OliverMcMillan Pacific Rim, LLC’s Request for Administrative Relief for the Symphony Honolulu Project Relating to Hawaii Administrative Rules § 15-217-55(k)(2)

Staff Report
May 27, 2015

**Background:** In June of 2012 the Authority approved the Development Permit for Symphony Honolulu Project. In a letter dated April 9, 2015, the applicant, OliverMcMillan Pacific Rim, LLC (“OMPR”) is requesting that the Authority consider administrative review and other relief relating to HAR § 15-217-55(k)(2) of the Mauka Area Rules. A copy of the applicant’s request is provided as Exhibit A.

**Discussion:** HAR, § 15-219-98, Rules of Practice and Procedure, provides for waiver or suspension of HCDA’s administrative rules for community development districts and is based on a written petition by a petitioner. Through a letter dated April 9, 2015, OMPR is requesting that the Authority: (1) initiate an administrative review process for the Glass Rule, as the implementation of the Glass Rule has resulted in direct conflicts with other Mauka Area Rules creating several unintended consequences, including, without limitation, the inability of projects to satisfy the Authority mandated minimum energy savings; (2) suspend the Glass Rule for the Kakaako Community Development District in general, pending such administrative review, research, and analysis, until the Authority is in a position to consider an appropriate modification and/or amendment to remove the Glass Rule’s conflict with other Mauka Area Rules and its unintended consequences; and (3) waive and/or permanently suspend the Glass Rule as applied to the Symphony Honolulu Project’s glass.

The plain language of HAR § 15-219-98 contemplates a written petition to be filed by a petitioner for waiver or suspension of any of the provisions of the administrative rules of the HCDA’s community development districts and sets a minimum information required in the petition. There is no provision in the HCDA’s Rules of Practice and Procedure for unilateral review and relief form provisions of community development district rules by the Authority. In absence of such a provision in the Rules of Practice and Procedure, any administrative waiver or suspension of the community development district rules by the Authority without a written petition by a petitioner in accordance with § 15-219-98 would constitute amendment of the community development district rules without the due process of Hawaii Revised Statutes (“HRS”), Chapter 91. Therefore, OMPR’s request for review and relief relating to HAR § 15-217-55(k)(2) can only be considered in accordance with the provisions of HAR § 15-219-98. Any request from the petitioner for waiver or suspension of any provisions of
the Mauka Area Rules needs to be considered as a Development Permit amendment and will require to follow the provisions of HRS, § 206E-5.6.

In consideration of the issues raised by OMPR relating to the “Glass Rule” staff has engaged a consultant with expertise in the subject matter to analyze the issue and provide recommendations to staff. Staff will present the consultant’s analysis and recommendation to the Authority once it is completed.

**Recommendation:** Staff notes that there is no provision in the Rules of Practice and Procedure for the Authority to administratively waive or suspend community development district rules, therefore, staff recommends that the Authority deny OMPR’s request for administrative review and other relief relating to HAR § 15-217-55(k)(2) of the Kakaako Mauka Area Rules and direct OMPR to follow the provisions of HAR § 15-219-98 if it desires to request waiver or suspensions of any provisions of the Mauka Area Rules.

Attachment: Exhibit A – Applicant’s Request Letter dated April 9, 2015
April 9, 2015

HAND DELIVER

Hawai‘i Community Development Authority
547 Queen Street
Honolulu, Hawai‘i 96813

Attention: Anthony J. H. Ching
Executive Director

Re: Request for Administrative Review and Other Relief Relating to
HAR §15-217-55(k)(2) of the Kaka‘ako Mauka Area Rules

To the Hawai‘i Community Development Authority:

The Hawai‘i Community Development Authority ("Authority") has informed our client, OliverMcMillan Pacific Rim, LLC ("OMPR"), that the windows OMPR is installing in the Symphony Honolulu Project above the ground level fail to meet the Authority’s visible light transmission level requirement established by § 15-217-55(k)(2) of the Mauka Area Rules and is thus in violation of said rule ("Glass Rule"). The Glass Rule requires that the Symphony Honolulu Project’s window glass have a measured visible light transmission level ("VLT") of at least fifty percent (50%). For the benefit of the Kaka‘ako Community Development District, as this rule will certainly become a district-wide problem if left as is, OMPR respectfully requests that the Authority (1) initiate an administrative review process for the Glass Rule, as the implementation of the Glass Rule has resulted in direct conflicts with other Mauka Area Rules creating several unintended consequences, including, without limitation, the inability of projects to satisfy the Authority mandated minimum energy savings; (2) suspend the Glass Rule for the Kaka‘ako Community Development District in general, pending such administrative review, research, and analysis, until the Authority is in a position to consider an appropriate modification and/or amendment to remove the Glass Rule’s conflict with other Mauka Area Rules and its unintended consequences; and (3) waive and/or permanently suspend the Glass Rule as applied to the Symphony Honolulu Project’s glass.

I. Introduction

After consulting with architectural, glass, and development experts, OMPR has been unable to identify a single reason why the Authority’s Glass Rule is beneficial to the consumer, the public, or the county and state government. The implementation of the Glass Rule has resulted in an unfortunate set of circumstances preventing development projects from satisfying Authority-mandated minimum energy savings under other Mauka Area Rules. The unintended consequences of the Glass Rule place it in direct conflict with and contrary to the goals and requirements of the Mauka Area Rules’ “Green Building” section, § 15-217-59, which mandates that projects meet at least the base Leadership in Energy and Environmental Design (“LEED”) standard.
standards. OMPR now seeks the Authority’s waiver or permanent suspension of the Glass Rule as applied to the Symphony Honolulu Project and the Glass Rule’s suspension as to the Kaka‘ako Community Development District in general pending further review, analysis, and research and potential modification/or amendment, as (1) the Glass Rule makes it impossible for a project with a window wall design, such as the Symphony Honolulu Project, to meet both the Glass Rule and the required LEED minimums, and (2) a waiver and suspension of the Glass Rule will not result in any harm to the public.

II. Increasing the VLT Generally Increases a Glass’ Solar Heat Gain Coefficient, Making the Building Less Environmentally Friendly

The purpose of the Mauka Area Rules’ “Green Building” section is to provide “standards intended to result in a responsible development pattern that conserves natural resources and provides a healthy environment for inhabitants of the mauka area.” Mauka Area Rules § 15-217-59(a). However, the Glass Rule creates the unintended consequence of increasing a project’s drain on natural resources and producing an unhealthy environment for both consumers and the general public due to the direct correlation between a glass type’s VLT and Solar Heat Gain Coefficient ("SHGC"), which negatively affects energy performance.

Glass with a high VLT (i.e., a VLT of 40% or greater) is undeniably less energy efficient, resulting in higher electrical cooling needs for apartment units and higher electric bills for consumers. See Exhibit “1” (Architects Hawaii, Ltd. Letter); see also Exhibit “2” (JA Weir Associates Letter); Exhibit “3” (Notkin Hawaii, Inc. Letter). The SHGC, which measures the heat transmitted through the glass to a building’s interior, generally increases as VLT increases. See Exhibit “1”; see also Exhibit “2.” Logically, the higher the SHGC value, the less energy efficient the glass is. See Exhibit “1”; see also Exhibit “2.”

Higher VLT requirements, and therefore less energy efficient glass, necessitate larger and more powerful cooling systems to offset internal heat gains. See Exhibit “1.” Hawai‘i buyers “have consistently expressed concerns over heat transmission,” as today’s high rise condominium buyers are more aware of how the glass systems affect their lifestyle and utility costs. See Exhibit “4” (Heyer & Associates LLC Letter). Increased electrical use also increases the pollutants entering the air we breathe, contributing to global warming and an environment that is overall detrimental to our health. Consequently, the Glass Rule has unintentionally imposed an irresponsible development pattern on Kaka‘ako projects, mandating the use of glass that is far less energy efficient than other readily available alternatives. This directly conflicts with the “Green Building” section of the Authority’s rules, increasing every subject project’s drain on our natural resources by raising the cooling costs for all buildings in the Kaka‘ako Community Development District.

It is also important to note that the stated purpose of the Glass Rule is “to provide views out of and into the building.” Makua Area Rules § 15-217-55(k)(2) (emphasis added). This is particularly discouraging to future residents looking to live in Kaka‘ako as any planned buildings will be located in an area already occupied by other high-rise buildings. The ability of neighbors in adjacent buildings to look into a unit during daylight hours will adversely and negatively affect the unit owner’s privacy within their unit and thus the unit’s desirability. See Exhibit “4”.
Appropriate consideration of an owner’s privacy while in the unit during daylight hours should have been given more substantial deference when creating the Glass Rule. See id. As currently composed, the Glass Rule will lead to a substantial number of unit owners keeping blinds, drapes or other window coverings closed during the day to preserve individual privacy within the unit and to reduce heat transmission through the glass to assist with cooling within the unit. There is little or no visibility through the windows when the blinds, drapes or other window covering are down, which also increases the energy need for artificial lighting during daylight hours. See Exhibit “1.”

There are only five glass options that come close to meeting the LEED required energy performance for the Symphony Honolulu Project. See Exhibit “2.” Of those five, the most energy efficient type has a SHGC of 0.22. See id.; see also Exhibit “3.” In comparison, the glass purchased for the Symphony Honolulu Project’s tower has a SHGC of 0.19, which results in a comparative energy savings of approximately 16%. See Exhibit “2.” This glass, with its stated VLT of 28%, was approved for installation by the City and County of Honolulu on January 29, 2014. See Exhibit “5” (Superstructure Permit). Most energy efficient glass has a SHGC of less than 0.20. See Exhibit “2.” Understandably, following the Glass Rule will require that development projects completely abandon the window wall design for designs that use “significantly less glass, up to 50% solid walls, or a combination thereof.” See Exhibit “1.” As the Glass Rule’s effects run contrary to the Authority’s purpose of encouraging sustainability and energy efficiency and savings, it should be waived or suspended until it is modified to remove any conflict with the “Green Building” section of the Mauka Area Rules.

III. The Glass Rule Prevents Projects With Window Wall Designs From Meeting Minimum LEED Standards and Makes LEED Silver, Gold, or Platinum Certification Impossible for All Projects with a VLT of 50% or Higher

The “Green Building” section adopts LEED standards, requiring that projects “qualify for the applicable base LEED rating system.” Makua Area Rules § 15-217-59(c)(1). To qualify for the applicable base LEED rating system a project must show 10% improvement and increased performance above the American Society of Heating, Refrigerating, and Air-Conditioning Engineers 90.1-2007 standards. See Exhibit “1.” There is no commercially-available glass with a VLT of 50% of greater that meets the minimum increased performance required by LEED of 10% when used in a window wall design. See Exhibit “1”; see also Exhibit “3.” The Symphony Honolulu Project’s inability to meet the base LEED rating required by the “Green Building” section with any commercially available glass with a VLT of 50% or more demonstrates a very serious problem that will ultimately become a district-wide problem if left unaddressed.

Both the Hawai’i Legislature and the Authority make energy efficiency a priority in development and construction, as evidenced by the Authority’s stated purpose in Section 206E-1 of the Hawaii Revised Statutes and by the passage of the “Green Building” section in the Mauka Area Rules. The emphasis on LEED standards and encouragement for projects to reach for LEED silver, gold, and platinum further evidences the importance of energy efficiency in upcoming and future projects in Kaka’ako. See Exhibit “1.” However, OMPR’s consultants have opined that higher LEED standards are completely unreachable under the current Glass Rule for any window design. See id.; see also Exhibit “3.”
Notably, there is already pre-established precedent for VLTs lower than 30% in the greater Honolulu area. OMPR's research failed to find a single high-rise tower in Honolulu that has a VLT close to 50%. See Exhibit “1.” Architects Hawaii, Ltd.’s list in Exhibit “1,” attached hereto, indicates that local designers, who go through an in-depth research and planning process using experts and consultants to plan their projects in Honolulu, have unanimously agreed that glass with a VLT of 20% to 30% is the best option to balance the desires of both consumer and government, while accounting for the sunny local environment. The importance of energy efficiency and the impediment and conflict between the Glass Rule and the goals set by both LEED and the “Green Building” section of the Mauka Area Rules support OMPR’s request for a waiver from and the suspension of the Glass Rule. In considering the relative importance of these two rules, the Hawai’i Legislature and the Authority would clearly point to the “Green Building” section of the Mauka Area Rules as being paramount and controlling.

IV. The Guidance Provided to the Authority by its Consultant Evidences the Need for Waiver and Suspension of the Glass Rule

The advice from the Authority’s code/rule consultant, Torti Gallas and Partners (“Torti Gallas”), provided for the drafting and codifying of the Glass Rule, supports OMPR’s position that the Glass Rule, as it stands today, should be waived or permanently suspended as to the Symphony Honolulu Project and suspended indefinitely to research ways to amend or modify it to meet its intended scope without substantially impeding or conflicting with a project’s ability to meeting the requirements and standards imposed by the “Green Building” section of the Mauka Area Rules. Torti Gallas, which the Authority hired to provide form-based code consulting for the Mauka Area Rules, suggested to the Authority that VLT requirements are “typically applied to ground floor conditions and not necessarily for upper floor tower glass.” See Exhibit “6” (Torti Gallas Letter). While Torti Gallas did suggest a possible VLT of 50% or greater in order to increase the visibility “in and out” of buildings, it was not asked to evaluate such a visibility-based VLT rule in relation to (a) energy calculations using sun conditions in a tropical environment such as Hawaii to achieve LEED or other energy goals set forth in § 15-217-59 of the Mauka Area Rules, or (b) the number of glass products meeting that criteria that are commercially available with a low SHGC to facilitate energy efficiency and savings. Id.

V. Conclusion

The characteristics of the glass chosen for the Symphony Honolulu Project (e.g., the reflectivity, VLT, SHGC, color, etc.) composes a beautifully designed and iconic tower in the Honolulu skyline and does not create any public nuisance or harm. OMPR has found no evidence that a lower VLT, like that of the Symphony Honolulu Project’s, impairs the daytime visibility out of a unit or adversely impacts the community or neighbors. On the contrary, a lower VLT provides good visibility out of a unit, while enhancing the ability of an owner to leave the blinds, drapes or other window coverings open during daylight hours, and contributes significantly to achieving the mandated energy savings goals under § 15-217-59 of the Mauka Area Rules. When given a choice between the two rules, OMPR chose to satisfy the “Green Building” section’s LEED requirements over the Glass Rule. OMPR submits that the Authority should not maintain a rule that substantially impairs or prevents projects in the Kaka'ako...
Community Development District from meeting the minimum LEED standards and the requirements of the "Green Building" section.

Although the current Glass Rule requires a VLT of 50% or higher, OMPR can provide specific reasons as to why it chose the glass currently being installed in the Symphony Honolulu Project. Conversely, there are no compelling reasons why the Symphony Honolulu Project's glass has to have a VLT of at least 50% and no harm to the public will result if the Glass Rule is waived and/or suspended.

As time is of the essence at this point in the Symphony Honolulu Project’s construction and development, OMPR respectfully requests that the Authority promptly respond regarding whether it will (1) initiate an administrative review of the Glass Rule, (2) indefinitely suspend the Glass Rule, and (3) waive and/or permanently suspend the Glass Rule as applied to the Symphony Honolulu Project's glass. Any delay in the resolution of this issue will certainly irreparably harm OMPR and the timeliness of the promised delivery of the residential units in the Symphony Honolulu Project.

If you have any questions or require anything further to process the above request, please do not hesitate to contact the undersigned.

Very truly yours,

McCORRISTON MILLER MUKAI MacKINNON LLP

William C. McCrorriston
D. Scott MacKinnon
Attorneys for OliverMcMillan Pacific Rim, LLC

DSM:cn
Enclosures
cc with enclosures:
  Daniel Nishikawa
  Morgan Dene Oliver
  Paul Buss
  Serge Krivatsy
  Kris Hui
March 19, 2015

Mr. Dan Nishikawa  
President  
Oliver McMillan Pacific Rim, LLC.  
733 8th Avenue  
San Diego, Ca 92101

Subject:  
Symphony Honolulu  
HCDA 15-217-55(k)(2) – 50% VLT Rule

Dear Dan,

As you have requested, we hereby offer our summary of recent discussions, findings, and professional opinion on Symphony Honolulu’s design as regarding HCDA Chapter 217 Mauka Area Rules Section 15-217-55(k)(2) and its windows rule of 50% Visual Light Transmittance (VLT) for glazing above the ground floor level. To note, Symphony Honolulu’s predominantly glass tower façade encloses 288 market rate apartments and 100 reserved apartments, providing high quality living environments for its residents.

HCDA’s 50% VLT or greater rule as it relates to urban high-rise development creates a significant challenge and difficulty on design and engineering. This is because it is in direct conflict with both the State Energy Code and Basic LEED criteria required by HCDA Rules. State of Hawaii HCDA Mauka Area Rules 15-217-59(c)(1) reference Basic LEED minimum criteria of Energy and Atmosphere (EA) prerequisite which requires 10% improvement and increased performance above the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 90.1-2007 standards. AHL and our specialist glazing and mechanical engineers have found no glazing product that can achieve both HCDA 50% VLT Rule and HCDA Basic LEED EA prerequisite of 10% increased energy performance requirements. Please know that this 10% minimum increase to energy performance is only a prerequisite of Basic LEED certification. Higher glazing performance requirements for LEED Silver, Gold, and Platinum would be needed to achieve EA credit 1 which, due to its significance in reduced energy consumption, offers the single highest total of points (19) among all other LEED credits.

While HCDA 15-217-59(c)(1) rule requires minimal Basic LEED Certification criteria, the consensus intent of professionals and goal of the public, community authorities, and governments worldwide is to achieve LEED rated certification levels of Silver, Gold, and Platinum certification. High-rise condominium projects similar to Symphony Honolulu would need to target energy savings for Silver at 30% increased performance, Gold would be in the range of 30%-48%, and Platinum would be 48% to a net zero building. Through our research, the limited available glazing products which meet HCDA’s 50% VLT or higher Rule create significant hardship in the designing to HCDA’s Basic LEED prerequisite. Additionally we find it not possible to pursue the desirable and highly recommended higher LEED Silver, Gold, or Platinum ratings with the current VLT Rule.
We believe in today's urban high-rise condominium environment that the enhanced views and open space quality that larger areas of glass provide creates the best possible living environments for residents and should be encouraged in planning rules.

HCDA’s 50% VLT Rule not only presents difficulty and hardship for designers and engineers, but also for residents, developers, and Honolulu’s economy overall. To meet both HCDA 50% VLT and energy performance rules, buildings would need to be designed with significantly less glass, up to 50% solid walls, or a combination thereof. These designs would significantly reduce LEED goals and suggested credits for daylight and views to the outside; resulting in reduced overall quality of life for residents.

Planning rules which support energy conservation should do so through coordinated technical requirements. The data submitted herein verifies that basically higher VLT equates to less energy efficient glazing. This in turn translates to more costly mechanical systems needed to offset heat gain within the units and ultimately effects residents through higher monthly energy costs. More costly mechanical systems directly affect sales prices making residential units less affordable to the local population of Hawaii.

We have compiled the attached which to the best of our knowledge is a comparative spreadsheet of high-rise condominium projects under HCDA and City and County of Honolulu zoned ordinances; showing their associated tower glazing VLT and Solar Heat Gain Coefficient (SHGC) values. SHGC is the measurement of heat gain through the glazing and into the interior of the unit which in Hawaii requires mechanical cooling to offset. In general the higher the SHGC value the lower efficiency in energy performance. It is important to note a few general findings:

a. SHGC increases as the value of VLT increases.

b. No project on this list would comply to HCDA’s 50% VLT Rule (nearest is 40% VLT).

c. Symphony’s VLT value is above average amongst the group and offers on average a higher energy performing SHGC value.

Through our research, leading glazing manufacturers and experts recommend glazing VLT values are within 20-40% for balance of light quality, interior comfort, and energy conservation. An increase of VLT value above 40% will present undesirable heat gain, glare, and also cast heavy shadows off furnishings and other items within the building interior space. In these cases, building occupants were found to lower and keep window shade treatments closed during daylight hours which removes the views suggested by LEED and required additional energy for artificial light to balance the shaded natural light.
In conclusion, we believe that the 50% VLT or greater requirement within HCDA Mauka Area Rules 15-217-55(k)(2) should be reconsidered for future HCDA projects and should not apply to Symphony Honolulu. We further believe that should these 2 actions take place there would be no adverse effects on the community at large and in fact Symphony Honolulu’s residents would benefit greatly.

Sincerely,

[Signature]

David Miller, AIA
Chairman and Principal
Architects Hawaii, Ltd.

cc: Serge Krivatsy, OM; Daniel Moats, AHL
## Hawaii Highrise - Glazing Performance Data
### March 12, 2015

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<tr>
<th>Project</th>
<th>Zoning</th>
<th>Visual Light Transmittance (VLT)</th>
<th>Solar Heat Gain Coefficient (SHGC)</th>
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Hawaii Highrise - Glazing Performance Data

Solar Heat Gain Coefficient

Visual Light Transmittance

- Watermark Waikiki
- Trump Waikiki
- Moana Pacific
- Pacifica
- 801 South
- Halekauwila
- Allure Waikiki
- Waihonua 1
- Hawaiki Tower 1
- Ritz Carlton Waikiki 1
- Capitol Place
- Symphony
- Anaha
- Ritz Carlton Waikiki 2
- Waiea
- One Alamoana
- Keola Lai
- Waihonua 2
- Waihonua 3
- Waihonua 4
- Koolani
- Century Center
Oliver McMillan  
Bishop Square | Pauahi Tower  
1003 Bishop Street, #2288  
Honolulu, Hawaii 96813  
Attention: Kris Hui

Dear Kris:

Symphony Honolulu  
Exterior Wall Design and Construction  
Discussion on High Performance Glass

We have carried out various discussions with you and the team in recent days with regards to properties of glass specific to high performance coated units. Kindly allow us to recap these discussions as follows.

The use for glass in commercial buildings has evolved from the original purpose of allowing light into a space to becoming an integral part of the environmental system of the building. As a part of the environmental system, glass technology has had to adapt to include integrated solar control as a part of the product. This is especially true in the tropical and subtropical regions of the world where sunlight is predominant. What started as clear glass changed into the reflective coatings of the 1970’s and 80’s and then into the Low Emissivity coatings of the 1990’s and 2000’s. In order to provide the next level of performance in today’s market, glass coatings have again evolved this time to become quite complex in makeup and now offer the combined benefits of many of the products that had come before. These new coatings are known as hybrids and may be made of up to fifteen layers of metallic film.

When studying or comparing the characteristics of glazing products, the terms typically used are Visible Light Transmittance (VLT) and Solar Heat Gain Coefficient (SHGC). Visible Light Transmittance can be best defined as the amount of light that passes through a pane of glass. The Solar Heat Gain Coefficient is a measurement for the amount of heat generated by the light (visible or infrared) that has passed through the glass (long wave conduction of heat due to glass absorption is not included in this measurement). Therefore, a simple means of understanding glass performance with these terms is that the more light that comes through a pane of glass (i.e., the higher the VLT), the worse the SHGC is which results in more heat buildup on the interior. In sunny climates such as Honolulu and Waikiki, the more heat that enters the building, the more energy it takes to neutralize this heat.

Chapter 15-217 of the Hawaii Administrative Rules (dated September 14, 2011) discusses the “visible light transmission level” of tower and ground floor glass on page 50, (k)(2) and stipulates a minimum level of 50% for the tower (70% for the ground floor). This clause is confusing as it uses the term “transmission” (level) which does not have a definition in the commercial glazing industry as transmission is an action and glass does not transmit anything. Assuming that this is a misnomer and that transmittance was meant to be used (the property of glass to allow light through), these rules require that all glass used in a new tower façade in the Mauka district have a VLT of 50% or greater.
Sunlight or, more accurately the solar spectrum, is essentially comprised of 47% visible light, 51% shortwave infrared radiation (heat) and 2% ultraviolet light. Historically, in order to reduce heat, it was necessary to reduce visible light. With advancements in spectrally selective Low E technology, solar heat could be reduced significantly with far less impact on visible light. After searching through a database for just about every coated piece of glass manufactured in the world with a VLT of 50% or greater, the best performing product on the market today has a corresponding SHGC of 0.22. This roughly translates into 22% of the total solar radiation on the facade ending up as heat inside the building that must now be neutralized by the cooling system. Conversely, the glass in use on Symphony provides a SHGC of 0.19 so three percentage points below the 0.22 value; representing substantial energy savings (~16%). This value was also required to meet the energy model necessary for Code compliance. Even with today’s advancements in spectrally selective Low E coatings, reducing the incident of solar radiation any further requires the reduction of the visible light transmittance. At this time, among the major suppliers we have researched throughout the world, we can find no high performance glass which can meet our necessary SHGC and the 50% VLT required in 15-217. This includes thousands of glass types as manufactured by Asahi, Cardinal, China Southern, Interpane, Guardian, NSG, Pilkington, PPG, Shanghai Pilkington, Saint Gobain and Viracon. In fact, we found only five comparable products with a VLT of 50% or greater and none of these came any closer than 16% of our required SHGC performance. We believe the absence of an available product identifies a flaw in the Rule as it stands today for the Rule is simply an over-requirement of current glazing and coating technology.

Hawaii is not alone in the attempt to accommodate tenant comfort and limit energy consumption in this manner. California also has such provision in its Title 24 section of the current Code. The difference is that California’s is an approach limiting U Value, Relative SHGC and VT, or visible transmittance, which is defined as the rating for overall daylight transmittance of product including frame. The key here is that there is an understanding that VLT (or VT) cannot be regulated alone but only as a part of three interrelated factors affecting performance of exterior wall systems. In fact, we are unaware of any municipalities in the US that regulate glass selection by VLT.

It is also important to understand that visible light transmittance is not a performance attribute of glass but an aesthetic one. It is the indicator of how much light travels through the glass. The solar heat gain coefficient is the performance indicator. It defines how the solar radiation traveling through the glass is controlled. For high sunlight areas such as the Mauka District of Honolulu, this SHGC needs to be low to control energy consumption and allow tenant comfort. While every project is different, aiming for a low SHGC (such as we did in going for less than 0.20) would save both energy and assist in reducing the overall cost of cooling for the residents.

Looking at the projects presently under construction in the various Honolulu districts, one characteristic is clear; none of these projects is using glass with a 50% VLT. All of the glass products in use in commercial developments today provide a much lower percentage of VLT. This is due to the emphasis on performance (most notably SHGC) in the design. It is also important to note that a reduction in VLT from 50% to 30% does not noticeably alter one’s ability to see through the glass.

We would welcome the opportunity to form a team of professionals to assist HCDA and any other interested Area Boards in working out a set of guidelines for glazing that would continue the focus on energy conservation while keeping in mind current technology as well as the tenant comfort and experience issues important to a locale such as Hawaii. The key to this would be to bring a balance to the requirements asked of the glazing while limiting the attributes unacceptable to district design.

Regards,

Jon Weir
JA Weir Associates

cc. D. Moats, AHL
March 19, 2015

Mr. Daniel Moats  
Associate  
ARCHITECTS HAWAII LTD.  
733 Bishop Street, Suite 3100  
Honolulu, Hawaii 96813

Project: Symphony Honolulu, Glazing Performance Review

Dear Mr. Moats:

As you know, we reviewed the energy performance with various glass types for the Symphony Honolulu high-rise residential tower. We find that there is a direct correlation between visible light transmittance (VLT), solar heat gain coefficient (SHGC) and energy performance of various glazing systems. We used the Carrier Hourly Analysis Program (version 4.6 HAP) which models annual energy usage in a LEED® compliant method. As you know, a prerequisite requirement of LEED® EA is to use at least 10% less energy compared to a code minimum baseline. The following table summarizes our findings of Symphony specified glazing and the highest energy performing glazing available from the two leading glazing manufacturers which have a VLT value of 50 percent or greater:

<table>
<thead>
<tr>
<th>Glass Specification</th>
<th>Viracon (Symphony) VRE1-30</th>
<th>Guardian SNX 62/72+IS20</th>
<th>Viracon VNE2-63</th>
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<tbody>
<tr>
<td>VLT</td>
<td>0.28</td>
<td>0.51</td>
<td>0.53</td>
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<tr>
<td>SHGC</td>
<td>0.19</td>
<td>0.22</td>
<td>0.26</td>
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<tr>
<td>Overall U-Value</td>
<td>0.27</td>
<td>0.23</td>
<td>0.26</td>
</tr>
<tr>
<td>Baseline Energy Use (kWh/yr)</td>
<td>13,790,378</td>
<td>13,790,378</td>
<td>13,790,378</td>
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<tr>
<td>Proposed Energy Use (kWh/yr)</td>
<td>12,374,144</td>
<td>12,448,840</td>
<td>12,576,237</td>
</tr>
<tr>
<td>Minimum 10% Savings Required per LEED® EA</td>
<td>10.3%</td>
<td>9.7%</td>
<td>8.8%</td>
</tr>
</tbody>
</table>

In conclusion from the table above, the type and quality of glass has a major impact on energy consumption in a high-rise building in Honolulu. Further, the U-value of glass doesn't have a significant effect on energy consumption as compared to the solar heat gain coefficient (SHGC) of glass which is the main contributing factor.

Sincerely,

NOTKIN HAWAII INC.

[Signature]

EXHIBIT "3"
Mr. Daniel Moats, Assoc. AIA
JN Dealership at Symphony
May 14, 2013

Keith M. Chan, PE
March 20, 2015

Mr. Daniel Nishikawa
Oliver McMillan Pacific Rim
1003 Bishop Street, Suite 2288
Honolulu, HI 96813

Dear Mr. Nishikawa:

This letter is in response to your request regarding the importance of glass systems used in buildings. Over the past 25 years, the principals of Heyer & Associates LLC have been directly involved in the sales and marketing of high rise condominiums in the Kakaako Redevelopment Area and Honolulu Urban Core consisting of approximately 3,569 residential condominium units. These buildings include the following:

- Nauru Towers, 304 residential units
- 1133 Waimanu, 282 residential units
- Hawaiki Tower, 417 residential units
- Hokua at 1288 Ala Moana, 247 residential units
- Capitol Place, 397 residential units
- Vanguard Lofts, 36 residential units
- Pacifica Honolulu, 489 residential units
- Waihonua at Kewalo, 341 residential units
- One Ala Moana, 206 residential units
- Symphony Honolulu, 388 residential units
- The Collection Honolulu, 462 residential units

During the sales process of each of these buildings, buyers have consistently expressed concerns over heat transmission, privacy (during the day time) and exterior sound transmission. The concerns were risen to the point where Heyer & Associates LLC, as the project broker, have had to request from the developer, a summary provided by their glass consultant with information on shading and light transmission for privacy, shading coefficient for energy and heat transmission and sound attenuation from exterior elements. This information has increasingly become more of an integral part of the buyer's decision to purchase.

High-rise condominium buildings with floor to ceiling window walls are highly desired to capture views and have become a standard requirement. Heat transmission through the glass has become such an important part of a buyer's decision to purchase, to the extent where a unit facing the east can command more in price than the same reverse unit type facing the west because of its perception of heat gain into the unit, thus requiring the air conditioning to run longer at a lower temperature set point to sufficiently cool the unit and keep it cool.

In conclusion, today's high rise condominium buyers are more sophisticated, knowledgeable and conscious of the glass systems used in buildings and items such as shading coefficient, transparency and exterior sound transmission are extremely critical to their purchasing decision as it has a direct impact on their lifestyle with high utility costs, lack of privacy and interference from outside noises if the glass does not meet certain requirements.

Should you have any questions, please feel free to contact us at 808-692-0060.

Sincerely,

Heyer & Associates LLC

Karl Heyer, IV, Managing Member
Jeanne Murata, Principal Broker

EXHIBIT "4"
DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET * HONOLULU, HAWAII 96813
Phone: (808) 788-8220 * Fax: (808) 788-6111

BUILDING PERMIT
FOR THE PERFORMANCE OF WORK UNDER THE
BUILDING ELECTRICAL, PLUMBING, AND SIDEWALK CODES
CHAPTERS 16, 17, 19, AND 20, RESPECTIVELY, AND UNDER CHAPTER 18
(FEES AND PERMITS) OF THE REVISED ORDINANCES OF
THE CITY AND COUNTY OF HONOLULU

LOCATION

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Site Address (if other than primary):

PROJECT:
SYMPHONY - Superstructure for 45-story building [THIRD PARTY REVIEW]

TYPE OF WORK
- Electrical Work
- Fire Sprinkler
- Other superstructure
- Fire Alarm
- Air Conditioning
- Swimming Pool
- Plumbing Work

RIGHT OF WAY WORK
- Sidewalk
- Driveway
- Driveway Types
- Curbing Types
- Linear Ft. of Sidewalk
- Linear Ft. of Curbing
- Linear Ft. of Driveway

Please notify the Building Inspector listed below at least 24 hours before starting work in the Right-Of-Way.

GENERAL CONTRACTOR
NORDIC PCL CONSTRUCTION, INC
Contact Info: 641-9108
Lic. No.: CT17

NOTES
- Permission is hereby given to do above work according to conditions hereon and according to approved plans and specifications pertaining thereto; subject to compliance with ordinances and laws of the City and County of Honolulu and State of Hawaii.
- Initial Print Date: Wednesday January 29, 2014 3:53 pm
- External ID: 050978860
- Permit No.: 742035
BUILDING PERMIT
FOR THE PERFORMANCE OF WORK UNDER THE
BUILDING ELECTRICAL, PLUMBING, AND SIDEWALK CODES
CHAPTERS 16, 17, 19, AND 20, RESPECTIVELY, AND UNDER CHAPTER 18
(_FEES AND PERMITS) OF THE REVISED ORDINANCES OF
THE CITY AND COUNTY OF HONOLULU

FOR DIRECTOR OF DEPARTMENT OF PLANNING AND PERMITTING
THIS PERMIT MUST BE POSTED IN A CONSPICUOUS PLACE ON THE SITE DURING THE PROGRESS OF WORK. THIS PERMIT MAY BE
REVOKED IF WORK IS NOT STARTED WITHIN 180 DAYS OF DATE OF ISSUANCE OR IF WORK IS SUSPENDED OR ABANDONED FOR 120
DAYS.

ELECTRICAL AND PLUMBING WORK TO BE DONE BY LICENSED PERSONS AS REQUIRED UNDER CHAPTER 448 E, HAWAI' REVISED STATUTES.
NOTICE TO HOMEOWNERS: This is to inform all homeowners that improvements to your home may require approval by your Homeowners' Association or
authorized representative prior to the commencement of construction.
Approval by the Department of Planning and Permitting does not certify compliance with the Covenants, Conditions and Restrictions or other design restrictions
administered and enforced by your Homeowners' Association.
ALL CONSTRUCTION UNDER THIS BUILDING PERMIT IS SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL. IT SHALL BE THE DUTY OF
THE PERSON DOING THE WORK AUTHORIZED BY THIS PERMIT TO NOTIFY THE BUILDING OFFICIAL THAT THE WORK IS READY FOR INSPECTION.

THE FOLLOWING ARE THE INSPECTORS ASSIGNED TO INSPECT THE CONSTRUCTION UNDER THIS PERMIT AND THEIR TELEPHONE NUMBERS:

Building Inspector: DOUGLAS OSHIRO (808) 768-8144
Electrical Inspector: LUKE BECHARD, DEREC (808) 768-8173
Plumbing Inspector: JOSEPH MURAMOTO, EI (808) 768-8191

APPLICATION NO.: A2013-11-1151
JobID: 60978660
PERMIT NO.: 742035

Initial Print Date: Wednesday January 29, 2014 3:53 pm
ExternalID: 060089331-006
Page 2 of 2
**DEPARTMENT OF PLANNING AND PERMITTING**
**CITY AND COUNTY OF HONOLULU**
650 SOUTH KING STREET • HONOLULU, HAWAII 96813
Phone: (808) 768-8220 • Fax: (808) 768-5111

**BUILDING PERMIT APPLICATION**
A2013-11-1151 (Third Party Review) 050978338-002

**LOCATION**
Contact Info: NANCY KAYA 927-0090

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Site Address (if other than primary):

**PROJECT:** [TMK: 21044001, 21044032, 21044048, *131220, *131137, *130988, *130898] [THIRD PARTY REVIEW]
SYMPHONY - Super structure for new 45-story building

**APPLICANT**
Kaya's Permit Processors (Attn: Nancy Kaya)
Contact Info: Phone: (808) 927-0090  Email: MIYASATON001@HAWAII.RR.

**OWNER:**
OLIVER MCMILLIAN PACIFIC RIM, LLC
Contact Info: (619) 321-1111

**PLAN MAKER:**
MILLER DAVID A
Contact Info: Lic. No.: AR3047

**GENERAL CONTRACTOR**
NORDIC PCL CONSTRUCTION, INC
Contact Info: Lic. No.: CT17

**ELECTRICAL CONTRACTOR**
HONOLULU PAINTING CO
Contact Info: Phone: (808) 836-5760

**PLUMBING CONTRACTOR**
LEIS DORVIN CO INC
Contact Info: Lic. No.: CT4747

**TYPE OF WORK**
- Electrical Work
- Fire Sprinkler
- Other superstructure

**RIGHT OF WAY WORK**
- Driveway Types:
  - New:
  - Existing:
  - Private:
- Curbing Types:
  - Linear Ft. of Curbing:
- Linear Ft. of Driveway:

**SEWAGE**
- Sewage Disposal Type:
- Sewage Disposal Method:

**RETROFIT**
- Showers to be replaced:
- Faucets to be Replaced:
- Urinals to be Replaced:
- Toilets to be Replaced:

**ZONING AND LUC DATA**
- TMK: 1-308: 008
- Development Plan Areas: Primary Urban Center
- Flood Zones: X - Beyond 50 Year Flood Plain
- Historic Site Register: None
- Lot Restriction: None
- Side Area: None
- SMA / Shoreline: Not in SMA
- Special Districts: Not in Special District
- State Land Use: Urban District
NOTES

APPROVALS REQUIRED FROM:  BWS  Engineering  Traffic  Wastewater

Other Agencies:
State - Hawaii Community Dev. Auth.
State-Health (A/C Ventilation)
State-Health (Sanitation)

Approved by: ___________________________ Date: ________________

Please visit DPP’s website at:  http://dppweb.honolulu.gov for permit information and status

NOTICE TO HOMEOWNERS:  This is to inform all homeowners that improvements to your home may require approval by your Homeowners Association or authorized representative prior to the commencement of construction.

Approval by the Department of Planning and Permitting does not certify compliance with the Covenants, Conditions and Restrictions or other design restrictions administered and enforced by your Homeowners Association.

Electrical and Plumbing work to be done by licensed persons and required under Chapter 648 E, Hawaii Revised Statutes.

This permit may be revoked if work is not started within 180 days of date of issuance or if work is suspended or abandoned for 120 days.

DATE CREATED: 11/15/2013

Staff Assignment:  Third Party Reviewer

APPLICATION NO.: A2013-11-1151

JobID: S0978660  Externaild: 050978338-002

Initial Print Date: Wednesday January 22, 2014 11:17 am

Page 2 of 3
APPLICATION FOR A SUPPLEMENT TO THE FOUNDATION PERMIT

Director
Department of Planning and Permitting
City and County of Honolulu
Honolulu, Hawaii 96813

Project Name: Symphony
Address: 850 Kapiolani Blvd., Honolulu, HI 96813
Tax Map Key No. 2-1-044-032
Foundation Building Permit No.: 756024 Date: 1-29-14

In accordance with Section 18-315(c) ROH 1990, as amended, request is hereby made for a supplement to the foundation permit for the subject project in order to enable us to proceed with the supplement to the foundation work at the earliest possible date.

As owner (or authorized agent) for the project, we hereby certify that:

1. The building for which the supplement is made will not be subdivided.

2. The superstructure will conform with all building regulations and requirements and requirements of the other governmental agencies concerned.

3. Plumbing and/or Electrical Work (select one):
   - No plumbing or electrical work will be performed until a building permit is obtained for the entire superstructure.
   - Plumbing and/or electrical work included under this supplement to the foundation permit are shown on plans submitted and limited only to work required in conjunction with the supplement to the foundation construction. We certify that the sizes for such plumbing and/or electrical lines are adequate and in compliance with the applicable codes.

4. The foundation work will not conflict with or otherwise affect any existing utilities.

We understand that the issuance of the supplement to the foundation permit does not obligate The City in any way, and that we are proceeding at our own risk without assurance that the permit for the entire building or structure will be granted.

We also understand that the issuance of the supplement to the foundation permit does not relieve us from complying with all other applicable codes, rules, regulations, and/or permit procedures including, but not limited to:

- Section 14-21 of the Revised Ordinances of The City and County of Honolulu, as amended (Ordinance 2412)
- Grading permits
- Trenching permits
- Construction over City easements
- Land use permits

Print Name of Owner/Authorized Agent: __________________________
Signature of Owner/Authorized Agent: __________________________
Address: __________________________ Telephone Number: __________________________

NOTE:
1. Those sets of the supplement to the foundation plans and specifications must be submitted with application.
2. Where piles are used and the design load per pile exceeds 40 tons, a static load test shall be made and the report shall be submitted to the Building Division.

*Signature*

*Address*

*Telephone Number*
March 12, 2015

Dan Nishikawa
OliverMcMillan Pacific Rim
1003 Bishop Street, #2288
Honolulu, HI

Re: Clarification on Form Based Rules, Kaka’ako, Mauka side, Honolulu, HI

Dear Dan:

Torti Gallas and Partners was retained to provide form based code consulting for the HCDA new Mauka Rules. It has come to my attention, that there might be confusion as to what was intended in the code regarding glazing and this note aims to provide clarification.

As part of that process of developing the code, Torti Gallas provided HCDA staff with general information on glazing. As part of that work, we suggested a standard requiring glazing to have a minimum Visible Light Transmission (VLT) of 50% or greater in order increase the visibility "in and out" of buildings. VLT requirements are typically applied to ground floor conditions, not necessarily for upper floor tower glass. We were not asked to evaluate the VLT rule based on (1) energy calculations using Hawaii sun conditions to achieve LEED and energy goals, or (2) the number of glass products that are commercially available.

On a related manner, we should clarify that that opaque glass and window grilles are reasonable items to be part of window wall systems. Their prohibition was meant to apply to the ground floor, only, where storefronts are required.

I trust this explanation provides clarity to your deliberations. If necessary, Torti Gallas is available to assist HCDA with amending the rules based on reasonable and appropriate Hawaii considerations.

Sincerely,

Neal I. Payton, FAIA, LEED-AP, Principal
Torti Gallas and Partners

EXHIBIT "6"