



Code Test & Results

THE LIST OF TESTED SITES & DESIGNERS

SITE 1: Holly Frixione

SITE 2: Jess & Sam Zimbabwe

SITE 3: Lucas Griffith

SITE 4: Rayna Huber

SITE 6: Chris Dobosz

SITE 7: Ali Jeevanjee

SITE 11: Andreas Stavropolous

SITE 12: Ingrid Stromberg

SITE A: Erin O'Mahoney Cubbison

Code Test & Results

Thirteen sites were selected for the code test. The sites were selected to cover the variety of conditions along the 5-mile strip within the four development types (SPA1-4): parcel sizes, lot locations and configurations (corner, through-block, internal), existing building types and land uses, relationship to infrastructure, relationship to riparian areas or drainage infrastructure, and district utility potential. Of the thirteen tests issued, nine were returned. The four sites not returned all corresponded to the large parcels that required subdivision and parcel platting, so I will have to test this part of the code myself on one of the four parcels.

The code test packet consisted of a project introduction that included most of the material on San Pablo Avenue from the analysis chapter, brief instructions on how to use the code, the code documents, and individual pages to identify each site. Most tests were completed within the assigned two-week period, and the amount of time spent on the code varied between eight and twenty hours. I am grateful to all of the code testers for spending the time on my thesis. Their contributions reinforce the flexibility and variability of the Urban Ecotone Code.

THE CODE TEST.

The following pages describe the hybrid form/performance-based code for the private realm adjacent to the public realm of San Pablo Avenue. The first two pages consist of the regulating plan which identifies where the four development conditions are located along the avenue, and the locations of the parcels chosen for the testing of this draft code. A checklist has been provided to assist your navigation of the code. Please add your comments to this checklist. (You can add your comments with Acrobat Pro.) The next three pages outline the overall development form and performance framework, and the final two pages address these concepts relative to the specific development conditions.

Please try to digest the code and then push it to its limits. The forms in the code represent maximum building envelopes and are meant to constrain certain elements of design, but not crush them. So how far can you push the code without breaking it? Or how easily does the code break down? I want to know what you think! From a design perspective, from a form perspective, from a graphic perspective, or any other perspective you'd like to contribute. Please take notes!

THE DELIVERABLES (all electronic files please!):

- 1| Schematic plan/section/axon/iso that demonstrates the performance and form requirements of the code, with land uses and number of residential units identified.
- 2| Completed checklist
- 3| Any notes you've made about the test (ha! but seriously, I want your feedback)

DUE: March 3, 2009 (3.3.09)

If you have any questions, please email or call me!



Introduction Page from the Code Test document

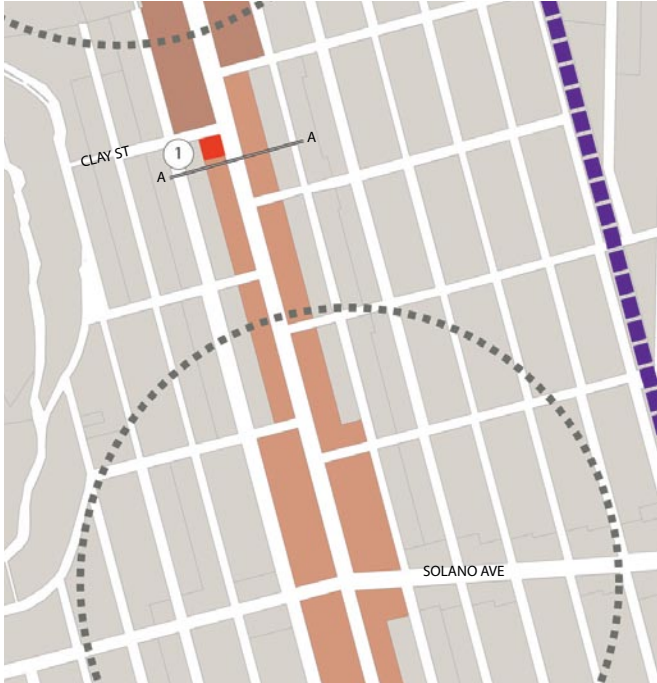


SPA 3

SITE #1

PARCEL AREA: 13,300 sf
EXISTING USES: local small businesses
USE TYPES: Retail-Oriented
CISTERN SIZE: 21,000 gallons
UNITS: 24 UNITS (78 U/A)

"Albany Square" used to be a motel...
BUSINESSES: Farmer's Insurance, Splendid Nails, Immigration Preparation Documents-- "Same Day SR22", Massage Therapy, European Skincare, Albany Pizza, Massage, Ms.G's Learning Center, Soleil Tanning, East Bay Art School, D&S Composing Services, Navigator Escrow Company, Brooke Auto Insurance. (hill behind is called Albany Hill Park).



Site #1 (SPA3)

Site #1 code test for the redesign of a southwest corner lot commercial/retail plaza meets all of the code requirements, and exceeds the density requirement (actual 78 units/acre) by 30%. There is no access to the residential units on San Pablo Avenue, so this condition should be specified more clearly. The pedestrian access for the residential units is through the parking area, which is the model the “commuter condos” follow, and is not the intention of the Ecotone code. However, this design could be easily modified to address this change. The interpretation of existing land uses incorporated into the new building was non-specific. The sun slot setback begins at the southern property line, as specified in the code and extends for 54 feet. The intention of the sun slot standard, although not clearly stated, is to have a sun slot for every 50 feet of frontage. The different interpretation of the standard requires clarification: the sun slot standard can be interpreted as a single setback space from the southern property line, or as a series of setbacks based on the 50-foot increment where there would be a setback from the southern edge of the designated 50 feet, starting at the southern parcel line. The choice allows for variation, while upholding the basic concepts.

FIRST FLOOR:

5,887 SF OF RETAIL = 6 TUCK-UNDER PARKING SPACES
(1 SPACE / 1000 SF OF RETAIL/COMMERCIAL)

24 HOUSING UNITS = 18 STACK PARKING SPACES
(1 SPACE = 3 CARS = 4 HOUSING UNITS)

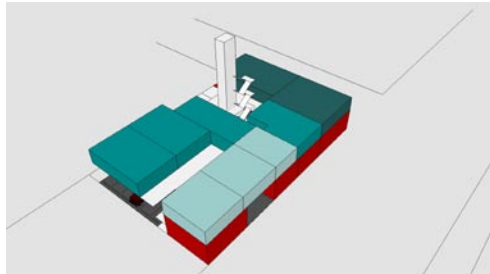
MECHANICAL ROOM.
WASTE & RECYCLING SPACE.



SECOND FLOOR:

(3) 1-BEDROOM UNITS, 700 SF AVG.
(4) 2-BEDROOM UNITS, 1000 SF AVG.
(2) 3-BEDROOM UNITS, 1450 SF AVG.

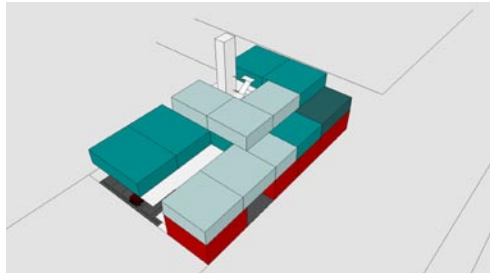
260 SF OF OUTDOOR SPACE.



THIRD FLOOR:

(3) 1-BEDROOM UNITS, 675 SF AVG.
(2) 2-BEDROOM UNITS, 890 SF AVG.

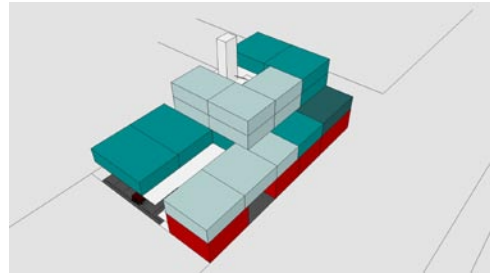
8000 SF OF OUTDOOR / GREEN ROOF / GARDEN SPACE.



FOURTH FLOOR:

(3) 1-BEDROOM UNITS, 675 SF AVG.
(2) 2-BEDROOM UNITS, 890 SF AVG.

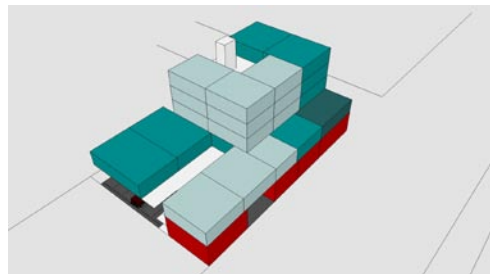
140 SF OF OUTDOOR SPACE.



FIFTH FLOOR:

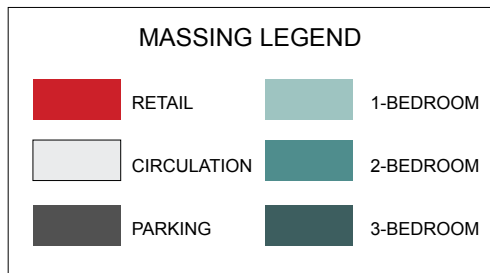
(3) 1-BEDROOM UNITS, 675 SF AVG.
(2) 2-BEDROOM UNITS, 890 SF AVG.

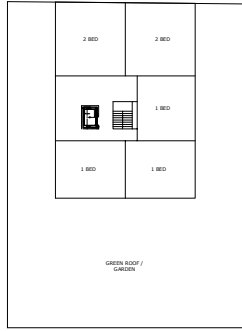
200 SF OF OUTDOOR SPACE.



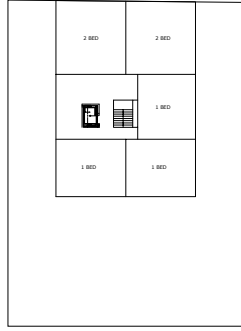
ROOF:

3820 SF OF GREEN ROOF.

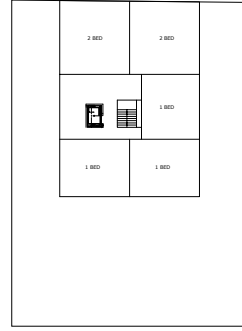




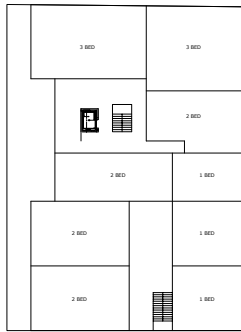
THIRD FLOOR 



FOURTH FLOOR 

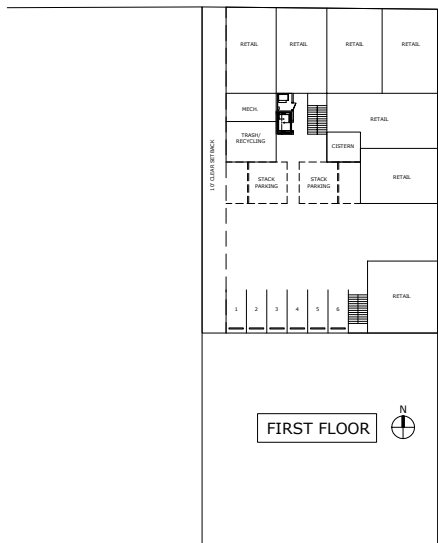


FIFTH FLOOR 



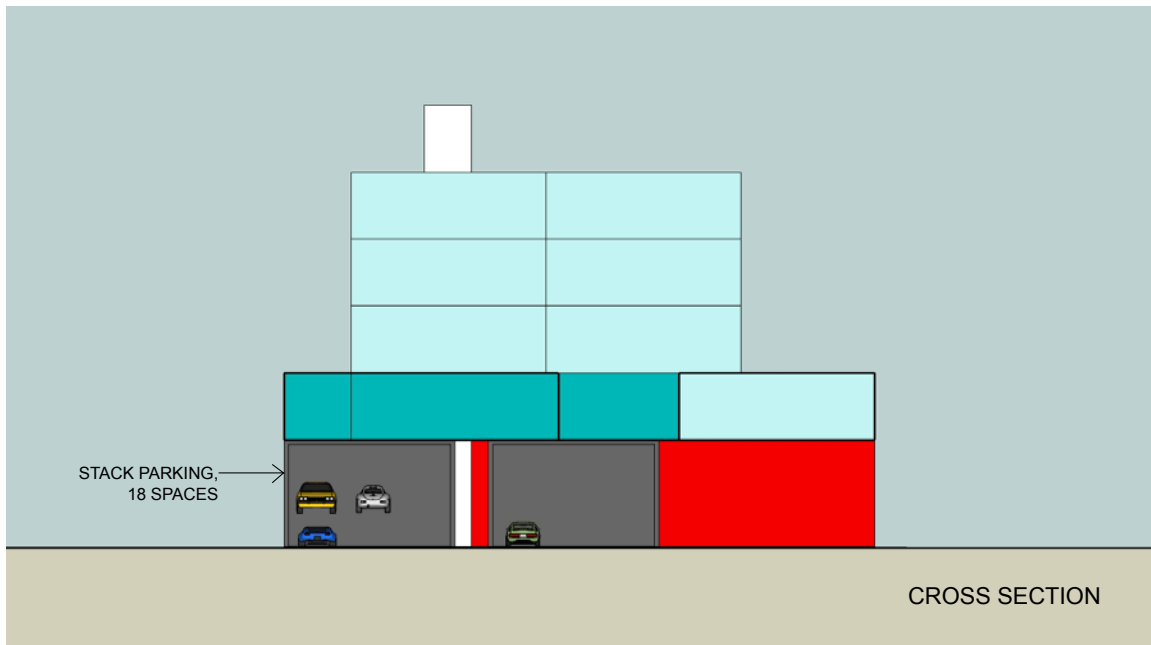
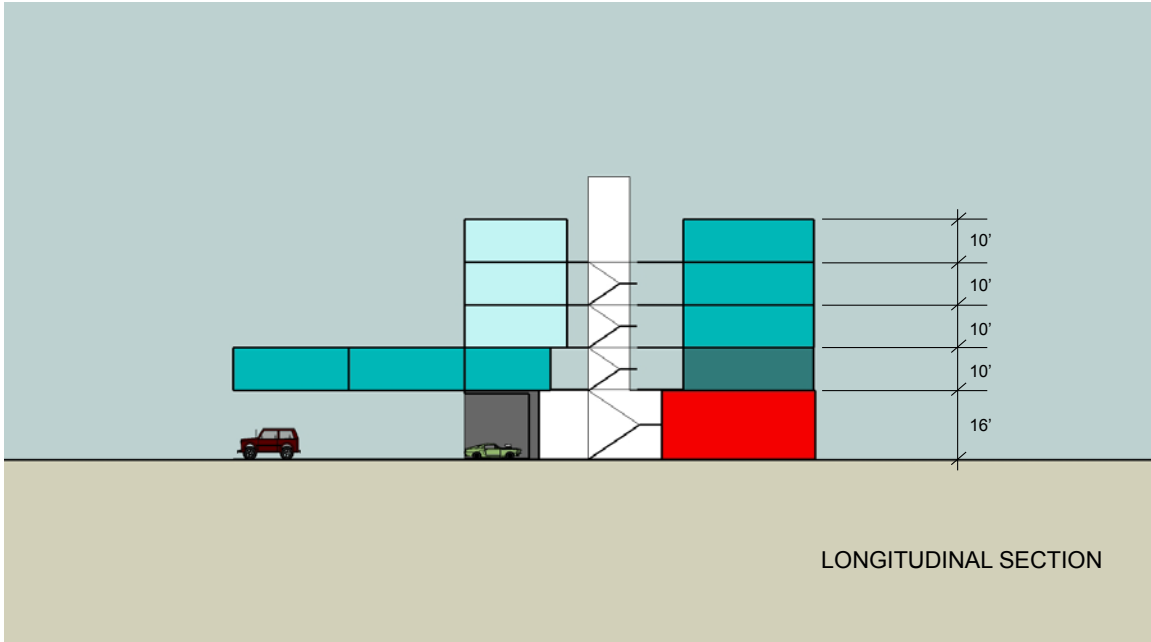
SECOND FLOOR 

Clay Street



FIRST FLOOR 

San Pablo Avenue



SPA 3 GUIDELINES:
 BUILDING HEIGHT = 56' (MAX. = 60')
 5 FLOORS ALLOWED, 5 FLOORS USED.
 10' REAR SETBACK.
 54' WIDE SUN SETBACK ABOVE 2ND FLOOR.
 10' REAR VIEWSHED SETBACK ABOVE 3RD FLOOR.
 20' FRONT VIEWSHED SETBACK ABOVE 3RD FLOOR.
 24 UNITS EXCEEDS 60 UNITS/ACRE RESIDENTIAL DENSITY.

MASSING LEGEND	
 RETAIL	 1-BEDROOM
 CIRCULATION	 2-BEDROOM
 PARKING	 3-BEDROOM

		COMPLIES	DOES NOT COMPLY	N/A
Contributes to Urban and Natural Ecotones		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BLOCK LAYOUT				
PARCEL LAYOUT	1000' Perimeter maximum for new blocks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FRONTAGE	20 000sf parcel maximum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Primary entrance on SPA or other principle street in SPA 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Vertical delineation every 50' of frontage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Openings designed for daylight and ventilation (25% min)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	80% minimum of façade built to frontage line	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	No parking on frontage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SUSTAINABLE DESIGN				
	complies with LEED Silver point level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	complies with Sustainable Sites certification level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ENERGY PRODUCTION				
	maximized on-site energy production	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HOUSING AIR QUALITY				
	through-floor or double exposure units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FOOD SECURITY				
	designate food crop space with residential uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUILDING REUSE				
	Existing building re-used	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Existing use incorporated into new building	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUILDING LAYOUT				
	maximum coverage not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	35' height minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	maximum height not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3 floor minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	maximum number of floors not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	residential density minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	sun slot setback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	rear property line setback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	rear viewshed setback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	front viewshed setback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	waste and recycling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PARKING				
	Residential stacked parking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Structured parking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Open lot park(ing)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LAND USE				
	Primary uses exceed secondary uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OPEN SPACE				
	coverage or land use ratio applied	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RIPARIAN & DRAINAGE AREAS				
	no building in 100' buffer zone	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	project incorporates riparian area into design	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VEGETATION				
	100% of parcel area identified as on-site vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STORMWATER MANAGEMENT				
	100% of stormwater remains on site--cistern accomodated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ASSUMED, BUT NOT SHOWN

1/2 EXIST. RETAIL

ADDITIONAL COMMENTS HERE:

- difficult to re-use existing building w/ requirements of code, this particular site and parking.
- i blew it on the vertical delineation, but what is that anyway? in general, a definition list of common terms would be helpful (e.g. vertical delineation, parcel vs block, etc).
- it took me a good while to really wrap my head around the code and figure out how to treat the site in regard to the code's requirements. i didn't end up getting much further with my design than the massing phase, which actually ended up resembling your SPA 3 diagram quite a bit, though i suppose that's to be expected?
- i think the code would yield some pretty fantastic solutions and help create a much improved corridor. my only concern is that it would become a pretty pricey endeavor to meet LEED standards, provide green roofs, large cisterns (21,000 gallons for lot 1), stack parking equipment while keeping developers interested. but woop-dee-do, probably not a relevant nitpick.
- great job andrea! congrats on your nearly completed thesis!



SPA 3

SITE #2

PARCEL AREA: 31,828 sf
EXISTING USES: Burger King
USE TYPES: Retail-oriented
CISTERN SIZE: N/A
UNITS: PARCEL A - 29 UNITS (88 U/A)
 PARCEL B - 25 UNITS (75 U/A)



Site #2 (SPA3)

Site #2 code test for the redesign of a northwest corner lot Burger King restaurant meets all of the code requirements except the two-exposure ventilation standard and the commercial parking number requirement. Since the site is larger than 20,000sf, it is subdivided into two parcels of approximately equal area, with each parcel exceeding the density requirement by at least 30%. The parcel subdivision is parallel to San Pablo Avenue creating a “front” parcel and a “back” parcel. This condition might work for this site given its corner location at the intersection of two major streets, however, the subdivision requirement was intended to create parcels perpendicular to San Pablo Avenue, with all parcels having frontage on the avenue. As pointed out by the designers, the sun slot standard is “really problematic for a corner parcel on the north side of the street. We (the designers) ended up losing all of the corner presence of our building.” Corner presence is a basic tool of urban design, where building heights define the public realm of an intersection, creating a type of gateway. Height on corners has the same effect as increasing the line weight at the corners of a line drawing; it adds emphasis. Clearly, an adjustment to the code needs to account for the sun slot standard at intersections. There are two types of solutions for this refinement: remove the sun slot standard at intersections or offset the setback line by a certain distance. In theory, the parcel size limitation of 20,000sf would create a frontage 200 feet long for the average parcel depth of 100 feet. Based on the two-exposure standard for residential units, the open space standard, and the 50’ vertical delineation frontage standard, a 50-foot setback for the initial sun slot for north-side parcels at intersections is a refinement consistent with the concepts in this code.

In applying the code to the entire corridor, it should be noted that the sun slot standard only applies to the section of San Pablo Avenue that runs in a predominantly north-south direction, as the sun access is not challenged by parcel development in the east-west sections of the corridor. The road shifts axes at the intersection with the Richmond Parkway and again for the stretch of road in Rodeo also known as Parker Avenue. Therefore, the sun slot standard would apply to parcels along San Pablo Avenue south of Richmond Parkway and those along Parker Avenue.

Returning to a site-specific design issue, the single entrance for the residential units doesn't comply with the two-exposure ventilation requirement in this specific spatial configuration because corridors would be necessary to access the vertical circulation. A second entrance would remedy this issue. Finally, the last two details of note: Interpretation of existing land use incorporated into the new building was non-specific. The designers didn't include parking for the residential uses because they felt it would be counter-productive to the development incentives.

New Issues

The design of Site #2 brought up some unaddressed issues: the skywalk and parking access for subdivided parcels. The skywalk connecting buildings assumes a single owner and probably a similar architecture. Is this consistent with intentions of the 50' parcel rhythm for the cultural landscape and pedestrian scale concepts? Yes. A size limit could be applied to skywalks and other building connections to prevent the perception of the two buildings reading as one structure. Parking access for this site is on a secondary street, which is facilitated by parallel parcel orientation, which broaches the question: can subdivided parcels share parking access? Yes, as long as the parcel orientation and frontage requirements are compliant with the code. The author determined the calculations below by measuring the areas in the 3-d computer model provided by the designers.

PARCEL A: COMMERCIAL 10,500sf; RESIDENTIAL: 12,000sf, 8000sf, 7000sf, 4500sf
(less 500sf each level for circulation area) = 29,500sf; PARKING: 1100sf (need 10 spaces for
commercial, only accounted for 5.5 at 200sf per space)

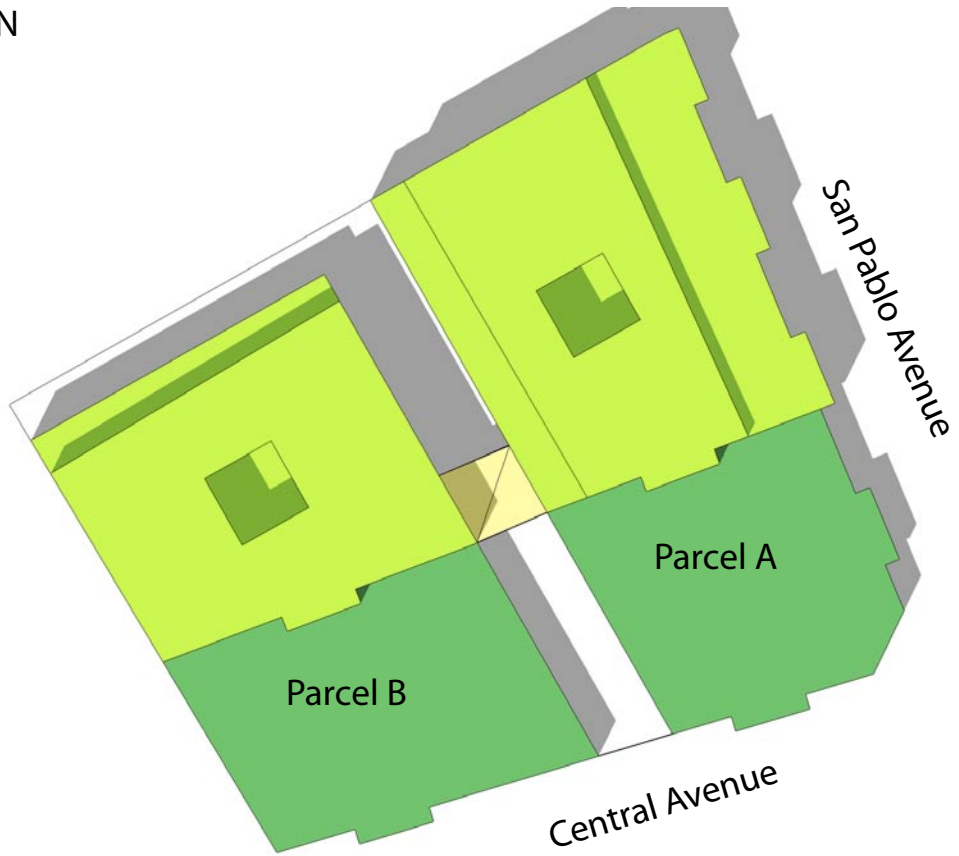
PARCEL B: COMMERCIAL 10,500 RESIDENTIAL: 11,200, 6000, 5200, 5200 (less 500sf
each level for circulation area) = 25,600; PARKING: 1100SF (need 10 spaces for commercial,
only accounted for 5.5 at 200sf per space)

Assume 1000sf per residential unit to generalize unit types since specific types were not
indicated.

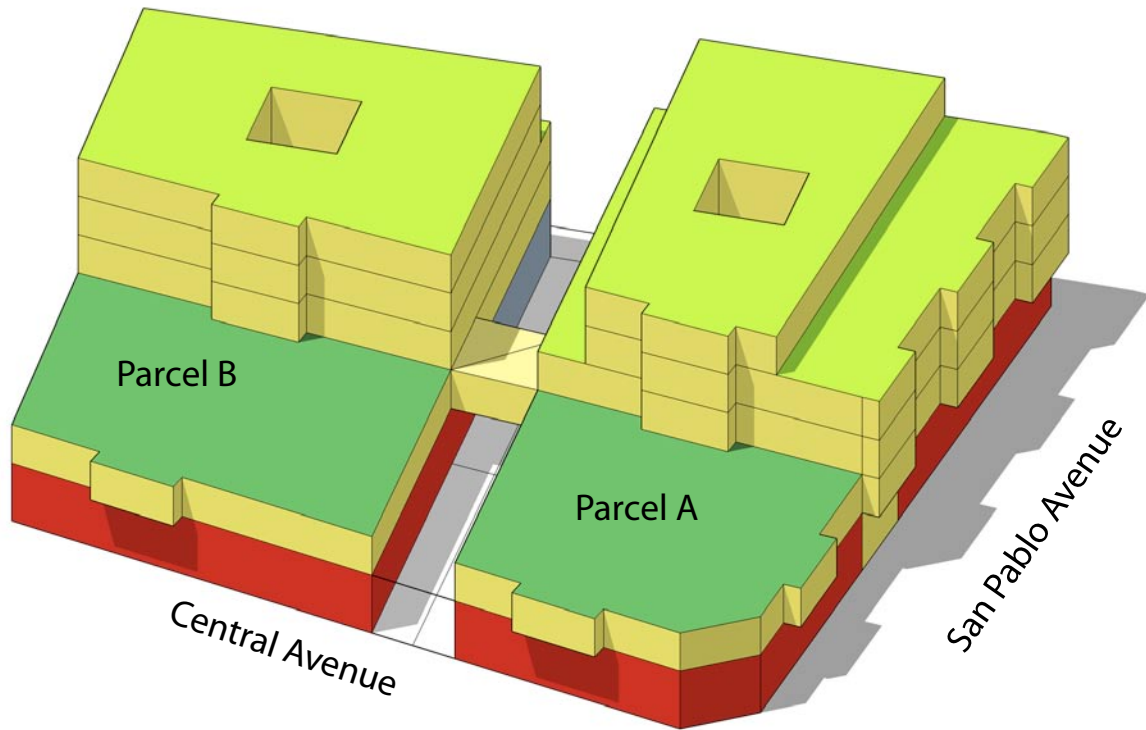
Parcel A density: total parcel sf = 14, 5000sf with 29 units = 88 units/acre (+47%)

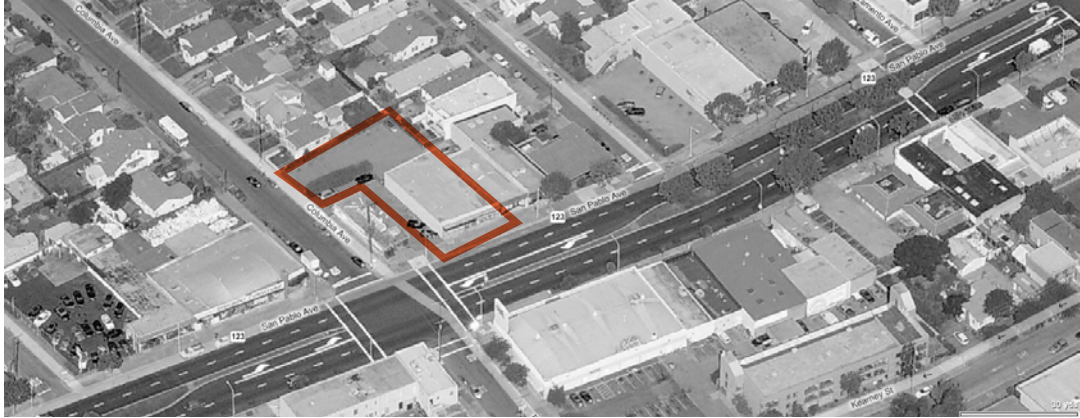
Parcel B density: total parcel sf: 14,000sf with 25 units = 79 units/acre (+32%)

PLAN



AXONOMETRIC

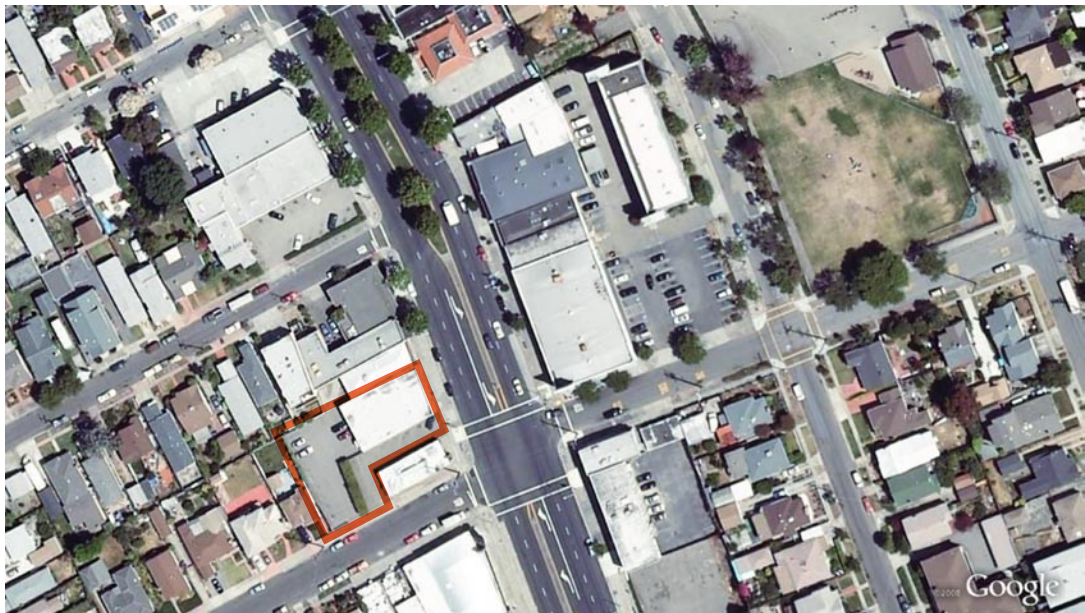




SPA 2

SITE #3

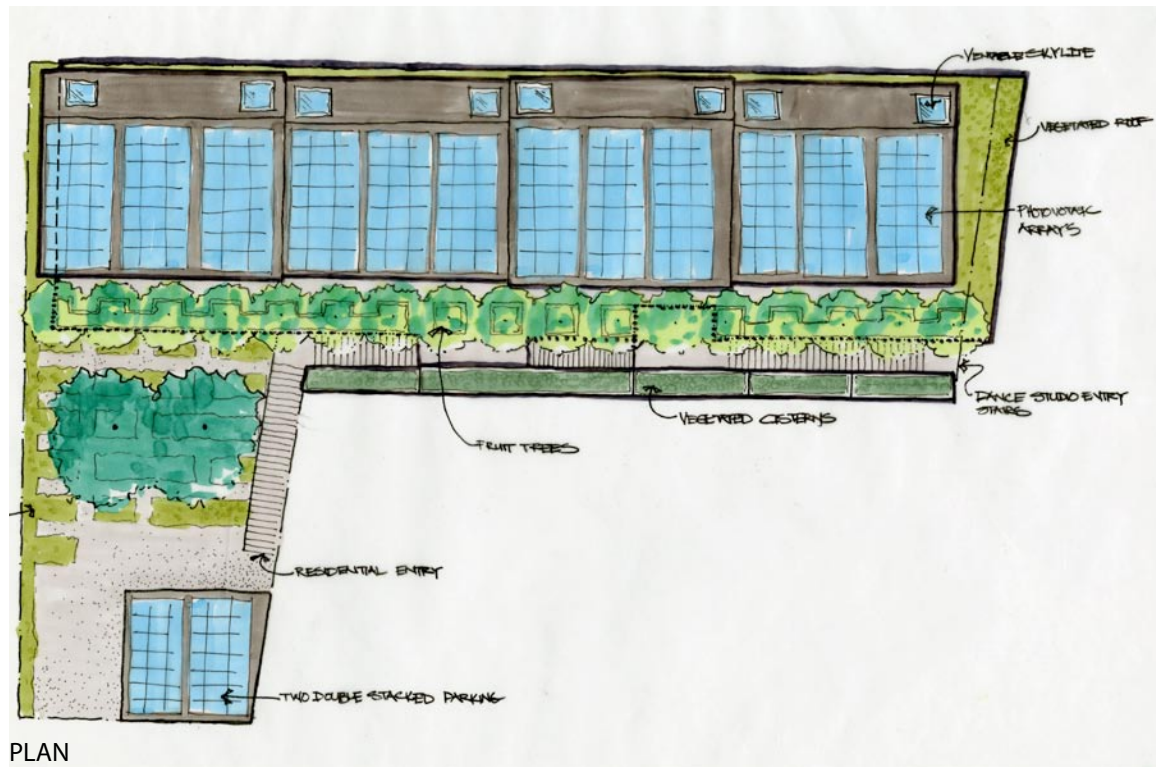
PARCEL AREA: 9311 sf
EXISTING USES: Dance Studio
 Vintage Clothing Store
USE TYPES: Retail-oriented
CISTERN SIZE: N/A
UNITS: 10 UNITS (37 U/A)



Site #3 (SPA2)

Site #3 code test for the redesign of a mid-block commercial/retail parcel meets all of the code requirements except for the density requirement (actual 37 units/acre). The interpretation of existing land uses incorporated into the new building is specific and the existing building is reused. The unit density could be improved by adding two residential units to the second floor in lieu of the additional commercial space.

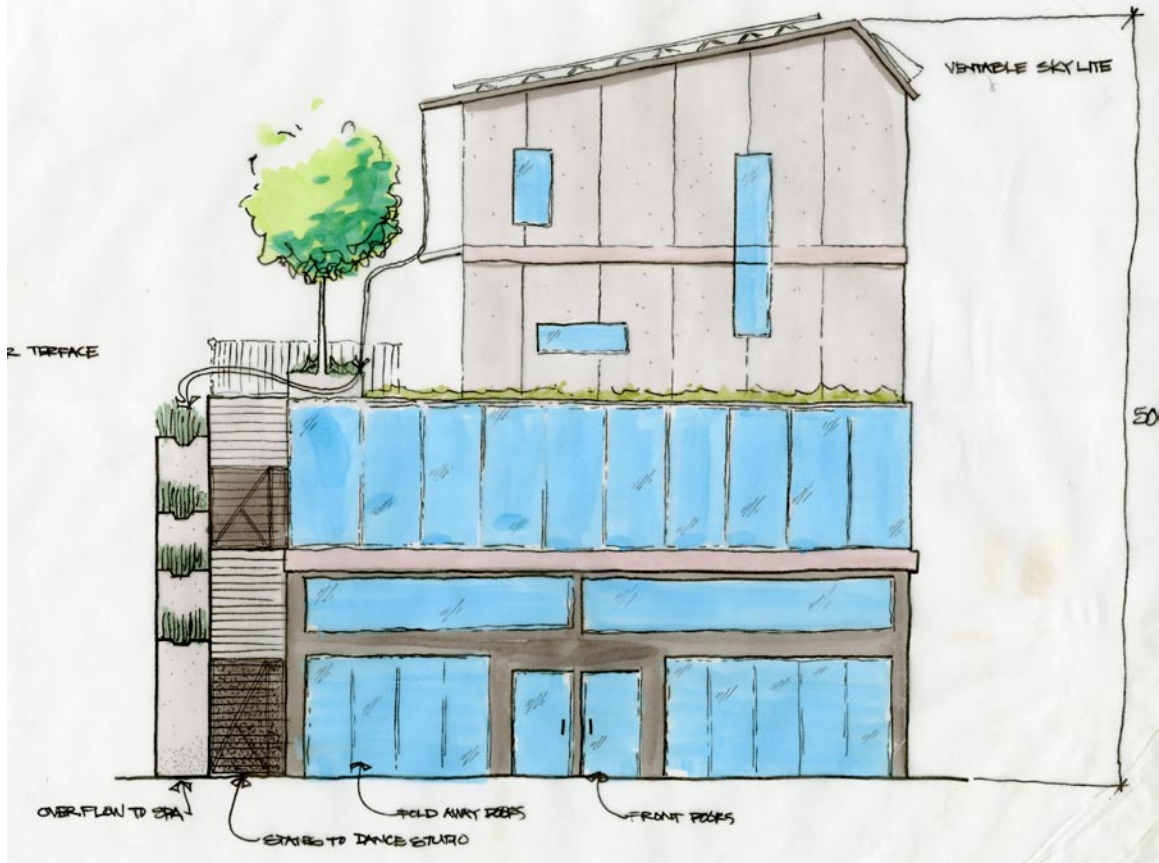
Total parcel sf = 9311sf with 8 units = 37 units/acre (-8%)



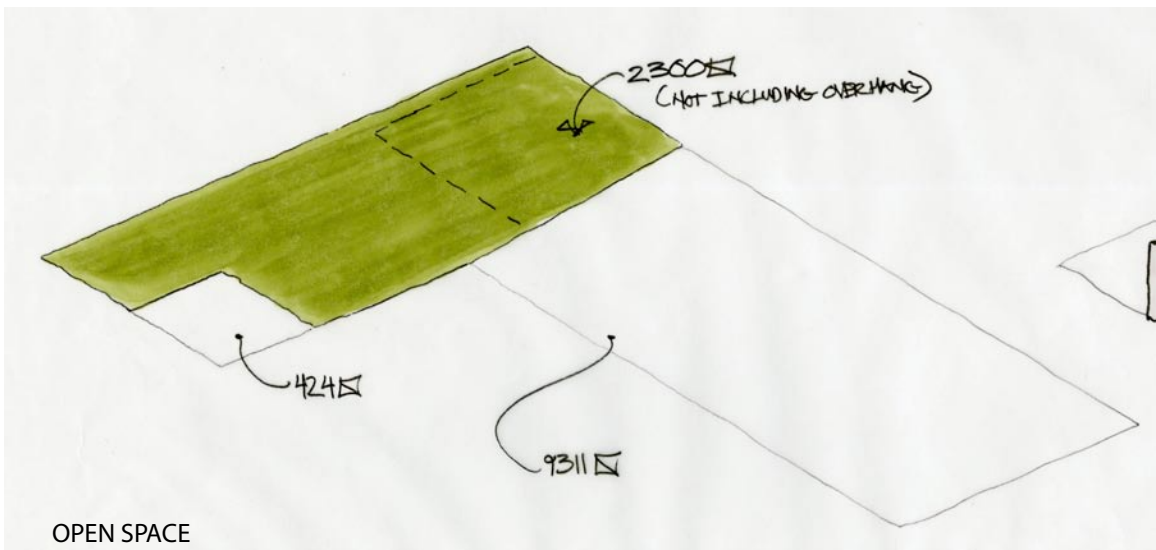
PLAN



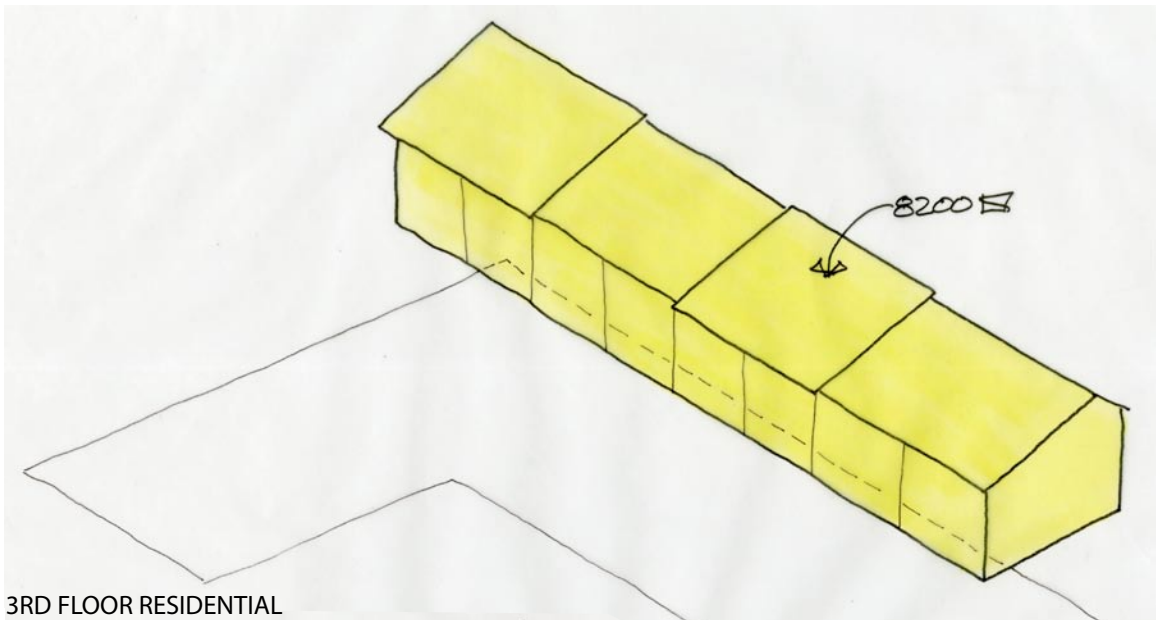
SIDE ELEVATION



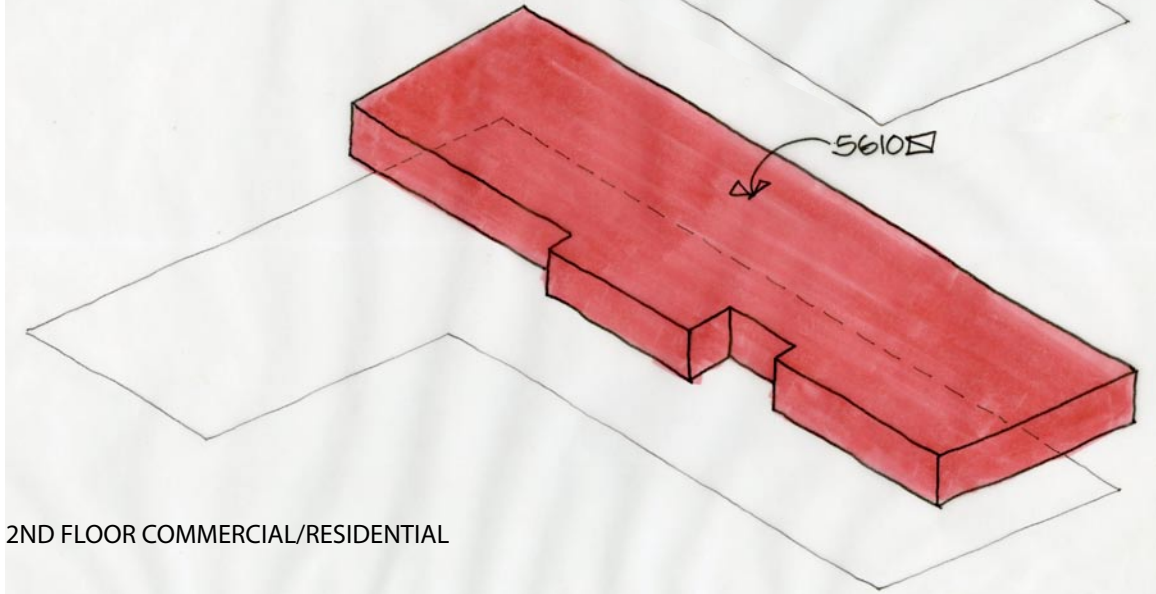
FRONT ELEVATION



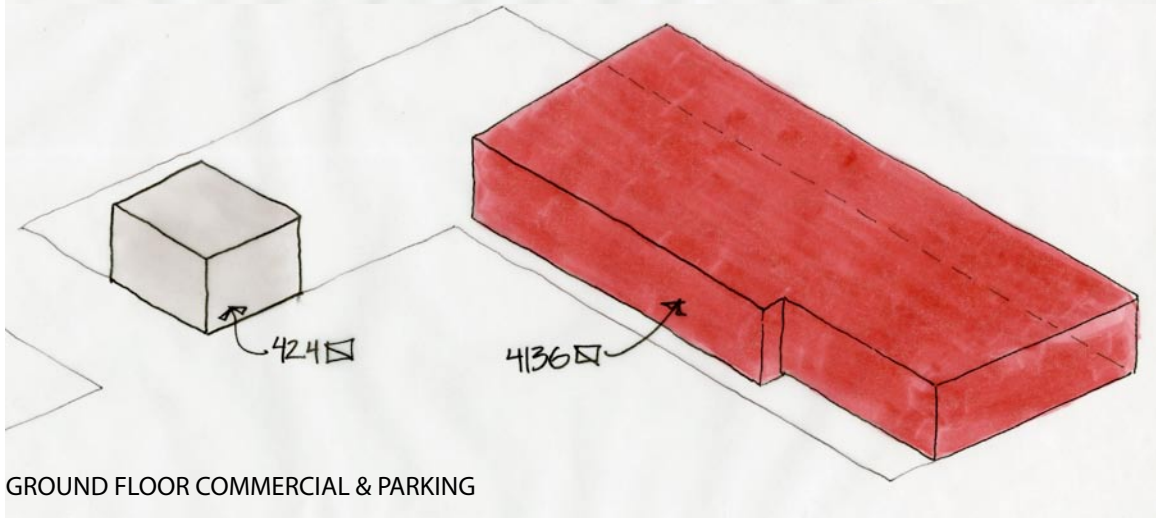
OPEN SPACE



3RD FLOOR RESIDENTIAL



2ND FLOOR COMMERCIAL/RESIDENTIAL

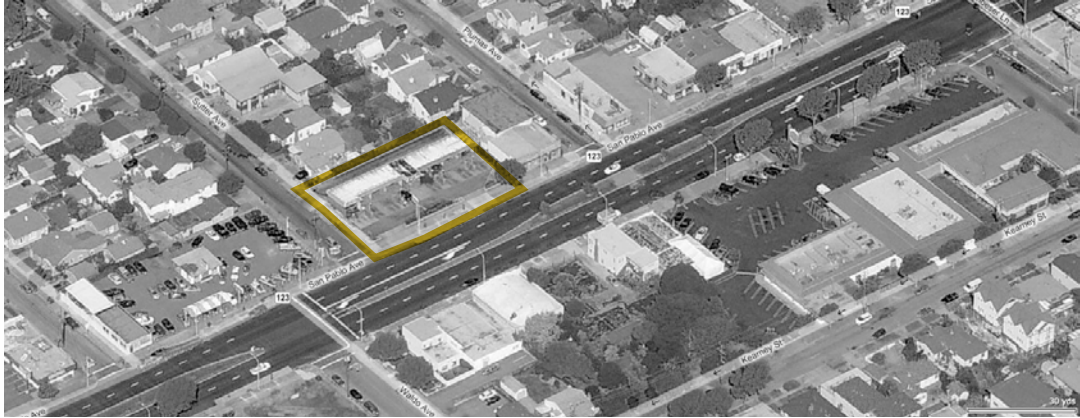


GROUND FLOOR COMMERCIAL & PARKING

		COMPLIES	DOES NOT COMPLY	N/A
Contributes to Urban and Natural Ecotones		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BLOCK LAYOUT	1000' Perimeter maximum for new blocks	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PARCEL LAYOUT	20 000sf parcel maximum	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
FRONTAGE	Primary entrance on SPA or other principle street in SPA 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Vertical delineation every 50' of frontage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Openings designed for daylight and ventilation (25% min)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	80% minimum of façade built to frontage line	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	No parking on frontage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SUSTAINABLE DESIGN	complies with LEED Silver point level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	complies with Sustainable Sites certification level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ENERGY PRODUCTION	maximized on-site energy production	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HOUSING AIR QUALITY	through-floor or double exposure units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FOOD SECURITY	designate food crop space with residential uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUILDING REUSE	Existing building re-used	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Existing use incorporated into new building	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUILDING LAYOUT	maximum coverage not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	35' height minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	maximum height not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3 floor minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	maximum number of floors not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	residential density minimum	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	sun slot setback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	rear property line setback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	rear viewshed setback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	front viewshed setback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	waste and recycling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PARKING	Residential stacked parking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Structured parking	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Open lot park(ing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LAND USE	Primary uses exceed secondary uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OPEN SPACE	coverage or land use ratio applied	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RIPARIAN & DRAINAGE AREAS	no building in 100' buffer zone	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	project incorporates riparian area into design	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VEGETATION	100% of parcel area identified as on-site vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STORMWATER MANAGEMENT	100% of stormwater remains on site--cistern accomodated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ADDITIONAL COMMENTS HERE:

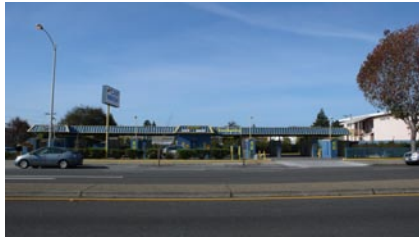
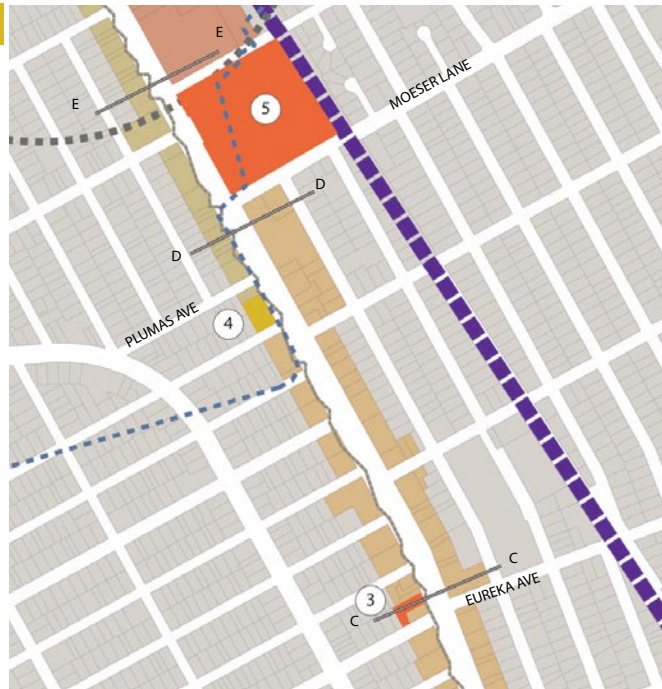
The checklist was filled out by the author based on notes and drawings provided by the designer.



SPA 1

SITE #4

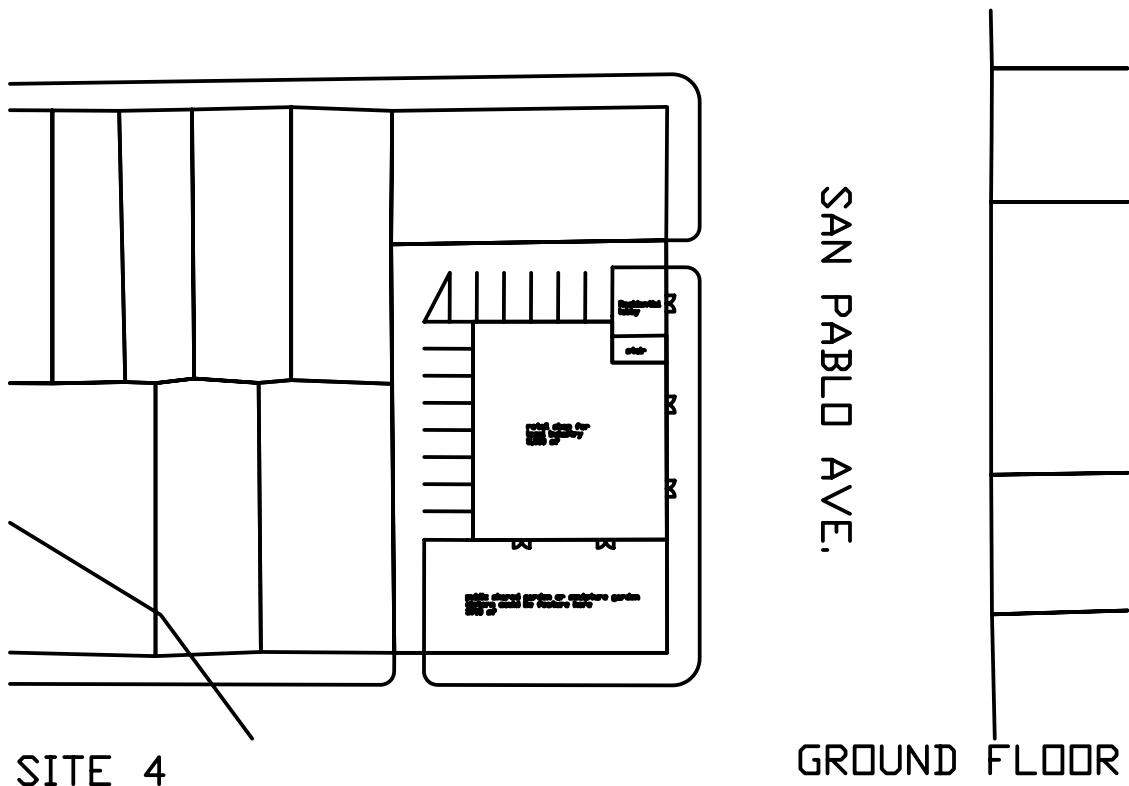
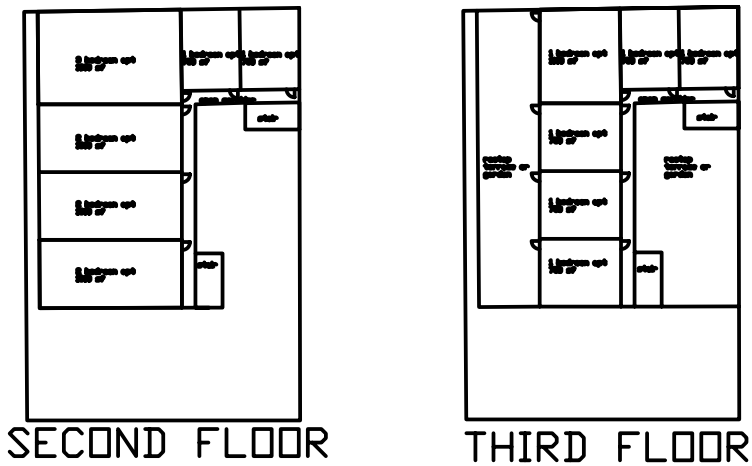
PARCEL AREA: 15310 sf
 EXISTING USES: Self-serve Car Wash
 USE TYPES: Auto-oriented
 CISTERN SIZE: N/A
 UNITS: 12 UNITS (34 U/A)



Site #4 (SPA1)

Site #4 code test for the redesign of a northwest corner auto-oriented business parcel does not comply with the following code requirements: incorporation of existing land use, minimum frontage, and unit density. The sun slot setback is not applicable to parcels in SPA1 since the building height is minimized, so the minimum frontage and unit density requirements could have complied if the sun slot setback had not been applied onto the site.

Total parcel sf = 15310sf with 12 units = 34 units/acre (-15%)



		COMPLIES	DOES NOT COMPLY	N/A
Contributes to Urban and Natural Ecotones		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BLOCK LAYOUT	1000' Perimeter maximum for new blocks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PARCEL LAYOUT	20 000sf parcel maximum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FRONTAGE	Primary entrance on SPA or other principle street in SPA 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Vertical delineation every 50' of frontage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Openings designed for daylight and ventilation (25% min)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	80% minimum of façade built to frontage line	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	No parking on frontage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SUSTAINABLE DESIGN	complies with LEED Silver point level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	complies with Sustainable Sites certification level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ENERGY PRODUCTION	maximized on-site energy production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HOUSING AIR QUALITY	through-floor or double exposure units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FOOD SECURITY	designate food crop space with residential uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUILDING REUSE	Existing building re-used	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Existing use incorporated into new building	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
BUILDING LAYOUT	maximum coverage not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	35' height minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	maximum height not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3 floor minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	maximum number of floors not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	residential density minimum (12-provided, 14 needed)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	sun slot setback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	rear property line setback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	rear viewshed setback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	front viewshed setback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	waste and recycling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PARKING	Residential stacked parking - <i>trch under</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Structured parking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Open lot park(ing)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LAND USE	Primary uses exceed secondary uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OPEN SPACE	coverage or land use ratio applied - <i>Isn't this redundant with the max bldg coverage?</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RIPARIAN & DRAINAGE AREAS	no building in 100' buffer zone - <i>I did not incorporate the adjacent stream.</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	project incorporates riparian area into design - <i>Buffer zone req. are not clear.</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VEGETATION	100% of parcel area identified as on-site vegetation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
STORMWATER MANAGEMENT	100% of stormwater remains on site--cistern accomodated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

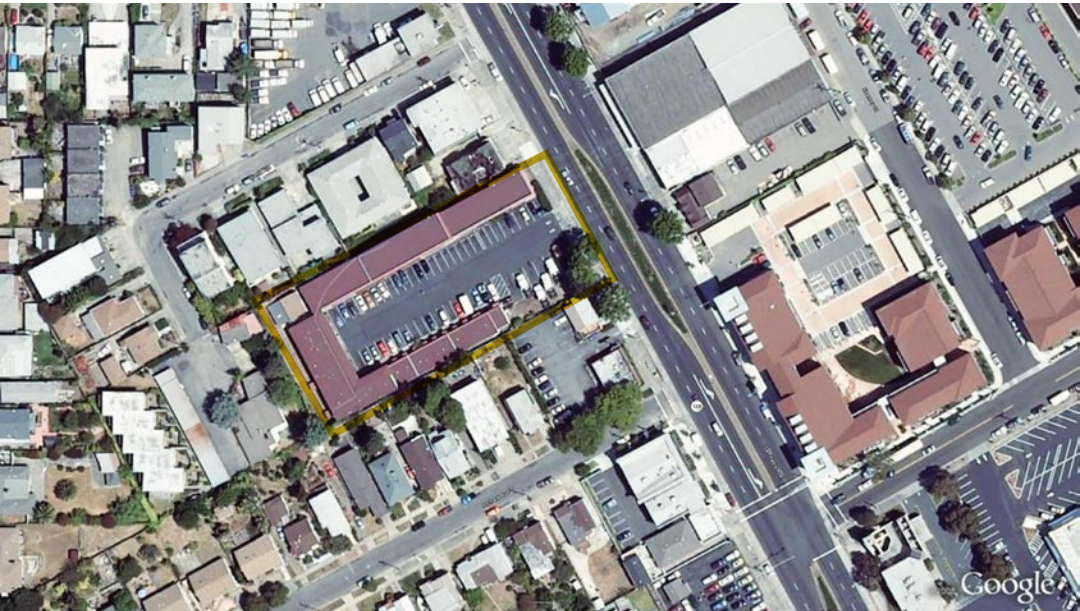
ADDITIONAL COMMENTS HERE:



SPA 1

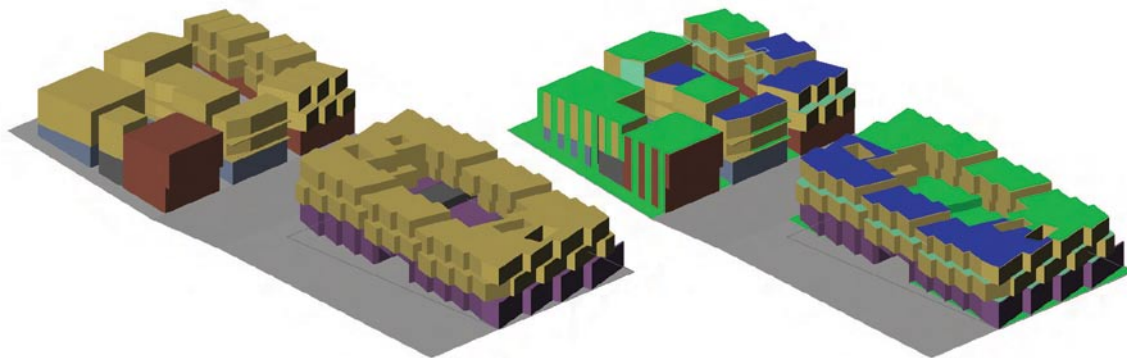
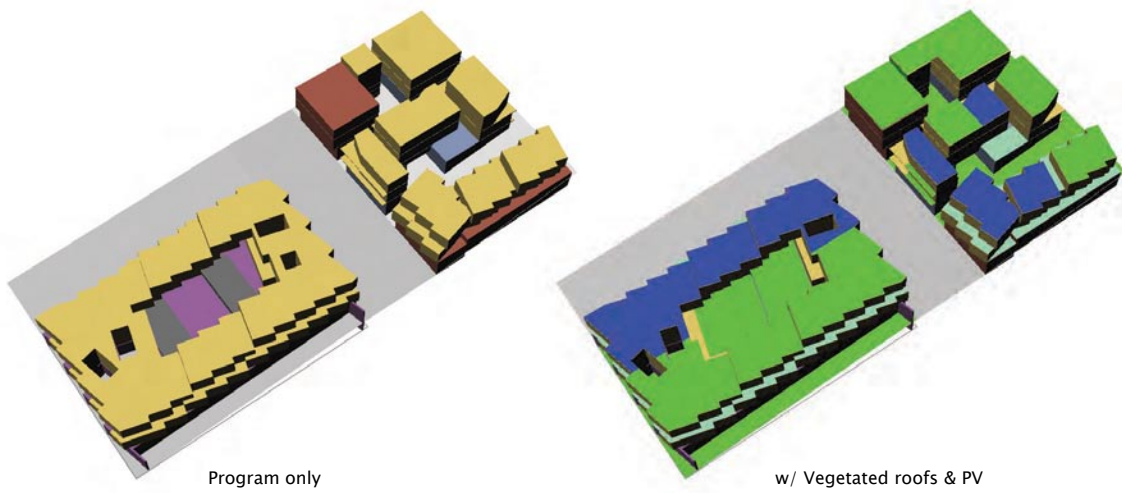
SITE #6

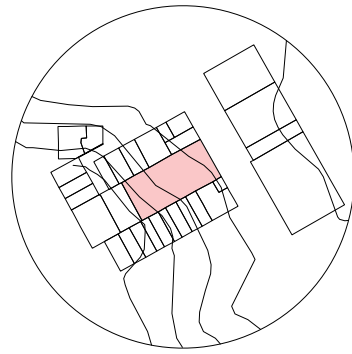
PARCEL AREA: 47565 sf
 EXISTING USES: Motel
 USE TYPES: Motel/Hotel
 CISTERN SIZE: N/A
 UNITS: 81 UNITS (74 U/A)
 MOTEL, SRO, MULTI-FAMILY



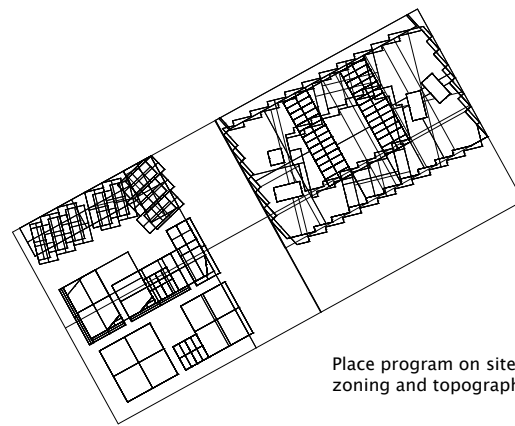
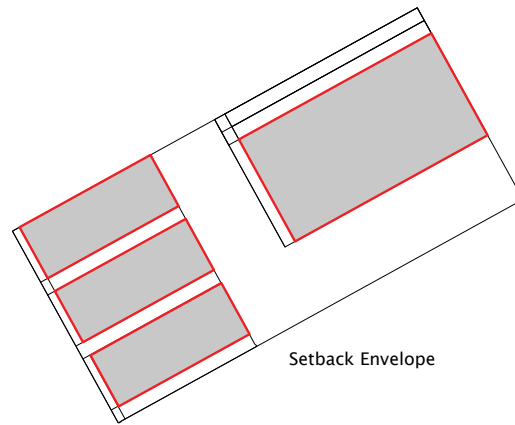
Site #6 (SPA1)

Site #6 code test for the redesign of a mid-block motel parcel meets all of the code requirements, except the stormwater standard, but exceeds the density requirement (actual 74 units/acre) by 85% including multi-family residential units, a motel, and a single resident occupant (SRO) facility. The designer introduced a new right-of-way since the existing site required subdivision into at least three parcels and the proportions of the parcel were not conducive to subdivision perpendicular to San Pablo Avenue.

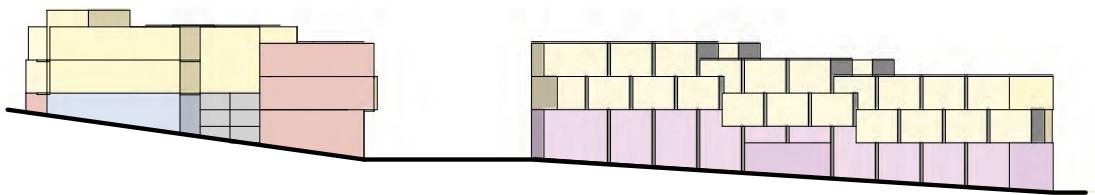


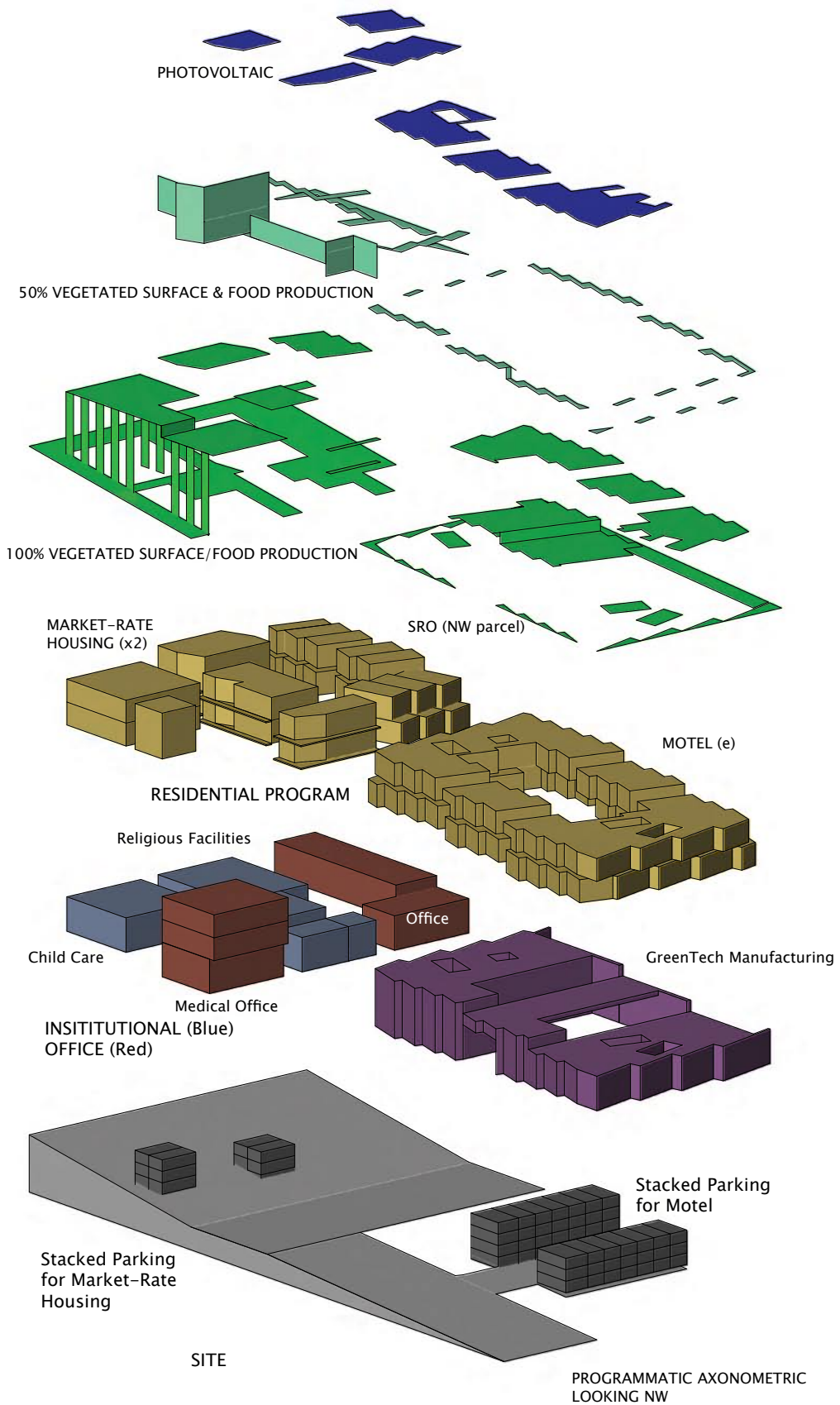


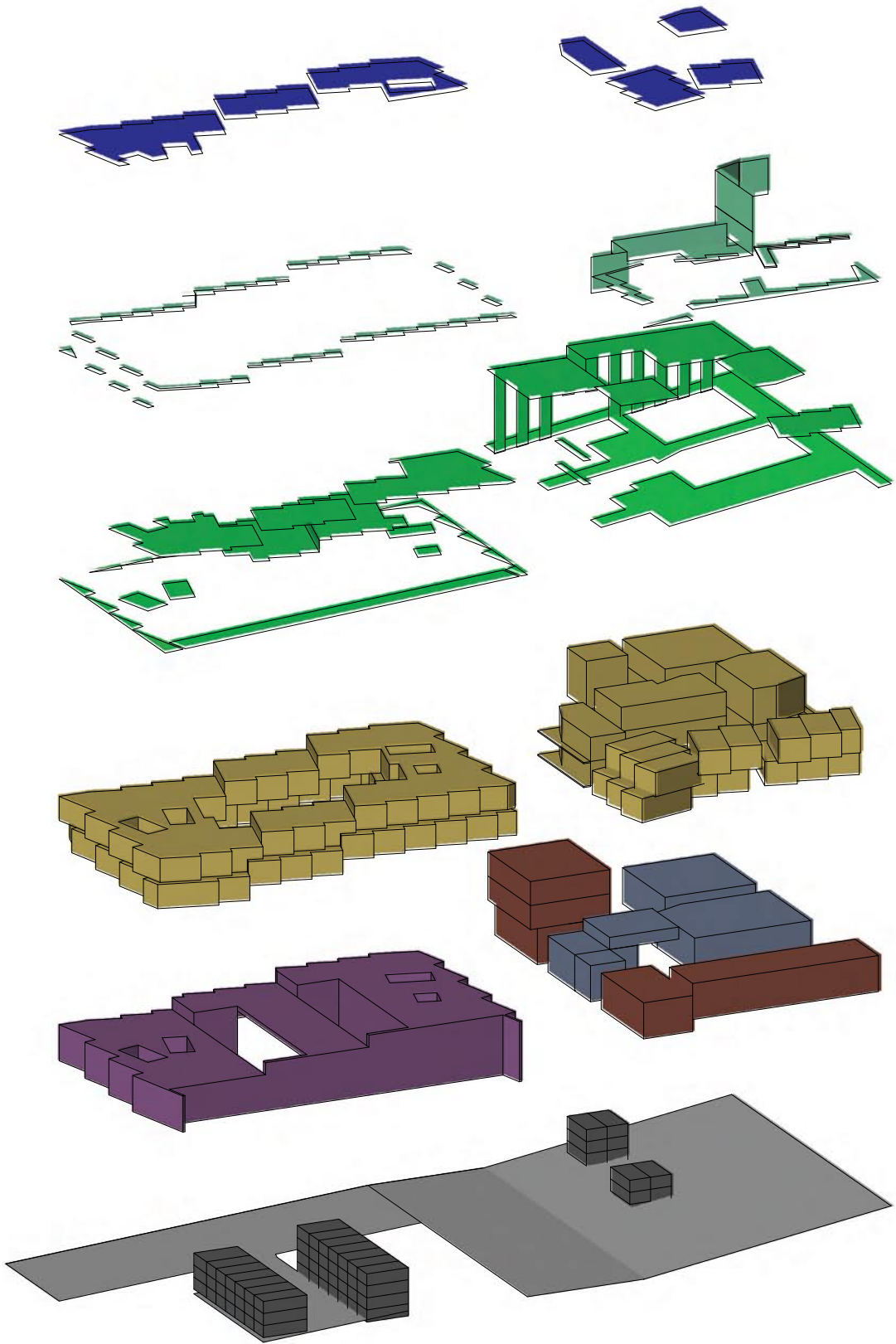
SITE #6



Place program on site per zoning and topography







PROGRAMMATIC AXONOMETRIC
LOOKING SW

		COMPLIES	DOES NOT COMPLY	N/A
Contributes to Urban and Natural Ecotones		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BLOCK LAYOUT	1000' Perimeter maximum for new blocks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PARCEL LAYOUT	20 000sf parcel maximum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FRONTAGE	Primary entrance on SPA or other principle street in SPA 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Vertical delineation every 50' of frontage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Openings designed for daylight and ventilation (25% min)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	80% minimum of façade built to frontage line	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	No parking on frontage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SUSTAINABLE DESIGN	complies with LEED Silver point level	<input checked="" type="checkbox"/> (def. should)	<input type="checkbox"/>	<input type="checkbox"/>
	complies with Sustainable Sites certification level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ENERGY PRODUCTION	maximized on-site energy production	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HOUSING AIR QUALITY	through-floor or double exposure units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FOOD SECURITY	designate food crop space with residential uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUILDING REUSE	Existing building re-used	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Existing use incorporated into new building	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUILDING LAYOUT	maximum coverage not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	35' height minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	maximum height not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3 floor minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	maximum number of floors not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	residential density minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	sun slot setback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	rear property line setback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	rear viewshed setback	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	front viewshed setback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> ??
	waste and recycling	<input checked="" type="checkbox"/> ??	<input type="checkbox"/>	<input type="checkbox"/>
PARKING	Residential stacked parking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Structured parking	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Open lot park(ing)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LAND USE	Primary uses exceed secondary uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OPEN SPACE	coverage or land use ratio applied	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RIPARIAN & DRAINAGE AREAS	no building in 100' buffer zone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	project incorporates riparian area into design	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VEGETATION	100% of parcel area identified as on-site vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STORMWATER MANAGEMENT	100% of stormwater remains on site--cistern accommodated	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ADDITIONAL COMMENTS HERE:



SPA 3

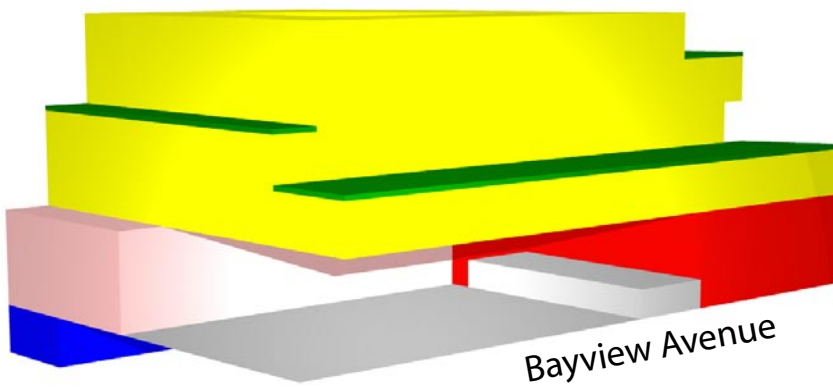
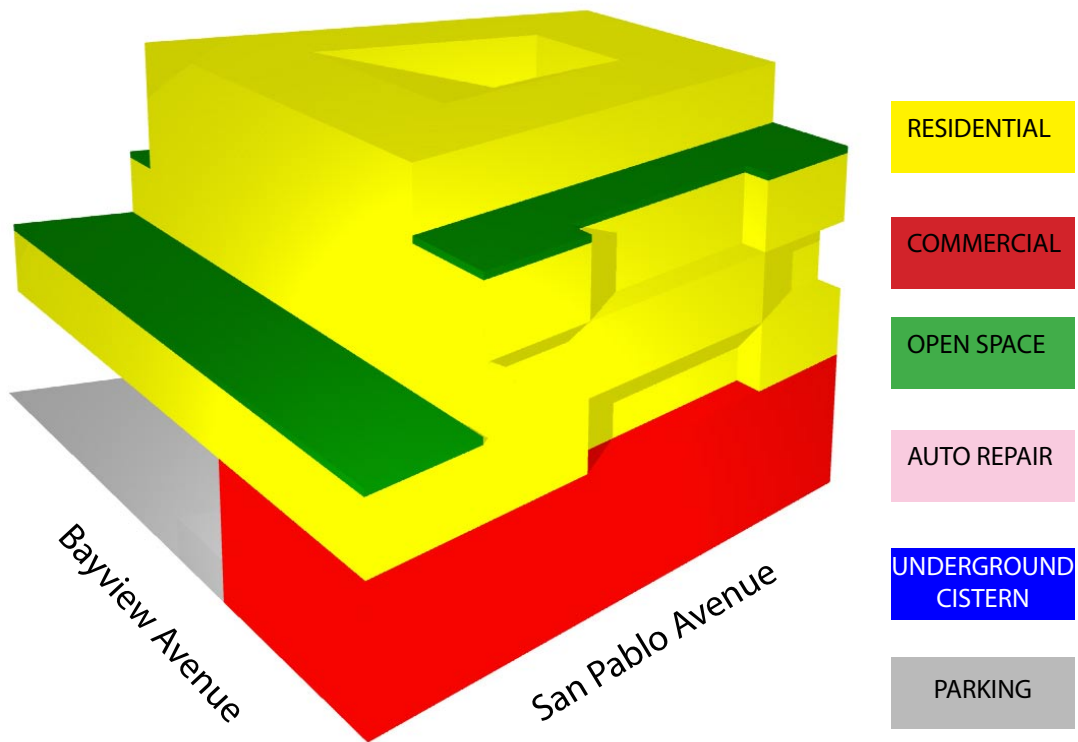
SITE #7

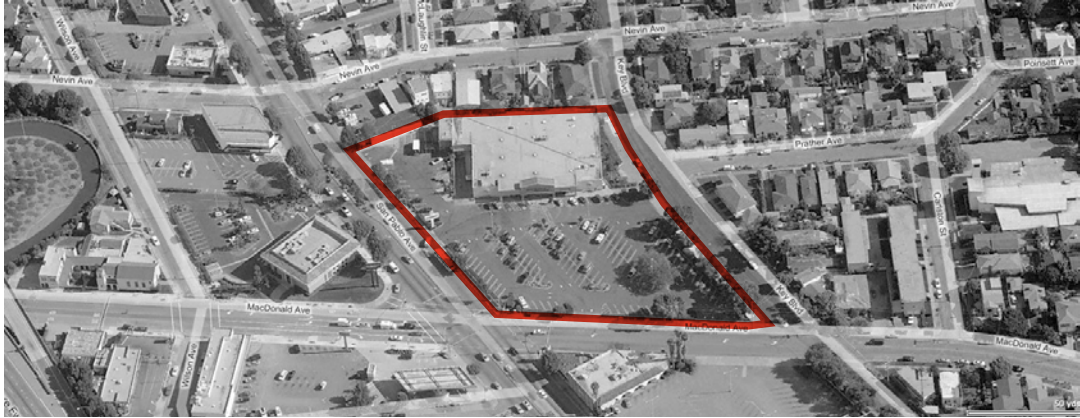
PARCEL AREA: 12339 sf
 EXISTING USES: Midas Brakes
 USE TYPES: Auto-related
 CISTERN SIZE: 45,000 gallons
 UNITS: 18 UNITS (63 U/A)



Site #7 (SPA3)

Site #7 code test for the redesign of a northwest corner auto-oriented business parcel meets all of the code requirements, and exceeds the density requirement (actual 63 units/acre) by 5%. The designer relocated the auto-related business to the back of the parcel where the stacked parking can be shared by the residents and the auto-repair business.





SPA 3

SITE #11

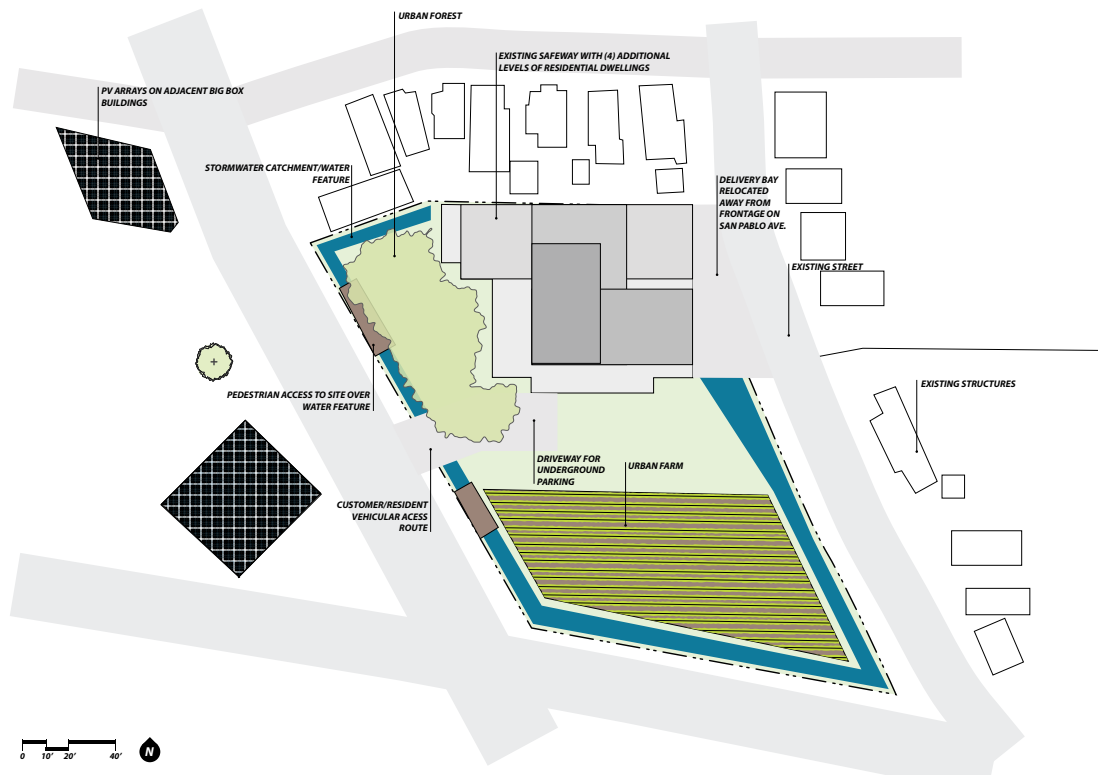
PARCEL AREA: 124,348 sf
EXISTING USES: Safeway grocery store
USE TYPES: Retail-oriented
CISTERN SIZE: N/A
UNITS: ~32 UNITS (21 U/A)
 sub-divided into 2 parcels



Site #11 (SPA3)

Site #11 code test for the redesign of a northeast corner grocery store parcel does not comply with most of the code requirements. The design does retain the existing Safeway grocery store and its structure and then adds a significant open space for agricultural production. The residential units were estimated at 32 units, which amounts to 21 units/acre if the parcel is subdivided into two parcels. 21 units/acre represents only 35% of the minimum density zoned for the site.

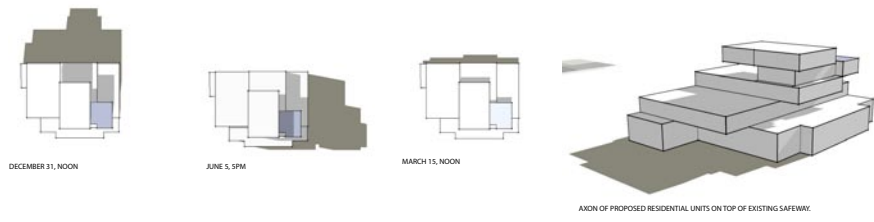
SITE #11: San Pablo & MacDonald Avenue



COMMENTS

THIS CONCEPTUAL PLAN MAINTAINS THE EXISTING USE OF SAFEWAY WHILE ADDING AN URBAN FARM, UNDERGROUND PARKING, AND A HIGHLY VISIBLE WATER HARVESTING SYSTEM THAT COLLECTS WATER FROM THE ROOF OF THE PROPOSED STRUCTURE.

THE PROPOSED STRUCTURE ADDS (4) LEVELS OF RESIDENTIAL DWELLING UNITS ON TOP OF THE EXISTING STORE. ALL PARKING WILL BE BELOW GRADE, ALLOWING FOR ALTERNATE USES OF THE GROUND PLANE, SUCH AS FARMING, A RECREATIONAL TURF AREA, AND



		COMPLIES	DOES NOT COMPLY	N/A
Contributes to Urban and Natural Ecotones		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BLOCK LAYOUT	1000' Perimeter maximum for new blocks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PARCEL LAYOUT	20 000sf parcel maximum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FRONTAGE	Primary entrance on SPA or other principle street in SPA 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Vertical delineation every 50' of frontage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Openings designed for daylight and ventilation (25% min)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	80% minimum of façade built to frontage line	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	No parking on frontage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SUSTAINABLE DESIGN	complies with LEED Silver point level	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	complies with Sustainable Sites certification level	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ENERGY PRODUCTION	maximized on-site energy production	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HOUSING AIR QUALITY	through-floor or double exposure units	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FOOD SECURITY	designate food crop space with residential uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUILDING REUSE	Existing building re-used	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Existing use incorporated into new building	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUILDING LAYOUT	maximum coverage not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	35' height minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	maximum height not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3 floor minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	maximum number of floors not exceeded	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	residential density minimum	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	sun slot setback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	rear property line setback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	rear viewshed setback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	front viewshed setback	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	waste and recycling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PARKING	Residential stacked parking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Structured parking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Open lot park(ing)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
LAND USE	Primary uses exceed secondary uses	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OPEN SPACE	coverage or land use ratio applied	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RIPARIAN & DRAINAGE AREAS	no building in 100' buffer zone	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	project incorporates riparian area into design	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VEGETATION	100% of parcel area identified as on-site vegetation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
STORMWATER MANAGEMENT	100% of stormwater remains on site--cistern accomodated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ADDITIONAL COMMENTS HERE:



SPA 3

SITE #12

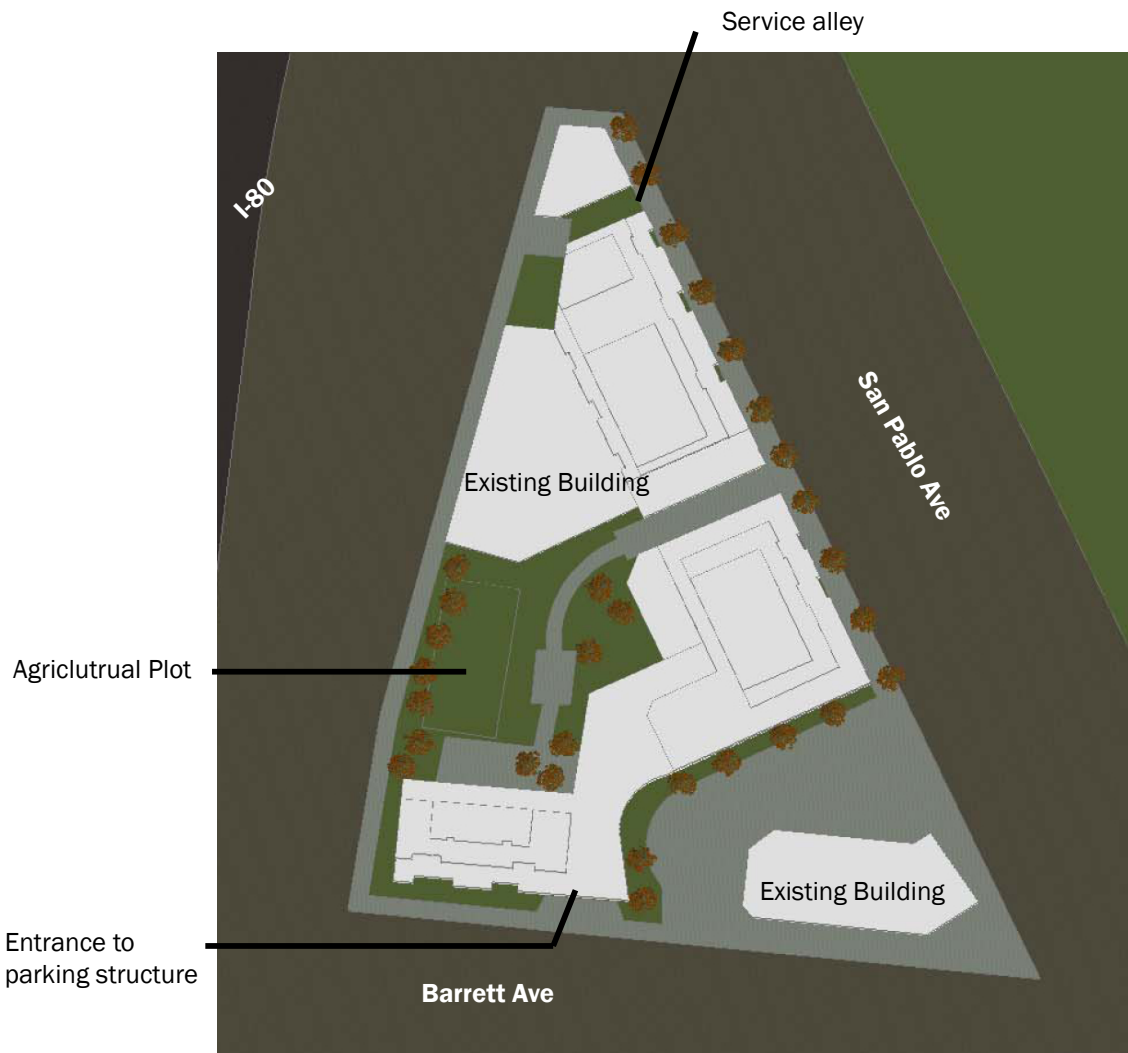
PARCEL AREA: 51,915 sf
EXISTING USES: Strip mall chain food stores
USE TYPES: Retail-oriented
CISTERN SIZE: N/A
UNITS: 72 UNITS (60 U/A)



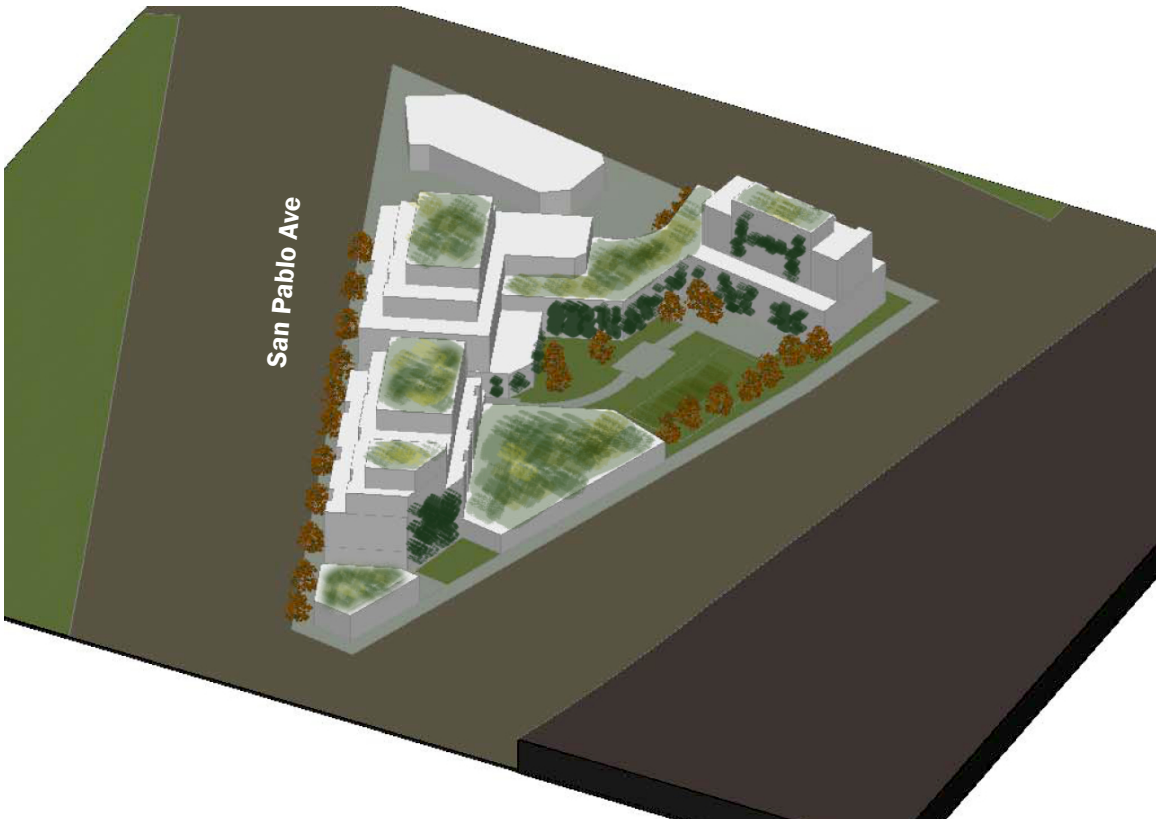
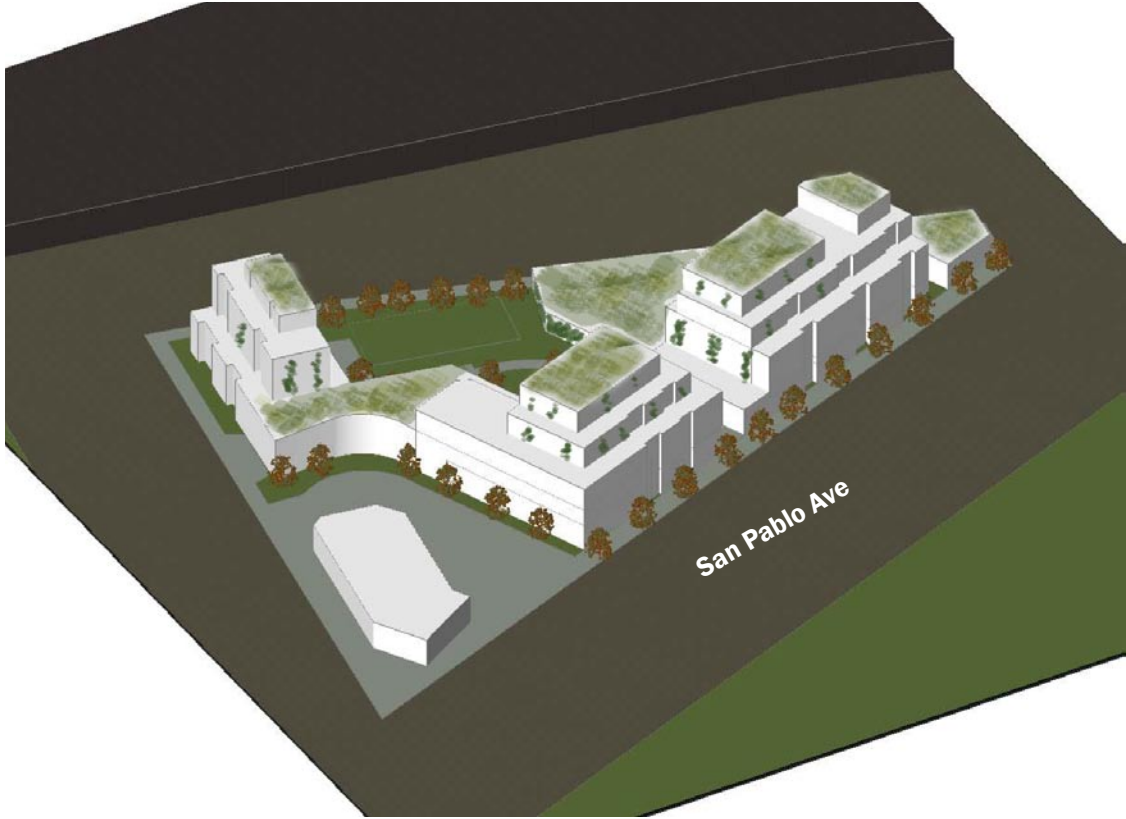
Site #12 (SPA3)

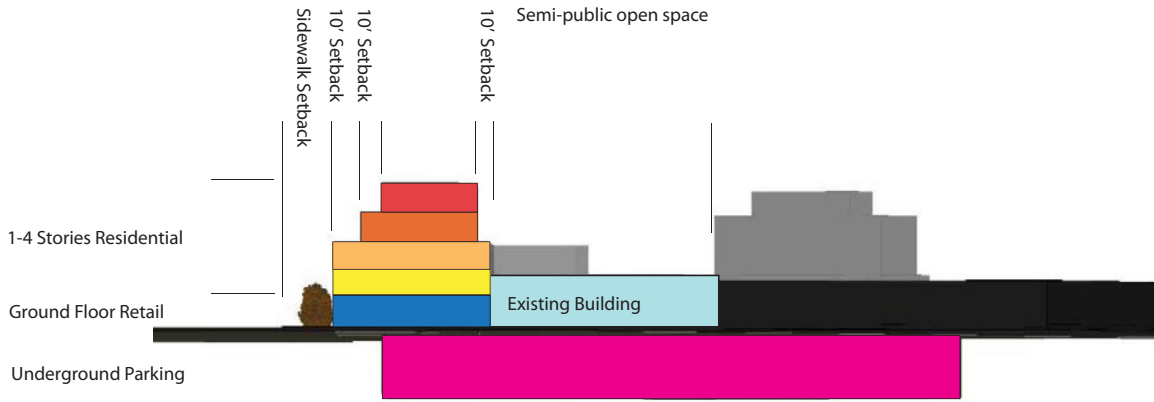
Site #12 code test for the redesign of a large commercial/retail parcel meets all of the code requirements including density, except for the sun slot standard and the stormwater standard.

The designer retained the existing uses and structures on the site.



The new plan for area #12 of San Pablo Ave. creates a mixed-use block with 1-5 floors of residential above ground floor small grain retail. The design takes advantage of existing topography in order to integrate a large parking structure under most of the new development. Water and heat are captured through a series of intensive and extensive green roofs, as well as semi-public green space and a small agricultural plot. The new development also takes advantage of the large existing building to create room for a retail use with a large floor plate while still meeting the frontage requirements.





Building Heights

- 1 Story
- 2 Stories
- 3 Stories
- 4 Stories
- 5 Stories

Open Space/Green Space

- Ground-level OS
- Extensive Green Roof
- Intensive Green Roof
- Agriculture
- Green Wall



SPA 3

SITE #A

PARCEL AREA: 1,500,646 sf
 EXISTING USES: a lot of retail
 USE TYPES: Retail-oriented
 CISTERN SIZE: LARGE +1 million gallons
 PARK ACRES: 13.7 acres
 (includes 3.3 riparian acres)
 UNITS: 1170 UNITS (100 U/A)



Site A (SPA4)

In theory, Site A complies with the code, however, this large retail/commercial complex was tested as a single site for it's for district utility potential more than code compliance. The designer of this code test specializes in decentralized energy, waste and water systems, and the large SPA4 sites are prime areas for self-sustaining redevelopment districts that would remove significant loads from the centralized infrastructure systems. These areas can also house large amounts of people and provide the amount of commercial and retail space to be well-functioning transit-oriented developments.

Decentralized Net Zero* Utility District

REGENERATIVE INFRASTRUCTURES:

Bio-gas Co-generation

Solar Thermal Hot Water & Heating

Water Cycling: Gray Water Recycling, Rainwater Harvesting, Brown Water Treatment and Recycling in Living Machines and Tertiary Treatment Constructed Wetlands

OVERALL SITE COVERAGE:

Green Coverage	40%
Building Coverage	34%
Hardscape (including roads)	26%

OCCUPANTS

Residents	2679
Office	1275
Retail	637
TOTAL	4591



200'

BUILDING

OPEN SPACE WITH
INFRASTRUCTURE

PERVIOUS
HARDSCAPE

RIPARIAN ZONE
OPEN SPACE

Code Test Conclusion

Unit densities were often exceeded even with the sun slot standard restriction, and the Urban Ecotone Code densities are higher than those specified in the real San Pablo Avenue Specific Plan. (Refer to chart in code analysis chapter.) Meanwhile, building height limits are similar between the two, with an additional floor allowed in SPA4. The results from the code test of the eight sites, excluding Site A, represent 304 units of housing for a population of 696 additional residents. Site A, which includes district utilities, accounts for 1170 units of housing for approximately 2679 people. If the five-mile strip redeveloped entirely to the Urban Ecotone Code conditions, an additional 16,814 units of housing would be created for an additional population of 38,505 residents, while accommodating the existing land uses. Along with this increase in population, there would need to be an increase in open space equaling 154 acres. Basically, this means that this 5-mile strip of San Pablo Avenue can accommodate significantly more than 9000 additional people without compromising the cultural landscape components addressed in the code explanation, and without imposing a burden on the existing centralized infrastructure systems.

