## Fleetwood Plaza Drainage Projects Update #1

As we all remember, there was a major rain event here at Fleetwood in May 2018. Significant planning has taken place since then. The root problem to solve here at Fleetwood has been confirmed. The problem is insufficient rain water runoff from our property to the surrounding roads below. This has allowed water to percolate/soak into our soil and to over saturate it. This saturated soil has led to water in basements, mud slides, landslides, and general mud disbursement around campus.

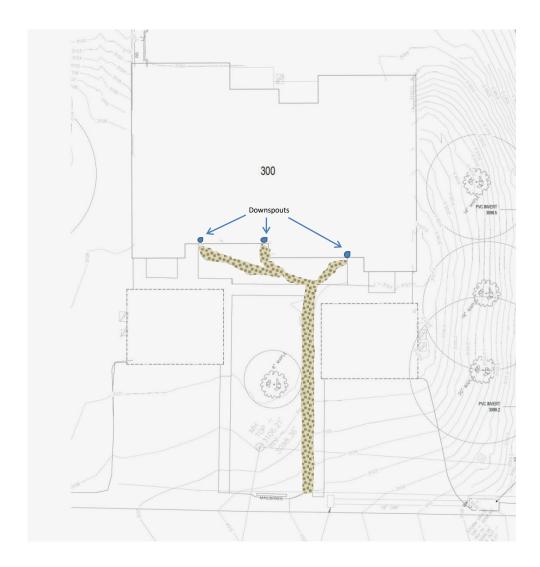
In the course of study on this problem both an independent engineering firm and a local authority opinion was sought. The independent engineering firm was Robinson Design Engineers. And the local authority was a contract engineer retained by the Laurel Park Maintenance department. All parties involved agreed on the source of the problem and that the best direction to take will be to improve/correct the rain water runoff at Fleetwood.

Two statement-of-work documents were drafted in order to solicit bids to fix our drainage problem. One statement-of-work covers downspout and land drainage in front of the buildings. The second statement-of-work covers the downspout, land drainage, and embankment runoff in the back of the buildings. The first work will require the services of a landscape company. The second work will require the services of a grading company.

This week (Aug. 6, 2018) bids have been solicited for the above work. It will take several weeks to collect and select from these bids. The cost of each bid is not known at this time, but rough estimates will most likely result in the tapping into part of the Fleetwood reserves. No special assessments should be needed.

## 1 Landscape Drainage in Front of Buildings

Open rock-lined runoff channels will be placed from the building front downspouts, under a sidewalk, and down between the carports/driveways of each building. Following is a diagram of the average building solution. This is a bird's eye view from above a building.



All efforts will be made to not disturb or remove any in-place foliage/plantings. However there will be disturbance. The primary goal here is to reinstate proper drainage. After the work is done replanting will be studied and planned.

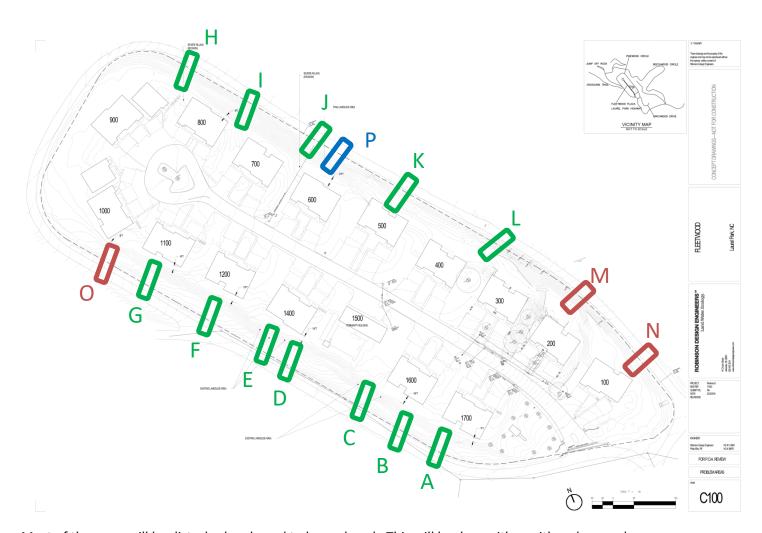
## 2 Drainage behind the Buildings

There shall be created 12 new catch basins, 3 new runoff channels, and one landslide repair. These shall be located as per the following map.

A, B, C, D, E, F, G, H, I, J, K, L – these will be new catch basins with a large drain pipe running down/beneath the embankment.

M, N, O – these will be new rock-lined surface runoff channels.

P – this is a landslide repair.



Most of the grass will be disturbed and need to be replaced. This will be done either with sod or seed.