

**City of Coral Gables City Commission Meeting**  
**Agenda Item G-1**  
**January 25, 2022**  
**City Commission Chambers**  
**405 Biltmore Way, Coral Gables, FL**

**City Commission**

**Mayor Vince Lago**

**Vice Mayor Michael Mena**

**Commissioner Rhonda Anderson**

**Commissioner Jorge Fors**

**Commissioner Kirk Menendez**

**City Staff**

**City Manager, Peter Iglesias**

**City Attorney, Miriam Ramos**

**City Clerk, Billy Urquia**

**Development Services Director, Suramy Cabrera**

**Planning and Zoning Director, Ramon Trias**

**Public Speaker(s)**

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Agenda Item G-1 [Start: 1:04 p.m.]

Discussion regarding metal roofs in Coral Gables. (Sponsored by Mayor Lago)

Mayor Lago: Moving back onto G-1. This is a simple one. This is one of two binders that I have. So, this is a binder that deals with metal roofs, deals with the discussion of metal roofs. I have notes that go back to 2013, 2014, excuse me, 2014 and 2015, when we had this discussion on the agenda and we talked about different opportunities because residents kept calling and saying, why don't we have metal roofs. There is a misconception. We do have metal roofs allowed already in the city. It just has to be copper. You can put a copper metal roof, as long as its approved, on any piece of property currently, as long as it's approved by the BOA and approved obviously by the city reviewers. But I know that we've been having this discussion and today there is going to be no action, but we've been getting more and more calls about the possibility of where would it be appropriate to even consider this. And I would like for the record, as we did with Burger Bob's and as we did with the Coral Gables Country Club. Explain that this is not the first time that we discuss this. This was already allowed at one time in the city for a limited time. And I would like Ms. Cabrera to have a conversation with us in regard to when was this allowed? - what are we

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thinking about? - what are the opportunities? – what are the recommendations, if we are even going to consider this.

Development Services Director Cabrera: So actually, there was a presentation in March of 2018 that Ramon gave to the Commission at that time, and it was mainly brought on by Commissioner Anderson. I went back and read the minutes of that meeting and it seems that what was being looked at was to use a metal tile but that mimics a barrel style tile.

Commissioner Anderson: My first choice was the standing seam so I could put my solar panels on with less risk.

Mayor Lago: You brought that up when you were on the PNZ. You were on Sustainability Advisory Board and then we rolled out...

Commissioner Anderson: The display.

Mayor Lago: I had forgotten about that.

Commissioner Anderson: So since standing seam was not within the realm of possibilities, I looked up two providers, Girard and DECRA. DECRA sent me the rolling display which I rolled three blocks from my home to bring to here. It was interesting.

Mayor Lago: You're committed.

Vice Mayor Mena: I think we're talking about more than that today.

Commissioner Anderson: Just giving you a capsule of the history.

Development Services Director Cabrera: The city did allow it, I think it was for 90 days in a specific area of southeast area of the city, and after 90 days, I believe it was brought back to Commission in 2015, I'm not sure. We could go through the presentation.

Vice Mayor Mena: Is that just north of Sunset, the area you are talking about?

Planning and Zoning Director Trias: It was south of U.S.-1.

Vice Mayor Mena: Okay.

Mayor Lago: You want to go through the presentation really quickly.

Vice Mayor Mena: I know some houses in that area, that's why.

Development Services Director Cabrera: I was going to say, I know a few houses that have metal roofs, so people did take advantage of it.

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Planning and Zoning Director Trias: The annexed areas and some of them around Sunset also.

Vice Mayor Mena: This is not annex north of Sunset, south of U.S.-1, just west of LeJeune.

Development Services Director Cabrera: So, it is allowed in the annexed areas and as you said, the copper roofs are allowed, but the metal roof discussion last time at Commission was pretty much, sort of left like, we don't like it, at least we don't like the quality of what we're seeing right now. There should be further, and I believe that Commissioner Anderson at that time...had offered to give addresses of locations where the Commission could go see them and the whole thing.

Commissioner Anderson: I still have the pictures of examples and there are some down south. Standing from the curb you couldn't tell the difference whether it was a real tile or that, and for some of our buildings unless you are going to be eating off the surface you are not going to be able to tell.

Mayor Lago: I think the big issue here, since that moment the Commissioner was on the Sustainability Advisory Board, not even the Planning and Zoning Board, and she brought it up, happy she brought it up, because I brought this up in 2015, all the information that we've gathered. Here's one example from 2015, when we brought it to the Commission, and I couldn't get the votes then. This is an easy interest for me, and I'll tell you why. Not only is it about the fact of solar panels and how you can attach the solar panels that you don't have to drill, like the Manager will tell you. When I installed solar panels on my house five years ago, he wasn't even the Manager, we talked about how to attach them on, and I had to drill 190 poles penetrations on my roof. I sometimes don't sleep wondering if my roof is leaking.

Vice Mayor Mena: By the way, your warranty...(inaudible).

Mayor Lago: Invalidated my warranty, but I did it because I believe in solar and I thought it was a good opportunity to be a leader on that front and take that step forward, and by the way, I've reaped the rewards of it, because I don't pay for electricity, its paid itself off; and my electric car is fed off my solar panels, just like Commissioner Anderson. But I'm always very nervous about how that's going to affect my roof, because the roof, again, it moves, as we all know. My real issue is talking about the replacement cost of roofs, and the fact that when you install a metal roof you don't have to replace a roof for 50 years potentially, and if you do have a leak on a metal roof, and its done properly, you can remove one panel. There is not that destruction, so it's a lot more sustainable and when you are done with that metal roof after 50 years, you can recycle that product and actually use it, do something with it; and it's a lot less wear and tear, it's a lot more environmentally friendly.

Development Services Cabrera: There were two basically major issues that were discussed previously, and one was an aesthetic issue.

Mayor Lago: That's what I was getting into. That's what I was getting into.

Development Services Cabrera: And the second one was the structural issue on the ballasting of the...

City Manager Iglesias: The issue, Mayor, the anchorage won't be affected by the metal roof because what happens is that most of the trusses are not designed to accept panels in certain areas, because they provide more loading than what the trusses were originally designed for. So, you have to spread out the load. Unless the house has been specifically designed for that, and that loading has been incorporated into your truss system, then you are working with the original design of the truss which means spreading the load out. So, if you did have a metal roof, you would still have to anchor, spread out that load and basically have the same anchorage that you have now. The only difference, unless those trusses were redesigned to take the additional loading. The other issue is the load itself, we discussed that. If you have a 3,000 square foot roof, and remember the roof is bigger than the house, because you have the overhangs, then the difference is at least 10 pounds, which means that the roof for a 3,000 square foot roof, if you go to metal, you'll be taking 30,000 pounds of ballast off your roof. For the older homes, frame construction, older truss designs, probably not a good idea.

Mayor Lago: That's my point. And I agree with the Manager on those points wholeheartedly. But I'm thinking about limiting it to the following: non-historic homes, obviously, number one, check; number two, brand new construction; number three, a person who is doing a significant renovation and say, I want to be able to remove, I want to reenforce my trusses, I want to redesign my truss system so that I can potentially lift my home, make it taller, taller ceilings, have a metal roof system, if I like. Maybe people who could potentially remove that ballast of 30,000 pounds, if using a 3,000 square foot home, as an example. Find a way to reenforce your trusses, the strapping, as required. I wouldn't do it blanket across the board that anybody could potentially install. They'd have to meet the requirements.

Development Services Cabrera: At that point, the only caveat is that people need to understand that its no longer just a reroofing permit, it's a building permit and they need to engage with an engineer that needs to be able to understand what the removal of all that weight of even of a clay tile that when it's wet during a hurricane, offers a lot of ballasting there.

Mayor Lago: And I would love for you to talk about this, both of you. In other communities in South Florida, they are not doing that. They are replacing tile and they are just pulling a permit for a metal roof, not taking into consideration or disregarding, maybe is a better word, the lack of ballast. So, when a hurricane comes, you don't have 30,000 pounds on top of your roof, so the uplift, and you can talk a little bit about the uplift scenario and how that affects the uplift.

Development Services Cabrera: But its doable technically, its just that it won't be a reroofing process, so it would be a longer process for permitting.

Commissioner Fors: Question. When you talk about somebody just pulling out their traditional roof, conventional roof, putting in aluminum without some of these other safeguards, loosing that ballast like some municipalities or some areas have allowed. When we say, or when you say, City

Manager, its not a great idea, are we talking about life-safety issues to people around that person, or is that not a good idea for that specific property owner?

City Manager Iglesias: The design procedures that we are looking at now is not only to preserve the existing structure, but we also limit missile damage, because as things come apart, then you've got missiles generated when you've got these high category hurricanes. So, its like picket fences. Picket fences in Homestead during Andrew, were like missiles come into the home one after another. So, the idea that the code has is not only sustaining your home, but also maintaining homes around you by minimizing that missile damage. So, if you have something that doesn't protect your interior, you don't have to have impact, but you still have to design it for hurricane loading, the idea is to keep it together.

Commissioner Fors: Right. I get that. I figured that was the answer and I wanted to clarify it, because as a general proposition, I have no problem with people assuming whatever risk they want to assume personally but knowing that it's a life-safety issue to people around them is kind of a different inquiry and that's when it does involve us. With that being said, I'll move it.

City Manager Iglesias: Let me just say that it depends on the age of the home, from the 30s, 40s and 20s usually had one anchor every three rafters; 50s construction and early 60s you had one anchor every two rafters; and then in the middle 60s it was a transition into trusses. Now the trusses back then were not designed for the current loads now. They were much under designed as what we have now, because we didn't have that science like we do now. So, the problem extends not only for the homes that were rafter roofs, also the early truss homes, like in the 60s and 70s and 80s.

Commissioner Fors: And if we are going to go in that direction, one last question, if we do go in that direction, how much of an undertaking is it for us here to actually draft those code provisions. Are there models that we can...?

City Manager Iglesias: Let me say that that is not a code provision. That's why other municipalities are doing it. They are simply saying, it's okay.

Mayor Lago: Yes.

City Manager Iglesias: What we try to do is when somebody would go to a copper roof and say, look, you have – this is what you are removing from your roof should you do it. So, I don't think it's a code issue that we can enforce, its something that we tell our residents because I think we have a Building Department that really looks at safety quite a bit. So, I think other municipalities are doing it, because there is no code provision right now that says you can not have any house go to a metal roof. There is no building code provision, let me just say it like that.

Planning and Zoning Director Trias: That's correct.

City Manager Iglesias: What helps us here is the zoning code that provides for that ballasting effect. So, it's not a building code issue. There is no building code requirement that says, you  
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cannot do that. Now, I've had a number of people call me and say, should I do it, should I have an engineer check it, because they've heard me say this and they are concerned, because if you take 30,000 pounds off your roof, and your roof was barely hanging on before, its not going to hang on anymore, and that's a fact, because as a hurricane comes by it tires to lift your roof off in many areas. And so, the more weight you can have on your roof without collapsing your roof; the more weight that you can have on your roof correctly that your roof can sustain, especially in today's environment, we have all kinds of roofing protocols that really have looked at the issue of roof failures after Andrew. As a matter of fact, metal roofs are one of the worst roofs before Andrew. They would roll up like a sardine can at the end. So, we have now, and I've installed hundreds of thousands of those in industrial buildings. What we have now is we have protocols that look at metal roofs, that look at tile roofs and our existing protocols are some of the best in the country, and really provide for the sustainability of the roofs that we are using now.

Development Services Cabrera: Ours in Miami-Dade County because they would have an NOA, and we will require that it has an NOA for any type of metal roof.

Commissioner Fors: So, what piece of legislation would be the product of what the Mayor is considering proposing?

Development Services Cabrera: The issue is that our zoning code right now does not allow metal roofs unless it's a copper roof per the zoning code – aesthetic. The zoning code is an aesthetic thing.

City Manager Iglesias: I just want to be clear, there is no code issue to doing that. You do it at your risk because there is no issue that can prevent it.

Mayor Lago: And if I may just add onto what Commissioner Fors is saying. I understand what you're trying to get at. I appreciate that, but my biggest concern was just articulated by the Manager. That's my biggest concern, just because the county or another city is doing it, you have a pre-existing – Let's use my house, for example, you have a pre-existing building, home, that was built in the 1950s, and now you are going to take all that load off, let's say in ten years I have to reroof my roof, I did it ten years ago. Roofs are averaging, what, 17, 18, 19, 20 years potentially. Now with the peel and stick method you can maybe get 23, 24, 25 years.

Commissioner Anderson: I got 24 out of my old roof without peel and stick.

Mayor Lago: Really. Maybe you had shade, the roof wasn't getting that hot.

Commissioner Anderson: A few oak trees.

Mayor Lago: But my point is that there is a lot of wear and tear, especially here in South Florida as the roof heats up, the 30 and the 90 paper. What happens is the tarp cracks and when it cracks is when you start having those leaks and that kind of situation. The peel and stick is supposed to give you a longer life. I don't think it's been proven that it does yet or not. They say it does. But what do you do if you take that roof off and you put now a metal roof on the project, on the home?

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My biggest concern is, if we are hit with a category 3, which we have before and survived perfectly fine. But if you are hit with a situation with a category 4, is that roof more subject to potentially significantly more uplift resulting in the homes, basically like you said, rolling up like a can of sardines. And that is why I brought this up many times, we tried to get the votes to see how we can push this forward. I can only see this happening in certain properties, not even areas, certain properties. Historic is out of the question, but it has to be new construction or someone who is willing to gut, remove the roof, remove the trusses, potentially even pour a light-weight concrete slab roof, which at the end of the day, you are seeing those more and more now throughout, because that's the ultimate measure in regard to protection. That's why I wanted to have this discussion. I don't want to take up the entire afternoon. I would like to bring this up, but I need more, I need staff to tell me to lay something out that would be approvals that they would feel comfortable with, because the last thing I want is an impending hurricane, we have 100 people that have taken advantage of this legislation and now installed solar roofs, excuse me, not solar roofs, metal roofs, and I won't be able to sleep for five days while a hurricane, we are still deciding whether a hurricane is coming or not.

Commissioner Anderson: I still have the drawings of my house and I had long conversations with Mr. Iglesias about how to do the calculations of replacement of the 30,000 pounds of weight with additional strapping, which I did do the additional strapping, for \$3,000 it was a bargain, when I was redoing the roof. But also, if I had been able to put the metal roof on, I would have dye-cut the block, bring it down to the foundation with the rebar and pour it in, because there were substantial trusses already on the 1950-sum-odd house. But being that the only option was copper, and I'm diametrically opposed to mining for copper to put copper on a roof that's a soft metal to begin with, I would have preferred a stronger one, stronger metal. I just went forward and put on the flat tile at this time, but I think we need to have this open discussion, because I had to sign a piece of paper that informed me that I did not need to do the additional tie-downs. But if you go to put a copper roof on back then when I was doing my roof, I know we've changed it since then, and I made that request, that people need to be informed. You can put these additional tie-downs, while you are reroofing just put the additional tie-downs and you will save on insurance.

City Manager Iglesias: And Commissioner the reason you had to sign that is because that was a code issue where the code requires tie-downs for new roofing, and then they decided to change the code and say, okay, if your costs are above a certain amount then you don't have to do that work, and that was what that was about. So, it was not a Coral Gables issue, it was a Florida Building Code issue that the state decided to make something happen, and maybe it's too expensive, maybe we'll retract that somewhat.

Commissioner Anderson: But I appreciated the conversations with you, because I learned so much that I went ahead and priced it, said this is a bargain, and did it, and I think the rest of the residents need to, at least look at the cost of doing it and the savings they will get on their insurance are immediate.

Vice Mayor Mena: Seems to me like from a zoning perspective, right...

Development Services Cabrera: From a technical perspective, the copper roof is similar to a metal roof.

Vice Mayor Mena: No, but I'm saying, as far as this metal roof concept, it seems to me like from a zoning perspective and an aesthetic perspective, there is support for it. So, then it's a question of the engineering and the structural and making sure that its application is done in a way that does not compromise safety in any way, even if in certain instances, it would make it impractical or even extremely onerous to do, so be it. That's the way it is, because in your house it would be too complicated. But I agree with the Mayor's point, and I had some concerns about doing it based on sort of geographic area. To me, its more about the age of the home, the appropriateness of the home.

Mayor Lago: Exactly.

Vice Mayor Mena: I agree. Obviously, historic is a non-starter. Like a new house being built from the ground up, I don't have an issue with it.

Development Services Cabrera: We have a Board of Architects, and I don't see, if the Commission wants to move in allowing the metal roofs, its just requiring that metal roofs be approved for, because we can approve reroofs without taking it to the Board of Architects, but if you want to put a metal roof on a house then you have to go to the Board of Architects.

City Manager Iglesias: And Vice Mayor, we cannot have our own building code, you are not allowed to do that. So, from a technical perspective, we are kind of, we really are shackled on that. However, we use the zoning code saying you must have this tile, so this criterion. But from a building code perspective, we can't have our own building code, its very clear. The building code is part of the State Statute, and we cannot implement our own building code. So, when somebody wants to go to a metal roof, what we would do is simply as we discussed with Commissioner Anderson, give them the pluses and negatives and they will have to make up their mind. What we are really relying on is the zoning code to provide that we don't have shingle roofs and we don't have metal roofs. We've got tile roofs that provide that kind of ballast.

Planning and Zoning Director Trias: The zoning code has had regulations for roof materials since 1930, so that has been one of the components. And I believe that the decision to allow copper was based on aesthetics. I mean from a material point of view, really...

City Manager Iglesias: Based on aesthetics.

Development Services Director Cabrera: It has the same issue as a metal roof.

Mayor Lago: We've had this conversation.

Planning and Zoning Director Trias: Yes, we've had it multiple times.

Mayor Lago: You have shown me.  
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Development Services Director Cabrera: I've read all the minutes.

Mayor Lago: All through...we've had the discussions in the 1930s where it was installed here in the 1920s and you have that down to a science. So, what I would like to do is, I don't want to carry, we have a lot of things on the agenda. I would like for staff to come back to me, come back to the Commission with a path moving forward which clearly states and shows examples of what the Manager just said right now about the zoning code and the building code. That was probably one of the most important things we heard today, because the cover that we have here is based on our zoning code. So that's something that's very key. I don't want to approve something and then have people say, I'll just take the liability like Commissioner Fors said, but he was very clear, he made a very good point. Yes, you take the liability, but your roof may fly off in a category 3, when it normally wouldn't have gone in a category 3, and it goes into the Vice Mayor's house next door. That's the truth.

Planning and Zoning Director Trias: Mayor the regulations in the zoning code is mostly about aesthetics in addition to that discussion.

Vice Mayor Mena: Can you have items in the zoning code that limit X material based on like the age of the home?

Development Services Director Cabrera: So, the way, I think that's what the Manager was trying to explain. The way we sort of work it now is that we base it on aesthetics, but that aesthetics has a technical component to it that is actually favorable technically also. So if you remove the aesthetic portion in the zoning code, we may lose our only way of getting the technical part and that's something that I think that now that I know what the Commission wants is that I can sit with the City Manager and look at the code, at our building code, look at our existing building code and look at the zoning code and see what's the best way.

Mayor Lago: What I'll do is that we'll bring it back in March, and I don't want to rush this. This is something that, again, not only is it aesthetics, it's a public safety issue. I want to be very careful.

City Manager Iglesias: Yes Mayor, because really, we are piggybacking off of the zoning code to provide this aesthetic which provides this benefit and that's how we are technically doing it, because from the building code perspective, we can't have our own building code. We'll be happy to bring it back in March and we'll do a formal presentation on it, if you would like.