

May 20, 2022

Valde Guerra, Executive Officer  
**Attn: Josefina Garces**  
County of Hidalgo Texas Executive Office  
2818 S. Bus. Hwy. 281  
Edinburg, Texas 78539

**RE: Professional Engineering Services for Construction Materials Testing  
(C-20-184-01-12) Work Authorization No. 2 ~ Construction Materials Testing  
PO #847843**

Dear Mr. Guerra:

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

The following is attached:


- Invoice No. 20331

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

	<b>% Complete</b>
<b>Construction Materials Testing</b>	<b>2.5%</b>
<b><u>UPDATED:</u></b> B2Z secured a sample of Subgrade and Select Backfill material for testing on the following item: <ul style="list-style-type: none"><li>- Subgrade - Moisture/Density Standard Proctor, Atterberg Limits of Soils and Percent Passing No. 200</li><li>-</li><li>- Select Backfill - Moisture/Density Standard Proctor, Atterberg Limits of Soils and Percent Passing No. 200</li></ul>	

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 #
5/20/2022	20331

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**                      **April 2022**

Description	Contract	Previous Applications	Current Completed	Total Completed	% Complete
Construction Materials Testing	\$ 64,763.07	\$ -	\$ 1,642.31	\$ 1,642.31	2.5%
<b>Total For This Billing Period</b>					<b>\$1,642.31</b>

Work Authorization ~ Summary

<u>WA No.</u>	<u>WA Amount</u>	<u>Previously Inv.</u>	<u>Percent Complete</u>	<u>Remaining Balance</u>
2	\$64,763.07	\$0.00	2.5%	\$63,120.76

  
Aisha Gonzalez - President

**Client:**

Hidalgo County  
100 North Closner  
Edinburg, TX 78539

**Project:**

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

**General Information**

<b>Sample Date:</b>	04/14/2022	<b>MF Sample Number:</b>	1688
<b>Sample From:</b>	Native Soil	<b>Material Type:</b>	Subgrade
<b>Sampled By:</b>	Manuel De Santiago	<b>Location Details:</b>	Composite sample from east & west of Building pad

**Test Results**

**Proctor Curve**

Moisture Content (%)	Dry Density (Lbs./Cu.Ft.)
12.68	99.07
16.26	103.95
18.31	105.98
20.74	101.08

Preparation	Method
Dry	Mechanical - Circular Face Rammer

Moisture Content (%)	Dry Density (Lbs./Cu.Ft.)
12.68	99.07
16.26	103.95
18.31	105.98
20.74	101.08

<b>Optimum Moisture:</b>	18.3
<b>Maximum Dry Density:</b>	106.0
<b>Specific Gravity (Assumed):</b>	2.65

Atterberg Limits	
<b>Liquid Limit (%):</b>	36
<b>Plastic Limit (%):</b>	16
<b>Plastic Index:</b>	20

<b>Test Completed Date:</b>	04/20/2022	<b>Test Completed By:</b>	Jorge Solis
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**Test Results:** The test is for informational purposes.

Test Method (As Applicable): Tex 114-E / ASTM D-698 Method-A, Method-B or Method-C ;  
Tex 104-E, Tex 105-E, Tex 106-E / ASTM D4318 ;  
Tex 110-E / ASTM C-136

Respectfully Submitted by B2Z Engineering

*[Signature]*  
Hector Cantu, Corporate Laboratory Manager

**Client:**

Hidalgo County  
100 North Closner  
Edinburg, TX 78539

**Project:**

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

**General Information**

<b>Sample Date:</b>	04/18/2022	<b>MF Sample Number:</b>	1692
<b>Sample From:</b>	Stockpile	<b>Material Type:</b>	Select Backfill
<b>Sampled By:</b>	Manuel De Santiago	<b>Location Details:</b>	Monte alto pit

**Test Results**

**Proctor Curve**

Preparation	Method
Dry	Mechanical - Circular Face Rammer
Moisture Content (%)	Dry Density (Lbs./Cu.Ft.)
9.57	110.43
12.83	114.07
15.60	112.25
18.75	105.71
<b>Optimum Moisture:</b>	13.0
<b>Maximum Dry Density:</b>	114.1
<b>Specific Gravity (Assumed):</b>	2.65

**Atterberg Limits**

<b>Liquid Limit (%):</b>	25
<b>Plastic Limit (%):</b>	15
<b>Plastic Index:</b>	10

<b>Test Completed Date:</b>	04/20/2022	<b>Test Completed By:</b>	Jorge Solis
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**Test Results:** The test is for informational purposes.

Respectfully Submitted by B2Z Engineering

Test Method (As Applicable): Tex 114-E / ASTM D-698 Method-A, Method-B or Method-C ;  
Tex 104-E, Tex 105-E, Tex 106-E / ASTM D4318 ;  
Tex 110-E / ASTM C-136

  
 Hector Cantu, Corporate Laboratory Manager

## Material in Soils Finer than No. 200 / Tex-111-E

Project :	<u>Bio-Safety Laboratory</u>	B2Z Proj. No :	<u>4124</u>
Client:	<u>Hidalgo County</u>	Work Order No:	<u>BSL-3S</u>
Engineer:	<u></u>	Mat'l. Desc. Or Use:	<u>Subgrade</u>
Architect:	<u></u>	Date Sampled:	<u>4/14/2022</u>
Contractor:	<u>ECON-Enriquez Construction</u>	Sample Location:	<u>East &amp; West of Bldg Pad</u>

***Tw = Weight of Tare***  
***Wt = Initial Mass of Oven Dried Sample***  
***Wr = Mass of the Oven Dried sample retained on the sieves***  
***Percent Finer = 100( Wt - Wr ) / Wt - Tw***

Sample Identification							
Tare ID		Tw		Wt	Wr	Loss	% -200
IR.16		175		364.7	248.7	116.0	61.1

Sample Identification							
Tare ID		Tw		Wt	Wr	Loss	% -200

Sample Identification							
Tare ID		Tw		Wt	Wr	Loss	% -200

Remarks: For Information Only

This report applies only to the standards of procedures indicated and to the sample(s) tested and/or observed and are not necessarily indicative of the qualities of apparently identical or similar products or procedures, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and are not to be reproduced without written permission.

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Respectfully Submitted by B2Z Engineering



Hector Cantu, Corporate Laboratory Manager

MetaField # 1692

## Material in Soils Finer than No. 200 / Tex-111-E

Project : Bio-Safety Laboratory  
 Client: Hidalgo County  
 Engineer: \_\_\_\_\_  
 Architect: \_\_\_\_\_  
 Contractor: ECON-Enriquez Construction

B2Z Proj. No : 4124  
 Work Order No: BSL-4S  
 Mat'l. Desc. Or Use: Backfill  
 Date Sampled: 4/14/2022  
 Sample Location: Monte Alto Pit

***Tw = Weight of Tare***  
***Wt = Initial Mass of Oven Dried Sample***  
***Wr = Mass of the Oven Dried sample retained on the sieves***  
***Percent Finer = 100( Wt - Wr ) / Wt - Tw***

Sample Identification							
Tare ID		Tw		Wt	Wr	Loss	% -200
308		189.1		426.5	318.0	108.5	45.7

Sample Identification							
Tare ID		Tw		Wt	Wr	Loss	% -200

Sample Identification							
Tare ID		Tw		Wt	Wr	Loss	% -200

Remarks: For Information Only

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Respectfully Submitted by B2Z Engineering

Hector Cantu, Corporate Laboratory Manager