Appendix 6

Arborist Report

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March 31, 2005

To: Alex Shkerish, Atelier
From: Tina Cohen, Certified Arborist

Site: **Burke Gilman Trail Expansion, King County, WA**

Arborist's Report

On March 29 and 30, 2005 the trees and tree groups along the Burke Gilman trail were evaluated to determine their health. Notwithstanding the recommendations and conclusions made in this report, it must be realized that trees are living organisms and their health and vigor constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather.

Scope of Work

This report provides a general assessment of all the trees over 6 inches in diameter (4 inches if unusual or multi-stemmed) within the trail ROW. The assessment includes trees on both sides of the trail except for trees growing on the west steep slope. The City of Lake Forest Park does not exempt any tree species from their regulations.

The trees have been viewed from Beach Drive NE as well as from the trail, unless they are locked behind a fence or are otherwise not accessible. Trees are considered a 'group' where several of the same species are growing closely together. Shrubs and hedges are not included in the assessment.

Summary

- Most of the 100 tree groups or individuals are healthy, although some will outgrow their location (for example the cottonwoods growing close to Beach Drive NE). The health ratings may need to be revised if conditions change.

- Many species that grow on this site are susceptible to losing branches during wind or ice storms.

- Trees that are covered in ivy will need to be rechecked once the ivy has been removed.

- Findings listed on the spreadsheet and the site plan are for use in the planning process.

- There are many damaged, dying trees growing on the steep slope west of the trail and at the west property line underneath utility wires. The decline is mostly the result of topping cuts. The utility and others responsible for maintenance should be made aware that topping can create hazardous trees. *These trees were not part of the scope of work.*

Methodology

Trees were evaluated with guidelines established by the International Society of Arboriculture's Tree Hazard Evaluation Form and the Tree Condition Assessment Form used for tree appraisals, per the *Guide for Plant Appraisal, 9th Edition.* The health assessments were performed without excavation or internal examination such as coring or drilling. The root flares were inspected if they are accessible.

Details of Findings

Please see the attached spreadsheet 'Burke Gilman Tree Overview' and the annotated site plan.

Explanation of Spreadsheet Terms

Number: Corresponds to the numbered circles on the site plan and indicates an individual tree or group (labeled "GP" on the site plan). The circles indicate location, not actual dimensions of the canopies. The numbers start at the north at Log Boom Park and continue southward.

Species:
Alder, *Alnus rubra*. NATIVE. This is a pioneer species, the first type of tree to grow on a disturbed site. It appreciates water and is well suited for this location. However older trees are susceptible to breakage, and they are considered too shallow rooted to contribute to long-term slope stability.
Map abbreviation: Alder.

Ash, most likely Oregon, *Fraxinus latifolia.* NATIVE. The exact ID can be confirmed once the tree leafs out. Ashes are common to low-lying, moist areas and are well suited to this site. (This is not the naturalized European species Mountain ash, *Sorbus aucuparia*.)
Map abbreviation: Ash.

Austrian pine, *Pinus nigra*. Probably the most commonly planted pine in the Seattle area, this species can thrive in various growing conditions if it receives full or nearly full sun.
Map abbreviation: Aust Pine.

Bigleaf maple, *Acer macrophyllum*. NATIVE. This species is relatively short lived and will start to have decay problems after about 80 years. Topping has damaged many maples on the steep slope. The healthy maples are all younger, intact trees.
Map abbreviation: BLM.

Black locust, *Robinia pseudoacacia*. Locusts are naturalized in our area, but are not native. They can be extremely invasive. The trees near the trail are young and vigorous. Older trees tend have broken branches in their canopies.
Map abbreviation: Blk Loc.

Conifer group. The site has several areas where different types of conifers are planted in close proximity, such as Douglas fir, Austrian pine, Grand fir, and Western red cedar. Except for Douglas fir (described below), these trees will thrive on a wet site but will not tolerate standing water.

Map abbreviation: Conifer GP.

Cottonwood, *Populus trichocarpa*. NATIVE. Fast growing and well adapted to wet sites, cottonwoods will become very large, and the trees adjacent to Beach Drive will become too large for the narrow planting area. Dropped branches, a normal response to stress, can root in place providing the trees with another means of reproduction. Neighbors have complained about the sticky flower pods and the white fluffy seeds.

Map abbreviation: Cott.

Douglas fir, *Pseudotsuga menziesii*. NATIVE. The firs on this site appear to be planted, not naturally occurring. Although sometimes fir and cottonwood will grow near each other, usually fir prefers a drier site.

Map abbreviation: D Fir.

Lombardy poplar, *Poplus nigra 'Italica'*. Poplars are a fast growing, narrow but tall tree frequently planted to delineate property lines. They prefer a wet site so most are doing well. As they mature, they will drop branches.

Map abbreviation; Lomb poplar.

Sycamore or London plane, *Platanus pseudoacerifolia*. This impressive shade tree is often used to line boulevards. On this site the sycamores are structurally healthy. However they are growing close together and may have the foliar diseases *Anthracnose* or mildew, which cause primarily cosmetic problems.

Map abbreviation; Sycamore.

Western red cedar, *Thuja plicata*. NATIVE. Cedars are one of the best conifers for a wet site and it's odd that there aren't more of them near the trail. The largest group is a row of planted trees that has been maintained as a hedge. Although the cedars seem to be tolerating the repeated topping cuts, they are considered to be unhealthy in this assessment.

Map abbreviation; WR Cedar.

The following miscellaneous planted species are found in very limited amounts:

Alaska cedar, *Chamaecyparis nookatensis*
Hawthorn, *Crataegus sp.*
Cherry, *Prunus sp.*
Corkscrew willow, *Salix 'Torulosa'*
Mugo pine, *Pinus mugo*
Norway spruce, *Picea abies*
Purple plum, *Prunus cerisifera*
Plum, *Prunus sp.*
Tanyosho pine, *Pinus densiflora 'Tanyosho'*
Vine maple, *Acer circinatum* NATIVE

The names are not abbreviated on the site plan.

Condition Ratings:

Healthy: No apparent defects.

Healthy (moderate): Minor defects such as small trunk wounds or broken branches that do not compromise the overall health of the tree.

Healthy pending: The tree is apparently healthy but further investigation is recommended, for example where the root crown or trunk were covered by ivy.

Healthy no access: The tree is apparently healthy but could not be fully viewed because the adjacent homeowners have fenced and locked the King County easement.

Unhealthy: Significant defects such as trunk or root crown decay.

Unhealthy topped: All the topped trees received this rating because the damage will cause decline and can create hazardous trees. The western red cedar hedge also received this rating because as individual trees their health has been diminished.

Dead/declining: Only one tree, bigleaf maple #57, was rated dead/declining. The majority of trees in this category are located on the steep slope or off-site, thus beyond the scope of this assessment.

Location: The location names are for use in the field or to sort the trees by area. They're also is useful for calculating where the majority of the trees or groups are located. The evaluation sections start at the north at Log Boom Park and end south of 147th Street at the points designated by Atelier.

Comment: The comments are intended to act as reminders if more detail is needed in the future.

Conclusion

The result of the overview evaluation is that the trees along the trail are mostly in good health and are well suited to this wet site. Please note this is not a guarantee of long-term safety, and tree health will change over time.

Limits

Unless expressed otherwise (1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection, and (2) the inspection is limited to visual examination of accessible items without further dissection, excavation, probing, or coring.

Loss or alteration of any part of a report invalidates the entire report.

There is no warranty or guarantee expressed or implied, that problems or deficiencies of the trees in question may not arise in the future.

The report and conclusions expressed herein represent the opinion of Tina Cohen d/b/a Northwest Arborvitae. Our fee is no way contingent upon any specified value, a result or occurrence of a subsequent event, or upon any finding to be reported.

Respectfully submitted,

Tina Cohen, ISA Certified Arborist #PN0245
Member, American Society of Consulting Arborists
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Encl: Site plans (7 pages)
Spreadsheet 'Burke Gilman Tree Overview' (4 pages)

Burke Gilman Tree Overview
by Tina Cohen, Certified Arborist #PN0245
March 31, 2005

#	SPECIES	RATING	LOCATION	COMMENT
1	cottonwood GROUP	healthy	T Owen Park to Ballinger	
2	cottonwood	healthy pending	T Owen Park to Ballinger	
3	ash	healthy	T Owen Park to Ballinger	
4	alder GROUP	healthy	T Owen Park to Ballinger	
5	Austrian Pine GROUP	healthy	T Owen Park to Ballinger	west slope
6	cottonwood	healthy	T Owen Park to Ballinger	
7	Austrian Pine GROUP	healthy (moderate)	T Owen Park to Ballinger	west slope/ wounded
8	cherry ornamental	healthy	T Owen Park to Ballinger	
9	bigleaf maple	healthy	T Owen Park to Ballinger	
10	cherry ornamental	healthy	T Owen Park to Ballinger	
11	cottonwood GROUP	healthy pending	T Owen Park to Ballinger	ivy on trunk
12	black locust GROUP	healthy	T Owen Park to Ballinger	ivy
13	plum purple GROUP	healthy	T Owen Park to Ballinger	
14	Austrian Pine GROUP	healthy	T Owen Park to Ballinger	both sides
15	Douglas fir	healthy	T Owen Park to Ballinger	
16	cottonwood	healthy pending	T Owen Park to Ballinger	
17	cottonwood	healthy pending	T Owen Park to Ballinger	ivy
18	black locust GROUP	healthy	T Owen Park to Ballinger	
19	cottonwood	healthy	T Owen Park to Ballinger	
20	bigleaf maple	UNhealthy	T Owen Park to Ballinger	
21	black locust GROUP	healthy	T Owen Park to Ballinger	both sides of fence
22	Austrian Pine GROUP	healthy	T Owen Park to Ballinger	
23	Lombardy poplar	healthy (moderate)	T Owen Park to Ballinger	fence in trunk
24	sycamore GROUP	healthy	T Owen Park to Ballinger	
25	Austrian Pine GROUP	healthy (moderate)	T Owen Park to Ballinger	
26	Lombardy poplar GROUP	healthy	T Owen Park to Ballinger	

See report for explanation of terms.

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#	SPECIES	RATING	LOCATION	COMMENT
27	sycamore	healthy	T Owen Park to Ballinger	
28	Lombardy poplar	healthy	T Owen Park to Ballinger	
29	tulip poplar	healthy pending	T Owen Park to Ballinger	ivy
30	ash GROUP	healthy pending	T Owen Park to Ballinger	ivy
31	corkscrew willow	healthy	T Owen Park to Ballinger	
32	plum purple GROUP	healthy (moderate)	T Owen Park to Ballinger	
33	ash	UNhealthy TOPPED	T Owen Park to Ballinger	ivy
34	Tanyosho pine	healthy	T Owen Park to Ballinger	
35	Douglas fir	healthy	T Owen Park to Ballinger	
36	ash GROUP	healthy (moderate)	T Owen Park to Ballinger	girdle
37	conifer GROUP	healthy	T Owen Park to Ballinger	
38	black locust GROUP	healthy	T Owen Park to Ballinger	
39	Norway spruce	healthy (moderate)	T Owen Park to Ballinger	
40	cottonwood	healthy	T Owen Park to Ballinger	
41	conifer GROUP	healthy	T Owen Park to Ballinger	
42	black locust/maple GROUP	healthy	T Owen Park to Ballinger	
43	conifer GROUP	UNhealthy	T Owen Park to Ballinger	
44	black locust GROUP	healthy (moderate)	T Owen Park to Ballinger	
45	ash GROUP	healthy	T Owen Park to Ballinger	
46	conifer GROUP	healthy	T Owen Park to Ballinger	
47	bigleaf maple GROUP	healthy	T Owen Park to Ballinger	
48	Austrian Pine	healthy	T Owen Park to Ballinger	
49	sycamore	healthy	Ballinger to creek	topped regrew
50	sycamore GROUP	healthy	Ballinger to creek	both sides of trail
51	Lombardy poplar GROUP	healthy	creek to 170th	ivy on 1
52	sycamore GROUP	healthy	creek to 170th	

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#	SPECIES	RATING	LOCATION	COMMENT
53	sycamore GROUP	healthy	creek to 170th	
54	Douglas fir GROUP	healthy (moderate)	creek to 170th	some trunk wounds
55	Lombardy poplar GROUP	healthy	creek to 170th	
56	alder GROUP	healthy (moderate)	creek to 170th	treehouse
57	bigleaf maple	dead declining	creek to 170th	
58	sycamore GROUP	healthy	creek to 170th	
59	cottonwood GROUP	healthy pending	creek to 170th	
60	Douglas fir GROUP	healthy	creek to 170th	
61	Lombardy poplar GROUP	healthy	170th to 165th	hangers
62	Douglas fir GROUP	healthy (moderate)	170th to 165th	trunk wounds
63	Lombardy poplar GROUP	healthy	170th to 165th	
64	Alaska cedar GROUP	healthy	170th to 165th	
65	Lombardy poplar GROUP	healthy	170th to 165th	ivy
66	cottonwood GROUP	healthy pending	170th to 165th	mixed, some dead declining
67	black locust GROUP	healthy	170th to 165th	
68	cherry ornamental	healthy (moderate)	170th to 165th	
69	bigleaf maple	UNhealthy TOPPED	170th to 165th	
70	conifer GROUP	UNhealthy TOPPED	170th to 165th	
71	ash	healthy pending	165th to 155th	
72	western red cedar	healthy pending	165th to 155th	
73	conifer GROUP	healthy	165th to 155th	one topped, possibly offsite
74	conifer GROUP	healthy (moderate)	165th to 155th	ivy
75	bigleaf maple	UNhealthy TOPPED	165th to 155th	
76	Vine maple	healthy	165th to 155th	possibly offsite
77	conifer GROUP	heathy no access	165th to 155th	
78	black locust GROUP	healthy	165th to 155th	

See report for explanation of terms.

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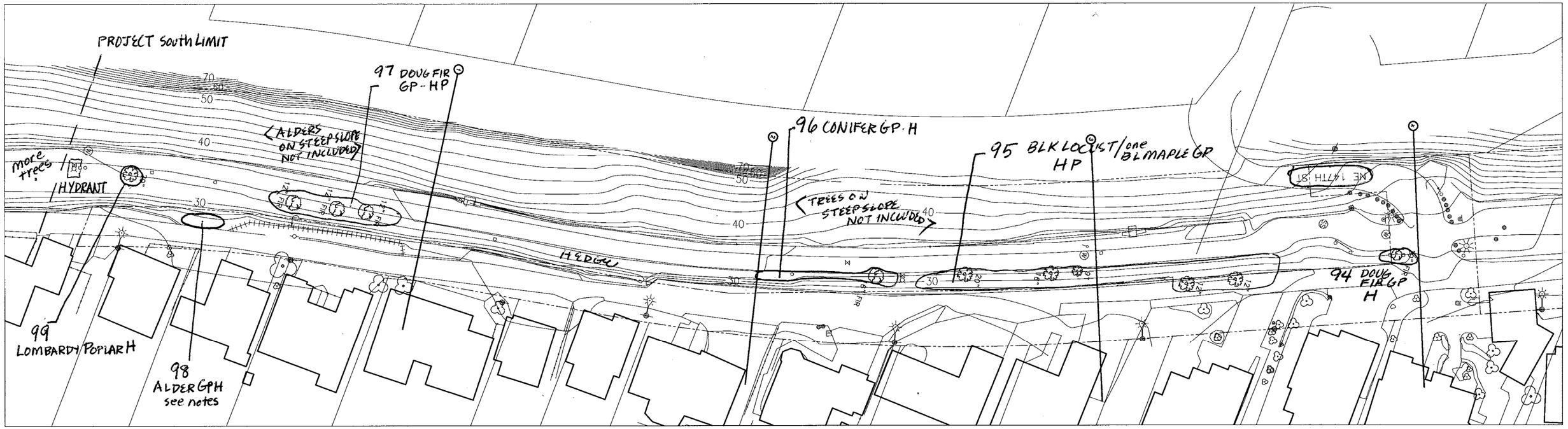
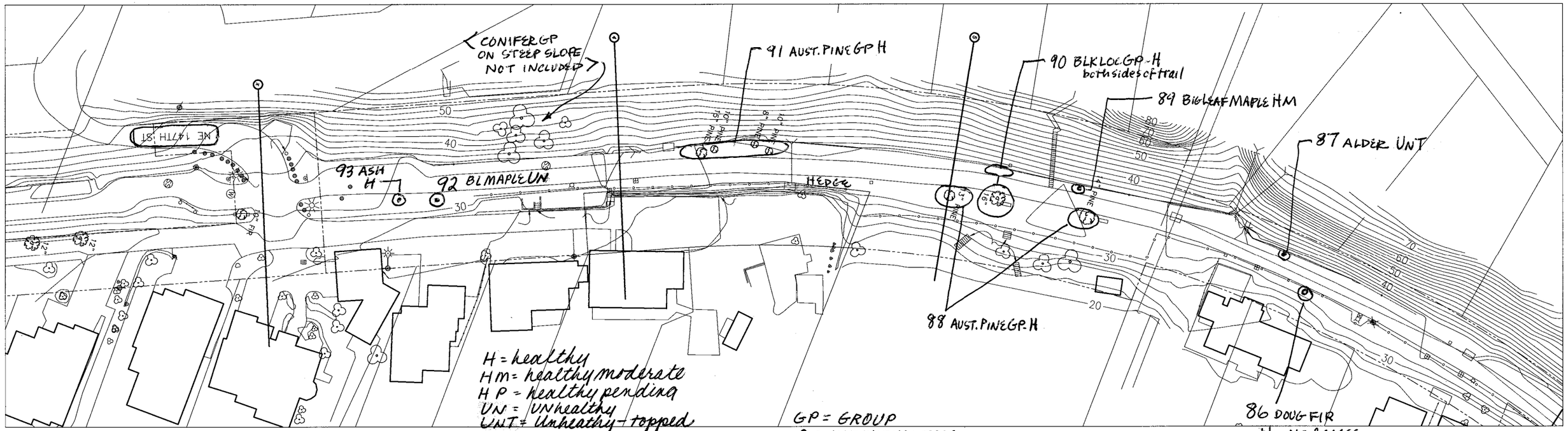
#	SPECIES	RATING	LOCATION	COMMENT
79	hawthorn GROUP	healthy (moderate)	165th to 155th	trunk wound
80	hawthorn GROUP	healthy	165th to 155th	south tree wounded
81	Pine mugo	healthy (moderate)	165th to 155th	
82	western red cedar GROUP	UNhealthy TOPPED	155th to stop sign	tolerating topping
83	hawthorn	healthy	stop sign to 147th	
84	conifer GROUP	healthy	stop sign to 147th	on slope
85	conifer GROUP	heathy no access	stop sign to 147th	not topped
86	Douglas fir	heathy no access	stop sign to 147th	
87	alder	UNhealthy TOPPED	stop sign to 147th	
88	Austrian Pine GROUP	healthy	stop sign to 147th	
89	bigleaf maple	healthy (moderate)	stop sign to 147th	
90	black locust GROUP	healthy	stop sign to 147th	both sides of trail
91	Austrian Pine GROUP	healthy	stop sign to 147th	
92	bigleaf maple	UNhealthy	stop sign to 147th	
93	ash	healthy	stop sign to 147th	
94	Douglas fir GROUP	healthy	147th to hydrant	
95	black Locust\maple GROUP	healthy pending	147th to hydrant	recheck the maple
96	conifer GROUP	healthy	147th to hydrant	limited space
97	Douglas fir GROUP	healthy pending	147th to hydrant	evidence of slope slip, J-base
98	alder GROUP	healthy	147th to hydrant	evidence of slope slip, J-base
99	Lombardy poplar	healthy	147th to hydrant	
100	willow corkscrew	healthy (moderate)	155th to stop sign	trunk has grown through the wire fence

See report for explanation of terms.





H = healthy
HM = healthy moderate
HP = healthy pending
UN = unhealthy
UNT = Unhealthy - topped

GP = GROUP
⊙ = INDIVIDUAL TREE
CIRCLES ARE FOR LOCATION ONLY, NOT TO SCALE.

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Burke Gilman Trail Redevelopment

NOTES PAGES 1-7
By TINA COHEN
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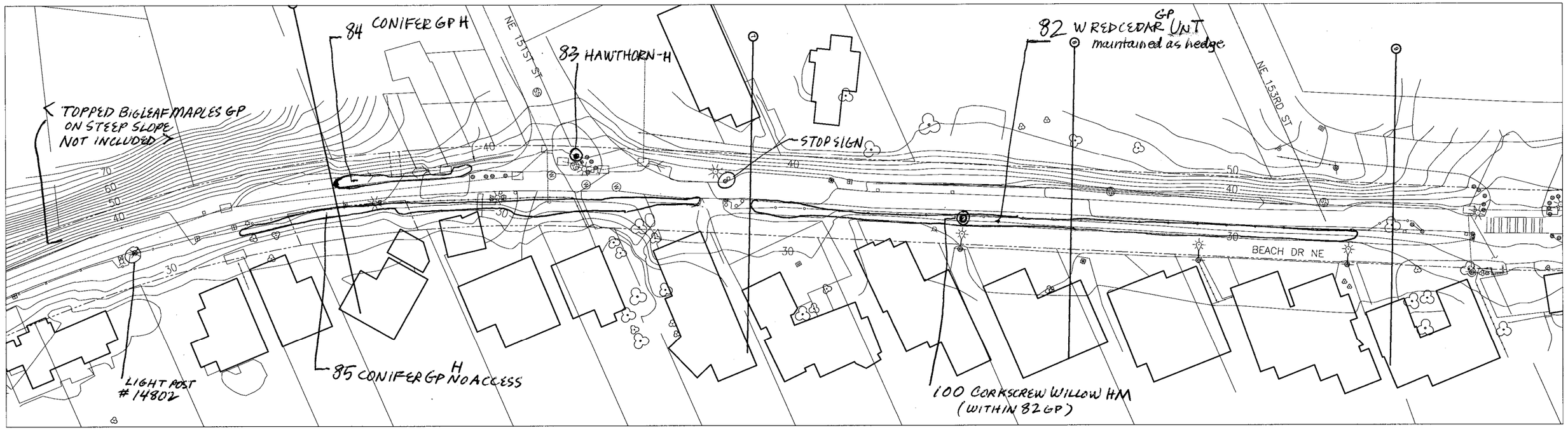
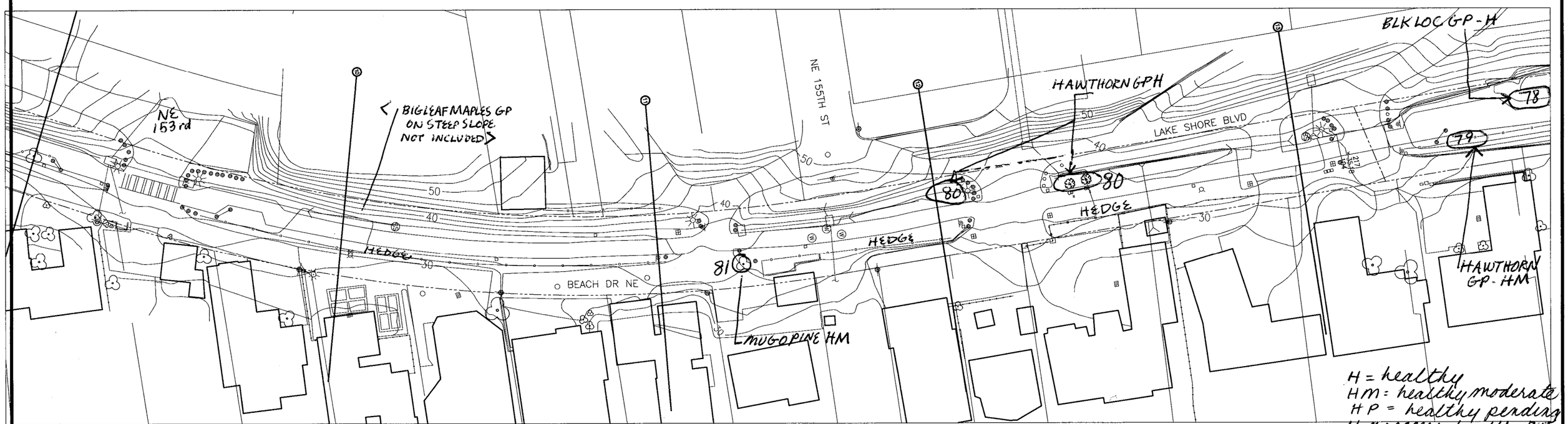
3-30-2005

SHEET 1 OF





H = healthy
HM = healthy moderate
HP = healthy pending
H no access = healthy BUT NO ACCESS
UNT = Unhealthy topped

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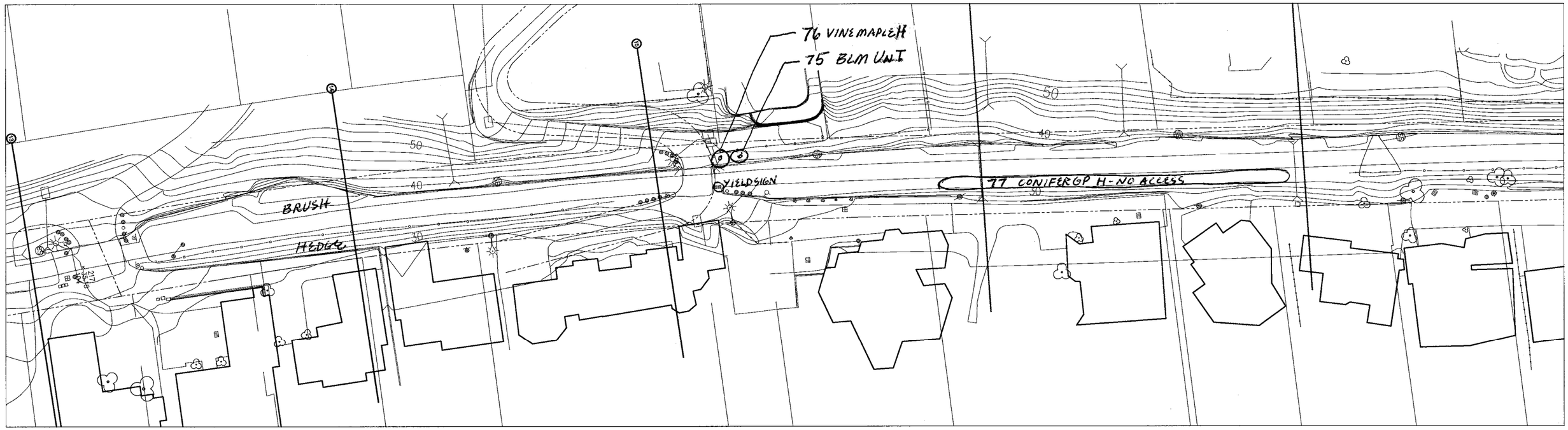

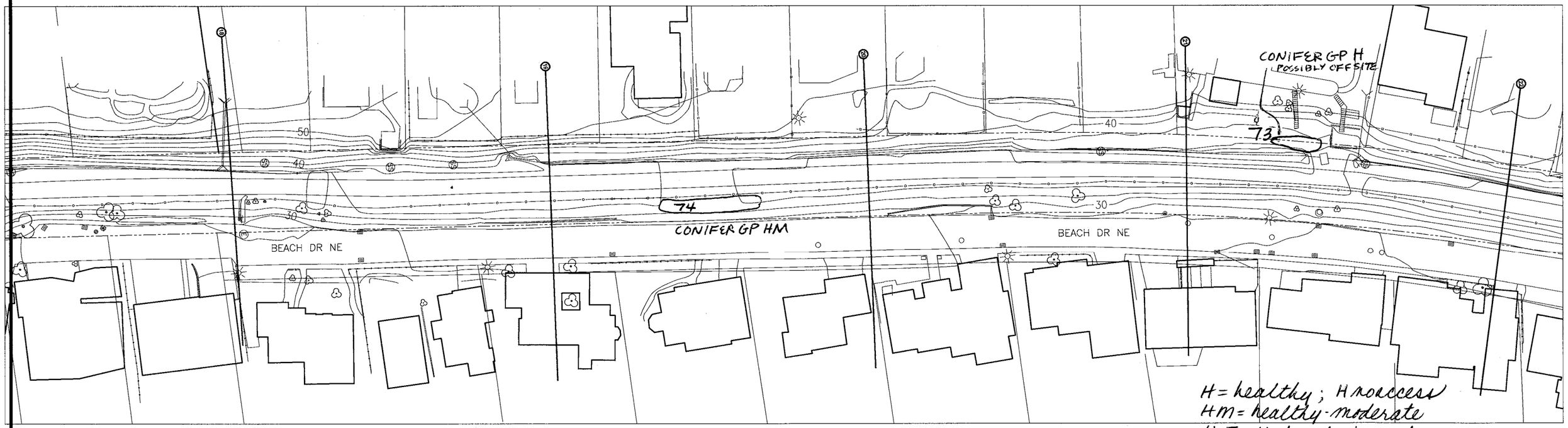

H = healthy ; H no access
HM = healthy - moderate
UNT = Unhealthy topped

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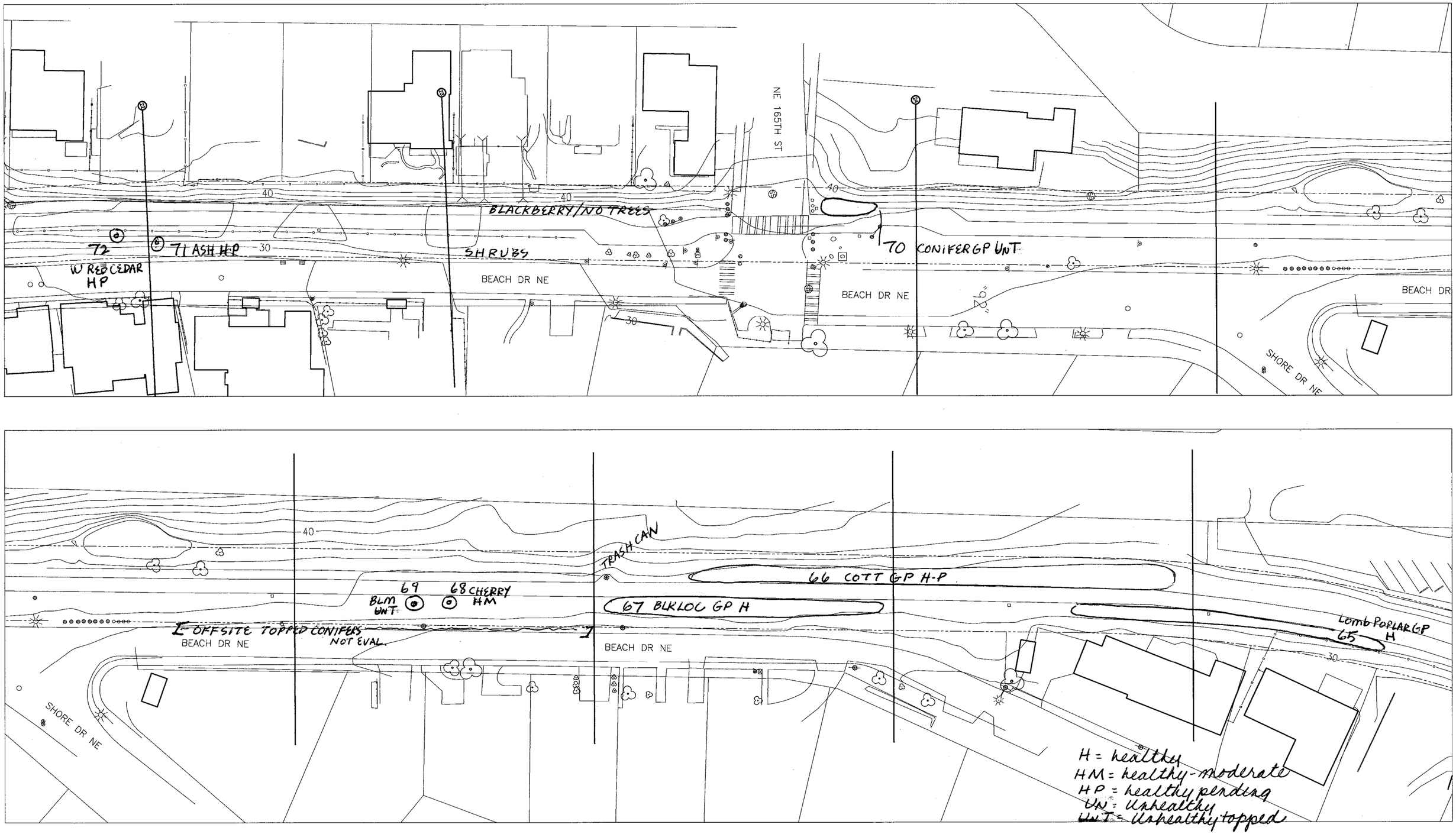

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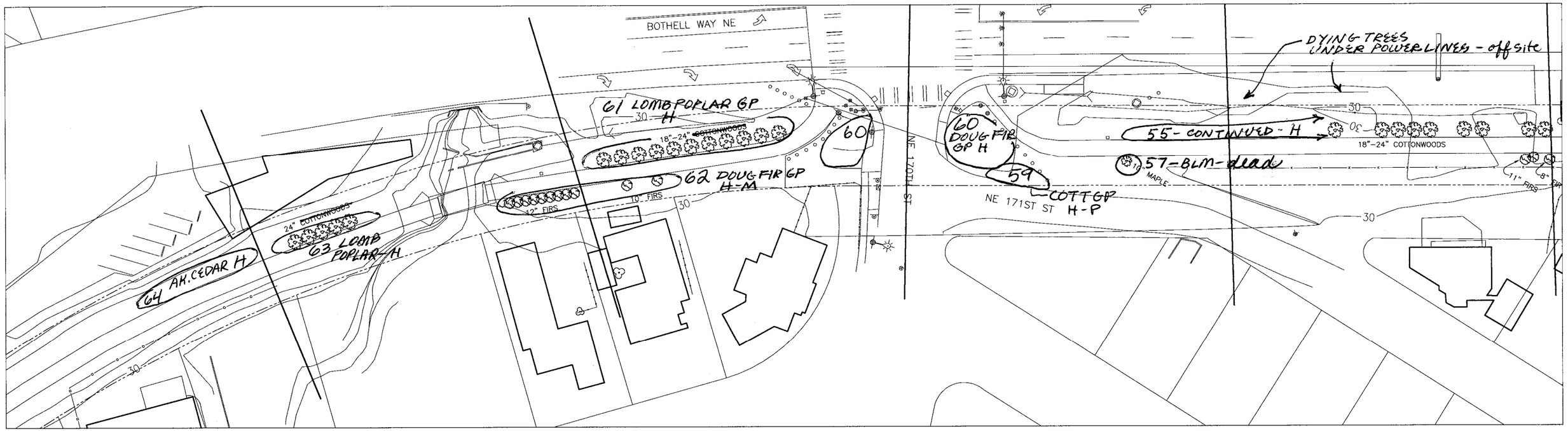

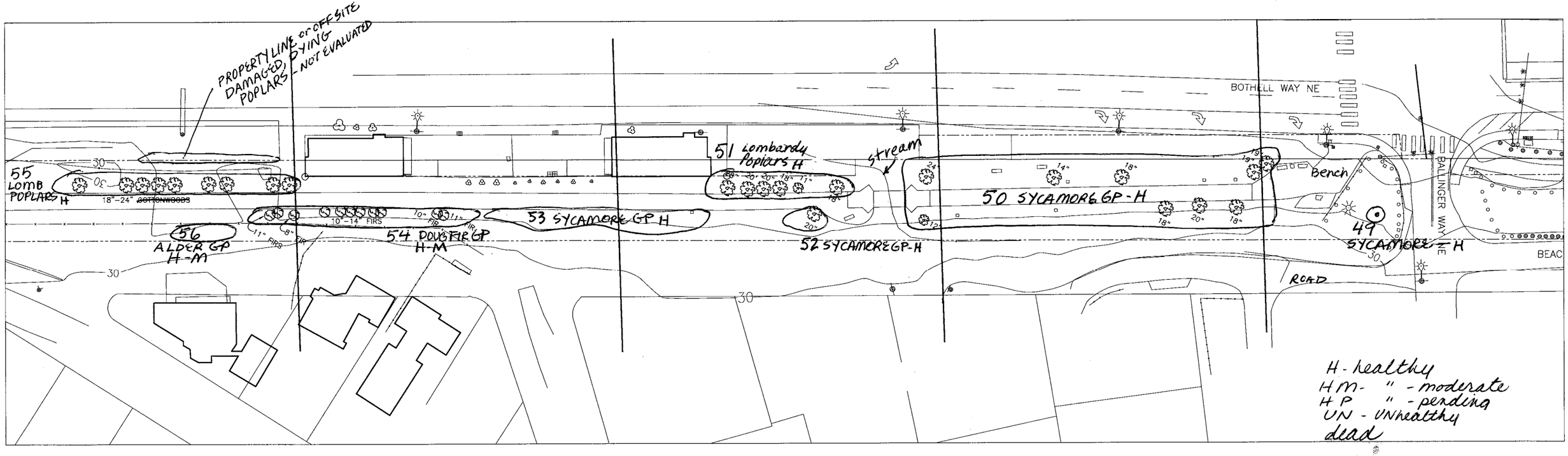

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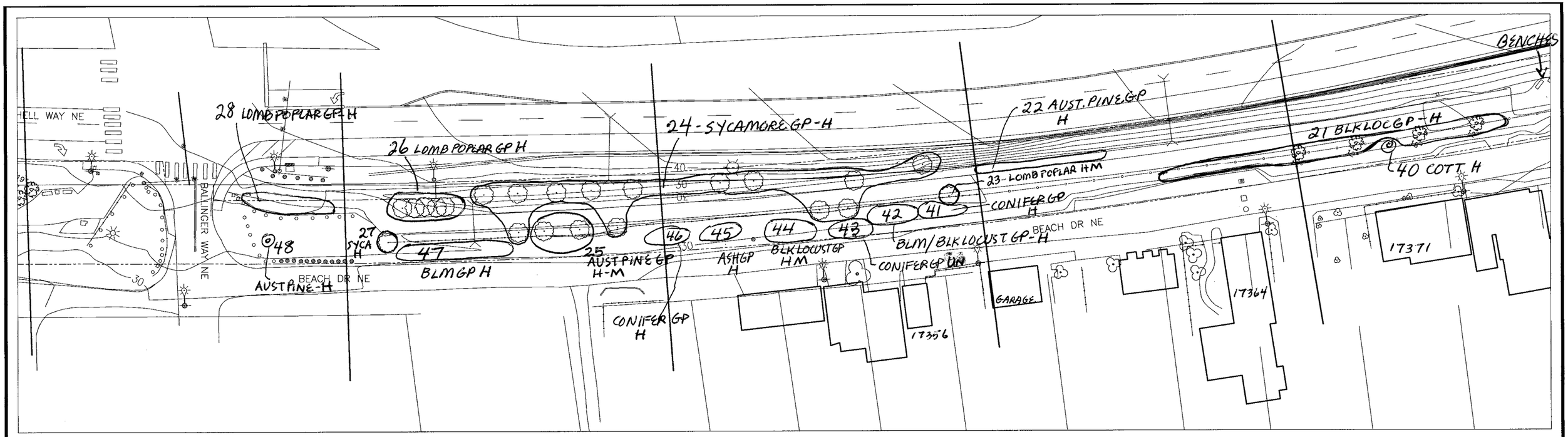

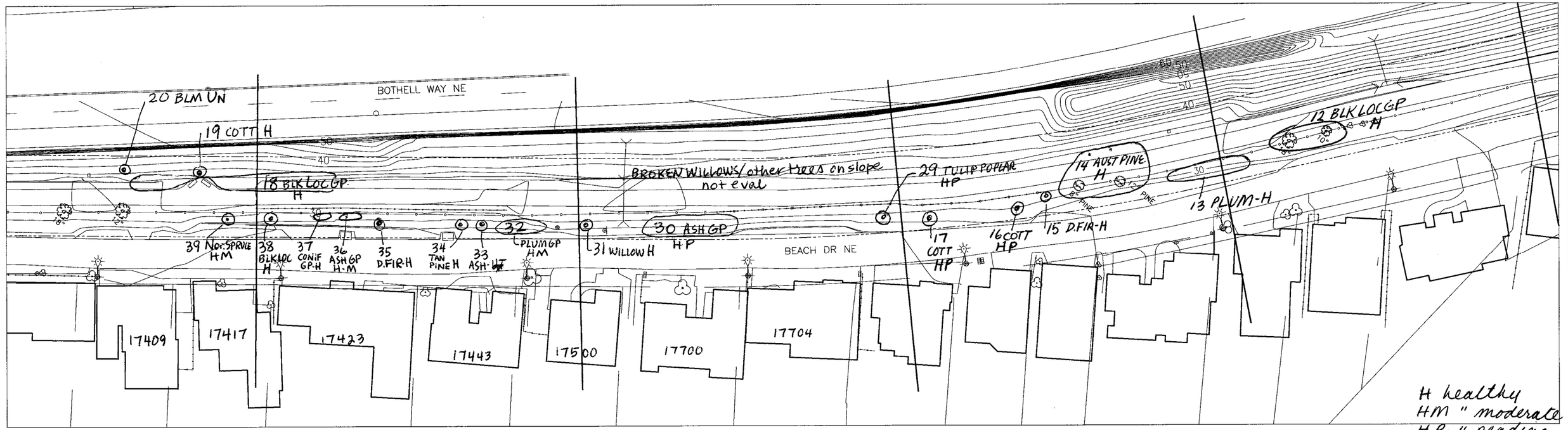

H healthy
HM " moderate
HP " pending
UN Unhealthy
~~UT~~ " topped

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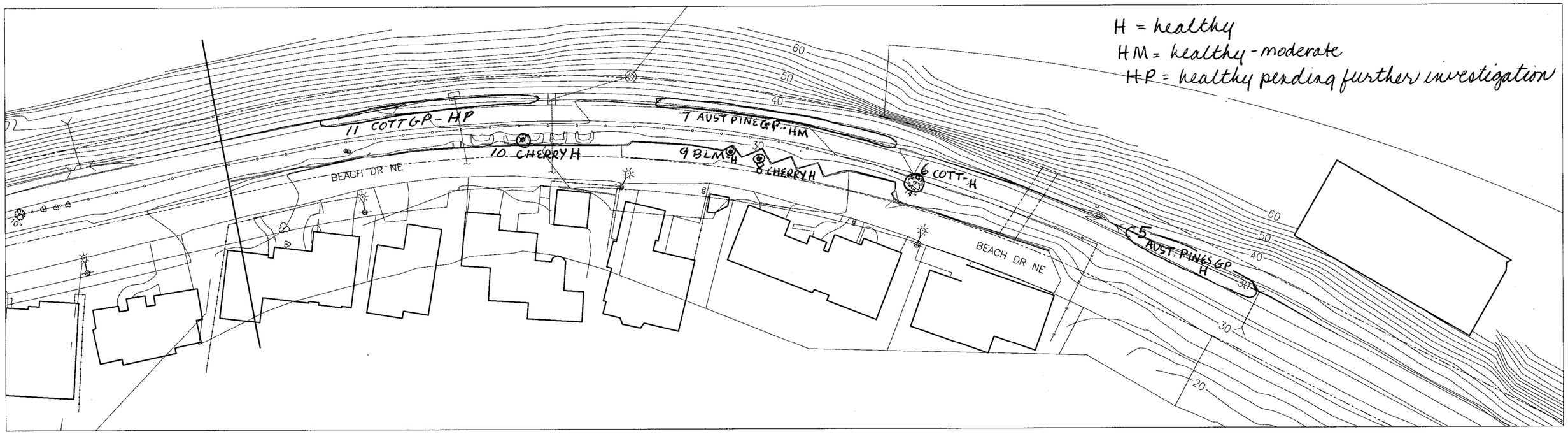
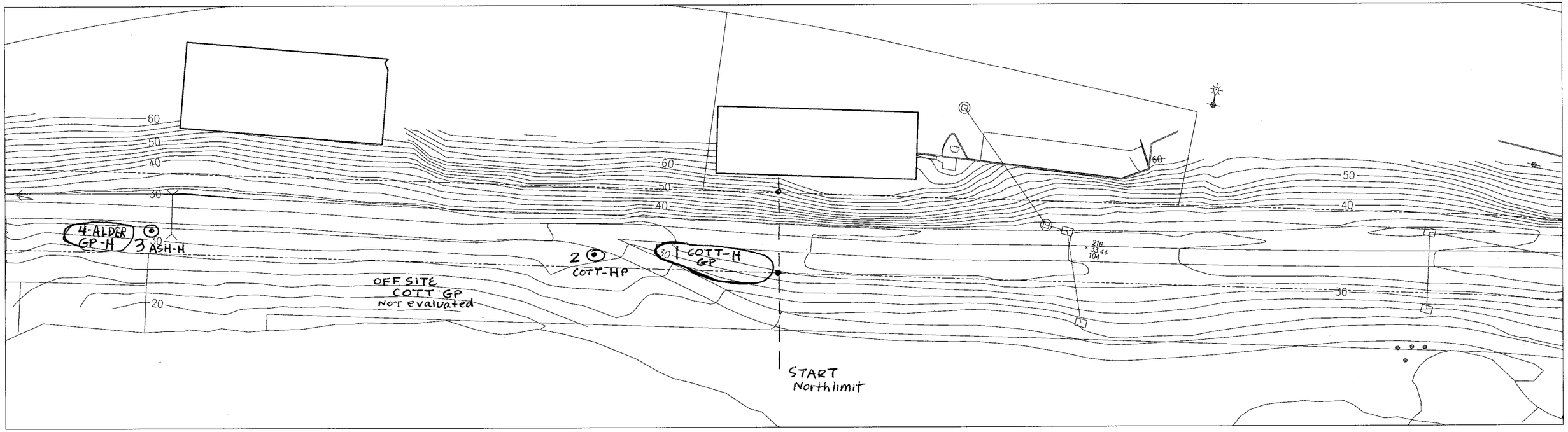
SHEET 6 OF

H = healthy
HM = healthy - moderate
HP = healthy pending further investigation





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Notes by TINA COHEN
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