

WORK PROGRAM 295 MACARTHUR BLVD, OAKLAND

Exterior Details and Work Program Summary:

- Dry Rot corrections on roof-life of multiple bungalows
- Exterior painting and stucco work on multiple bungalows due to extensive deferred exterior maintenance
- Exterior window restoration and replacement/repair in kind, to match original. Especially on the multi-pane windows facing the interior walkway. Dry rot noted on windowsills and broken glass in multiple windows.
- Repair of window caulking done incorrectly during previous repairs.
- Front wall and entrance post repair. Major cracking and concrete damage showing at entrance posts.
- Repair of interior driveway walls. Extensive deferred maintenance including major cracking and chipping of stucco/paint and concrete.
- Repair of landscaping barriers which have been heavily damaged over time.
- Repainting/refinishing of walkway entrances into the bungalows. Paint is not matching and heavily chipped.
- Structural repair/seismic reinforcement in all 10 bungalows. Each bungalow consists of a soft-story condition where the buildings bear on wood-framed cripple wall.

* Due to the Bungalow Style of this property. The work program has been split up into individual items and then grouped so as to be as efficient as possible. For example, exterior painting and stucco repairs will be completed as follows: Cottages 1-4 during year 1, 5-7 during year 2, 8-10 during year 3 etc.

For photo reference purposes, Work Items have been grouped as follows:
(#1, #2, #3), (#4, #5), (#6), (#7), (#8, #9, #10)

**Note there is an application in to convert two rear garages into Accessory Dwelling Units (ADUs). This ADU application is independent of the Mills Act Application and work plan.

EXTERIOR IMAGES



(Street view of 295 MacArthur)



(Front entrance damage, cracking and stucco repair)

WORK ITEM: #7



(Street facing wall with extensive paint/stucco damage)

WORK ITEM: #7



(Interior driveway walls heavily damaged, stucco, paint and cement)

WORK ITEM: #4, #5



(Dry rot repair needed on multiple bungalow roof lines)

WORK ITEM: #1, #2, #3



(Stucco repair on bungalow)

WORK ITEM: #1, #2, #3



(Improper caulking and repair work on windowsill. Needs restoration)

WORK ITEM: #1, #2, #3



(Improper caulking and repair. Needs replacement/restoration) in kind, to match original

WORK ITEM: #1, #2, #3



(Stucco cracking)

WORK ITEM: #1, #2, #3



(Example of improper caulking/repairs from prior deferred maintenance)

WORK ITEM: #1, #2, #3



(Improper caulking/repairs from prior deferred maintenance)

WORK ITEM: #1, #2, #3



(Additional improper caulking/repairs which needs replacement and refurbishment in kind to match original)

WORK ITEM: #1, #2, #3



(Additional improper caulking/repairs)

WORK ITEM: #1, #2, #3



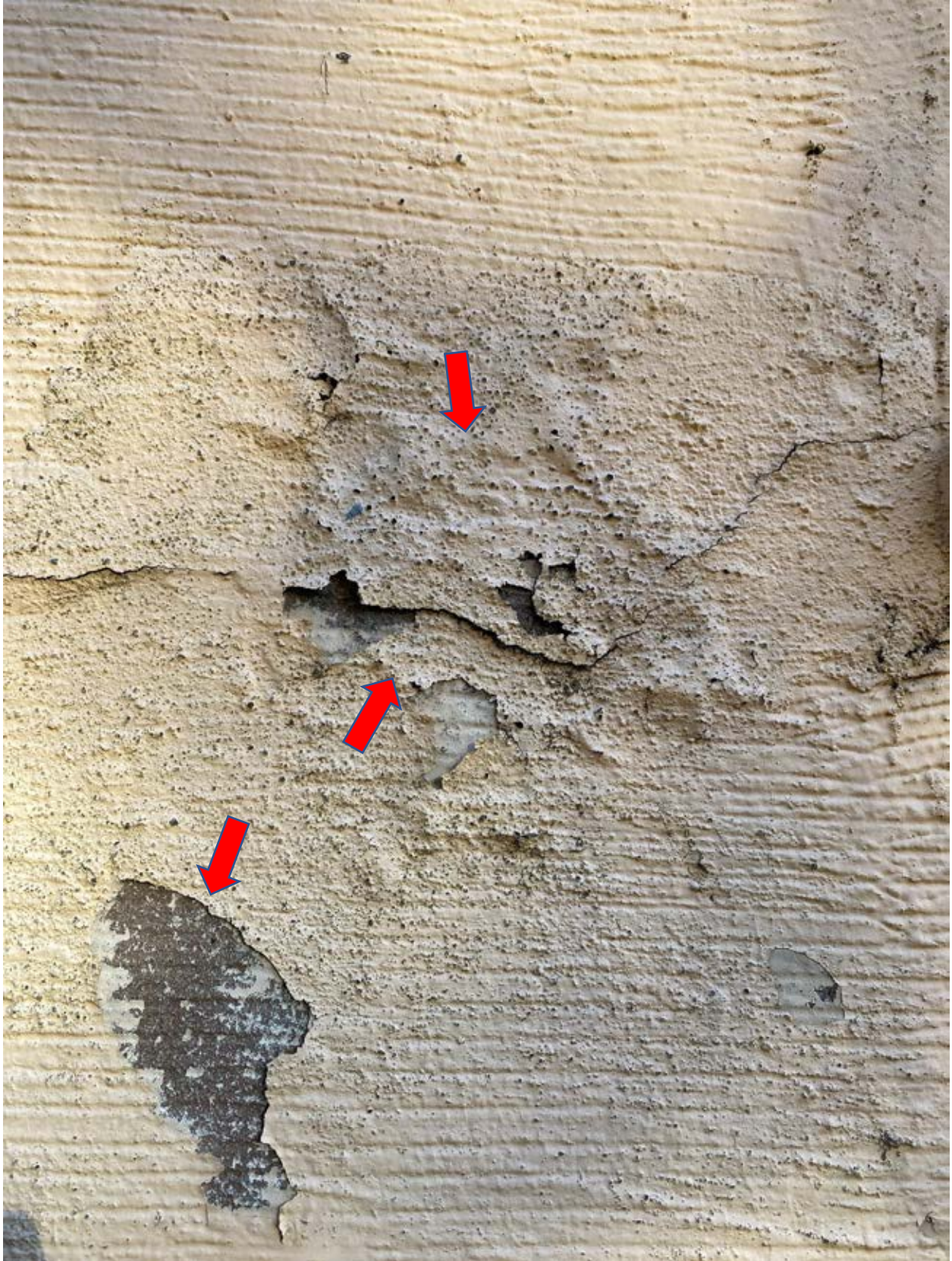
(Window framing containing dry rot and in need of restoration in kind to match original)

WORK ITEM: #1, #2, #3



(Damaged Stucco siding)

WORK ITEM: #1, #2, #3



(Damaged Stucco siding)

WORK ITEM: #1, #2, #3



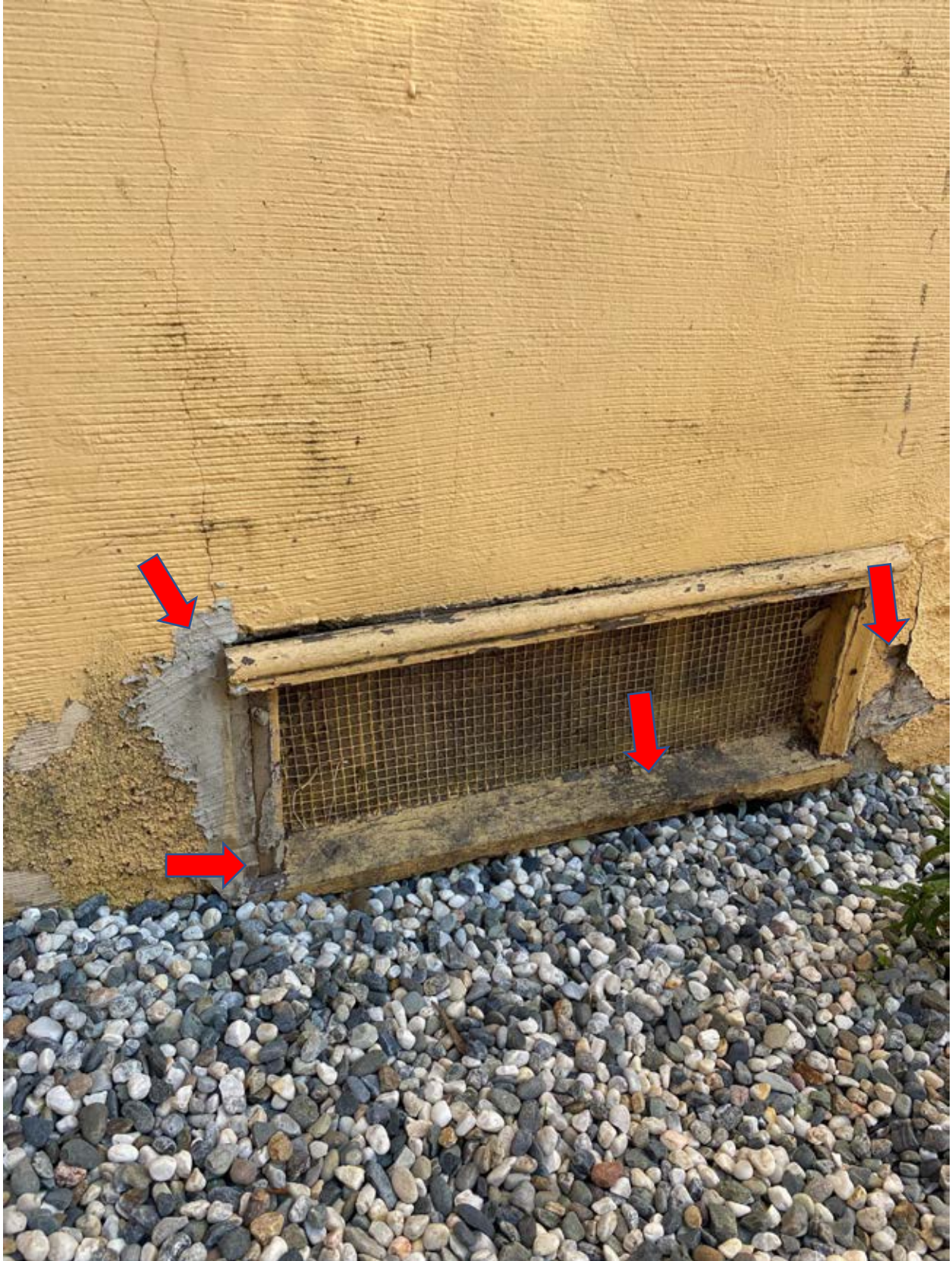
(Damaged stucco siding, paint spillage and cracking)

WORK ITEM: #1, #2, #3



(Damaged walkway and stucco siding)

WORK ITEM: #4, #5



(Improper repairs, dry rot, and stucco cracking)

WORK ITEM: #1, #2, #3



(Windowsill paint cracking)

WORK ITEM: #1, #2, #3



(Roofline dry rot on multiple bungalows)

WORK ITEM: #1, #2, #3



(Additional roofline dry rot)

WORK ITEM: #1, #2, #3



(Driveway retaining wall cracking, settling, stucco damage. Needs repair/replacement)

WORK ITEM: #6



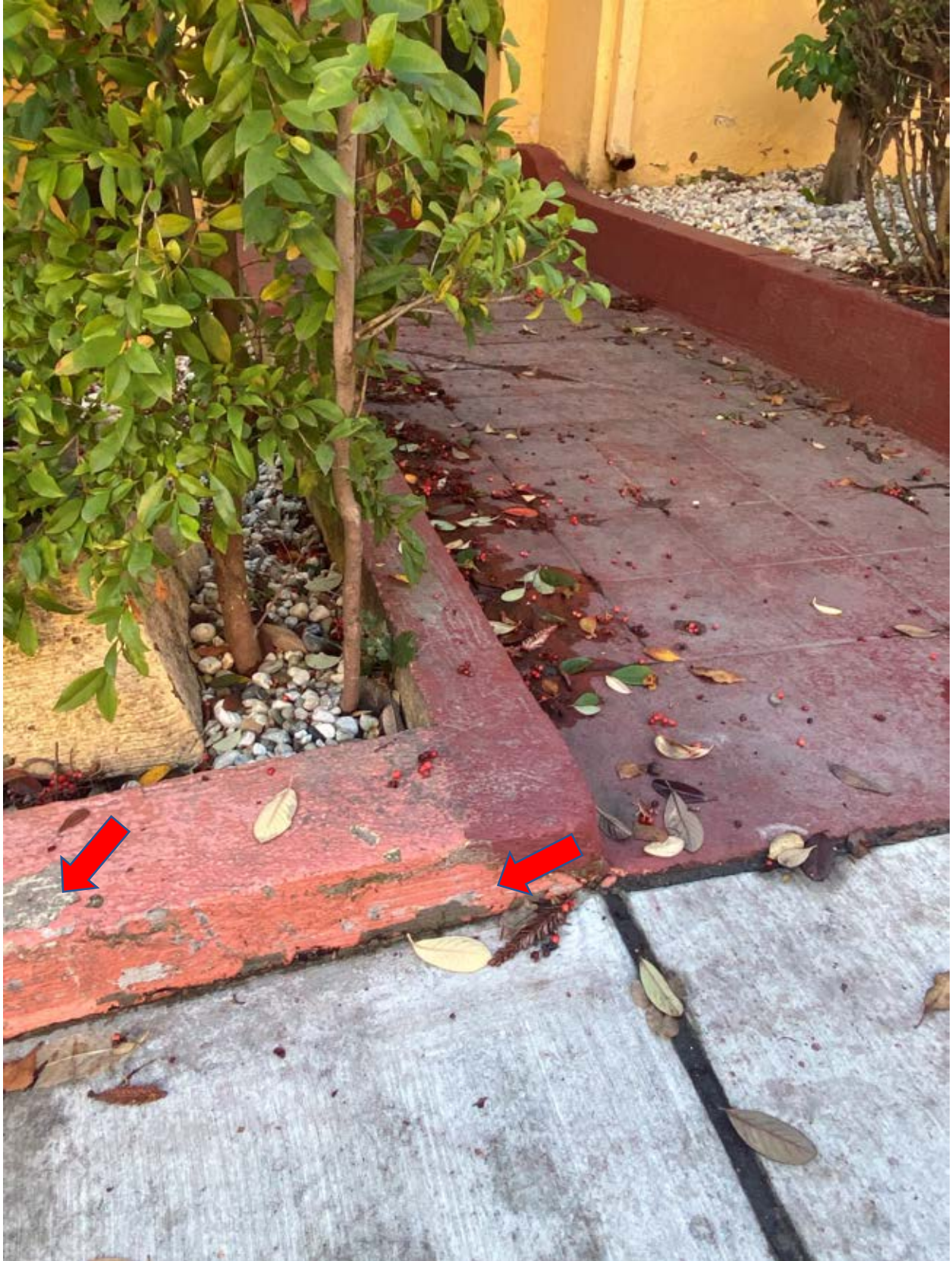
(Additional driveway retaining wall damage)

WORK ITEM: #6



(Driveway landscaping wall damage. Broken pieces and concrete damage)

WORK ITEM: #4, #5



(Concrete damage and paint mismatch on bungalow walkways)

WORK ITEM: #4, #5



(Paint peeling and damage on bungalow walkway. Stucco cracking and damage on retaining walls)

WORK ITEM: #4, #5



(Dry rot and stucco damage)

WORK ITEM: #1, #2, #3



(Improper repairs to prior stucco damage. Retaining wall restoration needed)

WORK ITEM: #4, #5



(Damage and cracking on bungalow entrance way)

WORK ITEM: #4, #5



(Concrete damage on walkway entrance to bungalow)

WORK ITEM: #4, #5



(Major damage on portion of driveway retaining wall. Stucco damage and broken cement)

WORK ITEM: #6



(Mismatch paint on windowsills, damage to stucco and concrete at bungalow entrance)

WORK ITEM: #4, #5



(Stucco damage on driveway retaining wall)

WORK ITEM: #6



(Major cracking and stucco damage on driveway retaining wall)

WORK ITEM: #6



(Cracking and improper stucco repair on bungalow front entrance)

WORK ITEM: #4, #5



(Major cracking on and stucco damage on street facing entrance posts)

WORK ITEM: #7



(Major cracking and improper repairs on driveway portion of entrance post)

WORK ITEM: #6



(Stucco damage and mismatched paint on walkway)

WORK ITEM: #4, #5



(Improper repairs to street facing walls)

WORK ITEM: #7



(Soft-story structural/seismic issues that need to be reinforced)

WORK ITEM: #8, #9, #10



December 15, 2022

RE: Structural Observation
295 MacArthur Blvd
Oakland, CA 94610

To Whom It May Concern:

In my capacity as California-Licensed Professional Civil Engineer #C81125, I write in association with the structural condition of the ten, 1-level, 1-unit, wood-frame, residential buildings located at 295 MacArthur Blvd in Oakland.

Building Composition

- **Structural Framing.** Each of the ten buildings are wood-frame structures over crawl space. The ground floor framing of each building bears both on wood-frame cripple walls and directly on the concrete foundation. It is a soft-story condition where the buildings bear on wood-frame cripple wall, and it is not a soft-story condition where the building bear directly on the concrete foundation.
- **Recommendation.** The standard recommendation of the structural engineering community is to strengthen the unreinforced, wood-frame cripple walls with segments of wood-frame shear wall that anchor directly into the concrete foundation. These shear wall segments install from the inside of the crawl space, and they install only from within the crawl space, and not within the unit above.

Where the ground floor framing bears directly on the concrete foundation, Universal Retrofit Foundation Plates (URFP) are best installed to fasten the floor framing to the foundation.

- **Building Exterior.** The building exterior consists of a stucco sheathing layer. This sheathing provides a higher lateral strength relative to wood siding. This is beneficial to seismic resistance, though not a seismic system.

WORK ITEM: #8, #9, #10

Seismic Hazard

- **Seismicity.** The subject buildings are located in Oakland near the Hayward Fault, which is capable of a seismic event.
- **Soil Site Class C.** The subject buildings are located in an area of USGS Soil Site Class C, which is characterized as very dense soil and soft rock. This material naturally attenuates (dampens / reduces) seismic load, with A/B (rock) being best and E (soft clay) being worst.
- **Soil Site Map.** The location of the subject buildings are marked with an "X" on the following USGS Soil Site Class Map:



WORK ITEM: #8, #9, #10

- **Retrofit Scope.** To retrofit the subject buildings, wood-frame shear walls are installed into the existing concrete foundation. This is the most cost-effective retrofit technique. Work is only performed within the ground floor, and not above, within habitable units. Shear wall segments are installed on the interior side of existing walls, typically around the building perimeter and existing garage space. Their assembly involves adding framing, fasteners, hold-downs, and plywood to the existing typical stud framing like this:

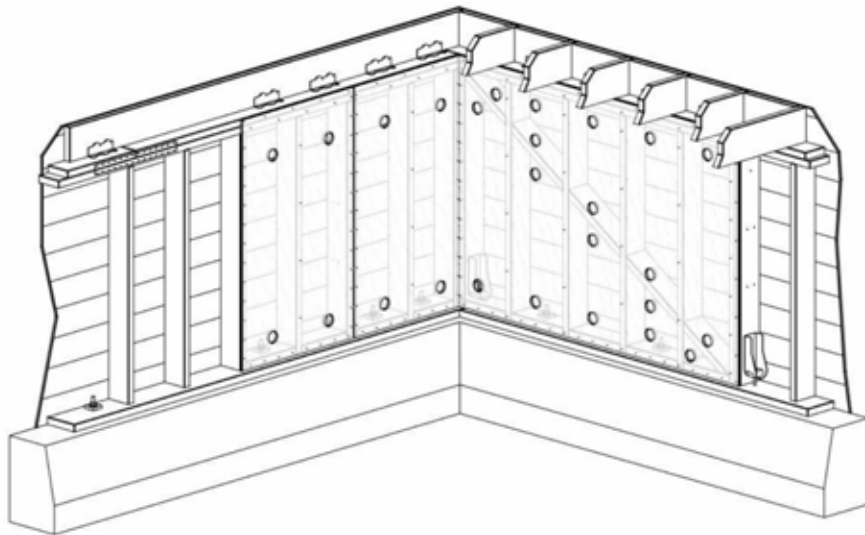


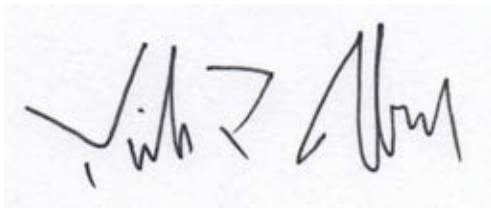
Image: Wood-frame shear wall installed into existing concrete footing

WORK ITEM: #8, #9, #10

As a summary of observations and recommendations, please note that this material does not guarantee or provide warranty for the building or any existing condition, and does not constitute any liability for City Structural, Inc. and the author, who are held harmless.

It has been my pleasure to serve you on this matter, please feel free to let me know if you have any questions, or if I can be of further assistance.

Best,



Mike Abell, P.E.
Principal Engineer
City Structural, Inc.
www.citystructural.com

WORK ITEM: #8, #9, #10