



Construction Materials Testing  
**Concrete Testing**  
**Echtle Tract Unit 2**  
**San Antonio, Texas**

**InTEC Project No. S222168-5**  
August 20, 2023

**Starlight Homes Texas, LLC**  
17319 San Pedro Avenue, Suite 140  
San Antonio, Texas 78232



**Integrated Testing and Engineering Company of San Antonio, L.P.**  
Geotechnical & Environmental Engineering • Construction Services • Geologic Assessment

August 20, 2023

Starlight Homes of Texas, L.L.C.  
17319 San Pedro Avenue, Suite 140  
San Antonio, Texas 78232

**Attention: Mr. Blake Harrington**

Re: Concrete Tests  
**Echtle Tract Unit 2**  
San Antonio, Texas

**InTEC Project #: S222182-5**

Gentlemen:

Integrated Testing and Engineering Company of San Antonio, L.P. (InTEC) performed concrete field and compressive strength tests at the above referenced project site between March 21, 2023 and May 12, 2023

Field concrete tests were performed on an "on call" basis by the contractor. Full time observation of concrete placement was not performed. Concrete field and compressive strength test results for the above referenced project are presented for your review.

We appreciate and wish to thank you for the opportunity to be of service to you on this project. If we can be of additional assistance, or if you have any questions, please call us.

Sincerely,

**InTEC of San Antonio**

Murali Subramaniam, Ph. D., P.E.  
Vice President



08/20/2023



# Compressive Strength of Concrete

Test Method: ASTM C 39

Report Date: 08/20/2023

Sample: 22069

## InTEC of San Antonio

12028 Radium  
San Antonio, TX 78216  
Phone: 210-525-9033

## Client:

Starlight Homes of Texas, L.L.C.  
17319 San Pedro Avenue, Suite 140  
San Antonio, TX 78232

## Project:

S222182  
Echtle Tract Unit 2  
29.351987902789354, -98.76520610937705  
San Antonio, TX

### Sample Details

Set #:	1	Technician:	Foley, Ryan	Batched:	09:58 CDT
Specimen Size:	6" X 12"	Cast By:	Foley, Ryan	Sampled:	10:10 CDT
Specimens In Set:	4	Date Cast:	03/21/23	Cast:	10:15 CDT
Truck / Ticket #:	686 / 20183951	Sampled From:	Chute	Truck Empty:	10:50 CDT
Contractor:		Placement Method:	Chute	Placement Time:	52 (min)

### Location

Placement Location:	Drain - Top Deck
Location Details:	Drain J1 Top Deck STA 2+74 to 2+68
Sample Location / Notes:	Top Deck

### Batch Log

Supplier:	Vulcan Materials
On-Site Admixtures:	None

### Specifications

Strength:	3000 (psi)
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### Field Measurements

<b>Weather:</b>	<b>Slump (in):</b>	4-3/4 (ASTM C143)	<b>Plastic Unit Weight:</b>
<b>Air Temperature (F):</b>	<b>Concrete Temp (F):</b>	68 (ASTM C1064)	<b>Air Content:</b>
			<b>Load Volume:</b> 10.00 (yd³)

### Lab Test Results

Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in <sup>2</sup> )	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
1-1	7	03/28/23	1 / 6	6.00	28.27	96,000	3,400	5		U
1-2	7	03/28/23	1 / 6	6.00	28.27	100,000	3,540	2		U
1-3	28	04/18/23	1 / 27	6.00	28.27	120,000	4,250	3		U
1-4	28	04/18/23	1 / 27	6.00	28.27	118,000	4,170	5		U

Test Age Average Strengths (psi): 7 Day - 3470, 28 Day - 4210

### Capping Methods

Tested By: Alex Martinez (1,2,3,4)	U: Unbonded Caps (ASTM C1231)
Checked In : 03/22/2023 (1,2,3,4)	



TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6



# Compressive Strength of Concrete

Test Method: ASTM C 39

Report Date: 08/20/2023

Sample: 22157

## InTEC of San Antonio

12028 Radium  
San Antonio, TX 78216  
Phone: 210-525-9033

## Client:

Starlight Homes of Texas, L.L.C.  
17319 San Pedro Avenue, Suite 140  
San Antonio, TX 78232

## Project:

S222182  
Echtle Tract Unit 2  
29.351987902789354, -98.76520610937705  
San Antonio, TX

### Sample Details

Set #:	2	Technician:	Castellanos, Arturo	Batched:	12:50 CDT
Specimen Size:	6" X 12"	Cast By:	Castellanos, Arturo	Sampled:	14:35 CDT
Specimens In Set:	4	Date Cast:	03/29/23	Cast:	14:45 CDT
Truck / Ticket #:	680 / 20185692	Sampled From:	Chute	Truck Empty:	14:55 CDT
Contractor:	VK KNOWLTON	Placement Method:	Chute	Placement Time:	125 (min)

### Location

Placement Location:	Drain - Footing
Location Details:	DRAIN "A3" FOOTING ON (DOWN STREAM STA 2+83.78)AND (STA 3+51.78UP STREAM) HEADWALLS
Sample Location / Notes:	DRAIN A3

### Batch Log

Supplier:	Vulcan Materials	Strength:	3000 (psi)
On-Site Admixtures:	None		

### Field Measurements

Weather:	Cloudy	Slump (in):	6 (ASTM C143)	Plastic Unit Weight:	
Air Temperature (F):	64	Concrete Temp (F):	67 (ASTM C1064)	Air Content:	
				Load Volume:	10.00 (yd <sup>3</sup> )

### Lab Test Results

Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in <sup>2</sup> )	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
2-1	7	04/05/23	1 / 6	6.00	28.27	105,000	3,710	5		U
2-2	7	04/05/23	1 / 6	6.00	28.27	100,000	3,540	5		U
2-3	28	04/26/23	1 / 27	6.00	28.27	124,000	4,390	3		U
2-4	28	04/26/23	1 / 27	6.00	28.27	125,000	4,420	2		U

Test Age Average Strengths (psi): 7 Day - 3630, 28 Day - 4400

### Capping Methods

Tested By: Alex Martinez (1,2,3,4)	U: Unbonded Caps (ASTM C1231)
Checked In : 03/30/2023 (1,2,3,4)	



TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6



# Compressive Strength of Concrete

Test Method: ASTM C 39

Report Date: 08/20/2023

Sample: 22215

InTEC of San Antonio  
12028 Radium  
San Antonio, TX 78216  
Phone: 210-525-9033

Client:  
Starlight Homes of Texas, L.L.C.  
17319 San Pedro Avenue, Suite 140  
San Antonio, TX 78232

Project:  
S222182  
Echtle Tract Unit 2  
29.351987902789354, -98.76520610937705  
San Antonio, TX

Sample Details										
Set #:	3	Technician:	Foley, Ryan	Batched:	10:15 CDT					
Specimen Size:	6" X 12"	Cast By:	Foley, Ryan	Sampled:	11:20 CDT					
Specimens In Set:	4	Date Cast:	04/04/23	Cast:	11:25 CDT					
Truck / Ticket #:	667 / 1547	Sampled From:	Chute	Truck Empty:	11:45 CDT					
Contractor:		Placement Method:	Chute	Placement Time:	90 (min)					
Location										
Placement Location:	Drain - Walls									
Location Details:	Drain A3 Headwall STA 2+83 to 2+53 Upstream and Downstream									
Sample Location / Notes:	Drain A3 headwall									
Batch Log						Specifications				
Supplier:	Vulcan Materials					Strength:	3600 (psi)			
On-Site Admixtures:	None									
Field Measurements										
Weather:	Slump (in):		4 (ASTM C143)		Plastic Unit Weight:					
Air Temperature (F):	Concrete Temp (F):		86 (ASTM C1064)		Air Content:					
					Load Volume: 10.00 (yd³)					
Lab Test Results										
Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in²)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
3-1	7	04/11/23	1 / 6	6.00	28.27	115,000	4,070	5		U
3-2	7	04/11/23	1 / 6	6.00	28.27	116,000	4,100	6		U
3-3	28	05/02/23	1 / 27	6.00	28.27	120,000	4,250	5		U
3-4	28	05/02/23	1 / 27	6.00	28.27	125,000	4,420	2		U
Test Age Average Strengths (psi): 7 Day - 4090, 28 Day - 4330										
								Capping Methods		
Tested By: Alex Martinez (1,2,3,4)								U: Unbonded Caps (ASTM C1231)		
Checked In : 04/05/2023 (1,2,3,4)										



TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6



# Compressive Strength of Concrete

Test Method: ASTM C 39

Report Date: 08/20/2023

Sample: 22328

## InTEC of San Antonio

12028 Radium  
San Antonio, TX 78216  
Phone: 210-525-9033

## Client:

Starlight Homes of Texas, L.L.C.  
17319 San Pedro Avenue, Suite 140  
San Antonio, TX 78232

## Project:

S222182  
Echtle Tract Unit 2  
29.351987902789354, -98.76520610937705  
San Antonio, TX

### Sample Details

Set #:	4	Technician:	Castellanos, Arturo	Batched:	13:00 CDT
Specimen Size:	6" X 12"	Cast By:	Castellanos, Arturo	Sampled:	13:55 CDT
Specimens In Set:	4	Date Cast:	04/14/23	Cast:	14:10 CDT
Truck / Ticket #:	678 / 3594	Sampled From:	Chute	Truck Empty:	14:10 CDT
Contractor:	VK KNOWLTON	Placement Method:	Bucket	Placement Time:	70 (min)

### Location

Placement Location:	Drain - Rip Rap
Location Details:	UPSTREAM STA3+51.78-3+61.78and DOWN STREAM STA2+72.78- 2+83.78. DRAIN A3
Sample Location / Notes:	DRAIN A3

### Batch Log

Supplier:	Vulcan Materials	Strength:	3000 (psi)
On-Site Admixtures:	None		

### Field Measurements

Weather:	Sunny	Slump (in):	3 (ASTM C143)	Plastic Unit Weight:	
Air Temperature (F):	74	Concrete Temp (F):	84 (ASTM C1064)	Air Content:	
				Load Volume:	10.00 (yd <sup>3</sup> )

### Lab Test Results

Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in <sup>2</sup> )	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
4-1	7	04/21/23	3 / 4	6.00	28.27	68,000	2,410	3		U
4-2	7	04/21/23	3 / 4	6.00	28.27	68,500	2,420	5		U
4-3	28	05/12/23	3 / 25	6.00	28.27	87,000	3,080	5		U
4-4	28	05/12/23	3 / 25	6.00	28.27	88,000	3,110	5		U

Test Age Average Strengths (psi): 7 Day - 2410, 28 Day - 3100

### Capping Methods

Tested By: Alex Martinez (1,2,3,4)	U: Unbonded Caps (ASTM C1231)
Checked In : 04/17/2023 (1,2,3,4)	



TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6