



**ENTECH**  
ENGINEERING, INC.

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

November 8, 2021

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

Attn: Jim Boulton

Re: Density Testing – Storm Sewer  
Forest Lakes Residential Development, Filing 6  
Colorado Springs, Colorado  
Report No. 1, Tests 1–61

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 8, 2021 through October 22, 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\_4cl1.docx

<b>Client:</b> FLRD #6	<b>Entech Job #:</b> 201326.4	<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> Storm Sewer	<b>Report Date:</b> 11-01-2021	T = AASHTO, T-180

Test #	Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
1	Main, Station 2+10 on Timber Trek Way, 4' below grade.	10/8/2021	99	95	8.2	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
2	Main, Station 2+10 on Timber Trek Way, 2' below grade.	10/8/2021	98	95	8.1	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
3	Main, Station 2+10 on Timber Trek Way, at grade.	10/8/2021	97	95	7.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
4	Main, Station 3+25 on Timber Trek Way, 4' below grade.	10/9/2021	95	95	6.6	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
5	Main, Station 3+25 on Timber Trek Way, 2' below grade.	10/9/2021	97	95	8.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
6	Main, Station 3+25 on Timber Trek Way, at grade.	10/9/2021	97	95	7.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
7	Main, Station 4+50 on Timber Trek Way, 4' below grade.	10/9/2021	97	95	7.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
8	Main, Station 4+50 on Timber Trek Way, 2' below grade.	10/9/2021	98	95	7.0	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
9	Main, Station 4+50 on Timber Trek Way, at grade.	10/9/2021	97	95	6.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
10	Main, Station 6+25 on Timber Trek Way, 4' below grade.	10/9/2021	97	95	8.1	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> 201326.4	<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> Storm Sewer	<b>Report Date:</b> 11-01-2021	T = AASHTO, T-180

Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
11	Main, Station 6+25 on Timber Trek Way, 2' below grade.	10/9/2021	98	95	7.9	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
12	Main, Station 6+25 on Timber Trek Way, at grade.	10/9/2021	97	95	6.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
13	Main, Station 8+00 on Timber Trek Way, 4' below grade.	10/9/2021	96	95	7.2	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
14	Main, Station 8+00 on Timber Trek Way, 2' below grade.	10/9/2021	96	95	6.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
15	Main, Station 8+00 on Timber Trek Way, at grade.	10/9/2021	97	95	6.1	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
16	10' east, 5' south of Lot 52 on Timber Trek Way, 2' east of inlet, 4' below grade.	10/11/2021	98	95	7.1	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
17	10' east, 5' south of Lot 52 on Timber Trek Way, 2' south of inlet, 2' below grade.	10/11/2021	98	95	7.7	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
18	10' east, 5' south of Lot 52 on Timber Trek Way, 2' north of inlet, 1' below grade.	10/11/2021	97	95	7.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
19	10' east, 5' south of Lot 52 on Timber Trek Way, 2' west of inlet, at grade.	10/12/2021	96	95	6.8	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
20	5' east of Lot 56 on Timber Trek Way, 2' north of inlet type "e", 4' below grade.	10/12/2021	96	95	7.5	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

 <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> 201326.4	<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> Storm Sewer	<b>Report Date:</b> 11-08-2021	T = AASHTO, T-180

Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
21	5' east of Lot 56 on Timber Trek Way, 2' west of inlet type "e", 2' below grade.	10/12/2021	96	95	8.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
22	5' east of Lot 56 on Timber Trek Way, 2' south of inlet type "e", 1' below grade.	10/13/2021	96	95	9.0	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
23	5' east of Lot 56 on Timber Trek Way, 2' east of inlet type "e", at grade.	10/13/2021	97	95	9.2	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
24	5' west of Lot 67 on Timber Trek Way, 2' north of inlet type "r", 7' below grade.	10/13/2021	97	95	8.1	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
25	5' west of Lot 67 on Timber Trek Way, 2' west of inlet type "r", 2' below grade.	10/13/2021	98	95	7.9	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
26	5' west of Lot 67 on Timber Trek Way, 2' east of inlet type "r", 1' below grade.	10/14/2021	99	95	6.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
27	5' west of Lot 67 on Timber Trek Way, 2' south of inlet type "r", at grade.	10/14/2021	97	95	7.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
28	2' north of Manhole I on Timber Trek Way, 4' below grade.	10/14/2021	97	95	7.6	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
29	2' east of Manhole I on Timber Trek Way, 3' below grade.	10/14/2021	96	95	7.7	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
30	2' west of Manhole I on Timber Trek Way, 2' below grade.	10/14/2021	96	95	8.2	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

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

<b>Client:</b> FLRD #6	<b>Entech Job #:</b> 201326.4	<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> Storm Sewer	<b>Report Date:</b> 11-08-2021	T = AASHTO, T-180

Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
31	2' south of Manhole I on Timber Trek Way, 1' below grade.	10/14/2021	95	95	7.9	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
32	1' north of Manhole I on Timber Trek Way, at grade.	10/14/2021	97	95	6.8	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
33	1' north of Manhole J on Timber Trek Way, 5' below grade.	10/15/2021	97	95	5.9	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
34	1' west of Manhole J on Timber Trek Way, 4' below grade.	10/15/2021	97	95	7.2	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
35	1' south of Manhole J on Timber Trek Way, 3' below grade.	10/15/2021	98	95	6.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
36	1' north of Manhole K on Timber Trek Way, 4' below grade.	10/15/2021	97	95	6.9	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
37	2' east of Manhole K on Timber Trek Way, 3' below grade.	10/15/2021	95	95	6.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
38	1' south of Manhole K on Timber Trek Way, 1' below grade.	10/15/2021	97	95	7.3	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
39	1' east of Manhole J on Timber Trek Way, 2' below grade.	10/16/2021	95	95	6.6	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
40	1' north of Manhole J on Timber Trek Way, 1' below grade.	10/16/2021	96	95	6.9	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) 531-5559 • (719) 531-5238 (fax)

FIELD DENSITY RESULTS

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


<b>Client:</b> FLRD #6	<b>Entech Job #:</b> 201326.4	<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> Storm Sewer	<b>Report Date:</b> 11-08-2021	T = AASHTO, T-180

Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
41	1' south of Manhole J on Timber Trek Way, at grade.	10/16/2021	97	95	7.1	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
42	1' west of Manhole K on Timber Trek Way, at grade.	10/16/2021	97	95	7.8	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
43	2' north of Manhole L on Timber Trek Way, 5' below grade.	10/16/2021	96	95	7.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
44	2' east of Manhole L on Timber Trek Way, 4' below grade.	10/16/2021	97	95	6.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
45	2' west of Manhole L on Timber Trek Way, 3' below grade.	10/16/2021	96	95	6.0	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
46	2' south of Manhole L on Timber Trek Way, 2' below grade.	10/16/2021	95	95	6.2	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
47	2' north of Manhole L on Timber Trek Way, 1' below grade.	10/16/2021	95	95	6.2	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
48	2' east of Manhole L on Timber Trek Way, at grade.	10/16/2021	96	95	6.7	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
49	Manhole M on Timber Trek Way, 5' below grade.	10/18/2021	98	95	7.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
50	Manhole M on Timber Trek Way, 3' below grade.	10/18/2021	97	95	6.9	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><b>FIELD DENSITY RESULTS</b></p>	<p><i>Joseph C. Goode, Jr., P.E.</i></p>
--	-------------------------------------	--

<b>Client:</b> FLRD #6	<b>Entech Job #:</b> 201326.4	<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> Storm Sewer	<b>Report Date:</b> 11-08-2021	T = AASHTO, T-180

Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
51	Manhole M on Timber Trek Way, 1' below grade.	10/18/2021	97	95	7.2	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
52	Manhole M on Timber Trek Way, at grade.	10/19/2021	96	95	6.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
53	Manhole N on South Mesa Top Drive, 5' below grade.	10/19/2021	95	95	7.0	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
54	Manhole N on South Mesa Top Drive, 3' below grade.	10/19/2021	96	95	5.9	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
55	Manhole N on South Mesa Top Drive, 1' below grade.	10/20/2021	96	95	6.4	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
56	Manhole N on South Mesa Top Drive, at grade.	10/20/2021	97	95	6.7	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
57	Main, Station 10+00 on South Mesa Top Drive, 7' below grade.	10/21/2021	95	95	8.0	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
58	Main, Station 10+00 on South Mesa Top Drive, 5' below grade.	10/22/2021	97	95	6.9	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
59	Main, Station 10+00 on South Mesa Top Drive, 3' below grade.	10/22/2021	98	95	7.5	SM	M - 130.3 @ 7.6	<input type="checkbox"/>
60	Main, Station 10+00 on South Mesa Top Drive, 1' below grade.	10/22/2021	97	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. Cl. = Centerline

 <p><b>ENTECH</b> ENGINEERING, INC. 505 Elkon 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>
---	------------------------------	--

**Client:** FLRD #6  
**Project:** Forest Lakes Residential Development, Filing 6  
**Subject:** Storm Sewer

**Entech Job #:** 201326.4  
**Tested By:** J. Claton  
**Report Date:** 11-01-2021

**Proctor Value Key:** M = modified, ASTM D-1557  
 S = standard, ASTM D-698  
 T = AASHTO, T-180

Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
61	Main, Station 10+00 on South Mesa Top Drive, at grade.	10/22/2021	96	95	7.3	SM	M - 130.3 @ 7.6	<input checked="" type="checkbox"/> = Pass <input type="checkbox"/> = Fail

**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>
--	------------------------------	--