

**Disposition of Comments**

**Drawing(s) Title: BASMAA Urban Greening Typical GI Details**

**Document Author: Lotus Water**

**Date Submitted: 4/21/17**

Comment #	Reviewer Name	Location (Drawing ID)	Comment	Action Taken	Response
1	Ken Kortkamp	General	Label each variation using more specific “naming descriptor” to intuitively communicate use of configuration.	Added description	Added descriptions under Bulbout Alternatives Title that list main elements
2	Ken Kortkamp	General	: Clarify or separate out “Construction Notes” from “Designer Notes & Guidelines”.	No Action	These typical drawings are not for construction and it will be up to the designer to determine which notes to carry forward for construction.
3	Ken Kortkamp	General	Provide general guidance or criteria on when each variations is preferred (e.g. concise bullets).	No Action	High-level overview provided in charrette summary that accompanies these details, but this kind

					of guidance should be included in a more robust set of designer guidelines and site selection criteria under a different scope of work at a later date.
4	Ken Kortkamp	General	Provide <u>minimal typical width</u> for each variation (plan and section) to allow for increase usability during planning stage. NOTE: The available width (from front of sidewalk to back of new or existing curb) will be one of the key design conditions that determine the possible bulb-out variation, thus magnitude of walls, thus level of costs. (NOTE: Other key design condition will be utilities.)	No Action	The minimum width (3 ft) of the flat portion of the bioretention planters are provided. The other widths are dependent on the street grading, required treatment volume, desired ponding depth, allowable parking space removal, and utility conflicts. Designer will need to determine whether they have adequate space to use side slopes vs. walls on a site-by-site basis. This could also feed into site selection criteria guidance to

					be provided by others in the future.
5	Ken Kortkamp	General	Provide designer note(s) clarifying drain inlet (catch basin?) reuse or removal, or show each plan with both alternate drain inlet locations as an “In-line” and or “Off-line” configuration. NOTE: Local jurisdictions need to provide feedback on preference on how they prefer planters to perform with regarding to treatment storm vs storm drain storm sizing.	Revised Details and Added Descriptions	Revised Bulbout Alternative 1 to show Inline Condition with Overflow Structure, and Alternative 3 to show Offline Condition. Expanded Overflow Note to address jurisdictional issue.
6	Ken Kortkamp	General	Provide variation that removes sidewalk “curb walls” on <u>both</u> ends. This variation will be more cost effective when the length of system is not limited and wall are not needed.	Revised Details	Revised Section A to show sloped sides on both sides of planter, but did not add a variation that shows slopes on entire perimeter. This is a less common condition in the streetscape, and more applicable to parking lot or park type settings with more space. Also sections are based on charrette output.

7	Ken Kortkamp	General	<p>Typical plans and sections all illustrate a condition where a utility main conflict is located through a newly proposed facility. While this may be the case for the two selected demonstration projects or likely in future locations, it likely that a primary goal of the planning phase to minimize locating BMPs in locations with a utility main conflict. Therefore, it may be more appropriate <u>not</u> to consider this condition as an ‘typical’ occurrence; supplement with a separate “component detail”. NOTE: Coordination with local jurisdictions and local utilities will be required to determine what will be required when BMPs are proposed over utilities (i.e. some jurisdiction may be more, or less, concerned with this conflict).</p>	Removed utility main conflict from Variation 1	Removed utility main conflict from Variation 1 so it does not appear so much as a typical condition and expanded upon utility note by saying utility conflicts should be avoided where feasible. Agree that agencies will need to coordinate with utility providers on required setbacks, protection measures, etc. and have noted this in charrette report and next steps list being provided with these details.
8	Ken Kortkamp	Section A-A	<p>Provide variation where a Standard Gutter with no gutter wall extension is possible. NOTE: This variation will require the most width and may not be feasible in many cases.</p>	Revised Alternative 1 and Section A to show this condition.	Revised Alternative 1 and Section A to show this condition.
9	Ken Kortkamp	Variation 2	<p>Consider adding an optional surface connector pipe or trench drain.</p>	Added optional trench drain to Alternative 4	
10	Ken Kortkamp	Variation 4	<p>Clarify if forebay intended as ‘forebay with bioretention’, or separate ‘forebay’ that then conveys to bioretention on opposite side of cycle track.</p>	Added note that leaves this up to designer.	Can be either depending on pre-treatment needs,

					DMA size, and grading constraints.
11	Ken Kortkamp	General	Consider how these typical details will be used as part of the broader project needs: <ul style="list-style-type: none"> <li>• Planning tools and guidance</li> <li>• How to design guidance</li> <li>• Design tools: i.e. GI Typical Details</li> </ul>	No Action	Some of this information is provided in the Charrette Summary. Agree that these tools are probably one piece of a larger body of guidance.
12	Leo Chow	C1.2	Line up ADA ramp with walkway (east side ramp)	Revised	Revised
13	Leo Chow	C1.2	GI perimeter should line up with the building.	Revised	Slid north ramp/planter to the left to line up with sidewalk.
14	Leo Chow	C1.3	The overflow structure grates shall use a “hat” to prevent blockage Similar to this <a href="https://www.greydock.com/fsd-030-a.html">https://www.greydock.com/fsd-030-a.html</a>	Added example of overflow structure to Section C-C	Added overflow structure w/ beehive grate to Section C-C and expanded on overflow note. Jurisdictions will need to provide specific overflow structures that meet their specific criteria.
15	Leo Chow	S-A-A	In the GI, create a slope with the soil from the curb and gutter side. (similar the sidewalk, to make it symmetry)	Revised	

16	Leo Chow	S-A-A	Specific the height range (min and/or max) for the sidewalk to bottom of underdrain and Gutter to the underdrain	Added range of depth relative to aggregate section, not sidewalk.	Underdrain depth should be measured from bottom of bioretention soil and/or bottom of aggregate storage. It is not related to sidewalk finish surface. Placement of underdrain within the aggregate storage is dependent on subgrade soil's infiltration capacity.
17	Leo Chow	S-A-A	Add in the detail for the overflow structure	Added overflow structure to section C.	Added overflow structure to Section C-C, but did not add separate detail since structures will be specific to city design criteria.
18	Leo Chow	S-B-B	Grade soil with slope for positive drainage for both side	No Action Taken	The intent of Section B-B is to show a more constrained condition in which there is no space to have sloped sides. The bottom is kept flat to maximize capacity.

19	Leo Chow	S-B-B	Specific the height range (min and/or max) for the sidewalk to bottom of underdrain and Gutter to the underdrain	See previous comment on underdrain placement. Added Note.	
20	Leo Chow	S-C-C	Grade soil with slope for positive drainage for both side (to indicate less drop off at the edge of curb)	Revised.	Slopes are not needed for positive drainage since facility is designed to pond water, but have revised drawing to show sloped sides for the purpose of lessening the drop off from the sidewalk.
21	Leo Chow	S-C-C	Specific the height range (min and/or max) for the sidewalk to bottom of underdrain and Gutter to the underdrain	See previous comment on underdrain placement. Added Note.	
22	City of Oakland	General	In general, Oakland sidewalks extend to back of curb. Continuous planter strips are less common. It would be worthwhile to have the drawings reflect the more typical condition. As drawn, the details may create an unrealistic expectation on the amount of width that is available for planters.	No Action	These typical designs were developed using intersections in San Mateo and Sunnyvale, and therefore may not reflect typical conditions in Oakland, however other aspects of the typical designs may

					be used for Oakland to modify these to reflect more typical conditions in Oakland.
23	City of Oakland	C1.1	For streets with parallel on-street parking, bulbouts should extend by no more than 6' from the existing curb line.	No Action	Added 6' (Typ) to Alternative 1. Bulbouts were drawn showing 6' encroachment and sections are already noted that edge of bulbout should be 1' (min) from edge of travelway and/or bike lane.
24	City of Oakland	C1.1	Redraw the bulbout extents such that the curb line along the curb ramp is parallel to the roadway centerline. In general, bulbouts should have at least 15' of curb extension where the curb line is parallel to the roadway centerline. This provides the roadway with an "edge" at the bulbout that is visible to motorists.	No Action	This may not be standard for all cities, so we're leaving the bulbout geometry requirements up to the individual cities and note this on our details.
25	City of Oakland	C1.1; C1.2	Try to avoid eliminating curb ramp wings. Where curb ramp wings are eliminated, consideration should be given to providing 6' wide ramps. The wings do add to the capacity	No Action	Note 4 addresses ADA requirements. Cities can choose to show a minimum distance from planter edge to curb

			of a ramp, making it easier for pedestrians to walk together or pass oncoming pedestrians.		ramps depending on their city-specific requirements.
26	City of Oakland	C1.1; C1.3	At the upper right corner of the planter, provide a radius for the concrete sidewalk that provides a more natural path of travel for pedestrians making this turn.	Revised	Curves added.
27	City of Oakland	C1.2	Maintain a straight path of pedestrian travel between the mid-block sidewalk and the curb ramp. In other words, shift the planter out of the sidewalk to provide a straight path of travel.	Revised	Curb ramps/planter edges shifted to maintain straight sidewalk alignments.
28	City of Oakland	C1.4	The horizontal offset of the bike lane should happen at a rate no greater than 1':5' (1':7' preferred).	Revised	Lengthened transition to reflect 1:5 ratio
29	City of Oakland	C1.4; S-C-C	Eliminate the raised pavement markers from the sidewalk to remove a potential tripping hazard. Bike space versus ped space could be differentiated by paving material, specifically asphalt (bike) versus concrete (ped).	Added note	Will add note about these being one of many ways to differentiate the ped and bike lanes.
30	City of Oakland	C1.4	It is probably not practical or necessary to stripe a crosswalk across a bike lane to a single parking space.	No Action	There is no parking alongside the bulbout. Striping is to alert bikers of pedestrian crossing that aligns with street crosswalk. Added street

					crosswalk striping to show this better.
31	Matt Fabry	General	From a maintenance standpoint, I would recommend all connections between bioretention areas shown as piped by trench drain-style connections with grates that can be removed for maintenance. Seems like all the projects that have piped connections tend to get clogged. I know Shauna said it was cheaper, but I think we need to look at cost benefit in the long-run with O&M.	Addressed	Where surface water needs to be carried through solid walls on C-1.4, changed labels to say 'trench drains', but kept solid pipe for underdrain connector pipes.