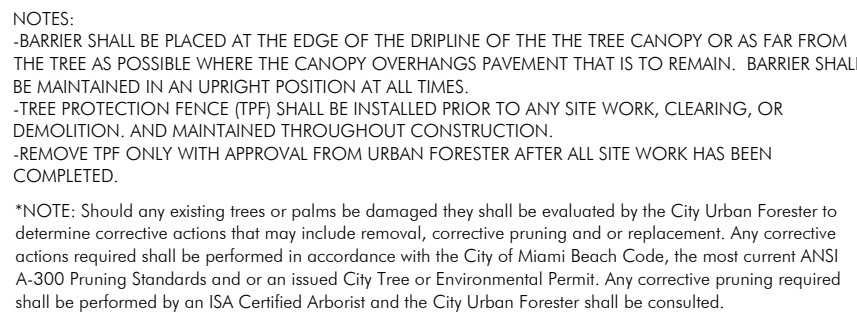


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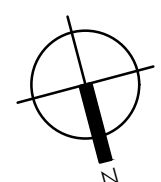
EXISTING  
TREE/PALM TO  
REMAIN

EXISTING  
TREE/PALM TO  
BE REMOVED

TREE PROTECTION  
FENCING (TYP.)



N.T.S.



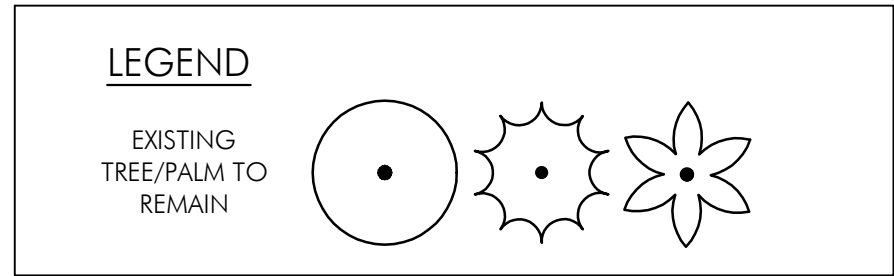
40' 20' 10' 0

SCALE: 1" = 10'

LA-101

**LA-101**





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A-201

**A-201**

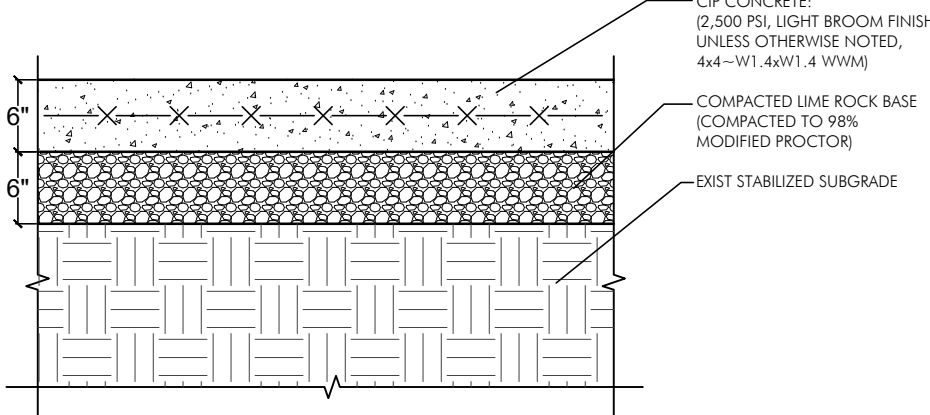
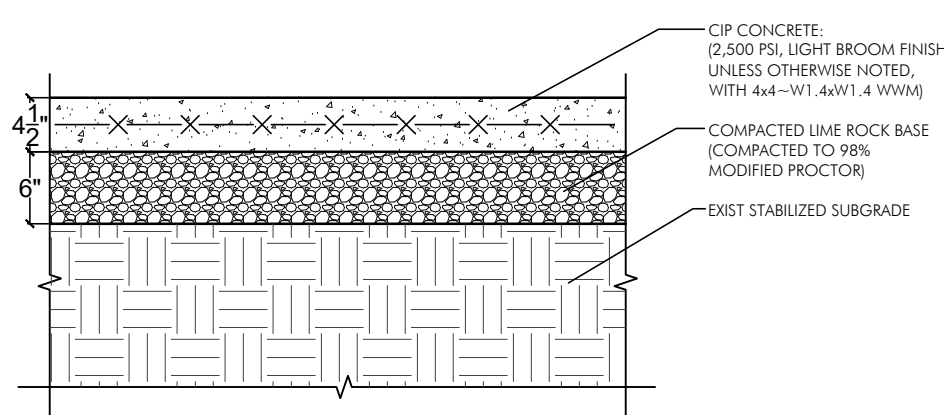
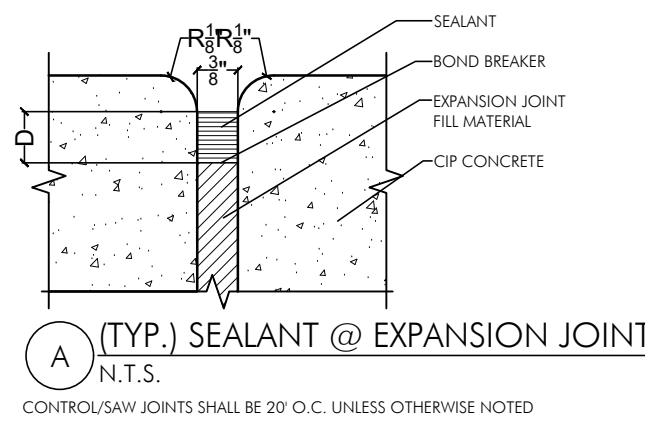
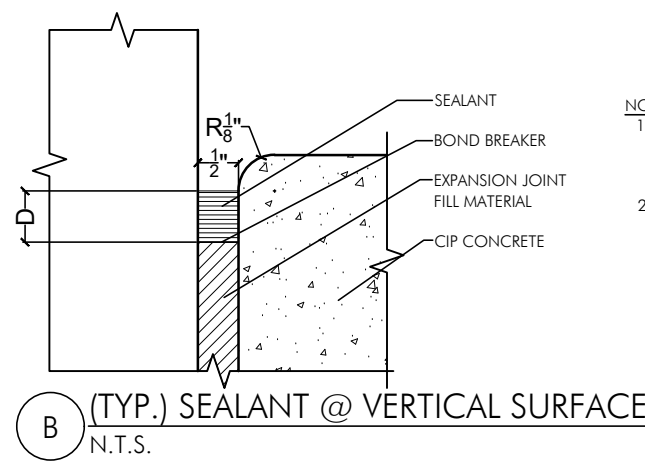


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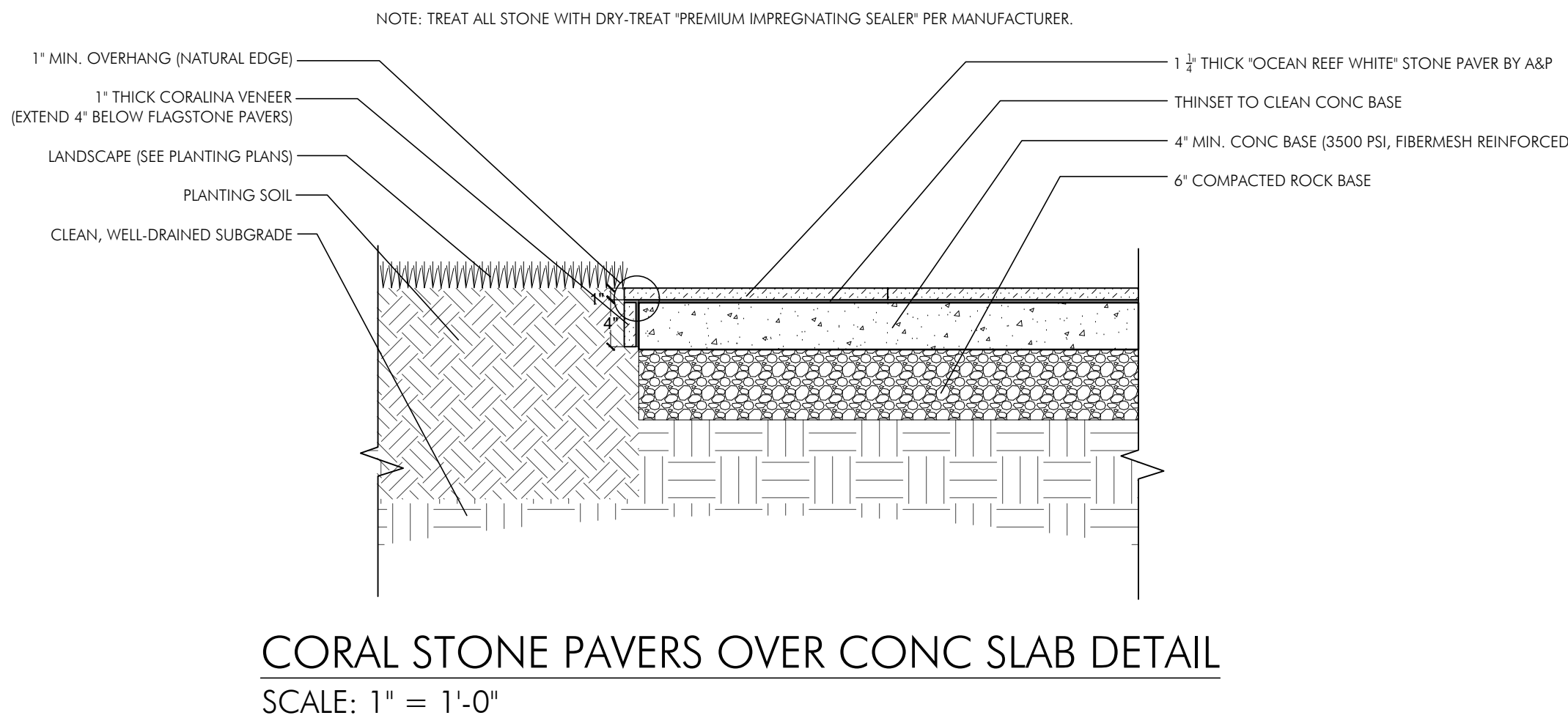
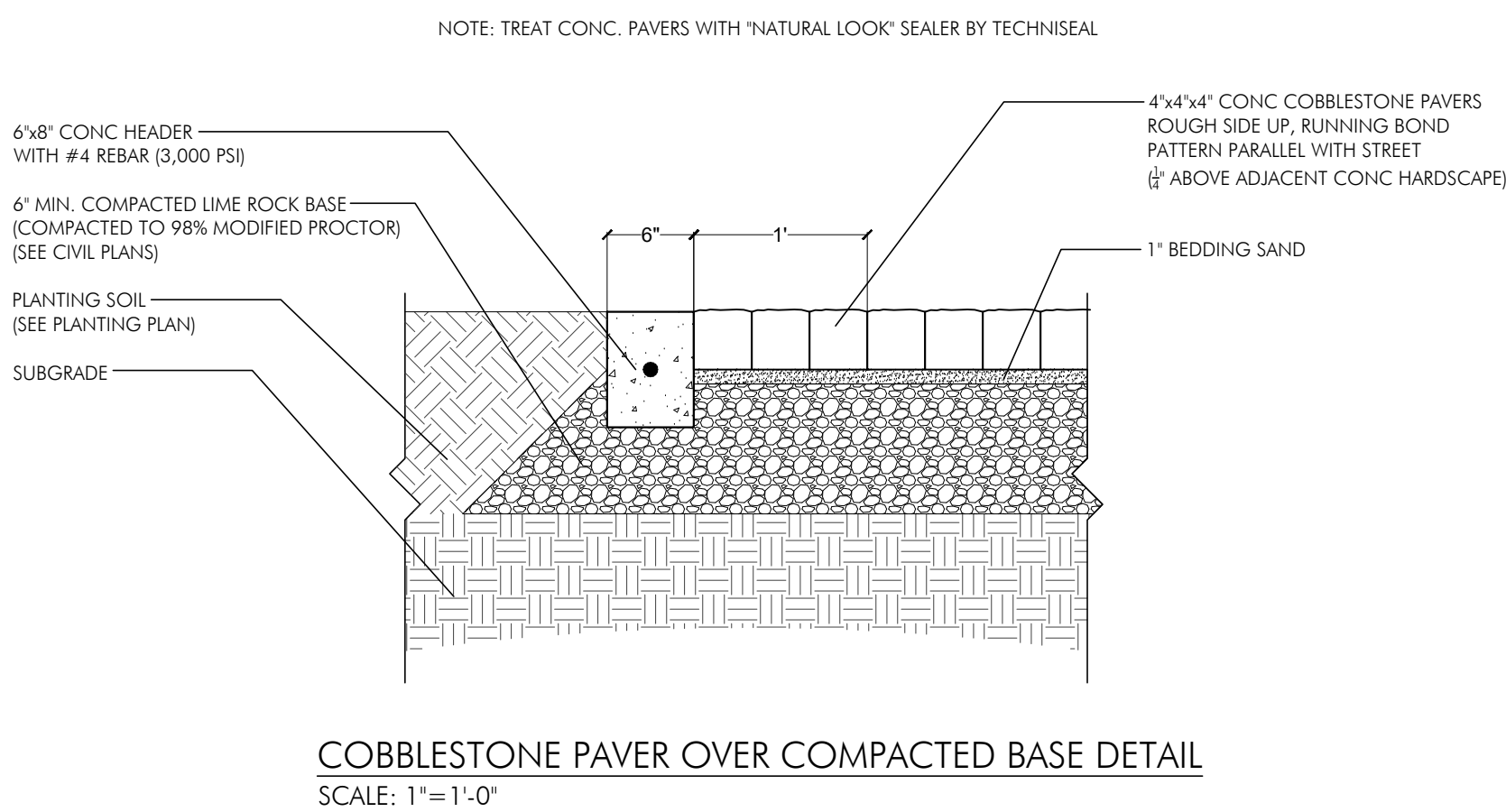
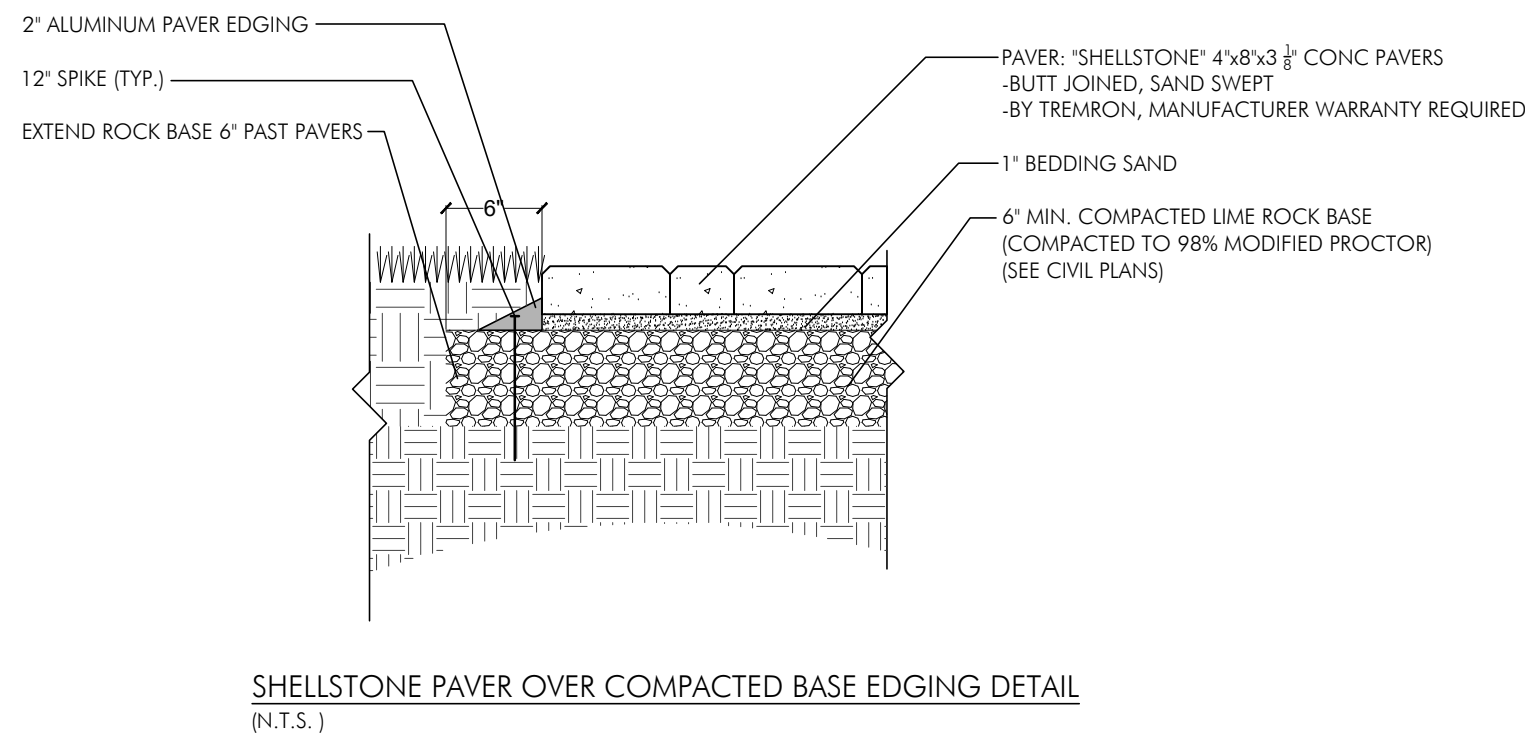
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- NOTES:
1. CONCRETE WALKWAYS AND SLABS SHALL HAVE 2% MAX. CROSS SLOPE FOR DRAINAGE, PERPENDICULAR TO DIRECTION OF PEDESTRIAN TRAVEL. NO PORTION OF ANY RUNWAYS SLOPE SHALL EXCEED 2% IN ALL PAVED AREAS SHALL MEET ADA ACCESSIBILITY STANDARDS.
  2. SAW CUT CONTROL JOINTS 1/8" WIDE AND 1" DEPTH OF SLAB, SHALL BE MADE WITHIN 18 HOURS OF CONCRETE PLACEMENT. ALL SAW CUTS SHALL BE TRUE, ACCOMPLISHED WITH THE AID OF A STRAIGHT EDGE.
  3. EXPANSION JOINTS WITH BITUMINOUS EXPANSION MATERIAL 3/4" WIDE SHALL BE LOCATED AS SHOWN ON PLAN AND NOTED IN DETAIL A & B.
  4. FINISHED GRADE SHALL BE SET 1" BELOW WALKWAY TOP ELEVATION AND SLOPED 3:1 MAX. AWAY FROM WALKWAY.
  5. CONTRACTOR TO FORM AND PLACE CONCRETE FOR WALKWAY AND SLABS AS INDICATED ON PLANS.
  6. CONTRACTOR TO LOCATE AND VERIFY ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
  7. ALL CHANGES SHALL BE MADE WITHOUT PRIOR CONSENT OF ARCHITECT OF RECORD.
  8. ROCK BASE TO NOTED 4" MIN. BEYOND NEW CONCRETE.
  9. CONCRETE SLAB TO BE 4" THICK IN VEHICULAR MAINTENANCE AREAS IF SUCH AREAS ARE REQUIRED.



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Miami Beach, Florida 33141

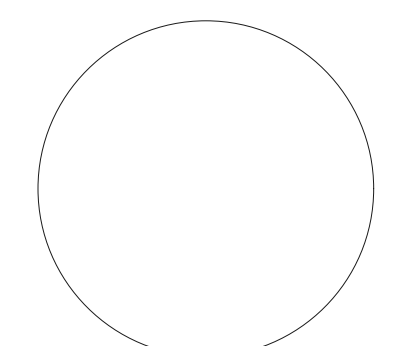
Revisions

Owner Information

#Client Company

#Client Address1  
#Client Address2  
#Client City, #Client State  
#Client Postcode  
#Client Phone Number

Consultant



Taylor Kiehl Semler  
PLA-FL6667205

DRB SUBMITTAL

Date  
08/04/2023  
Scale  
AS SHOWN  
Project No.  
2133  
Sheet Name  
HARDSCAPE DETAILS  
Sheet No.  
LA-301



NOT FOR CONSTRUCTION

D

C

B

A

| PLANT LIST             |  |         |      |   |
|------------------------|--|---------|------|---|
| TREES                  |  |         |      |   |
| KEY                    | PLANT NAME   | QTY.    | UT.  | SIZE  |
| BUSI                   | Bursaria maritima<br>...Gumbo Limbo  | 2       | ea.  | 14' tall x 5' spread, 3" DBH  |
| CAWI                   | Canella winterana<br>...Wild Cinnamonbark  | 4       | ea.  | 12' tall x 5' spread, 2" DBH  |
| CLRO                   | Clusia rosea<br>...Autograph Tree  | 1       | ea.  | 12' tall x 5' spread, 2" DBH  |
| COER                   | Conocarpus erectus<br>...Green Buttonwood  | 3       | ea.  | 14' tall x 5' spread, 3" DBH  |
| COES                   | Conocarpus erectus 'Sericeus'<br>...Silver Buttonwood                            | 5       | ea.  | 12' tall x 6' spread, 3 trunks (total 3' min. DBH) lifted tree form   |
| COSE                   | Cordia sebestena<br>...Orange Ginger   | 10      | ea.  | 10' tall x 5' spread, 1 1/2"-2" DBH   |
| GUSA                   | Guaiacum sanctum<br>...Lignum Vitae  | 3       | ea.  | 8' tall x 4' spread, 1 1/2"-2" DBH  |
| GYLU                   | Gymnanthes lucida<br>...Caribbead  | 1       | ea.  | 8' tall x 4' spread, 1 1/2"-2" DBH  |
| ILCA                   | Ilex cassine<br>...Dahoon Holly  | 1       | ea.  | 12' tall x 5' spread, 2" DBH  |
| PIDI                   | Pimenta dioica<br>...Allspice  | 1       | ea.  | 12' tall x 5' spread, 2" DBH  |
| TABA                   | Tabebuia bahamensis<br>...White Tabebuia   | 2       | ea.  | 14' tall x 6' spread, 3" DBH  |
| PALMS                  |  |         |      |   |
| KEY                    | PLANT NAME   | QTY.    | UT.  | SIZE  |
| COAR                   | Coccothrinax argentea<br>...Florida Silver Palm                                  | 1       | ea.  | 6' CT min.  |
| COCR                   | Coccothrinax crinita<br>...Old Man Palm  | 1       | ea.  | 6' CT min.  |
| COMI                   | Coccothrinax miraguama<br>...Miraguama Palm                                      | 1       | ea.  | 6' CT min.  |
| CONU                   | Cocos nucifera var. 'Green Malayan'<br>...Coconut Palm                           | 8       | ea.  | 6' CT min.  |
| DYDE                   | Dypsis decaryi<br>...Triangle Palm   | 1       | ea.  | 6' CT min.  |
| PTSC                   | Phycosperma schafferi<br>...Schaffer's Palm                                      | 6       | ea.  | 12' tall OA   |
| SAPA                   | Sabal palmetto<br>...Sabal Palm  | 5       | ea.  | (1) @ 26' tall; (2) @ 30' tall; (2) @ 34' tall, curved/character trunks, smooth trunk, hurricane cut, lean as shown in plans, mix sizes in groups |
| THRA                   | Thrinax radiata<br>...Florida Thatch Palm  | 1       | ea.  | 6' tall OA  |
| MEMO(3)                | Veitchia montgomeryana (triple)<br>...Montgomery Palm                            | 1       | ea.  | 18' tall OA, 11" GW, triple trunk, heads M/L same height  |
| BAMBOO, VINES & OTHERS |  |         |      |   |
| KEY                    | PLANT NAME   | QTY.    | UT.  | SIZE  |
| STNI                   | Strelitzia nicholsoni<br>...White Bird of Paradise                               | 3       | ea.  | 7-8' tall overall, multi  |
| SHRUBS                 |  |         |      |   |
| KEY                    | PLANT NAME   | QTY.    | UT.  | SIZE  |
| AEBL                   | Aechmea blanchetiana<br>...Bromeliad   | 38      | ea.  | 24" x 18"   |
| AEMA                   | Aechmea malva<br>...Bromeliad  | 22      | ea.  | 24" x 18"   |
| ALPU                   | Alpinia purpurata<br>...Red Ginger   | 5       | ea.  | 36" x 36"   |
| BOAS                   | Bougainvillea 'Alabama Sunset'<br>...Alabama Sunset Bougainvillea                | 2       | ea.  | 12" x 12", to be installed on pool trellis system   |
| BOBK                   | Bougainvillea 'Barbora Kars'<br>...Barbora Kars Bougainvillea                    | 2       | ea.  | 12" x 12", to be installed on pool trellis system   |
| BOCG                   | Bougainvillea 'California Gold'<br>...California Gold Bougainvillea              | 2       | ea.  | 12" x 12", to be installed on pool trellis system   |
| CAAM                   | Callicarpa americana<br>...American Beautyberry                                  | 32      | ea.  | 30" x 30"   |
| CACY                   | Capparis cynophallophora<br>...Jamaica Caper                                     | 51      | ea.  | 6' HT.  |
| CAZU                   | Calyptranthes zuzugium<br>...Myrtle of the River                                 | 3       | ea.  | 36" x 24"   |
| CHIC                   | Chrysobalanus icaco<br>...Cocoplum   | 27      | ea.  | 18" x 18"   |
| CHIH                   | Chrysobalanus icaco 'Horizontalis'<br>...Horizontal Cocoplum                     | 94      | ea.  | 12" x 18"   |
| COLV                   | Coccoloba vivifera<br>...Seagrape  | 7       | ea.  | 24" x 24", full to ground   |
| DIBI                   | Dietles bicolor<br>...African Iris   | 1       | ea.  | 18" x 18"   |
| DIME                   | Dioscorea spicata<br>...Cyclad   | 1       | ea.  | 5' x 5'   |
| ERLU                   | Eurocladus littoralis<br>...Golden Creeper                                       | 186     | ea.  | 3 gal cans, full, install 24" o.c.  |
| EUFO                   | Eugenia foetida<br>...Spanish Stopper  | 8       | ea.  | 24" x 24", full to ground   |
| FOSE                   | Forsydia speciosa<br>...Florida Privet   | 22      | ea.  | 24" x 18", full   |
| HANO                   | Hamelia nodosa<br>...Dwarf Firebush  | 29      | ea.  | 18" x 18", install 18" o.c.   |
| MEER                   | Megacarpasma erythrodactylus<br>...Brazilian Red Clock                           | 1       | ea.  | 4' x 3', multi-trunk, full to ground  |
| MODE                   | Monsiera delicatosa<br>...Monsiera   | 8       | ea.  | 30" x 30", mature leaves, install 36" o.c.  |
| MYFR                   | Myrcianthes fragrans<br>Simpson's Stopper  | 1       | ea.  | 5' x 5', full to ground   |
| NECR                   | Neomarcia canulea 'Regina'<br>...Blue Walking Iris                               | 4       | ea.  | 24" x 24"   |
| PHBM                   | Philodendron var. 'Burle Marx'<br>...Burle Marx Philodendron                     | 60      | ea.  | 18" x 18"   |
| PHWI                   | Philodendron 'Weeks Red'<br>...Climbing Philodendron                             | 2       | ea.  | 36" x 24", install against trunk where shown  |
| POJU                   | Portia 'Jungles'<br>...Bromeliad   | 10      | ea.  | 24" x 18"   |
| POMA                   | Podocarpus macrophyllus<br>...Mexican Blue Ball                                  | 35      | ea.  | 48" x 24", full to ground   |
| PSBA                   | Psychotria bahamensis<br>...Bahamas Wild Coffee                                  | 9       | ea.  | 24" x 24"   |
| RAKU                   | Radermachera var. 'Kunning'<br>...Radermachera                                   | 13      | ea.  | 30" x 24", full to ground   |
| RUBR                   | Ruellia brittaniana<br>...Mexican Blue Bell                                      | 46      | ea.  | 18" x 18"   |
| SATR                   | Sanseveria infasciata<br>Snake Plant   | 18      | ea.  | 30" x 18"   |
| SEREG                  | Serenoa repens 'Green'<br>...Saw Palmetto  | 5       | ea.  | 24" x 24"   |
| SERES                  | Serenoa repens 'Silver'<br>...Saw Palmetto                                       | 18      | ea.  | 24" x 24"   |
| SPBA                   | Spartina bakeri<br>...Sand Cordgrass   | 18      | ea.  | 30" x 24"   |
| TRDA                   | Tripsacum dactyloides<br>...Folchatchew Grass                                    | 68      | ea.  | 3 gal cans, full  |
| VAAN                   | Vallesia antillana<br>...Pooriberry  | 3       | ea.  | 30" x 24"   |
| YUAL                   | Yucca aloekolia<br>...Spanish Bayonet  | 3       | ea.  | 6-7' tall overall   |
| ZAPU                   | Zamia pumila<br>...Coontie   | 17      | ea.  | 18" x 18"   |
| GROUNDCOVERS           |  |         |      |   |
| GAPU                   | Gaillardia pulchella<br>...Indian Blanket Flower                                 | 23      | ea.  | 12" x 12", install 12" o.c.   |
| HEDE                   | Helianthus debilis<br>...Dune Sunflower  | 114     | ea.  | 12" x 12", install 12" o.c.   |
| MISC                   | Microsorium scolopendria<br>...Wart Fern   | 51      | ea.  | 12" x 12", install 12" o.c.   |
| NEKQ                   | Nephrolepis obliterata 'Kimberly Queen'<br>...Kimberly Queen Fern                | 170     | ea.  | 12" x 12", install 12" o.c.   |
| PIMI                   | Pilea microcarpa<br>...Artilery Fern   | 306     | ea.  | 8" x 8", install 12" o.c.   |
| MISCELLANEOUS          |  |         |      |   |
|                        | Planting Soil:<br>70% Silica Sand<br>20% Everglades Muck<br>10% Shredded Pinbark | as req. | c.y. | excavate and backfill 18" depth in all planting areas.  |
|                        | Empire Zosia<br>Bermuda 'Celebration'  | as req. | s.f. | solid sod   |
|                        | Shredded Melaleuca Mulch<br>Rooftopguard   | as req. | c.y. | 3" layer in all shrub beds<br>24" deep, manufacturer to be selected   |

## CITY OF MIAMI BEACH LANDSCAPE LEGEND

INFORMATION REQUIRED TO BE PERMANENTLY AFFIXED TO PLANS  
Zoning District \_\_\_\_ RM-1 \_\_\_\_ Lot Area \_\_\_\_ 35,406 \_\_\_\_ Acres \_\_\_\_ .81 \_\_\_\_

### OPEN SPACE

A. Square feet of required Open Space as indicated on site plan:  
Lot Area = \_\_\_\_ 35,406 \_\_\_\_ s.f. x \_\_\_\_ 9.5 \_\_\_\_ % = \_\_\_\_ s.f.

B. Square feet of parking lot open space required as indicated on site

Number of parking spaces \_\_\_\_ 0 \_\_\_\_ x 10 s.f. parking space =

C. Total square feet of landscaped open space required: A+B=

### LAWN AREA CALCULATION

A. Square feet of landscaped open space required

B. Maximum lawn area (sod) permitted= \_\_\_\_ 50 \_\_\_\_ % x \_\_\_\_ 8,024 \_\_\_\_ s.f.

### TREES

A. Number of trees required per Acre, less existing number of trees meeting minimum requirements=

\_\_\_\_ 28 \_\_\_\_ trees x \_\_\_\_ .81 \_\_\_\_ net lot acres - number of existing trees=

B. % Natives required: Number of trees provided x 30% =

C. % Low maintenance / drought and salt tolerant required:  
Number of trees provided x 50% =

D. Street Trees (maximum average spacing of 20' o.c.):  
\_\_\_\_ 0 \_\_\_\_ linear feet along street divided by 20' =

E. Street tree species allowed directly beneath power lines:  
(maximum average spacing of 20' o.c.):  
\_\_\_\_ 200 \_\_\_\_ linear feet along street divided by 20' =

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LANDSCAPE SPECIFICATIONS  
PART 1 - GENERAL

1.1 SCOPE

A. Contractor shall provide all labor, materials, equipment, supervision, and related work necessary to complete the landscape work in accordance with the intent of the landscape plans, schedules and these specifications. The extent of work is shown on the drawings which are a part of this document.

1.2 CONTRACTOR QUALIFICATIONS

A. Landscape installation work to be performed by a Contractor Certified by the Florida Nurserymen, Growers and Landscape Association (FNLGA) as a Certified Landscape Contractor. Any pruning to be supervised by an Arborist, certified by the International Society of Arboriculture (ISA) and licensed in Miami-Dade County.

1.3 INVESTIGATION OF UTILITIES

A. Prior to beginning work, the Contractor shall be responsible to locate existing underground utilities. Check with all utility companies and Sunshine State, call (811).

1.4 SUBSTITUTIONS

A. Only materials specified will be accepted, unless approved in writing by the Landscape Architect in advance.

1.5 PLANT SIZES

A. All plant sizes shall equal or exceed the minimum sizes as specified in the plant list. When plant sizes are specified as a range of sizes, installed materials shall overage the mean of the range specified. Plants shall be measured following pruning, with branches in normal position. All necessary pruning shall be done at the time of planting.

1.6 PLANT QUALITY

A. All plant material shall be equal to or better than Florida No. 1 as classified by "Grades and Standards for Nursery Plants" by the Division of Plant Industry, Florida Department of Agriculture. They shall have a growth habit that is normal for the species; healthy, vigorous, free from insects, disease and injury.

B. The Owner or Landscape Architect reserves the right to refuse any plant material which does not conform to the intent of the written specifications or design.

C. CIRCUING ROOTS FOUND ON CONTAINER-GROWN MATERIAL WILL NOT BE ACCEPTED UNLESS REMEDIAL ROOT PRUNING, APPROVED BY THE LANDSCAPE ARCHITECT IS DONE BEFORE PLANTING.

1.7 PLANT QUANTITY

A. The plant quantities shown on the plant list are to be used only as an aid to bidders. In the case of discrepancy between the plant list and the plan, the quantity on the plan shall override the plant list.

1.8 UNIT PRICES

A. The successful bidder shall furnish to the Owner and the Landscape Architect, a unit price breakdown for all materials. The Owner may, at his discretion, add to or delete from the materials utilizing the unit price breakdown submitted to and accepted by the Owner.

1.9 SUBMITTALS

A. Fertilizer: The Contractor shall submit to the Owner and Landscape Architect documentation that all the fertilizer used for the project is of the analysis specified and placed at the rates specified in section 2.2 FERTILIZER.

B. Planting soil: The Contractor shall submit a sample of the planting soil (approximately 1 cu. ft.) for approval by the Landscape Architect prior to delivery to the site.

1.10 CLEAN-UP & MAINTENANCE OF TRAFFIC

A. Follow procedures in FDOT Index 600 for maintenance of traffic during construction.

B. At the end of each work day, the Contractor shall remove debris and shall barricade the unfilled holes in a manner appropriate to the path of pedestrians and motorists.

C. Upon completion of the work or any major portion of the work or as directed by the Landscape Architect, all debris and surplus material from his work shall be removed from the job site.

1.11 MAINTENANCE PRIOR TO ACCEPTANCE

A. The Contractor is responsible to maintain the plantings until they are accepted under the provisions of 1.12 "ACCEPTANCE OF INSTALLATION".

1. Plants: Begin maintenance immediately following the final plant installation operation for each plant and continue until all plant installation is complete and accepted. Maintenance shall include watering of all plants, weeding, mulching, pest and disease control, tightening and repositioning of guys, repair of losses, removal of dead growth, resetting of plants to proper grade or up-right position, restoration of plant saucer, litter pick-up in plant beds and other necessary operations to assure specified minimum grade of Florida No. 1.

2. Turf Areas: Begin maintenance of turf immediately following the placement of sod and continue until sod installation is complete and accepted. Maintenance shall include but not be limited to, watering, leveling, mowing, weed and pest control, fungus and disease control and other necessary operations as determined by the Landscape Architect and good nursery practice.

3. Resulting or straightening trees and palms: The Contractor shall reset and/or straighten trees and palms as required or no additional cost to the Owner unless caused by sustained winds of 75 mph or more. Then, the costs of the operations may be charged to the Owner. Re-set trees within 48 hours.

1.12 ACCEPTANCE OF INSTALLATION

A. Inspection: Inspection of the work, to determine completion of contract work, exclusive of the possible replacement of plants and turf, will be made by the Landscape Architect at the conclusion of the maintenance period. Written notice requesting such an inspection and submitted by the Contractor at least ten (10) days prior to the anticipated date.

1.13 GUARANTEE

A. Guarantee all plants for a period of one year (CCD). Guarantee shall commence from the date of written acceptance. Plant material which is on the site and scheduled to be relocated is not covered by the guarantee except in the case of Contractor's negligence or work that has been done in an unworkmanlike manner. The Contractor is not responsible for loss due to acts of god, (i.e.) sustained winds of 75 mph or more, floods, frost, lightning, vandalism or theft.

1.14 REPLACEMENT

A. Replacement shall be made during the guarantee period as directed by the Landscape Architect within ten (10) days from time of notification. For all replacement plant material, the guarantee period shall extend for an additional forty-five (45) days beyond the original guarantee period. The Contractor shall be responsible to provide water to the replacement plants in sufficient quantity to aid in their establishment. At the end of the guarantee period, inspection will be made by the Landscape Architect, upon written notice requesting such inspection and submitted by the Contractor at least five (5) days before the anticipated date. Replacement plants must meet the requirements of Florida No. 1 at time of inspection. Remove from the site all plants that are dead or in a state of unsatisfactory growth, as determined by the Landscape Architect. Replace these and any plants missing due to the Contractor's negligence as soon as conditions permit.

1. Materials and Operations: All replacement plants shall be of the same kind and size as indicated on the plant list. The Contractor shall supply and plant the plants as specified under planting operations.

2. Cost of Replacements: A sum sufficient to cover the estimated cost of possible replacements, including material and labor will be retained by the Owner and paid to the Contractor after all replacements have been satisfactorily made and approved by the Landscape Architect.

PART 2 - MATERIALS

2.1 PLANTING SOIL

A. Planting soil for trees, shrubs and ground covers shall be of the composition noted on the plans, measured by volume.

B. Soil for Soddied Areas: shall be coarse lawn sand.

2.2 FERTILIZER

A. Fertilizer for trees, palms, shrubs, and groundcovers shall be as follows: LESCO Palm Special 13-3-13 in equal, Sulfur coated with iron and other minor elements and maximum of 2% chlorine, or brand with equal analysis. The fertilizer shall be uniform in composition, dry and free flowing and shall be delivered to the site in the original unopened containers, bearing the manufacturer's guaranteed analysis. Fertilizer for sod and seeded areas shall be 8-4-8, 50% organically derived nitrogen, or equal.

2.3 WATER

A. The Contractor shall provide potable water on site, available from the start of planting. The Contractor is responsible to ascertain the location and accessibility of the water source. The Contractor is responsible to provide the means of distribution (i.e., water truck, hoses, etc.) for distribution of water to the planting areas.

2.4 MULCH

A. Mulch shall be shredded Melaleuca mulch (Florimulch) as manufactured by Forestry Resources, Inc., or equal.

2.5 ROOT BARRIER MATERIAL

A. Root barrier material shall be 24" deep polypropylene panels by DeepRoot or approved equal.

B. Install per details in the plans.

PART 3 - INSTALLATION PROCEDURES

3.1 LAYOUT

A. Verify location of all underground utilities and obstructions prior to excavation.

3.2 HERBICIDE TREATMENT

A. In all areas infested with weed and/or grass growth, or systemic herbicide, such as Roundup, shall be applied per manufacturer's rates. When it has been established where work will be done, the systemic herbicide shall be applied in accordance with manufacturer's labeling to kill all noxious growth. Contractor shall schedule his work to allow more than one application to obtain at least 95% kill of undesirable growth. If necessary, Contractor shall conduct a test to establish suitability of product and applicator to be used on this project, prior to execution of the full application.

3.3 PLANT PIT EXCAVATION AND BACKFILLING

A. Trees: See the Planting and Bracing Details and notes.

B. All planting holes shall be hand dug where machine dug holes may adversely affect utilities or improvements.

C. Shrubs and Groundcover: Shrubs and groundcover shall be planted in a soil bed as described in the notes and details. Space shrubs and provide setback from curb and pavements as shown in the plans.

D. Watering of field-grown plants: Thoroughly puddle in water to remove any air pockets in the plant hole.

3.4 WATERING

A. The Contractor is responsible to provide the water for all new plants and transplants and means of distribution (i.e., hand watering or water truck) during the maintenance period and extending into the period after acceptance until the full schedule as listed below is complete. Water for trees and other large field-grown plants shall be supplemented by hand or water truck, in addition to the irrigation system, (if one is provided). Contractor can adjust watering schedule during heavy rain season upon approval of the Landscape Architect.

AMOUNT OF WATER PER APPLICATION

For trees up to 5 inch caliper: 5 gallons

From 5 to 8 inch caliper: 25 gallons

9 inch and up caliper: 50 gallons

FREQUENCY OF WATER

Daily for the first week

3 times per week for weeks 2 - 5

2 times per week for weeks 6 - 8

1 time per week for weeks 9 - 12

B. Water in plants by thoroughly soaking of the entire root ball immediately after planting. For large trees and shrubs, add water while backfilling hole to eliminate any air pockets in the soil around the root ball.

C. Water shrubs, soil and groundcover a minimum of once daily for a week or until an irrigation system is fully operational. If no irrigation system is to be installed, the Contractor shall be responsible for watering the shrubs, soil, and groundcover for the time specified above, after installation of each section of the planting installed.

3.5 FERTILIZING

A. Add fertilizer on top of the surface of shrubs beds and tree and palms root balls two (2) months after installation. Fertilize soil and two (2) days after installing other planting of each segment of the job. Fertilizer shall be applied after soil has been well moistened. Fertilizer shall be washed off of plant leaves and stems immediately after application. Apply at the following rates:

1. Trees and Large Shrubs: One (1) pound per inch of trunk diameter, spread evenly over the root ball area.

2. Shrubs: One half (1/2) handful per shrub, spread evenly over the root ball area.

3. Groundcover: Twelve (12) pounds per 100 sq. ft. of bed area.

4. Sod: Twelve (12) pounds per 1,000 sq. ft. Wash fertilizer off blades immediately after spreading.

3.6 MULCHING

A. Spread mulch two (2) inches thick uniformly over the entire surface of shrubs and groundcover beds, depth measured after settling, unless otherwise specified in the plans. Provide 36" diameter bed of mulch, measured from outer edge of the trunk, for all trees and palms planted in soil areas. Keep mulch away from contact with the trunk. Create a 6" high ring of mulch at the outer edge of tree and palm holes.

3.7 GUYING AND BRACING

A. See the details bound herewith or made part of the plans.

3.8 SODDING

A. Provide a blanket of lawn sand as described in the notes in these plans. Prior to planting, remove stones, sticks, etc. from the sub-soil surface. Excavate existing non-conforming soil as required so that the finish grade of sod is flush with adjacent pavement or top of curb as well as adjacent sod in the case of sod patching.

B. Place sod on moistened soil, with edges tightly butted, in staggered rows at right angles to slopes. The sod shall be rolled with a 500 pound hand roller immediately after placing.

C. Keep edge of sod bed a minimum of 18" away from groundcover beds and 24" away from edges of shrub beds and 36" from trees, measured from the edge of plant or tree trunk.

D. Sod shall be watered immediately after installation to uniformly wet the soil to at least two inches below the bottom of sod strips.

E. Apply fertilizer to the sod as specified in Section 3.5.

F. Excavate and remove excess soil so top of sod is flush w/top of curb or adjacent pavement, or adjacent existing soil.

PLANT BED PREPARATION NOTES

1. In all areas where new sod and shrub and groundcover masses are to be planted, kill all existing weeds by treating with Round-up prior to beginning soil preparation.

2. In all shrub and groundcover beds, prepare soil as described for either condition, over the entire area to be planted:

Condition A:

If any compacted road base or asphalt or rocky soil is encountered, remove compacted material entirely to allow an 18" depth of planting soil. Backfill the entire area of the shrub and groundcover beds with 18" planting soil (as specified in Plans) to within 2 inches of the adjacent pavement or top of curb. Remove all debris and rocks and pebbles larger than 2 inches in size and level the grade before planting.

Condition B:

Where no compacted soil is encountered, thoroughly mix 6 inches of planting soil into the existing soil to a depth of 18 inches. If required, excavate and remove the existing soil to lower the grade, so that the prepared mix is finished to a minimum of 2 inches below top of curb or adjacent walkway. Remove all debris and rocks and pebbles larger than 2 inches in size and level the grade before planting.

For all soil areas, spread a 2" deep layer of lawn sand prior to sodding. Remove all debris and rocks and pebbles larger than 2 inches in size and level the grade before sodding. Remove, if required, existing soil so that top of sod is flush with and adjacent top of curb or pavement.

For Trees and shrubs larger than 7" gallon, Add Diehard® transplant inoculant supplied by Horticultural Alliance, Inc. (800-628-6373) or equal. Mix into top 8-10 inches of planting hole, making sure it is contact with the root. Add at a rate specified by manufacturer (typically 4oz. per 1" inches of trunk caliper or 7 gallon can).

SPACING OF PLANTS (SEE PLANT SPACING DETAIL)

1. Plants shall be planted sufficiently away from edges of pavements or curbs, to allow for growth toward the edges of the bed.

PROTECTION OF PLANTS

1. The Contractor shall be responsible to protect existing trees and shrubs in and adjacent to the area of work. Erect barriers as necessary to keep equipment and materials, any toxic material, away from the canopy drip line of trees and shrubs. DO NOT PILE SOIL OR DEBRIS AGAINST TREE TRUNKS OR DEPOSIT NOXIOUS BUILDING SUPPLIES OR CHEMICALS WITHIN THE DRIP LINE.



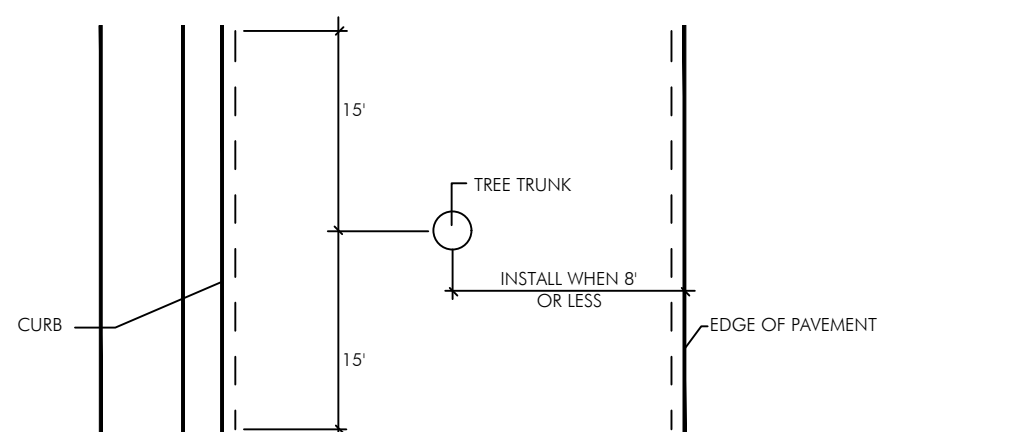
SIZE:  
□ 1/2" X 5/8" (3.2MM X 14.0MM), 0.072" (1.82MM) THICK  
w/ 0.135" (3.43MM) EXPOSED TOP LIP

FINISH LEGEND:  
(H) MILL FINISH-NATURAL ALUMINUM

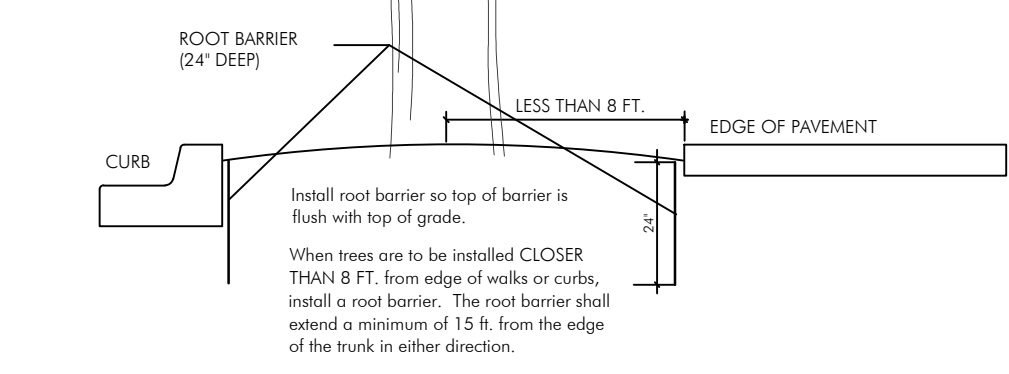
- NOTES:
1. INSTALL PER MANUFACTURER'S "INSTALLATION GUIDELINES"
  2. 8" (2.44 M) SECTIONS TO INCLUDE (3) 12" (305 MM) ALUMINUM STAKES, 16" (4.88 M) SECTIONS TO INCLUDE (8) 12" (305 MM) ALUMINUM STAKES.
  3. CORNERS - CUT BASE EDGING UP HALFWAY AND FORM A CONTINUOUS CORNER.
  4. PERMALOC CLEANLINE AS MANUFACTURED BY PERMALOC CORPORATION, HOLLAND MI (800) 356-8660, (616) 399-9600
  5. CONTRACTORS NOTE: FOR PRODUCT AND PURCHASING INFORMATION VISIT WWW.PERMALOC.COM

ALUMINUM EDGING DETAIL

N.T.S.

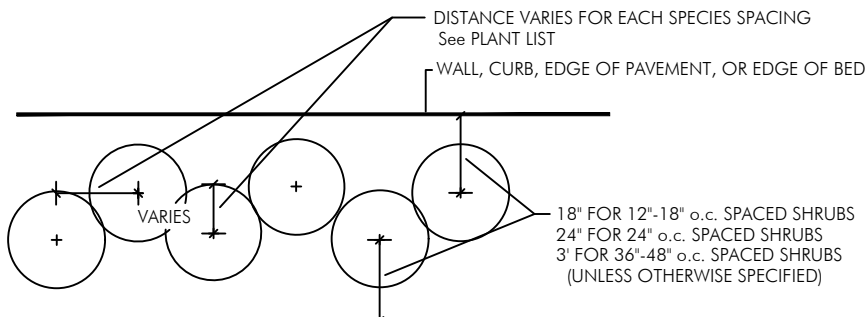


PLAN VIEW



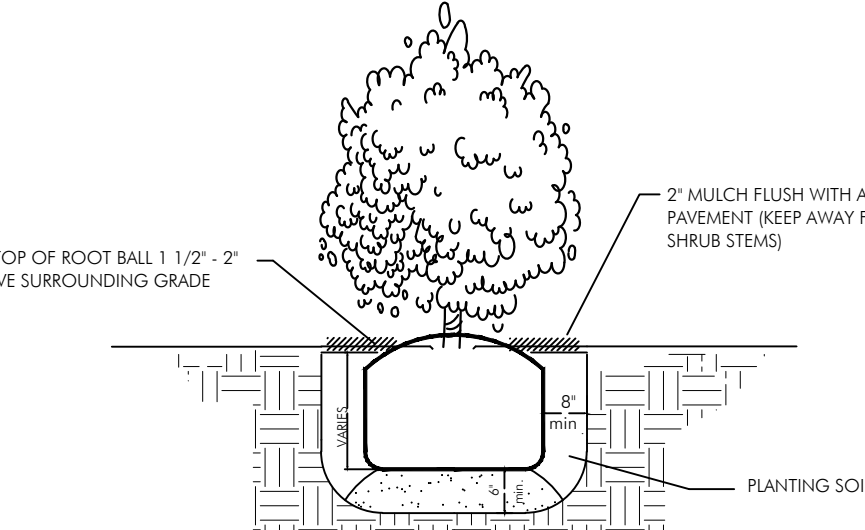
ROOT BARRIER INSTALLATION DETAIL

N.T.S.



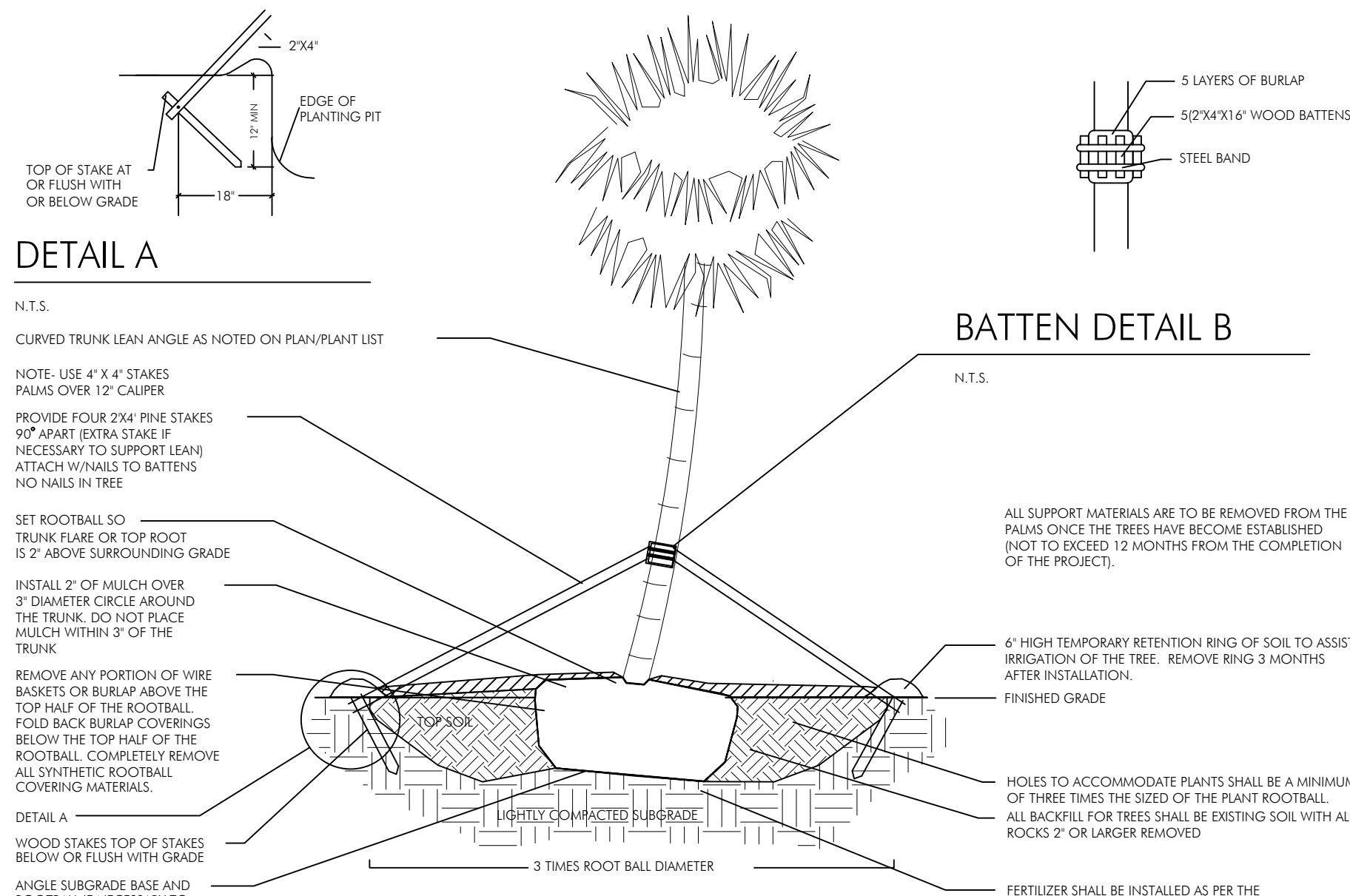
SHRUB SPACING DIAGRAM

N.T.S.



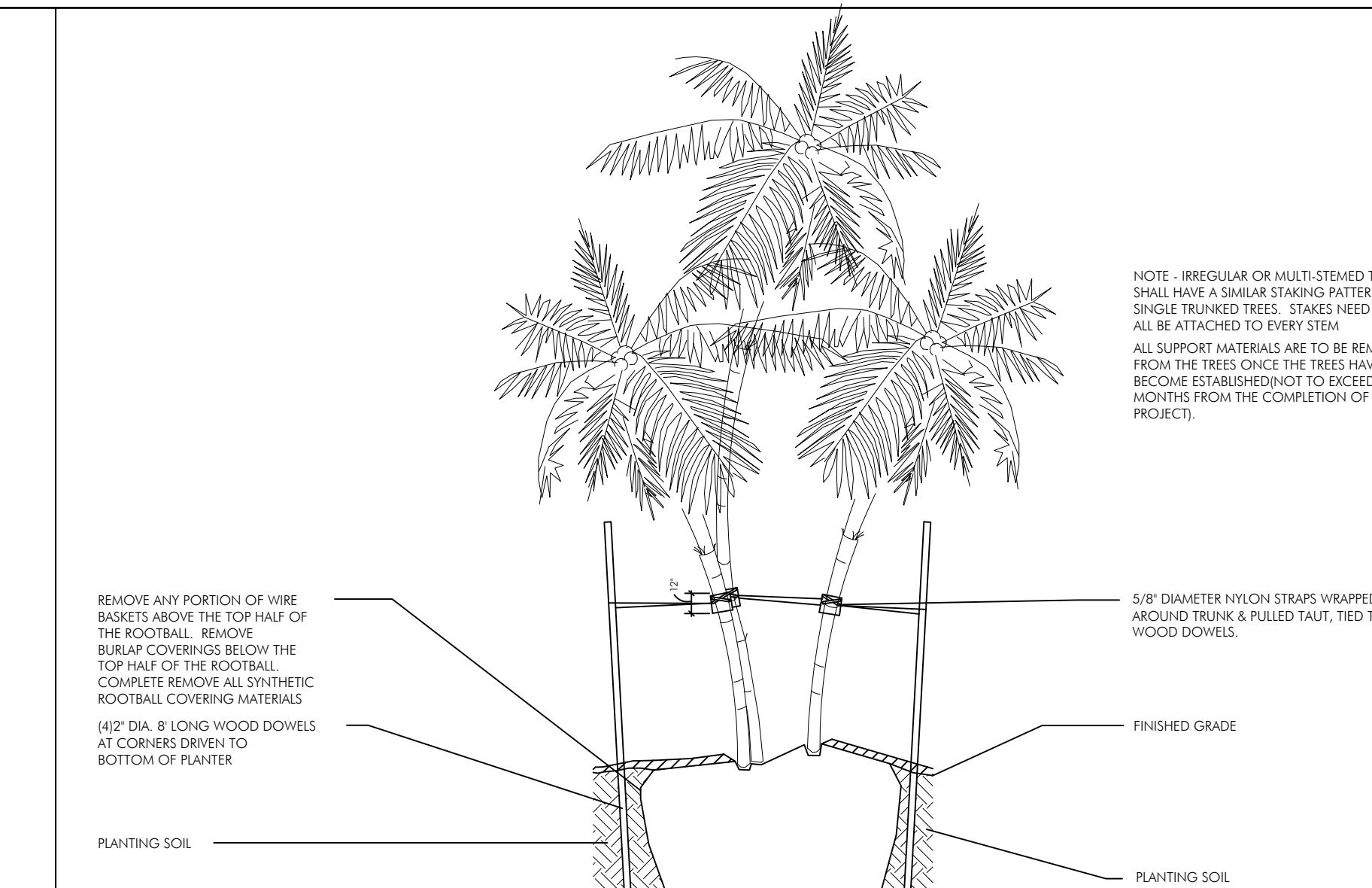
SHRUB INSTALLATION DETAIL

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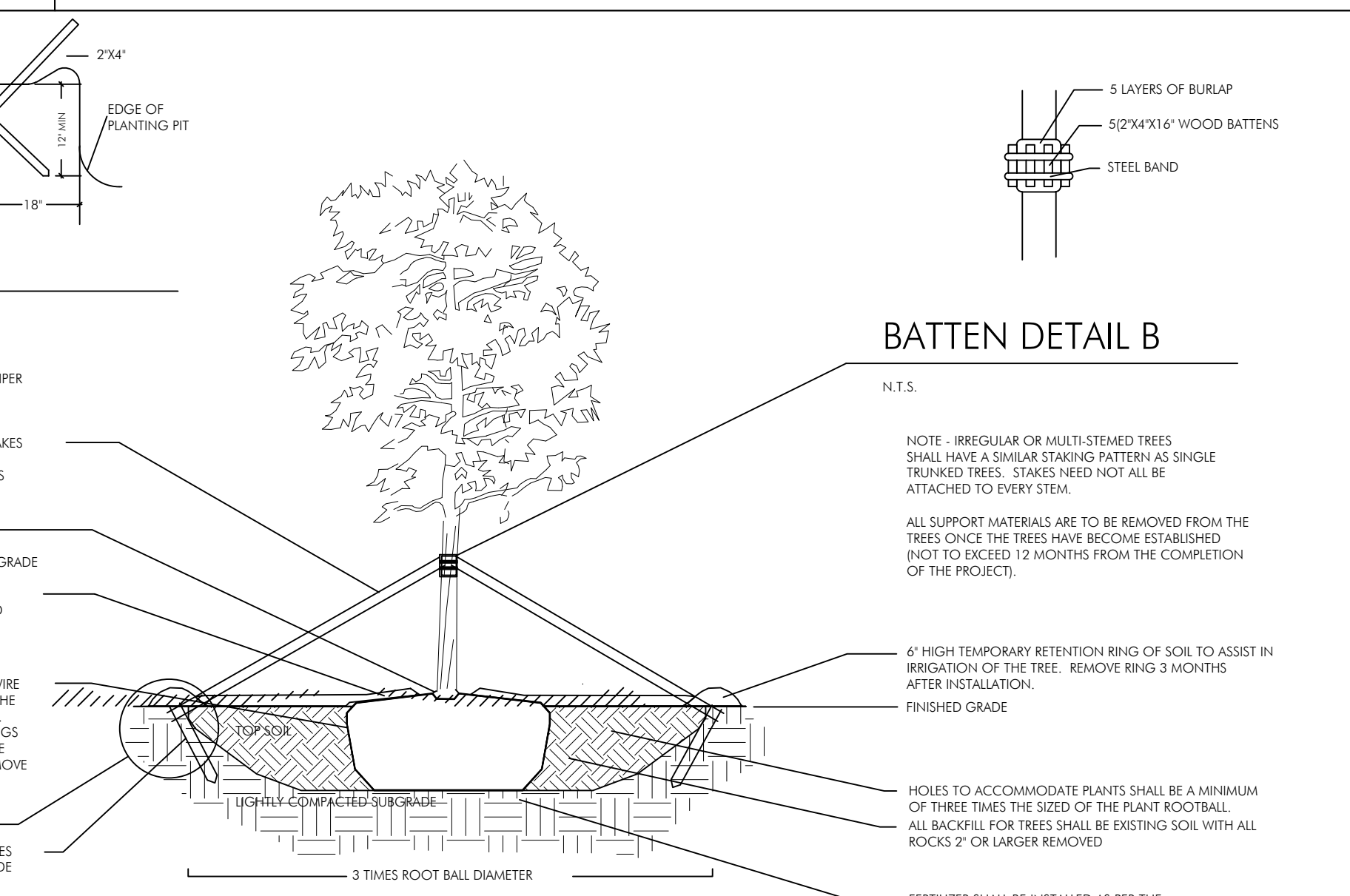
PLANTING & BRACING DETAIL FOR LEANING/CROOKED PALMS

N.T.S.



MULTI-TRUNKED TREE/PALM BRACING DETAIL

N.T.S.



PLANTING & BRACING DETAIL OVER 3 1/2" CALIPER

N.T.S.



## IRRIGATION MATERIALS LIST

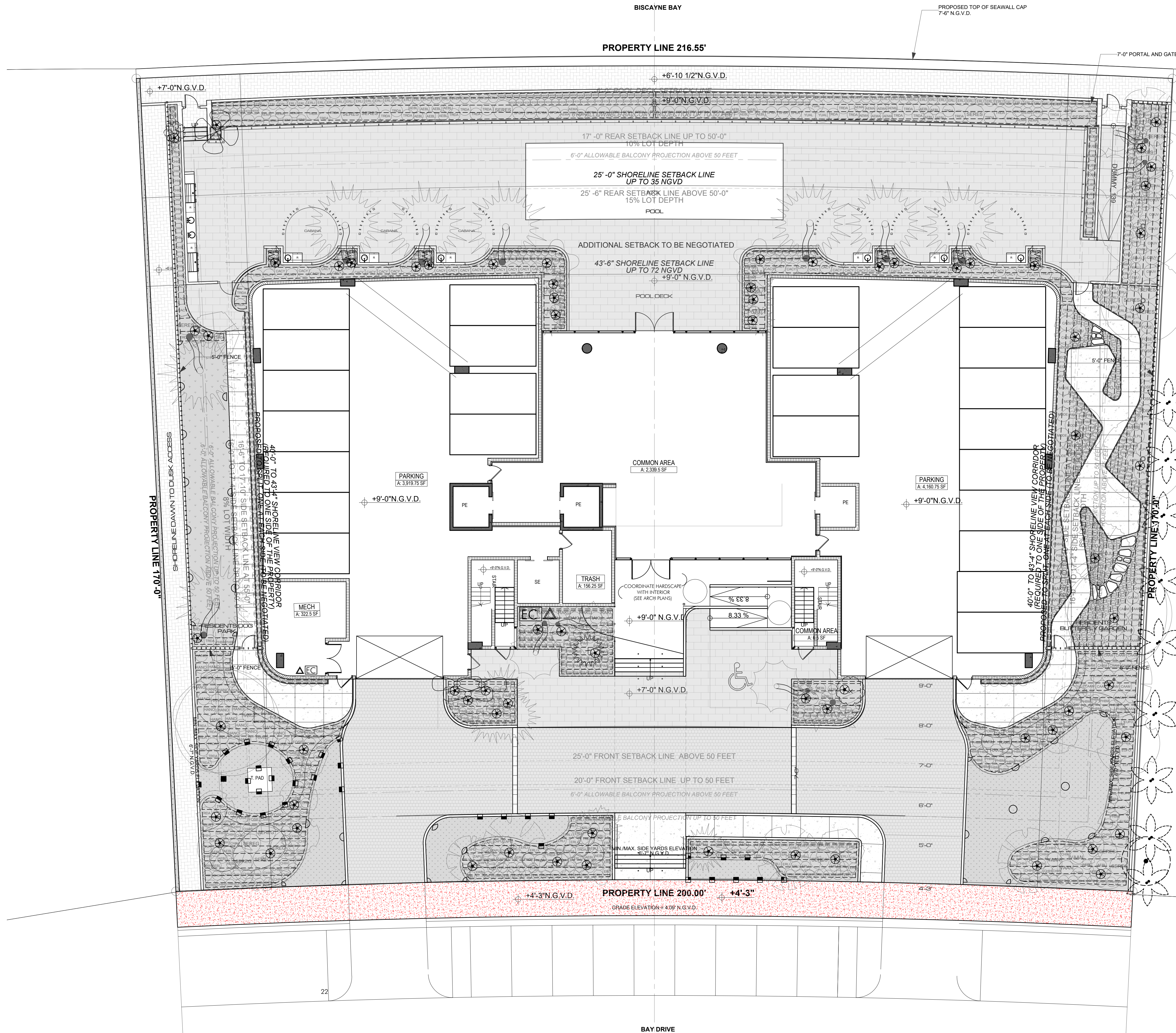
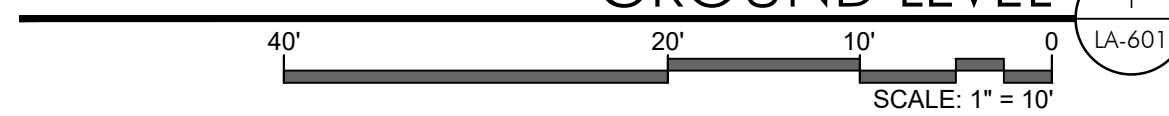
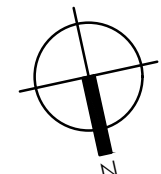
| KEY | ITEM   | QTY.        |
|-----|--|-------------|
| --- | PVC laterals shall be Class 200 PVC (sized as shown on plans)  | as required |
| --- | MAIN shall be Class 200 PVC  | as required |
| --- | PVC sleeves shall be Class 200 PVC (sized double the width of the pipe running through it)   | as required |
| --- | Flexible PVC or Polypipe (for swing joints)  | as required |
| WM  | Water Meter and Backflow Prevention Assembly (See Civil Plans)   | 1           |
| EC  | Electric Controller<br>RAINBIRD ESPME3 Series Controller   | 1           |
| Δ   | Rainbird RSD Series Rain Sensor (locate in area of free rainfall)  | 1           |
| ⬮   | RAINBIRD 200-PESB 2" Electromechanical Solenoid Control Valve  | #           |
|     | Irrigation Control Wire  | as required |
|     | RAINBIRD Spray Heads 1800 @ 30 PSI Series w/MPR nozzles<br>6" pop-up in grass areas<br>12" pop-up on risers in shrub beds                                      | as required |
| ○   | 10-F (1.58 gpm)<br>10-TQ (1.18 gpm)<br>10-H (.79 gpm)<br>10-T (.53 gpm)<br>10-Q (.39 gpm)  |             |
| ●   | 5-F (.41 gpm)<br>5-TQ (.33 gpm)<br>5-H (.20 gpm)<br>5-T (.13 gpm)<br>5-Q (.10 gpm)   |             |
| ★   | RAINBIRD 1300A-F Adjustable Flood Bubbler 1300A-F (1.5 gpm)  | as required |
| ▼   | Rainbird 1" Inline Pressure Regulator (PSI-M40X-100) (drip zones not to exceed 40psi max)  | as required |
|     | RAINBIRD XFS Subsurface Drip Irrigation XFS-09-12-500/250/100<br>Air/Vacuum Relief Valves Kit (3/4" Air relief valve/ Easy Fit Compression Tee/ and Flush Cap) | as required |
| ■   | Residential Wide Flow Control Zone Kit (XCZ100PRBCOM) (0.3-20 gpm)   | as required |
| ⌘   | RAINBIRD 3-RC Quick Coupler Valve  | as required |
| ≡≡  | PVC Supply Header for drip Irrigation Class 200 PVC  | as required |
| ⊗   | RAINBIRD Xeri-Bubbler UXB-360-1032 (.6 gpm)  | 71          |

## LATERAL PIPE SIZING

The Contractor is responsible to properly size all laterals. All laterals shall be sized according to the following schedule. Total gallons per pipe section shall be calculated by adding the GPM per head for every head downstream of the pipe.

## CLASS 200 PVC PIPE SIZING CHART

| SIZE   | GPM         |
|--------|-------------|
| 3/4"   | 0-8 GPM     |
| 1"     | 8-14 GPM    |
| 1 1/2" | 14-24 GPM   |
| 1 1/2" | 24-32 GPM   |
| 2"     | 32-50 GPM   |
| 2 1/2" | 50-75 GPM   |
| 3"     | 60-110 GPM  |
| 4"     | 110-190 GPM |

IRRIGATION HEAD LAYOUT PLAN  
GROUND LEVEL

revuelta  
architecture  
international

Miami  
Santiago, Chile

revuelta-architecture.com

2850 SW 27TH AVE  
SUITE 110  
MIAMI, FL 33133  
T: 305.560.5000  
F: 305.560.5040

ALVARADO / ROSCOE / ROSENBERG  
Project

1940 Bay Drive  
1940 BAY DRIVE  
Miami Beach, Florida 33141

## Revisions

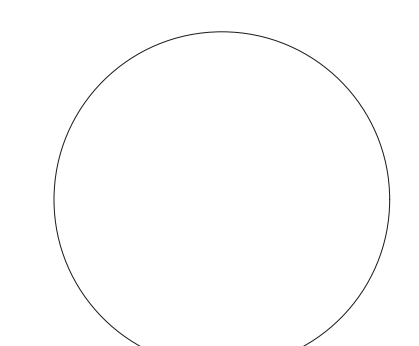
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## Owner Information

## #Client Company

#Client Address1  
#Client Address2  
#Client City, #Client State  
#Client Postcode  
#Client Phone Number

## Consultant



Taylor Kiehl Semler  
PLA-FL6667205

## DRB SUBMITTAL

Date  
08/04/2023  
Scale  
AS SHOWN  
Project No.  
2133

SHOWN PLAN  
GROUND LEVEL

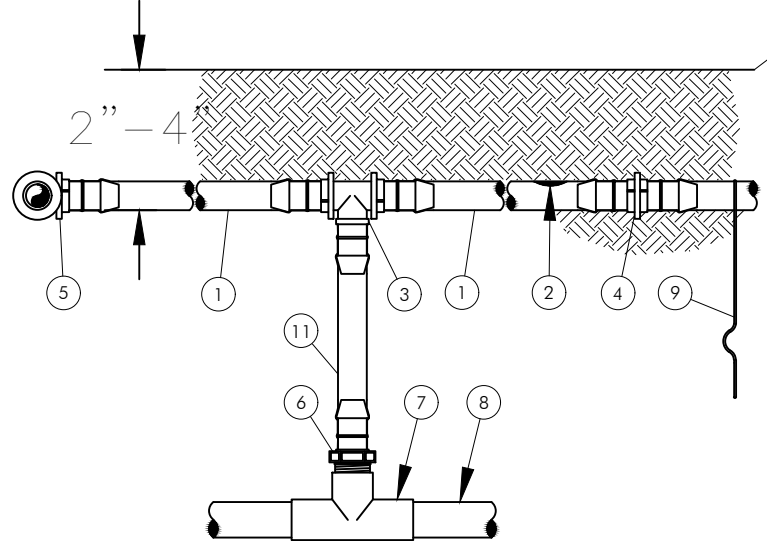
Sheet No.

LA-601



GENERAL NOTES:

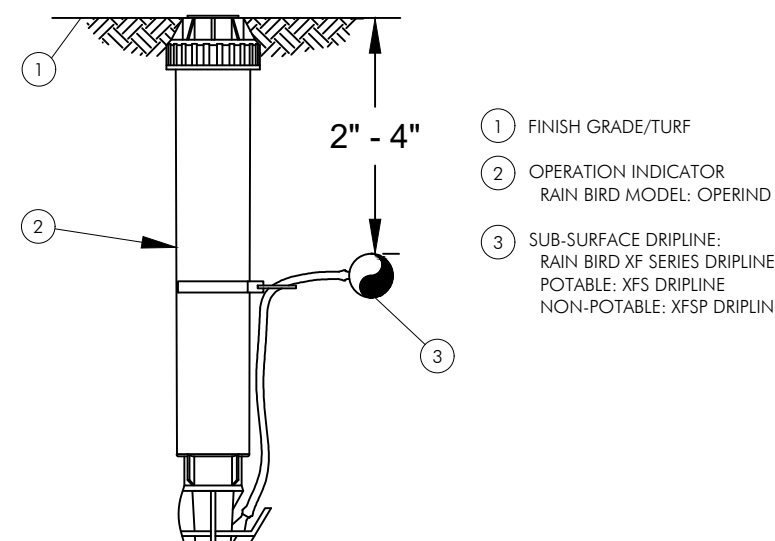
- SCOPE OF WORK: The Contractor shall furnish all labor, machinery, tools, supplies, and equipment as necessary to construct and provide an operating system, as indicated in the Plans. The work shall include, but not be limited to, furnishing materials (pipe, valves, sprinkler heads, fittings, controllers, electrical, wire and fittings, primer, glue, etc.), layout, protection to the public, excavation, assembly, installation, backfilling, compaction, repair of road or pavement surfaces, controller and low voltage feed to the valves, clean-up, maintenance and guarantee, and as-built plans.
- Contractor shall coordinate with General Contractor or other pertinent Contractor on the job to ensure that sleeves are provided and installed under hard surfaces to allow access to all areas to be irrigated. All sleeves shall be constructed of Schedule 40 PVC. Bury all sleeves a minimum of 24" below the surface. Sleeve to be 2 times the size of the pipe running through it. Sleeve shall extend 24" past the edge of pavement into the area to be irrigated.
- GUARANTEE: The irrigation system shall be guaranteed for a minimum of one calendar year from the time of final acceptance.
- REPAIR UTILITIES: The Contractor shall be responsible to verify the location of all utilities by hand excavation or other appropriate measures before performing any work that may result in damage to utilities structures, or property. The Contractor shall take immediate steps to repair, replace, or restore all services to any utilities which are disrupted due to his operations. All costs involved in disruption of service and repairs due to negligence on part of the Contractor shall be his responsibility.
- AS-BUILT DRAWINGS: Prints of the plans will be supplied to the Contractor for recording "as-built" information. Immediately upon installation of any work which deviates from what is shown on the Plans, the Contractor shall clearly indicate such changes in red pencil on the prints. Such changes shall include, but not be limited to, changes in (1) materials; (2) size of material; (3) location; and (4) quantities.
- The entire installation shall fully comply with all applicable local and state codes and ordinances. The Contractor shall take out all required plumbing and electrical applications and permits, arrange for all necessary inspections and shall pay all fees and expenses in connection with same as part of work under the contract.
- UNIT PRICES: The successful bidder shall furnish, to the Owner, a unit price breakdown for all materials. The Owner may at his own discretion, add to or delete from the materials, using the unit price breakdown submitted to and accepted by the Owner.
- MAINTENANCE PERIOD: The irrigation system shall be maintained for a period of 90 days after final acceptance of installation. Maintenance shall include checking of the system 2 times per week. Contractor shall be responsible to replace/repair any broken or malfunctioning parts of the system including those damaged by accidents or vandalism. Repairs shall be made immediately at the time of inspection or when notified by the Landscape Architect.
- The irrigation system shall provide 100% coverage with a minimum of 90% overlap of water spray.
- The system is design to provide sprinkler precipitation rates that are nearly equal in each zone. Mixing of sprinklers with widely varying precipitation rates in a zone will not be accepted.
- All pipe shall be made of Schedule 40 PVC, except flexible PVC (or Tero funny pipe) for flexible swing joint and Schedule 80 galvanized steel pipe for all above ground fittings. Pipe locations shall be adjusted in the field. When laying out mains and laterals, locate pipe near edges of pavement or against buildings wherever possible, to allow space for plant rootballs. Coordinate pipe locations with plantings. Bury all mains 18" below surface and laterals 12". Depth shall be measured to top of pipe.
- Keep pop-up sprinkler heads a minimum of 8" from edges of pavement and curbing, and heads on rises a minimum of 18", or as indicated in the plans.
- All heads located in shrub or groundcover beds shall be installed on a riser as per details in the plans. All other heads shall be installed on a swing joint as per details in the plans.
- Place irrigation control wire in conduit in the same trench as mains and under the main. ASI wire shall be #14 or larger solid copper (UL approved underground direct burial cable and shall be continuous with no splices from controller to solenoid valve.
- Valve locations are schematic and shall be adjusted in the field. Each valve shall be in a separate valve box (10" x 18" min.). When grouping valve boxes in grass or groundcover areas, set boxes a minimum of 12" apart to allow grass or groundcover to grow between them. When possible, hide valve boxes in shrub beds, a minimum of 12" from edge of beds. Set all valve boxes, concrete or plastic, in ground with cover flush with finish grade, and level, with a minimum of 6" of pea gravel at the bottom of the box, with at least 2" of clearance from the bottom of the valve to the top of the gravel.
- TESTING: Notify the Landscape Architect in writing when testing will be conducted. Conduct test in the presence of the Landscape Architect. After all PVC assembly is completed the lines shall be flushed to insure that no rocks, sand, or other foreign debris remain in the lines. The mains shall be filled with water and all outlets shall be opened and plugged. The main shall be pressurized to 100 PSI for a minimum of one hour. No section of the main will be approved if the pressure drops more than 5 PSI at the end of the one hour period. Leaks shall be repaired immediately and the system shall be re-tested until found satisfactory by the Landscape Architect.



- NOTES:
- PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
  - AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE THE TIE DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
  - SAVE YOUR HANDS. USE THE RAIN BIRD FITTING TOOL KIT INSERTION TOOL FOR FITTING ASSEMBLY.
1. ON SURFACE DRIPLINE: RAIN BIRD XFS DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFS DRIPLINE
2. INLINE DRIP EMITTER OUTLET: SEE PLANS FOR DRIPLINE OUTLET SPACING.
3. BARR TEE 1 1/2" x 1 1/2" RAIN BIRD XFF TEE
4. BARR COUPLING 1 1/2" x 1 1/2" RAIN BIRD XFF COUP
5. BARR ELBOW 1 1/2" x 1 1/2" RAIN BIRD XFF ELBOW
6. BARR MALE ADAPTER 1 1/2" x 1 1/2" RAIN BIRD XFF MALE ADAPTER 1 1/2" x 1 1/2" RAIN BIRD XFF MALE ADAPTER
7. PVC TEE SOGT
8. PVC LATERAL SUPPLY HEADER
9. TIE DOWN STAKE
10. RAIN BIRD TDS-050 WITH BEND (TYPICAL)
11. RAIN BIRD XFS SERIES BLANK TUBING LENGTH AS REQUIRED

XFS SUBSURFACE DRIPLINE RISER ASSEMBLY

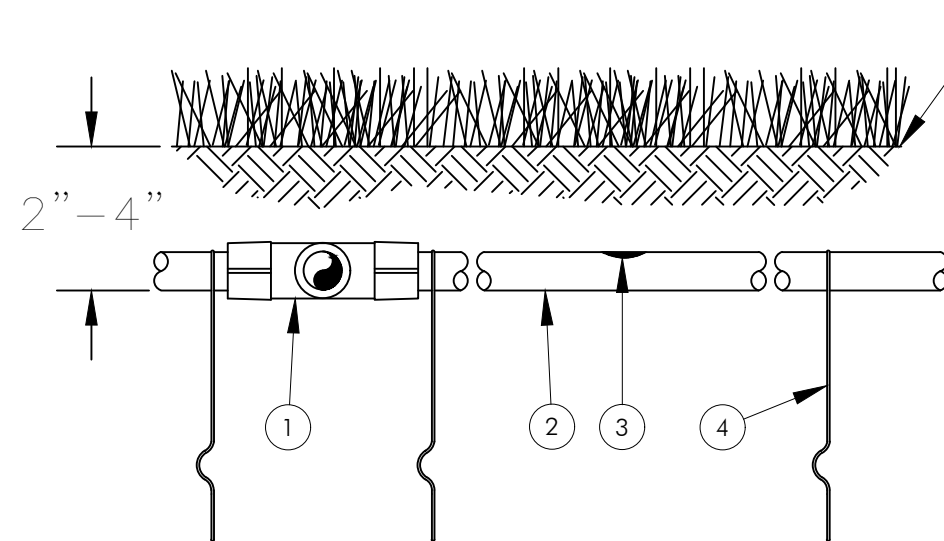
N.T.S.



- NOTES:
- INSERT BARR TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING.
  - VALVE NOZZLE MAY BE SET TO CLOSED, OR IF IT IS DESIRED TO SEE SPRAY FROM THE NOZZLE, SET THE ARC TO 24".
1. FINISH GRADE/TURF
2. OPERATION INDICATOR RAIN BIRD MODEL OPERIND
3. SUBSURFACE DRIPLINE: RAIN BIRD XFS DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFS DRIPLINE

XFS SUBSURFACE DRIPLINE OPERATION INDICATOR

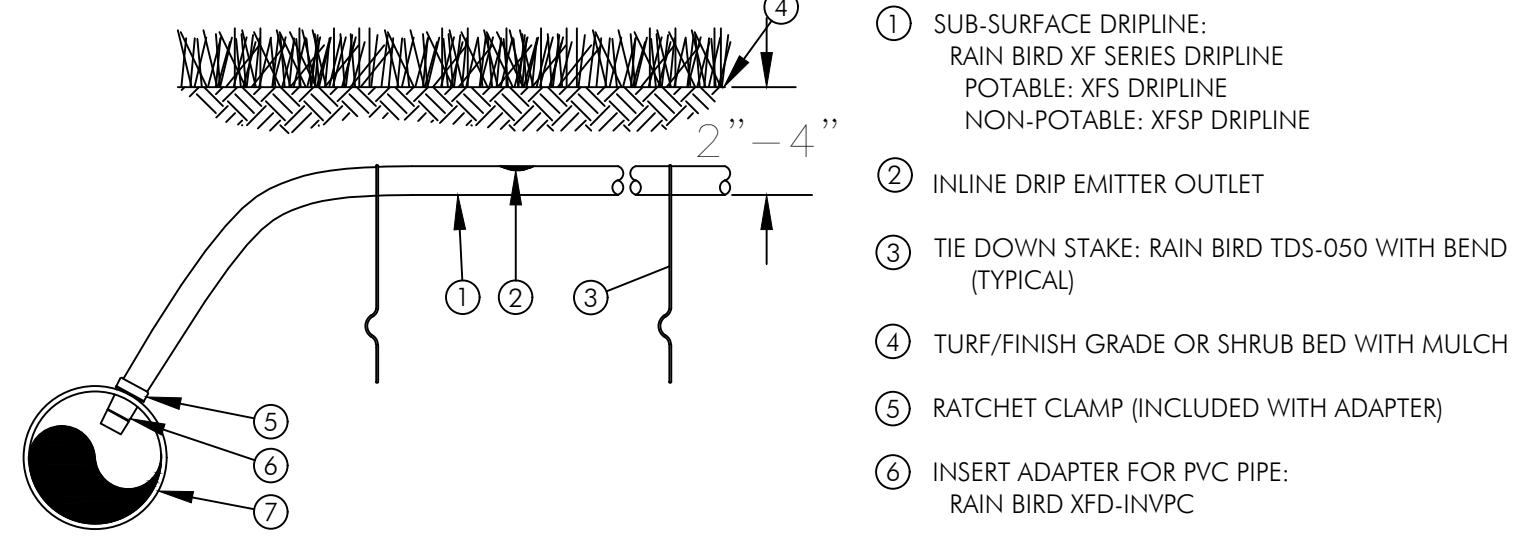
N.T.S.



- NOTES:
- PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
  - AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE THE TIE DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
  - INSERTION PLOW AND TRENCHED INSTALLATIONS DO NOT REQUIRE TIE DOWN STAKES.
1. EASY FIT COMPRESSION TEE: RAIN BIRD MDCTEE
2. SUB-SURFACE DRIPLINE: RAIN BIRD XFS DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFS DRIPLINE
3. INLINE DRIP EMITTER
4. TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (TYPICAL)
5. TURF/FINISH GRADE OR SHRUB BED WITH MULCH

XFS SUBSURFACE DRIPLINE BURIAL

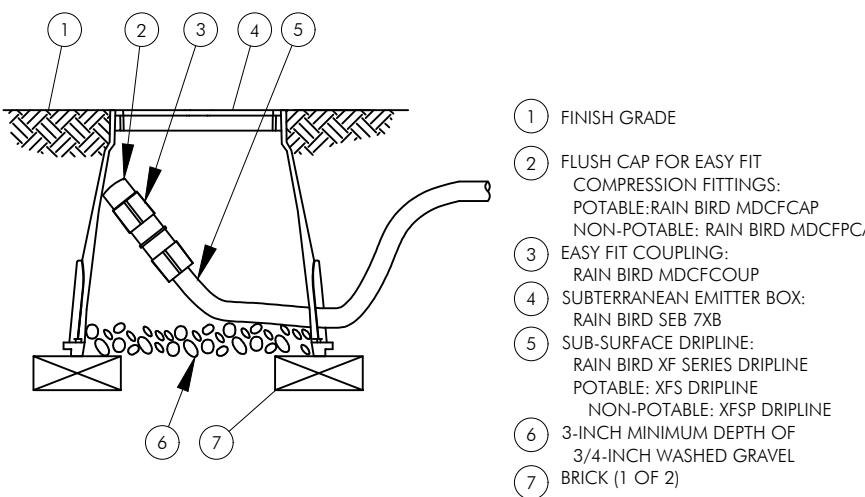
N.T.S.



- NOTES:
- PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
  - AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
  - INSERTION PLOW AND TRENCHED INSTALLATIONS DO NOT REQUIRE TIE DOWN STAKES.
1. SUB-SURFACE DRIPLINE: RAIN BIRD XFS DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFS DRIPLINE
2. INLINE DRIP EMITTER OUTLET
3. TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (TYPICAL)
4. TURF/FINISH GRADE OR SHRUB BED WITH MULCH
5. RATCHET CLAMP (INCLUDED WITH ADAPTER)
6. INSERT ADAPTER FOR PVC PIPE: RAIN BIRD XFD-INVPC
7. PVC LATERAL PIPE MINIMUM 1 1/2" IN DIAMETER DEPTH PER SPECIFICATION

XFS SUBSURFACE DRIPLINE ADAPTER FOR PVC

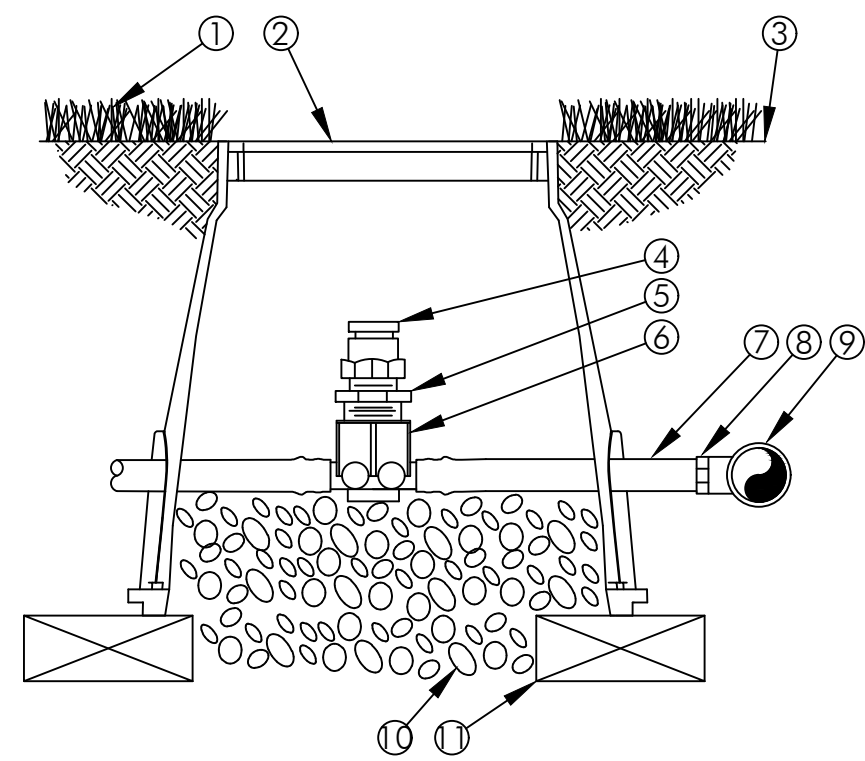
N.T.S.



- NOTE:
- ALLOW A MINIMUM OF 4 INCHES OF DRIPLINE TUBING IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.
1. FINISH GRADE
2. FLUSH CAP FOR EASY FIT COMPRESSION FITTINGS: POTABLE: RAIN BIRD MDCTCAP NON-POTABLE: RAIN BIRD MDCTCAP
3. EASY FIT COUPLING: RAIN BIRD MDCTCOUP
4. SUBTERANEAN EMITTER BOX: RAIN BIRD SEB 788
5. SUB-SURFACE DRIPLINE: RAIN BIRD XFS DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFS DRIPLINE
6. 3/4 INCH MINIMUM DEPTH OF 3/4 INCH WASHED GRAVEL
7. BRICK (1 OF 2)

XFS DRIPLINE FLUSHPOINT WITH COMPRESSION FITTINGS

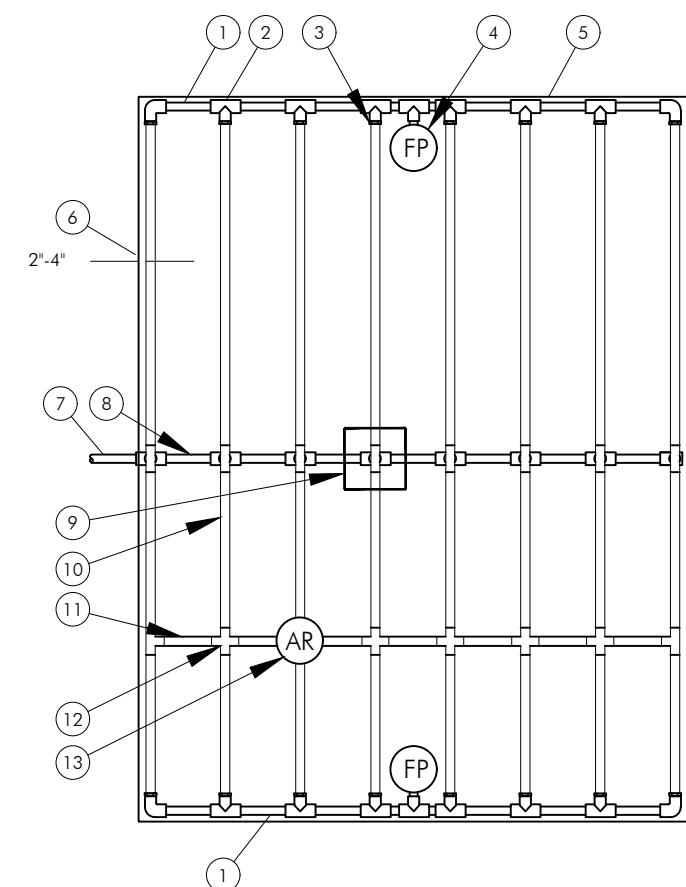
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1. TURF GRASS
2. SUBTERANEAN EMITTER BOX: RAIN BIRD SEB 788
3. FINISH GRADE
4. AIR RELIEF VALVE: RAIN BIRD ARV050 TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
5. 1/2" x 1/2" PVC REDUCER BUSHING
6. BARR X FEMALE THREAD CONNECTOR: RAIN BIRD XFD-TFA FITTING
7. BLANK DRIPLINE TUBING: RAIN BIRD XFS SERIES
8. BARR X MALE THREAD CONNECTOR: RAIN BIRD XFF-MAA FITTING
9. PVC TEE CONNECTED TO PVC HEADER PIPE
10. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
11. BRICK (1 OF 2)

XFS AIR/VACUUM RELIEF

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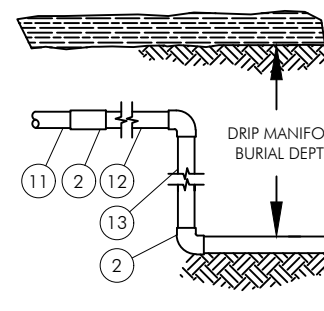


- NOTES:
- DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE RAIN BIRD XFS DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
  - LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
  - AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.
  - WHEN USING 1/2 INCH INSERT FITTINGS WITH DESIGN PRESSURE OVER 50 PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.
1. PVC EXHAUST HEADER
2. PVC SCH 40 TEE OR EL (TYPICAL)
3. BARR X MALE FITTING: RAIN BIRD XFF-MAA FITTING (TYPICAL)
4. FLUSH POINT (TYPICAL)
5. SEE RAIN BIRD DETAIL "XFS FLUSH POINT" OR "XFS FLUSH POINT WITH BALL VALVE"
6. PERIMETER OF AREA
7. PERIMETER DRIPLINE PIPE TO BE INSTALLED 2'-4" FROM PERIMETER OF AREA
8. PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZES TO MEET LATERAL FLOW DEMANDS)
9. CONNECTION FROM SUPPLY MAINFOLD TO DRIPLINE (TYPICAL: SEE INSET A)
10. SUB-SURFACE DRIPLINE: RAIN BIRD XFS DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFS DRIPLINE
11. RAIN BIRD XFS SERIES BLANK TUBING
12. BARR X BARR INSERT TEE OR CROSS: RAIN BIRD XFF TEE OR RAIN BIRD XFF CROSS (TYPICAL)
13. 1/2" AIR RELIEF VALVE: RAIN BIRD MODEL ARV050. SEE RAIN BIRD XFS DETAILS FOR AIR RELIEF INSTALLATION.
14. BARR X FEMALE FITTING: RAIN BIRD XFD-TFA FITTING
15. 3/4" PVC PIPE, LENGTH AS NECESSARY

| Inlet Pressure psi | 12" Spacing        |                    | 16" Spacing        |                    | 24" Spacing        |                    |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                    | Nominal Flow (gph) | Nominal Flow (gph) | Nominal Flow (gph) | Nominal Flow (gph) | Nominal Flow (gph) | Nominal Flow (gph) |
| 0.6                | 0.9                | 0.6                | 0.9                | 0.6                | 0.9                | 0.9                |
| 15                 | 273                | 155                | 314                | 250                | 424                | 322                |
| 20                 | 318                | 189                | 353                | 284                | 508                | 368                |
| 30                 | 360                | 230                | 413                | 350                | 586                | 414                |
| 40                 | 395                | 255                | 465                | 402                | 652                | 474                |
| 50                 | 417                | 285                | 528                | 420                | 720                | 488                |
| 60                 | 460                | 290                | 586                | 455                | 780                | 514                |

XFS SUBSURFACE DRIPLINE CENTERFEED LAYOUT

N.T.S.

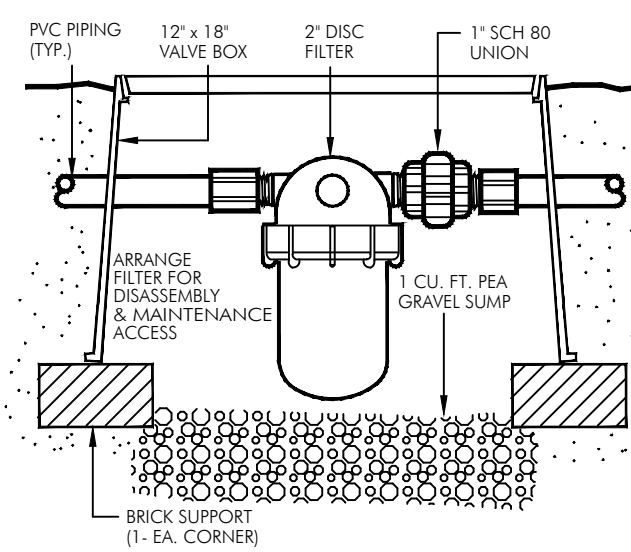


- NOTES:
- DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE RAIN BIRD XFS DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
  - LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
  - AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.
  - WHEN USING 1/2 INCH INSERT FITTINGS WITH DESIGN PRESSURE OVER 50 PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.
1. PVC EXHAUST HEADER
2. PVC SCH 40 TEE OR EL (TYPICAL)
3. BARR X MALE FITTING: RAIN BIRD XFF-MAA FITTING (TYPICAL)
4. FLUSH POINT (TYPICAL)
5. SEE RAIN BIRD DETAIL "XFS FLUSH POINT" OR "XFS FLUSH POINT WITH BALL VALVE"
6. PERIMETER OF AREA
7. PERIMETER DRIPLINE PIPE TO BE INSTALLED 2'-4" FROM PERIMETER OF AREA
8. SUB-SURFACE DRIPLINE: RAIN BIRD XFS DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFS DRIPLINE
9. RAIN BIRD XFS SERIES BLANK TUBING
10. BARR X BARR INSERT TEE OR CROSS: RAIN BIRD XFF TEE OR RAIN BIRD XFF CROSS (TYPICAL)
11. 1/2" AIR RELIEF VALVE: RAIN BIRD MODEL ARV050. SEE RAIN BIRD XFS DETAILS FOR AIR RELIEF INSTALLATION.
12. PVC SUPPLY HEADER
13. PVC DRIP MAINFOLD FROM RAIN BIRD CONTROL ZONE KIT (SIZES TO MEET LATERAL FLOW DEMANDS)
14. PVC SCH 40 RISER PIPE

| Inlet Pressure psi | 12" Spacing        |                    | 16" Spacing        |                    | 24" Spacing        |                    |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                    | Nominal Flow (gph) | Nominal Flow (gph) | Nominal Flow (gph) | Nominal Flow (gph) | Nominal Flow (gph) | Nominal Flow (gph) |
| 0.6                | 0.9                | 0.6                | 0.9                | 0.6                | 0.9                | 0.9                |
| 15                 | 273                | 155                | 314                | 250                | 424                | 322                |
| 20                 | 318                | 189                | 353                | 284                | 508                | 368                |
| 30                 | 360                | 230                | 413                | 350                | 586                | 414                |
| 40                 | 395                | 255                | 465                | 402                | 652                | 474                |
| 50                 | 417                | 285                | 528                | 420                | 720                | 488                |
| 60                 | 460                | 290                | 586                | 455                | 780                | 514                |

XFS SUBSURFACE DRIPLINE END FEED LAYOUT

N.T.S.

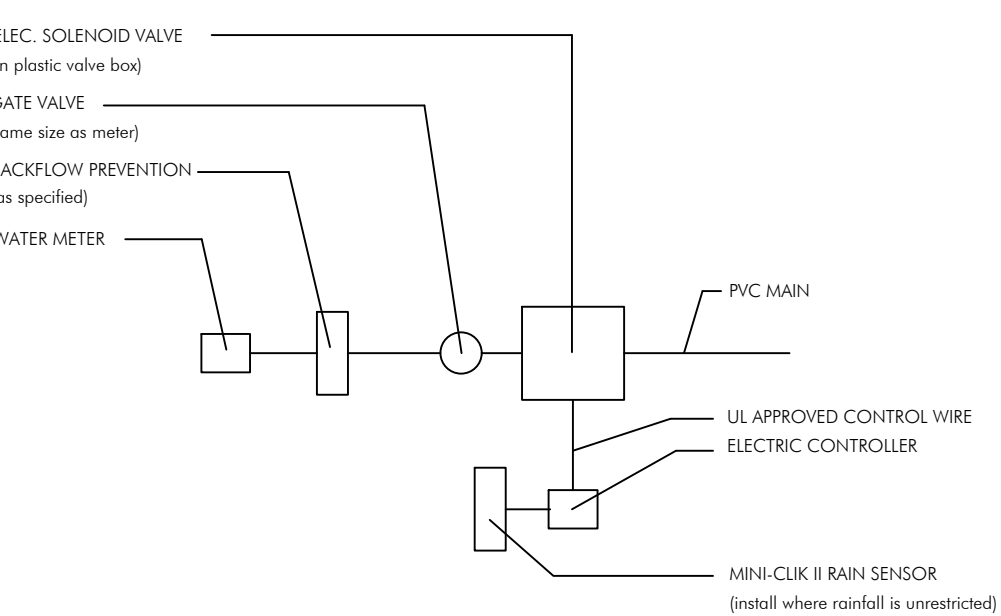


2" DISC FILTER

N.T.S.

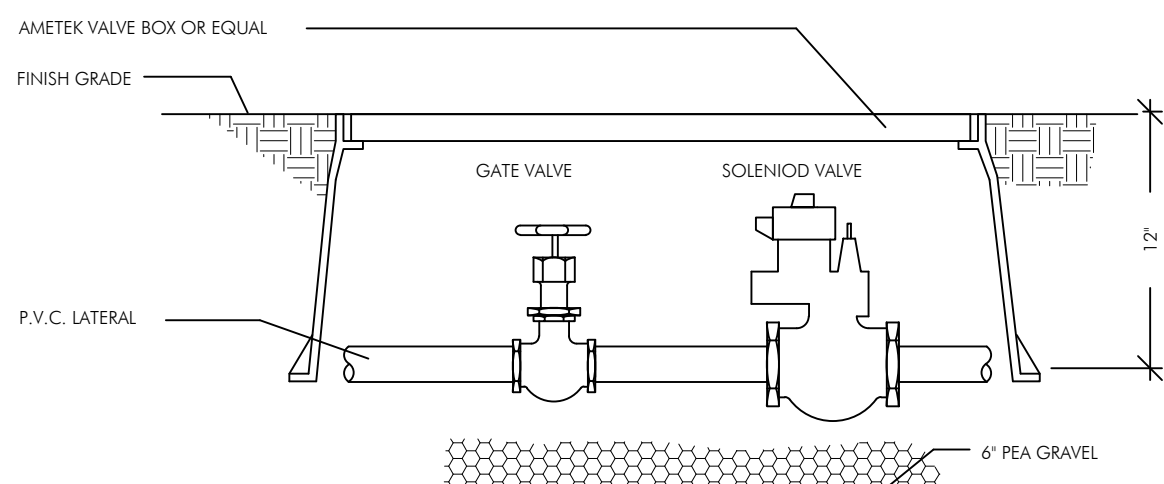
RAIN SENSOR DETAIL

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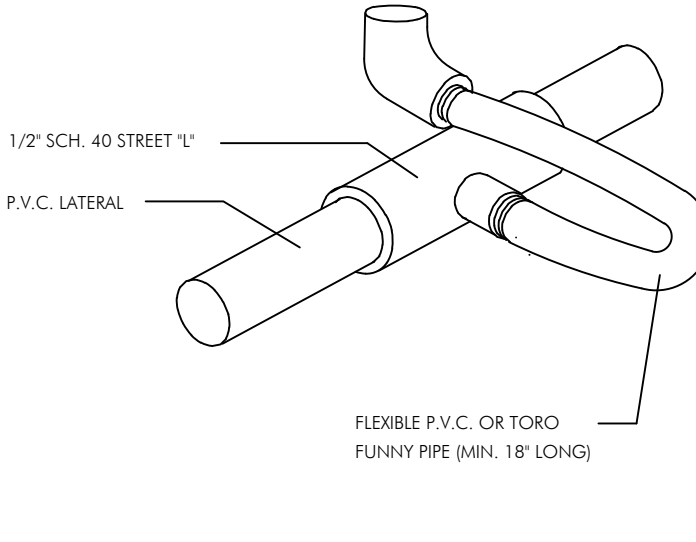
CONNECTION TO METER DETAIL

N.T.S.



TYPICAL SOLENOID VALVE ASSEMBLY

N.T.S.



FLEXIBLE SWING JOINT DETAIL

N.T.S.