



ENTECH
ENGINEERING, INC.

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

June 16, 2022

Classic Communities
2138 Flying Horse Club Drive
Colorado Springs, CO. 80921

Attn: Mark Sherwood

Re: Density Testing – Sanitary Sewer
Forest Lakes Development, Filing 7
Colorado Springs, Colorado
Report No. 8, Tests 223 - 273

Dear Mr. Sherwood,

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

Density testing on this site was performed on April 19 through 25, 2022. The density testing indicates that the materials have been adequately compacted at the depths and in the locations noted, with the exceptions of tests 226, 234, 249, and 263. However, retests were done at the locations noted on the same day of the original tests. 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., P.E.
President



JCG/pb

Enclosure

Entech Job No. 220622

F:\AA projects\2022\220622-FLRD-Forest Lakes F7-110-ConMat\220622_2cl8.doc


Client: Classic Communities	Entech Job #: 220622.2	Proctor Value Key: M = modified, ASTM D-1557
Project: Forest Lakes Development, Filing 7	Tested By: B. Wasilik	S = standard, ASTM D-698
Subject: Sanitary Sewer	Report Date: 06-16-2022	T = AASHTO, T-180

Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
223	Manhole # 1, 7' below grade.	4/19/2022	97	95	8.6	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
224	Manhole # 1, 5' below grade.	4/19/2022	99	95	7.1	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
225	Manhole # 1, 3' below grade.	4/19/2022	97	95	7.1	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
226	Manhole # 11, 10' below grade.	4/20/2022	87	95	11.9	SM	M - 118.7 @ 10.0	<input checked="" type="checkbox"/>
226a	Manhole # 11, 10' below grade. **retest**	4/20/2022	99	95	8.3	SM	M - 118.7 @ 10.0	<input type="checkbox"/>
227	Manhole # 1, 1' below grade.	4/20/2022	97	95	7.0	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
228	Main, Station # 2 + 50 on Mesa Top Drive, 8' below grade.	4/20/2022	98	95	8.3	SM	M - 118.7 @ 10.0	<input type="checkbox"/>
229	Manhole # 11, 8' below grade.	4/20/2022	98	95	10.4	SM	M - 118.7 @ 10.0	<input type="checkbox"/>
230	Manhole # 11, 6' below grade.	4/20/2022	97	95	8.2	SM	M - 118.7 @ 10.0	<input type="checkbox"/>
231	Main, Station 2 + 50 on Mesa Top Drive, 6' below grade.	4/20/2022	99	95	9.8	SM	M - 118.7 @ 10.0	<input type="checkbox"/>

Comments:

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

All dimensions are approximate. Cl. = Centerline

 <p>ENTECH 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>
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Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
232	Manhole # 11, 4' below grade.	4/20/2022	99	95	9.1	SM	M - 118.7 @ 10.0	<input type="checkbox"/>
233	Main, Station 2 + 50 on Mesa Top Drive, 4' below grade.	4/20/2022	97	95	8.1	SM	M - 118.7 @ 10.0	<input type="checkbox"/>
234	Manhole # 11, 2' below grade.	4/20/2022	88	95	13.7	SM	M - 118.7 @ 10.0	<input checked="" type="checkbox"/>
234a	Manhole # 11, 2' below grade. **retest**	4/20/2022	97	95	11.7	SM	M - 118.7 @ 10.0	<input type="checkbox"/>
235	Main, Station # 2 + 50 on Mesa Top Drive, 2' below grade.	4/20/2022	100	95	9.6	SM	M - 118.7 @ 10.0	<input type="checkbox"/>
236	Manhole # 11, at grade.	4/20/2022	100	95	6.9	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
237	Main, Station # 2 + 50 on Mesa Top Drive, at grade.	4/20/2022	99	95	7.1	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
238	Main, Station # 2 + 50 on Mountain Ledge Lane, 10' below grade.	4/21/2022	97	95	11.1	SM	M - 118.7 @ 10.0	<input type="checkbox"/>
239	Main, Station # 2 + 50 on Mountain Ledge Lane, 8' below grade.	4/21/2022	96	95	7.9	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
240	Main, Station # 2 + 50 on Mountain Ledge Lane, 6' below grade.	4/21/2022	98	95	8.3	SM	M - 125.7 @ 8.8	<input type="checkbox"/>

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FIELD DENSITY RESULTS

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Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
241	Manhole # 10, 9' below grade.	4/22/2022	95	95	6.8	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
242	Manhole # 10, 7' below grade.	4/22/2022	95	95	6.9	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
243	Service, Lot # 41, 6' below grade.	4/22/2022	95	95	9.2	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
244	Manhole # 10, 5' below grade.	4/22/2022	96	95	7.0	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
245	Manhole # 10, 3' below grade.	4/22/2022	95	95	7.4	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
246	Service, Lot # 41, 4' below grade.	4/22/2022	96	95	6.9	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
247	Manhole # 15, 12' below grade.	4/22/2022	95	95	6.8	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
248	Service, Lot # 41, 2' below grade.	4/22/2022	95	95	8.0	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
249	Manhole # 10, 1' below grade.	4/22/2022	87	95	9.5	SM	M - 125.7 @ 8.8	<input checked="" type="checkbox"/>
249a	Manhole # 10, 1' below grade. **retest**	4/22/2022	96	95	7.2	SM	M - 125.7 @ 8.8	<input type="checkbox"/>

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Subject: Sanitary Sewer	Report Date: 06-27-2022	T = AASHTO, T-180

Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
250	Service, Lot # 41, 1' below grade.	4/22/2022	95	95	8.2	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
251	Manhole # 15, 10' below grade.	4/22/2022	97	95	7.8	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
252	Service, Lot # 41, at grade.	4/22/2022	97	95	7.9	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
253	Manhole # 10, at grade.	4/22/2022	96	95	8.6	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
254	Service, Lot # 42, 8' below grade.	4/22/2022	95	95	9.0	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
255	Service, Lot # 42, 6' below grade.	4/22/2022	95	95	9.4	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
256	Service, Lot # 42, 4' below grade.	4/22/2022	95	95	7.7	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
257	Manhole # 15, 8' below grade.	4/22/2022	95	95	6.8	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
258	Manhole # 15, 6' below grade.	4/22/2022	95	95	7.1	SM	M - 125.7 @ 8.8	<input type="checkbox"/>

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Test #	Test Location	Testing Date	Percent Compaction	Percent Required	Percent Moisture	Soil Type	Proctor Type/Value	Pass/Fail
259	Service, Lot # 42, 2' below grade.	4/22/2022	95	95	7.8	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
260	Service, Lot # 42, at grade.	4/25/2022	95	95	7.8	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
261	Service, Lot # 37, 11' below grade.	4/25/2022	100	95	7.6	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
262	Manhole # 15, 4' below grade.	4/25/2022	96	95	7.1	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
263	Service, Lot # 37, 9' below grade.	4/25/2022	88	95	9.3	SM	M - 118.7 @ 10.0	<input checked="" type="checkbox"/>
263a	Service, Lot # 37, 9' below grade. **retest**	4/25/2022	100	95	8.6	SM	M - 118.7 @ 10.0	<input type="checkbox"/>
264	Service, Lot # 37, 7' below grade.	4/25/2022	97	95	11.4	SM	M - 118.7 @ 10.0	<input type="checkbox"/>
265	Service, Lot # 37, 5' below grade.	4/25/2022	95	95	8.3	SM	M - 118.7 @ 10.0	<input type="checkbox"/>
266	Manhole # 15, 2' below grade.	4/25/2022	100	95	6.8	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
267	Service, Lot # 37, 3' below grade.	4/25/2022	98	95	8.8	SM	M - 125.7 @ 8.8	<input type="checkbox"/>

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268	Service, Lot # 37, 1.5' below grade.	4/25/2022	99	95	8.8	SM	M - 125.7 @ 8.8	<input checked="" type="checkbox"/> = Fail
269	Service, Lot # 37, at grade.	4/25/2022	96	95	7.2	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
270	Service, Lot # 35, 10' below grade.	4/25/2022	99	95	12.0	SM	M - 118.7 @ 8.8	<input type="checkbox"/>
271	Service, Lot # 35, 8' below grade.	4/25/2022	95	95	7.2	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
272	Service, Lot # 35, 6' below grade.	4/25/2022	96	95	7.1	SM	M - 125.7 @ 8.8	<input type="checkbox"/>
273	Service, Lot # 35, 4' below grade.	4/25/2022	98	95	7.0	SM	M - 125.7 @ 8.8	<input type="checkbox"/>

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