Saint Louis Park High School Tree Health Assessment

Cuningham Group Architecture, Inc.
September 22, 2023

BOLTON & MENK

Real People. Real Solutions.

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Appendix A: Tree Health Assessment

I. INTRODUCTION

Cuningham Group Architecture, Inc. (Cuningham) has requested a tree health assessment on all existing trees located on the Saint Louis High School campus. To assist in the assessment, Cuningham provided Bolton & Menk with an AutoCAD survey drawing which included the existing features found at the Saint Louis Park High School. The survey drawing recorded the location, species, and diameter at breast height (DBH) of approximately 176 trees on the Saint Louis High School campus. A Bolton & Menk tree inspector certified by the Minnesota Department of Natural Resources used this information to perform a tree health assessment on September 20, 2023.

II. METHODS

ESRI ArcGIS Pro (version 3.1) was used to create a data collection map which included Hennepin County aerial imagery and the location of each existing tree according to AutoCAD survey drawing provided to Bolton & Menk by Cuningham. The data collection map was uploaded to a field data collector which consists of an Apple iPad that uses the ESRI ARC Field Map application paired Geode GNS3S GPS receiver tied to Hennepin County coordinate system. A Minnesota certified tree inspector then used the data collector to confirm the location of existing trees, record the location of new trees, and to record the assessment of all trees on site based on the Tree Health Scale (Table 1).

Tree Health Scale

The tree health scale (Table 1) ranks each tree on a 0-5 scale. The tree health scale takes into consideration the species, size, height, age, and visible condition of each tree and its components.

Table 1: Tree Health Scale	
Rank	**Defect(s)**
0 - Dead	No leaves, large quantities of missing bark, cavities, splits, heavy decay, broken and missing branches, defoliated, diseased, infested, etc.
1 – Nearly Dead	Missing or loose bark, heavy defoliation, diseased, infested, cavities, splits, broken and missing branches, decaying, girdling, etc.
2 – Heavily Diseased/Decayed	Cankers, epicormic sprouts, frass, insect larvae exit holes, defoliated branches, bark flecking, bird activity, exposed decaying wood, etc.
3 – Structurally Compromised	Girdling, trunk and large branch cracks and splits, cavities, included bark, leans, compression, wounds, etc.
4 – Structurally Sound, Small Risk of Failure	Small wounds, cavities, or decay that may or may not worsen the health and structural integrity of the tree over time.
5 – Average Tree	No visible signs of defects, disease, or infestations.

III. FINDINGS

On September 20, 2023, the tree health assessment found a total of 127 trees on the Saint Louis Park High School campus. It was noted the several areas around the campus were under construction or had been modified according to the existing survey drawing. Several new trees have also been planted since the original survey was carried out. The newly planted trees are

within the right-of-way of Idaho Avenue and 33rd Street West. The new trees were discovered to be in poor condition due to drought and lack of water. New trees equipped with watering bags contained no water.
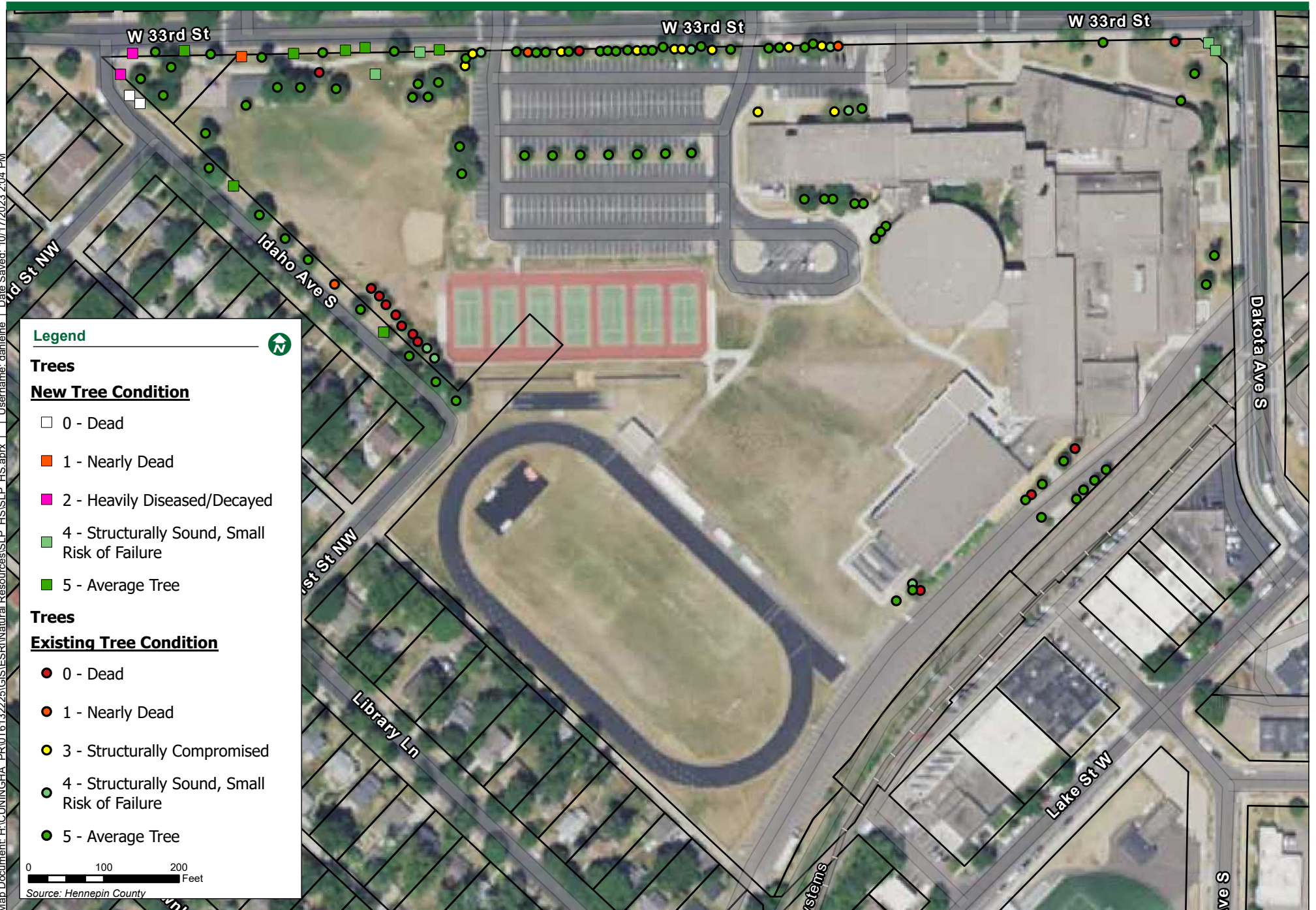
Table 2 details the health condition of all trees assessed on the school campus. 89 trees (67%) were recorded with a rank of 5 - Average Tree, 11 (8%) of trees were ranked 4 – Structurally Sounds, Small Risk of Failure, 11 (8%) trees were ranked 3 – Structurally Compromised, 0 (0%) trees were ranked 2 – Heavily Diseased/Decayed, 6 (5%) trees were ranked 1 – Nearly Dead, and 16 trees were ranked 0 - Dead.

TREE HEALTH RATING

■ 0　■ 1　■ 2　■ 3　■ 4　■ 5

16, 12%
6, 5%
0, 0%
11, 8%
11, 8%
89, 67%
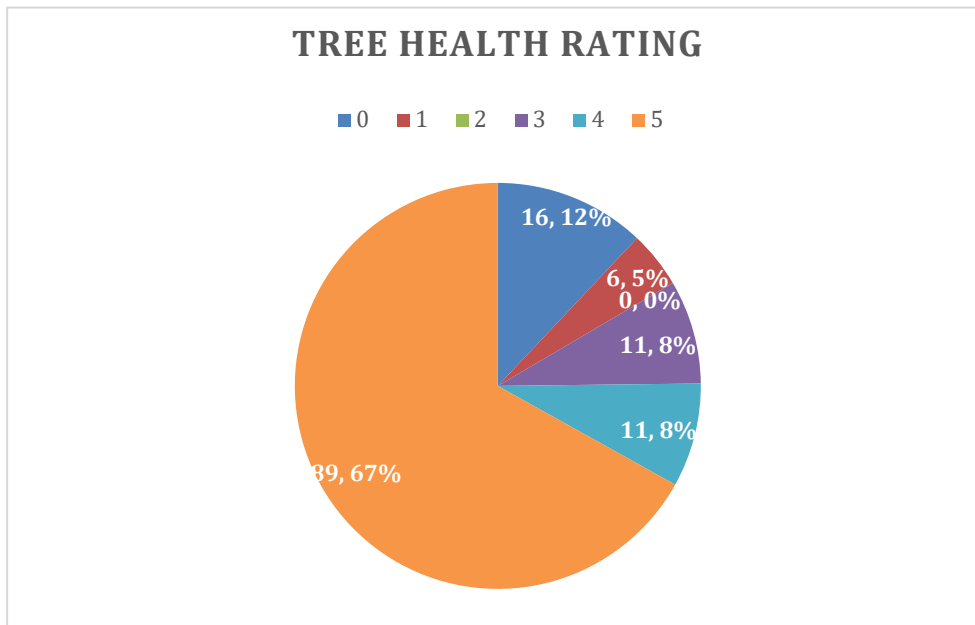
IV. CONCLUSION

The tree assessment revealed that 75% of the trees found on the Saint Louis Park High School campus received a rank of 4 or greater. Trees that received a ranking of 3 or less were due to lack of maintenance, construction damage, or deterioration due to recent climate conditions. It is recommended that trees with a ranking of 3 or less should be removed and replaced.

Appendix A: Tree Health Assessment

St. Louis Park High School Tree Health Assessment

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Exhibit A: Tree Location & Health Map

October 2023

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Legend

Trees

New Tree Condition

☐ 0 - Dead

🟧 1 - Nearly Dead

🟪 2 - Heavily Diseased/Decayed

🟩 4 - Structurally Sound, Small Risk of Failure

🟩 5 - Average Tree

Trees

Existing Tree Condition

🔴 0 - Dead

🟠 1 - Nearly Dead

🟡 3 - Structurally Compromised

🟢 4 - Structurally Sound, Small Risk of Failure

🟢 5 - Average Tree

0   100   200 Feet

Source: Hennepin County