



## HUGHES HUGHES INC.

May 6, 2013

Enrique Colmenares  
Vintro Ft. Lauderdale, LLC  
2216 Park Avenue  
Miami Beach, FL 33139

### **Delivered Via Email**

**RE: Vintro Hotel, Ft. Lauderdale Beach, Parking System Evaluation**  
DRC# 70-R-12  
HHI Project No. 12009.1

Dear Mr. Colmenares:

Your Vintro Hotel project's land use attorney, Scott Backman of Dunay, Miskel, Backman and Blattner, LLP, and architect, Jose L. Gomez, AIA, Vice President of Beilinson Gomez Architects P.A., requested that Hughes Hughes Inc. (HHI) conduct an operations analyses for the hotel's then-proposed access and parking system. Subsequently, the project site plan was modified, necessitating this update to our original March 19, 2013 evaluation. The following project elements formed the basis for our analysis.

### **Project Description**

Though originally proposed to include 72 rooms, the hotel is now proposed to provide only 61 rooms. In addition, the applicant proposes to operate a 2,000 square-foot restaurant and a 500 square-foot bar/lounge—expected amenities at such hotels. The site plan is attached (see Attachment 1). The clientele is planned to be comprised of the adult market (40s and up) who prefer small boutique luxury accommodations.

The project is located near the east end of Alhambra Street, with a street address of 3029 Alhambra Street. The single lot is currently the site of a single-family residence owned by Vintro Fort Lauderdale, LLC. To its immediate east, the project site is adjacent to the Casablanca Café on Fort Lauderdale Beach's SR A1A. To the site's northeast is The Seasons, a 16-story condominium, and between the condo and café is the 4-story Ocean Holiday Motel. Directly north of the project site is a 2-story multi-family apartment building at 3028 Seville Street. To its immediate west is the Alhambra Beach Resort hotel, at 3021 Alhambra Street.

The site's access is obtained via Alhambra Street near the southeast corner of the site. The two-way driveway will connect to several ground-floor accessible parking spaces, as well as ground floor and second-floor mechanical parking. While the site is visible and accessible from SR A1A, the site benefits from Alhambra Street's connection to Birch Road, a north-south neighborhood spine road providing easy access to the north and south.

#### *Site Access/Internal Circulation*

Alhambra Street is a very low volume local street, and provides the only access to the proposed hotel. The project driveway is 20 feet wide (clear) and serves a 48-space parking garage, as well as taxi drop-off, trash and recycling removal vehicles and delivery vehicles. The parking garage will be fully served by valets, and the applicant intends to execute a valet parking agreement with the City solidifying its intentions. Trash and recycling pickups will occur within the ground floor of the parking garage and be facilitated by on-duty staff.

Between the Alhambra Street property line and the rear of the building, up to 5 vehicles can stand in the approximately 105-foot by 10-foot (clear) inbound lane until they can be parked on the ground floor or moved, one at the time, into the car elevator to be taken to the second floor garage level. Five standard parking spaces and one disabled space are located along the north end of the ground floor garage. When unoccupied, these spaces will be used to temporarily augment incoming vehicle storage until they can be valet-parked, increasing the number of vehicles that can be stored within the building prior to being moved by valets to alternate parking spaces.

#### *Project Trip Generation*

Projected trip generation for the proposed hotel was updated for this analysis using trip generation rates for "Hotel," Land Use Code 310, contained in the Institute of Transportation Engineers' (ITE) *Trip Generation* manual, 9<sup>th</sup> Edition, published late last year. While the project can be best described as a luxury boutique hotel, ITE does not provide trip generation rates for this specific use at this time, and so the "Hotel" rate was utilized as a best-fit.

As shown in Attachment 2, without considering site-specific factors, the facility is projected on an average weekday to generate 32 morning peak hour trips, and 37 the afternoon peak hour trips. These trips are included in the weekday daily projection of 173 total trips. As noted in the ITE manual's description of the Hotel land use, whether private or open to the public, any external

vehicular trips generated by the hotel's restaurant and bar/lounge are reflected in the hotel room trip generation rate.

Luxury boutique hotels generate fewer trips than a typical hotel because many guests do not drive to the destination in personal or rental cars. Instead, typically half or more arrive in the area by plane and take a taxi to the hotel, which was selected by the guest as a "destination" in and of itself. From that point, these guests generally stay in the area (i.e., walk to the beach, lunch, etc.) and occasionally use a taxi for a longer trip or in inclement weather. For this reason, the suburban ITE "Hotel" trip generation rate overestimates the number of trips entering and exiting the site. Further reducing site trip generation is the applicant's transportation demand management program described below.

#### *Voluntary TDM Program*

To further reduce vehicular trips and parking demand, the applicant is proposing a transportation demand management (TDM) program, and will accept a TDM condition of approval expressing the applicant's commitment to the following TDM measures:

- A. To encourage employees to consider transit, and get in the habit of riding the bus to and from work, institute an employee program that reimburses employee transit riders for 100% of the cost of their bus fares.
- B. To encourage employees to make a habit of riding a bike to work, institute a program that provides a \$5 credit on the employee food and beverage allowance for each day that the employee rides a bicycle to work.
- C. To encourage local restaurant and bar patrons to ride bicycles to the hotel, provide visible on-site bike racks and institute a program offering all patrons who arrived by bicycle a 10% discount on their bar and food bills.
- D. To encourage ride sharing among employees, organize and maintain a car-pooling rider-match program that assists site employees in locating other employees that work the same shift and originate from the same approximate location.
- E. To discourage employees from driving to work, refrain from reimbursing employees for off-site parking costs.

The nature of luxury boutique hotel trip making, as well as the effects of these specific programs on the project's projected trip generation was evaluated by HHI. The evaluation was conducted for the Saturday peak hour of the hotel, and is summarized in the second part of the trip generation table shown in Attachment 2. As shown in the summary, the travel demand programs are estimated to reduce inbound trips by approximately 6 trips in the peak hour. The TDM program reduces outbound trips by 5 trips in the peak hour; however, outbound taxi trips contributes an additional 13 outbound trips over use of a private vehicle, for a net increase of 8 trips.

The net effect is that, during the Saturday afternoon peak hour, the "Hotel" trip rate suggests the project will generate 26 inbound and 20 outbound trips without the travel demand programs, and only 20 inbound trips (and 29 outbound trips) with these programs in operation at a luxury boutique hotel. These characteristics and programs reduce inbound queues and parking demand without creating any capacity or experiential negatives.

#### *Parking Requirements and Provisions*

Section 47-20.2. Table 3 of the City's Unified Land Development Regulations provides a parking rate for hotels located in the Central Beach Districts of 0.67 spaces per room. If a hotel includes a bar, such as the Vintro project, the parking requirement is 13.21 spaces per 1,000 gfa of bar space. These calculations are detailed in the table shown on Attachment 3. As shown in the table, the hotel rooms require 40.87 parking spaces and the bar/lounge within it requires another 6.58 spaces, for a total of 47 spaces.

Based on the Barrier Island Parking Study policy recommendations identified as Option 1, the alternative adopted by the City on October 16, 2012, the applicant is not required to provide additional parking to support the upper-level restaurant; instead the hotel rate presumes that a restaurant is included in a typical hotel. As stated in the last paragraph on page 7-2 of the Barrier Island report, the City has eliminated the practice of generating separate parking for resort area hotel spas, restaurants and meeting space.

The applicant's TDM program, at a minimum, will ensure that the project's vehicular parking demand (calculated using the new beach area parking rate) is not exceeded, and is expected to reduce parking demand below the new rate.

As noted above, the nature of luxury boutique hotel trip-making also influences parking demand. This type of hotel guest relies primarily on taxis rather than personal or rental cars to visit

destinations such as Fort Lauderdale Beach. The project's projected parking demand in this regard was also evaluated by HHI, and the evaluation is summarized in the second part of the parking calculations table shown in Attachment 3. As shown in the summary, the higher use of taxis is estimated to reduce parking demand by approximately 50% based on local antidotal evidence. At 50%, the total parking demand is reduced by approximately 24 parking spaces even without consideration of the applicant's TDM program incentives which could further reduce demand. However, as shown in the attached parking calculation table, the project meets its full Code parking requirement in its two-floor garage.

As noted above, 5 standard parking spaces and one disabled space are located along the north end of the ground floor garage. The two other ground floor parking stalls will be outfitted with hydraulic lifts allowing two vehicles to occupy each parking stall: one on the floor and one on an overhead lift. On the second floor of the hotel, another 19 parking stalls are provided, each outfitted with a lift. A brochure describing the proposed lift equipment is provided as Attachment 4. A car (large freight) elevator provides access to the 38 second-floor parking spaces.

Though currently uncommon in Broward County, at the urging of land planners and environmentalists, developers throughout the world are increasingly turning to more efficient and less detrimental ways to construct projects, including the use of car lifts and elevators. Car lifts allow a project to more efficiently absorb parked vehicles, reducing the amount of land and building materials, and reducing building mass. Likewise, use of a car elevator, which eliminates the need for garage ramps, significantly reduces the amount of space and resources needed to construct a multi-floor parking garage. These construction technique improvements benefit the public by facilitating more compact development which, in turn, increases pedestrianism and transit usage, and accommodates the same number of people in less space leaving more open areas and green space within the urban district. It is also good for the environment in that, as noted above, fewer building materials are needed to accommodate a given number of people (and their transportation vehicle of choice). With reduced building surfaces (walls), there is less reflected heat and other environmental benefits. In general, these new construction techniques are welcomed by planners and environmental professionals.

As outlined above, the applicant proposes to provide 48 parking spaces, 40.87 of which the Code rates assume will be utilized by hotel guests (including the restaurant) and 6.58 spaces assumed to be needed by bar patrons not otherwise associated with the hotel. One extra space is provided in excess of the Code requirement, even given the likelihood that many fewer spaces will be needed.

## **Parking System Evaluation**

Three questions have been raised by the public in relation to the proposed parking operation system. The questions, requested information and our analysis are outlined below. The valet operational analysis is based on our parking experience, timing information from local studies, and interviews with valet service providers who currently operate the proposed equipment. The equipment (of similar) proposed to be utilized in this project was identified by the project architect during the preliminary project design phase, and product data for the selected equipment was provided to us through the architect.

*Question 1: Using the proposed elevator/lift system, will valets be able to move incoming vehicles to storage quickly enough to avoid queue backup onto Alhambra Street?*

Based on the peak hour trip generation shown in Attachment 2, the afternoon peak hour of the generator on Saturday can be anticipated to represent the hotel's peak parking demand. As shown in the table, approximately 20 vehicles are projected to enter during the peak 60 minutes, and 29 are projected to exit. A review of tables provided in the Urban Land Institute's *Shared Parking* manual (1<sup>st</sup> Edition) shows that the peak parking accumulation for a hotel with restaurant and bar can be anticipated to occur around 6pm on Saturday. Antidotal evidence suggests that the inbound trip peak hour of the generator is usually the 60 minutes following the hotel's (beginning) check-in time, typically 3:00pm.

The queuing analysis conducted for this evaluation is comprised of two elements: the estimated peak hour arrival volume and pattern, and the estimated cumulative amount of time the garage operator (the valet) will need to "process" each vehicle.

To identify the appropriate arrival pattern, a successful beach area boutique hotel with a similar clientele, The Pillars Hotel, was studied during the afternoon peak period on March 7, 2013, when the hotel was 100% occupied. The inbound and outbound vehicular movements, including taxis, were recorded in five-minute intervals beginning at 4:00pm in order to obtain a detailed arrival pattern. The two-hour study showed that no more than one vehicle entered or exited in any single 5-minute period—a very flat arrival pattern. (In two-thirds [i.e., 16] of the 24 five-minute periods, no vehicle arrived or departed at all.) Based on this evidence, the tested arrival patterns were each comprised of a peak arrival period that was flat with a graduated lead-up and fall-off pattern at either end of the peak arrival period to approximate the entire hour of arrivals.

In addition to determining the appropriate arrival pattern that can be expected at this location and type of hotel, it was also necessary to estimate the amount of time required to process incoming

vehicles. To do this, several everyday operating procedures were assumed including giving inbound vehicles priority over exiting vehicles. Among other procedures, this translates into the practice of returning the car elevator from the second floor to the ground floor empty (after delivering a vehicle to the second floor) if an inbound vehicle that must be transferred to the second floor is waiting. To facilitate this, the analysis also assumes there will be no shortage of valets to respond immediately and efficiently to incoming vehicles, including the stationing of one or more valets on the second floor to remove incoming vehicles from the elevator as they arrive (on the second floor) so that the initial valet can return the elevator to the ground floor immediately on delivery of the vehicle to the second floor so that the next incoming vehicle can be processed. Finally, it was assumed that all equipment will be in good operating order. To ensure that these assumptions are valid, the applicant is committed to provide a high level of valet service utilizing highly trained valets in a sufficient number to minimize vehicle processing time. In addition, the applicant intends to maintain on-going maintenance agreements to service the car elevator and lifts, thereby insuring their fitness for service.

To be conservative, the analysis was conducted for the longest time line in the vehicle parking process. Because it takes longer to park a vehicle on the upper floor we assumed that each entering vehicle would need to be parked on the second floor. However, to be consistent with the assumption that inbound vehicles would be prioritized over outbound vehicles, we also assumed the car elevator would be returned to the ground floor empty.

While all of the parking demand was evaluated assuming use of the elevator, the following analysis is conservative because 5 parking spaces (or 6, counting the disabled space) are standard spaces located on the ground floor, and two others on the ground floor (the lower parking spots of the two lift-equipped spaces) are available for initial use by incoming vehicles without use of the elevator. These 7 to 8 spaces will be treated as temporary spaces for the immediate servicing of incoming vehicles that can later be re-parked on the second floor during off-peak parking periods.

Following is a summary of the increments of time needed to process a request to park a vehicle, from its arrival time until the car elevator has returned to the ground floor and is available to park the next waiting vehicle. The time increments include greeting the guest, entering the vehicle, moving the vehicle onto the car elevator (which takes longer than placing the vehicle on a downstairs lift), raising the vehicle to the second floor and exiting the elevator, and returning the elevator to the ground floor to be available to accept a subsequent parking request.

The performance times assume the car elevator is parked at the 1<sup>st</sup> floor level and not in use when the parking operation begins, and considers the time required to achieve this. These performance times were identified from a elevator study conducted by HHI at the Eden Rock Hotel on Miami Beach on March 7, 2013. The Eden Rock uses elevators manufactured by ThyssenKrupp

Elevator Americas, the car (freight) elevator manufacturer of the elevator under consideration for the Vintro Hotel. (Similar elevators manufactured by others are expected to provide similar performance times.) After repeated operations, the average time necessary to complete the elevator sequence was 2 minutes and 11 seconds. (The [upstairs] lift operational times were not considered, as the delivered vehicle can be parked on or under the lift by another valet while the car elevator is returning to the ground floor to process the next incoming vehicle.)

- 05 seconds to activate the hall call (assumed start-up time)
- 07 seconds for door to open assuming 84" power vertical bi-parting doors
- 83 seconds for loading, lifting & exiting the elevator\*
- 36 seconds to return the empty elevator to ground level\*
- 131 seconds for total turnaround (2 minutes and 11 seconds)

Documentation of the estimated times provided by the vendor is provided in Attachments 5a and b. The data shown with an asterisk represents actual observations conducted by HHI.

Attachments 6a, b and c show the queue analysis results for three sample arrival scenarios, incorporating the arrival pattern and cumulative "processing time" data collected for this project. As noted above, the analysis was conducted for the peak hour of operations, expected to be Saturday afternoon.

The Peak Hour of the Generator Queue Analysis illustrated in Attachment 6a (Arrival Scenario 1) assumes an even arrival distribution over a 60-minute period; that is, 100% of the peak hour arrival demand spread over 60 minutes. In this scenario all arriving vehicles can be parked without forming a queue. The analysis illustrated in Attachment 6b (Arrival Scenario 2) assumes an even arrival distribution over a 30-minute period; that is, 100% of the peak hour arrival demand spread over only 30 minutes. In this scenario the arriving vehicles would generate a maximum queue of 7 vehicles. The analysis illustrated in Attachment 6c (Arrival Scenario 3) assumes a 60% arrival distribution over a 15-minute period; that is, 60% of the peak hour arrival demand is spread over only 15 minutes. In this scenario the arriving vehicles would generate a maximum queue of 5 vehicles.

At an estimated 20 feet of queue length per vehicle when valet parked, the maximum queues resulting from Scenarios 1 and 3 are 0 feet and 100 feet, respectively, less than the 105 feet of driveway queue storage provided on-site. Scenario 2 (if 100% of the peak hour demand ever actually occurs in 30 minutes) results in two vehicles arriving within the peak hour needing to be received. In this case, once arriving vehicles begin to stack back toward the south end of the driveway, the hotel doorman will alert valets by radio that he will begin directing any approaching inbound vehicles



to the City's Sebastian Parking Lot diagonally across the street from the hotel, and a valet with pocket change for the meter will be assigned to greet any arriving taxi or personal vehicle, monitor the hotel driveway queue and eventually move the vehicle to the queue when shorter.

An added benefit to the garage operation, and to queuing in general, is that the 24-space reduction in actual parking demand described above (but not accounted for in this analysis) helps ensure that the 6 ground floor standard and disabled parking spaces and the two on-floor spaces underneath the two ground-floor lifts, all of which can be quickly accessed, are likely to be available to valets for short term parking and staging of inbound vehicles that will eventually be moved to longer-term parking on the second floor.

If some unique event causes more arrival demand than reflected in the analysis and accommodated as described above, other alternatives are available. As noted above, under heavy incoming parking demand, entering vehicles will be given priority over exiting vehicles. Under these circumstances, no outbound vehicles would be processed and so none would be utilizing the outbound driveway lane, freeing up the outbound lane to be used temporarily for inbound storage—another 5 vehicles could be stored on-site. In addition, should such circumstances occur, immediate use of the Sebastian Parking Lot could be employed by valets with pocket change to temporarily store arriving vehicles until they can be moved into the hotel garage. (The City's expansion of the existing Sebastian Parking Lot is currently out for bid and will increase the current 75-space lot to a total of 140 metered spaces. These 65 additional spaces will be more than enough to satisfy Casablanca Café's patrons' parking needs, the hotel's potential arrival pattern peaks and other area needs.

Given the design and unique characteristics of the hotel, the applicant's TDM program, the use of the Sebastian Parking Lot, and the garage operating procedures, the proposed hotel is not expected to generate queues on Alhambra Street.

*Question 2: How will sanitation operations which include the unloading, emptying or collection of waste and recyclable containers, truck loading and other deliveries be accomplished on-site so that Alhambra Street is not impacted by these activities?*

The ground floor (including overhead clearances) has been designed to accommodate rear-end loading garbage and recycle trucks within the building envelope, allowing waste pick-up to take place within the building. The hotel's waste and recycle chutes are located near the northwest corner of the interior of the building. The proposed system includes a Wilkinson Hi-Rise Waste/Recycling Chute Model BSE-2RUC, which includes a model 350-C5 compactor. Wastes will be collected in a 2-yard compacted container, and recycles will be collected similarly in a 2-yard compacted container. For pickup, the containers can be rolled out of the northwest corner storage room into

the central vehicular area at the north end of the interior ground floor by building staff, once the service truck arrives at the site. This will not only ensure that waste containers and the collection of wastes is not visible to the public, but much of the noise associated with this activity will also be absorbed within the building. City staff have reviewed and approved the proposed waste removal access program.

Solid waste removal is expected to occur three times weekly using a rear load truck. Waste removal will be scheduled to avoid peak guest arrival periods (see below). During waste removal, up to 5 inbound cars can be stored in the hotel's inbound driveway lane while the waste removal truck is on the site, though data collected for this evaluation indicates that 5 vehicles are not expected to arrive in the short off-peak time frame during which the waste removal truck is on site.

Though City Code only limits solid waste pickup to the hours between 7:00 am and 10:00 pm daily, the applicant has determined that the best period to schedule solid waste pickup is between 8:00 and 9:30am on weekdays, when street volumes are light, inbound hotel vehicles are at a minimum and any noise generated by approaching or departing garbage trucks is not likely to disturb the neighborhood. The applicant also plans to complete this activity prior to the opening of Casablanca Café for lunch to avoid any impacts on the Café's outdoor seating areas. (Casablanca Café is not open for breakfast.)

As noted above, hotels are not required by Code to provide loading bays. In fact, outside the City's Regional Activity Center (RAC) in the downtown area, City Code requires loading zones only for free standing sales and/or services buildings, free standing office buildings and multi-tenant commercial buildings. Hotels are not required by Code to provide loading bays. With regard to truck activity in general, hotels of this nature experience only limited truck deliveries and those are of such limited duration that it is generally considered counterproductive to provide a separate space for such occasional activities. Unwarranted loading zones diminish the aesthetics and spacial efficiencies of a building and site unnecessarily.

When smaller delivery trucks do arrive at the hotel site, they will be parked internally in one of the 5 ground floor standard parking spaces at the north end of the first-floor garage. When a truck's length exceeds the 18-foot standard parking space or otherwise prevents internal circulation from continuing during the duration of the truck delivery, the truck will stand in the driveway's southbound (outbound) lane. When the southbound lane is utilized, valets will work together to operate the inbound lane as a two-way lane, ensuring as always that the inbound direction takes priority.

To protect the public from any possibility of truck deliveries being conducted from the over-wide street (Alhambra Street is 30 feet wide instead of the standard 22- to 24-foot width), a vehicle overflow plaza has been designed and designated in the southwest corner of the building footprint as pictured in Attachment 7 (lower left corner A1). At 10 feet by 54 feet, it is of sufficient size and clearance to accommodate larger trucks. When needed, hotel staff will clear this area of any bystanders and assist the truck driver in backing into the designated area. As previously stated, all routine truck deliveries will be scheduled for off-peak vehicular periods.

Many routine and non-routine deliveries are made by vans that can be accommodated in the 5 standard parking spaces in the hotel garage's first floor. Larger truck deliveries by routine vendors of the hotel will be instructed to approach the site from the west and back into the hotel's main driveway or, when necessary, the vehicle overflow plaza. Attachment 8 illustrates various truck design vehicles' movements as they back into the hotel's driveway or the vehicle overflow plaza. A WB-40 tractor trailer, a Single Unit truck and a Service Vehicle (SVEH) are shown entering the vehicle overflow plaza. The waste removal vendor's Heavy Garbage Truck (KO 2N+1) is shown entering the hotel's main driveway to access the trash receptacles. (The KO 2N+1 design vehicle was chosen to represent the vendor's garbage truck because it is among the largest garbage design vehicles for which turning templates are available, and it reflects a rear-load truck as planned to be utilized at this site.)

*Question 3: Can conflicts between waste removal, truck loading and other deliveries, and valet operations be avoided?*

As referenced in the section above, removal of wastes and recyclables will be strictly scheduled to coordinate with environmental considerations. Most particularly, waste removal will occur when the noise generated by the trucks themselves is of least impact on the surrounding residences and businesses. The timing of waste removal should be tightly controlled to occur at a consistent time of day, and days of the week. This will allow the hotel to post the schedule and otherwise advise hotel guests that they will encounter a slight delay when calling for a car to leave the site during these time periods, as it will not be possible to deliver a previously-parked vehicle to a guest until waste removal activity is completed.

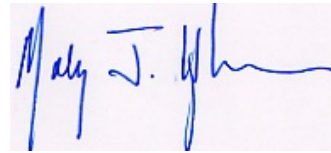
As clarified in the "Site Access/Internal Circulation" section of this evaluation, truck loading and other deliveries are anticipated to occur within the garage, by shorter trucks from the 5 standard parking spaces along the north end of the garage, and by longer trucks standing in the southbound (outbound) driveway lane. The vehicle overflow plaza in the southwest corner of the building footprint will be used to resolve any inadvertent conflicts.

Enrique Colmenares  
May 6, 2013  
Page 12

As detailed in the response to the first question, above, up to 5 inbound vehicles can accumulate and be stored off the Alhambra Street travel lanes during waste removal. The arrival pattern analysis outlined in response to the first question above suggests that this number is unlikely to be reached or exceeded.

If you have any further questions, please don't hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Molly J. Hughes", is written over a light purple rectangular background.

Molly J. Hughes, AICP, PTP, AVS  
President

Vintro Hotel Parking System Eval.wpd  
Attachments