

August 2, 2022

Eduardo Olivarez, Chief Administrative Officer  
**Attn: Josefina Garces**  
County of Hidalgo Texas Health Department  
1304 S 25<sup>th</sup> Avenue  
Edinburg, Texas 78539

**RE: Professional Engineering Services for Construction Materials Testing  
(C-20-184-01-12) Work Authorization No. 2 ~ Construction Materials Testing  
Hidalgo County Health Dept. Testing/Bio-Safety Laboratory  
PO #847843**

Dear Mr. Olivarez:

Attached for your review and approval is our invoice for services rendered under Work Authorization #2 during the month of July 2022 on the subject referenced project.

The following is attached:

- Invoice No. 20341

The following is a narrative of the progress for this period.

	<b>% Complete</b>
<b>Construction Materials Testing</b>	<b>32%</b>
<b><u>UPDATED:</u></b> B2Z continues to perform field testing with the use of the nuclear density gauge to measure compaction of Select Backfill Material.  B2Z continues to perform Concrete and Laboratory testing. Casting of concrete cylinders included Preparation / Hold / Cure and Compressive Strength testing.  B2Z performed inspection of the structural rebar reinforcing of the building pad and vertical panels.	

Should you have any questions regarding this submittal, please do not hesitate to call me at (956) 585-3773.

Sincerely,



Oliver Salgado, P.E.  
Project Manager  
B2Z Engineering, LLC



# Invoice

P.O. Box 2724  
McAllen, Tx. 78502  
(956) 585-3773

Date	Invoice #
8/2/2022	20341

Please send remittance with copy of invoice to:

Attn: Mrs. Aisha Gonzalez  
P.O. Box 2724  
McAllen, Tx. 78502

Bill To:

County of Hidalgo Texas Executive Office  
2818 S. Bus. Hwy. 281  
Edinburg, TX 78539

Project Info:

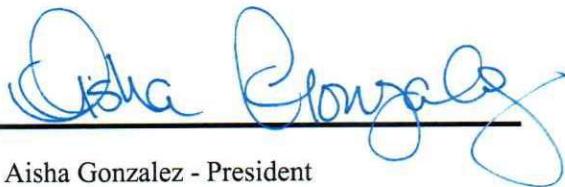
Hidalgo County Bio-Safety Lab Geo & CMT  
Contract # C-20-184-01-12  
Work Authorization #2  
PO# 847843  
B2Z JOB: 4124

**Billing Period**                      **July 2022**

Description	Contract	Previous Applications	Current Completed	Total Completed	% Complete
Construction Materials Testing	\$ 64,763.07	\$ 16,190.77	\$ 4,533.41	\$ 20,724.18	32.0%
<b>Total For This Billing Period</b>					<b>\$4,533.41</b>

Work Authorization ~ Summary

WA No.	WA Amount	Previously Inv.	Percent Complete	Remaining Balance
2	\$64,763.07	\$16,190.77	32.0%	\$44,038.89

  
Aisha Gonzalez - President

**Mission Office**

900 S Stewart Rd, Ste. 2  
Mission, TX 78572  
Phone: 956-585-3773

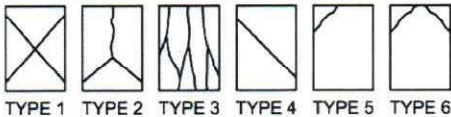
**Client:**

Hidalgo County  
100 North Closner  
Edinburg, TX 78539

**Project:**

4124  
Hidalgo County Health Dept Testing/Bio-Safety  
Laboratory  
Various  
Edinburg, TX

Sample Details										
<b>Set #:</b>	1	<b>Technician:</b>	Sergio Navarro	<b>Batched:</b>	09:50 CDT					
<b>Specimen Size:</b>	4 x 8 Cast Cylinder	<b>Cast By:</b>	Sergio Navarro	<b>Sampled:</b>	10:35 CDT					
<b>Specimens In Set:</b>	6	<b>Date Cast:</b>	06/09/22	<b>Cast:</b>	10:42 CDT					
<b>Truck / Ticket #:</b>	7164 / 2055840	<b>Sampled From:</b>	Chute	<b>Truck Empty:</b>	10:50 CDT					
<b>Contractor:</b>		<b>Placement Method:</b>	Chute	<b>Placement Time:</b>	60 (min)					
Location										
<b>Placement Location:</b>	Building Pad/Slab									
<b>Location Details:</b>	Building Pad									
<b>Sample Location / Notes:</b>	Rebar Footings									
Batch Log					Specifications					
<b>Supplier:</b>	Alamo Concrete	<b>Mix Design:</b>	3000PSI	<b>Strength:</b>	3000 (psi)					
<b>On-Site Admixtures:</b>	None									
Field Measurements										
<b>Weather:</b>	Hot, Sunny	<b>Slump (in):</b>	6	<b>Plastic Unit Weight:</b>						
<b>Air Temperature (F):</b>	84	<b>Concrete Temp (F):</b>	91	<b>Air Content:</b>	1.5					
				<b>Load Volume:</b>	10.00 (yd <sup>3</sup> )					
Standard Cure					Field Cure					
<b>Min / Max Temp (F):</b>	79/99									
<b>Initial Cure Method:</b>	Plastic Cover/Lid/Blanket									
<b>Final Cure Method:</b>	Water Storage Tank									
Lab Test Results										
<b>Testing Lab:</b> B2Z Mission Lab, 900 S. Stewart Rd., Suite 2, Mission, TX, 78572										
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	06/16/22	1 / 6	4.00	12.57	26,078	2,080	2	F3	1
1-2	7	06/16/22	1 / 6	4.00	12.57	27,069	2,150	2	F3	1
1-3	7	06/16/22	1 / 6	4.00	12.57	27,656	2,200	2	F3	1
1-4	28	07/07/22	1 / 27	4.00	12.57	35,751	2,840	5	F6	1
1-5	28	07/07/22	1 / 27	4.00	12.57	36,716	2,920	5	F6	1
1-6	56	08/04/22	1 / 55							
<b>Test Age Average Strengths (psi):</b> 7 Day - 2140, 28 Day - 2880										
									Capping Methods	
<b>F3:</b> The 7 day test results did not meet the specifications. <b>F6:</b> The 28 day test results did not meet the specifications. <b>Tested By:</b> Manuel De Santiago (1,2,3,4,5) <b>Checked In :</b> 06/10/2022 (1,2,3,4,5,6)									1: Neoprene Pad	



Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager

**Mission Office**

900 S Stewart Rd, Ste. 2  
Mission, TX 78572  
Phone: 956-585-3773

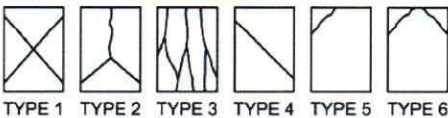
**Client:**

Hidalgo County  
100 North Clossner  
Edinburg, TX 78539

**Project:**

4124  
Hidalgo County Health Dept Testing/Bio-Safety  
Laboratory  
Various  
Edinburg, TX

Sample Details											
<b>Set #:</b>	2	<b>Technician:</b>	Manuel De Santiago	<b>Batched:</b>	06:16 CDT						
<b>Specimen Size:</b>	4 x 8 Cast Cylinder	<b>Cast By:</b>	Manuel De Santiago	<b>Sampled:</b>	06:35 CDT						
<b>Specimens In Set:</b>	6	<b>Date Cast:</b>	06/16/22	<b>Cast:</b>	06:50 CDT						
<b>Truck / Ticket #:</b>	7256 / 2060762	<b>Sampled From:</b>	Chute	<b>Truck Empty:</b>	06:50 CDT						
<b>Contractor:</b>		<b>Placement Method:</b>	Chute	<b>Placement Time:</b>	34 (min)						
Location											
<b>Placement Location:</b>	Building Pad/Slab										
<b>Location Details:</b>	Building Pad North West corner 10'East 15' South										
<b>Sample Location / Notes:</b>	Building Pad North West Corner 10'Em15'S										
Batch Log						Specifications					
<b>Supplier:</b>	Alamo Concrete	<b>Mix Design:</b>	3000PSI	<b>Strength:</b>	3000 (psi)						
<b>Plant:</b>	Edinburg										
<b>On-Site Admixtures:</b>	None										
Field Measurements											
<b>Weather:</b>	Mostly Cloudy		<b>Slump (in):</b>	6"		<b>Plastic Unit Weight:</b>					
<b>Air Temperature (F):</b>	74		<b>Concrete Temp (F):</b>	87		<b>Air Content:</b>	1.2				
						<b>Load Volume:</b>	30.00 (yd <sup>3</sup> )				
Standard Cure						Field Cure					
<b>Initial Cure Method:</b>	Plastic Cover/Lid/Blanket										
<b>Final Cure Method:</b>	Water Storage Tank										
Lab Test Results											
<b>Testing Lab:</b> B2Z Mission Lab, 900 S. Stewart Rd., Suite 2, Mission, TX, 78572											
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	06/23/22	1 / 6	4.00	12.57	28,914	2,300	5	F3	1	
2-2	7	06/23/22	1 / 6	4.00	12.57	30,258	2,410	5	F3	1	
2-3	7	06/23/22	1 / 6	4.00	12.57	31,291	2,490	5	F3	1	
2-4	28	07/14/22	1 / 27	4.00	12.57	35,825	2,850	2	F6	1	
2-5	56	08/11/22	1 / 55								
2-6	56	08/11/22	1 / 55								
<b>Test Age Average Strengths (psi):</b> 7 Day - 2400, 28 Day - 2850											
								Capping Methods			
F3: The 7 day test results did not meet the specifications. F6: The 28 day test results did not meet the specifications. <b>Tested By:</b> Manuel De Santiago (1,2,3,4) <b>Checked In :</b> 06/17/2022 (1,2,3,4,5,6)								1: Neoprene Pad			



Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager

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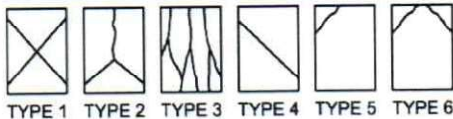
**Client:**

Hidalgo County  
100 North Closner  
Edinburg, TX 78539

**Project:**

4124  
Hidalgo County Health Dept Testing/Bio-Safety  
Laboratory  
Various  
Edinburg, TX

Sample Details											
<b>Set #:</b>	3	<b>Technician:</b>	Manuel De Santiago	<b>Batched:</b>	07:03 CDT						
<b>Specimen Size:</b>	4 x 8 Cast Cylinder	<b>Cast By:</b>	Manuel De Santiago	<b>Sampled:</b>	07:30 CDT						
<b>Specimens In Set:</b>	6	<b>Date Cast:</b>	06/16/22	<b>Cast:</b>	07:45 CDT						
<b>Truck / Ticket #:</b>	7257 / 2060893	<b>Sampled From:</b>	Chute	<b>Truck Empty:</b>	08:00 CDT						
<b>Contractor:</b>	Econ-Enriquez Construction	<b>Placement Method:</b>	Chute	<b>Placement Time:</b>	57 (min)						
Location											
<b>Placement Location:</b>	Building Pad/Slab										
<b>Location Details:</b>	Center of Building from east side										
<b>Sample Location / Notes:</b>	Center of Building from east side										
Batch Log						Specifications					
<b>Supplier:</b>	Alamo Concrete	<b>Mix Design:</b>	3000PSI	<b>Strength:</b>	3000 (psi)						
<b>Plant:</b>	Edinburg										
<b>On-Site Admixtures:</b>	None										
Field Measurements											
<b>Weather:</b>	Mostly Cloudy	<b>Slump (in):</b>	5 1/2"	<b>Plastic Unit Weight:</b>							
<b>Air Temperature (F):</b>	74	<b>Concrete Temp (F):</b>	88	<b>Air Content:</b>	1.3						
				<b>Load Volume:</b>	90.00 (yd <sup>3</sup> )						
Standard Cure						Field Cure					
<b>Initial Cure Method:</b>	Plastic Cover/Lid/Blanket										
<b>Final Cure Method:</b>	Water Storage Tank										
Lab Test Results											
<b>Testing Lab:</b> B2Z Mission Lab, 900 S. Stewart Rd., Suite 2, Mission, TX, 78572											
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	
3-1	7	06/23/22	1 / 6	4.00	12.57	29,433	2,340	5	F3	1	
3-2	7	06/23/22	1 / 6	4.00	12.57	33,787	2,690	5	F3	1	
3-3	7	06/23/22	1 / 6	4.00	12.57	33,796	2,690	5	F3	1	
3-4	28	07/14/22	1 / 27	4.00	12.57	40,764	3,240	2	R6	1	
3-5	28	07/14/22	1 / 27	4.00	12.57	41,389	3,290	2	R6	1	
3-6	28	07/14/22	1 / 27	4.00	12.57	41,532	3,300	2	R6	1	
<b>Test Age Average Strengths (psi):</b> 7 Day - 2570, 28 Day - 3280											
										Capping Methods	
<b>F3:</b> The 7 day test results did not meet the specifications. <b>R6:</b> The 28 day test results meets or exceeds the 56 day specified strength. <b>Tested By:</b> Manuel De Santiago (1,2,3,4,5,6) <b>Checked In :</b> 06/17/2022 (1,2,3,4,5,6)										1: Neoprene Pad	



Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager

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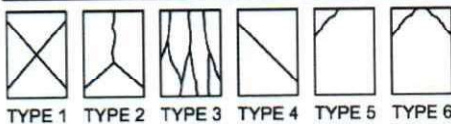
**Client:**

Hidalgo County  
100 North Closser  
Edinburg, TX 78539

**Project:**

4124  
Hidalgo County Health Dept Testing/Bio-Safety  
Laboratory  
Various  
Edinburg, TX

Sample Details										
<b>Set #:</b>	4	<b>Technician:</b>	Sergio Navarro		<b>Batched:</b>	04:46 CDT				
<b>Specimen Size:</b>	4 x 8 Cast Cylinder	<b>Cast By:</b>	Sergio Navarro		<b>Sampled:</b>	05:20 CDT				
<b>Specimens In Set:</b>	6	<b>Date Cast:</b>	06/29/22		<b>Cast:</b>	05:28 CDT				
<b>Truck / Ticket #:</b>	7266 / 2070952	<b>Sampled From:</b>	Chute		<b>Truck Empty:</b>	05:39 CDT				
<b>Contractor:</b>		<b>Placement Method:</b>	Chute		<b>Placement Time:</b>	53 (min)				
Location										
<b>Placement Location:</b>	Building Pad/Slab									
<b>Location Details:</b>	Spreader Footing									
<b>Sample Location / Notes:</b>	North West Corner									
Batch Log					Specifications					
<b>Supplier:</b>	Alamo Concrete	<b>Mix Design:</b>	3000PSI		<b>Strength:</b>	3000 (psi)				
<b>On-Site Admixtures:</b> None										
Field Measurements										
<b>Weather:</b>	Fresh	<b>Slump (in):</b>	5		<b>Plastic Unit Weight:</b>					
<b>Air Temperature (F):</b>	75	<b>Concrete Temp (F):</b>	90		<b>Air Content:</b>	1.7				
					<b>Load Volume:</b>	10.00 (yd <sup>3</sup> )				
Standard Cure					Field Cure					
<b>Min / Max Temp (F):</b>	75/99									
<b>Initial Cure Method:</b>	Plastic Cover/Lid/Blanket									
<b>Final Cure Method:</b>	Water Storage Tank									
Lab Test Results										
<b>Testing Lab:</b> B2Z Mission Lab, 900 S. Stewart Rd., Suite 2, Mission, TX, 78572										
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	07/06/22	1 / 6	4.00	12.57	33,151	2,640	5	F3	1
4-2	7	07/06/22	1 / 6	4.00	12.57	34,436	2,740	5	F3	1
4-3	7	07/06/22	1 / 6	4.00	12.57	35,066	2,790	4	F3	1
4-4	28	07/27/22	1 / 27							
4-5	28	07/27/22	1 / 27							
4-6	28	07/27/22	1 / 27							
<b>Test Age Average Strengths (psi): 7 Day - 2720</b>										
								Capping Methods		
<b>F3:</b> The 7 day test results did not meet the specifications.								1: Neoprene Pad		
<b>Tested By:</b> Manuel De Santiago (1,2,3)										
<b>Checked In :</b> 06/30/2022 (1,2,3,4,5,6)										



Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager

**Mission Office**

900 S Stewart Rd, Ste. 2  
Mission, TX 78572  
Phone: 956-585-3773

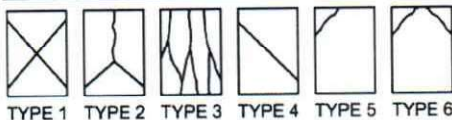
**Client:**

Hidalgo County  
100 North Closner  
Edinburg, TX 78539

**Project:**

4124  
Hidalgo County Health Dept Testing/Bio-Safety  
Laboratory  
Various  
Edinburg, TX

Sample Details										
<b>Set #:</b>	4	<b>Technician:</b>	Sergio Navarro	<b>Batched:</b>	04:46 CDT					
<b>Specimen Size:</b>	4 x 8 Cast Cylinder	<b>Cast By:</b>	Sergio Navarro	<b>Sampled:</b>	05:20 CDT					
<b>Specimens In Set:</b>	6	<b>Date Cast:</b>	06/29/22	<b>Cast:</b>	05:28 CDT					
<b>Truck / Ticket #:</b>	7266 / 2070952	<b>Sampled From:</b>	Chute	<b>Truck Empty:</b>	05:39 CDT					
<b>Contractor:</b>		<b>Placement Method:</b>	Chute	<b>Placement Time:</b>	53 (min)					
Location										
<b>Placement Location:</b>	Building Pad/Slab									
<b>Location Details:</b>	Spreader Footing									
<b>Sample Location / Notes:</b>	North West Corner									
Batch Log						Specifications				
<b>Supplier:</b>	Alamo Concrete	<b>Mix Design:</b>	3000PSI	<b>Strength:</b>	3000 (psi)					
<b>On-Site Admixtures:</b>	None									
Field Measurements										
<b>Weather:</b>	Fresh	<b>Slump (in):</b>	5	<b>Plastic Unit Weight:</b>						
<b>Air Temperature (F):</b>	75	<b>Concrete Temp (F):</b>	90	<b>Air Content:</b>	1.7					
				<b>Load Volume:</b>	10.00 (yd <sup>3</sup> )					
Standard Cure					Field Cure					
<b>Min / Max Temp (F):</b>	75/99									
<b>Initial Cure Method:</b>	Plastic Cover/Lid/Blanket									
<b>Final Cure Method:</b>	Water Storage Tank									
Lab Test Results										
<b>Testing Lab:</b> B2Z Mission Lab, 900 S. Stewart Rd., Suite 2, Mission, TX, 78572										
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	07/06/22	1 / 6	4.00	12.57	33,151	2,640	5	F3	1
4-2	7	07/06/22	1 / 6	4.00	12.57	34,436	2,740	5	F3	1
4-3	7	07/06/22	1 / 6	4.00	12.57	35,066	2,790	4	F3	1
4-4	28	07/27/22	1 / 27	4.00	12.57	39,893	3,170	5	R6	1
4-5	28	07/27/22	1 / 27	4.00	12.57	43,359	3,450	5	R6	1
4-6	28	07/27/22	1 / 27	4.00	12.57	44,150	3,510	2	R6	1
<b>Test Age Average Strengths (psi):</b> 7 Day - 2720, 28 Day - 3380										
									Capping Methods	
<b>F3:</b> The 7 day test results did not meet the specifications. <b>R6:</b> The 28 day test results meets or exceeds the 56 day specified strength. <b>Tested By:</b> Manuel De Santiago (1,2,3), Frank Velez Jr (4,5,6) <b>Checked In :</b> 06/30/2022 (1,2,3,4,5,6)									1: Neoprene Pad	



Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager

**Mission Office**  
 900 S Stewart Rd, Ste. 2  
 Mission, TX 78572  
 Phone: 956-585-3773

**Client:**  
 Hidalgo County  
 100 North Closner  
 Edinburg, TX 78539

**Project:**  
 4124  
 Hidalgo County Health Dept Testing/Bio-Safety  
 Laboratory  
 Various  
 Edinburg, TX

Sample Details			
<b>Set #:</b>	5	<b>Technician:</b>	Rick Garcia
<b>Specimen Size:</b>	4 x 8 Cast Cylinder	<b>Cast By:</b>	Rick Garcia
<b>Specimens In Set:</b>	5	<b>Date Cast:</b>	07/19/22
<b>Truck / Ticket #:</b>	7264 / 2085041	<b>Sampled From:</b>	Pump
<b>Contractor:</b>	Econ- Enriquez Construction	<b>Placement Method:</b>	Pump
<b>Batched:</b>	03:18 CDT	<b>Sampled:</b>	03:30 CDT
<b>Cast:</b>	03:45 CDT	<b>Truck Empty:</b>	03:50 CDT
<b>Placement Time:</b>	32 (min)		

Location	
<b>Placement Location:</b>	Concrete Wall Panels
<b>Location Details:</b>	N. W. Corner panel 3 Center panel 4
<b>Sample Location / Notes:</b>	NW corner panel N center panel

Batch Log	Specifications
<b>Supplier:</b> Alamo Concrete	<b>Strength:</b> 4000 (psi)
<b>Plant:</b> Edinburg	
<b>On-Site Admixtures:</b> None	

Field Measurements			
<b>Weather:</b> Humid	<b>Slump (in):</b> 7-3/4	<b>Plastic Unit Weight:</b>	
<b>Air Temperature (F):</b> 90	<b>Concrete Temp (F):</b> 91	<b>Air Content:</b> 0.7	<b>Load Volume:</b> 10.00 (yd <sup>3</sup> )

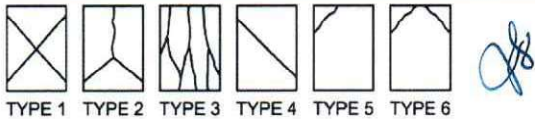
Standard Cure	Field Cure
<b>Min / Max Temp (F):</b> 93/104	
<b>Initial Cure Method:</b> Plastic Cover/Lid/Blanket	
<b>Final Cure Method:</b> Water Storage Tank	

**Lab Test Results**

Testing Lab: B2Z Mission Lab, 900 S. Stewart Rd., Suite 2, Mission, TX, 78572

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
5-1	7	07/26/22	1 / 6	4.00	12.57	38,707	3,080	2	F3	1
5-2	7	07/26/22	1 / 6	4.00	12.57	40,327	3,210	2	F3	1
5-3	28	08/16/22	1 / 27							
5-4	28	08/16/22	1 / 27							
5-5	56	09/13/22	1 / 55							

<b>Test Age Average Strengths (psi):</b> 7 Day - 3140	<b>Capping Methods</b>
<b>F3:</b> The 7 day test results did not meet the specifications.	1: Neoprene Pad
<b>Tested By:</b> Rick Garcia (1,2)	
<b>Checked In :</b> 07/20/2022 (1,2,3,4,5)	



Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager

**Mission Office**

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Mission, TX 78572  
Phone: 956-585-3773

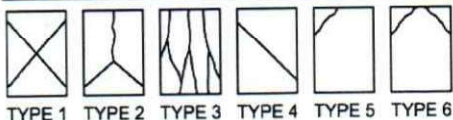
**Client:**

Hidalgo County  
100 North Closner  
Edinburg, TX 78539

**Project:**

4124  
Hidalgo County Health Dept Testing/Bio-Safety  
Laboratory  
Various  
Edinburg, TX

Sample Details											
<b>Set #:</b>	6	<b>Technician:</b>	Rick Garcia	<b>Batched:</b>	04:12 CDT						
<b>Specimen Size:</b>	4 x 8 Cast Cylinder	<b>Cast By:</b>	Rick Garcia	<b>Sampled:</b>	04:30 CDT						
<b>Specimens In Set:</b>	5	<b>Date Cast:</b>	07/19/22	<b>Cast:</b>	04:40 CDT						
<b>Truck / Ticket #:</b>	7264 / 2085160	<b>Sampled From:</b>	Pump	<b>Truck Empty:</b>	04:40 CDT						
<b>Contractor:</b>	Econ-Enriquez Construction	<b>Placement Method:</b>	Pump	<b>Placement Time:</b>	28 (min)						
Location											
<b>Placement Location:</b>	Concrete Wall Panels										
<b>Location Details:</b>	SE panel #13 Center SE panel 12										
<b>Sample Location / Notes:</b>	SE panel 13 Center sE panel 12										
Batch Log						Specifications					
<b>Supplier:</b>	Alamo Concrete					<b>Strength:</b>	4000 (psi)				
<b>Plant:</b>	Edinburg										
<b>On-Site Admixtures:</b>	None										
Field Measurements											
<b>Weather:</b>	Humid		<b>Slump (in):</b>	8		<b>Plastic Unit Weight:</b>					
<b>Air Temperature (F):</b>	91		<b>Concrete Temp (F):</b>	91		<b>Air Content:</b>	0.7				
						<b>Load Volume:</b>	10.00 (yd <sup>3</sup> )				
Standard Cure						Field Cure					
<b>Min / Max Temp (F):</b>	93/104										
<b>Initial Cure Method:</b>	Plastic Cover/Lid/Blanket										
<b>Final Cure Method:</b>	Water Storage Tank										
Lab Test Results											
<b>Testing Lab:</b> B2Z Mission Lab, 900 S. Stewart Rd., Suite 2, Mission, TX, 78572											
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	
6-1	7	07/26/22	1 / 6	4.00	12.57	41,536	3,300	2	F3	1	
6-2	7	07/26/22	1 / 6	4.00	12.57	51,779	4,120	2	R3	1	
6-3	28	08/16/22	1 / 27								
6-4	28	08/16/22	1 / 27								
6-5	56	09/13/22	1 / 55								
<b>Test Age Average Strengths (psi): 7 Day - 3710</b>											
										Capping Methods	
<b>F3:</b> The 7 day test results did not meet the specifications.										1: Neoprene Pad	
<b>R3:</b> The 7 day test results meets or exceeds the 28 day specified strength.											
<b>Tested By:</b> Rick Garcia (1,2)											
<b>Checked In :</b> 07/20/2022 (1,2,3,4,5)											



Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager



# Soil Nuclear Gauge

B2Z Report No. BSL-435  
 Report Date: 06/27/2022  
 Test Method: ASTM D 6938

Mission Office  
 900 S Stewart Rd, Ste. 2  
 Mission, TX 78572  
 Phone: 956-685-3773

## Client:

Hidalgo County  
 100 North Closser  
 Edinburg, TX 78539

## Project:

4124  
 Hidalgo County Health Dept Testing/Bio-Safety  
 Laboratory  
 Various  
 Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
89		06/24/22	Select Backfill #2		CL/CH	14.3	111.9	13.5	112.7	127.9	6	100.7	95	DP/MP
90		06/24/22	Select Backfill #2		CL/CH	14.3	111.9	13.9	115.4	131.4	6	103.1	95	DP/MP
91		06/24/22	Select Backfill #2		CL/CH	14.3	111.9	15.4	112.1	129.4	6	100.2	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge	Field Technician									
89	Other: Spreader Footing West Side of Bldg W1 from N to S Final Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022	Manuel De Santiago									
90	Other: Spreader Footing West Side of Bldg W2 from N to S Final Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022	Manuel De Santiago									
91	Other: Spreader Footing West Side of Bldg W3 from N to S Final Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022	Manuel De Santiago									
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.												

Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager



# Soil Nuclear Gauge

BZZ Report No. BSL-44s  
 Report Date: 06/27/2022  
 Test Method: ASTM D 6938

Mission Office  
 900 S Stewart Rd, Ste. 2  
 Mission, TX 78572  
 Phone: 956-585-3773

## Client:

Hidalgo County  
 100 North Closner  
 Edinburg, TX 78539

## Project:

4124  
 Hidalgo County Health Dept Testing/Bio-Safety  
 Laboratory  
 Various  
 Edinburg, TX

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
92		06/24/22	Select Backfill #2		CL/CH	14.3	111.9	13.2	113.4	128.4	6	101.3	95	DP/MP
93		06/24/22	Select Backfill #2		CL/CH	14.3	111.9	13.6	114.4	130.0	6	102.2	95	DP/MP
94		06/24/22	Select Backfill #2		CL/CH	14.3	111.9	15.3	106.8	123.1	6	95.4	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician									
92	Other: Spreader Footing West Side of Bldg S1 from W to E Final Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022	Manuel De Santiago									
93	Other: Spreader Footing West Side of Bldg S2 from W to E Final Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022	Manuel De Santiago									
94	Other: Spreader Footing West Side of Bldg S3 from W to E Final Lift			Instrotek / 3500 Xplorer / 4507 / 01/25/2022	Manuel De Santiago									
Remarks		Comments												
DP/MP: Density Pass / Moisture Pass		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.												

Respectfully Submitted by BZZ Engineering

Hector Cantu, Corporate Laboratory Manager

# Inspection Report

**Client:**Hidalgo County  
100 North Closner  
Edinburg, TX 78539**Project:**4124  
Hidalgo County Health Dept Testing/Bio-Safety  
Laboratory  
Various  
Edinburg, TX**Project Contractor:** ECON - Enriquez Construction

On 06/28/2022, a representative of B2Z Engineering was dispatched to the subject project to perform rebar spreader footing inspection. Please see attached inspection report.

<b>Contractor Present:</b>	ECON - Enriquez Construction
<b>Inspector/Technician Time:</b>	3.0
<b>Trip Charge:</b>	30 miles
<b>Inspector/Technician:</b>	Giovanni Mares

92

Respectfully Submitted by B2Z Engineering



Hector Cantu, Corporate Laboratory Manager

# Bio-Lab CMT

Edinburg Texas



Date Tue 06/28/2022

Job # 4124

Prepared By Gio Mares



## Weather

6:00 AM

75°

Clear

Wind: 4 MPH | Precipitation: .0" | Humidity: 89%

12:00 PM

91°

Clear

Wind: 5 MPH | Precipitation: .0" | Humidity: 51%

4:00 PM

94°

Mostly Cloudy

Wind: 12 MPH | Precipitation: .01" | Humidity: 45%

## Work Logs

No entry

Name	Description	Quantity	Total Hours	Total Hours To Date
Total		0	0	0

## Time Cards

No entry

## Materials

No entry

## Equipment

No entry

## General Notes

1. Conducted my inspection today at 1:36 PM for the rebar spreader footing inspection. As per observations all installation of rebar is as per plans and specs. proper spacing and overlapping was performed and proper size used as per spec

Gio Mares | 06/28/22 | 01:35PM

## Site Safety Observations

No entry

Survey

Questions	N/A	No	Yes	Description
1. Rebar epoxy coated.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Clearance around rebar as specified.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All rebar properly spaced 14 inch on center in corners and 16 inch on center on runways <small>Gio Mares   06/28/22   01:33PM</small>
3. Bars are properly supported on chairs.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All rebar properly supported by brick chairs number seven all the way through and they Ocho say they say it's OK <small>Gio Mares   06/28/22   01:33PM</small>
4. Size & number of bars as specified	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All rebar number seven on corners of spreader footing and number six along runways <small>Gio Mares   06/28/22   01:33PM</small>
5. Lap lengths as specified.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All laps as per plan minimum 3 feet <small>Gio Mares   06/28/22   01:33PM</small>
6. Spacing of bars as specified.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All spacing as per plans and specs 14 inch on center in corners and 16 inches on center along runways <small>Gio Mares   06/28/22   01:33PM</small>
7. Dowels in places and tied.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No dowels in this application <small>Gio Mares   06/28/22   01:35PM</small>
8. Epoxy coating specified.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Bars are properly laid and positioned.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All rebar properly laid in position and secure as per plans <small>Gio Mares   06/28/22   01:33PM</small>

Attachments



*Gio Mares*

---

I, Gio Mares, have reviewed and completed this report.

Gio Mares | 06/28/22 | 01:38PM

**Client:**

Hidalgo County  
 100 North Closner  
 Edinburg, TX 78539

**Project:**

4124  
 Hidalgo County Health Dept Testing/Bio-Safety  
 Laboratory  
 Various  
 Edinburg, TX

**Project Contractor:** ECON- Enriquez Construction

On 07/11/2022, a representative of B2Z Engineering was dispatched to the subject project to **performed rebar inspection for vertical tilt panels. Please see attached inspection report.**

<b>Contractor Present:</b>	ECON- Enriquez Construction
<b>Inspector/Technician Time:</b>	3.0
<b>Trip Charge:</b>	30 miles
<b>Inspector/Technician:</b>	Giovanni Mares



Respectfully Submitted by B2Z Engineering



Hector Cantu, Corporate Laboratory Manager

Date Mon 07/11/2022

Job # 4124

Prepared By Gio Mares



## Weather

6:00 AM

77°

Humid

Wind: 7 MPH | Precipitation: .0" | Humidity: 86%

12:00 PM

95°

Humid

Wind: 8 MPH | Precipitation: .0" | Humidity: 49%

4:00 PM

102°

Clear

Wind: 11 MPH | Precipitation: .0" | Humidity: 34%

## Work Logs

No entry

Name	Description	Quantity	Total Hours	Total Hours To Date
Total		0	0	0

## Time Cards

No entry

## Materials

No entry

## Equipment

No entry

## General Notes












1. Rebar inspection for vertical tilt panels conducted at 3 PM. As per all observations made, all installed rebar has been properly laid positioned and secured as per plans and specs. All rebar installed is as specified for size.

Gio Mares | 07/11/22 | 04:41PM

## Site Safety Observations

No entry

Survey

Questions	N/A	No	Yes	Description
1. Rebar epoxy coated.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Clearance around rebar as specified. 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All clearances around form boards properly spaced  <small>Gio Mares   07/11/22   03:15PM</small>
3. Bars are properly supported on chairs. 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All rebar properly supported by plastic chairs as specified  <small>Gio Mares   07/11/22   03:15PM</small>
4. Size & number of bars as specified 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All interior rebar for panels number 6 specified and number seven rebar for cords specified in plans  <small>Gio Mares   07/11/22   04:39PM</small>
5. Lap lengths as specified. 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All laps minimum 4 feet as specified <small>Gio Mares   07/11/22   03:15PM</small>
6. Spacing of bars as specified. 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All rebar 12 inch on center as specified  <small>Gio Mares   07/11/22   03:15PM</small>
7. Dowels in places and tied. 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All dowels properly installed and secure  <small>Gio Mares   07/11/22   03:15PM</small>
8. Epoxy coating specified.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Bars are properly laid and positioned.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All rebar properly laid and position as per plan and specs <small>Gio Mares   07/11/22   03:15PM</small>

Survey Photos

2. 



3.



4.



5.



6.



7.



### Attachments



*Gio Mares*

---

I, Gio Mares, have reviewed and completed this report.

Gio Mares | 07/11/22 | 03:22PM