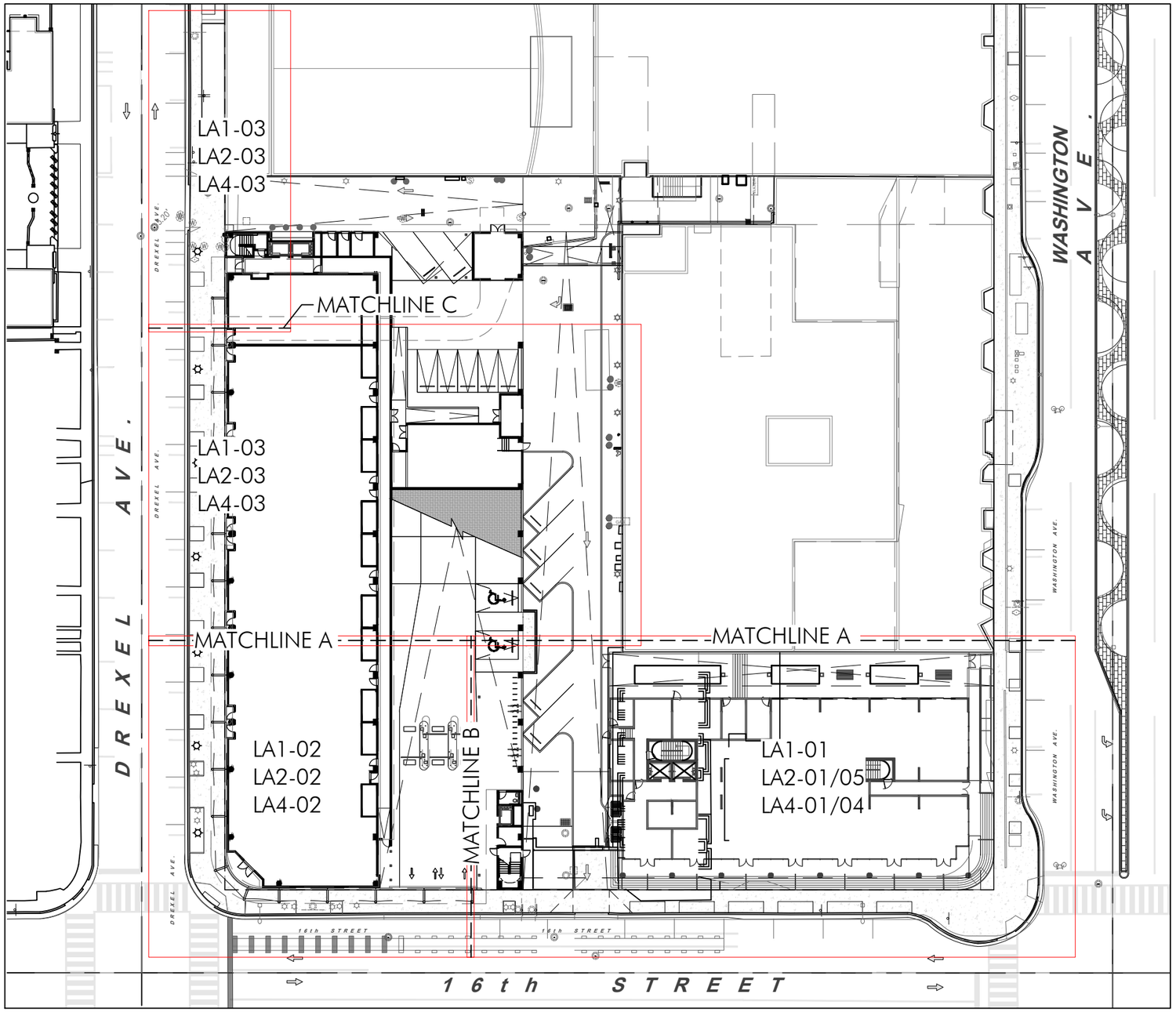

N

KEY MAP

200' 100' 50' 0

SCALE: 1" = 50'

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1600 WASHINGTON AVENUE

1601 DREXEL & 1600 WASHINGTON AVENUE
MIAMI BEACH, FL

DATE 6/18/2025
SCALE as noted
SHEET LA0-01

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205

MATCHLINE A

MATCHLINE A

MATCHLINE A

MATCHLINE B

MATCHLINE B

16

17

18

15

WASHINGTON AVE.

16th STREET

EXISTING PALM TO REMAIN

EXISTING PALM TO BE REMOVED

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

CRITICAL ROOT ZONE (TYP.)

TREE PROTECTION FENCING (TYP.)

N

EXISTING TREE DISPOSITION PLAN

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

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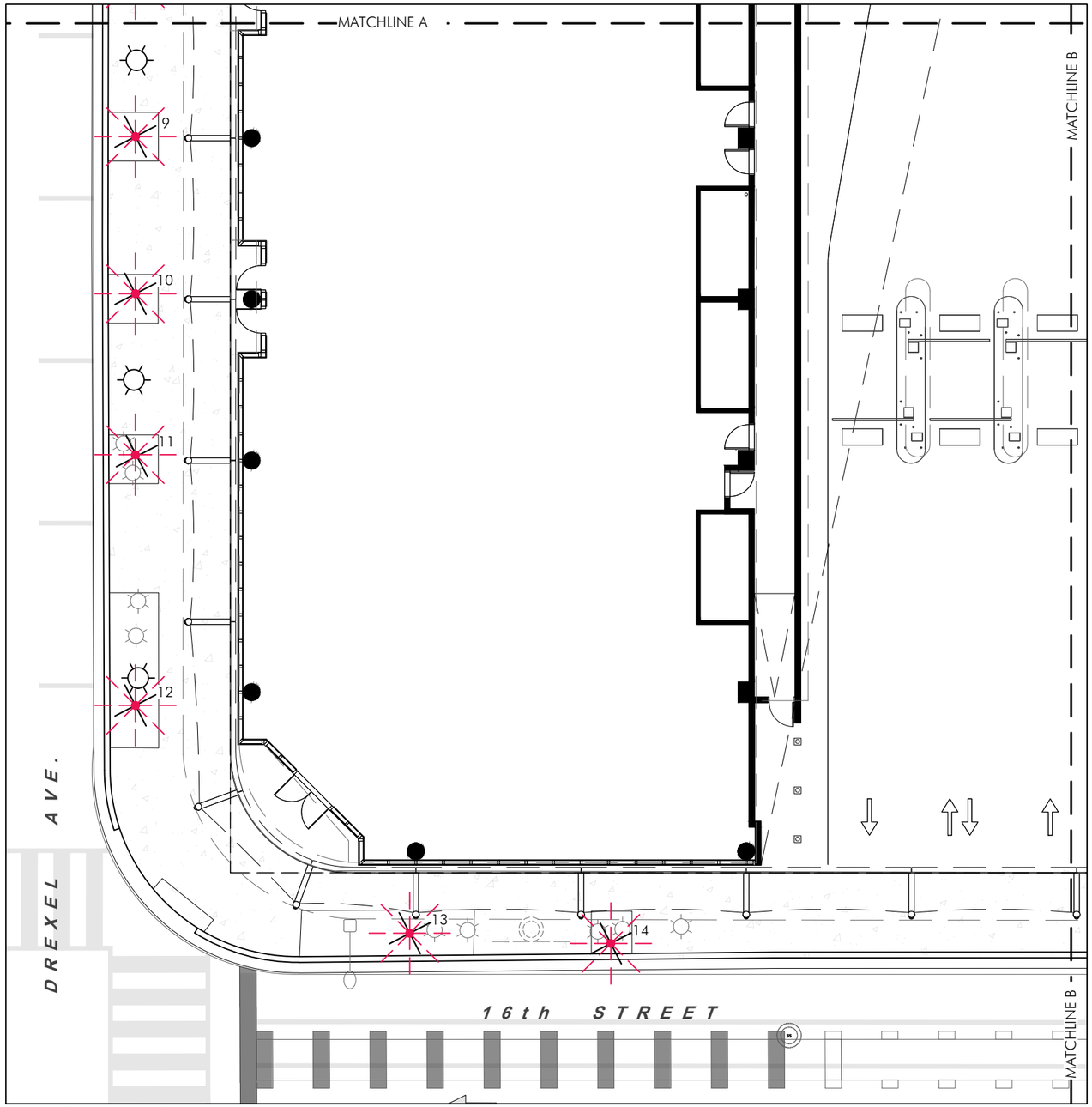

EXISTING PALM TO REMAIN

EXISTING PALM TO BE REMOVED

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

CRITICAL ROOT ZONE (TYP.)

TREE PROTECTION FENCING (TYP.)

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EXISTING TREE DISPOSITION PLAN

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

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DATE 6/18/2025
SCALE as noted
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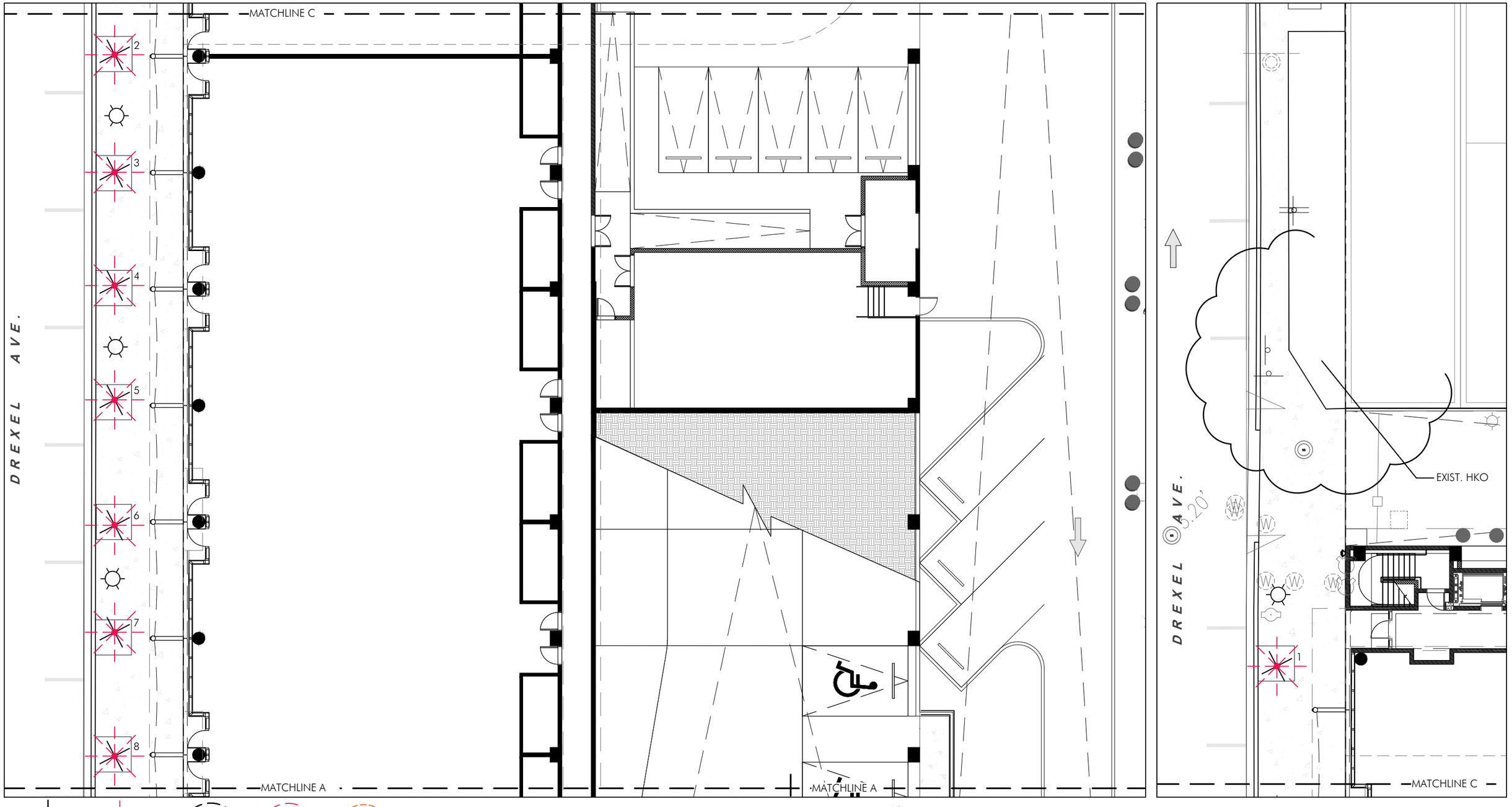

EXISTING PALM TO REMAIN

EXISTING PALM TO BE REMOVED

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

EXISTING TREE DISPOSITION PLAN

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

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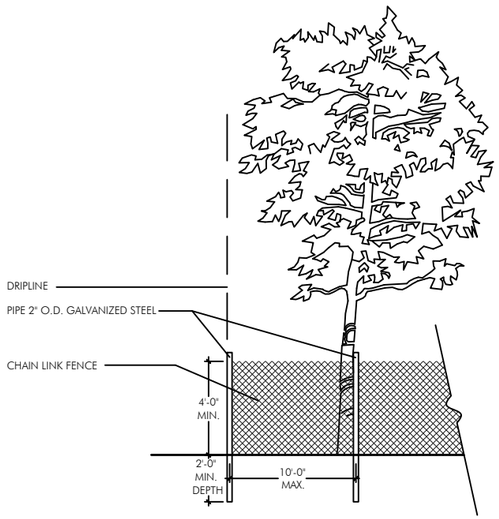

NOTES:
-BARRIER SHALL BE PLACED AT THE EDGE OF THE DRIPLINE OF THE THE TREE CANOPY OR AS FAR FROM THE TREE AS POSSIBLE WHERE THE CANOPY OVERHANGS PAVEMENT THAT IS TO REMAIN. BARRIER SHALL BE MAINTAINED IN AN UPRIGHT POSITION AT ALL TIMES.
-TREE PROTECTION FENCE (TPF) SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING, OR DEMOLITION. AND MAINTAINED THROUGHOUT CONSTRUCTION.
-REMOVE TPF ONLY WITH APPROVAL FROM URBAN FORESTER AFTER ALL SITE WORK HAS BEEN COMPLETED.

*NOTE: Should any existing trees or palms be damaged they shall be evaluated by the City Urban Forester to determine corrective actions that may include removal, corrective pruning and or replacement. Any corrective actions required shall be performed in accordance with the City of Miami Beach Code, the most current ANSI A-300 Pruning Standards and or an issued City Tree or Environmental Permit. Any corrective pruning required shall be performed by an ISA Certified Arborist and the City Urban Forester shall be consulted.

TREE PROTECTION DETAIL

N.T.S.

EXISTING TREE DISPOSITION LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE HT.(ft.)	SIZE SPD.(ft.)	SIZE DBH.(in.)	DISPOSITION	MITIGATION DBH.(in.)
1	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
2	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
3	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
4	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
5	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
6	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
7	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
8	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
9	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
10	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
11	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
12	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
13	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
14	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
15	Sabal palmetto	Sabal Palm	18	10	10	remove	1 palm
16	Ficus alii	Long Leaf Fig	25	25	12	remove	12
17	Roystonea regia	Royal Palm	35	15	16	remove	1 palm
18	Roystonea regia	Royal Palm	35	15	16	remain	1 palm
						TOTAL DBH INCHES TO BE REMOVED	12
						TOTAL PALMS TO BE REMOVED	16
						TOTAL DBH INCHES MITIGATION REQUIRED	4x2"dbh for trees + 16x2"dbh for palms =40" in total
						TOTAL DBH INCHES MITIGATION PROVIDED	129

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1600 WASHINGTON AVENUE

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MIAMI BEACH, FL

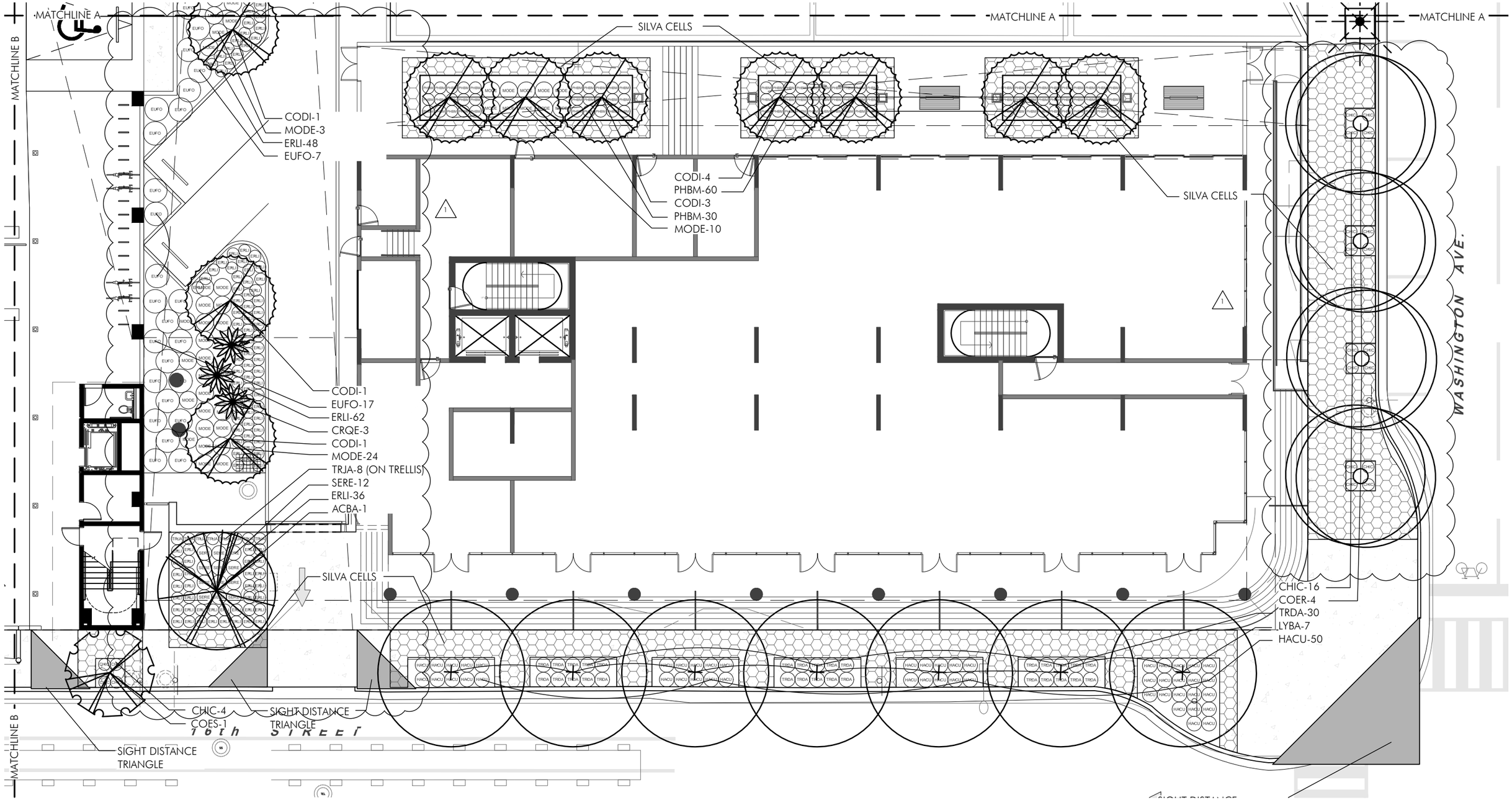
EXISTING TREE DISPOSITION PLAN

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

DATE 6/18/2025
SCALE as noted
SHEET LA1-04

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205



N

PLANTING PLAN GROUND FLOOR

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

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REGISTERED LANDSCAPE ARCHITECT KENNETH GARDNER LA 0001569 STATE OF FLORIDA

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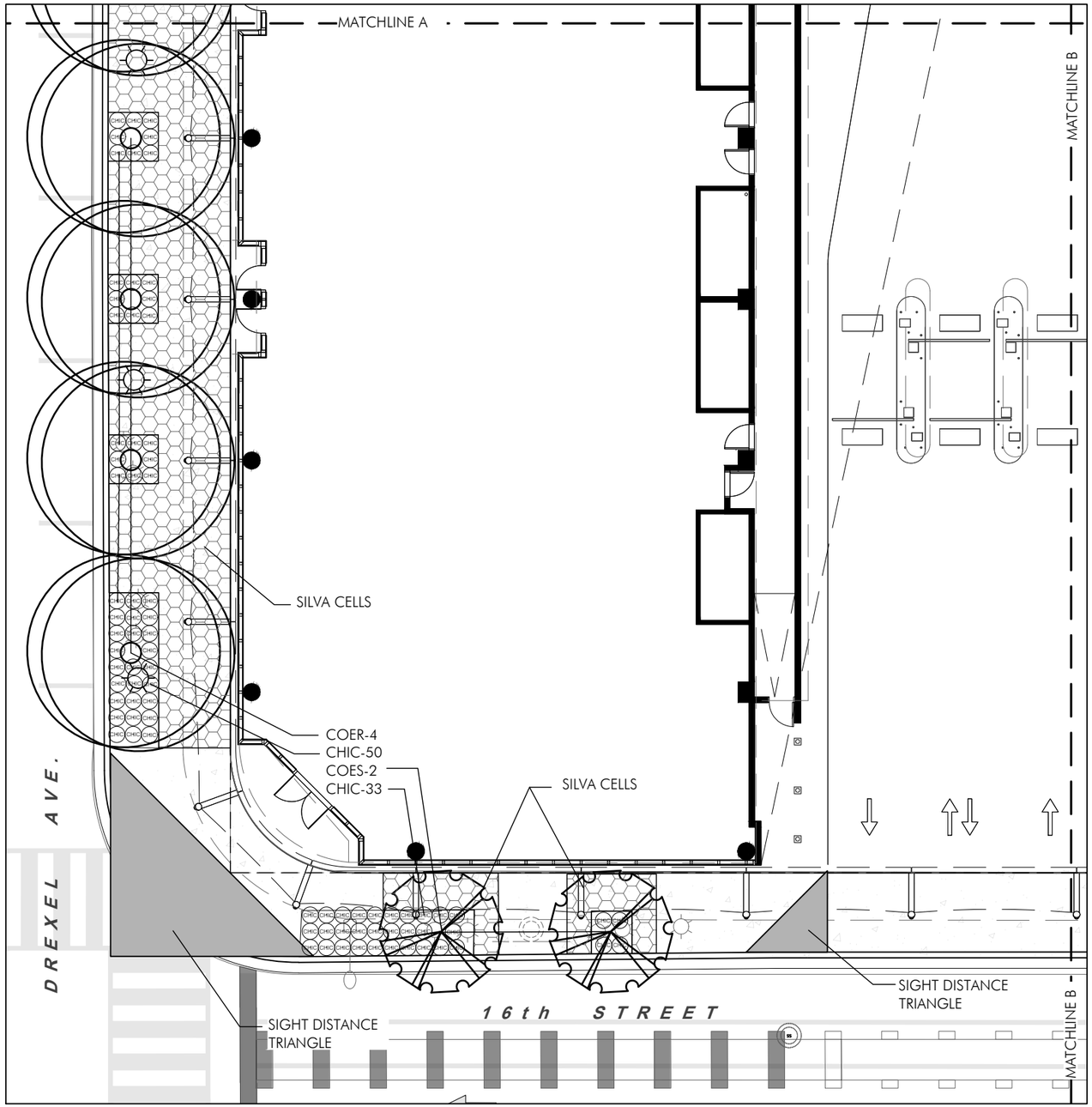
SHEET LA2-01

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205



N

PLANTING PLAN GROUND FLOOR

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

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DATE 6/18/2025
SCALE as noted
SHEET LA2-02

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205

MATCHLINE C

CHIC-56
COER-7

EUFO-11
ERLI-19
MODE-9
CODI-1
EUFO-11
EUFO-2
EUFO-2
CODI-1
EUFO-6
ERLI-36
MODE-12

SILVA CELLS

CHIC-8
COER-1

DREXEL AVE.

MATCHLINE A

MATCHLINE A

MATCHLINE C

N

PLANTING PLAN GROUND FLOOR

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

GARDNER + SEMLER
LANDSCAPE ARCHITECTURE
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LICENSED LANDSCAPE ARCHITECT KENNETH ERIC GARDNER LA 0001569 STATE OF FLORIDA

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MIAMI BEACH, FL

DATE 6/18/2025

SCALE as noted

SHEET LA2-03

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205

PLANT LIST-GROUND FLOOR

*NOTE: IF THERE IS A DESCREPANCY BETWEEN THE QUANTITIES SHOWN WITHIN THE LIST BELOW AND WHAT IS SHOWN ON THE PLAN, THE QUANTITIES SHOWN ON THE PLAN SHALL OVERRIDE THOSE FROM THIS LIST.

TREES

KEY	PLANT NAME	QTY.	UT.	SIZE
COER	Conocarpus erectus ...Green Buttonwood	16	ea.	16' tall x 6' spread, 4" DBH
COES	Conocarpus erectus "Sericeus" ..Silver Buttonwood	3	ea.	12' tall x 6' spread, 3 trunks (totalling 3" min. DBH) lifted to tree form
CODI	Coccoloba diversifolia ...Pigeon Plum	12	ea.	12' tall x 5' spread, 2" DBH, 4' CT min.
ACBA	Acacia bakeriana ...Pink Shower Tree	1	ea.	16" tall x 6' spread, 4" DBH
LYBA	Lysiloma bahamensis ..Wild Tamarind	7	ea.	16" tall x 6' spread, 4" DBH

SHRUBS

KEY	PLANT NAME	QTY.	UT.	SIZE
CHIC	Chrysobalanus icaco "Horizontalis" ..Horizontal Cocoplum	167	ea.	24" x 24"
CRQE	Crinum augustum "Queen Emma" ..Queen Emma Crinum Lily	3	ea.	36" x 36"
ERLI	Ernodea littoralis ..Golden Creeper	165	ea.	12" x 12"
HACU	Hamelia cuprea ..Dwarf Firebush	50	ea.	24" x 24"
MODE	Monstera deliciosa ...Monstera	56	ea.	30" x 30", mature leaves
PHBM	Philodendron var. "Burle Marx" ...Burle Marx Philodendron	90	ea.	18"x18"
EUFO	Eugenia foetida ..Spanish Stopper	45	ea.	6' tall OA, full to ground
SERE	Serenoa repens ..Saw Palmetto	12	ea.	24" x 24"
TRDA	Tripsacum dactyloides ...Fakahatchee Grass	30	ea.	3 gal cans, full

VINES

KEY	PLANT NAME	QTY.	UT.	SIZE
TRJA	Trachelospermum jasminoides ...Star Jasmine	8	ea.	3 gal cans, trellised

OTHER

	Planting Soil 70% Silica Sand 20% Everglades Muck 10% Shredded Pinebark	as req.	c.y.	
	Shredded Melaleuca Mulch	as req.	c.y.	3" layer in all shrub beds

CITY OF MIAMI BEACH
LANDSCAPE LEGEND

INFORMATION REQUIRED TO BE PERMANENTLY AFFIXED TO PLANS

Zoning District_____CD-3_____ Lot Area ____66,708_ Acres___1.53_____

		REQUIRED/ ALLOWED	PROVIDED
	OPEN SPACE		
A.	Square feet of required Open Space as indicated on site plan: Lot Area = ___66,708__ s.f.x _____0____ % = _____ s.f.	0	4,074
B.	Square feet of parking lot open space required as indicated on site		
	Number of parking spaces __0___ x 10 s.f. parking space =	0	0
C.	Total square feet of landscaped open space required: A+B=	0	4,074
	LAWN AREA CALCULATION		
A.	Square feet of landscaped open space required	0	4,074
B.	Maximum lawn area (sod) permitted= ___50____ % x __4074__ s.f.	0	0
	TREES		
A.	Number of trees required per lot = 22 TREES x 1.53 =	34 (0 exit. To remain)	4
B.	% Natives required: Number of lot trees provided x 30% =	11	33
C.	% Low maintenance / drought and salt tolerant required: Number of trees provided x 50%=	17	33
D.	Street Trees (maximum average spacing of 20' o.c.) ____700_____ linear feet along street divided by 20'=	35	35
E.	Street tree species allowed directly beneath power lines: (maximum average spacing of 20' o.c.): _____0_____ linear feet along street divided by 20'=	0	0
	SHRUBS		
A.	Number of shrubs required: Sum of lot and street trees req x 12=	828	573
B.	% Native shrubs required: Number of shrubs provided x 50%=	414	424
	LARGE SHRUBS OR SMALL TREES		
A.	Number of large shrubs or small trees required: Number of required shrubs x 10%=	41	45
B.	% Native large shrubs or small trees required: Number of large shrubs or small trees provided x 50%=	21	45

N

PLANTING PLAN GROUND FLOOR

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

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DATE 6/18/2025

SCALE as noted

SHEET LA2-04

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205

MATCHLINE A

MATCHLINE A

MATCHLINE A

MATCHLINE B

MATCHLINE B

CLGU-10
BUAR-1
ERLI-40

BALA-2
NEEX-60
PSLI-30
MUCA-8
COBA-1

BENCH

POMA-35
POJU-9
CLGU-28
ARGL-240
COVV-1

RUEQ-18
COES-2
FIGI-24
RUEQ-15

QUVI-1
FIGI-9
PSLI-26
LIEG-270
THRA-17
BOSP-45

WASHINGTON AVE.

16th STREET

N

PLANTING PLAN ROOF FLOOR

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

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DATE 6/18/2025

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PLANT LIST-ROOF FLOOR

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TREES

KEY	PLANT NAME	QTY.	UT.	SIZE
BUAR	Bulnesia arborea ...Verawood	1	ea.	12' tall x 5' spread, 2" DBH , 4' CT min.
COES	Conocarpus erectus "Sericeus" ..Silver Buttonwood	1	ea.	12' tall x 6' spread, 3 trunks (totalling 3" min. DBH) lifted to tree form
COUV	Coccoloba uvifera ...Seagrape	1	ea.	18' tall x 16' spread, 6" DBH
QUVI	Quercus virginiana ...Live Oak	1	ea.	18' tall x 6' spread, 4" DBH

PALMS

KEY	PLANT NAME	QTY.	UT.	SIZE
COBA	Copernecia bailiana ..Bailey's Palm	1	ea.	8' tall overall, 1 GW
THRA	Thrinax radiata ...Florida Thatch Palm	1	ea.	6' tall OA

SHRUBS

KEY	PLANT NAME	QTY.	UT.	SIZE
BOSP	Bougainvillea spectabilis ..Great bougainvillea	45	ea.	3 gal cans
BROM	Bromeliad spp. ...Bromeliad spp.	9	ea.	variety to be selected
CLGU	Clusia gutifera ...Dwarf Pitch Apple	38	ea.	60" x 36"
FIGI	Ficus microcarpa "Green Island" ...Green Island Ficus	40	ea.	18"x18"
MUCA	Muhlenberghia capillaris ...Muhly Grass	8	ea.	18" x 18"
POMA	Podocarpus macrophyllus ...Podocarpus	35	ea.	48" x 24"

PLANT LIST-ROOF FLOOR

SHRUBS

PSLI	Psychotria ligustrifolia ..Dwarf Coffee	56	ea.	24" x 24"
RUEQ	Russelia equisetiformis ..Firecracker Plant	33	ea.	18" x 18"

BAMBOO

KEY	PLANT NAME	QTY.	UT.	SIZE
BALA	Bambusa lako ..Tropical Black Bamboo	2	ea.	18' tall overall, 6-7 culms per clump

GROUNDCOVERS

KEY	PLANT NAME	QTY.	UT.	SIZE
ARGL	Arachis glabrata ...Perennial Peanut	240	ea.	1 gal cans, full
ERLI	Ernodea littoralis ..Golden Creeper	40	ea.	18" x 18"
LIEG	Liriope muscari 'Evergreen Giant' ...Evergreen Giant Liriope	270	ea.	1 gallon cans
NEEX	Nephrolepis exaltata "Bistoniensis" ...Boston Fern	60	ea.	12" x 12"

OTHER

Green Roof Soil Mixes From Atlas Soil

	Roof Planter Soil Mix 25% Coarse Sand 25% Medium Sand 20% Pine Bark 20% Florida Peat 8% Rice Rock 2% Marl	as req.	c.y.	to backfill all planters
	Shredded Melaleuca Mulch	as req.	c.y.	3" layer in all shrub beds

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N

1600 WASHINGTON AVENUE

1601 DREXEL & 1600 WASHINGTON AVENUE
MIAMI BEACH, FL

PLANTING LIST ROOF FLOOR

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

DATE 6/18/2025
SCALE as noted
SHEET LA2-06

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205

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 (FNGLA) as a Certified Landscape Contractor. Any pruning to be supervised by an Arborist, certified by the International Society of Arboriculture (ISA) and licensed in County where work is performed.

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. If plant sizes of local codes and ordinances require larger plant material than specified on plans, then they shall supercede the sizes on the plan. When plant sizes are specified as a range of size, installed materials shall average 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. CIRCLING 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 un-filled holes in a manner appropriate in 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 all plants, weeding, mulching, pest and disease control, tightening and repairing of guys, repair of braces, 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. Re-setting or straightening trees and palms:
The Contractor shall re-set and/or straighten trees and palms as required at 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 unworkman-like 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 Sodded 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 or 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 8-6-8, 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 as specified on the Plant List.

2.5 ROOT BARRIER MATERIAL
A. Root barrier material shall be 24" deep polypropolylene panels by DeepRoot or approved equal.
B. Install per details in the plans.

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REGISTERED LANDSCAPE ARCHITECT ERIC GARDNER LA 0001569 STATE OF FLORIDA
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PLANTING SPECS &DETAILS
DATE 6/18/2025
SCALE as noted
SHEET LA3-01

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205

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 infected with weed and/or grass growth, a systemic herbicide 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, sod 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 shrub, sod, 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 sod within two (2) days after installing after 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 three (3) 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 sod 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 edge 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 sod.

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 systemic herbicide prior to beginning soil preparation.

2. In all shrub and groundcover beds, excavate and backfill soil as described in "Plant List(s)". If no specific preparation is noted, prepare soil as described below 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 per plant list unless otherwise stated. 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 per plant list into the existing soil to a depth of 18 inches unless otherwise stated. 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 sod areas, spread a 2" deep layer of lawn sand prior to sodding. Remove all debris and rocks and pebbles larger than 2 inchs 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 innoculant 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 ball. 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.

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1 07.10.2025 REVIEW COMMENTS

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1600 WASHINGTON AVENUE

1601 DREXEL & 1600 WASHINGTON AVENUE
MIAMI BEACH, FL

PLANTING SPECS &DETAILS

DATE 6/18/2025
SCALE as noted
SHEET LA3-02

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205

DETAIL A

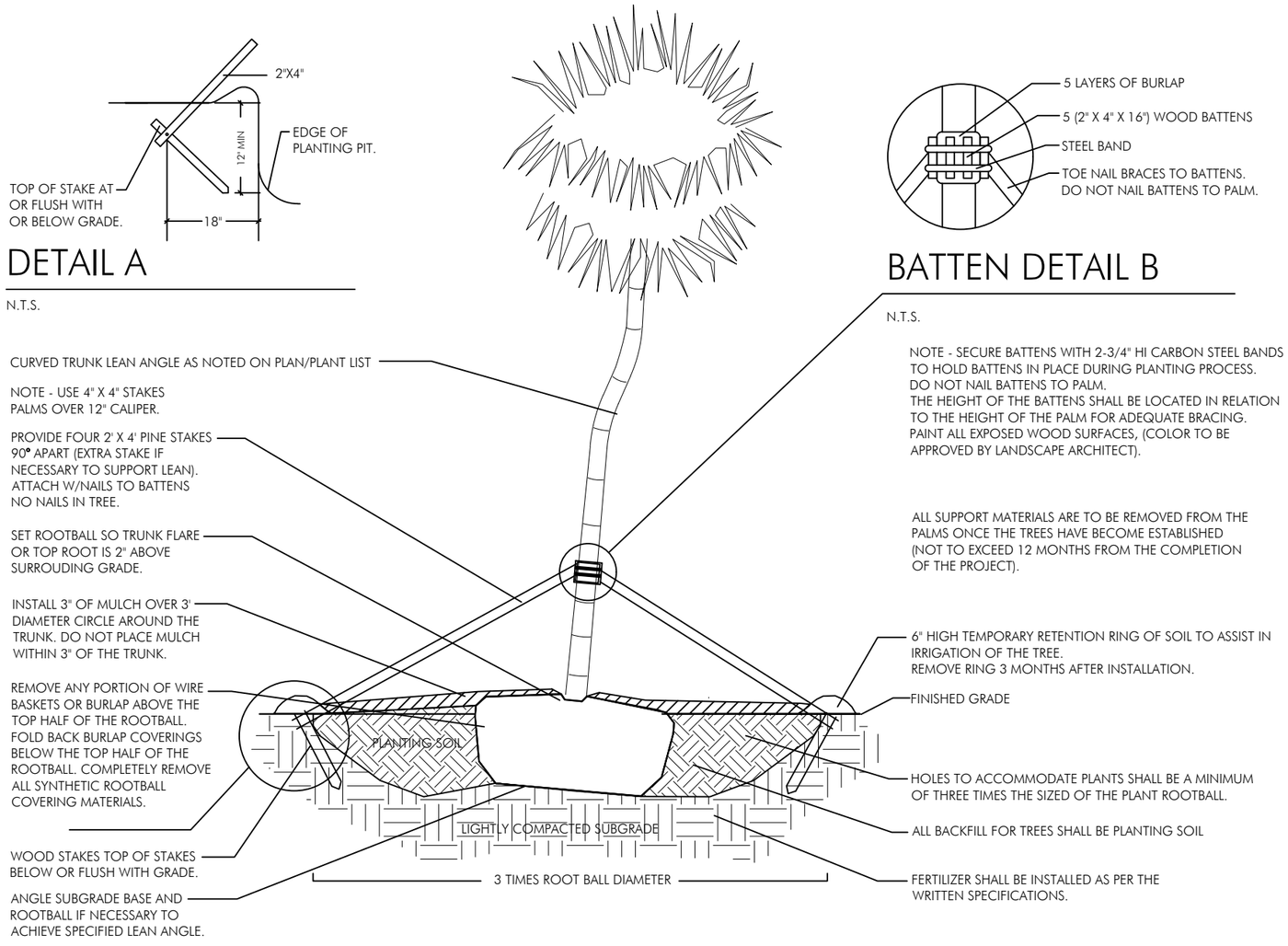
N.T.S.

BATTEN DETAIL B

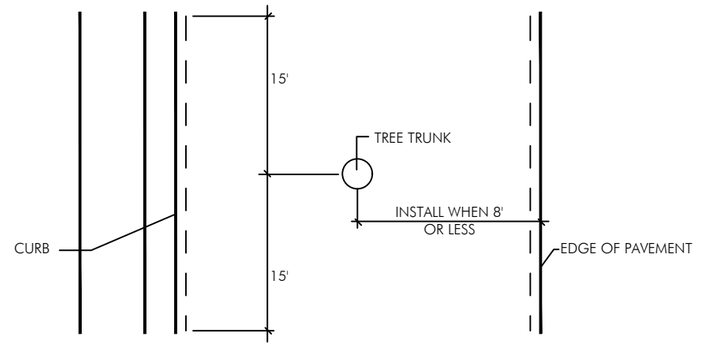
N.T.S.

NOTE - SECURE BATTENS WITH 2-3/4" HI CARBON STEEL BANDS TO HOLD BATTENS IN PLACE DURING PLANTING PROCESS. DO NOT NAIL BATTENS TO PALM.
THE HEIGHT OF THE BATTENS SHALL BE LOCATED IN RELATION TO THE HEIGHT OF THE PALM FOR ADEQUATE BRACING. PAINT ALL EXPOSED WOOD SURFACES, (COLOR TO BE APPROVED BY LANDSCAPE ARCHITECT).

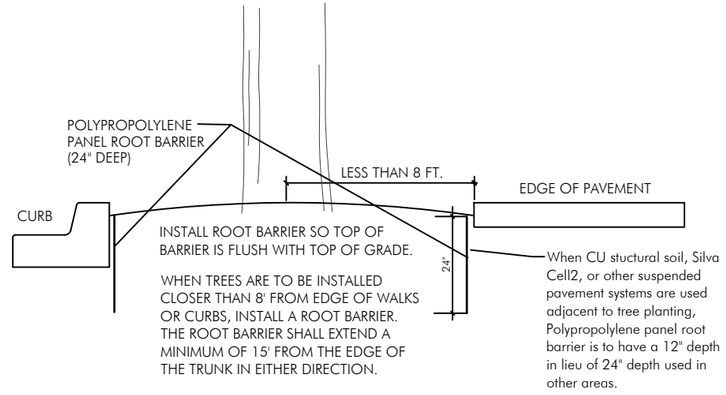
ALL SUPPORT MATERIALS ARE TO BE REMOVED FROM THE PALMS ONCE THE TREES HAVE BECOME ESTABLISHED (NOT TO EXCEED 12 MONTHS FROM THE COMPLETION OF THE PROJECT).



PLANTING & BRACING DETAIL FOR LEANING/CROOKED PALMS



PLAN VIEW



ROOT BARRIER INSTALLATION DETAIL

N.T.S.

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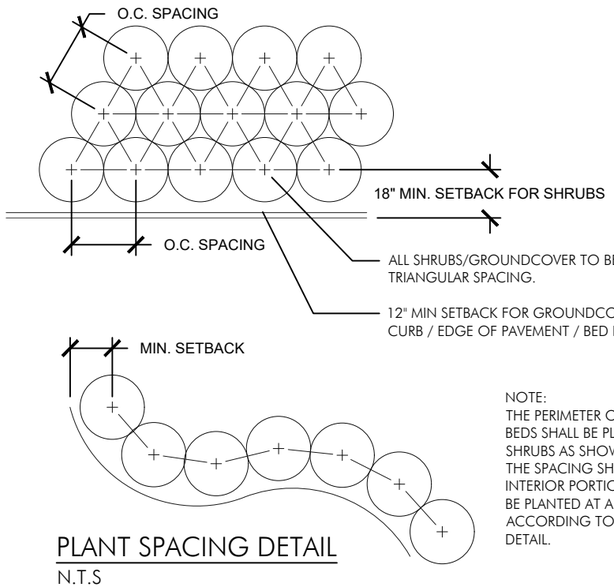
PLANTING
SPECS &DETAILS

DATE 6/18/2025
SCALE as noted
SHEET LA3-03

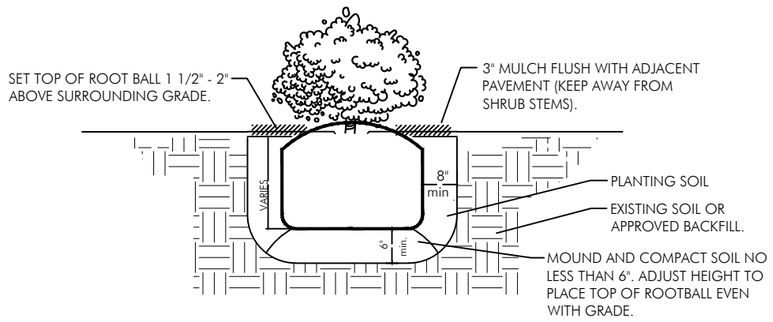
Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205



NOTE:
THE PERIMETER OF ALL CURVED PLANTING BEDS SHALL BE PLANTED WITH ROW OF SHRUBS AS SHOWN IN THE PLANT AND AT THE SPACING SHOWN IN THE PLANT LIST. INTERIOR PORTIONS OF EACH BED SHALL BE PLANTED AT APPROPRIATE SPACING ACCORDING TO THIS PLANT SPACING DETAIL.

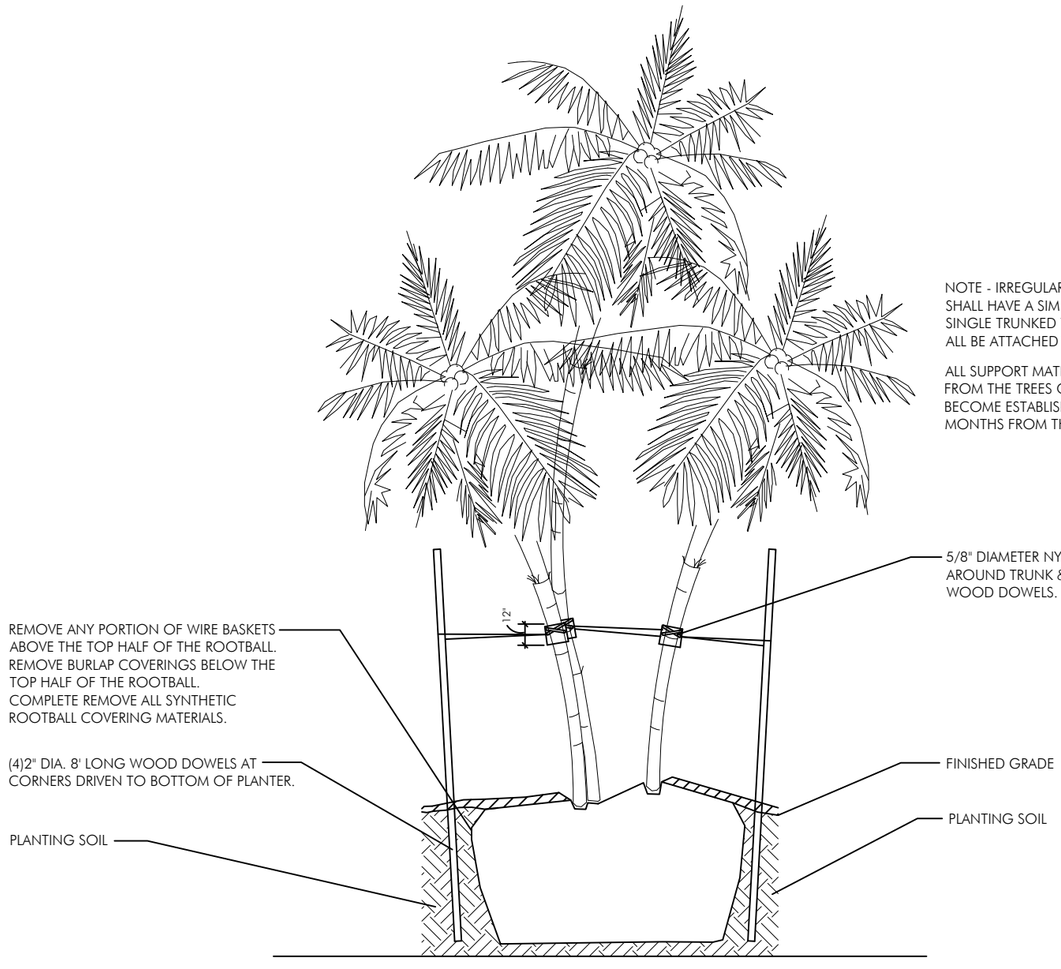
PLANT SPACING DETAIL

N.T.S



SHRUB INSTALLATION DETAIL

N.T.S.



MULTI-TRUNKED TREE/PALM BRACING DETAIL

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KENNETH ERIC GARDNER — LANDSCAPE ARCHITECT — LA 0001569 — STATE OF FLORIDA

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PLANTING SPECS &DETAILS

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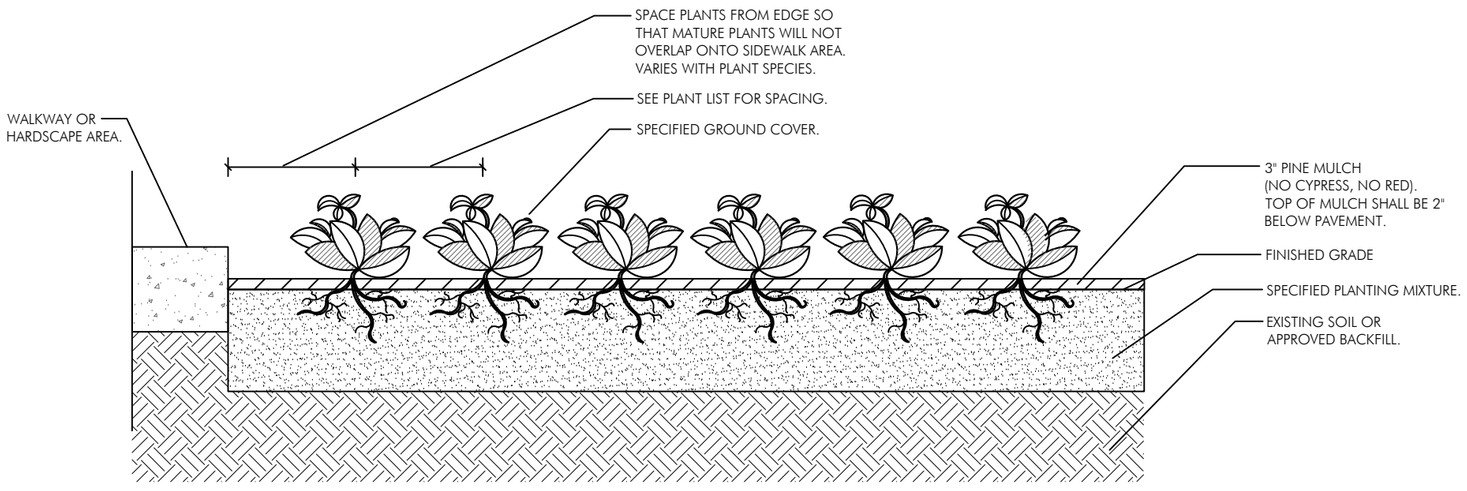

GROUND COVER PLANTING DETAIL

N.T.S.

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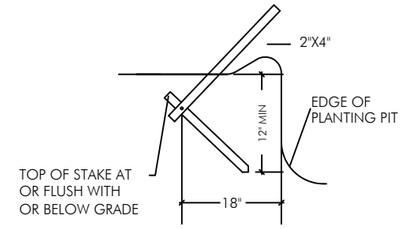
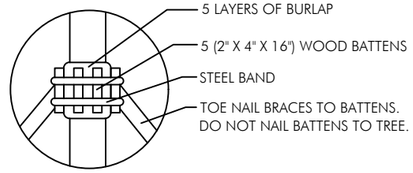
Kiehl Semler FL LA #6667205



DETAIL A

N.T.S.



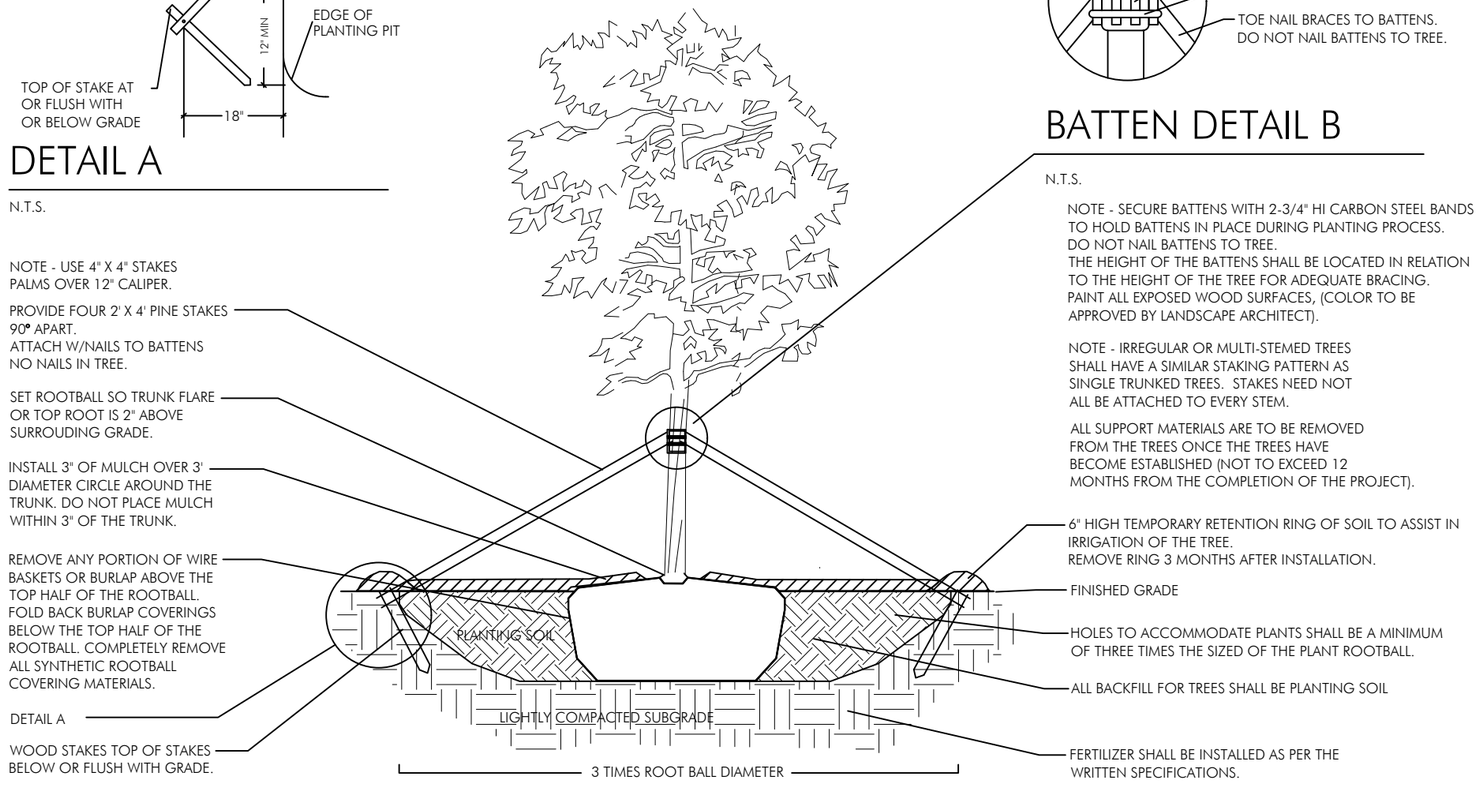
BATTEN DETAIL B

N.T.S.

NOTE - SECURE BATTENS WITH 2-3/4" HI CARBON STEEL BANDS TO HOLD BATTENS IN PLACE DURING PLANTING PROCESS. DO NOT NAIL BATTENS TO TREE.
THE HEIGHT OF THE BATTENS SHALL BE LOCATED IN RELATION TO THE HEIGHT OF THE TREE FOR ADEQUATE BRACING. PAINT ALL EXPOSED WOOD SURFACES, (COLOR TO BE APPROVED BY LANDSCAPE ARCHITECT).

NOTE - IRREGULAR OR MULTI-STEMED TREES SHALL HAVE A SIMILAR STAKING PATTERN AS SINGLE TRUNKED TREES. STAKES NEED NOT ALL BE ATTACHED TO EVERY STEM.

ALL SUPPORT MATERIALS ARE TO BE REMOVED FROM THE TREES ONCE THE TREES HAVE BECOME ESTABLISHED (NOT TO EXCEED 12 MONTHS FROM THE COMPLETION OF THE PROJECT).



PLANTING & BRACING DETAIL OVER 3 1/2" CALIPER

N.T.S.

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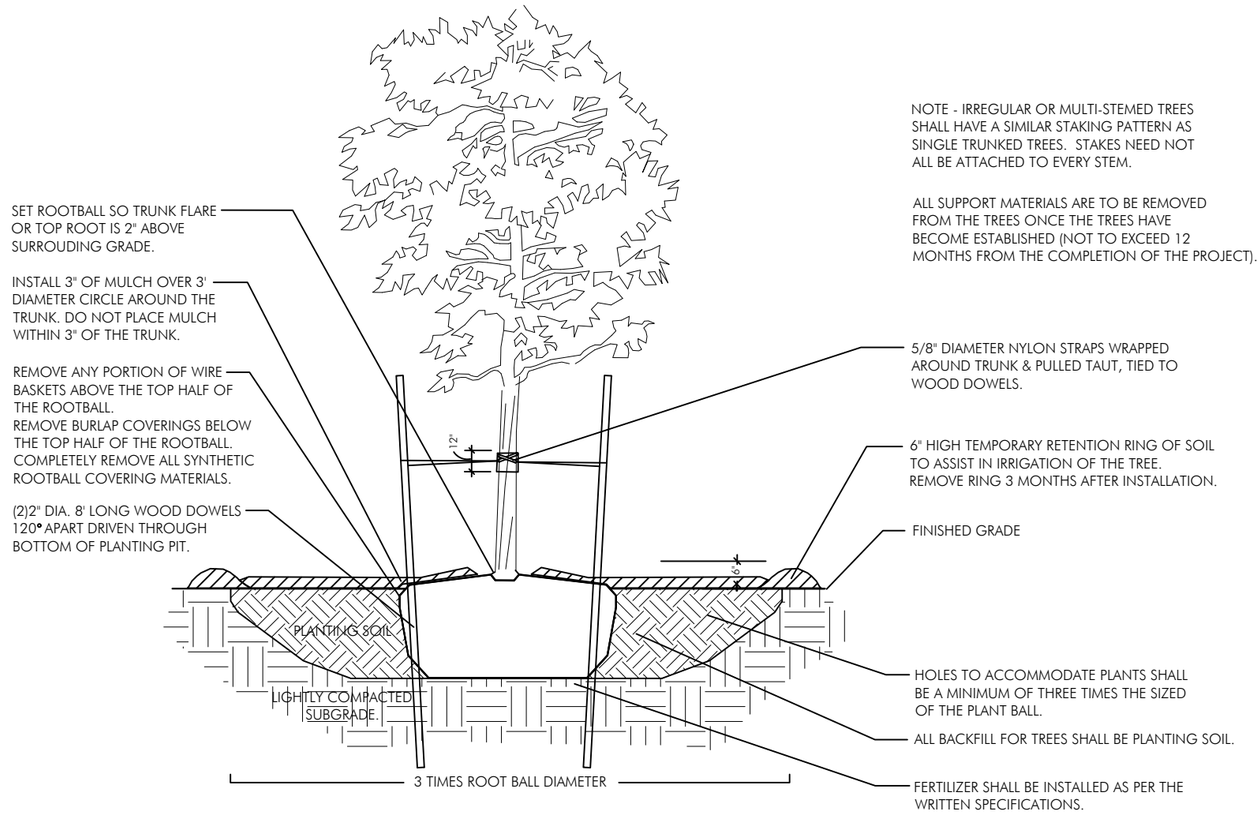
Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205



PLANTING & BRACING DETAIL UNDER 3 1/2" CALIPER

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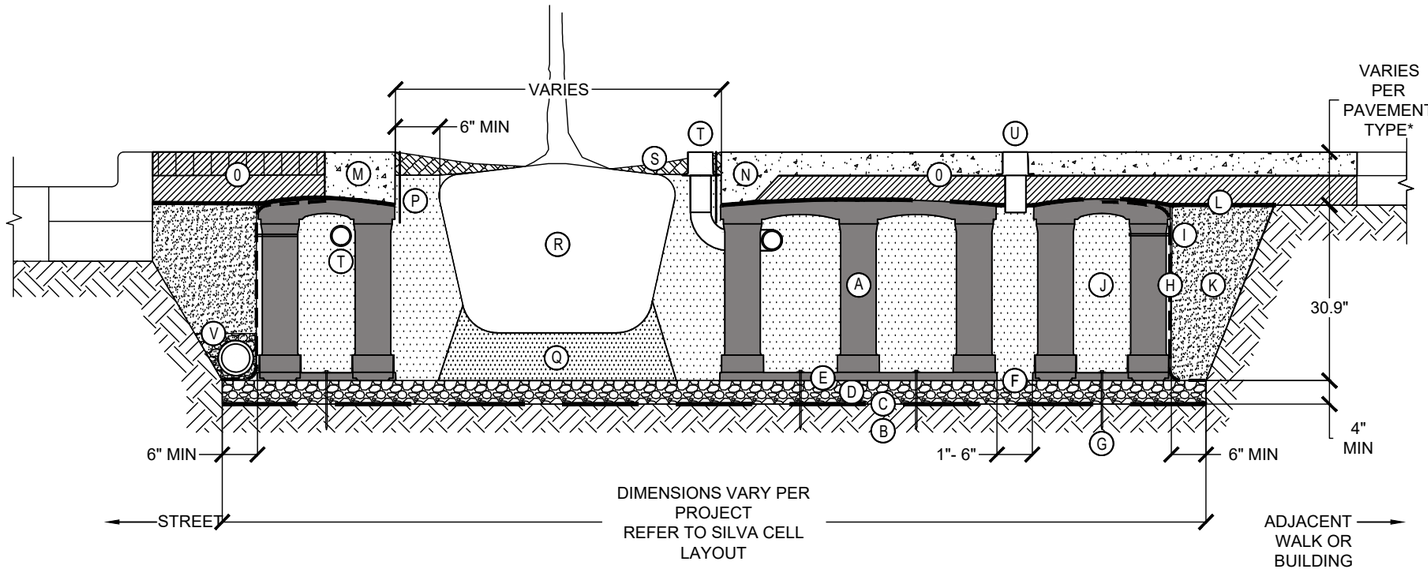

SILVA CELL 2X INSTALLATION DETAIL

N.T.S.

KEY PLAN

- (A) SILVA CELL SYSTEM (DECK, BASE, AND POSTS)
- (B) SUBGRADE, COMPACTED
- (C) GEOTEXTILE FABRIC, PLACED ABOVE SUBGRADE
- (D) 4" MIN AGGREGATE SUB BASE, COMPACTED TO 95% PROCTOR
- (E) SILVA CELL BASE SLOPE, 10% MAX
- (F) 1" TO 6" SPACING BETWEEN SILVA CELLS AT BASE
- (G) ANCHORING SPIKES, CONTACT DEEPROOT FOR ALTERNATIVE
- (H) GEOGRID, WRAPPED AROUND PERIMETER OF SYSTEM, WITH 6" TOE (OUTWARD FROM BASE) AND 12" EXCESS (OVER TOP OF DECK)
- (I) CABLE TIE, ATTACHING GEOGRID TO SILVA CELL AT BASE OF UPPER LEG FLARE, AS NEEDED
- (J) PLANTING SOIL, PER PROJECT SPECIFICATIONS, PLACED IN LIFTS AND WALK-IN COMPACTED TO 75-85% PROCTOR
- (K) COMPACTED BACKFILL, PER PROJECT SPECIFICATIONS
- (L) GEOTEXTILE FABRIC TO EDGE OF EXCAVATION
- (M) RIBBON CURB AT TREE OPENING (TO BE USED WITH PAVERS OR ASPHALT)
- (N) THICKENED EDGE AT TREE OPENING (TO BE USED WITH CONCRETE)
- (O) PAVEMENT AND AGGREGATE BASE PER PROJECT *

*MINIMUM PAVEMENT PROFILE OPTIONS TO MEET H-20 LOADING

PAVEMENT	+ AGGREGATE BASE COURSE
4" CONCRETE	+ 4" AGGREGATE
3" PAVER	+ 12" AGGREGATE
4" ASPHALT	+ 12" AGGREGATE
2.6" PAVER	+ 5" CONCRETE

- (P) DEEPROOT ROOT BARRIER, 12" OR 18", DEPTH DETERMINED BY THICKNESS OF PAVEMENT SECTION, INSTALL DIRECTLY ADJACENT TO CONCRETE EDGE RESTRAINT
- (Q) PLANTING SOIL BELOW ROOT BALL, COMPACTED WELL TO PREVENT SETTLING
- (R) ROOT BALL
- (S) TREE OPENING TREATMENT, PER PROJECT SPECIFICATIONS
- (T) DEEPROOT WATER AND AIR VENT, ROOTBALL, OPTIONAL; WHEN REQUIRED
- (U) DEEPROOT WATER AND AIR VENT, OPTIONAL; WHEN REQUIRED
- (V) UNDERDRAIN SYSTEM, OPTIONAL; WHEN REQUIRED (LOCATION AND DETAILS BY OTHERS)

NOTES

1. EXCAVATION SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE HEALTH AND SAFETY REGULATIONS
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS
3. PROVIDE SUPPLEMENTAL IRRIGATION
4. DO NOT SCALE DRAWINGS

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REVISIONS

1	07.10.2025	REVIEW COMMENTS

REGISTERED LANDSCAPE ARCHITECT KENNETH ERIC GARDNER LA 0001569 STATE OF FLORIDA

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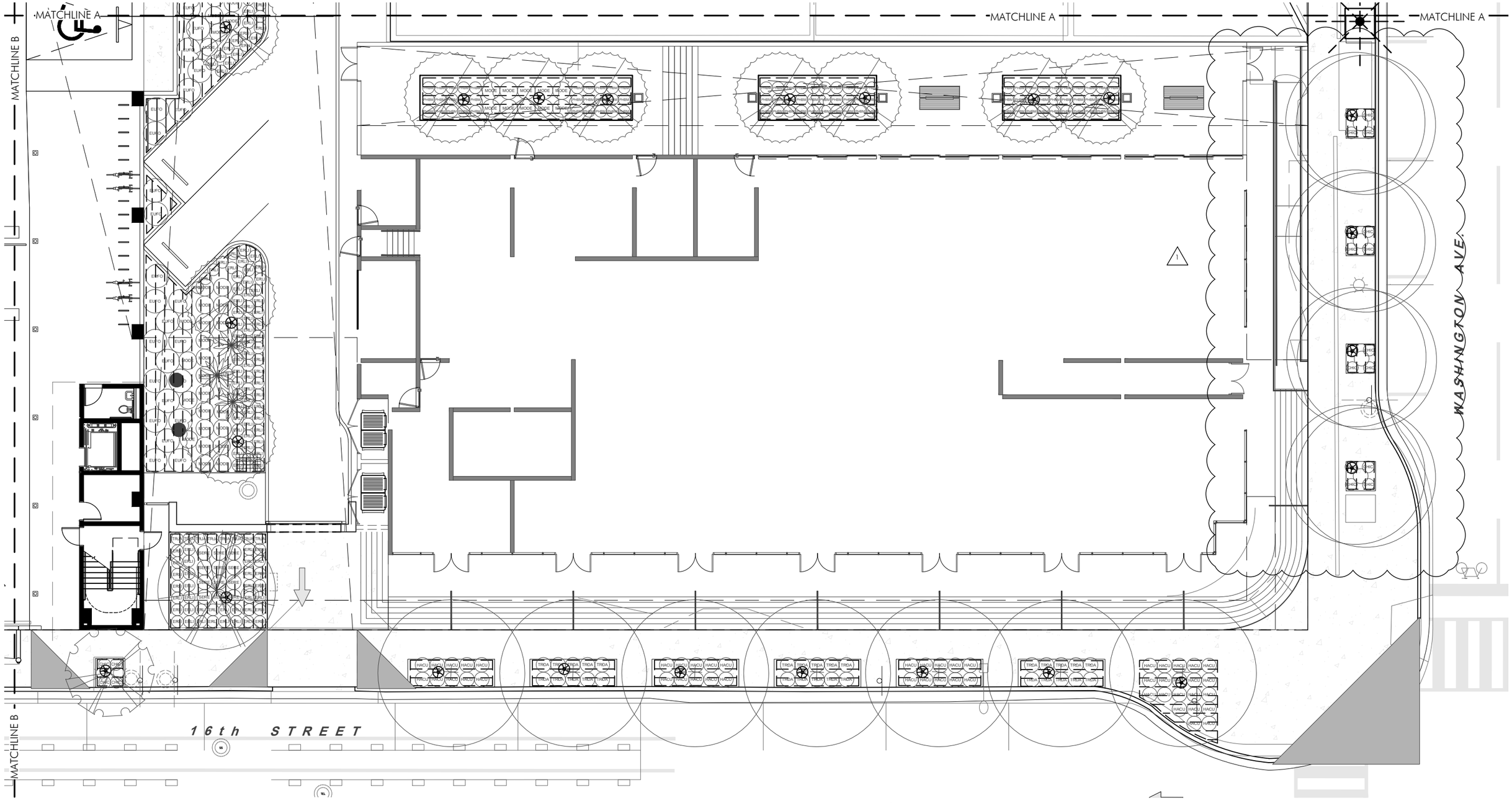
1600 WASHINGTON AVENUE

1601 DREXEL & 1600 WASHINGTON AVENUE
MIAMI BEACH, FL

PLANTING SPECS &DETAILS

DATE 6/18/2025
SCALE as noted
SHEET LA3-08

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205



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IRRIGATION PLAN GROUND FLOOR

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

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ASSOCIATED LANDSCAPE CONTRACTORS OF AMERICA
KENNETH ERIC GARDNER
LA 0001569
STATE OF FLORIDA
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Date: 2025.07.11 16:58:08 -04'00'

1600 WASHINGTON AVENUE

1601 DREXEL & 1600 WASHINGTON AVENUE

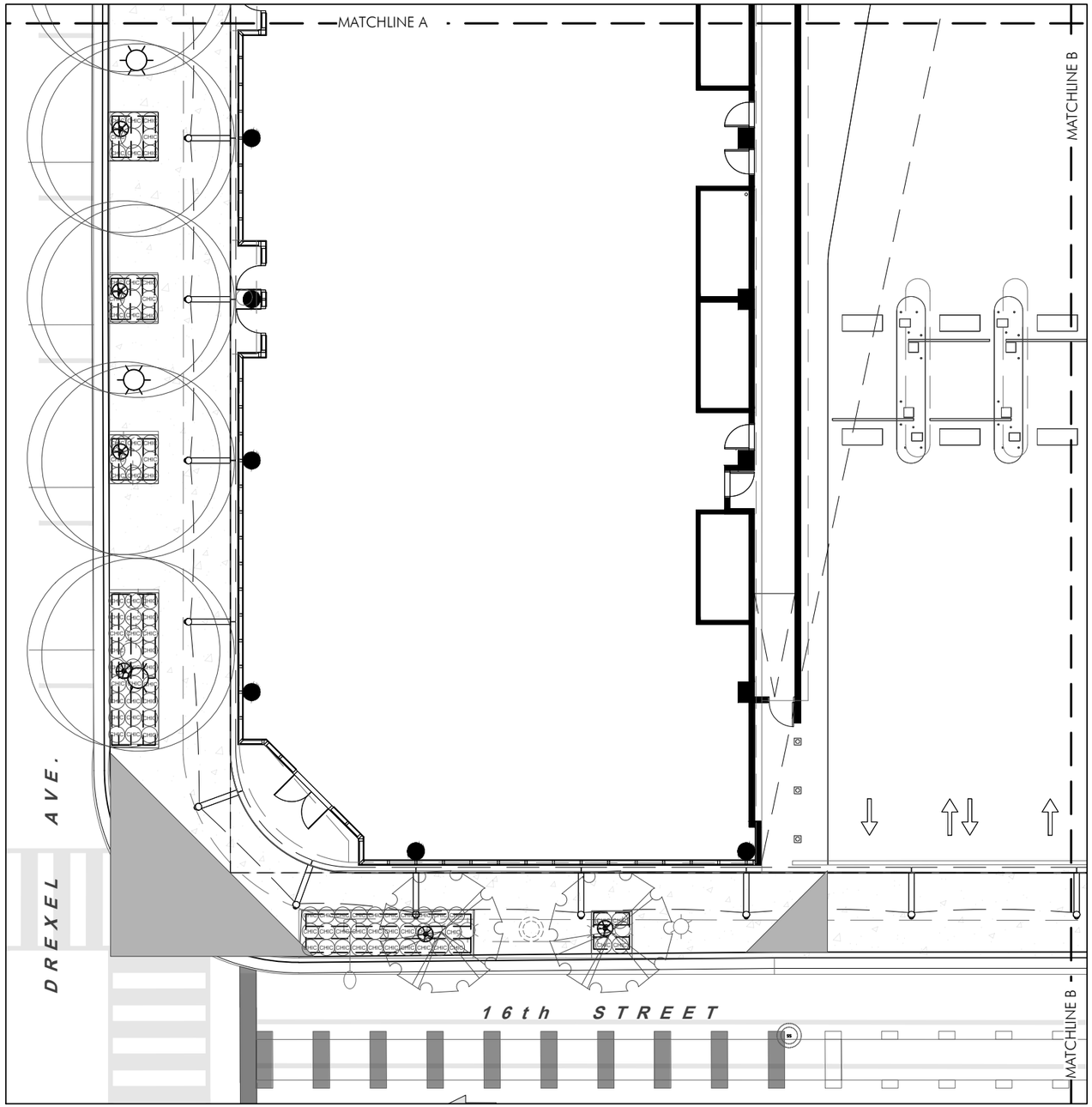
MIAMI BEACH, FL

DATE 6/18/2025

SCALE as noted

SHEET LA4-01

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205



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
- - - -	Bubbler Zone Piping	as required
═══	PVC sleeves shall be Class 200 PVC (sized double the width of the pipe within, installed wherever pipe runs under hardscape)	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 RAINBIRD ____ Series Controller	1
△	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 1" Inline Pressure Regulator (PSI-M40X-100)(drip zones not to exceed 40psi max)	as required
----------	RAINBIRD XFS Subsurface Dripperline XFS-09-12-500/250/100 Air/Vaccum Relief Valves Kit (3/4" Air relief valve/ Easy Fit Compression Tee/ and Flush Cap)	as required
▪	Residential ____ Flow Control Zone Kit (___-___-___-___) (_#_ gpm) (__ Valve w/ ___ Filter)	1
⋈	RAINBIRD 3-RC Quick Coupler Valve	1
▼▼▼	PVC Supply Header for dripplerline Class 200 PVC	as required
⊛	RAINBIRD Xeri-Bubbler UXB-360-1032 (.6 gpm)	#
△	RAINBIRD Xeri-Spray Adjustable mister 360 ADJMST (.1 gpm) (install into dripline with Xeri-bug drip emitters for spray into bromeliad cups)	#

LATERAL PIPE SIZING

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

CLASS 200 PVC PIPE SIZING CHART

SIZE	GPM
¾"	0-8 GPM
1"	8-14 GPM
1¼"	14-24 GPM
1½"	24-32 GPM
2"	32-50 GPM
2½"	50-75 GPM
3"	60-110 GPM
4"	110-190 GPM

N

IRRIGATION PLAN GROUND FLOOR

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

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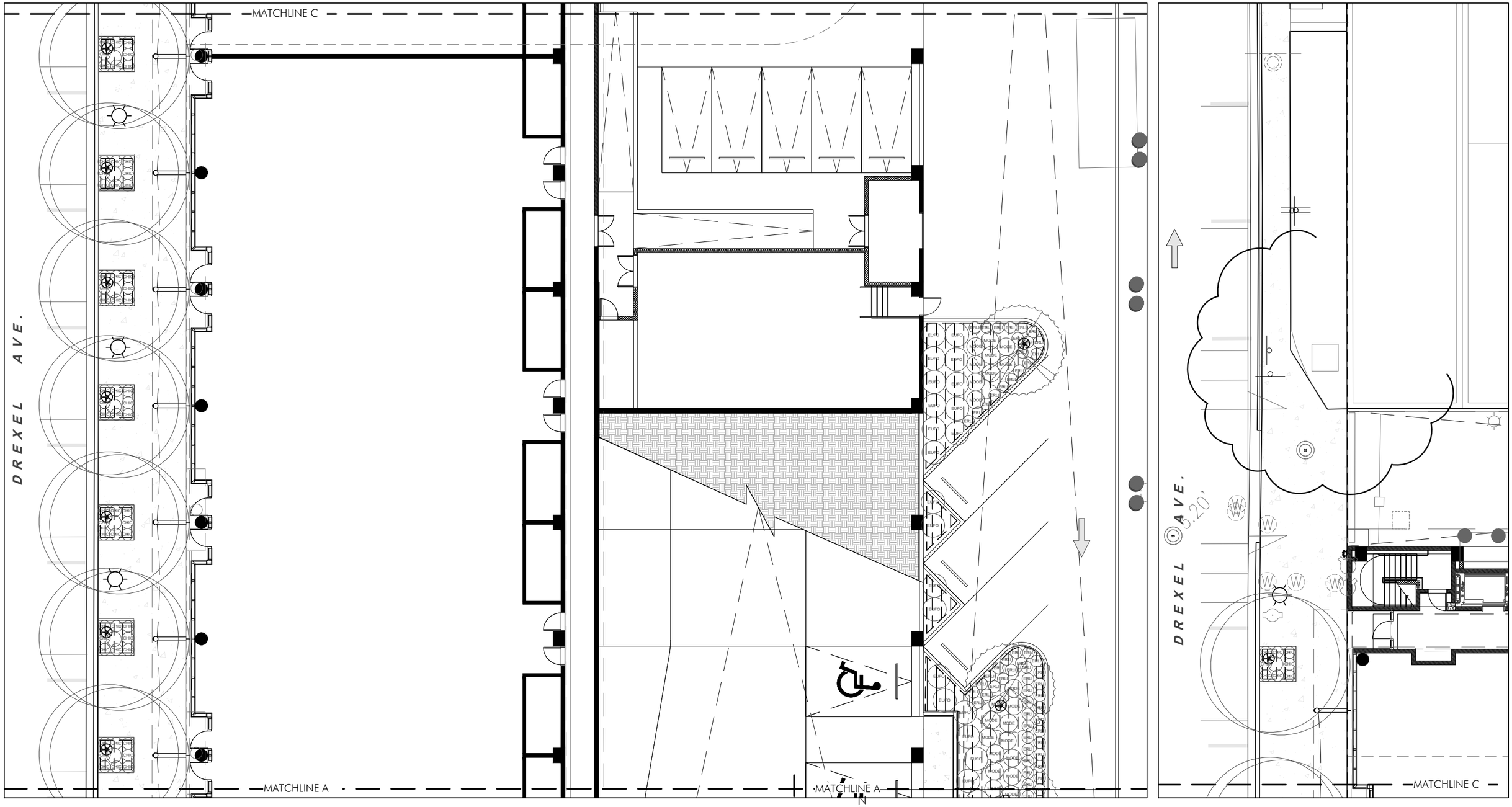
MIAMI BEACH, FL

DATE 6/18/2025
SCALE as noted
SHEET LA4-02

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205



IRRIGATION PLAN GROUND FLOOR

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

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KEN GARDNER LANDSCAPE ARCHITECT ERIC SEMLER LA 0001569 STATE OF FLORIDA

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MIAMI BEACH, FL

DATE 6/18/2025
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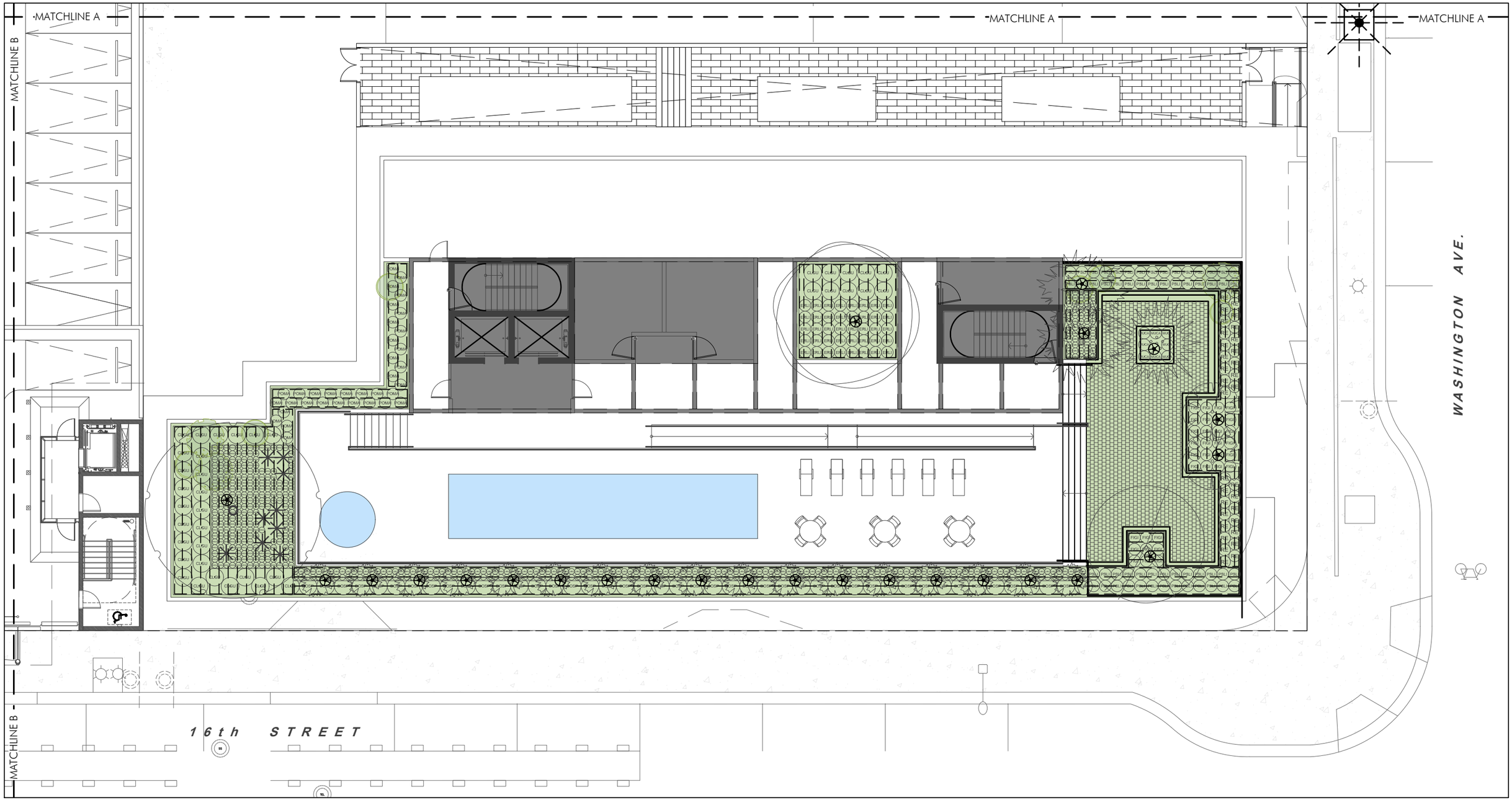
SHEET LA4-03

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205



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IRRIGATION PLAN ROOF FLOOR

64' 32' 16' 0

SCALE: 1/16" = 1'-0"

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MIAMI BEACH, FL

DATE 6/18/2025
SCALE as noted
SHEET LA4-04

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205

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
~~	Bubbler Zone Piping	as required
——— ———	PVC sleeves shall be Class 200 PVC (sized double the width of the pipe within, installed wherever pipe runs under hardscape)	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 RAINBIRD ____ Series Controller	1
△	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

KEY	ITEM	QTY.
▼	Rainbird 1" Inline Pressure Regulator (PSI-M40X-100)(drip zones not to exceed 40psi max)	as required
----------	RAINBIRD XFS Subsurface Dripperline XFS-09-12-500/250/100 Air/Vaccum Relief Valves Kit (3/4" Air relief valve/ Easy Fit Compression Tee/ and Flush Cap)	as required
◪	Residential ____ Flow Control Zone Kit (___-___-___-___) (_#_ gpm) (__ Valve w/ ___ Filter)	1
⋈	RAINBIRD 3-RC Quick Coupler Valve	1
▼▼▼	PVC Supply Header for dripplerline Class 200 PVC	as required
⊛	RAINBIRD Xeri-Bubbler UXB-360-1032 (.6 gpm)	#
△	RAINBIRD Xeri-Spray Adjustable mister 360 ADJMST (.1 gpm) (install into dripline with Xeri-bug drip emitters for spray into bromeliad cups)	#

LATERAL PIPE SIZING

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

CLASS 200 PVC PIPE SIZING CHART

SIZE	GPM
¾"	0-8 GPM
1"	8-14 GPM
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1½"	24-32 GPM
2"	32-50 GPM
2½"	50-75 GPM
3"	60-110 GPM
4"	110-190 GPM

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KENNETH ERIC GARDNER — FLORIDA LANDSCAPE ARCHITECT — FLA.0001569 — STATE OF FLORIDA

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MIAMI BEACH, FL

IRRIGATION PLAN
ROOF FLOOR

DATE 6/18/2025
SCALE as noted
SHEET LA4-05

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205

GENERAL NOTES:

1. 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.

2. Contractor shall coordinate with General Contractor or other pertinent Contractors on the job to insure that sleeves are provided and installed under hard surfaces to allow access to all areas to be irrigated. All sleeves shall be constructed of Class 200 PVC. Bury all sleeves a minimum of 18" below the surface. Sleeve to be double the size if the pipe running through it. Sleeve shall extend 24" past the edge of pavement into the area to be irrigated.

3. GUARANTEE: The irrigation system shall be guaranteed for a minimum of one calendar year from the time of final acceptance.

4. 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.

5. 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) sizes of material; (3) location; and (4) quantities.

6. 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.

7. 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.

8. 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.

9. The irrigation system shall provide 100% coverage with a minimum of 90% overlap of water spray.

10. 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.

11. Irrigation mainline shall be made of Class 200 PVC and all laterals shall be Class 200 PVC, except flexible PVC (or Toro funny pipe) for flexible swing joint and Schedule 40 PVC risers for spray heads in shrub areas. Schedule 80 galvanized steel pipe is to be used 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 and laterals 18" min. below surface. Depth shall be measured to top of pipe.

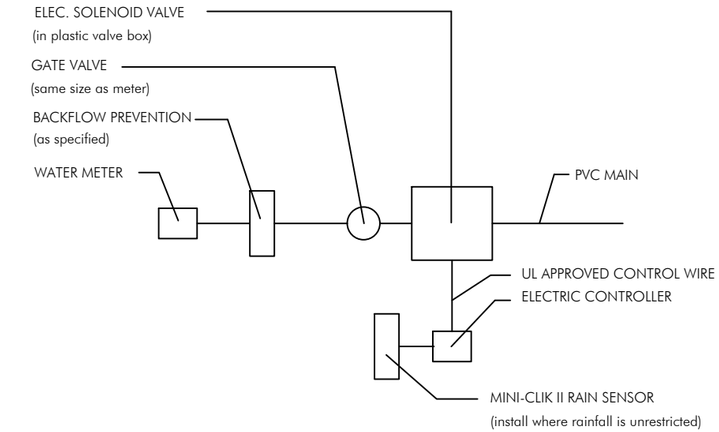
12. Keep pop-up sprinkler heads a minimum of 8" from edges of pavement and curbing, and heads on risers a minimum of 18", or as indicated in the pans.

13. 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.

14. 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 U.L. approved underground direct burial cable and shall be continuous with no splices from controller to solenoid valve.

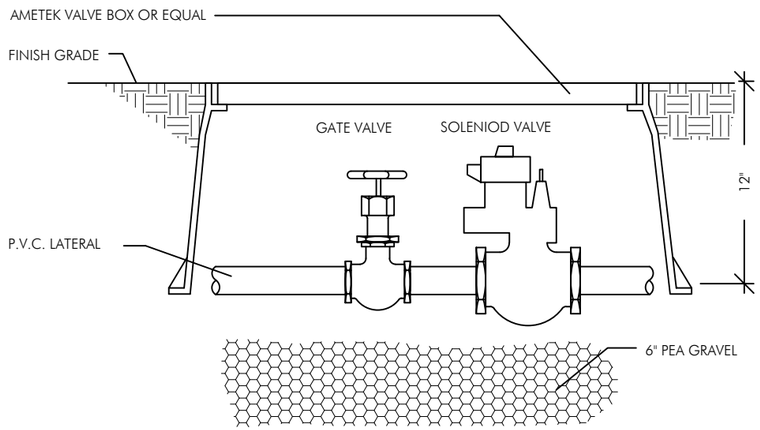
15. Valve locations are schematic and shall be adjusted in the field. Each valve shall be in a separate valve box (10" x 16") min.). When grouping valve boxes in grass or groundcover areas, set boxes a minimum of 12" apart to allow grass or groundcover to grow between them. When possible, hide valve 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.

16. 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 remains in the lines. The mains shall be filled with water and all outlets shall be capped 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.



CONNECTION TO METER DETAIL

N.T.S.



TYPICAL SOLENOID VALVE ASSEMBLY

N.T.S.

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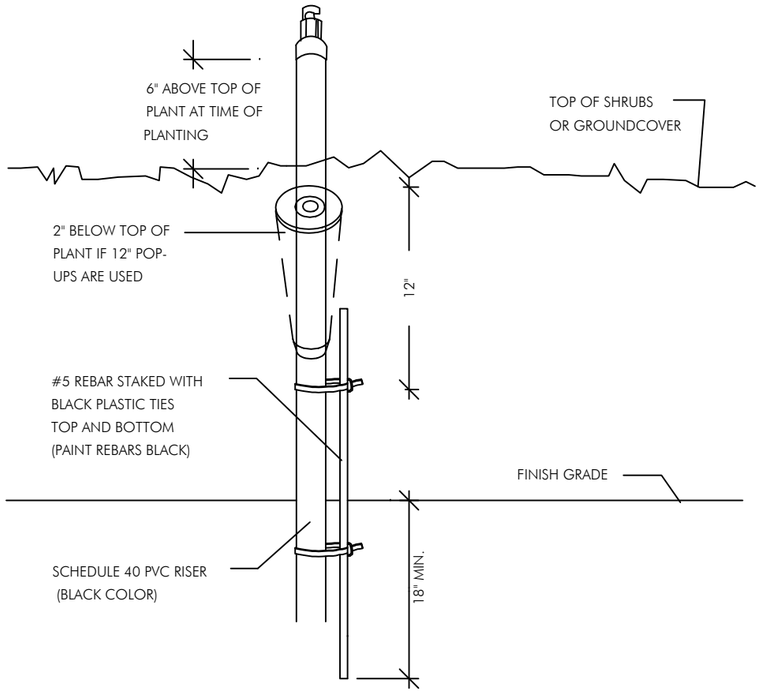
IRRIGATION SPECS &DETAILS

DATE 6/18/2025
SCALE as noted
SHEET LA5-01

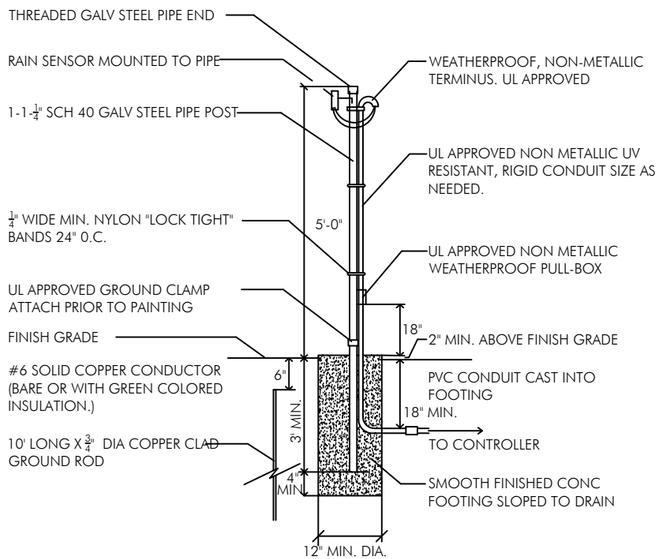
Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205



SPRINKLER ON RISER DETAIL FOR SHRUB AREAS

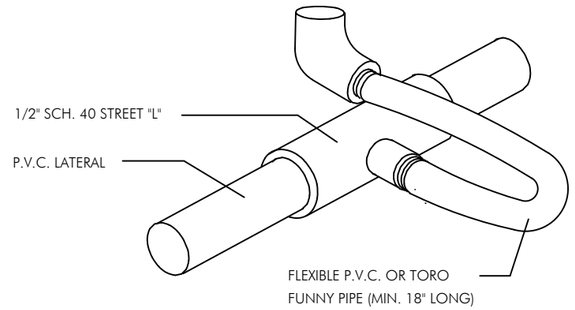
N.T.S.

NOTE:
ALL WIRE CONNECTIONS SHALL BE APPROVED WATERTIGHT CONNECTIONS.
FINISH ENTIRE ASSEMBLY, EXCEPT FOR EQUIPMENT, WITH FLAT BLACK ACRYLIC ENAMEL PAINT.
PRIME METALLIC SURFACES WITH ZINC CHROMATE PRIOR TO FINISHING.



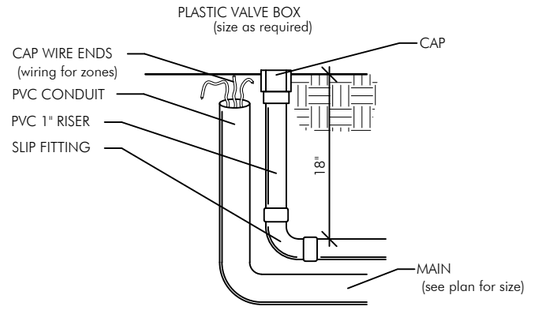
RAIN SENSOR DETAIL

N.T.S.



FLEXIBLE SWING JOINT DETAIL

N.T.S.



DETAIL OF STUB-OUT FOR FUTURE USE

N.T.S.

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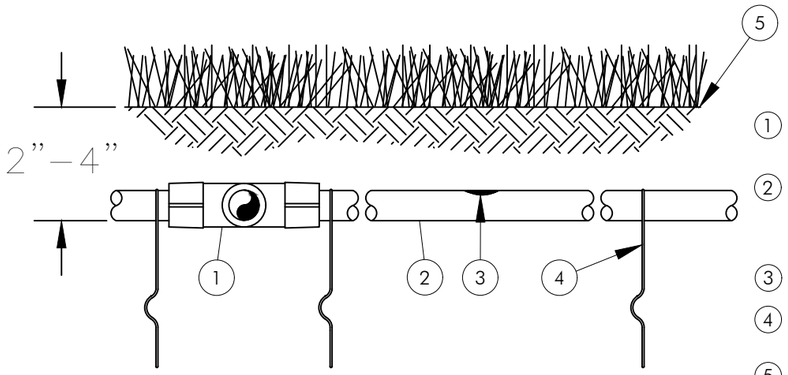
MIAMI BEACH, FL

IRRIGATION
SPECS &DETAILS

DATE 6/18/2025
SCALE as noted
SHEET LA5-02

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205

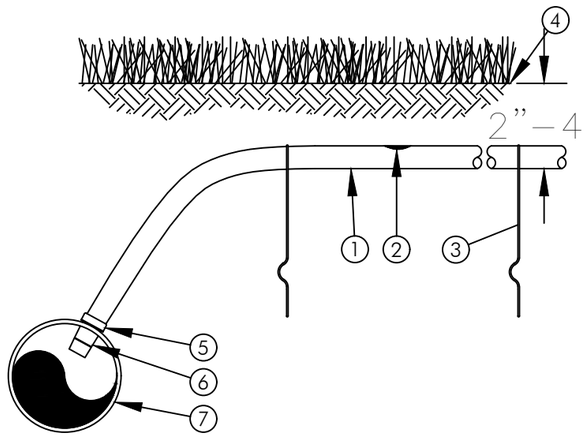


1. EASY FIT COMPRESSION TEE: RAIN BIRD MDCFTEE
2. SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
3. INLINE DRIP EMITTER
4. TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (TYPICAL)
5. TURF/FINISH GRADE OR SHRUB BED WITH MULCH

NOTES:
1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, F0UR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. 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.
3. INSERTION PLOW AND TRENCHED INSTALLATIONS DO NOT REQUIRE TIE DOWN STAKES.

XFS SUBSURFACE DRIPLINE BURIAL

N.T.S.



1. SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFSP 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 $1\frac{1}{2}$" IN DIAMETER DEPTH PER SPECIFICATION

NOTES:
1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, F0UR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. 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.
3. INSERTION PLOW AND TRENCHED INSTALLATIONS DO NOT REQUIRE TIE DOWN STAKES.

XFS SUBSURFACE DRIPLINE ADAPTER FOR PVC

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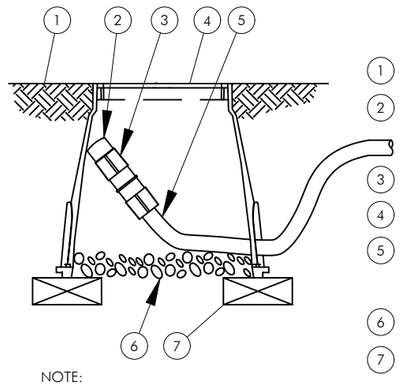

1. FINISH GRADE
2. FLUSH CAP FOR EASY FIT COMPRESSION FITTINGS: POTABLE:RAIN BIRD MDCFCAP NON-POTABLE: RAIN BIRD MDCFPCAP
3. EASY FIT COUPLING: RAIN BIRD MDCFCOUP
4. SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
5. SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
6. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
7. BRICK (1 OF 2)

NOTE:
1. ALLOW A MINIMUM OF 6-INCHES OF DRIPLINE TUBING IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

XFS DRIPLINE FLUSHPOINT WITH COMPRESSION FITTINGS

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REVISIONS

1	07.10.2025	REVIEW COMMENTS

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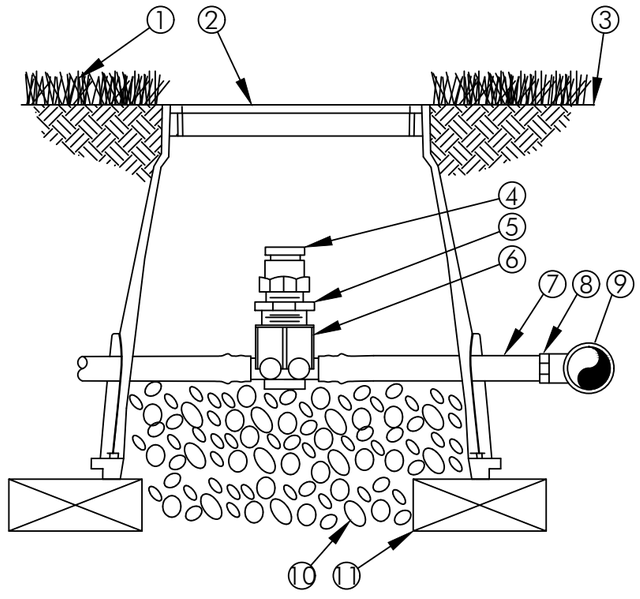
IRRIGATION
SPECS &DETAILS

DATE 6/18/2025
SCALE as noted
SHEET LA5-03

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205



1. TURF GRASS
2. SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
3. FINISH GRADE
4. ½" AIR RELIEF VALVE: RAIN BIRD ARV050 TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
5. ½" X ¾" PVC REDUCER BUSHING
6. BARB X FEMALE THREAD CONNECTOR: RAIN BIRD XFD-TFA FITTING
7. ½" BLANK DRIPLINE TUBING: RAIN BIRD XF SERIES
8. BARB X MALE THREAD CONNECTOR: RAIN BIRD XFF-MA FITTING
9. PVC TEE CONNECTED TO PVC HEADER PIPE
10. 3" MINIMUM DEPTH OF ¾" WASHED GRAVEL
11. BRICK (1 OF 2)

XFS AIR/VACUUM RELIEF

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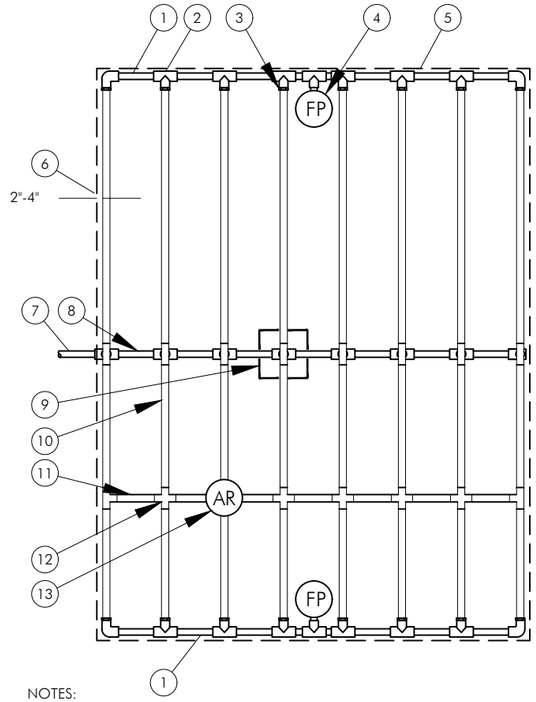
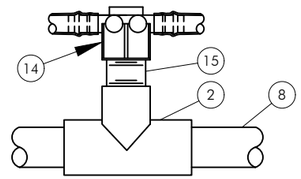


1. PVC EXHAUST HEADER
2. PVC SCH 40 TEE OR EL (TYPICAL)
3. BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
4. FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL "XFS FLUSH POINT" OR "XFS FLUSH POINT WITH BALL VALVE"
5. PERIMETER OF AREA
6. PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
7. PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
8. PVC SUPPLY MANIFOLD
9. CONNECTION FROM SUPPLY MANIFOLD TO DRIPLINE (TYPICAL)- SEE INSET A
10. SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL) POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
11. RAIN BIRD XF SERIES BLANK TUBING
12. BARB X BARB INSERT TEE OR CROSS: RAIN BIRD XFF-TEE OR RAIN BIRD XFD-CROSS (TYPICAL)
13. ½" AIR RELIEF VALVE: RAIN BIRD MODEL: ARV050 SEE RAIN BIRD XFS DETAILS FOR AIR RELIEF INSTALLATION
14. BARB X FEMALE FITTING: RAIN BIRD XFD-TFA-075 FITTING
15. ¾" PVC NIPPLE, LENGTH AS NECESSARY



INSET A

NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE RAIN BIRD XF-SDI DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
3. AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.
4. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

XFS Dripline Maximum Lateral Lengths (Feet)

Inlet Pressure psi	12" Spacing		18" Spacing		24" Spacing	
	Nominal Flow (gph)		Nominal Flow (gph)		Nominal Flow (gph)	
	0.6	**0.9**	**0.6**	**0.9**	**0.6**	**0.9**
15	273	155	314	250	424	322
20	318	169	353	294	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	596	455	780	514

XFS SUBSURFACE DRIPLINE CENTERFEED LAYOUT

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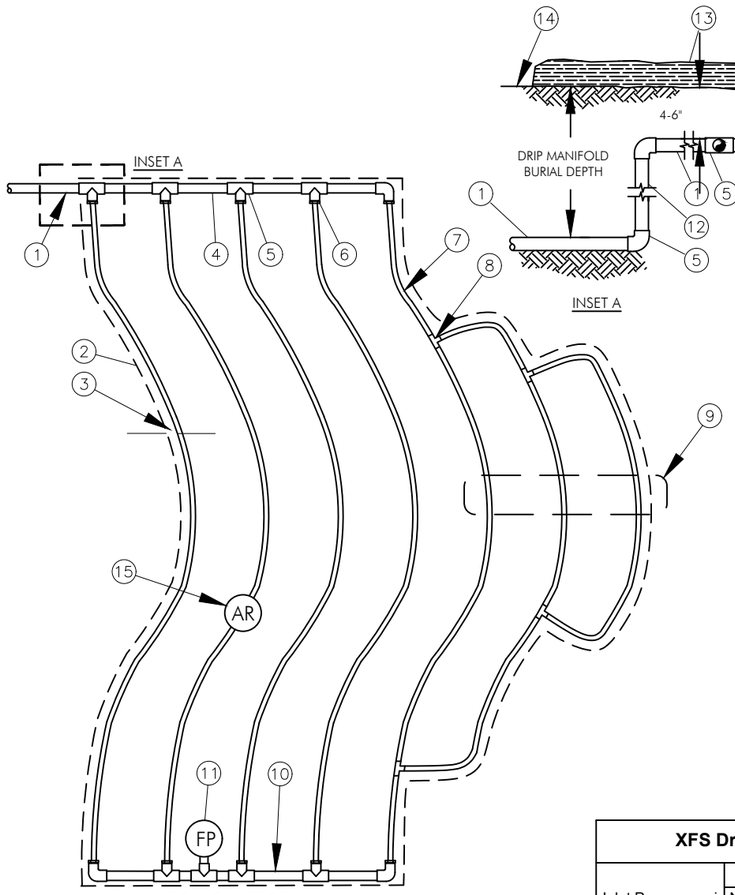
MIAMI BEACH, FL

IRRIGATION SPECS &DETAILS

DATE 6/18/2025
SCALE as noted
SHEET LA5-04

Ken Gardner FL LA #1569
Kiehl Semler FL LA #6667205



1. PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
2. PERIMETER OF AREA
3. PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
4. PVC SUPPLY MANIFOLD
5. PVC SCH 40 TEE OR EL (TYPICAL)
6. BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
7. SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL) POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
8. BARB X BARB INSERT TEE: RAIN BIRD XFF-TEE (TYPICAL)
9. TOTAL LENGTH OF SELECTED DRIPLINE SHOULD NOT EXCEED LENGTH SHOWN IN TABLE
10. PVC FLUSH HEADER
11. FLUSH POINT: SEE RAIN BIRD XFS DETAILS FOR FLUSH POINT INSTALLATION
12. PVC RISER PIPE
13. TURF OR MULCH
14. FINISH GRADE
15. ½" AIR RELIEF VALVE: RAIN BIRD MODEL: ARV050 SEE RAIN BIRD XFS DETAILS FOR AIR RELIEF INSTALLATION

NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE INSTALLATION SPECIFICATIONS ON RAIN BIRD WEB SITE (WWW.RAINBIRD.COM) FOR SUGGESTED SPACING.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
3. INSTALL AIR RELIEF VALVE AT HIGH POINTS IN DRIP LATERAL.
4. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

XFS Dripline Maximum Lateral Lengths (Feet)

Inlet Pressure psi	12" Spacing		18" Spacing		24" Spacing	
	Nominal Flow (gph)		Nominal Flow (gph)		Nominal Flow (gph)	
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50	417	285	528	420	720	488
60	460	290	596	455	780	514

XFS SUBSURFACE DRIPLINE ODD CURVES LAYOUT

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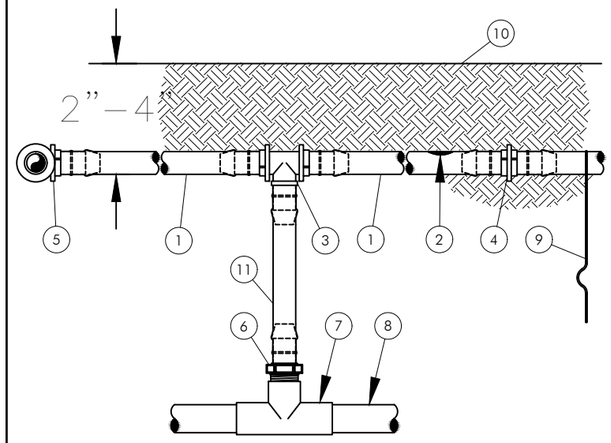

1. ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
2. INLINE DRIP EMITTER OUTLET, SEE PLANS FOR DRIPLINE OUTLET SPACING.
3. BARB TEE 17x17x17mm RAIN BIRD XFF-TEE
4. BARB COUPLING 17x17mm RAIN BIRD XFF-COUP
5. BARB ELBOW 17x17mm RAIN BIRD XFF-ELBOW
6. BARB MALE ADAPTER 17mm X 1/2" MPT RAIN BIRD XFF-MA-050 17mm X 3/4" MPT RAIN BIRD XFF-MA-075
7. PVC TEE SxSxT
8. PVC LATERAL SUPPLY HEADER
9. TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (TYPICAL)
10. FINISH GRADE
11. RAIN BIRD XF SERIES BLANK TUBING LENGTH AS REQUIRED

NOTES:
1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. 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.
3. SAVE YOUR HANDS. USE THE RAIN BIRD FITTINS-TOOL XF INSERTION TOOL FOR FITTING ASSEMBLY.

XFS SUBSURFACE DRIPLINE RISER ASSEMBLY

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REVISIONS

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SHEET LA5-05

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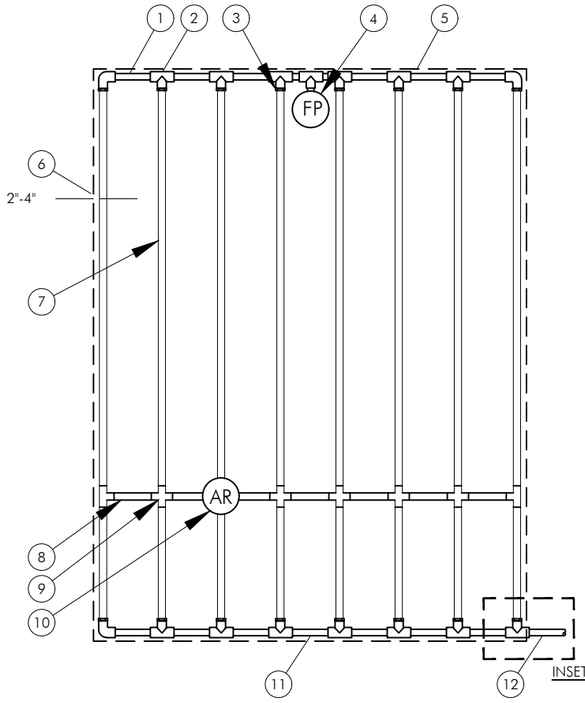
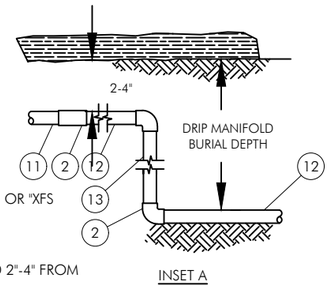


1. PVC EXHAUST HEADER
2. PVC SCH 40 TEE OR EL (TYPICAL)
3. BARB X MALE FITTING:
   RAIN BIRD XFF-MA FITTING (TYPICAL)
4. FLUSH POINT (TYPICAL)
   SEE RAIN BIRD DETAIL "XFS FLUSH POINT" OR "XFS FLUSH POINT WITH BALL VALVE"
5. PERIMETER OF AREA
6. PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
7. SUB-SURFACE DRIPLINE:
   RAIN BIRD XF SERIES DRIPLINE (TYPICAL)
   POTABLE: XFS DRIPLINE
   NON-POTABLE: XFSP DRIPLINE
8. RAIN BIRD XF SERIES BLANK TUBING
9. BARB X BARB INSERT TEE OR CROSS:
   RAIN BIRD XFF-TEE OR
   RAIN BIRD XFD-CROSS (TYPICAL)
10. ½" AIR RELIEF VALVE: RAIN BIRD MODEL: ARV050
    SEE RAIN BIRD XFS DETAILS FOR AIR RELIEF INSTALLATION
11. PVC SUPPLY HEADER
12. PVC DRIP MANIFOLD FROM RAIN BIRD CONTROL ZONE VALVE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
13. PVC SCH 40 RISER PIPE



INSET A

XFS Dripline Maximum Lateral Lengths (Feet)

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	Nominal Flow (gph)		Nominal Flow (gph)		Nominal Flow (gph)	
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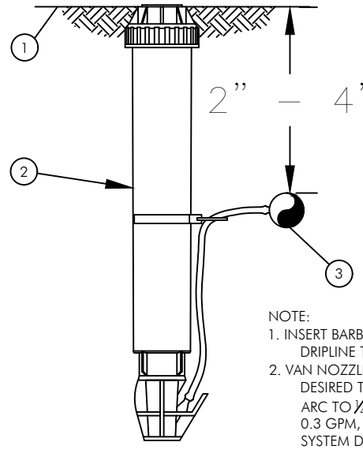
NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE RAIN BIRD XFS DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
3. AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.
4. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

XFS SUBSURFACE DRIPLINE END FEED LAYOUT

N.T.S.



1. FINISH GRADE/TURF
2. OPERATION INDICATOR
   RAIN BIRD MODEL: OPERIND
3. SUB-SURFACE DRIPLINE:
   RAIN BIRD XF SERIES DRIPLINE
   POTABLE: XFS DRIPLINE
   NON-POTABLE: XFSP DRIPLINE

NOTE:
1. INSERT BARB TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING.
2. VAN NOZZLE MAY BE SET TO CLOSED, OR IF IT IS DESIRED TO SEE SPRAY FROM THE NOZZLE, SET THE ARC TO ¼ PATTERN. THE FLOW FROM THE NOZZLE, 0.3 GPM, SHOULD BE ACCOUNTED FOR IN THE SYSTEM DESIGN.

XFS SUBSURFACE DRIPLINE OPERATION INDICATOR

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