



ENTECH
ENGINEERING, INC.

505 ELKTON DRIVE
COLORADO SPRINGS, CO 80907
PHONE (719) 531-5599

**TESTING SUMMARY
RED ROCK VALLEY ESTATES WATER DISTRICT
RAW/POTABLE WATER TRANSMISSION LINE
EL PASO COUNTY, COLORADO**

Prepared for:
**Front Range Earthworks
317 Sherri Drive
Colorado Springs, CO 80911**

Attn: Kenny Willis

June 12, 2026

Respectfully Submitted,

ENTECH ENGINEERING, INC.

Joseph C. Goode III, P.E.
Sr. Engineer

Entech Job No. 251739

CW:JCG/

Utility Trench Backfill
Water



Soil Density Report

Client:

Project:

Front Range Earthworks
317 Sherri Dr
Colorado Springs, CO 80911

251739
Calle del Fuente - US 115
Calle del Fuente
Colorado Springs, CO 80926

Entech Engineering
505 Elkton Dr.
Colorado Springs, CO 80907
Phone: 719-531-5599

Test Results

Subject / Overall Test #	Test Location	Elevation (feet)	Reference	Test Date	Proctor ID	In Place Moist. (%)	In Place Dry Density (pcf)	Percent Comp.	Min Comp. (%)	Opt. Moisture Tolerance (%)	Rem. Code	Retest Of	Field Tech
1 / 1	Water: STA 23 + 50 on Llano Cir.	2	Below Grade	09/22/2025	P2	21.2	88.7	74	95	-1 / 3	DF/MF		RL
2 / 2	Water: STA 23 + 50 on Llano Cir.	2	Below Grade	10/06/2025	P2	14.4	117.3	98	95	-1 / 3	DPMP	1	RL
3 / 3	Water: STA 21 + 00 on Llano Cir.	2	Below Grade	10/06/2025	P2	14.9	113.6	95	95	-1 / 3	DPMP		RL
4 / 4	Water: STA 18 + 50 on Calle del Fuente.	2	Below Grade	10/06/2025	P2	13.7	115.4	97	95	-1 / 3	DPMP		RL
5 / 5	Water: STA 16 + 00 on Calle del Fuente.	2	Below Grade	10/06/2025	P2	13.2	115.9	97	95	-1 / 3	DPMP		RL
6 / 6	Water: STA 19 + 50 on Calle del Fuente.	-	At Grade	10/10/2025	P1	9.3	127.4	97	95	-2 / 2	DPMP		RL
7 / 7	Water: STA 17 + 50 on Calle del Fuente.	-	At Grade	10/10/2025	P1	9.7	133.3	102	95	-2 / 2	DPMP		RL
8 / 8	Water: STA 15 + 50 on Calle del Fuente.	-	At Grade	10/10/2025	P1	9.2	129.4	99	95	-2 / 2	DPMP		RL
9 / 12	Water: STA 21 + 50 on Llano Cir.	-	At Grade	10/17/2025	P1	7.7	132.6	101	95	-2 / 2	DPMP		RL
10 / 13	Water: STA 23 + 50 on Llano Cir.	-	At Grade	10/17/2025	P1	10.1	125.4	96	95	-2 / 2	DPMP		RL

Remarks

DF/MF : Density Fail / Moisture Fail
DP/MP : Density Pass / Moisture Pass

Comments

Tests are "Direct Transmission" (Method A). Gauge calibration data on file with the testing Agency.

Proctor Data

Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)
P2	ASTM D698 - A	CL	12.2	119.2
P1	ASTM D1557 - A	SM	8.2	131.3

Roadway Subgrade



Soil Density Report

Client:

Project:

Front Range Earthworks
317 Sherri Dr
Colorado Springs, CO 80911

251739
Calle del Fuente - US 115
Calle del Fuente
Colorado Springs, CO 80926

Entech Engineering
505 Elkton Dr.
Colorado Springs, CO 80907
Phone: 719-531-5599

Test Results

Subject / Overall Test #	Test Location	Elevation (feet)	Reference	Test Date	Proctor ID	In Place Moist. (%)	In Place Dry Density (pcf)	Percent Comp.	Min Comp. (%)	Opt. Moisture Tolerance (%)	Rem. Code	Retest Of	Field Tech
1 / 9	Roadway Subgrade: STA 19 + 45 on Calle del Fuente.	-	At Grade	10/10/2025	P1	7.9	127.7	97	95	-2 / 2	DPMP		RL
2 / 10	Roadway Subgrade: STA 17 + 45 on Calle del Fuente.	-	At Grade	10/10/2025	P1	7.4	130.3	99	95	-2 / 2	DPMP		RL
3 / 11	Roadway Subgrade: STA 15 + 45 on Calle del Fuente.	-	At Grade	10/10/2025	P1	8.1	126.2	96	95	-2 / 2	DPMP		RL
4 / 14	Roadway Subgrade: STA 21 + 45 on Llano Cir.	-	At Grade	10/17/2025	P1	9.7	132.6	101	95	-2 / 2	DPMP		RL
5 / 15	Roadway Subgrade: STA 23 + 45 on Llano Cir.	-	At Grade	10/17/2025	P1	10.1	128.0	98	95	-2 / 2	DPMP		RL

Remarks

DP/MP : Density Pass / Moisture Pass

Comments

Tests are "Direct Transmission" (Method A). Gauge calibration data on file with the testing Agency.

Proctor Data

Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)
P1	ASTM D1557 - A	SM	8.2	131.3

**Roadway Subgrade:
Recycled Concrete Base**



Soil Density Report

Client:

Project:

Front Range Earthworks
317 Sherri Dr
Colorado Springs, CO 80911

251739
Calle del Fuente - US 115
Calle del Fuente
Colorado Springs, CO 80926

Entech Engineering
505 Elkton Dr.
Colorado Springs, CO 80907
Phone: 719-531-5599

Test Results

Subject / Overall Test #	Test Location	Elevation (feet)	Reference	Test Date	Proctor ID	In Place Moist. (%)	In Place Dry Density (pcf)	Percent Comp.	Min Comp. (%)	Opt. Moisture Tolerance (%)	Rem. Code	Retest Of	Field Tech
6 / 16	Roadway Subgrade: RCB, STA 19 + 50 on Calle del Fuente.	-	At Grade	10/17/2025	P3	12.0	117.4	96	95	-2 / 2	DPMP		RL
7 / 17	Roadway Subgrade: RCB, STA 17 + 50 on Calle del Fuente.	-	At Grade	10/17/2025	P3	12.8	120.5	99	95	-2 / 2	DPMP		RL
8 / 18	Roadway Subgrade: RCB, STA 15 + 50 on Calle del Fuente.	-	At Grade	10/17/2025	P3	12.1	116.7	96	95	-2 / 2	DPMP		RL
9 / 19	Roadway Subgrade: RCB, STA 21 + 00 on Llano Cir.	-	At Grade	10/18/2025	P3	12.6	119.3	98	95	-2 / 2	DPMP		RL
10 / 20	Roadway Subgrade: RCB, STA 23 + 00 on Llano Cir.	-	At Grade	10/18/2025	P3	13.0	120.1	99	95	-2 / 2	DPMP		RL

Remarks

DP/MP : Density Pass / Moisture Pass

Comments

Tests are "Direct Transmission" (Method A). Gauge calibration data on file with the testing Agency.

Proctor Data

Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)
P3		Cls 6 R.C.	10.9	121.9

Asphalt Pavement



Density of Asphalt

Client:

Project:

Front Range Earthworks
317 Sherri Dr
Colorado Springs, CO 80911

251739
Calle del Fuente - US 115
Calle del Fuente
Colorado Springs, CO 80926

Entech Engineering
505 Elkton Dr.
Colorado Springs, CO 80907
Phone: 719-531-5599

Test Results

Test #	Test Date	Test Location	Lift Thickness (inches)	Mix Design	Max Density (pcf)	In Place Density (pcf)	Percent Comp.	Min/Max Comp. (%)	Rem. Code	Field Tech	Retest Of
1	10/21/2025	Bottom Lift, Drive Lane: STA 20 + 75 on Llano Cir., westbound lane.	2.0	(1/2") PG 64-22 20% RAP	151.8	141.3	93	92 / 96	SP	RL	
2	10/21/2025	Bottom Lift, Drive Lane: STA 22 + 50 on Llano Cir., westbound lane.	2.0	(1/2") PG 64-22 20% RAP	151.8	140.9	93	92 / 96	SP	RL	
3	10/21/2025	Bottom Lift, Drive Lane: STA 23 + 50 on Llano Cir., westbound lane.	2.0	(1/2") PG 64-22 20% RAP	151.8	139.4	92	92 / 96	SP	RL	
4	10/21/2025	Bottom Lift, Joint: STA 23 + 75 on Llano Cir.	2.0	(1/2") PG 64-22 20% RAP	151.8	139.9	92	92 / 96	SP	RL	
5	10/21/2025	Bottom Lift, Drive Lane: STA 23 + 50 on Llano Cir., eastbound lane.	2.0	(1/2") PG 64-22 20% RAP	151.8	140.1	92	92 / 96	SP	RL	
6	10/21/2025	Bottom Lift, Drive Lane: STA 21 + 00 on Llano Cir., eastbound lane.	2.0	(1/2") PG 64-22 20% RAP	151.8	140.1	92	92 / 96	SP	RL	
7	10/21/2025	Bottom Lift, Joint: STA 21 + 50 on Llano Cir., eastbound lane.	2.0	(1/2") PG 64-22 20% RAP	151.8	139.3	92	92 / 96	SP	RL	
8	10/23/2025	Bottom Lift, Drive Lane: STA 19 + 75 on Calle del Fuente, southbound lane.	2.0	(1/2") GR SX(75) PG 64-22	152.7	142.9	94	92 / 96	SP	RL	
9	10/23/2025	Bottom Lift, Drive Lane: STA 16 + 50 on Calle del Fuente, southbound lane.	2.0	(1/2") GR SX(75) PG 64-22	152.7	143.3	94	92 / 96	SP	RL	
10	10/24/2025	Bottom Lift, Drive Lane: STA 15 + 75 on Calle del Fuente, southbound lane.	2.0	(1/2") GR SX(75) PG 64-22	152.7	141.6	93	92 / 96	SP	RL	
11	10/27/2025	Top Lift, Drive Lane: STA 20 + 00 on Calle del Fuente, northbound lane.	2.0	(1/2") GR SX(75) PG 64-22	152.7	143.0	94	92 / 96	SP	JG	
12	10/27/2025	Top Lift, Drive Lane: STA 17 + 50 on Calle del Fuente, northbound lane.	2.0	(1/2") GR SX(75) PG 64-22	152.7	140.4	92	92 / 96	SP	JG	
13	10/27/2025	Top Lift, Drive Lane: STA 20 + 00 on Calle del Fuente, southbound lane.	2.0	(1/2") GR SX(75) PG 64-22	152.7	141.1	92	92 / 96	SP	JG	



Density of Asphalt

Client:

Project:

Front Range Earthworks
317 Sherri Dr
Colorado Springs, CO 80911

251739
Calle del Fuente - US 115
Calle del Fuente
Colorado Springs, CO 80926

Entech Engineering
505 Elkton Dr.
Colorado Springs, CO 80907
Phone: 719-531-5599

Test #	Test Date	Test Location	Lift Thickness (inches)	Mix Design	Max Density (pcf)	In Place Density (pcf)	Percent Comp.	Min/Max Comp. (%)	Rem. Code	Field Tech	Retest Of
14	10/27/2025	Top Lift, Drive Lane: STA 17 + 50 on Calle del Fuente, southbound lane.	2.0	(1/2") GR SX(75) PG 64-22	152.7	140.4	92	92 / 96	SP	JG	
15	10/30/2025	Top Lift, Drive Lane: STA 19 + 50 on Calle del Fuente, southbound lane.	2.0	(1/2") SP75 PG 64- 22 20% RAP	152.7	141.8	93	92 / 96	SP	RL	
16	10/30/2025	Top Lift, Drive Lane: STA 16 + 00 on Calle del Fuente, southbound lane.	2.0	(1/2") SP75 PG 64- 22 20% RAP	152.7	142.1	93	92 / 96	SP	RL	
17	10/31/2025	Top Lift, Drive Lane: STA 19 + 00 on Calle del Fuente, northbound lane.	2.0	(1/2") SX75 PG 64- 22 20% RAP	152.7	141.5	93	92 / 96	SP	RL	
18	10/31/2025	Top Lift, Joint: STA 18 + 50 on Calle del Fuente.	2.0	(1/2") SX75 PG 64- 22 20% RAP	152.7	139.9	92	92 / 96	SP	RL	
19	10/31/2025	Top Lift, Drive Lane: STA 15 + 75 on Calle del Fuente, northbound lane.	2.0	(1/2") SX75 PG 64- 22 20% RAP	152.7	140.8	92	92 / 96	SP	RL	
20	10/31/2025	Top Lift, Drive Lane: STA 16 + 25 on Calle del Fuente, northbound lane.	2.0	(1/2") SX75 PG 64- 22 20% RAP	152.7	140.4	92	92 / 96	SP	RL	

Remarks

SP : Supplied Density Pass

Comments

Tests are determined using backscatter method.