

APPENDIX D

Tree Resource Evaluation/Construction Impact Assessment



James P. Allen
& Associates

Dedicated to the Preservation of Trees

**Morgan Hill Technology Center
&
Mixed-Use Project**

**APN Nos. 728-30-006/009, 728-31-014/015&016
SW Corner of Cochrane Road & DePaul Drive**

**Tree Resource Evaluation/
Construction Impact Assessment/
Tree Protection Plan**



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**Prepared for
Huffman-Broadway Group Inc.**

TABLE OF CONTENTS

Assignment/Scope of Services.....	Page 3
Summary.....	Pages 3 and 4
Background.....	Page 4
Observations.....	Pages 4 through 6
Tree Inventory Methodology.....	Pages 6, 7 and 8
Required Procedures.....	Pages 9 through 11
Tree Replacement.....	Pages 11 and 12
Tree Preservation	Page 13

Attachments

- Tree Resource Inventory
- Tree Location Map

ASSIGNMENT/SCOPE OF SERVICES

The construction of the Morgan Hill Technology Center and Mixed-Use Project is proposed for development by TC Morgan Hill Venture LLC. This +/- 63.36-acre site is located on the South West corner of Cochrane Road and DePaul Drive in the City of Morgan Hill; APN Nos. 728-30-006, 009 728-31-014, 015, 016. The site is currently being used as a commercial nursery.

The area proposed for construction is populated with both young and mature indigenous and non-indigenous tree species, some of which may meet “Ordinance Sized Tree” criteria as defined by Morgan Hill Municipal Code section 12.32.020. In order to accurately assess existing resources, project impacts and required mitigation the following tasks have been completed

- Receive and review map files and project descriptions from the project biologist
- Perform site inspections:
 - Locate, numerically tag, catalog and confirm mapped locations of trees > 4 diameter inches growing within striking distance of project impacts/grading limits
 - Identify tree species
 - Measure trunk diameter, approximate canopy width and height
 - Define Critical Root Zone extents for preserved trees
 - Identify trees that meet “Ordinance Sized Tree” status as defined by Morgan Hill Municipal Code section 12.32.020
 - Rate individual tree health, structure and preservation suitability as “good”, “fair” or “poor”
- Define necessary tree removal/retention based on overall tree condition and construction related impacts
- Create a Tree Protection Plan for trees suitable for retention
- Quantify tree replacement requirements for “Ordinance Sized” trees removed due to construction impacts
- Define and document a Mitigation Maintenance and Monitoring Program
- Document findings herewith

SUMMARY

Plans for this project have been reviewed. Twenty-eight (28) trees/tree groups growing within 20 feet of projected grading limits have been assessed and the known impacts resulting from the construction of proposed improvements defined at this time have been evaluated.

To construct the project as envisioned, the removal of 25 trees/tree groups is necessary due to construction impacts. Of this total 11 individual trees meet “Ordinance Sized Tree” criteria and may require mitigation. (see Tree Removal Summary Table on page 9).

In order to compensate for the loss of tree resources and meet City Code requirements, “Ordinance Sized” trees removed will be replaced at a ratio to be determined by the City or by making a monetary contribution to a Tree Trust Fund. To ensure the survivability and proper growth of the replacement trees a five-year Maintenance and Monitoring Program (MM&P) has been defined with success criteria to meet a 100% survival rate.

To ensure the protection of Trees #124, #125 and Tree Group #128 growing on the parcel to the East and outside the project development boundary it is imperative that the recommendations detailed within this document are incorporated as conditions of project approval.

BACKGROUND

I was contacted by Dr. Terry Huffman of Huffman-Broadway Group Inc. on February 28, 2019 who asked of my interest and availability to assess the impacts to tree resources on this project. Dr. Huffman provided background materials and verbally described the project. I reviewed the documents, expressed interest in providing service and executed a service contract with Dr. Huffman that evening.

Impacts to tree resources resulting from the construction of necessary site improvements were determined by anticipating the most dramatic level of impacts since the project will be graded and soils stabilized to and possibly beyond the property boundaries. The exact Limits of Grading will not be known until the grading plan is finalized and field staking representing cut/fill and disturbance limits are survey located and set in the field by the project survey team. There is a possibility that tree classification and recommended procedures will change once the exact positions of the proposed improvements are known. Necessary changes will be defined in the field by the Project Arborist and implemented by the builder as Conditions of Project Approval.

Site inspections were conducted on March 4 and 9, 2019.

OBSERVATIONS

Site Description

The project spans approximately 63.36 acres combining 5 existing parcels bound by Cochrane Road, the existing DePaul Drive and future Right of Way, Half Road and U. S. Highway 101. The site is currently used as a storage facility for a large quantity of boxed specimen trees. There are two old buildings near the Cochrane Road frontage that are currently used as an office for a tree salvage/relocation business and equipment storage.

The project site is relatively level except for 3 to 5 feet of fill material along the western project boundary. This fill or grade differential is located on the western boundary adjacent to Highway 101 extending to a length of approximately 1600 feet. Fill widths vary from 130 to 350+ feet and are bisected near the mid-length point by a linear area of original elevation in an East/West direction.

Tree Descriptions

Tree resources on this Project are composed of both indigenous and non-indigenous species:

- coast live oak (*Quercus agrifolia*)
- locust (*Gleditsia* sp.)
- Lombardy poplar (*Populus nigra*)
- acacia (*Acacia* sp.)
- plum (*Prunus* sp.)
- walnut (*Juglans* sp.)
- California pepper (*Schinus mole*)
- Canary Island pine (*Pinus canariensis*)

Tree Descriptions, continued

Tree Groups #102 and 103 are composed of 19 small locust trees that were planted parallel to Half Road on the Southern project boundary. These trees may be considered as “Street Trees”.



Tree Group #104 is a line of 198 Lombardy poplar trees growing on or near the property boundary. This line of trees once served the function of a windscreen buffering the adjacent orchard property. These trees were sheared at the approximate height of 18 feet.

Many of the trunks are dead, several have fallen over.

Since these trees stand within staked construction limits and will need to be removed, they were assessed as a group. Each tree was measured individually to determine if any met “Ordinance Sized Tree” status.

Trees #126 and 127 met protected criteria and were added individually to the Tree Resource Inventory. Approximate locations are documented on the attached *Tree Location Map*.

Tree Descriptions, continued

Trees #124 and 125 are Canary Island pines that grow on the adjacent parcel near the Southeast corner of this project. Since their Critical Root Zones may be impacted by necessary grading, Special Treatments and the installation of Tree Protection Fencing may be necessary.

The remainder of the trees on the site consist of a few amenity trees planted near the existing structure and several older fruit and nut trees.

Two California pepper Trees #114 (pictured on the title page), #115 along with one coast live oak, Tree #101 growing on Half Road have good preservation suitability.

There is a long line of densely planted trees outside the project boundary along the northern edge of the adjacent orchard. The Westernmost edge of Tree Group #128 will need Tree Protection Fencing installed in order to guard against construction damage.



TREE INVENTORY METHODOLOGY

Each tree was visually assessed from the root crown to the extents of the foliar canopy. The attached inventory lists information on trees ≥ 4 inches in diameter growing within 20 feet of proposed grading limits.

Round numbered metal tags were affixed to each tree/tree groups trunk. Tree locations are documented on the attached Tree Location Map.

The tree inventory lists species, trunk diameter, tree health, structure and suitability ratings, Critical Root Zone extents (Preserved trees only), approximate canopy width and height, level of impacts and description, observations, required procedures and whether the tree meets “Ordinance Sized Tree” criteria.

Diameter is the width of the trunk measured at 4.5 feet above natural grade (ground level). For trees that were unable to be measured at 4.5 feet above natural grade, measurement heights are provided.

Health, Structure and Preservation Suitability ratings are categorized as “good, fair or poor.”

Note* **Tree health and structure** are separate issues that are related since both are revealed by tree anatomy. A tree’s vascular system is confined in a thin layer of tissue between the bark and wood layers. This thin layer is responsible for transport of nutrients and water between the root system and the foliar canopy. When this tissue layer is functioning properly a tree has the ability to produce foliage (leaves). As long as the tree maintains a connected vascular system it may appear to be in good health.

When conditions conducive to decay are present, fungi, bacteria or poor compartmentalization, wood strength is degraded. As decay advances, the tree’s ability to continue standing is compromised. Thus, a tree can appear to be in good health, but have poor structure.

Critical Root Zone, Defined for Preserved Trees Only: Individual tree root systems provide anchorage, absorption of water/minerals, storage of food reserves and synthesis of certain organic materials necessary for tree health and stability. The Critical Root Zone (CRZ) is the species-specific amount of roots necessary to continue to supply these elements essential for each tree to stand upright and maintain vigor. This distance reflects the minimum footage measurement from the trunk required for the protection of the tree’s root zone.

Construction activities proposed within these areas are subject to specific review and the implementation of recommended special treatments.

Canopy Width and Height were approximated

Construction Impacts, Level and Description: This section describes what procedures are proposed near the individual tree or tree group. The influences proposed construction activities will have on the tree are classified as **None, Low, Moderate** or **High**. These classifications are defined as follows:

- **None**, the tree is not near the impact area of the proposed construction.
- **Low**, adverse effects from the proposed construction activities are minimal.
- **Moderate**, this level of impacts will result in loss in tree vigor and/or stability. Recommended procedures must be implemented to decrease these impacts.
- **High**, requiring tree removal or the understanding that premature tree mortality and/or destabilization can be anticipated. Mitigation is required for trees subject to this level of impacts.

Construction of this project as presented requires the following procedures that impact tree health and stability:

- Over-excavation for site stabilization
- Grading for building and retaining wall construction
- Trenching for utility lines and drainage structure installation
- Building construction
- Planned landscape installation

These procedures require alteration of natural grade in the form of cut and/or fill (described below) at the defined “Limits of Grading”. Roots shattered during this process provide openings for opportunistic decay causing organisms degrading tree support systems and vigor.

Alteration of natural grade

- Cuts, lowering of natural grade, require the removal of soil until the desired elevation is reached. A cut within the trees Critical Root Zone can remove non-woody and woody roots. Non-woody (absorbing) roots are responsible for transporting moisture and nutrients necessary for maintaining tree health. More significant cuts remove woody roots that provide structural support, compromising the tree’s ability to stand upright.
- Fill, increasing natural grade, often requires an initial cut to “knit in” and stabilize the material. This material is applied in layers and compacted in the process. Compaction breaks down soil structure by removing air and adding moisture. Anaerobic conditions may develop, promoting decay. Absorbing roots can suffocate from lack of oxygen. Structural roots may be compromised as a result of the decay.

Protected Tree Criteria

Trees that meet protected criteria were determined as defined in Morgan Hill Municipal Code Section 12.32.020 - Definitions.

G. "Ordinance Sized Tree" means any live woody plant rising above the ground with a single stem or trunk of a circumference of forty inches or more for nonindigenous species and eighteen inches or more for indigenous species measured at four and one-half feet vertically above the ground or immediately below the lowest branch, whichever is lower, and having the inherent capacity of naturally producing one main axis continuing to grow more vigorously than the lateral axes. All commercial tree farms, nonindigenous tree species in residential zones and orchards (including individual fruit trees) are exempted from the definition of tree for the purpose of this chapter.

H. "Street Tree" is a tree, of any size, situated within the public street right-of-way or publicly accessible private street (e.g., trees within a landscape park strip), or within five feet of a publicly accessible sidewalk adjacent to a public or private street in the case of a street without a landscape park strip.

I. "Indigenous tree" means any tree which is native to the Morgan Hill region. Such trees include, oaks (all types), California Bays, Madrones, Sycamore, and Alder.

NOTE: For purposes of this evaluation, any indigenous tree with a circumference of 18 inches or greater (5.73 diameter inches) was assigned “Ordinance Sized Tree” designation.

Any non-indigenous tree with a circumference of 40 inches or greater (12.73 diameter inches) was assigned “Ordinance Sized Tree” designation.

REQUIRED PROCEDURES

Tree Removal due to Construction Impacts

Twenty-five (25) trees will need to be removed to construct the project as projected. Eleven (11) of these trees meet “Ordinance Sized Tree” criteria and may require replacement. Trees proposed for removal are within or directly adjacent to disturbance limits. Trees to be removed are identified in the attached spreadsheet and listed as follows:

- **Trees/Tree Groups to be Removed due to Construction Impacts: Trees #101 through 123, 126 and 127**
 - **Trees #101, 105, 108, 110, 112, 114, 117, 118, 123, 126 and 127 meet “Ordinance Sized Tree” criteria**

Tree locations are documented on the attached *Construction Impact Assessment/Tree Location* map.

Trees are to be removed in a controlled, sectional manner to avoid damaging surrounding trees to be preserved and adjacent properties.

Morgan Hill Technology Center & Mixed-Use Project Construction Impact Analysis Tree Removal Summary Table March 12, 2019				
Number of trees/tree groups inventoried	Number of individual trees proposed for removal	Trees proposed for removal due to construction impacts	Trees proposed for removal due to construction impacts that meet "Ordinance Sized Tree" criteria	Total number of trees to be removed that may require mitigation
28	25	25	11	11

SPECIAL TREATMENTS, IF NECESSARY

Tree Maintenance

Maintenance pruning has been defined to remove dead branches and provide vertical clearance for construction for specific inventoried trees defined in the attached spreadsheet. This is necessary in order to decrease the risk of branches, stems and trunks falling and injuring workers or the residents.

- **Dead Branch Removal: Trees #124 and #125, Outside of Development Boundaries**

A qualified certified arborist, using the following industry guidelines should be contracted to perform all tree pruning.

- American National Standards Institute A300 for Tree Care Operations- Tree, Shrub and Other Woody Plant Maintenance-Standard Practices.
 - (Part 1)-2001 Pruning
- International Society of Arboriculture: Best Management Practices
- American National Standards Institute Z133.1-1994 for Tree Care Operations- Pruning, Trimming, Repairing, Maintaining, and Removing Trees and Cutting Brush- Safety Requirements

Special Treatments near Trees #124, 125 and Tree Group #128 may/may not be necessary. This determination will be made by the Project Arborist once grade stakes have been placed. Special Treatments may include but not be limited to:

Pre-Grading Root Severance; A “Ditchwitch” type trencher with sharp cutting teeth will prune roots along the Limits of Grading to minimum depths of three feet under the direction of the Project Arborist. This machine can be used when the “Final Line of Disturbance” is near the perimeter of the Critical Root Zone following these procedures:

- Establish a “final line of disturbance” with field staking. This line represents the furthest distance from the tree trunk that will allow the proposed construction.
- Trench to a minimum three-foot depth along this established line.
- Prune roots after trenching using the techniques defined below.

A backhoe type machine may be required near several trees to be preserved on this site for preconstruction root severance treatments if the distance between these trees and the grading limit cannot be decreased. This procedure is defined below:

- Establish a “final line of disturbance” with field staking. This line represents the furthest distance from the tree trunk that will allow the proposed construction.
- Determine the depth of the cut required.
- Begin digging 8 to 10 feet from the established line in a “spoke in wheel” pattern, using the tree trunk as the hub.
- Dig toward the tree trunk to determine where roots are located to the required depth
- Begin pruning roots using the techniques defined below.
- Upon reaching the final line of disturbance make the final root pruning cuts

Root Pruning

Once the trencher has severed roots and grading equipment has removed soils from the root severance trench, roots are to be pruned cleanly leaving bark intact. All root pruning should be performed by skilled labor. The following tools should be used:

- Hand-pruners/Loppers
- Handsaw
- Reciprocating saw
- Chainsaw

When completed, the pruned portions should be covered with burlap or similar material and kept moist.

REQUIRED TREE REPLACEMENT

Compensation for tree removal required in order to complete the project will include:

- Preservation and protection of Trees #124, 125 and Tree Group #128
- Implementation of Special Treatments to be defined by the Project Arborist once grade stakes are placed
- Tree planting as a component of the planned landscape to be maintained in perpetuity
 - A replanting program for 11 “Ordinance Sized” trees proposed for removal shall meet replacement ratios defined by the City of Morgan Hill. If there is insufficient space to replant replacement trees, a hybrid mitigation plan may be designed to include a monetary contribution to a Tree Trust Fund compensating for the remainder of trees that cannot be replanted.

Replacement tree nursery stock selected for dominant species shall be standard (single trunk).

Trees planted should be well formed without co-dominant, poorly attached stems. Trees shall be disease free and absent of swirling or girdling roots.

Qualified professionals adhering to the following guidelines shall plant the replacement trees:

- Prepare the planting site by excavating 3 times the width and 2 inches less than the exact depth of the nursery container.
- Prune any visible matted or circling roots to remove or straighten them. Cut the root ball vertically on opposite sides at least half the distance to the trunk.
- Free roots from the root ball breaking away some of the soil to provide better contact between the root ball and the backfill soil.
- Backfill with native soil.
- After backfilling a two to four-inch layer of tree chip mulch should be applied to the soil layer. Chips should not be applied within 12 inches of the trunk.
- Stakes for support, should be driven on opposite sides of the root ball and driven into the soil. The tree can be secured to the stakes using “Arbortape” or by using the “ReadyStake” system.

Supplemental irrigation will be provided the new trees by means of a temporary “drip” emitter system for a period of two (2) years. This system shall be designed, installed and maintained by a qualified professional to maintain appropriate moisture levels.

Maintenance and Monitoring Program Criteria

To ensure the survivability and proper growth of the replacement trees success criteria will be defined to meet a 100% survival rate and implemented as follows.

- A qualified professional will monitor the newly planted trees at one (1) month intervals for the first year of growth and every 3 months thereafter for an additional four-year period
- Tree health and growth rates will be assessed
- Trees suffering poor growth rates or declining health will be identified
- Invigoration treatments will be provided
- Dead trees or trees in an irreversible state of decline will be replaced
- At the end of the five-year period the status of the new plantings will be assessed to make certain that success criteria have been met and all replacement trees planted are performing well

Implementation of these success criteria shall be a condition of project approval.

TREE PRESERVATION AND PROTECTION

Tree Preservation Structures shall be constructed of the following materials as field specified by the Project Arborist.

- Chain link, 72 inches, in height secured to metal stakes driven at least 18 inches into the soil.
- Temporary orange snow fencing attached to “T” posts driven into the ground
- Silt fencing
- Rice straw bales

Tree Preservation Structure locations are documented on the attached Tree Location/Preservation Map.

Monitoring of the project will be the responsibility of the Project Arborist, if deemed necessary. Site inspections will take place at the following intervals:

- Following on-site placement of grade stakes
- During tree removal operations
- During preconstruction root severance
- After Tree Preservation fencing locations have been staked
- Following Tree Protection fencing installation and prior to the commencement of grading
- During all grading activities within Critical Root Zones
- As necessary during the grading activities to ensure compliance with all conditions of project approval

To ensure the protection of the trees remaining on this site it is imperative that the recommendations detailed within this document are incorporated as conditions of project approval.

Questions regarding this report may be directed to my office.

Respectfully submitted,

James P. Allen

James P. Allen
Registered Consulting Arborist #390





Morgan Hill Technology Center and Mixed Use Project

SW Corner of Cochrane Road and DePaul Drive

APNs 728-30-006/009, 728-31-014/015 016

Dedicated to the Preservation of Trees

James P. Allen
Associates

Tree Resource Inventory

TREE/ TREE GROUP #	SPECIES	DIAMETER @ 4.5ft ABOVE NATURAL GRADE (INCHES)	HEALTH	STRUCTURE	SUITABILITY	Critical Root Zone/ Preserved Trees Only	IMPACTS LEVEL/ Description	Approximate Canopy Width/Height Footage Extents	•OBSERVATIONS •REQUIRED PROCEDURES •NUMBER THAT MEET "ORDINANCE SIZED TREE" CRITERIA
101	coast live oak	39.8 @ 24" above grade	Good	Fair	Good		HIGH/ Within Proposed Grading Limits	48/ 25	<ul style="list-style-type: none"> • Divides into 4 stems at 5-feet above grade • Low growing wide spreading canopy • Remove Due To Construction Impacts • 1
102	locust	Group of 10 small trees .75 to 5.3	Fair	Poor	Poor		HIGH/ Within Proposed Grading Limits	8-15/ 2-12	<ul style="list-style-type: none"> • Line of ten small trees • May be considered Street Trees • Poor trunk/stem attachments • Nursery stakes still attached • Remove Due To Construction Impacts • 0
103	locust	Group of 9 small trees .75 to 4	Fair	Poor	Poor		HIGH/ Within Proposed Grading Limits	2-11/ 2-12	<ul style="list-style-type: none"> • Line of nine small trees • May be considered Street Trees • Poor trunk/stem attachments • Nursery stakes still attached • Remove Due To Construction Impacts • 0
104	Lombardy poplar	Line of 198 trees .75 to 13.5	Poor	Poor	Poor		HIGH/ Within Proposed Grading Limits	3-8/ 12-25	<ul style="list-style-type: none"> • Line of 198 trees providing windscreening functions • Approximately 20% are dead • Several trees have fallen • Poor trunk/stem attachments • Profuse sprout growth • Previously topped/headed at the approximate height of 18 feet • Remove Due To Construction Impacts • 0
105	coast live oak	Double Trunk 12.5 & 14	Good	Fair	Fair		HIGH/ Within Proposed Grading Limits	35/ 25	<ul style="list-style-type: none"> • Poor trunk/stem attachments • Remove Due To Construction Impacts • 1



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TREE/ TREE GROUP #	SPECIES	DIAMETER @ 4.5ft ABOVE NATURAL GRADE (INCHES)	HEALTH	STRUCTURE	SUITABILITY	Critical Root Zone/ Preserved Trees Only	IMPACTS LEVEL/ Description	Approximate Canopy Width/Height Footage Extents	•OBSERVATIONS •REQUIRED PROCEDURES •NUMBER THAT MEET "ORDINANCE SIZED TREE" CRITERIA
106	coast live oak	Triple Trunk 8.3, 4 & 6.5	Fair	Poor	Poor		HIGH/ Within Proposed Grading Limits	18/ 25	<ul style="list-style-type: none"> • Poor trunk/stem attachments • Remove Due To Construction Impacts • 0
107	coast live oak	Double Trunk 3 & 3.1	Good	Poor	Poor		HIGH/ Within Proposed Grading Limits	8/ 25	<ul style="list-style-type: none"> • Poor trunk/stem attachments • Remove Due To Construction Impacts • 0
108	coast live oak	6.2	Fair	Poor	Poor		HIGH/ Within Proposed Grading Limits	20/ 15	<ul style="list-style-type: none"> • Asymmetrical canopy • Pruning wounds on North side of trunk • Mechanical wounds on lower trunk • Remove Due To Construction Impacts • 1
109	coast live oak	4.2	Fair	Poor	Poor		HIGH/ Within Proposed Grading Limits	8/ 25	<ul style="list-style-type: none"> • Suppressed young tree • Narrow growth form • Poor trunk/stem attachments • Remove Due To Construction Impacts • 0
110	acacia	12.8	Fair	Poor	Poor		HIGH/ Within Proposed Grading Limits	28/ 21	<ul style="list-style-type: none"> • Asymmetrical canopy • Previously topped at 10' above grade • Suppressed to the North • Remove Due To Construction Impacts • 1
111	plum	Double Trunk 5 & 5.4	Fair	Poor	Poor		HIGH/ Within Proposed Grading Limits	22/ 15	<ul style="list-style-type: none"> • Poor trunk/stem attachments • Previously topped at 12' above grade • Profuse sprout growth • Remove Due To Construction Impacts • 0



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112	walnut	12.8	Fair	Fair	Poor		HIGH/ Within Proposed Grading Limits	27/ 18	<ul style="list-style-type: none"> • Decayed wound sites • Remove Due To Construction Impacts • 1
113	plum	Five Trunks 6, 7, 5.5, 5.3 & 2.4	Fair	Fair	Poor		HIGH/ Within Proposed Grading Limits	27 20	<ul style="list-style-type: none"> • Poor trunk/stem attachments • Decay in basal area • Remove Due To Construction Impacts • 0
114	California pepper	35.9 @ 24" above grade	Fair	Fair	Good		HIGH/ Within Proposed Grading Limits	70/ 45	<ul style="list-style-type: none"> • Strong buttress roots • Divides into 6 secondaryr, well attached trunks at 40" above grade • Remove Due to Construction Impacts • 1
115	California pepper	4.8	Fair	Poor	Poor		HIGH/ Within Proposed Grading Limits	10/ 18	<ul style="list-style-type: none"> • Suppressed young tree • Leans to the North • Remove Due To Construction Impacts • 0
116	plum	Double Trunk 4.2 & 3.5	Fair	Poor	Poor		HIGH/ Within Proposed Grading Limits	18/ 14	<ul style="list-style-type: none"> • Poor trunk/stem attachments • Profuse sprout growth • Remove Due To Construction Impacts • 0
117	California pepper	Double Trunk 22.5 & 16	Fair	Fair	Good		HIGH/ Within Proposed Grading Limits	40/ 36	<ul style="list-style-type: none"> • Mechanical damage to buttress roots • Divides at 4' above grade • Weak trunk attachments • Remove Due To Construction Impacts • 1



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118	California pepper	Double Trunk 8.5 & 7.7	Fair	Poor	Poor		HIGH/ Within Proposed Grading Limits	28/ 21	<ul style="list-style-type: none"> • Mechanical damage to buttress roots • Poor trunk/stem attachments • Previously topped at 12' above grade • Profuse sprout growth • Remove Due To Construction Impacts • 1
119	plum	Double Trunk 6.3 & 5.2	Fair	Poor	Poor		HIGH/ Proximity to Proposed Grading Limits	15/15	<ul style="list-style-type: none"> • Decayed wound where eastern trunk was removed • Poor trunk/stem attachments • Decayed pruning wounds • Remove Due To Construction Impacts • 0
120	walnut	Double Trunk 9.9 & 7	Fair	Fair	Poor		HIGH/ Proximity to Proposed Grading Limits	33/ 30-35	<ul style="list-style-type: none"> • Poor trunk/stem attachments • Mistletoe growth at the height of 20 feet • Remove Due To Construction Impacts • 0
121	walnut	9.5	Fair	Fair	Poor		HIGH/ Proximity to Proposed Grading Limits	18/ 25-30	<ul style="list-style-type: none"> • Trunk swoops to the South • Suppressed growth to the North • Remove Due To Construction Impacts • 0
122	plum	Three Trunks 7, 6.3, & 6.2	Fair	Poor	Poor		HIGH/ Proximity to Proposed Grading Limits	15/15	<ul style="list-style-type: none"> • Poor trunk/stem attachments • Decayed pruning wound sites • Remove Due To Construction Impacts • 0



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123	walnut	27.1 @ 18" above grade	Fair	Poor	Poor		HIGH/ Proximity to Proposed Grading Limits	45/ 30	<ul style="list-style-type: none"> • Mechanical damage to buttress roots • Severely decayed lower trunk • 6 and 9" inch secondary trunks develop at 5' above grade • Remove Due To Construction Impacts • 1
124	Canary Island pine	31.9	Fair	Fair	Good	24	HIGH/ Proximity to Proposed Grading Limits	36/ 80	<ul style="list-style-type: none"> • Grows on neighboring property • Suppressed to the East • Large diameter dead branches • Poor trunk/stem attachments at 50' above grade • Preserve and Protect, Avoided by Project Development • 1
125	Canary Island pine	26	Fair	Fair	Good	20	HIGH/ Proximity to Proposed Grading Limits	30/ 65-70	<ul style="list-style-type: none"> • Grows on neighboring property • decayed oak tree stump on the east side of the butrees area • Suppressed to the West • Large diameter dead branches • Preserve and Protect, Avoided by Project Development • 1
126	Lombardy poplar	13.3	Poor	Poor	Poor		HIGH/ Within Proposed Grading Limits	6-8/ 25-30	<ul style="list-style-type: none"> • Poor trunk/stem attachments • Profuse sprout growth • Previously topped/headed at the approximate height of 18 feet • Remove Due To Construction Impacts • 1
127	Lombardy poplar	12.8	Poor	Poor	Poor		HIGH/ Within Proposed Grading Limits	6-8/ 25-30	<ul style="list-style-type: none"> • Poor trunk/stem attachments • Profuse sprout growth • Previously topped/headed at the approximate height of 18 feet • Remove Due To Construction Impacts • 1



**Morgan Hill Technology Center and Mixed Use Project
 SW Corner of Cochrane Road and DePaul Drive
 APNs 728-30-006/009, 728-31-014/015 016**

Dedicated to the Preservation of Trees

**James P. Allen
 & Associates**

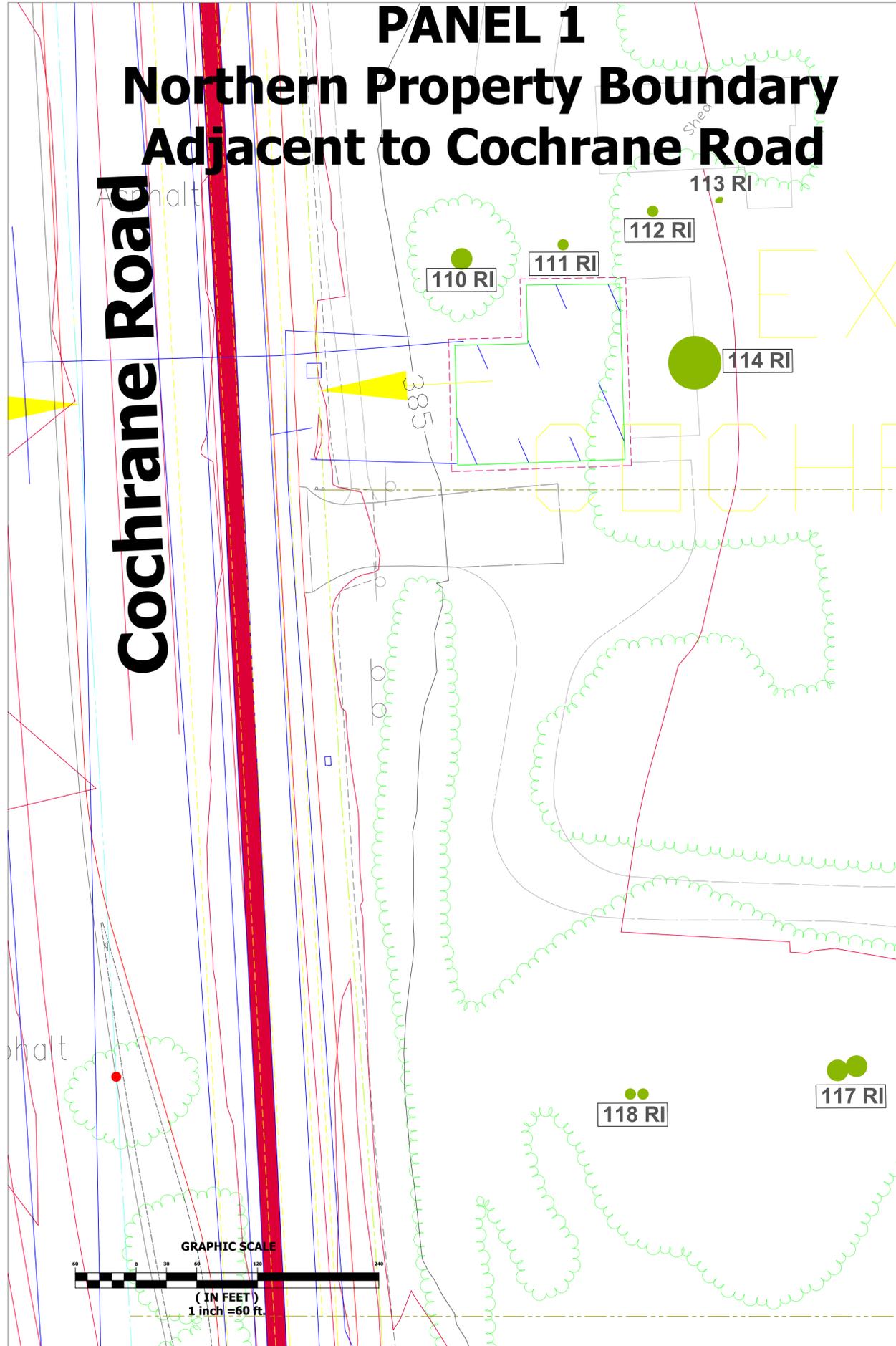
Tree Resource Inventory

TREE/ TREE GROUP #	SPECIES	DIAMETER @ 4.5ft ABOVE NATURAL GRADE (INCHES)	HEALTH	STRUCTURE	SUITABILITY	Critical Root Zone/ Preserved Trees Only	IMPACTS LEVEL/ Description	Approximate Canopy Width/Height Footage Extents	•OBSERVATIONS •REQUIRED PROCEDURES •NUMBER THAT MEET "ORDINANCE SIZED TREE" CRITERIA
128	Various	Approximated at .75 to 11.5	Fair	Fair	Fair	12	LOW/ Beyond Proposed Grading Limits	Varies	<ul style="list-style-type: none"> • Dense line of trees growing on Northern boundary of the adjacent orchard • Variety of species • Preserve and Protect, Avoided by Project Development • Not Known

PANEL 1

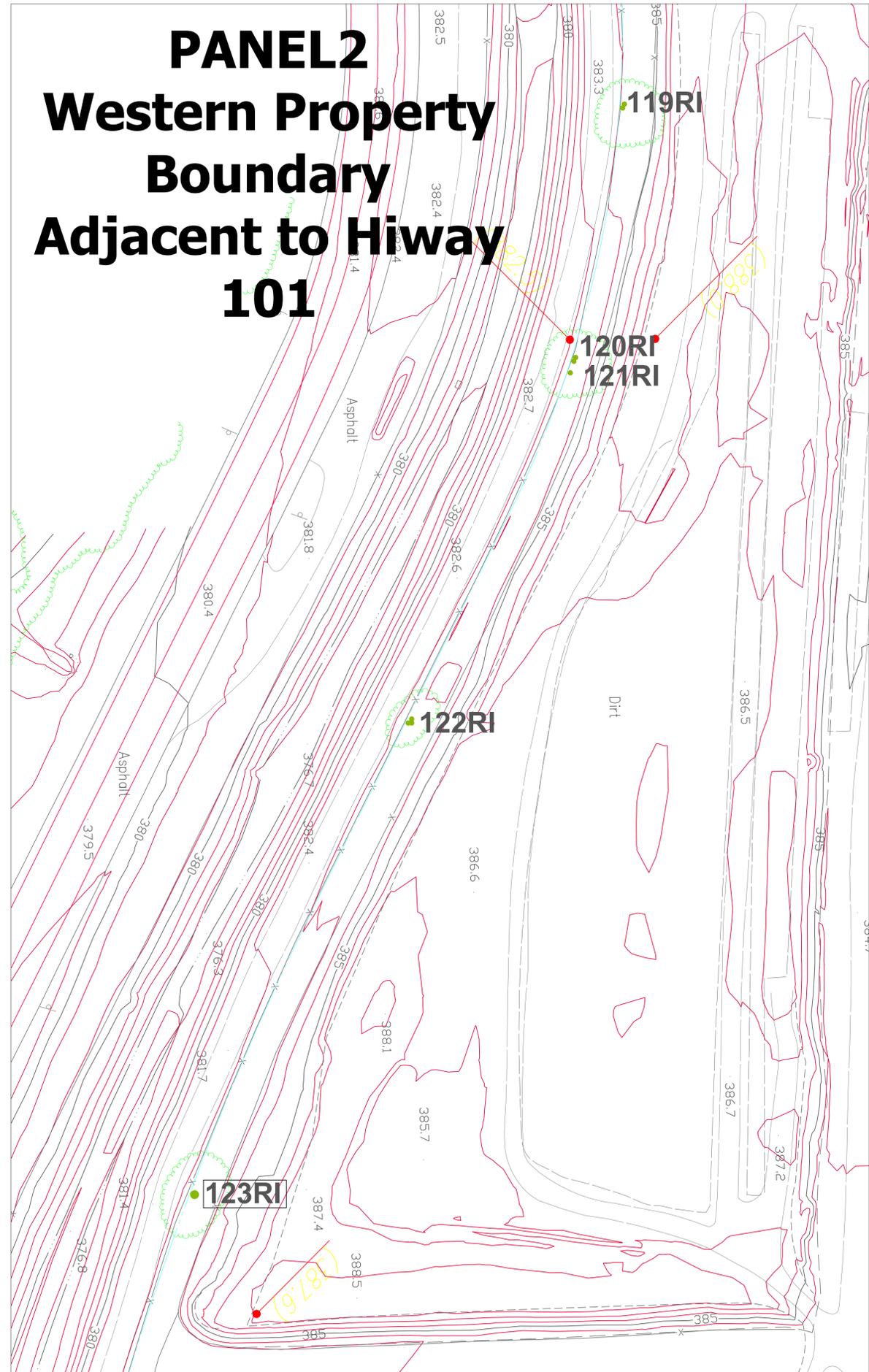
Northern Property Boundary Adjacent to Cochrane Road

Cochrane Road



PANEL 2

Western Property Boundary Adjacent to Hiway 101



Map Key / Legend

- Field Located Tree Trunk Location
- Approximate Canopy Extents
- Field Located Tree Group Location
- 101** Assigned Tree Number
- 101** Meets "Ordinance Sized Tree" Criteria
- 102 RI** Remove due to Construction Impacts
- 124 P** Preserve and Protect/
Avoided by Project Development
- Critical Root Zone,
Preserved Trees Only
- Tree Preservation Zone
With Straw Bales

**Morgan Hill
Technology Center
&
Mixed Use Project**

**APNs 728-30-006/009,
728-31-014/015 & 016**

**SW Corner of Cochrane Road
&
DePaul Drive**

Northern/Western Project Extents

**Tree Resource Evaluation/
Construction Impact Analysis/
Tree Protection Plan**

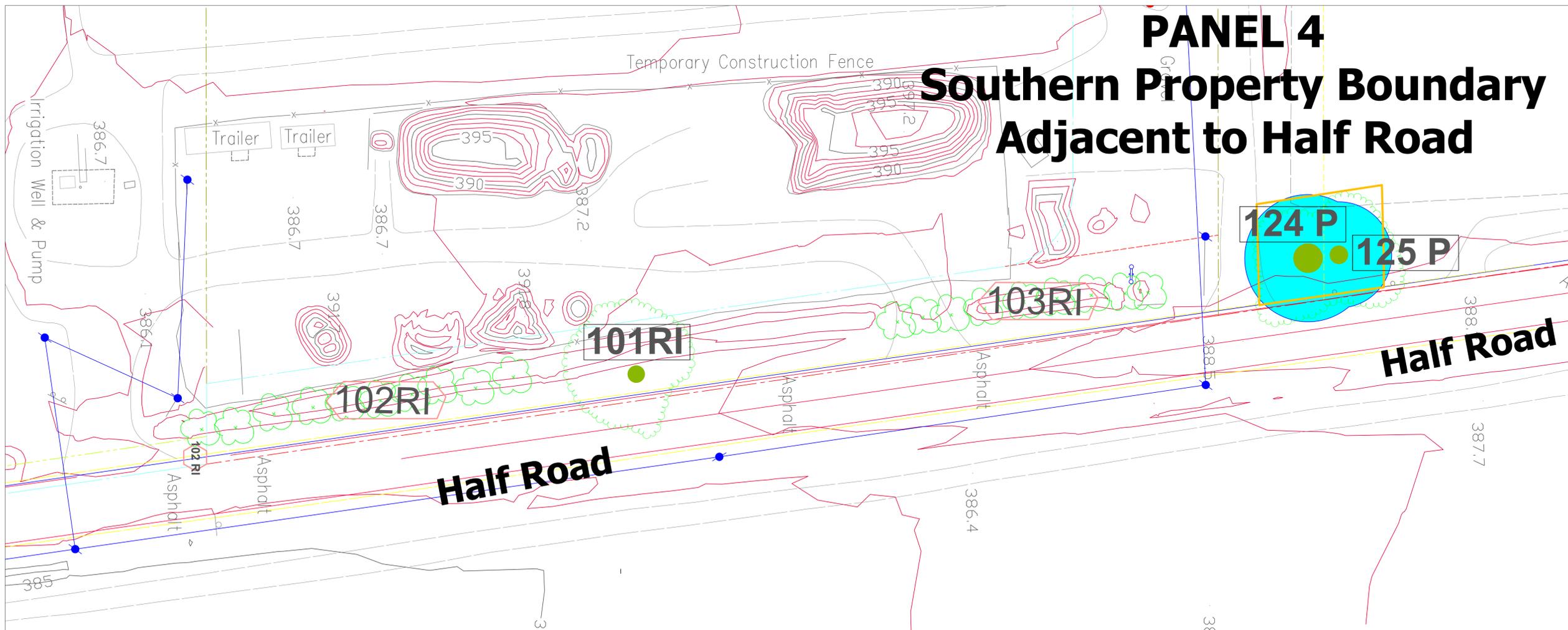
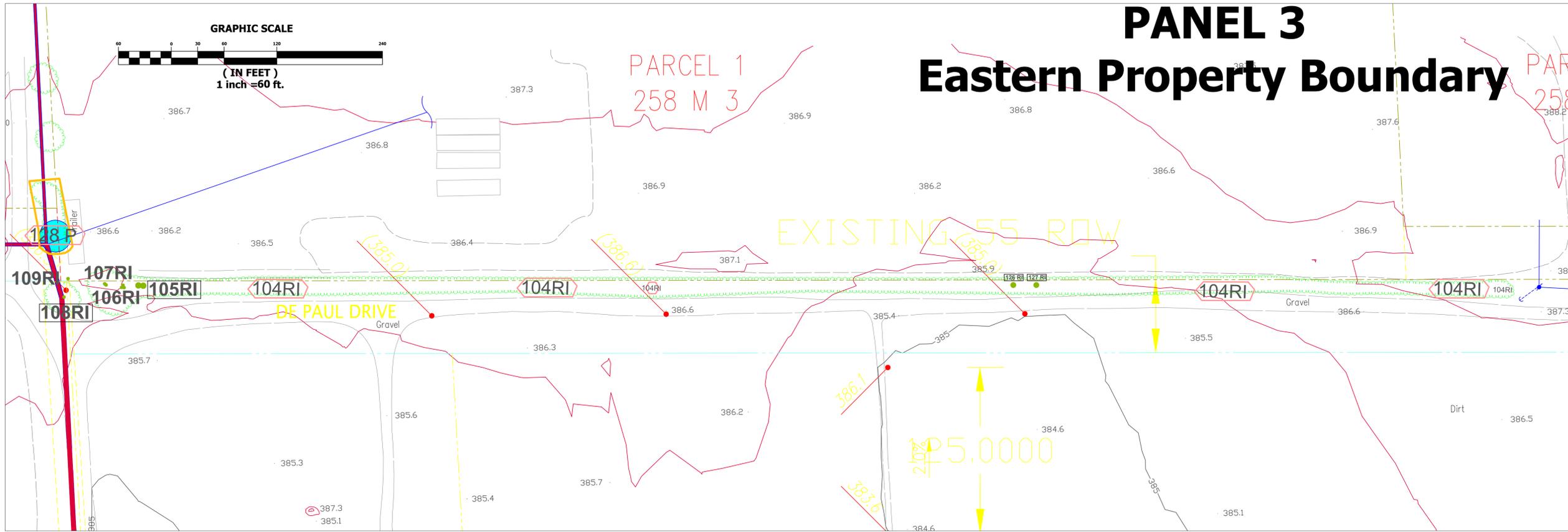


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1 OF 2

Date: 09/30/19
Revision: XX/XX/XX



Map Key / Legend

- Field Located Tree Trunk Location
- Approximate Canopy Extents
- Field Located Tree Group Location
- 101** Assigned Tree Number
- 101** Meets "Ordinance Sized Tree" Criteria
- 102 RI** Remove due to Construction Impacts
- 124 P** Preserve and Protect/
Avoided by Project Development
- Critical Root Zone,
Preserved Trees Only
- Tree Preservation Zone
With Straw Bales

**Morgan Hill
Technology Center
&
Mixed Use Project**

**APNs 728-30-006/009,
728-31-014/015 & 016**

**SW Corner of Cochrane Road
&
DePaul Drive**

Southern/Eastern Project Extents

**Tree Resource Evaluation/
Construction Impact Analysis/
Tree Protection Plan**



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2 OF 2

Date: 09/30/19
Revision: XX/XX/XX