

**CITY OF BOULDER
PLANNING BOARD AGENDA ITEM**

MEETING DATE: October 29, 2015

AGENDA TITLE: Public hearing to receive feedback on the draft pilot Form-Based Code (FBC) for the Boulder Junction Phase I area and the potential review process.

REQUESTING DEPARTMENTS:

David Driskell, Executive Director of Community Planning and Sustainability (CP&S)
Susan Richstone, Deputy Director of CP&S
Sam Assefa, Senior Urban Designer, CP&S
Karl Guiler, Senior Planner/Code Amendment Specialist, CP&S
Leslie Oberholtzer, Design Consultant, CodaMetrics

OBJECTIVES:

1. Hear Staff and Consultant presentations
2. Hear Public Comment
3. Planning Board clarifying questions, discussion and request for feedback.

PURPOSE

The purpose of the public hearing is to provide opportunities for CodaMetrics, the city's design consultant, to present the draft Boulder Junction Phase I Form-Based Code (FBC) and for Planning Board to ask any clarifying questions about the FBC and provide input before the draft and associated ordinance are considered on Nov. 19th.



The draft FBC can be found in [Attachment A](#) and is labeled as Appendix M: Special Design Areas, Boulder Junction Phase I. Appendix M would specify "Special Design Areas" that would have special regulations much like overlay districts and could be updated if the city adopts new form-based codes in the future. CodaMetrics has drafted the FBC in a way that would allow incorporation of additional FBCs if desired. Staff recommends this option as it would create minimal disruption of the existing code and if need be, could be removed if the city opted to not continue implementing FBC in the future. Alternatively, if form-based codes were found to be successful in the future, the appendices could replace sections of the land use code in the long term.

Staff is also looking for feedback on what the review process for projects in the Form-Based Code area should be and what the level of staff and board discretion should be based on the FBC's content.

[Attachment B](#) contains a memo from Victor Dover of Dover Kohl with suggestions for different levels of review to help inform the discussion.

The public hearing will follow a public open house on the draft FBC from 3-6pm. This memorandum includes a staff analysis of the draft FBC and recommendations on the review process. A background of the project and an overview of the structure and content of the FBC is also included.

To guide the discussion the following questions are posed to Planning Board:

1. Draft FBC: What feedback does the Planning Board have in terms of the FBC's format and content in informing future development in the Boulder Junction Phase I area? Are there any changes, additions or deletions that are necessary to address design concerns raised throughout the process?
2. Review Process: What type of review process should be used to implement the FBC? What should the level of staff and board discretion be based on the FBC's content?

BACKGROUND & PUBLIC INPUT

Form-Based Code pilot project

As part of the Design Excellence Initiative, the city has been piloting a Form-Based Code (FBC) in Boulder Junction, defined as the Phase I area within the adopted Transit Village Area Plan. This area was selected on a recommendation by Victor Dover of Dover/Kohl Partners based on his work on the Design Excellence Initiative last winter. That work culminated with a recommendation to City Council last January for piloting a FBC for a limited area such as Boulder Junction where there is already a consensus on land use and urban design policy articulated in an adopted Transit Village Area Plan.

As requested by City Council, the FBC project was commenced in April of this year and was anticipated to be a six-month process, which was extended by a month to allow for more internal and FBC Working Group review time. The project has involved outreach to the community and coordination with review boards (i.e., Planning Board, Transportation Advisory Board, Design Advisory Board and Boulder Junction Access District) and council about desired building designs and forms that would inform the final pilot FBC. A working group composed of representatives of above referenced boards has also been informing the pilot FBC and has met seven times to date.

The overall purpose of considering FBC as a new tool for Boulder is to address design quality and provide more predictability on development review issues recently articulated through community, board and council conversations, as summarized in the January 20, 2015 memo from Dover Kohl ([link to memo](#)). The City of Boulder's Community Planning & Sustainability Department (CP&S) is leading the effort in collaboration with other city departments and two consultant teams: Dover Kohl and Partners and CodaMetrics. Dover Kohl and Partners will assist in the broad, citywide Design Excellence discussions that would ultimately inform changes to the land use code, and CodaMetrics will assist in preparation of the pilot FBC.

If adopted, the FBC pilot would apply to the Phase I area of Boulder Junction. Victor Dover's recommendation was that it be tested in a small geographic area where an adopted vision is already established. Staff understands that this is challenging considering that there are already development projects in the review pipeline within the area that may be acted upon prior to adoption of the FBC. Staff and CodaMetrics have worked with applicants of the S*park, Reve and The Commons projects in a two-way conversation of how the projects could be informed by the progress of the FBC. While the projects may not end up 100 percent consistent with the final FBC pilot, the hope is that they will adopt and address

design elements within their projects to reflect the evolution of the FBC. Staff finds that the approved Commons and S*park projects were well-informed by the ideas discussed during the FBC process. It is important to note that the city is embarking on what could be a longer process of determining whether FBC is appropriate for Boulder to achieve better design outcomes. Boulder Junction is an opportunity to test the FBC tool itself as well as the process. If successful, staff anticipates structuring new public processes of review for other areas of the city (e.g., Phase II Boulder Junction, Downtown, North Boulder etc.) based on what has been learned through the pilot project.

Below is a summary of the FBC pilot timeline:

May & June 2015- Events related to the FBC pilot commenced in the week of May 11th and included a joint meeting of Planning Board, Boulder Design Advisory Board (BJAD), Transportation Advisory Board (TAB) and the Boulder Junction Access District on Thursday, May 14th. At the May 14th board workshop, CodaMetrics lead a discussion with board members on desired and undesired design elements that would help inform what the FBC covers and the types of prescriptive standards to achieve the desirable elements that may be incorporated into the draft FBC.

On May 15th, Dover Kohl and Partners presented to the public, "[Form-Based Code 101](#)", which summarized what form-based codes are, the benefits of a form-based code for the Boulder Junction area, how it might be useful elsewhere in Boulder, as well as some of the limitations of form-based codes. The event also included a question and answers session that can be viewed at the link above.

CodaMetrics held a community workshop open to the greater public on Saturday, May 16th at the Hotel Boulderado. The event was attended by roughly 30 persons and involved lively discussion about design and what would be appropriate in the Boulder Junction area. While there were expressions of varying architectural taste, there were also common themes of agreement.

City Council received an update on the FBC project on May 26, 2015 and provided input on draft Guiding Principles on June 15, 2015. The guiding principles were prepared by the consultant, CodaMetrics, to assist in the formulation of the draft FBC and inform applicants that have projects in the pipeline in the Boulder Junction area. The guiding principles included a list of "potential" regulations to address key design concerns identified through the process with goals of creating better buildings and ones that fit the vision for Boulder Junction. The findings of the principles were that Boulder desired "Honest, Simple and Human-Scaled" buildings. The packet regarding the FBC pilot including the guiding principles and a narrative of the entire process since April 2015 can be reviewed [here](#) and searching for the June 15th packet.

July & August 2015- CodaMetrics and city staff held a workshop with members of the public on July 22nd. CodaMetrics presented an overview of the FBC and the input received thus far before discussing the draft components, which are discussed in the 'Structure and Content' section of this memorandum. Following the presentation, attendees circulated to review information and provide input on the following five topics: I. Regulating Plan, II. Public Realm, III. Building Materials and Construction Quality, IV. Building Proportions, and V. Building Massing. Most of the workshop was an opportunity for members of the public to better understand how FBC might work and what the proposed content would be.

Throughout the duration of the project CodaMetrics and staff have met with members of the community in stakeholder meetings ranging from neighborhood representatives (e.g., Steel Yards, North Boulder etc.) and other groups like the Chamber of Commerce and Downtown Boulder. Most feedback has been

positive. Some concerns heard relate to whether FBC would create too many buildings that look the same or whether the FBC would add additional layers of development review complexity or cost upon proposals. CodaMetrics indicated that while certain parameters would have to be met to get a specified level of quality or design, there would still be flexibility to achieve varied, creative buildings. Portions of the code actually require certain levels of variation between properties in terms of setbacks, materiality etc. In terms of cost, while material costs may increase with higher levels of quality required, more predictability in city expectations and higher likelihood for shorter review process would also decrease cost.

A study session with City Council was held on Aug. 11th. A summary of the discussion can be found [here](#) within the Sept. 1, 2015 folder (Agenda item 3B).

September 2015- CodaMetrics provided the draft of the FBC to the city in Sept. 2015. The draft was circulated to several city departments for review and then forwarded to the FBC Working Group for review and comment at two meetings. Victor Dover of Dover Kohl and partners has also reviewed and commented on the draft. Recommended changes from these reviewers have been incorporated into the draft FBC.

WORKING GROUP FEEDBACK

The FBC working group has met on several occasions throughout the pilot project and its comments have been summarized in previous memoranda. The working group met most recently on Sept. 21st and Sept. 28th to discuss the draft FBC. Below is summary of comments from those meetings:

- Focus on the properties in the southwest quadrant of Boulder Junction Phase I, as this is the area that will be most impacted and informed by the adoption of the FBC. There was a discussion about exactly which properties were in Phase I. Staff has clarified that the limits are 30th to the west, Valmont to the north, the BNSF railway to the east, and just south of Pearl to the south. Phase I does not include properties west of 30th, which are technically part of Phase II.
- Industrial property north of Goose Creek path- There was discussion about the industrial property between the Steel Yards project to the north and Goose Creek to the south. There was some disagreement about what the scale of the buildings should be – To effectively frame the Depot Square Plaza to the south from an urban design standpoint taller (4-5 story) buildings would be most effective; however, some members were concerned about that scale and the impact it would have on the existing residential to the north. There was an expressed desire to have that property develop with residential, potentially townhouse type uses. CodaMetrics noted the importance that buildings on that site front to the south towards Goose Creek onto potentially a new enhanced pedestrian connection/linear park in order to avoid backs of buildings to the creek and fronts onto the private alley to the north. This is a requirement of the FBC.
- Building length/massing- The group liked the restrictions to building length by type as proposed. There was support for the massing and height limitations on the city site at the corner of 30th and Pearl in order to preserve views of the Flatirons from Depot Square. There was less consensus about the importance to protect viewlines from the corner of 30th and Goose Creek. More mass modeling was requested for Planning Board.
- Paseos- With respect to paseos, open air walkways were preferred to roofed walkways or atria and that paseos should create permeability, be activated with uses and have good transparency (windows) throughout their length. No tunnels.
- Open space for residential- There were concerns that there may not be enough residential open space requirements for play areas to encourage families in the area.

- Public realm- There were discussions about block size and preference for narrower streets and other traffic calming measures such as bulb-outs. Coordination with fire department necessary. There was also discussion about the new north-south street through the city site to provide access to the lots.
- Building design/materials- There were discussions about the quality of buildings materials (e.g., material transitions, quality at the street level, stucco etc.), encouraging different roof styles, hiding mechanical equipment, and level of window glazing on different facades. There were also some divergent opinions about whether balconies should be restricted on facades or not as well as what kind of balconies are favored.

DISCUSSION

Staff is looking for feedback on the draft FBC and the potential review process before returning on Nov. 19th with an updated draft FBC and ordinance to adopt. To guide the discussion the following questions are posed to Planning Board:

1. Draft FBC: What feedback does the Planning Board have in terms of the FBC's format and content in informing future development in the Boulder Junction Phase I area? Are there any changes, additions or deletions that are necessary to address design concerns raised throughout the process?
2. Review Process: What type of review process should be used to implement the FBC? What should the level of staff and board discretion be based on the FBC's content?

Draft FBC

The draft form-based code (FBC) can be found in [Attachment A](#). An overview of its structure and content can be found in the 'Structure and Content of the FBC' starting on page 10. Leslie Oberholtzer of CodaMetrics will also be at the public hearing to do a walk-through of the FBC.

Effectively, the FBC would specify new form and intensity regulations separate from Chapters 9-7, "Form Standards," B.R.C. 1981 and 9-8, "Intensity Standards," B.R.C. 1981 of the land use code, but would still be subject to the Use Standards of chapter 9-6, Development Standards of chapter 9-9 and the Subdivision Regulations of chapter 9-12. New references would be added to the code pointing users to the appendices and a new review process section would be added (this is discussed further below) to implement the FBC.

Throughout the review process for the pilot project (e.g. working group meetings, stakeholder meetings, community workshops and board meetings), many design related concerns have been heard. While it's unrealistic to think that all of the design issues will be addressed to everyone's satisfaction, staff finds that many of these design problems are addressed in the FBC and that in general, the FBC will result in better design outcomes and buildings that are more representative of Boulder in terms of scale and quality.

Some of the key features of the FBC (see 'Structure and Content of the FBC' for more information) that would be notable design improvements and create more predictability over current regulations are:

- Public realm requirements that would create new special connections to break up blocks, new design criteria for quality pedestrian walkways (e.g. paseos) and new open space types that would relate to surrounding context.
- Building form requirements that would result in simple, honest and human-scaled buildings with a greater sense of symmetry and avoiding over-articulation.
- Design requirements that require high quality materials and prohibit less enduring materials making buildings appear permanent and avoid complicated, confusing facades by requiring a certain percentage of high quality materials and specifying where material changes can occur.
- Height limitations in certain areas to preserve views and for certain building types to achieve a diversity of building heights.
- Limitations on building length and requirements for open paseo penetrations between buildings to limit building scale and length and increase site permeability.
- Specifications for windows that will create more proportionality by requiring vertical dimensions in some scenarios and create more visual interest through addition of lintels and indents to create shadow lines.
- Specified areas at the storefront level must be used as retail, restaurant or service uses to activate the pedestrian spaces.
- Includes provision to encourage flexibility and design variation between buildings.
- Protects viewlines from Depot Square to the Flatirons.

QUESTIONS: *What feedback does the Planning Board have in terms of the FBC's format and content in informing future development in the Boulder Junction Phase I area? Are there any changes, additions or deletions that are necessary to address design concerns raised throughout the process?*

Review Process

As opposed to a more prescriptive process where the city is clear about what is required in projects to result in good design outcomes, the Site Review process has been criticized in recent years for its unpredictable results. This is because while Site Review requires compliance with detailed criteria related to site and building design, compliance with the long list of criteria can be somewhat subjective and the built results have created mixed reactions and raised questions of consistency with other projects in terms of their design quality (see pages 11-15 for design issues that have been raised through the FBC process). With the strong level of discretion that is inherent in Site Review and the back and forth between the city and the developer through the review process to meet the criteria, the process can be costly and unpredictable – especially when unexpected conditions, design changes or verdicts are decided on the project late in the process after much time, effort and money has been allocated to a proposal.

These challenges have prompted the city, as part of the Design Excellence Initiative to consult with Victor Dover of Dover Kohl and Partners. Dover Kohl was charged with conducting a review of Boulder's development approval procedures and make recommendations for better tools and procedural changes to address concerns related to lengthy review processes and bad design outcomes. Some of the key tasks for Dover Kohl included recommendations on:

- Process changes that would lead to increased predictability in the review process; and
- Changes to Site Review criteria that would make discretionary review more effective and lead to better buildings, taking into account roles of the Design Advisory Board and the Planning Board.

Regarding better tools for the city to consider, one of Dover Kohl's recommendations was to test a form-based code as a pilot that would eventually be integrated into the current land use code. Some key objectives of a FBC include:

- To make a clear and unwavering statement in the rules about desired design outcomes, including building mass, scale and height at specific locations;
- Create more predictability in expectations for applicants, staff, boards and the public; and
- Eliminate lengthy review process and “horse-trading” and instead establish a more streamlined process of review and approvals of compliant development applications;

In addition, Doiver Kohl was charged with recommendations on how best to integrate FBC into current land use code. These recommendations are found in [Attachment B](#).

Per the Dover Kohl recommendation:

- i. The FBC can be used to streamline the development approval process;*
- ii. The FBC can create better predictability with development in the built environment;*
- iii. The FBC at Boulder Junction can act as a “pilot project” allowing the City to test and become familiar with FBC as a policy mechanism, so that this method may then be applied to other locations (in some form) in Boulder.*

The recommendation goes on to say that the “*ideal scenario would streamline the process for FBC-compliant development in Boulder Junction, providing a new by-right path to approval of building design and site plan; Identify community benefits of greatest importance upfront, and include required community benefit criteria in the Form-Based Code, which could if necessary be linked to incentives for development applicants; and allow full development (e.g., height / density / or intensity) by-right if applicant meets specified FBC requirements.*”

With respect to community benefit, the draft FBC addresses many design related benefits that have been raised in the community (e.g., requirements for shorter building lengths, restrictions on building height to achieve diversity of heights, more site permeability with paseos etc.) to achieve better design outcomes. The FBC does not include benefits related to energy efficiency at this time as the city is working on new regulations that would apply citywide and would likely surpass what could be integrated into the FBC at this time.

Consistent with Victor Dover's recommendation, because form-based codes are prescriptive in that they specify exactly what a jurisdiction finds appropriate and acceptable for site and building design, FBCs are typically implemented in a non-discretionary manner where if a proposal meets all of the specifications in the FBC, they are approved like a building permit without review criteria and public hearings. This type of review is the most predictable for developers, the city and the general public as the specifications are explicitly spelled out and are not subject to negotiation or subjective criteria which typically create inconsistent results and some outcomes that the city did not anticipate.

That said, Victor Dover and the city are aware that eliminating review board discretion may be difficult, at least until the results of the FBC are known. With that in mind, Dover has spelled out a number of options for discretion effectively creating new review thresholds based on either number of building stories or gross floor area.

Based on the uncertainty, inconsistency and subjectivity identified in the Site Review process, staff is recommending a new review process for projects that are in form-based code areas (e.g., Design and Form Review?). The review would be similar to Site or Use Review, but would not include the extensive discretionary review criteria or mandatory public hearings, since the projects would be subject to more detailed, objective standards in the FBC specifying the city’s expectations for developments in the Boulder Junction Phase I area. The review process could have an administrative review component for smaller projects (e.g., one-story, small additions, or under a specified valuation) and a more involved review process for larger projects.

Based on the Planning Board’s growing knowledge of how the FBC could work, staff is looking for feedback on what the review process should be and what the level of discretion should be (e.g., should there be a call-up process?). To assist in this discussion, staff has laid out the following options for discussion:

Review Process/ Discretion Option	Advantages	Disadvantages
<p>1. No call up/Staff level review</p>	<ul style="list-style-type: none"> • Most consistent with philosophy of FBCs to have clear regulations to meet city goals and no discretionary review. • More predictable to developers and the community. • Less time consuming and costly. • Avoids perception of “horse-trading” at public hearings and “design by committee.” • More consistent and equitable results in development. • Removes some burden from Planning Board and City Council and allows focus on other planning items. 	<ul style="list-style-type: none"> • May not avoid a design that is found to be unacceptable by some. • Site specific design opportunities not identified by the FBC may be missed.
<p>2. No call up/Staff level review with Mandatory Design Advisory Board (DAB) review.</p>	<ul style="list-style-type: none"> • Most consistent with philosophy of FBCs to have clear regulations to meet city goals and no discretionary review. • Introduces expert design input from DAB which has resulted in improved designs in projects. • More predictable to developers and the community. • Less time consuming and costly. • Avoids perception of “horse-trading” at public hearings and “design by committee.” 	<ul style="list-style-type: none"> • Site specific design opportunities not identified by the FBC may be missed.

	<ul style="list-style-type: none"> • More consistent and equitable results in development. • Removes some burden from Planning Board and City Council and allows focus on other planning items. 	
<p>3. Call-up based on specific identified areas of concern/discretion.</p>	<ul style="list-style-type: none"> • May avoid an unacceptable design. • May address site specific design opportunities that should be applied to a project. • Implements the FBC in a way that is cautious until the outcomes are better determined. 	<ul style="list-style-type: none"> • Provides little advantage over the currently identified challenges of the Site Review process. • Would require creation of new subjective criteria as part of a call-up process. • Less predictable to developers and the community. • More time consuming and costly. • Risks of perception of “horse-trading” at public hearings and “design by committee.” • Less consistent and equitable results in development. • Retains discretionary burden on the Planning Board and City Council.

QUESTIONS: *What type of review process should be used to implement the FBC? What should the level of staff and board discretion be based on the FBC’s content?*

STRUCTURE AND CONTENT OF THE FORM-BASED CODE (FBC)

Key Components

Key components (listed below) of the draft FBC ([Attachment A](#)) are discussed in this section.

- I. Regulating Plan and Building Type requirements (sections M-1 and M-3 of FBC)
- II. Public Realm (section M-2)
- III. Site and Building Design (Section M-4)

I. Regulating Plan and Building Type requirements (see pages 8-12 of [Attachment A](#) for the Regulating Plan and pages 33-52 for specific Building Type requirements)

The regulating plan is a development guiding map based on the city's Boulder Valley Comprehensive Plan (BVCP) land use map designations for Boulder Junction, the TVAP plan and the zoning in the area. It is more specific than a zoning map and breaks up the area into sub-districts and specifies unique or special design elements for certain sites or blocks. It may outline streets with special design requirements, specified open space locations open to the public, vista opportunities, required storefront retail areas etc. The regulating plan also specifies required TVAP street, alley and pedway connections in the phase I Boulder Junction area.

Another purpose of the regulating plan is specify allowable 'building types' for each sub-area district, each with their own form and massing requirements. Examples are 1) Main Street Storefront, 2) Commercial Storefront, 3) General Mix, and 4) Row Building. Each of these building types would be regulated by a number of specific form regulations such as 1) Built-to lines, 2) Setbacks, 3) Required percentage of frontage along a streetscape, 4) Maximum site coverage, and 5) Maximum Building Width etc.

There would also be maximum story heights, maximum number of stories and requirements for transparency (i.e., windows) at each floor to avoid blank walls. These regulations would be similar to some of the code requirements found in the land use code, but would be more specific.

The Regulating Plan is found on page 9 and the Building Type requirements are found on pages 33 through 52. Some examples of Building Type requirements that will inform the design of buildings are as follows:

- Built-to zones and setbacks
- Maximum building length
- Maximum overall building height
- Maximum and minimum story heights
- Façade transparency requirements per façade and for each floor
- Entrance locations
- Horizontal and vertical façade divisions
- Cap (Roof) types

II. Public Realm (see pages 16-30 of **Attachment A**)

The experience and interface of buildings to the adjacent pedestrian and vehicular environment has been an important issue discussed in this process. The public realm plan would specify the desired streetscapes in terms of street width, building to street ratios, tree plantings, hardscape materials as well as specific plaza/open space design requirements.

The public realm plan, like the regulating plan, is an opportunity to require certain design features that are not explicitly specified in the zoning map or connections plan. For instance, if there are opportunities for additional pedestrian pathways through blocks to create additional permeability and to break down the mass of block-long buildings they can be added to the plan.

Another identified opportunity that has been proposed on the plan above (shown in red on the public realm graphic) is the opportunity for a special pedestrian corridor along the north edge of Goose Creek. This idea generated a lot of discussion at the FBC working group and the joint board meeting. Whether the connection is multi-modal or just an emphasized pedestrian connection, it was considered important to ensure that buildings on the site (currently occupied by a long industrial used building) would face southward with their backs positioned along what would be an alley already constructed in Steel Yards. Having new buildings face that alley with their backs to Goose Creek would not be a preferred urban design outcome.

The connection, which could be an extension of the Mapleton right-of-way into Boulder Junction, could be treated with unique landscape and hardscape details, tree plantings, and benches with potential views of the Flatirons. The connection could also create a new celebrated connection from the future park and Depot Square to the retail uses north on 30th. It is unlikely that such a connection would be vehicular given alignment issues with 30th and Mapleton and in the vicinity of the new Goose Creek bridge in Depot Square. These are the specific kinds of urban design ideas that could make the FBC a better implementing tool for TVAP's vision for Boulder Junction than the current zoning or Site Review process.

III. Site and Building Design (see pages 54-65 of **Attachment A**)

The quality of building materials approved for developments and how they are constructed and assembled has also been a key design consideration identified through the FBC pilot process and as part of the Design Excellence initiative. A specific part of the FBC that effectively goes beyond just form alone is clearly specifying what materials are permitted or prohibited. Percentages (e.g., primary building materials and secondary building materials) and locations of the materials can also be specified.

The image preference surveys and other forums for feedback identified building materials that were desired or found to be appropriate to Boulder Junction versus other materials that were not considered as durable or did not match the intended character of Boulder. For instance, some materials make buildings appear permanent and coherent with other buildings of an area and some materials make buildings appear more temporary or out of character with the surrounding context. Sometimes building materials can be applied simply with primary and secondary building materials while other buildings have been designed with multiple materials that appear "too busy".

While there are good examples of building design and material usage in buildings in Boulder, Figure 1 below shows some of the types of design flaws that could be improved upon with more specific building material requirements in a FBC.

Some examples of building materiality concerns that have been raised are as follows:

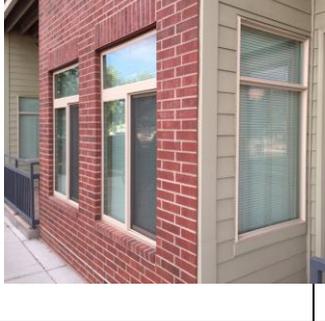
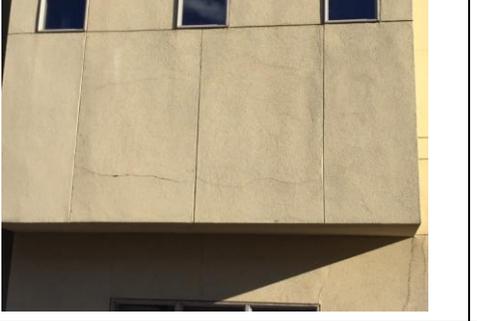
		
<p>Too many materials</p>	<p>Change of materials on building facades do not diminish the appearance of the 4th floor</p>	<p>Utility placement along streetscapes</p>
		
<p>Large blank walls</p>	<p>Construction that looks cheap with flush mounted windows and fiber board siding</p>	<p>Use of wood under balconies</p>
		
<p>Material changes at corners</p>	<p>Poor construction quality with cracked stucco.</p>	<p>Concerns about CMU appearance and durability</p>

Figure 1- Building material concerns

To address these design concerns, the following is a sample of some of the new standards that would apply to developments.

- Façade material requirements that specify primary and secondary allowable materials and how much of each façade can be composed of each.
- Limits on the amount and location of more undesirable materials such as stucco or CMU (cement masonry units).
- Requirements for where material changes can occur on a façade.
- Requirements for window dimensions, recessing of windows and lintels.
- Awning and balcony requirements.
- Special building construction quality requirements.

Beyond just material concerns, the over-articulation of buildings in recent years has also garnered criticism. Over-articulation of buildings has been evident in recent years partly from contemporary architectural styles, but also because of the city's adopted design guidelines and Site Review criteria that have been applied to buildings with efforts to "reduce building mass" and "create pedestrian interest." While these well intentioned guidelines and criteria have avoided monotonous buildings, they have not necessarily resulted in well-liked buildings or resulted in less massive buildings.

When Victor Dover visited Boulder last year, he raised the issue that many historic buildings that have been constructed over time used the "Golden Ratio" which effectively involves integrating rectangles of a ratio of 1 to 1.6 to create a sense of harmony and balance in building facades (see 63 of [Attachment A](#)). This practice was common in pre-World War II designs, but has been used less so in contemporary times. When unused, many critics of buildings have found that the buildings appear irregular and trigger a strong human reaction. Use of the Golden Ratio could be mandated in the FBC in a way that would still encourage unique and different building designs, but enough that a sense of balance and symmetry could be achieved. Many of the buildings that Boulder citizens have found to be acceptable use the Golden Ratio, as evidence by the top four buildings in the image preference survey (Figure 2) or the Hotel Boulderado (Figure 3).

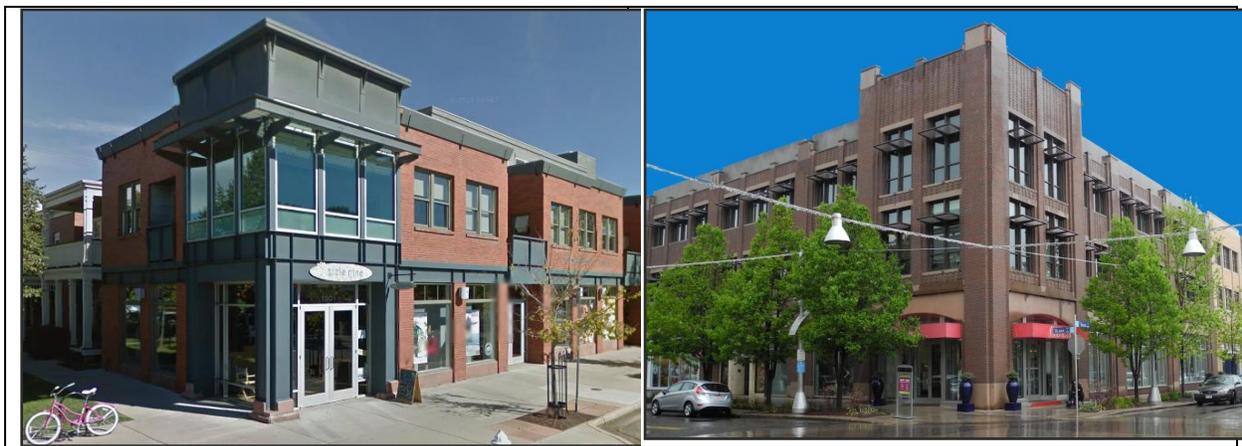




Figure 2- Top rated designs from both the community and joint board image preference survey.



Figure 3- Proportions of Hotel Boulderado.

Building massing – both horizontally and vertically – has been a prominent issue in the design conversation. Staff has heard significant concerns about the appearance of block-long buildings that do not effectively appear as multiple buildings despite attempts to create that effect, uniform building height at 55 feet with no diversity in height and the lack of real publicly accessible permeability through project sites, which also can reduce the massing of buildings.

CodaMetrics shows in the following two diagrams how massing often plays out under the current land use code and Site Review process followed by the massing that could be created through specific new regulations in the FBC.

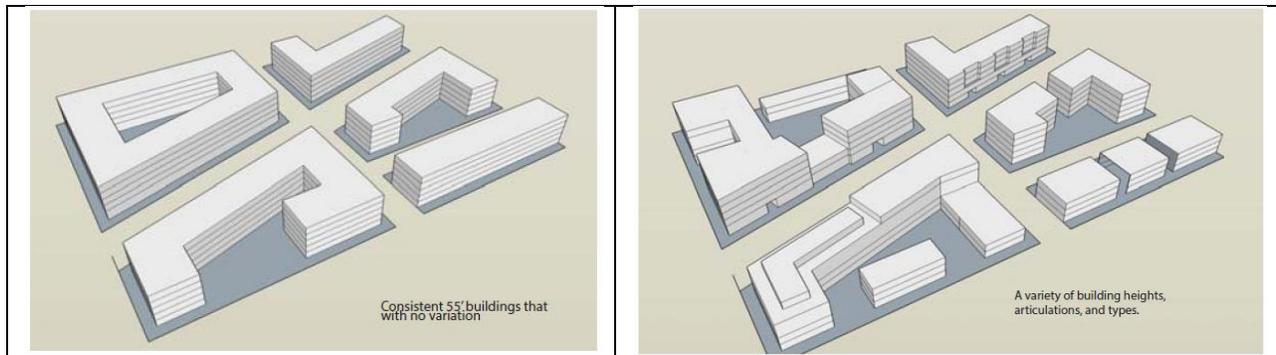


Figure 4- Building massing based on floor area ratio and uniform 55-foot (left) and possible massing through specific regulations in FBC.

To achieve the breaking down of massing without creating the affect of over-articulation and to achieve multiple buildings with a diversity of heights, the following regulations are proposed in the draft FBC (see 62 of [Attachment A](#)):

- Buildings must include a base, middle and top.
- Fenestration must be organized by story.
- Design changes such as recesses, entrances and window placement, roof design and building heights must change to create variety between buildings.
- Roof height diversity would be achieved by requiring that a minimum of 30 percent of the total footprints of all buildings on a site be lower than the tallest portion of a building footprint.
- Remove floor area ratio (FAR) and open space requirements which create too much uncertainty and variability. Alternatively, add specific form requirements and designate open space locations, which set the level of expectation and create more predictability.
- Require a “base, middle, and top” in buildings to avoid over-articulation and create more symmetry. Proportion requirements related to the Golden Ratio discussed above would also avoid over “busy” facades.
- Specify “maximum building width” to avoid block long buildings, in additional to requiring additional pedway connections through large blocks. This would cut down on building size and would be an acceptable trade off considering the proposed removal of FAR requirements.

NEXT STEPS

Planning Board will consider an updated draft of the FBC at its Nov. 19th public hearing. Planning Board will make a recommendation to City Council on the FBC and associated ordinance to adopt prior to council consideration.

ATTACHMENTS

- [Draft Boulder Junction Phase I Form-Based Code](#)
- [Memorandum from Victor Dover of Dover Kohl and Partners dated July 17, 2015.](#)