SBCA TREE CONSULTING

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Date: December 29, 2014

To: Miroo Desai, Senior Planner
City of Emeryville, Planning Division
1333 Park Avenue
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Location: Sherwin Williams Site on Horton St.

Subject: Tree condition and viability for retention.

Assignment: *Arborist was asked to review the condition of the street trees bordering the old Sherwin Williams facility on Horton St. and Sherwin Ave. and to provide commentary and recommendations regarding the feasibility of retaining the trees.*

Introduction

The tree inspection was undertaken in conjunction with the renovation of the Sherwin Williams Paint facility on Horton Street. Arborists reviewed eleven Japanese Pagoda Trees *(Sophora japonica)* trees on Horton Street, two European Hackberry *(Celtis australis)* located on Sherwin Ave, and one Flaxleaf Paperbark *(Melaleuca linariifolia)* located behind the sidewalk on Sherwin Ave.

Summary

Visual inspection of the *Sophora* and Hackberry trees on Holden found a significant amount of root related displacement of sidewalk and curb, as well as street uplift. If the original surface grades are restored, it is likely that most of the trees will require removal.

If there is a strong desire to retain as many of the trees as possible, a full assessment of each tree after the pavement has been removed will make the final determination. The assessment will determine if the trees can remain safe and healthy after the sidewalk and street repairs have been made. If retained, the soil below the sidewalk will require special mitigation treatments.

The Melaleuca tree growing behind the sidewalk is likely a private tree. This tree is doing well.

We feel that this is an excellent opportunity to remove problematic trees and provide a tree root environment for replacement trees which will carry them long into the future without continual costly pavement repairs.

Attachment 3

Table of Trees

Table blow provides information on the 14 trees reviewed. Tree #1 is located at the north end of the row on Horton. Trees #12, 13 and 14 are located on Sherwin Avenue. The table provides information and comments pertaining to the 14 trees. The species, size, condition and level of hardscape displacement are listed as well as pertinent notes.

	Species	Common Name	DBH[1]	Health	Structure	Hardscape Displacement	Notes
1	*Sophora japonica*	Japanese Pagoda Tree	8.5”	Fair	Fair	Moderate	Poor pruning, sidewalk uplift
2	*Sophora japonica*	Japanese Pagoda Tree	11”	Fair-Poor	Fair	Moderate	Sidewalk uplift
3	*Sophora japonica*	Japanese Pagoda Tree	5”	Poor	Poor	Minor	Not viable
4	*Sophora japonica*	Japanese Pagoda Tree	7.5”	Fair-Good	Fair	Moderate	Curb/drainage problems
5	*Sophora japonica*	Japanese Pagoda Tree	8”	n/a	Fair	Major	Sidewalk, curb and street
6	*Sophora japonica*	Japanese Pagoda Tree	6.5”	Good	Fair	Minor	Sidewalk cracks
7	*Sophora japonica*	Japanese Pagoda Tree	9”	Fair	Fair	None	
8	*Sophora japonica*	Japanese Pagoda Tree	7”	Fair	Fair	Major	Sidewalk, curb and street uplift
9	*Sophora japonica*	Japanese Pagoda Tree	10”	Fair-Good	Fair	Minor	Drainage issues, curb and gutter
10	*Sophora japonica*	Japanese Pagoda Tree	7.5”	Good	Fair	Major	Oak Root Fungus?, Drainage issues, street uplift
11	*Sophora japonica*	Japanese Pagoda Tree	11.5”	Good	Fair	Major	Drainage issues, street uplift
12	*Melaleuca linariafolia*	Paper Bark Melaleuca	14”	Good	Poor	None	No problems
13	*Celtis australis*	European Hackberry	11”	Good	Poor	Major	Codominant-Included Bark, sidewalk uplift
14	*Celtis australis*	European Hackberry	7”	Fair	Fair	Moderate	Small, likely root restrictions. Minor sidewalk uplift.

[1] DBH is tree diameter measured at 54 inches above soil grade.

Discussion

Sophora Trees – Though the S*ophora* trees do provide a significant amenity to the streetscape, there are concerns for the future tree health and the potential for ongoing sidewalk uplift. If they are subjected to excessive root pruning, the trees are likely to decline and die. Though most have reached a fair size, their future value is expected to decline due to the root zone limitations.

Removal and replacement of the trees at the time the hardscape repairs are made will allow for the preparation of planting sites that will allow the trees to thrive with minimal if any hardscape displacement in the future.

Hackberry Trees – The two European Hackberry trees vary significantly in size. The reason for the difference is likely limitations in rooting environment, however unknown. Like the Sophora trees, the hackberry roots appear to be on the surface. One or both of the trees could be retained if excessive root loss does not occur when the sidewalk is repaired.

Timing – With the need to make the extensive repairs to the street and sidewalk, it appears that this may be a good time to consider the future. Allowing the existing trees to remain will likely be more expensive in the long term. Tree replacement will allow for the preparation of a suitable planting site that will allow for the replacement trees to thrive and provide amenities to the street for many years.

Recommendations

Remove and replace all *Sophora* and smaller Hackberry. The larger Hackberry is a nice tree and maybe worthy of retention. However, without extensive soil and root mitigation, the hardscape displacement problems are expected to return. It is recommended that a suitable soil environment be provided for the replacement trees at or exceeding City guidelines for soil volumes and the use of structural soil.

Any trees to be retained will require a water jet procedure as well as the use of clean crushed rock below the sidewalk pavement after the necessary root pruning. Specifications for the necessary mitigation treatments can be provided if needed.

End Report

Photo Supplement

Photo 1. *Photo to the right shows the aesthetic contribution to the streetscape offered by the trees. Tree # 5 is causing sidewalk pavement uplift and uplift to the gutter sufficient to affect drainage.*

Photo 2. *Photo to the left shows the sidewalk area having the most significant uplift. Because of the tree lean to the street, cutting the offending root may compromise the tree stability.*

Photo 3. *Photo to the right shows the* Sophora *tree closest to the corner of Sherwin St. Along with the sidewalk, the curb and street have been uplifted by the tree roots. Root pruning needed to accomplish the necessary repairs will likely compromise the future health and stability of this, the largest of the Sophora trees..*

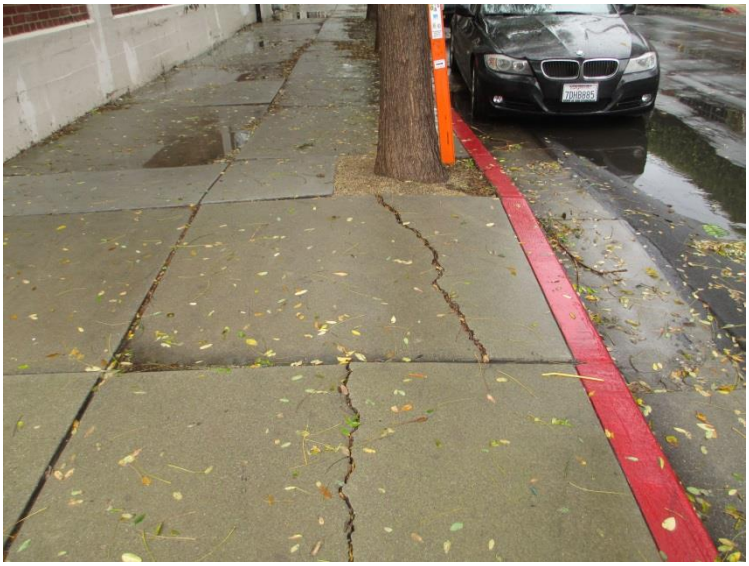

Photo 4. *Photo to the left shows the bases of the two hackberry trees looking west with the larger tree in the foreground. The pavement uplift does indicate that the tree roots have developed near the surface, likely due to soil compaction.*

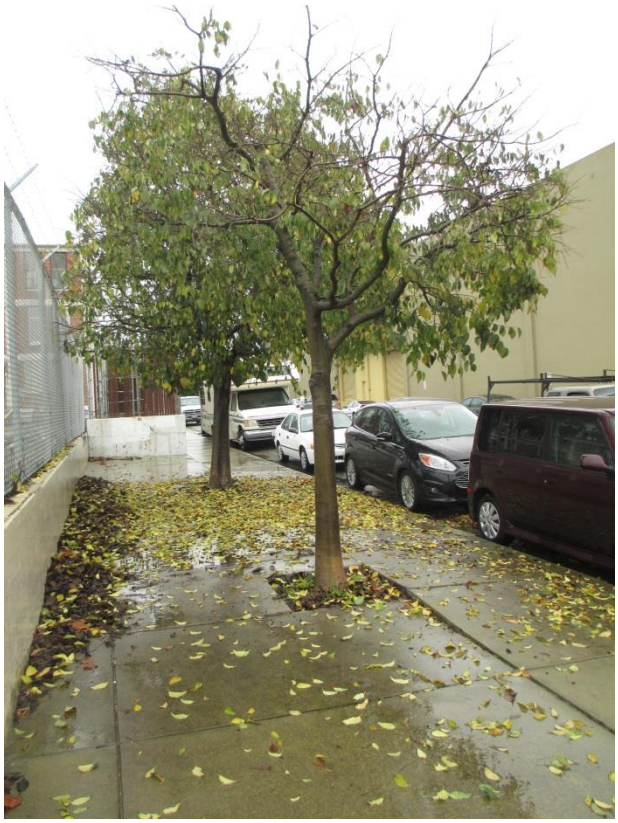

Photo 5. *Photo shows the hackberry trees looking east with the smaller tree in the foreground. This tree has not thrived, likely due to a restrictive soil environment. There is also sidewalk uplift.*

Photo 6. *Last photo to the left shows the Melaleuca tree that appears to be growing out of the City R.O.W.*

End Photo Supplement