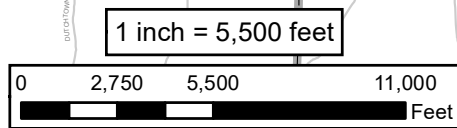
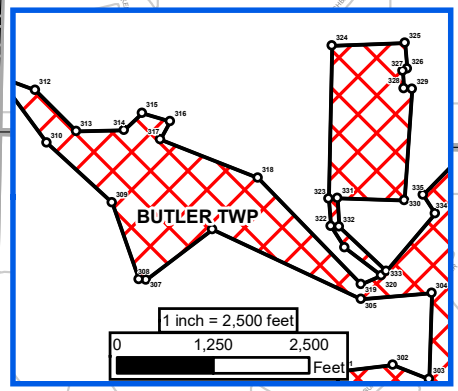
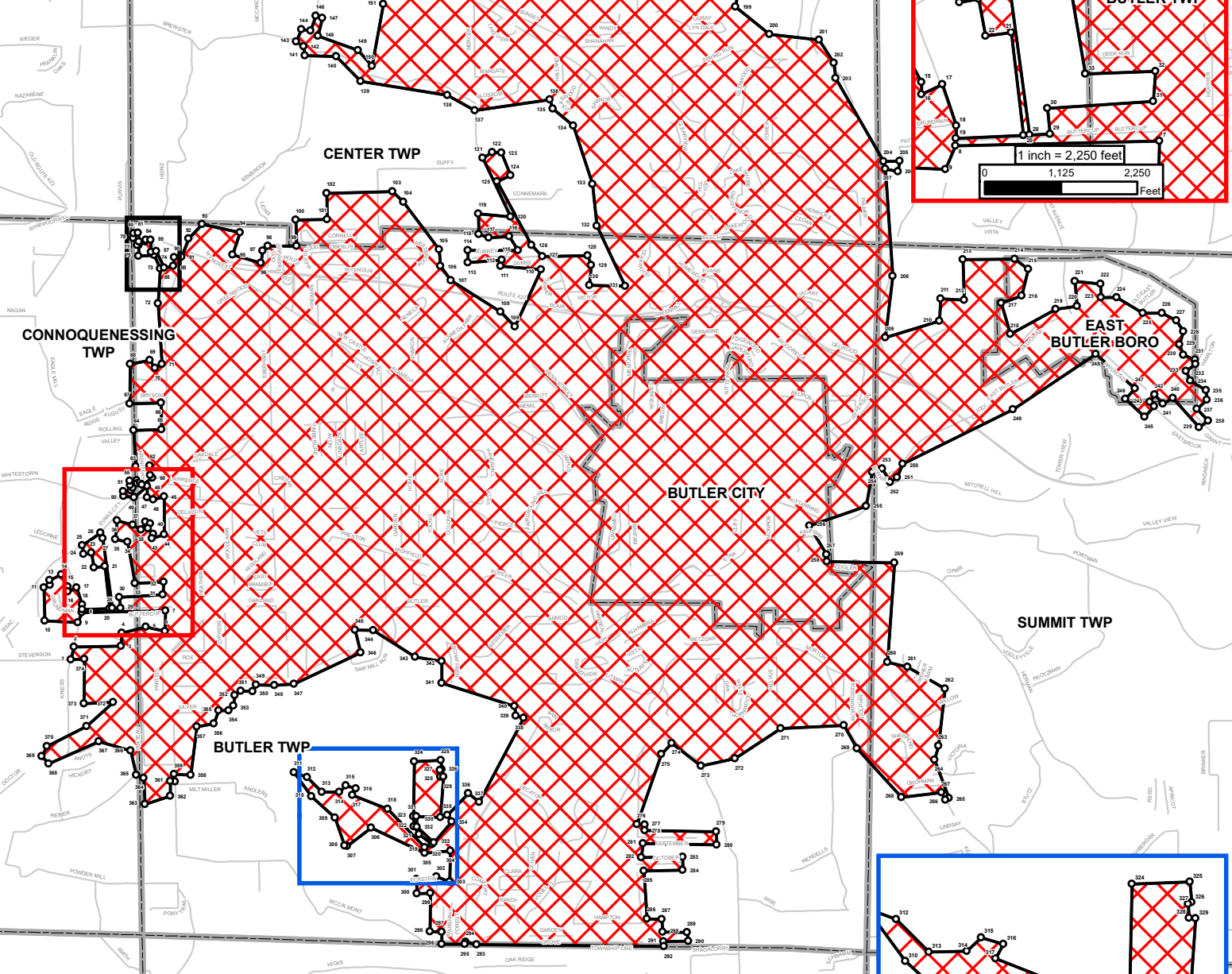
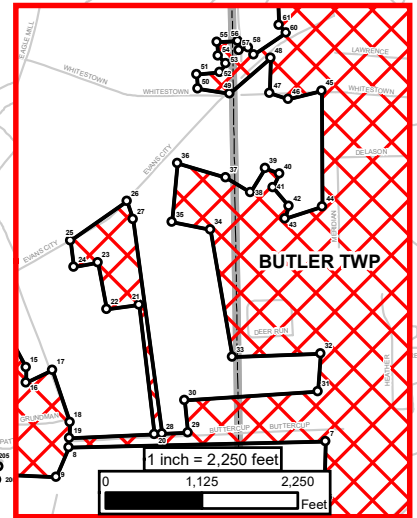
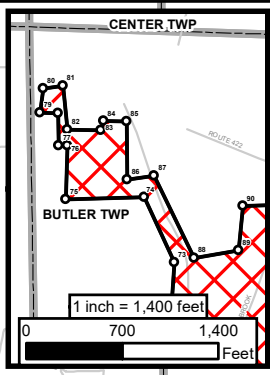


Second Amended Appendix A-16-a- through e



Pennsylvania-American Water Company
 Butler Operating Area
 Proposed Service Territory - Butler Wastewater System
 Approximately 17,528 Acres
 City of Butler, Butler Twp, Center Twp, Connoquenesing Twp,
 East Butler Boro, Oakland Twp, and Summit Twp, Butler County

**PENNSYLVANIA
 AMERICAN WATER**

Pennsylvania American Water
 852 Wesley Drive
 Mechanicsburg, PA 17055

Drawn By: MW Date: 3/23/2023

Legend

- Bearings & Distance Points
- ▨ Applied For Wastewater Service Territory
- ▭ Municipality

TO BE USED FOR REFERENCE ONLY

Although every effort has been made to ensure the accuracy of the information, errors and conditions originating from physical sources to develop the Certificated Service Territory may be reflected in the data supplied.

Disclaimer: Bearings and distances were not developed as result of physical survey completed by a Professional Licensed Surveyor, but instead completed through employment of ESRI's ArcGIS COGO tool. The mapping data source used for the roads base mapping is from OpenStreetMap, 2020. The mapping data source used for the municipal boundaries is from Montgomery County PA GIS, 2019.

*** Bearings and Distances attached separately**

Second Amended Appendix A-16-c

Starting Point: The northwestern most point of parcel pin 120-3F47-11A, located at 301 Kriess Road, Connoquenessing Township, PA.

Sequence	From	To	Bearing	Distance (ft)
1	1	2	N13°26'10"E	467.48
2	2	3	N88°54'06"E	1,697.99
3	3	4	N3°37'26"E	472.52
4	4	5	N75°32'01"E	883.71
5	5	6	S77°49'39"E	706.89
6	6	7	N1°26'20"E	737.01
7	7	8	S88°36'19"W	3,013.09
8	8	9	S22°43'47"W	376.00
9	9	10	N87°08'11"W	1,196.59
10	10	11	N1°16'51"W	1,184.07
11	11	12	N64°00'50"E	237.44
12	12	13	N4°35'00"W	169.47
13	13	14	N65°26'46"E	478.84
14	14	15	S28°08'53"E	488.14
15	15	16	S0°42'25"W	178.73
16	16	17	N64°12'32"E	346.98
17	17	18	S18°10'38"E	645.74
18	18	19	S0°31'58"W	186.30
19	19	20	N87°35'08"E	993.55
20	20	21	N6°35'17"W	1,533.02
21	21	22	S81°41'00"W	385.79
22	22	23	N10°34'01"W	556.20
23	23	24	S79°28'44"W	285.19
24	24	25	N7°20'01"W	311.13
25	25	26	N54°56'02"E	805.00
26	26	27	S18°56'28"E	218.76
27	27	28	S7°41'59"E	2,542.69
28	28	29	N87°34'47"E	305.04
29	29	30	N6°11'38"W	384.68
30	30	31	N86°08'11"E	1,566.36
31	31	32	N4°23'09"E	443.95
32	32	33	S87°36'24"W	1,037.90
33	33	34	N9°49'58"W	1,515.38
34	34	35	N78°29'25"W	456.67
35	35	36	N5°16'19"E	688.92
36	36	37	S73°44'12"E	589.44
37	37	38	S58°58'13"E	341.29
38	38	39	N30°55'49"E	330.59
39	39	40	S70°14'23"E	181.85
40	40	41	S25°51'21"W	182.30
41	41	42	S41°22'45"E	287.36
42	42	43	S17°26'37"W	157.42
43	43	44	N72°13'05"E	459.64
44	44	45	N0°23'10"W	1,362.55

Second Amended Appendix A-16-c

45	45	46	S75°58'20"W	405.27
46	46	47	N71°55'16"W	226.48
47	47	48	N1°13'17"E	408.16
48	48	49	S49°12'09"W	631.08
49	49	50	N81°09'23"W	380.44
50	50	51	N4°04'44"W	167.07
51	51	52	N84°54'56"E	272.00
52	52	53	N35°32'36"E	126.61
53	53	54	N47°07'13"W	131.41
54	54	55	N4°24'24"W	157.75
55	55	56	N86°27'46"E	249.19
56	56	57	S7°13'38"E	112.21
57	57	58	N72°46'56"E	113.79
58	58	59	S38°07'44"E	102.95
59	59	60	N55°32'14"E	456.32
60	60	61	N43°40'12"W	121.25
61	61	62	N1°23'40"W	351.32
62	62	63	S85°59'47"W	500.34
63	63	64	N3°31'25"W	1,317.58
64	64	65	N88°25'27"E	1,008.11
65	65	66	N1°29'33"W	957.13
66	66	67	S88°17'10"W	1,128.39
67	67	68	N0°24'07"E	1,435.93
68	68	69	N79°30'36"E	731.75
69	69	70	S33°21'29"E	342.14
70	70	71	N59°04'06"E	282.56
71	71	72	N3°40'19"W	2,191.44
72	72	73	N3°59'10"E	1,263.65
73	73	74	N25°12'19"W	524.71
74	74	75	S88°07'47"W	569.25
75	75	76	N1°16'32"E	393.17
76	76	77	N87°40'40"W	60.89
77	77	78	N1°05'19"W	235.43
78	78	79	N88°51'27"W	132.82
79	79	80	N7°38'56"E	178.36
80	80	81	N81°26'16"E	144.59
81	81	82	S6°03'14"E	322.53
82	82	83	S89°10'30"E	244.10
83	83	84	N14°29'40"E	68.59
84	84	85	S89°03'35"E	169.10
85	85	86	S0°47'15"E	427.35
86	86	87	N81°51'59"E	198.79
87	87	88	S25°49'58"E	662.70
88	88	89	N80°20'08"E	330.78
89	89	90	N5°16'03"E	324.86
90	90	91	N88°26'14"E	266.09
91	91	92	N20°50'55"E	707.22

Second Amended Appendix A-16-c

92	92	93	N43°46'49"E	713.05
93	93	94	S77°46'32"E	1,389.18
94	94	95	S18°11'37"W	846.23
95	95	96	S73°48'55"E	1,058.62
96	96	97	N9°42'59"E	439.02
97	97	98	N46°15'18"E	248.36
98	98	99	N89°41'25"E	1,041.02
99	99	100	N2°03'24"W	937.68
100	100	101	N88°39'11"E	1,139.22
101	101	102	N1°08'47"W	944.60
102	102	103	N88°41'28"E	2,365.76
103	103	104	S47°27'37"E	546.00
104	104	105	S36°52'50"E	2,140.83
105	105	106	S4°43'21"E	608.53
106	106	107	S36°44'18"E	632.04
107	107	108	S57°25'15"E	2,129.56
108	108	109	S43°41'59"E	734.89
109	109	110	N24°44'17"E	2,272.06
110	110	111	N84°49'40"W	1,466.89
111	111	112	N12°45'48"E	220.40
112	112	113	S85°18'24"W	1,228.95
113	113	114	N1°09'35"W	437.30
114	114	115	N89°39'15"E	1,803.55
115	115	116	N31°50'16"W	579.13
116	116	117	S86°45'25"W	739.16
117	117	118	N70°04'53"W	396.95
118	118	119	N1°08'08"W	726.43
119	119	120	S85°04'45"E	1,166.36
120	120	121	N25°17'26"W	2,335.86
121	121	122	N58°03'37"E	397.72
122	122	123	S87°24'52"E	336.57
123	123	124	S22°14'54"E	878.37
124	124	125	S64°55'29"W	537.61
125	125	126	S28°26'46"E	2,604.40
126	126	127	S44°00'33"E	562.23
127	127	128	N88°55'15"E	1,631.95
128	128	129	S19°13'30"E	369.42
129	129	130	S4°46'59"W	735.98
130	130	131	S88°35'53"E	1,301.55
131	131	132	N25°09'24"W	2,400.67
132	132	133	N6°06'57"W	1,526.65
133	133	134	N18°10'54"W	2,208.54
134	134	135	N50°54'53"W	963.72
135	135	136	N17°37'52"W	349.77
136	136	137	S81°39'45"W	2,732.72
137	137	138	N60°38'29"W	1,133.46
138	138	139	N80°54'26"W	3,159.33

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139	139	140	N44°22'33"W	1,270.45
140	140	141	N88°34'24"W	1,127.64
141	141	142	N9°55'27"W	330.50
142	142	143	N54°58'58"W	312.38
143	143	144	N23°18'22"E	465.56
144	144	145	S81°52'32"E	331.12
145	145	146	N19°02'54"E	566.33
146	146	147	S73°40'27"E	247.04
147	147	148	S12°49'57"W	666.82
148	148	149	S70°27'42"E	1,528.64
149	149	150	S41°23'46"E	765.72
150	150	151	N10°27'24"E	2,276.29
151	151	152	N5°12'04"W	2,346.91
152	152	153	N58°41'26"W	650.18
153	153	154	N31°31'14"W	2,033.15
154	154	155	N17°44'07"W	594.44
155	155	156	N86°38'51"W	642.64
156	156	157	N47°05'27"W	985.05
157	157	158	S39°00'58"W	649.18
158	158	159	N52°15'55"W	438.85
159	159	160	N37°04'05"E	692.41
160	160	161	N38°54'51"W	213.07
161	161	162	N34°23'33"E	2,908.32
162	162	163	N52°50'20"W	480.65
163	163	164	N29°19'07"W	678.35
164	164	165	N12°05'19"E	351.54
165	165	166	S88°34'18"E	368.48
166	166	167	S44°38'40"E	2,738.87
167	167	168	S25°28'04"W	638.43
168	168	169	S87°47'43"W	584.91
169	169	170	S0°26'42"E	1,280.94
170	170	171	S20°12'43"E	2,650.33
171	171	172	N88°55'22"E	377.96
172	172	173	N6°11'22"E	842.82
173	173	174	N23°50'42"E	1,525.85
174	174	175	S87°46'34"W	412.31
175	175	176	N40°40'00"W	213.12
176	176	177	N17°25'31"E	471.78
177	177	178	N87°15'05"E	891.16
178	178	179	S52°47'19"E	923.10
179	179	180	N1°18'20"W	403.39
180	180	181	N81°51'14"E	471.51
181	181	182	S1°40'36"E	479.23
182	182	183	N82°02'36"E	1,707.27
183	183	184	S72°07'26"E	2,057.11
184	184	185	S9°56'40"E	550.67
185	185	186	S86°14'58"E	1,716.09

Second Amended Appendix A-16-c

186	186	187	N0°59'01"W	517.90
187	187	188	N89°27'29"E	522.12
188	188	189	S1°46'40"E	801.65
189	189	190	N73°39'08"E	746.20
190	190	191	N25°13'52"E	590.22
191	191	192	S61°12'58"E	610.37
192	192	193	S35°52'56"W	497.79
193	193	194	S21°52'44"E	329.14
194	194	195	S78°51'21"E	637.92
195	195	196	S51°08'25"E	355.07
196	196	197	S88°36'14"E	758.80
197	197	198	S54°25'21"E	2,306.35
198	198	199	S9°57'16"W	2,621.12
199	199	200	S50°56'19"E	1,578.13
200	200	201	S83°32'02"E	1,793.69
201	201	202	S33°05'56"E	995.84
202	202	203	S5°29'08"E	543.96
203	203	204	S30°01'14"E	3,471.65
204	204	205	N89°00'50"E	571.13
205	205	206	S9°47'42"W	374.87
206	206	207	N78°10'48"W	453.36
207	207	208	S3°52'46"E	3,874.65
208	208	209	S6°56'41"W	2,236.34
209	209	210	N72°48'54"E	2,036.67
210	210	211	N3°14'09"E	801.69
211	211	212	S87°02'27"E	854.92
212	212	213	N1°40'38"W	1,453.19
213	213	214	N89°28'15"E	1,865.77
214	214	215	S53°54'42"E	606.99
215	215	216	S13°56'32"W	996.30
216	216	217	S70°30'44"W	784.65
217	217	218	S16°34'07"E	1,170.23
218	218	219	N61°19'58"E	1,870.76
219	219	220	N81°19'07"E	768.05
220	220	221	N4°23'45"W	903.72
221	221	222	S84°12'49"E	924.88
222	222	223	S1°21'45"E	488.86
223	223	224	S89°05'46"E	569.80
224	224	225	S59°07'56"E	1,096.76
225	225	226	N89°34'22"E	694.51
226	226	227	S62°10'07"E	581.64
227	227	228	S32°26'18"E	468.05
228	228	229	S16°39'52"W	492.93
229	229	230	S21°06'16"E	397.53
230	230	231	S66°55'18"E	467.06
231	231	232	S6°48'32"E	152.83
232	232	233	S54°35'18"W	433.29

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233	233	234	S25°18'02"E	386.90
234	234	235	S58°45'42"E	650.59
235	235	236	S5°48'04"E	348.51
236	236	237	S47°30'25"W	499.37
237	237	238	S44°44'33"E	600.03
238	238	239	S55°14'19"W	402.06
239	239	240	N42°10'34"W	1,417.84
240	240	241	S61°42'16"W	408.09
241	241	242	N42°57'33"W	434.21
242	242	243	S33°25'08"W	323.65
243	243	244	S48°02'04"E	222.08
244	244	245	S42°37'56"W	522.61
245	245	246	N46°38'37"W	939.15
246	246	247	N41°59'05"E	508.96
247	247	248	N48°26'38"W	1,882.31
248	248	249	S56°13'15"W	3,592.87
249	249	250	S63°44'19"W	4,444.41
250	250	251	S22°02'05"W	520.72
251	251	252	S55°08'28"W	303.86
252	252	253	N29°55'08"W	567.14
253	253	254	S70°05'03"W	386.15
254	254	255	S10°23'10"W	1,247.46
255	255	256	S70°49'52"W	2,155.23
256	256	257	S30°19'42"E	1,208.64
257	257	258	S0°58'20"E	246.21
258	258	259	S89°05'58"E	2,436.18
259	259	260	S3°48'05"W	3,592.03
260	260	261	S75°52'11"E	736.73
261	261	262	S59°59'14"E	1,555.37
262	262	263	S6°09'17"W	2,083.02
263	263	264	S16°02'53"W	514.12
264	264	265	S20°30'17"E	1,482.32
265	265	266	S65°24'00"W	149.23
266	266	267	N27°18'55"W	296.16
267	267	268	S83°22'17"W	1,460.26
268	268	269	N42°12'39"W	2,380.51
269	269	270	N29°53'10"W	960.07
270	270	271	S87°12'22"W	2,275.21
271	271	272	S56°45'24"W	1,978.59
272	272	273	S77°36'17"W	1,255.74
273	273	274	N51°52'53"W	1,326.18
274	274	275	S43°19'33"W	547.41
275	275	276	S19°12'23"W	2,673.53
276	276	277	S85°56'12"E	275.19
277	277	278	S1°19'49"W	202.85
278	278	279	S89°12'29"E	2,588.35
279	279	280	S1°50'25"E	474.00

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280	280	281	N89°08'27"W	2,657.09
281	281	282	S6°37'23"W	503.56
282	282	283	N89°13'41"E	1,480.61
283	283	284	S1°25'34"E	482.72
284	284	285	S88°59'51"W	1,411.60
285	285	286	S4°03'28"E	1,729.96
286	286	287	S87°52'51"E	525.10
287	287	288	S5°05'15"E	451.05
288	288	289	S88°30'00"E	882.83
289	289	290	S6°11'54"E	319.66
290	290	291	S88°58'44"W	885.43
291	291	292	S5°05'16"E	175.00
292	292	293	N89°22'07"W	6,769.89
293	293	294	N77°49'24"W	397.26
294	294	295	S16°33'19"W	82.68
295	295	296	N89°22'07"W	842.07
296	296	297	N0°15'10"E	436.19
297	297	298	N87°31'22"W	415.40
298	298	299	N0°26'40"E	1,377.46
299	299	300	S88°49'00"W	496.36
300	300	301	N1°20'26"W	523.64
301	301	302	N83°18'05"E	727.09
302	302	303	S68°51'04"E	503.64
303	303	304	N1°50'50"E	1,117.79
304	304	305	S85°11'20"W	927.02
305	305	306	N64°43'32"W	2,134.08
306	306	307	S52°42'21"W	1,093.88
307	307	308	N81°00'40"W	89.86
308	308	309	N19°37'08"W	1,058.48
309	309	310	N47°26'34"W	1,151.06
310	310	311	N36°03'20"W	1,073.39
311	311	312	S69°38'05"E	514.78
312	312	313	S44°38'03"E	758.67
313	313	314	N88°42'31"E	624.19
314	314	315	N46°32'01"E	326.88
315	315	316	S73°18'01"E	381.64
316	316	317	S29°12'46"W	267.46
317	317	318	S68°33'38"E	1,365.11
318	318	319	S44°03'55"E	1,932.13
319	319	320	N66°53'25"E	287.30
320	320	321	N52°29'44"W	602.58
321	321	322	N32°39'43"W	328.53
322	322	323	N4°18'55"W	356.71
323	323	324	N1°04'34"E	1,993.45
324	324	325	N87°51'13"E	951.88
325	325	326	S5°44'14"E	333.83
326	326	327	S64°56'18"W	66.34

Second Amended Appendix A-16-c

327	327	328	S3°00'02"E	231.37
328	328	329	S85°35'01"E	112.97
329	329	330	S3°59'44"W	1,450.70
330	330	331	N88°11'43"W	871.95
331	331	332	S2°41'03"E	373.63
332	332	333	S46°55'01"E	844.84
333	333	334	N40°10'56"E	986.31
334	334	335	N34°01'16"W	286.78
335	335	336	N44°12'56"E	1,092.42
336	336	337	S51°49'22"E	504.24
337	337	338	N27°48'22"E	3,427.68
338	338	339	N72°37'04"W	292.79
339	339	340	N8°26'25"W	349.71
340	340	341	N72°34'29"W	2,756.24
341	341	342	N0°25'04"E	785.38
342	342	343	N80°47'33"W	969.27
343	343	344	N57°28'40"W	1,799.72
344	344	345	N88°34'41"W	651.11
345	345	346	S13°39'36"E	844.99
346	346	347	S64°39'22"W	2,652.99
347	347	348	S86°15'14"W	719.21
348	348	349	N88°02'31"W	661.55
349	349	350	S27°36'04"W	271.80
350	350	351	N88°34'06"W	412.41
351	351	352	S56°32'38"W	264.62
352	352	353	S7°47'50"W	391.62
353	353	354	S46°32'36"W	245.11
354	354	355	N88°33'59"W	347.30
355	355	356	S21°29'18"W	506.41
356	356	357	S79°23'08"W	621.49
357	357	358	S7°05'54"W	1,760.15
358	358	359	N87°29'11"W	592.15
359	359	360	S4°40'51"E	255.95
360	360	361	N88°26'41"W	160.33
361	361	362	S0°10'01"W	535.46
362	362	363	S72°50'52"W	964.82
363	363	364	N2°55'11"W	937.32
364	364	365	N67°44'40"W	281.99
365	365	366	N13°25'05"W	906.02
366	366	367	N73°55'11"W	1,186.74
367	367	368	S66°05'44"W	1,969.72
368	368	369	N43°39'42"W	367.69
369	369	370	N26°44'06"E	406.57
370	370	371	N63°14'17"E	1,601.14
371	371	372	N47°53'56"E	1,292.57
372	372	373	S87°09'25"W	1,054.83
373	373	374	N0°30'34"E	1,604.00

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374	374	1	S87°52'39"W	480.84
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