

# L&G Engineering

Transportation Consultants

April 2, 2018



Commissioner Joseph Palacios  
Hidalgo County Precinct 4  
1051 N. Doolittle Rd  
Edinburg, TX 78542

**RE: 10<sup>th</sup> Street Extension - Work Authorization No. 2 - Limits: SH 107 to FM 1925  
PO#700265 - L&G Project#120902**

Dear Commissioner Palacios:

Attached for your approval is our invoice for services rendered under this work authorization for the month of March 2018. .

Attached to this progress report is:

- L & G's Invoice
- Work Schedule

*The following is the status for the Work Authorization and Supplemental's listed below:*

**Work Authorization#2 – Preparation of the PS&E**

- o 100% complete
- *Suppl. #1 to Work Auth. #2 – Additional Traffic Signal & Two Traffic Warrants*
  - o 100% complete
- *Suppl. #2 to Work Auth. #2 – Phase III Right-of-Way Acquisition*
  - o 100% complete
- *Suppl. #3 to Work Auth. #2 – Provide Compensable Utility Oversight*
  - o 100% complete
- *Suppl. #4 to Work Auth. #2 – Abatement and Demolition of Guardhouse and Wall*
  - o 100% complete

*Below is a narrative for the Supplemental identified below:*

- **Suppl. #5 to Work Auth. #2 – Construction Management, Construction Inspection and Construction Material Testing**

		% Complete
<b>FC 32001 – CONSTRUCTION INSPECTION</b>		
Construction started on 2/12/18. Contractor has set up barricades. Barricades continue to be inspected for compliance. Bulletin Board was inspected by L&G and updated by Contractor. L&G continues to coordinate with TxDOT on the ongoing progress of project. L&G inspector is on the project on a daily basis. The contractor is currently working on Prep ROW, Roadway Excavation and	L&G	6%

Embankment, placement of Concrete Box Culverts, Lime treatment of Subgrade, and placement of RC Pipe (Spl).		
<b>FC 32002 – CONSTRUCTION MANAGEMENT</b>		
L&G continues to process a monthly estimate to be used for monthly submittals to Hidalgo County Pct #4 and TxDOT. L&G has developed project record files and maintain project record in compliance with LGPP requirements. L&G has developed and completed Change Order #1 requesting a changing in drainage materials from Steel Ribbed Corrugated Metal Pipe (SRCMP) to Reinforce Concrete Pipe (RCP). The change order has been formally approved by TxDOT and Hidalgo County.	L&G	6% ✓
<b>FC 32030 – CONSTRUCTION QC/QA</b>		
B2Z, Rosendo Garcia, has reviewed project files for completeness and organization. Rosendo has obtained and reviewed a copy of the project Sampling and Testing Guide Schedule. Mr. Garcia has visited the project barricades and bulletin board. Mr. Garcia makes notes of items for discussion. Discussions are held between B2Z and L&G Construction Group to discuss findings. See B2Z's progress report for additional details.	B2Z	6%
<b>FC 33004 – MATERIAL TESTING</b>		
L&G lab has sampled and tested flex base material. Material for sand backfill was sampled and tested. L&G has coordinated with TxDOT on approving HMA CP and Concrete designs and suppliers.	L&G	6% ✓

Should you have any questions or require additional information, please do not hesitate to give me a call at (956) 585-1909.

Sincerely,  


Ricardo Gallaga, P.E.  
 Project Manager  
 Attachments

**L & G Consulting Engineers Inc**  
**2100 W. Expressway 83**  
**Mercedes, TX 78570**  
**(956)565-9813 Fax (956)565-9018**

**INVOICE#: 11326861**  
**INVOICE DATE: 3/31/2018**

**BILL TO: 84**  
Hidalgo County Pct. #4  
x/o Commissioner Joseph Palacios  
1051 N. Doolittle Rd.  
Edinburg, TX 78541

**JOB: 120902**  
10th Street Extension Project  
WA#2, PO#700265  
C-12-126-10-16

DESCRIPTION	CONTRACT	PREVIOUS APPLICATIONS	CURRENT COMPLETED	TOTAL COMPLETED	% COMPL	BALANCE TO FINISH
Engineering services for the month of March 2018.						
Work Authorization #2 - Preparation of the PS&E						
15001-Field Survey	45,001.00	45,001.00 ✓		45,001.00	100.0	-
15010-Field Srvy/SUB	80,000.00	80,000.00 ✓		80,000.00	100.0	-
16001-Rdwy Dsgn	799,217.00	799,217.00 ✓		799,217.00	100.0	-
16002-Rdwy Dsgn-Outfall	48,000.00	48,000.00 ✓		48,000.00	100.0	-
16205-Sign,Marki,Dsg	59,721.00	59,721.00 ✓		59,721.00	100.0	-
16250-Sigl Dsgn-SUB	60,281.00	60,281.00 ✓		60,281.00	100.0	-
16308-Permted Utility	95,000.00	95,000.00 ✓		95,000.00	100.0	-
	<u>1,187,220.00</u>	<u>1,187,220.00</u> ✓	<u>0.00</u>	<u>1,187,220.00</u> ✓	<u>100.0</u> ✓	<u>-</u>
Supplemental #1 to Work Authorization #2 - Additional Traffic Signal & Two Warrants						
16205-Signal Design	5,001.00	5,001.00 ✓		5,001.00	100.0	-
16250-Signal Dsgn/SUB	24,977.60	24,977.60 ✓		24,977.60	100.0	-
	<u>29,978.60</u>	<u>29,978.60</u> ✓	<u>0.00</u>	<u>29,978.60</u> ✓	<u>100.0</u>	<u>-</u>
Supplemental #2 to Work Authorization #2 - Phase III Right-of-Way Acquisition						
6000-ROW Acquisition	380,800.00	380,800.00 ✓		380,800.00	100.0	-
60100-Title Services	38,400.00	38,400.00 ✓		38,400.00	100.0	-
60200-Appraisal Serv	32,000.00	32,000.00 ✓		32,000.00	100.0	-
60210-Appraisal Srv/SUB	144,000.00	144,000.00 ✓		144,000.00	100.0	-
60300-Appraisal Rvw	22,400.00	22,400.00 ✓		22,400.00	100.0	-
60310-Apprsal Rvw/SUB	28,800.00	28,800.00 ✓		28,800.00	100.0	-
60400-Parcel Negtion	224,000.00	224,000.00 ✓		224,000.00	100.0	-
60500-Clsng Srvs Fee	12,800.00	12,800.00 ✓		12,800.00	100.0	-
Sub Total	<u>883,200.00</u>	<u>883,200.00</u> ✓	<u>0.00</u>	<u>883,200.00</u>	<u>100.0</u>	<u>-</u>
Supplemental #3 to Work Authorization #2 - Provide Compensable Utility Oversight						
60101-Comp Utlty Mgmt	135,000.00	135,000.00 ✓		135,000.00 ✓	100.0	-
Supplemental #4 to Work Authorization #2 - Abatement and Demolition of Guardhouse and Wall						
12006-Asbestos Abate	10,066.94	10,066.94 ✓		10,066.94	100.0	-
12050-Abatement/ SUB	6,870.00	6,870.00 ✓		6,870.00	100.0	-
12060-Asbestos Abate/ SUB	27,940.00	27,940.00 ✓		27,940.00	100.0	-
13002-ROW Map	5,018.88	5,018.88 ✓		5,018.88	100.0	-
13020-ROW Map/ SUB	3,189.00	3,189.00 ✓		3,189.00	100.0	-
15007-Sub-Surface Utility Eng.	5,018.88	5,018.88 ✓		5,018.88	100.0	-
15070-Sub-Surface Utility Eng/SUB	19,752.00	19,752.00 ✓		19,752.00	100.0	-
15008-Dsgn Chnge Cal	40,085.14	40,085.14 ✓		40,085.14	100.0	-
Sub Total	<u>117,940.84</u>	<u>117,940.84</u> ✓	<u>0.00</u>	<u>117,940.84</u>	<u>100.0</u>	<u>-</u>

L &G Consulting Engineers Inc  
 2100 W. Expressway 83  
 Mercedes, TX 78570  
 (956)565-9813 Fax (956)565-9018

INVOICE#: 11326861  
 INVOICE DATE: 3/31/2018

BILL TO: 84  
 Hidalgo County Pct. #4  
 x/o Commissioner Joseph Palacios  
 1051 N. Doolittle Rd.  
 Edinburg, TX 78541

JOB: 120902  
 10th Street Extension Project  
 WA#2, PO#700265  
 C-12-126-10-16

DESCRIPTION	CONTRACT	PREVIOUS APPLICATIONS	CURRENT COMPLETED	TOTAL COMPLETED	% COMPL	BALANCE TO FINISH
Supplemental #5 to Work Authorization #2 - Construction Management, Construction Inspection and Construction Material Testing						
32001-Construction Inspection	599,040.96	5,990.41 ✓	29,952.05	35,942.46	6.0	563,098.50
32003-Construction Management	316,287.90	3,162.88 ✓	15,814.39	18,977.27	6.0	297,310.63
32030-Construction QC/QA	79,230.36	792.30 ✓	3,961.52	4,753.82	6.0	74,476.54
33004-Material Testing	186,639.37	1,866.39 ✓	9,331.97	11,198.36	6.0	175,441.01
	<u>1,181,198.59</u>	<u>11,811.98</u>	<u>59,059.93</u>	<u>70,871.91</u>	6.0	<u>1,110,326.68</u>
TOTAL:	<u>3,534,538.03</u>	<u>2,365,151.42</u>	<u>59,059.93</u>	<u>2,424,211.35</u>	68.6	<u>1,110,326.68</u>

ORIGINAL CONTRACT SUM \$ 1,187,220.00  
 CHANGE BY CHANGE ORDER \$ 2,347,318.03  
 CONTRACT SUM TO DATE \$ 3,534,538.03  
 TOTAL COMPLETED TO DATE \$ 2,424,211.35  
 LESS PREVIOUS INVOICES \$ 2,365,151.42  
 CURRENT PAYMENT DUE \$ 59,059.93

  
 PROJECT MANAGER'S SIGNATURE

March 25, 2018

Mr. Ricardo Gallaga, P.E.  
Project Manager ~ L&G Consulting Engineers, Inc.  
2100 W. Expressway 83  
Mercedes, Texas 78570

**RE: Work Authorization #45 for Construction Inspection & CMT  
10<sup>th</sup> Street Construction Management  
Invoice No. 3249 (Job #152780)  
CSJ: 0921-02-300**

Dear Mr. Gallaga:

Attached for your review and approval is our invoice for services rendered during the month of March 2018 on the subject referenced project.

The following is attached:

- Invoice No. 3249 (Job #152780)

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

TASK	
(1) FC 32010 – Construction Management (B2Z Engineering) QC/QA Construction Inspection QC/QA Material Testing	<u>% Complete = 6.0%</u>
<p><b>Updated</b> – B2Z conducted a detailed review of the below referenced file folders produced by L&amp;G and offer the following:</p> <p><b><u>Project Files:</u></b> B2Z has continued review of the up-to-date project files and has found them to be well organized for effective project management tracking items activity and general project requirements.</p> <p><b><u>On-Site Inspection (QC/QA):</u></b></p> <p><b><u>Field Visit (3-5-18)</u></b> – B2Z noted the following while driving the project with L&amp;G Chief Inspector Jose Luis Garcia:</p> <ul style="list-style-type: none"><li>• Subgrade<ul style="list-style-type: none"><li>○ Excavation - Contractor had already excavated to subgrade to Schunior (to approx. Sta. 126) and was hauling off excess material.</li><li>○ Liming – Contractor had ripped about 1000' on east side starting at beginning of project to receive lime treatment during the day. Lime had already been placed for about 300' and mixing/pulverization operation had just started.</li></ul></li><li>• Drainage Structures (Inlets) – Inspector had identified a fit problem with Structure A-7. The inlet top was not satisfactorily matching the bottom section with noticeable offsets with bottom walls. He had reported the problem to L&amp;G management and immediate attention was given to the issue as an L&amp;R (Inlet fabricator) representative arrived on site to assess the condition and take pictures.</li><li>• Erosion/Silt Control Devices – Contractor had started placing sediment/silt control devices on new inlets on project.</li></ul>	

Field Visit (3-19-18) – B2Z noted the following while driving the project:

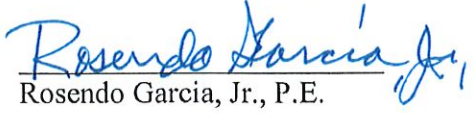
- Storm Sewer – There was no storm sewer work on-going, but pipe and associated structures (in various stages of construction) had been done up to south side of existing bridge at around Station 140+55 ahead of subgrade operations. Additional pipe had been placed along ROW Line north of the bridge to Chapin to continue storm sewer construction.
- Box Culvert (Sta. 112+81) – Contractor had blocked off canal water and started removing existing box culvert on east side. New 9' x 8' precast concrete boxes were on site to replace existing structure.
- Subgrade –
  - Subgrade had been limed and compacted to Schunior.
  - From north of Schunior, excavation to subgrade level had been done to around station 140+55 on south side of existing bridge.
- Flex Base (raw) – Flex base had been delivered and spread on the subgrade section initially limed at beginning of project and truck delivery was on-going between north of canal at Sta. 112+81 and Schunior.
- Erosion/Silt Control Devices – Contractor had continued placing sediment/silt control devices on new inlets on project. However, the rock filter dams required in canals where box culvert (Sta. 112+81 and Sta. 191+96) construction has been done this month have not been installed. Contractor had blocked drainage with earth berms during construction and project inspector has told contractor to install rock berms required.

**Updated** – B2Z has noted the following review of records:

- Drainage (backfill) –
  - Densities - Lab reports on file (R015 for drainage and irrigation, and R016 thru R019, and R025) all with passing results for 98% required. One test on R015 shows fail, but is at 97.9%.
  - Inspector Preliminary Density Reports – Inspector has done several trench backfill reports including 9' X 8' Boxes at Sta. 112+81 done this month pending lab reports. Test results are passing.
- Culvert Boxes (9' x 8') – Were marked with “CAPA” stamp, an approved supplier on Material Producer List and also indicates material is from an approved plant.
- Subgrade -
  - Lime – Lime approved on project is from Lhoist North America of Texas, an approved Type B Commercial Lime Slurry producer on approved Material Producers List.
  - Gradation on pulverized material – R022, R023, and R024 all show passing results. Inspector also did three other preliminary reports (passing) done this month pending lab reports.
  - Densities/Depth Checks – Inspector turned in several preliminary density reports and one depth check report with passing results pending lab reports.
  - Limed Proctor – Lab Report R021 establishes proctor for subgrade testing.
- Flex Base – Flex Base from Martin Marietta Materials approval is on file accepted by L&G on 2-22-18 and includes testing to verify compliance with Item 247 spec requirements.
- Sand Bedding Gradation (for Item 400 pipe construction)
  - Reports R013, R014, and R026 all pass required gradation (90-100) for Tex Method 110-E.
- Concrete Materials Testing (for JIII Edinburg Plant)
  - Course Aggregate (Report R011) – Gradations passing (exception is 1” sieve slightly off at 94 vs 95 to 100) required. Decant value noted at 1.18%.
  - Fine Aggregate (Report R012) – Gradations passing and sand equivalent at 82%.
- Water Sample – Water sample was taken for testing from irrigation canal at Sta. 141+25 to determine if suitable for processing of roadway materials as per contract requirements for chlorides and sulfates.
- Material On Hand (MOH) – February 2018 Materials on Hand Request was for a total net amount of \$768,948.49 (after material used for period was deducted) primarily for drainage structures (RC Pipe and Inlets) and a much smaller amount for Irrigation items (Low Head Pressure Pipe, PVC Pip structures). The request has the proper invoice attachments with unit material prices from approved producers.

Should you have any questions regarding this submittal, please do not hesitate to email me at [Rosendo@B2ZEng.com](mailto:Rosendo@B2ZEng.com) or call me at (956) 900-4361.

Respectfully Submitted,

A handwritten signature in blue ink that reads "Rosendo Garcia, Jr." with a stylized flourish at the end.

Rosendo Garcia, Jr., P.E.

Senior Construction Manager – B2Z Engineering, LLC



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

### Invoice

Date	Invoice #
3/26/2018	3249

Please send remittance with copy of invoice to:

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

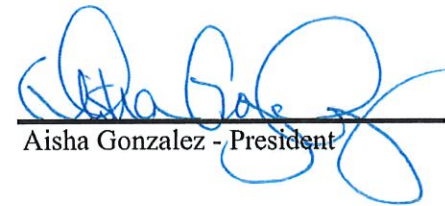
Bill To: L&G Engineering  
2100 W. Expressway 83  
Mercedes, Tx. 78570

Project Info:  
10th Street Construction Inspection & CMT  
JOB: 152780  
Billing Period 2/27/18 - 3/26/18

CSJ#0921-02-300

Description	Contract Amount	x	% Complete	Current Amount Due
FC 32010 - Construction Management ~ Sub	\$79,230.36		6.00%	\$3,961.52
			Previously Invoiced	\$792.30

TOTAL PREVIOUSLY INVOICED	\$792.30
<b>TOTAL DUE THIS INVOICE</b>	<b>\$3,961.52</b>

  
Aisha Gonzalez - President



**EXHIBIT "C"**  
**WORK SCHEDULE**  
**10th Street Extension - WA #2**  
 From SH 107 to FM 1925 (Monte Christo Rd)  
 Length = 2.5 miles

TASK AND DESCRIPTION	FIRM		2018												2019												2020				2021						
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC	Q1	Q2	Q3	Q4	Q1	Q2	Q3				
<b>10th Street Extension (SH 107-FM1925)</b>																																					
<b>WA #1: EA, PI, Schematic &amp; ROW Map</b>																																					
Advertise & Conduct Public Meeting	L&G	COMP																																			
TxDOT Schematic Approval	TxDOT	COMP																																			
TxDOT ROW Map Approval	TxDOT	COMP																																			
Environmental Decision	TxDOT	COMP																																			
<b>WA #2: Design Survey &amp; PS&amp;E</b>																																					
Design Survey	DLS	COMP																																			
Permitted Utility Coordination	L&G	COMP																																			
Outfall Coordination with HCDD #1	L&G	COMP																																			
30% PS&E Completion	L&G	COMP																																			
60% PS&E Completion	L&G	COMP																																			
90% PS&E Completion	L&G	COMP																																			
95% PS&E Completion	L&G	COMP																																			
TxDOT Review	TxDOT	COMP																																			
100% Mylars Completion	L&G	COMP																																			
TxDOT Approval	TxDOT	COMP																																			
<b>TXDOT RELEASE OF ROW</b>																																					
ROW Release	TxDOT	COMP																																			
<b>WA #3: ROW Acq. (SH 107 - Schunior)*</b>																																					
<b>ROW Acquisition (Approx. 64 parcels)</b>																																					
ROW Acquisition Process	L&G	COMP																																			
<b>Construction Mngmnt - Bid Analysis &amp; Contract Award</b>																																					
Receive TxDOT approval to advertise including pre-bid & DBE Conf	TxDOT	COMP																																			
Advertise (1st) & post in civcast (3 weeks prior to bid opening)	Cty/L&G	COMP																																			
Advertise (2nd) & post in www.civcastusa.com	Cty/L&G	COMP																																			
Advertise (3rd) & post in www.civcastusa.com	Cty/L&G	COMP																																			
Conduct DBE conference & Pre-Bid Meeting	Cty/L&G	COMP																																			
Open Bids (verify apparent low bidder)(7 weeks prior to letting)	Cty/L&G	COMP																																			
Submit Bids to TxDOT (low bidder concurrence)(6 wks to letting)	Cty/L&G	COMP																																			
Receive concurrence from TxDOT	TxDOT	COMP																																			
Recommend to County; Award to Low Bidder	L&G	COMP																																			
Award Contract at Commissioner's Court (Letting Date)	County	COMP																																			
<b>Construction Management - Contract Execution</b>																																					
Assist the County with Execution of the Contract	L&G	COMP																																			
<b>Construction Operations (SH 107 - FM 1925)</b>																																					
Construction Begins ( Start Date: February 2018)	County																																				

**SIEVE ANALYSIS  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
C-17-218-12-19

L&G Project Number: E130181

Client: Hidalgo County Pct. #4

L&G Report Number: R011

Contractor: Texas Cordia Construction, LLC

Sample Date: 02/15/2018

Date Reported: 03/02/2018

Page 1 of 1

Material: Concrete Coarse Aggregate  
Description: Coarse Aggregate JIII Edinburg Plant  
Shape: Rounded  
Hardness: Hard/Durable

Sieve	% Passing	Low	High
1 1/2 in	100	100	100
1.00 in	94*	95	100
1/2 in	57	25	60
No. 4	6	0	10
No. 8	2	0	5

Remarks: \* Out of tolerance Decant Value = 1.18%  
Test Method (As Applicable): ASTM C-136

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
(Edinburg, TX) Attn: Maria Lucio  
(1-cc copy)  
1-cc Texas Cordia Construction, LLC  
1-cc Laboratory

Respectfully Submitted,  
L&G Engineering



Ricardo A. Gil, Lab Manager

**SIEVE ANALYSIS  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
C-17-218-12-19  
Client: Hidalgo County Pct. #4  
Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
L&G Report Number: R012  
Sample Date: 02/15/2018  
Date Reported: 02/15/2018

Page 1 of 1

Material: Concrete Fine Aggregate  
Description: Concrete Fine Aggregate JIII Edinburg Plant  
Shape: Rounded  
Hardness: Hard/Durable

<u>Sieve</u>	<u>% Passing</u>	<u>Required</u>
3/8 in	100	100
No. 4	100	95-100
No. 8	80	80-100
No. 16	64	50-85
No. 30	53	26-65
No. 50	32	10-35
No. 100	5	0-10

Remarks: Sand Equivalent = 82%  
Test Method (As Applicable): TexDOT Methods

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
(Edinburg, TX) Attn: Maria Lucio  
(1-cc copy)  
1-cc Texas Cordia Construction, LLC  
1-cc Laboratory

Respectfully Submitted,  
L&G Engineering



\_\_\_\_\_  
Ricardo A. Gil, Lab Manager

**SIEVE ANALYSIS  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
C-17-218-12-19  
Client: Hidalgo County Pct. #4  
Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
L&G Report Number: R013  
Sample Date: 02/27/2018  
Date Reported: 03/02/2018

Page 1 of 1

Material: Sand for Bedding  
Description: Sand - TxDot Item 400  
Shape: Rounded  
Hardness: Weathered/Friable

<u>Sieve</u>	<u>% Retained</u>	<u>Required</u>
3 in	0	0
3/4 in	0	
3/8 in	0	
No. 4	0	
No. 10	0	0
No. 40	0	
No. 100	0	
No. 200	97.5	90-100

Remarks: Dry Sieve Analysis  
Test Method (As Applicable): TEX 110-E

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
(Edinburg, TX) Attn: Maria Lucio  
(1-cc copy)  
1-cc Texas Cordia Construction, LLC  
1-cc Laboratory

Respectfully Submitted,  
L&G Engineering



\_\_\_\_\_  
Ricardo A. Gil, Lab Manager

**SIEVE ANALYSIS  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
C-17-218-12-19  
Client: Hidalgo County Pct. #4  
Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
L&G Report Number: R014  
Sample Date: 02/27/2018  
Date Reported: 03/02/2018

Page 1 of 1

Material: Sand for Bedding  
Description: Sand - TxDot Item 400  
Shape: Rounded  
Hardness: Weathered/Friable

<u>Sieve</u>	<u>% Retained</u>	<u>Required</u>
3 in	0	0
3/4 in	0	
3/8 in	0	
No. 4	0	
No. 10	0	0
No. 40	0	
No. 100	0	
No. 200	91.5	90-100

Remarks: Washed Sieve Analysis  
Test Method (As Applicable): TEX 110-E

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
(Edinburg, TX) Attn: Maria Lucio  
(1-cc copy)  
1-cc Texas Cordia Construction, LLC  
1-cc Laboratory

Respectfully Submitted,  
L&G Engineering



Ricardo A. Gil, Lab Manager

**FIELD DENSITIES  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
 C-17-218-12-19  
 Client: Hidalgo County Pct. #4  
 Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
 L&G Report Number: R015  
 Sample Date: 03/02/2018  
 Date Reported: 03/05/2018

Page 1 of 1

Material Description	TRENCH BACKFILL		
Required % Proctor	98	Moisture Tolerance	-2+3
	<u>Proctor No</u>	<u>Optimum % Moisture</u>	<u>Opt. Density, LB/CF</u>
	TB MD2	15.0	106.9

Test No.	Test Location	Proctor No	Moisture Content	Dry Density	Percent Compaction	Depth (inch)
1	30" RCP Sta. 139+80 1st Lift	TB MD2	15.7%	104.8 pcf	98.0% (Pass)	8"
2	30" RCP Sta. 140+00 2nd Lift	TB MD2	15.7%	105.1 pcf	98.3% (Pass)	8"
3	Irrigation Crossing Sta. 131+15 1st Lift	TB MD2	15.9%	104.6 pcf	97.9% (Fail)	8"
4	Irrigation Crossing Sta. 131+15 2nd Lift	TB MD2	15.5%	105.2 pcf	98.4% (Pass)	8"
5	Irrigation Crossing Sta. 139+60 1st Lift	TB MD2	15.5%	104.8 pcf	98.0% (Pass)	8"
6	Irrigation Crossing Sta. 139+60 2nd Lift	TB MD2	16.1%	104.9 pcf	98.1% (Pass)	8"

Remarks: Test results are in general compliance with the project specifications except as noted.  
 Test Methods: ASTM D2922, D3017

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
 (Edinburg, TX) Attn: Maria Lucio  
 (1-cc copy)  
 1-cc Texas Cordia Construction, LLC  
 1-cc Laboratory

Respectfully Submitted,  
 L&G Engineering



Ricardo A. Gil, Lab Manager

**FIELD DENSITIES  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
 C-17-218-12-19  
 Client: Hidalgo County Pct. #4  
 Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
 L&G Report Number: R016  
 Sample Date: 03/02/2018  
 Date Reported: 03/05/2018

Page 1 of 1

Material Description	Trench Backfill		
Required % Proctor	98	Moisture Tolerance	-2+3
	<u>Proctor No</u>	<u>Optimum % Moisture</u>	<u>Opt. Density, LB/CF</u>
	TB MD2	15.0	106.9

Test No.	Test Location	Proctor No	Moisture Content	Dry Density	Percent Compaction	Depth (inch)
1	30" RCP Sta. 132+00 1st Lift	TB MD2	14.8%	105.9 pcf	99.1% (Pass)	8"
2	30" RCP Sta. 134+00 2nd Lift	TB MD2	15.3%	105.9 pcf	99.1% (Pass)	8"
3	30" RCP Sta. 135+25 1st Lift	TB MD2	15.1%	106.0 pcf	99.2% (Pass)	8"
4	30" RCP Sta. 136+00 2nd Lift	TB MD2	15.8%	104.9 pcf	98.1% (Pass)	8"
5	30" RCP Sta. 138+50 1st Lift	TB MD2	15.2%	105.4 pcf	98.6% (Pass)	8"
6	30" RCP Sta. 139+00 2nd Lift	TB MD2	15.3%	105.4 pcf	98.6% (Pass)	8"

Remarks: Test results are in general compliance with the project specifications except as noted.  
 Test Methods: ASTM D2922, D3017

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
 (Edinburg, TX) Attn: Maria Lucio  
 (1-cc copy)  
 1-cc Texas Cordia Construction, LLC  
 1-cc Laboratory

Respectfully Submitted,  
 L&G Engineering



Ricardo A. Gil, Lab Manager

**FIELD DENSITIES  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
 C-17-218-12-19  
 Client: Hidalgo County Pct. #4  
 Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
 L&G Report Number: R017  
 Sample Date: 03/02/2018  
 Date Reported: 03/05/2018

Page 1 of 1

Material Description	Trench Backfill		
Required % Proctor	98.0	Moisture Tolerance	-2+3
	Proctor No	Optimum % Moisture	Opt. Density, LB/CF
	TB MD1	14.0	113.3

Test No.	Test Location	Proctor No	Moisture Content	Dry Density	Percent Compaction	Depth (inch)
1	24" RCP Sta. 117+50 1st Lift	TB MD1	14.4%	111.3 pcf	98.2% (Pass)	8"
2	24" RCP Sta. 118+00 2nd Lift	TB MD1	13.5%	113.1 pcf	99.8% (Pass)	8"
3	24" RCP Sta. 119+50 1st Lift	TB MD1	14.8%	111.3 pcf	98.2% (Pass)	8"
4	24" RCP Sta. 120+00 2nd Lift	TB MD1	13.7%	112.5 pcf	99.3% (Pass)	8"
5	18" RCP Sta. 121+00 1st Lift	TB MD1	14.0%	113.3 pcf	100.0% (Pass)	8"
6	18" RCP Sta. 123+00 2nd Lift	TB MD1	14.3%	112.3 pcf	99.1% (Pass)	8"

Remarks: Test results are in general compliance with the project specifications except as noted.  
 Test Methods: ASTM D2922, D3017

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
 (Edinburg, TX) Attn: Maria Lucio  
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 1-cc Texas Cordia Construction, LLC  
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Respectfully Submitted,  
 L&G Engineering



Ricardo A. Gil, Lab Manager

**FIELD DENSITIES  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
 C-17-218-12-19  
 Client: Hidalgo County Pct. #4  
 Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
 L&G Report Number: R018  
 Sample Date: 03/02/2018  
 Date Reported: 03/05/2018

Page 1 of 1

Material Description	Trench Backfill		
Required % Proctor	98.0	Moisture Tolerance	-2+3
	Proctor No	Optimum % Moisture	Opt. Density, LB/CF
	TB MD1	14.0	113.3

Test No.	Test Location	Proctor No	Moisture Content	Dry Density	Percent Compaction	Depth (inch)
1	A-7 to A-8 Laterals Sta. 107+62 30'Lt 1st Lift	TB MD1	13.7%	112.1 pcf	98.9% (Pass)	8"
2	A-7 to A-8 Sta. 107+62 23'Rt 2nd Lift	TB MD1	14.7%	111.6 pcf	98.5% (Pass)	8"
3	A-10 to A-9 Sta. 110+50 39'Rt 1st Lift	TB MD1	15.3%	111.4 pcf	98.3% (Pass)	8"
4	A-10 to A-9 Sta. 110+50 20'Lt 2nd Lift	TB MD1	13.7%	112.7 pcf	99.5% (Pass)	8"
5	B-7 to B-8 Sta. 118+45 10'Rt 1st Lift	TB MD1	14.4%	111.8 pcf	98.7% (Pass)	8"
6	B-7 to B-8 Sta. 110+50 32'Lt 2nd Lift	TB MD1	14.7%	112.0 pcf	98.9% (Pass)	8"

Remarks: Test results are in general compliance with the project specifications except as noted.  
 Test Methods: ASTM D2922, D3017

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
 (Edinburg, TX) Attn: Maria Lucio  
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 L&G Engineering



Ricardo A. Gil, Lab Manager

**FIELD DENSITIES  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
 C-17-218-12-19  
 Client: Hidalgo County Pct. #4  
 Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
 L&G Report Number: R019  
 Sample Date: 03/02/2018  
 Date Reported: 03/05/2018

Page 1 of 1

Material Description	Trench Backfill		
Required % Proctor	98.0	Moisture Tolerance	-2+3
	Proctor No	Optimum % Moisture	Opt. Density, LB/CF
	TB MD1	14.0	113.3

Test No.	Test Location	Proctor No	Moisture Content	Dry Density	Percent Compaction	Depth (inch)
1	24" RCP Sta. 105 +25 1st Lift	TB MD1	13.8%	112.4 pcf	99.2% (Pass)	8"
2	24" RCP Sta. 105+75 2nd Lift	TB MD1	14.2%	111.9 pcf	98.8% (Pass)	8"
3	24" RCP Sta. 106+50 1st Lift	TB MD1	14.0%	111.8 pcf	98.7% (Pass)	8"
4	24" RCP Sta. 107+00 2nd Lift	TB MD1	13.6%	112.1 pcf	98.9% (Pass)	8"
5	30" RCP Sta. 109+00 1st Lift	TB MD1	13.6%	112.7 pcf	99.5% (Pass)	8"
6	30" RCP Sta. 110+00 2nd Lift	TB MD1	15.3%	111.1 pcf	98.1% (Pass)	8"

Remarks: Test results are in general compliance with the project specifications except as noted.  
 Test Methods: ASTM D2922, D3017

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
 (Edinburg, TX) Attn: Maria Lucio  
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 1-cc Laboratory

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 L&G Engineering



Ricardo A. Gil, Lab Manager

**REPORT OF SITE VISIT  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
C-17-218-12-19

Client: Hidalgo County Pct. #4

Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181

L&G Report Number: R020

Sample Date: 02/28/2018

Date Reported: 03/07/2018

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Page 1 of 1

On February 28, 2018 a representative of L&G Engineering Laboratory was dispatched to the subject project to extract a water sample from the Irrigation canal at Station 141+25.

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
(Edinburg, TX) Attn: Maria Lucio  
(1-cc copy)  
1-cc Texas Cordia Construction, LLC  
1-cc Laboratory

Respectfully Submitted,  
L&G Engineering



---

Ricardo A. Gil, Lab Manager

**PROCTOR  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
 C-17-218-12-19  
 Client: Hidalgo County Pct. #4  
 Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
 L&G Report Number: R021  
 Sample Date: 03/05/2018  
 Date Reported: 03/08/2018

Page 1 of 1

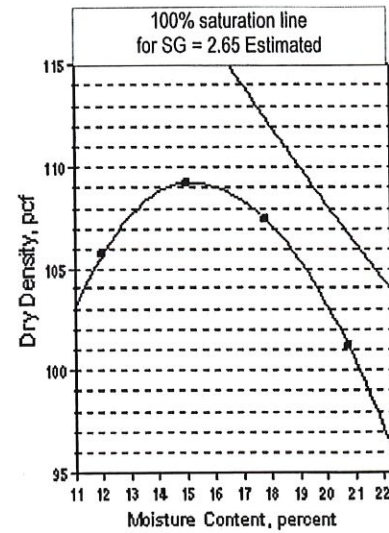
Compaction Method: ASTM D-698  
 Material Description: Limed Subgrade

Specific Gravity: 2.65

Liquid Limit: 22  
 Plastic Limit: 18  
 Plasticity Index: 4

Specimen No.:	1	2	3	4
Moisture, %:	12.0	15.0	17.8	20.7
Dry Density (pcf):	105.7	109.2	107.4	101.3

Maximum Dry Density in P.C.F.: 109.2  
 Optimum Moisture (%): 15.1



Remarks: Job Site Sample  
 Test Method: ASTM D-698 Method-A, ASTM D-4318

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
 (Edinburg, TX) Attn: Maria Lucio  
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 1-cc Laboratory

Respectfully Submitted,  
 L&G Engineering

Ricardo A. Gil, Lab Manager

**SIEVE ANALYSIS  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
C-17-218-12-19  
Client: Hidalgo County Pct. #4  
Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
L&G Report Number: R022  
Sample Date: 03/02/2018  
Date Reported: 03/21/2018

Page 1 of 1

Material: Liming TRT Subgrade  
Shape: Rounded  
Hardness: Hard/Durable

<u>Sieve</u>	<u>% Passing</u>	<u>Required</u>
1 3/4 in	100	100
3/4 in	100*	85
No. 4	80*	60

Remarks: Area Pulvized STa. 116+00 to 117+30 (46'W X 130'L) left side of roadway. \*Met Requirements.  
Test Method (As Applicable): Tex 101-E / Part III

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
(Edinburg, TX) Attn: Maria Lucio  
(1-cc copy)  
1-cc Texas Cordia Construction, LLC  
1-cc Laboratory

Respectfully Submitted,  
L&G Engineering



\_\_\_\_\_  
Ricardo A. Gil, Lab Manager

**SIEVE ANALYSIS  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
C-17-218-12-19  
Client: Hidalgo County Pct. #4  
Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
L&G Report Number: R023  
Sample Date: 03/05/2018  
Date Reported: 03/09/2018

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Page 1 of 1

Material: Lime TRT Subgrade

<u>Sieve</u>	<u>% Passing</u>	<u>Required</u>
1 3/4 in	100	100
3/4 in	100*	85
No. 4	75*	60

Remarks: Area Pulvized Sta. 105+00 to 108+88.90 Right side \*Met Requirements  
Test Method (As Applicable): Tex 101-E / Part III

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
(Edinburg, TX) Attn: Maria Lucio  
(1-cc copy)  
1-cc Texas Cordia Construction, LLC  
1-cc Laboratory

Respectfully Submitted,  
L&G Engineering



---

Ricardo A. Gil, Lab Manager

**SIEVE ANALYSIS  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
C-17-218-12-19

Client: Hidalgo County Pct. #4

Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181

L&G Report Number: R024

Sample Date: 03/07/2018

Date Reported: 03/09/2018

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Page 1 of 1

Material: Lime TRT Subgrade

<u>Sieve</u>	<u>% Passing</u>	<u>Required</u>
1 3/4 in	100	100
3/4 in	100*	85
No. 4	80*	60

Remarks: Area pulvized Sta. 105+50 to 110+29.54 left side \*Met Requirements  
Test Method (As Applicable): Tex 101-E / Part III

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
(Edinburg, TX) Attn: Maria Lucio  
(1-cc copy)  
1-cc Texas Cordia Construction, LLC  
1-cc Laboratory

Respectfully Submitted,  
L&G Engineering



---

Ricardo A. Gil, Lab Manager

**FIELD DENSITIES  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
 C-17-218-12-19  
 Client: Hidalgo County Pct. #4  
 Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
 L&G Report Number: R025  
 Sample Date: 03/08/2018  
 Date Reported: 03/09/2018

Page 1 of 1

Material Description	Trench Backfill		
Required % Proctor	98.0	Moisture Tolerance	-2+3
	Proctor No	Optimum % Moisture	Opt. Density, LB/CF
	TB MD2	15.0	106.9

Test No.	Test Location	Proctor No	Moisture Content	Dry Density	Percent Compaction	Depth (inch)
1	30" RCP Sta. 135+00 3rd Lift	TB MD2	15.9%	106.0 pcf	99.2% (Pass)	8"
2	30" RCP 134+75 4th Lift	TB MD2	15.0%	109.4 pcf	102.3% (Pass)	8"
3	30" RCP Sta. 138+25 3rd Lift	TB MD2	18.0%	107.5 pcf	100.6% (Pass)	8"
4	30" RCP Sta. 138+90 4th Lift	TB MD2	17.1%	110.1 pcf	103.0% (Pass)	8"
5	30" RCP Sta. 138+50 3rd Lift	TB MD2	17.5%	109.8 pcf	102.7% (Pass)	8"
6	30" RCP Sta. 140+00 4th Lift	TB MD2	17.0%	109.8 pcf	102.7% (Pass)	8"

Remarks: Test results are in general compliance with the project specifications except as noted.  
 Test Methods: TEX 115-E

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
 (Edinburg, TX) Attn: Maria Lucio  
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Respectfully Submitted,  
 L&G Engineering



Ricardo A. Gil, Lab Manager

**SIEVE ANALYSIS  
TEST REPORT**

Project Description: 10th Street Extension Project from SH107 to FM 1925  
C-17-218-12-19  
Client: Hidalgo County Pct. #4  
Contractor: Texas Cordia Construction, LLC

L&G Project Number: E130181  
L&G Report Number: R026  
Sample Date: 03/09/2018  
Date Reported: 03/09/2018

Page 1 of 1

Material: Sand for Bedding  
Description: Sand- TxDOT Item 400  
Shape: Rounded  
Hardness: Weathered/Friable

<u>Sieve</u>	<u>% Retained</u>	<u>Required</u>
3 in	0	0
3/4 in	0	
3/8 in	0	
No. 4	0	
No. 10	0	0
No. 40	0	
No. 100	0	
No. 200	92.0	90-100

Remarks: Dry Sieve Analysis  
Test Method (As Applicable): Tex Method 110-E

Orig: Hidalgo County Pct. #4 (E130) (Hidalgo County Pct. #4)  
(Edinburg, TX) Attn: Maria Lucio  
(1-cc copy)  
1-cc Texas Cordia Construction, LLC  
1-cc Laboratory

Respectfully Submitted,  
L&G Engineering



Ricardo A. Gil, Lab Manager