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August 22, 2019

Mr. Max Ferentinos  
1651 Old Meadow Road  
Suite 100  
McLean, VA 22102

RE: Sustainable design overview  
Artis Senior Living of Tarrytown  
Tarrytown, NY  
LK Job Number: 16358.00

Dear Mr. Ferentinos,

We are the architects retained by Artis Senior Living for ongoing architectural project design on the above and other sites in a multiplicity of locations in several states. In that role, we have been asked to summarize the sustainable initiatives that are planned for the White Plains Road site and are further incorporated into Artis memory care centers now planned, under construction, or under consideration for the future. We note for the record that much of the material summarized in this letter is contained in sections of the SDEIS now under review by the Planning Board of the Village of Tarrytown.

For the record, LK Architects were retained in 2011 by Artis Senior Living, not only because of our focus on design of similar senior facilities but also because of our expertise in 'green' planning techniques and contemporary infrastructure design. Since that initial retention, we have gained considerable design insight as we have incorporated evolving planning concepts with the necessary treatment needs for dementia residents.

For the convenience of reviewers, this letter is divided into three (3) sections: a review of the Artis comprehensive recycling program, a review and current plans for providing facility power needs, both primary and emergency, and finally a summary of green initiatives already incorporated as a matter of policy into Artis site design. Further, we are in receipt of the Westchester County Planning Board advisory letter sent to the Village of Tarrytown on June 28, 2019; the first and third sections of this letter contain responses to the questions raised by the county for consideration of the Planning Board.

We have been informed by the project team that much of the above ties into the goals set forth in the recently-adopted (November 2018) Village of Tarrytown Comprehensive Plan. Specifically, the first section significantly reduces resource consumption, design elements touched on in the second and third sections lessen greenhouse gas emissions and incorporate green infrastructure. Additionally, overall, this type of care facility supports a diverse, multi-generational community of the type we believe was envisioned by the Tarrytown in the cited plan. The last is a major reason a company such as Artis and its programs were sought out by the site owner in response to discussions with the village.

### **Section One: The Artis Recycling Program**

The Artis Recycling Program may be summarized as a comprehensive effort to recycle disposables used in the course of senior memory care residential needs on the site. Notably, this includes:

To allow for the success of the recycling program, space is set aside in every Artis facility to allow for storage, sorting, and processing of recyclables. We believe there will be sufficient space required for the Westchester County recycling program that includes plastics with numbers 1-7 as noted in the letter of June 28 from Commissioner Norma Drummond on behalf of the County Planning Board. This will be provided in the plans to be submitted to the Building Department as, if and when all prior as required municipal approvals have been issued.

### **Section Two: Artis Power Needs**

A fully-occupied, 64-bed facility such as envisioned for Artis, of course contingent on state licensing and local municipal approvals, requires both primary and secondary, absolutely reliable sources of power. This is an absolute necessity for the protection of the lives of the residents who will be cared for in the facility as well as providing a viable work-place environment for Artis staff. As such, we are gratified that there is full electric power available from the New York utility Consolidated Edison. Further, we are informed that Artis consulting engineers were able to timely file a reservation for natural gas use despite the ongoing moratorium.

As a reserve in case of an interruption of power from natural or other causes, Artis will use a natural gas generator that will immediately begin to function in the event of failure of electric power from the local utility. The generator will be equipped so that it could be switched over to a propane fuel source in the future. This would include adding on-site storage tanks if required.

It has been suggested by members of the Tarrytown professional staff and planning board that we look at the possibility of renewable energy originated by solar panels. We have done so. There are significant site-size driven considerations as well as the local code requiring compliance with the Village Tree Ordinances and the previously filed and approved SWPPP and ground cover antecedent to the construction of the detention facility that make the roof of the proposed building the sole area to place photovoltaic panels.

This thought of ours was seconded at a recent planning board work session comment that the roof of the facility be considered for photovoltaic panels. We note for the record that to provide the garden space, so necessary for resident accommodation, all condensers, HVAC units and the like, are installed on the roof. See picture of a similar Artis facility's roof, attached hereto. These installations of necessity occupy some roof space but there is room for a panel array. That will be part of the detailed site planning submission we will undertake as, if and when the predicate required zoning is in place.

### **Section Three: Green Initiatives Incorporated into Artis Site Design**

There are several such initiatives. These include:

- There is an extensive Tree Removal and Replanting Plan planned for the site. See Appendix F, drawings SP-3.1, SP-3.2, and SP-4 for reference.
- The earlier-referenced P-1 Micropool designed as incorporated into the approved SWPPP for the entire site follows the NYSDEC mandates for such retention. It is included in full as updated for the Artis project in a separate binder filed as part of this FSEIS. It is noted that the updated SWPPP includes two substantial Green Infrastructure Practices now planned by Artis but not contemplated earlier. These are a bioretention filter and an additional porous paving parking lot for the use of visitors and staff at the proposed facility.


- From both the new village comprehensive plan (cf. page 56) and suggestions from respondents to the initial SDEIS, the installation of bicycle infrastructure as may be required by staff and/or visitors to residents is prioritized and will be included in the plan. This will assist with helping mobility without use of vehicles. Note while the plan also mentions the desirability of pedestrian access off Martling Avenue, that is a general statement, laudable, but not contemplated in respect to a secure memory care facility, especially in light of the existing pedestrian path along the site's westernmost border on top of the Old Croton Aqueduct.
- Creating an energy efficient building envelope was essential to reducing the cooling and heating demand for the building. The typical exterior wall section will be insulated with spray foam insulation. This not only helps achieve a high R-value for the walls, but also acts as a vapor and air barrier. The spray foam insulation will reduce moisture infiltration into the building helping eliminate the concern of mold and mildew issues in the building.
- The majority of the roof will have a high-albedo roofing membrane. This roofing material will reflect solar heat and greatly reduce the HVAC cooling demand on the building. Using a high-albedo roof material also helps to reduce urban heat islands.
- It was important to consider the design of the building shape and the placement and size of the windows to maximize interior daylighting. The resident rooms and public spaces throughout the building are designed to have generously sized windows. Also, the building floor plate depth was designed to be narrow, allowing natural daylight to penetrate deep into every room. Besides reducing energy demand, this creates a healthy environment that helps the resident connect with the natural environment outside the building and enhances the residents' psychological well-being.
- The design for the interior lighting incorporates motion sensors for energy savings. The lighting design also incorporates LED fixtures to reduce the overall energy load on the building.
- Selecting interior finishes that would encourage a healthy environment was important for this facility. This includes choosing low or zero VOC paints, stains, and varnishes. Also, the furnishings and finishes are selected to help reduce the toxins in the building and promote a healthy indoor environment.
- Artis will incorporate a solar photovoltaic system into its design with the installation of photovoltaic panels onto roof areas as the final engineering will allow. The exact layout will be done in such a way as to minimize the tree removal on the site in order to accommodate the photovoltaic system.

The above summarizes the current plan in respect to questions that have been raised in respect to what Artis contemplates constructing on the site if all approvals and permits are granted after the completion of the ongoing municipal review. Additional questions may be addressed to the undersigned at the contact information contained in this letter.

Thank you for the opportunity to engage with the ongoing environmental review.

Sincerely,

Dennis D Smith, AIA



Paul Folger  
Project Manager