Division 3 – LANDSCAPING

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3.1 – Purpose and enforcement.

1. The purpose of this section is to [~~set forth~~] **establish landscaping** standards for new and expanded development within the city, **to** enhance the aesthetic appearance of the community, including the visual appearance of streets, **to** complement the visual effect of buildings, **to** aid in the enhancement of property values, **to** provide buffers between various land uses, **to** provide protection from intense land use activities, **to** insulate from the effects of weather conditions, including the provision shading for parking lots, and **to** aid in conserving water by encouraging the use of varieties of plants indigenous to arid regions. These standards [~~shall~~] **are established to** be the minimum requirements necessary for the promotion of the foregoing purposes. Text and diagrams describing landscaping and irrigation requirements, planting details, approved tree and shrub lists and other examples for the requirements of this [~~division~~] **landscaping section** are in the [~~appendix~~] **Landscaping Appendix attached** to this section[~~, and available on the Carson City website and on CD at the planning division office~~].

2. Enforcement. The standards of this Division are enforced under CCMC 18.020.030 (Enforcement).

(Ord. 2007-26 § 1 (part), 2007: Ord. 2001-23).

3.2 - Applicability.

1. These landscaping standards apply to new construction and expansion of existing buildings and uses within all zoning districts excluding single-family residential zoning districts.

[~~These landscape standards shall apply to new construction of the following projects:~~
~~Multi-family Residential with 3 or more units;~~
~~Institutional Uses;~~
~~Office Uses;~~
~~Commercial Uses;~~
~~Industrial Uses;~~ **~~and~~**
~~Public Uses.~~]

2. [~~The director~~] **Notwithstanding other provisions of this section relating to deviations to certain landscaping standards or requirements, the Director** may approve variations to the standards set out in this division if they respond more appropriately to a particular site and provide equivalent means of achieving the intent of the landscape standards.

3. Any expansion of [~~a~~] **an existing** building **or existing site improvements** not in compliance with the landscape requirements in this [~~division and Title 18 of the Carson City Municipal Code~~] **section** must comply with landscape standards by [~~twice~~] the proportion to the expansion pursuant to Table 3.1 (Expansion Compliance).

Table 3.1
Expansion Compliance

Amount of Building Expansion:	**Landscaping Compliance Requirement**
[~~≤ 5% Building Expantion~~] **Not more than 5 percent**	No [~~Requirements~~] **additional requirements**
[~~≤ 10% Building Expantion~~] **Not more than 10 percent**	20[~~% of Landscape Requirements~~] **percent of landscaping requirements** for **the** entire site
[~~≤ 20% Building Expantion~~] **Not more than 20 percent**	40[~~% of Landscape Requirements~~] **percent of landscaping requirements** for **the** entire site
[~~≤30% Building Expantion~~] **Not more than 30 percent**	60[~~% of Landscape Requirements~~] **percent of landscaping requirements** for **the** entire site
[~~≤ 40% Building Expantion~~] **Not more than 40 percent**	80[~~% of Landscape Requirements~~] **percent of landscaping requirements** for **the** entire site
[~~≤ 40% Building Expantion~~] **More than 40 percent**	100[~~% of Landscape Requirements~~] **percent of landscaping requirements** for **the** entire site

(Ord. 2007-26 § 1 (part), 2007: Ord. 2001-23).

3.3 - Landscape and irrigation plans.

1. A landscape and irrigation plan shall be filed with the city and approved by the [~~director~~] **Director** prior to the approval of a site plan or issuance of a building permit. The plan shall be prepared by a landscape architect registered in the state of Nevada, or other person permitted to prepare landscape plans pursuant to Chapter 623A of the Nevada Revised Statutes (NRS). Landscaping on all commercial[~~/~~] **and** industrial projects must be installed or supervised by an individual at the job location with at least one of the following credentials: Certified Landscape Technician, Licensed Landscape Contractor, Certified Landscape Professional, ISA Certified Arborist, Registered Landscape Architect, a C10 Qualified Employee as recognized by the State Contractor's Board, or an equivalent certification, approved by the parks and recreation department.

[~~3.3.1~~] **2.** The landscape and irrigation plan [~~shall~~] **must** be clearly and neatly drawn in a commonly used scale such as engineer or architect (i.e., 1 inch equals 20 feet or ¼ inch equals 1 foot) and shall include a north arrow, owner/developer name, project location, location of adjacent streets, property lines, easements, sidewalks, drives, paved areas, sign and light standard locations, building outlines, eaves, topography and grading, existing trees or other natural features influencing the use of the site, utilities either overhead or underground and ground-mounted equipment such as vaults, transformers and air conditioning units.

[~~3.3.2~~] **3.** The plans [~~shall~~] **must** include landscape calculations relevant to the application of the standards of this section and [~~shall~~] **must** include a plant list in a legend format giving the common and botanical names of each plant with a key number or identifying symbol assigned to each plant, the size of the plant, its spacing and the quantity to be used.

[~~3.3.3~~] **4.** The landscape plans [~~shall~~] **must** include construction details for planting, staking, soil amendments and any special requirements for the project [~~and may be an attachment to the plans~~].

[~~3.3.4~~] **5.** Irrigation plans [~~shall~~] **must** be drawn at the same scale as the landscape plans and **must** include specifications which comply with the most current Uniform Plumbing Code as adopted by the [~~city~~] **City**. [~~On all submitted plans, provide] detail~~] **Detail** showing number of emitters/bubblers and rate or gallons per hour (gph) or gallons per minute (gpm) [~~or~~] **for** all plants and trees **must be provided**. See emitter detail in [~~appendix~~] **the Landscaping Appendix** for example.

[~~3.3.5~~] **6.** Identification and description of automatic irrigation components **must be provided** to insure that vegetation is adequately serviced through water conserving features. Overhead sprinkler irrigation is only allowed on turf areas or other areas requiring overhead sprinkler irrigation.

[~~3.3.6~~] **7.** All drip and bubbler irrigation systems for trees and shrubs must be on a separate irrigation zone from turf irrigation zones. The utilization of water savings irrigation design [~~is encouraged,~~] and incorporation of separation of irrigation zones based on water needs **is encouraged**.

[~~3.3.7~~] **8.** [~~Indication~~] **Location** of the irrigation system point of connection to the water supply and size, water pressure available, and maximum demand of the system in gallons per hour/minute [~~shall~~] **must** be provided.

[~~3.3.8~~] **9.** Irrigation equipment specified must be identified by manufacturer's name and equipment identification number.

[~~3.3.9~~] **10.** All equipment locations [~~shall~~] **must** be indicated for irrigation valves, controllers, hydrants, quick coupler valves, sprinkler heads, backflow preventors and pipe sizing.

[~~3.3.10~~] **11.** Additional irrigation details may be needed to clarify particular situations as shown in typical irrigation legend in the **Landscaping** Appendix.

[~~3.3.11~~] **12.** Typical details [~~shall~~] **must** include backflow prevention devices, backflow enclosure valves, irrigation heads and irrigation controllers. [~~Note that pressure~~] **Pressure** vacuum breakers are allowed for residential applications, and reduced pressure principle backflow prevention devices are required in all other applications.

[~~3.3.12~~] **13.** All below ground equipment must be located within boxes of adequate size to protect the components.

[~~3.3.13~~] **14.** Schedule 40 PVC pipe is required for all pressure lines and under all paved areas.

[~~3.3.14~~] **15.** Piping must be installed a minimum of 18 inches underground for non-pressure irrigation lines and 24 inches underground for constant pressure irrigation lines.

[~~3.3.15~~] **16.** Freeze protection and/or winterization for the irrigation system [~~shall~~] **must** be provided.

[~~3.3.16~~] **17.** Schedule 40 PVC pipe or equivalent sleeving under sidewalks or driveways is required.

[~~3.3.17~~] **18.** Landscape irrigation water use shall be separately metered or sewer changes shall apply for **uses** other than residential uses.

(Ord. 2007-26 § 1 (part), 2007: Ord. 2001-23).

3.4 - Preservation and protection of existing trees and shrubs.

[~~Trees~~] **1. Existing trees** and significant shrubs [~~shall~~] **must** be preserved whenever possible and [~~shall~~] **may** be considered part of the required landscape area. Preservation of **healthy,** existing 4-inch caliper [~~(6-8 foot for evergreens) healthy trees will be~~] **or larger deciduous trees and 6 foot or taller evergreen trees are** eligible for a 2:1 credit toward the total tree requirement [~~if approved by the director~~], up to a maximum of 25 percent of the requirement for trees on the site. [~~Provide an~~] **An** overlay **must be provided** on all submitted plans [~~of~~] **showing** all existing trees with **the** caliper (deciduous) or height (evergreen)**,** [~~and~~] significant shrubs on the site**,** and [~~clearly mark~~] which **trees or shrubs** will be retained on the site [~~and which are~~] **or** proposed to be removed.

[~~3.4.1~~] **2.** Deciduous trees with a trunk diameter of 4 [~~inch~~] **inches** or greater at a point [~~four and ½ foot~~] **4 ½ feet** above ground level**,** [~~or~~] evergreen trees 6 [~~foot or greater~~] **feet or more** in height or significant shrubs[~~, shall~~] **may** not be removed unless authorized by prior written approval from the [~~director~~] **Director**. The applicant [~~is encouraged to~~] **must** submit a report [~~to the director~~] prepared by a certified arborist [~~,~~] or licensed design professional detailing a reason for a request to authorize removal

of trees [~~and~~] **or** significant shrubs. After consultation with other applicable [~~city divisions~~] **City departments**, the [~~director~~] **Director** may authorize the removal of existing trees and shrubs if any of the following criteria exist:

[~~1.~~] **(a)** The health or condition of the tree presents a clear danger to people or property or it constitutes a nuisance[~~.~~] **;**

[~~2. When the~~] **(b) The** tree or shrub is located within the footprint of the building, or [~~when a~~] **the** tree trunk or shrub is so close to the building area that construction would result in irreparable damage or death to the plant[~~.~~] **;**

[~~3.~~] **(c)** Access is so restricted to the site that removal is necessary and unavoidable[~~.~~] **;**

[~~4.~~] **(d)** The elevation will be severely changed by grading/building/development[~~. The~~] **and the** tree or shrub cannot remain on the site as a result of the change in elevation[~~.~~] **; or**

[~~5.~~] **(e)** Any other instances deemed appropriate by the [~~director shall~~] **Director may** be considered.

[~~3.4.1.1~~] **3.** All trees removed from a site, [~~which were not previously approved under the criteria outlined in subsection 3.4.1 above~~] **excluding those approved for removal by the Director**, require replacement by 1 of the **following** methods [~~listed below. As an example, removal of a 6-inch diameter tree would require replacement of the tree with 4, 3-inch caliper trees or the equivalent.~~] **:**

[~~a.~~] **(a)** Deciduous trees require replacement with [~~a 2:1 caliper ratio tree~~] **new deciduous trees totaling twice the diameter of the trees removed**, with a minimum caliper of 2 [~~inch~~] **inches** and a maximum of 3 [~~inch~~] **inches** per **new** tree. **For example, removal of a 6-inch diameter tree would require replacement with trees totaling not less than 12 inches in diameter (6 inches x 2 = 12 inches), which could be accomplished using four 3-inch caliper trees (4 x 3 = 12) or six 2-inch caliper trees (6 x 2 = 12);**

[~~b.~~] **(b)** Evergreen trees require replacement with [~~a 2:1 height ratio~~] **new evergreen trees totaling twice the height of the trees removed**, with a height minimum of 6 foot and maximum of 8 foot per replacement tree[~~.~~] **; or**

[~~c.~~] **(c)** Tree replacement may require off-site mitigation, including planting of trees on public property**, when adequate space is not available on the site to accommodate the additional new trees**. **In lieu of planting replacement trees on the development site, a fee may be paid to the City for the cost to purchase and plant the trees within the public right-of-way or on City property. Fees for planting of trees within the right-of-way or on City property must be paid in an amount as established by the Parks, Recreation and Open Space Department.** [~~Off-site mitigation shall require approval by the parks and recreation director. Payment of fees to purchase and plant trees, as well as associated costs are required, rather than actual planting of trees on public property. Appropriate fees which are based on the placement of trees in the right-of-way program as periodically updated shall be paid to the parks and recreation department. Provide the planning department with a copy of receipt for payment of required tree replacement/mitigation fees. Payment~~] **When off-site mitigation is proposed, payment for the off-site mitigation** is required prior to the building permit **for the proposed development** being issued.

[~~3.4.2~~] **4.** Tree Protection. [~~All deviations from the tree protection code must be approved by the planning division.~~] Construction activities can severely damage or kill trees. [~~See tree retention/protection, root pruning detail, and excavation adjacent to retained trees in appendix for additional requirements and information.~~] The following practices must be followed during all construction activities **when existing trees are proposed to be retained on a building site**:

[~~1.~~] **(a)** Pruning of live branches from trees identified for preservation is prohibited except in **accordance with the pruning standards of this section;** [~~conjunction with subsection 3.4.3 Pruning Standards. See pruning details in appendix for more requirements and details.~~]

[~~2.~~] **(b)** Tree protection fencing and protection is required around all trees identified for preservation. See **the applicable** detail in [~~appendix~~] **the Landscaping Appendix**. [~~Construct~~] **The construction of** protection fencing [~~which complies~~] **must comply** with the following:

[~~a.~~] **(1)** Protective fencing must be constructed of [~~4 foot wide~~] minimum **4-foot tall** orange netting or chain link. Fencing must be **located** a minimum of 5 feet outside the tree drip line. Fences must be mounted on above ground concrete footings, which [~~shall~~] **may** not be driven into the ground[~~. Spacing shall~~] **and may** be no more than 10 [~~foot~~] **feet apart**. This detail shall be placed on all grading, demolition and improvement plans[~~.~~] **;**

[~~b.~~] **(2)** Protective fencing [~~shall~~] **must** enclose the entire area under the canopy drip line of the tree protection zone throughout the life of the project, or until work within the tree protection zone is completed. The fence [~~shall~~] **may** not be moved during construction phase without prior approval of the qualified site professional utilizing the best management practices. The protective fence may be removed at final grading inspection or at the time final landscaping is installed. Refer to **the** detail in [~~appendix~~] **the Landscaping Appendix** for **a** sample drawing[~~.~~] **; and**

[~~c.~~] **(3)** A sign describing the fence as protective tree fencing [~~shall~~] **must** be prominently displayed on each fence. The sign must be a minimum of 8.5 [~~by~~] **x** 11 inches and clearly state: "Tree Protection Zone. This fence shall not be removed and is subject to penalty per Carson City Municipal Code." Refer to detail in [~~appendix~~] **the Landscaping Appendix** for **a** sample drawing[~~.~~] **;**

[~~3.~~] **(c)** If protective fencing cannot be placed around the entire tree protection zone, then protective fencing [~~shall~~] **must** be placed around the trunk of the **tree** [~~tree(s) but only after prior approval of the proposal by the planning division~~]. [~~2 by 4~~] **Two-by-four** lumber shall be secured with banding around the trunk of tree(s) to be preserved. [~~Do not attach boards~~] **Boards** or banding **may not be attached** directly into the bark or trunk of the tree[~~.~~] **;**

[~~4.~~] **(d)** There should be no activity in the tree protection zone without prior approval by the planning division. The following are prohibited activities within the tree protection zone:

a. Soil disturbance, including excavation, trenching or grade change [~~without prior approval of the planning division.~~] **;**

b. Spoils, non-spoils, storage of any equipment, materials or parking[~~.~~] **; and**

c. Placement of non-spoil material or equipment[~~.~~] **;**

[~~5.~~] **(e)** [~~Apply 6 inches of wood~~] **Wood** chips or bark **must be applied to a depth of not less 6 inches** over the root zone of trees within the protective barriers. Mulching areas outside of protective barriers will help to minimize compaction from construction traffic adjacent to sensitive root zones[~~.~~] **;**

[~~6.~~] **(f)** Hand digging [~~shall be~~] **is** required to determine if lateral roots are present on trees in the direction of proposed **building** foundation location. If support roots are found, it is recommended that correct root pruning is performed[~~,~~] so as to not compromise the stability of the [~~tree(s).~~] **trees;**

[~~7.~~] **(g)** [~~Correctly and cleanly prune exposed~~] **Exposed** roots that are not to be saved **must be pruned** back to the soil horizon in compliance with [~~detail in subsection 3.4.3~~] **the pruning standards of this section**. Pruning should be supervised by a qualified licensed professional and should be performed to ISA standards (see details in [~~appendix~~] **the Landscaping Appendix**)[~~.~~] **;**

[~~8.~~] **(h)** [~~Promptly cover exposed~~] **Exposed** roots **must be promptly covered** with damp tarp(s) which are kept moist[~~,~~] or **other** material that will keep roots from drying[~~.~~] **;**

[~~9.~~] **(i)** [~~Irrigate~~] **Irrigation must be provided** within the dripline of trees once a week if natural precipitation does not occur during spring, summer and fall[~~.~~] **; and**

[~~10.~~] **(j)** See [~~detail~~] **details** for tree retention, root pruning and excavation adjacent to retained trees in [~~appendix~~] **the Landscape Appendix for additional tree preservation notes**.

[~~3.4.3~~] **5.** Pruning Standards. No trees **which are part of required landscaping** on commercial**,** [~~or~~] industrial **or public** land [~~which is part of required landscaping shall~~] **may** be pruned in a manner that impairs the health of the tree. All pruning performed on required trees shall be in accordance with pruning standards published by the American National Standards Institute (ANSI), per ANSI A300 Part 1 Pruning, and International Society of Arboriculture, Western Chapter. See [~~appendix~~] **the Landscaping Appendix** regarding pruning [~~detail~~] **details**.

[~~1.~~] **(a)** ANSI pruning standards require**,** in part, the use of certain tools, cutting techniques, and pruning methods to be followed, including not leaving branch stubs, few or no heading cuts, not cutting off the branch collar (not making a cut flush with the trunk), not topping or lion's tailing ("gutting-out" a

tree by removing a large number of the inner branches), not removing more than 25 percent of the foliage of a single branch, not removing more than 25 percent of the total tree foliage in a single year, not damaging other parts of the tree during pruning and not using wound paint. [~~50~~] **Fifty** percent of the foliage should remain evenly distributed in the lower 66 percent of the tree canopy after pruning.

[~~2.~~] **(b)** All pruned material shall be controlled and removed in a manner to prevent damage to the surrounding plant material and property. Tree topping, tipping and heading back are all terms used to describe severe cutting back of a tree's crown and is prohibited on any tree which is part of required landscaping and [~~strenuously~~] **is strongly** discouraged on any other trees on the site.

[~~3.~~] **(c)** Trees severely damaged by storms or other causes, or trees under utility wire or other obstructions[~~,~~] where other pruning practices are impractical, may be exempted from the prohibition of topping, tipping and heading back, at the discretion of the [~~director~~] **Director**. A letter of request must be submitted to the [~~director~~] **Director** and approved prior to [~~such severe~~] pruning **that is not otherwise in compliance with the provisions of this section**.
(Ord. 2007-26 § 1 (part), 2007: Ord. 2001-23).

3.5 – [~~Landscape design standards~~] Landscaped area required.

[~~3.5.1~~] **1.** All landscaping [~~shall~~] **must** aesthetically enhance and be compatible with the site area. Landscaping [~~shall~~] **must** be installed to enhance the view of the site from public [~~street(s)~~] **streets** and adjacent properties.

[~~3.5.2~~] **2.** A minimum of 20 percent of the site's impervious surfaces, excluding the building coverage, must be pervious areas of landscape material. The area within the public right-of-way [~~adjacent to a site~~] **between the property line and the paved roadway surface, excluding sidewalk area,** must be landscaped and may be counted for **not more than** 25 percent of the total required landscaped area. In areas with [~~right-of-ways over~~] **rights-of-way more than** 20 feet in depth **between the property line and the paved roadway surface or back of sidewalk**, the [~~director~~] **Director** may modify or waive the requirement for landscaping [~~of~~] **within** the right-of-way. The requirement may also be waived by the [~~director~~] **Director** if the public agency denies permission for an encroachment permit or lease of the area to be landscaped.
(Ord. 2007-26 § 1 (part), 2007: Ord. 2001-23).

3.6 - Turf.

The following standards for the use of turf in landscaping are intended to conserve water by minimizing the need for water for irrigation and minimizing irrigation water wasting.

[~~3.6.1~~] **1.** Turf areas [~~shall~~] **may** not constitute more than the percentage of the total landscape area as established by the table below unless approved by [~~special use permit~~] **Special Use Permit**.

Table - Permitted percentage of turf area. [~~Turf area is shown as a percentage of the total landscaped area:~~]

Development Area	Permitted Turf Area
Less than 5 acres (ac.)	50[~~%~~] **percent of the total landscaped area**
5 ac. to less than 10 ac.	40[~~%~~] **percent of the total landscaped area**
10 ac. to less than 15 ac.	30[~~%~~] **percent of the total landscaped area**
15 ac. or larger	25[~~%~~] **percent of the total landscaped area**

[~~3.6.2~~] **2.** Turf shall not be used on slopes greater than 4:1 or in areas less than 8 feet in width or length.

[~~3.6.3~~] **3.** Where landscape areas abut sidewalks, drive-aisles, parking areas or other hardscape surfaces, a minimum 3-foot wide landscape buffer area must be provided between any turf areas and the

hardscape to capture irrigation overspray and runoff. The buffer area may be drip-irrigated plant materials or non-living landscape materials.

4. Artificial turf may be used in the permitted proportions for turf, provided that the artificial turf must be of a quality to resemble natural turf and must be maintained perpetually in compliance with the recommended maintenance schedule for the particular product.

[Staff note: Section 3.10 (Plant materials) currently prohibits the use of artificial plants unless approved by the Director. Subsection 4 is added to expressly allow artificial turf to be used as landscaping material.]

(Ord. 2007-26 § 1 (part), 2007: Ord. 2001-23).

3.7 - Trees.

[~~3.7.1~~] **1. A minimum of 1 tree is required for each 400** [~~The minimum number of trees shall be one (1) tree per four hundred (400)~~] square feet of **required** landscape area. Additional trees are required if the number of trees for parking areas and along right-of-way areas as [~~described in subsections 3.7.1.1 and 3.7.1.2 exceed~~] **required by this subsection result in the total number of required trees exceeding** this minimum. The Director may modify this standard for public uses such as parks.

[~~1.~~] **(a)** Included in the minimum **total** required number of trees, a minimum of [~~one (1)~~] **1** shade tree must be planted for every [~~ten (10)~~] **10** parking spaces or fraction thereof[~~,~~] and **must be** distributed throughout the parking area [~~surface~~] to provide even shading within the parking lot. For example, [~~eighteen (18)~~] **11** parking spaces [~~shall require two (2)~~] **requires 2** trees. A minimum of [~~one (1)~~] deciduous tree shall be placed in each standard sized parking island.

[~~2.~~] **(b)** Included in the minimum required number of trees, at least [~~one (1)~~] **1** tree [~~shall~~] **must** be placed along the right-of-way frontage for [~~every thirty (30)~~] **each 50** lineal feet of right-of-way **frontage** at a point not more than [~~twenty (20)~~] **20** feet from the right-of-way. **Trees should generally be spread out along the right-of-way frontage but may be grouped to avoid driveways, buildings or other site constraints.** The Director may allow for different spacing or locations of trees for projects with outdoor display such as automobile sales lots.

[Staff note: Full-sized trees should generally be spaced a minimum of 30 feet apart. When one tree per 30 feet of parcel frontage is required, this results in trees needing to be spaced closer together after eliminating areas such as driveways where trees cannot be planted. Staff believes the one-tree-per-50 feet requirement will result in the desired number of trees for property frontages.]

[~~3.7.2~~] **2.** Where more than [~~ten (10)~~] **10** deciduous trees are provided as a part of the landscape plan, a [~~minimum of fifty percent (50%)~~] **maximum of 60 percent** of the trees [~~shall~~] **may** be of [~~a different~~] **the same** species to ensure diversity **of tree species**. Additional species may be required on larger projects.

[Staff note: This modification is intended to meet the same intent as the original requirement of "a minimum of 50 percent" of the trees being of a different variety.]

(Ord. 2007-26 § 1 (part), 2007: Ord. 2001-23).

(Ord. No. 2008-33, § XVI, 9-4-2008)

3.8 - Groundcover [~~(including shrubs)~~] and shrubs.

[~~3.8.1~~] **1.** Groundcover shall be used to prevent erosion, inhibit weed growth, and present an aesthetically pleasing appearance when mature. Groundcover may include living plants such as turf, shrubs, vines, meadow grasses, flowers or other living covers. Ground cover and shrubs [~~shall~~] **must** be incorporated into all landscape plans in a balanced manner.

[~~3.8.2~~] **2.** Non-planted, non-living materials such as wood chips, bark, decorative rock, mulch, stone or other non-living materials [~~may be used as groundcover, and shall be distributed throughout the site~~] **customarily used as landscaping ground cover must be used in all landscaped areas that do not have living plant material as groundcover**. [~~All landscape areas shall be covered with materials suitable for reducing dust and evaporation and shall be designed to improve the aesthetic appearance of the area.~~]

An attractive mix of organic and non-organic materials is encouraged. [~~Products which appear to be dirt shall not be used.~~]

[~~3.8.3~~] **3.** A [~~ratio of at least~~] **minimum of** 6 shrubs is required for each **400 square feet of required landscape area, excluding turfed areas.** [~~tree placed or retained on the site. If a large quantity of] turf is proposed for the site, the required shrub count may be reduced after review and approval of the submitted landscaping plans by the planning division.~~]

[Staff note: The proposed requirement of 6 shrubs per 400 square feet of landscaped area is consistent with the current requirement of 6 shrubs per tree since one tree is also required per 400 square feet of landscaped area. However, the amendment also clarifies that areas that are turfed are not counted towards the required number of shrubs since turfed areas already provide live plant material.]

(Ord. 2007-26 § 1 (part), 2007: Ord. 2001-23).

3.9 - Streetscape.

On arterial streets, minimum [~~10 foot~~] **10-foot** wide landscape areas shall be provided along the frontage of the site adjacent to the street. On all other streets, a minimum [~~of 6 foot~~] **6-foot** wide landscape area shall be provided along the frontage of the site adjacent to the street. On sites with unique constraints, the [~~director~~] **Director** may approve an alternative dimension if the alternative does not compromise the integrity of the landscape plan.

(Ord. 2007-26 § 1 (part), 2007: Ord. 2001-23).

3.10 - Plant materials.

[~~3.10.1~~] **1.** The latest edition of the American Standard for Nursery Stock by the American Association of Nurserymen shall be **used as** the criteria for sizes and grades of plant materials. **Except as otherwise provided in this section, no** [~~No~~] artificial plants are allowed [~~unless approved by the director~~].

All trees [~~to~~] **must** be number 1 grade nursery stock and meet current industry quality standards adopted by the American Association of Nurserymen, American National Standards Institute (ANSI) Z60 and NRS 555 (Regulations of Nursery and Nursery Stock). All trees must comply with the following:

No girdling, kinked, circling or "J" roots;

No trees that have been topped;

No wounds in the trunk, bark or on limbs;

Insect and disease free, rodent and mechanical damage free;

No trees that have large nursery stakes through rootball or have been grown on a nursery stake;

Rootball [~~to~~] **must** be appropriate to caliper and crown size;

Trunk/crown structure and trunk taper [~~to~~] **must** be appropriate for the species;

All graft unions [~~to~~] **must** be healthy with trunk diameter below union larger than above union;

All trees [~~to~~] **must** stand upright without stakes;

Roots, bark and shoot growth [~~to~~] **must** give evidence of good tree vigor;

Any replacement of plant stock [~~to~~] **must** be equal to original specification and approved by the owner's representative[~~;~~] **and**

Any substitution of plant material must be submitted in writing for approval by the landscape architect or design professional and the planning division[~~;~~] **.**

[~~3.10.2~~] **2.** Container grown shrubs [~~shall~~] **must** be minimum 5 gallon size at the time of planting**,** excluding trees and those plants grown in flats. Perennials [~~shall~~] **must** be a minimum 1 gallon size at the time of planting.

[~~3.10.3~~] **3.** Required evergreen trees [~~shall~~] **must** be a minimum of 6 feet in height at the time of planting and [~~shall~~] **must** not comprise more than 40 percent of the total number of **required** trees [~~or as dictated by the site and approved by the director~~].

[~~3.10.4~~] **4.** Required deciduous trees [~~shall~~] **must** be a minimum caliper of 2 inches at the time of planting. Using 3 inch [~~maximum~~] caliper new trees shall reduce the number of required trees by 10

percent [~~or as approved by the director. This does not refer to required replacement trees as shown in subsection 3.4.1.1, for trees removed without permission~~].

[~~3.10.5~~] **5.** If additional trees **or shrubs** beyond the minimum requirement are proposed, [~~they~~] **the additional trees or shrubs** may be smaller in size **than otherwise required by this section**. The required number of trees **and shrubs** in each category and total for the project must be clearly marked on the plan, with additional trees **and shrubs** noted as supplemental.

[~~3.10.6~~] **6.** Trees which overhang sidewalks, parking lots or streets shall be free of thorns or fruit types that litter the ground. Evergreen trees are not permitted in [~~standard sized~~] parking islands **less than 12 feet in width**.

[~~3.10.7~~] **7.** Within an urban setting, [~~the following types of trees shall not be installed because of undesirable characteristics:~~] 'Populus genus' (aspens, poplars and cottonwoods), 'Salix genus' (willows), and 'Ulmus genus' (elms) **may not be planted due to undesirable characteristics**. [~~New species which do not exhibit undesirable characteristics are acceptable.~~] Requests for waiver of this requirement may be considered by the [~~director~~] **Director** in appropriate instances. [~~Developers are encouraged to protect and preserve existing healthy trees on site.~~]

[~~3.10.8~~] **8.** Tree selection for projects [~~will~~] **should** be guided by the approved Carson City tree list for commercial projects. Trees planted in the [~~city will~~] **City must** be installed according to the [~~city's~~] tree planting standards **contained within this section**. The approved tree list and standard planting details are located in the [~~appendix~~] **Landscaping Appendix**.

[~~3.10.9~~] **9.** Riparian Areas. Areas along established riparian corridors may utilize native riparian trees and shrubs which are identified on the Carson City riparian area list. These materials may be planted along river/stream corridors within Carson City after approval of the intended choices and locations by the [~~director~~] **Director**. Request for use of riparian trees and shrubs outside of a riparian or wetland zone within the urban setting may be considered by the [~~director~~] **Director** in appropriate instances. The approved riparian area tree and shrub lists are located in the [~~appendix~~] **Landscaping Appendix**.

[~~3.10.10~~] **10.** Historic District Properties. Areas within the historic district are encouraged to utilize trees and shrubs shown as noted on the Carson City tree list for commercial projects, further noted as Carson City historic district preferred trees. The approved tree list with historic district preferred trees noted is located in the [~~appendix~~] **Landscaping Appendix**.
(Ord. 2007-26 § 1 (part), 2007: Ord. 2001-23).

3.11 - Details.

[~~3.11.1 Parking~~] **1. Landscaped areas abutting parking** and driveway areas [~~shall~~] **must** include concrete curbs or similar improvements [~~as approved by the director~~] for protection of landscaping. Vehicle overhangs into landscaped areas [~~shall~~] **may** not exceed 2 feet. Planter areas [~~shall~~] **must** not be less than 72 square feet in size and [~~shall~~] **must** have a minimum width of 6 feet.

[~~3.11.2~~] **2.** Drainage basins, when required, [~~shall~~] **must** be incorporated into the landscape design, utilize non-buoyant landscape materials, and [~~shall~~] be irrigated if landscaped **with live plant material**. Access [~~shall~~] **must** be provided for maintenance. The landscaped basin area may count [~~as~~] **towards not more than** 10 percent of the total landscape requirement if the basin is not fenced with sight-obscuring materials and is landscaped along the perimeter to enhance the appearance.

[~~3.11.3~~] **3.** Snow storage should be incorporated within the design of projects and should be oriented for maximum sun exposure for acceleration of melting. Driveways, drive aisles, sidewalks and landscape areas, cannot be used for snow storage. Drainage and run-off from snow storage areas [~~shall~~] **must** be considered in the design.

[~~3.11.4~~] **4.** Soil in planted areas should be mechanically loosened to a minimum depth of 12 inches and/or to the depth of the root ball and 3 times the diameter for trees and shrubs. Tests of soils, based upon one test per site (sites over 25,000 square feet in landscape area may require additional tests as required by the [~~director, shall~~] **Director, must** be conducted and appropriate soil amendments recommended. Soils should be improved by incorporating the recommended soil amendments into the loosened soil prior to planting.

[~~3.11.5~~] **5.** All non-planted landscape areas [~~shall~~] **must** be covered with materials such as mulch **in accordance with the provisions of this section**. [~~Products which appear to be dirt shall not be used.~~] A weed barrier fabric is required under all rock and cobble mulches and pre-emergent herbicide is recommended.

[~~a.~~] **(a)** Planted areas should be mulched to a minimum depth of 3 inches for organic mulches. No fabric shall be used under wood mulch.

[~~b.~~] **(b)** Sufficient quantity of rock mulch [~~shall~~] **must** be installed to completely cover all weed control fabric. Fabric [~~shall~~] **must** be trimmed back in compliance with landscaping details to allow for future growth of plants. All rock mulch must be washed and cleaned prior to installation. Large cobble mulch should include top dressing of smaller matching cobble or similar material. Nonporous material such as plastic sheeting [~~shall~~] **may** not be placed under the mulch.

[~~3.11.6~~] **6.** All debris, including concrete, asphalt, wire, wood, steel and other foreign matter, must be removed from a planting area prior to soil preparation or planting and prior to request for a final inspection of the site.

[~~3.11.7~~] **7.** Conflicts [~~shall~~] **must** be avoided in design of landscape improvements by considering the size and breadth of mature landscaping. [~~Show existing~~] **Existing** and proposed overhead and underground power lines, utility poles, light standards and utility easements **must be shown** on submitted landscape plans. Fire hydrants, fire connections, water boxes (3 feet clearance required), water and sewer service lines **(**10 feet clearance required for trees), overhead utilities, signs, roof overhangs, light standards etc., shall be taken into consideration in design of landscaping. [~~Show all~~] **All** proposed and existing signage for the site **must be shown on the landscape plans**.
(Ord. 2007-26 § 1 (part), 2007: Ord. 2001-23).

3.12 - Inspection, certifications and security.

[~~3.12.1~~] **1.** Upon installation of landscaping and irrigation systems, the registered design professional, licensed design professional, general contractor, certified landscape contractor, registered landscape architect, or others as allowed per [~~Nevada Revised Statutes (NRS)~~] **NRS** who created, stamped and signed the landscaping and irrigation plans, or who has been authorized by that person, [~~shall~~] **must** certify that the installation was completed per the approved plans, including review of installation of correct plant materials, planting was according to diagrams and instructions included in the plan, emitter location and detail, etc. A letter attesting to this inspection and compliance [~~shall~~] **must** be submitted to the planning division **prior to the issuance of a final certificate of occupancy for the proposed use**. Plant tags [~~are to~~] **must** be left on plants until after approval of the landscaping plan by the authorized professional and [~~shall~~] **must** be removed upon approval. The planning division retains the right to inspect projects, and if not in compliance with submitted plans, require compliance prior to issuance of a final certificate of occupancy.

[~~3.12.2~~] **2.** [~~It is understood that minor~~] **Minor** deviations [~~and/or~~] **or** plant substitutions may be necessary during the course of the project. These deviations may be done if approved by the registered design professional or others as allowed per NRS, and if consistent with the original approved design and plants selected are similar to the original plan and intended purpose. Notification in writing to the [~~director is required for these instances. Approval is required from the director~~] **Director and approval of the revisions are required** prior to installation. Upon completion, as-built landscape plans [~~shall~~] **must** be submitted. Major design revisions require a new **plan review** fee [~~and additional staff resources~~].

[~~3.12.3~~] **3.** If, due to weather constraints, all landscaping is not completed prior to the final inspection, financial security in a form acceptable to the [~~city~~] **City** in the amount of 150 percent of the estimated cost of installation of remaining landscape improvements [~~shall~~] **must** be filed with the city guaranteeing installation within 9 months of final inspection. The estimated cost of the landscaping improvements not completed must be verified by the [~~city~~] **City**. Installation of plant materials during times when the ground is likely to be frozen is discouraged due to high mortality of plants. Delay of planting[~~,~~] and providing financial security [~~in a form acceptable to the city, as described in subsection 3.13.1,~~] is recommended during these times.

(Ord. 2007-26 § 1 (part), 2007: Ord. 2001-23).

3.13 - Maintenance.

[~~3.13.1~~] **1.** All landscape areas must be maintained by the property owners, including using the most current pruning standards accepted by the ANSI International Society of Arboriculture [~~and/or~~] **or** the National Arborist Association. Any damaged or dead [~~plant(s)~~] **plants** must be replaced or repaired by the property owners [~~within~~] **not more than** 30 days following notification by the [~~director~~] **Director**. If the season of the year makes this repair or replacement within [~~a 30 day period~~] **30 days** impractical, [~~the person responsible for landscaping shall schedule an appropriate time for the completion of the accomplishment of this work as required and approved by the director. Property owner shall provide a~~] financial security in a form acceptable to the city, in the amount of 150 percent of the estimated cost of installation of remaining landscape improvements [~~, which shall be filed with the city guaranteeing installation~~] **must be provided to the City**. The estimated cost of the landscaping improvements not yet completed must be verified by the [~~city~~] **City**.

[~~3.13.2~~] **2.** Maintenance must include the checking of the sprinkler pattern and drip systems, plant condition, weeding, fertilization, pest control, replacement of mulches, weed barrier and dead material, or other debris, proper pruning and use of proper mowing heights. Radical pruning or trimming such as topping shall require replacement of the plant material. The required maintenance schedule for both the planting and the irrigation system [~~shall~~] **must** be shown on the landscape plan provided to the owner by the registered design professional or others as allowed by NRS.

[~~3.13.3~~] **3.** An acknowledgment by the property owner of the required maintenance for a project must be submitted to the [~~city~~] **City** as a part of landscape and irrigation plan submittals.
(Ord. 2007-26 § 1 (part), 2007: Ord. 2004-13 § 7, 2004; Ord. 2001-23).

3.14 - Revisions to landscape plans.

[~~3.14.1~~] If a revision to a landscape plan results in a change to the approved plans of more than 25 percent, a new landscape plan and review fee are required. Variations to the plan include, but are not limited to, change in species, type (e.g. rock, mulch, turf, etc.), and [~~change in~~] location **of plants and materials**.
(Amended by Ord. 2007-26 § 1 (part), 2007).

3.15 - Design standards.

Diagrams, text and examples are located in the [~~appendix~~] **the Landscaping Appendix**, including, but not limited to, general landscape and irrigation notes, irrigation legend detail, typical plant list legend example, tree and shrub planting details, emitter layout and staking, bubbler, tree protection, flushing end cap, drip, spray and coupling valves, rotor/pop-up head, irrigation trench wall section, rock wall, wood and pipe bollards, approved tree, shrub, riparian and historic district lists, pruning, tree retention[~~/~~] **and** protection, root pruning and excavation adjacent to retained tree details.
(Ord. 2007-26 § 1 (part), 2007).

Landscaping Appendix.

[See following pages]

GENERAL LANDSCAPE NOTES: 02/2007

ALL LAWN AREAS SHALL BE CONTOURED AND ROLLED WITH A WEIGHTED HAND ROLLER PRIOR TO SODDING OPERATIONS.

CONTRACTOR MAY PROVIDE PHOTOGRAPHS OR SAMPLES OF ALL TREE PLANT MATERIAL FOR APPROVAL BY THE DESIGN PROFESSIONAL OR OWNER'S REPRESENTATIVE TO SEE IF SPECIFICATIONS ARE MET. THIS DOES NOT GUARANTEE ACCEPTANCE OF ALL TREES UPON DELIVERY TO PROJECT SITE.

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO ANY DIGGING OR CONSTRUCTION. THE ACQUISITION OF ALL NECESSARY PERMITS ASSOCIATED WITH CONSTRUCTION SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING ALL NOTES, CHECKING PLANT NAMES AND CONFIRMING ALL NUMBERS, SIZES, AND PLANT AVAILABILITY PRIOR TO SUBMITTING BID.

IF QUANTITIES LISTED IN THE PLANTING SCHEDULES DO NOT CORRELATE WITH THE QUANTITIES INDICATED ON THE PLANS, THEN PLAN QUANTITIES SHALL GOVERN.

THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO INSTALL ALL MATERIALS COMPLETE AND IN PLACE AS SHOWN AND/OR SPECIFIED.

FINISH GRADES IN ALL LAWN AREAS SHALL BE ESTABLISHED BEFORE INSPECTION BY THE DESIGN PROFESSIONAL OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION OF SOD.

ROUGH GRADE, FINISH GRADE AND ALL BERM LOCATION/SHAPES SHALL BE ESTABLISHED BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT, DESIGN PROFESSIONAL OR OWNER'S REPRESENTATIVE BEFORE INSTALLATION OF THE IRRIGATION SYSTEM, SITE ELEMENTS OR ANY SOD.

SOIL AMENDMENTS IN COMPLIANCE WITH DEVELOPMENT STANDARDS 3.11 SHALL BE INCORPORATED INTO THE TOP 8 " TO 10" (MIN) OF THE ROUGH GRADE OF ALL LAWN AREAS PRIOR TO SODDING.

ROUGH GRADE IN ALL LAWN AND PLANTING BED AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 8"–10" (MIN.) PRIOR TO INSTALLATION OF PLANT MATERIAL, BERMS AND SOD.

ALL SOD AND PLANT MATERIALS SHALL BE #1 GRADE NURSERY STOCK AND WARRANTED FOR ONE YEAR AFTER FINAL PROJECT ACCEPTANCE. REPLACE ANY PLANT WHICH DIES WITHIN 30 DAYS AFTER NOTIFICATION, EXCEPT DURING WINTER, WHEN REPLANTING MAY BE DELAYED, WITH PLANTS EQUAL TO ORIGINAL MATERIALS.

THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE ALL LAWN & PLANTING BED AREAS TO ESTABLISH ROUGH GRADE AND INSTALL REQUIRED SOIL AMENDMENTS. (4 1/2" BELOW TOP OF CURBS IN PLANTING AREAS & 1 1/2" BELOW SIDEWALKS IN LAWN AREAS.)

ANY IMPORTED TOPSOIL REQUIRED FOR INSTALLATION OF THE BERMS OR ESTABLISHMENT OF ROUGH GRADE OR FINISH GRADE SHALL BE TOPSOIL MIX APPROVED BY THE LANDSCAPE ARCHITECT OR DESIGN PROFESSIONAL PRIOR TO INSTALLATION.

TREE STAKING SHALL BE DONE ON ALL TREES. CONTRACTOR SHALL STAKE AS PER DETAIL. ORIGINAL NURSERY STAKES ON TREES SHALL BE REMOVED BEFORE INSTALLATION. TREES MUST STAND UPRIGHT WITHOUT SUPPORT TO BE ACCEPTABLE.

INSTALL A PROFESSIONAL GRADE LANDSCAPE FABRIC UNDER ALL ROCK MULCH AREAS. SECURE TO ROUGH GRADE. DO NOT LEAVE EXPOSED. (SEE DEV ST 3.11) NO PLASTIC SHEETING CAN BE PLACED UNDER ROCK MULCH

ROCK MULCH SHALL BE WASHED AND CLEANED. MULCH DEPTH TO BE 4"–6" MIN. AND BE INSTALLED IN ALL PLANTING AREAS AND OVER ALL BERMS AS SHOWN ON APPROVED LANDSCAPE PLANS. WEED FABRIC SHOULD BE COVERED BY MULCH AND NOT VISIBLE.

ALL PLANTING PITS SHALL BE EITHER HAND OR BACKHOE DUG (NO AUGER). THE BOTTOM AND SIDES OF THE PLANTING PITS SHALL BE SCARIFIED BEFORE INSTALLATION OF THE PLANT MATERIAL. HOLES SHALL BE THREE TIMES AS WIDE AS THE ROOTBALL DIAMETER, THE SAME DEPTH AS THE ROOTBALL AND BACKFILLED WITH AN APPROVED SOIL MIX.

ALL PLANTING BEDS AND SOD AREAS SHALL BE STRIPPED AND CLEARED OF ALL LAWN, ROOTS, WEEDS, AND DEBRIS AND SHALL BE RAKED TO A SMOOTH AND EVEN GRADE PRIOR TO PLANT MATERIAL OR SOD INSTALLATION.

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INSTALL IBDU WATER SOLUBLE STARTER PLANT FERTILIZER BAGS/TABLETS OR AN APPROVED EQUAL IN ALL PLANTING PITS. USE 1 PER 1-GALLON CONTAINER, 3 PER 5-GALLON CONTAINER, AND 5 PER 15-GALLON CONTAINER/ 2" CAL. OR LARGER TREE.

CONTRACTOR TO APPLY A PRE-EMERGENT HERBICIDE AND PERMEABLE LANDSCAPE FABRIC THROUGHOUT ALL ROCK MULCH AREAS PRIOR TO PLACING MULCH. NO PRE-EMERGENT HERBICIDE SHALL BE APPLIED IN PERENNIAL, GROUNDCOVER, BULB AND ANNUAL AREAS. ADD GRANULAR PRE-EMERGENT HERBICIDE PER MANUFACTURER'S WRITTEN RECOMENDATIONS PRIOR TO INSTALLING LANDSCAPE FABRIC AND ROCK MULCH.

FINAL LOCATION OF ALL LANDSCAPE PLANT MATERIAL SHALL BE SET BY THE CONTRACTOR ACCORDING TO THE PLANS AND APPROVED BY THE LANDSCAPE ARCHITECT, DESIGN PROFESSIONAL OR OWNER'S REP BEFORE INSTALLATION.

NO PLANTS SHALL BE PLACED TO CONFLICT OR CREATE CONFLICT W/ SIGNS, LIGHTS, UTILITIES, ETC. IF PLANT LOCATION WILL CAUSE A CONFLICT, CONTACT THE LANDSCAPE ARCHITECT.

ALL PERENNIAL & GROUNDCOVER AREAS SHALL BE HAND SET BY THE CONTRACTOR IN AREAS SHOWN ON DRAWINGS AND APPROVED BY THE LANDSCAPE ARCHITECT, DESIGN PROFESSIONAL OR OWNER'S REP BEFORE INSTALLATION.

THE CONTRACTOR SHALL REMOVE ALL BURLAP, TWINE, TIES, CONTAINERS AND WIRE BASKETS FROM ALL PLANT MATERIAL. DO NOT DISTURB ROOTBALLS. REMOVE ANY EXCESS SOIL ON TREES OR SHRUBS THAT HAS ACCUMULATED DURING THE PACKAGING & SHIPPING PROCESS, (B&B STOCK – ESPECIALLY) IN ORDER TO DETERMINE PROPER PLANTING DEPTH IN ORDER TO PLACE ROOTBALL AT 1" ABOVE GRADE. CLEAN DOWN TO THE TOP OF STRUCTURAL (FLARED) ROOT SYSTEM.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROVIDE EFFECTIVE DUST CONTROL OF ALL PREPARED SOIL AREAS.

ALL TREES TO BE #1 GRADE NURSERY STOCK AND MEET CURRENT INDUSTRY QUALITY STANDARDS ADOPTED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) Z60 AND NEVADA REVISED STATES (NRS) 555 (REGULATIONS OF NURSERY AND NURSERY STOCK). ALL TREES MUST COMPLY WITH:

- NO GIRDLING, KINKED, CIRCLING OR "J" ROOTS.
- NO TREES THAT HAVE BEEN TOPPED.
- NO WOUNDS IN THE TRUNK BARK OR ON LIMBS.
- INSECT AND DISEASE FREE, RODENT AND MECHANICAL DAMAGE FREE.
- NO TREES THAT HAVE LARGE NURSERY STAKES THROUGH ROOTBALL OR HAVE BEEN GROWN ON A NURSERY STAKE.
- ROOTBALL TO BE APPROPRIATE TO CALIPER AND CROWN SIZE.
- TRUNK/ CROWN STRUCTURE AND TRUNK TAPER TO BE APPROPRIATE FOR THE SPECIES.
- ALL GRAFT UNIONS TO BE HEALTHY WITH TRUNK DIAMETER BELOW UNION LARGER THAN ABOVE UNION.
- ALL TREES TO STAND UPRIGHT WITHOUT STAKES.
- ROOTS, BARK AND SHOOT GROWTH TO GIVE EVIDENCE OF GOOD TREE VIGOR.
- ANY REPLACEMENT OF PLANT STOCK TO BE EQUAL TO ORIGINAL SPECIFICATION AND APPROVED BY THE OWNER'S REPRESENTATIVE OR DESIGN PROFESSIONAL AND THE COMMUNITY DEVELOPMENT PLANNING DEPARTMENT.

ALL PLANTING BEDS AND SOD AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS.

ALL BOX TREES TO BE STAKE FREE NURSERY STOCK, NO LARGE STAKES THROUGH ROOTBALL.

THE CONTRACTOR SHALL SPACE PLANT MATERIALS TO ACCOMMODATE EVERGREEN TREE GROWTH. SPACE ALL SHRUBS/ GROUND COVERS/ PERENNIALS A MINIMUM OF 8' AWAY FROM ANY EVERGREEN TREE TRUNK.

ANY SUBSTITUTION OF PLANT MATERIAL MUST BE SUBMITTED IN WRITING FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR DESIGN PROFESSIONAL AND THE COMMUNITY DEVELOPMENT DEPARTMENT.

THE CONTRACTOR SHALL INSPECT THE SITE REGULARLY TO REVIEW THE CONDITION OF ALL PLANTINGS. IF ANY CHANGES IN THE OVERALL MAINTENANCE PROGRAM ARE REQUIRED TO IMPROVE THE CONDITIONS TO AN ACCEPTABLE STANDARD, THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING. OTHERWISE THE CONTRACTOR ACCEPTS FULL RESPONSIBILITY FOR THE CONDITION OF THE PLANTINGS AND MUST HONOR THE GUARANTEE. ANY PLANTS REPLACED UNDER THIS GUARANTEE SHALL BE GUARANTEED FOR ONE FULL YEAR FROM THE DATE OF REPLACEMENT.

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE MAINTENANCE OF THE ENTIRE IRRIGATION SYSTEM & ALL LANDSCAPING UNTIL FINAL PROJECT ACCEPTANCE. AFTER FINAL PROJECT ACCEPTANCE ALL PROJECT MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE OWNER.

THE CONTRACTOR SHALL TOP DRESS ROUGH GRADE OF ALL LAWN AREAS WITH 2" OF PROFESSIONAL GRADE TOP SOIL MIX, APPROVED BY THE LANDSCAPE ARCHITECT OR DESIGN PROFESSIONAL. SCARIFY ALL LAWN AREAS INCORPORATING TOPSOIL INTO ROUGH GRADE.

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UPON INSTALLATION OF LANDSCAPING AND THE IRRIGATION SYSTEM, THE REGISTERED DESIGN PROFESSIONAL OR LANDSCAPE ARCHITECT OR OTHERS AS ALLOWED PER NRS SHALL CERTIFY THAT THE INSTALLATION WAS COMPLETED PER THE APPROVED PLANS. THE REGISTERED DESIGN PROFESSIONAL SHALL CHECK THE INSTALLATION TO VERIFY COMPLIANCE WITH APPROVED PLANS. THEN THE PLANNING DEPARTMENT SHALL INSPECT FOR FINAL APPROVAL. PLANT SPECIES IDENTIFICATION TAGS ARE TO BE LEFT ON PLANTS UNTIL AFTER APPROVAL OF THE LANDSCAPING AND THEN REMOVED.

IT IS UNDERSTOOD THAT MINOR DEVIATION AND/OR PLANT SUBSTITUTIONS MAY BE NECESSARY DURING THE COURSE OF THE PROJECT. THESE DEVIATIONS MAY BE DONE IF APPROVED BY THE LANDSCAPE ARCHITECT OR DESIGN PROFESSIONAL OR OTHERS AS ALLOWED PER NRS, AND IF CONSISTENT WITH THE ORIGINAL APPROVED DESIGN AND PLANTS SELECTED ARE SIMILAR TO THE ORIGINAL PLAN AND INTENDED PURPOSE. NOTIFICATION IN WRITING TO THE COMMUNITY DEVELOPMENT PLANNING DEPARTMENT IS REQUIRED FOR THESE INSTANCES. APPROVAL IS REQUIRED FROM THE DIRECTOR PRIOR TO INSTALLATION. UPON COMPLETION, AS-BUILT LANDSCAPE PLANS SHALL BE SUBMITTED TO COMMUNITY DEVELOPMENT PLANNING DEPARTMENT. MAJOR DESIGN REVISIONS MAY REQUIRE NEW FEES AND ADDITIONAL STAFF RESOURCES.

ALL LANDSCAPE AREAS MUST BE MAINTAINED BY THE PROPERTY OWNERS, INCLUDING USING THE MOST CURRENT PRUNING STANDARDS ACCEPTED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE AND/OR THE NATIONAL ARBORIST ASSOCIATION. ANY DAMAGED OR DEAD PLANT MUST BE REPLACED OR REPAIRED BY THE PROPERTY OWNERS WITHIN 30 DAYS FOLLOWING NOTIFICATION BY THE DIRECTOR. IF THE SEASON OF THE YEAR MAKES THIS REPAIR OR REPLACEMENT WITHIN A 30 DAY PERIOD IMPRACTICAL, THE PERSON RESPONSIBLE FOR LANDSCAPING SHALL SCHEDULE AN APPROPRIATE TIME FOR THE COMPLETION OF THE ACCOMPLISHMENT OF THIS WORK AS REQUIRED BY THE DIRECTOR.

MAINTENANCE MUST INCLUDE THE CHECKING OF THE SPRINKLER PATTERN AND DRIP SYSTEMS, PLANT CONDITION, WEEDING, FERTILIZATION, PEST CONTROL, REPLACEMENT OF MULCHES, WEED BARRIER AND CLEAR AWAY DEBRIS, PROPER PRUNING AND USE OF PROPER MOWING HEIGHTS. RADICAL PRUNING OR TRIMMING SUCH AS AS TOPPING SHALL REQUIRE REPLACEMENT OF THE PLANT MATERIAL.

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GENERAL IRRIGATION NOTES: 2/2007

ALL PLUMBING AND ELECTRICAL WORK SHALL BE COMPLETED AS PER ALL LOCAL CODES.

INSTALLATION OF MATERIALS SHALL BE PER MANUFACTURERS RECOMMENDATIONS OR AS SPECIFIED. SPRINKLER HEADS ARE EXACT. NO EXTRA PAYMENT WILL BE MADE WHERE PIPING MUST BE OFFSET TO AVOID EXISTING CONDITIONS, OTHER WORK OR WHERE CHANGES ARE NECESSARY TO FACILITATE INSTALLATION.

THE IRRIGATION SYSTEM SHALL BE CONSTRUCTED FOR WINTERIZATION BY THE CONTRACTOR.

ALL MATERIALS SHALL BE NEW, WITHOUT FLAWS AND CONSIDERED THE BEST AVAILABLE IN STOCK. THE COMPLETE SYSTEM SHALL HAVE A ONE-YEAR WARRANTY AFTER FINAL PROJECT ACCEPTANCE ON ALL PARTS AND LABOR.

PRIOR TO FINAL PROJECT ACCEPTANCE, THE CONTRACTOR SHALL INSTRUCT THE OWNER, OR HIS REPRESENTATIVE, IN THE PROPER OPERATION, MAINTENANCE, AND WINTERIZATION OF THE ENTIRE IRRIGATION SYSTEM.

THE CONTRACTOR SHALL PROVIDE AND KEEP CURRENT A COMPLETE SET OF RECORD DRAWINGS WHICH SHALL BE CORRECTED DAILY TO SHOW CHANGES IN THE ORIGINAL DRAWINGS. ALL MAINLINE PIPING AND VALVE LOCATIONS SHALL BE SHOWN WITH ACTUAL MEASUREMENTS TO REFERENCE POINTS.

WHEN THE SYSTEM IS COMPLETE, THE CONTRACTOR SHALL PERFORM A COVERAGE TEST. THE IRRIGATION SYSTEM SHALL PROVIDE 100% COVERAGE OF ALL LAWN & LANDSCAPE PLANTING AREAS.

ALL IRRIGATION MAINLINE PIPING & LATERAL PIPING SHALL BE SCHEDULE 40 PVC PIPE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SETTLING IN THE IRRIGATION TRENCHES OR ASSOCIATED IRRIGATION WORK AS A WARRANTY ITEM.

ALL IRRIGATION VALVES SHALL BE LOCATED IN PROFESSIONAL GRADE VALVE BOXES. SIZE OF VALVE BOXES SHALL VARY WITH NUMBER OF VALVES LOCATED IN BOX. ALL VALVE BOX LID ELEVATIONS SHALL BE SET FLUSH WITH FINISHED GRADE. PROVIDE BOX SIZE THAT WILL ALLOW 6" CLEARANCE AROUND ALL SIDES OF VALVES. PROVIDE BOLTS PER MANUFACTURER'S RECOMMENDATIONS AND SECURE EACH VALVE BOX.

ON ALL THREADED JOINTS WITHIN THE IRRIGATION SYSTEM, THE CONTRACTOR SHALL USE 2-3 FULL TURNS OF TEFLON TAPE AT EACH CONNECTION.

WIRE CONNECTORS SHALL BE USED ON ALL FIELD WIRE SPLICES AND CONNECTIONS.

ALL CONTROL WIRE SHALL BEAR A U/L APPROVED LABEL FOR DIRECT UNDERGROUND BURIAL IN NATIONAL ELECTRIC CODE CLASS IT CIRCUITS. AWG SIZES. ALL CONTROL WIRE RUNS LESS THAN 1000' SHALL HAVE NO SPLICES. IF A SPLICE OCCURS ON A FIELD CONTROL WIRE, THE CONTRACTOR SHALL INSTALL THE SPLICE IN A 6" ROUND VALVE BOX USING APPROVED WATERTIGHT CONNECTORS. IF APPROVED BY THE LANDSCAPE ARCHITECT OR DESIGN PROFESSIONAL. OTHERWISE THE ENTIRE FIELD CONTROL WIRE SHALL BE REMOVED & REPLACED.

TAPE AND BUNDLE ALL CONTROL WIRE TO BOTTOM OF MAINLINE PIPE AT 10' O.C.

THE IRRIGATION CONTROLLER SHALL BE INSTALLED IN A LOCATION AS SHOWN ON THE PLANS. THE LANDSCAPE ARCHITECT, DESIGN PROFESSIONAL, OR THE OWNER'S REPRESENTATIVE WILL APPROVE FINAL CONTROLLER LOCATION.

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IRRIGATION VALVE BOXES ARE TO BE INSTALLED IN LANDSCAPE PLANTING AREAS OR OTHER PROTECTED SPACES. VALVE BOXES SHALL NOT BE INSTALLED IN LAWN AREAS.

THE CONTRACTOR SHALL INSTALL SCHEDULE 40 GALVANIZED PIPING 5' ON EITHER SIDE OF THE BACK FLOW PREVENTER, AS DEPICTED IN THE STANDARD CITY'S DETAIL.

FILTER FABRIC FOR ABOVE ALL ROCK SUMPS SHALL BE PROFESSIONAL GRADE WEED BARRIER OR AN APPROVED EQUAL.

IRRIGATION MAINLINE TO BE BURIED 24" BELOW FINISHED GRADE AND ALL SPRAY SYSTEM LATERAL LINE PIPING TO BE BURIED 18" BELOW FINISH GRADE. ALL 3/4" DRIP IRRIGATION TUBING TO BE BURIED 4" – 6" BELOW FINISH GRADE.

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION. THE ACQUISITION OF ALL NECESSARY PERMITS ASSOCIATED WITH CONSTRUCTION SHALL BE THE CONTRACTORS RESPONSIBILITY.

ALL GALVANIZED PIPE IN CONTACT WITH SOIL SHALL BE COVERED WITH PVC TAPE TO PREVENT PIPE CORROSION (PER UNIFORM PLUMBING CODE).

THE CONTRACTOR SHALL INSTALL A CURB STOP AND WASTE VALVE AT THE BACKFLOW PREVENTER (SIZE TO MATCH MAINLINE) (AS PER CITY'S PUBLIC WORKS DEPARTMENT DETAIL.).

PIPE DOPE SHALL NOT BE USED ANYWHERE ON THE IRRIGATION SYSTEM.

NO 3/4" PIPE SHALL BE USED ANYWHERE ON THE SPRAY IRRIGATION SYSTEM. (EXCEPT FOR 3/4" SWING JOINT ASSEMBLIES FOR ROTOR OR POP-UP SPRAY HEADS).

THE CONTRACTOR SHALL EXPOSE ENDS OF ALL IRRIGATION SLEEVES. ANY BROKEN OR SHATTERED ENDS OF THE IRRIGATION SLEEVES SHALL BE CUT TO A CLEAN END BEFORE INSTALLATION OF EITHER MAINLINE PIPE, LATERAL LINES OR DRIP IRRIGATION TUBING. ALL SLEEVE ENDS SHALL BE INSPECTED BY THE LA/DESIGN PROFESSIONAL BEFORE BURYING.

FINAL CONNECTION OF THE VALVE WIRES TO THE CONTROLLER SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

THE CONTRACTOR SHALL AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND UTILITIES WHICH MAY EFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO THE SAME.

THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD OR UNDERGROUND POWER AND/OR TELEPHONE, WATER, GAS AND SEWER FACILITIES SO AS TO SAFELY PROTECT ALL UTILITIES, PERSONNEL, AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COSTS AND LIABILITY IN CONNECTION THEREWITH.

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.

ALL MAINLINES SHALL BE PRESSURE TESTED AT 1.5 TIMES THE STATIC PRESSURE FOR A MINIMUM 2 HOUR PERIOD PRIOR TO BACKFILLING OF TRENCHES. TEST WILL BE CONSIDERED SUCCESSFUL IF NO PRESSURE LOSS OCCURS DURING THE TWO HOURS. IF ANY LEAKS ARE PRESENT THEY SHALL BE CORRECTED AND LINES SHALL BE RE-TESTED PRIOR TO BACKFILLING TRENCHES.

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PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE AT THE TIME OF SAID REJECTION.

THE CONTRACTOR SHALL FLUSH ALL LATERALS AND EMITTER LINES PRIOR TO INSTALLING EMITTERS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED BY HIS WORK. HE SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS, FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS UNDER SIDEWALKS AND PAVING.

SHOULD DISCREPANCIES ARISE BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS WHICH REQUIRE FIELD MODIFICATIONS OR PLAN REVISIONS, THE LANDSCAPE ARCHITECT, DESIGN PROFESSIONAL, OR OWNER'S REPRESENTATIVE SHALL BE CONTACTED PRIOR TO CONSTRUCTION FOR RESOLUTION OR PLAN REVISION.

DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT, DESIGN PROFESSIONAL, OR THE OWNERS REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

THE IRRIGATION CONTROLLER SHALL BE WIRED DIRECTLY TO A 110 VOLT POWER SOURCE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE IRRIGATION CONTROLLER WIRING TO THE POWER SOURCE. CONNECTING THE CONTROLLER TO THE POWER SOURCE SHALL BE THE RESPONSIBILITY OF A LICENSED ELECTRICAL CONTRACTOR. THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ANY LOCAL CODES OR ORDINANCES THAT APPLY. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE POWER SOURCE AND EXACT LOCATION OF THE CONTROLLER WITH OWNER'S REPRESENTATIVE.

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TYPICAL PLANT LIST EXAMPLE

5/2006

TREE LEGEND

QUANTITY	SYMBOL	COMMON/ BOTANICAL NAME	SIZE	SPACING
9	A	CHANTICLEER FLOWERING PEAR Pyrus calleryana 'Chanticleer'	2" CAL	40 FEET ON CENTER
4	B	BLOODGOOD JAPANESE MAPLE Acer palmatum 'Bloodgood'	2" CAL	AS PER PLANS
16	C	NORTHERN RED OAK Quercus rubra	2" CAL	40 FEET ON CENTER
5	D	BLUE ASH Fraxinus quadrangulata	2" CAL	40 FEET ON CENTER
3	E	BACHERI BLUE SPRUCE Picea pungens 'Bocheri'	6' TALL (MIN.)	15 FEET ON CENTER
1	F	BLUE HAVEN JUNIPER Juniperus scopulorum	6' TALL (MIN.)	8 FEET ON CENTER

TYPICAL PLANT LIST EXAMPLE

5/2006

SHRUB/ PERENNIAL LEGEND

QUANTITY	SYMBOL	COMMON/ BOTANICAL NAME	SIZE	SPACING
120	AA	JAPANESE REDLEAF BARBERRY Berberis thunbergii 'Atropurpurea'	5 GAL.	6 FEET ON CENTER
15	BB	ROCK COTONEASTER Cotoneaster horizontalis	5 GAL.	6 FEET ON CENTER
207	CC	DWARF OREGON GRAPE Mahonia aquifolium 'Compacta'	5 GAL.	4 FEET ON CENTER
109	DD	SUTTER'S GOLD POTENTILLA Potentilla fruticosa 'Sutter's Gold'	5 GAL.	4 FEET ON CENTER
11	EE	VANHOUTTE SPIREA Spiraea vanhouttei	5 GAL.	6 FEET ON CENTER
3	FF	DWARF MUGHO PINE Pinus mugo mugo	5 GAL.	5 FEET ON CENTER
55	GG	RED-HOT POKER Kniphofia uvaria	1 GAL	3 FEET ON CENTER
30	HH	MOONBEAM COREOPSIS Coreopsis lanceolata 'Moonbeam'	1 GAL.	2 FEET ON CENTER
27	II	DAY LILIES (MIXED COLORS) Hemerocallis spp.	1 GAL.	3 FEET ON CENTER
24	JJ	BALTIC IVY Hedera helix 'Baltica'	1 GAL.	18 INCHES ON CENTER

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NO.	REVISION	DATE	Standard Landscape Detail	File Name: [H:\Landscape details\PLANTING LEGEND.dwg]
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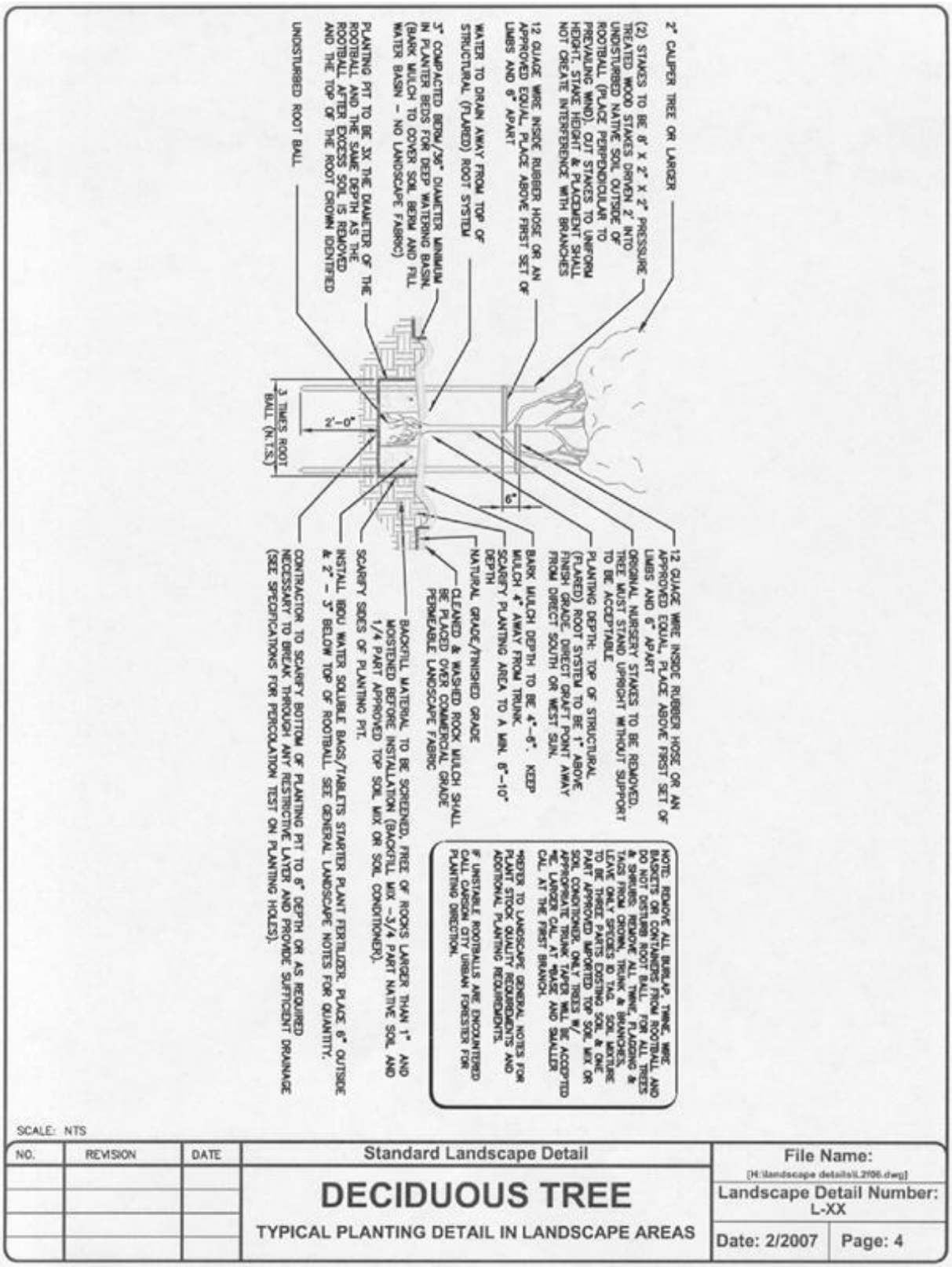
2" CALIPER TREE OR LARGER
(2) STAKES TO BE 8' X 2" X 2" PRESSURE TREATED WOOD STAKES DRIVEN 2' INTO UNDISTURBED NATIVE SOIL OUTSIDE OF ROOTBALL (PLACE PERPENDICULAR TO PREVAILING WIND). CUT STAKES TO UNIFORM HEIGHT. STAKE HEIGHT & PLACEMENT SHALL NOT CREATE INTERFERENCE WITH BRANCHES
12 GUAGE WIRE INSIDE RUBBER HOSE OR AN APPROVED EQUAL. PLACE ABOVE FIRST SET OF LIMBS AND 6" APART
WATER TO DRAIN AWAY FROM TOP OF STRUCTURAL (FLARED) ROOT SYSTEM
3" COMPACTED BERM/36" DIAMETER MINIMUM IN PLANTER BEDS FOR DEEP WATERING BASIN. (BARK MULCH TO COVER SOIL BERM AND FILL WATER BASIN – NO LANDSCAPE FABRIC)
PLANTING PIT TO BE 3X THE DIAMETER OF THE ROOTBALL AND THE SAME DEPTH AS THE ROOTBALL AFTER EXCESS SOIL IS REMOVED AND THE TOP OF THE ROOT CROWN IDENTIFIED
UNDISTURBED ROOT BALL
3 TIMES ROOT BALL (N.T.S.)
2'-0"
6"
12 GUAGE WIRE INSIDE RUBBER HOSE OR AN APPROVED EQUAL. PLACE ABOVE FIRST SET OF LIMBS AND 6" APART
ORIGINAL NURSERY STAKES TO BE REMOVED. TREE MUST STAND UPRIGHT WITHOUT SUPPORT TO BE ACCEPTABLE
PLANTING DEPTH: TOP OF STRUCTURAL (FLARED) ROOT SYSTEM TO BE 1" ABOVE FINISH GRADE. DIRECT CRAFT POINT AWAY FROM DIRECT SOUTH OR WEST SUN.
BARK MULCH DEPTH TO BE 4"-6". KEEP MULCH 4" AWAY FROM TRUNK.
SCARIFY PLANTING AREA TO A MIN. 8"-10" DEPTH
NATURAL GRADE/FINISHED GRADE
CLEANED & WASHED ROCK MULCH SHALL BE PLACED OVER COMMERCIAL GRADE PERMEABLE LANDSCAPE FABRIC
BACKFILL MATERIAL TO BE SCREENED, FREE OF ROCKS LARGER THAN 1" AND MOISTENED BEFORE INSTALLATION (BACKFILL MIX –3/4 PART NATIVE SOIL AND 1/4 PART APPROVED TOP SOIL MIX OR SOIL CONDITIONER).
SCARIFY SIDES OF PLANTING PIT.
INSTALL IBDU WATER SOLUBLE BAGS/TABLETS STARTER PLANT FERTILIZER. PLACE 6" OUTSIDE & 2" – 3" BELOW TOP OF ROOTBALL. SEE GENERAL LANDSCAPE NOTES FOR QUANTITY.
CONTRACTOR TO SCARIFY BOTTOM OF PLANTING PIT TO 6" DEPTH OR AS REQUIRED NECESSARY TO BREAK THROUGH ANY RESTRICTIVE LAYER AND PROVIDE SUFFICIENT DRAINAGE. (SEE SPECIFICATIONS FOR PERCOLATION TEST ON PLANTING HOLES).
NOTE: REMOVE ALL BURLAP, TWINE, WIRE BASKETS OR CONTAINERS FROM ROOTBALL AND DO NOT DISTURB ROOT BALL. FOR ALL TREES & SHRUBS: REMOVE ALL TWINE, FLAGGING & TAGS FROM CROWN, TRUNK & BRANCHES. LEAVE ONLY SPECIES ID TAG. SOIL MIXTURE TO BE THREE PARTS EXISTING SOIL & ONE PART APPROVED IMPORTED TOP SOIL MIX OR SOIL CONDITIONER. ONLY TREES W/ APPROPRIATE TRUNK TAPER WILL BE ACCEPTED *RE: LARGER CAL. AT *BASE AND SMALLER CAL. AT THE FIRST BRANCH.
*REFER TO LANDSCAPE GENERAL NOTES FOR PLANT STOCK QUALITY REQUIREMENTS AND ADDITIONAL PLANTING REQUIREMENTS.
IF UNSTABLE ROOTBALLS ARE ENCOUNTERED CALL CARSON CITY URBAN FORESTER FOR PLANTING DIRECTION.
SCALE: NTS
NO.
REVISION
DATE
Standard Landscape Detail
DECIDUOUS TREE
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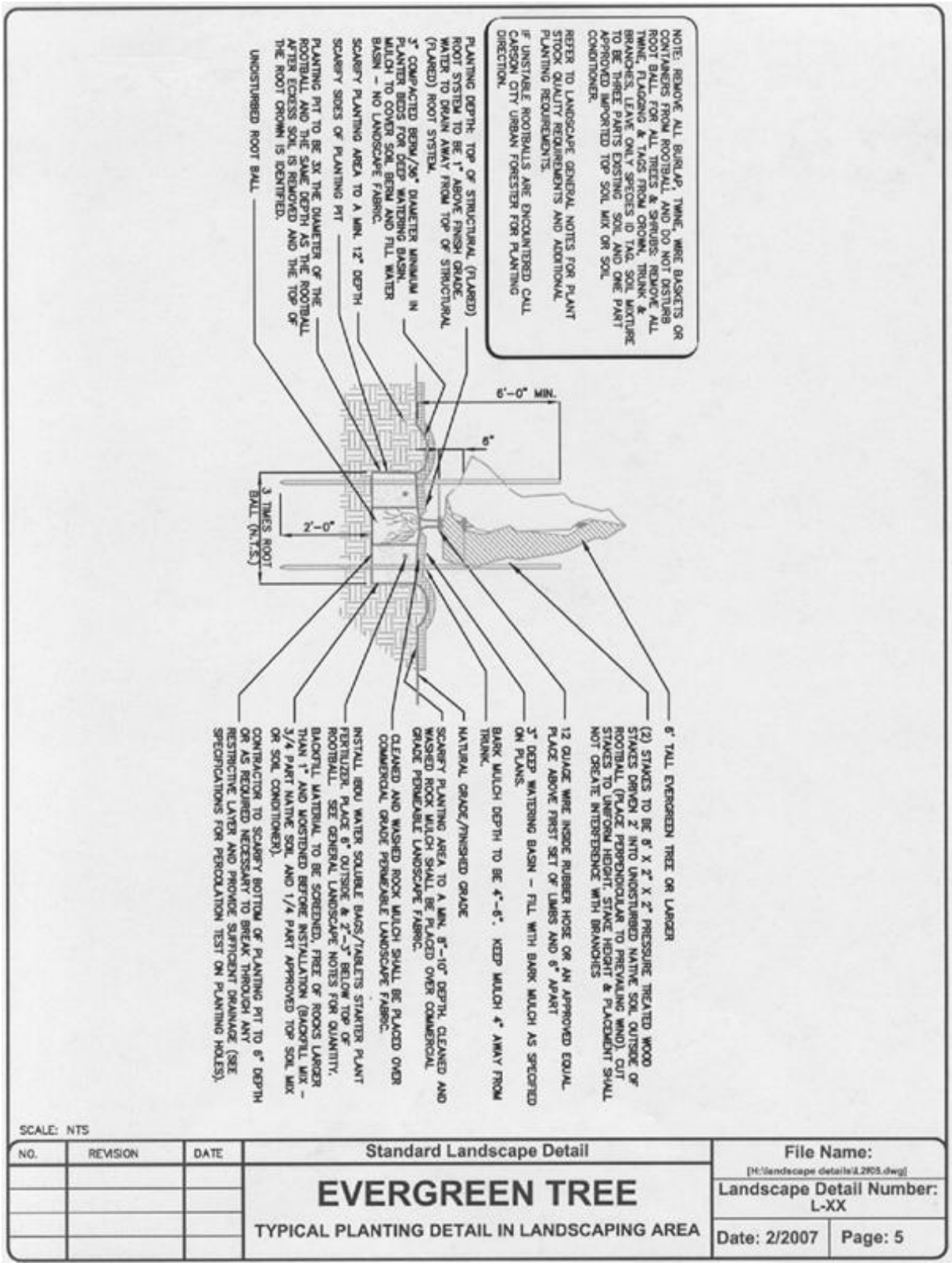
NOTE: REMOVE ALL BURLAP, TWINE, WIRE BASKETS OR CONTAINERS FROM ROOTBALL AND DO NOT DISTURB ROOT BALL FOR ALL TREES & SHRUBS; REMOVE ALL TWINE, FLAGGING & TAGS FROM CROWN, TRUNK & BRANCHES. LEAVE ONLY SPECIES ID TAG. SOIL MIXTURE TO BE THREE PARTS EXISTING SOIL AND ONE PART APPROVED IMPORTED TOP SOIL MIX OR SOIL CONDITIONER.
REFER TO LANDSCAPE GENERAL NOTES FOR PLANT STOCK QUALITY REQUIREMENTS AND ADDITIONAL PLANTING REQUIREMENTS.
IF UNSTABLE ROOTBALLS ARE ENCOUNTERED CALL CARSON CITY URBAN FORESTER FOR PLANTING DIRECTION.
PLANTING DEPTH: TOP OF STRUCTURAL (FLARED) ROOT SYSTEM TO BE 1" ABOVE FINISH GRADE. WATER TO DRAIN AWAY FROM TOP OF STRUCTURAL (FLARED) ROOT SYSTEM.
3" COMPACTED BERM/36" DIAMETER MINIMUM IN PLANTER BEDS FOR DEEP WATERING BASIN. MULCH TO COVER SOIL BERM AND FILL WATER BASIN – NO LANDSCAPE FABRIC.
SCARIFY PLANTING AREA TO A MIN. 12" DEPTH
SCARIFY SIDES OF PLANTING PIT
PLANTING PIT TO BE 3X THE DIAMETER OF THE ROOTBALL AND THE SAME DEPTH AS THE ROOTBALL AFTER EXCESS SOIL IS REMOVED AND THE TOP OF THE ROOT CROWN IS IDENTIFIED.
UNDISTURBED ROOT BALL
6'-0" MIN.
6"
2'-0"
3 TIMES ROOT BALL (N.T.S.)
6' TALL EVERGREEN TREE OR LARGER
(2) STAKES TO BE 8' X 2" X 2" PRESSURE TREATED WOOD STAKES DRIVEN 2' INTO UNDISTURBED NATIVE SOIL OUTSIDE OF ROOTBALL (PLACE PERPENDICULAR TO PREVAILING WIND). CUT STAKES TO UNIFORM HEIGHT. STAKE HEIGHT & PLACEMENT SHALL NOT CREATE INTERFERENCE WITH BRANCHES
12 GUAGE WIRE INSIDE RUBBER HOSE OR AN APPROVED EQUAL. PLACE ABOVE FIRST SET OF LIMBS AND 6" APART
3" DEEP WATERING BASIN – FILL WITH BARK MULCH AS SPECIFIED ON PLANS.
BARK MULCH DEPTH TO BE 4"-6". KEEP MULCH 4" AWAY FROM TRUNK.
NATURAL GRADE/FINISHED GRADE
SCARIFY PLANTING AREA TO A MIN. 8"-10" DEPTH. CLEANED AND WASHED ROCK MULCH SHALL BE PLACED OVER COMMERCIAL GRADE PERMEABLE LANDSCAPE FABRIC.
CLEANED AND WASHED ROCK MULCH SHALL BE PLACED OVER COMMERCIAL GRADE PERMEABLE LANDSCAPE FABRIC.
INSTALL IBDU WATER SOLUBLE BAGS/TABLETS STARTER PLANT FERTILIZER. PLACE 6" OUTSIDE & 2"-3" BELOW TOP OF ROOTBALL. SEE GENERAL LANDSCAPE NOTES FOR QUANTITY.
BACKFILL MATERIAL TO BE SCREENED, FREE OF ROCKS LARGER THAN 1" AND MOISTENED BEFORE INSTALLATION (BACKFILL MIX – 3/4 PART NATIVE SOIL AND 1/4 PART APPROVED TOP SOIL MIX OR SOIL CONDITIONER).
CONTRACTOR TO SCARIFY BOTTOM OF PLANTING PIT TO 6" DEPTH OR AS REQUIRED NECESSARY TO BREAK THROUGH ANY RESTRICTIVE LAYER AND PROVIDE SUFFICIENT DRAINAGE. (SEE SPECIFICATIONS FOR PERCOLATION TEST ON PLANTING HOLES).
SCALE: NTS
NO.
REVISION
DATE
Standard Landscape Detail
EVERGREEN TREE
TYPICAL PLANTING DETAIL IN LANDSCAPING AREA
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Landscape Detail Number:
L-XX
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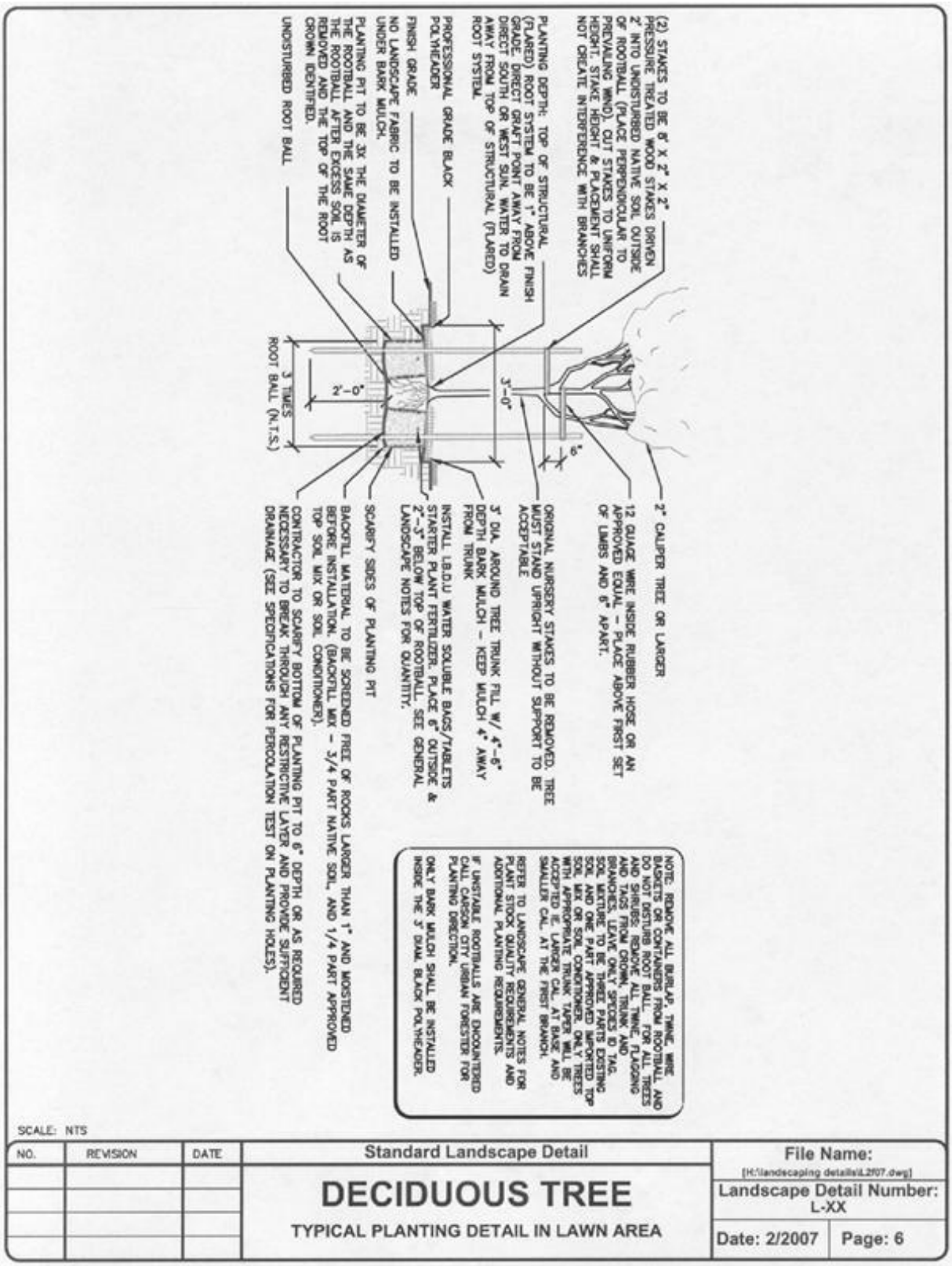
(2) STAKES TO BE 8' X 2" X 2" PRESSURE TREATED WOOD STAKES DRIVEN 2' INTO UNDISTURBED NATIVE SOIL OUTSIDE OF ROOTBALL (PLACE PERPENDICULAR TO PREVAILING WIND). CUT STAKES TO UNIFORM HEIGHT. STAKE HEIGHT & PLACEMENT SHALL NOT CREATE INTERFERENCE WITH BRANCHES
PLANTING DEPTH: TOP OF STRUCTURAL (FLARED) ROOT SYSTEM TO BE 1" ABOVE FINISH GRADE. DIRECT GRAFT POINT AWAY FROM DIRECT SOUTH OR WEST SUN. WATER TO DRAIN AWAY FROM TOP OF STRUCTURAL (FLARED) ROOT SYSTEM.
PROFESSIONAL GRADE BLACK POLYHEADER
FINISH GRADE
NO LANDSCAPE FABRIC TO BE INSTALLED UNDER BARK MULCH.
PLANTING PIT TO BE 3X THE DIAMETER OF THE ROOTBALL AND THE SAME DEPTH AS THE ROOTBALL AFTER EXCESS SOIL IS REMOVED AND THE TOP OF THE ROOT CROWN IDENTIFIED.
UNDISTURBED ROOT BALL
3 TIMES ROOT BALL (N.T.S.)
2'-0"
3'-0"
6"
2" CALIPER TREE OR LARGER
12 GUAGE WIRE INSIDE RUBBER HOSE OR AN APPROVED EQUAL – PLACE ABOVE FIRST SET OF LIMBS AND 6" APART.
ORIGINAL NURSERY STAKES TO BE REMOVED. TREE MUST STAND UPRIGHT WITHOUT SUPPORT TO BE ACCEPTABLE
3' DIA. AROUND TREE TRUNK FILL W/ 4"-6" DEPTH BARK MULCH – KEEP MULCH 4" AWAY FROM TRUNK
INSTALL LB.D.U WATER SOLUBLE BAGS/TABLETS STARTER PLANT FERTILIZER. PLACE 6" OUTSIDE & 2"-3" BELOW TOP OF ROOTBALL. SEE GENERAL LANDSCAPE NOTES FOR QUANTITY.
SCARIFY SIDES OF PLANTING PIT
BACKFILL MATERIAL TO BE SCREENED FREE OF ROCKS LARGER THAN 1" AND MOISTENED BEFORE INSTALLATION. (BACKFILL MIX – 3/4 PART NATIVE SOIL, AND 1/4 PART APPROVED TOP SOIL MIX OR SOIL CONDITIONER).
CONTRACTOR TO SCARIFY BOTTOM OF PLANTING PIT TO 6" DEPTH OR AS REQUIRED NECESSARY TO BREAK THROUGH ANY RESTRICTIVE LAYER AND PROVIDE SUFFICIENT DRAINAGE (SEE SPECIFICATIONS FOR PERCOLATION TEST ON PLANTING HOLES).
NOTE: REMOVE ALL BURLAP, TWINE, WIRE BASKETS OR CONTAINERS FROM ROOTBALL AND DO NOT DISTURB ROOT BALL. FOR ALL TREES AND SHRUBS: REMOVE ALL TWINE, FLAGGING AND TAGS FROM CROWN, TRUNK, AND BRANCHES. LEAVE ONLY SPECIES ID TAG. SOIL MIXTURE TO BE THREE PARTS EXISTING SOIL AND ONE PART APPROVED IMPORTED TOP SOIL MIX OR SOIL CONDITIONER. ONLY TREES WITH APPROPRIATE TRUNK TAPER WILL BE ACCEPTED IE. LARGER CAL. AT BASE AND SMALLER CAL. AT THE FIRST BRANCH.
REFER TO LANDSCAPE GENERAL NOTES FOR PLANT STOCK QUALITY REQUIREMENTS AND ADDITIONAL PLANTING REQUIREMENTS.
IF UNSTABLE ROOTBALLS ARE ENCOUNTERED CALL CARSON CITY URBAN FORESTER FOR PLANTING DIRECTION.
ONLY BARK MULCH SHALL BE INSTALLED INSIDE THE 3' DIAM. BLACK POLYHEADER.
SCALE: NTS
NO.
REVISION
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Standard Landscape Detail
DECIDUOUS TREE
TYPICAL PLANTING DETAIL IN LAWN AREA
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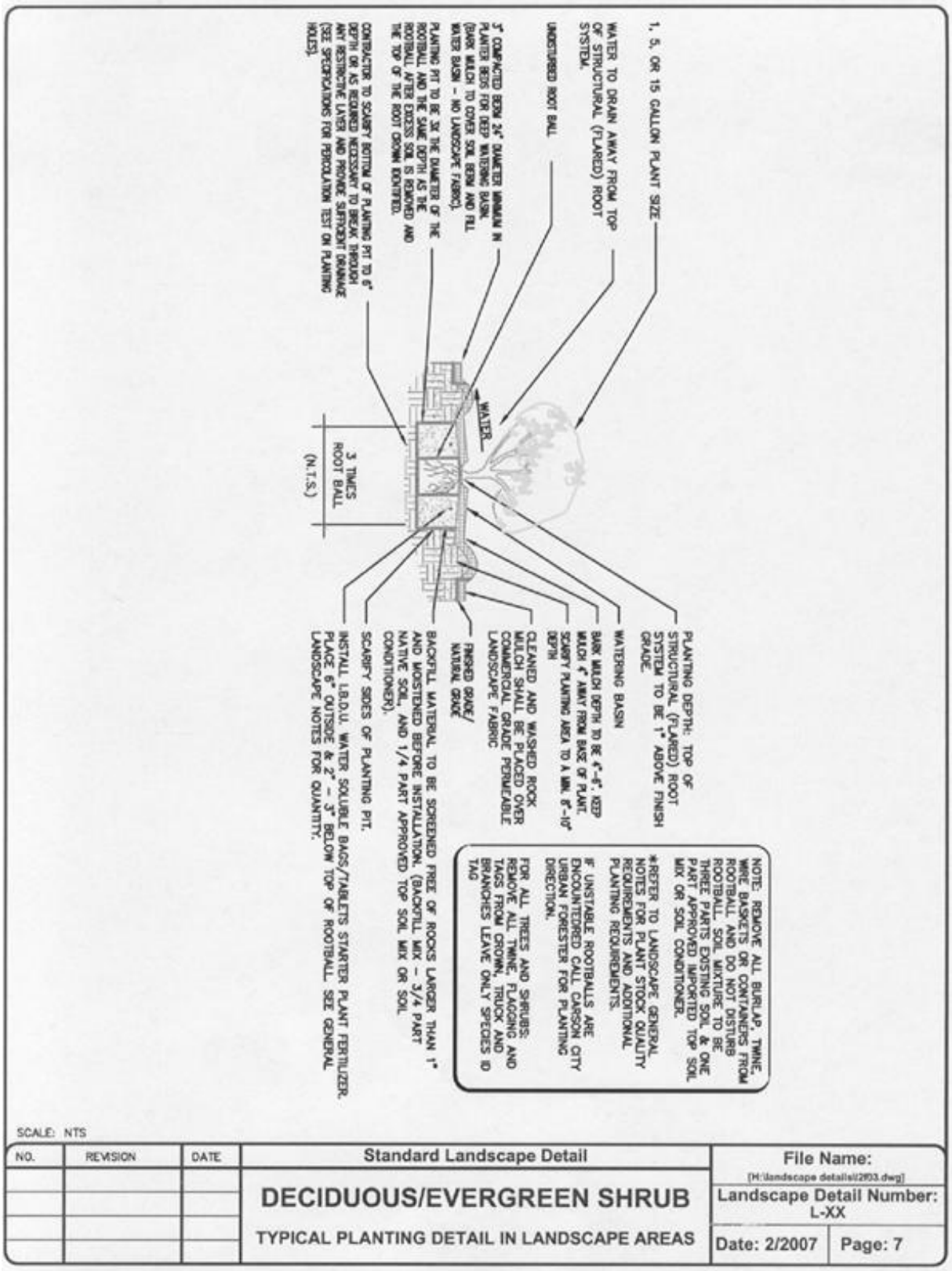
1, 5, OR 15 GALLON PLANT SIZE
WATER TO DRAIN AWAY FROM TOP OF STRUCTURAL (FLARED) ROOT SYSTEM.
UNDISTURBED ROOT BALL
3" COMPACTED BERM 24" DIAMETER MINIMUM IN PLANTER BEDS FOR DEEP WATERING BASIN. (BARK MULCH TO COVER SOIL BERM AND FILL WATER BASIN – NO LANDSCAPE FABRIC).
PLANTING PIT TO BE 3X THE DIAMETER OF THE ROOTBALL AND THE SAME DEPTH AS THE ROOTBALL AFTER EXCESS SOIL IS REMOVED AND THE TOP OF THE ROOT CROWN EXPOSED.
CONTRACTOR TO SCARIFY BOTTOM OF PLANTING PIT TO 6" DEPTH OR AS REQUIRED NECESSARY TO BREAK THROUGH ANY RESTRICTIVE LAYER AND PROVIDE SUFFICIENT DRAINAGE (SEE SPECIFICATIONS FOR PERCOLATION TEST ON PLANTING HOLES).
WATER
3 TIMES ROOT BALL
(N.T.S.)
PLANTING DEPTH: TOP OF STRUCTURAL (FLARED) ROOT SYSTEM TO BE 1" ABOVE FINISH GRADE.
WATERING BASIN
BARK MULCH DEPTH TO BE 4"-6". KEEP MULCH 4" AWAY FROM BASE OF PLANT.
SCARIFY PLANTING AREA TO A MIN. 8"-10" DEPTH
CLEANED AND WASHED ROCK MULCH SHALL BE PLACED OVER COMMERCIAL GRADE PERMEABLE LANDSCAPE FABRIC
FINISHED GRADE/ NATURAL GRADE
BACKFILL MATERIAL TO BE SCREENED FREE OF ROCKS LARGER THAN 1" AND MOISTENED BEFORE INSTALLATION. (BACKFILL MIX – 3/4 PART NATIVE SOIL, AND 1/4 PART APPROVED TOP SOIL MIX OR SOIL CONDITIONER).
SCARIFY SIDES OF PLANTING PIT.
INSTALL I.B.D.U. WATER SOLUBLE BAGS/TABLETS STARTER PLANT FERTILIZER. PLACE 6" OUTSIDE & 2" – 3" BELOW TOP OF ROOTBALL. SEE GENERAL LANDSCAPE NOTES FOR QUANTITY.
NOTE: REMOVE ALL BURLAP, TWINE, WIRE BASKETS OR CONTAINERS FROM ROOTBALL AND DO NOT DISTURB ROOTBALL. SOIL MIXTURE TO BE THREE PARTS EXISTING SOIL & ONE PART APPROVED IMPORTED TOP SOIL MIX OR SOIL CONDITIONER.
*REFER TO LANDSCAPE GENERAL NOTES FOR PLANT STOCK QUALITY REQUIREMENTS AND ADDITIONAL PLANTING REQUIREMENTS.
IF UNSTABLE ROOTBALLS ARE ENCOUNTERED CALL CARSON CITY URBAN FORESTER FOR PLANTING DIRECTION.
FOR ALL TREES AND SHRUBS: REMOVE ALL TWINE, FLAGGING AND TAGS FROM CROWN, TRUNK AND BRANCHES LEAVE ONLY SPECIES ID TAG
SCALE: NTS
NO.
REVISION
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Standard Landscape Detail
DECIDUOUS/EVERGREEN SHRUB
TYPICAL PLANTING DETAIL IN LANDSCAPE AREAS
File Name:
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IRRIGATION LEGEND**

2/2007

SYMBOL	BRAND	MODEL NUMBER	P.S.I.	G.P.M.	RADIUS	COMMENTS
	RAINBIRD	1804-8Q-FLT	30	.39	8'	4" POP-UP SPRAY HEAD
	RAINBIRD	1804-8H-FLT	30	.79	8'	4" POP-UP SPRAY HEAD
	RAINBIRD	1804-10Q-LA	30	.39	10'	4" POP-UP SPRAY HEAD
	RAINBIRD	1804-10H-LA	30	.79	10'	4" POP-UP SPRAY HEAD
	RAINBIRD	1804-10F-LA	30	.57	10'	4" POP-UP SPRAY HEAD
	WILKINS	BACKFLOW PREVENTER				BACKFLOW PREVENTER (INSTALL IN STRONG BOX INSULATED BACKFLOW COVER)
	STRONG BOX	SBBC-45 ALI				45" LONG, 29.5" HIGH, 16" WIDE, (ALUMINUM INSULATED COVER, LOW PROFILE).
	WATOURS	ISOLATION VALVE/GATE VALVE				1 1/2" OR 2" GATE VALVE (MATCH TO MAINLINE SIZE)
	MUELLER	CURB AND STOP WASTE VALVE				1" VALVE (MATCH TO MAINLINE SIZE)
	WILKINS	500 SERIES				2" PRESSURE REDUCING VALVE
	RAINBIRD	150-PEB				1 1/2" ELECTRIC PLASTIC VALVE (SPRAY SYSTEM)
	RAINBIRD	44RC				1" QUICK COUPLING VALVE
	--	PVC MAINLINE – SIZE INDICATED ON DRAWINGS				SCHEDULE 40 PIPE
	--	1" – 2" DIAM. PVC LATERAL LINES – SIZE INDICATED ON DRAWINGS				SCHEDULE 40 PIPE
	--	EXISTING PVC IRR. SLEEVES (NEW SLEEVES INDICATED ON DRAWINGS)				
	--	VALVE NUMBER GALLONS				
DRIP IRRIGATION SYSTEM **						
	RAINBIRD	XCZ-100				CONTROL ZONE KIT W/ 1" DV ELECTRIC PLASTIC VALVE (DRIP SYSTEM) (USE CARSON INDUSTRIES, INC. VALVE BOX OR AN APPROVED EQUAL – SIZE 13¾" x 23¼")
	PEPCO	3/4" DRIP TUBING				
	PEPCO	FLUSHING END CAP				
	RAINBIRD	XB-10 OR XB-10-6 EMITTERS				SINGLE OR MULTI OUTLET PRESSURE COMPENSATING – INSTALL DRIP TO ALL PLANTS

**IDENTIFIED BRANDS ARE FOR ILLUSTRATION PURPOSES ONLY. THE LANDSCAPE ARCHITECT OR DESIGN PROFESSIONAL IS RESPONSIBLE FOR SPECIFYING THE PROPER EQUIPMENT FOR THE IRRIGATION SYSTEM.

SCALE: NTS

NO.	REVISION	DATE	Standard Irrigation Detail	File Name: [H:\landscape detail\IRR-LEGEND.dwg]
			TYPICAL IRRIGATION LEGEND	Landscape Detail Number: L-XX
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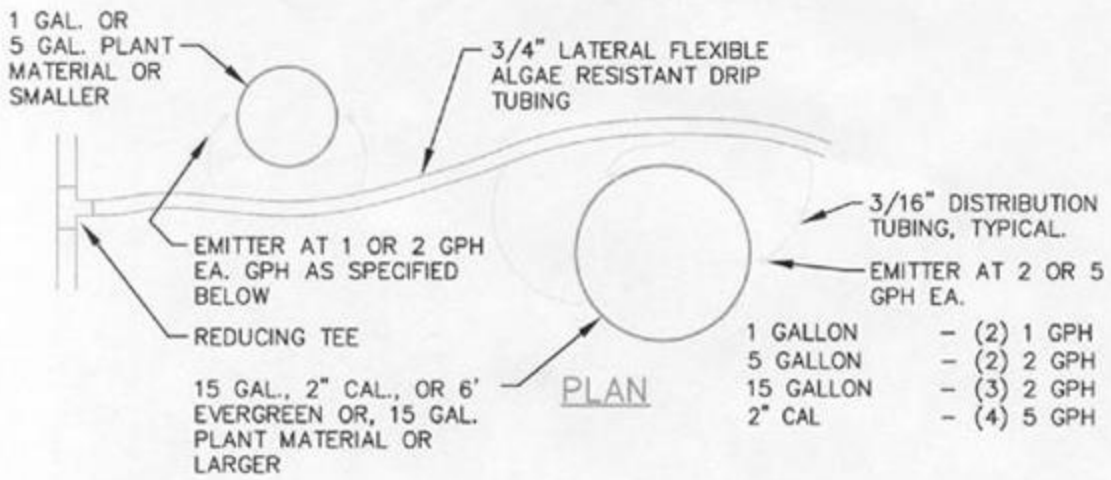
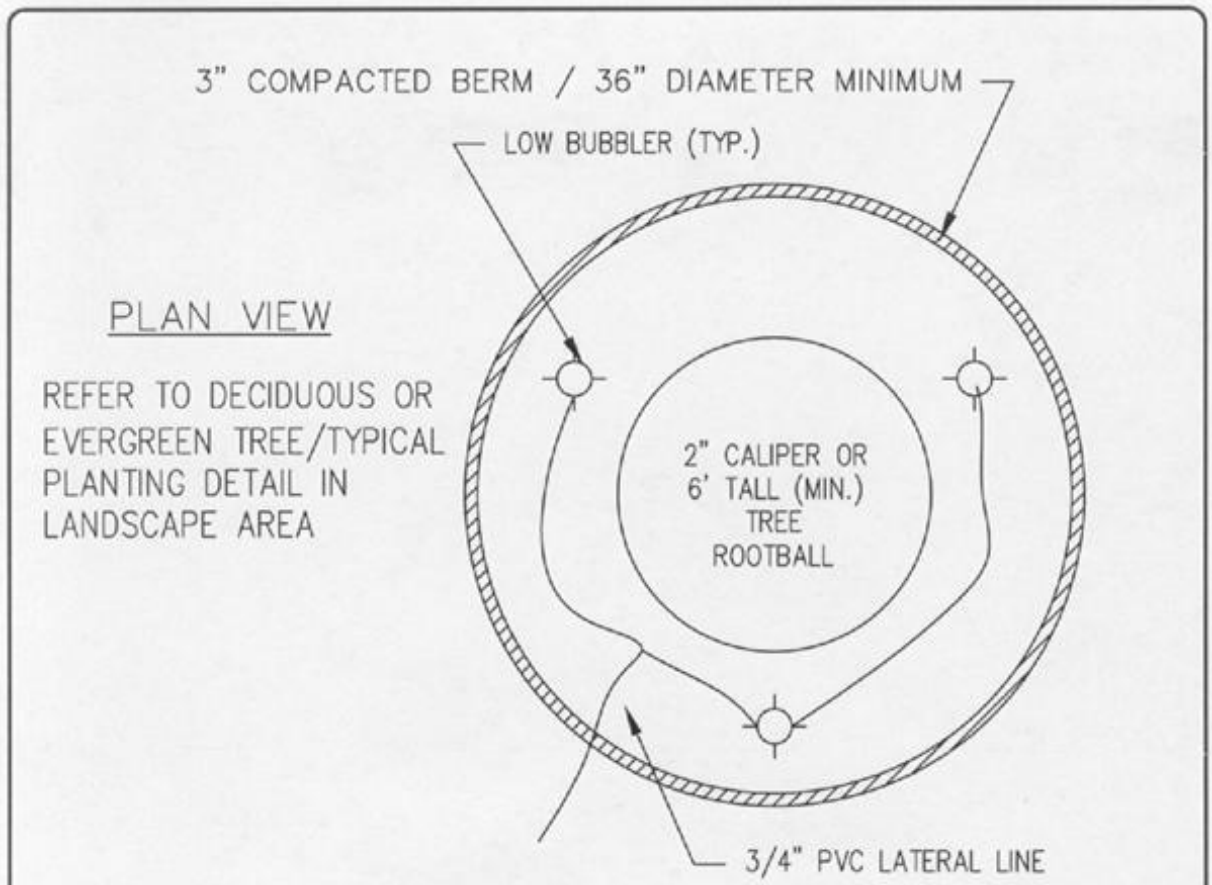
NOTES:

1. STAKE DISTRIBUTION TUBING IN PLACE AT SURFACE OF EACH EMITTER.
2. ALL PLANTS LOCATED ON SLOPES SHALL HAVE EMITTERS PLACED UP HILL FROM PLANT.
3. DO NOT WRAP DISTRIBUTION TUBING AROUND PLANT STEM OR TREE TRUNK.
4. DO NOT PLACE EMITTERS AGAINST PLANT STEM OR TREE TRUNK.
5. PLACE EMITTERS AROUND PLANT FOR EQUAL DISTRIBUTION OF WATER.
6. CONTRACTOR IS RESPONSIBLE TO ESTABLISH WATERING TIMES AND DURATIONS.
7. EMITTER (GPH) WATER RATE MAY BE ALTERED DUE TO SOIL TYPE AND SOIL DRAINAGE CHARACTERISTICS.



SCALE: NTS

NO.	REVISION	DATE	Standard Irrigation Detail	File Name: [H:\landscape details\DRIP.dwg]
			TYPICAL DRIP EMITTER DETAIL	Landscape Detail Number: L-XX
				Date: 2/2007 Page: 9

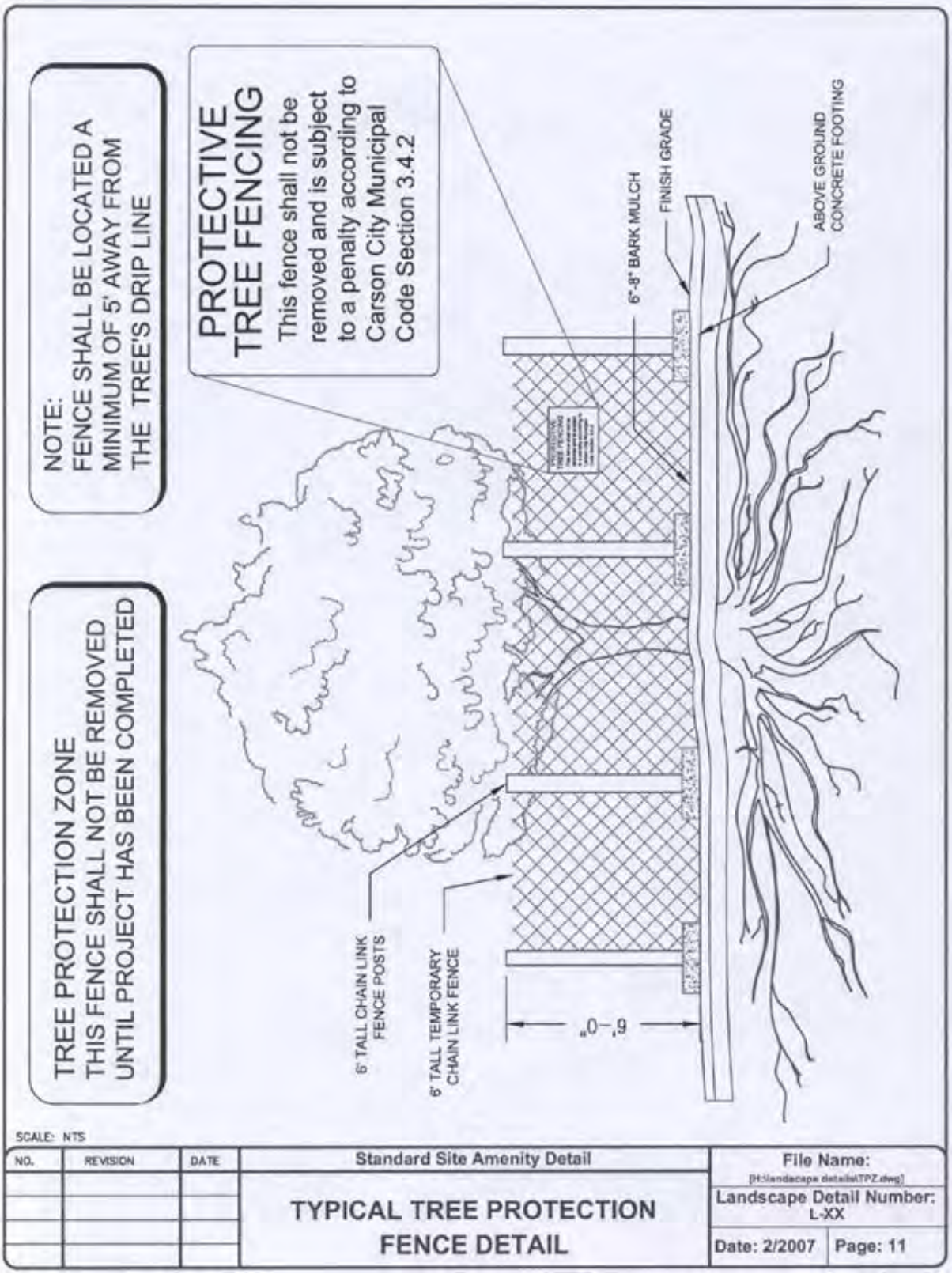


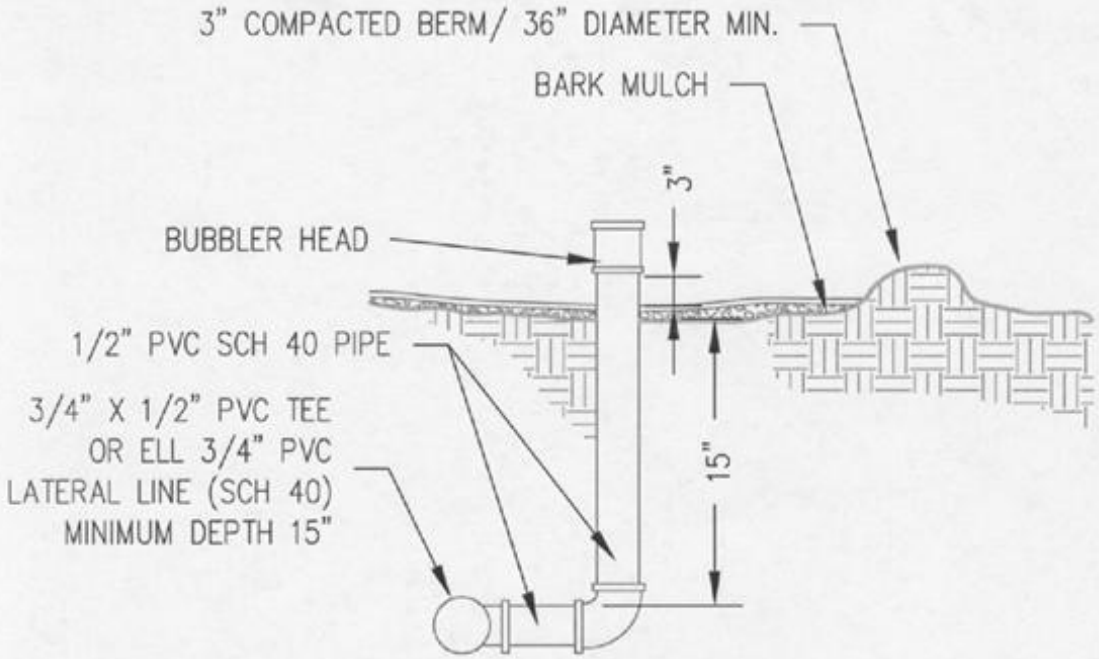
NOTES:

1. TREES SHALL HAVE 3 BUBBLERS PER TREE, EQUALLY DISTRIBUTED AROUND ROOTBALL.
2. DRAWING IS DIAGRAMMATIC ONLY.
3. REFER TO IRRIGATION PLAN FOR BUBBLER ZONES.
4. 3 BUBBLER PER TREE, BUT QUANTITY MAY BE ALTERED (2 MINIMIM – 4 MAXIMUM) DUE TO SOIL TYPE AND SOIL DRAINAGE CHARACTERISTICS.

SCALE: NTS

NO.	REVISION	DATE	Standard Irrigation Detail	File Name: [H:\landscape detail\BUBBLER2.dwg]
			TYPICAL TREE BUBBLER LAYOUT DETAIL	Landscape Detail Number: L-XX
				Date: 2/2007 | Page: 10


NOTE:
FENCE SHALL BE LOCATED A MINIMUM OF 5' AWAY FROM THE TREE'S DRIP LINE
PROTECTIVE TREE FENCING
This fence shall not be removed and is subject to a penalty according to Carson City Municipal Code Section 3.4.2
TREE PROTECTION ZONE
THIS FENCE SHALL NOT BE REMOVED UNTIL PROJECT HAS BEEN COMPLETED
6"-8" BARK MULCH
FINISH GRADE
ABOVE GROUND CONCRETE FOOTING
6' TALL CHAIN LINK FENCE POSTS
6' TALL TEMPORARY CHAIN LINK FENCE
6'-0"
SCALE: NTS
NO.
REVISION
DATE
Standard Site Amenity Detail
TYPICAL TREE PROTECTION FENCE DETAIL
File Name:
Landscape Detail Number: L-XX
Date: 2/2007
Page: 11



NOTES

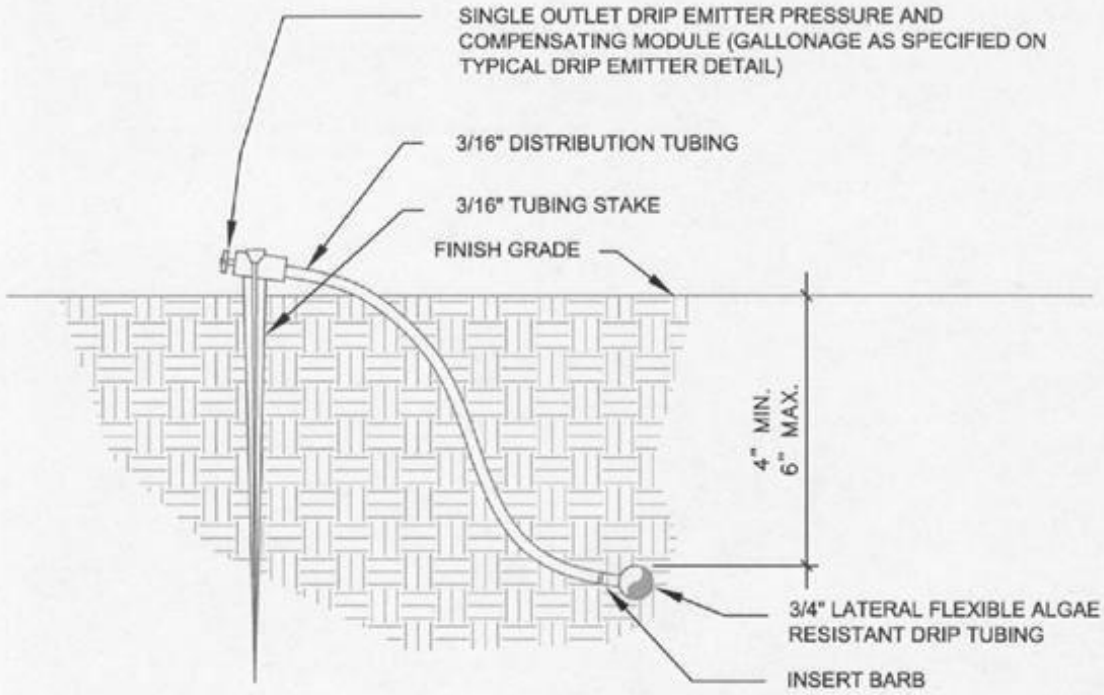
1. TREES SHALL HAVE 3 BUBBLERS PER TREE, EQUALLY DISTRIBUTED AROUND ROOTBALL.

2. IN LANDSCAPE PLANTING AREA BUBBLER HEADS NEED TO BE 3" ABOVE BARK MULCH

3. 3 BUBBLER PER TREE QUANTITY MAY BE ALTERED (2 MIN. / 4 MAX.) DUE TO SOIL TYPE AND SOIL DRAINAGE CHARACTERISTICS.

SCALE: NTS

NO.	REVISION	DATE	Standard Irrigation Detail	File Name: [H:\la\dscape details\BUBBLER1.dwg]
			TYPICAL TREE BUBBLER DETAIL	Landscape Detail Number: L-XX
				Date: 2/2007 Page: 12



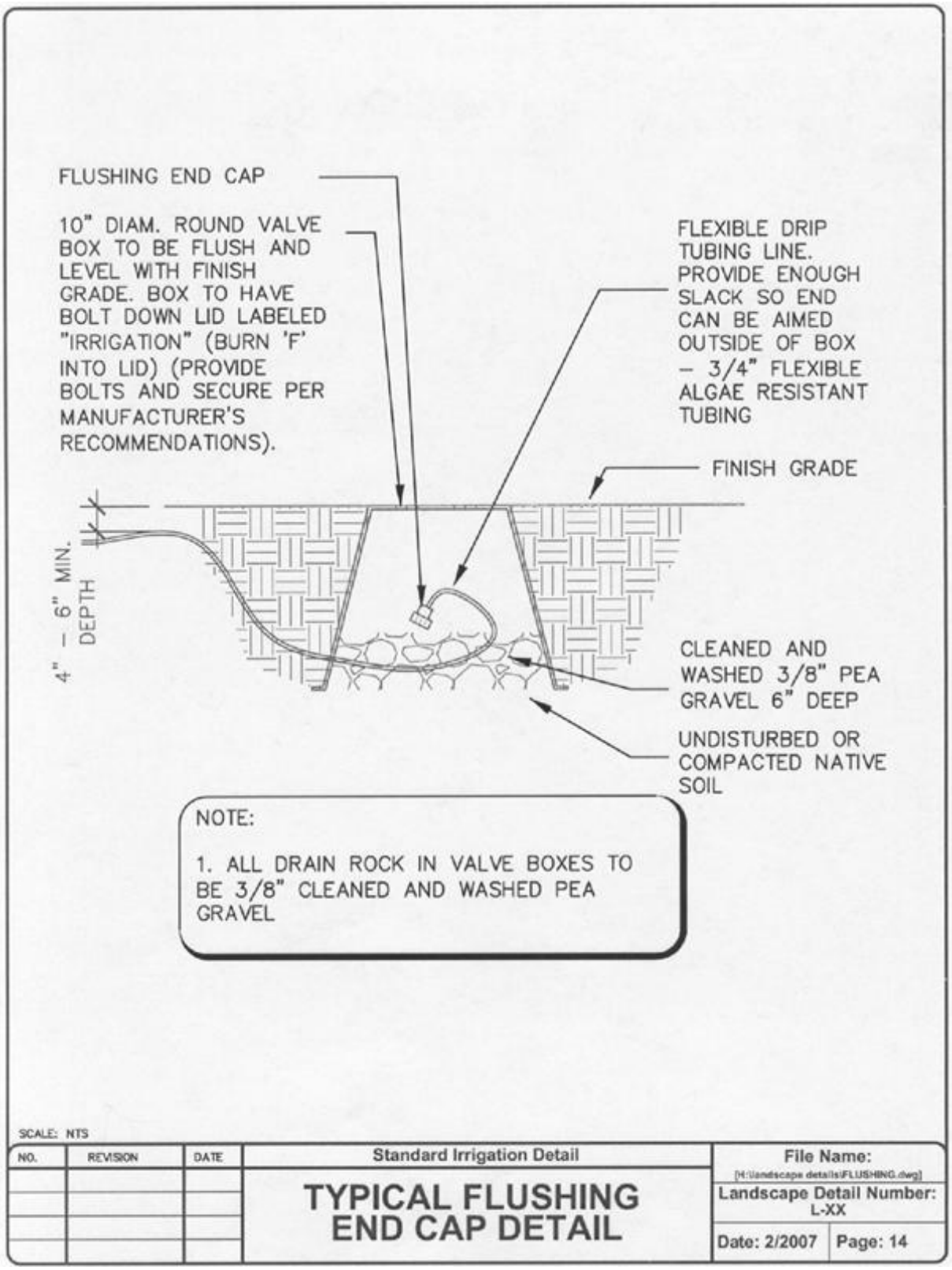
NOTES:

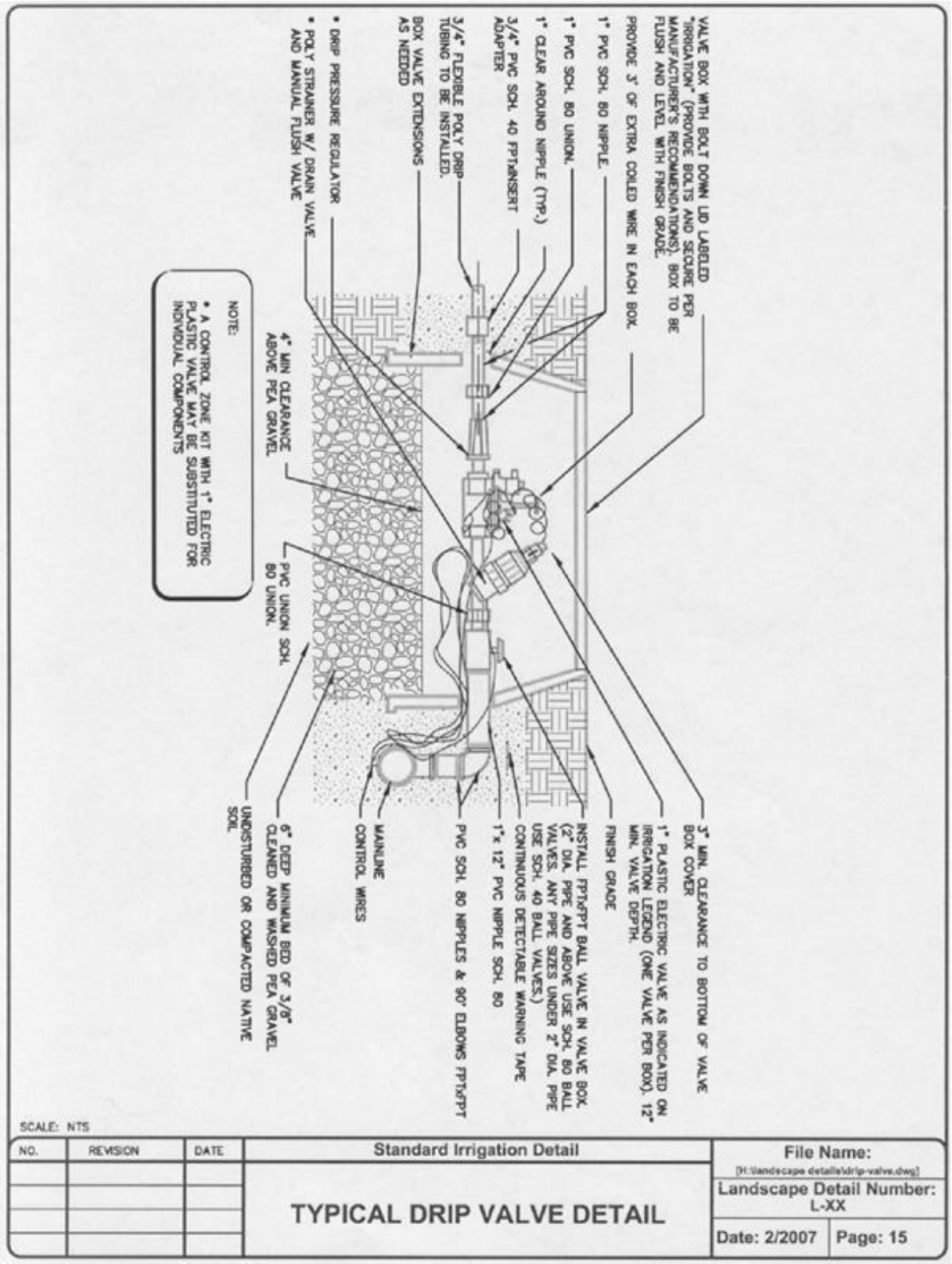
1. INSERT BARB DIRECTLY INTO FLEXIBLE DRIP TUBING FOR INSTALLATION OF DISTRIBUTION TUBING.

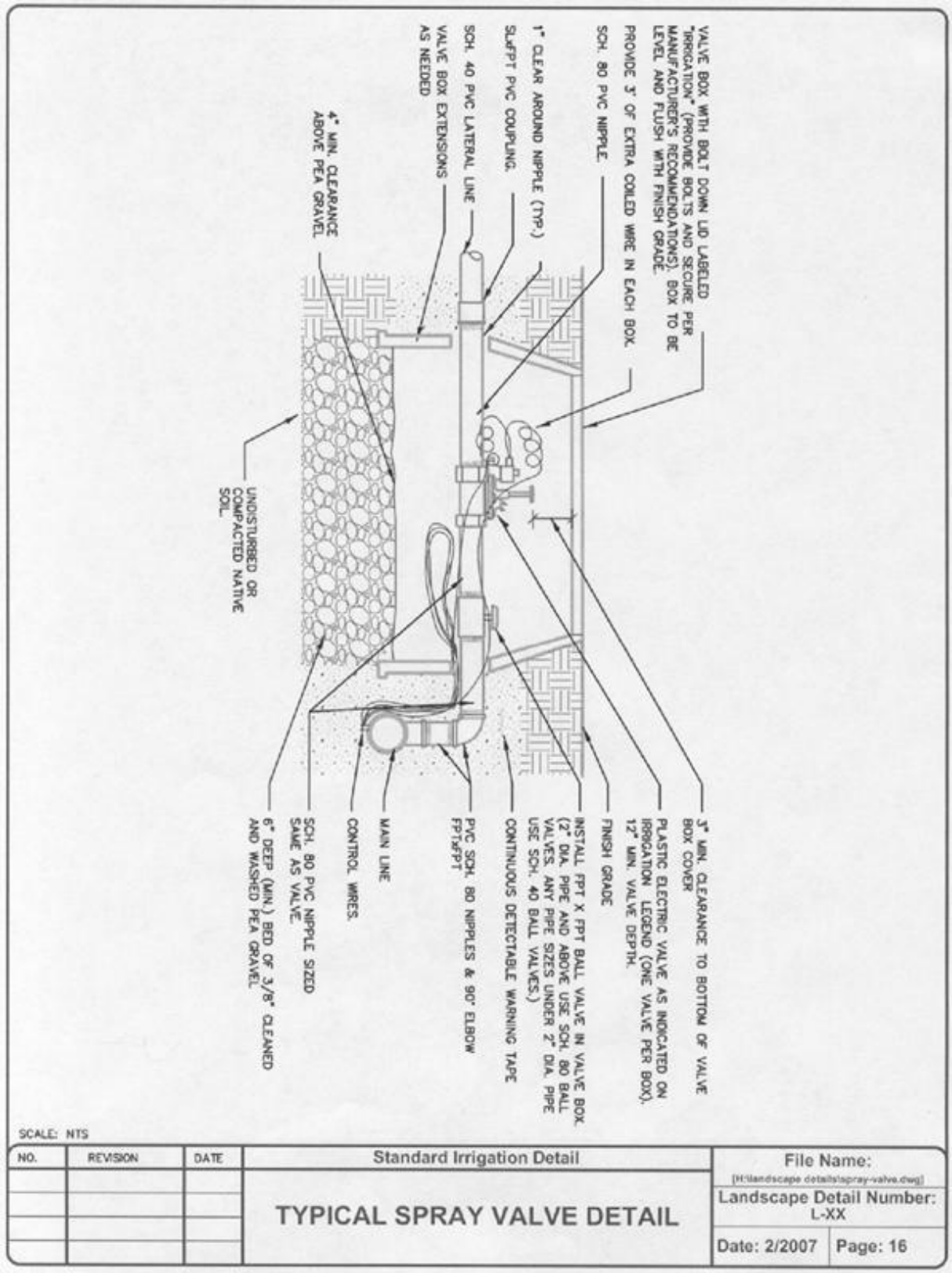
2. PLACE EMITTERS ON OUTER EDGE OF ROOT BALL AND SOIL OUTSIDE OF ROOT BALL SO PLANT MATERIAL WILL RECEIVE WATER. DO NOT PLACE EMITTER AT BASE OF TRUNK OR STEM PLANTS.

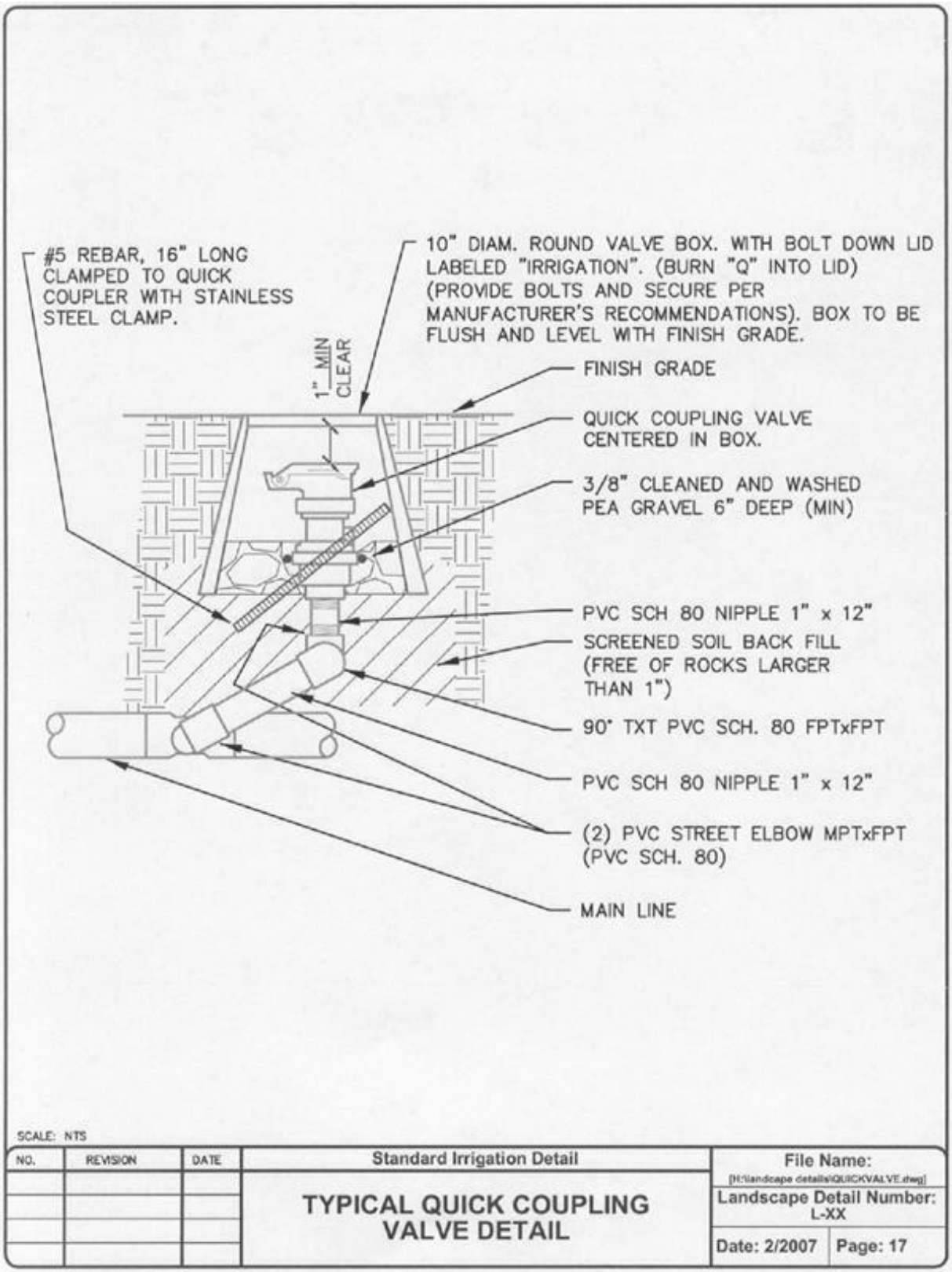
SCALE: NTS

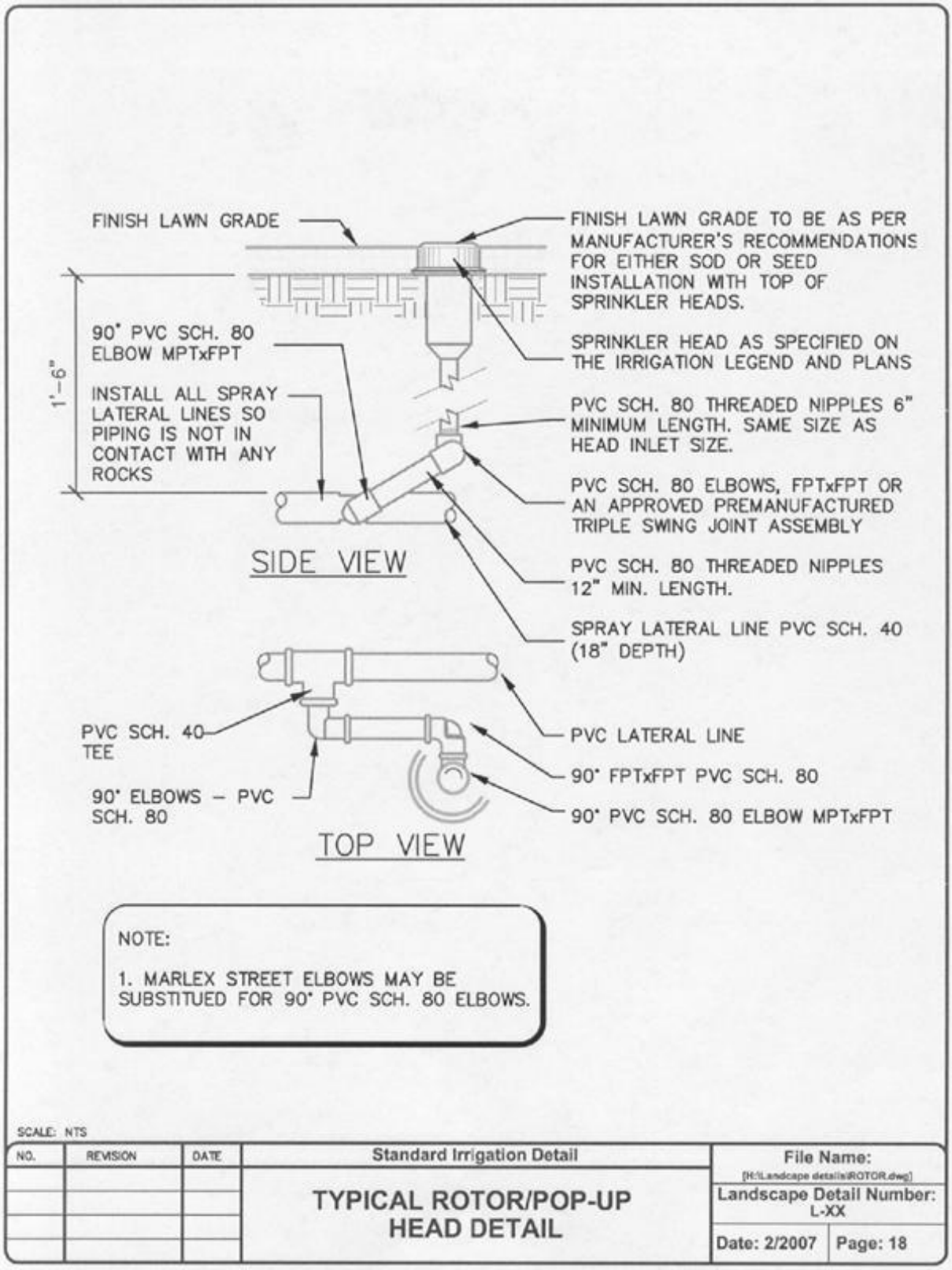
NO.	REVISION	DATE	Standard Irrigation Detail	File Name: [H:\landscape details\dripens.dwg]
			TYPICAL DRIP EMITTER STAKING DETAIL	Landscape Detail Number: L-XX
				Date: 2/2007 Page: 13

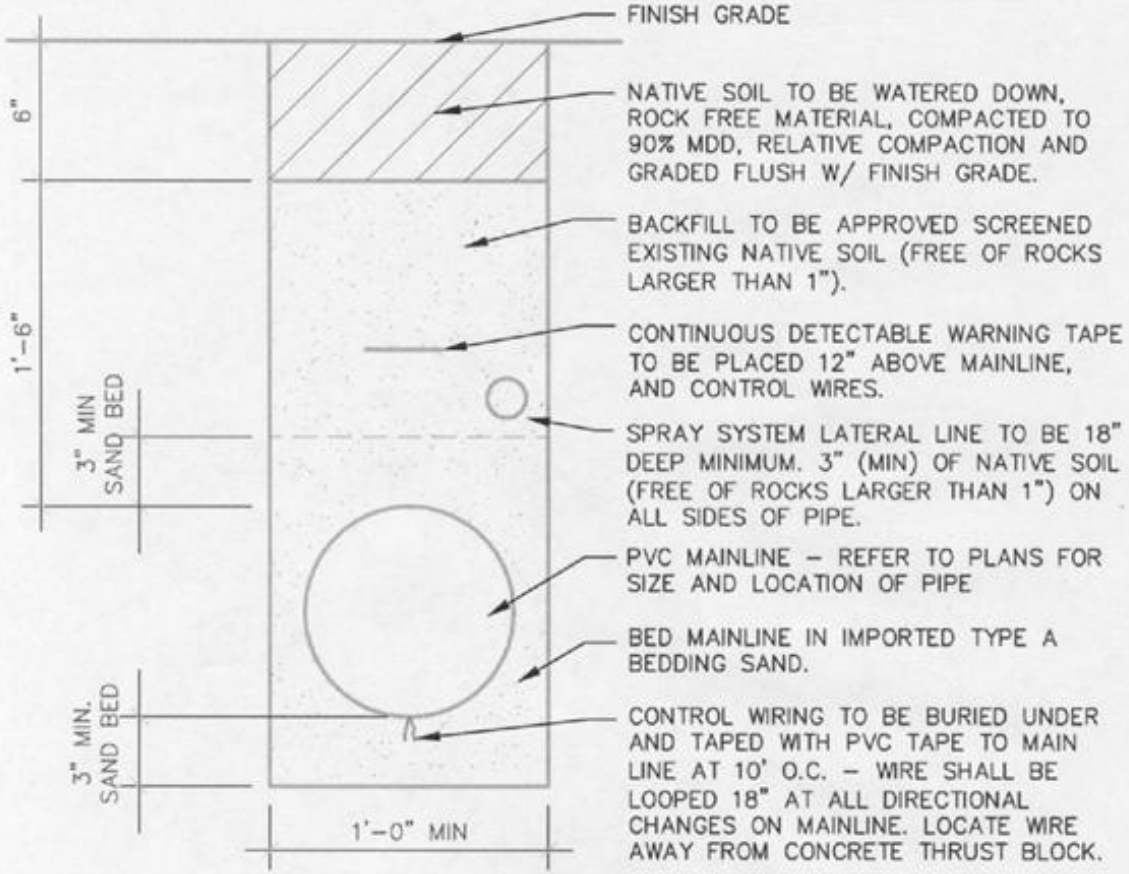

FLUSHING END CAP
10" DIAM. ROUND VALVE BOX TO BE FLUSH AND LEVEL WITH FINISH GRADE. BOX TO HAVE BOLT DOWN LID LABELED "IRRIGATION" (BURN 'F' INTO LID) (PROVIDE BOLTS AND SECURE PER MANUFACTURER'S RECOMMENDATIONS).
FLEXIBLE DRIP TUBING LINE. PROVIDE ENOUGH SLACK SO END CAN BE AIMED OUTSIDE OF BOX – 3/4" FLEXIBLE ALGAE RESISTANT TUBING
FINISH GRADE
4" – 6" MIN. DEPTH
CLEANED AND WASHED 3/8" PEA GRAVEL 6" DEEP
UNDISTURBED OR COMPACTED NATIVE SOIL
NOTE:
1. ALL DRAIN ROCK IN VALVE BOXES TO BE 3/8" CLEANED AND WASHED PEA GRAVEL
SCALE: NTS
NO.
REVISION
DATE
Standard Irrigation Detail
TYPICAL FLUSHING END CAP DETAIL
File Name:
[H:\landscape details\FLUSHING.dwg]
Landscape Detail Number: L-XX
Date: 2/2007
Page: 14


VALVE BOX WITH BOLT DOWN LID LABELED "IRRIGATION" (PROVIDE BOLTS AND SECURE PER MANUFACTURER'S RECOMMENDATIONS). BOX TO BE FLUSH AND LEVEL WITH FINISH GRADE.
PROVIDE 3' OF EXTRA COILED WIRE IN EACH BOX.
1" PVC SCH. 80 NIPPLE.
1" PVC SCH. 80 UNION.
1" CLEAR AROUND NIPPLE (TYP.)
3/4" PVC SCH. 40 FPTxINSERT ADAPTER
3/4" FLEXIBLE POLY DRIP TUBING TO BE INSTALLED.
BOX VALVE EXTENSIONS AS NEEDED
* DRIP PRESSURE REGULATOR
* POLY STRAINER W/ DRAIN VALVE AND MANUAL FLUSH VALVE
4" MIN CLEARANCE ABOVE PEA GRAVEL
PVC UNION SCH. 80 UNION.
UNDISTURBED OR COMPACTED NATIVE SOIL
6" DEEP MINIMUM BED OF 3/8" CLEANED AND WASHED PEA GRAVEL
MAINLINE
CONTROL WIRES
PVC SCH. 80 NIPPLES & 90° ELBOWS FPTxFPT
1"x 12" PVC NIPPLE SCH. 80
CONTINUOUS DETECTABLE WARNING TAPE
INSTALL FPTxFPT BALL VALVE IN VALVE BOX. (2" DIA. PIPE AND ABOVE USE SCH. 80 BALL VALVES. ANY PIPE SIZES UNDER 2" DIA. PIPE USE SCH. 40 BALL VALVES.)
FINISH GRADE
1" PLASTIC ELECTRIC VALVE AS INDICATED ON IRRIGATION LEGEND (ONE VALVE PER BOX). 12" MIN. VALVE DEPTH.
3" MIN. CLEARANCE TO BOTTOM OF VALVE BOX COVER
NOTE:
* A CONTROL ZONE KIT WITH 1" ELECTRIC PLASTIC VALVE MAY BE SUBSTITUTED FOR INDIVIDUAL COMPONENTS
SCALE: NTS
NO.
REVISION
DATE
Standard Irrigation Detail
TYPICAL DRIP VALVE DETAIL
File Name:
[H:\landscape details\drip-valve.dwg]
Landscape Detail Number: L-XX
Date: 2/2007
Page: 15


VALVE BOX WITH BOLT DOWN LID LABELED "IRRIGATION" (PROVIDE BOLTS AND SECURE PER MANUFACTURER'S RECOMMENDATIONS). BOX TO BE LEVEL AND FLUSH WITH FINISH GRADE.
PROVIDE 3' OF EXTRA COILED WIRE IN EACH BOX.
SCH. 80 PVC NIPPLE.
1" CLEAR AROUND NIPPLE (TYP.)
SL×FPT PVC COUPLING.
SCH. 40 PVC LATERAL LINE
VALVE BOX EXTENSIONS AS NEEDED
4" MIN. CLEARANCE ABOVE PEA GRAVEL
UNDISTURBED OR COMPACTED NATIVE SOIL.
3" MIN. CLEARANCE TO BOTTOM OF VALVE BOX COVER
PLASTIC ELECTRIC VALVE AS INDICATED ON IRRIGATION LEGEND (ONE VALVE PER BOX). 12" MIN. VALVE DEPTH.
FINISH GRADE
INSTALL FPT X FPT BALL VALVE IN VALVE BOX. (2" DIA. PIPE AND ABOVE USE SCH. 80 BALL VALVES. ANY PIPE SIZES UNDER 2" DIA. PIPE USE SCH. 40 BALL VALVES.)
CONTINUOUS DETECTABLE WARNING TAPE
PVC SCH. 80 NIPPLES & 90° ELBOW FPT×FPT
MAIN LINE
CONTROL WIRES.
SCH. 80 PVC NIPPLE SIZED SAME AS VALVE.
6" DEEP (MIN.) BED OF 3/8" CLEANED AND WASHED PEA GRAVEL
SCALE: NTS
NO.
REVISION
DATE
Standard Irrigation Detail
TYPICAL SPRAY VALVE DETAIL
File Name:
[H:\landscape details\spray-valve.dwg]
Landscape Detail Number: L-XX
Date: 2/2007
Page: 16

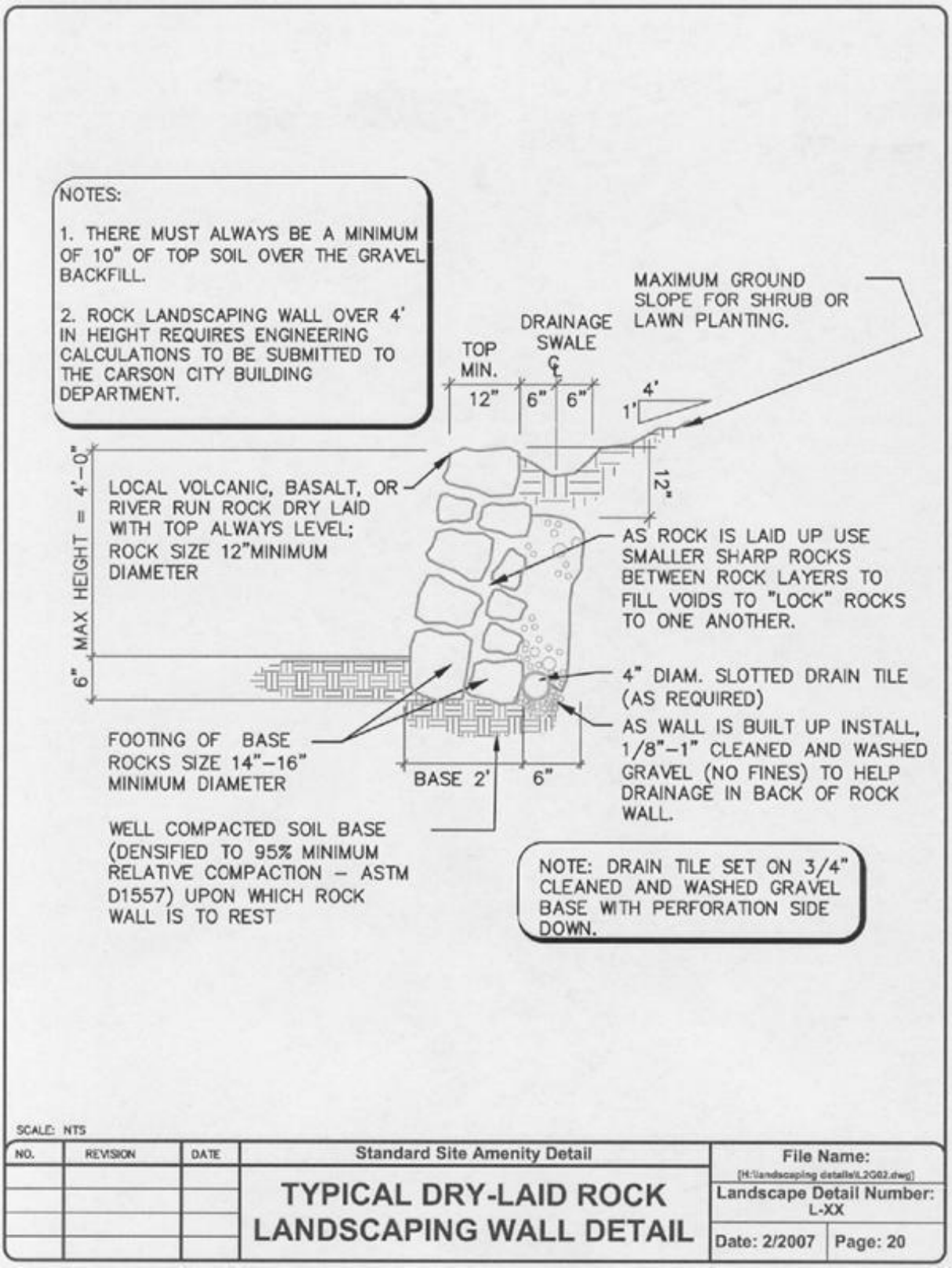

#5 REBAR, 16" LONG CLAMPED TO QUICK COUPLER WITH STAINLESS STEEL CLAMP.
10" DIAM. ROUND VALVE BOX. WITH BOLT DOWN LID LABELED "IRRIGATION". (BURN "Q" INTO LID) (PROVIDE BOLTS AND SECURE PER MANUFACTURER'S RECOMMENDATIONS). BOX TO BE FLUSH AND LEVEL WITH FINISH GRADE.
1" MIN CLEAR
FINISH GRADE
QUICK COUPLING VALVE CENTERED IN BOX.
3/8" CLEANED AND WASHED PEA GRAVEL 6" DEEP (MIN)
PVC SCH 80 NIPPLE 1" x 12"
SCREENED SOIL BACK FILL (FREE OF ROCKS LARGER THAN 1")
90° TXT PVC SCH. 80 FPTxFPT
PVC SCH 80 NIPPLE 1" x 12"
(2) PVC STREET ELBOW MPTxFPT (PVC SCH. 80)
MAIN LINE
SCALE: NTS
NO.
REVISION
DATE
Standard Irrigation Detail
TYPICAL QUICK COUPLING VALVE DETAIL
File Name:
[H:\landcape details\QUICKVALVE.dwg]
Landscape Detail Number: L-XX
Date: 2/2007
Page: 17

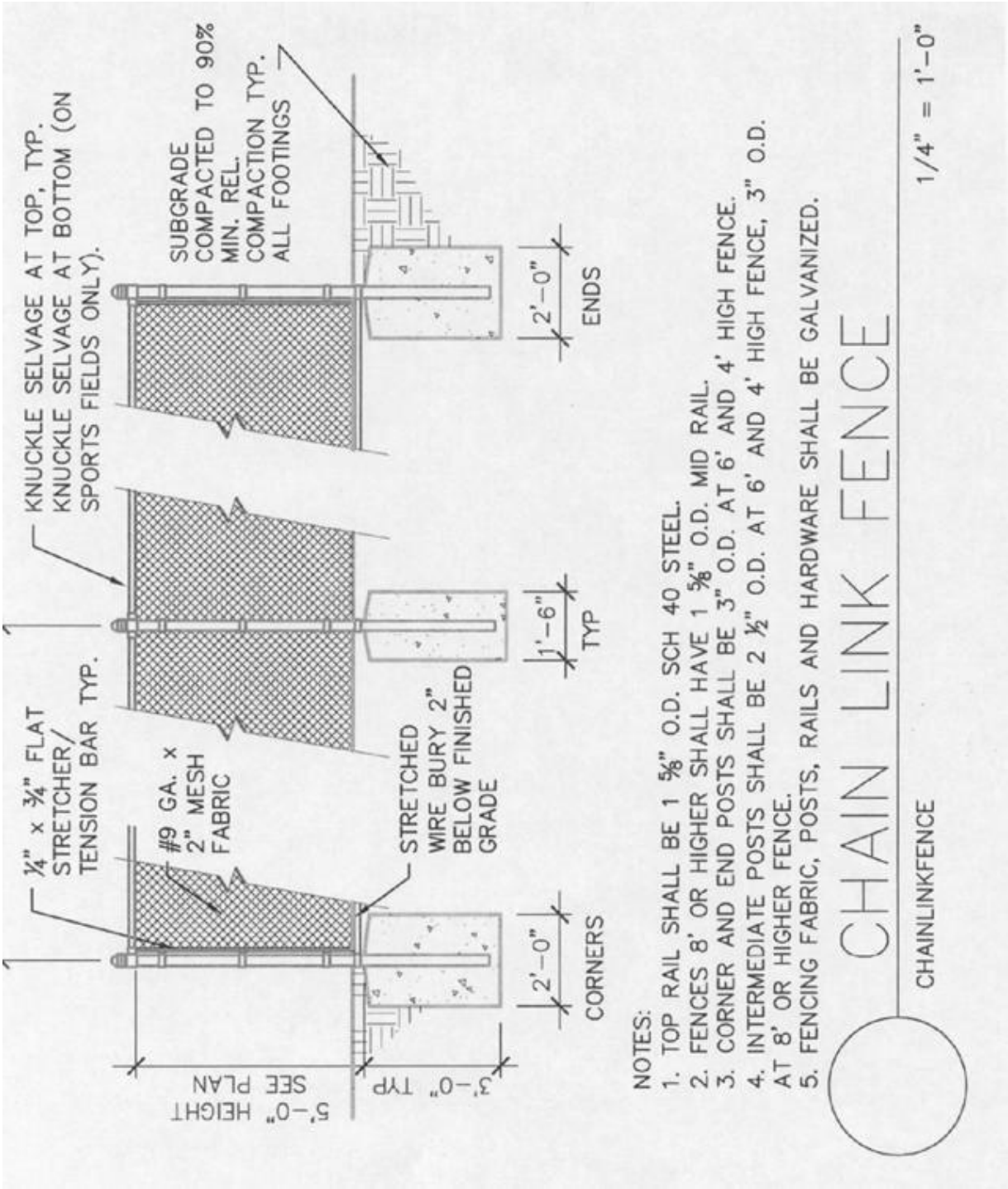

FINISH LAWN GRADE
FINISH LAWN GRADE TO BE AS PER MANUFACTURER'S RECOMMENDATIONS FOR EITHER SOD OR SEED INSTALLATION WITH TOP OF SPRINKLER HEADS.
90° PVC SCH. 80 ELBOW MPTxFPT
SPRINKLER HEAD AS SPECIFIED ON THE IRRIGATION LEGEND AND PLANS
1'-6"
INSTALL ALL SPRAY LATERAL LINES SO PIPING IS NOT IN CONTACT WITH ANY ROCKS
PVC SCH. 80 THREADED NIPPLES 6" MINIMUM LENGTH. SAME SIZE AS HEAD INLET SIZE.
PVC SCH. 80 ELBOWS, FPTxFPT OR AN APPROVED PREMANUFACTURED TRIPLE SWING JOINT ASSEMBLY
SIDE VIEW
PVC SCH. 80 THREADED NIPPLES 12" MIN. LENGTH.
SPRAY LATERAL LINE PVC SCH. 40 (18" DEPTH)
PVC SCH. 40 TEE
PVC LATERAL LINE
90° FPTxFPT PVC SCH. 80
90° ELBOWS – PVC SCH. 80
90° PVC SCH. 80 ELBOW MPTxFPT
TOP VIEW
NOTE:
1. MARLEX STREET ELBOWS MAY BE SUBSTITUED FOR 90° PVC SCH. 80 ELBOWS.
SCALE: NTS
NO.
REVISION
DATE
Standard Irrigation Detail
TYPICAL ROTOR/POP-UP HEAD DETAIL
File Name:
[H:\Landscape details\ROTOR.dwg]
Landscape Detail Number: L-XX
Date: 2/2007
Page: 18

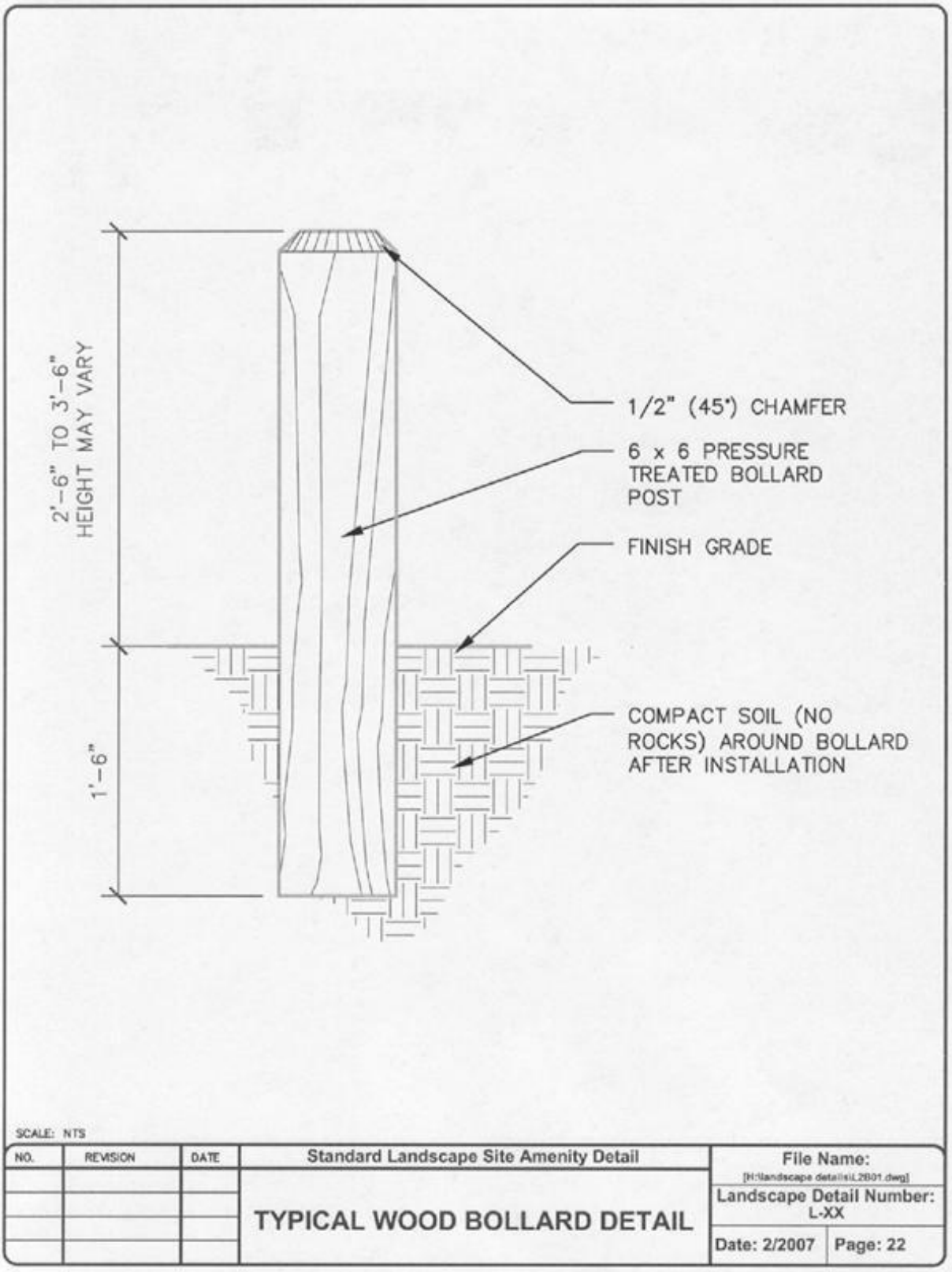


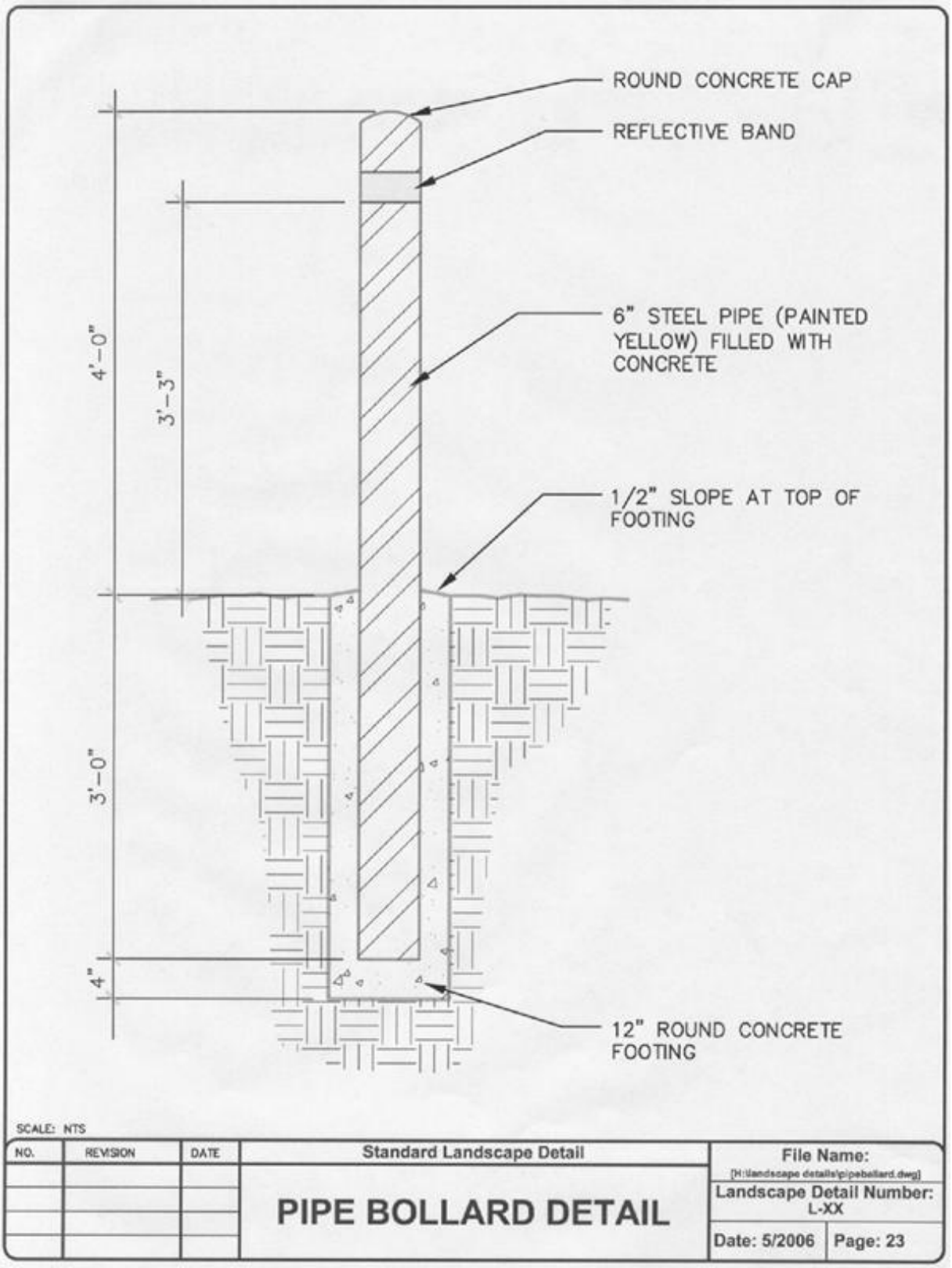
SCALE: NTS

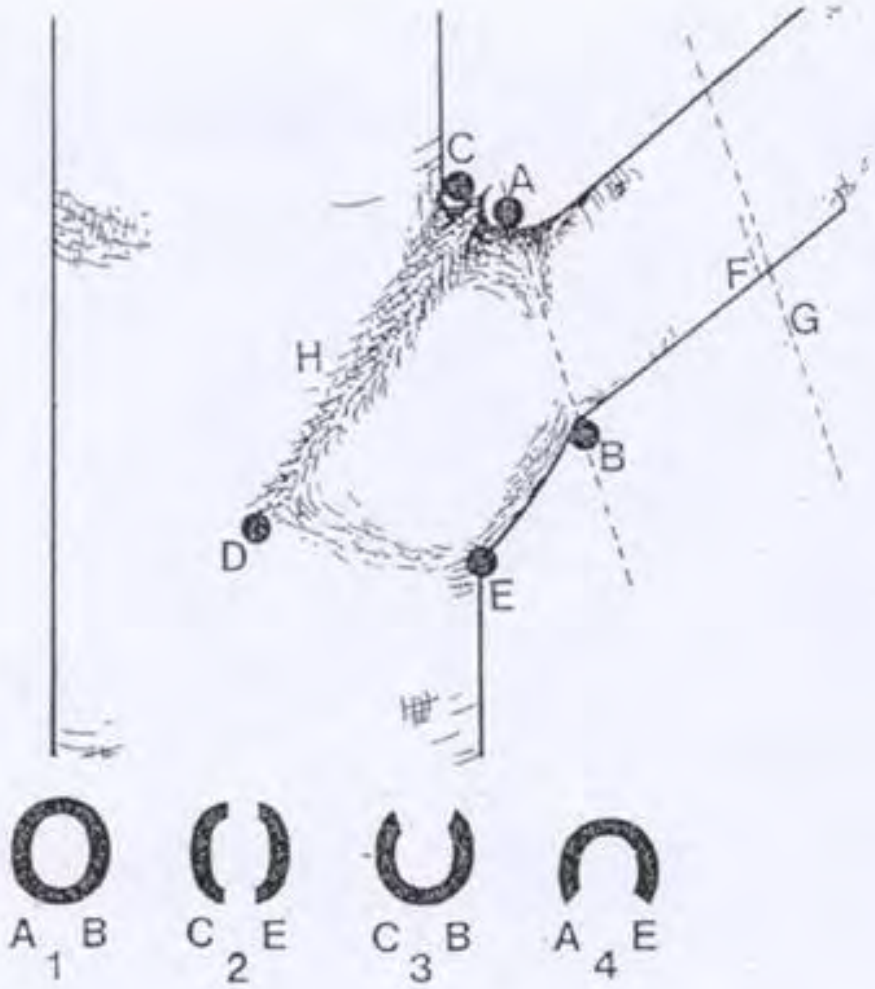
NO.	REVISION	DATE	Standard Irrigation Detail	File Name: [H:\Landscape details\TRENCH1.dwg]
			TYPICAL IRRIGATION TRENCH WALL SECTION DETAIL	Landscape Detail Number: L-XX
				Date: 2/2007 Page: 19


NOTES:
1. THERE MUST ALWAYS BE A MINIMUM OF 10" OF TOP SOIL OVER THE GRAVEL BACKFILL.
2. ROCK LANDSCAPING WALL OVER 4' IN HEIGHT REQUIRES ENGINEERING CALCULATIONS TO BE SUBMITTED TO THE CARSON CITY BUILDING DEPARTMENT.
MAXIMUM GROUND SLOPE FOR SHRUB OR LAWN PLANTING.
DRAINAGE SWALE
TOP MIN.
12"
6"
6"
4'
1'
12"
6" MAX HEIGHT = 4'-0"
LOCAL VOLCANIC, BASALT, OR RIVER RUN ROCK DRY LAID WITH TOP ALWAYS LEVEL; ROCK SIZE 12"MINIMUM DIAMETER
AS ROCK IS LAID UP USE SMALLER SHARP ROCKS BETWEEN ROCK LAYERS TO FILL VOIDS TO "LOCK" ROCKS TO ONE ANOTHER.
4" DIAM. SLOTTED DRAIN TILE (AS REQUIRED)
AS WALL IS BUILT UP INSTALL, 1/8"–1" CLEANED AND WASHED GRAVEL (NO FINES) TO HELP DRAINAGE IN BACK OF ROCK WALL.
FOOTING OF BASE ROCKS SIZE 14"–16" MINIMUM DIAMETER
BASE 2'
6"
WELL COMPACTED SOIL BASE (DENSIFIED TO 95% MINIMUM RELATIVE COMPACTION – ASTM D1557) UPON WHICH ROCK WALL IS TO REST
NOTE: DRAIN TILE SET ON 3/4" CLEANED AND WASHED GRAVEL BASE WITH PERFORATION SIDE DOWN.
SCALE: NTS
NO.
REVISION
DATE
Standard Site Amenity Detail
TYPICAL DRY-LAID ROCK LANDSCAPING WALL DETAIL
File Name:
Landscape Detail Number: L-XX
Date: 2/2007
Page: 20


KNUCKLE SELVAGE AT TOP, TYP.
KNUCKLE SELVAGE AT BOTTOM (ON SPORTS FIELDS ONLY).
SUBGRADE COMPACTED TO 90% MIN. REL. COMPACTION TYP. ALL FOOTINGS
¼" x ¾" FLAT STRETCHER/ TENSION BAR TYP.
#9 GA. x 2" MESH FABRIC
STRETCHED WIRE BURY 2" BELOW FINISHED GRADE
2'-0"
ENDS
1'-6"
TYP
2'-0"
CORNERS
5'-0" HEIGHT SEE PLAN
3'-0" TYP
NOTES:
1. TOP RAIL SHALL BE 1 ⅝" O.D. SCH 40 STEEL.
2. FENCES 8' OR HIGHER SHALL HAVE 1 ⅝" O.D. MID RAIL.
3. CORNER AND END POSTS SHALL BE 3" O.D. AT 6' AND 4' HIGH FENCE.
4. INTERMEDIATE POSTS SHALL BE 2 ½" O.D. AT 6' AND 4' HIGH FENCE, 3" O.D. AT 8' OR HIGHER FENCE.
5. FENCING FABRIC, POSTS, RAILS AND HARDWARE SHALL BE GALVANIZED.
CHAIN LINK FENCE
1/4" = 1'-0"
CHAINLINKFENCE


2'-6" TO 3'-6"
HEIGHT MAY VARY
1'-6"
1/2" (45°) CHAMFER
6 x 6 PRESSURE
TREATED BOLLARD
POST
FINISH GRADE
COMPACT SOIL (NO
ROCKS) AROUND BOLLARD
AFTER INSTALLATION
SCALE: NTS
NO.
REVISION
DATE
Standard Landscape Site Amenity Detail
TYPICAL WOOD BOLLARD DETAIL
File Name:
[H:\landscape details\L2801.dwg]
Landscape Detail Number:
L-XX
Date: 2/2007
Page: 22


ROUND CONCRETE CAP
REFLECTIVE BAND
6" STEEL PIPE (PAINTED YELLOW) FILLED WITH CONCRETE
1/2" SLOPE AT TOP OF FOOTING
12" ROUND CONCRETE FOOTING
4'-0"
3'-3"
3'-0"
4"
SCALE: NTS
NO.
REVISION
DATE
Standard Landscape Detail
PIPE BOLLARD DETAIL
File Name:
[H:\landscape details\p\pebollard.dwg]
Landscape Detail Number:
L-XX
Date: 5/2006
Page: 23



NATURAL TARGET PRUNING

Locate the branch bark ridge (H) and the branch collar (E to B).
Stub cut the branch (up F, down G).
Locate points A and B where the branch meets the branch collar.
Cut from A to B, or from B to A with care.
If position of B is uncertain, draw a line in your mind from A to E.
Angle EAD is approximately the same as angle EAB.
Point D is the beginning of the branch bark ridge (H).
A proper cut will result in woundwood pattern 1.
Improper cuts will result in patterns 2, 3, and 4.
Do not leave stubs.
Do not make flush cuts.
Do not paint the wounds.

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Wendy Hanson
Horticulture Assistant
Master Gardener Program Coordinator

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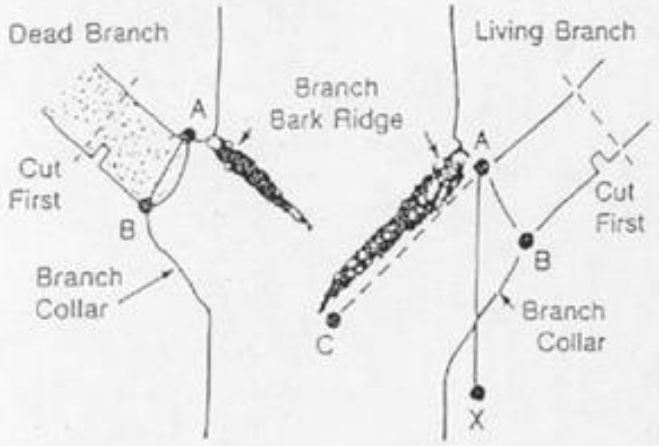
Gardnerville (775) 782-9960 FAX (775) 782-9965
E-mail: hanson@unce.unr.edu
Web site: www.unce.unr.edu

Page 1

Natural Target Pruning

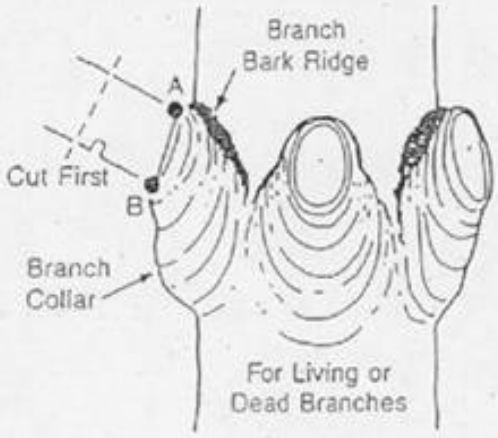
Hardwoods



Natural Pruning Steps

1. Locate the branch bark ridge
2. Find TARGET A—outside of branch bark ridge
3. Find TARGET B—swelling where branch meets branch collar
4. If B is hard to find—drop a line at AX. Angle XAC = to angle XAB
5. Stub branch to be pruned
6. Make cut at line AB

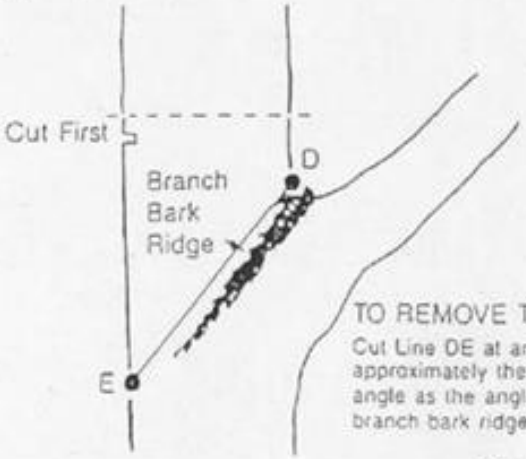
Conifers



Do Not

- Cut behind the branch bark ridge
- Leave stubs
- Cut branch collar
- Paint cuts—except for cosmetics
- Leave flat top when topping

Topping



TO REMOVE TOP:
Cut Line DE at an angle approximately the same angle as the angle of the branch bark ridge

BEST TIME TO PRUNE

Late dormant season or EARLY spring before leaves form

FOR MORE INFORMATION WRITE:

Northeastern Forest
Experiment Station
P.O. Box 640
Durham NH 03824

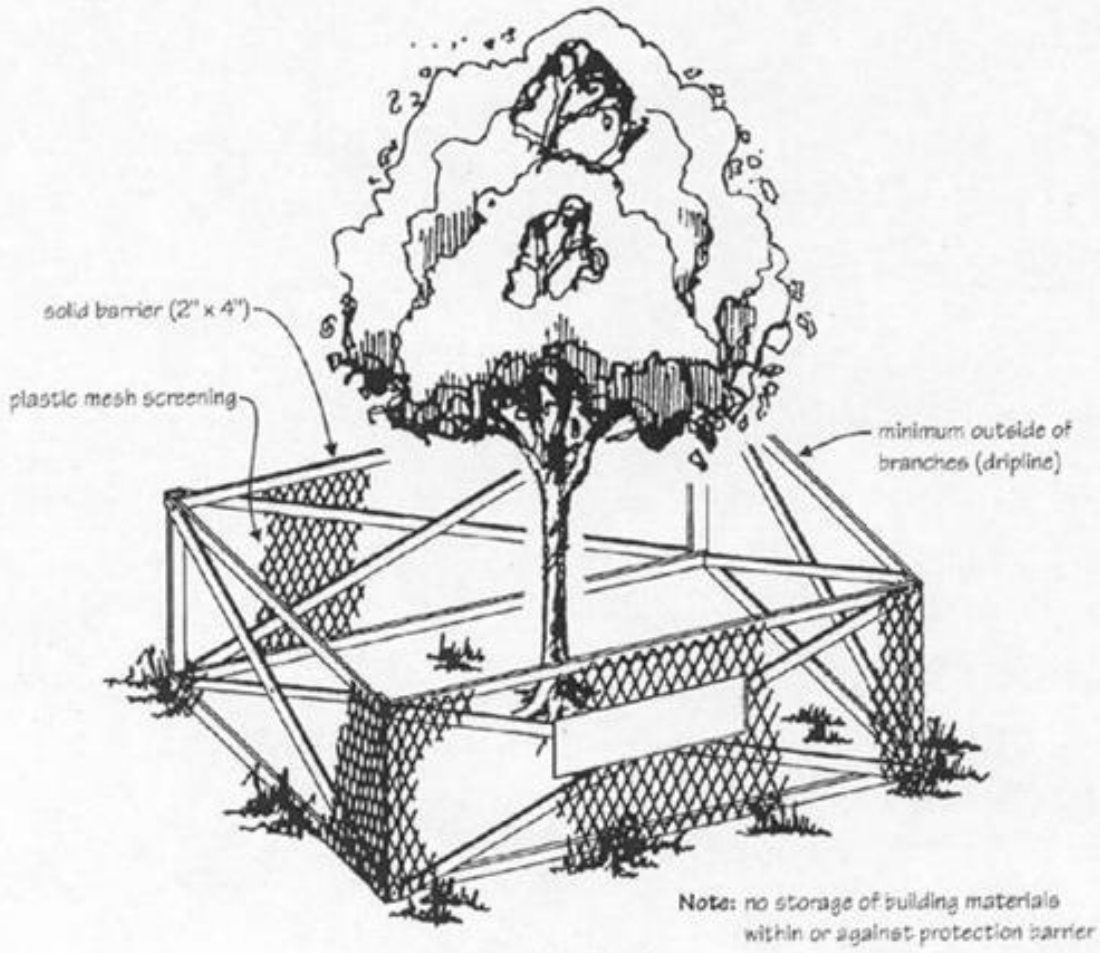
or

your local State Forestry or
USDA Forest Service Office

Page 2

TREE RETENTION/PROTECTION

1) Where trees are to be retained on a site, protection barriers must be installed as specified in 3.4.2.
2) Any required excavation in or around the protection barrier to accommodate underground services, footing, etc. should be indicated on the plan and completed by hand.
3) Trees inside the protection zone should be cared for throughout the construction process, i.e., they must be watered sufficiently if a portion of the tree's root system has been disturbed by excavation.
4) Root and branch pruning, where necessary, must be done in accordance with 3.4.2.



Tree Retention Guideline

Page 26 Tree Retention/Protection

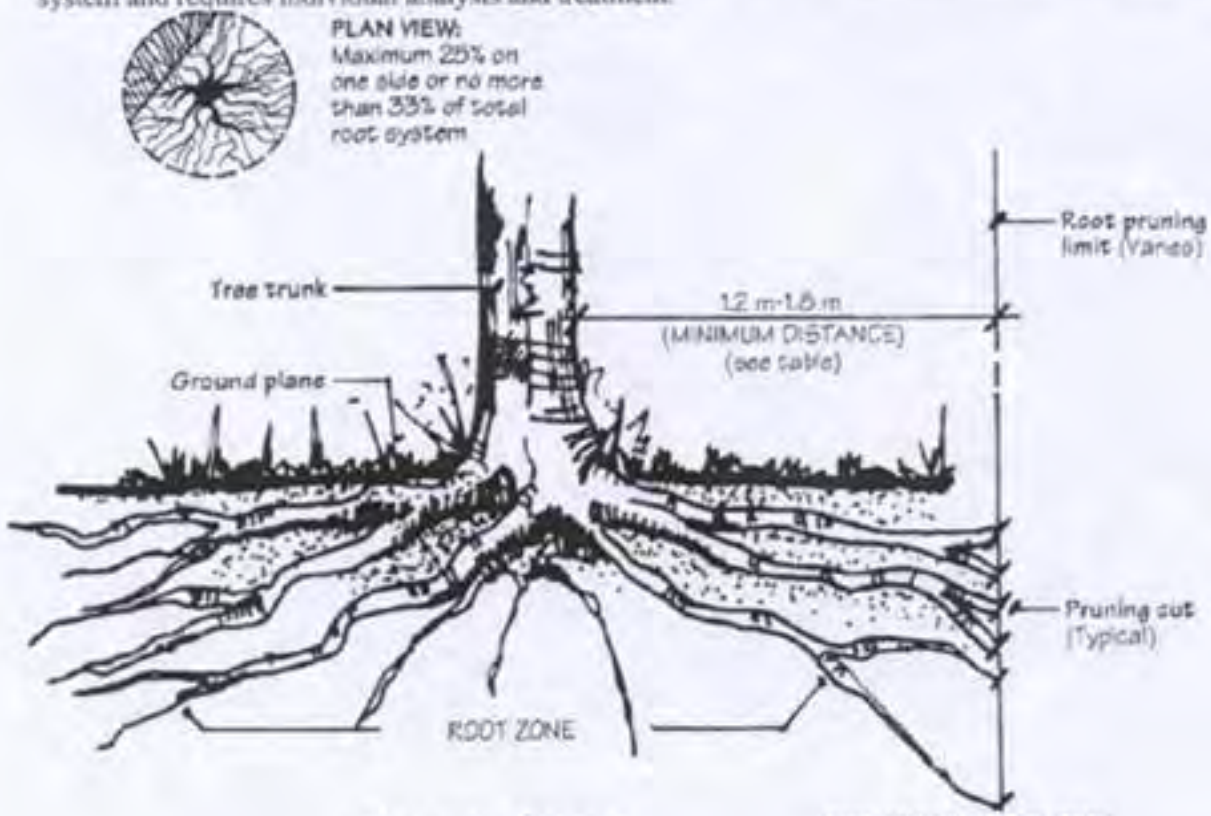
Root Pruning

Root pruning is the practice of removing a portion of a tree's root system. As a first alternative, adding soil and reseeding is recommended to prevent the removal of key structural roots. However, root pruning sometimes becomes necessary in order to accommodate landscape features such as walks, retaining walls, drains or utilities. Root pruning may also be necessary when existing roots begin to interfere with the routine maintenance of surrounding lawns and shrub beds. For example, it would be better to remove a surface root which is continually wounded by a lawn mower blade rather than to increase potential for disease through open wounds in the root. Other reasons for root pruning may include transplanting and undesirable growth patterns

The circumstances necessitating root pruning vary, but the objective of tree root pruning is always to ensure the health, stability and longevity of the tree. Therefore, major root pruning should only be done by, or in consultation with, an Arborist or other qualified landscape professional.

The following general guidelines for root pruning are provided for your convenience:

a) A tree should be root pruned only if the problem can be solved by removing less than 33 percent of the tree's roots, with no more than 25 percent from one side.
b) For trees 30 cm in diameter and less, roots should not be removed within 1.2 m of the outer edge of the tree base. Trees with diameters over 30 cm should be allowed an additional 30 cm for every extra 7.5 cm of trunk diameter measured at a point 1.4 m above ground. For example, a tree with a 37.5 cm diameter trunk measured 1.4 m above the ground would require a minimum 1.55 m allowance around it.
c) Cut roots cleanly after excavation with clean, sharp tools, to promote callous formation and wound closure. Wounds may be dressed with a tree rooting hormone compound that is available at garden centres.
d) Backfill the excavation as soon as possible and water the soil around roots to avoid leaving air pockets.
e) Mix soil improvements (e.g. peat moss) with fill soil to promote new root growth, especially if the existing soil is of poor quality. The soil quality can be easily determined by using a basic soil testing kit which is readily available at most nursery supply stores. Do not add fertilizers until improved tree growth is noticed, generally after 6 to 8 weeks during a growing season. Soil testing will better determine soil deficiencies and additional amendment requirements.
f) Surface roots which interfere with other elements in the landscape can be removed under the supervision of an Arborist or other qualified landscape professional. Each tree has a different root system and requires individual analysis and treatment.



Excavation Adjacent to Retained Trees

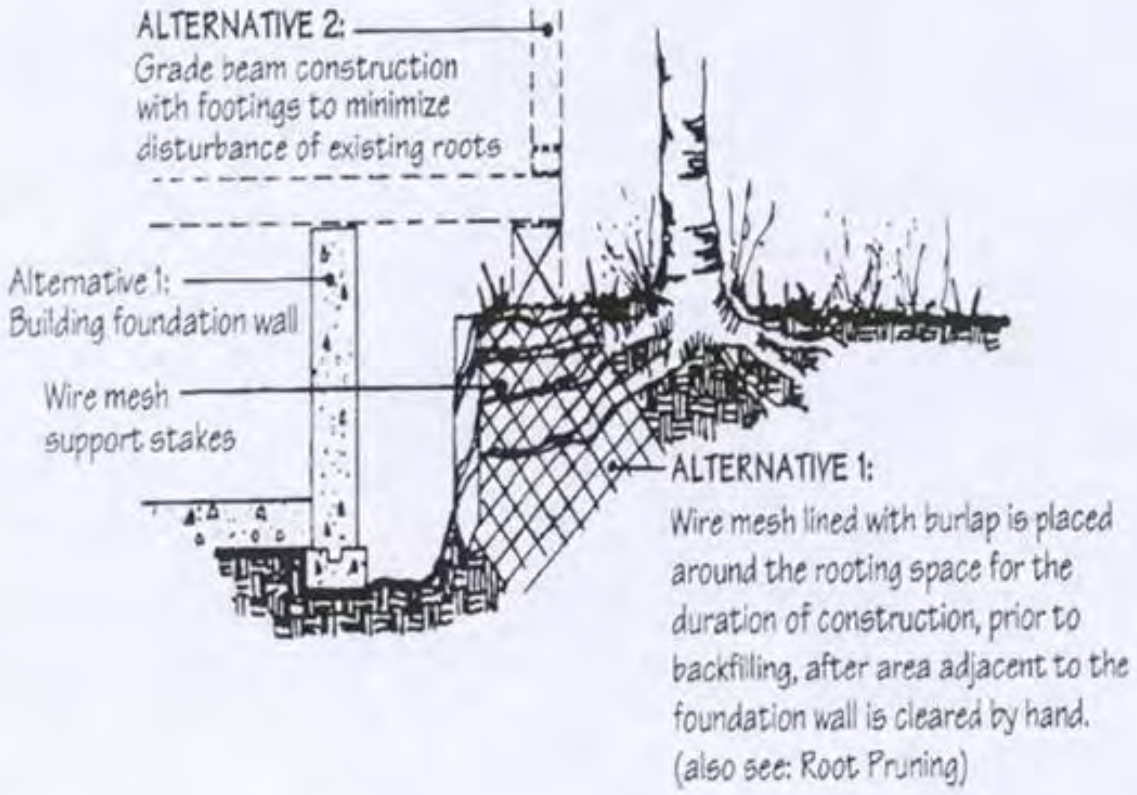
In cases where proposed building excavation will affect existing trees to be retained, special attention should be given to proper root pruning and care for the remaining root system. Alternatively, a post and beam structure for the building may be considered to retain the rooting space (see diagram, Alternative 2). It is important to note that most roots are located in the top 60 cm of soil, with the major roots for water and nutrients absorption in the top 20 to 30 cm.

a) In order to minimize root damage, soil erosion and tree disturbance, a temporary root curtain[2] should be wrapped around the root zone to retain and protect the exposed area. The root curtain should consist of heavy wire mesh or similar material lined with burlap (to retain moisture) and supported by posts. Backfill should be used as required to ensure that none of the roots are left exposed. Only hand excavation should be used in the root zone area.

b) It is critical that the root zone system (or roots of the tree) be kept moist by watering as required throughout the construction process.

c) Once the foundation is ready to be backfilled, the root curtain can be carefully removed. It is of utmost importance that the area surrounding the tree be kept free of building materials, as well as pedestrian and vehicular traffic, to avoid soil compaction.

d) Tunnelling rather than trenching should be considered when installing underground utilities and drainage lines to minimize damage to existing trees. This technique entails boring a hole under or through the root system with minimum disturbance. To ensure that the work is undertaken in the appropriate manner, a certified Arborist or similarly qualified landscape professional should be consulted if the applicant decides to use this technique.



Owner Maintenance Agreement

All landscaping, irrigation and screening shall be maintained at all times to conform to the regulations of Development Standards Division 3 Landscaping. Landscaping and related equipment including, but not limited to, trees, shrubs, plants, screens, walkways, benches, fountains and irrigation systems shall be maintained by the present or subsequent owner of the property. The owner of the property is responsible for maintaining or assuring the ongoing maintenance of installed landscaping so that the landscaping continues to thrive. Each owner shall be required at all times to keep all landscaping materials in good health, repair and maintenance.

The City may require the immediate replacement of any and all dead or damaged plant materials at any time. If any portion of the landscaping material or irrigation equipment is dead, dying, damaged, destroyed or otherwise affected, the owner of the development project shall replace or repair the damaged or affected material within thirty days following notification from the Director. If the season of the year makes this repair or replacement impractical within the thirty-day period, the person responsible for the landscaping shall submit a letter of request to the Director asking for a delay to replace materials and shall submit a time frame for the accomplishment of this work. If the repair or replacement is not accomplished in a timely fashion the Director may initiate proceedings to revoke the special use permit or business license for the subject use.

_____ _____

Signature of Owner Date

Carson City Tree List for Commercial Projects

USDA Zone: 5 (Plant Material) Sunset Zone: 3

Species and Varieties Appropriate for Proposed Site That Are Not on This List Are Subject to Approval, Not Including Accent Trees

Deciduous

Small Tree - Less than 30 feet (single stem)

ACER ginnala 'Flame'	Amur Maple
* AMELANCHIER species varieties	Serviceberry
CARPINUS caroliniana	American Hornbeam
CATALPA bignonioides 'Nana'	Umbrella Catalpa
* CRATAEGUS species thornless varieties	Hawthorn
FRAXINUS pennsylvanica 'Johnson'	Leprechaun Green Ash
KOELREUTERIA paniculata	Goldenrain Tree
* MALUS species varieties	Flowering Crabapple (<1" size fruit)
* PRUNUS maackii	Amur Chokecherry
* PRUNUS padus	European Bird Cherry
* PRUNUS virginiana 'Canada Red'	Canada Red Chokecherry
SORBUS americana 'Dwarfcrown'	Red Cascade Mountain Ash

Medium Tree - 30 feet to less than 50 feet tall

ACER fremanii 'Jeffersred'	Autumn Blaze Maple
* ACER negundo 'Sensation'	Sensation Box Elder
ACER nigrum 'Greencolumn'	Greencolumn Maple
* ACER platanoides varieties	Norway Maple
ACER pseudoplatanus varieties	Sycamore Maple
* ACER rubrum varieties	Red Maple
ACER saccharum 'Green Mountain'	Sugar Maple
CARPINUS betulus varieties	European Hornbeam
CATALPA speciosa	Northern Catalpa
CELTIS occidentalis	Common Hackberry
CELTIS reticulata	Western Hackberry
* FRAXINUS americana varieties	White Ash
FRAXINUS excelsior	European Ash
FRAXINUS ornus	Flowering Ash
* FRAXINUS pennsylvanica varieties	Green Ash
FRAXINUS quadrangulata	Blue Ash
* GLEDITSIA triacanthos inermis varieties	Thornless Honeylocust
GYMNOCLADUS dioicus	Kentucky Coffeetree
* PYRUS calleryana varieties	Callery Pear

* - Carson City Historic District Preferred Tree

QUERCUS lobata	Valley Oak
QUERCUS robur 'Fastigiata'	Skyrocket English Oak
* ROBINIA x ambigua 'Idaho'	Idaho Locust
* SORBUS aucuparia varieties	Mountain Ash
* TILIA cordata varieties	Littleleaf Linden
TILIA tomentosa varieties	Silver Linden
Large Tree - 50 feet or greater	
* PLATANUS occidentalis	American Sycamore
* PLATANUS x acerifolia 'Bloodgood'	London Planetree
* QUERCUS coccinea	Scarlet Oak
QUERCUS douglasii	Blue Oak
QUERCUS macrocarpa	Bur Oak
QUERCUS robur 'Fastigiata'	Columnar English Oak
* QUERCUS rubra	Red Oak
TILIA americana varieties	American Linden
ZELKOVA serrata	Sawleaf Zelkova

Evergreen

Small Tree - Less than 30 feet (single stem)	
* PINUS mugo	Swiss Mountain Pine
PINUS thumbergiana	Japanese Black Pine
Medium Tree - 30 feet to less than 50 feet tall	
* JUNIPERUS species varieties	Juniper tree
* PICEA pungens varieties	Spruce
PINUS aristata	Bristlecone Pine
PINUS edulis	Two-Needle Pinyon Pine
PINUS monophylla	Single-Leaf Pinyon Pine
PINUS nigra	Austrian Pine
PINUS sylverstris	Scotch Pine
Large Tree - 50 feet or greater	
* ABIES concolor	White Fir
* CALOCEDRUS decurrens	Incense Cedar
CEDRUS atlantica	Atlas Cedar
* PICEA pungens	Colorado Spruce
PINUS contorta latifolia	Lodgepole Pine
* PINUS jeffreyi	Jeffrey Pine
* PINUS ponderosa	Ponderosa Pine
SEQUOIADENDRON giganteum	Giant Sequoia

* - Carson City Historic District Preferred Tree

Carson City Riparian Area List

Scientific Name	Common Name
Tree	
ACER negundo	Boxelder
ALNUS incana spp. tenuifolia	Thinleaf Alder
ALNUS rubra	Red Alder
ALNUS sinuata	Sitka Alder
BETULA occidentalis	Water (Black) Birch
CRATAEGUS douglasii	Black/Douglas Hawthorn
POPULOUS fremontii	Cottonwood
POPULUS angustifolia	Narrowleaf Cottonwood
POPULUS balsamifera spp. Trichocarpa	Black Cottonwood
POPULUS tremulides	Quaking Aspen
PRUNUS virginiana 'Canada Red'	Canada Red Chokecherry
SALIX alba	White Willow
SALIX amygdaolodes	Peachleaf Willow
SALIX nigra	Black Willow
SALIX prolixa	Mackenzie Willow
SAMBUCUS coerulea	Blue Elderberry

Carson City Riparian Area List

Scientific Name	Common Name
Shrub	
CORNUS sericea	Redosier Dogwood
ELAEGNUS commutata	Silverberry
PENTAPHYLLOIDES floribunda	Shrubby Cinquefoil
PHILADELPHUS lewisii	(Mockorange) Syringa
RHUS tribobata	Skunkbush Sumac
RIBES aureum	Golden Current
RIBES cereum	Wax (Squaw) Current
ROSA woodsii	Wood's Rose
SALIX bebbiana	Bebb Willow
SALIX boothii	Booth Willow
SALIX drummondiana	Drummond Willow
SALIX exigua ssp. Exigua	Coyote Willow
SALIX exigua ssp. Melanopsis	Coyote Willow
SALIX geyeriana	Geyer Willow
SALIX lemmonii	Lemmon Willow
SALIX lutea	Yellow Willow
SALIX lutia spp. Lasiandra	Pacific (Whiplash) Willow
SALIX planifolia var. planifolia	Planeleaf Willow
SALIX scouleriana	Scouler Willow
SALIX sitchensis	Sitka Willow
SAMBUCUS racemosa spp. Pubens	Red Elderberry
SHEPHERDIA argentea	Silver Buffaloberry
SYMPHORICARPOS albus	Common Snowberry