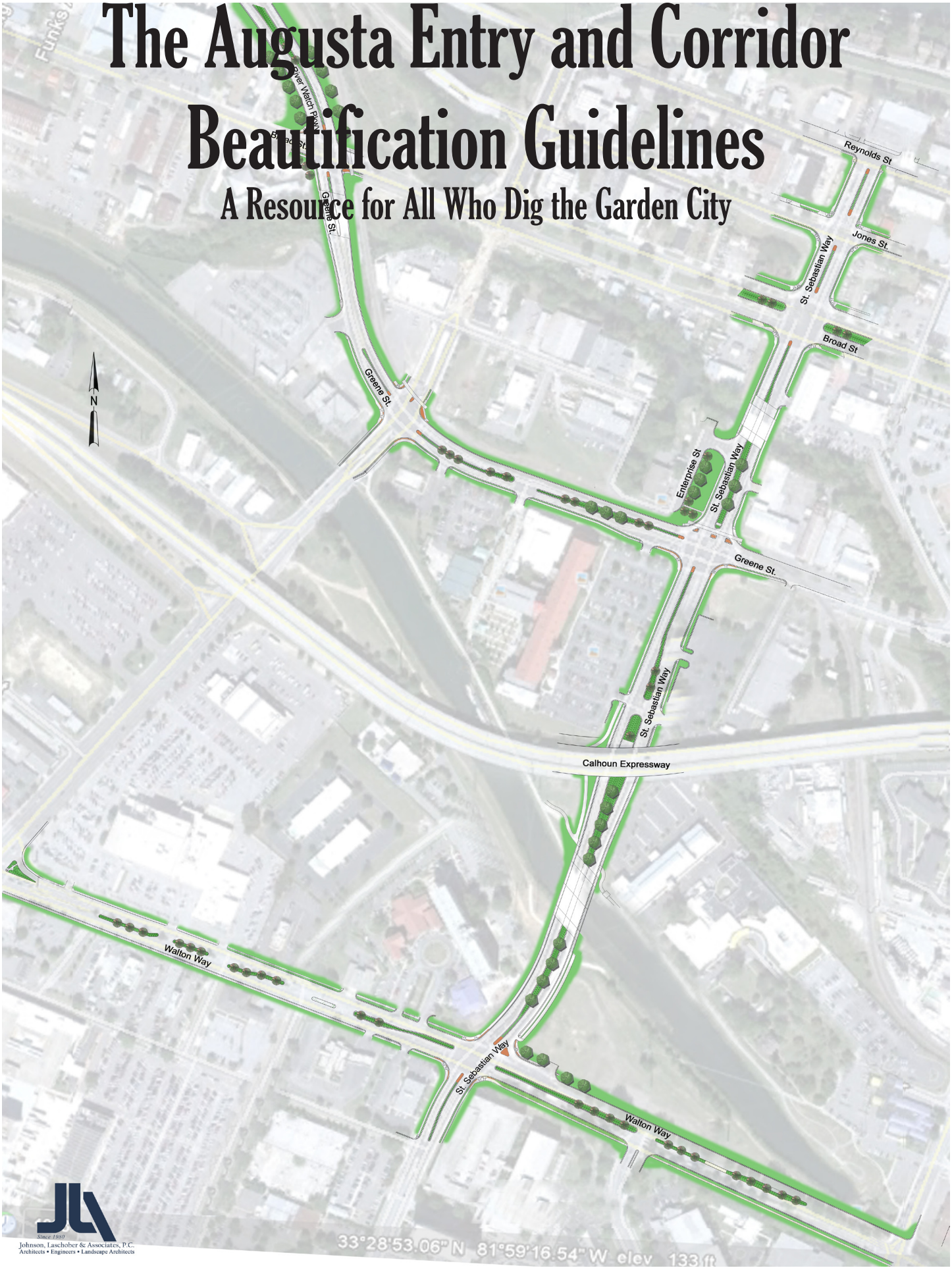
The Augusta Entry and Corridor Beautification Guidelines

A Resource for All Who Dig the Garden City



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The Augusta Entry and Corridor Beautification Guidelines

A Resource for All Who Dig the Garden City

Sponsored by the Augusta Convention and Visitors Bureau and Augusta-Richmond County

Written by Johnson, Laschober, and Associates, P.C.

June 2013

Contents

Definitions:

Contractor- The contractor shall be defined as the party who enters into a contractual agreement put forth by another entity.

The City- The city, as used herein, shall refer to the Augusta, Georgia municipal government.

Landscape Architect-Landscape architect as used herein shall refer to a professional liscensed as a landscape architect by the state of Georgia. The landscape architect shall be the principal party involved in the design of any Beautification project.

Contract-Shall refer to a written agreement between two parties involved in an Augusta beautification project, that is intended to be enforceable by law.

Corridor- A corridor shall refer to any thoroughfare including immediate surrounding buildings, parcels, views, etc. determined to be of specific importance to the image of the city by the Augusta Beautification Commitee.

Design Phase-The design phase of a project, as specified herein, will include all project related activities between procurement of a Landscape Architect and the beginning of construction. Design Phase includes project development, design documents, construction documents, and permitting.

Construction Phase-Construction phase, as specified herein, will include all activity between procurement of a Construction Contractor and Final Completion of Contruction according to the contract.

Maintenance Phase-The maintenance phase as specified herein will include the continuing maintenance of the project by a professional landscape maintenance company for the lifespan of the project.

Right of Way (R/W)-Right of way shall refer to the legal right, established by usage or grant, to pass along a specific route through property belonging to another.

Beauty Spot-A beauty spot as referred to herein shall be a small area meant to bring emphasis to an area or create an impact on passers-by. Beauty spots will be typified by more complex design and may be designed independently or as part of a corridor.

Groundcover- A groundcover as described herein shall refer to any low growing grass, vine, or shrub that is intended to completely cover the area in which it is planted. Such plants will often be low and wide, or of a creeping or spreading variety.

Hardscape- Hardscape shall refer to any non landscaped area within the scope of the design. Typically, hardscape will be poured concrete, concrete or clay pavers, or asphalt. Concrete and asphalt hardscape elements may have color added, be stamped, or be formed to create a more visually appealing design.

Xeric- Xeric, as referred to herein shall be defined as a descriptor of any low water use area.

Sponsor- Sponsor, only as referred to herein, as a part of the Augusta Beautification Agreement, shall refer to the Augusta Georgia municipal government.

Company-The Company, only as referred to herein, as a part of the Augusta Beautification Agreement, shall refer to the party who enters into an agreement with the city under the Augusta Beautification Agreement Program.

Purpose

The purpose is three fold: to beautify the Garden City, to welcome visitors to our city and make a positive first impression by creating positive experiences, and finally to differentiate between different corridors and districts to build a sense of place and reinforce local character.

Applicability

This code shall apply to all new roadway construction, existing landscape improvements and all development projects within a designated Entryway Corridor. Variances shall be requested through the Augusta Beautification Committee by contacting Augusta Georgia Planning and Development Department.

Planned Gateways & Corridors:

The following areas have been identified by the City of Augusta for beautification initiatives:

Gateways:

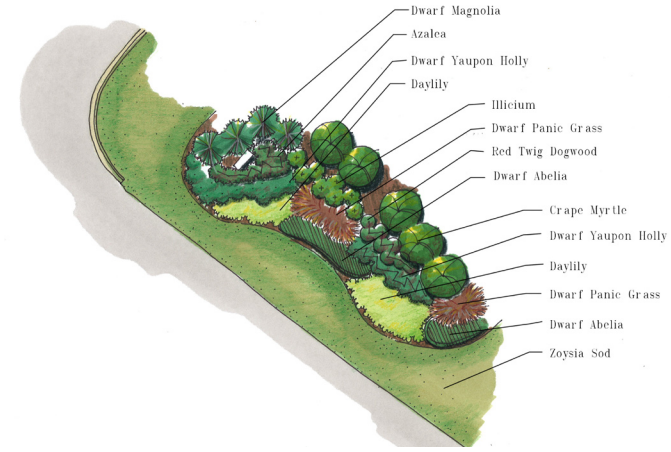
- Riverwatch Parkway at Alexander Drive
- Doug Bernard Parkway at Bobby Jones Expressway (extending from Bobby Jones to the airport and to the Gordon Highway intersection which is included)
- Sandbar Ferry Road at Bobby Jones Expressway

Secondary Gateways:

- Wheeler Road at I-20 (Established and maintained by Wheeler Rd businesses)
- Alexander Drive (Established and maintained by Barry Storey)
- St. Sebastian Way (Established and maintained by area businesses)
- Gordon Highway east of Bobby Jones Expressway (Established and maintained by the Gordon Highway Development Committee)
- Deans Bridge Road & Gordon Highway

Augusta Beautification project before landscape construction.

Augusta Beautification project after landscaoe construction.



Proposed Beautification Project Rendering

Interstate Interchanges (subject to GDOT approval)

- Washington Road at I-20
- Riverwatch Parkway at I-20
- Deans Bridge Road at I-520
- Doug Bernard Parkway at I-520
- Gordon Highway at I-520

Other area of interest may arise as further development increases – or as targeted by private groups or city departments.

Starting the Process

Projects can be established in a variety of ways by private donors, civic groups, organizations, businesses, or by a branch of the Augusta Georgia municipal government.

Common means of project establishment are as follows:

- Garden City Improvement/Augusta Beautification as clearing house/first stop for municipal or private projects
- Road Construction Projects will necessitate a review for landscape opportunities while in concept phase, in order to better plan available landscape space.
- Projects may be initiated by the City or by stakeholders through this process.

See Augusta Beautification Approval Process for information on how to initiate a project below. Augusta Beautification Agreement is attached as an exhibit.

"AUGUSTA BEAUTIFICATION APPROVAL PROCESS" (For Private Parties)

1. The Company/Organization selects an area to be considered for landscaping.

2. The Company/Organization contacts the Augusta Richmond County Planning Commission to obtain approval for the site selected, the program requirements and agreement documents.

3. The Company/Organization provides a detailed landscaping and maintenance plan to Augusta Georgia Planning Commission which will be reviewed by the Augusta Beautification Oversight Committee*. The landscaping plan must be prepared or reviewed by a Registered Landscape Architect and include plant material types, size and requested locations in accordance with the Augusta Beautification Standards. The maintenance plan includes an estimated annual maintenance cost, plan for funding, length of commitment, and contact information of the party committing to maintain the area.

4. The Company/Organization provides proof of insurance as follows:
   - A. Worker's Compensation - Certificate of Insurance
   - B. General Liability Insurance - $1,000,000 minimum coverage
   - C. Automobile Insurance - $500,000 minimum coverage

5. The Company/Organization is notified of required revisions and/or approval of plan.

6. The Company/Organization signs and submits five (5) copies of Augusta Beautification Program Agreement to the City Law Department. The CEO/President and Corporate Secretary must sign all documents. The Company/Organization's Corporate Seal must be affixed. The Mayor executes the agreement.

7. Installation may begin. (Pending all necessary plan approvals have been accepted.)

*The Augusta Beautification Committee consists of representatives from the Augusta Richmond County Planning Commission, Traffic & Engineering, Parks & Recreation, and the Augusta Convention & Visitors Bureau."

Major arterials are the most restricted regarding planting design and irrigation.

Minor arterials offer many opportunities for high impact design.

Local streets offer opportunity for civic groups and homeowners to join in the beautification effort.

Design Procurement

Projects initiated by the City will follow the standard practice for project procurement. Privately initiated projects with the City as a donor will require the submission of a minimum of three bids. Fully privately funded jobs are free to use any procurement means the owner desires.

All Augusta Beautification projects shall be designed by a Georgia licensed Landscape Architect only.

Design Process

Roadway classification will have a direct correlation with the design character and maintenance requirements for any project. Corridors that receive the most traffic will be more complex in design character and require more frequent maintenance than lesser traveled ways. All corridors and entry ways will receive enhanced maintenance in late March and early April. Augusta Beautification Committee will classify each project and reserves the right to re-classify as it sees fit.

Roadway Classifications

- Major arterials will be defined as any roadway with more than 4 lanes, with limited access, and divided medians.
- Minor arterials will be defined as any roadway with 4 lanes, divided roadway, and limited access.
- Collector streets shall be defined as those unrestricted access roadways with more than two lanes.
- Local streets will be defined as those unrestricted access roads with only 2 lanes.

Right of Way Ownership Implications

Georgia Department of Transportation (GDOT) Right of Way (R/W)

For projects or parts of projects which are on GDOT R/W see the attached “Policy for Landscaping and Enhancements on GDOT Right of Way”.

Augusta, Georgia R/W

Follow the above mentioned GDOT guideline for any items not addressed, in this book of standards.

Many of the planting limitations and irrigation restrictions from the GDOT Guideline are not required for medians and roadway shoulders within ARC Right of Way. Please contact the Augusta Traffic Engineering Department for further clarity.

Typical design characterization

The typical Augusta Georgia gateway design will be representative of the city in its character and composition. Traditional plants of the southern garden will be prominently featured in each project and accompanied by hardy plants that both complement the southern palette and thrive in the heat of summer. Plantings should be designed to provide year round interest, with particular attention paid to providing impact from late March to early April. Plantings should favor the southern garden style where possible. Ornamental heavy plant combinations should be paired with tidy edges of sod, groundcovers, or mulch. Projects should be designed for ease of maintenance.

Expected Project Life

- Projects should be designed to provide a minimum 50 year project life. The use of appropriate plant material and irrigation equipment will help to extend the project’s lifetime. Assume a minimum 10 year cyclical refurbishment period for major maintenance, such as seasonal bed soil replenishment, major tree pruning, major irrigation maintenance, and sub-surface drainage maintenance.

Using hardy plant material is necessary to maintain a beautiful project year round.

Southern garden plants should be prominent in any Augusta Beautification Project.

Median Type	Description	Design and Technical Directions
Narrow	Medians 6' in width or less	Concrete recommended as standard material: basic City standard is poured in place concrete curbs with broom finish between curbs; where stamped colored concrete has been used in nearby medians on the same arterial, its use should be continued Special area guideline pavement should be used in place of standards where applicable
Beauty Spot/Gateway	Sections of medians and shoulders at key intersections and gateway points that function to announce arrival at an important place along an arterial corridor	Medians designed to integrate with area-specific streetscape design guidelines Well detailed and higher quality materials due to high levels of importance Median trees selected to coordinate with street trees Banners, entry signage, gateway elements, public art, special lighting (only where coordinated by Engineering). Area-specific entry signage/bollards used to announce median where approved by Engineering. Standard median signage shall be from Augusta Convention and Visitors Bureau "City of Augusta Wayfinding and Welcome Signage" Program
Town/Neighborhood Center	Designated areas for intensive pedestrian-oriented commercial, mixed use and civic development Medians designed to integrate with area-specific streetscape design guidelines.	Well detailed due to high levels of pedestrian activity. Trees selected to match street trees with emphasis on growing conditions for tree health and longevity to maximize greening, including use of structural soils under paved areas such as pedestrian crosswalks to prevent roots from breaking and heaving crosswalks. Trees generally planted on centerline of median to minimize impacts on sightlines to commercial storefronts/signage. Medians designed to support pedestrian safety and traffic calming.

Median Type	Description	Design and Technical Directions
Commercial Corridor/ Business Park	Arterial road with concentration of commercial land uses with primarily vehicular rather than pedestrian orientation Medians designed to provide continuity and identity to the corridor.	Standard level of detail due to comparatively low levels of pedestrian activity. Standard hardscape treatment where no area-specific guidelines exist. Emphasis on greening through use of trees and mass plantings of shrubs/groundcover Trees generally planted on centerline of median to minimize impacts on sightlines to commercial storefronts/signage. Minimize vehicular crossings of median to maximize greening opportunities.
Residential Corridor	Arterial road with concentration of residential land uses, especially where residences have entries related to the fronting arterial Multifamily to single family residential land use character should be reinforced by median treatment.	Vehicular crossings of median should be minimized in order to maximize greening opportunities. Median lighting is warranted in order to minimize light impacts on residential uses; no banners Informal plantings to maximize greening, to communicate a residential character, and to create strong contrast with commercial corridors. Groupings of different tree species either on centerline or staggered as width permits; use of areas of spring bulbs; use of accent areas of flowering shrubs/groundcovers, particularly near intersections or other focal points. Plant selection from drought tolerant species related to a residential plant palette, including grasses and common roses.

Median Type	Description	Design and Technical Directions
Park/Open Space Corridor	Major parks and intersections with major greenway corridors	Medians should be planted to compliment the character of major parks – from urban to naturalized treatments. Consideration should be given to avoiding medians within major parks, especially parks that are treated as forest areas in favor of minimizing the overall width of the developed road right-of-way since green space at the road edge is substantially higher value as part of the urban forest than a median. Greenway crossings of arterials should be announced and facilitated by the median treatment on a case by case basis – potential design details could include pedestrian crosswalks, bollards for refuge and visual cues for motorist, signage or banners. Use native species consistent with the ecology of the area to increase habitat values associated with the nearby green space. Heritage Area (Cultural and Natural) Medians at places of heritage significance, including buildings on the Heritage Register, intersections of heritage roads Special features or planting in the median should complement and assist in the interpretation of heritage features – potential details include signage, pole-mounted banners, placement of an appropriate artifact in the median (historic farm machine at a heritage farmstead), historic plant materials (flowering fruit trees).
Rural/Agricultural Corridor	Generally medians are not required	Medians should be planted with simple mass plantings that suit the adjacent cultural landscape character; rural residential should use a residential plant palette; agricultural uses should generally have a row of trees with one consistent groundcover species.

Median and Non-Median General Characteristics

- The Augusta Beautification Committee reserves the right to establish the classification of any project or portion of a project as xeric or non-xeric.

Xeric Landscapes

- In a xeric median, the plants are to be drought resistant and will only be watered until establishment. Xeric medians will have similar character to Non-xeric medians where possible. Turf grasses will not be used in xeric medians due to high water requirement. Ground cover or mulch will serve as the main field of the median.
- Xeric medians will be best suited with native and hardy plant materials.

Non-Xeric Landscapes

- In non-xeric medians, irrigation shall be installed and equipped with smart controller technology. Calsense brand of controller is the system in use by Augusta, Georgia. Turf grass is acceptable in non-xeric medians.

Plant Usage by Plant Type

Grass/Groundcover

Spacing

- Groundcover should be installed and spaced to achieve full continuous plant mass in two years and at no greater than 3' O.C. See GDOT guide.

Use

- Groundcover shall be used as the lowest layer of plant material within bed lines where turf is included in the design. In some instances (xeriscaping, low water or low maintenance zones), groundcovers may be used curb to curb as the field in which the planting beds are established.

Location

- Groundcovers will be used to reinforce gradual height changes leading the eye upward between turf and shrubs or trees. Groundcover may also be used in any location that cannot sustain grass or cannot be mowed.

Xeric landscapes are composed of plants that require very little water after establishment.

Non-Xeric Landscapes require irrigation to perform at peak condiotin

Where grass is not used, groundcovers become the main ground level element.

Spacing shrubs for mature size helps prevent looking overgrown and decreases likelihood of disease.

Clonal plant varieties are preferred due to consistency of character and performance from plant to plant.

Large trees can be used quite effectively to frame a space and create enclosure.

Shrubs

Spacing

- Shrubs shall be spaced according to mature size. Small shrubs can be placed 3'-5' apart, while large shrubs will generally be installed at 5'-8' O.C.

Use

- Shrubs should be used to create year round interest in the design. With the appropriate mix of evergreen and deciduous plants with unique flower color and foliage texture, the project can provide interest all year round.

Location

- Shrubs function as the main eye level accompaniment to the trees which will usually define the space above. In the case where trees are not allowed, large shrubs may function as the predominant space defining element and may be used like trees with medium and small shrub accompaniment.

Large Trees

Spacing

- As a rule of thumb, large shade trees may be planted at 40' O.C. in linear projects. In some instances (i.e. high speed corridors) larger spacing is acceptable, but should under no circumstance exceed 60' O.C.

Use

- Clonal varieties of large native trees shall be specified where possible.
- Trees will be used as the spine of all linear projects and set the tone of the corridor. Trees will be used to reduce heat island effect by shading roadways, to break up expansive stretches of median by introducing rhythm and pattern, as well as to frame views and create focal points.
- Trees form an implied barrier creating separate spaces. Median trees divide the roadway into two spaces while trees on the curb or shoulder can envelope the whole roadway as one space with "walls" on either side.

Location

- In general, trees will be planted centrally in linear projects (setback restrictions apply in medians). Incorporate trees throughout the project area to form spaces and focal points.

Small Trees

Spacing

- As a rule of thumb, small trees shall be spaced at 20’-30’ O.C.

Use

- Small trees function in a role that is a hybrid between the space defining large tree and the interest of flowering shrubs. Small trees can function as either, in order to provide the perfect complement or transition between the shrub and large tree.

Location

- In general, trees will be planted centrally in linear projects (setback restrictions apply in medians). Incorporate trees throughout the project area to form spaces and focal points.

Seasonal Color

Spacing

- Seasonal color shall be the responsibility of the organization/company to install as needed in order to keep vibrant annuals in bloom all year long. Plants shall be spaced so that at maturity of plants the seasonal bed will be completely covered in continuous vegetation.

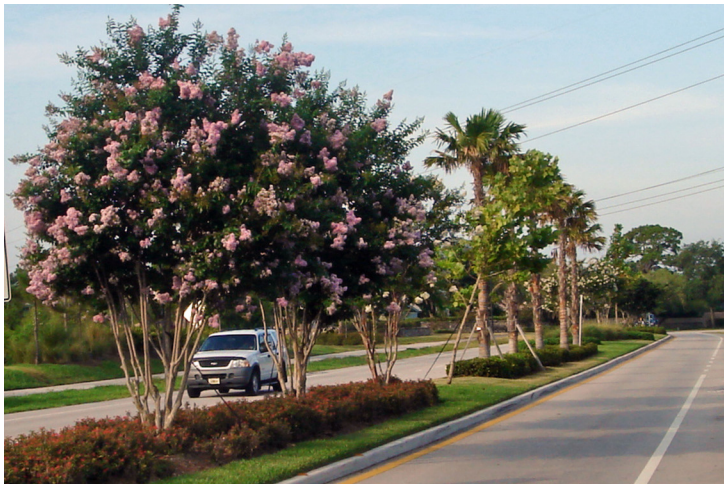
Use

- Seasonal color shall make up a minimal amount of the total landscaped area. Use shall be to provide an impact upon approaching a landscaped median. Pops of color and interesting foliage texture combinations are encouraged.

Location

- Locate to make an impact as people first approach the project or corridor.

Care should be taken to minimize or prevent new plantings of any type within the root zone of established trees.



Small trees often offer added visual impact through flowering or fall color.

Seasonal color should be used to create visual impact with a small footprint.

In order to limit large scale losses, the amount of un-proven plants in each project will be limited.

The theme tree will be the predominant reoccuring design component and set the character of the project.

Dark brown double hammered hardwood bark mulch shall be the preferred mulch used in all beds.

Recommended Plant Type Ratios

The Augusta Beautification Committee reserves the right to determine the theme plant species of any corridor or project.

- No more than 25% of the total plant material (by area) proposed for a project shall be azaleas.
- No more than 20% of the total plant material proposed for a project shall be deciduous plant material by area (Excluding trees).
- No less than 60% of total trees proposed for a project shall be large trees.
- A theme tree/shrub combination shall be established for every project or corridor. Approximately 60% of any plant category (large tree, small tree, flowering shrub) will be of the theme species for the project. Any project completed as a continuation of an established project, or proposed in a corridor with an established theme tree/shrub combination shall not vary the theme tree.
- A maximum of 2 plant types per project, which have not been proven in Garden City Improvement previous project or included in initial Guideline plant palette, may be used in a new project. Unproven plant material is not to exceed 10% total project plant material by area.
- No envasive exotic species as defined by the Georgia Exotic Pest Plant Council shall be specified for installation in any project.

Mulch

- All mulch used in beautification projects shall be organic in nature. No stone or synthetic mulch shall be used.
- Preferred mulch materials are double hammered hardwood bark mulch or long leaf pine straw. If artificial color is to be used, mulch should be naturally colored in brown hues. No black or red mulches will be accepted.
- Mulch shall be installed between 2”-4” thick and shall be replaced as needed and at minimum twice per year.
- No mulch shall be installed immediately around base of plants. See planting details.

Median Specific Characteristics

Design with experiential progression in mind.

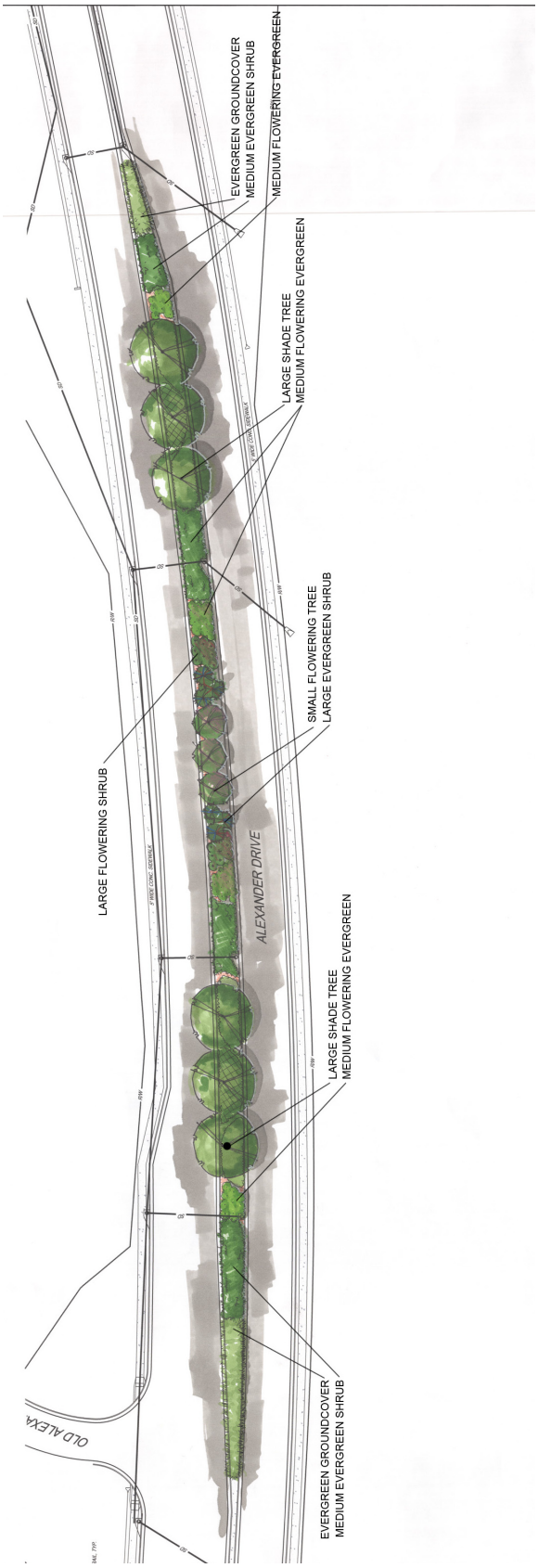
- Create multiple groups of complementary plant materials (Group A, Group B, Group C). Begin to establish patterns by alternating plant groups (aba- aba, aba-aca-aba, etc.). Multiple plant groupings and establishment of perceptible patterns are particularly important on long linear projects. A break in the pattern can be used to create a focal point or emphasis.
- Design with speed and scale in mind. Lengthen plant groups and individual spacing of major design elements on high speed corridors.
- Use the ends and center of projects to create an impacting experience. Medians will be experienced from both sides by users traveling in opposite directions. Be sure to account for direction of travel and whether travelers are entering or leaving the city.

Design based on median width

- Median widths < 15’ wide may not receive a tree that matures at larger than 4” in caliper. See GDOT guide.
- Median widths 15’-35’ wide shall have one row of trees max.
- Median widths 35’+ may have multiple rows of trees.

Narrow medians

- Construction of medians less than 6’ wide should be avoided where possible.
- Landscape medians should not be less than 8’ wide.
- Medians less than 8’ wide should be addressed with approved hardscape material. Clay pavers or stamped/stained concrete are preferred. Clay/brick pavers are not allowed in GDOT R/W.



Repeating similar elements throughout the design corridor helps to create both variety and unity.

Pavers installed in a narrow median restrained by concrete curb.

Paver joints shall be swept with polymeric sand to prevent weed growth and overall maintenance required.

Pavers

- When pavers are used in a project, they shall be set on a 4” graded aggregate base course and graded to provide positive drainage.
- Joints shall be swept with polymeric sand and surface treated with pre-emergent herbicide immediately following installation.
- Where pavers are installed adjacent to a curb, surface of pavers should be installed flush with top of curb. A ½” pre-formed expansion joint shall be provided at curb paver interface. Metal or masonry edge restraint shall be used where edge of paver area is not bound by a structural element.
- Paver color shall be determined by pre-existing materials within corridor or established design pattern for gateway or corridor.
- No debris or liquid waste from masonry or other construction shall be placed or disposed of in proposed planting areas or area existing plants.

Plant Palette

Botanical Name	Common Name	Min. Size Installed	Xeric
Large Trees			
Acer buergerianum ‘Valynor’	Trident Maple	4” CAL	YES
Nyssa sylvatica ‘Wildfire’ or ‘Green Gable’	Black Gum	4” CAL	YES
Quercus hemisphaerica	Darlington Oak	4” CAL	
Quercus phellos ‘Hightower’	Hightower Willow Oak	4” CAL	
Taxodium distichum	Bald Cypress	4” CAL	YES
Ulmnus parvifolia ‘Bosque’	Lacebark Elm	4” CAL	
Ulmnus americana ‘Princeton’	American Elm	4” CAL	
Ginkgo biloba	Ginkgo	4” CAL	
Small Trees			
Acer griseum	Paper Bark Maple	10’-12’ B&B	
Chionanthus virginicus	Fringe Tree	10’-12’ B&B	YES
Juniperus virginiana	Eastern Red Cedar	10’-12’ B&B	YES
Lagerstroemia sp.	Crape Myrtle	10’-12’ B&B	YES
Magnolia grandiflora ‘Alta’ or ‘Little Gem’	Dwarf Southern Magnolia	10’-12’ B&B	
Prunus x yeodensis	Yoshino Cherry	10’-12’ B&B	
Large Shrubs			
Azealea indica ‘G.G. Gerbing’ or ‘George Tabor’	Indica azalea	7 GAL	
Camellia japonica	Japonica Camellia	7 GAL	
Forsythia x intermedia	Golden Bells	7 GAL	
Ilex x ‘Nellie R. Stevens’	Nellie R. Steven’s Holly	7 GAL	
Ilex x ‘Savannah’	Savannah Holly	7 GAL	YES
Illicium parviflora	Anise tree	7 GAL	
Loropetalum ‘Burgundy’	Burgundy Loropetalum	7 GAL	
Myrica cerifera	Southern Wax Myrtle	7 GAL	YES
Osmanthus fragrans	Fragrant Tea Olive	7 GAL	
Viburnum tinus	Laurestinus	7 GAL	YES
Vitex agnus-castus	Chaste Tree	7 GAL	

Botanical Name	Common Name	Min. Size Installed	Xeric
Small Shrubs			
Abelia grandiflora	Dwarf Abelia	3 GAL	
Azalea x 'Encore'	Encore Azalea	3 GAL	
Berberis thunbergii sp.	Japanese Barberry	3 GAL	
Ilex cornuta	Carissa Holly	3 GAL	YES
Ilex vomitoria 'Nana'	Dwarf Yaupon Holly	3 GAL	YES
Loropetalum chinensis 'Emerald Snow'	Emerald Snow Loropetalum	3 GAL	
Loropetalum chinensis 'Ever Red Sunset'	Ever Red SunsetLoropetalum	3 GAL	
Panicum virgatum	Panic Grass	3 GAL	YES
Pennesetum alopecuroides	Hameln's Dwarf Fountain Grass	3 GAL	
Raphiolepis indica	Indian Hawthorne	3 GAL	YES
Raphiolepis umbellata 'Minor'	Dwarf Yedda Hawthorne	3 GAL	YES
Rosa x Knockout	Knockout Rose	3 GAL	YES
Groundcover			
Hemerocallis sp.	Daylily	1 GAL	YES
Juniperus sp.	Juniper	1 GAL	YES
Liriope sp.	Lilyturf	1 GAL	
Loropetalum chinensis 'Daruma Dwarf' or 'Peack'	Dwarf Daruma or Purple Pixie Loropetalum	1 GAL	YES
Trachelospermum asiaticum	Asiatic Jasmine	1 GAL	YES
Gardenia x 'Radicans'	Dwarf Gardenia	1 GAL	
Veronica peduncularis 'Georgia Blue'	Georgia Blue Speedwell	1 GAL	

Turf Grasses

- Preferred turf grass for beautification projects shall be Palisades Zoysia.
- Other species of grass including Centipede and Bermuda may be considered pending site location and micro climatic conditions.
- Certification of grass species by submission to project Landscape Architect or Augusta Tree and Landscape Maintenance Department will be required prior to installation.

Installation Methods

See detail section in appendix for complete library of approved details for inclusion in plans submittted for approval.

Planting Beds Preparation

- All plants shall meet the requirements set forth in the American Standards for Nursery Stock (ANSI Z.60). All plants shall be installed at the sizes specified by the approved landscape plan and will not be accepted otherwise.

- Prior to installation, all plant material shall be inspected by the Landscape Architect. Contractor shall have sole responsibility for coordinating pre-installation inspection. Plant labels including genus, species, and cultivar shall remain attached to each plant until reviewed and approved by the Landscape Architect. Substitution due to plant availability requires the approval from the Landscape Architect.

- Plant material shall be balled and burlapped or container grown as specified. No container grown stock will be accepted if it is root bound. All plastic or synthetic root wrapping material shall be removed at time of planting. Burlap should be pulled back approximately one third of root ball height, in order to discourage wicking of moisture from the rootball.

- Plant material should not be stored on site without being installed within 24 hours unless temporary irrigation and shade are provided. Root balls of plant material delivered to site shall not be allowed to dry out before installation.

- All plants shall be hand watered thoroughly twice during the first 24 hours after installation. After planting, all trees, shrubs, and grass shall be watered weekly or as necessary to maintain the equivalent of one inch of absorbed water per week.

- Prior to planting, the location of all plant

All synthetic material will be removed from the rootballs of plants at the time of installation.

Remove the top 1/3 of burlap from the rootball during installation.

Temporary plantings or other protection are required, if plant materials are not installed within 24 hours.

Landscaped areas should be graded to encourage drainage and prevent puddling.

Bedlines shall be created with a three inch deep shovel cut edge.

Nylon straps with shock absorbing components should be used to securely brace new trees.

material is to be staked and approved by the Landscape Architect.

- Planting beds shall have a minimum slope of 2% to encourage positive drainage and discourage saturated root systems. Supplement areas with suitable topsoil if needed to provide positive drainage.
- The landscape contractor shall provide fertilizer, pre-emergent herbicide, lime topsoil and planting mixture as per the installation specifications.
- Bed lines shall have a three inch deep shovel cut trench edge where mulch meets grass, concrete walks or curbs unless otherwise specified. Bed lines shall be smooth and continuous and be within a reasonable location and shape as illustrated on plans. Place mulch under plants and into bed line trenches.
- Planting bed areas shall be treated with Round-up or equal herbicide spray, by a licensed herbicide applicator and left undisturbed for 7 days prior to beginning excavation and prep. There shall be no weeds or grass clumps in excavated median prior to topsoil placement. Contractor shall also schedule a time for Landscape Architect to observe finished excavation prior to placement of planting soil.
- Contractor shall be responsible for full landscape maintenance through a thirty day maintenance period following the date of final completion. At completion of the thirty day period the owner will be responsible for all maintenance and watering.
- Contractor is responsible for the cleanup of all containers, pallets, debris, etc. resulting from his/her work.
- All plant material, including turf grass shall be warranted for a period of one year. Warranty does not include acts of God or vandalism.

General Tree Planting

- Nylon strap with shock absorbing componentsand wooden stakes shall be used for all tree support staking. Pull straps tight, but do not over tighten.
- Plant root ball 1”-2” above existing grade.

- Mark the north facing side of the tree prior to initial digging. Using the marking install the tree in the same orientation as it was excavated.
- Tree rings shall be created using 2”-4” deep organic mulch installed at a minimum of 8’-10’ in width. A 2” high earthen saucer of native soil shall be created near the edge of the mulch ring to better retain water.
- If present, the wire basket shall be completely removed from the root ball and burlap shall be pulled back one third of the height of the root ball.
- Tree installation pit shall extend a minimum of 12” beyond the root ball along the flat undisturbed bottom of the pit. Diameter of the top of the tree pit shall be at minimum two times the width of the root ball.
- Grade backfill of tree pit away from the base of tree to provide positive drainage.
- Central leader shall never be pruned.

Evergreen Tree Planting Detail

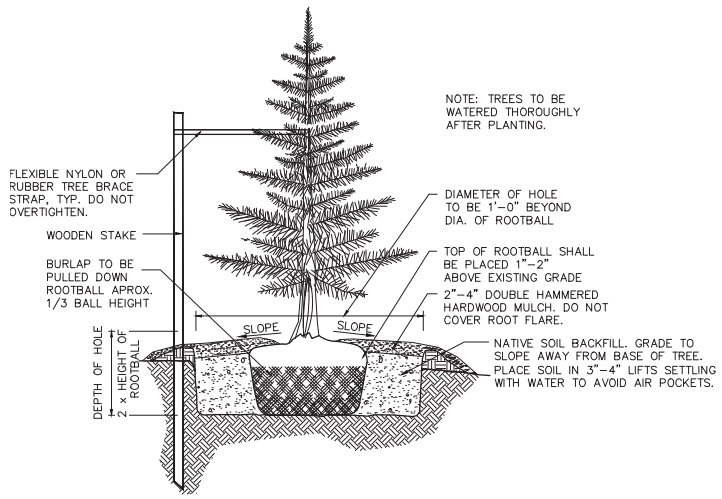
- One support stake shall be driven into the ground at 1’-6” away from the edge planting hole on the side of the prevailing wind. A nylon strap with shock absorbing components shall be attached from the tree to the stake for support. All straps and stakes shall be removed within one week of the end of the 90 day maintenance period.

Multi Trunk Tree

- Tree staking should be done with 1”x2”x18” long wood stakes in compacted soil. Nylon straps with shock absorbing components should be wrapped to multiple trunks per strap and then secured to a stake in order that each main trunk is anchored against the wind. All straps and stakes shall be removed within one week of the end of the 90 day maintenance period.

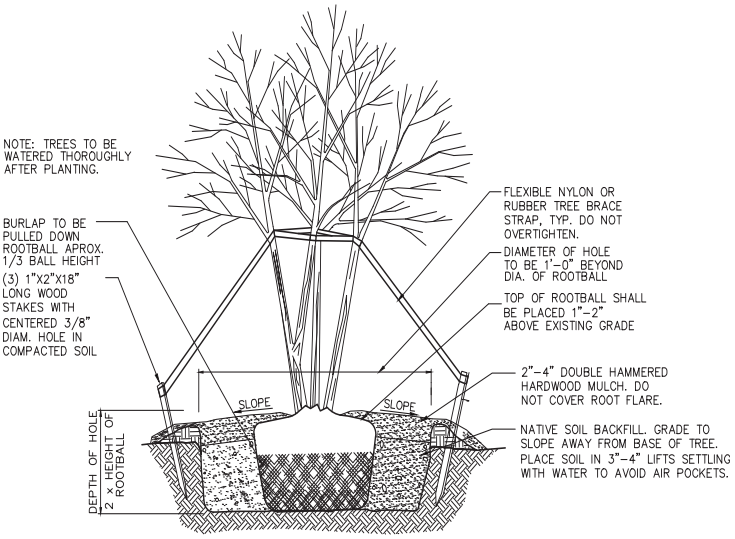
Typical Tree Planting Detail

- Tree staking should be done with 1”x2”x18” long wood stakes in compacted soil. Nylon straps with shock absorbing components should brace the tree in three directions from the lowest set of branches to the stakes. All straps and stakes shall be removed within one week of the end of the 90 day maintenance period.



NOTES:
1. MIN. ROOT MASS TO BE IN ACCORDANCE WITH "AMERICAN STANDARDS FOR NURSERY STOCK"
2. DO NOT ALLOW ROOT BALL TO DRY OUT DURING INSTALLATION PROCESS.
3. ALL STRAPS, STAKES AND ASSOCIATED MATERIALS SHALL BE REMOVED BY CONTRACTOR WITHIN ONE WEEK OF THE END OF THE 90 DAY MAINTENANCE PERIOD.
4. NOTE COMPASS ORIENTATION OF TREE PRIOR TO DIGGING AND MATCH PRIOR ORIENTATION AT INSTALLATION.
5. LOCATE ANCHOR STAKE 1'-0" OUTSIDE OF PLANTING HOLE ON THE SIDE OF THE PREVAILING WIND.

EVERGREEN TREE PLANTING DETAIL



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4. NOTE COMPASS ORIENTATION OF TREE PRIOR TO DIGGING AND MATCH PRIOR ORIENTATION AT INSTALLATION.

MULTI-STEM TREE PLANTING DETAIL
NOT TO SCALE

Percolation tests should be performed to determine whether supplemental drainage is required.

Rocky or debris laden soils shall require excavation to a depth of no less than 12".

Soil samples shall be tested to determine whether soil amendments are necessary.

Shrub Installation Detail

- Plant top of root ball at or just above finish grade.
- Lay out beds as illustrated on plan. Fill in planting bed with triangular spaced plants measured from center to center.
- Planting hole shall be minimum 1' outside of root ball at surface and wider at the top than at the bottom.

Median Plant Spacing Detail

- This detail is required in all GDOT Rights-of Way. No shrub shall be planted closer than 3' from the face of curb. Groundcovers shall not be planted closer than 18" to face of curb.
- Sod shall not encroach closer than 2' from adjacent plantings and shall be defined by a 3" deep shovel cut bed edge.
- Use triangular plant spacing as shown in detail.

Soil, Planting Media Preparation

Establish Rate of Percolation

- Test percolation by excavating an 18" deep hole and filling it with water. If percolation of the water from the hole takes more than 24 hours, percolation is insufficient and soil amendment and improvement should be undertaken.
- Soil samples shall be taken to the local County Extension Agency for testing. Soil amendments shall be added as recommended by testing agency.
- In cases where the existing soil has a high rock or debris content or fails the percolation test, excavation and replacement of soil media will be necessary.
- In excavation and replacement scenarios, no less than 12", and preferably 18"or more of soil should be removed throughout the project area.
- When replacing soil, care should be taken that the subsoil be left in a manner that promotes positive drainage, by insuring slope of 2% or more to a drainage structure and relatively

consistent surface without pot holes or low points intermediate.

- Finished grades of imported soil should be left 1” minimum below any curb or other hardscape in an attempt to provide a clean, flush edge between top of concrete and abutting sod or mulch. Imported soil should be finish graded to provide positive drainage across surface. See “Sod Installation Detail”.
- The imported topsoil shall meet the attached criteria and a sample shall be submitted to the Landscape Architect in a 1 gallon re-sealable plastic bag for approval prior to installation.

Underdrains/Sewer tie-ins

- Where possible, French drains should be installed at the subsurface to enhance drainage.
- French drains should be tied to storm sewer at an existing drainage structure by core drilling. When grades are prohibitive, or there is no available structure into which to tie French drains, the use of rock sump areas will be accepted. See detail.
- Under drains are recommended in all medians, however, in areas where existing soils pass percolation test and further excavation is not required due to poor existing soil material, french drains will not be required.

Irrigation

- Irrigation is preferred in the design of all beautification projects. GDOT does not allow irrigation within medians without a variance and has requirements for its installation on roadway shoulders. See the attached GDOT manual for further reference to irrigation requirements and variance process.
- The Augusta, Georgia municipal government prefers the use of a “smart irrigation system” to reduce the waste and danger of water on roadways. Smart irrigation systems are equipped with an anemometer to monitor wind speeds, a thermometer to determine possibility of freezing, and pressure loss sensors to eliminate waste in a pipe burst scenario, as well as, moisture and rainfall monitoring in order to efficiently and

French drains are suggested in all median beautification projects.

The Calsense controller monitors many site conditions to preserve water during.

Calsense controllors can be monitored by a central computer.

Irrigation by water truck is one method of establishing plants in a xeric landscape.

Drip irrigation bags are another option for use during the establishment period for xeric landscapes.

Directional drilling is the preferred method of providing irrigation and power access to areas installed without sleeves or conduit.

safely distribute water to plants as needed. ARC is equipped with the Calsense line of smart irrigation controllers and operating software. All proposed controllers shall be compatible with this system.

Standard Irrigation

- Standard irrigation projects will employ a Calsense smart irrigation system linked to city control. The Calsense installation requirement is driven by project size and budget. Contact Augusta Beautification Committee for information on possible variance.
- Augusta Utilities Department is often amicable in offering in-kind donations of water utility installation and water service. In most circumstances, when AUD makes in-kind donations AUD installs water lines from a needed tap to the water meter. Irrigation designer or Landscape Architect shall coordinate with AUD civil engineer to coordinate efficient layout, tap locations, and supply line sizing.
- Contractors are encouraged to contact the area Calsense Representative for assistance in installation and setup of the Calsense irrigation system, particularly the controller, associated sensors and programming.

Xeric Plantings

- Xeric planting scenarios are designed for minimal water use. While not preferred, the use of xeric landscaping is allowed under this guideline where standard irrigation is not available or not allowed.
- See plant palette for approved plants for xeric landscapes.
- Xeric landscapes shall receive irrigation in an amount equal to 1” rainfall each week for the first year of installation. This can be accomplished through temporary use of an irrigation system or by use of a water truck.

Directional Drilling and Boring

- In order to avoid the necessity of drilling or boring, all new-construction projects shall include 2-6” dedicated sleeves for irrigation access to any

location that creates an enclosed landscaped area. This shall include but is not limited to, landscaped medians, parking lot islands, driveways at street yard crossings, foundation planting areas, etc.

- On existing sites or in areas where there is no irrigation access provided, boring and directional drilling are preferred to open cuts. Any project under GDOT jurisdiction will require a utility encroachment permit in addition to the special encroachment permit. Without a variance, sleeving will also be required to be Schedule 80 PVC within the R/W.
- Augusta, Georgia requires minimum 48" cover over all roadway drilling or boring. Jack and bore pits will be a minimum of 36" from the edge of pavement /back of curb. No road or driveway shall be open cut without authorization from the Traffic Engineer.
- In the event that the required minimum cover cannot be achieved due, contractor shall notify project Landscape Architect and Augusta Engineering Department.

All landscaped areas confined by hardscapes should be provided with access via sleeves upon installation.

Open cuts shall be avoided at all costs through the use of sleeving and directional drilling.

Sponsor signage may be displayed for limited times with approval of the Augusta Beautification Commitee.

Augusta Convention and Visitors Bureau has established a Welcome and Wayfinding sign program.

Signage

Sponsor Signage

- Sponsor recognition signage will be allowed in the form of removable signs with sponsor logos. Sponsor Signage will be allowed to be displayed at the project during initial installation through completion, during Early April, and by request of the Sponsor for special events. Requests should be sent, in writing, to the chair of the Augusta Beautification Committee.

Program Signage

- Program signage will be installed permanently in each project completed as part of the Augusta Beautification Program.
- Program signage will identify the project as a part of the Augusta Beautification Program, and refer readers to the program website, which will list all parties involved in the project, project bio and statistics, before and after pictures, and information on becoming a part of the program.

Welcome and Way Finding Signage

- Welcome to Augusta and District Wayfinding signage installation is an ongoing project of the Augusta Convention and Visitors Bureau. Many of the welcome sign locations will be accompanied by landscaping to create ‘Beauty Spots’ and are available as project locations for potential sponsors.

Permit Process

GDOT

When proposed project is on the R/W belonging to the GDOT, the project will have to be approved by GDOT in addition to the local permitting process. The standard process for landscape improvements in the GDOT R/W incudes a special encroachment permit issued through the District Access Management Office. A landscape review will also be required through the GDOT landscape office.

- Medians are the most restricted area of landscaping with heavy restrictions on irrigation. Most irrigation in medians requires a Variance approved by the GDOT Commissioner.
- Roadway shoulders and areas outside of the traveled way are less restricted in the use of landscaping and irrigation.
- Refer to Attached GDOT Guide for more information on restrictions and requirements.

GDOT Grant Process

The GDOT offers assistance through grants to local municipalities in the effort to improve local roadways. When awarded a grant, the project does not require an Encroachment Permit. There are however many more requirements that do have to be met, including the Landscape Office Review.

- Concept Meeting
- Concept Report
- Environmental Report
- Design Phase
- Construction Documents
- Bidding
- Construction Management

Augusta, Georgia

Each roadway beautification project will also require completion of the Augusta, Georgia plan approval process. GDOT regulations supersede City requirements, but do not alleviate the necessity of a plan review.

- Land Disturbance Permit and 3-Phase ESPC for Projects will be required for any project or phase with greater than 1 acre of disturbed area. Erosion Control BMPs will be required on all projects regardless of size. No project is exempt.
- When submitting for design review approval, a submittal of 12 full sets of plans shall be delivered to the Augusta Georgia Planning and Development Department. Review fees may be waived by the P&D Department at the Directors' discretion, for projects benefitting the city.

Construction Bidding Process

Projects initiated by the City will follow the standard practice for project procurement. Privately initiated projects with the City as a donor will require the submission of a minimum number of bids. Fully privately funded jobs are free to use any procurement means the owner desires.

Construction Process

Pre-Construction Meeting

A Pre-construction meeting is to be attended by a representative from each city department involved in the project, any state department with jurisdiction, project sponsor, project designer, and contractor. Pre-con shall be scheduled by contractor per Augusta, Georgia standards. Site visits are encouraged as part of the Pre-construction when possible.

Permits

Design permitting shall be the sole responsibility of the Landscape Architect. Construction Phase permits are the responsibility of the Contractor to procure as necessary.

Erosion Control Measures

For projects requiring a Land Disturbing Activity Permit, an erosion control plan will be submitted to the Augusta, Georgia Engineering Department during the design phase. Erosion control BMPs will be the responsibility of the contractor to install and maintain. During construction, all erosion control measures shall be maintained as drawn on the approved plans or as directed by project Landscape Architect or Augusta Traffic Engineering Deparment. Plans should be red lined, dated to reflect changes and kept available on site throughout construction.

Traffic Control

When necessary, a traffic control plan will be submitted to the Augusta, Georgia Engineering Department during the design phase. In some instances, based on project complexity, as determined by AED, inclusion of appropriate details from the most recent Manual on Uniform Traffic Control Devices will suffice. Traffic control will be the responsibility of the contractor to procure and maintain. During construction, all traffic control measures shall be maintained as drawn on the approved plans or as directed by design engineer or City Traffic Engineer. Plans should be red lined, dated to reflect changes and kept available on site throughout construction.

Construction Observation

Construction observation will be completed by the project Landscape Architect at the frequency established between the Owner and Landscape Architect in the Contract. Landscape Architect will be present for all project milestones, as established in the contract. Augusta, Georgia will also complete site observation as deemed necessary and discussed in the Project pre-construction meeting.

Post Bid Changes

Post bid changes shall be initiated by submittal of Request for Information to project Landscape Architect and appropriate permitting authority. If additional approval is required for requested change, the appropriate submittals will be made by Landscape Architect. Contract drawings shall be red lined and dated. Post bid changes will be negotiated as a change to the contract between owner and contractor or Landscape Architect.

Maintenance Process

As part of the Augusta Beautification Program, project sponsors will be responsible for the installation, monitoring, and maintenance of the landscape improvements, by employing a contracted professional landscape maintenance company. Scheduled maintenance to be performed is to include but not be limited to: mowing, edging, pruning, blowing, litter control, as well as other general maintenance.

Contractor Selection

Qualifications

- Contractors shall have completed at minimum 3 projects of equal scope, complexity and value.
- Contractors shall meet the minimum bonding and insurance requirements per Augusta Beautification Agreement.
- Contact Augusta Beautification Commitee for information on qualified contractors and landscape maintenance companies.

Long-Term Maintenance Plan

Sponsors will be required to commit to providing the maintenance of the project area they wish to adopt. Sponsor shall produce a plan demonstrating provision for the maintenance cost of a contracted professional landscape maintenance company over the entire commitment period. Multiple sponsor projects are encouraged and all participants will sign agreement.

Maintenance Schedule

A scope and frequency of maintenance will be established during the Augusta Beautification Agreement process based on roadway classification (High Visibility/High Maintenance, vice versa). All projects will receive enhanced maintenance in mid-March and Early April. For this reason, minimum biweekly* maintenance visits in the month of March will be required of all projects regardless of roadway classification. Maintenance Company should also complete touch ups during the first full week of April as needed (leaf litter, trash pickup, etc.).
*For the purpose of this document, bi-weekly shall mean every other week.

Growing Season
March-November Requirements
Mowing
Edging
Blowing
Deadheading & Fertilizing Flowering Plants
Tip pruning and Shaping of shrubs
Maintain mulch as needed
Weed control
Irrigation observation, maintenance, and adjustment
Litter/General area cleanup
Integrated Pest Management

Dormant Season
December-February Requirements
Leaf Control
Pruning of Trees and Shrubs
Irrigation Maintenance/Seasonal Precautions
Litter/General area cleanup
Mulch all beds
Pre-emergent Herbicide
Integrated Pest Management

Maintenance Schedule by Roadway Classification

Roadway Classification	Growing Season Maintenance	Dormant Season Maintenance
Major Arterial	Bi-weekly	Bi-weekly
Minor Arterial	Bi-weekly	Bi-weekly
Collector	Bi weekly	Monthly
Local	Monthly	Monthly

Regular maintenance will be required at a frequency determined by the roadway classification.

Methods of Payment for maintenance contract

- The Garden City Improvement Fund has been established to facilitate the management of priority corridors. The public may make tax deductible donations and earmark donations for their corridor of choice.
- A group may petition to form a Business Improvement District to in order to maintain their corridor of choice through a Voluntary Tax Assessment.
- In order to begin a sanctioned project, the Augusta Beautification Commitee will require 25% percent of the projected one year maintenance cost to be pledged.

Project Coordination and Installation

Coordination with Site Utilities and Signs

- Execution and installation of the landscape plan shall not be compromised by variations from approved location of site utilities and service connections including:
- Water, sanitary and storm sewer, electric, gas, cable television lines.
- Transformers, cable television and telephone boxes, air conditioning/heating units.
- Street lights, pedestrian lights and related service conduit, ballast/splice boxes.
- Traffic signs and signals.
- Site-use related signs or signature elements.
- Fire department connections, information stations, fire access ways or emergency vehicle access

As-Built Landscape and Irrigation Documents

- As-built documents are required for all landscape and irrigation installation. Contractor shall provide hardcopy and digital copy of as-built drawings to both landscape architect and Augusta Beautification Committee.

Drawings shall at a minimum indicate the following:

- As-constructed site conditions including clear delineation of all variation(s) and changes from approved drawings including location, quantity and specification of all project elements.

Landscape Drawings

Drawings shall at a minimum indicate the following:

- Pre-existing site conditions, including vegetation and other site features to be preserved.
- As-constructed conditions that identify and record the species, quantity and location of plantings.
- Updated Planting Schedule or Index indicating species, specifications and quantities.
- As-built drawings shall be prepared, dated and sealed by a Contractor certified in the State of Georgia.

Irrigation and Water Management Drawings

Drawings shall at a minimum indicate the following:

- As-constructed conditions that clearly identify and record the location, dimension and specification of all system components including heads, pipes, valves, controller(s), sleeves, backflow preventer(s) and water source.
- As-built documents shall be prepared, dated and signed by the Contractor of Record.

Traffic control measures shall be in place during installation and ongoing maintenance.

Contact List

Utilities

For information regarding location of water and sewer lines, GIS information, and coordination for installation, as well as, regarding possible in kind donations of Utility Department labor and equipment, please contact the Augusta Utilities Department.

Tom Weidmeier, Director
Augusta Utility Department
Phone: (706) 821-1851
Fax: (706) 821-1859
Email: tweidmeier@augustaga.gov

Deanna Davis, Civil Engineer
Augusta Utility Department
Phone: (706) 821-1851
Fax: (706) 821-1859
Email:ddavis2@augustaga.gov

Traffic

For traffic related concerns on projects within the Augusta, Georgia R/W, contact Steve Cassell. This includes any variance from the GDOT landscape guidelines, traffic control and roadway encroachment, Mowing and Maintenance Agreements, traffic signal or street light utility information, and coordination with proposed projects and transportation master plan.

Steve Cassell, P.E., PTOE
Asst. Director of Traffic Engineering
517 Telfair St.
Augusta, GA 30901
Phone:(706) 821-1850
Fax:(706) 821-1724
Email: scassell@augustaga.gov

Engineering

For concerns regarding Augusta Georgia erosion control and construction requirements, contact the Augusta Engineering Department.

David Smith, P.E.
Stormwater and Construction Engineer
522 Greene St.
Augusta, GA 30901
Phone:(706) 821-1706
Fax:(706) 821-1708

Planning & Zoning

For concerns regarding Zoning requirements and permitting procedures, contact Bob Austin at the Augusta Georgia Planning and Development Office.

Bob Austin
Zoning Administrator
525 Telfair St.
Augusta, GA 30901
Phone: (706) 821-1796
Fax: (706) 821-1806
Email: baustin@augustaga.gov

GDOT Local and District Offices

For projects or portions of projects which are located in a Georgia Dept. of Transportation R/W, GDOT requirements take precedent over local ordinances. For questions on permitting, guideline clarification, on-site meetings, and initiation of variances contact GDOT District 2 Access Management Office. Permits will be issued through the Augusta Area Permit Engineer. Please contact Ronnie Sanders for permit pickup, Pre-construction Meeting coordination, and construction site visit coordination.

Raye Southerland
801 Highway 15 South
Tennille, GA 31809
District 2 Access Management Supervisor
Phone: (478) 552-4621
Email: rsoutherland@dot.ga.gov

Todd Price
District 2 Access Manager
801 Highway 15 South
Tennille, GA 31809
Phone:(478) 552-4622
Email: tprice@dot.ga.gov

Ronnie Sanders
Area Permit Engineer
Route 2, Box 4260
Frontage Road
Evans, GA 30809
Phone: (706) 855-3476

Augusta Beautification Committee

To reach the Augusta Beautification Committee with questions or interest in sponsoring a beautification project, contact the Augusta, Georgia Planning and Zoning Office.

Garden City Improvement Fund

Starting in 2010, a public/private partnership between The City of Augusta, the Georgia Department of Transportation, the Augusta Convention and Visitor's Bureau, local businesses and concerned citizens has collaborated on several projects aimed at beautifying the City's major corridors. These efforts have been privately-led by concerned citizens and the Convention and Visitor's Bureau.
For this, we need help and are asking for the public's support through donations to the "Garden City Improvement Fund." Those wishing to Sponsor a project or wanting to help with ongoing maintenance may make a maintenance contribution in the name of the "Garden City Improvement Fund" through the Community Foundation of the CSRA. Donations can be made either on-line or mailed to the following address:

- The Garden City Improvement Fund
  c/o The Community Foundation for the CSRA
  Post Office Box 31358
  Augusta, Georgia 30903

Donations are tax deductible.

Appendix

Construction Details

Brick Paver Detail
Evergreen Tree Planting Detail
Multi-Stem Tree Planting Detail
Standard Tree Planting Detail
Shrub Planting Detail
Median Plant Spacing Detail
Suitable Imported Topsoil Note
Sod Installation Detail
Sump Area Drainage Detail

Island Planting Bed Berm Detail w/ French Drain

Sample Approved Plan Set

Cover Sheet
Index Plan
Landscape Plan Sheet 1 of 3
Landscape Plan Sheet 2 of 3
Landscape Plan Sheet 3 of 3
Landscape Notes and Details
Irrigation Plan 1 of 3
Irrigation Plan 2 of 3
Irrigation Plan 3 of 3
Irrigation Notes and Details Sheet 1 of 3
Irrigation Notes and Details Sheet 2 of 3
Irrigation Notes and Details Sheet 3 of 3

Sample Augusta Beautification Program Agreement

Sample GDOT Landscape Guidelines

CONSTRUCTION DETAILS

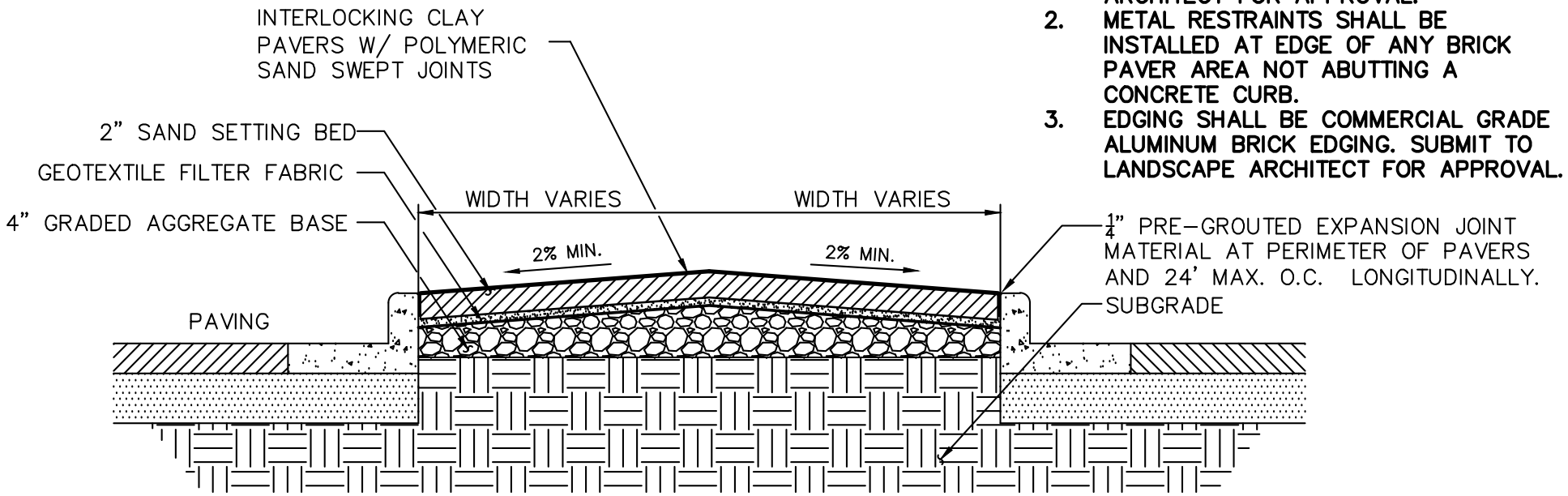
INCLUDE AS SHOWN ON PLANS SUBMITTED FOR APPROVAL

NOTE:

PAVERS SHALL BE VELOUR FLASH SOLID
ITEM # 51-25-109, RUN# 51-92-07
BY CHEROKEE BRICK AND TILE CO.
800-277-2745

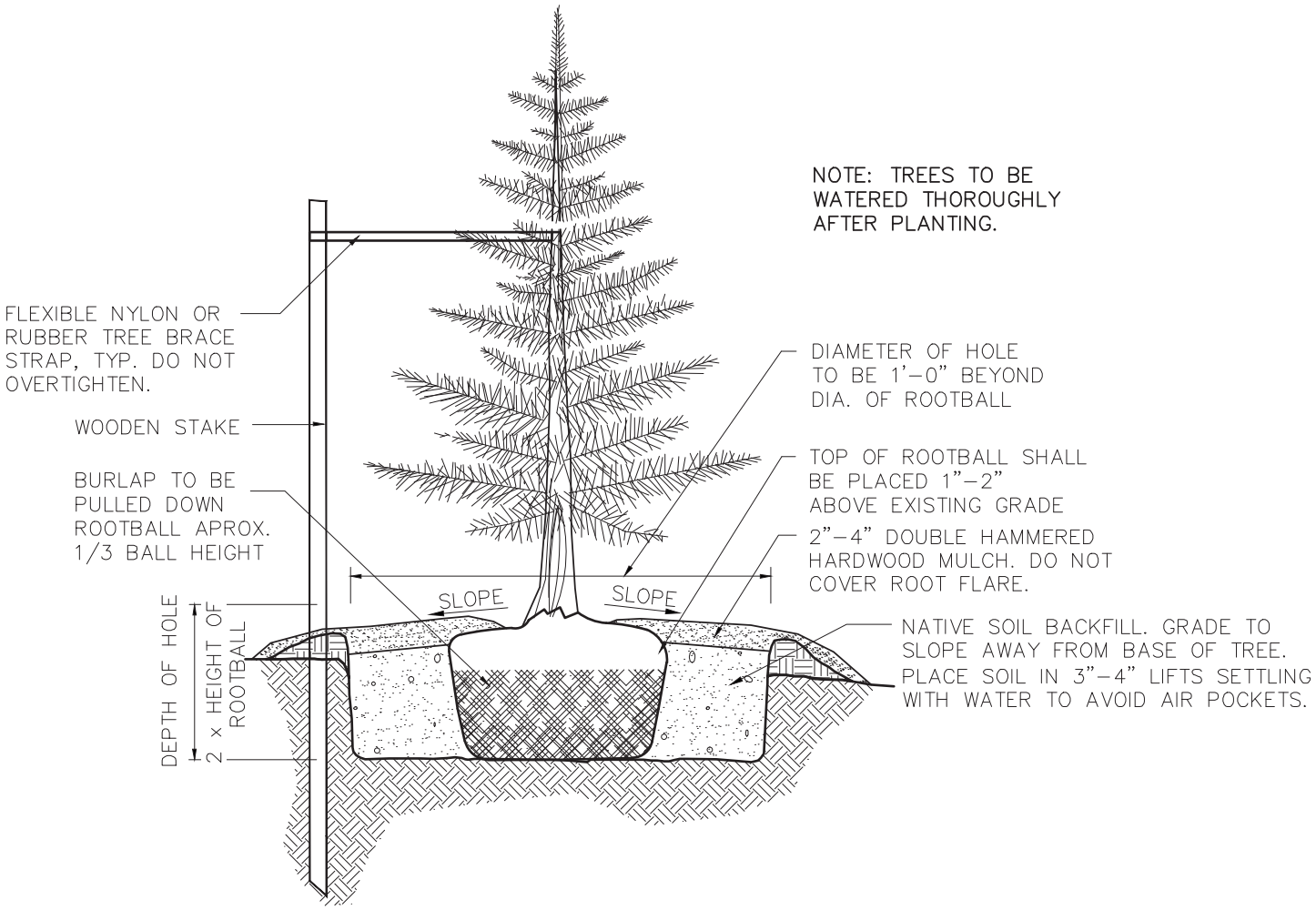
NOTE:

1. **POLYMERIC SAND SHALL BE RECOMMENDED BY PAVER MANUFACTURER FOR THIS APPLICATION AND SUBMITTED TO LANDSCAPE ARCHITECT FOR APPROVAL.**
2. **METAL RESTRAINTS SHALL BE INSTALLED AT EDGE OF ANY BRICK PAVER AREA NOT ABUTTING A CONCRETE CURB.**
3. **EDGING SHALL BE COMMERCIAL GRADE ALUMINUM BRICK EDGING. SUBMIT TO LANDSCAPE ARCHITECT FOR APPROVAL.**



BRICK PAVER DETAIL

NO SCALE



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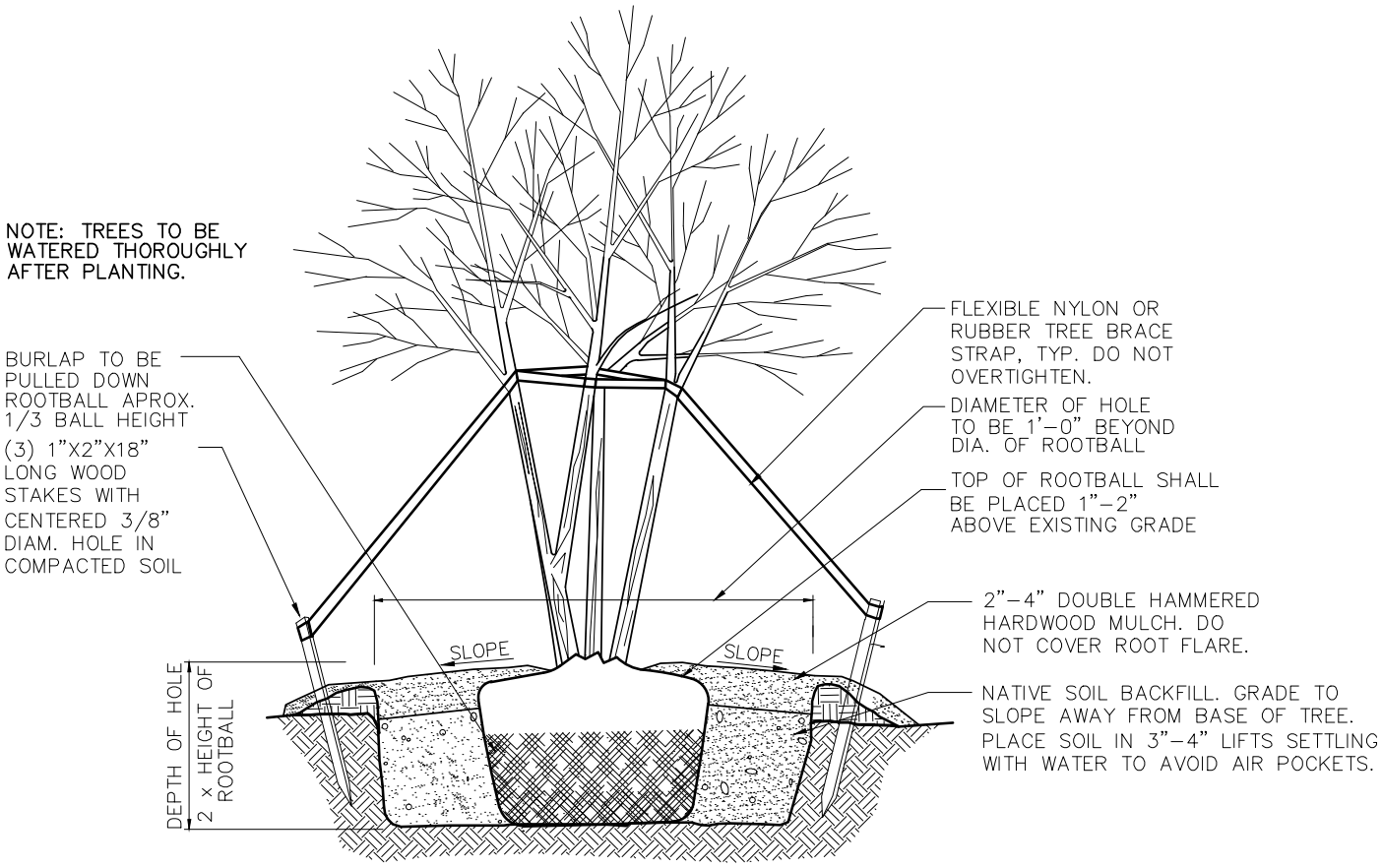
5. LOCATE ANCHOR STAKE 1'-0" OUTSIDE OF PLANTING HOLE ON THE SIDE OF THE PREVAILING WIND.

EVERGREEN TREE PLANTING DETAIL

NTS



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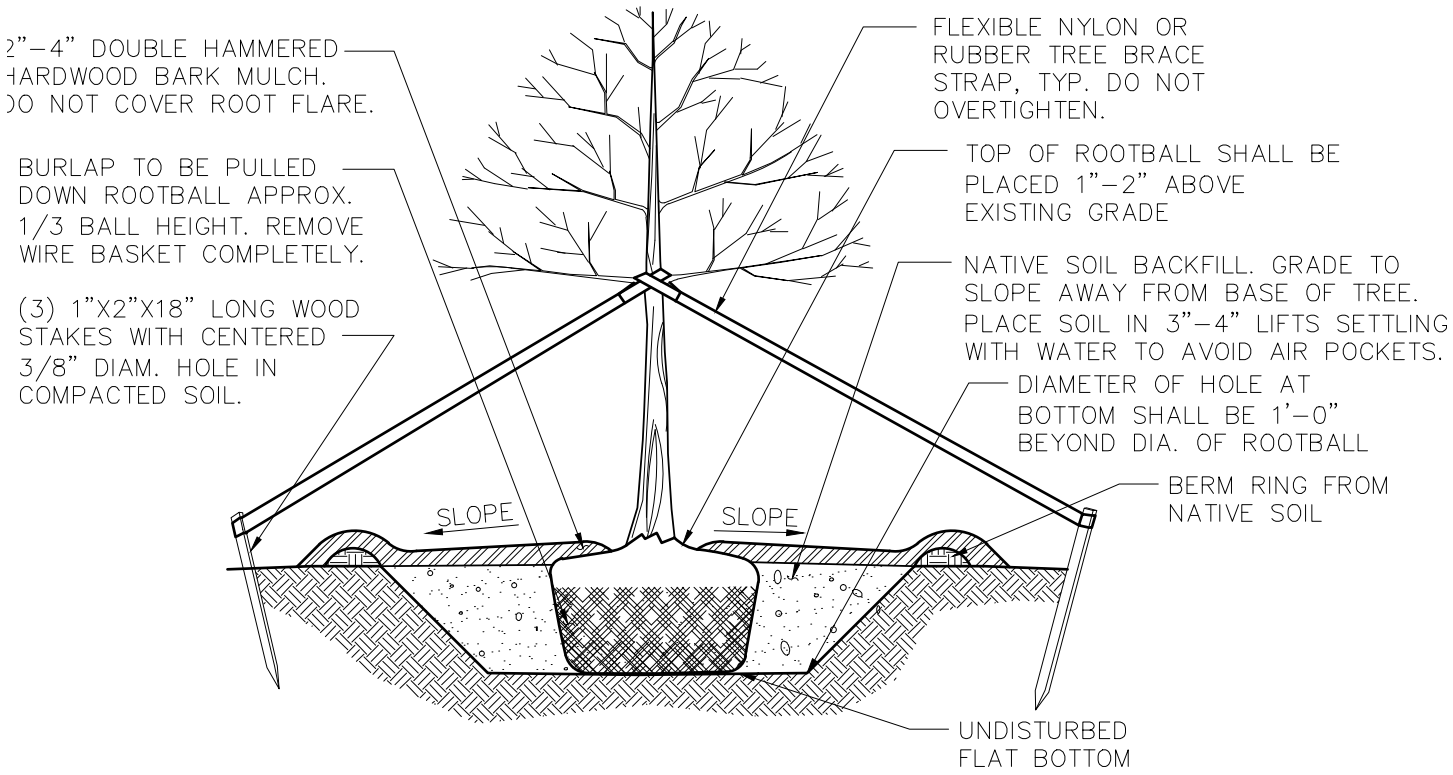
MULTI-STEM TREE PLANTING DETAIL

NOT TO SCALE

NOTE: TREES TO BE WATERED THOROUGHLY AFTER PLANTING.



TYP. TREE PLANTING DETAIL

NO SCALE

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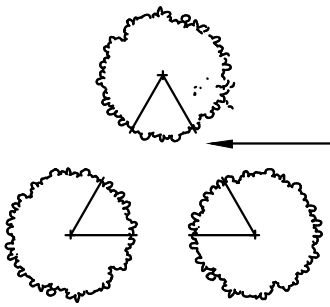
3. ALL STRAPS, STAKES AND ASSOCIATED MATERIALS SHALL BE REMOVED BY CONTRACTOR WITHIN ONE WEEK OF THE END OF THE 90 DAY MAINTENANCE PERIOD.

TYPICAL BED LAYOUT:

1. LAY OUT PERIMETER PLANTING SPACED AS PER PLAN.
2. FILL IN PLANTING BED WITH TRIANGULAR SPACING.
3. ADJUST AS PER L.A.'S INSTRUCTIONS.

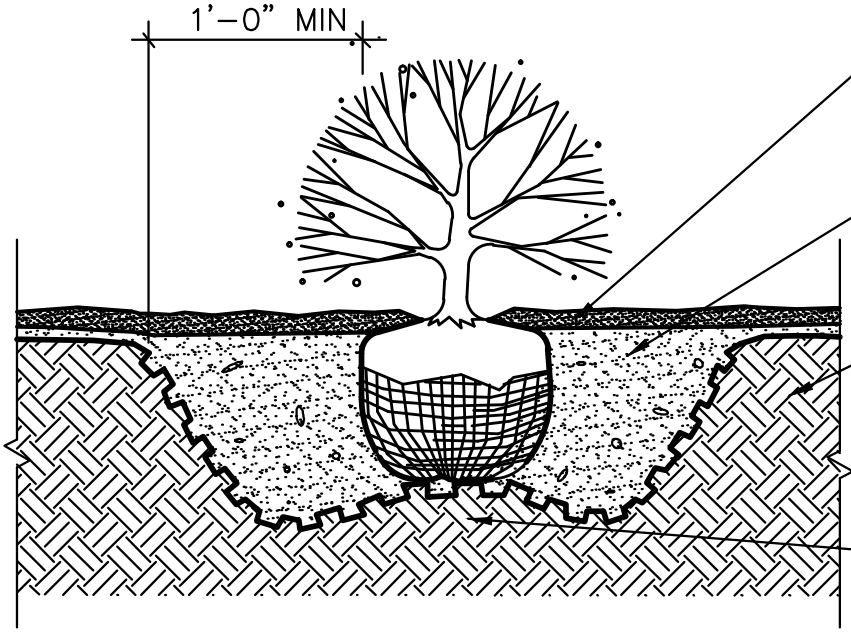


TRIANGULAR SPACING – TYP. UNLESS NOTED ON PLANTING PLAN.

NOTES:

1)VERIFY FINISH GRADE ELEVATION. PLANT TOP OF ROOTBALL AT FINISH GRADE.

2)REMOVE BURLAP FROM TOP $\frac{1}{3}$ OF BALL. REMOVE CONTAINER PLANTS FROM CONTAINERS AND CUT ANY CIRCLING ROOTS.



3" LONG LEAF PINE STRAW MULCH THROUGHOUT BED. DO NOT COVER ROOT FLARES.

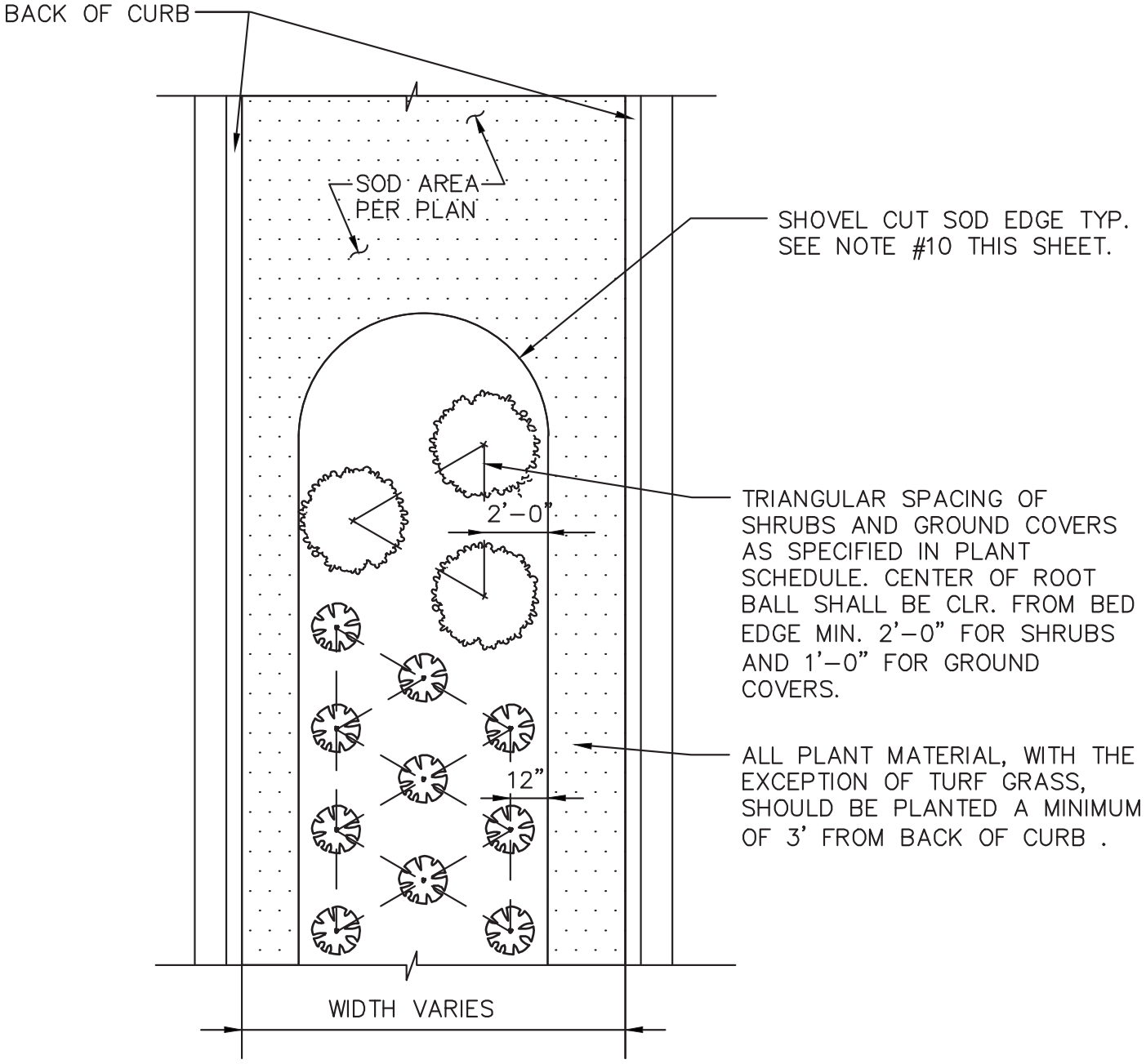
PLANTING SOIL MIX PER PLANTING NOTES

UNDISTURBED EXISTING SOIL

ROOTBALL TO REST ON COMPACTED EXISTING SUBSOIL TO PREVENT SETTLEMENT

SHRUB PLANTING DETAIL

NOT TO SCALE



MEDIAN PLANT SPACING DETAIL

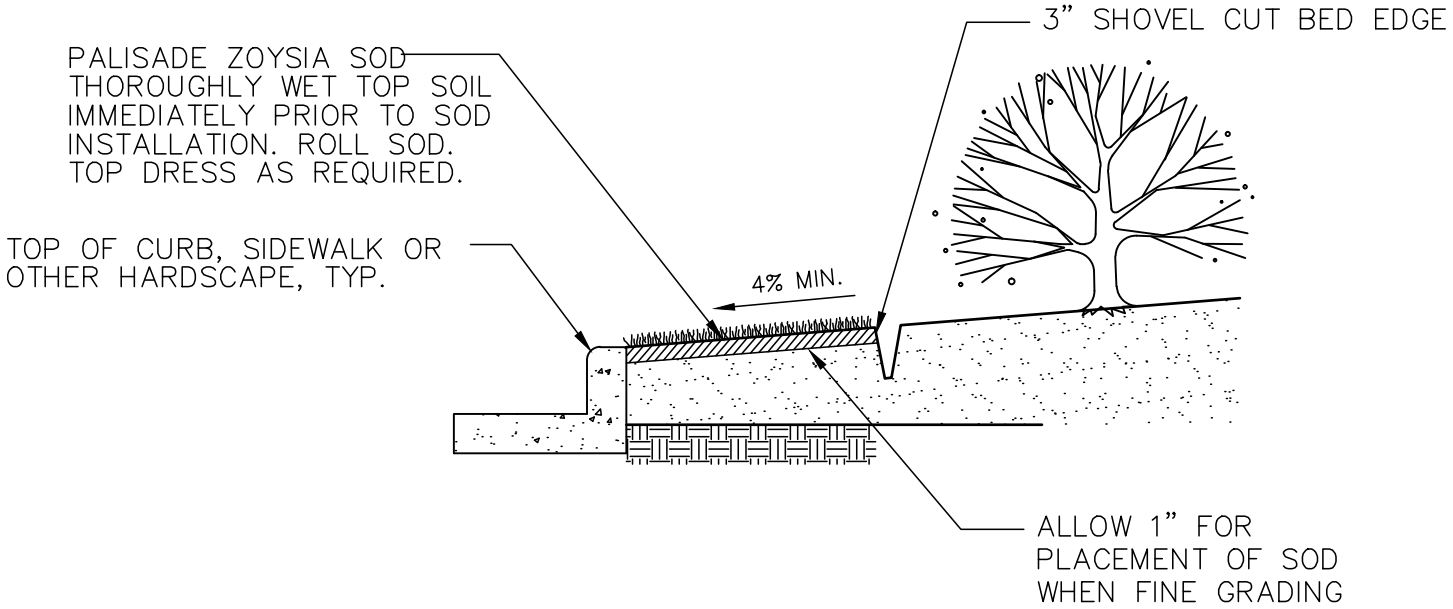
NO SCALE

SUITABLE IMPORTED TOPSOIL

1. A MIXTURE OF APPROVED TOPSOIL, SAND, AND ORGANIC MATERIAL MIXED TO MEET THE FOLLOWING SPECIFICATION.
2. PARTICLE SIZE DISTRIBUTION ACCORDING TO U.S.D.A. PARTICLE CLASSIFICATIONS:

PARTICLE	SIZE (MM)	ALLOWABLE LIMIT
GRAVEL	>4.75	MAX. 3%
FINE GRAVEL	2.00–4.75	MAX. 10%
VERY COARSE SAND	1.00–2.00	
COARSE SAND+	0.50–1.00	COMBINED
MEDIUM SAND	0.25–0.50	50–75%
FINE SAND	0.1–0.25	5–15%
VERY FINE SAND	0.05–0.10	0–10%
SILT	0.002–0.05	10–20%
CLAY	<0.002	10–20%

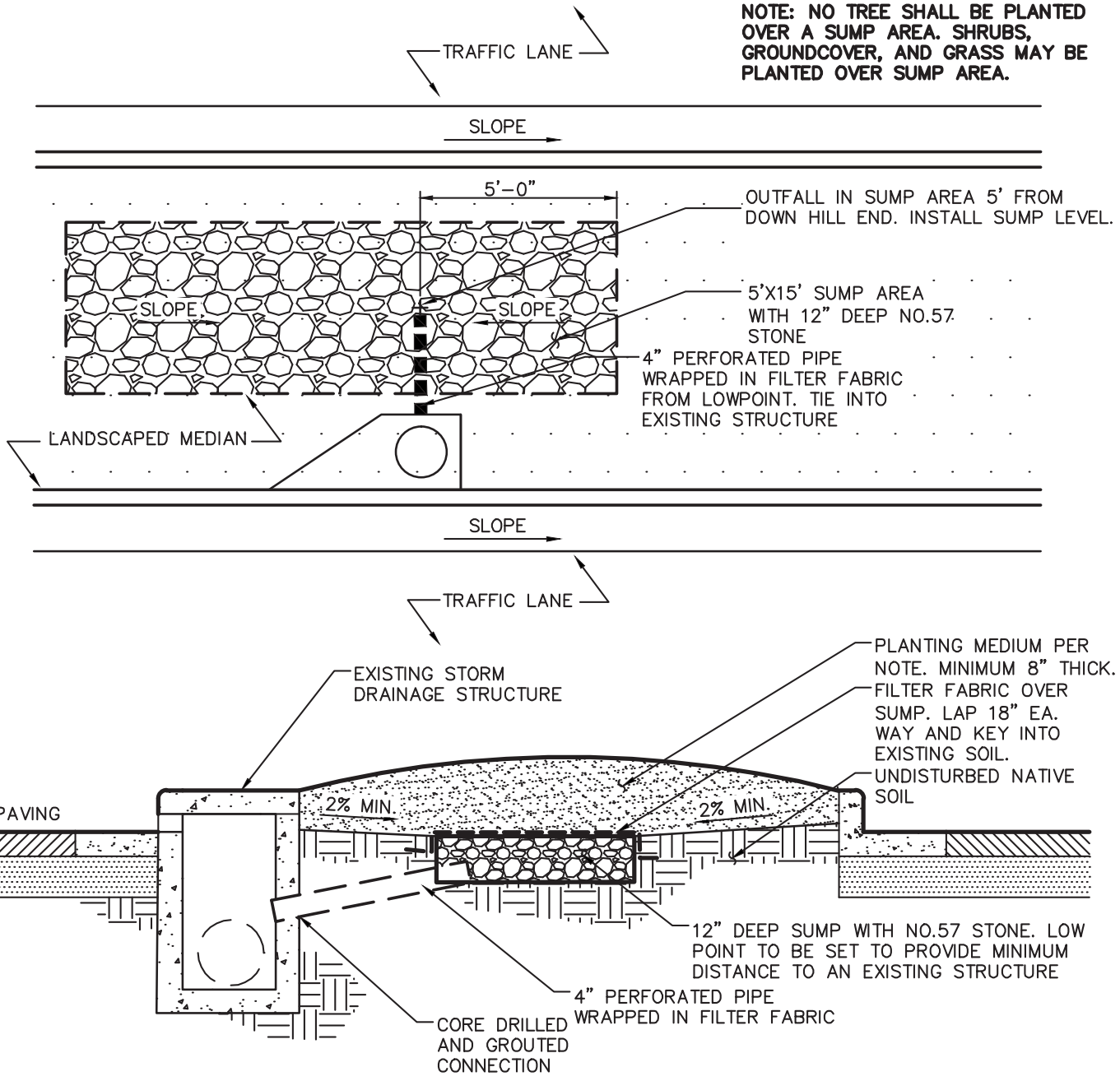
3. THE U.S.D.A. SOIL TEXTURE CLASS SHALL BE A SANDY LOAM, WITH NO MORE THAN 75% SAND AND NO MORE THAN 15% COMBINED SILT+CLAY.
4. THE ORGANIC MATTER SHALL BE 8 TO 15%.
5. DEPTH OF MIX AS INDICATED ON DRAWINGS.
6. CONTRACTOR SHALL PROVIDE A SUBMITTAL OF THE TOPSOIL MATERIAL IN A ONE GALLON RESEALABLE PLASTIC STORAGE BAG TO THE LANDSCAPE ARCHITECT FOR APPROVAL. CONTRACTOR SHALL ALSO PROVIDE A SOIL TEST BY AN APPROVED TESTING AGENCY OF THE PROPOSED MATERIAL FOR LANDSCAPE ARCHITECT APPROVAL.



SOD INSTALLATION DETAIL

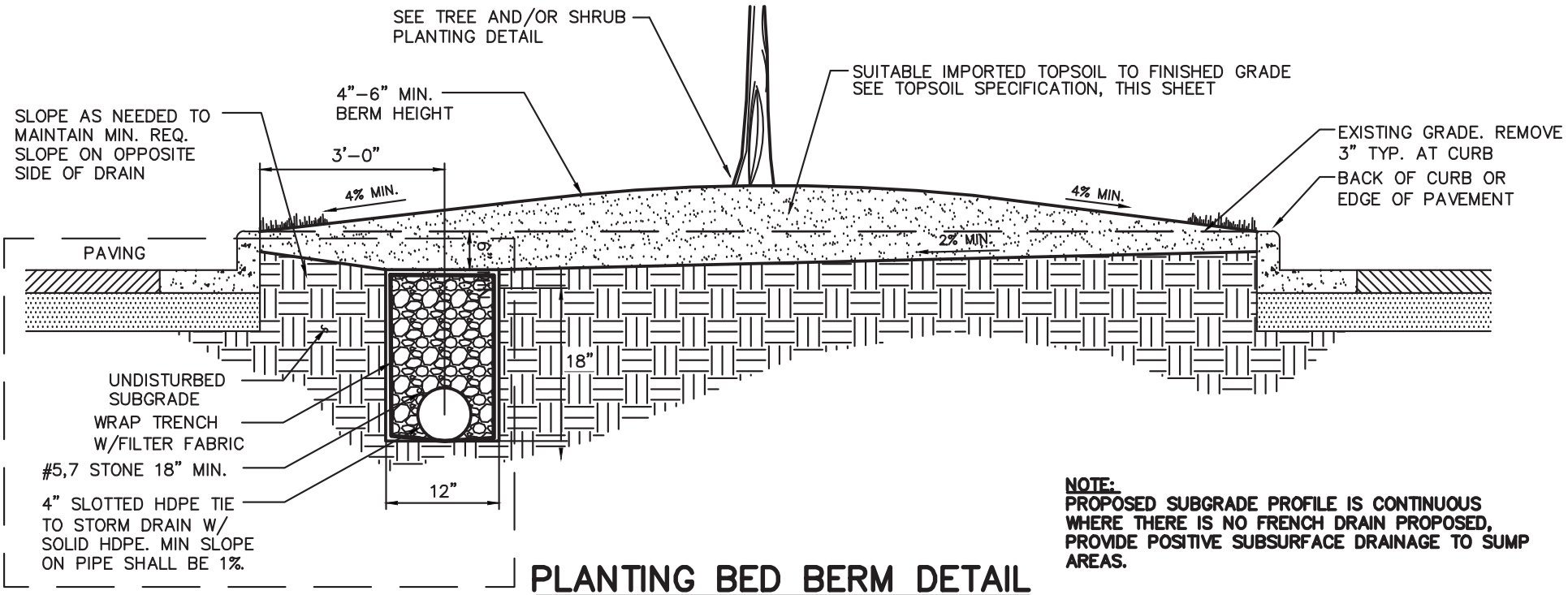
NOT TO SCALE

NOTE: NO TREE SHALL BE PLANTED OVER A SUMP AREA. SHRUBS, GROUNDCOVER, AND GRASS MAY BE PLANTED OVER SUMP AREA.



SUMP AREA DRAINAGE DETAIL

NO SCALE



PLANTING BED BERM DETAIL

NO SCALE

NOTE:
PROPOSED SUBGRADE PROFILE IS CONTINUOUS WHERE THERE IS NO FRENCH DRAIN PROPOSED, PROVIDE POSITIVE SUBSURFACE DRAINAGE TO SUMP AREAS.

SAMPLE APPROVED PLAN SET

FOR REFERENCE ONLY, MOST RECENT DEVELOPMENT CODES APPLY

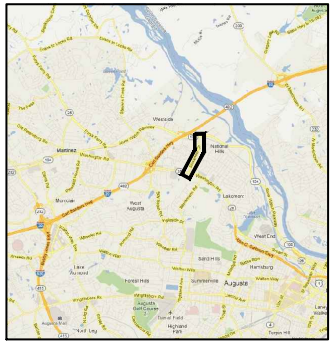
BARRY STOREY

1190 INTERSTATE PARKWAY, AUGUSTA, GEORGIA

ALEXANDER DRIVE
LANDSCAPED MEDIAN IMPROVEMENTS

PROJECT DATA

OWNER/DEVELOPER	BARRY STOREY 1190 INTERSTATE PARKWAY AUGUSTA, GA. 30909
CONTACT REPRESENTATIVE	BARRY STOREY TEL. (706)-868-2222
ZONING	N/A
DISTURBED AREA (AREA OF CONSTRUCTION)	±.87 ACRES
IMPERVIOUS AREA OF IMPROVEMENTS	±0 ACRES
PARCEL NO.	N/A



LOCATION MAP

DRAWING INDEX

JOHNSON, LASCHOBER & ASSOCIATES, P.C.

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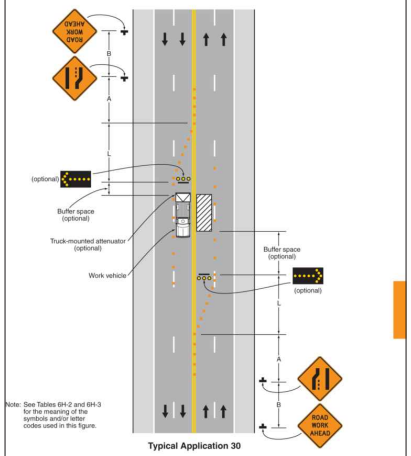
JOB NO. 5912.1110

TRAFFIC CONTROL NOTES AND DETAILS

2009 Edition — Page 693

Figure 6H-30. Interior Lane Closure on a Multi-Lane Street (TA-30)



Typical Application 30

December 2009 — Sect. 6H.01

Figure 6C-1. Component Parts of a Temporary Traffic Control Zone

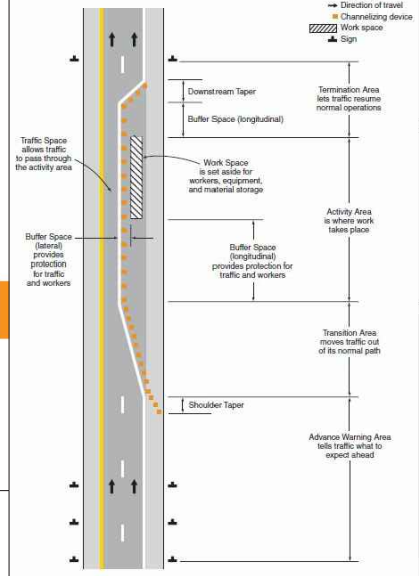


Table 6C-3. Taper Length Criteria for Temporary Traffic Control Zones

Type of Taper	Taper Length
Merging Taper	at least L
Shifting Taper	at least 0.5 L
Shoulder Taper	at least 0.33 L
One-Lane, Two-Way Traffic Taper	50 feet minimum, 100 feet maximum
Downstream Taper	50 feet minimum, 100 feet maximum

Note: Use Table 6C-4 to calculate L

Table 6C-4. Formulas for Determining Taper Length

Speed (S)	Taper Length (L) in feet
40 mph or less	$L = \frac{WS^2}{60}$
45 mph or more	$L = WS$

Where: L = taper length in feet
W = width of offset in feet
S = posted speed limit, or off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

Table 6C-2. Stopping Sight Distance as a Function of Speed

Speed*	Distance
20 mph	115 feet
25 mph	155 feet
30 mph	200 feet
35 mph	250 feet
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet
70 mph	730 feet
75 mph	820 feet

* Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed

TRAFFIC LANE CLOSURE NOTES:

1. CONTRACTOR SHALL NOT UNDERTAKE ANY CONSTRUCTION ACTIVITY THAT REQUIRES IMPEDANCE OR CLOSURE OF ANY PART OF OR WHOLE LANE OF TRAFFIC BEFORE 8:30 AM OR AFTER 4:30PM DURING THE WORK WEEK.

Table 6C-1. Recommended Advance Warning Sign Minimum Spacing

Road Type	Distance Between Signs**		
	A	B	C
Urban (low speed)*	100 feet	100 feet	100 feet
Urban (high speed)*	350 feet	350 feet	350 feet
Rural	500 feet	500 feet	500 feet
Expressway / Freeway	1,000 feet	1,500 feet	2,640 feet

* Speed category to be determined by the highway agency
** The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The "first sign" is the sign in a three-sign series that is closest to the TTC zone. The "third sign" is the sign that is furthest upstream from the TTC zone.)

REQUIREMENTS APPLICABLE TO ALL PERMITS

SECTION I

1. THE APPLICANT IS RESPONSIBLE FOR MAINTAINING UTILITIES AND ANY COSTS ASSOCIATED WITH THE RELOCATION OF SAID UTILITIES. aNY PERMITTED WORK WITHIN 500 FT OF A TRAFFIC SIGNAL OR 100 FEET OF ANY GROUND MOUNTED STREET LIGHT SHALL REQUIRE THE APPLICANT TO CONTACT AUGUSTA TRAFFIC ENGINEERING AT 706-821-1841 FOR A LOCATE.
2. THE APPLICANT MUST PROVIDE PROOF OF FINANCIAL SECURITY IN THE AMOUNT OF THREE THOUSAND DOLLARS ($3000) FOR ONE(1) TO THREE(3) ACTIVE PROJECTS. FIVE THOUSAND DOLLARS ($5000) FOR FOUR TO FIVE ACTIVE PROJECTS AND TEN THOUSAND DOLLARS FOR SIX OR MORE ACTIVE PROJECTS AS APPROVED BY THE AUGUSTA ENGINEER.
3. THE APPLICANT SHALL AGREE TO AN 18 MONTH WARRANTY PERIOD ON ALL WORK WITHIN AUGUSTA RIGHTS OF WAY WHICH COMMENCES AT THE ACCEPTANCE OF PERMITTED WORK.
4. NO ROAD OR TRAFFIC LANE MAY BE BLOCKED UNLESS AUTHORIZED BY THE AUGUSTA ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
5. THE DEPARTMENT OF ENGINEERING SHALL BE NOTIFIED AT 706-821-1706 AT LEAST 24 HOURS PRIOR TO THE BEGINNING OF ANY PERMITTED ACTIVITY AND AS SOON AS PRACTICAL AFTER THE COMPLETION OF THE WORK.
6. THE APPLICANT, WHICH INCLUDES, BUT IS NOT LIMITED TO THE UTILITY COMPANY AND ITS SUBCONTRACTORS, SHALL MAINTAIN ADEQUATE TRAFFIC CONTROL PER THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND/OR THE AUGUSTA STANDARDS AND SPECIFICATIONS. ALL SAFETY FEATURES AS NECCESSARY FOR PUBLIC SAFETY IN THE ENCROACHMENT AREA SHALL BE MAINTAINED AT ALL TIMES WHILE WORK IS IN PROGRESS AND FOR THE ACTIVE LIFE OF THE PERMIT. (I.E. FLAGGERS, BARRICADES, LIGHTS, ETC.)
7. ALL BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY TO WITHIN 12" OF THE TOP OF SUBGRADE. THE TOP TWELVE INCHES OF THE BACKFILL SHALL BE COMPACTED TO AT LEAST 100% OF THE MAXIMUM LABORATORY DRY DENSITY. THE TOP OF SUBGRADE IS THE LOCATED IMMEDIATELY BENEATH ALL BASE AND PAVING MATERIALS.
8. NO ROADWAY WILL BE CUT AND ALL EXISTING PAVED DRIVEWAYS BE BORED UNLESS OTHERWISE AUTHORIZED BY THE AUGUSTA ENGINEER.
   A) ROAD BORES SHALL HAVE A MINIMUM COVER OF 48"
   B) JACK OR BORE ENTRANCE AND EXIT PITS SHALL BE A MINIMUM OF THREE FEET FROM THE EDGE OF ROAD/PAVEMENT OR THE BACK OF CURB. DISTANCE WILL INCREASE WITH THE INCREASE IN PIT DEPTH.
9. NO MORE THAN 150 LF OF TRENCH SHALL BE OPEN AT ANY TIME UNLESS AUTHORIZED BY THE AUGUSTA ENGINEER.
10. GRASSING, MULCHING AND THE IMPLEMENTATION OF BEST MANAGEMENT PRACTICES (BMPS) FOR THE CONTROL OF EROSION AND SEDIMENT SHALL BE DONE IN ACCORDANCE WITH THE "MANUAL FOR SOIL EROSION AND SEDIMENT CONTROL IN GEORGIA" CURRENT EDITION.
11. VIOLATIONS OF THE GOVERNING ORDINANCE ARE PUNISHABLE BY PENALTIES SET FORTH IN MUNICIPAL CODE TITLE 7, ARTICLE 4, SECTION 7-3-30.

SPECIAL REQUIREMENTS APPLICABLE TO ALL CUTS

SECTION II

1. ONE LANE OF TRAFFIC FLOW SHALL BE MAINTAINED AT ALL TIMES, UNLESS OTHERWISE AUTHORIZED BY THE AUGUSTA ENGINEER.
2. ALL ROAD CUT EXCAVATIONS SHALL BE RECONSTRUCTED PER THE "UTILITY ROAD CUT DETAIL."
3. SIDEWALKS AND DRIVEWAYS SHALL NOT BE OPEN CUT UNLESS OTHERWISE AUTHORIZED BY THE AUGUSTA ENGINEER.

ADDITIONAL NOTE

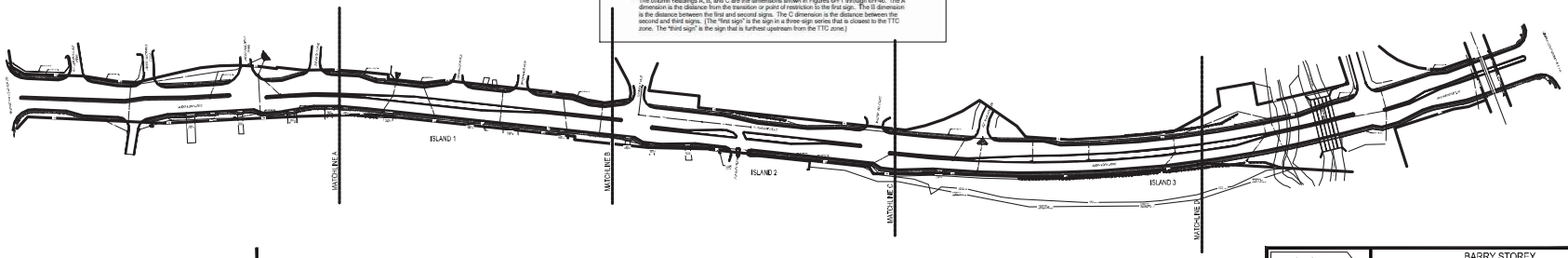
1. CONTACT TRAFFIC ENGINEERING 706-821-1841 PRIOR TO ANY WORK FOR LOCATIONS OF STREET AND TRAFFIC SIGNAL WIRING. CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL REPAIRS.

GENERAL NOTES:

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS AND LICENSES FOR ALL UTILITY AND BUILDING CONSTRUCTION AS REQUIRED BY AUGUSTA-RICHMOND COUNTY ORDINANCES.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING THE LOCATING AND RELOCATION OF ALL UTILITIES AS NECESSARY WITH THE RESPECTIVE UTILITY COMPANIES.
3. EXISTING CONDITIONS PLAN DERIVED FROM AUGUSTA-RICHMOND COUNTY GIS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY PROJECT LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
4. SILT BARRIERS MUST BE IN PLACE PRIOR TO DEMOLITION, REGARDLESS OF PLAN REQUIREMENT OR LOT SIZE. NO GRADING SHALL BE DONE UNTIL SILT BARRIER INSTALLATION IS COMPLETE.
5. ALL EASEMENTS TO BE GRASSED AND/OR RIP-RAPPED AS REQUIRED TO CONTROL EROSION.
6. THE CONTRACTOR SHALL ADHERE TO THE WEIGHT LIMITS PRESCRIBED ON COUNTY MAINTAINED ROADS FOR HAULING EQUIPMENT AND/OR MATERIALS TO AND FROM THIS SITE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGES TO THE STREETS AND/OR UTILITIES DUE TO NON-COMPLIANCE OF WEIGHT LIMIT REGULATIONS.
7. CONTRACTOR SHALL CONTACT THE INSPECTION DIVISION OF THE AUGUSTA-RICHMOND COUNTY PUBLIC WORKS DEPARTMENT AT LEAST 48 HOURS PRIOR TO STARTING WORK ON THE PROJECT.
8. ALL CONSTRUCTION WITHIN AUGUSTA RIGHTS-OF-WAY MUST CONFORM TO AUGUSTA-RICHMOND COUNTY STANDARDS & SPECIFICATIONS.
9. CONTRACTOR SHALL CONTACT THE UTILITIES PROTECTION INC. "CALL BEFORE YOU DIG" SERVICE IN ORDER TO LOCATE UTILITIES PRIOR TO STARTING ANY EXCAVATION OR CONSTRUCTION.

EROSION AND SEDIMENT CONTROL NOTES:

1. CONTRACTOR SHALL ALLOW NO SOIL, GRAVEL, OR OTHER DEBRIS FROM CONSTRUCTION OR LAND DISTURBANCE TO ENTER THE STORM SEWER.
2. CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT STORM INLETS FROM SEDIMENTATION THROUGH THE USE OF APPLICABLE BMPS.
2. IN LIEU OF SILT FENCE CONTRACTOR SHALL PROVIDE OUTLET PROTECTION PER PLAN FOR EACH STORM INLET DOWNSTREAM OF THE CURRENT WORK AREA BEFORE DISTURBING SOIL. CONTRACTOR SHALL ALSO PROVIDE REGULAR CLEANUP OF IMPERVIOUS SURFACES BY STREET SWEEPING OR OTHER METHOD TWICE DAILY AND ADDITIONALLY AS NEEDED.



INDEX PLAN

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

REV	DATE	BY	DESCRIPTION
2	8/17/2012	LFC	ISSUED FOR CONSTRUCTION
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ALEXANDER DR LANDSCAPE IMPROVEMENT PROJECT

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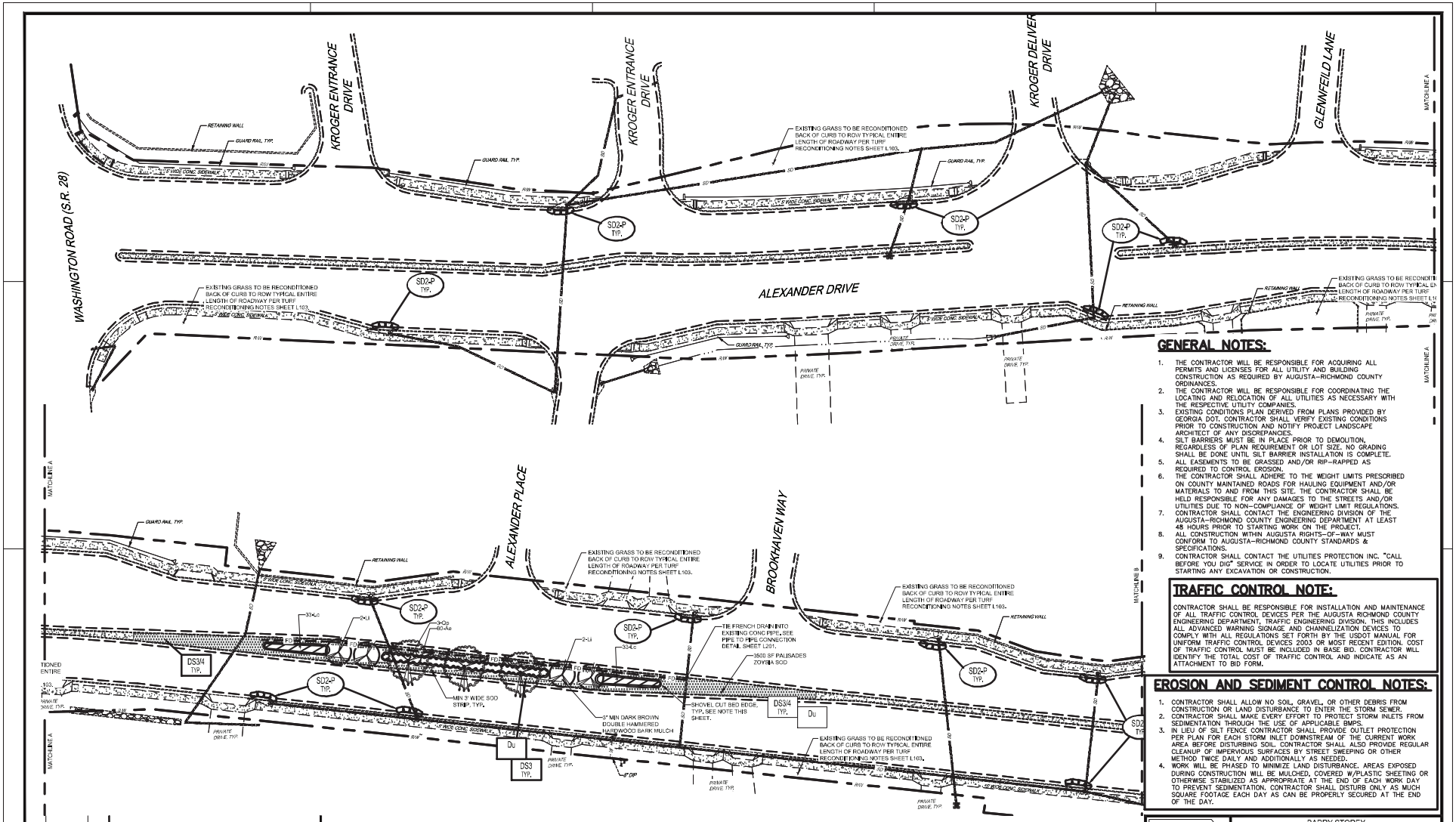

LANDSCAPE PLAN

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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REV	DATE	BY	DESCRIPTION
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1	8/6/2012	LFC	ISSUED FOR COUNTY APPROVAL
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The underground utilities shown have been located from field survey information and existing drawings. The engineer makes no guarantee that the underground utilities shown comprise all such utilities in the area, either existing or proposed. The engineer further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The engineer has not physically located the underground utilities.

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ALEXANDER DR LANDSCAPE IMPROVEMENT PROJECT

LANDSCAPE PLAN

SCALE	DATE	PROJECT NO.	DRAWING NO.	REV.
1"=30'	12/28/2011	6075.1101	L101	2

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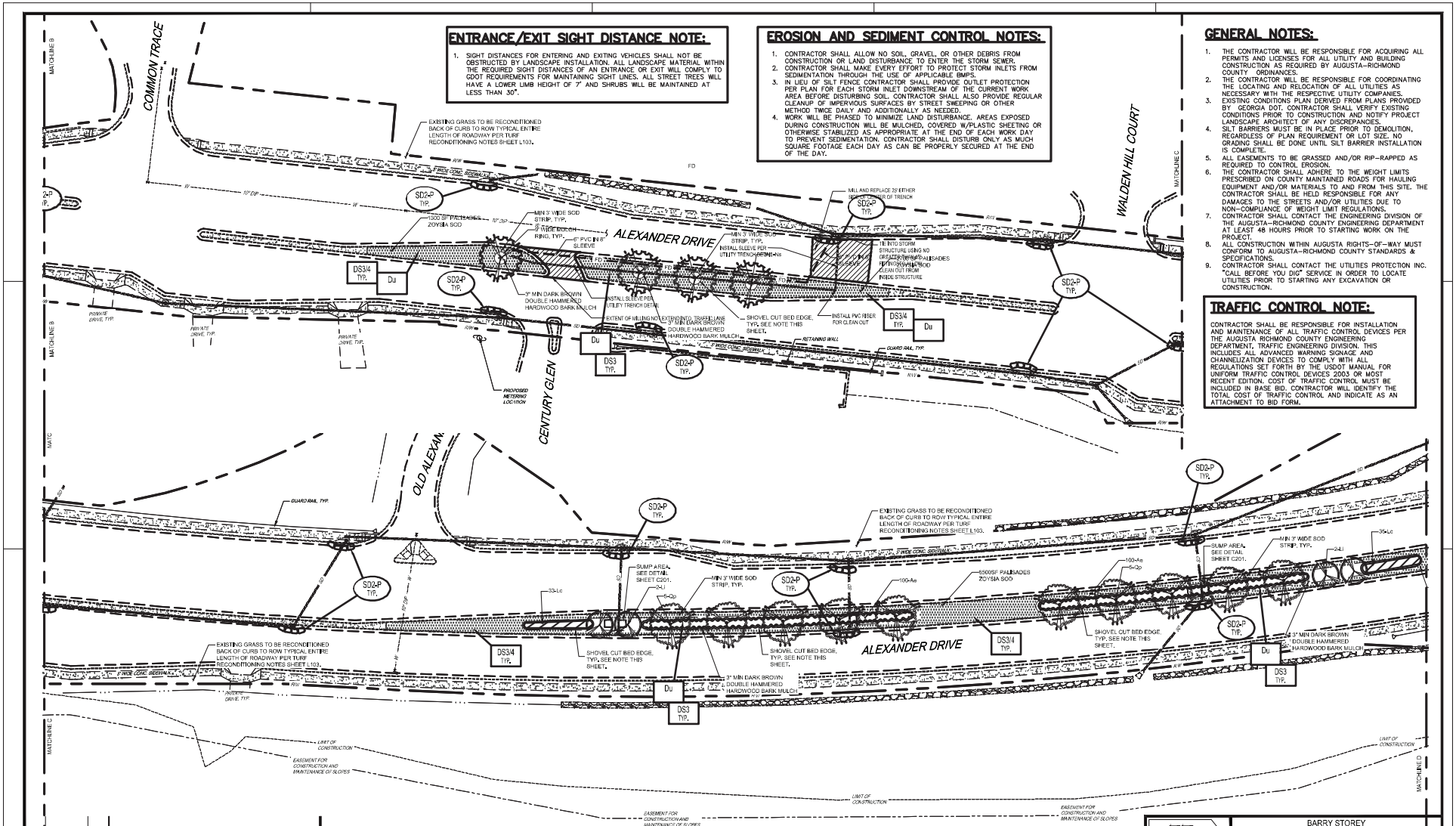

ENTRANCE/EXIT SIGHT DISTANCE NOTE:

1. SIGHT DISTANCES FOR ENTERING AND EXITING VEHICLES SHALL NOT BE OBSTRUCTED BY LANDSCAPE INSTALLATION. ALL LANDSCAPE MATERIAL WITHIN THE REQUIRED SIGHT DISTANCES OF AN ENTRANCE OR EXIT WILL COMPLY TO GDOT REQUIREMENTS FOR MAINTAINING SIGHT LINES. ALL STREET TREES WILL HAVE A LOWER LIMB HEIGHT OF 7' AND SHRUBS WILL BE MAINTAINED AT LESS THAN 30".

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GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

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SCALE	DATE	PROJECT NO.	DRAWING NO.	REV.
1"=30'	12/28/2011	5913.1110	L102	2

K:\59 13111\0_landarch L101.dwg - Plotted: 6/18/2013 11:07 AM By Lance Chesky, RLA, LEED AP

PLANT SCHEDULE

QTY	SYM.	SIZE	BOTANICAL NAME	COMMON NAME	HEIGHT	WIDTH	SPACING
8	Li	4" CAL.	Lagerstroemia indica 'Sarah's Favorite'	Sarah's Favorite White Crape Myrtle	15'-16'	FULL	AS SHOWN
4	Ns	4" CAL.	Nyssa salvatica 'Wildfire'	Wildfire Black Gum	18'-20'	FULL	AS SHOWN
13	Qp	4" CAL.	Quercus phellos 'Hightower'	Hightower Willow Oak	18'-20'	FULL	AS SHOWN
260	Ae	3 GAL.	Azalea x 'conlef'	Autumn Cheer Encore Azalea	15"-18"	15"-18"	4' O.C.
134	Lc	3 GAL.	Loropetalum chinense 'Daruma'	Daruma Dwarf Loropetalum	12"-15"	15"-18"	4' O.C.

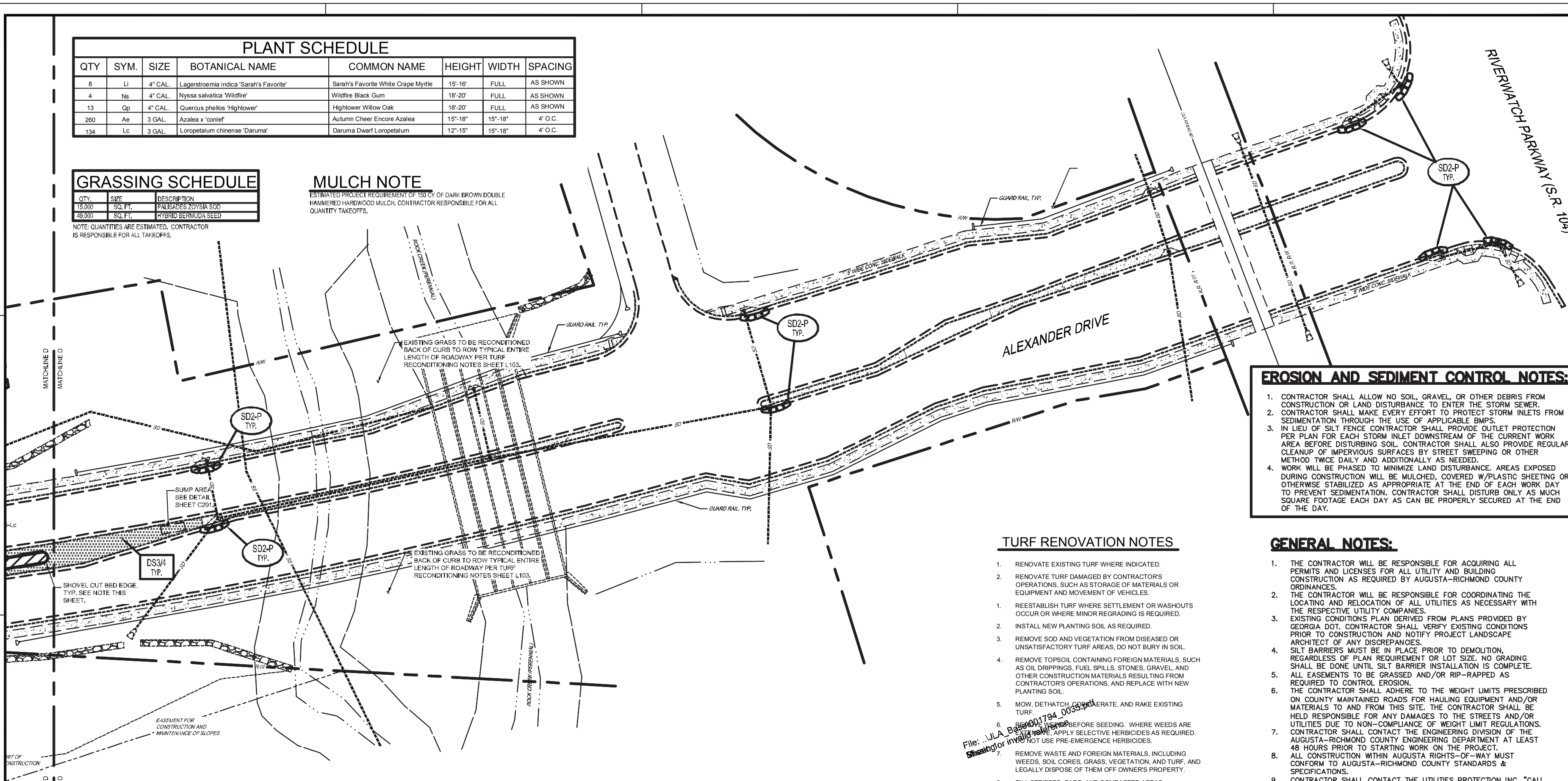
GRASSING SCHEDULE

QTY.	SIZE	DESCRIPTION
15,000	SQ. FT.	PALISADES ZOYSIA SOD
49,000	SQ. FT.	HYBRID BERMUDA SEED

NOTE: QUANTITIES ARE ESTIMATED. CONTRACTOR IS RESPONSIBLE FOR ALL TAKEOFFS.

MULCH NOTE

ESTIMATED PROJECT REQUIREMENT OF 150 CY OF DARK BROWN DOUBLE HAMMERED HARDWOOD MULCH. CONTRACTOR RESPONSIBLE FOR ALL QUANTITY TAKEOFFS.



TURF RENOVATION NOTES

1. RENOVATE EXISTING TURF WHERE INDICATED.
2. RENOVATE TURF DAMAGED BY CONTRACTOR'S OPERATIONS, SUCH AS STORAGE OF MATERIALS OR EQUIPMENT AND MOVEMENT OF VEHICLES.
1. REESTABLISH TURF WHERE SETTLEMENT OR WASHOUTS OCCUR OR WHERE MINOR REGRADING IS REQUIRED.
2. INSTALL NEW PLANTING SOIL AS REQUIRED.
3. REMOVE SOD AND VEGETATION FROM DISEASED OR UNSATISFACTORY TURF AREAS; DO NOT BURY IN SOIL.
4. REMOVE TOPSOIL CONTAINING FOREIGN MATERIALS, SUCH AS OIL DRIPPINGS, FUEL SPILLS, STONES, GRAVEL, AND OTHER CONSTRUCTION MATERIALS RESULTING FROM CONTRACTOR'S OPERATIONS, AND REPLACE WITH NEW PLANTING SOIL.
5. MOW, DETHATCH, CORE AERATE, AND RAKE EXISTING TURF.
6. REMOVE WEEDS BEFORE SEEDING. WHERE WEEDS ARE EXTENSIVE, APPLY SELECTIVE HERBICIDES AS REQUIRED. DO NOT USE PRE-EMERGENCE HERBICIDES.
7. REMOVE WASTE AND FOREIGN MATERIALS, INCLUDING WEEDS, SOIL CORES, GRASS, VEGETATION, AND TURF, AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
8. TILL STRIPPED, BARE, AND COMPACTED AREAS THOROUGHLY TO A SOIL DEPTH OF 4 INCHES.
9. APPLY INITIAL FERTILIZER REQUIRED FOR ESTABLISHING NEW TURF AND MIX THOROUGHLY INTO TOP 4 INCHES OF EXISTING SOIL. INSTALL NEW PLANTING SOIL TO FILL LOW SPOTS AND MEET FINISH GRADES.
10. APPLY SEED AND PROTECT WITH STRAW MULCH AS REQUIRED FOR NEW TURF.
11. WATER NEWLY PLANTED AREAS AND KEEP MOIST UNTIL NEW TURF IS ESTABLISHED.
12. SEED SHALL BE HYBRID BERMUDA.

EROSION AND SEDIMENT CONTROL NOTES:

1. CONTRACTOR SHALL ALLOW NO SOIL, GRAVEL, OR OTHER DEBRIS FROM CONSTRUCTION OR LAND DISTURBANCE TO ENTER THE STORM SEWER.
2. CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT STORM INLETS FROM SEDIMENTATION THROUGH THE USE OF APPLICABLE BMPS.
3. IN LIEU OF SILT FENCE CONTRACTOR SHALL PROVIDE OUTLET PROTECTION PER PLAN FOR EACH STORM INLET DOWNSTREAM OF THE CURRENT WORK AREA BEFORE DISTURBING SOIL. CONTRACTOR SHALL ALSO PROVIDE REGULAR CLEANUP OF IMPERVIOUS SURFACES BY STREET SWEEPING OR OTHER METHOD TWICE DAILY AND ADDITIONALLY AS NEEDED.
4. WORK WILL BE PHASED TO MINIMIZE LAND DISTURBANCE. AREAS EXPOSED DURING CONSTRUCTION WILL BE MULCHED, COVERED W/PLASTIC SHEETING OR OTHERWISE STABILIZED AS APPROPRIATE AT THE END OF EACH WORK DAY TO PREVENT SEDIMENTATION. CONTRACTOR SHALL DISTURB ONLY AS MUCH SQUARE FOOTAGE EACH DAY AS CAN BE PROPERLY SECURED AT THE END OF THE DAY.

GENERAL NOTES:

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS AND LICENSES FOR ALL UTILITY AND BUILDING CONSTRUCTION AS REQUIRED BY AUGUSTA–RICHMOND COUNTY ORDINANCES.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING THE LOCATING AND RELOCATION OF ALL UTILITIES AS NECESSARY WITH THE RESPECTIVE UTILITY COMPANIES.
3. EXISTING CONDITIONS PLAN DERIVED FROM PLANS PROVIDED BY GEORGIA DOT. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY PROJECT LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
4. SILT BARRIERS MUST BE IN PLACE PRIOR TO DEMOLITION, REGARDLESS OF PLAN REQUIREMENT OR LOT SIZE. NO GRADING SHALL BE DONE UNTIL SILT BARRIER INSTALLATION IS COMPLETE.
5. ALL EASEMENTS TO BE GRASSED AND/OR RIP–RAPPED AS REQUIRED TO CONTROL EROSION.
6. THE CONTRACTOR SHALL ADHERE TO THE WEIGHT LIMITS PRESCRIBED ON COUNTY MAINTAINED ROADS FOR HAULING EQUIPMENT AND/OR MATERIALS TO AND FROM THIS SITE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGES TO THE STREETS AND/OR UTILITIES DUE TO NON–COMPLIANCE OF WEIGHT LIMIT REGULATIONS.
7. CONTRACTOR SHALL CONTACT THE ENGINEERING DIVISION OF THE AUGUSTA–RICHMOND COUNTY ENGINEERING DEPARTMENT AT LEAST 48 HOURS PRIOR TO STARTING WORK ON THE PROJECT.
8. ALL CONSTRUCTION WITHIN AUGUSTA RIGHTS–OF–WAY MUST CONFORM TO AUGUSTA–RICHMOND COUNTY STANDARDS & SPECIFICATIONS.
9. CONTRACTOR SHALL CONTACT THE UTILITIES PROTECTION INC. "CALL BEFORE YOU DIG" SERVICE IN ORDER TO LOCATE UTILITIES PRIOR TO STARTING ANY EXCAVATION OR CONSTRUCTION.

TRAFFIC CONTROL NOTE:

CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES PER THE AUGUSTA RICHMOND COUNTY ENGINEERING DEPARTMENT, TRAFFIC ENGINEERING DIVISION. THIS INCLUDES ALL ADVANCED WARNING SIGNAGE AND CHANNELIZATION DEVICES TO COMPLY WITH ALL REGULATIONS SET FORTH BY THE USDOT MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES 2003 OR MOST RECENT EDITION. COST OF TRAFFIC CONTROL MUST BE INCLUDED IN BASE BID. CONTRACTOR WILL IDENTIFY THE TOTAL COST OF TRAFFIC CONTROL AND INDICATE AS AN ATTACHMENT TO BID FORM.

LANDSCAPE PLAN

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

UTILITIES PROTECTION CENTER

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SOUTH CAROLINA - 1-800-922-0983

UTILITY WARNING:

The underground utilities shown have been located from field survey information and existing drawings. The engineer makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The engineer further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The engineer has not physically located the underground utilities.

REV	DATE	BY	DESCRIPTION
2	8/17/2012	LFC	ISSUED FOR CONSTRUCTION
1	8/6/2012	LFC	ISSUED FOR COUNTY APPROVAL
0	7/12/2012	LFC	ISSUED FOR BID

R E V I S I O N S

DRAWN BY: LFC DATE: 12/28/11 CHECKED BY: DRP DATE: 12/28/2011

BARRY STOREY
1190 INTERSTATE PARKWAY AUGUSTA, GA

ALEXANDER DR LANDSCAPE IMPROVEMENT PROJECT
LANDSCAPE PLAN

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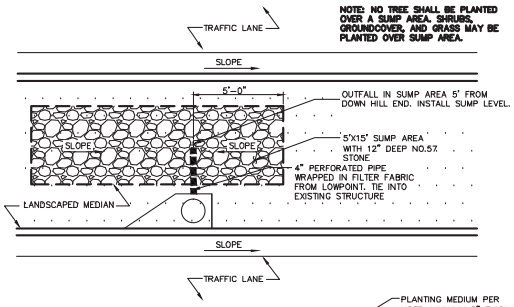
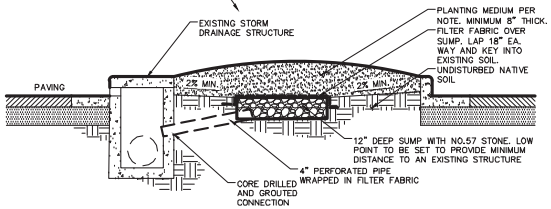
SCALE	DATE	PROJECT NO.	DRAWING NO.	REV.
1"=30'	12/28/2011	5913.1110	L103	2

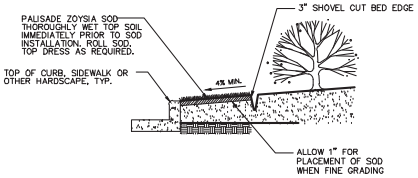
K:\5913\1110\Landarch\L101.dwg Plotted: 6/18/2013 12:05 PM By: Lance Cheely, RLA, LEED AP



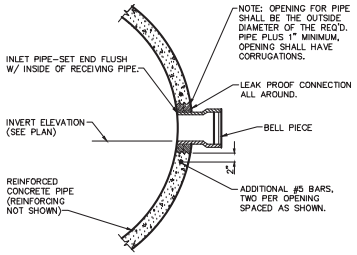
NOTE: NO TREE SHALL BE PLANTED OVER A SUMP AREA. SHRUBS, GROUNDCOVER, AND GRASS MAY BE PLANTED OVER SUMP AREA.



SUMP AREA DRAINAGE DETAIL
NO SCALE



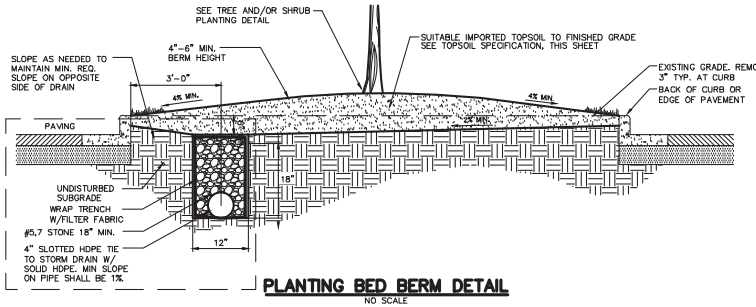
SOD INSTALLATION DETAIL
NOT TO SCALE



PIPE TO PIPE CONNECTION DETAIL
NO SCALE

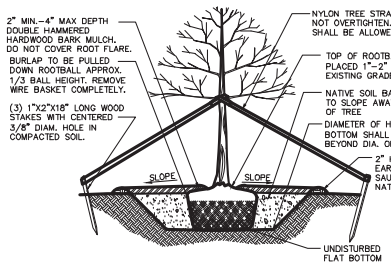
PLANTING NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
2. THE LANDSCAPE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON ALL DRAWINGS.
3. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARDS FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. NO PLANT WILL BE ACCEPTED IF IT DOES NOC MEET THE PROJECT SPECIFICATIONS OR THESE STANDRADS.
4. ALL LANDSCAPE AND LAWN AREAS SHALL BE FINE GRADED AS APPROPRIATE TO PROVIDE POSITIVE DRAINAGE. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE FINE GRADING IS COMPLETE.
5. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING.
6. ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETIC OR PLASTICS SHALL BE RE-MOVED AT THE TIME OF PLANTING.
7. PRIOR TO PLANTING, THE LOCATION OF TREES SHALL BE STAKED AND ALL PLANT MATERIAL SHALL BE INSPECTED FOR APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR EQUAL. NO PLANT MATERIAL WILL BE ACCEPTED IF IT IS DAMAGED, DISEASED OR INADEQUATE IN SIZE AS SPECIFIED ON PLANS. SUBSTITUTIONS DUE TO AVAILABILITY MUST BE APPROVED BY THE LANDSCAPE ARCHITECT IN WRITING.
8. ALL PLANTS SHALL BE INSTALLED AS PER DETAILS AND THE INSTALLATION SPECIFICATIONS.
9. THE LANDSCAPE CONTRACTOR SHALL PROVIDE FERTILIZER, PRE-EMERGENT HERBICIDE, LIME, TOPSOIL AND PLANTING MIXTURE AS PER THE INSTALLATION SPECIFICATIONS.
10. BEDLINES SHALL HAVE A 3" DEEP SHOVEL CUT TRENCH EDGE WHERE MULCH MEETS GRASS, CONCRETE WALKS OR CURBS UNLESS OTHERWISE SPECIFIED. BEDLINES SHALL BE SMOOTH AND CONTINUOUS AND BE WITHIN A REASONABLE LOCATION AND SHAPE AS ILLUSTRATED ON PLANS.
11. MINIMUM SLOPE ON LANDSCAPE AREAS SHALL BE 2%. ALL LANDSCAPE AREAS SHOULD HAVE POSITIVE DRAINAGE AND NOT ENCOURAGE SATURATED ROOT SYSTEMS. SUPPLEMENT THESE AREAS WITH SUITABLE TOPSOIL IF NEEDED TO PROVIDE POSITIVE DRAINAGE AND IF AN ADEQUATE AMOUNT OF ON-SITE SUITABLE TOP SOIL IS UNAVAILABLE.
14. PLACE 2" MIN.-4" MAX. OF MULCH OVER ALL PLANTING BEDS; DARK BROWN DOUBLE HAMMERED HARDWOOD MULCH FOR ALL TREES, SHRUBS, AND GROUND COVERS. PLACE MULCH UNDER PLANTS AND INTO BEDLINE TRENCHES. DO NOT COVER ROOT FLARE.
15. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR CLEAN UP OF ALL CONTAINERS, PALLETS, DEBRIS, ETC. RESULTING FROM HIS/HER WORK.
16. ALL PLANTS SHALL BE HAND WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL TREES, SHRUBS AND GRASS SHALL THEN BE WATERED WEEKLY OR AS NECESSARY TO MAINTAIN THE EQUIVALENT OF ONE INCH OF ABSORBED WATER PER WEEK. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FULL LANDSCAPE MAINTENANCE THROUGH A 30-DAY MAINTENANCE PERIOD FOLLOWING THE DATE OF FINAL COMPLETION. AT COMPLETION OF THE 30-DAY MAINTENANCE PERIOD THE OWNER WILL BE RESPONSIBLE FOR ALL MAINTENANCE AND WATERING.
17. ALL PLANTS AND GRASS SHALL BE WARRANTED FOR ONE (1) YEAR. WARRANTY DOES NOT INCLUDE ACTS OF GOD OR VANDALISM.
18. MEDIAN SHALL BE TREATED WITH ROUND-UP OR EQUAL HERBICIDE SPRAY, BY A LICENSED HERBICIDE APPLICATOR AND LEFT UNDISTURBED FOR SEVEN DAYS PRIOR TO BEGINNING EXCAVATION. THERE SHALL BE NO WEEDS OR GRASS CLUMPS IN EXCAVATED MEDIAN PRIOR TO TOPSOIL PLACEMENT. CONTRACTOR SHALL ALSO SCHEDULE A TIME FOR THE LANDSCAPE ARCHITECT TO OBSERVE FINISHED EXCAVATION BEFORE PLACEMENT OF PLANTING SOIL.



PLANTING BED BERM DETAIL
NO SCALE

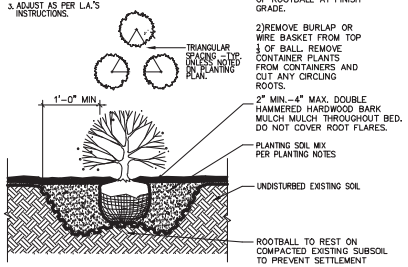
NOTE: TREES TO BE WATERED THOROUGHLY AFTER PLANTING.



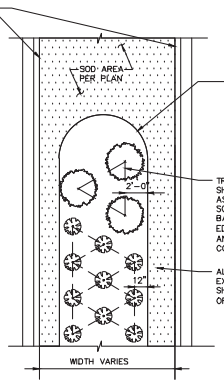
TYP. TREE PLANTING DETAIL
NO SCALE

NOTES:
1. MIN. ROOT MASS TO BE IN ACCORDANCE WITH "AMERICAN STANDARDS FOR NURSERY STOCK"
2. PRUNE ALL DAMAGED, DISEASED OR WEAK LIMBS & ROOTS.
3. DO NOT ALLOW ROOT BALL TO DRY OUT DURING INSTALLATION PROCESS.
4. ALL STRAPS, STAKES AND ASSOCIATED MATERIALS SHALL BE REMOVED BY CONTRACTOR WITHIN ONE WEEK OF THE END OF THE 90 DAY MAINTENANCE PERIOD.

NOTE: PROPOSED SUBGRADE PROFILE IS CONTINUOUS WHERE THERE IS NO FRENCH DRAIN PROPOSED, PROVIDE POSITIVE SUBSURFACE DRAINAGE TO SUMP AREAS.



SHRUB PLANTING DETAIL
NOT TO SCALE



MEDIAN PLANT SPACING DETAIL
NO SCALE

SUITABLE IMPORTED TOPSOIL

1. A MIXTURE OF APPROVED TOPSOIL, SAND, AND ORGANIC MATERIAL MIXED TO MEET THE FOLLOWING SPECIFICATION.
2. PARTICLE SIZE DISTRIBUTION ACCORDING TO U.S.D.A. PARTICLE CLASSIFICATIONS:

PARTICLE	SIZE (MM)	ALLOWABLE LIMIT
GRAVEL	>4.75	MAX. 3%
FINE GRAVEL	2.00–4.75	MAX. 10%
VERY COARSE SAND	1.00–2.00	
COARSE SAND+	0.50–1.00	COMBINED
MEDIUM SAND	0.25–0.50	50–75%
FINE SAND	0.1–0.25	5–15%
VERY FINE SAND	0.05–0.10	0–10%
SILT	0.002–0.05	10–20%
CLAY	<0.002	10–20%

3. THE U.S.D.A. SOIL TEXTURE CLASS SHALL BE A SANDY LOAM, WITH NO MORE THAN 75% SAND AND NO MORE THAN 15% COMBINED SILT+CLAY.
4. THE ORGANIC MATTER SHALL BE 8 TO 15%.
5. DEPTH OF MIX AS INDICATED ON DRAWINGS.
6. CONTRACTOR SHALL PROVIDE A SUBMITTAL OF THE TOPSOIL MATERIAL IN A ONE GALLON RESEALABLE PLASTIC STORAGE BAG TO THE LANDSCAPE ARCHITECT FOR APPROVAL. CONTRACTOR SHALL ALSO PROVIDE A SOIL TEST BY AN APPROVED TESTING AGENCY OF THE PROPOSED MATERIAL FOR LANDSCAPE ARCHITECT APPROVAL.

MISC. NOTES AND DETAILS
NO SCALE

REV.	DATE	BY	DESCRIPTION
2	8/17/2012	LFC	ISSUED FOR CONSTRUCTION
1	8/6/2012	LFC	ISSUED FOR COUNTY APPROVAL
0	7/12/2012	LFC	ISSUED FOR BID

REVISIONS

DRAWN BY: LFC DATE: 10/5/11 CHECKED BY: DRP DATE: 10/6/11

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UTILITY WARNING:
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ALEXANDER DR. LANDSCAPED MEDIAN IMPROVEMENTS

MISC. NOTES AND DETAILS

JOHNSON, LASCHOBER & ASSOCIATES, P.C.
1298 BROAD STREET AUGUSTA, GEORGIA 30901
TEL (706) 724-5756 FAX (706) 724-3935

SCALE	DATE	PROJECT NO.	DRAWING NO.	REV.
AS NOTED	10/10/11	5913.1110	L201	2

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GEORGIA UNIFORM CODING SYSTEM FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sd2	SEDIMENT TRAP, INLET			AN IMPOUNDING AREA CREATED BY EXCAVATING AROUND A STORM DRAIN DROP INLET. THE EXCAVATED AREA WILL BE FILLED AND STABILIZED ON COMPLETION OF CONSTRUCTION ACTIVITIES.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		Ds1	ESTABLISHING TEMPORARY PROTECTION FOR DISTURBED AREAS WHERE SEEDING MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDING COVER.
Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)		Ds3	ESTABLISHING PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, SOD, OR LEGUMES ON DISTURBED AREAS.
Ds4	DISTURBED AREA STABILIZATION (WITH SODDING)		Ds4	A PERMANENT VEGETATION USING SODS ON HIGHLY ERODIBLE OR CRITICALLY ERODED LANDS.
Du	DUST CONTROL ON DISTURBED AREAS		Du	CONTROLLING SURFACE AND AIR MOVEMENT DUST ON CONSTRUCTION SITES, ROADWAYS AND SIMILAR SITES.

STANDARDS & SPECIFICATIONS:
ALL DESIGNS WILL CONFORM TO AND ALL WORK WILL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE "GREEN BOOK" ALSO KNOWN AS THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", LATEST EDITION.

Plants, Planting Rates, And Planting Dates For Temporary Cover Or Companion Crops

Species	Rates per Acre	Rates per 1,000 sq. ft.	Planting Dates by Region M–L	P	C
Barley	3 bu.	3.3 lb.	9/1–10/31	9/15–11/15	10/1–12/31
Oats	4 bu.	2.9 lbs.	9/15–11/15	9/15–11/15	9/15–11/15
Triticale	3 bu.	3.3 lbs.	---	---	10/15–12/15
Ryegrass, Annual Rye Grain (alone) Rye Grain (in mixtures)	40 lbs. 3.0 bu. 0.5 bu.	0.9 lb. 3.9 lb. 0.6 lb.	8/15–4/30 7/15–11/30 8/15–10/31	8/1–4/15 9/15–12/31 9/15–11/30	9/15–3/31 9/1–2/28 10/1–12/31
Lespedeza, Annual	40 lbs.	0.9 lb.	2/1–4/30	2/15–4/30	1/15–3/15
Weeping Lovegrass	4 lbs.	0.1 lb.	4/1–5/31	4/1–5/31	3/1–5/31
Sudangrass	60 lbs.	1.4 lb.	4/1–8/31	4/1–8/31	3/1–7/31
Millet, Browntop Millet, Pearl	40 lbs. 50 lbs.	0.9 lbs. 1.1 lbs.	4/15–6/15 5/15–7/15	4/15–6/30 5/1–7/31	4/15–6/30 4/15–8/15
Wheat	3 bu.	4.1 lbs.	9/15–11/30	10/1–12/15	10/15–12/31

1. Temporary cover crops are very competitive and will crown out perennials if seeded too heavily.
2. Reduce seeding rates by 50% when drilled.
3. Unusual site conditions may require heavier seeding rates.
4. Seeding rates may need to be altered to fit temperature variations and local conditions.

Fertilizer Requirements for Temporary Vegetation

Types of Species	Planting Year	Fertilizer (N–P–K)	Rate (lbs./acre)	N Top Dressing Rate (lbs./acre)
Cool season grasses	First Second Maintenance	6–12–12 6–12–12 10–10–10	1500 1000 400	50–100 -- 30
Cool season grasses & legumes	First Second Maintenance	6–12–12 0–10–10 0–10–10	1500 1000 400	0–50 -- --
Temporary cover crops seeded alone	First	10/10/10	500	30
Warm season grasses	First Second Maintenance	6–12–12 6–12–12 10–10–10	1500 800 400	50–100 50–100 30

SOIL EROSION & SEDIMENT CONTROL LEGEND

- Ds1 – DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
- Ds2 – DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)
- Ds3 – DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)
- Ds4 – DISTURBED AREA STABILIZATION (WITH SODDING)
- Du – DUST CONTROL ON DISTURBED AREAS
- Sd2 – INLET SEDIMENT TRAP
  - Sd2–F FILTER FABRIC & FRAME
  - Sd2–P GRAVEL BAGS
  - Sd2 EXCAV EXCAVATED INLET SEDIMENT TRAP

NOTES:
RECP – ROLLED EROSION CONTROL PRODUCT
LANDLOK CS2 BY LANDLOK OR EQUAL.
FOR CLARITY, SOME BMP's ARE SHOWN TOGETHER IN ONE SYMBOL.

EX. **St/Fr** – STORM OUTLET PROTECTION AND FILTER RING

Ds1/2 – MULCHING AND TEMPORARY GRASSING

Plants, Planting Rates, And Planting Dates For Permanent Cover

Species	Rate per Acre	Rates per 1,000 sq. ft.	Planting Dates by Region M–L	P	C	Remarks
Bermuda, Common (Hulled seed) Alone With Perennials	10 lbs. 6 lbs.	0.2 lb. 0.1 lb.	---	4/1–5/31	3/15–5/31	Quick cover; low growing; sod forming; needs full sun.
Bermuda, Common (Unhulled seed) With temporary cover With other perennials	10 lbs. 6 lbs.	0.2 lb. 0.1 lb.	---	10/1–2/28	11/1–1/31	Plant with Winter annuals.
Bermuda Sprigs With temporary cover	40cu.ft. Sod plugs 3' x 3'	0.9cu.ft.	4/15–6/15	4/1–6/15	4/1–5/31	1 cu. ft. = 650 sprigs; 1 bu. = 1.25 cu. Ft. or 800 sprigs.

Fertilizer Requirements for Permanent Vegetation

Types of Species	Planting Year	Fertilizer (N–P–K)	Rate (lbs./acre)	N Top Dressing Rate (lbs./acre)
Cool season grasses	First Second Maintenance	6–12–12 6–12–12 10–10–10	1500 1000 400	50–100 -- 30
Cool season grasses & legumes	First Second Maintenance	6–12–12 0–10–10 0–10–10	1500 1000 400	0–50 -- --
Ground covers	First Second Maintenance	10–10–10 10–10–10 10–10–10	1300 1300 1100	-- -- --
Pine seedlings	First	20–10–5	one 21–gram pellet per seedling placed in the closing hole	--
Shrub Lespedeza	First Maintenance	0–10–10 0–10–10	700 700	-- --
Temporary cover crops seeded alone	First	10–10–10	500	30
Warm season grasses	First Second Maintenance	6–12–12 6–12–12 10–10–10	1500 800 400	50–100 50–100 30
Warm season grasses & legumes	First Second Maintenance	6–12–12 0–10–10 0–10–10	1500 1000 400	50

* APPLY AGRICULTURAL LIME AS PRESCRIBED BY SOIL TESTS OR AT A RATE OF 1 TO 2 TONS PER ACRE

Material	Depth
Dry Straw Or Hay	2" To 4"
Wood Waste (sawdust, Bark, Chips)	2" To 3"
Cutback Asphalt (slow Curing)	1200 Gal./acre (1/4 Gal./sq.yd.)
Black Polyethylene Film	Completely Cover Area; Hold In Place With Soil On Outer Edge

M–L represents the Mountain; Blue Ridge; and Ridges and Valleys MLRAs
P represents the Southern Piedmont Region MLRA
C represents the Southern Coastal Plain; Sand Hills; Black Lands; and Atlantic Coast Flatwoods MLRAs

Ds2 TEMPORARY GRASSING — **Ds3 PERMANENT GRASSING** — **Ds1 MULCHING**

NOTES:

1. ALL SEEDED AREAS WILL BE MULCHED WITH HAY OR STRAW AT A RATE OF 2–2 1/2 TONS PER ACRE WITHIN 24 HRS. AFTER SEEDING. USE OF A TACKIFIER IS REQUIRED ON ALL SLOPES EXCEEDING 3:1.
2. GRASSING WILL BE ACCEPTED WHEN A 95% COVER BY PERMANENT GRASSING IS OBTAINED AND WEEDS ARE NOT DOMINANT.
3. GRASSING OF DISTURBED AREAS WILL COMMENCE AT COMPLETION OF EACH PHASE OF CONSTRUCTION OR IN THE SEQUENCE AS INDICATED. IN ANY CASE, GRASSING OF ANY DISTURBED AREA WILL BEGIN AT EARLIEST POSSIBLE DATE.
4. IRRIGATION WILL BE APPLIED AT A RATE THAT WILL NOT CAUSE RUNOFF.
5. TOPDRESSING WILL BE APPLIED ON ALL TEMPORARY & PERMANENT SPECIES PLANTED ALONE OR IN MIXTURES WITH OTHER SPECIES.
6. PERMANENT GRASSING SHALL BE IRRIGATED AND MAINTAINED. BERMUDA GRASS MAY BE MOWED AS DESIRED MAINTAINING AT LEAST 4 TO 6 INCHES OF TOP GROWTH.
7. Ds1 WILL BE EMPLOYED FOR DISTURBED AREAS LAID BARE FOR MORE THAN 14 DAYS AND NO GREATER THAN 45 DAYS PRIOR TO CONSTRUCTION RECOMMENCEMENT.
8. Ds1 & Ds2 WILL BE EMPLOYED FOR DISTURBED AREAS LAID BARE FOR MORE THAN 45 DAYS AND NO GREATER THAN 180 DAYS PRIOR TO CONSTRUCTION RECOMMENCEMENT.
9. Ds2 & Ds3 SHALL BE EMPLOYED FOR DISTURBED AREAS LAID BARE FOR MORE THAN 180 DAYS PRIOR TO CONST. RECOMMENCEMENT.

GRASSING, FERTILIZATION & MULCH

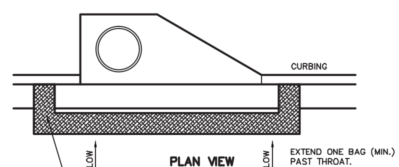
NO SCALE

Du DUST CONTROL BY IRRIGATION

1. THE CONTRACTOR SHALL CONDUCT OPERATIONS AND MAINTAIN THE PROJECT SITE SO AS TO MINIMIZE THE CREATION AND DISPERSION OF DUST. DUST CONTROL SHALL BE USED THROUGHOUT THE WORK AT THE SITE.
2. THE CONTRACTOR MUST PROVIDE CLEAN WATER, FREE FROM SALT, OIL AND OTHER DELETERIOUS MATERIALS TO BE USED FOR ON–SITE DUST CONTROL.
3. THE CONTRACTOR SHALL SUPPLY WATER SPRAYING EQUIPMENT CAPABLE OF ACCESSING ALL WORK AREAS.
4. THE CONTRACTOR SHALL IMPLEMENT STRICT DUST CONTROL MEASURES DURING ACTIVE CONSTRUCTION PERIODS ON–SITE. THESE CONTROL MEASURES WILL GENERALLY CONSIST OF WATER APPLICATIONS THAT SHALL BE APPLIED A MINIMUM OF ONCE PER DAY DURING DRY WEATHER OR MORE OFTEN AS REQUIRED TO PREVENT DUST EMISSIONS.
5. FOR WATER APPLICATION TO UNDISTURBED OIL SURFACES, THE CONTRACTOR SHALL:
   A. APPLY WATER WITH EQUIPMENT CONSISTING OF TANK, SPRAY BAR, PUMP DISCHARGE PRESSURE GAUGE.
   B. ARRANGE SPRAY BAR HEIGHT, NOZZLE SPACING AND SPRAY PATTERN TO PROVIDE COMPLETE COVERAGE OF GROUND WATER.
   C. DISPERSE WATER THROUGH NOZZLES ON SPRAY BAR AT 20 PSI MINIMUM. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
6. FOR WATER APPLICATION TO SOIL SURFACES DURING DEMOLITION AND/OR EXCAVATION, THE CONTRACTOR SHALL:
   A. APPLY WATER WITH EQUIPMENT CONSISTING OF A TANK, PUMP WITH DISCHARGE GAUGE, HOSES AND MIST NOZZLES.
   B. LOCATE TANK AND SPRAYING EQUIPMENT SO THAT THE ENTIRE EXCAVATION AREA CAN BE MISTED WITHOUT INTERFERING WITH DEMOLITION AND/OR EXCAVATION EQUIPMENT OR OPERATIONS. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
   C. APPLY WATER SPRAY IN A MANNER TO PREVENT MOVEMENT OF SPRAY BEYOND CONSTRUCTION BOUNDARIES.
7. CONTRACTOR SHALL REFER TO "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" LATEST EDITION FOR ADDITIONAL INFORMATION ON TEMPORARY AND PERMANENT DUST CONTROL BMP'S.

SITE MAINTENANCE NOTES:

1. **THE DESIGN PROFESSIONAL WHO PREPARED E.S. & P.C. PLAN SHALL INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMP'S WITHIN 7 DAYS AFTER INSTALLATION.**
2. **ANY AMENDMENTS AND/OR REVISIONS TO THE E.S. & P.C. PLANS WHICH WILL HAVE A SIGNIFICANT EFFECT ON BMP'S WITH HYDRAULIC COMPONENTS MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.**
3. **WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.**
4. **THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND–DISTURBING ACTIVITIES.**
5. **EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT SEDIMENT SOURCE.**
6. **ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.**
7. **DEVELOPERS AND/OR CONTRACTORS ARE RESPONSIBLE TO REMOVE OR CLEAN OUT ANY SILT, DIRT, MUD OR ANY OTHER TYPE OF DEBRIS THAT COMES OFF THEIR SITE AND FINDS ITS WAY INTO A PRIVATE POND, ONTO PRIVATE PROPERTY, INTO A COUNTY OWNED POND OR COUNTY OWNED PROPERTY TO INCLUDE RIGHTS–OF–WAY.**
8. **THE CONTRACTOR SHALL COMPLY WITH THE "GEORGIA MANUAL FOR ON–SITE SEWAGE MANAGEMENT SYSTEMS" FOR WASTE DISPOSAL, SANITARY SEWER AND/OR SEPTIC TANK INCLUDING ALL TEMPORARY MEASURES DURING CONSTRUCTION AND AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.**



GRAVEL CONTAINED IN PERVIOUS, NON–BIODEGRADABLE BAGS. 24" LONG, 12" WIDE AND 6" HIGH. (USE COURSE AGGREGATE ½" TO 1" DIAMETER)

PLACE BAGS SUCH THAT NO GAPS ARE PRESENT. USE BAGS MADE OF WOVEN GEOTEXTILE (NOT BURLAP). BAGS SHALL BE INSPECTED WEEKLY AND SEDIMENT REMOVED AS NEEDED.

Sd2–P INLET SEDIMENT TRAP GRAVEL BAGS

NO SCALE

MISC. NOTES AND DETAILS

NO SCALE

DUST CONTROL NOTES

GA. RULE [391–3–1–.02] – (N) – FUGITIVE DUST CONTROL (N) FUGITIVE DUST:
1. ALL PERSONS RESPONSIBLE FOR ANY OPERATION, PROCESS, HANDLING, TRANSPORTATION OR STORAGE FACILITY WHICH MAY RESULT IN FUGITIVE DUST SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT SUCH DUST FROM BECOMING AIRBORNE. SOME REASONABLE PRECAUTIONS WHICH COULD BE TAKEN TO PREVENT DUST FROM BECOMING AIRBORNE INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

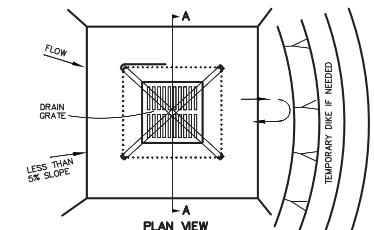
(I) USE, WHERE POSSIBLE, OF WATER OR CHEMICALS FOR CONTROL OF DUST IN THE DEMOLITION OF EXISTING BUILDINGS OR STRUCTURES, CONSTRUCTION OPERATIONS, THE GRADING OF ROADS OR THE CLEARING OF LAND;

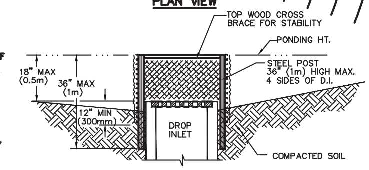
(II) APPLICATION OF ASPHALT, OIL, WATER, OR SUITABLE CHEMICALS ON DIRT ROADS, MATERIALS, STOCKPILES, AND OTHER SURFACES WHICH CAN GIVE RISE TO AIRBORNE DUSTS;

(III) INSTALLATION AND USE OF HOODS, FANS, AND FABRIC FILTERS TO ENCLOSE AND VENT THE HANDLING OF DUSTY MATERIALS. ADEQUATE CONTAINMENT METHODS CAN BE EMPLOYED DURING SANDBLASTING OR OTHER SIMILAR OPERATIONS;

(IV) COVERING, AT ALL TIMES WHEN IN MOTION, OPEN BODIED TRUCKS, TRANSPORTING MATERIALS LIKELY TO GIVE RISE TO AIRBORNE DUSTS;
(V) THE PROMPT REMOVAL OF EARTH OR OTHER MATERIAL FROM PAVED STREETS ONTO WHICH EARTH OR OTHER MATERIAL HAS BEEN DEPOSITED.

2. THE PERCENT OPACITY FROM ANY FUGITIVE DUST SOURCE LISTED IN PARAGRAPH (2)(N)1. ABOVE SHALL NOT EQUAL OR EXCEED 20 PERCENT.





NOTES:

1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
2. USE TYPE "C" SILT FENCE SUPPORTED BY STEEL POST 3' (1m) MINIMUM LENGTH. SPACE STAKES EVENLY AROUND INLET 3' MAX. AND DRIVEN 18" DEEP IN THE GROUND.
3. INSTALL 2"X4" (100X50mm) WOOD TOP FRAME TO INSURE STABILITY.
4. THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BY– PASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.
5. FABRIC & WIRE SHALL BE SECURELY FASTENED TO THE POSTS, AND FABRIC ENDS MUST BE OVER–LAPPED 18" MIN. OF WRAPPED TOGETHER AROUND POST TO PROVIDE A CONTINUOUS BARRIER AROUND THE INLET.
6. AN EXCAVATION MAY BE CREATED AROUND THE INLET SEDIMENT TRAP TO PROVIDE ADDITIONAL SEDIMENT STORAGE. THE TRAP SHALL BE SIZED TO PROVIDE A MINIMUM STORAGE CAPACITY OF 67 CY/ACRE OF DRAINAGE AREA. A MIN. DEPTH OF 1.5 FT. FOR SEDIMENT STORAGE SHALL BE PROVIDED. SIDE SLOPES SHALL NOT BE STEEPER THAN 2:1.
7. INLET SEDIMENT TRAPS (Sd2–F's) SHALL BE MAINTAINED PER SOIL SEDIMENTATION & POLLUTION CONTROL NOTES UNTIL FINE GRADING AND PAVING OCCURS DURING FINAL STABILIZATION, WHERE IN THE Sd2–F's WILL TRANSITION TO Sd2–P's (GRAVEL BAGS; NOT PIGS–IN–A–BLANKET.)

Sd2–F INLET SEDIMENT TRAP FILTER FABRIC W/ SUPPORTING FRAME

NO SCALE

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0	7/12/2012	LFC	ISSUED FOR BID

R E V I S I O N S

DRAWN BY: LFC DATE: 10/6/11 CHECKED BY: DRP DATE: 10/6/11

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ALEXANDER DRIVE LANDSCAPED MEDIAN IMPROVEMENTS
EROSION CONTROL NOTES AND DETAILS

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SCALE	DATE	PROJECT NO.	DRAWING NO.	REV.
AS NOTED	10/10/11	5913.1110	L202	2

HEAD SPACING NOTE

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCALE THE PLAN AND CHECK NOZZLE TYPES TO DETERMINE THE CORRECT SPACING OF THE HEADS. THE CONTRACTOR SHALL NOT SPACE THE HEADS FURTHER APART OR USE LESS HEADS THAN SHOWN ON THE PLAN. ANY CHANGES TO THE HEAD SPACING OR LAYOUT, WITHOUT THE CONSENT OF THE LANDSCAPE ARCHITECT OR OWNER, SHALL HOLD THE IRRIGATION CONTRACTOR RESPONSIBLE FOR WARRANTY OF THE PLANTS AND OR SOD IN THESE AREAS.

RIGHT OF WAY PERMIT NOTE

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK WITH ALL LOCAL GOVERNING AGENCIES, VERIFY ALL REQUIREMENTS AND CODE REGULATIONS, AND OBTAIN ALL INFORMATION REQUIRED TO PULL NECESSARY RIGHT OF WAY PERMITS IF REQUIRED. CONTRACTOR SHALL SECURE AND PAY FOR PERMITS.

MP ROTATOR DISTANCE CONTROL NOTE

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL VALVETTE SYSTEMS LITTLE VALVE FLOW CONTROL UNITS TO CONTROL SPRAY RADIUS AND MINIMIZE OVERSPRAY IN AREAS 8' AND LESS. ADJUST PRS-D DIAL ON ZONE CONTROL VALVES WHERE POSSIBLE IN LIEU OF INSTALLING LITTLE VALVES. INSTALL CORNER SPRAY MP UNIT WHERE 45/90/165 ANGLES OCCUR.

IRRIGATION PERMIT/BACKFLOW NOTE

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN AND PAY FOR ALL RELATED PERMITS AND PERFORM BACKFLOW TESTING PER LOCAL CODE. APPROVED RESULTS SHALL BE SUBMITTED TO OWNER'S REPRESENTATIVE.

BOOSTER PUMP STATION NOTE:

IF DYNAMIC PRESSURE READING DOES NOT REACH 55 PSI, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A WATERTRONICS OR EQUAL BOOSTER PUMP STATION CAPABLE OF PROVIDING PRESSURE DIFFERENTIAL BETWEEN DYNAMIC READING AND THE MINIMUM REQUIRED PRESSURE OF 55 PSI WITH A 30 GPM FLOW RATE. PROVIDE ELECTRICAL REQUIREMENTS.

TREE ROOT ZONE NOTES

CONTRACTOR SHALL STAY A MINIMUM OF DRIP LINE OF TREE AWAY FROM MAIN TREE TRUNK WHILE PERFORMING ANY KIND OF EXCAVATION TO AVOID CUTTING AND DAMAGING OF ROOTS. NO MACHINERY OR TRENCHING WITHIN THE ROOT ZONE OF TREES. CONTRACTOR SHALL USE EXTREME CAUTION TO KEEP A MINIMUM DISTANCE OF 20' FROM EXISTING TREES AND TREE WELLS. USE EXTREME CAUTION AND HAND DIG WHEN ENCOUNTERING ROOT ZONES OF TREES. STAY NEXT TO CURBS WHEN IN THESE AREAS.

NOTE:

CONTRACTOR RESPONSIBLE FOR ROUTING AND INSTALLING ALL IRRIGATION EQUIPMENT AND PIPING SO THAT IT DOES NOT CONFLICT WITH OR DAMAGE ANY EXISTING OR NEW LANDSCAPING OR IRRIGATION COMPONENTS. CONTRACTOR RESPONSIBLE FOR ROUTING ALL LINES SO AS TO AVOID ANY CONFLICT OR DAMAGE TO LANDSCAPE MATERIAL ROOT STRUCTURES.

UTILITIES DAMAGE DISCLAIMER

CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE FOR ALL EXISTING UNDER GROUND UTILITIES LOCATIONS WITHIN THE IMPROVED CONSTRUCTION AREA. ANY DAMAGE TO EXISTING UTILITIES OR OTHERWISE SHALL BE REPAIRED IMMEDIATELY BY IRRIGATION CONTRACTOR AT HIS OWN EXPENSE.

SLEEVE NOTE

ALL SLEEVE LOCATIONS WHERE SIZE IS NOT NOTED SHALL BE INSTALLED 2 SIZES LARGER THAN PIPING PASSING THROUGH SLEEVE OR MINIMUM 4" SIZE, INSTALL EXTRA 4" SLEEVE AT MAIN LINE LOCATIONS WHERE SIZE IS NOT NOTED. IRRIGATION CONTRACTOR SHALL INSTALL ALL SLEEVING UNLESS OTHERWISE NOTED ON PLANS. GENERAL CONTRACTOR AND IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE TO ASBUILT, IDENTIFY, AND LOCATE HIS RESPECTIVE SLEEVES AT THE START OF AND DURING SYSTEM INSTALLATION.

NOTE:

CONTRACTOR RESPONSIBLE FOR REPAIRING/ REPLACING ANY DAMAGED ITEM OR MATERIAL COMPONENT WHATSOEVER AND SHALL, AT HIS OWN EXPENSE, REPAIR AND/OR REPLACE THAT PARTICULAR ITEM IMMEDIATELY.

CALSENSE INSTALLATION NOTES

1) CALSENSE MODEL RB-1 RAIN BUCKET- USE PAIGE P-7-17-D CABLE INSTALLED IN CONDUIT. INSTALL ONE SPARE RUN OF PAIGE P-7-17-D TO SAME LOCATION IN CONDUIT.
2) HUNTER FREEZE-CLICK-REV FREEZE SENSOR- USE #18-2 INSTALLED IN CONDUIT.
3) USE 3M SCOTCHLOK NO. 3570 CONNECTOR SEALING PACKS FOR SPLICES.
4) INSTALL ALL CABLES FROM CONTROLLERS TO CALSENSE EQUIPMENT.
5) COORDINATE INSTALLATION OF AN ETHERNET LINE TO CONTROLLER INSIDE OF THE BUILDING, TO INTERACT WITH IRRIGATION COMPUTER SYSTEM.
6) INSTALL RADIO SHOP CABLE #LMR-195CB WITH BNC CONNECTIONS FOR REMOTE ANTENNAE AND SUPPLY AND MOUNT ANTENNAE OUTSIDE AND ABOVE CONTROLLERS SHOULD RECEPTION FROM REMOTE RADIO NOT RESPOND TO ANTENNAE INSIDE CONTROLLER ROOM.
7) INSTALL 3-YELLOW AND 2-BLUE (14-1) WIRES FROM CONTROLLER TO SUPERIOR 3100 SERIES 1" MASTER VALVES IN 1 1/4" SCH. 40 PVC CONDUIT.
8) INSTALL 3-GREEN AND 2-BLACK (14-1) WIRES FROM CONTROLLER TO THE CALSENSE 1" FLOW METERS IN 1 1/4" SCH. 40 PVC CONDUIT.
9) GROUNDING OF CONTROLLERS PERFORMED PER PAIGE ELECTRIC OR ASIC SPECIFICATIONS. SEE DETAILS SHEET IR5.
10) CONTACT CALSENSE REPRESENTATIVE DAVE RIPPE AT 770-500-0000 FOR RADIO SURVEY PRIOR TO START OF CONSTRUCTION AND ORDERING OF CALSENSE EQUIPMENT. EQUIPMENT LOCATION AND WIRE RUN DISTANCES WILL BE DETERMINED BY DAVE AFTER SURVEY IS COMPLETED.
11) RADIO REMOTE EQUIPMENT COMMUNICATION TEST NEEDS TO BE PERFORMED TO DETERMINE WHICH ANTENNAE SHALL BE INSTALLED.

NOTE:

ALL PAVED, CONCRETE, AND HARDSCAPE AREAS THAT ARE NOT PROVIDED WITH AN EXISTING SLEEVE ARE TO SLEEVED BY THE DIRECTIONAL BORING METHOD. PIPING IS TO BE MINIMUM SCH. 40 RATED, MINIMUM 24" DEEP, AND TWO SIZES LARGER THAN PIPING AND/OR WIRING INSTALLED INSIDE OF THE SLEEVE. CONTRACTOR SHALL EXTEND END OF PIPING MINIMUM 5 FEET BEYOND CURB OR ROADWAY EDGES TO ELIMINATE ANY CURB OR HARDSCAPE SETTLEMENT ISSUES.

NOTE:

ALL PAVED, CONCRETE, AND HARDSCAPE AREAS THAT ARE NOT PROVIDED WITH AN EXISTING SLEEVE ARE TO SLEEVED BY THE DIRECTIONAL BORING METHOD. PIPING IS TO BE MINIMUM SCH. 40 RATED, MINIMUM 18" DEEP, AND TWO SIZES LARGER THAN PIPING AND/OR WIRING INSTALLED INSIDE OF THE SLEEVE.

TREE STREAM SPRAY NOTE

TREE STREAM SPRAY PIPE LATERALS NOT SHOWN FOR CLARITY PURPOSES. CONTRACTOR SHALL INSTALL PIPE ON STREAM SPRAY ZONE #5 PER PIPE MANUFACTURER'S SPECIFICATIONS AND NOT EXCEED A VELOCITY OF MORE THAN 5 FEET PER SECOND. REFER TO LATERAL LINE PIPE SIZING.

SOIL MOISTURE SENSOR NOTE

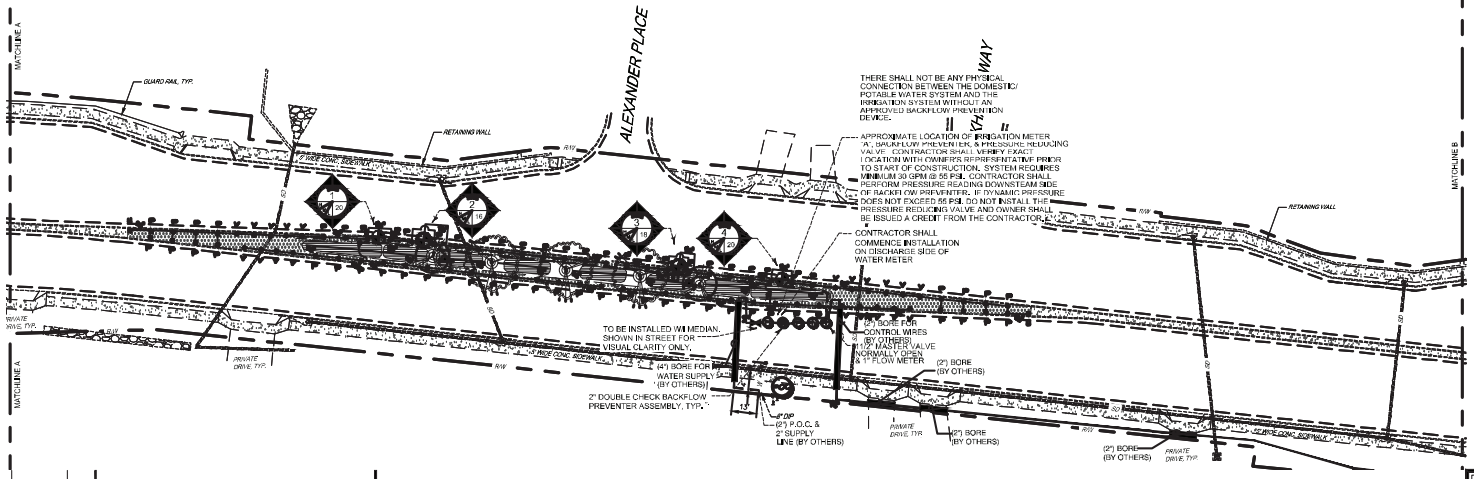
CALSENSE 100LS MOISTURE SENSOR UNITS WILL NOT BE INSTALLED AS A PART OF THIS SCOPE OF WORK. FUTURE LOCATIONS ON SITE WILL BE DETERMINED BY OWNER OR OWNERS REPRESENTATIVE. UNITS WILL BE WIRED INTO CLOSEST ZONE CONTROL VALVE WITH (2) #14-1 DIRECT BURIAL IRRIGATION WIRES. SPLICES WILL BE MADE WITH 3M SCOTCHLOK NO. 3570 CONNECTOR SEALING PACKS. SENSORS WILL BE ASBUILTED AND HAVE 2" PVC MARKER PIPES AND CAPS NEXT TO SENSORS. REFER TO CALSENSE DETAILS FOR INSTALLATION.

ROADWAY OVERSPRAY NOTE

CONTRACTOR SHALL SPACE AND POSITION MP ROTATOR SPRINKLERS IN MEDIANS IN SUCH A MANNER TO ELIMINATE OVERSPRAY INTO ROADWAY AND HARDSCAPE AREAS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE ADJUST SPRAY ARC AND RADIUS TO ENSURE THERE IS NO DISTRIBUTION OF WATER OUTSIDE OF MEDIANS.

CALSENSE IRRIGATION NOTE

1. THE IRRIGATION SYSTEM SHALL NOT RUN IN A MANNER THAT WILL CREATE A HAZARD TO TRAFFIC DURING FREEZING CONDITIONS. THE CALSENSE CONTROLLER IS EQUIPPED TO SHUT DOWN IRRIGATION SPRAY IN FREEZING CONDITIONS AS WELL IN THE EVENT OF A PIPE BURST.



IRRIGATION PLAN

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

REV	DATE	BY	DESCRIPTION
2	8/17/2012	LFC	ISSUED FOR CONSTRUCTION
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REVISIONS

DRAWN BY: LFC DATE: 12/28/11 CHECKED BY: DRP DATE: 12/29/2011

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SCALE	DATE	PROJECT NO.	DRAWING NO.	REV.
1"=30'	12/28/2011	5913.1110	I101	2

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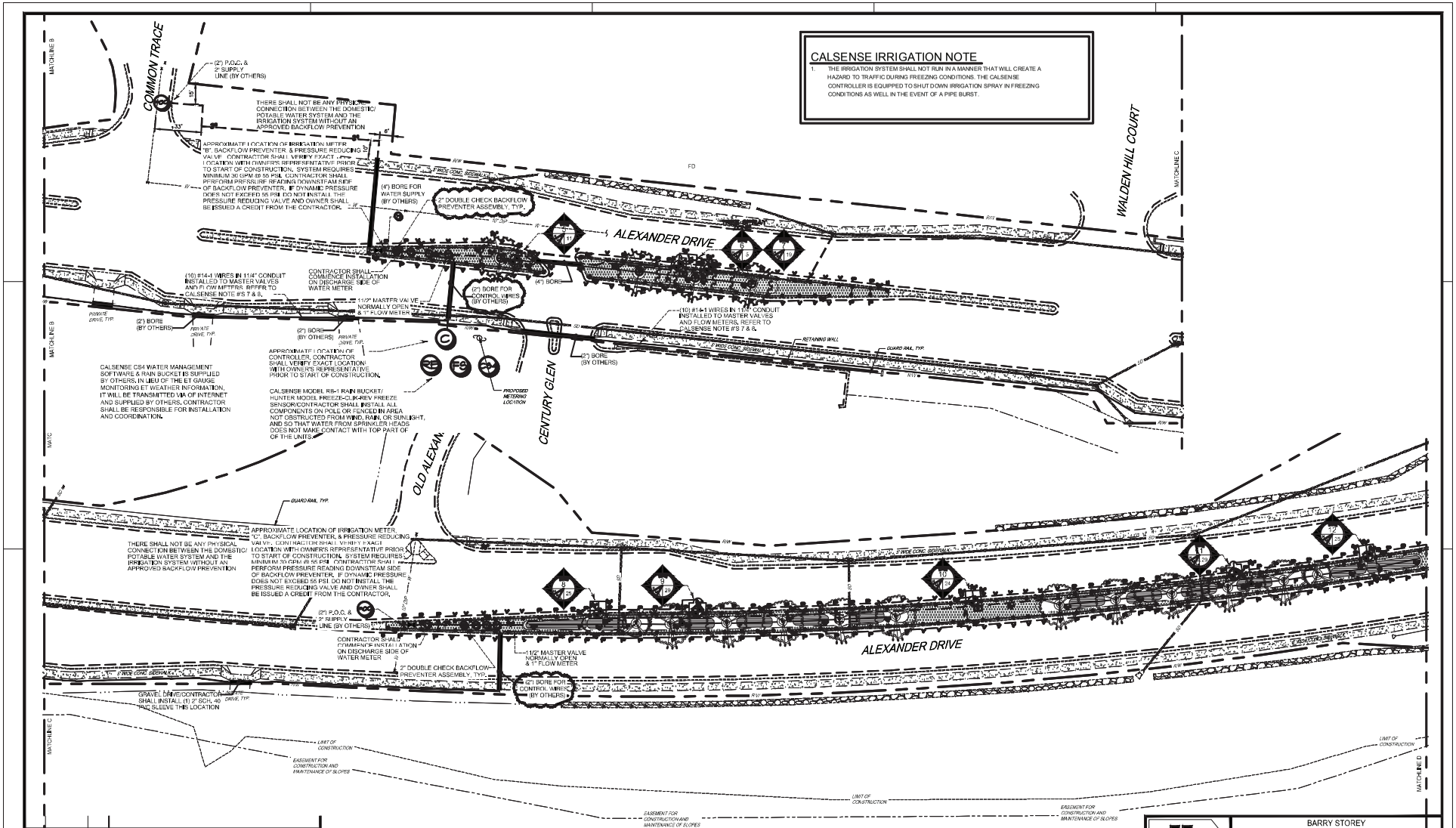

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IRRIGATION PLAN

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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BARRY STOREY
INTERSTATE PARKWAY AUGUSTA, GA

ALEXANDER DR LANDSCAPE IMPROVEMENT PROJECT

IRRIGATION PLAN

JOHNSON, LASCHOBER & ASSOCIATES, P.C.
1296 BROAD STREET AUGUSTA, GEORGIA 30901
TEL (706) 724-5796 FAX (706) 724-3953

SCALE	DATE	PROJECT NO.	DRAWING NO.	REV.
1"=30'	12/28/2011	5913.1110	I102	2

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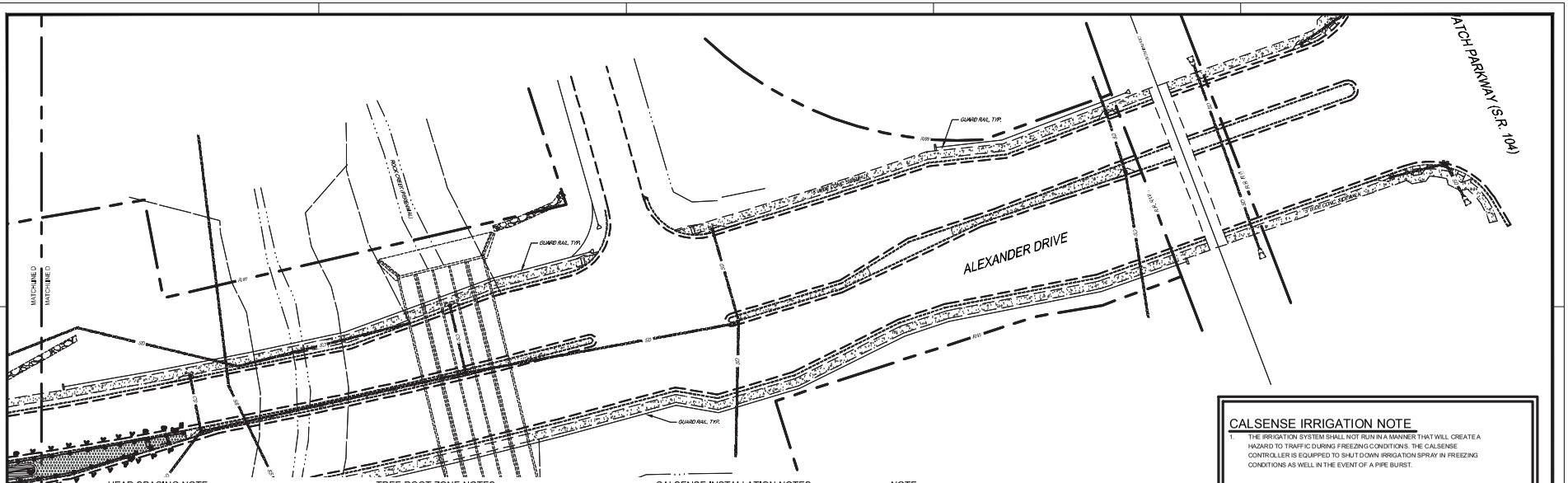

HEAD SPACING NOTE

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCALE THE PLAN AND CHECK NOZZLE TYPES TO DETERMINE THE CORRECT SPACING OF THE HEADS. THE CONTRACTOR SHALL NOT SPACE THE HEADS FURTHER APART OR USE LESS HEADS THAN SHOWN ON THE PLAN. ANY CHANGES TO THE HEAD SPACING OR LAYOUT, WITHOUT THE CONSENT OF THE LANDSCAPE ARCHITECT OR OWNER, SHALL HOLD THE IRRIGATION CONTRACTOR RESPONSIBLE FOR WARRANTY OF THE PLANTS AND OR SOD IN THESE AREAS.

RIGHT OF WAY PERMIT NOTE

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK WITH ALL LOCAL GOVERNING AGENCIES, VERIFY ALL REQUIREMENTS AND CODE REGULATIONS, AND OBTAIN ALL INFORMATION REQUIRED TO PULL NECESSARY RIGHT OF WAY PERMITS IF REQUIRED. CONTRACTOR SHALL SECURE AND PAY FOR PERMITS.

MP ROTATOR DISTANCE CONTROL NOTE

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL VALVETTE SYSTEMS LITTLE VALVE FLOW CONTROL UNITS TO CONTROL SPRAY RADIUS AND MINIMIZE OVERSPRAY IN AREAS 8' AND LESS. ADJUST PRS-D DIAL ON ZONE CONTROL VALVES WHERE POSSIBLE IN LIEU OF INSTALLING LITTLE VALVES. INSTALL CORNER SPRAY MP UNIT WHERE 45/90/105 ANGLES OCCUR.

IRRIGATION PERMIT/BACKFLOW NOTE

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN AND PAY FOR ALL RELATED PERMITS AND PERFORM BACKFLOW TESTING PER LOCAL CODE. APPROVED RESULTS SHALL BE SUBMITTED TO OWNER'S REPRESENTATIVE.

BOOSTER PUMP STATION NOTE:

IF DYNAMIC PRESSURE READING DOES NOT REACH 55 PSI, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A WATERTRONICS OR EQUAL BOOSTER PUMP STATION CAPABLE OF PROVIDING PRESSURE DIFFERENTIAL BETWEEN DYNAMIC READING AND THE MINIMUM REQUIRED PRESSURE OF 55 PSI WITH A 30 GPM FLOW RATE. PROVIDE ELECTRICAL REQUIREMENTS.

TREE ROOT ZONE NOTES

CONTRACTOR SHALL STAY A MINIMUM OF DRIP LINE OF TREE AWAY FROM MAIN TREE TRUNK WHILE PERFORMING ANY KIND OF EXCAVATION TO AVOID CUTTING AND DAMAGING OF ROOTS. NO MACHINERY OR TRENCHING WITHIN THE ROOT ZONE OF TREES. CONTRACTOR SHALL USE EXTREME CAUTION TO KEEP A MINIMUM DISTANCE OF 20' FROM EXISTING TREES AND TREE WELLS. USE EXTREME CAUTION AND HAND DIG WHEN ENCOUNTERING ROOT ZONES OF TREES. STAY NEXT TO CURBS WHEN IN THESE AREAS.

NOTE:

CONTRACTOR RESPONSIBLE FOR ROUTING AND INSTALLING ALL IRRIGATION EQUIPMENT AND PIPING SO THAT IT DOES NOT CONFLICT WITH OR DAMAGE ANY EXISTING OR NEW LANDSCAPING OR IRRIGATION COMPONENTS. CONTRACTOR RESPONSIBLE FOR ROUTING ALL LINES SO AS TO AVOID ANY CONFLICT OR DAMAGE TO LANDSCAPE MATERIAL ROOT STRUCTURES.

UTILITIES DAMAGE DISCLAIMER

CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE FOR ALL EXISTING UNDER GROUND UTILITIES LOCATIONS WITHIN THE IMPROVED CONSTRUCTION AREA. ANY DAMAGE TO EXISTING UTILITIES OR OTHERWISE SHALL BE REPAIRED IMMEDIATELY BY IRRIGATION CONTRACTOR AT HIS OWN EXPENSE.

SLEEVE NOTE

ALL SLEEVE LOCATIONS WHERE SIZE IS NOT NOTED SHALL BE INSTALLED 2 SIZES LARGER THAN PIPING PASSING THROUGH. SLEEVE OR MINIMUM 4" SIZE. INSTALL EXTRA 4" SLEEVE AT MAIN LINE LOCATIONS WHERE SIZE IS NOT NOTED. IRRIGATION CONTRACTOR SHALL INSTALL ALL SLEEVING UNLESS OTHERWISE NOTED ON PLANS. GENERAL CONTRACTOR AND IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE TO ASBUILT, IDENTIFY, AND LOCATE HIS RESPECTIVE SLEEVES AT THE START OF AND DURING SYSTEM INSTALLATION.

NOTE:

CONTRACTOR RESPONSIBLE FOR REPAIRING/ REPLACING ANY DAMAGED ITEM OR MATERIAL COMPONENT WHATSOEVER AND SHALL AT HIS OWN EXPENSE, REPAIR AND/OR REPLACE THAT PARTICULAR ITEM IMMEDIATELY.

CALSENSE INSTALLATION NOTES

1) CALSENSE MODEL RS-1 RAIN BUCKET- USE PAIGE P-7-174-D CABLE INSTALLED IN CONDUIT, INSTALL ONE SPARE RUN OF PAIGE P-7-174-D TO SAME LOCATION IN CONDUIT.
2) HUNTER FREEZE-CLIK-REV FREEZE SENSOR- USE #1550 INSTALLED IN CONDUIT.
3) USE 3M SCOTCHLOK NO. 3570 CONNECTOR SEALING PACKS FOR SPLICES.
4) INSTALL ALL CABLES FROM CONTROLLERS TO CALSENSE EQUIPMENT.
5) COORDINATE INSTALLATION OF AN ETHERNET LINE TO CONTROLLER INSIDE OF THE BUILDIONG, TO INTERACT WITH IRRIGATION COMPUTER SYSTEM.
6) INSTALL RADIO SHOP CABLE #LMR-195-DB WITH BNC CONNECTIONS FOR REMOTE ANTENNAE AND SUPPLY AND MOUNT ANTENNAE OUTSIDE AND ABOVE CONTROLLERS SHOULD RECEPTION FROM REMOTE RADIO NOT RESPOND TO ANTENNAE INSIDE CONTROLLER ROOM.
7) INSTALL 3-YELLOW AND 2-BLUE (14-1) WIRES FROM CONTROLLER TO SUPERIOR 3100 SERIES 1" MASTER VALVES IN 1 1/4" SCH. 40 PVC CONDUIT.
8) INSTALL 5-GREEN AND 2-BLACK (14-1) WIRES FROM CONTROLLER TO THE CALSENSE 1" FLOW METERS IN 1 1/4" SCH. 40 PVC CONDUIT.
9) GROUNDING OF CONTROLLERS PERFORMED PER PAIGE ELECTRIC OR ASIC SPECIFICATIONS. SEE DETAILS SHEET IR-5.
10) CONTACT CALSENSE REPRESENTATIVE DAVE PIPPE AT 770-205-0030 FOR RADIO SURVEY PRIOR TO START OF CONSTRUCTION AND ORDERING OF CALSENSE EQUIPMENT. EQUIPMENT LOCATION AND WIRE RUN DISTANCES WILL BE DETERMINED BY DAVE AFTER SURVEY IS COMPLETED.
11) RADIO REMOTE EQUIPMENT COMMUNICATION TEST NEEDS TO BE PERFORMED TO DETERMINE WHICH ANTENNAE SHALL BE INSTALLED.

NOTE:

ALL PAVED, CONCRETE, AND HARDSCAPE AREAS THAT ARE NOT PROVIDED WITH AN EXISTING SLEEVE ARE TO SLEEVED BY THE DIRECTIONAL BORING METHOD. PIPING IS TO BE MINIMUM SCH. 40 RATED, MINIMUM 24" DEEP, AND TWO SIZES LARGER THAN PIPING AND/OR WIRING INSTALLED INSIDE OF THE SLEEVE. CONTRACTOR SHALL EXTEND END OF PIPING MINIMUM 6 FEET BEYOND CURB OR ROADWAY EDGES TO ELIMINATE ANY CURB OR HARDSCAPE SETTLEMENT ISSUES.

NOTE:

ALL PAVED, CONCRETE, AND HARDSCAPE AREAS THAT ARE NOT PROVIDED WITH AN EXISTING SLEEVE ARE TO SLEEVED BY THE DIRECTIONAL BORING METHOD. PIPING IS TO BE MINIMUM SCH. 40 RATED, MINIMUM 18" DEEP, AND TWO SIZES LARGER THAN PIPING AND/OR WIRING INSTALLED INSIDE OF THE SLEEVE.

TREE STREAM SPRAY NOTE

TREE STREAM SPRAY PIPE LATERALS NOT SHOWN FOR CLARITY PURPOSES. CONTRACTOR SHALL INSTALL PIPE ON STREAM SPRAY ZONE #6 PER PIPE MANUFACTURER'S SPECIFICATIONS AND NOT EXCEED A VELOCITY OF MORE THAN 5 FEET PER SECOND. REFER TO LATERAL LINE PIPE SIZING.

SOIL MOISTURE SENSOR NOTE

CALSENSE 1000-S MOISTURE SENSOR UNITS WILL NOT BE INSTALLED AS A PART OF THIS SCOPE OF WORK. FUTURE LOCATIONS ON SITE WILL BE DETERMINED BY OWNER OR OWNER'S REPRESENTATIVE. UNITS WILL BE WIRED INTO CLOSEST ZONE CONTROL VALVE WITH (2) #14-4 DIRECT BURIAL IRRIGATION WIRES. SPLICES WILL BE MADE WITH 3M SCOTCHLOK NO. 3570 CONNECTOR SEALING PACKS. SENSORS WILL BE ASBUILTED AND HAVE 2" PVC MARKER PIPES AND CAPS NEXT TO SENSORS. REFER TO CALSENSE DETAILS FOR INSTALLATION.

ROADWAY OVERSPRAY NOTE

CONTRACTOR SHALL SPACE AND POSITION MP ROTATOR SPRINKLERS IN MEDIANS IN SUCH A MANNER TO ELIMINATE OVERSPRAY INTO ROADWAY AND HARDSCAPE AREAS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE ADJUST SPRAY ARC AND RADIUS TO ENSURE THERE IS NO DISTRIBUTION OF WATER OUTSIDE OF MEDIANS.

CALSENSE IRRIGATION NOTE

1. THE IRRIGATION SYSTEM SHALL NOT RUN IN A MANNER THAT WILL CREATE A HAZARD TO TRAFFIC DURING FREEZING CONDITIONS. THE CALSENSE CONTROLLER IS EQUIPPED TO SHUT DOWN IRRIGATION SPRAY IN FREEZING CONDITIONS AS WELL IN THE EVENT OF A PIPE BURST.

REV	DATE	BY	DESCRIPTION
2	8/17/2012	LFC	ISSUED FOR CONSTRUCTION
1	8/6/2012	LFC	ISSUED FOR COUNTY APPROVAL
0	7/12/2012	LFC	ISSUED FOR BID

REVISIONS

DRAWN BY: LFC DATE: 12/28/11 CHECKED BY: DRP DATE: 12/28/2011

UTILITIES PROTECTION CENTER 811 Know what's below. Call before you dig. THREE WORKING DAYS BEFORE YOU DIG GEORGIA - 1-800-282-7411 SOUTH CAROLINA - 1-800-922-0983

UTILITY WARNING: The underground utilities shown have been located from field survey information and existing drawings. The engineer makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The engineer further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The engineer has not physically located the underground utilities.

IRRIGATION PLAN

GRAPHIC SCALE

30 0 10 20 40 120

(IN FEET)

1 inch = 30 ft.

CID
CARPENTER IRRIGATION DESIGN
5805 State Bridge Road/Suite G 440
Duluth, GA 30097
Off. 678-584-1338
E-mail: wecarp@aol.com

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1"=30'	12/28/2011	5913.1110	I103	2

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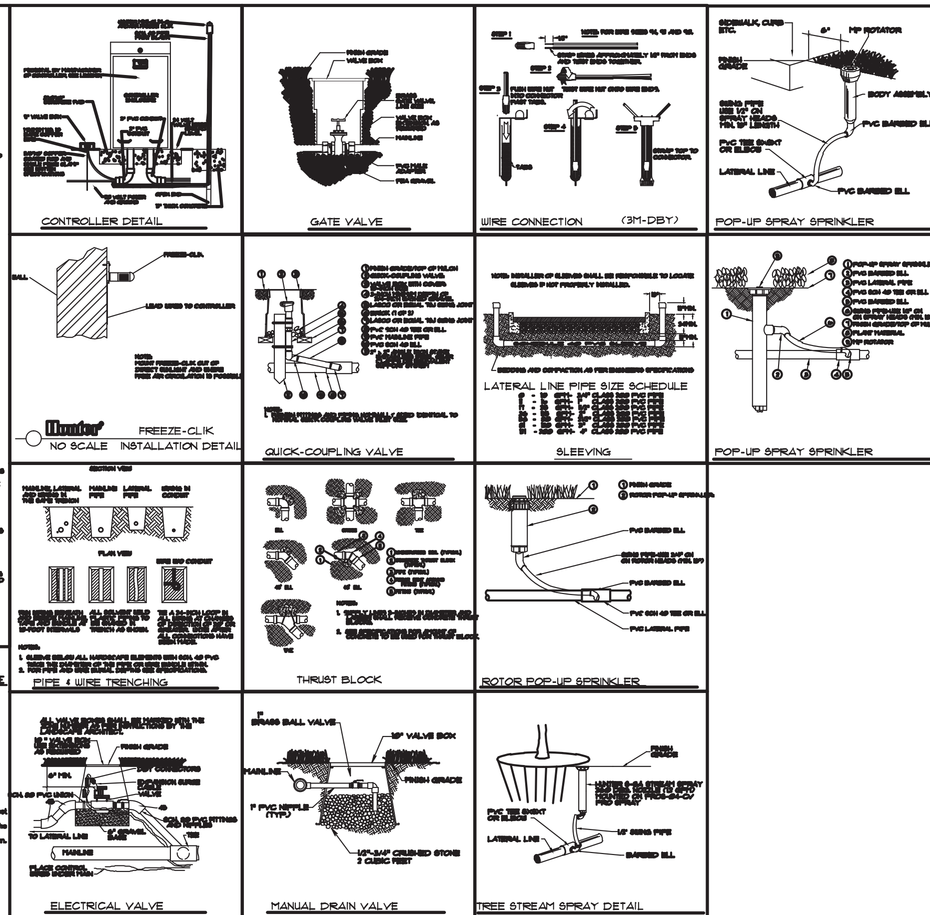
GENERAL NOTES

LEGEND

ZONE CHART

ZONE	GPM	HEAD TYPE	WATER USE	PRECIP. RATE (in. per hour)	RUN TIME (minutes)
1	20	Spray	HIGH	0.5	60
2	16	Drip	MEDIUM	1.5	20
3	18	Drip	MEDIUM	1.5	20
4	20	Spray	HIGH	0.5	60
5	11	Spray	HIGH	0.5	60
6	5	Bubbler	MEDIUM	0.75	40
7	19	Spray	HIGH	0.5	60
8	25	Spray	HIGH	0.5	60
9	29	Drip	MEDIUM	1.5	20
10	24	Spray	HIGH	0.5	60
11	29	Drip	MEDIUM	1.5	20
12	25	Spray	HIGH	0.5	60

This chart is provided as a general outline only and is based on providing approximately 1 inch of water per week. The contractor shall be responsible to set the run times on the controller based for the specific site conditions. This shall include, but not limited to soil, weather, plant needs and establishment period. The contractor shall be fully responsible to check equipment quantities and shall be responsible to install and include in the proposal all equipment shown on the plan. The plan overrides any errors in quantities.



ZONE SYMBOL

CALSENSE INSPECTION NOTE

LATERAL LINE PIPE SIZE SCHEDULE

UTILITIES PROTECTION CENTER

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GEORGIA - 1-800-282-7411
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IRRIGATION DETAILS

CID
CARPENTER IRRIGATION DESIGN
5805 State Bridge Road/Suite G 440
Duluth, GA 30097
Off. 678-584-1338
E-mail: wecarp@aol.com

CALSENSE IRRIGATION NOTE

1. THE IRRIGATION SYSTEM SHALL NOT RUN IN A MANNER THAT WILL CREATE A HAZARD TO TRAFFIC DURING FREEZING CONDITIONS. THE CALSENSE CONTROLLER IS EQUIPPED TO SHUT DOWN IRRIGATION SPRAY IN FREEZING CONDITIONS AS WELL IN THE EVENT OF A PIPE BURST.

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GENERAL NOTES

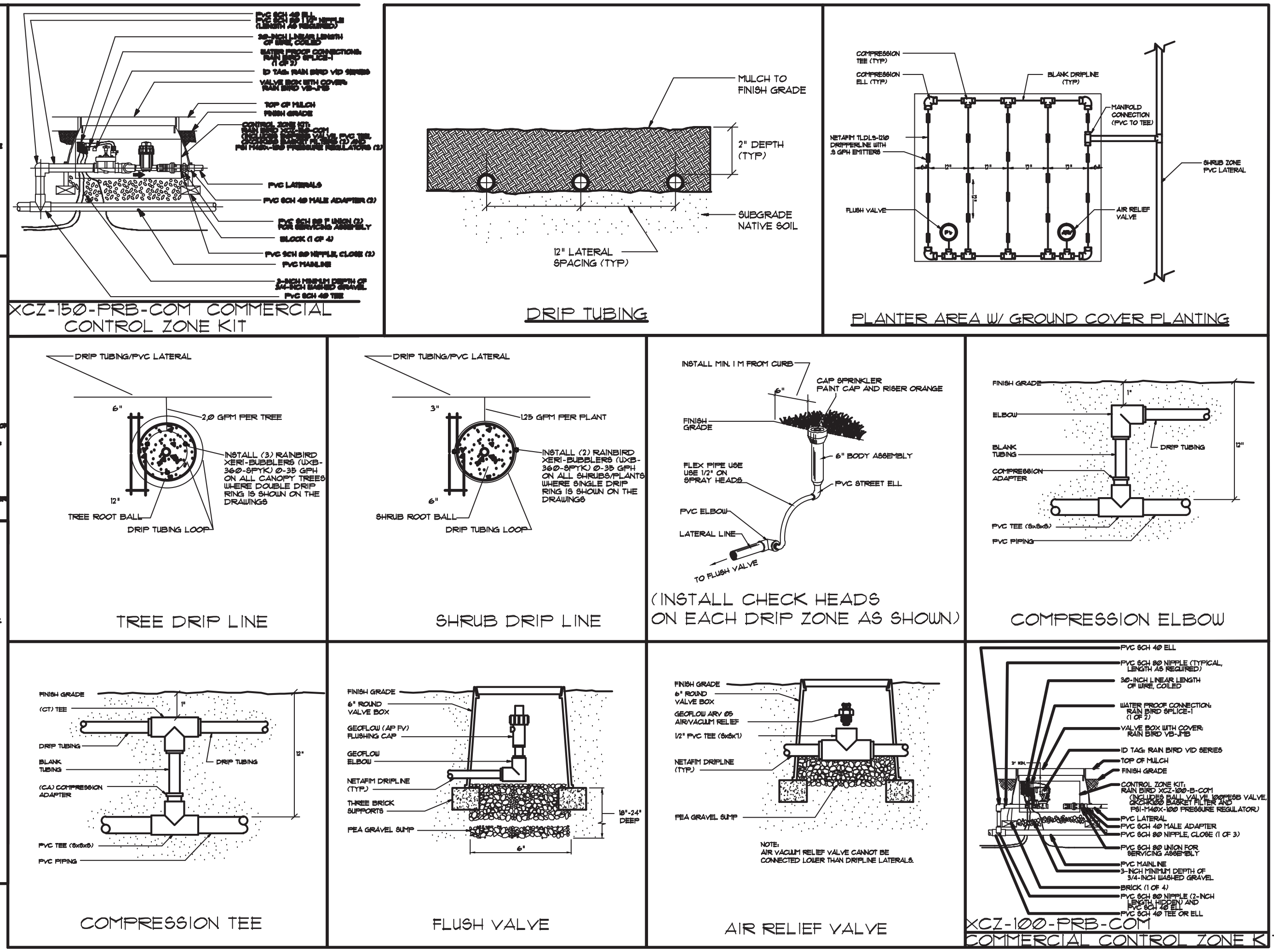
1) REFER TO THE LANDSCAPE PLANS WHEN TRENCHING TO AVOID TREES AND SHRUBS.
2) ALL MAINLINE PIPING SHALL BE BURIED TO A MINIMUM DEPTH OF 24" OF COVER.
3) ALL LATERAL PIPING SHALL BE BURIED TO A MINIMUM DEPTH OF 18" OF COVER.
4) ALL POP-UP ROTORS AND SPRAYS SHALL BE INSTALLED USING AN 18" SWING PIPE CONNECTION.
5) ADJUST ALL NOZZLES TO REDUCE WATER WASTE ON HARD SURFACES & BLDG. WALLS.
6) THROTTLE ALL VALVES ON SHRUB LINES AS REQUIRED TO PREVENT FOGGING.
7) ALL CONTROL WIRE SPLICES SHALL BE MADE IN VALVE BOXES USING KING "ONE STEP" CONNECTORS AND SEALANT WITH WIRE NUTS.
8) THE CONTRACTOR SHALL PREPARE AN AS-BUILT DRAWING ON A REPRODUCIBLE PAPER (SEPIA OR MYLAR) SHOWING ALL IRRIGATION INSTALLATION. A MYLAR OR SEPIA OF THE ORIGINAL PLAN CAN BE OBTAINED FROM THE ARCHITECT FOR A FEE. THE AS-BUILT DRAWING SHALL LOCATE ALL MAINLINE AND VALVES BY SHOWING EXACT MEASUREMENTS FROM HARD SURFACES.
9) ALL VALVES, GATE VALVES AND QUICK COUPLERS SHALL BE INSTALLED IN VALVE BOXES.
10) ANY PIPING SHOWN OUTSIDE THE PROPERTY LINE OR RUNNING OUTSIDE A LANDSCAPE AREA IS SHOWN THERE FOR CLARITY ONLY. ALL LINES SHALL BE INSTALLED ON THE PROPERTY AND INSIDE THE LANDSCAPE AREAS.
11) THE EXACT HEIGHT OF ANY 12" POP-UP THAT IS SHOWN IN A SHRUB BED SHALL BE DETERMINED BY THE ARCHITECT IN THE FIELD.
12) THE CONTRACTOR SHALL EXERCISE CARE SO AS NOT TO DAMAGE ANY EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIRS AND COST OF ANY DAMAGE CAUSED BY HIS WORK.
13) ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE AGAINST ALL DEFECTS IN EQUIPMENT AND WORKMANSHIP. (OR AS OUTLINED IN THE WRITTEN SPECIFICATIONS)
14) ELECTRICAL SERVICE TO ALL EQUIPMENT SHALL BE PROVIDED TO THE EQUIPMENT LOCATION AS PART OF THE ELECTRICAL PLANS.

DRIP TUBING NOTES

1) INSTALL ALL DRIP TUBING 1" UNDER GROUND. USE U-SHAPED WIRE STABILIZERS TO HOLD THE LINES IN PLACE.
2) KEEP ALL DRIP LINE CLEAN AT ALL TIMES BEFORE THE FINAL CONNECTION. TAPE ALL TUBE ENDS OR USE DIRTCAPS.
3) AVOID SHARP BENDS IN THE TUBING. DO NOT BEND THE TUBING WITH LESS THEN A 12" RADIUS.
4) ALL DRIP TUBING SHALL HAVE UNIFORM SPACING AND BURIAL DEPTH.
5) INSTALL DRIP TUBING TO ALL AREAS THAT SHALL RECEIVE PLANT MATERIAL. SEE THE LANDSCAPE PLAN FOR THE EXACT LOCATIONS.
6) SPACE TUBING AS NOTED ON THE PLAN. THE PLAN DOES NOT ALWAYS SHOW ALL DRIP TUBING. THE PLAN LAYOUT IS SHOWN FOR CLARITY ONLY.
7) REFER TO THE TORO NETAFIM DRIP INSTALLATION MANUAL FOR INSTALLATION INSTRUCTIONS.
8) ALWAYS FLUSH ALL LINES BEFORE FINAL CONNECTION.
9) REFER TO THE LANDSCAPE PLAN TO AVOID LAYOUT WHERE TREES SHALL BE INSTALLED INSIDE PLANT BEDS.
10) ALL MAINLINE SHALL BE BURIED TO A MINIMUM DEPTH OF 24".
11) ALL CONTROL WIRE SPLICES SHALL BE MADE IN VALVE BOXES USING SNAP-TITE CONNECTORS AND SEALANT. ALL WIRE SHALL BE 14 GAUGE, EXCEPT WHERE NOTED OTHERWISE.
12) ANY PIPING SHOWN OUTSIDE THE PROPERTY LINE OR RUNNING OUTSIDE THE LANDSCAPE AREA IS SHOWN THERE FOR CLARITY ONLY.
13) THE CONTRACTOR SHALL EXERCISE CARE SO AS NOT TO DAMAGE ANY EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS OF ANY DAMAGE CAUSED BY HIS WORK.
14) INSTALL ALL AIR RELIEF AND FLUSH VALVES INSIDE A VALVE BOX.
15) CLEARLY AND NEATLY MARK THE TOP OF EACH VALVE BOX WITH THE TYPE OF EQUIPMENT THAT IT CONTAINS. (IE. VALVE, FLUSH VALVE, ETC.)
16) THE VALVE ASSEMBLY SHALL BE PLACED INSIDE A VALVE BOX. THE VALVE SHALL BE INSTALLED FIRST, FOLLOWED BY A PVC UNION, 1" DISC FILTER (OR AS NOTED ON THE PLAN), AND A PRESSURE REGULATOR (30 PSI), IN THAT ORDER. INSTALL A 6" LAYER OF PEA GRAVEL IN THE BASE.
17) THE DRIP TUBING SHALL HAVE EMITTERS EVERY 12" AND SHALL BE SPACED 12" APART.
18) FILTER SIZES-0-17 GPM-3/4", 18-26 GPM-1", 27-80 GPM-1 1/2"
19) THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE HIS/HER WORK WITH THE LANDSCAPE CONTRACTOR.

LEGEND

●	RUN CHECK HEAD - SEE DRIP DETAIL
◉	RAIN BIRD XCZ-150-PRB-COM ZONE CONTROL KIT (15-40 GPM). INSTALL IN A CARSON JUMBO RECTANGLE VALVE BOX.
◉	RAIN BIRD XCZ-100-PRB-COM ZONE CONTROL KIT (3-20 GPM). INSTALL IN A CARSON JUMBO RECTANGLE VALVE BOX.
◉	RAIN BIRD XCZ-LF-100-PRF-F LOW FLOW ZONE CONTROL KIT (3-20GPM). INSTALL IN A CARSON JUMBO RECTANGLE VALVE BOX.
◎	TREE DRIP LINE (2.0 GPM) SEE DETAIL
○	SHRUB DRIP LINE (1.25 GPM) SEE DETAIL
▥	EACH PLANTING AREA SHOWN AS DRIP TUBING SHALL HAVE ROWS (12" O.C.) OF NETAFIM TLDL9-1210 LANDSCAPE DRIPLINE. THE DRIPLINE SHALL BE INSTALLED ON GRADE, SECURED WITH NETAFIM TLS6 GALVANIZED SOIL STAPLES, AND THEN COVERED WITH MULCH. THE DRIPLINE SHALL BE LOCATED TO ALLOW FOR PROPER COVERAGE OF ALL PLANT MATERIAL. NETAFIM 17MM DRIPPERLINE BARBED FITTINGS SHALL BE USED ON ALL DRIPLINE JOINTS AND ENDS- SEE DETAIL.
———	NETAFIM TLDL9-1210 DRIPPERLINE WITH .9 GPH EMITTERS. INSTALL AS PER DETAILS
FV	GEOFLOW (AP FV) FLUSH VALVE/OR EQUAL/ INSTALL AS PER DETAILS
ARV	GEOFLOW (ARV 05) AIR VACUUM RELIEF VALVE/ OR EQUAL/INSTALL AS PER DETAILS
━━━	CLASS 200 PVC LATERAL LINE- SIZE AS SHOWN UNTIL A SMALLER SIZE IS SHOWN.



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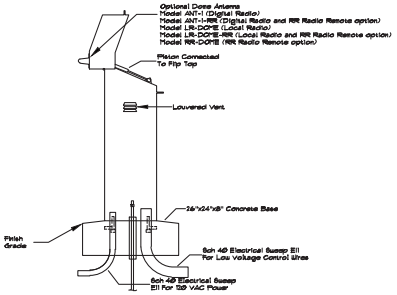
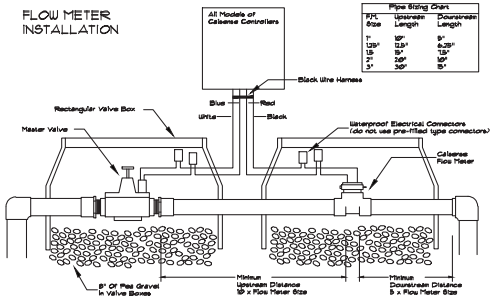
CALSENSE PRE-ASSEMBLED ENCLOSURE INSTALLATION DETAIL (PROVIDED BY OWNER)

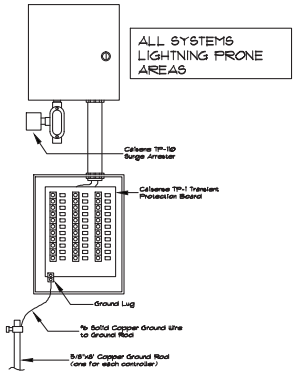


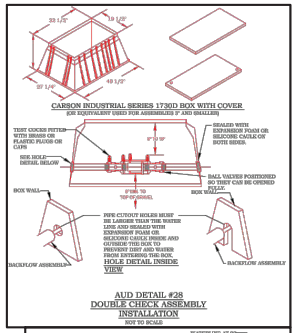
FLOW METER INSTALLATION



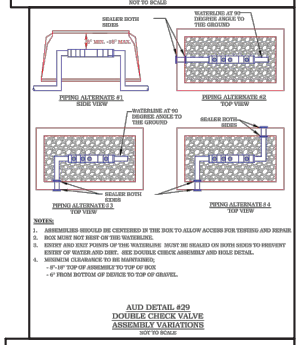
Pipe Sizing Chart		
FPL Size	Upstream Length	Downstream Length
1"	10"	5"
1.25"	12.5"	6.25"
1.5	15"	7.5"
2"	20"	10"
3"	30"	15"

GROUNDING INSTRUCTIONS DETAIL



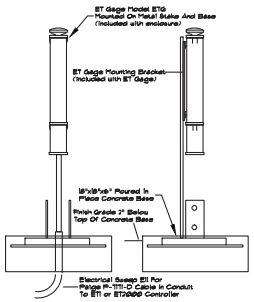


AUD DETAIL #28
DOUBLE CHECK ASSEMBLY INSTALLATION
NOT TO SCALE

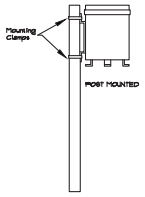


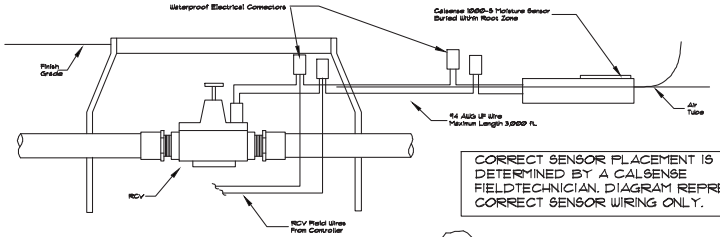
AUD DETAIL #29
DOUBLE CHECK VALVE ASSEMBLY VARIATIONS
NOT TO SCALE

VANDAL RESISTANT ET GAGE ENCLOSURE



RAIN BUCKET (PROVIDED BY OWNER)

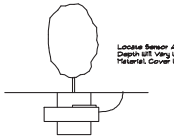




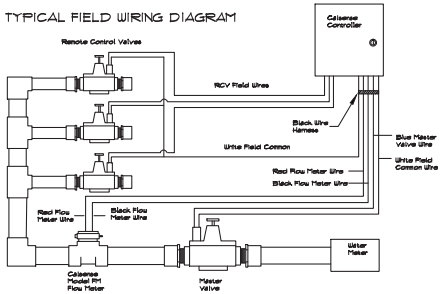
CORRECT SENSOR PLACEMENT IS DETERMINED BY A CALSENSE FIELDTECHNICIAN. DIAGRAM REPRESENTS CORRECT SENSOR WIRING ONLY.

CORRECT SENSOR DEPTH

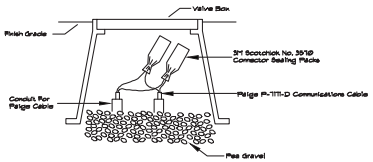
Note : Sensor Should Be Submersed In Water For Above 15 Minutes Before Installation



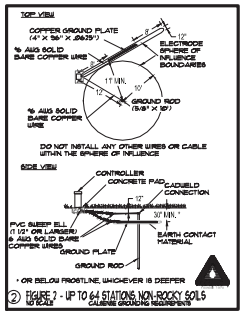
TYPICAL FIELD WIRING DIAGRAM



Communications Cable Splice Detail



CALSENSE



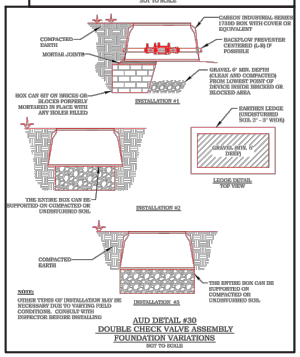
② FIGURE 2 - UP TO 64 STATIONS NON-ROCKY SOILS
CALSENSE GROUNDING REQUIREMENTS

CALSENSE IRRIGATION NOTE

1. THE IRRIGATION SYSTEM SHALL NOT RUN IN A MANNER THAT WILL CREATE A HAZARD TO TRAFFIC DURING FREEZING CONDITIONS. THE CALSENSE CONTROLLER IS EQUIPPED TO SHUT DOWN IRRIGATION SPRAY IN FREEZING CONDITIONS AS WELL IN THE EVENT OF A PIPE BURST.

IRRIGATION NOTE

1. THIS PROJECT INCLUDES THE INSTALLATION OF IRRIGATION SYSTEM COMPONENTS TO BE SUPPLIED BY THE OWNER. SEE PLANS AND IRRIGATION LEGEND SHEET 1104 FOR FURTHER INFORMATION.



AUD DETAIL #30
DOUBLE CHECK VALVE ASSEMBLY FOUNDATION VARIATIONS
NOT TO SCALE

REV	DATE	BY	DESCRIPTION
2	8/17/2012	LFC	ISSUED FOR CONSTRUCTION
1	8/6/2012	LFC	ISSUED FOR COUNTY APPROVAL
0	7/12/2012	LFC	ISSUED FOR BID

REVISIONS

DRAWN BY: LFC DATE: 12/28/11 CHECKED BY: DRP DATE: 12/28/2011

UTILITIES PROTECTION CENTER
811 Know what's below. Call before you dig.
THREE WORKING DAYS BEFORE YOU DIG
GEORGIA - 1-800-282-7411
SOUTH CAROLINA - 1-800-922-0983

UTILITY WARNING
The underground utilities shown have been located from field survey information and existing drawings. The engineer makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The engineer further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The engineer has not physically located the underground utilities.

CALSENSE DETAILS

CID
CARPENTER IRRIGATION DESIGN
5805 State Bridge Road/Suite G 440
Duluth, GA 30097
Off. 678-584-1338
E-mail: wecarp@aol.com

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BARRY STOREY
1190 INTERSTATE PARKWAY AUGUSTA, GA

ALEXANDER DR LANDSCAPE IMPROVEMENT PROJECT

CALSENSE DETAILS

JOHNSON, LASCHOBER & ASSOCIATES, P.C.
1296 BROAD STREET AUGUSTA, GEORGIA 30901
TEL (706) 724-5756 FAX (706) 724-3955

SCALE	DATE	PROJECT NO.	DRAWING NO.	REV.
N. T. S.	12/28/2011	5913.11104	I106	2

K:\5913111 10\Landarch\ALA-IRR.dwg Plotted: 6/18/2013 2:03 PM By: Lance Cheely, RLA, LEED AP

SAMPLE BEAUTIFICATION AGREEMENT

FOR REFERENCE ONLY, MOST RECENT REVISION APPLIES

SAMPLE GDOT LANDSCAPE GUIDELINE

FOR REFERENCE ONLY, MOST RECENT REVISION APPLIES
SEE GDOT WEBSITE OR CONTACT GDOT FOR MOST RECENT REVISION