

**URBAN DESIGN REVIEW BOARD
REGULAR MEETING
AUGUST 7, 2012**

APPROVED 09-04-2012

A. CALL TO ORDER

The regular meeting of the Urban Design Review Board (Board) was called to order by Ms. Linda Berry, Vice-Chair, at approximately 10:01 a.m., Tuesday, August 7, 2012, in the Planning Department Conference Room, First Floor, Kalana Pakui Building, 250 South High Street, Wailuku, Island of Maui.

A quorum of the Board was present (see Record of Attendance.)

B. ADMINISTRATIVE APPROVAL OF THE MAY 1, 2012 AND JUNE 5, 2012 MEETING MINUTES

Ms. Linda Berry: . . . We'll call this meeting to order. This is the August 7th meeting of the Urban Design Review Board. We do have two months worth of these minutes to approve. Does anyone have any comments on the May or June meeting minutes? Okay, then those are administratively approved.

The May 1, 2012 and the June 5, 2012 Urban Design Review Board meeting minutes we administratively approved.

First order of business today is Mr. Clyde Sakamoto, Chancellor, University of Maui, Maui College, requesting a Special Management Area Use Permit for the proposed UHMC photo voltaic system project consisting of a photo voltaic system placed on new carport structures located in the University of Hawaii, Maui College parking lot at TMK: 3-8-7-40, Kahului, Island of Maui. Danny Dias will be presenting.

C. COMMUNICATIONS

1. **MR. CLYDE SAKAMOTO, Chancellor, UNIVERSITY OF MAUI - MAUI COLLEGE (UHMC) requesting a Special Management Area Use Permit for the proposed UHMC Photovoltaic System Project consisting of a photovoltaic system placed on new carport structures located in the University of Hawaii Maui College parking lot at TMK:3-8-007: 040 (por.), Kahului, Island of Maui. (SM1 2012/0002) (Danny Dias)**

The Board may act to make recommendations on the various project design aspects within their purview.

Mr. Danny Dias: Good morning Vice-Chair –

Mr. Andrew Carson: Excuse me Madame Chair, before we begin, I'd like to recuse myself from

comment or vote on this issue. I presently employed by the college.

Ms. Berry: Thank you Andrew.

Mr. Dias: Good morning Vice-Chair Berry, members of the Urban Design Review Board. The project before you is very simple, and yet it's interesting and it makes an awful lot of sense. The reason it's before you today is that it is located in the Special Management Area. What the UH Maui College is proposing in their rear parking lot – and this is the parking lot that's somewhat adjacent to the Maui Arts and Cultural Center (MACC) – is to install carport like structures that are approximately 12 to nine feet in height, and place photo voltaic panels on top, on top of the structures. UHMC estimates that this project will provide about 18% of the daily electrical needs for the campus which is fairly substantial.

This project uses the existing footprint of the campus so it's very efficient from a land use perspective. With respect to landscaping, we're working with the college and if you look at section-five in the handout that you were given, you can see that UHMC is essentially keeping the same amount of trees that they're required within the parking lot, but they're redistributing those trees, mostly to the perimeter of the parking lot. And what that does is it helps screen the area, and obviously, it makes it a little more aesthetically pleasing. So, with that, I'd like to hand it over to Clyde Sakamoto. And also we have here, Mike Munekiyo who will do the bulk of the presentation for the applicant. Thank you.

Mr. Clyde Sakamoto: Good morning Vice-Chair Berry, members of the Board. And I want to thank Planning Department staff member, Danny Dias, for the overview. I wanted to just spend a few minutes with you to give you an idea of what the connection is behind this particular project and our overall academic goals which are creating the kind of learning environment that demonstrates the kind of sustainability that we've been arguing for, advocating for, some years now. This is a project that creates and enhances a learning environment that really explores what it is our community, our County, State, may be facing with regard to energy use and its application in a way that enlists our sustainable construction technology program which Andrew is a part of. Which also connects with our sustainable management program, our Bachelors degree program. And connects with our campus . . . (inaudible) . . . as an energy efficient, energy effective, kind of institution that demonstrates public responsibility in so far as how it is that we approach our management, our energy management challenges.

Mike Munekiyo, our consultant, will introduce all of our partners involved, but I wanted to take just a few minutes to talk about our relationship with Johnson Controls, and how it is that we are implementing this purchase of power agreement that will establish this capability on our campus and allow our students to experience what it is that we can do as a campus to manage our energy, kinds of costs and behaviors. And so what this is is a reflection of about almost 16 years of history. We started in 1996, actually, looking at energy management and photo voltaic kinds of solutions. This demonstrates a third of our parking lot, the back parking lot kind of use in terms of the first iteration of what we intend to be a series of iterative kinds of additions to photo voltaic panel contributions. We anticipate that every three or four years, the technology is going to continue to improve to become more efficient so that's why we're only covering a

third. It's 611 KW, KW that will be generated. And what we're hoping to do is have that mitigate some of the expansion of energy consumption. You see our new science building coming up. That will require more energy to support that we have currently available on the campus except for the kinds of \$2.1 million resources that we had to expend this year to support that. So this project will help maintain the kinds of resources that we have at levels that we can manage. We're hopeful, going forward, to complete this project by the end of the year, which if we do, will save us about \$30,000 this year. But going forward, it will save us a considerable amount every year for 20 years of the life of the project. And that's why we're before you to help expedite this project and hopefully complete it by the end of this year which would allow us to experience more savings and most cost effectiveness in behalf of student learning experience and in behalf of applying our limited resources to student learning rather than simply power consumption. And so we are grateful for the kind of support that we received from the board in the past, and would be grateful for your support and approval of this very important project from an educational standpoint going forward. So with that, Mike Munekiyo is here to deliver some of the details of the proposal. I do have a time challenge. You may see me leaving about 11 o'clock if it goes that far. But I'd be pleased to answer any questions that you have between that time. We've got an international conference call that I have to be at. But thank you all, again, for the kind of support we've gotten in the past.

Mr. Michael Munekiyo: Thanks Clyde. And just to continue on what Chancellor Sakamoto has been speaking about. First of all my name is Mike Munekiyo. We've been assisting the college in processing the Special Management Area Permit application for this project. And as Clyde mentioned, we do have a number of resource personnel available to answer any questions that the board may have this morning. In addition to Chancellor Sakamoto, we have David Tamanaha, Vice-Chancellor at the College, Robert Burton is the College's Facility Manager, Stuart Zinner is the Energy Management Project Director, and Clyde mentioned the partnership, the College's partnership with Johnson Controls Inc, or JCI, they are the PV system design coordinator. And we have today from JCI Ron Young who is the Project Manager, and Dave Garner who is with JCI Solar. We also have our landscape architect, Mike Miyabara, from Miyabara Associates if there are any questions with respect to the tree planting plan that Danny mentioned earlier.

Just a real brief overview. The project involves the installation of the carport structures in the main parking lot, off of Wahine Pio Avenue, together with flushed mounted PV panels. And we'll see those in a few minutes. The carport structures and PV systems will occupy four rows of parking and these are double loaded parking. In other words, head to head parking. And you'll see how that's configured in a minute. The power generated by the PV system will be connected at the existing central chiller building where existing electrical distribution infrastructure is located and then off to the college grid, and we'll show you that location as well.

Just a regional overview in terms of project location. Parcel 40 as was mentioned by the Chair is one of the three major parcels at the Kahului campus. Orientation purposes, this is Kaahumanu Avenue, Kahului Beach Road here, and Wahine Pio Avenue located here. The Maui Arts and Cultural Center is right across the street in this location so the main parking lot is located in this corner here, and so we've indicated by this dot and we'll get into a little more

closer lot at what the campus looks like. This is the campus map. And again for orientation purposes, Kaahumanu Avenue at the bottom of the page, Wahine Pio Avenue at the top, and MACC is up here. For those who are familiar with this area know that the Maui Swap Meet is located in this location. There's an open grass area where the Maui Swap Meet is located, and Kahului Beach Road beyond.

So what this shows in the dashed area is the location of the proposed PV system. As I mentioned, it occupies four rows of parking – one, two, three, four – and you see that a little bit clearer in the next slide. And those, we'll get into the detail design in a minute. I wanted to show you this slide because in addition to the four rows of PV panels and carport structures, I wanted to point this chiller building that I mentioned earlier. This is the central chiller building. Power will be connected via underground cable through the chiller building and then for distribution through the college grid.

There are a couple of alternatives which the college is considering in terms of construction material type. We did want to present both today for comment before the UDRB. The study or the decision to go with one or the other – and I'll go through both – will be based on further analysis with respect to cost and maintenance consideration. So that decision will be forthcoming in a month or two. But given the need to expedite the project we felt it best to provide the board with both alternatives and have, receive comments on both. This alternative is the galvanized steel alternative, and we have, of course, a reinforce concrete footing. The carport structure itself will be supported on these beam columns, and again galvanized roofing material, on top of which, the photo voltaic modules will be placed. These are on an inclined slope. Nine foot on one side, nine foot in height on one side, 11 and three-quarters on the other side for this construction material alternative. And again, the incline nature of the design is to capture the maximum solar radiation possible for system efficiency.

Now in addition to the galvanized steel alternative, the college is also considering an alternate. And that alternate is a precast concrete structure support alternative. And whereas the previous alternative showed a galvanized steel concept, this alternative would be of precast concrete construction upon which the PV panels would be mounted. Designed similarly in terms of height. Nine feet here. A little less on this side, 11 foot, an inch. But again, same type of design concept in terms of how the carport structures will actually be constructed.

Just a little bit in terms of some of the key elements and Clyde mentioned this earlier, but the system is designed to generate about 611 kilowatts of electricity. And this will meet about 18% of the college's daily electricity needs. I want to just go through a few photos. I know most of you are familiar with the college's parking lot here, but some things to keep in mind, this a view from the Wahine Pio Avenue Driveway, looking to the parking. And these are the rows that would be used for the PV system. There are trees that would be displaced as a result of the installation, and there will be 48 trees that will be need to be relocated. And these trees that are displaced will be relocated to the perimeter of the parking lot and along Wahine Pio Avenue, and I'll show you a tree planting concept in a minute. In addition, the light standards, these poles, would need to be come down. And under each of the carport structures there will be replacement security and safety lighting so it's not to compromise night time movement in the

parking lot.

This is a view from the Pa'ina Building, looking north, actually northwest. And you can see the Maui Arts and Cultural Center in the background. Same thing here from the Ka'a'ike Building, another photo of the project area. I wanted to get this photo of the central chiller building just to give the board an idea of the relative proximity of the chiller building to the parking lot. It's right off the parking lot and this is where the power will be connected to.

Now we did speak about the tree planting relocation. This graphic is represent a campus wide tree planting plan. But what we focused on is the area within the heavy dashed area and that is where we are speaking about the PV location. Again the blue rows represent the carport PV system. And as I mentioned earlier, 48 trees would be relocated, and they would be relocated around the perimeter of the parking lot. Again here's the swap meet location. But what I wanted to emphasize is that this plan is part of a larger landscaping scheme to enhance the landscaping qualities of the campus. And along Wahine Pio, in particular, there is really an enhanced landscaping scheme which I'd like to go over. And again, part of the trees that will be relocated will be along Wahine Pio as well as along some of the other perimeter areas.

But this is what our plan will look like. This is the Wahine Pio looking to the beach, to Kahului Beach Road, and a section –. If we were to start at the right, this would be where the PV panels will be located. Moving to the left, some trees within the parking lot will be retained, and then this would be the row of relocated trees from the parking lot. It will be supplemented by shorter accent trees and ground cover. So what the intent here is to provide a fairly nice buffering area, a visual treatment, along Wahine Pio Avenue.

This is what Wahine Pio Avenue looks like today and what the landscaping treatment once the project is implemented, it's gonna look something like this. Again, the relocated trees in the lighter green, the shorter accent trees and the landscaping shrubbery as well. Now if one were to drive along Wahine Pio, you'd be able to see through the trees and see some of the carport structures. But in general, what we tend to do is allow the driver to focus along the road and really take advantage of the buffering that's going to be provided along the roadway. And that's the extent of our presentation. As I said we do have a number of resources available to answer any questions. So at this time Madame Chair, we'd be happy to answer any questions the board may have.

Ms. Berry: Thank you. We'll next do public testimony. I believe we have at least one person here to testify. Warren?

Mr. Warren Shibuya: Good morning Vice-Chair Berry, members of the Urban Design Review Board. And also good morning to Chancellor Sakamoto and his staff, as well as all the supporters of this project in the audience. I'm Warren Shibuya. I speak as a Maui resident and senior community volunteer. I do not represent the Maui County Energy Alliance, the General Plan Advisory Committee, nor the Maui Planning Commission – all I served and are serving on. I encourage Maui residents, businesses, and governmental agencies increasing energy sustaining by implementing energy conserving and producing renewable power, decreasing our

dependency on fossil based fuels while we increase the qualities of our lives, neighborhoods and our Maui ohana.

I support this excellent project, a product of University collaboration and leadership. This is an outstanding initiative of leading by example. This project transforms academic concepts and thoughts in to safely resourcing the abundant free radiant energy, transforming into useable and quality electricity which in turns saves utility expenses. Campus utility savings bolsters quality services and developing student skills and initiatives, thereby transforming and improving lives in our community and state. This PV system reduces Maui campus energy burden through a PV generated capacity delivering up to 611,000 AC watts per hour potentially redirecting monies toward increasing quality staffing and program investments. Summarizing I say this PV project leads by example, exciting qualities into the UHMC, their students and community it serves, rationalizing from a long range planning view point. You're approving this project sets the performance bar, how limited and finite Maui land ought to be used, performing multiple value added functions such as resourcefully uses renewable energy to sustain ourselves in institutions, transforms sun heated parked cars to PV shaded cars, reduces electricity costs and increases potential for educational services. This PV investment gives at least 20 years of great bang for taxpayer's bucks. This PV project has potential of doing technology spin off, powering hydrogen generators and refueling cars with non destructing fuel and a clean alternative power system. Today some of Hawaii's military buses, trucks and cars are powered by PV generated hydrogen. Please review design project and approve the proposed photo voltaic project for improving the University of Hawaii Maui Campus operations, and delivering quality educating services, thereby, increasing the qualities of students and Maui's employees. Mahalo.

Ms. Berry: Thank you Warren. Is there any other public testimony? Okay, if not, then we'll proceed with our question period. This – we'll reserve our comments for later, but this is an opportunity for the board to ask questions. Shall we start with Mike?

Mr. Michael Silva: I have a couple of questions. First, it's not shown on the plans, but I was just curious if there's gonna be any kind of like clearance bar you see at drive-thru, like fast food, or parking garages to worry about, you know, cars hitting the structure?

Mr. Munekiyo: I'll ask Ron Young from JCI to answer that question.

Mr. Ron Young: I'm Ron Young with Johnson Controls. Yeah, we can put up a bar. That's not a big issue.

Mr. Silva: I guess my concern was more of the public seeing from the driveway, if there was one what it would like. I'm not saying that I'm recommending one, but what it would look like if there is one.

Mr. Young: Actually, if you look at the drawings, the precast columns are probably going to be longitudinal to a parking spot, so actually the clearance is not nine foot, it's almost 11 foot clearance. So the necessity of having a bar is probably not an issue.

Mr. Silva: Okay. Second question is the –. Mike, if you can go back to that last slide, the rendering for the – actually the landscape architect. The –. I was just curious on seeing those photos of the existing parking lot and knowing those trees are going to get relocated. Actually is there one more from the street side or is that –? That one. Do you know how long it's going to take for those trees to grow in that big? As I'd imagine those existing tree have probably been there 10, 15 years. I don't know. Because that looks nice. I like that.

Mr. Mike Miyabara: Yeah, that's what it's gonna look like some time in the future, of course. At minimum, they're going to put in, at a minimum of, you know, 25 gallon, eight feet tall probably, about that size. Six to eight foot spread. So it's gonna take, I would guess, you know, at least five to 10 years to get to this stage.

Mr. Silva: Thank you. That's all the questions I have.

Ms. Berry: Thank you Mike. Robert?

Mr. Robert Bowlus: I have no questions.

Ms. Berry: Jane?

Ms. Jane Marshall: How are you going to –. I'm just –. A short summary of how you're going to use students. I'm just curious.

Mr. Sakamoto: Thank you for the question.

Ms. Berry: State your name please.

Mr. Sakamoto: It's Clyde Sakamoto, Chancellor, Head Custodian of UH Maui College.

Ms. Berry: Thank you.

Mr. Sakamoto: The students have been involved already in the energy efficiency installation process through a number of different programs. They've shadowed Johnson Control installers. They have been part of sustainable construction technology classes, to some level our sustainable management classes. And what they've done is tracked the actual installation process of these different kinds of systems. They have been involved in the data acquisition. But we have some solar panels on our shop roofs now. They've been involved in the data collection process and are involved in some of the applied comparative research involved with solar PV performance among different kinds of panels. So we're part of the Hawaii Natural Energy Institute Project that will involve – and we already have the grant funded – to allow comparisons to occur among different climates around the State of Hawaii using similar kinds of panels. So students are involved in all of those kinds of processes, and will be further involved as we get into the maintenance and operation of the systems that we're going to be involved in. And with this one as well, they're going to be tracking that whole installation process.

Ms. Marshall: That's really terrific Clyde. That's great.

Mr. Sakamoto: Thank you.

Ms. Marshall: I'm not sure if you're the one to answer this, but I wondered if you can give us an executive summary on the pros and cons, how you're going back and forth between the two alternates for the support structure, the concrete versus galvanized.

Mr. Sakamoto: Yeah, I'm not the technical expert, but from an institutional standpoint, our primary concern is the longevity of the materials and their abilities to resist the kind of corrosion that comes at from the harbor and all of the salt air. So we've continually confronted that so the material selection is crucial, actually it's critical for us.

Ms. Marshall: And is the concrete really a significant increase in cost? Is that why you're going back and forth?

Mr. Sakamoto: We're understanding that the costs are comparable, but I'll let my technical colleagues answer that. But we are seeking for a solution that allows the system to stand a 20-year life cycle of the system itself. That's our primary criteria.

Mr. Young: Ron Young, Project Manager for Johnson Controls. The original design showed the structural steel, galvanized, which does work in this application, but there's a long term maintenance cost associated with that. So I was tasked by the College to come up with some alternatives. I came up with composite, like fiber glass which was comparable. But I discounted it because of the UV protection. The coating had to be put on it. It made it \$150,000 to \$200,000 more expensive. Plus with your wind loads, it was going to be a bigger structure. So we went to the precast. And what I'm doing right now, the reason we haven't made the decision quite yet is I owe the College a Life Cycle Cost Analysis, concrete versus the galvanized steel, before we can make that final decision. But we just wanted to approach you with both alternatives to show you which way we're going, and once we get that decision.

Ms. Marshall: I just was curious about what your thinking was. And my final question is that there's a lot of recycled glass used in the planting wells in the parking lot. I wondered is that going to continue or are you going to go to another solution? What do you think?

Mr. David Tamanaha: Good morning board, Vice-Chair. My name is David Tamanaha, Vice-Chancellor at UH Maui College, and thank you for the question. In terms of the grass, I mean, the glass recycled materials in the planter's stalls, the College is intending to maintain that in the parking stalls.

Ms. Marshall: In the new scenario. Okay.

Mr. Tamanaha: Part of our overall sustainability, recycling efforts that we have on campus.

Ms. Marshall: Okay. Thank you.

Ms. Berry: Thank you Jane. Morgan?

Mr. J. Morgan Gerdel: Okay, I have a few questions. Looking at the concrete option, I was wondering, is the spacing the same as the steel structure, or is it a different type of spacing?

Mr. Young: It's actually the same spacing. 25 foot base. I'd look at doing 35 foot base, but the cost, there was two additional concrete beams that had to go in for the wind load so the cost went up considerably. So we just went back to the 25 foot base basically.

Mr. Gerdel: And then also looking at the existing photos, I noticed there's the light poles for the parking lot. Is there going to be additional lighting installed under the structure?

Mr. Young: Yes. Where the lighting poles are removed, we'll be putting LED lights that will be tied on to that same circuit.

Mr. Gerdel: And then I was just wondering about a public education component. Do you have some signage or other way to demonstrate the power it's generating?

Mr. Young: Yes. In fact, we've installed five kiosks, well, actually seven kiosks on campus. And I believe there's gonna be a web link so anybody can get on and look at what the consumption is. But once the PV system is up and running that will be tied to the kiosks so it will show everybody what kind of power it's generating.

Mr. Gerdel: Okay, thank you. That's all I have.

Ms. Berry: Thank you Morgan. I've got a couple of questions too. Is there going to be a finish on the galvanized steel or will that be left natural?

Mr. Young: That would be left natural.

Ms. Berry: Okay, thank you. And my second question, what happens when it rains? Are the panels close enough together that the rain will not come down through and hit you on the head as you're getting into your car?

Mr. Young: Yeah, there's going to be a gap because there's a bracket similar to this that holds the panel in. So there has to be a gap between them.

Ms. Berry: Isn't that going to make it tough on people trying to get into their cars?

Mr. Young: They have that problem right now.

Ms. Berry: That's true. Yeah, it will be more concentrated, though, with the panels collecting it and sending it down through a narrow slot.

Mr. Young: Well, no, because the panels slope to one side. So it will shed off on one side of

the parking. So you want to park on the up hill side first.

Ms. Berry: Okay, thank you. Are there any other questions? Okay, let's go to the comment section then. Morgan, would you like to start with the comments?

Mr. Gerdel: Just one comment, I guess, visually, I like the look of the steel structure. I think it's a little lighter and less massive, so I think it could be visually less intrusive than the concrete if I understand the maintenance consideration to have to be with that.

Ms. Berry: Jane?

Ms. Marshall: Bravo.

Mr. Berry: Robert?

Mr. Bowlus: Yeah, I like the landscape buffer, but I like the concept tremendously, so thank you very much.

Ms. Berry: Mike?

Mr. Silva: Yeah, I do truly appreciate the school leading and teaching by example. That is great. Again, my only concern is really the trees. Seeing those autograph trees in there that are pretty small. That's one of my pet peeves. I know that they don't grow big, so I would like to see some other types of trees so it grows in better. Other than that, it's a great project. Thank you.

Ms. Berry: Thank you. I second everything everyone else said. Shall we –. Danny, do you have this down what you need to carry forward or do we need to make a motion?

Mr. Dias: All of the comments are just comments right? We don't have any conditions do we? Okay. Okay.

Ms. Berry: Michael had a condition and that was that he would like to see them look at some different trees.

Mr. Dias: Okay, we can add that in.

Ms. Berry: Okay. Should we –? Okay, if there's no objections, those will be forwarded to the Planning Commission by unanimous consent, or we can have a motion.

Mr. Silva: No objections.

Ms. Berry: Okay, we'll forward that by unanimous consent then. Thank you.

Mr. Munekiyo: Thank you very much board members.

Ms. Berry: Thank you for your nice presentation. Okay, next on the agenda is the Director's Report, and we'll give them a moment to clear out. I don't think that we need to take a break. I think we can do this and wrap things up probably. There's not much more on the agenda.

After discussion and without any objections, the Urban Design Review Board forward one comment to the Maui Planning Commission.

D. DIRECTOR'S REPORT

- 1. Status of Board Vacancy**
- 2. Agenda Items for the September 4, 2012 meeting**

Mr. Clayton Yoshida: Good morning Madame Chair. Regarding the vacancy that we have for an alternate member, we have no change in status. We are looking for an alternate member with a landscape architect background.

With respect to the next meeting on September 4th, we don't have a solid agenda item at this point in time. But we would note that for the first six months of the year we received no SMA Major SMA Use Permit applications. In the past six weeks we received three SMA Use Permit application. One of them is this one, and another one is for shoreline protection in West Maui. But we do seem to be getting a little busier in terms of SMA Use Permits. That's all we have to report.

E. NEXT MEETING DATE: SEPTEMBER 4, 2012

F. ADJOURNMENT

Ms. Berry: Okay. Thank you Clayton. Okay, so next meeting date, September 4th. Meeting is adjourned.

There being no further business brought forward to the Board, the UDRB meeting was adjourned at approximately 10:36 p.m.

Respectfully submitted by,

LEILANI A. RAMORAN-QUEMADO
Secretary to Boards and Commissions II

RECORD OF ATTENDANCE:

PRESENT:

Linda Berry, Vice-Chair
Robert Bowlus
Andrew Carson
J. Morgan Gerdel
Jane Marshall
Michael Silva

EXCUSED:

Darryl Canady
Bryan Maxwell
Linda Kay Okamoto, Chair

OTHERS:

Clayton Yoshida, Planning Program Administrator, Department of Planning
Danny Dias, Staff Planner
Michael Hopper, Deputy Corporation Counsel