

ORIGINATION FORM

Proposed Revisions to a Standard Plans Index
(Please provide all information – Incomplete forms will be returned)

Contact Information:

Date: June 26, 2019
Originator: **Ashley Hagan Binder**
Phone:
Email: ashley.binder@dot.state.fl.us

Standard Plans:

Index Number: **580-001**
Sheet Number (s): 1,2
Index Title: Landscape Installation

Summary of the changes:

Modifications to bracing detail, overall clarifications. Clarification that bracing is intended for plant establishment purposes only. Clarification on lumber grade. Clarify band strength.

Commentary / Background:

The detail for landscape installation is not intended to be a safety measure, rather to determine a standard, quality detail for root establishment purposes. There was a high wind event with trees falling into the travel way, partly due to the soil conditions, poor grade of lumber, but also due to the unusual weather. Changes are a result of the need to clarify to the intent of this detail, and also the quality/grade of materials used.

Other Affected Offices / Documents: (Provide name of responsible personnel)

- | Yes | No | |
|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other Standard Plans – |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | FDOT Design Manual – Ashley Hagan Binder |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Basis of Estimates Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Standard Specifications – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Approved Product List – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Construction – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Maintenance – |

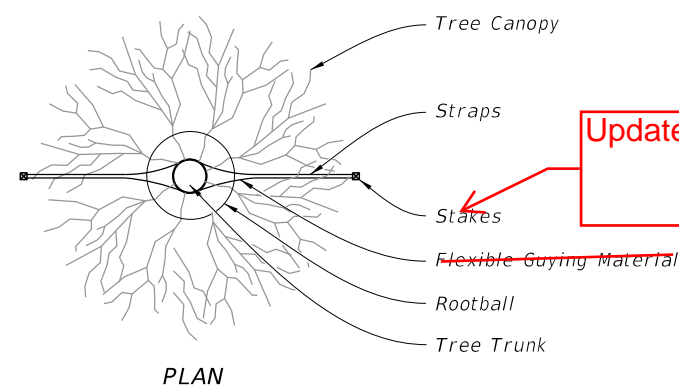
Origination Package Includes: (Email or hand deliver package to Derwood Sheppard)

- | Yes | N/A | |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Redline Mark-ups |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Proposed Standard Plan Instructions (SPI) |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Revised SPI |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other Support Documents |

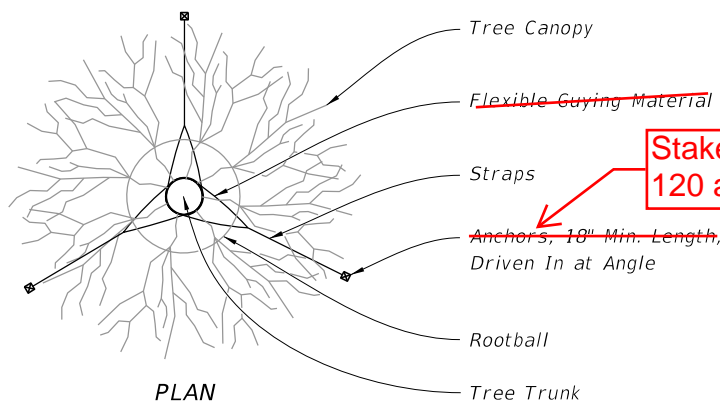
Implementation:

- Design Bulletin (Interim) DCE Memo Program Mgmt. Bulletin FY-Standard Plans (Next Release)

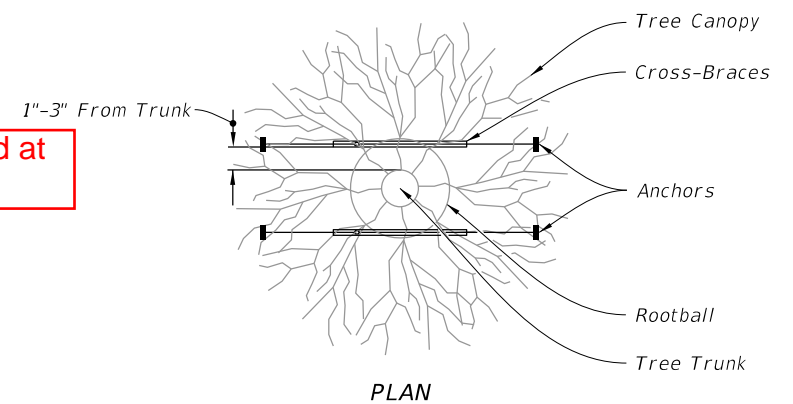
Contact the Roadway Design Office for assistance in completing this form



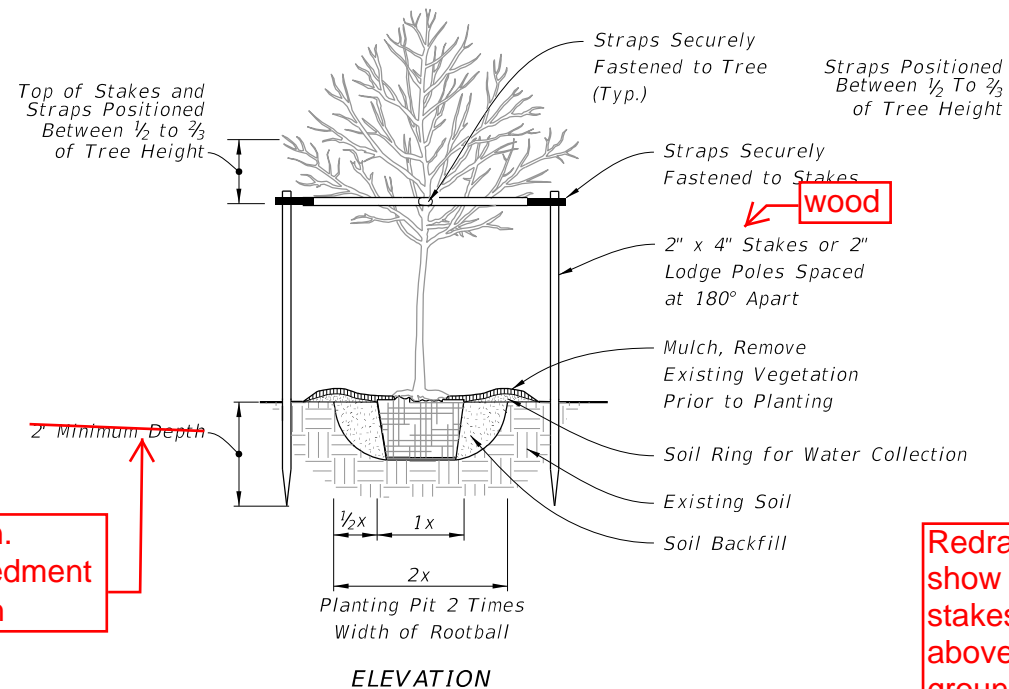
PLAN



PLAN



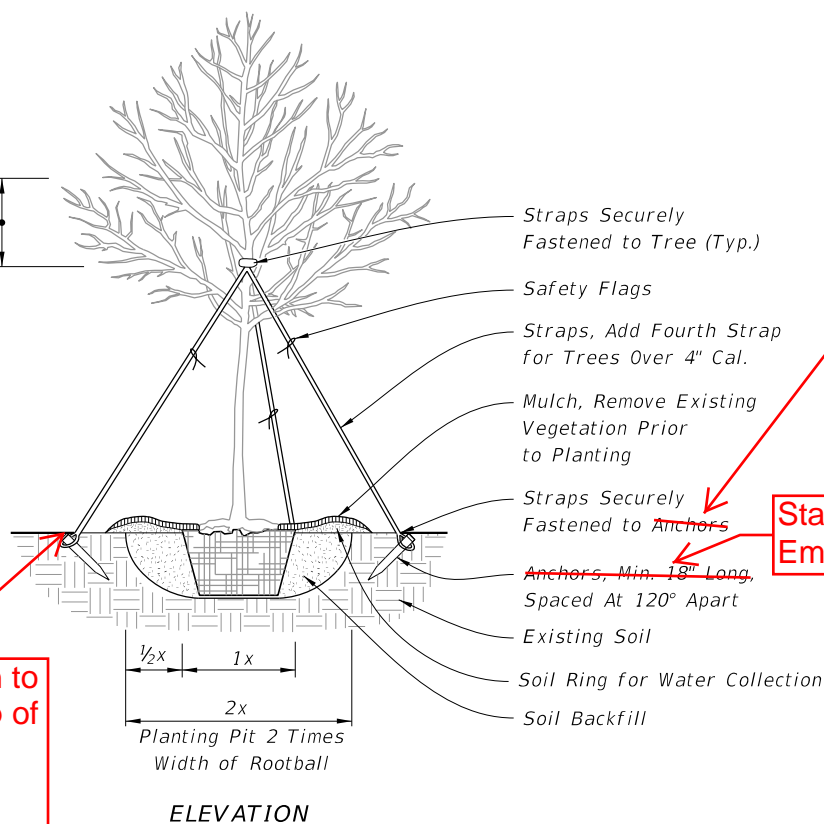
PLAN



ELEVATION

2' Min. Embedment Depth

Redrawn to show top of stakes above ground

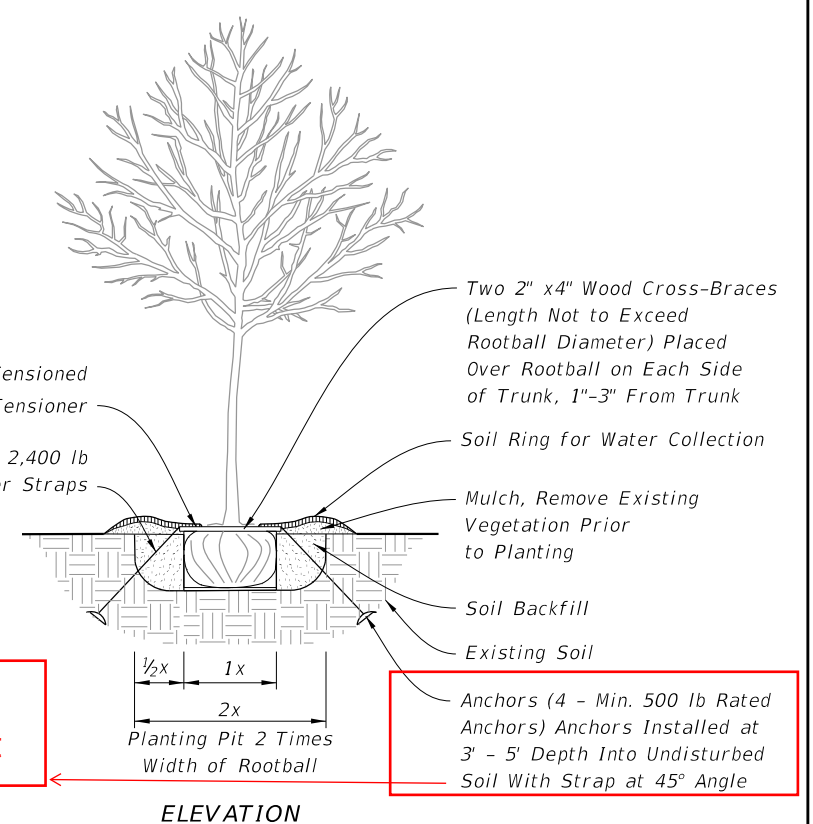


ELEVATION

Stakes

Stakes, 18" Min. Embedment Depth,

Moved Callout



ELEVATION

with min. 600 lb. break strength.

existing

embed a min. of 18"

UNDER 2 1/2" CALIPER TREE PLANTING

2 1/2" TO 6" CALIPER TREE PLANTING

UNDER 4" CALIPER TREE PLANTING WITH UNDERGROUND BRACING

GENERAL NOTES:

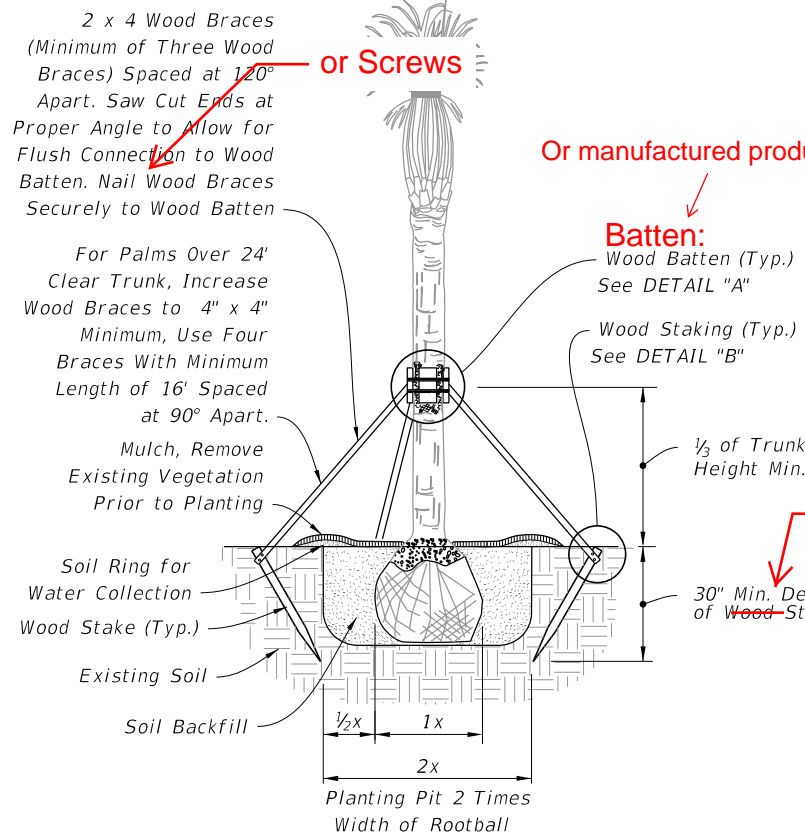
- All dimensions 6" and less are exaggerated for illustrative purposes only. All dimensions provided for wood materials are nominal.
- Remove plant containers prior to planting. If plants are not container grown, remove a minimum of the top 1/3 of burlap, fabric, or wire mesh.
- Allow no more than 1" of soil to cover the uppermost root on all trees. Set the top of root ball 1"-2" above finish grade after settling and set plumb to the horizon.
- Backfill with loosened existing soil or as shown in the plans. Remove rocks, sticks, or other deleterious material greater than 1" in any direction prior to backfilling. Water and tamp to remove air pockets. If existing soils contain excessive sand, clay, or other material not conducive to proper plant growth, contact Engineer prior to planting.

UPDATED AND ADDED NOTES

- Except when a permanent, subsurface or drip irrigation system is provided, construct soil rings at the outer edge of the planting pit, with a height of 3" and gently sloping sides. Do not pile soil on top of rootball.
- Construct a 3" deep layer of mulch placed 2" off the edge of the trunk flare, around the base of shrub, or solidly around ground cover. Never pile mulch against the tree trunk.
- Install guying with minimum 1" wide nylon or polypropylene straps. Check straps monthly and adjust as required to eliminate girdling of tree. Locate all wood stakes or anchors beyond the edge of soil ring in undisturbed soil and located below finished grade, unless otherwise specified. Alternate tree bracing and guying systems specified or approved by the Engineer may be used in lieu of the tree bracing and guying methods detailed on the Index.
- Relocated Trees and Palms: Brace relocated trees and palms in accordance with the Contract Documents. Remove bracing at the conclusion of the contract or as directed by the Engineer. Bracing or straps must not damage or become embedded in the tree bark.

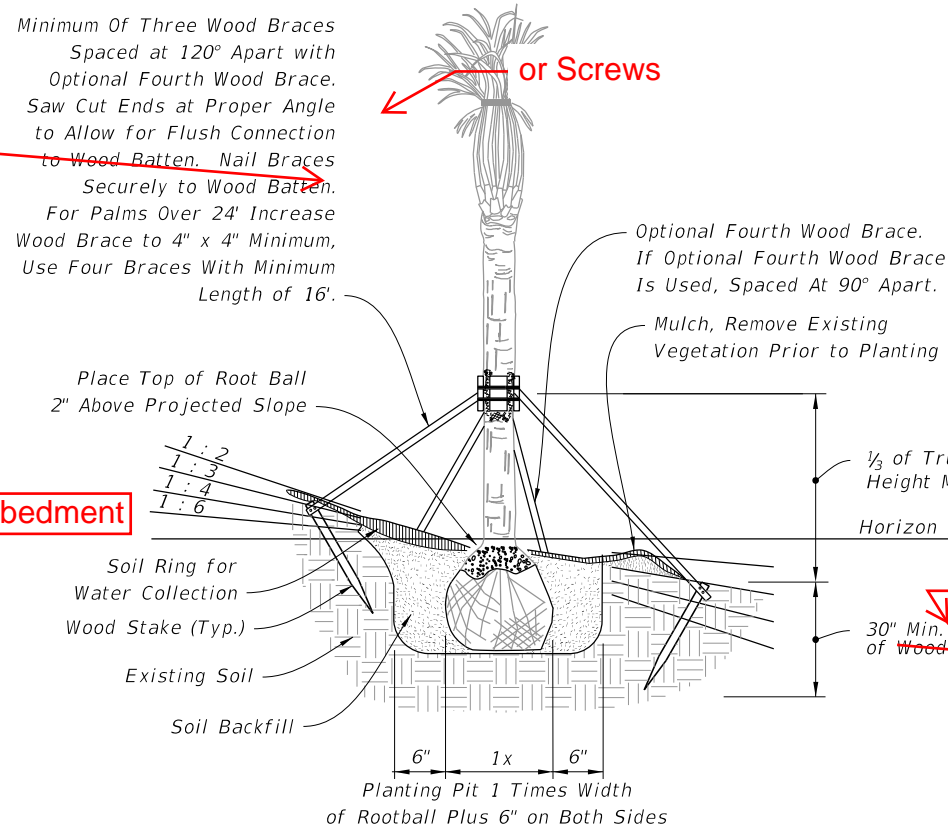
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LAST REVISION	DESCRIPTION:
11/01/18	11/01/19



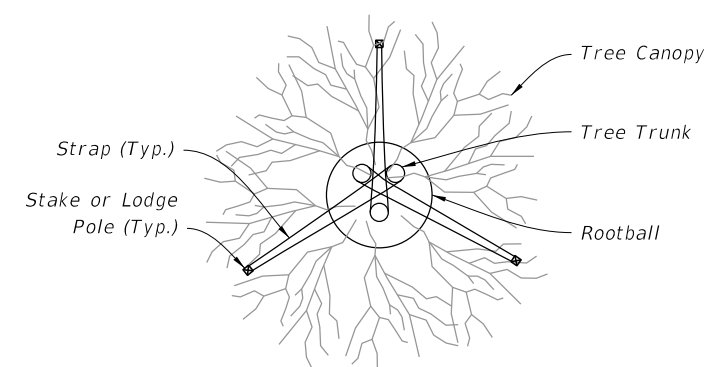
ELEVATION

NOTE: May be used on large caliper canopy trees, adjust banding every 6 months or as needed (for fast growing species) to prevent girdling.

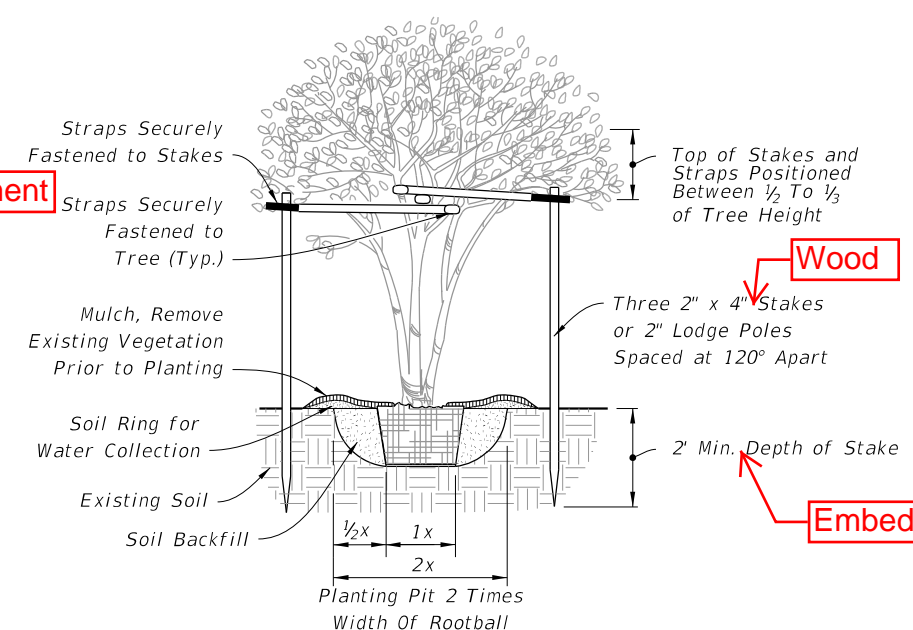


ELEVATION

NOTES: May be used on large caliper canopy trees pending slope and rootball width, adjust banding every 6 months or as needed (for fast growing species) to prevent girdling. Slope provided as Rise:Run.

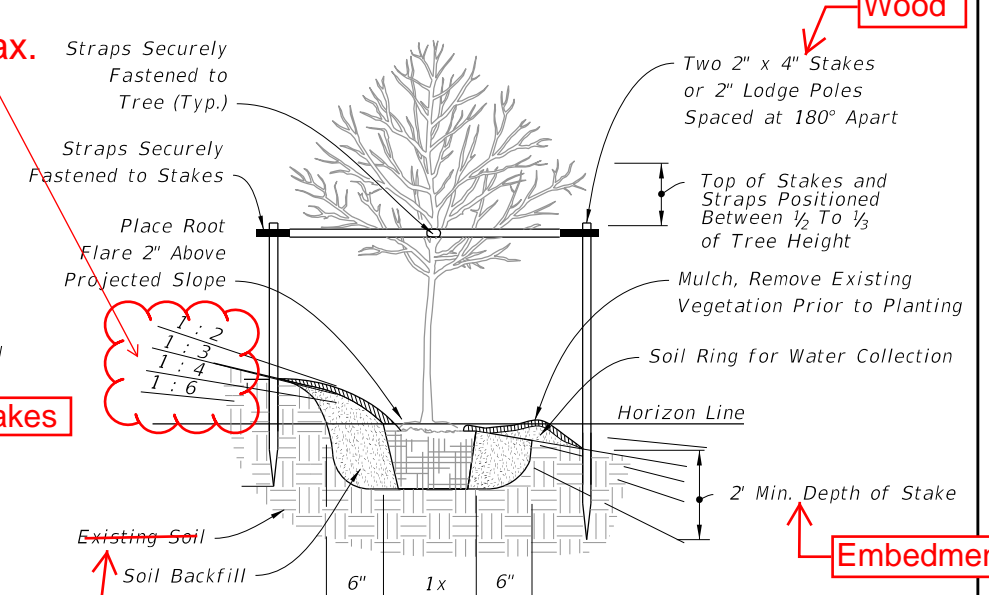


PLAN



ELEVATION

MAX 10' HT. MULTI-TRUNK TREE PLANTING

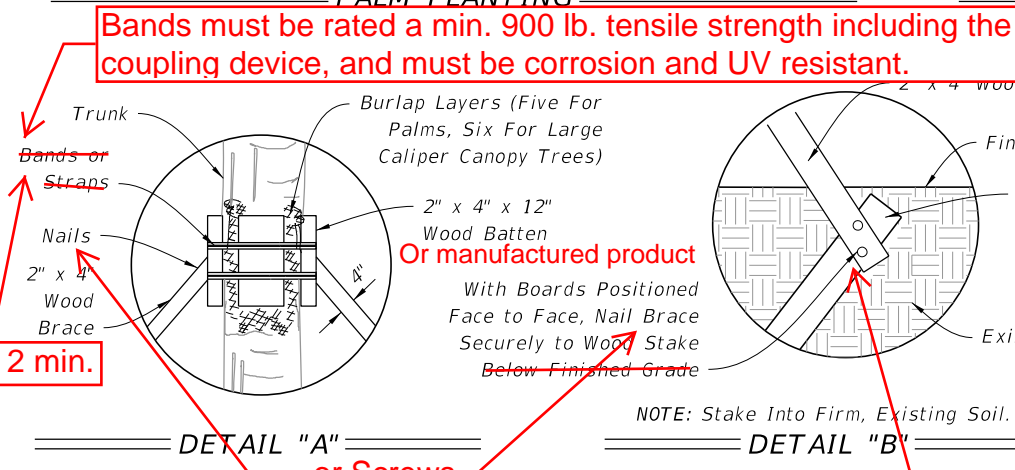


ELEVATION

NOTE: Slope provided as Rise:Run.

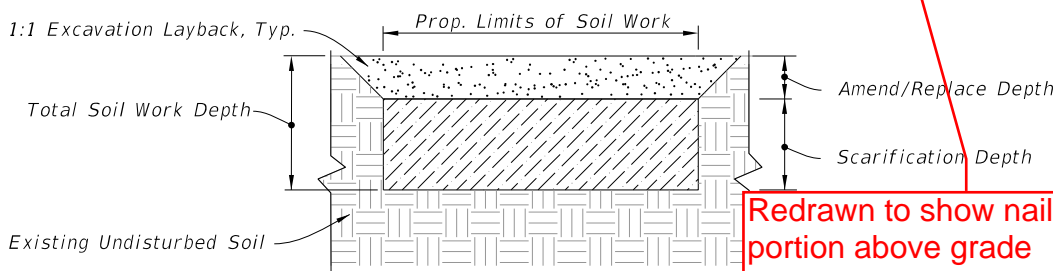
UNDER 2 1/2" CALIPER TREE PLANTING ON SLOPE

PALM PLANTING



DETAIL "A"

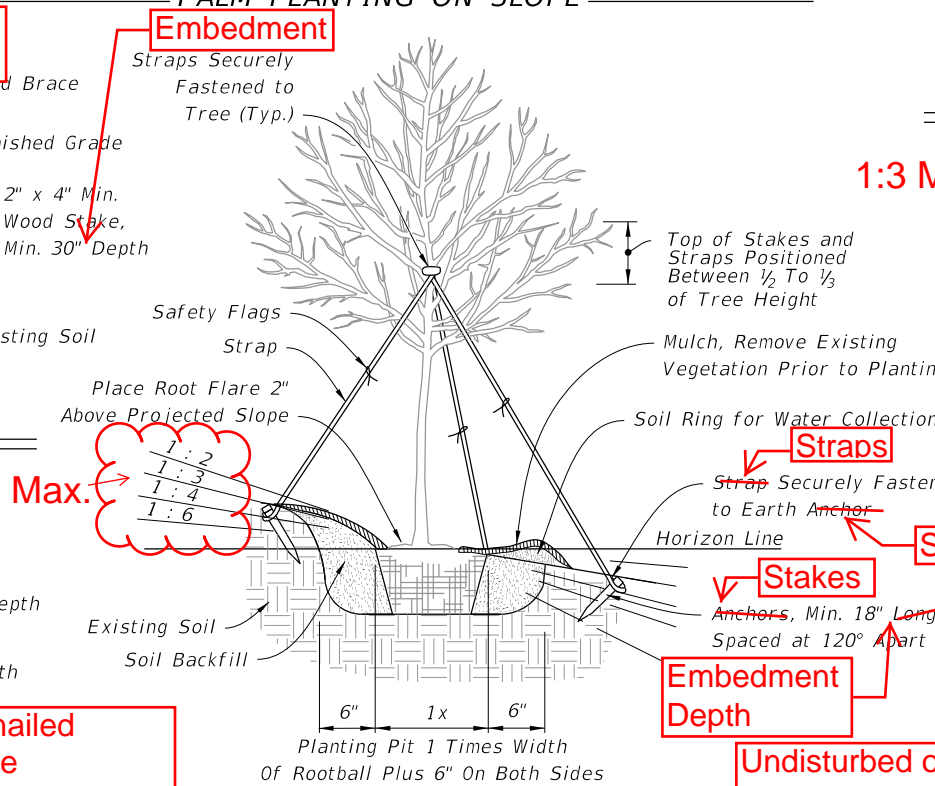
DETAIL "B"



(Typical Section)

LANDSCAPE SOIL WORK

PALM PLANTING ON SLOPE

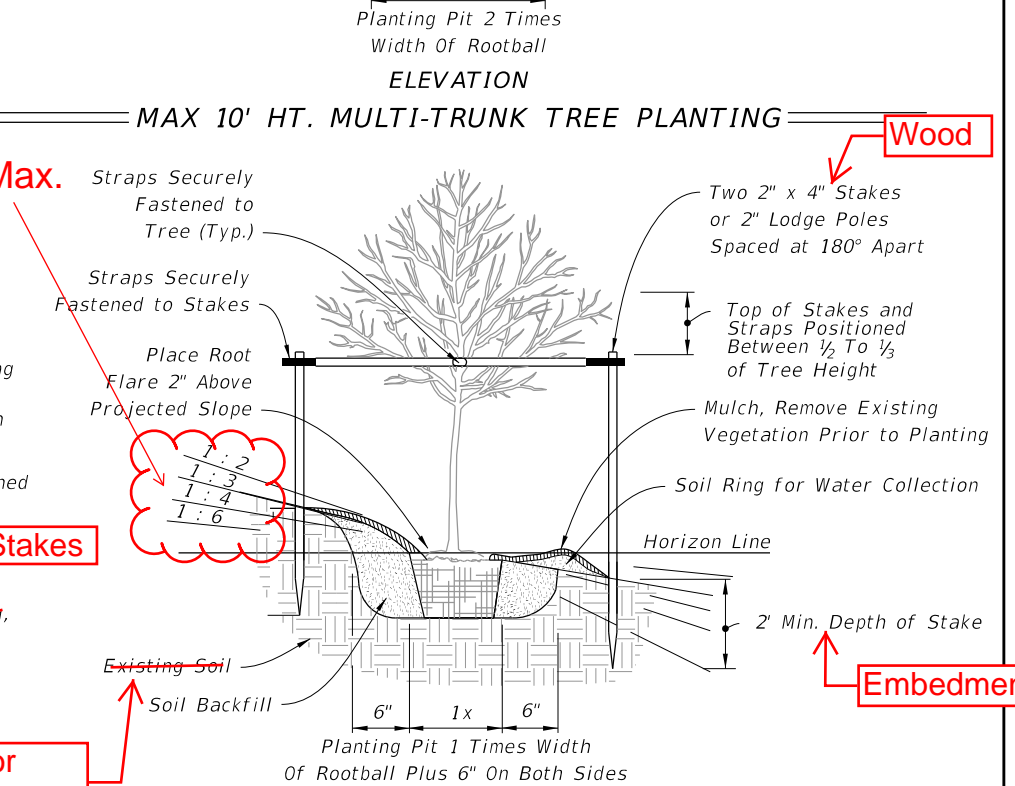


ELEVATION

NOTE: Slope provided as Rise:Run.

2 1/2" TO 6" CALIPER TREE PLANTING ON SLOPE

UNDER 2 1/2" CALIPER TREE PLANTING ON SLOPE



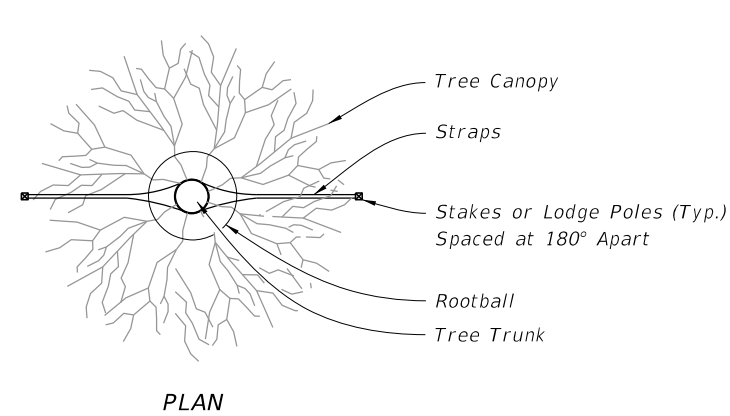
ELEVATION

NOTE: Slope provided as Rise:Run.

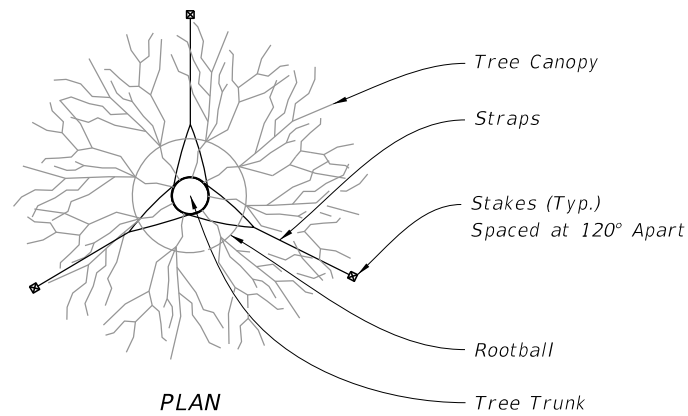
UNDER 2 1/2" CALIPER TREE PLANTING ON SLOPE

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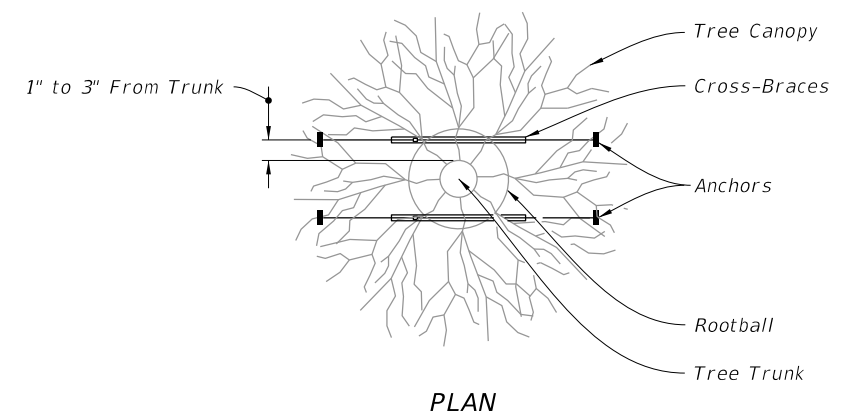
LAST REVISION	DESCRIPTION:
11/01/19	11/01/19
11/01/18	



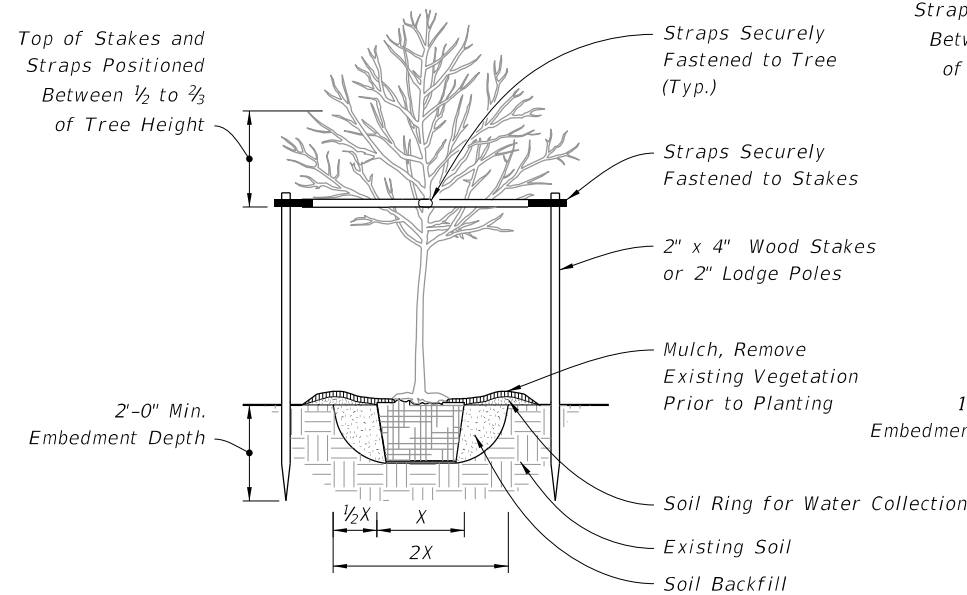
PLAN



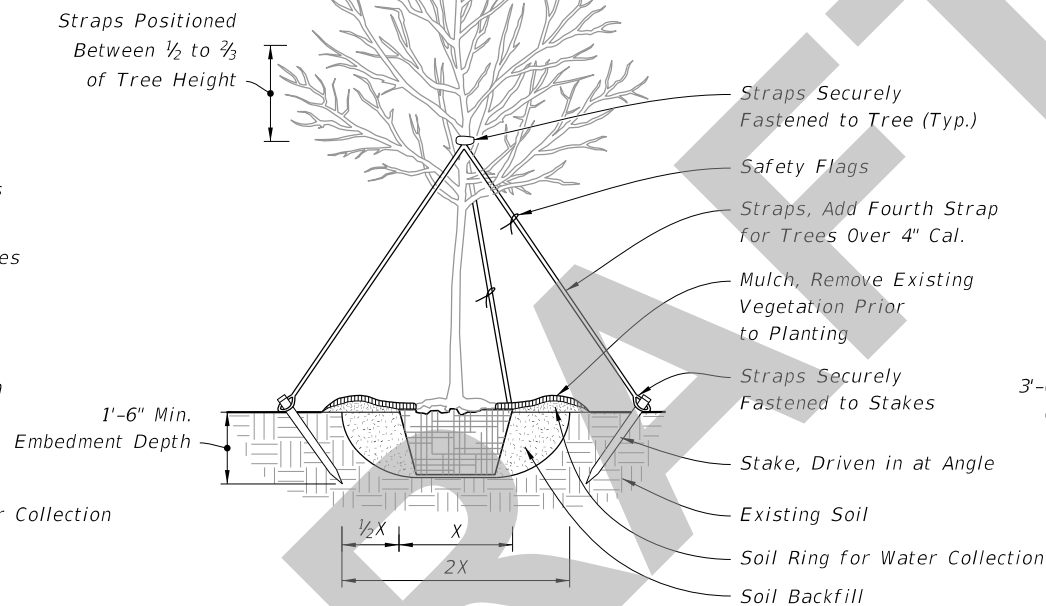
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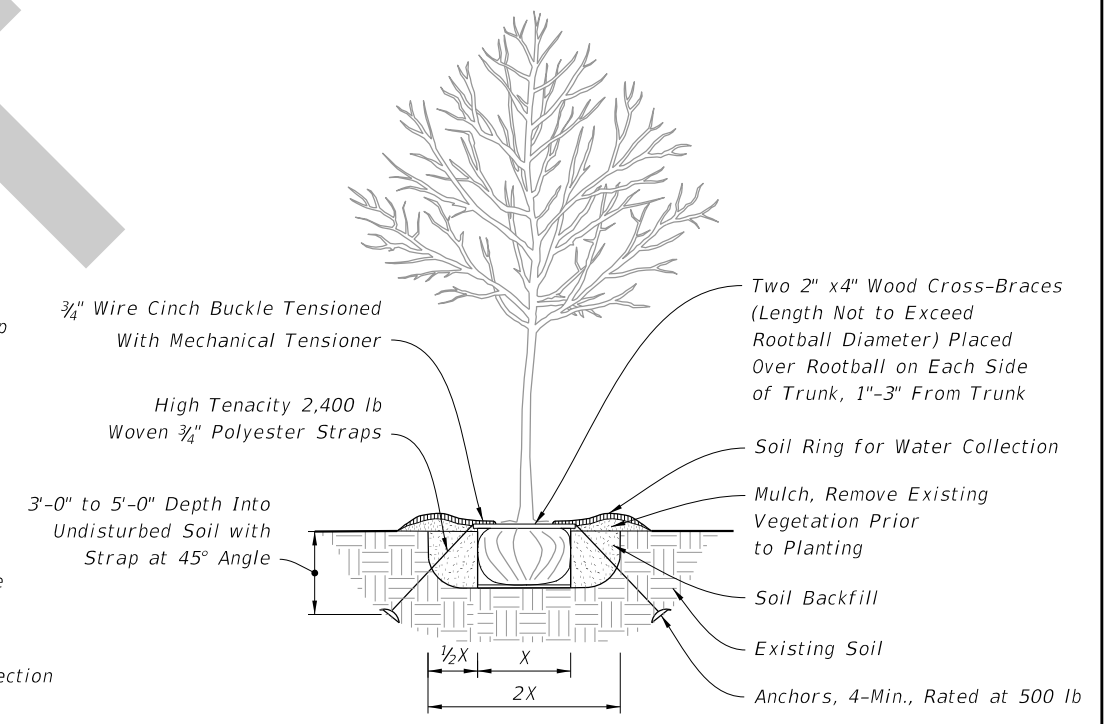
PLAN



ELEVATION



ELEVATION



ELEVATION

UNDER 2 1/2" CALIPER TREE PLANTING


2 1/2" TO 6" CALIPER TREE PLANTING

UNDER 4" CALIPER TREE PLANTING WITH UNDERGROUND BRACING

GENERAL NOTES:

1. Staking guidelines are based on standard horticultural requirements and are provided for plant establishment purposes only. Details not intended to apply when bracing is intended to address safety considerations. When bracing for safety, refer to Designer generated signed and sealed details. These guidelines are not intended to apply when the tree or palm is within falling distance of a roadway, pedestrian or bicycle route, under extreme wind loads, non-standard soil properties, non-standard plant dimensions, or when rootball is anticipated to be greater than 4 feet diameter and planted on 1:3 slope or steeper.
2. All dimensions 6" and less are exaggerated for illustrative purposes only. Dimensions shown for wood materials are nominal. Slopes shown are Vertical:Horizontal.
3. Remove plant containers prior to planting. Remove a minimum of the top 1/3 of burlap, fabric, or wire mesh for plants not grown in containers.
4. Allow no more than 1" of soil to cover the uppermost root on all trees. Set the top of rootball 1"-2" above finish grade after settling and set plumb to the horizon.
5. Backfill with loosened existing soil or as shown in the plans. Remove rocks, sticks, or other deleterious material greater than 1" in any direction prior to backfilling. Water and tamp to remove air pockets. Contact the Engineer prior to planting if existing soils contain excessive sand, clay, or other material not conducive to proper plant growth.
6. Construct soil rings at the outer edge of the planting pit with a height of 3" and gently sloping sides unless a permanent, subsurface or drip irrigation system is provided. Do not pile soil on top of rootball.
7. Construct a 3" deep layer of mulch placed 2" off the edge of the trunk flare, around the base of shrub, or solidly around ground cover. Never pile mulch against the tree trunk.
8. Install guying with minimum 1" wide nylon or polypropylene straps with a minimum 600 lb. break strength. Check straps monthly and adjust as required to eliminate girdling of tree. Locate all wood stakes beyond the edge of soil ring in existing soil and embed a minimum of 18" below finished grade unless otherwise specified. Alternate tree bracing and guying systems specified or approved by the Engineer may be used in lieu of the tree bracing and guying methods detailed on the Index.
9. Relocated Trees and Palms: Brace relocated trees and palms in accordance with the Contract Documents. Remove bracing at the conclusion of the contract or as directed by the Engineer. Bracing or straps must not damage or become embedded in the tree bark.
10. Use 2" x 2" minimum wood stakes unless otherwise shown in the Plans or directed by the Engineer. Use wood meeting #2 Common or better in accordance with the Standard Grading Rules for Southern Pine.
11. Drive stakes into existing, undisturbed soil. Localized compaction may be provided to prevent displacement of the stakes for previously disturbed existing soils that do not provide sufficient stability.

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2 x 4 Wood Braces (Minimum of Three Wood Braces) Spaced at 120° Apart. Saw Cut Ends at Proper Angle to Allow for Flush Connection to Batten. Nail or Screw Braces Securely to Wood Batten or Manufactured Tree Bracing.

For Palms Over 24' Clear Trunk, Increase Wood Braces to 4" x 4" Minimum, Use a Minimum of Four Braces With Minimum Length of 16' Spaced

Mulch, Remove Existing Vegetation Prior to Planting

Soil Ring for Water Collection

Wood Stake (Typ.)

Existing Soil
Soil Backfill

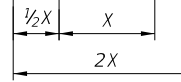
ELEVATION

Batten: Wood or Manufactured Tree Bracing System (Typ.) See DETAIL "A"

See DETAIL "B"

1/3 of Trunk Height Min.

2'-6" Min. Embedment Depth



Minimum Of Three Wood Braces Spaced at 120° Apart with Optional Fourth Wood Brace. Saw Cut Ends at Proper Angle to Allow for Flush Connection to Batten. Nail or Screw Braces Securely to Wood Batten or Manufactured Tree Bracing System. For Palms Over 24' Increase Wood Brace to 4" x 4" Minimum, Use a Minimum of Four Braces With Minimum Length of 16'.

Place Top of Root Ball 2" Above Projected Slope

Soil Ring for Water Collection

1:3 Max.

Wood Stake (Typ.)

Existing Soil

Soil Backfill

ELEVATION

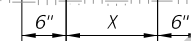
Fourth Brace for Palms Over 24'

Mulch, Remove Existing Vegetation Prior to Planting

1/3 of Trunk Height Min.

Horizon Line

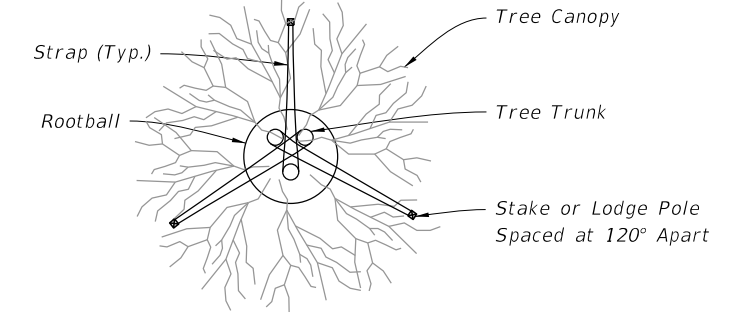
2'-6" Min. Embedment Depth



NOTE: May be used on large caliper canopy trees pending slope and rootball width, adjust banding every 6 months or as needed (for fast growing species) to prevent girdling.

PALM PLANTING

PALM PLANTING ON SLOPE



PLAN

Straps Securely Fastened to Stakes

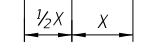
Straps Securely Fastened to Tree (Typ.)

Mulch, Remove Existing Vegetation Prior to Planting

Soil Ring for Water Collection

Existing Soil

Soil Backfill



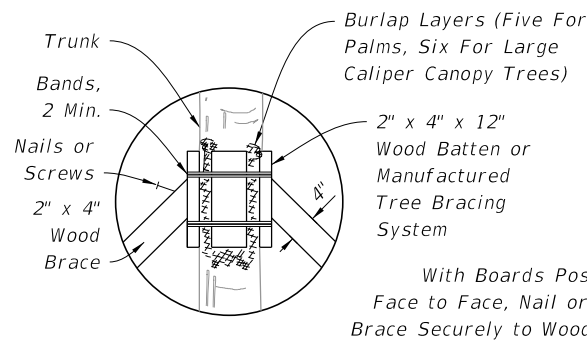
ELEVATION

Top of Stakes and Straps Positioned between 1/2 to 1/3 of Tree Height

Three 2" x 4" Wood Stakes or 2" Lodge Poles (Typ.)

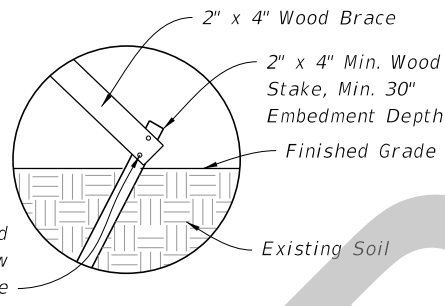
2'-0" Min. Embedment Depth

MAX 10' HT. MULTI-TRUNK TREE PLANTING



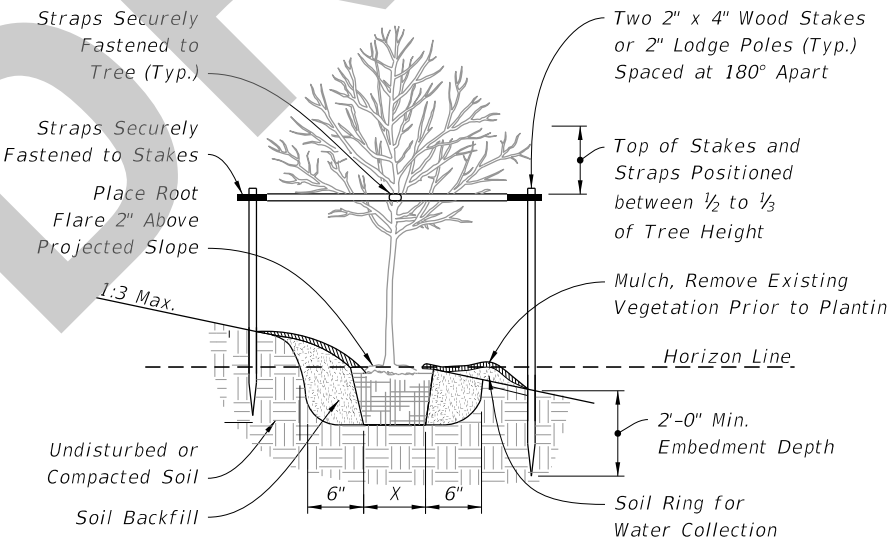
NOTE: Install bands and couplings that are rated a min. 900 lb. tensile strength, and are corrosion and UV resistant.

DETAIL "A"



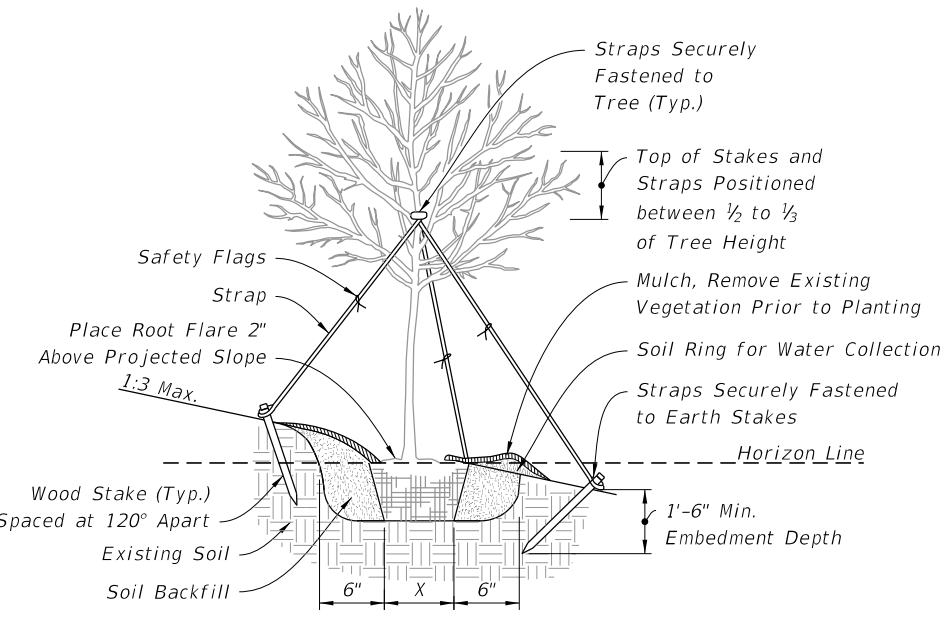
NOTE: Stake Into Firm, Existing Soil.

DETAIL "B"



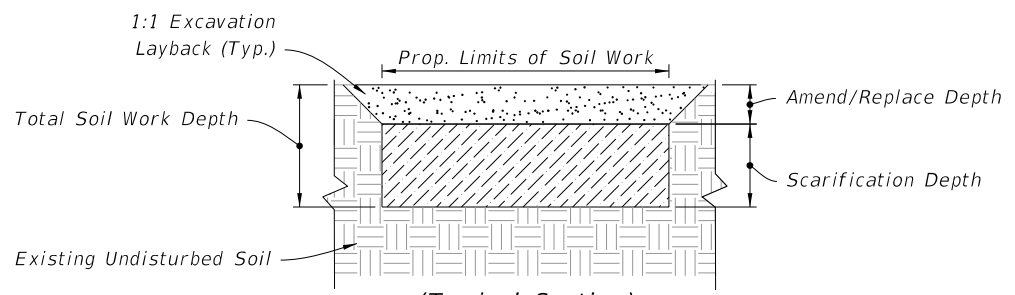
ELEVATION

UNDER 2 1/2" CALIPER TREE PLANTING ON SLOPE



ELEVATION

2 1/2" TO 6" CALIPER TREE PLANTING ON SLOPE



(Typical Section) LANDSCAPE SOIL WORK

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