	
#50 (0.30mm)	5872.4		2	
#100 (0.150mm)	5885.8		2	
#200 (0.075mm)	5906.9		1.6	0-1.5
Pan	5911.3			

Tested By: Dave Hassman — Reviewed By:

7213.4

8501.2

Form Reviewed By: G. Schmidt
Rev #2
Rev. Date: 02/03/2016

GeoTest