Verification Report – Ventas 2019 GRESB Submission

Goby, Inc. is in a contractual agreement with Ventas, Inc. to collect and compile the necessary data required to provide the energy consumption and GHG calculations that support the 2019 GRESB report. In 2018, the consumption data was collected from Ventas for electricity, natural gas and other major CO_2 emitting fuels.

Responsibilities of Ventas and the Verification Provider

The management of Ventas has primary responsibilities for the preparation and content of its GRESB Response. Goby's statement represents its independent opinion on the content and accuracy of the information and environmental data within.

Goby's Data Collection Process

The following processes were utilized to collect and compile the data for the 2019 GRESB Assessment:

- 2018 consumption data was provided to Goby directly from third party energy suppliers and utility companies in the format of either an invoice, flat file, or other raw consumption data to be reviewed, analyzed, and validated into Goby's data management system. Each invoice was validated for accuracy by identifying any discrepancies and outliers prior to inputting in the Goby platform.

- After all data was inputted into the Goby platform, a missing data and data validation report was provided to Ventas for review to provide any additional data or clarifications. After all data was confirmed, the greenhouse gases were then calculated using The Climate Registry General Verification Protocol Version 2.1 (Released June 2014) standard.

- All relevant data is exported from the Goby platform to be broken down by each scope of GHG emissions, as applicable. The data was further verified by Goby teams to address any changes in property type and number of facilities.

- On a monthly basis, Goby will update utility data and property data as available for each building

- On a monthly basis, Goby will pull the monthly average temperature for weather normalization from NOAA based on local zip code

- Goby performs quality assurance tracking for reporting errors and large outliers in data

- Data and utility invoices will be pulled automatically into Goby via sites' online utility accounts, where available, and will manually load utility data from bills where online logins are not available

- Any invoices are stored in a cloud based file sharing program as a document repository

Data Validation Process and Methodology

Below is a flow chart of the Goby Data Validation Process for how primary and secondary data are reviewed.
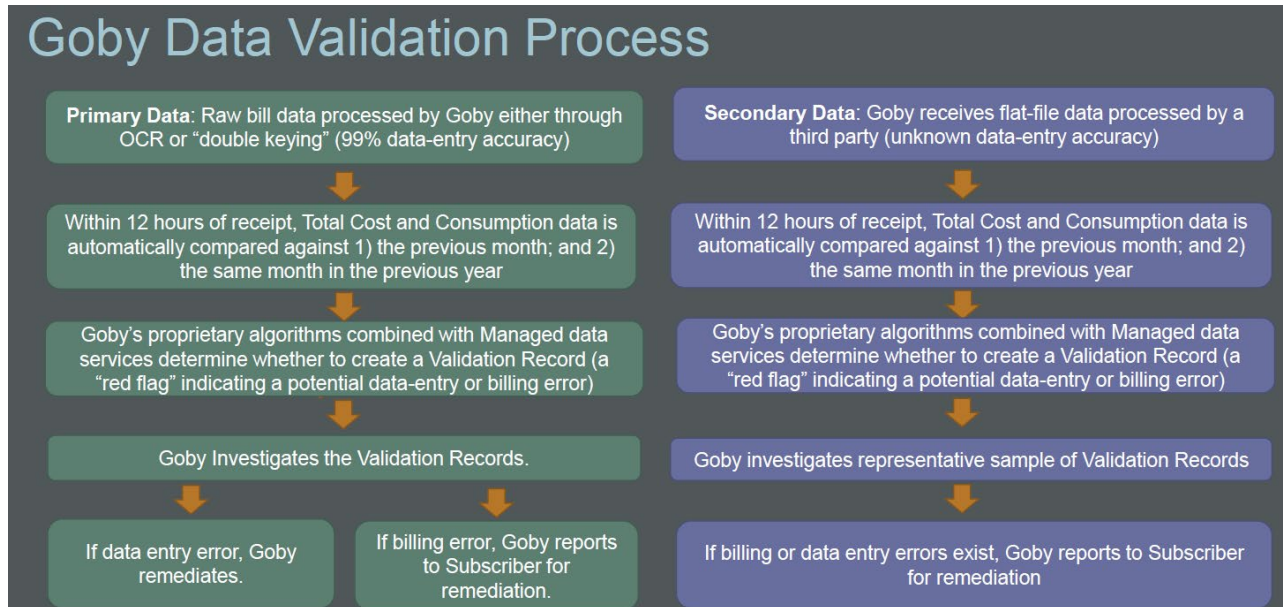
All utility data in the Goby platform is assessed based on the below validation rules. If any data is above or below the listed Error Type's then a flag is generated within the platform and a Goby Team member responds to that item. Data is reviewed based on various Interval periods to assess for potential errors.

Goby Platform Automated Validations			
Validation Rule	**Error Type**	**Interval**	**Utility Type(s)**
• Average Consumption per Day per Meter (if meter level data available) • Average Consumption per Day per Building (if meter level data unavailable)	Exceeds Threshold Percentage Change (+/-)	• Current Billing Period vs. Previous Billing Period • Current Billing Period vs. Same Billing Period Last Year	• Energy • Water • Waste
Total Cost Per Bill	Exceeds Threshold Percentage Change (+/-)	• Current Billing Period vs. Previous Billing Period • Current Billing Period vs. Same Billing Period Last Year	• Energy • Water • Waste
• Average Cost per Day per Meter (if meter level data available) • Average Cost per Day per Building (if meter level data unavailable)	Exceeds Threshold Percentage Change (+/-)	• Current Billing Period vs. Previous Billing Period • Current Billing Period vs. Same Billing Period Last Year	• Energy • Water • Waste
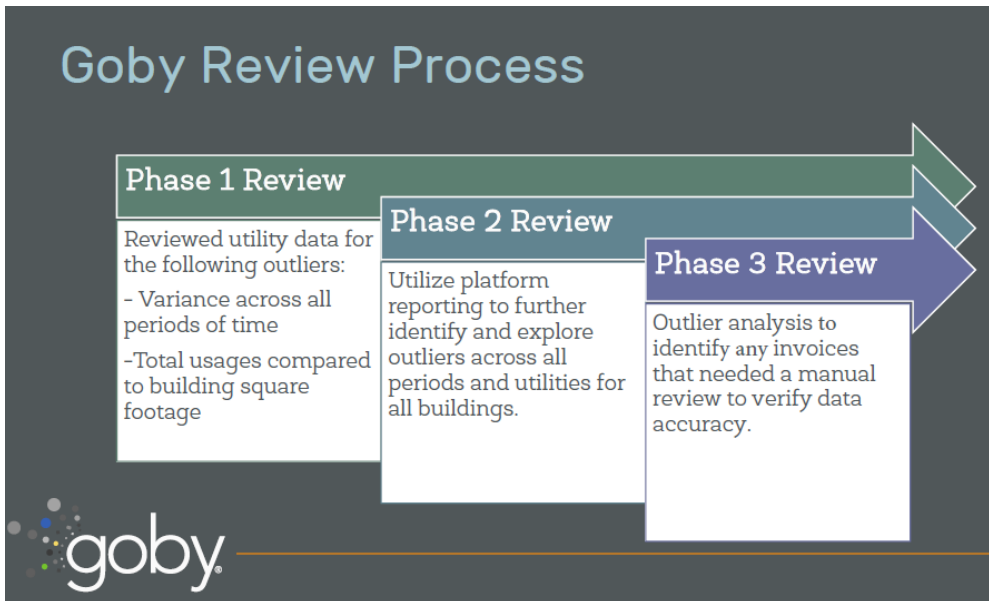
Stages of the Goby Platform

HISTORICAL
Historical Data Load
QA Spot Check

The Goby team will load historical utility data and monthly bills from either paper bills, utility logins, or other preferred systems in a **seamless data transfer**. This data will be saved in a central location and easily accessed from SeaSuite reports.

CONFIG
Data Configuration

SeaSuite **connects directly to utility providers** to pull data in automatically every month, removing burden and creating a painless setup process. Meter configurations will be unique to each property's specifications.

LAUNCH
Client Access

A **customized communication strategy** will be utilized to launch the platform as "live" to both executive level and property level teams. This strategy will onboard users with pragmatic training and support, including live webinars and in-person presentations.

ONGOING
Active

Our expert and **dedicated team** ensure ongoing support. This includes: ongoing meetings, data quality review, turn-key services, normalized and comparative reporting, utility bill management, etc.

Goby has a high level of confidence with respect to the reported data. The consumption data was collected directly from the professional utility providers and input into our data management system. Once the data is extracted by the operators, Goby utilizes a separate process to automatically upload the data. Goby's validation process then begins by ensuring that the data that was provided by the operators and utility providers corresponds with what is in the Goby platform. The entry and validation process is both electronic and manual to insure greater accuracy. All data points are validated for outliers and discrepancies.

All GHG calculations are performed by Goby using the consumption data provided by the operators. Goby runs all the data through a manual recheck once exported from the platform to ensure there are no major outliers that could potentially misinterpret the data. Goby also uses the GHG Protocol to evaluate Ventas' specified environmental performance information and its adherence to the principles.

The loading of data and calculating of GHG emissions are overseen by Ashley Dauksas, Vice President of Data and Jason Franken, Director of Consulting.

Scope and Limitations

The submission covered a reporting period of January 1, 2015 – December 31, 2018. Greenhouse gas ("GHG") quantification is subject to inherent uncertainty due to such things as incomplete scientific knowledge and other factors, to precisely characterize the relationship between various inputs and the emission results. Energy use data used in GHG emissions calculations are subject to primary limitations, given the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques may result in materially different measurements.

Based on our review, nothing came to our attention that caused us to believe that the selected sustainability metrics are not fairly stated.

Appendix A

Energy Performance

Energy (MWh)	2016 Absolute		2017 Absolute			2018 Absolute			Like-for-Like				
	Total	Per 1,000 SF	Total	Per 1,000 SF	Prior Yr. Δ	Total	Per 1,000 SF	Prior Yr. Δ	2016	Prior Yr. Δ	2017	2018	Prior Yr. Δ
Healthcare	150,907	52	149,008	52	-1.3%	151,069	53	1.4%			133,906	136,385	1.9%
Medical Office	382,543	30	394,516	30	3.1%	384,533	30	-1.9%			279,278	281,410	0.8%
Other: Life Science	153,268	51	178,916	57	12.4%	227,080	48	-16.4%			68,895	70,116	1.8%
Seniors Housing	928,067	24	973,173	24	0.2%	1,149,880	25	5.3%			385,081	392,415	1.9%
Total Portfolio	1,614,785	28.17	1,695,613	29	1.6%	1,912,562	29	1.7%			867,160	880,326	1.50%

Greenhouse Gas Performance (MT CO2e)

Scope 1	2016 Absolute		2017 Absolute			2018 Absolute			Like-for-Like				
	Total	Per 1,000 SF	Total	Per 1,000 SF	Prior Yr. Δ	Total	Per 1,000 SF	Prior Yr. Δ	2016	Prior Yr. Δ	2017	2018	Prior Yr. Δ
Healthcare	-					-							
Medical Office	17,818	3	18,498	3	3%	18,437	3	1.0%			8,188	8,888	8.6%
Other: Life Science	10,736	4	11,373	4	1.3%	13,552	4	-9.5%			6,231	6,607	6.0%
Seniors Housing	50,657	2	55,230	2	5.4%	64,302	2	2.4%			18,504	19,537	5.6%
Total Portfolio	79,210	2.376	85,101	2.477	4.3%	96,291	2.503	1.0%			32,923	35,032	6.4%

Scope 2	2016 Absolute		2017 Absolute			2018 Absolute			Like-for-Like				
	Total	Per 1,000 SF	Total	Per 1,000 SF	Prior Yr. Δ	Total	Per 1,000 SF	Prior Yr. Δ	2016	Prior Yr. Δ	2017	2018	Prior Yr. Δ
Healthcare						-							
Medical Office	131,976	11	134,023	11	0.7%	133,325	11	-0.3%			82,544	82,420	-0.2%
Other: Life Science	31,680	12	39,123	13	7.0%	44,802	12	-11.5%			30,398	31,610	4.0%
Seniors Housing	125,197	5	126,630	5	-1.8%	153,118	5	6.0%			39,268	39,193	-0.2%
Total Portfolio	288,853	7.429	299,776	7.475	0.6%	331,245	7.448	-0.4%			152,209	153,223	0.7%

Scope 1+2	2016 Absolute		2017 Absolute			2018 Absolute			Like-for-Like				
	Total	Per 1,000 SF	Total	Per 1,000 SF	Prior Yr. Δ	Total	Per 1,000 SF	Prior Yr. Δ	2016	Prior Yr. Δ	2017	2018	Prior Yr. Δ
Healthcare						-							
Medical Office	149,793	12	152,521	12	1.8%	151,761	12	-0.3%			90,732	91,308	0.6%
Other: Life Science	42,416	15	50,496	17	14.4%	58,354	15	-9.8%			36,628	38,217	4.3%
Seniors Housing	175,854	7	181,860	7	0.4%	217,420	8	4.8%			57,960	58,730	1.3%
Total Portfolio	368,063	9.304	384,877	9.528	2.4%	427,536	9.557	0.3%			185,320	188,256	1.6%

Scope 3	2016 Absolute		2017 Absolute			2018 Absolute			Like-for-Like				
	Total	Per 1,000 SF	Total	Per 1,000 SF	Prior Yr. Δ	Total	Per 1,000 SF	Prior Yr. Δ	2016	Prior Yr. Δ	2017	2018	Prior Yr. Δ
Healthcare	50,935	18	50,088	17	-1.7%	50,249	17	0.3%			39,918	40,066	0.4%
Medical Office	4,032	8	3,935	8	-2.4%	1,071	3	-68.3%			-	-	-
Other: Life Science	3,935	36	4,083	37	3.7%	9,916	11	-69.9%					
Seniors Housing	93,103	7	94,174	6	-6.0%	108,047	6	5.2%			20,729	20,931	1.0%
Total Portfolio	152,005	8.561	152,279	8.080	-5.6%	169,283	8.081	0.01%			60,647	60,996	0.6%

Water Performance

Water (m^3)	2016 Absolute		2017 Absolute			2018 Absolute			Like-for-Like				
	Total	Per 1,000 SF	Total	Per 1,000 SF	Prior Yr. Δ	Total	Per 1,000 SF	Prior Yr. Δ	2016	Prior Yr. Δ	2017	2018	Prior Yr. Δ
Healthcare	855,221	297	801,361	279	-6.3%	806,244	280	0.6%			643,132	585,031	-9.0%
Medical Office	932,294	113	836,530	105	-7%	799,481	103	-1.5%			564,968	576,582	2.1%
Other: Life Science	46,480	30	401,451	111	275%	451,641	103	-7.7%			238,969	243,943	2.1%
Seniors Housing	6,764,355	180	7,128,157	180	0.0%	8,057,175	183	1.6%			4,291,085	4,258,573	-0.8%
Total Portfolio	8,598,350	171	9,167,500	170	-0.8%	10,114,540	171	1.0%			5,738,154	5,664,129	-1.3%

Waste Performance

Waste (Metric Tonnes)	2016			2017					2018				
	Total	Per 1,000 SF	Diversion %	Total	Per 1,000 SF	Prior Yr. Δ	Diversion %	Prior Yr. Δ	Total	Per 1,000 SF	Prior Yr. Δ	Diversion %	Prior Yr. Δ
Healthcare	-	-	-	5.8	0.03		0.0%	-	-	-			
Medical Office	38,253	4	19.8%	37,310	3.76	-1.9%	19.8%	-0.2%	33,455	3.47	-7.5%	20.7%	4.5%
Other: Life Science	334	1	8.0%	396	0.92	-17.3%	9.9%	-	1,341	0.62	-32.8%	30.9%	210.8%
Seniors Housing	42,657	1.46	11.6%	46,021	1.56	6.9%	11.6%	0.0%	45,026	1.45	-6.8%	12.0%	3.8%
Total Portfolio	81,244	2	15.3%	83,733	2.1	1.7%	15.2%	-0.2%	79,822	1.9	-10.8%	16.0%	4.9%

GRESB Energy and GHG

Coverage (2018-current, 2016 & 2017 - historical)									
Property Type	2018 Total	2018 Max	2018 %	2017 %	2016 %	2018 LFL SF	2018 LFL %	2017 LFL %	2016 LFL %
Healthcare	2,875,415	8,725,894	33%	42%	34%	2,561,197	29.4%	29.4%	
Medical Office	12,866,379	19,625,171	66%	71%	67%	9,370,564	47.7%	47.7%	
Other: Life Science	4,774,567	5,917,165	81%	73%	72%	1,766,552	29.9%	29.9%	
Seniors Housing	45,167,183	54,478,069	83%	81%	74%	15,053,386	27.6%	27.6%	
Portfolio	65,683,544	88,746,299	74%	74%	69%	28,751,699	32.4%	32.4%	

Coverage (current)		
Property Type	2016	2017
Healthcare	2,875,415	2,875,415
Medical Office	12,953,954	12,953,954
Other: Life Science	3,027,566	3,144,998
Seniors Housing	38,460,181	40,267,076
Portfolio	57,317,116	59,241,443

GRESB Water

Coverage (2018-current, 2016 & 2017 - historical)									
Property Type	2018 Total	2018 Max	2018 %	2017 %	2016 %	2018 LFL SF	2018 LFL %	2017 LFL %	2016 LFL %
Healthcare	2,875,415	8,725,894	33%	27%	22%	2,149,198	24.6%	24.6%	
Medical Office	7,748,287	19,625,171	39%	58%	68%	5,654,702	28.8%	28.8%	
Other: Life Science	4,391,588	5,917,165	74%	60%	72%	1,346,252	22.8%	22.8%	
Seniors Housing	44,013,184	54,478,069	81%	68%	56%	23,435,789	43.0%	43.0%	
Portfolio	59,028,474	88,746,299	67%	61%	56%	32,585,941	36.7%	36.7%	

Coverage (current)		
Property Type	2016	2017
Healthcare	2,875,415	2,875,415
Medical Office	8,259,473	7,982,305
Other: Life Science	1,564,105	3,603,721
Seniors Housing	37,573,792	39,578,007
Portfolio	50,272,785	54,039,448

Coverage (2018-current, 2016 & 2017 - historical)   Coverage (current)

GRESB Waste

Property Type	2018 Total	2018 Max	2018 %	2017 %	2016 %
Healthcare	-	8,725,894	-	2.0%	0.0%
Medical Office	9,629,607	19,625,171	49%	55.0%	56.0%
Other: Life Science	2,158,173	5,917,165	36%	21.0%	0.0%
Seniors Housing	31,063,680	54,478,069	57%	53.0%	50.0%
Portfolio	42,851,460.00	88,746,299	48.3%	47.0%	43.0%

Property Type	2016	2017
Healthcare	-	177,004
Medical Office	9,997,092	9,934,413
Other: Life Science	298,659	427,837
Seniors Housing	29,301,812	29,575,157
Portfolio	39,597,563	40,114,411