Green Roof Review Task Force  
**DRAFT Agenda – Meeting #7 – May 2, 2018 – 9:00-12:00**  
200 W 14th Ave, 2nd Floor, Grand Mesa Room

**Meeting Objectives:**
- Review the full package of proposed action for new buildings and existing buildings
- Build toward consensus on a package that everyone can live with

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9:00 Opening
- Welcome – Opening – Introductions – Preliminary Matters – Agenda Preview and Operating Protocol Reminder
- Council Committee-of-the-Whole – May 7

9:05 Latest Version – Options and Proposals
- Presentation – New Buildings
- Q&A ---- Reserve Judgment – Seek to Understand the Proposal

9:40
- Presentation – Existing Buildings (revisions since your last meeting)
- Q&A ---- Reserve Judgment – Seek to Understand the Proposal

10:00 Consensus-Seeking Discussion – Now’s the Time for Judgment

**New Buildings Detailed Questions:**
- Is the new proposed coverage requirement acceptable?

**Existing Buildings Detailed Questions:**
- How much green is the right amount of green? What option does the task force prefer for existing buildings?
- Should buildings over 25,000 or 50,000 be included in the Energy Program and what should the program energy savings goal be?
- Do you like adding a fee-in-lieu option for the Energy Program, if so is a financial contribution to support low-income and affordable housing customer solar adoption through rooftop or community solar a good way to direct the funds?
- What should be eligible for credit for past compliance (previously implemented energy efficiency or water quality measures)?
- Are exemptions necessary for the Energy Program? If so, for what circumstances?
- Should we provide another option for those buildings that must replace a roof due to hail damage or fire?

**Overarching Questions**
- How does the current package serve the core principles and the interests of all stakeholders?
- In what ways does it fall short?
- What do we do to improve the viability of the proposal?
- What may have to change to get everyone on board?
- Is the system striking the right balance of flexibility and performance?
- Does the package achieve the benefits of the ordinance in a more effective and efficient way than the version adopted by the voters?

11:49 Recap – How Close are We to a Meeting-of-the-Minds?

11:50 Next Steps
- Public Process – Getting More Eyes and Minds on the Current Proposal
- Task Force Meeting – Wednesday, May 23 – 9:00 – 12:00
- Council Committee-of-the-Whole – May 7 and June 25
- Other?

12:00 Adjourn
Meeting Objectives:
- Review the full package of proposed action for new buildings and existing buildings
- Build toward consensus on a package that everyone can live with

I. Comprehensive Proposal – Existing and New Buildings

Discussion/Reaction/Revision
- This package takes the options on the ballot and makes each one a bit more flexible; that was our goal
- This is impressive; would rather have all green roofs, but it is our duty to make it work for buildings that can’t make the green roof work
- For the green space element – it’s best if we can aggregate the spaces – better for water, for plants, for animals, better for cooling and water management, easier to maintain – we need to think about how we allow for the individual building green spaces to be joined together
- We need a thoughtful definition of campuses; in the development process, campuses have open space requirements in general development plans, so this would be in addition; there could be situations where one parcel is used for all of the campus’s green area; there will be tracking and administrative work; maybe we tie this to site development plans as they do in Toronto
- It is important to recognize that this is above what is already required for water quality; we need to be clear about that; ditto aggregating small green spaces
- For existing buildings, separating the requirements for individual buildings is essential
- Breaking up the spaces helps
- Though it is hard to see the increase for apartments, this is a fairer approach to coverage requirements
- Essential to keep the energy program threshold at 50,000 square feet and not lower it to 25,000
- In the ‘non-controversial’ list, item #3, we should consider how to deduct rooftop mechanical equipment from the available roof space; the current proposal includes an assumed 40% for every building
- In the alternative, the recommendation could be to eliminate the across-the-board 40% and have each building calculate its own available roof space
- We should think about what’s easiest for building owners and the city to implement for campuses and to track the allocation should the owner sell off pieces of a campus
- Administratively, it is easiest to track the site plan
- No clear how many downtown buildings have options for anything but green on the roof (because there is no available space on the ground), and not certain how many in downtown can support the weight of a green roof
- The estimates for existing buildings were developed city-wide; in general, taller buildings are more leeway to carry additional weight than low, flat buildings which are generally built to carry only the roof as designed; many can barely support extra insulation; concrete structures do well, steel less well, and wood-frame buildings are not built to be able to add heavy load
- Generally, no building, regardless of construction type will be built to carry more load than originally designed
- Tallest buildings will likely have the greatest constraint in available roof space
- Making tree lawns viable require significant soil volume; downtown has limited space but many buildings have space for street trees
- We should continue to think about how this ordinance creates incentives and disincentives; might it change what downtown developers choose to build
Given the economics of downtown development, these requirements are not going to change downtown building types

- We need to think about unexpected emergencies (fire and wind) and some that are more common (hail); perhaps cool roof only if an emergency
- It is important that we continue to think about the potential for unintended consequences; we want to maintain the momentum for increased density, we do not want to negatively impact the higher density housing projects
- On the positive side of the economic question, the green roof elements of higher density housing projects are being marketed as amenities
- We should ask the city’s economist to consider the implications and potential market shifts the proposal could create; **Katrina will investigate**

Prior improvements – Energize Denver will track compliance so the data will exist to give credits for energy efficiency improvements made within the last 5 years, to document improvements that have value over time and to check whether energy star scores are maintained

- Failure to comply would trigger a citation
- With respect to landmarks – this proposal treats everyone the same and the goal is to have at least one option that will work for every building so that the program does not have exemptions or exclusions
- 150 sq ft of green is a reasonable size
- 200 sq ft of green seems reasonable as well
- Additions – if an addition takes the whole building over a size threshold, then the requirement should apply; under the current ordinance if you have a larger building, you can add to the building and not comply – that is not fair
- We need to make sure that we aren’t triggering roof replacement for the original portion of the building if that portion doesn’t need to be replaced
- Yes, the calculations for an addition need to apply to the new portion of roof
- We need to clarify how that same principle applies to a building with multiple, independent roof surfaces
- Yes, we should avoid requiring good roof to be replaced; only need to comply for the part off the roof that is being replaced
- Building owners will put off replacement as long as possible to avoid triggering the ordinance
- Owners will try to patch and avoid high-cost replacements – with or without this ordinance – that’s not something we can change
- A barrier to consensus – if 25-50k sqft buildings are in the energy program
- We need to clarify how fees are used and should exclude them from being used for administration costs – all of the fee-in-lieu should go directly to the new green initiatives
- We should continue to look for ways to reduce costs further
- The goal should be to get costs down, if possible; we have done a good job of that
- Major renovations not included (they were not called-out in the original ordinance) and would not trigger the ordinance if they don’t trigger a roof replacement for an existing building
- In the calculator, we should test an assumption that a higher percentage of existing buildings could support a green roof; we may have been too conservative in the estimate
- Cool roof does not apply only to flat roofs – there are cool and highly reflective materials for sloped roofs
- If the roof is a defining feature, then the building owner takes a different path
- We need a definitions section and need to be sure that we are defining terms like ‘cannot support’, ‘defining feature’, etc.
- Building a sloped roof is not a way to avoid compliance – there is not an exemption for sloped roofs
- It is possible to build a green roof on a slope
If a building owner wishes to prove that the roof cannot support a required element (green or solar) their team would need make a presentation to the Building Division; staff will work with this proposal and can tighten up the specifics before the next meeting.

- We just have to make sure there is at least one option that works for each building type
- We need to help owners and developers understand how to comply
- There may be uses we want to think about separately – hospitals, for example
- We want to communicate this so that insurance coverage changes in response to the ordinance
- We need to look for balance – have we constructed something that can work for everyone

II. Next Steps

Public and Stakeholder Input

1. Updating the proposal in light of today’s meeting
2. Distributing the proposal for input from the technical advisors who have agreed to do a technical review – these are individuals who might have filled the seats on the task force and have agreed to help at this stage (approximately 50 individuals)
3. Distributing the proposal for input from everyone who has attended one of these meetings and given us their e-mail address and all who have sent in an e-mail address with a request to stay involved (more than 700 individuals)
4. Two public input sessions:
   - May 11, 9:00-10:30 – Webb Building – 201 W. Colfax – Room 4.G.2
   - May 14, 9:00-10:30 – Webb Building – 201 W. Colfax – Room 1.B.6
5. Summarizing the Input for the Task Force

Task Force Review and Evaluation

1. Taking the proposal to constituents for discussion – helping them to understand how the Task Force has worked to realize the benefits of the original ordinance with lower cost, greater effectiveness, greater fairness, greater flexibility and more willing compliance
2. Testing the proposal with them – applying this framework to specific buildings and specific circumstances
3. Assessing whether this proposal is an improvement over the existing ordinance

City Council Committee-of-the-Whole – May 7th – 1:30-3:00

1. Briefing on the efforts of the Task Force through meeting #7
2. Input from council members on the proposal’s ability to realize the benefits of the original ordinance with lower cost, greater effectiveness, greater fairness, greater flexibility and more willing compliance

Task Force Meetings 8 and 9

1. Meeting 8 – May 23 – 9:00-12:00
2. Meeting 9 – June 7 – 1:00-4:00