As we considered this area of the bridge upgrade and widening, one of the important aspects we took into consideration was the larger Soto Street improvement project. We felt that it was important that it has characteristics specific to this location yet belongs within a family of improvements.
Like the upper portion of the Soto project (between Mission and Multnomah), the bridge location (and its retaining wall to the north) faces a set of design challenges that we’d like to address. These include:

- Giving character/uniqueness to the bridge and wall
- Minimizing graffiti
- Developing general design character through place-making
- Avoiding monotony through variation
- Break down the scale of the wall: Layering, Texture, Vegetation
Over the last several months we've developed a number of ideas for the stretch of Soto street between Mission Road and Multnomah Street. We thought it may be helpful to briefly discuss those ideas in order to understand our starting point for the bridge and retaining wall at Valley Boulevard.

For the Mission/Multnomah section, we developed ways to incorporate a green wall into the retaining wall. We made this possible by thinking about the role that a layered metal mesh might play in the design. Because green walls take some time to grow, we felt it was important that the design serve as both a deterrent against graffiti and has a beautiful aesthetic quality prior to full growth.

This was achieved through the use of a dense mesh that is layered over the wall - simultaneously making it difficult to graffiti, and providing a system for plants to grow on. Additionally, we considered texturing the concrete in ways that works in tandem with some of the patterns that occurred in the mesh framework.
DESIGN | UNCONVENTIONAL USE

We looked more specifically at ways of creating a perceptual three-dimensionality to the wall, using a system that suggests folds in the surface. In reality, it is a simple (and materially conventional) mesh system that is geometrically composed to suggest a three-dimensional folded surface in the impression of the wall.

This idea would also be used at the bridge location. We have also been working on some ideas that are specific to the bridge location, which we will go over in more detail.
Here are a few images showing the Mission/Multnomah section of the wall. The wall includes the steel mesh system that we discussed— in most cases deployed in a way that is two-dimensional. It includes one moment of three-dimensionality forming a bench and shade canopy.
We have also been exploring a system of using concrete formwork patterns that acts in multiple ways: 1) a graffiti deterrent, aesthetically speaking to the folded mesh system, which 2) provides variation in the overall length of the wall.
That system is created using conventional corrugated panels (of varying sizes and densities) that are arranged to form patterns across the wall.
As we thought about the bridge section of the roadway at Valley Boulevard, we began by looking closely at some of the geological formations around the area—specifically along Soto Street. Here are a couple of our images, that we found particularly compelling. This geology is characterized by variation in the fractured rock, with a predominantly diagonal orientation (in hillside locations where it is typically cut), revealing the natural eccentricities that occur in the layers of rock.
With these images in mind, we examined ways of abstracting the geological images into two-dimensional patterns. The intention here was not to replicate the formation precisely, but rather to capture the character using some of the basic characteristics of the geology to produce a creative/artistic representation. We are interested in simultaneously expressing an artistic approach that speaks aesthetically to the some of the qualities we’ve developed for the other portion of the wall, having its creative origins firmly embedded in the long history of the site (pun fully intended). These are some of the patterns we have been developing.
Based on the two-dimensional patterns, we then considered ways to produce semi three-dimensional patterns that could be used at a range of scales. Specifically, we developed two major areas of focus: 1) the precast guardrail panels of the bridge, and 2) the retaining wall, adjacent to the north of the bridge, along the western side.
GALVANIZED WELDED WIRE MESH
(rather than chain link)

PANEL 1
Precast pattern in concrete

GALVANIZED STEEL
"embedded" in the precast

PANEL 2
Precast pattern in concrete
ALTERNATING PANELS
used to better conceal the
simple repetition seen in most
precast panels

EMBEDDED STEEL ELEMENTS
used as fence supports to create a
stronger relationship between panel
and fencing.