

CONCRETE COMPRESSIVE STRENGTH TEST REPORT

Terracon

Report Number: 20181040.0123
Service Date: 05/16/19
Report Date: 06/17/19 Revision 2 - 28-day results
Task: Concrete

1901 Sharp Point Dr, Ste C
Fort Collins, CO 80525-4429
970-484-0359

Client

Signature Construction LLC
Attn: Matt Boyle
720 3rd Ave SW
Carmel, IN 46032-2036

Project

Lakeview on the Rise Apartment Development
6740 South College Avenue
Fort Collins, CO

Project Number: 20181040

Material Information

Specified Strength: 4,500 psi @ 28 days

Mix ID: CD4575
Supplier: Martin Marietta Materials
Batch Time: 0712 Plant:
Truck No.: 125 Ticket No.: 83453068

Sample Information

Sample Date: 05/16/19 Sample Time: 0820
Sampled By: Quinn Zamora
Weather Conditions: Overcast
Accumulative Yards: 11/11 Batch Size (cy): 11
Placement Method: Chute
Water Added Before (gal):
Water Added After (gal):
Sample Location: Far east corner wall bottom 2'
Placement Location: Stormwater Inlet A1A

Field Test Data

Test	Result	Specification
Slump (in):	3	3.0 - 5.0
Air Content (%):	5.0	5.0 - 8.0
Concrete Temp. (F):	66	
Ambient Temp. (F):	61	
Plastic Unit Wt. (pcf):	141.4	
Yield (Cu. Yds.):		

Laboratory Test Data

Set No.	Specimen ID	Avg Diam. (in)	Area (sq in)	Date Received	Weight (lbs)	Date Tested	Age at Test (days)	Maximum Load (lbs)	Compressive Strength (psi)	Fracture Type	Tested By
2	1	4.00	12.57	05/17/19	8.32	05/19/19	3	40,500	3,220	2	
2	2	4.00	12.57	05/17/19	8.26	05/23/19	7	51,140	4,070	3	
2	3	4.00	12.57	05/17/19	8.34	06/13/19	28	57,020	4,540	2	
2	4	4.00	12.57	05/17/19	8.40	06/13/19	28	57,830	4,600	3	
2	5	4.00	12.57	05/17/19	8.36	06/13/19	28	60,760	4,840	3	
Average (28 days)									4,660		

Initial Cure: Outside

Final Cure: Moist Room

Comments: Average compressive strength of 28 day cylinders complies with the specified strength.


Samples Made By: Terracon
Services:

Terracon Rep.: Quinn Zamora
Reported To: Taylor w/ Signature Construction
Contractor: Connell

Report Distribution:

(1) Signature Construction LLC, Matt Boyle (1) Connell Resources Inc, Jeff Laugel
(1) Signature Construction LLC, Taylor Elizalde (1) Signature Construction LLC, Trevor Rine
(1) Terracon Consultants, Inc., Eric Bernhardt

Reviewed By:


Craig L. Nelson
Project Manager

Test Methods: ASTM C 31, ASTM C39, ASTM C138, ASTM C143, ASTM C172, ASTM C231, ASTM C1064

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual sample tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

Bituminous Mixture Test Results

1901 Sharp Point Drive
 Fort Collins, Colorado 80525
 Telephone No.: (970) 658 - 4405
 Fax No.: (970) 484 - 0454

Client Name: Signature Construction LLC

Address: 720 3rd Ave SW
 Camel, IN 46032-2036

Attn.: Matt Boyle

Project Name: Lakeview on the Rise Apartment Development

Location: Debra Drive and Lorien Lane
 Intersection Northbound Debra
 Lift Designation: Bottom

Project No.: 20181040

Mix Source: Connell

Plant/Pit: Timnath connell asphalt plant **Report#** .0287

Mix Type: 20150 S75PG64-22L

Sampled By: arimer Count

Truck/Ticket No.: 170008 4505

Reviewed By: Craig Nelson

Date of Report: 8/12/19

Date: 8/6/19

Time: 1:45 PM

Department Manager

Test Procedures:

 AASHTO T 164, Quantitative Extraction of Bitumen from Bituminous Paving Mixtures, Method B
 X CP L5120, Determination of the Asphalt Binder Content of Bituminous Mixtures by the Ignition Metho Method A

Laboratory Testing Information

0.00 Calibration factor No Temp. compensation factor used 0.00 Moisture content, % 538 Test temp, C
2245 Sample Mass, gm Yes AC measured on external scale

Corrected Bituminous Content, %
 AASHTO T 164 **4.98** Ignition Method
 Specification limits: 5.10 +/- 0.3
 Sieve Analysis of: X Ignited Mineral Agg.
 Extracted Agg.
 Cold Belt Combined

Physical Properties of Bituminous Mixtures:
 AASHTO T 245 @ Blows per Side
 or CP L5106 (Hveem)
 or CP L5115 N(design) gyrations
 Avg. dia. of mold, mm t. ht, mm:

Sieve Size	Accumulative % Passing	Specification			
		Job Mix		Master Band	
		Min.	Max.	Min.	Max.
1-1/2"					
1"					
3/4"	100	100	100	100	
1/2"	90	90	100	90-100	
3/8"	79	75	87	---	
1/4"					
#4	64	58	68	---	
#8	49	44	54	28-58	
#10					
#16	35			---	
#30	24	20	28	---	
#40					
#50	15			---	
#80					
#100	9			---	
#200	5.9	4.2	8.2	2.0-10.0	

Property	CDOT Standard	Avg. of Specimens	Specification
Bulk Specific Gravity	CP 44		
Bulk Density (pcf)	CP 44		
Theoretical Max. Specific Gravity	CP 51	2.423	
Theoretical Density (pcf)	CP 51	151.2	
Air Voids (%)	CP 44		
Voids Filled (%)	AI SP-2		
Voids Min. Aggregate (%)	T 269		
Stability (pounds)	T 245		
Flow (1/100 inch)	T 245		
Temperature of mix sampled (F)			
Ambient Temp. @ sampling (F)			
Hveem Stability	CP L5106		
Lottman Test:	CP L5109		
Conditioned/Dry Strength, psi			
Tensile Strength Ratio (TSR), %			
Fine Aggregate Angularity, %	T 304		

Comments: () Denotes outside specification limits shown above.

Sampled according to CP55-06, Method B

Distribution: Client