



**ENTECH**  
ENGINEERING, INC.

505 ELKTON DRIVE  
COLORADO SPRINGS, CO 80907  
PHONE (719) 531-5599  
FAX (719) 531-5238

December 23, 2021

FLRD #6  
2138 Flying Horse Club Drive  
Colorado Springs, CO 80921

Attn: Jim Boulton

Re: Density Testing – Sanitary Sewer  
Forest Lakes Residential Development, Filing 6  
Colorado Springs, Colorado  
Report No. 13, Tests 647–690

Dear Mr. Boulton,

As requested, personnel of Entech Engineering, Inc. have performed density testing at the above referenced site.

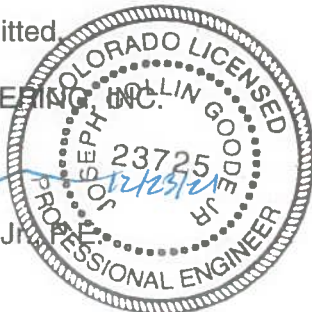
Density testing on this site was performed on October 11, 2021 through October 15, 2021. The density testing indicates that the materials have been adequately compacted at the depths and in the locations noted. Results of the density tests are enclosed with this letter.

We trust that this has provided you with the information you require. Should you have any questions or need further information, please do not hesitate to contact us.

Respectfully Submitted,

ENTECH ENGINEERING, INC.

  
Joseph C. Goode, Jr.  
President



JCG/bk

Enclosure

Entech Job No. 201326

F:\AA projects\2020\201326-FLRD-Forest Lakes F6-110-ConMat\201326\_2cl13.docx

<b>Client:</b> FLRD #6	<b>Entech Job #:</b> 201326.2	<b>Proctor Value Key:</b> M = modified, ASTM D-1557
<b>Project:</b> Forest Lakes Residential Development, Filing 6	<b>Tested By:</b> J. Claton	S = standard, ASTM D-698
<b>Subject:</b> Sanitary Sewer	<b>Report Date:</b> 12-28-2021	T = AASHTO, T-180

Test #	Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
647	Main, Station 15 + 00, on Mesa Top Drive North, 15' below grade.	10/11/2021	98	98	8.3	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
648	Main, Station 15 + 00, on Mesa Top Drive North, 13' below grade.	10/11/21	98	98	8.7	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
649	Main, Station 15 + 00, on Mesa Top Drive North, 11' below grade.	10/11/21	98	98	8.9	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
650	Main, Station 15 + 00, on Mesa Top Drive North, 9' below grade.	10/11/21	96	95	7.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
651	Main, Station 15 + 00, on Mesa Top Drive North, 8' below grade.	10/11/21	97	95	7.8	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
652	Main, Station 15 + 00, on Mesa Top Drive North, 6' below grade.	10/11/21	95	95	8.6	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
653	Service to Lot #6, on Mesa Top Drive North, 10' below grade.	10/11/21	99	98	7.0	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
654	Service to Lot #6, on Mesa Top Drive North, 10' below grade.	10/11/21	97	95	7.1	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
655	Service to Lot #6, on Mesa Top Drive North, 6' below grade.	10/11/21	96	95	6.8	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
656	Main, Station 15 + 00, on Mesa Top Drive North, 4' below grade.	10/12/21	96	95	9.2	SM	M - 130.3 @ 7.6	<input type="checkbox"/>

**Comments:**

Scope of Observation: PERIODIC; CONTRACTOR'S OR CLIENT'S REPRESENTATIVE ADVISED

All dimensions are approximate. Cl. = Centerline



**ENTECH**  
ENGINEERING, INC.  
505 Elkton Drive  
Colorado Springs, CO 80907  
(719) 531-5599 • (719) 531-5238 (fax)

FIELD DENSITY RESULTS

*Joseph C. Goode, Jr., P.E.*

<b>Client:</b> FLRD #6	<b>Entech Job #:</b> 201326.2	<b>Proctor Value Key:</b> M = modified, ASTM D-1557
<b>Project:</b> Forest Lakes Residential Development, Filing 6	<b>Tested By:</b> J. Claton	S = standard, ASTM D-698
<b>Subject:</b> Sanitary Sewer	<b>Report Date:</b> 12-28-2021	T = AASHTO, T-180

Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
657	Main, Station 15 + 00, on Mesa Top Drive North, 2' below grade.	10/12/21	97	95	9.1	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
658	Main, Station 15 + 00, on Mesa Top Drive North, 1' below grade.	10/12/21	97	95	7.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
659	Main, Station 15 + 00, on Mesa Top Drive North, at grade.	10/12/21	97	95	6.9	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
660	Service to Lot #6 on Mesa Top Drive North, 4' below grade.	10/12/21	96	95	6.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
661	Service to Lot #6 on Mesa Top Drive North, 2' below grade.	10/12/21	97	95	6.7	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
662	Service to Lot #6 on Mesa Top Drive North, at grade.	10/12/21	95	95	7.2	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
663	1' north of Manhole 8 on North Mesa Top Drive, 12' below grade.	10/18/21	99	98	8.1	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
664	1' west of Manhole 8 on North Mesa Top Drive, 10' below grade.	10/18/21	98	98	7.9	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
665	1' south of Manhole 8 on North Mesa Top Drive, 8' below grade.	10/19/21	96	95	7.6	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
666	1' east of Manhole 8 on North Mesa Top Drive, 6' below grade.	10/19/21	96	95	7.8	SM	M - 130.3 @ 7.6	<input type="checkbox"/>

**Comments:**

Scope of Observation: PERIODIC; CONTRACTOR'S OR CLIENT'S REPRESENTATIVE ADVISED

All dimensions are approximate. Ci. = Centerline



**ENTECH**  
ENGINEERING, INC.  
505 Elkton Drive  
Colorado Springs, CO 80907  
(719) 531-5599 • (719) 531-5238 (fax)

FIELD DENSITY RESULTS

*Joseph C. Goode, Jr., P.E.*

<b>Client:</b> FLRD #6	<b>Entech Job #:</b> 201326.2	<b>Proctor Value Key:</b> M = modified, ASTM D-1557
<b>Project:</b> Forest Lakes Residential Development, Filing 6	<b>Tested By:</b> J. Claton	S = standard, ASTM D-698
<b>Subject:</b> Sanitary Sewer	<b>Report Date:</b> 12-28-2021	T = AASHTO, T-180

Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
667	2' north of Manhole 8 on North Mesa Top Drive, 5' below grade.	10/20/21	97	95	6.3	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
668	2' east of Manhole 8 on North Mesa Top Drive, 4' below grade.	10/20/21	96	95	6.6	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
669	2' west of Manhole 8 on North Mesa Top Drive, 3' below grade.	10/21/21	95	95	7.1	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
670	2' south of Manhole 8 on North Mesa Top Drive, 2' below grade.	10/21/21	95	95	6.8	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
671	1' north of Manhole 8 on North Mesa Top Drive, 1' below grade.	10/22/21	97	95	7.2	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
672	1' south of Manhole 8 on North Mesa Top Drive, at grade.	10/22/21	96	95	7.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
673	Service, Lot #31 on Mesa Top Drive North, 14' below grade.	10/28/21	99	98	8.1	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
674	Service, Lot #31 on Mesa Top Drive North, 12' below grade.	10/28/21	98	98	8.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
675	Service, Lot #31 on Mesa Top Drive North, 10' below grade.	10/28/21	98	98	9.3	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
676	Service, Lot #31 on Mesa Top Drive North, 8' below grade.	10/28/21	96	95	9.3	SM	M - 130.3 @ 7.6	<input type="checkbox"/>

**Comments:**

Scope of Observation: PERIODIC; CONTRACTOR'S OR CLIENT'S REPRESENTATIVE ADVISED

All dimensions are approximate. Cl. = Centerline



**ENTECH**  
ENGINEERING, INC.  
505 Elkton Drive  
Colorado Springs, CO 80907  
(719) 531-5595 • (719) 531-5238 (fax)

FIELD DENSITY RESULTS

*Joseph C. Goode, Jr., P.E.*

<b>Client:</b> FLRD #6	<b>Entech Job #:</b> 201326.2	<b>Proctor Value Key:</b> M = modified, ASTM D-1557
<b>Project:</b> Forest Lakes Residential Development, Filing 6	<b>Tested By:</b> J. Claton	S = standard, ASTM D-698
<b>Subject:</b> Sanitary Sewer	<b>Report Date:</b> 12-28-2021	T = AASHTO, T-180

<b>Test #</b>	<b>Location</b>	<b>Testing Date</b>	<b>Percent Compaction</b>	<b>Percent Required</b>	<b>Percent Moisture</b>	<b>Soil Type</b>	<b>Proctor Type/Value</b>	<b>Pass/Fail</b> <input checked="" type="checkbox"/> = Fail
677	Service, Lot #31 on Mesa Top Drive North, 6' below grade.	10/28/21	97	95	9.0	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
678	Service, Lot #31 on Mesa Top Drive North, 4' below grade.	10/28/21	96	95	8.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
679	Service, Lot #31 on Mesa Top Drive North, 2' below grade.	10/28/21	96	95	8.0	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
680	Service, Lot #31 on Mesa Top Drive North, at grade.	10/28/21	97	95	7.9	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
681	Service, Lot #9 on Mesa Top Drive North, 14' below grade.	10/29/21	99	98	7.2	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
682	Service, Lot #9 on Mesa Top Drive North, 12' below grade.	10/29/21	99	98	6.9	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
683	Service, Lot #9 on Mesa Top Drive North, 10' below grade.	10/29/21	98	98	6.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
684	Service, Lot #9 on Mesa Top Drive North, 8' below grade.	10/29/21	97	95	7.3	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
685	Service, Lot #9 on Mesa Top Drive North, 6' below grade.	10/29/21	95	95	8.1	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
686	Service, Lot #9 on Mesa Top Drive North, 4' below grade.	10/29/21	97	95	8.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>

**Comments:**

Scope of Observation: PERIODIC; CONTRACTOR'S OR CLIENT'S REPRESENTATIVE ADVISED

All dimensions are approximate. Cl. = Centerline

 <p><b>ENTECH</b> ENGINEERING, INC. 505 Elkton Drive Colorado Springs, CO 80907 (719) 531-5599 • (719) 531-5238 (fax)</p>	<p>FIELD DENSITY RESULTS</p>	<p><i>Joseph C. Goode, Jr., P.E.</i></p>
--	------------------------------	--

<b>Client:</b> FLRD #6	<b>Entech Job #:</b> 201326.2	<b>Proctor Value Key:</b> M = modified, ASTM D-1557
<b>Project:</b> Forest Lakes Residential Development, Filing 6	<b>Tested By:</b> J. Claton	S = standard, ASTM D-698
<b>Subject:</b> Sanitary Sewer	<b>Report Date:</b> 12-28-2021	T = AASHTO, T-180

Test #	Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
687	Service, Lot #9 on Mesa Top Drive North, 2' below grade.	10/29/21	97	95	8.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
688	Service, Lot #9 on Mesa Top Drive North, at grade.	10/29/21	97	95	8.0	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
689	Service, Lot #29 on Mesa Top Drive North, 14' below grade.	11/1/21	98	98	7.1	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
690	Service, Lot #29 on Mesa Top Drive North, 12' below grade.	11/1/21	99	98	6.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>

**Comments:**

Scope of Observation: PERIODIC; CONTRACTOR'S OR CLIENT'S REPRESENTATIVE ADVISED

All dimensions are approximate. Cl. = Centerline



**ENTECH**  
ENGINEERING, INC.  
505 Elkton Drive  
Colorado Springs, CO 80907  
(719) 531-5599 • (719) 531-5238 (fax)

FIELD DENSITY RESULTS

*Joseph C. Goode, Jr., P.E.*