

1 GENERAL GROWTH PROPERTIES, INC.

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COLUMBIA, MARYLAND

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COMMUNITY FORUM

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GUEST SPEAKER: KEITH BOWERS

8

BIOHABITATS

9

VISION IN FOCUS

10

SUSTAINABILITY ENVIRONMENT

11

MAY 6, 2008

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The above-mentioned Community Forum was held

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on Tuesday, May 6, 2008, commencing at 7:00 p.m., at

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General Growth Properties, Inc., 10275 Little Patuxent

16

Parkway, Columbia, Maryland 21044, before Robert A.

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Shocket, a Notary Public.

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MODERATOR: GREG HAMM

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REPORTED BY: Robert A. Shocket



1 continue, the vision in focus meetings, and questions  
2 that are raised. I was just meeting with a concerned  
3 citizen about another topic right before this and some  
4 new questions have come up.

5                   So, we want to continue to keep the  
6 community apprised of the questions that are being  
7 contemplated and considered. There will be a meeting  
8 tomorrow night that will deal with transit and  
9 transportation, which are very intricately linked to  
10 sustainability and the environment. And on Thursday  
11 evening we will address culture. There will be another  
12 meeting scheduled early June that will come back and  
13 address some of the specific issues relating to  
14 planning and architecture and the specifics of the  
15 zoning application that we will be submitting in mid to  
16 late June though some of my team members kick me of  
17 time I say that but it will be submitted mid to late  
18 June.

19                   And, in between our meeting next Thursday  
20 night and our meeting in early June with the community,  
21 we will be meeting with each of the villages and those

1 will be taking place next week and the week after.  
2 Those times and dates are spelled out in the Web site  
3 as well and we will also be meeting next week with the  
4 Transportation Alliance -- Advocates, thank you, my  
5 apologies -- Transportation Advocates and I believe  
6 there's another presentation at the Chamber, so, we  
7 want to make sure that we have been as accessible as  
8 possible and I assure you that questions and comments  
9 and concerns are taken very seriously and reflected in  
10 the plans and the thoughts that take shape here.

11                   So, without further delay on my part, many  
12 of you have gotten to know Keith Bowers over the last  
13 few months. Some of you may have known him for a very  
14 long time as a resident of Columbia. He is the founder  
15 and president of Biohabitats, an ecological restoration  
16 design and planning and assessment firm and their  
17 mission is to restore the earth and inspire ecological  
18 stewardship. He's got over 24 years of experience in  
19 innovative ecological restoration and has been  
20 instrumental in some very significant projects.

21                   He is Chair of the Society for Ecological

1 Restoration International and a member of the State of  
2 Maryland Wetlands Restoration Steering Committee. I  
3 think he's a very valuable person to have as a member  
4 of your community and an extremely valuable person to  
5 have as a member of our team. It's been a delight to  
6 work with Keith and his staff and his team. And, I  
7 would like to turn it over to Keith Bowers of  
8 Biohabitats.

9 (Applause)

10 MR. BOWERS: Thank you, Greg. First of  
11 all, thank you all for showing up tonight on this, what  
12 turned out to be a very beautiful evening outside so I  
13 appreciate you all coming indoors with the lights down  
14 low looking at these slides and listening to me. I was  
15 a resident of Columbia. I resided in Columbia for  
16 about three or four years, about 20 years ago, 15 to 20  
17 years ago so I am no longer are a resident of Columbia  
18 so I just wanted to make sure that that was clear.

19 What I'm going to do tonight is take you  
20 through the, as Greg said, sort of drill down based on  
21 the master plan that was revealed last week and talk

1 about some of the specific ecological and  
2 sustainability initiatives that we see happening as we  
3 move forward further with the master plan, with the  
4 phase one design. For those of you that were here the  
5 first session that I gave a talk on, which was sort of  
6 getting to know the planners, I talked about, a little  
7 bit about Biohabitats' experience and I talked a lot  
8 about what sustainability means.

9           And I believe that presentation is still up  
10 on the Web site, the GGP Web site. And then last week  
11 we unveiled the master plan and the phase one plan, and  
12 we briefly, I spent probably about three minutes going  
13 through very quickly the framework for the  
14 sustainability program. And I want to dive into that a  
15 little bit more deeply tonight.

16           So what we're going to do is I have about  
17 45 minutes to an hour of a presentation to give to you,  
18 and then we have a good hour after that to entertain  
19 any questions that you have or enter into any kind of  
20 dialog that you want about the environmental and  
21 sustainability aspects of the master plan and phase

1 one.

2                   And, as Greg mentioned, we're really  
3 interested in your feedback and your comments and your  
4 suggestions because as residents of Columbia and as  
5 users of the Columbia Town Center you know this area a  
6 lot better than we do and I'm sure all of you have some  
7 visions and some desires in terms of how you want to  
8 see the ecological components and sustainability  
9 components built into this master plan and phase one  
10 plan as we move forward.

11                   So, first of all, what I'm going to do is  
12 talk about, go back through an ecological overview that  
13 we prepared about a year ago, and again for those of  
14 you that were with us or with me the first presentation  
15 I gave about a month ago, I showed some of these slides  
16 then but I want to go back through for those of you  
17 that are new tonight, then talk about some watershed  
18 best management practices opportunities. We have  
19 looked in throughout the watersheds that drain through  
20 Columbia Town Center and have some found some what we  
21 consider best management practices or ways to improve

1 the ecology and water resources and we're going to  
2 review some of those with you tonight.

3           And then I'm going to go back to the  
4 sustainability program that we briefly went through  
5 last week and talk a little bit more in depth about  
6 that. And then what we've done is we have taken the  
7 phase one plan that was reviewed last week and we have  
8 done what we call sort of a green overlay based on some  
9 sustainability strategies that we're looking at and  
10 we're exploring right now of how feasible they would be  
11 to employ or incorporate into the phase one plan.

12           Now, what's really critical is the  
13 sustainability program is going to help inform that  
14 decision and so the sustainability program is running  
15 on a parallel track with the design of phase one in the  
16 master plan so over the next three to four months what  
17 we're going to be doing is marrying those two together.

18           And then lastly I want to talk about  
19 Symphony Woods because I know there are some issues  
20 with Symphony Woods in terms of what the master plan  
21 and the phase one plan showed last week and I want to

1 dive into that a little bit more so we can all become a  
2 little bit more educated and look at potential  
3 opportunities throughout Symphony Woods and potential  
4 impacts there as well.

5                   So, first of all, I'm going to go through  
6 the ecological overview that was prepared about a year  
7 ago just to kind of give a broad-based regional  
8 landscaped sense of this area. One of the first things  
9 that we went out and did in this ecological overview  
10 was to really look at the woodland areas that surround  
11 and encompass Columbia Town Center and we categorized  
12 them into approximately 22 different vegetation  
13 communities. And the reason we did that was that  
14 really helps us, that informs us in terms of the  
15 quality of those woodlands, how valuable they are from  
16 an ecological standpoint and what may be needed in  
17 terms of restoration and enhancement as we move  
18 forward.

19                   Next what we did is we looked at major  
20 forest habitat parcels, and again these are really  
21 important in terms of the being able to support certain

1 species and what we wanted to do is identify any major  
2 habitat parcels and determine whether those are  
3 important from a regional perspective as well as a  
4 Columbia Town Center perspective.

5                   And, what we basically found is that this  
6 sort of regional patch or corridor along Little  
7 Patuxent River here is extremely important and  
8 relatively an unfragmented corridor and we're losing a  
9 lot of these types of corridors in the State of  
10 Maryland and actually throughout North America right  
11 now, especially in our suburban and urban areas. And  
12 the more we can do to preserve those types of  
13 corridors, then the better off we are in terms of  
14 supporting and enhancing biodiversity.

15                   We also looked at this map and the pattern  
16 basically suggested that this corridor that runs up  
17 through here, and we're calling this the Symphony Woods  
18 stream that makes its way down the Little Patuxent,  
19 this corridor up here is extremely important, too. So,  
20 that sort of helps frame in terms of major ecological  
21 patterns through here what we do in Columbia Town

1 Center and looking at trying to do everything we can to  
2 minimize any fragmentation or impact to this corridor  
3 and this corridor as we move forward.

4                   We also looked at water resources. This is  
5 a slide of the floodplains that exist along the stream  
6 corridors and obviously they're very important as well.  
7 Not only are our streams important but our flood planes  
8 are extremely important, too. They're a major  
9 component of the stream system, the aquatic system and  
10 what we want to try to do is minimize any of the  
11 impacts to any of the floodplains through here as well.  
12 We looked at soils.

13                   We looked at soils for a bunch of different  
14 reasons, what kinds of plant communities these soils  
15 support. In this case we looked at how the soils  
16 actually infiltrate or drain water because if we're  
17 looking at managing stormwater, that water that runs  
18 off of impervious surfaces, the more we can infiltrate  
19 that back into the ground, the better off we are  
20 because we replenish the groundwater which then  
21 replenishes the streams and it prevents flooding and

1 downstream erosion.

2                   And, so, we wanted to identify where those  
3 soils are located on the site that have good  
4 infiltration capacity and that way when we begin to  
5 look at stormwater management opportunities throughout  
6 Columbia Town Center and beyond, we know what areas  
7 could then support stormwater best management practices  
8 that begin to infiltrate this stormwater.

9                   What we also did was we looked at, as I  
10 mentioned before, we looked at the quality of some of  
11 these forest stands or vegetation communities and on  
12 this scale the red is a low quality all the way up to  
13 the blue, which is a higher quality. And we used a  
14 whole bunch of Kevin different indices to help us  
15 determine the quality of the forest in terms of we  
16 looked at the structure, is there a canopy, a  
17 mid-canopy, a shrub layer or a ground cover layer and  
18 we looked at the age of the tree stands in there. We  
19 looked at the diversity of the trees and the  
20 vegetation.

21                   So, we used I think over 15 different

1 indices to determine the quality of the forest going  
2 through here. And basically what we see is that, you  
3 know, the quality of this forest through here  
4 relatively speaking is a lot higher than the quality of  
5 this patch of forest or this patch of forest. The  
6 quality of this patch and this patch is relatively high  
7 as well where these are intermediary. So that gives us  
8 a perspective in terms of the ecological significance  
9 or integrity of these forest patches.

10                   And so looking at coming up with some  
11 commitments in terms of what GGP is committed to from  
12 an ecological overview, first of all, we're committed  
13 to preserving and enhancing the Little Patuxent River  
14 forested corridor and the Symphony Woods stream  
15 forested corridor. And there we see us working in  
16 collaboration with CA and private property owners to  
17 help preserve those corridors and enhance them in any  
18 way possible.

19                   The GGP would provide funding and in-kind  
20 services for reforestation, invasive species management  
21 and habitat restoration in these corridors, that future

1 development in phase one in Columbia Town Center will  
2 strive to minimize any future fragmentation of those  
3 corridors, and then we'll also look at leading  
4 community efforts to restore Symphony Woods stream and  
5 the riparian woodlands.

6                   So, if you all recall the first  
7 presentation that I gave, for those of you that were  
8 here, we talked about the different levels of  
9 sustainability and one of the highest levels that we  
10 talked about is regenerative, how can we regenerate  
11 ecological processes in what we're doing and part of  
12 that definition of being regenerative is really  
13 reaching out beyond the project boundaries and looking  
14 at what we can do in the community and the regional  
15 landscape to help perpetuate and enhance ecological  
16 resources. So some of these commitments speak to that.

17                   The next thing we did is we looked at the  
18 watersheds that drain onto or through Columbia Town  
19 Center, and we were asked by GGP to look in these  
20 subwatersheds and help determine whether there are any  
21 types of watershed best management practices that GGP

1 could help facilitate and employ to help improve water  
2 quality, to improve woodland quality and to improve  
3 overall ecological integrity. This is a map of the  
4 Columbia Town Center, the Mall here. The area here,  
5 the gray and the light white, whitish gray areas are  
6 all impervious surfaces. The greens are all pervious,  
7 or, you know, covered with vegetation. So that just  
8 gives us a perspective of the amount of impervious  
9 surface on the landscape and surrounding Town Center  
10 here versus the amount of pervious surface in these  
11 green areas.

12                   Then what we did was we overlaid the water  
13 resources on here, the stream systems, Wilde Lake, Lake  
14 Kittamaqundi, Little Patuxent River down here, just to  
15 get an idea of how the stream resources interact and  
16 are within the context of the impervious surface and  
17 the green spaces. Then what we did is we divided this  
18 up into three different watersheds. The one watershed  
19 is Symphony Woods watershed here, which is really  
20 outlined in this blue color right here and basically  
21 all this land drains to the Symphony Woods stream here,

1    which drains down to Little Patuxent River, the Wilde  
2    Lake subwatershed, which is up here, which basically  
3    all drains toward Wilde Lake, so that's this tan area.  
4    And then this sort of gray area in here, right through  
5    here is all the area that drains into the stream below  
6    Wilde Lake and right into Lake Kittamaquindi.

7                    So, we looked at those three subwatersheds  
8    in a little bit more detail.  And what we did was,  
9    first of all, we looked at stormwater retrofits where  
10   we could go into these subwatersheds and do some  
11   retrofitting of existing parcels, existing development  
12   and improve the stormwater that's running off some of  
13   the impervious surfaces here.  And what I want to do is  
14   just kind of go through briefly and highlight some of  
15   the features or some of the ideas that we found.  One  
16   is bioretention.

17                   Now, bioretention is using plants and soil  
18   to help filter stormwater and have it infiltrate into  
19   the ground before it runs off into a stream channel or  
20   runs down a swale into a stream channel.  And,  
21   basically, these are some of the conditions we find out

1 there right now, in terms of parking lots, the runoff  
2 off these parking lots, in some of these grass areas,  
3 and the pollutants right now from that runoff go right  
4 into the stream system.

5                   And what we see is to go in and retrofit  
6 some of these parking lots and impervious surfaces to  
7 allow that runoff to go into these bioretention areas  
8 to filter through the soil. The vegetation uptakes  
9 some of the nutrients and some of the hydrocarbons and  
10 heavy metals and helps filter out some of the  
11 pollutants in the stormwater. And then the stormwater  
12 overflows from there and goes through into the stream  
13 system. So we think that there are opportunities  
14 throughout some of these subwatersheds to do some of  
15 these bioretention facilities.

16                   We also looked at some other what we call  
17 water quality best management practices, in this case,  
18 sand filters and permeable pavement. And again what we  
19 did is we went out and identified different areas that  
20 we could go look at retrofitting these parking lots or  
21 these storm drain systems to allow the water to go

1 through some type of sand filter which has been proven  
2 to filter out some the nutrients like phosphorus and  
3 nitrogen in stormwater, and then permeable paving to  
4 allow water to actually infiltrate through the paving  
5 into the ground and into the groundwater.

6                   And these are some techniques that can be  
7 used in terms of permeable paving. The sand filters  
8 can be embedded into the parking lots so they're not  
9 visible but stormwater runs down, goes through the  
10 sand filter and infiltrates into the ground. You can  
11 see a couple examples here and here and then another  
12 example of what sort of the forest paving can look like  
13 and we see some opportunities in the watershed to do  
14 this type of work as well.

15                   We also looked at some of the existing  
16 stormwater basins that are already in and already built  
17 and these are some of the conditions that exist now.  
18 And, what happens is when you get stormwater in here if  
19 there isn't a good contact between the soil and  
20 vegetation to help uptake some of the nutrients and  
21 remove some of the pollutants, then we're really not

1 maximizing the opportunity to remove those pollutants  
2 from the system nor is it providing good wildlife  
3 habitat either.

4                   So, we see, there's plenty of precedent set  
5 out there where you can go in and maximize the  
6 vegetation to provide habitat but, more importantly, to  
7 provide water quality benefits to some of the  
8 stormwater as it sits in these stormwater ponds before  
9 it's discharged back into the stream. Plus we think  
10 they can be improved quite a bit from an esthetic  
11 standpoint as well. We also looked at techniques  
12 called rain gardens and rain barrels. We found some  
13 areas here that we can employ those.

14                   And that's basically taking runoff off of  
15 town homes, houses apartment complexes and instead of  
16 the runoff running right into the storm drain system,  
17 what we can do is use rain barrels to capture some of  
18 that runoff and reuse that for irrigation. We can  
19 create little types of rain gardens off of street  
20 systems here, some vegetated swales through here to  
21 capture and infiltrate some of the rainwater. So

1 there's a lot of opportunities to do that in these  
2 watersheds as well.

3                   And then we looked at what's called  
4 bioswales and really it's just taking again some of  
5 these areas we highlighted and identify, where right  
6 now we have these great open grass strips here, they  
7 really aren't utilized for much of anything and we  
8 think that they could be not only an esthetic asset but  
9 a functional asset in terms of the ecological  
10 components and water quality components of the  
11 landscape as well. And so there's plenty of precedence  
12 or examples of taking some of these grass areas and  
13 turning them into filter strips that filter some of the  
14 runoff, provide some enhanced habitat, and provide some  
15 esthetic opportunities as well throughout these three  
16 subwatersheds.

17                   And then last, or, we've also looked at  
18 wooded wetlands, areas where we know we're adjacent to  
19 woodlands, where some of the stream systems exist and  
20 right now in some cases we have some poor quality areas  
21 in terms of their ecological benefits and I think

1 through some sort of targeted manipulation of these  
2 areas we could enhance them to again retain stormwater,  
3 filter that stormwater through these areas, infiltrate  
4 as much of the stormwater as possible before it goes  
5 back into the stream channel.

6           Even this section up here is taking, these  
7 two sections here are called regenerative storm drain  
8 systems where out of a storm drain pipe we can allow  
9 the water to stair-step down these swales, infiltrate  
10 as they sit in these pockets and then overflow down  
11 into the stream channel. And again that's been proven  
12 to remove a lot of the nutrients and pollutants in the  
13 stream channel. Then in terms of the stormwater  
14 retrofits we come up with over 28 of these  
15 opportunities. These are the different types here that  
16 we believe that we can manage about 230 acres or 100  
17 acres of impervious surface by going in and doing some  
18 of these retrofits in some of these subwatersheds here.

19           We've also looked at stream and buffer  
20 restoration. We recognize that these streams through  
21 here, in a lot of cases, in here and in here, are in

1 pretty poor shape. They're eroding. They down-cut the  
2 stream. The flood-flows don't have access to the  
3 floodplain anymore and so it's devastating to the  
4 aquatic habitat and the stream channel every time it  
5 rains. So, we think that there are opportunities to go  
6 no those stream systems and restore those stream  
7 systems. We also have looked again at the forest  
8 quality beyond the Town Center.

9           As you remember, before we really focused  
10 on this area, on that ecological overlay that we looked  
11 at. Here we looked at the forest quality up through  
12 here and in this area and believe that there's  
13 opportunities to go in there and do invasive species  
14 management so remove the exotic invasive species that  
15 are beginning to take over some of these forested areas  
16 and outcompete the native species in there, and to look  
17 at opportunities to go in and enhance or reforest some  
18 of these areas with native species.

19           So, here's a picture of what some of the  
20 stream channels look like right now and you can see  
21 what's happened with the storm drain coming out of

1 here, the storm drainage from some of the storm events,  
2 and it's basically devastating some of the stream  
3 systems through here. Some other shots of a lack of a  
4 buffer system along the streams here, with some of the  
5 erosion taking place here, and this is what's called a  
6 head cut; in other words, the stream is cutting back up  
7 through the valley to reach an equilibrium with the  
8 grade there and that will continue to happen if it's  
9 left unchecked.

10                   So, we believe there's a lot of precedence  
11 out there and a lot of work that's been done actually  
12 in the State of Maryland in a lot of the counties  
13 around here, going back in and doing this type of  
14 stream restoration to bring back the aquatic habitat  
15 and to restore some of these streams but still allow  
16 flood-flows and storm-flows to go through these systems  
17 here. And just some other examples of some stream  
18 restoration and buffer restoration that can be done in  
19 some of these watershed, subwatershed areas.

20                   So, we have identified about a little over  
21 a mile worth of stream restoration that can be done, a

1 little over or about, almost two acres of floodplain  
2 reconnection, quite a bit of riparian buffer  
3 enhancement, some stream restoration here, bank  
4 stabilization, stormwater conveyance and 150 acres of  
5 invasive species management and reforestation that can  
6 be done in these subwatersheds.

7 I also want to mention that, that other  
8 subwatershed, the one that flows to Wilde Lake, the  
9 Center for Watershed Protection I believe about four or  
10 five years ago did a pretty comprehensive survey of  
11 that subwatershed and found some opportunity there to  
12 do some of these water quality retrofits that I  
13 mentioned in the Symphony Woods subwatershed and the  
14 Lake Kittamaquidi subwatershed. So that information is  
15 also available that I'm sure that the Columbia  
16 Association is going to be looking at quite intently  
17 when they look at their watershed restoration  
18 initiatives that they're undertaking right now.

19 So, some of the commitments in terms of  
20 watershed BMP opportunities, through the formation of a  
21 downtown partnership group to lead efforts to initiate

1 watershed BMPs in Symphony Woods and Lake Kittamaquidi  
2 subwatersheds, what we're going to do is set some goals  
3 to reduce phosphorus and nitrogen pollutants from the  
4 stormwater runoff, work in conjunction with CA's  
5 watershed restoration initiatives, the Little Patuxent  
6 watershed restoration action strategy and other local  
7 and state initiatives.

8                   We know that there have been studies on  
9 these watersheds done in the past and, as I mentioned  
10 just briefly before, CA is undertaking a study, too,  
11 here, and we want to work in collaboration with  
12 everyone to make sure that we're not repeating anything  
13 that was done previously but we're all contributing to  
14 sort of the success of restoring some of these  
15 subwatersheds.

16                   And then GGP is willing to take a  
17 leadership role in contacting and facilitating private  
18 land ownership participation in this because a lot of  
19 these, in fact almost all these watershed BMPs are off  
20 GGP's property but GGP is making a commitment to help  
21 initiate and facilitate a leadership role in that

1 effort. And then also looking at financing, that GGP  
2 is willing to step up to the plate and help refinance  
3 some of these watershed BMPs and initiate that process,  
4 part of this overall Columbia Town Center master plan.

5 The next section I want to do is briefly  
6 talk about the sustainability program. Again some of  
7 this is repetitive of last week but I want to just dive  
8 a little bit more into this to let you know what we're  
9 doing and where we're going with this.

10 First of all, this is sort of a flowchart  
11 of the sustainability program, to develop a vision.  
12 From that vision we came up with six principles for  
13 sustainability. And then what we've done is we've  
14 identified different elements and I'll go through each  
15 one of those elements as sort of the foundation blocks  
16 for the sustainability program.

17 From there we're going to determine what  
18 goals we're going to set for ourselves in addressing  
19 each one of these elements and then from those goals  
20 we're going to develop what we call targets or  
21 components, that we're going to set metrics or targets

1 and look at how we can measure or quantify how well  
2 we're doing along the sustainability program and then  
3 come up with the strategies to implement.

4                   So, for instance, if one of our goals is to  
5 reduce phosphorus and nitrogen in stormwater  
6 pollutants, then our target might be to reduce so many  
7 pounds of phosphorus and nitrogen within so many years  
8 and our strategies might be rooftop gardens, they might  
9 be stormwater basins, they might be infiltration  
10 trenches, they might be sand filters, they might be  
11 bioretention facilities. There's a whole array of that  
12 different strategies that we can employ to help meet  
13 that goal.

14                   So, we're right in the process right now of  
15 working with the design firms, Cooper Robertson, and  
16 Sasaki & Associates. As they are undertaking the  
17 design, we're informing them of what our goals are and  
18 how we can incorporate different strategies within the  
19 design to meet those goals.

20                   So the vision for the sustainability  
21 program for Columbia Town Center that we developed was

1 Columbia Town Center, a seamless confluence of life  
2 that fosters the growth of its people, respects the  
3 land and promotes economic prosperity while celebrating  
4 the diversity of all life. And what we wanted to do is  
5 we really wanted to take the legacy of what Rouse did  
6 with Columbia and move that forward under the  
7 sustainability program.

8                   So, we tried to capture the essence of his  
9 goals and his vision for Columbia and bring that up to  
10 this century and move it beyond for the next hopefully  
11 50 to 100 years. We also recognize that sustainability  
12 is not just about the environment, it's about  
13 liveability, it's about culture, it's about economics,  
14 it's about economic prosperity and we wanted to make  
15 sure that that was embedded in our sustainability  
16 program as well.

17                   So, what we did was we came up with these  
18 six principles, that Columbia Town Center will be a  
19 city within a garden, that Columbia Town Center will  
20 forge connections with surrounding villages and  
21 strengthen its independence with a surrounding region,

1 that Columbia Town Center will be socially equitable,  
2 vibrant and profitable, that Columbia Town Center will  
3 be diverse and heterogeneous, that Columbia Town Center  
4 will be adaptive and evolving over time, and that  
5 Columbia Town Center will be using and cycling  
6 renewable resources.

7                   And so I challenge all of you that as we  
8 move forward in our phase one and our master planning  
9 that these are the principles we're holding up and if  
10 you see any parts of our phase one or master planning  
11 scenarios where you don't think we're meeting these  
12 principles, then ask us about it because we're trying  
13 to hold ourselves up to meeting this principals and  
14 this vision as we move forward.

15                   So, I talked about the elements earlier,  
16 sort of what are the elemental sort of the foundation  
17 building blocks or elemental features of the  
18 sustainability program and we came up here with six.  
19 Liveability is one, that it has to be livable. People  
20 have to enjoy Columbia Town Center because if we don't  
21 have people, it's not going to be sustainable.

1                   Number two, transportation. I know  
2 transportation is a huge issue, not only locally in  
3 terms of potential congestion locally but regional as  
4 well. How do we get folks in and out of Columbia? How  
5 does it become a place where people from Baltimore or  
6 Washington can get here and do it in a sustainable way?

7                   Ecology is obviously an important factor in  
8 sustainability and I would subscribe that if we don't  
9 have a good ecological foundation for any development  
10 we do, then it's never going to last and it's never  
11 going to be viable and so that needs to be a critical  
12 component of the sustainability program.

13                   Energy is a huge issue and we're all  
14 dealing with that right now in terms of gasoline prices  
15 and oil and if we're going to be building a Town Center  
16 for the next 25 to 50 years that we may not be relying  
17 on the energy that we use now 50 years from now, and  
18 then we also have to take into consideration our carbon  
19 footprint and how that may be contributing to  
20 greenhouse gases and how that might have an effect on  
21 Columbia Town Center and the region in the world.

1                   Water is another huge issue. We're seeing  
2 more and more shortages of water throughout the United  
3 States. The south has gone through a major drought.  
4 We have had our droughts here. Water is going to be an  
5 increasingly contentious issue as we move forward and  
6 again the next 50 years how we're going to deal with  
7 potable water to support Columbia Town Center. So  
8 that's something we're taking very seriously. And then  
9 materials, the materials that we're using today, are  
10 they going to be full of toxic chemicals or are we  
11 going to try to use materials that minimize or  
12 eliminate toxic chemicals? Are they going to  
13 locally-sourced materials? Are they going to be  
14 sourced in such a way that we're not destroying or  
15 impacting environments some other place in order to  
16 build Columbia Town Center?

17                   So, those are some of the elements that  
18 we'll be looking at as well. So let me just briefly go  
19 through these in a little bit more detail. Again  
20 liveability, we're going to be coming up with goals for  
21 each one of these subsections under liveability in

1 terms of how will Columbia Town Center really develop  
2 or instill or continue the legacy of the legacy of the  
3 sense of place and community that's already here. How  
4 can we incorporate recreation and relaxation into  
5 Columbia Town Center? How can we use this  
6 redevelopment process to bring in healthy food or to  
7 have healthy food available for the residents of  
8 Columbia?

9                   It has to be economically viable, so, has  
10 to have economic vitality so we need to incorporate  
11 that into the plan. We need to look at what we call  
12 community resilience; in other words, this has to last  
13 for a long, long time. If we're really talking about  
14 sustainability, then it has to be able to sustain  
15 itself for a long time.

16                   So how do we build in that community  
17 resilience over time? And then what we call being in  
18 service, how can we be stewards of the landscape and  
19 stewards of the sustainability program? Are there  
20 programs set up for our kids? Are there programs set  
21 up for the residents of the Columbia and the residents

1 of Columbia Town Center to be in service to provide  
2 volunteer services and to help with the sustainability  
3 program? How can we build a community and really how  
4 can we make this a just and fair community as we move  
5 forward? So those are all elements, components of the  
6 elements of liveability that we're going to be  
7 incorporating into the sustainability program.

8                   Water, as I said before, is a huge issue.  
9 We need to look at rainwater. We need to look at  
10 rainwater in terms of how we can harvest rainwater, how  
11 we can infiltrate rainwater into the groundwater and  
12 how we can take rainwater off of impervious surfaces  
13 and convey it safely to our stream systems without  
14 polluting our stream systems or without eroding our  
15 stream systems. We need to look at everything we can  
16 do in terms of water conservation and reducing user  
17 demand water, potable water. There's a lot of progress  
18 being made now of taking greywater, that water that  
19 runs out of the sink or maybe down your shower, that  
20 how can you reuse that water in toilets or other  
21 mechanisms so we're not using fresh potable water in

1 areas where we really don't need it.

2                   In terms of wastewater, how can we recycle,  
3 how can we treat wastewater that we can then begin to  
4 think about recycling and there's communities where  
5 wastewater treatment systems are being developed,  
6 small-packaged systems that are being developed  
7 throughout the United States that can clean wastewater  
8 and we can reuse that wastewater for, say, irrigation  
9 purposes. How can we recycle water and then how can we  
10 treat and deal with stormwater? We kind of looked at  
11 this as the whole hydrologic cycle. We can go in and  
12 look at how we make that whole hydrologic cycle from  
13 when rain falls to and when it runs off our buildings  
14 and our surfaces or out our pipes, how can we do it in  
15 a sustainable way. So, that will all be part of the  
16 stainability program.

17                   Transportation is a huge issue. You'll  
18 hear more about this tomorrow night but briefly we want  
19 to develop a design approach that minimizes car travel  
20 or minimizes congestion and makes it easier for people  
21 to move around Town Center. It makes it easier for

1 people to be connected to the villages and to the  
2 communities in Columbia.

3           So, by doing that, the diversity of uses  
4 and intensity of uses, the density of uses help  
5 facilitate that whole transportation issue. And the  
6 more we can link transportation with good sound land  
7 use planning and mixed development and all of the other  
8 facets of the sustainability program, the easier it is  
9 to get there. We also recognize that there's some  
10 regional transportation issues that we don't  
11 necessarily have control over but hopefully we can help  
12 begin to really intensify the dialogue about mass  
13 transportation and how this, the development of  
14 Columbia Town Center can be a facilitator of that.

15           And then a diversity of modes, we don't  
16 want this just to be strictly a car-driven community,  
17 that it has to be walkable, that we use bicycles or any  
18 kind of mode of transportation throughout Columbia Town  
19 Center. Greg has been pretty empathic with all of us  
20 about the connectivity of Columbia Town Center and the  
21 way people move in and out and through and within

1 Columbia Town Center is an extremely important concept  
2 that we're talking to heart in all of this.

3 Energy, as I mentioned before, energy is a  
4 huge component, how we're supplying, what we're  
5 supplying, what type of energy are we supplying, can we  
6 provide all-renewable energy to power Columbia Town  
7 Center in the next 50 years, how is that energy being  
8 harvested, how is it being transported, and brought to  
9 the site; all those issues we're going to be taking a  
10 hard look at in developing our goals for energy in the  
11 sustainability program.

12 Just like water, what conservation measures  
13 can we employ as we begin to develop Columbia Town  
14 Center to reduce the energy demand? Because that's the  
15 first thing we want to do, is reduce the energy demand.  
16 And then what can we do to offset energy that we use in  
17 Columbia Town Center? If we're using nonrenewable  
18 energy or energy that causes greenhouse gases because  
19 there's no other viable alternative or no financially  
20 viable alternative at this time can we offset that  
21 carbon footprint by ways of mitigating that? And then

1 looking at the effect of climate change and how climate  
2 change will affect the habitat, how the site is used in  
3 the future, water demands, other things, and that  
4 becomes critically important as well.

5 Ecology, as I mentioned before, really the  
6 foundation and basis that we're going to be looking at  
7 biodiversity, invasive species, and you already heard a  
8 little bit about that. The connectivity, so, we heard  
9 about the connectivity from a people standpoint in  
10 terms of transportation; well, it's just as valuable  
11 from a habitat standpoint, as I mentioned, with the  
12 corridors that we're looking to protect. How we elicit  
13 stewardship in the environmental program or the  
14 ecological program that we're developing, again going  
15 back to climate change and how climate change may  
16 affect the ecology and habitat of this area as we move  
17 forward over the next 25 to 50 years, how to restore  
18 some of the great natural areas and greenbelts that we  
19 have surrounding Columbia Town Center and radiating out  
20 from Columbia Town Center.

21 And then looking at urban ecology, a lot of

1 times that's forgotten but there's a lot of things that  
2 we can do with Columbia Town Center in bringing habitat  
3 into Columbia Town Center from how we design and plant  
4 street trees to looking at some of these stormwater  
5 devices to developing living or green walls or living  
6 roofs or green roofs or all types of different  
7 strategies that we can begin to employ.

8                   And then soils, because soils are really  
9 the foundation for vegetation and the foundation for  
10 habitat, and again I showed that one slide about soils  
11 that are good for infiltration and we want to make sure  
12 that we take advantage of that but we also want to make  
13 sure that as we begin to develop Columbia Town Center  
14 that we provide soils that have the nutrients, that  
15 have the organic matter and they can support good  
16 healthy vegetation and life.

17                   And then materials, we want to look at a  
18 materials that we bring in to use to build or retrofit  
19 Columbia Town Center. Can they be renewable or  
20 certified materials, that we're not impacting  
21 environments somewhere else? Can they be nontoxic?

1 Can we get a lot of our materials from locally-sourced  
2 areas or locally-sourced manufacturers so we reduce the  
3 transportation demand and all the environmental impacts  
4 associated with bringing materials in from across the  
5 globe or across the United States? How do we handle  
6 construction waste? Can we do it in a way that we can  
7 recycle and reuse most of our instruction waste? And  
8 then as we begin to operate Columbia Town Center, how  
9 do we deal with solid waste in terms of recycling, in  
10 terms of reusing, in terms of composting, setting up a  
11 good, solid program in how we deal with our waste? If  
12 we can make all our waste equal food, then we've  
13 succeeded in that effort. So, the idea would be to  
14 minimize or eliminate all the waste coming off of  
15 Columbia Town Center in the future.

16 So some of the commitments in terms of the  
17 sustainability, we're going to be developing the  
18 sustainability program. It's transparent so you all  
19 know exactly what's going into it and why we're doing  
20 what we're doing. It's measurable so we can measure  
21 the progress as we move forward. It's adaptive because

1 what we set in stone now in 2008 is not necessarily  
2 what we're going to need in 2012 or 2015.

3           So, this program has to have a life of its  
4 own and be adaptive and then responsive to the  
5 community needs because the community is going to be  
6 changing over time and the sustainability program needs  
7 to be able to change and keep up with the community as  
8 well.

9           So, what we plan on doing is collaborating  
10 with Howard County Sustainability Task Force to ensure  
11 that the countywide sustainability initiatives are  
12 incorporated into the Columbia Town Center. We're  
13 going to facilitate and solicit community stakeholder  
14 input throughout this process. We're going to be  
15 working with local and regional academic institutions.  
16 We're going to be identifying goals for each of the  
17 sustainability elements that I just mentioned up there.  
18 We're going to setting measurable targets for each one  
19 of those elements so we can measure our progress.

20           Then we're going to be identifying and  
21 incorporating sustainable design, construction and

1 management strategies into the redevelopment of  
2 Columbia Town Center and then we're going to be  
3 preparing what I call an institutional commitment plan  
4 to sustain the sustainability initiatives as we move  
5 forward, so, when GGP leaves, when we all leave this  
6 community, when we have a new community in here in 50  
7 years, that this whole sustainability program is  
8 institutionalized in the community and part of the  
9 everyday life of Columbia Town Center.

10           Next I want to just kind of briefly go  
11 through what some of these strategies might look like.  
12 Now, these are just, we're just exploring here now and  
13 saying well, what if we started employing some of these  
14 potential sustainability strategies. So, what we've  
15 done is we have taken, you know, the master plan and we  
16 have taken the phase one initiative that was shown last  
17 week and in this case we've highlighted what we're  
18 calling Market Square here.

19           So, this is the Mall right here. This is  
20 the Market Square area that Sasaki & Associates showed  
21 last week, is part of the redevelopment of phase one of

1 Columbia Town Center. And what we have done here is we  
2 first looked at, well, wow, you know, one of the things  
3 that we can do, one of the strategies that we may  
4 employ, we're again still exploring is we could put  
5 green roofs on all these buildings here and have a  
6 living roof and the living roof could provide habitat,  
7 it could provide stormwater attenuation and stormwater  
8 quality improvements. It could be insulation for the  
9 buildings themselves. There's a lot of things that we  
10 can do with these green roofs.

11 We can also look at putting solar arrays up  
12 there. And one example of this is, this is on a  
13 rooftop of solar arrays on a planted green roof, and so  
14 there are opportunities not only to harvest renewable  
15 energy on some of these roofs but also to provide  
16 habitat. So these again are some of the initiatives  
17 that we're exploring to incorporate in this phase one  
18 here.

19 We can also begin to look at what we call  
20 green streets. So, we already have a good site plan in  
21 terms of these streets and the street trees but we

1 think we can take that to the next level and  
2 incorporate things like these little pocket wetland  
3 areas that when it rains the stormwater coming off the  
4 streets gets filtered through these areas. Again it  
5 provides water quality improvement and it provides  
6 habitat. It helps green up some of the streets.  
7 Obviously room for bicycles, we think bicycles and  
8 walking are a big component of these green streets and  
9 so we need to incorporate that.

10 We need to also look at ways of planting  
11 street trees in such a way that we're going to get  
12 canopy cover over. Because, as some of you may recall  
13 in my first presentation, I said, well, wouldn't it be  
14 great if from the air all you saw was canopy cover all  
15 over all of Columbia Town Center when it was all said  
16 and done in any way that we can provide that kind of  
17 canopy cover on these green streets, that I think it  
18 will help from a standpoint.

19 So, kind of taking a cross-section of doing  
20 some of the water quality infiltration devices, having  
21 bike lanes and providing some of these green street

1 initiatives is something that we're exploring as part  
2 of the sustainability program. Even green parking,  
3 even retrofitting some of the parking area out here, if  
4 it may be under a phase two or phase three development  
5 strategy, it may be sitting there for the next ten or  
6 fifteen years before development takes place, then we  
7 can look at going in and retrofitting some of those  
8 parking lots to add water quality infiltration and  
9 trees and shading in those parking lots.

10           So, those are some of the initiatives we're  
11 going to be exploring, too. And even looking at night  
12 sky initiative in terms of turning down the lights to  
13 make sure the lights aren't shining up into the sky and  
14 we lose the dark sky and even powering all these lights  
15 with renewable resources. Those are some of the  
16 initiatives that we're looking into as well.

17           One of the other things that we're looking  
18 into is the LEED program for buildings, the Leadership  
19 and Environmental and Energy Design and that all these  
20 buildings would be LEED certified and then go through  
21 their own set of metrics in terms of LEEDs as well.

1 Even things like stormwater art, being able to  
2 incorporate in this case sort of civic art with  
3 stormwater and provide that as part of the sort of  
4 cultural experience that you have when you go into Town  
5 Center but make it visible, that when it's raining this  
6 art takes place and you know what's happening to the  
7 stormwater and can educate folks on where that  
8 stormwater goes.

9           In fact, we just read a report that most  
10 people when they talk about stormwater they want to do  
11 something about stormwater because they first of all  
12 didn't even realize that stormwater actually enters a  
13 storm drain and goes right to the stream channels, that  
14 a lot of people think that it's actually treated before  
15 it goes into stream channels and so the more we can  
16 highlight that initiative and talk about ways of  
17 capturing some of this stormwater, reusing it, and  
18 filtering it, the better off we are, and some other  
19 just examples of using stormwater from that sort of  
20 cultural, civic art standpoint.

21           Then we took this area down here, which

1 we're calling the Lakefront, and again using the plans  
2 that Sasaki & Associates reviewed last week and taking  
3 this area, coming down to the Lakefront. This is what  
4 they were call the Spanish steps down to the Lakefront  
5 and again looking at ways of greening the roofs,  
6 putting in solar arrays, greening the streets, rooftop  
7 treatments, which is basically not treating the  
8 stormwater on the roofs but ways of treating the  
9 stormwater coming off roofs in certain areas that can  
10 provide esthetic appeal and civic appeal to the  
11 Columbia Town Center and provide some habitat as well.

12           And then also looking at bioswales along  
13 here to capture some of the stormwater coming down as  
14 well, what we call sort of functional landscapes, that  
15 these landscapes would be there for recreation and play  
16 and relaxation but they also might have another  
17 function in terms of habitat or water quality  
18 improvement, so, how can we stack the benefits as well,  
19 looking at permeable sidewalks, how sidewalks can  
20 infiltrate stormwater and provide that function and  
21 then looking at the boardwalk along here and how we can

1 use that from an ecological and sustainability  
2 standpoint, and then where can we do some shoreline  
3 recitation along this hard edge here to soften up the  
4 edge and provide additional habitat and water quality  
5 filtration along the lake.

6                   So, there are a lot of different  
7 initiatives that we can begin to employ in this site  
8 plan that we're now exploring that we're going to be  
9 working with Cooper Robertson and Sasaki & Associates  
10 on. This happens to be a rain garden combined with  
11 sort of a functional landscape. Now, what we did is we  
12 took Symphony Woods and we did the same thing. I said  
13 here's the site plan for Symphony Woods. What if we  
14 went in there, looked at green roofs, what if the  
15 Pavilion actually had a living green roof on top of it?  
16 And, looked at green roofs for potentially the cultural  
17 buildings that may be proposed in that area. How can  
18 we do rooftop treatment on other areas or do solar  
19 arrays or look at greening up all these streets to make  
20 sure we have good canopy cover overtop of these streets  
21 and they function from a water quality perspective,

1 where it can go in a new stream restoration. I  
2 mentioned some of the stream restoration in the  
3 subwatersheds; we also recognize that stream  
4 restoration is needed through Symphony Woods and we're  
5 committed to doing that as well.

6                   And in looking at other areas in parking  
7 lots where we with can do some of those water quality  
8 BMPs that I mentioned before, and then essentially this  
9 whole corridor going up through here, as I mentioned,  
10 how important that was from an ecological perspective;  
11 yet, we also recognize that it is in need of some  
12 restoration in terms of invasive species management and  
13 some enhancement through there.

14                   So, we're looking at that as well. And the  
15 again showing maybe what some of these green streets  
16 can look like by getting a canopy cover going overtop  
17 of them, by providing some of these water quality  
18 inlets in here and making them bike friendly and  
19 pedestrian friendly through there. And some of these  
20 interior roads and marketplace roads could look like  
21 this in terms of again providing some median strips,

1 that it's more of a park setting through here, that  
2 you're really, really driving through the trees, that  
3 it's not a wide boulevard or a wide expanse of asphalt,  
4 and again these are functioning from a water quality  
5 perspective as well.

6                   So, some of the sustainability strategy  
7 commitments here incorporate an array of programmatic,  
8 institutional and physical strategies that meet the  
9 sustainability goals that we'll be developing and that  
10 will be outlined in the sustainability program, that  
11 the selection of these strategies will be based on  
12 local and regional, ecological, social and economic  
13 benefits, so we're looking at what I call sort of what  
14 I the triple top line, the planet, prosperity and  
15 people. Assessment of life-cycle costs and benefits,  
16 so not only will we be looking at what it costs to  
17 implement but what are the long-term life-cycle costs  
18 of this, really look at it from a long-term  
19 sustainability standpoint, really committed to a living  
20 systems approach.

21                   So, we look at everything through that lens

1 instead of a structural, hard engineering lens, and  
2 then how can we maximize educational opportunities for  
3 our kids and future kids that will be residing in  
4 Columbia and Columbia Town Center, which will be  
5 extremely important.

6                   And then finally I want to talk real  
7 briefly about Symphony Woods and then we'll open it up  
8 for questions and dialog after this. So, we know that  
9 a lot of people hold dearly Symphony Woods and we want  
10 to make sure that what we're doing in Symphony Woods is  
11 something that we feel it can being can be long-term  
12 beneficial. And what we've done is all these little  
13 dots here, we actually have gone out with a GPS unit  
14 and some of our foresters and tree specialists in our  
15 firm have gone out and identified all the trees.

16                   And basically we're going to identify all  
17 the trees in this area but we got to about this area so  
18 we haven't inventoried this area yet but we will. And  
19 these are all the locations of all the trees that are  
20 in this area right now. And they're color-coded here  
21 by species so all the different colors represent

1 different species.

2                   And then the size of the dots represent the  
3 size of the trees and so they vary in size from sort of  
4 small saplings to pretty large trees that are over  
5 maybe 36-inch diameter, what's called DBH or diameter  
6 breast height. And so we wanted to get sort of a  
7 quantitative viewpoint of all the trees in Symphony  
8 Woods. And then what we did was we kind of looked at  
9 tree health and based on standard arboriculture and  
10 forestry practices or indices, we used to assess the  
11 health of these trees, basically the green is in good  
12 health, the red is in poor health and the yellow and  
13 brown are in between. And you can see that a lot of  
14 the trees in here are in fairly good health.

15                   Now, remember that this is just an  
16 inventory of the tree species in here. What's missing  
17 in from this component and what's really missing from  
18 the landscape out there is there's very little  
19 understory and there's almost no shrub or native ground  
20 layer, ground cover layer.

21                   And, so, while we've assessed the health of

1 these trees individually, the health of the woodlands  
2 over all compared to the health of other parts of the  
3 woodlands, say, here or along Little Patuxent River is  
4 a lot, from an ecological perspective a lot healthier  
5 than this area in here because of the lack of  
6 structure, of forest structure in there. But then what  
7 we did is we looked at tree impacts based on these  
8 roads, proposed roads through here and potentially  
9 proposed buildings in here.

10 Remember that GGP doesn't own this land  
11 here. They own the land that encompasses and contains  
12 Merriweather Post Pavilion. So, all this is just  
13 proposed and it obviously has to meet with the approval  
14 of Columbia Association and the residents of Columbia.  
15 But from what's proposed on here we looked at basically  
16 all the trees that would need to be removed from there  
17 are in black and what that really is, is that we've  
18 been able to retain 62 percent of the trees and 68  
19 percent of those that are going to be retained are in  
20 good condition.

21 And, so, what we would be doing is looking

1 at ways of even minimizing, some of these trees you can  
2 see are on the edges, and if there are ways that we can  
3 realign the road slightly or maybe go around some of  
4 these trees or maybe look at placing these buildings  
5 slightly in a different perspective to eliminate some  
6 impacts to some of the trees that are in good health  
7 and some of the larger trees, well, that's the next  
8 step that we'll be taking.

9                   But now that we have this quantifiable data  
10 we can begin to look at how we can minimize some of the  
11 impact of some of the trees in here. But what we're  
12 also doing, as you saw on these green overlay slides,  
13 by providing enhanced forest cover through here, really  
14 improving the ecological integrity of the forest by  
15 looking at green roofs, by looking at these green  
16 streets, what we're hoping to do is mitigate and  
17 hopefully enhance the forest quality throughout this  
18 whole, what we call Symphony Woods area in the  
19 long-term.

20                   So in terms of sort of our commitment to  
21 Symphony Woods, that we're going to minimize and

1 mitigate the disturbance to Symphony Woods through the  
2 application of tree preservation, best management  
3 practices, through woodland restoration and through  
4 long-term management, that we'll inventory and analyze  
5 the existing street cover which we're undertaking right  
6 now, that we'll work in collaboration with CA to  
7 develop a comprehensive woodland management program for  
8 Symphony Woods, we'll develop woodland restoration  
9 enhancement initiatives as part of that woodland  
10 management plan and then we'll work in collaboration  
11 with locally and regional academic institutions to  
12 really make this an all-educational process.

13 (Applause)

14 MR. BOWERS: Let's open it up for any  
15 questions or dialog that you might have in terms of for  
16 ecological overlay, the watershed BMPs, the  
17 sustainability program, the sustainability strategies  
18 and the Symphony Woods, so.

19 MR. HAMM: Thank you very much, Keith. We  
20 will be taking questions and we'll take them by calling  
21 on individuals and then if others are more comfortable

1 writing and handing them in, we can take them that way  
2 as well. Looks like we start with the gentleman and  
3 then the lady in the front row.

4                   PARTICIPANT: Well, first of all, I am  
5 greatly impressed that GGP is putting this kind of  
6 thought and these kind of resources into an  
7 ecologically sustainable and responsible approach to  
8 what you're doing here in Columbia. Last week and also  
9 tonight, and it may have been that I just missed it but  
10 I didn't hear a whole a lot about, last week, the  
11 development aspects and this week, the ecological  
12 elements of the proposed 5500 residential units.

13                   And, I would like to hear a little bit more  
14 about that because, as I say, I might have missed it  
15 but I didn't hear a whole lot about it. Fortunately  
16 I'm going to be here and maybe some other folks here  
17 tonight are not going to be able to be here tomorrow  
18 for the transportation presentation. But my ancillary  
19 question to that first question is that dotted line  
20 that shows what looks suspiciously like a flyover  
21 across the lake, a terrible, terrible, terrible idea

1 from my point of view, what ecological impacts do you  
2 see that having? So, those are my two questions.

3 MR. HAMM: Certainly you are correct in  
4 terms of what the last presentation dealt with and  
5 tonight's. We did want to talk about the first phase  
6 primarily because we wanted to bring a phase forward  
7 that could be fully developed and designed and that we  
8 could engage the community in moving to the next step.  
9 Residential will clearly be part of the plan, and Keith  
10 can speak to this with more, you know, with a different  
11 perspective than mine but as somebody said last week,  
12 and I think it's correct, that places are generally  
13 better that don't go dark at night and don't go  
14 completely quiet.

15 You know, you think of a warehouse district  
16 compared to a real city, which was part of the vision  
17 of Jim Rouse and part of the vision of Columbia, real  
18 cities are 24-hour environments and one of the comments  
19 made last week I think was a very good one, is that we  
20 want residential in as many parts of downtown as makes  
21 sense but we want it to be done in an intelligent and

1 sustainable way, and by mixing uses vertically, retail  
2 on the ground floor, residential or office above, hotel  
3 adjacent, amenities and cultural things in walking  
4 distance, you're really creating and setting up an  
5 environment for long-term sustainability and for a  
6 place that can accommodate growth over many years and  
7 one that begins to attract the true diversity that  
8 Columbia wants and that diversity includes age  
9 diversity and getting younger, you know, increasing the  
10 appeal to Columbia for people age 22 to 32.

11           With respect to the number of units, we'll  
12 be getting into that in late, in June, in the June  
13 presentation, we will discuss in more detail by  
14 neighborhoods, kind of where we think the smartest  
15 place for density to occur over this long period of  
16 time. But in general the grid, the streets, the  
17 walkability, the beginning to create a place that is  
18 economically viable, desirable and employs the  
19 principles that Keith laid out, we believe needs to  
20 include residential, needs to include smart density and  
21 transit, some of which will be tomorrow. There be

1 transcripts of that available. And, you know, we  
2 believe that it's a sustainable and intelligent program  
3 over time.

4                   With respect to the bridge, I'll let Keith  
5 talk about a little bit, too, but we wanted to start  
6 the discussion somewhere and, you know, we're trying to  
7 figure out how we link Oakland Mills with Columbia and  
8 our first thought was, my first thought was, well, you  
9 don't go to the lake. That would be bad for  
10 environmental reasons and other things. And as we  
11 looked into it, one thing we realized is that 29 widens  
12 there and there's the potential for having the ramps on  
13 the inside of the two roadways which would be superior  
14 to the very sensitive wetland areas on either side of  
15 that and the bridge would really bridge over the  
16 environmentally sensitive area.

17                   So, the more we looked at it we thought,  
18 well, if there is going to be another interchange and  
19 we want to connect Oakland Mills, this very we may be  
20 the most ecologically appropriate way to address that.  
21 We also realize that it happened to be exactly where

1 Jim Rouse drew the bridge back in the sixties and the  
2 photographs and the plan and literally, you know, we  
3 rediscovered the wheel as we thought, you know, looking  
4 at the plan and looking at how you would make that  
5 connection and minimize the impact to surrounding  
6 neighbors on the other side of the road. So, those  
7 were our thoughts and this is the discussion. So,  
8 thanks for your question and I'll let Keith --

9 PARTICIPANT: Before you move over --

10 MR. HAMM: No, let's finish with this  
11 gentleman's question and then the lady in red is next  
12 and we can get you.

13 MR. BOWERS: So, I think, first of all,  
14 that the bridge over the lake and access out to 29 is  
15 something that right now our traffic engineers are  
16 telling us that we need but from a transportation  
17 sustainability standpoint, are there other ways that we  
18 can bring people in and out of Columbia Town Center?  
19 And, so, while that's something that we're looking at  
20 and something that there may be mass transportation  
21 options available 25, 30, 40 years from now, we're not

1 sure what's the best way to make that leap between now  
2 and then.

3                   And, so, we're looking at other options but  
4 given the option that if a bridge was required there or  
5 access out to 29 was required there, I would be lying  
6 to you if I said there was absolutely no ecological  
7 impact at all. Of course there's going to be some  
8 environmental impact. But the higher we can raise that  
9 bridge over that corridor, the less of a shading effect  
10 we can get on the vegetation, allow vegetation to grow  
11 through and under that bridge, that we do it in such a  
12 way that the supports don't provide any fragmentation  
13 to the habitat, that maybe we even look at a living  
14 bridge option, how can we incorporate living vegetation  
15 in the support structure and the bridge itself to  
16 filter water, stormwater runoff off that bridge or to  
17 filter air quality or reduce the noise impact. Those  
18 are the types of things that we're going to be looking  
19 at if it's a given that a bridge may be required there.

20                   PARTICIPANT: Thank you.

21                   MR. HAMM: Yes, ma'am, and then we'll come

1 to you.

2                   PARTICIPANT: I thought you were very  
3 diplomatic not to mention why there's so little  
4 understory in the part of Symphony Woods that you have  
5 proposed to put buildings in. And, of course, I think  
6 many of us know that it is the result of Columbia  
7 Association's overmanagement of Symphony Woods, Josh  
8 Belmesser (phonetic) before he was Josh Belmar  
9 (phonetic), did an internship with the Columbia  
10 Association when he was in college and he basically was  
11 comparing and contrasting Patapsco State Park with  
12 Symphony Woods.

13                   And one of the things that I recall that he  
14 presented in his talk to the Columbia Association board  
15 of directors was the concept that the land in Symphony  
16 Woods has been severely compacted and as a result there  
17 has been very, very, very little opportunity for  
18 anything to sprout and that with CA's mowing practices  
19 that if anything did sprout that it would be mowed  
20 down. And this basically is the reason that there's no  
21 understory there.

1                   But, I noticed that there was an area in  
2     Symphony Woods, I think you had identified as having  
3     good forest and I have a feeling that you might not be  
4     aware that at least some of those trees were planted by  
5     a group of young and not so young people back around  
6     1988 to 1989. And it just occurred to me that maybe  
7     instead of putting buildings in, maybe enlist a lot of  
8     young and not to young people in planting more shrubs'  
9     and small trees that within 20 years might produce some  
10    pretty decent forest.

11                   Also in 1994, the Columbia Association  
12    commissioned a survey asking Columbia residents to  
13    respond in terms of what kind of amenities they would  
14    like to see in Symphony Woods and they give a whole  
15    list of suggestions. Among them was nothing like woods  
16    but apparently a lot of those people who responded  
17    wrote in "woods" just as a possibility. And, then that  
18    was, then the results were presented, it was noted by  
19    the consultant, who I think was Charley Bailey, that  
20    overwhelmingly the people of Columbia would like  
21    Symphony Woods to stay as it is.

1 MR. BOWERS: Thanks.

2 MR. HAMM: And I will address briefly the  
3 plan and the proposal and Merriweather. One of the,  
4 you know, one of the conflicting, one of the challenges  
5 in attempting to meet multiple objectives is, you know,  
6 there are various conflicts that need to be weighed and  
7 the proposal that was shown was our attempt to balance  
8 some of those objectives based in part on what we heard  
9 from the community, you know, past discussions of  
10 Columbia Association and the strong recommendations of  
11 the Merriweather, the commission on Merriweather that  
12 convened and completed their work a couple years ago.

13 So, what we want to do from a placemaking  
14 perspective is connect Merriweather to a walkable phase  
15 of Town Center, create a strong, exciting, walkable  
16 area and the concept is that the plaza area outside --  
17 I don't know if you can go back to those images,  
18 Keith -- the plaza area outside of, that would now  
19 connect to the Mall, and we, Alan Ward from Sasaki  
20 designed a very interesting place, and the thought is  
21 to raise the elevation of the entrance to the Mall from

1 where it currently comes to the food court and you'll  
2 notice it goes from the Ring Road and slopes down.

3           What we would be doing is raising that up  
4 so that you'd basically be at grade with -- Keith, can  
5 I borrow your little pointer? There were some images  
6 that you had. This plaza here, this is the Ring Road,  
7 basically, shown in an ultimate state where we think  
8 it, one of the themes here -- and we'll get into this  
9 tomorrow and we think it does definitely relate to the  
10 environment -- is the rectilinear nature of these  
11 streets and they become predictable, understandable.  
12 There are streets that people can relate to, and one of  
13 the things that Marty Wells spoke of is the fact that  
14 right now in this entire area there really are no roads  
15 other than the Ring Road.

16           Everything else is parking lot. One of the  
17 plans, obviously one of the driving features of what  
18 we're attempting to do is in order to make it a  
19 walkable place and reduce the total miles driven is to  
20 create a predictable network of roads that allows  
21 traffic to go in multiple different ways. So, from the

1 Ring Road here, at this elevation this is like  
2 elevation three-sixty, this now goes into a, drops to  
3 probably three forty-five, where you enter into the  
4 food court right here.

5                   What we've done here is elevated this so  
6 this is elevation, I beg your pardon, this is three  
7 seventy-seven, there is like three sixty-eight so this  
8 now is all at the same grade and elevation as  
9 Merriweather and this, this area here. The  
10 Merriweather Commission or the Merriweather Task Force  
11 spoke at great length on attempting to connect these  
12 places in a walkable way and incorporate features of  
13 art and culture that would bring people in to Symphony  
14 Woods, and that's really what this is intended to show.

15                   The other challenge with renovating  
16 Merriweather, as Alan spoke about, is ADA access and  
17 how we get ADA, you know, how we get increased  
18 proximity of visitors to Merriweather to the facility  
19 and then make sure that there's ADA access in close  
20 proximity to the parking. And, so, that's how this  
21 plan began to develop. This is obviously CA's land but

1 one thought to link and create a very interesting place  
2 would be to put a library or a civic building here and  
3 a civic building here that could frame this park area  
4 that leads into Merriweather and again wanting not to  
5 isolate Merriweather in its own little orbit, wanting  
6 to integrate it into the cultural life of Columbia in a  
7 very strong way.

8                   So, that was really the thought behind this  
9 plan. These woods in here, as Keith pointed out, are,  
10 you know, in need of significant work. Creating a  
11 walkable connection here is something that we think and  
12 the Merriweather committee thought is very important,  
13 again to strengthen the culture of Columbia and  
14 celebrate it while we enhance its environment.

15                   And Keith and I spoke about this at some  
16 length. If there were to be buildings here to take up  
17 a portion of this site and a building here, taking a  
18 portion of this site, this is essentially what people  
19 understand to be Symphony Woods, and there were green  
20 roofs included on some of these buildings, not to  
21 mention the park area here that's created out of

1 asphalt, the future park opportunity here, other future  
2 green roofs in the existing parking structure, we  
3 should significantly increase the number of trees in  
4 the entire Town Center area by effecting such a  
5 development.

6                   So, if we were to impact portions of what  
7 we now deem to be Symphony Woods, we are confident we  
8 could more than offset that in other areas and frankly  
9 make sure that we're focused on the right environmental  
10 priorities -- and this is from my time with Keith and  
11 from what I've understood -- this corridor is of  
12 significant value. There's a lot of, there's some  
13 degradation down here that really needs to be focused  
14 on. These stream corridors here are very important.  
15 And, so, that's, those were our thoughts with respect  
16 to Symphony Woods and I'm sorry for rambling. Did I  
17 answer your question, though?

18                   PARTICIPANT: Partially.

19                   MR. HAMM: Was there anything more that I  
20 might let Keith address?

21                   PARTICIPANT: Had you considered restoring

1 a forest there through what it might have been 40 years  
2 ago, so that it would be forest again 40 years from  
3 now, your timeframe seems to be roughly 30 years, so, I  
4 and I know that the trees that were planted 20 years  
5 ago seem to be thriving. Why couldn't, I mean, if  
6 Columbians were made aware of such an option and  
7 elected it, would that be a viable --

8 MR. HAMM : It's a possibility. Question I  
9 think is again one of priorities and if there's not a  
10 strong connection here crossing a street, you know, the  
11 environment will benefit from a walkable downtown in  
12 Columbia, and we believe it's very important to link  
13 the cultural elements to one another. So, we somehow  
14 need to accommodate that and that's one of the  
15 conflicts that we're attempting to address.

16 PARTICIPANT: It kind of seems that  
17 Merriweather is driving this issue because part of the  
18 reasons that you all have concluded that this is not  
19 tremendously valuable forest is that there's no  
20 understory and one of the reasons that there's no  
21 understory is partly that the ground has been compacted

1 because people have been trampling it and also because  
2 of the mowing practices which make it open so that  
3 people can trample it.

4 MR. HAMM: We didn't, we, Keith came to  
5 the, Keith's people came to the conclusion of the value  
6 of the forest independent entirely of any of our  
7 thoughts or, you know, that was done before I knew my  
8 way to this building, so, I had no say in that and --  
9 go ahead.

10 MR. BOWERS: So, I think it certainly is  
11 possible to restore that forest. There's no doubt that  
12 you could go in and restore that area and get the  
13 structural diversity and the plant diversity, the tree  
14 diversity and make that a thriving forest. I guess  
15 what we're looking at is that if there is opportunities  
16 to bring in cultural amenities, could you do it in such  
17 a way, and again I think that -- do you have  
18 the clicker? Yeah, you're dangerous with this thing.

19 That, there's no reason that what's shown  
20 as big blocks here are necessarily all building and all  
21 pavement, that they could almost be buildings within

1 the trees or almost treehouse-type buildings, that you  
2 could surround these buildings or maintain a lot of the  
3 trees that are there and enhance the forest around  
4 those buildings and they would be nestled in, in here  
5 and not necessarily take up that whole block.

6                   And so when we were looking at trying to  
7 create a strong connection between this Town Center  
8 here and Merriweather Post Pavilion, it just dawned on  
9 us that since these woodlands were so impacted, that if  
10 we were going to put cultural amenities anywhere within  
11 this area, this would be probably the most ideal place  
12 to put it with the least ecological impacts knowing  
13 that we can nest them into the existing trees and then  
14 reforest around them. So, that sort of the decision,  
15 that's where we are in this decision-making process  
16 now. Of course, that's why we're having these venues  
17 and opening it up to all of you to get feedback from  
18 the community on what the community wants to see.

19                   PARTICIPANT: Thank you.

20                   MR. HAMM: Sir, you had one.

21                   PARTICIPANT: It's been answered. Thank

1 you.

2 MR. HAMM: Okay. Yes, sir?

3 PARTICIPANT: Just from a personal  
4 standpoint, I kind of like to get the big picture  
5 first, and there are so many pieces of the big picture  
6 missing it's hard to warm up to this part, the part you  
7 have presented quite the way I think it deserves. And  
8 in fact by emphasizing phase one so early in the  
9 discussion, I'm left with the feeling that the  
10 development of Town Center has left me with for many  
11 years, which is it's being developed on a piecemeal  
12 basis. So maybe when you present the big picture that  
13 will be cleared up but for right now I don't feel  
14 comfortable with that.

15 MR. HAMM: Maybe we, I might address that.  
16 Can you go to the master plan? You've got to begin  
17 somewhere and phase one here is, it's a substantial  
18 phase. It would include retail. Do we -- we have one  
19 that shows the entire area, right? Phase one is a  
20 substantial area and say it's a total of 750,000 feet  
21 of space.

1 PARTICIPANT: I was here last week, so.

2 MR. HAMM: Okay. But that would take four  
3 years, you know, that's like a four-year, it's a long  
4 time to develop that much project.

5 PARTICIPANT: Right.

6 MR. HAMM: And so the overall master plan  
7 is really very similar to, you know, this road network  
8 and the street connections and how this may tie into  
9 this interchange and somewhere in here there needs to  
10 be a connection or an additional interchange, these  
11 things are the details of the master plan that we will  
12 be elaborating on in more detail in June.

13 Some of the things that we also went into  
14 last week and we'll go into in more detail this week  
15 are hierarchies of streets, what types of plantings  
16 would be included in those streets, what types of  
17 sidewalks, what types of things the county, on land we  
18 don't control or have any influence on, might want to  
19 influence to increase connectivity. So, there are many  
20 of those elements that we will go into more tomorrow  
21 night and additionally in June.

1                   And then lastly, and I know, is again where  
2 we would want much of the density, where we would  
3 encourage height. I know height is an issue. Right  
4 now there are no height limitations. You know, one of  
5 the statements I have read from Mr. Rouse was he wanted  
6 a building that you could see from Washington to  
7 Baltimore, something like that. I think that the  
8 community doesn't want that. And I think the community  
9 wants certainty and they want to know where limitations  
10 will be. And those are issues we will address.  
11 There's lot, as you say to, there's a lot to address  
12 and so we're starting.

13                   PARTICIPANT: Okay. That's good. Now,  
14 with the bridge over Lake Kittamaquidi, it's hard to  
15 tell whether you're talking about just a connector to  
16 Oakland Mills or a complete interchange there. It  
17 raises a question of what are the density tradeoffs; in  
18 other words, without the bridge what could be achieved,  
19 how much of the 5500 do you use and with a bridge what  
20 can be achieved? How do air quality and noise fit in?  
21 We've talked about all of the other components of

1 sustainability and ecology but I didn't hear any  
2 mention of those two factors.

3           The charette really had us focus on the  
4 Lakefront as sort of the heart of Columbia but I don't  
5 think you've mentioned the Lakefront and what part it  
6 plays in the overall concept. We seem to have shifted  
7 our, the focus of our attention from the Lakefront down  
8 to Merriweather. So, that's, that's a question.  
9 Residential in the Crescent, there were a lot of  
10 portrayals of that back during the charette days. It's  
11 not real clear what the concept is. It wasn't a bad  
12 one then; I'm just not clear what we're left with.  
13 And, I'm throwing a lot of questions at you.

14           MR. HAMM: Before I forget them all --

15           PARTICIPANT: I only had one more and that  
16 was that the Mall itself remains impermeable. I mean,  
17 it's kind of the biggest thing you got to get around.  
18 If you want to get from one side of Town Center to the  
19 other, you either got to go through the Mall or you got  
20 to find a way around it. Okay? So, I just wonder what  
21 thoughts you have given to that. Those are my

1 questions. Thank you. We can come back to any if you  
2 want.

3 MR. HAMM: I'll let Keith address noise and  
4 air quality. I think the bridge, the status of the  
5 bridge was one, the Mall and traffic --

6 PARTICIPANT: The bridge versus the  
7 tradeoff and development.

8 MR. HAMM: -- and residential density, some  
9 of that we'll get into tomorrow night. Residential,  
10 frankly, is a very benign use as it comes, as it  
11 relates to traffic. And, that was one of the slides  
12 that was shown the other night. Retail and office,  
13 office in particular has a significant impact on  
14 traffic more so than residential.

15 PARTICIPANT: Yeah, and I said to your  
16 transportation planner at the time, why don't we just  
17 go all residential or heavily residential and get  
18 around the problem? Because you've got, basically  
19 you've got two bottlenecks. They're always going to  
20 limit Town Center. Let's just face up to it and move  
21 on with the best we can do, given that.

1                   MR. HAMM: Residential is far less, you  
2 know, far less burdensome on the traffic network if  
3 traffic is the only issue then, and furthermore  
4 residential, the presence of residential increases the  
5 likelihood of transit and multimodal transportation  
6 alternatives. So, what happens in, what I have seen  
7 happen in Virginia and the rail out there, really where  
8 the residential is and planned is where the rail ends  
9 up coming.

10                   So, it's a complicated question. We will  
11 show in June kind of where we expect the density to be.  
12 You know, we think as a general planning principle the  
13 closer more of the residential, more of the density in  
14 general can be to the interchanges, the existing  
15 interchanges and not interfering with existing  
16 neighborhoods and trying to drive more of it in the  
17 southern part of the development, we think makes a lot  
18 of sense.

19                   Obviously there needs to be an intelligent  
20 relationship of density. If you have four-story, you  
21 have single-story, four units to the acre, housing in

1 these areas, you know, this probably isn't the best  
2 spot for a 30-story tower. I say that, I'm glad  
3 somebody laughed. Thank you. Levity, I was joking. I  
4 understand your point.

5 PARTICIPANT: Keep your day job.

6 MR. HAMM: Thank you. This is, you know,  
7 this area probably wants to be softer and have lower  
8 height and lower density and there's residential  
9 obviously in different parts of Town Center that we  
10 need to be very respectful and mindful of, residential  
11 obviously in these areas. We want a very strong  
12 connection to the college and the hospital and want to  
13 drive residential, want to drive density generally in  
14 places where it seems to make the most sense. So, a  
15 lot of that will be made much clearer in June.

16 And did I miss one of your points? Well,  
17 the bridge would be a full interchange. This is shown  
18 as a full interchange and the tradeoff, really, the  
19 tradeoff of density, I don't know the exact answer to  
20 your question. We'll know more tomorrow. I don't  
21 think he'll have the full answer tomorrow night either.

1 It's a pretty complicated question but the general  
2 answer was residential last less traffic impact than  
3 the other uses.

4 PARTICIPANT: What happened to the  
5 Lakefront as the heart of Town Center?

6 MR. HAMM: Well, it's still very important  
7 and, you know, one of the things is, is we don't own  
8 most of this, you know? Columbia Association owns kind  
9 of all the areas that are part of the Lakefront and  
10 many of the buildings in here have speckled ownership.  
11 So we, I had difficulty proposing as a first phase  
12 something that we may or may not be able to do.

13 So, we think the Lakefront is very  
14 important and that is why we in the very first phase  
15 made a very strong statement on land that we just  
16 happen to own both sides of here, that gets people to  
17 the Lakefront in one, you know, very early, immediately  
18 and that's where the Spanish steps came, and, so, the  
19 Spanish steps that were shown earlier. And that's,  
20 this is about a 60-foot drop in elevation.

21 So, we think this will be very strong and

1 inviting and this would be retail on either side of  
2 here and this is a great, an at-grade lighted  
3 intersection right there. So, we think that's a very  
4 achievable and real day-one connection to the  
5 lakefront. Eventually, you know, going through the  
6 Mall may not be out of the question but right now  
7 there's about ten different owners that would need to  
8 agree to a penetration there. And there's a hundred  
9 foot drop in grade from there to there. So, we think  
10 that this is a very good way to start the pedestrian  
11 connection to the Lakefront so we're not turning our  
12 back on it at all. It's really a part of it, part of  
13 the first plan. I'll let Keith speak to the  
14 environmental impacts.

15 MR. BOWERS: Well, I think you mentioned  
16 noise and air quality. And noise we're looking at.  
17 It's embedded in our goals, in our elements for  
18 transportation and how noise affects liveability and  
19 how much it affects habitat. So, those are the two  
20 issues that we're going to be looking at in terms of  
21 sustainability. In terms of air quality, that's going

1 to be embedded in the materials we use in terms of  
2 off-gassing for indoor air quality or off-gassing even  
3 outdoor, in terms of transportation modes that we set  
4 up or we establish here and potential air quality  
5 impacts associated with different transportation modes.  
6 And then obviously that plays into the whole  
7 liveability and habitat aspects as well. So, while I  
8 didn't mention those two specifically up there, air  
9 quality and noise will play an important role in the  
10 sustainability program.

11 PARTICIPANT: I think that air quality is a  
12 particular issue with, for the new bridge over the lake  
13 because it comes right into the areas that we're  
14 setting aside for pedestrians.

15 MR. BOWERS: Sure. Sure. We'll be looking  
16 at that.

17 MR. HAMM: A couple questions, written.  
18 "Should not all new buildings meet some minimum level  
19 of LEED certification such as silver or gold?" That's  
20 something we're looking at and learning more about.  
21 One of the things I hear is that LEED certification may

1 become less relevant going forward and there might be  
2 some things that really replace the LEED certification  
3 as the mark of being a smart green building but we're  
4 very committed to what Keith just outlined.

5 MR. BOWERS: Yeah, so I think LEED right  
6 now is sort of the benchmark that a lot of folks are  
7 using from a sustainability standpoint. In fact, when  
8 you look at a lot of sustainability programs almost  
9 their entire program is focused on the building and not  
10 the infrastructure and the landscape around the  
11 building. So, that's why we wanted to emphasize here  
12 in this plan tonight, you know, what we're doing, that  
13 we're really taking a holistic approach and not just  
14 looking at the building but we're looking at all the  
15 infrastructure and support and landscape surrounding  
16 the building because this is all a town.

17 Now, the building itself, right now the  
18 Cascadian Chapter of the Green Building Council out in  
19 Washington and Oregon has come up with a living  
20 building standard beyond LEED. And, so, there are now  
21 metrics and there are programs out there now that are

1 taking the next steps beyond LEED. And so we're  
2 looking at not only LEED but we're looking at some of  
3 these other programs that are coming out that are  
4 moving beyond LEED and we're exploring whether they're  
5 going to be feasible and whether we can even go beyond  
6 LEED Platinum, which is the highest LEED rating you can  
7 get, in looking at some of these other systems. So we  
8 will have a component in there for the buildings  
9 themselves and that will be as part of the  
10 sustainability program.

11 MR. HAMM: I'll get a couple of these  
12 because they're a couple of very good questions and  
13 then we'll take some from the audience. "Phase one in  
14 ecological sustainability sounds very impressive. What  
15 can GGP and CA do to enforce sustainable landscaping  
16 techniques including using native plants? How can  
17 residents communicate with businesses and landscape  
18 contractors and lawn service companies, how can they  
19 all be encouraged to use organic methods for fertilizer  
20 and pest control? As I see it, this is imperative in  
21 improving water quality before rain runoff enters the

1 Little Patuxent Columbia Lake."

2 MR. BOWERS: Well, I fully agree with that  
3 statement and it's basically don't let your friends  
4 plant non-native plants out there. No, I mean, if we  
5 could work with CA in developing a landscape initiative  
6 or a landscape management program that uses nontoxic  
7 materials, that uses native plants, that really looks  
8 at the landscape from an ecological habitat standpoint  
9 as well as a functional esthetic viewpoint for people,  
10 then I think that would be great as a standard  
11 throughout Columbia. That's, of course, what we're  
12 going to be embedding in Columbia Town Center so as we  
13 embed that in Columbia Town Center perhaps CA can work  
14 with us and collaborate with us and take that  
15 communitywide.

16 MR. HAMM: In the next 45 days we will be,  
17 60 days we're going to be meeting with other groups and  
18 putting firm commitments in our presentation to the  
19 County along with our request for density to meet the  
20 objectives that Keith laid, that Keith presented here.  
21 And those really included a true leadership role in

1 attempting to effect many of these, the subwatershed  
2 improvements and we think, let's use this as an  
3 opportunity to do something significant.

4                   And we think it can happen and we think the  
5 private sector has abilities that the public sector or  
6 that the government doesn't but we've got a very  
7 innovative County government here that wants to work  
8 with us. We have a community committed to it. So,  
9 we're very serious about what we're presenting here.  
10 With respect to Keith's comment about invasive species,  
11 this is a flier that I was asked to read. "Plant a  
12 Bay-wise Landscape. Howard County master gardeners  
13 teach environmentally conscious gardening. A tour of  
14 the Library and plantings, including, on Tuesday, May  
15 13 at 7 at the Central Library. And you can register  
16 online at the library or call them." Maybe take one  
17 from the audience. Yes, ma'am, in blue here, yes.  
18 There's two in blue. I apologize.

19                   PARTICIPANT: And this may be out of place  
20 with the topic right now but the ADA did come up and  
21 how fast can we get some compliance with ADA? Because

1 it is a problem. It is a problem. You have this  
2 problem of typography to work around.

3 MR. HAMM: It depends on ADA to what parts  
4 specifically. I mean, some are going to be easier to  
5 fix sooner than others. Merriweather is kind of, you  
6 know, if we can work it out with CA and the community,  
7 Merriweather could be a relatively quick fix. Other  
8 places from, say, the Warfield Triangle to the  
9 Lakefront is a different matter. One of the things we  
10 are going to be looking at as well is the steps to the  
11 lake, do encourage, you know, do open up immediately  
12 the pedestrian connection to Oakland Mills. And, we've  
13 got ideas on how maybe those pedestrian walkovers  
14 could, you know, could meet ADA compliance that we'll  
15 be talking about later.

16 PARTICIPANT: It's, the one what gets to me  
17 is the Mall to the Lakefront because there is a bus  
18 that you can take to get there but you can't get back.  
19 And I was just wondering if --

20 MR. HAMM: Tomorrow night we are going to  
21 be discussing the transit alternatives. Eric from San

1 Francisco is coming out and we have had very good  
2 conversations with the college, who now has a shuttle  
3 bus system and one of our, one of the things we think  
4 could be part of a solution early on is a  
5 Transportation Management Association, which could  
6 support some additional local bus and commuter  
7 services.

8                   PARTICIPANT: The other thing is if you  
9 built housing first before the amenities are here,  
10 before the services are here, then you get the traffic  
11 out and they go to, you know, they go out for their  
12 business, they go out for their shopping, for their  
13 entertainment. So you want to get the amenities here  
14 to attract people before you put the housing up because  
15 otherwise your roads are going to be, you know, it's  
16 going to go out. The traffic is going to go out.

17                   MR. HAMM: So I'm clear, is your point that  
18 it's better to do the residential first?

19                   PARTICIPANT: No, no, no, no.

20                   MR. HAMM: It's best to do the amenities  
21 first?

1                   PARTICIPANT: Amenities services, yes.

2                   MR. HAMM: Right. So they stay and they  
3 can walk and use them?

4                   PARTICIPANT: Yes.

5                   MR. HAMM: We agree. And, well, we believe  
6 it's concurrent and we think that good mixed use is,  
7 you know, infectious in a good way. There's a lot of  
8 good things that come from it. You know, ideally you  
9 would have office with a hotel and residential and the  
10 amenities all at once. And that's what we're  
11 attempting to pull together here.

12                   PARTICIPANT: Otherwise you're going to  
13 have people go to Montgomery County and they may never  
14 think about coming back to shop or --

15                   MR. HAMM: That's an excellent point.  
16 Thank you very much. And I think I promised the other  
17 --

18                   PARTICIPANT: This question is for Keith,  
19 get you off the hook there. In your presentation you  
20 showed the nice greenway along the Patuxent River  
21 Valley and say that it's probably the best that you

1 have ecologically. I understand that that will also be  
2 the place where they're going to be putting in a sewer  
3 interceptor.

4                   So, it's a two-pronged question. One is,  
5 what impact will that have, how will you mitigate it  
6 and second, is it too late to look into other options  
7 of taking or our sewer and stormwater elsewhere, doing  
8 something else with it, do we need it? And do you need  
9 it for, you know, could we do other things.

10                   MR. BOWERS: Sure. Sure. Well, first of  
11 all, from my understanding that's a regional sanitary  
12 sewer line or interceptor and so what we do here in  
13 Town Center has very little effect on what they propose  
14 in terms of the upgrade for that regional line going  
15 through that. That's not to say that we're going to be  
16 looking at wastewater in Town Center in ways,  
17 innovative ways of how we may be able to treat that on  
18 site or treat it in such a way that it's  
19 environmentally sustainable. The impact that that  
20 actual line is going to have, from my understanding --  
21 and I've seen some preliminary construction plans and

1 read through some of the permits -- is unfortunately  
2 going to be pretty significant.

3           And, I know that there are right now going  
4 out to bid for I think up to seven different  
5 construction contracts because this is miles and miles  
6 and miles long. This is just one segment through here.  
7 And I'm not sure where Howard County stands in terms of  
8 their mitigation measures and whether they're willing  
9 to kind of go back to the table and look at ways of  
10 mitigating the specific impacts within this corridor  
11 right here.

12           But, if they are and we can find that out,  
13 then we would be more than happy to collaborate with  
14 them on looking at ways to potentially mitigate some of  
15 the construction impacts and, and the long-term impacts  
16 of the upgrade of that sewer line. So if anybody has  
17 any information on that or can steer us in that  
18 direction, we would be happy.

19           MR. HAMM: You may not be aware of this but  
20 Howard County actually has asked us if we would waive  
21 any conflict issues so that they could consult within

1 their ability to do so with you or any of our other  
2 consultants to come up with strategies for that  
3 mitigation.

4 MR. BOWERS: Great.

5 MR. HAMM: So the county is very focused on  
6 that. Here's a question. "Are you proposing to  
7 mitigate the five-foot diameter stormwater drainage  
8 pipe that flows directly into Lake Kittamaqundi from  
9 the Mall parking a lot?"

10 MR. BOWERS: Is that the one that flows out  
11 of Symphony Woods first or is that the one that goes  
12 right down --

13 PARTICIPANT: No, it comes out into, at  
14 about where the sushi place is.

15 MR. BOWERS: Right. So as part of phase  
16 one, no, but in terms of long-term redevelopment in  
17 terms of the master plan, yes, that we would look at  
18 the drainage, all the drainage systems coming from the  
19 Mall or off the Mall parking lot and looking at ways  
20 that we can basically do that whole drainage system,  
21 that we can capture rainwater, reuse rainwater, treat

1 and filter that rainwater. So, in the long run the  
2 answer is yes, that we will be looking at that.

3 MR. HAMM: What alerted me to this issue  
4 was learning that the rainwater that comes down through  
5 this stream bed here and I guess through this here kind  
6 of pools up on Little Patuxent and then flows into  
7 Symphony Woods here. And none of that is detained so  
8 it's all, it all turns out to be full of nitrogen and  
9 phosphorus and is pretty yucky stuff. And, you know,  
10 it just goes back to the time in which much of this was  
11 developed and the practices then used.

12 So, that's how we got into the idea of  
13 trying to look regionally at the two subwatersheds and  
14 beginning to look at what things we can do to address  
15 that. The Biohabitats had all the dots on the maps of  
16 different ideas. We priced those. We would like to  
17 talk, you know, we have had good conversations with the  
18 college, with the hospital. We introduced the idea to  
19 CA, who owns much of this land. So, we want to come up  
20 with some very comprehensive regional solutions.  
21 Hopefully that answers your question. But, if there is

1 a big pipe and we control it, that's good because we  
2 can fix it. Yes, sir?

3 PARTICIPANT: One issue that hasn't come up  
4 on the environmental is noise. You are planning on  
5 redoing Merriweather. Has a study been done on what  
6 the effects are going to be on noise? Right now it's  
7 tolerable.

8 MR. HAMM: My understanding is yes, that  
9 the committee on Merriweather looked into that with a  
10 great deal of detail, went into that in great detail.  
11 One of the things we would like to do is we own  
12 Merriweather now and, you know, we've got a contract  
13 set. The operator has done a very good job of  
14 reenergizing it. We would like for many, we would like  
15 to broaden its type of performances to include things  
16 other than just music, so that obviously will help  
17 some. And then the redevelopment of it eventually,  
18 that would be something we would look into very  
19 seriously.

20 This area actually represents a little  
21 tighter area that is now, you know, that people now

1 associate with Merriweather. The property line goes  
2 here and we wanted to make sure we could fit all of it  
3 within our property line and wanted to look for  
4 opportunities to do some things in these little barns,  
5 perhaps. This is in the CA land but this might be a  
6 cultural type activity or cultural type building. But,  
7 we would be retaining this bowl and apparently some of  
8 the sound attenuation things that are now used are very  
9 effective and so we would be looking at that. As we  
10 went forward, it would not get -- you know, our goal  
11 would be to make it better, not worse.

12 PARTICIPANT: I understand, it's been  
13 addressed somewhat already. Merriweather itself is not  
14 bad. It's the sound stages outside of Merriweather,  
15 temporary stages that make the windows vibrate. And,  
16 also we should keep in mind that the new residents in  
17 Town Center will be affected by Merriweather also.

18 MR. HAMM: We're aware. We share your  
19 concern.

20 PARTICIPANT: One other observation. When  
21 you talk about connectability from the Mall to

1 Merriweather, I think it should be Mall, Symphony Woods  
2 slash Merriweather.

3 MR. HAMM: Excellent point. Yes, sir?

4 PARTICIPANT: Keith, thank you. You gave a  
5 great presentation this evening. I appreciate all the  
6 detail that you went into and all the things you've  
7 looked at. I had like to focus on your stream. You  
8 talked about stability of the stream beds and I think  
9 if I don't butcher your facts you said that something  
10 like one mile of stream bed, you thought about you  
11 could stabilize that. CA is now in the process of  
12 putting out contracts to de-silt the three lakes, Wilde  
13 Lake, Lake Kittamaquidi and also Lake Elkhorn.

14 In your opinion the work that you plan to  
15 do, will that actually prevent the re-siltation of  
16 those lakes? Because it seems to me that there needs  
17 to be a more regional approach that would involve the  
18 county, the state and perhaps even the federal  
19 government with EPA Regional 3 or the Chesapeake Bay  
20 Program office out in Annapolis to look at the broader  
21 aspect because I'm not sure just looking at one mile of

1 stream bed is really going to be effective in stopping  
2 that siltation of those three lakes.

3 MR. BOWERS: Good point. Actually, the  
4 stream restoration that would take place in that  
5 Symphony Woods subwatershed doesn't even drain to Lake  
6 Kittamaqundi. It drains right to the Little Patuxent  
7 so all the restoration there wouldn't necessarily  
8 benefit the sediment problem happening in the lakes.  
9 We also know that Columbia Association is now  
10 undertaking a more comprehensive look at the  
11 subwatersheds that drain into these lakes and looking  
12 at measures like stream restoration and riparian buffer  
13 planting and reforestation to help address and mitigate  
14 that problem.

15 So, Columbia Association is undertaking  
16 that right now, and I think through their efforts  
17 combined with the efforts that GGP is willing to  
18 undertake as part of the Columbia Town Center, then it  
19 becomes more of a comprehensive or more of a  
20 regional-wide approach. And there are also, as you  
21 said, there are other agencies out there, there are

1 other programs out there that can be leveraged for both  
2 funds and in-kind services to help out with that sort  
3 of thing.

4                   So, I'm sure that the work that CA is  
5 doing, and, in fact, we talked with CA about  
6 collaborating with them on what we have found through  
7 working with GGP and working with their consultants to  
8 make sure that we come up with the best solutions and  
9 sort of uncover and identify all those opportunities,  
10 so, we do look at this from a regional perspective.

11                   MR. HAMM: And if I'm not mistaken, if, the  
12 regional approach we're attempting to take, if it were  
13 applied to where it flows into Lake Kittamaquidi and  
14 the other lakes, it would indeed reduce the need for  
15 dredging and the problems that we're now experiencing,  
16 is that correct?

17                   MR. BOWERS: You know, lakes in this  
18 physiographic region are not natural in the first  
19 place, so anytime you put a lake within a stream you  
20 have sediment that's being transported through that  
21 stream system. That's a natural occurrence and so you

1 will always get some sedimentation within the lakes.  
2 But the more we can reduce erosion and the down-cutting  
3 of those streams in the valleys by doing some of the  
4 stream restoration, we can significantly improve the  
5 conditions in the lake and negate some of the  
6 sedimentation going in.

7 MR. HAMM: You, sir, here, and then Alan  
8 and then one more, you, sir, third and then we'll -- I  
9 have been told there's cookies, we do have cookies and  
10 coffee, I'm told afterwards. I see bottles of water as  
11 well so we'll be available to visit one-on-one as well.

12 PARTICIPANT: I really wanted to thank you,  
13 GGP, for hiring this guy.

14 (Applause)

15 PARTICIPANT: He's made some wonderful  
16 presentations and he's come across very honest. He's  
17 told us the negatives as well as the positives and the  
18 things he's doing. I mean, looking at the presentation  
19 it may be that I'm looking at it through green-colored  
20 glasses but I'm really happy with what you're doing  
21 although I still have questions and there will be

1 questions as we go on. I personally live overlooking  
2 Wild Stream, the stream that runs along there. And we  
3 have a mosquito problem and I understand there's a  
4 problem with bats that eat mosquitoes and I'm concerned  
5 about some of the repairs that you're doing, that some  
6 of the things that you're doing are going to create  
7 standing water which will then increase the number of  
8 mosquitoes. So that's one issue.

9                   And the second -- and there's only two,  
10 well, maybe there's a third -- the second issue is you  
11 keep talking about native species and my friend over  
12 here asked this question about native species. But we  
13 are going to experience global warming and don't we  
14 need to talk about the species that will be able to  
15 survive in a slightly warmer climate or even a  
16 significantly warmer climate than we have now? And in  
17 particular I would like to get some trees around my  
18 little house for my wife on Mother's Day. And, so, can  
19 you give me some advice on what kind of trees to plant?  
20 And, by the way, we have a Town Center Environmental  
21 Action Group, about five of us were here, some of us

1 have left but you should know about it.

2 MR. BOWERS: So shadberry, redbud.

3 PARTICIPANT: Shadberry, redbud.

4 MR. BOWERS: Shadberry and redbud. That's  
5 two good understory tree species, that would be great.

6 PARTICIPANT: Okay. Thank you.

7 MR. BOWERS: In terms of climate change --  
8 I'll kind of take these backwards. In terms of climate  
9 change, that's, in sort of migration of species and  
10 vegetation communities that's something that is really  
11 swirling around in conservation and ecological  
12 restoration communities now and there's all kinds of  
13 groups and panels and people dealing with that subject  
14 in looking at science and ethics and practicality of  
15 what we do in terms of restoration, in terms of  
16 planting native plants, whether we try to predict  
17 what's going to happen in the future and accelerate  
18 that process now or whether we try to basically plant  
19 native plants now and let that process happen naturally  
20 over time. So there's still a lot of debate and  
21 controversy going on there.

1                   Climate change is something that we're  
2 going to be looking at in terms of any type of  
3 landscape restoration we do here. And, so, all I can  
4 say now is that that's certainly something we're  
5 considering but I don't have the answers to. But it's  
6 definitely on the forefront of our minds in. You know,  
7 the whole ecology community it's something that we're  
8 all dealing with.

9                   The first thing you asked about was  
10 mosquitoes and that's something that we have also been  
11 dealing with for probably over 20 years in looking at  
12 these kinds of water quality BMPs and standing water.  
13 There's been a lot of universities and academic  
14 institutions that have been studying weather by  
15 employing some of these water quality BMPs that we're  
16 actually providing more of a breeding ground for  
17 mosquitoes.

18                   And basically what the science is telling  
19 us is that first of all we don't really want standing  
20 water out there. We want water that's going to go into  
21 these areas and then infiltrate or get flushed out

1 because the standing water is where mosquitoes can  
2 breed in. If the water is moving or infiltrating they  
3 can't breed in there. So, the more that we can design  
4 these features to allow water to infiltrate over a 24  
5 or 48 hour period or move out in that same time frame  
6 we greatly reduce the risk of mosquitoes being able to  
7 breed there.

8                   The other thing that we do is that if we  
9 have ponds with no other type of vegetation around or  
10 no other habitat for predators, then it's an ideal  
11 situation for mosquitoes, too. So, the more we can  
12 look at this from sort of a holistic, living systems  
13 approach by habitat for predators of mosquitoes and  
14 combine that with flushing the water out in a short  
15 period of time, we greatly reduce the risk of  
16 mosquitoes and mosquito breeding. Will we get rid of  
17 it? No. So, but we are aware that it's something that  
18 we consider in all the designs that we do.

19                   MR. HAMM: Alan Klein and one more after  
20 that and then we'll -- two more.

21                   MR. KLEIN: Keith, Alan Klein. I'm the

1 spokesperson for the Coalition for Columbia's Downtown  
2 and, as it turned out, I didn't have to be much of a  
3 spokesperson tonight. I had this whole long list of  
4 questions that I developed as you went through your  
5 presentation and one by one various supporters of our  
6 coalition kept asking them without any prompting, you  
7 know, so you are hearing the concerns of the community.  
8 And Steve stole my thunder because I want to say that  
9 every time I hear you speak I get more and more  
10 sanguine about our future as a planet and as a  
11 community, so, I'm very much appreciative of you being  
12 here and grateful for bringing you here.

13 MR. BOWERS: Thank you.

14 MR. KLEIN: And I guess to Greg, I want to  
15 say in front of God -- that would be Andre representing  
16 the press -- and the public that we as an organization  
17 get a, have gotten a reputation among some as being  
18 antigrowth, as being, wanting no change. And I guess I  
19 want to say that if you all can come up with a plan of  
20 some clear standards, some clear metrics, some clear  
21 milestones for bringing this development forward that

1 the community can get behind, for us it's not about the  
2 numbers of this many units, that many units or  
3 whatever, it's about the impact. And if you are paying  
4 as close attention to these other aspects of traffic,  
5 of culture, of liveability and all the things that  
6 Keith has brought out, you're going to find a great  
7 partner in the community. So I'm looking forward to  
8 that.

9 (Applause)

10 MR. HAMM: Well, thank you very much.  
11 We'll try to live up to that standard and I greatly  
12 appreciate the comments. Sir?

13 PARTICIPANT: Keith, in your first  
14 presentation you showed a college and with the college  
15 you then did your study period. Then you showed  
16 exactly where the areas should be developed. In this  
17 you didn't show us a slide like that, in your  
18 presentation this time, Where did you develop, where  
19 your company developed in this or suggest in  
20 development matching it to the plan that's already in  
21 place with the county or were you still coming up with

1 the right places to develop land?

2 MR. BOWERS: Well, we did, we did that in a  
3 different roundabout way when we look at those  
4 vegetation communities and looked at the quality of  
5 those woodlands and looked at, from a regional  
6 landscape ecology standpoint, the important corridors.  
7 And, so, there again identifying Little Patuxent and  
8 identifying Symphony Woods corridors is from a regional  
9 landscape ecology standpoint, the most important  
10 ecological aspects of this area.

11 That's what we kind of zoned in on, said  
12 that's really important from a regional perspective.  
13 Now let's look at it in a little bit more finer grain.  
14 And while we didn't go through the same type of  
15 analysis I think you're referring to the University of  
16 North Carolina, Chapel Hill, that analysis that we did  
17 there. That was pretty much an open-slate piece of  
18 land with nothing on it. There was an old, there was  
19 an airport on there but it had basically been logged  
20 several times over and was never really developed.

21 And, so, they were looking at building a

1 whole new campus on there from scratch, where in this  
2 case we already have all this infrastructure already in  
3 place. And, so, it's about first of all identifying  
4 those regional important ecological areas and then  
5 looking at, given the existing infrastructure that's  
6 already in place, where could we develop or where  
7 should we sort of stay out of or where could we restore  
8 or enhance based on that existing infrastructure.

9                   PARTICIPANT: The other question I had,  
10 with he entranceway to the Symphony Woods, those sort  
11 of facilities could be in the parking lot that's  
12 already been disturbed, that's in part the Crescent and  
13 I wonder why you chose Symphony Woods as opposed to the  
14 Crescent.

15                   MR. BOWERS: Well, I think it was the whole  
16 -- it wasn't us. It was the whole team that chose  
17 that. And I think again it's looking at reinforcing  
18 the connectivity and the sort of liveability and  
19 cultural aspects of the Town Center in making that  
20 connection from the Mall and the shopping area to  
21 Merriweather Post and saying how can we do it in the

1 environmentally sensitive way. In those buildings that  
2 you see there again are just an idea of what could be  
3 done there. Again, GGP doesn't own that property.  
4 That's CA's property and it's just a, "what if," if we  
5 were to make a strong pedestrian active corridor  
6 through there, then that might be one alternative.

7 MR. HAMM: I would add to that -- and I  
8 don't know why I didn't think of this earlier but one  
9 of the original reasons for attempting to link strongly  
10 Merriweather to the first phase is that we heard from a  
11 number of people that Symphony Woods is a foreboding  
12 place that isn't welcoming, that they're not sure they  
13 can go there all the time. It's kind of, part of it,  
14 part of the issues were raised earlier about the  
15 understory and lack thereof.

16 What we envision here is introducing people  
17 to Symphony Woods and expanding that educational  
18 opportunity. Those are, you know, it's the community's  
19 call but we want there to be a cultural spine. You  
20 know, we want there to be a place, a gathering place in  
21 Columbia. And, we don't think Merriweather is going

1 away.

2                   So, we want to have some connection there  
3 and we threw ideas out and it's really the community's  
4 call. It's CA's call. But, we do think there wants to  
5 be a definitive place that represents the culture of  
6 Columbia and allows for it to grow and be sustained.  
7 And Merriweather is not going away so we thought let's  
8 make that world class and let's think of other  
9 educational, cultural museums, other things that can  
10 get people to enjoy Symphony Woods. So that was the,  
11 that's the logic and the discussion will continue.  
12 Yes.

13                   MR. HOWELL: Yeah, my name is Sherman  
14 Howell. I'm a member of the County Sustainability, we  
15 call it County Sustainability Board, by the way, and we  
16 have the chair here tonight and we also have the  
17 executive director tonight. So for the public concern  
18 and interest we have a special, we would have a special  
19 interest in this whole environmental process. I just  
20 wanted to the public to rest -- as well as CA will  
21 probably have a strong interest in it. I just want to

1 compliment you on the presentation tonight which was  
2 great.

3 I like the idea of a city within a garden.  
4 Apparently you have been visiting Battery Park. You  
5 know, Battery Park actually has within it Battery City.  
6 There are 3500, the last count I heard of, they have  
7 3500 different species of plants. So, I am very  
8 impressed -- I'm a walker -- very impressed tonight to  
9 hear that we will be a city within a garden. I  
10 encourage people when they go to New York, go to  
11 Battery Park. But this is how -- it's a lovely place.  
12 Thank you.

13 MR. HAMM: Thank you all very much for  
14 coming.

15 (Applause)

16 (Hearing was concluded at 9:15 p.m.)

17

18

19

20

21

1 State of Maryland,  
2 Baltimore County, to wit:

3 I, ROBERT A. SHOCKET, a Notary Public of  
4 the State of Maryland, County of Baltimore, do hereby  
5 certify that the within-named proceedings personally  
6 took place before me at the time and place herein set  
7 out.

8 I further certify that the proceedings were  
9 recorded stenographically by me and this transcript is  
10 a true record of the proceedings.

11 I further certify that I am not of counsel  
12 to any of the parties, nor in any way interested in the  
13 outcome of this action.

14 As witness my hand and notarial seal this  
15 8th day of May, 2008.

16

\_\_\_\_\_  
Robert A. Shocket,

17

Notary Public

18

19

20 My Commission Expires:

21 November 1, 2010

