



Executive Summary
of
Sidewalk Buffer Trees
Survey & Assessment
Central Coast Maintenance Association
Nipomo, California

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EXECUTIVE SUMMARY

The Central Coast Maintenance Association (CCMA) holds responsibility for the stewardship of common-area landscapes within Trilogy at Monarch Dunes, a master-planned residential community located in Nipomo, San Luis Obispo County, California.

This comprehensive Tree Management Plan is based on a complete analysis of the April 2026 Sidewalk Buffer Tree Survey (see SWBT_Survey_AllPhase2026.xlsx), which documents exactly 1,362 trees (Trees 3501–4862).

The plan integrates every data column from the survey—tree number, address, sidewalk buffer location (SB1, SB2, SB3), species, trunk diameter, height, tree well type, stakes, sidewalk condition, hazard risk, overall condition, condition comments, general recommendations, pruning recommendations, pruning schedule, irrigation recommendations, plant health care (PHC) recommendations, PHC schedule, photographs, and geospatial coordinates (coordinate system: EPSG:6424)—along with the detailed Tree Data Sheet definitions, the Updated Tree List for Replanting Suitability Analysis, and the Tract 2341 Phase and Unit Exhibit map.

The sidewalk buffer trees form a defining feature of the community's streetscape, providing shade, aesthetic value, and environmental benefits in a Mediterranean coastal climate characterized by sandy soils, seasonal drought, persistent winds, and urban compaction. The inventory is dominated by Southern Magnolia, Chinese Elm, Brisbane Box, African Sumac, and Carrot Wood, with many trees in fair-to-good condition (ratings 3–4).

Primary challenges include undersized tree wells, turf and artificial ground-cover competition, surface rooting exacerbated by frequent irrigation, mowing damage, buried root collars, sidewalk lifting, and a history of improper pruning on certain species.

This plan establishes a proactive, sustainable program emphasizing cultural improvements (mulching and root-collar exposure to full dripline), standardized deep/infrequent irrigation, species-appropriate pruning (including vehicle/pedestrian, sign, and light clearances), targeted PHC (fertilizer, systemic fungicide, and growth regulators), and strategic replanting with Tier 1 suitable species.

Urgent Year 1 actions address removals, cultural deficiencies, and initial PHC applications, followed by a recurring three-year maintenance cycle.

Full implementation will minimize infrastructure conflicts, reduce liability, enhance tree longevity, and ensure compliance with County of San Luis Obispo permitting requirements for removals and construction activities.

INTRODUCTION

Trilogy at Monarch Dunes is a master-planned community governed by the Central Coast Maintenance Association under the guidelines established in the Wallace Group's Tract 2341 development documents.

Sidewalk buffer trees are planted in linear zones between the curb and sidewalk, serving as a unified landscape element that enhances curb appeal, provides seasonal interest, mitigates urban heat, and supports stormwater management.

Primary Benefits

Shade and Cooling: They reduce urban heat by providing canopy shade along streets and sidewalks, helping to mitigate the urban heat island effect in Nipomo's Mediterranean coastal climate.

Aesthetic Value & Curb Appeal: They serve as a defining feature of the community's streetscape, creating a unified, attractive landscape element that enhances the overall appearance of the neighborhood.

Seasonal Interest: Many species offer flowers, foliage color changes, bark interest, or other visual features throughout the year.

Environmental Benefits: Improve air quality by filtering pollutants, sequester carbon and produce oxygen, & support biodiversity and provide habitat for birds and pollinators

Stormwater Management: Tree canopies and root systems help intercept rainfall, reduce runoff, and promote groundwater recharge.

Property Value & Community Livability: Well-maintained Street trees are known to increase property values and contribute to a more desirable, walkable residential environment.

Pedestrian and Traffic Benefits: They provide visual screening, soften the hardscape of streets and sidewalks, and improve the overall pedestrian experience.

Long-term Infrastructure Protection (when properly managed): With the recommended cultural practices in the management plan (expanded tree wells, mulching to the dripline, deep/infrequent irrigation, etc.), they help minimize conflicts with sidewalks while delivering the above benefits for decades.

This Tree Management Plan translates the April 2026 survey findings into a practical, 5-year strategy tailored to the specific conditions of Nipomo's coastal environment. It addresses every aspect of the survey data and incorporates best management practices from the International Society of Arboriculture (ISA), ANSI A300 standards, and local regulatory requirements.

The plan prioritizes prevention of decline, protection of existing infrastructure, and strategic replacement to maintain a healthy, diverse, and low-maintenance urban forest for current and future residents.

ORGANIZATION OF THIS TREE MANAGEMENT PLAN

This Tree Management Plan is structured to provide CCMA with a clear, logical, and actionable roadmap. Following the Executive Summary and Introduction, the document is organized as follows:

- **Sidewalk Buffer Areas** defines the three standardized buffer zones (SB1, SB2, SB3) and explains their unique maintenance considerations.
- **Inventory Overview and Phase Distribution** summarizes the 1,362 trees by phase, street, size, and geospatial distribution.
- **Species Composition and Suitability for Replanting** details the existing species inventory and provides a tiered suitability analysis to guide future replacements.
- **Tree Size, Tree Wells, and Growing Space** evaluates current tree dimensions and growing conditions, highlighting the critical need for expanded dripline areas.
- **Tree Stakes** assesses staking status and recommends immediate corrections for new and improperly staked trees.
- **Sidewalk Condition** quantifies tree-related sidewalk lifting and cracking and prioritizes mitigation.
- **Level I Tree Hazard Risk Assessment** identifies low-, moderate-, high-, and extreme-risk trees based on structural defects.
- **Current Condition and Key Stressors** present health ratings/links observed decline to primary stressors.
- **Recommended Maintenance Practices** delivers guidance on cultural improvements, irrigation, pruning, plant health care, mowing mitigation, root pruning, tree protection during construction, planting specifications, staking, and root-barrier removal.
- **Prioritization and Phased Implementation** outline a practical Year 1–Year 4+ schedule.
- **Tree Removal Permits in Nipomo for CCMA** explains regulatory requirements and replacement obligations.
- **Monitoring, Documentation, and Adaptive Management** establishes protocols for ongoing inspection and plan updates.
- **Conclusion and Next Steps** summarize the plan's benefits and provides immediate action items for CCMA.

This structured approach ensures that every aspect of the sidewalk buffer tree program is addressed comprehensively, enabling CCMA to implement the plan efficiently and measure long-term success.

SIDEWALK BUFFER AREAS

The survey classifies each tree's location using three standardized sidewalk buffer zones (Figure 1), as defined in the Tree Data Sheet:

SB1 – Directly in front of the residence (the primary buffer zone between the sidewalk and the home's frontage). This is the most common location and typically experiences the highest foot traffic and mower activity.

SB2 – On the opposite side of the driveway from SB1 (often along the continuation of the same sidewalk). These trees frequently border driveways and may receive slightly different irrigation and maintenance patterns.

SB3 – Present only on corner lots, along the side yard. These trees are exposed to greater wind, have reduced soil volume on one side, and are more susceptible to mechanical damage from turning vehicles and edging equipment. More than one SB3 tree will be labeled A, B, C, etc.

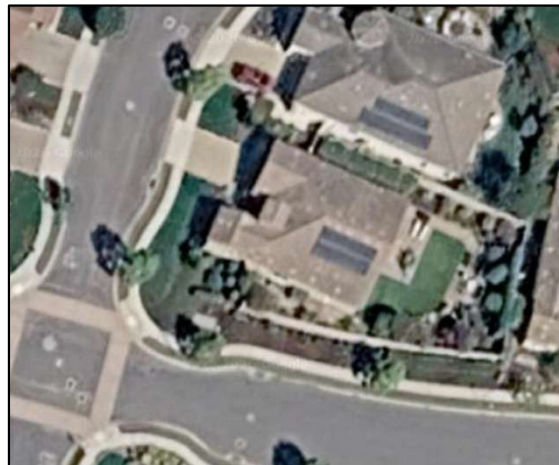


Figure 1: sidewalk buffer locations 1, 2, & 3 at 1027 Joseph Ct.

Analysis of the "Sidewalk Buffer Location" column confirms that the majority of the 1,362 trees are in SB1 positions, with progressively fewer in SB2 and SB3. Corner-lot SB3 trees require additional protective measures, including wider mulch rings and more frequent clearance pruning to maintain safe sightlines around intersections. This classification system allows CCMA to prioritize maintenance routes and tailor specifications by buffer type.

Sidewalk Buffer Tree Counts:

Sidewalk Buffer Area	Count	Percentage
SB1 (primary buffer in front of residence)	1,120	82.2%
SB2 (opposite side of driveway)	41	3.0%
SB3 (corner lots / side yard)	201	14.8%

Summary

SB1 is by far the most common location (the standard frontage buffer).

SB3 trees are almost entirely on corner lots and are often labeled with suffixes (3-A, 3-B, 3-C, etc.).

SB2 is relatively rare.

INVENTORY OVERVIEW AND PHASE DISTRIBUTION

The survey inventories exactly 1,362 trees across Phases 1A, 1B, 2A, 2B, and 2C, as illustrated in the Tract 2341 Phase and Unit Exhibit map (Figure 2). Phase 1A contains the largest concentration, primarily along Northwood Road and adjacent early-development streets. Phases 2B and 2C include newer plantings along Eucalyptus Road, Trilogy Parkway, Trail View Place, and the Riley Lane/AJ Lane corridor. GPS coordinates and high-resolution photographs enable precise mapping and field verification for all trees.

Tree sizes vary significantly: unestablished trees typically range from 1–4-inch trunk diameter and 4–10 feet in height, while established specimens reach 8–14+ inches in diameter and 20–30+ feet tall. Multi-trunk (“MT”) designations are common among younger or previously pruned trees. The dataset provides a robust baseline for tracking growth, condition changes, and maintenance history over time.

Tree Counts by Phase

Phase	Quantity	Percentage
1A	482	35.4%
1B	376	27.6%
2A	213	15.6%
2B	270	19.8%
2C	21	1.5%

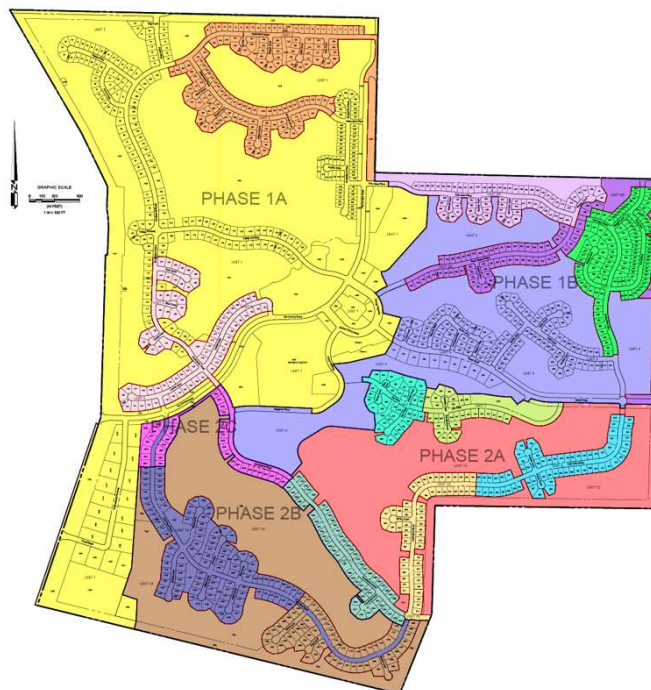


Figure 2: Tract 2341 Phase and Unit Exhibit map; locations of the phases associate with Trilogy at Monarch Dunes (Phases 1A, 1B, 2A, 2B, and 2C).

Summary

Phase 1A has the largest number of trees (mostly along Northwood Road and early streets).

Phase 1B is the second largest.

Phases 2A–2C represent newer plantings (especially along Eucalyptus Road and surrounding areas).

Phase 2C is the smallest group.

SPECIES COMPOSITION AND SUITABILITY FOR REPLANTING

Twenty-four (24) species are represented in the inventory. The five most abundant account for nearly 74.3% of all trees:

- Southern Magnolia (*Magnolia grandiflora*) – 508 trees (37.3%)
- Chinese Elm (*Ulmus parvifolia*) – 142 trees (10.4%)
- Brisbane Box (*Lophostemon confertus*) – 132 trees (9.7%)
- African Sumac (*Searsia lancea*) – 119 trees (8.7%)
- Carrot Wood – 111 trees (8.1%)

Carrot Wood dominates unestablished trees (primarily located in Phase 2B), while much smaller numbers of Sweetgum, Jacaranda, Chinese Pistache, Crape Myrtle, Australian Willow, Southern Live Oak, Victorian Box, Bradford Pear, Chinese Elm, and Peruvian Pepper complete the inventory.

Suitability for future replanting is evaluated using the definition for suitability below and the Updated Tree Planting List for Suitability Analysis (Table 1), which ranks species in three tiers based on performance in Nipomo's sandy soils, drought conditions, wind exposure, restricted tree wells, and low-maintenance requirements:

Tier 1	Highly Suitable (Strongly Recommended – Proven, Low-Maintenance, Well-Fitting)
	These align best with tree wells: compact, drought-adapted, low litter, street-approved, and mostly with CCMA "x".
Tier 2	Moderately Suitable (Viable with Monitoring/Care – Good but Some Trade-offs)
	These work but may need more space, occasional pruning, or have minor litter/establishment issues. Mostly with CCMA "x".
Tier 3	Low Suitability / Caution or Not Recommended (Avoid or Use Only if Mitigated)
	These have significant drawbacks for tree wells (roots, mess, size, invasiveness, or poor street performance). Even if CCMA "x" exists, they underperform long-term in Nipomo conditions.

Tier 1 – Highly Suitable (Strongly Recommended)

African Sumac, Australian Willow, Brisbane Box, Crape Myrtle, Desert Willow, Japanese Pittosporum, Loquat (various species), Peppermint Willow. These species are drought-tolerant, structurally sound, low-litter, and proven performers in local sidewalk buffers.

Tier 2 – Moderately Suitable (Viable with Monitoring)

Chinese Pistache, Evergreen Ash, Fern Pine, Gold Medallion, Jacaranda, Southern Magnolia, Arbutus species (Pacific Madrone & Strawberry Madrone), Narrow Leafed Ash, Oak (various species), Podocarpus, Purple Leaf Plum, Water Gum. These perform well but may require supplemental irrigation during establishment or more frequent structural pruning.

Tier 3 – Low Suitability / Caution or Not Recommended

Bradford Pear (weak branching and storm failure risk), Carrot Wood (invasive tendencies and poor drought tolerance), Ceanothus species; Chinese Elm; Chinese Flame; Crab Apple; Liquidambar (aggressive surface roots and sidewalk heaving), Maidenhair (Ginkgo), Olive, Pepper, Silk Tree, Willow (all *Salix* species), Western Redbud, Victorian Box (stress-prone). These should be phased out during removals and replaced exclusively with Tier 1 species unless site-specific conditions justify otherwise.

Caveat On Species Suitability

These rankings are guidelines, not absolute rules. Individual site factors—such as exact soil compaction, irrigation practices, microclimate variations, or future climate shifts—can influence long-term success. Some Tier 2 species may perform adequately in favorable locations, while certain Tier 1 species may still require supplemental care during establishment. Conversely, Tier 3 species are not automatically prohibited; in rare cases where no better alternative fits the site constraints, they may be considered with heightened monitoring and mitigation measures.

Final species selection for any removal/replanting should always be reviewed on a case-by-case basis with the project arborist to ensure the chosen species best matches the specific location, long-term maintenance goals, and CCMA objectives.

Suitability for Replanting and Strategic Transition by Street Neighborhoods

A key long-term recommendation of this Tree Management Plan is the phased replacement of lower-suitability species (Tier 2 and Tier 3) with highly suitable Tier 1 and strong Tier 2 species. To make this transition practical, cost-effective, and visually cohesive, CCMA should organize replacements by “street neighborhoods” — logical groupings of contiguous streets or blocks that share similar planting ages, species mixes, and maintenance challenges.

This neighborhood-based approach offers several advantages:

- **Efficiency and Cost Control:** Contractors can mobilize once per street or small cluster of streets, reducing mobilization fees, equipment moves, and traffic disruption. Coordinated removals and replantings on the same visit minimize the number of construction impacts to residents.
- **Uniform Streetscape Appearance:** Replacing Tier 3 species (e.g., Bradford Pear, Carrot Wood, Sweetgum) and selected Tier 2 species with consistent Tier 1 choices (Brisbane Box, African Sumac, Crape Myrtle, Australian Willow, Loquat) creates visually harmonious corridors rather than patchwork replacements.
- **Prioritization Based on Need:** Streets with the highest concentrations of Tier 3 trees and elevated hazard or sidewalk issues (e.g., portions of Northwood Road, Nathan Way, and Eucalyptus Road) can be scheduled first, while lower-priority neighborhoods follow in later phases.
- **Homeowner Engagement:** Residents on the same street can be notified together, fostering community understanding and support for the transition.

Implementation would begin with a detailed mapping of Tier 3 and Tier 2 concentrations using the survey’s address and species data. A realistic 8- to 12-year transition plan could target one or two neighborhoods per year, aligned with the three-year pruning cycle and annual budget. All replacements would follow the approved planting specifications, Tier 1 priority list, and cultural practice standards outlined elsewhere in this plan.

By treating entire street neighborhoods as cohesive units, CCMA can systematically upgrade the sidewalk buffer canopy to more resilient, lower-maintenance species while maintaining the attractive, unified character that defines Trilogy at Monarch Dunes. This strategic approach ensures the community’s urban forest becomes healthier, safer, and more sustainable over time.

Table 1: Updated Tree Planting List for Suitability Analysis.

CCMA SIDEWALK BUFFER STUDY TREE SPECIES	Onsite	Tier	Notes
African Sumac	x	Tier 1	Excellent; 25 ft, low water/drought tolerant, wind/poor-soil tolerant, low allergy/pollen.
Australian Willow (<i>Geijera parvifolia</i>)		Tier 1	Strong performer; 25–35 ft, drought tolerant, wind tolerant, wide soil adaptability.
Brisbane Box (<i>Lophostemon confertus</i>)	x	Tier 1	Very good; 30–60 ft (manageable but requires pruning), low water/drought tolerant, seacoast/wind tolerant.
Bronze Loquat		Tier 1	Good fit; 15–25 ft, thrives in non-irrigated wells, low water. Minor pest notes but suitable.
Crape Myrtle (<i>Lagerstroemia indica</i>)	x	Tier 1	Excellent; 6–30 ft, low water/drought tolerant, low litter, good structure.
Desert Willow	x	Tier 1	Ideal; 25 ft, drought tolerant, wind tolerant. Low maintenance.
Japanese Pittosporum	x	Tier 1	Good; 20–35 ft, drought tolerant, low power-line conflict.
Loquat (Japanese)	x	Tier 1	Strong; 15–35 ft, low water/drought tolerant
Peppermint Willow (<i>Agonis flexuosa</i>)		Tier 1	Excellent coastal choice; 25–35 ft, suitable for parkways/cutouts/tree wells, wind/drought tolerant, low pests.
Chinese Pistache (<i>Pistacia chinensis</i>)	x	Tier 2	Reliable fall color; drought tolerant but grows larger (up to 60 ft)—best with ample well space.
Evergreen Ash	x	Tier 2	Adaptable but ash species can have pest risks (monitor emerald ash borer). Can grow quite large.
Fern Pine (<i>Podocarpus gracillior</i>)		Tier 2	Tolerates drought/pollution/salinity; variable size but adaptable. Minor fruit litter.
Gold Medallion		Tier 2	Showy flowers; 20–25 ft but pods create litter—prune to minimize. Needs good drainage.
Jacaranda	x	Tier 2	Aesthetic “wow” factor at times of year; Very messy; Invasive roots.
Magnolia	x	Tier 2	Attractive but size varies; some litter. Check specific cultivar.
Marina Strawberry (<i>Arbutus mena</i>)	x	Tier 2	Evergreen, attractive bark/fruit; 40 ft, oak-root resistant but not drought tolerant—supplemental water early.
Narrow Leafed Ash	x	Tier 2	Adaptable but ash species can have pest risks (monitor emerald ash borer). Can grow quite large.
Oak Tree (Generic)	x	Tier 2	Drought tolerant/low water for many natives; wildlife value. Use smaller cultivars to avoid root heaving in wells.
Pacific Madrone	x	Tier 2	Native appeal, drought tolerant; needs excellent drainage. Can reach larger sizes.
Podocarpus	x	Tier 2	Like fern pine: Tolerates drought/pollution/salinity; variable size but adaptable. Minor fruit litter.
Purple Leaf Plum	x	Tier 2	Ornamental; 35 ft but not drought tolerant—fruit/mess possible.
Southern Live Oak	x	Tier 2	Evergreen, drought tolerant; larger (50–60 ft) so monitor roots.
Water Gum (<i>Tristanopsis laurina</i>)		Tier 2	Similar to Brisbane Box but smaller; adaptable but planted less locally.
Black Willow	x	Tier 3	High water needs, aggressive roots (pavement damage), messy, large—poor urban fit.
Bradford Pear	x	Tier 3	Weak branching (storm failure), invasive potential, smelly flowers, short lifespan. Widely discouraged by arborists.
Carrotwood	x	Tier 3	Often planted as a street tree in SoCal; invasive tendencies (seeds spread by birds); Not drought tolerant.
Ceanothus Ray Hartman	x	Tier 3	Small/native (10–25 ft), drought tolerant but more shrub-like; Better for larger spaces where spreading is tolerated.
Chinese Elm	x	Tier 3	Adaptable but can be larger/invasive roots in some cases. Needs frequent, specialized pruning.
Chinese Flame	x	Tier 3	Showy but messy fruits/pods.
Crab Apple	x	Tier 3	Fruit drop/mess, disease prone (fire blight).
Liquid Amber	x	Tier 3	60+ ft, surface roots, not drought tolerant, messy, trip hazard.
Maidenhair (<i>Ginkgo biloba</i>)	x	Tier 3	Very large (70+ ft), not drought tolerant—select male (fruitless) only or suffer the consequence (putrid smelling)
Olive	x	Tier 3	Drought tolerant/low water but fruit mess (sterile cultivar can fruit sometimes), Not a good street tree.
Pepper	x	Tier 3	Drought tolerant but not a good street tree, invasive roots, prolific, messy, animal caution (toxicity).
Silk Tree	x	Tier 3	Messy pods/flowers, high water needs, pests (webworm/wilt), Not a good street tree.
Weeping Willow	x	Tier 3	High water needs, aggressive roots (pavement damage), messy, large—poor urban fit.
Western Redbud		Tier 3	Small/native (10–25 ft), drought tolerant but more shrub-like; Better for larger spaces where spreading is tolerated.
Willow	x	Tier 3	High water needs, aggressive roots (pavement damage), messy, large—poor urban fit.

TREE SIZE, TREE WELLS, AND GROWING SPACE

Trunk diameters range from 1-inch (unestablished trees) to 14+ inches (mature trees), with heights most commonly 10–25 feet. Tree wells are coded 1–8 in the survey, with the majority falling into suboptimal categories (all but Code 2, although most Code 2s did not have enough clearance):

Tree Well Conditions

	Description	Count	Percentage
1	Growing In Turf	1,028	75.4%
2	Cleared Circle	39	2.9%
3	Artificial Turf	4	0.3%
4	Added Planting at Base	3	0.2%
5	Turf W/ Rocks Around Base	135	9.9%
6	Rubberized Mat Around Base	2	0.1%
7	Added Hardscape Feature	7	0.5%
8	Other (Condition Comments)	144	10.6%

Code 1 (growing in turf), Code 5 (turf with rocks), Code 3/8 (artificial turf or other ground cover). These conditions restrict root development, promote surface rooting, and increase susceptibility to mechanical damage and drought stress. Code 3 was almost always associated with decline.

Not very common were Code 4 (issues: root competition, buried root collar, maintenance conflicts), Code 6 (issues: poor gas exchange, heat build-up, girdling roots, bark damage, long-term degradation), and Code 7 (issues: root restriction, compaction, infrastructure conflict, irreversible damage conflict).

Code 2 (Cleared Circle) was the best observed tree well scenario although less than ideal; the ideal tree-well size extends to the full dripline of the tree (or a minimum 3–5-foot radius for young trees, expanding outward as the canopy matures). This was only found in one location from the entire population: Tree 4840 at 1527 Eucalyptus Road. Extending the tree-well to the full dripline would lessen the impact for all trees regardless of ground cover.

Current wells are frequently undersized relative to tree size, leading to competition with turf irrigation, compaction, and limited nutrient uptake. Expanding all wells to dripline coverage with 4-inches of organic mulch is a foundational recommendation that will dramatically improve tree vigor across the entire inventory.



Figure 3: the ideal SB1 expanded growing space in with mulch. This tree (Tree 4840) has the only growing space that maximizes

TREE STAKES

Tree Stakes is coded 1–6 in the survey:

	Description	Count	Percentage	Primary Context / Species Notes
1	No Stakes (No change, established tree)	850	62.4%	Mature/established trees; no action required. Dominant in Southern Magnolia, African Sumac, Brisbane Box, and Maidenhair.
2	Add Stakes	1	0.1%	Rare; young trees needing initial support (scattered unestablished trees).
3	Center Stake Only (Remove Center Stake & Stake Properly)	33	2.4%	Not established with single center stake only; requires immediate correction to proper guy staking. Common in Carrot Wood, Crape Myrtle, Australian Willow, and some Maidenhair.
4	Staked Properly (No Change)	100	7.3%	Not established but correctly staked; leave in place until end of establishment period.
5	Staked Improperly or Damaged (Reset/Reposition)	62	4.6%	Stakes are present but incorrect, loose, too tight, or damaged; requires resetting or repositioning to prevent girdling. Mostly not established.
6	Remove Stakes (Established Tree)	316	23.2%	Established trees that still have stakes in place; stakes must be removed promptly to avoid long-term trunk damage.

Key Observations and Implications

Code 1 (No Stakes) dominates the inventory (62.4%).

Not established trees account for most non-1 codes (Codes 3, 4, 5, and some 2 and 6).

Code 4 (100 trees) can remain until the end of the establishment period.

Code 3 and Code 5 together represent 95 trees (7.0%) that require active correction in the near term. These are the highest-priority staking issues because center stakes (Code 3) can girdle trunks as trees grow, and improperly/damaged stakes (Code 5) can cause leaning, abrasion, or instability. Stakes left on established trees can constrict growth and create entry points for pests/disease.

Code 6 (316 trees) are established trees that still retain stakes — a clear maintenance gap. Stakes left on mature trees can constrict growth and create entry points for pests/disease. **Tree stakes need to be removed when the tree has established (subjective) and the trunk is equal to or greater than the stake diameter (objective).**

Code 4 (100 trees) are correctly installed and can remain until the standard removal window.

Recommended Actions by Code (Prioritized)

Year 1 Priority (Immediate – 2026/2027):

- Code 3 (33 trees): Remove center stake and install proper guy staking (two or three low, flexible stakes with wide padded ties allowing 2–3 inches of trunk movement).
- Code 5 (62 trees): Reset or reposition stakes to correct configuration.
- Code 6 (316 trees): Remove all stakes immediately.
- Code 2 (1 tree): Install proper staking.

Years 2–3 (Establishment Period):

- Monitor and remove stakes on all Code 4 when established (may be longer for slower-growing species).
- Re-inspect all corrected trees (Codes 3 and 5) to confirm proper installation and growth response.

Ongoing:

All future plantings must follow Code 4 (Figure 4) standards at installation and be scheduled for removal under Code 6 at the appropriate time.

Crew training should emphasize the distinction between temporary support and permanent staking (which is never appropriate).



Figure 4: (left image) improperly staked tree that needs to be correctly staked until establishment (Code 5); (right image) properly staked tree (Code 4). Tree stakes can be removed on this tree when the trunk is equal to or greater than the stake diameter.

SIDEWALK CONDITION

Sidewalk Condition is coded 1–5 in the survey:

	Description	Count	Percentage	Primary Context / Species Patterns
1	No noticeable sidewalk issue	1,158	85.0%	Vast majority of trees; typical for younger or less aggressive-rooted species (Brisbane Box, Maidenhair, many African Sumac).
2	Incipient Lifting	121	8.9%	Early-stage root heaving; common in mid-sized established trees.
3	Noticeable Lifting	82	6.0%	Clear, visible lifting; most frequent in aggressive surface-root species.
4	Apparent Hazard	0	0.0%	Severe lifting presenting immediate trip/safety hazard.
5	Cracked But No Lifting	1	0.1%	Surface cracking without displacement; rare.

Key Observations

Code 1 (No noticeable issue) dominates the inventory (85%). This is expected for the large number of younger trees and species with more compact or less aggressive root systems.

Codes 2 and 3 combined affect 14.9% of all trees (203 trees). These represent the primary tree-related sidewalk concerns. Noticeable lifting (Code 3) is especially prevalent among:

- Sweetgum (*Liquidambar styraciflua*)
- Southern Magnolia (*Magnolia grandiflora*)
- Larger established African Sumac and some Maidenhair

There are no Code 4 and only one Code 5 tree. These are the highest-priority safety items and are concentrated in a handful of mature trees with significant root displacement or cracking.

Patterns by Phase and Location:

Phase 1A/B (older plantings) shows the highest incidence of Codes 2 and 3.

Phase 2B/2C (newer plantings) is overwhelmingly Code 1.

Lifting issues are more common in SB1 buffers (directly in front of homes) where root zones are more constrained by driveways and hardscape.

Root Cause Correlation: Lifting is strongly linked to surface rooting encouraged by frequent turf irrigation, undersized tree wells, and lack of mulch. Species with known aggressive surface roots (Sweetgum, Magnolia) account for a disproportionate share of Codes 2–3.

Recommended Actions by Code (Prioritized)

Year 1 Priority (Immediate – 2026/2027):

- Code 3 (82 trees): Targeted root pruning + sidewalk leveling where feasible. Combine with full tree-well expansion and mulching to prevent recurrence.
- Code 2 (121 trees): Proactive monitoring and cultural improvements (mulch to dripline, deep/infrequent irrigation shift) to slow progression to further hardscape damage.

Years 2–3:

- Re-inspect all Code 2 and 3 trees after cultural and irrigation changes.
- Schedule routine sidewalk maintenance in conjunction with the three-year pruning cycle.

Ongoing:

All new plantings and replacements must use Tier 1 and limited Tier 2 species; use root barriers only when necessary (and remove existing during tree-well expansion).

Subsequent arborist inspections should specifically re-evaluate sidewalk condition using the same 1–5 scale.

This assessment confirms that sidewalk lifting is a manageable, tree-related issue affecting 14.9% of the inventory (203 trees), concentrated in specific species and older phases.

With the recommended cultural practices (full-dripline mulching, irrigation adjustment, and strategic root pruning), future lifting can be significantly reduced while protecting both the trees and the sidewalk infrastructure.

LEVEL I TREE HAZARD RISK ASSESSMENT

A Level I Tree Risk Assessment is a quick, limited visual inspection of a tree or a population of trees from a specific, predefined perspective. Conducted via walk-by, its primary purpose is to quickly identify obvious, imminent hazards rather than provide a detailed diagnosis.

- **Method:** Conducted by observing the tree from the ground. The arborist does not typically walk a full 360-degree circle around every single tree.
- **Primary Target:** Focuses on detecting major defects or signs of decline (e.g., large dead branches, massive structural cracks, root lifting) that indicate an immediate or probable risk of failure.
- **Use Case:** Commonly used to survey large populations of trees **quickly** across properties.

Strengths and Limitations of a Level I Tree Risk Assessment:

- **Efficient:** The fastest and most cost-effective method to survey large areas and flag high-risk trees.
- **High Uncertainty:** Because it is a surface-level scan, it often misses hidden structural defects, internal decay, and root problems concealed by turf.

CCMA SWBT Level I Tree Hazard Risk Assessment:

Hazard risk for the SWBT population is generally low (1–2), though elevated ratings correlate with codominant stems with included bark, weak branch attachments, or buried root collars.

1 – Low Risk – 87.8% (1,196 trees)

- **Definition:** The combination of an unlikely failure, minor consequences, or a lack of a high-value target.
- **Meaning:** The tree exhibits minor or standard structural defects, but there is no immediate threat to public safety or property.
- **Action Required:** None immediately. The tree should be monitored during routine municipal or residential property maintenance cycles.

2 – Moderate Risk – 10.1% (137 trees)

- **Definition:** The tree has defined structural defects, and a failure could plausibly impact a target under standard weather conditions.
- **Meaning:** Significant issues exist (like a small cavity or dead branches), but the overall likelihood of immediate, catastrophic failure and severe damage remains limited.
- **Action Required:** Mitigation is not an emergency but should be planned. Arborists recommend scheduling pruning or removal within the next 3 to 12 months.

3 – High Risk – 1.9% (26 trees)

- **Definition:** A structural failure is highly likely, or the potential consequences to a permanent target are major.
- **Meaning:** The tree has severe defects (e.g., massive trunk cracks or advanced root rot) that pose a clear and present danger to nearby structures, vehicles, or busy pedestrian paths.
- **Action Required:** Immediate or short-term intervention is required. The property owner should restrict access to the target area or hire an arborist to prune, brace, or remove the hazard as soon as possible.

4 – Extreme Risk – 0.2% (3 trees)

- **Definition:** Failure is imminent, and a high-value target is certain to suffer catastrophic structural damage or severe personal injury.
- **Meaning:** The tree or a large section of it is actively failing, lifting at the roots, or heavily split during or immediately following a severe storm event.
- **Action Required:** Critical emergency. The area must be evacuated or cordoned off immediately. Emergency tree removal or structural stabilization services must be brought in without delay to eliminate the threat.

Key Observations

- **Overwhelmingly low risk:** 99.8% of trees (1,333 trees) are rated Low or Moderate. This indicates the overall sidewalk buffer tree population is stable and does not present widespread safety hazards.
- **Elevated risk is rare but concentrated:** Only 29 trees (0.2%) are rated High or Extreme. These are not randomly distributed — they are strongly correlated with specific Condition Comments that describe structural weaknesses, disease, or prior poor pruning practices.
- **Species patterns:** Higher hazard ratings (3–4) appear most frequently in Sweetgum, Bradford Pear, Chinese Elm, and a few Southern Magnolia and Southern Live Oak with buried root collars or disease.

Management Implications

- **Routine monitoring** is sufficient for the 1,196 Low-risk (Code 1) trees.
- **Proactive maintenance** (pruning, cabling, growth regulators, cultural improvements) is recommended for the 137 Moderate-risk (Code 2) trees to prevent escalation.
- **Priority action required** for the 29 High and Extreme-risk (Codes 3–4) trees. These should be flagged for immediate targeted mitigation (e.g., removal/replacement), and inclusion in the Year 1 work plan (if recommended).

This hazard risk assessment is consistent with the overall Condition ratings and sidewalk condition findings from the survey. The low percentage of elevated-risk trees is a positive indicator of the current tree population's general stability, but the 29 higher-risk trees represent the primary safety and liability focus for CCMA in the near term.

CURRENT CONDITION AND KEY STRESSORS

Condition ratings (0–5 scale, per the Tree Data Sheet definitions) are predominantly 3–4 (Fair to Good), indicating functional trees that respond well to proactive care:

	Description	Count	Percentage	Interpretation & Typical Condition Comments
5	Excellent/Very Good	74	5.4%	Vigorous, full dense crown, normal leaf color/size, minimal dieback (<5–10%), sound structure, good root flare. Comments often include “Full Crown”, “Established Tree”, “Young Established Tree W/ Center Stake”.
4	Good	976	71.7%	Mostly healthy with only minor issues (slight thinning or small dieback up to ~10–20%, minor structural defects that are easily corrected). Comments commonly note “Full Crown”, “Some Lower Limbs Over Sidewalk”, “Thin Crown; Sidewalk Visibly Lifted” (but otherwise healthy), or “Established Tree”.
3	Fair/Moderate	270	19.8%	Moderate decline or stress (20–40% dieback, crown thinning, poorer leaf color, moderate structural defects). Comments frequently include “Codominant Trunks; Minor Branch Tip Dieback”, “Mild Chlorosis”, “Thinning Crown”, “Multiple Stems”, “Topped in Past but Recovered”, or “Minor Tip Dieback”.
2	Poor	32	2.3%	Significant decline (>40–60% dieback, major structural defects, heavy epicormic growth, sparse crown). Comments typically read “Topped”, “Visibly Stressed; Over Pruned into Marginal Structure”, “Advanced Decline”, “Crown Dieback”, “Dead Branches; Water Stressed”, or “Codominant Trunks W/Included Bark Tissue”.
1	Critical/Very Poor	2	0.1%	Severe decline (>60–80% dieback, major irreversible defects, safety concerns). Comments almost always include “Mostly Dead”, “Advanced Decline”, “Remove/Replace”, or severe descriptions such as “Buried Root Collar; Disease in Crown” with extensive damage.
0	Dead	8	0.6%	Dead or nearly dead with no recovery potential. Comments explicitly state “Mostly Dead” or equivalent.

Key Observations and Relationship to Condition Comments

Dominant Ratings (4 and 3): 91.5% (1,246 trees) of the inventory falls into Good or Fair/Moderate condition. This reflects a generally healthy urban tree population, with the majority showing only moderate stress from common sidewalk-buffer challenges (turf competition, restricted wells, and irrigation patterns).

Poor or worst (2-0): 3.1% (42 trees) of trees are in these conditions—a very small fraction of the total population.

Excellent/Very Good (5): 5.4% (74 trees) of trees reach this highest rating. These are typically newly planted, vigorous specimens with no notable defects

Poor to Critical (2, 1, and 0): 3.1% of trees (42 total) are in Poor or worse condition. These are concentrated in specific species and situations:

- Southern Magnolia (11) with advanced decline or major defects
- Bradford Pear and Victorian Box (structurally weak or severely stressed).
- African Sumac (many topped/recovered trees with poor structure).
- A small number of Carrot Wood, Chinese Elm, Jacaranda, Plum, Oak, Madrone, Sweetgum and Victorian Box with advanced decline or major defects.

The Condition rating is directly supported by the “Condition Comments” column:

- Code 4 trees often have brief, positive or neutral comments (“Full Crown”, “Established Tree”).
- Code 3 trees consistently mention manageable issues (“Codominant Trunks; Minor Branch Tip Dieback”, “Mild Chlorosis”, “Thinning Crown”).
- Code 2 and below trees have more urgent language (“Topped”, “Visibly Stressed”, “Advanced Decline”, “Remove/Replace”, “Mostly Dead”).

Implications for Management

Majority of Trees (Code 4 – 71.7%): Require routine maintenance only (pruning, mulching, irrigation adjustment, and scheduled PHC).

Fair/Moderate Trees (Code 3 – 19.8%): Need proactive intervention (cultural improvements, targeted pruning, and PHC) to prevent decline into Code 2.

Poor and Below (Codes 0–2 – 3.0%): These 42 trees represent the highest priority for intensive care or removal/replacement. Many are already flagged with “Remove/Replace” or “Urgent Year 1” in the General Recommendations column.

This Condition assessment confirms that the sidewalk buffer tree population is predominantly functional and responsive to standard maintenance. The relatively low percentage of poor/critical trees is a positive indicator, but the 19.8% of trees in Code 3 (Fair/Moderate) represent an opportunity for preventive care to maintain overall canopy health and reduce future removal needs.

Key stressors identified through cross-analysis of condition comments, hazard risk, sidewalk condition, and general recommendations include:

- Surface rooting from turf irrigation: Frequent shallow watering encourages lateral roots that lift sidewalks and create trip hazards, most evident in Sweetgum, larger Magnolias, and certain African Sumac.
- Mowing impacts and mechanical damage: Trunks and exposed roots on new and established trees show repeated mower and string-trimmer injury, particularly in SB1 and SB3 locations where equipment operates close to the base.
- Buried root collars and undersized wells: Common across multiple species, leading to girdling roots, reduced stability, and decline.
- Chlorosis, tip dieback, and structural defects: Linked to soil compaction, improper irrigation, and past topping practices.

These issues are manageable with the cultural and maintenance protocols outlined below.

RECOMMENDED MAINTENANCE PRACTICES

Cultural Improvements

The survey data unequivocally shows that inadequate cultural practices around the base of the trees are the single most widespread and impactful issue affecting the 1,362 sidewalk buffer trees. Turf, rocks, and artificial ground covers occupy most tree wells, buried root collars are common, and mechanical mower/string-trimmer damage is frequently implied in condition comments. These conditions directly contribute to the observed variability in tree health—even among trees of the same species growing only feet apart.

The recommended cultural practices—systematic removal of turf, rocks, and artificial ground covers to the dripline, installation of 3–4 inches of organic mulch (kept 2–3 inches away from the trunk), and root-collar excavation wherever burial is documented—represent the foundational intervention for long-term tree health in this environment. **No other ground cover is recommended.** They are not optional enhancements; they are prerequisite to the success of pruning, irrigation, and plant health care programs.

Current Conditions Documented in the Survey

Analysis of the “Tree Well,” “General Recommendations,” and “Condition Comments” columns reveal the scale of the problem:

- Tree Well Codes show that most trees are growing in suboptimal conditions:
 - Code 1 (growing in turf) and Code 5 (turf with rocks) dominate.
 - Code 8 (artificial turf or other ground cover) is also common, especially in newer Phases 2B and 2C.
- General Recommendations repeatedly and explicitly call for:
 - “Clear Turf Around Base of Trunk At Least Dripline”
 - “Remove Rocks Around Base of Trunk”
 - “Remove Artificial Turf in Dripline; Remove Rocks; Mulch”
- Condition Comments frequently link poor cultural conditions to observed decline:
 - “Water Stressed; Tree Well (Rocks Around Base; Growing Space Is Dry)”
 - “Buried Root Collar; Disease in Crown”
 - “Visibly Stressed; Over Pruned into Marginal Structure”
 - Turf competition and mechanical damage are implied in many “Thin Crown,” “Chlorosis,” and “Tip Dieback” entries.

These cultural deficiencies are present across nearly every street and phase, affecting both unestablished trees and established trees. They explain why two identical Southern Magnolias or African Sumacs planted side-by-side can show dramatically different Condition ratings (one rated 4, the other 2–3).

Detailed Discussion of the Recommended Practices

1. Removal of Turf, Rocks, and Artificial Ground Covers to the Dripline

Turf and artificial covers create constant shallow moisture and compaction while competing for water and nutrients. Rocks limit oxygen exchange and can raise soil temperature. Extending the cleared area to the dripline (or a minimum 3–5 ft radius for young trees, expanding with canopy growth) eliminates these stressors and allows the tree’s natural root system to develop properly.

2. Installation of 3–4 Inches of Organic Mulch (Kept 2–3 Inches Away from Trunk)

Mulch is the most cost-effective, long-lasting improvement available. It conserves soil moisture, moderates soil temperature, suppresses weeds, adds organic matter as it decomposes, and dramatically reduces mower and string-trimmer damage. The 2–3-inch trunk clearance prevents rot and rodent damage.

3. Root-Collar Excavation

Buried root collars (documented in numerous Condition Comments, especially on Southern Live Oaks, Magnolias, and some Sumacs) cause girdling roots, reduced stability, and chronic decline. Excavation restores the proper transition between trunk and roots and is often the single most transformative act for a declining tree.

Expected Benefits and Influence on Tree Health

Implementing these practices will directly address the root causes of the variability noted in the survey:

- Improved water-use efficiency — Deep rooting replaces shallow, turf-dependent roots, making trees far more resilient to the homeowner-controlled irrigation inconsistencies.
- Reduced disease and pest pressure — Better aeration and drier surface conditions limit fungal pathogens and many insect issues.
- Slower sidewalk lifting — Healthier, deeper root systems exert less upward pressure on pavement.
- Lower long-term maintenance costs — Fewer stressed trees mean less emergency pruning, PHC treatments, and removals.
- Greater uniformity in health — Trees of the same species in the same block will respond far more consistently once cultural conditions are standardized.

These practices are the most influential single lever CCMA has for improving overall canopy health, because they correct the site-level conditions that irrigation, pruning, and PHC cannot overcome on their own.

Implementation Considerations for CCMA

Because these are cultural (non-chemical) practices, they are highly feasible and cost-effective. CCMA should:

- Make full-dripline mulching and root-collar excavation a mandatory Year 1 action for all 1,362 trees.
- Develop a simple specification sheet for contractors (mulch type, depth, clearance zone, root-collar standards).
- Coordinate with homeowners where artificial turf or hardscape removal is required.
- Budget for one-time installation plus a 3–5-year refresh cycle as mulch decomposes.

These cultural practices are the foundation upon which every other recommendation in this plan rests. Without them, pruning, PHC, and irrigation adjustments will deliver only marginal results. With them, the sidewalk buffer tree program has a realistic path to long-term success despite homeowner-controlled irrigation challenges.

I recommend that CCMA adopt these cultural practices as the first and non-negotiable priority in the Tree Management Plan.

Irrigation Management

The survey's irrigation guidance is deliberately standardized and climate-appropriate for Nipomo's Mediterranean conditions. For established trees, it calls for deep, infrequent watering (10 gallons per tree, 1–2 times per month). New plantings and unestablished trees receive a temporary establishment phase of monthly 10-gallon applications before transitioning to the same deep/infrequent regime. A very small number of trees are flagged for gradual reduction of existing frequent turf-style watering. It may be counterintuitive, but established trees will require less supplemental water as they will be trained to “find” their own water.

This uniformity is intentional: it simplifies communication to homeowners and maintenance crews. However, as you correctly noted, this column is the most difficult and influential part of the survey because irrigation is the single greatest driver of health variability observed in the data.

Why Irrigation Creates So Much Variability?

Even when trees of the same species and similar size are planted directly next to each other, their health outcomes diverge dramatically. The survey's Condition and Condition Comments columns repeatedly show this pattern:

- One Southern Magnolia may be rated “4 – Good” with a full crown while its immediate neighbor is rated “3 – Fair/Moderate” with mild chlorosis or tip dieback.
- Adjacent African Sumac trees show one vigorous and another water-stressed & heavily topped.

Root cause (evident in the data):

Many homeowners continue frequent, shallow turf-style irrigation (daily or every-other-day light watering) because it keeps the lawn green. This encourages surface rooting, poor drought tolerance, and the exact problems the survey is trying to correct (chlorosis, dieback, weak structure, and accelerated sidewalk lifting).

The recommended deep, infrequent regime (10 gallons 1–2 times per month) forces roots to grow deeper and wider, improves drought resilience, reduces surface rooting, and dramatically lowers disease and pest pressure.

Because CCMA does not control the irrigation systems or homeowner behavior, the survey's clear, science-based recommendation is not consistently followed. This homeowner-controlled variable explains more health inconsistency than species differences, tree-well size, or pruning history combined.

The Core Problem for CCMA

The survey correctly identifies the ideal irrigation regime, but enforcement is outside CCMA's direct authority. Homeowners are responsible for their own irrigation controllers and often prioritize lawn appearance over tree health. As a result:

- Trees in the same buffer zone experience wildly different soil moisture profiles.
- Species that are otherwise well-suited to the site (e.g., Brisbane Box, African Sumac) still show stress when over-watered.
- New plantings that start with proper establishment watering often decline once the homeowner reverts to turf irrigation.

This is the single biggest long-term threat to the success of the sidewalk buffer tree program.

CCMA Recommendations for Prescribing and Monitoring Irrigation

To achieve meaningful success, CCMA must move from “recommendation” to active prescription and monitoring. Suggested strategies include:

1. Formal Irrigation Prescription Policy

Adopt the survey’s recommendations as official CCMA policy. Issue every homeowner a clear, one-page “Sidewalk Buffer Tree Irrigation Guide” that states the exact gallonage and frequency for their tree(s) by address.

2. Annual Irrigation Audit Program

Conduct spot-checks (or full corridor audits) using soil moisture probes or simple visual root-zone tests. Document compliance and provide corrective guidance.

3. Homeowner Education & Incentives

Include the irrigation guide in annual CCMA mailings and the homeowner portal.

Offer a small rebate or priority maintenance credit for homeowners who install smart controllers programmed to the deep/infrequent schedule.

Host quarterly “Tree & Irrigation” workshops focused on why frequent shallow watering harms trees.

4. Enforcement Mechanisms

Add a tree-health clause to the CC&Rs that requires reasonable compliance with the prescribed irrigation regime.

For repeated non-compliance that results in tree decline or sidewalk damage, CCMA can charge the homeowner for corrective tree care or removal/replacement costs.

5. Technological Solutions

Encourage (or subsidize) conversion to smart irrigation controllers with tree-specific zones that deliver the recommended deep/infrequent cycles. Some newer controllers can even integrate soil moisture sensors at the tree well.

The Irrigation Recommendations column is the most critical and challenging part of the entire survey precisely because it directly addresses the factor that creates the greatest observed variability in tree health. The survey’s guidance is correct and evidence-based, but its success depends entirely on homeowner behavior — something CCMA currently cannot control.

Without a proactive program to prescribe, educate, monitor, and (where necessary) enforce these irrigation standards, the sidewalk buffer trees will continue to show inconsistent health outcomes even when all other maintenance (pruning, PHC, mulching) is performed perfectly.

This is the area where CCMA can have the greatest positive impact on long-term tree success. I recommend treating irrigation compliance as a core pillar of the Tree Management Plan and budgeting for an annual audit/education program starting in 2027.

Pruning Program

Key Observations from the Data

Clearance pruning dominates because sidewalk buffer trees must coexist with driveways, streets, and foot traffic. Nearly 47.1% (641 trees) of all trees have recommendations that explicitly mention vehicle or pedestrian clearance.

Unestablished trees are well-addressed: The 648 trees flagged for structural pruning represent the large cohort of recent installations (especially Carrot Wood, Crape Myrtle, and some Maidenhair). This is the correct proactive approach.

Topped and multi-stemmed trees (particularly African Sumac, Chinese Elms, and some Magnolias) drive the restoration category. The survey consistently pairs these with the note “Prohibit Future Topping,” which is critical for long-term structure.

Urgency is low overall: Most of the pruning is scheduled as “3” (standard 3-year cycle). Only a small percentage carry “1” or “Urgent Year 1” (primarily dead-branch removal or severe structural defects).

Strong correlation with other columns:

- Higher Hazard Risk (Codes 3–4) trees almost always have structural defects or removal needs.
- Sidewalk Condition Codes 2–4 frequently coincide with clearance or crown-raising recommendations.
- Condition Comments such as “Codominant Trunks,” “Weak Branch Attachments,” “Topped,” or “Small Overleveraged Scaffold Branch” directly explain the specific pruning language used.

Species-Specific Pruning Patterns

African Sumac & Chinese Elm — Heavy emphasis on restoration and clearance; many topped trees require structural recovery plus growth-regulator support.

Southern Magnolia — Mostly clearance pruning (raise lower limbs for vehicles/pedestrians); some thinning of codominant stems.

Strawberry Madrone & Brisbane Box — Predominantly minor clearance and crown cleaning.

Sweetgum — Clearance + occasional crown raising due to surface roots and sidewalk lifting.

Unestablished trees (Carrot Wood, Crape Myrtle, Maidenhair) — Almost exclusively structural pruning in the first 3–5 years.

Discussion and Management Implications for CCMA

Pruning is the most visible and frequently requested maintenance activity. The recommendations are practical, species-appropriate, and focused on the two primary goals of sidewalk buffer trees: public safety (clearance) and long-term structural health (avoidance of future topping and weak unions).

Strengths of the recommendations:

- They are highly specific and actionable.
- They emphasize prevention (structural pruning on young trees) rather than reaction.
- They integrate well with clearance needs for vehicles, pedestrians, signs, and lights.

Challenges:

- Volume is high — approximately 641 clearance-pruning events and 648 structural events must be managed over time.
- Homeowner expectations around “neatness” sometimes conflict with proper arboricultural technique (e.g., desire for excessive thinning).
- Without consistent follow-through, the “Prohibit Future Topping” guidance will be ignored, leading to repeated structural decline in African Sumac and similar species.

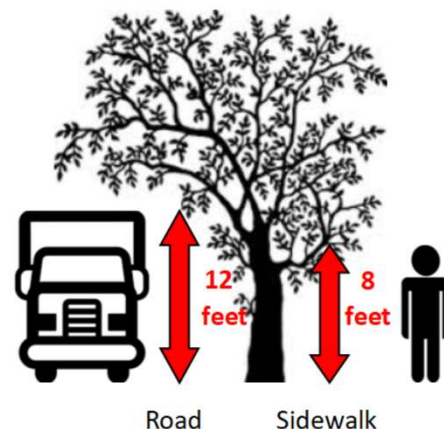
Recommended CCMA Implementation Strategy:

- Adopt a 3-Year Pruning Cycle as the standard (most trees are already scheduled this way).
- Year 1 Priority: All “1” or “Urgent Year 1” pruning.
- Contractor Specifications: Require ISA Certified Arborists using ANSI A300 standards. Provide the survey’s exact pruning language to crews. I can be available to help with providing any information to contractors.
- Homeowner Communication: Issue a clear “Pruning Guide” explaining why certain limbs are retained or removed and the prohibition on topping.
- Integration with Other Practices: Pair pruning with cultural improvements (mulch rings reduce mower damage) and irrigation adjustments (healthier trees respond better to pruning).

Long-term outlook: If the pruning program is executed consistently according to the survey’s recommendations, most trees will develop strong, safe structures and require only routine maintenance after the first 5–7 years. Failure to follow through, particularly on restoration pruning for topped trees, will result in recurring structural problems and higher future removal rates.

This column, more than any other, gives CCMA a clear, prioritized roadmap for the single most important hands-on maintenance task in the sidewalk buffer program.

- Structural pruning for young and newly planted trees to develop strong architecture (Figure 5).
- Clearance pruning for vehicles (inset; minimum 10-14 feet where possible).
- Clearance pruning for pedestrians (inset; 8 feet where possible).
- Sign clearance (2–3 feet around all regulatory and community signs). Sightlines dependent on speed of the roadway.
- Light clearance (pruning around the zone of influence for streetlights and security fixtures).
- Crown cleaning and thinning to reduce wind resistance and improve light/air penetration.
- Restoration pruning for previously topped trees, with a strict prohibition on future topping.



A three-year pruning cycle is recommended for established trees and unestablished trees.

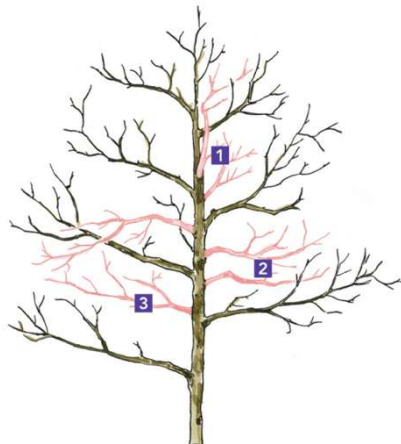


Figure 5: a tree with competing leaders (1) and crossing branches (2 & 3) becomes unstable as it grows. Removing competing leaders promotes apical dominance while improving structure. Structural pruning promotes healthy long-term growth.

Plant Health Care (PHC) Program

The “Plant Health Care Recommendations” and “PHC Schedule” columns provide specific, tree-by-tree prescriptions that form one of the most practical and actionable parts of the survey. The recommendations are well-targeted, consistent, and directly tied to the most common stressors observed in the Condition Comments (chlorosis, tip dieback, fungal issues, vigorous regrowth after topping, and establishment needs).

Species-Specific Patterns

Southern Magnolia → Almost universally receives an acidic slow-release fertilizer, often combined with systemic fungicide when chlorosis or minor dieback is noted.

African Sumac → The heaviest use of growth regulator (paclobutrazol), typically on a 3-year cycle, to manage the vigorous regrowth that follows past topping.

Strawberry Madrone → Strong emphasis on systemic fungicide (soil drench) due to the species’ known susceptibility to cankers and tip dieback in coastal conditions.

Unestablished trees (Carrot Wood, Crape Myrtle, Maidenhair, Australian Willow) → Light balanced or low-nitrogen fertilizer to support establishment without pushing excessive vegetative growth.

Brisbane Box and Maidenhair → Generally light fertilizer needs; many receive the standard 4-3-4 formula only when establishment or mild chlorosis is present.

Discussion and Professional Evaluation

The PHC recommendations are scientifically sound and appropriately conservative. They emphasize:

- Nutritional support via slow-release fertilizers tailored to soil pH and species needs (acidifying formulas for Magnolias and chlorotic trees).
- Disease prevention with targeted systemic fungicide for the two most susceptible species (Strawberry Madrone and certain Magnolias/Live Oaks).
- Growth control with paclobutrazol on African Sumac & Chinese Elm, which is an excellent choice for managing the species’ tendency to produce excessive regrowth after topping.

Strengths:

- The recommendations are proactive rather than reactive.
- They integrate well with the cultural practices (mulch, irrigation) and pruning guidance.
- Schedules are realistic and phased (Year 1 emphasis for new or stressed trees, then recurring cycles).

Challenges for CCMA:

- Because PHC applications (especially soil drenches and growth regulators) require licensed applicators and proper timing, consistent implementation depends on annual budgeting and contractor coordination.
- Homeowner-controlled irrigation can reduce the effectiveness of fertilizer and fungicide if trees remain under chronic over-watering stress.
- Monitoring actual uptake and response will require follow-up soil tests and visual inspections in Years 2–3.

Overall Effectiveness:

If executed as written, these PHC recommendations will significantly improve uniformity of tree health across the same species and reduce the number of trees that decline into Poor or Critical condition. The growth regulator program for African Sumac & Chinese Elm is particularly important, as it directly addresses one of the most common structural and maintenance problems in the inventory.

Recommended CCMA Actions

1. Adopt the survey's PHC recommendations and schedules as official policy.
2. Budget for a licensed applicator to perform all Year 1 applications in a single coordinated pass (spring 2027 recommended).
3. Include PHC compliance in the annual arborist inspection.
4. Pair PHC with the cultural practices (mulch + deep/infrequent irrigation) — the combination will deliver far better results than PHC alone.

The PHC section of the survey is one of its strongest components: it is specific, evidence-based, and directly addresses the primary health stressors present in the Trilogy sidewalk buffers. With consistent implementation, it will be a major contributor to the long-term success of the urban forest.

PHC follows the survey's explicit tree-by-tree prescriptions:

- Balanced or acidic slow-release fertilizers (8-4-8 or 4-3-4 formulations) applied in spring according to the PHC Schedule column.
- Systemic fungicide (soil drench) for Strawberry Madrone (tip dieback and cankers), certain Magnolias, and disease-affected Live Oaks.
- Growth regulator (paclobutrazol) for African Sumac and Chinese Elms and to manage vigorous regrowth after topping.

Integrated fungicide-plus-fertilizer applications are scheduled for the first year on many trees, with follow-up applications as prescribed.

Mowing Impacts and Mitigation

Many of the younger trees have trunk wraps around the base of their trunks to prevent mechanical damage to limited success. Trunk wraps, once applied, are often forgotten and eventually girdle the trunk, providing limited protection against mechanical damage.

Mechanical damage from mowing and string-trimmer damage is a recurring mechanical stressor on both new and established trees. This has a lasting negative effect on the health and structure of the tree that can severely limit the trees potential, possibly killing the tree at a young age. The damage is often unintentional by unskilled labor, but it is pervasive across all phases of the property.

Circling back to cultural practices, mitigation includes installation of full-dripline mulch area on every tree with a permanent mower-free zone, training crews to maintain a 6–12-inch buffer around trunks.

These measures will significantly reduce trunk wounds and root injury.

Root Pruning During Sidewalk Repair and Potential Consequences

Root pruning is a targeted surgical procedure used when tree roots are lifting or cracking the sidewalk. The goal is to relieve the pressure on the pavement while preserving as much of the tree's structural stability and health as possible.

Standard Root Pruning Process (ANSI A300 & ISA Best Management Practices)

1. Pre-Pruning Assessment

A certified arborist evaluates the tree's overall health, Condition rating, Hazard Risk, and Critical Root Zone (CRZ — typically the area extending to the dripline). Only roots directly causing the lift are considered for removal.

2. Sidewalk Removal

The affected section of the sidewalk must be removed:

- The lifting slab(s) are saw-cut and carefully removed to expose the offending roots.
- This is the only safe and effective way to access the roots without damaging them further or compromising the tree.
- Removing only a portion of the slab (the "heaved" section) is common; the entire panel is often replaced for a smooth, level finish.

3. Root Exposure and Pruning

Roots are exposed using hand tools or, preferably, an air-spade (compressed air) to minimize damage to remaining roots:

- Only roots directly under or pushing against the sidewalk are pruned.
- Cuts must be clean and angled (made with sharp pruning tools or saws) — never torn or chopped.
- Maximum removal limit: No more than 25 % of the root mass on any single side of the tree (and usually much less).
- Larger structural roots (>2–3 inches in diameter) are avoided whenever possible.

4. Post-Pruning Treatment

The root zone is backfilled with native soil (amended if needed for drainage):

- A full-dripline organic mulch ring (3–4 inches deep, kept 2–3 inches away from the trunk) is installed.
- Deep, infrequent irrigation and supplemental watering are provided for 1–2 growing seasons to reduce stress.
- The tree receives any scheduled PHC (fertilizer/fungicide) to support recovery.

5. Sidewalk Replacement

The removed section is replaced with new concrete (or a repair slab) at the correct grade.

Root barriers should be removed or modified during repairs to prevent future girdling.

Important Notes for CCMA

Root pruning always requires sidewalk removal and replacement in the lifted area. Simply grinding the roots from above or leaving the slab in place is not recommended — it leaves jagged wounds, invites decay, and usually fails to solve the problem.

This work must be performed by (or under the direct supervision of) a qualified ISA Certified Arborist and licensed concrete contractor working together.

Trees in Code 3 or 4 Sidewalk Condition (Noticeable Lifting or Apparent Hazard) are the highest priority for this combined root-pruning + sidewalk-repair operation.

Properly executed root pruning, followed by cultural improvements (mulch, irrigation adjustment), dramatically reduces recurrence of lifting while maintaining tree health and safety.

Tree Protection During Construction

The invisible killer: damage caused during construction.

Any future sidewalk repair, utility work, or construction near trees, including construction of the residence, should comply with ANSI A300 (Part 5) and ISA Best Management Practices.

Critical root zones (extending to the dripline) must be protected with fencing (Figure 6).

Equipment storage, grading, and material stockpiling within the root zone are prohibited.

Hand excavation is required for any necessary root work.



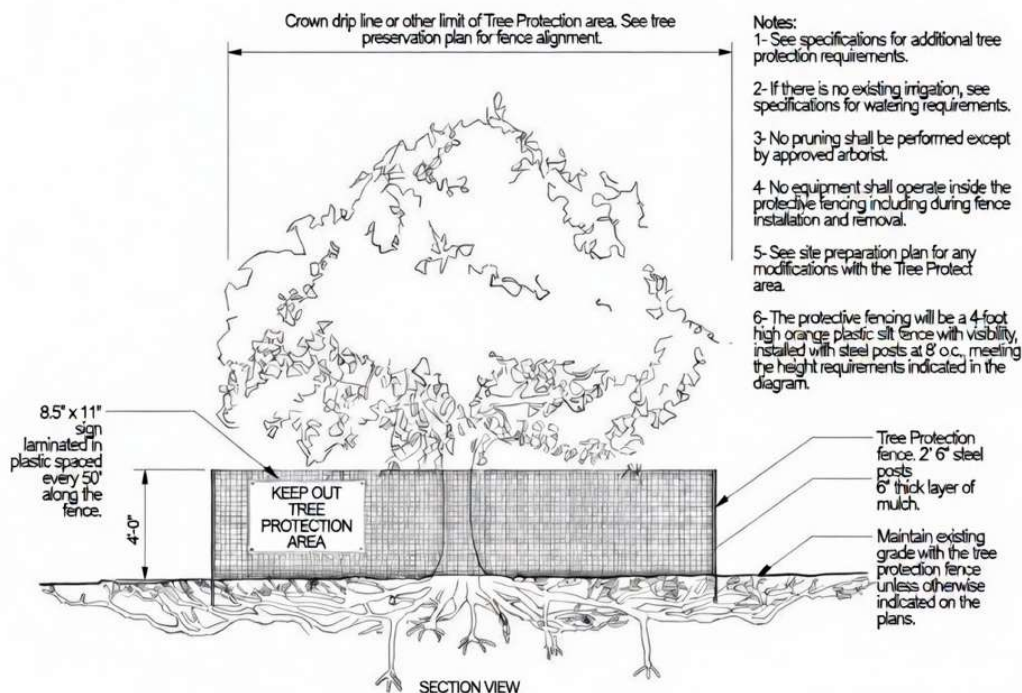


Figure 6: tree protection detail showing the Tree Protection. Tree Protection Zone is to be installed prior to any construction activity to ensure their proper function of protecting the protected oaks. The inset photo on Page 26 shows Tree 437; this scenario damages the tree. A protective fence could prohibit the construction equipment and materials from being staged in this tree's dripline/critical root zone.

Tree Planting Specifications

All replacement trees must meet California Certified Nursery Stock standards (ANSI Z60.1). Planting specifications include (Figure 5):

- Root flare set at or slightly above finished grade.
- Planting hole three times the width of the root ball and no deeper than the root ball height.
- Backfill with native soil amended only as needed for drainage.
- Immediate mulching to the dripline.
- Establishment watering per the irrigation schedule.

Only Tier 1 suitable species will be planted unless otherwise approved by CCMA and the project arborist.

Proper Staking Specifications

Proper staking is required only for new plantings and tree not yet established, following these specifications (Fig. 7):

- Two or three low, flexible stakes with wide, padded ties that allow 2–3 inches of natural trunk movement.
- Stakes driven outside the root ball.
- All stakes and ties removed by the end of Year 2 (or Year 3 for slower-growing species).
- Center stakes are prohibited.

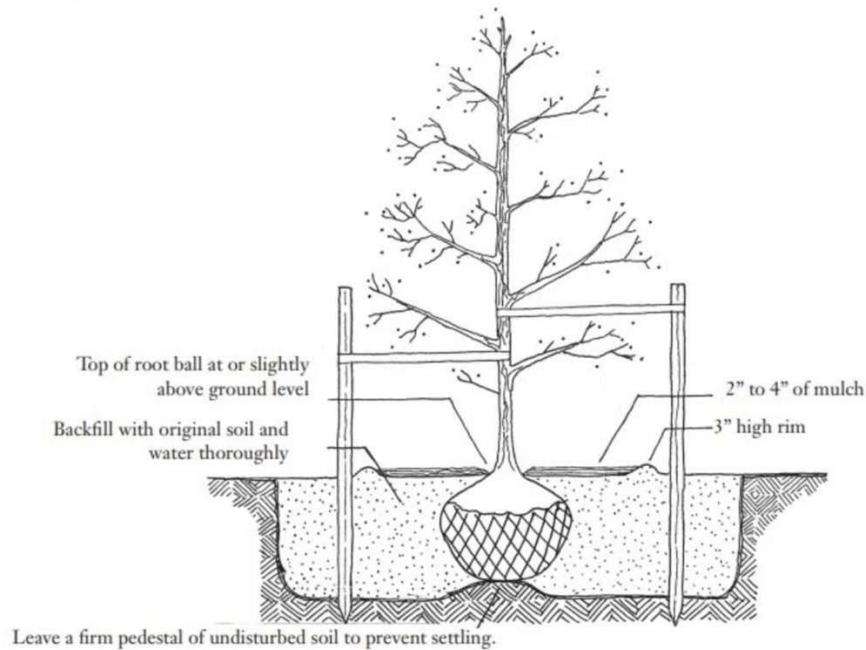


Figure 7: tree planting and staking specification.

Root Barrier Removal During Tree-Well Expansion

Existing root barriers (where present) must be removed or cut during tree-well expansion to allow natural root spread. New root barriers are discouraged except in extreme cases of infrastructure conflict and must be installed per manufacturer guidelines with arborist oversight. Removal of barriers is a critical step in restoring healthy root function and preventing long-term decline.

PRIORITIZATION AND PHASED IMPLEMENTATION

Year 1 (Immediate – 2026/2027):

- Complete all “Remove/Replace” and “Urgent Year 1” designations.
- Expand all tree wells to dripline coverage and install organic mulch.
- Execute initial PHC applications (fertilizer and fungicide) as prescribed.
- Perform structural and clearance pruning on new/young trees and high-risk specimens.
- Conduct root-collar excavation and root-barrier removal where needed.

Years 2–3 (2027–2029):

- Complete the first full three-year pruning cycle.
- Apply growth regulators to African Sumac & Chinese Elms per schedule.
- Monitor trees not yet established for establishment success and adjust irrigation as needed.

Year 4 and Beyond (Ongoing):

- Maintain the recurring three-year cycle of pruning, PHC, and inspections.
- Phase out Tier 3 species during scheduled removals and replant with Tier 1 species.
- Conduct annual professional arborist inspections using the baseline survey data.

Work should be sequenced by phase and street density for logistical efficiency, beginning with highest-traffic corridors.

TREE REMOVAL PERMITS IN NIPOMO FOR CCMA

Tree removal on common-area property requires a permit from the County of San Luis Obispo’s Planning Division ([link](#)). CCMA must submit an application that includes the relevant survey data, this arborist report, photographs, and a replacement planting plan. Removals are typically approved when trees are dead, hazardous, or demonstrably unsuitable (Tier 3 species with structural defects). All removals must be replaced in accordance with the planting specifications above. CCMA is encouraged to maintain a running removal/replacement log to streamline future permitting.

MONITORING, DOCUMENTATION, AND ADAPTIVE MANAGEMENT

CCMA will maintain a digital tree inventory database that incorporates the baseline survey, this plan’s recommendations, work history, and updated condition ratings. Annual inspections by a certified arborist should be used to track progress, identify emerging issues, and adjust the plan as needed. The plan itself should be reviewed every three to five years or following major weather events or major construction activities. Adaptive management ensures the program remains responsive to changing conditions while maintaining consistency with the original survey data.

CONCLUSION AND NEXT STEPS

This Tree Management Plan delivers a comprehensive, data-driven roadmap for the long-term success of the 1,362 sidewalk buffer trees at Trilogy at Monarch Dunes. By integrating every column of the April 2026 survey — from species suitability and condition ratings to detailed pruning, PHC, irrigation, staking, sidewalk, and cultural practice recommendations — the plan provides CCMA with clear, prioritized, and actionable guidance tailored to the specific conditions of the community.

Implementing the recommendations will transform the current sidewalk buffer canopy. Systematic cultural improvements (turf/rock/artificial cover removal, full-dripline mulching, and root-collar excavation) will form the essential foundation. Standardized deep/infrequent irrigation protocols, targeted PHC applications (fertilizer, systemic fungicide, and growth regulators), species-appropriate pruning (including clearance, structural, and restoration work), and a strategic, neighborhood-based transition from Tier 3 and lower-Tier 2 species to highly suitable Tier 1 and strong Tier 2 replacements will collectively:

- Dramatically improve tree health and uniformity, even among trees of the same species planted side-by-side.
- Reduce sidewalk lifting, mechanical damage, and long-term infrastructure conflicts.
- Minimize liability and emergency maintenance costs.
- Create a safer, more attractive, and more sustainable urban forest that enhances property values and resident quality of life for decades to come.

The survey clearly shows that consistent execution of these practices — particularly the foundational cultural work and the shift away from frequent shallow turf irrigation — is the single greatest opportunity to elevate overall canopy performance. While homeowner-controlled irrigation remains a challenge, the plan equips CCMA with the tools, policy language, education strategies, and monitoring framework needed to prescribe, track, and support proper irrigation practices effectively.

Immediate Next Steps for CCMA

To capitalize on this opportunity, CCMA should:

- Review and formally adopt this Tree Management Plan at the next Board meeting.
- Engage a qualified ISA Certified Arborist contractor to initiate Year 1 priority work (urgent removals/replacements, full cultural improvements, initial PHC applications, and structural pruning for unestablished trees).
- Allocate budget for cultural improvements, PHC materials, pruning, annual inspections, and professional oversight.
- Coordinate with the County of San Luis Obispo on any required tree removal permits.
- Schedule the first follow-up inspection in 2027/2028 to establish a performance baseline and measure progress against the April 2026 survey data.

I remain available to assist with contractor bid specifications, on-site crew training sessions, cost estimates, sample homeowner communications, proposed CC&R language for irrigation compliance, or any additional customization required to ensure successful implementation.

By acting decisively on this plan, CCMA will demonstrate strong leadership in urban forest stewardship and secure a healthy, resilient, and beautiful tree canopy that future generations of Trilogy residents will enjoy and appreciate.

CERTIFICATION OF PERFORMANCE

This Tree Management Plan is complete, self-contained, and ready for formal adoption and implementation by the Central Coast Maintenance Association. All recommendations are grounded in the full April 2026 survey dataset and best professional practices for the Nipomo coastal environment.

I, Sam Oakley, CERTIFY:

That I have personally inspected the tree(s) and/or the property referred to in this report and have stated my findings accurately. The extent of the evaluation and appraisal is stated in the attached report and the Terms of Assignment.

That I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.

That the analysis, opinions, and conclusions stated herein are my own.

That my analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices.

That no one provided significant professional assistance to the consultant, except as indicated within the report.

That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.

I further certify that I am Registered Consulting Arborist. #556 with the American Society of Consulting Arborists, and acknowledge, accept, and adhere to the ASCA Standards of Professional Practice. I am an International Society of Arboriculture Board Certified Master Certified Arborist and have been involved in the practice of arboriculture consultation and the study of trees for over twenty years.



Sam Oakley

ASCA Registered Consulting Arborist. # 556
ISA Certified Arborist. WE-9474B
ISA Tree Risk Assessor Qualified



asca | RCA #556
Registered Consulting Arborist®