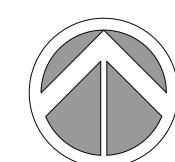


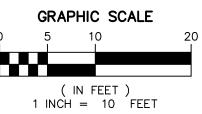
TREE DISPOSITION.

		1	osition cha			I	I -
Tree number	Common Name	Scientific name	Height	Spread		Disposition	Comments
1	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
3	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
4	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	15'	Good	Relocate	multi-trunk 5 stems
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	12'	Good	Relocate	double trunk
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	15'	12'	Good	Relocate	double trunk
	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
27	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
28	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
29	Christmas palm	Veitchia merrillii	15'	12'	Good	Relocate	double trunk
30	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
31	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
32	Christmas palm	Veitchia merrillii	15'	8'	Good	Relocate	
33	Coconut palm	Cocos nucifera	25'	30'	Fair/ Poor	Remove	Trunk damage
34	Coconut palm	Cocos nucifera	25'	30'	Fair	Remove	
35	Coconut palm	Cocos nucifera	25'	30'	Fair	Remove	Minor trunk damag
36	Coconut palm	Cocos nucifera	20'	30'	Fair	Remove	Trunk damage
37	Coconut palm	Cocos nucifera	20'	30'	Fair/ Poor	Remove	Trunk damage
38	Coconut palm	Cocos nucifera	32'	30'	Good	Remove	
39	Coconut palm	Cocos nucifera	28'	30'	Fair/ Poor	Remove	Major trunk damage
40	Coconut palm	Cocos nucifera	28'	30'	Fair	Remove	Trunk damage
41	Coconut palm	Cocos nucifera	20'	30'	Fair	Remove	Minor trunk damage
42	Bridalveil Tree	Caesalpinia granadillo	10'	20'	Good	Remain	
43	Bridalveil Tree	Caesalpinia granadillo	12'	20'	Good	Remain	
44	Mahogany	Swietenia mahogonii	12'	15'	Fair/ Poor	Remove	
45	Bridalveil Tree	Caesalpinia granadillo	15'	15'	Good	Remain	
46	Senegal date plam	Phoenix reclinata	10'	25'	Fair/ Poor	Relocate	
	Bridalveil Tree	Caesalpinia granadillo	16'	20'	Good	Remain	
	Christmas palm	Doble Veitchia merrillii	13'	8'	Good	Remain	
	Christmas palm	Veitchia merrillii	20'	8'	Good	Remain	
	Christmas palm	Veitchia merrillii	20'	8'	Good	Relocate	
	Christmas palm	Veitchia merrillii	20'	8'	Good	Remain	
	Christmas palm	Veitchia merrillii	20'	8'	Good	Remain	
52	CHIISTIIIAS DAITI						
	Christmas palm	Veitchia merrillii	20'	8'	Good	Remain	

TOTAL CANOPY REMOVED

7,030.6 SF





FINAL SUBMITTAL: NOV DRB

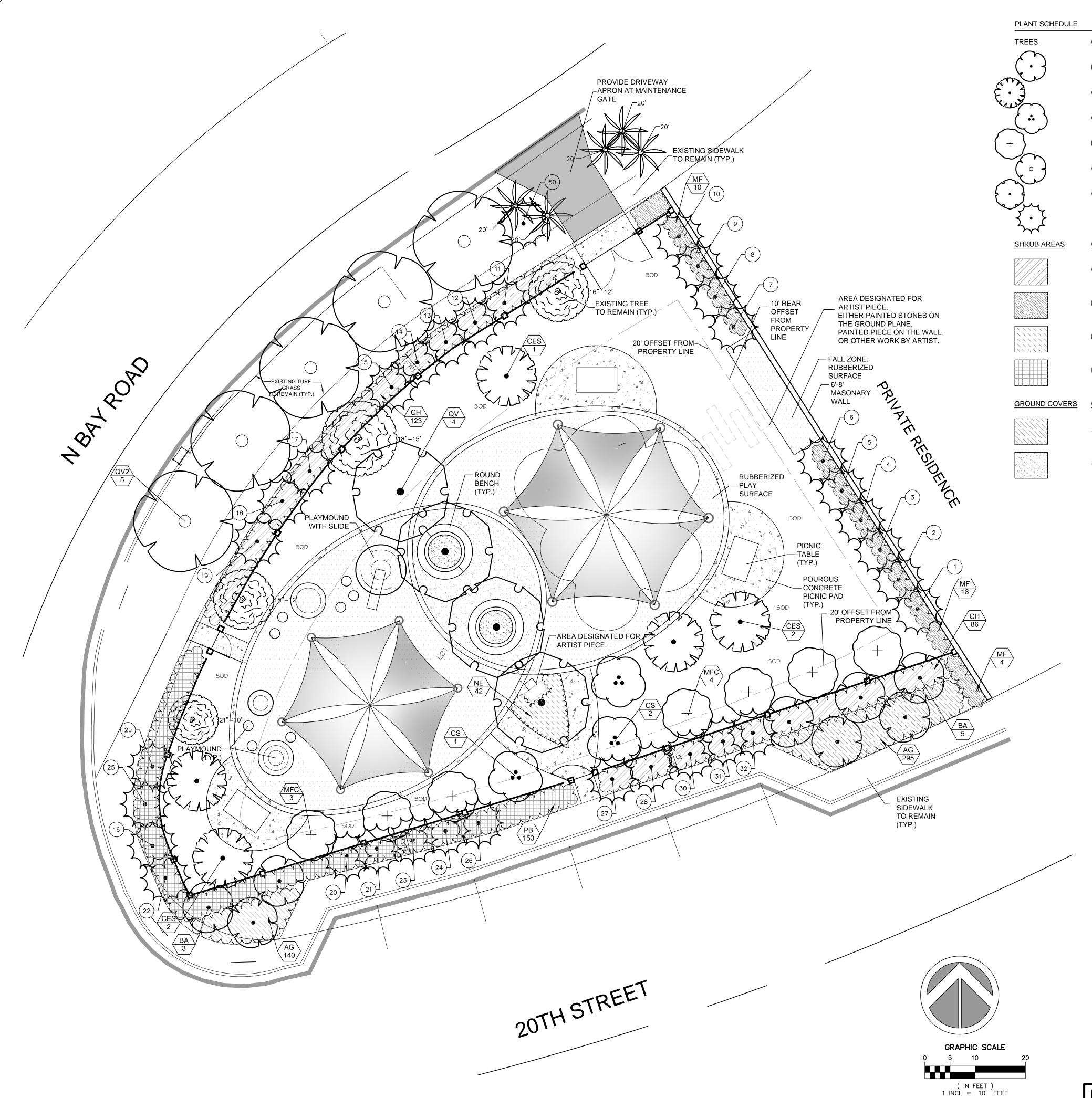
MJ RNG MJ
DES. DWN. CHK.

PROJECT / FILE NO.

18-00020

DRAWING NO.

TDP-1



CODE BOTANICAL NAME / COMMON NAME CAL SIZE <u>QTY</u> CONT Bulnesia arborea / Verawood 2" CAL 12` OA Ht 300 SF OF CANOPY Conocarpus erectus `Sericeus` / Silver Buttonwood Field Grown 2" CAL 12` OAH 300 SF OF CANOPY Cordia sebestena / Orange Geiger Tree Field Grown 2" CAL 12` OA Ht 300 SF OF CANOPY Myrcianthes fragrans `compacta` / Compact Simpson`s Stopper Field Grown 6 - 8` OA Ht 100 SF OF CANOPY QV2 Quercus virginiana / Southern Live Oak Field Grown 3" CAL 12 - 14` OA Ht Quercus virginiana / Southern Live Oak Field Grown 20-24` OA Ht 300 SF OF CANOPY RELOCATED PALM / SEE DISPOSITION PLAN SPACING QTY CODE BOTANICAL NAME / COMMON NAME <u>CONT</u> Chrysobalanus icaco `Horizontalis` / Horizontal Cocoplum 24" o.c. 209 7 GAL Myrcianthes fragrans / Twinberry 36" o.c. 36 3 GAL 18" o.c. 42 Nephrolepis exaltata / Boston Fern 3 GAL 24" o.c. 153 Psychotria ligustrifolia / Bahama Coffee CODE BOTANICAL NAME / COMMON NAME SPACING QTY 1 GAL 435 Arachis glabrata / Perennial Peanut 12" o.c. 5,526 sf Stenotaphrum secundatum / St. Augustine

	LANDSCAPE LEGEND		
	INFORMATION REQUIRED TO BE PERMANENTLY AFFIXED TO PLANS		
		.21 ac	_
		REQUIRED/	
	OPEN SPACE	ALLOWED	PROVIDED
A.	Square feet of required Open Space as indicated on site plan:		
	Lot Area = $9,429$ s.f.x 20 % = $1,886$ s.f.	1,886	1,886+
В.	Square feet of parking lot open space required as indicated on site plan:		
	Number of parking spaces x 10 s.f. parking space =	n/a	n/a
C.	Total square feet of landscaped open space required: A+B=	1,886	1,886+
	LAWN AREA CALCULATION	n/a	
	Square feet of landscaped open space required		
В.	Maximum lawn area (sod) permitted= % x s.f.	n/a	n/a
۸	TREES		
А.	Number of trees required per lot or net lot acre, less existing number of trees meeting minimum requirements=		
	trees x21 net lot acres - number of existing trees=	5	5
В.	% Natives required: Number of trees provided x 30% =	2	5
	% Low maintenance / drought and salt tolerant required:		
	Number of trees provided x 50%=	2	5
D.	Street Trees (maximum average spacing of 20' o.c.)	0	0
_	166 linear feet along street divided by 20'=	9	9
С.	Street tree species allowed directly beneath power lines: (maximum average spacing of 20' o.c.):		
	linear feet along street divided by 20'=	,	
	inlear feet along street divided by 20 =	n/a	n/a
	CHRIDE		
	SHRUBS Number of about a required Compatible and about the company in day 12	400	440
A. -	Number of shrubs required: Sum of lot and street trees required x 12=	168	440
В.	% Native shrubs required: Number of shrubs provided x 50%=	84	440
	LARGE SHRUBS OR SMALL TREES		
A.	Number of large shrubs or small trees required: Number of required shrubs		
	x 10%=	17	7
В.	% Native large shrubs or small trees required: Number of large shrubs or		
	small trees provided x 50%=	9	

MITIGATION REQUIREMENTS
TOTAL CANOPY REMOVED: 7,030.6 S.F.
TOTAL CANOPY REPLACED: 7,200 S.F.
MEET WITH (24) CATEGORY 1 TREES @ 300 S.F. EACH

FINAL SUBMITTAL: NOV DRB

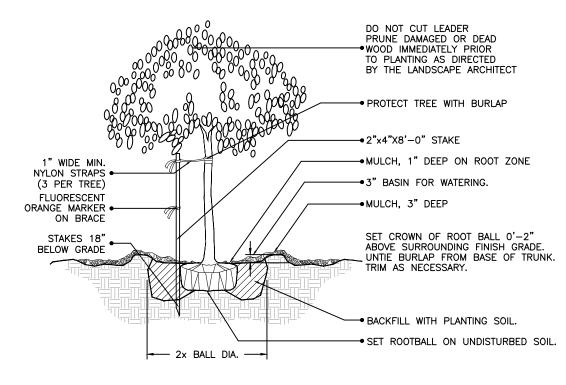


APPROVED: CASTO MIGUEL JUNCAL, RLA FLA. REGISTRATION NO. 6667184 ___ date : <u>9/7/2018</u>

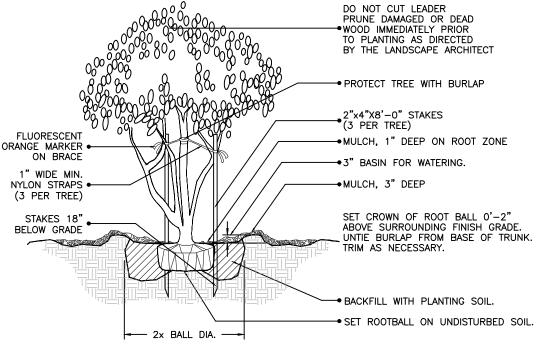
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LNP-1 DATE DRAWN: 9/7/2018

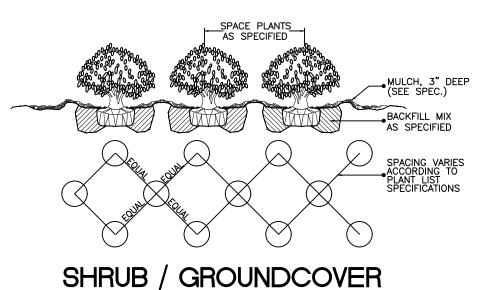
(2" cal. and over) LARGE TREE PLANTING DETAIL



(2" cal. and under) SMALL TREE PLANTING DETAIL



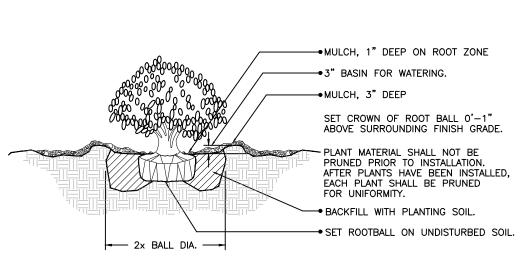
MULTI- TRUNK AND SMALL TREE (2" cal. and under) PLANTING DETAIL



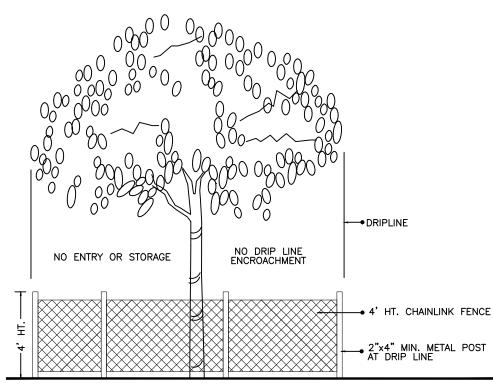
SPACING / PLANTING DETAIL

METAL STRAPS SECURING 2"x4"x12" WOOD BATTEN TOE NAIL BRACES TO 2"X4" WOOD BATTENS __1/2"x2' FLUORESCENT ORANGE MARKER 2"x4" WOOD BRACE → AT EQUAL SPACING (3 PER TREE) → MULCH, 1" DEEP ON ROOT ZONE 1/3 TRUNK →MULCH, 3" DEEP SET CROWN OF ROOT BALL 0'-2" ABOVE SURROUNDING FINISH GRADE. UNTIE BURLAP FROM BASE OF TRUNK 2"x4"x12" FOOT STAKE, FOR SOFT BURIED 3 FT. BELOW GRADE BACKFILL WITH PLANTING SOIL. → SET ROOTBALL ON UNDISTURBED SOIL. - 2x BALL DIA. —

SABAL PALM PLANTING DETAIL



SHRUB PLANTING DETAIL



TREE PRESERVATION BARRICADE FENCING DETAIL

GENERAL SPECIFICATIONS:

THE WORK AND MATERIALS NECESSARY FOR MEETING THESE SPECIFICATIONS SHALL BE INCLUDED IN THE UNIT COST OF TREE AND/OR PALM RELOCATION.

THE CONTRACTOR SHALL PERFORM ALL TREE REMOVAL AND PRESERVATION ACTIVITIES IN COMPLIANCE THE CITY'S AND COUNTY'S CODES AND ORDINANCES & POLICIES.

NO PERSON SHALL REMOVE, RELOCATE, OR REPLACE ANY TREE OR VEGETATION FROM

1.00 SUBMITTALS

A. CONTRACTOR SHALL SUBMIT THE FOLLOWING LIST OF ITEMS FOR REVIEW:

SUBJECT PROPERTY WITHOUT FIRST OBTAINING A TREE PERMIT FROM THE CITY.

1) VERIFICATIONS OF QUALIFICATIONS. CONTRACTOR TO SUBMIT A LIST OF REFERENCES AND MINIMUM OF FIVE (5) COMPLETED PROJECTS IN SIMILAR NATURE. 2) VERIFICATION OF ALL LICENSES AND CERTIFICATIONS. 3) LIST OF ALL EQUIPMENT TO BE UTILIZED FOR TREE PREPARATION AND TRANSPLANTING. 4) PROPOSED SEQUENCE OF EVENTS FROM START TO FINISH, IN WRITING.5) LITERATURE AND PROPOSED APPLICATION RATES FOR SPECIFIED WETTING AGENTS, FERTILIZERS, SOIL MIX, SOIL CONDITIONERS.6) TREE AND PALM WATERING SCHEDULE FOR TRANSPLANTED ANDTEMPORARY HOLDING AREA (IF APPLICAPLE). 1.01 LOCATIONA. TREES SHALL BE RELOCATED ONCE FROM THEIR PRESENT LOCATION TO A LOCATIONSPECIFIED ON THE PLANS, UNLESS OTHERWISE NOTED. 1.02 ROOT PRUNING, WATERING BEFORE TRANSPLANTING: A. ALL TREE RELOCATION, ROOT PRUNING AND TRIMMING, SHALL BE PERFORMED UNDERTHE SUPERVISION OF A INTERNATIONAL SOCIETY OF ARBORICULTURE (I.S.A.) CERTIFIED ARBORIST, LICENSED IN MIAMI-DADE COUNTY.

B. ROOT PRUNE TREES PRIOR TO MOVING THEM. REFER TO THE ROOT PRUNING CHART "ROOT PRUNING GUIDELINES FOR HARDWOOD TREES" ON THIS SHEET FOR MINIMUM AND IDEAL ROOT PRUNING WAITING PERIODS. THAT IS, FOR A TREE WITH A 12" OR GREATER CALIPER, ROOT PRUNE <u>8 TO 12 MONTHS</u> PRIOR TO RELOCATING THE TREE. PRIOR TO ROOT PRUNING, THOROUGHLY WATER THE ROOT ZONE ON A CONTINUOUS BASIS WITH AT LEAST 2 TO 3 INCHES OF WATER, 2 TO 3 DAYS PRIOR TO ROOT PRUNING. IF THE TREE HAS A DORMANT PERIOD, THEY SHOULD NOT BE TRANSPLANTED DURING THAT TIME. TREES SHOULD NOT BE TRANSPLANTED DURING PERIODS OF STRONG WINDS, DRY WINTER MONTHS OR DURING DROUGHT.

C. ROOT PRUNING SHALL BE ACCOMPLISHED BY DIGGING A TRENCH TWO-THIRDS (2/3) OF THE WAY AROUND THE TREE AT A MINIMUM OF 24" DEEP. THE ROOT PRUNING SHALL PRODUCE A ROOT BALL THAT CAN ADEQUATELY SUPPORT THE TREE TO BE MOVED. ROOT PRUNE ONLY WITH A MECHANICAL ROOT-PRUNING SAW OR OTHER DEVICE WHICH CLEANLY CUTS ROOTS. THIS TRENCH SHALL FORM A ROOTBALL DIAMETER OF APPROXIMATELY 10" TO 1' FOR EACH 1" OF TRUNK CALIPER MEASURES 6" ABOVE THE GROUND. REFER TO THE CHARTS ON THIS SHEET FOR DEPTH OF ROOTBALL AND DIAMETER OF ROOTBALL BASED ON CALIPER OF THE TREE TO BE RELOCATED. D. LARGE MULTI-TRUNK TREES SUCH AS (FICUS SPP.) DIAMETER SHALL BE DETERMINED ON A CASE BY CASE BASIS TO PRODUCE A ROOT BALL THAT CAN ADEQUATELY SUPPORT THE TREE TO BE MOVED.

E. ALL EXPOSED ROOTS SHALL BE CUT OFF CLEANLY, WITH SHARP INSTRUMENTS. BACKFILL TRENCHES WITH NON-NATIVE MULCH OR SOIL CONSISTING OF 30% SILICA SAND AND 70% MUCK. ROOT BALL & TRENCH SHALL BE KEPT MOIST DURING REGENERATION PERIOD.

1.03 TOP PRUNING AND THINNING:

A. THE AMOUNT OF GENERAL PRUNING AND THINNING SHALL BE LIMITED TO THE MINIMUM NECESSARY TO REMOVE DEAD OR INJURED TWIGS OR BRANCHES AS A RESULT OF TRANSPLANTING OPERATIONS. PRUNING AND THINNING SHALL BE DONE IN SUCH A MANNER AS NOT TO CHANGE THE NATURAL HABIT OR SHAPE OF A PLANT. THE PROJECT LANDSCAPE ARCHITECT SHALL BE CONTACTED PRIOR TO PERFORMING ANY MAJOR PRUNING OR THINNING.

B. ALL CROWN PRUNING SHALL BE DONE IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE A-300 STANDARDS OR PALM PRUNING IN ACCORDANCE WITH THE STANDARDS IN "Arboriculture: Integrated Management of Landscape Trees, Shrubs, and Vines, Second Edition" by Richard W. Harris, CURRENT EDITION AND BY AN I.S.A. CERTIFIED ARBORIST.

1.04 BRACING AND GUYING OF TREES AFTER ROOT PRUNING:

A. BRACING AND GUYING SHALL BE PROVIDED TO ASSURE THE TREES' STABILITY DURING THE ROOT REGENERATION PERIOD; AS PER THE APPLICABLE DETAIL.

1.05 BALLING AND BURLAPPING

A. PLANT MATERIAL. WHICH IS IN A SOIL OF A LOOSE TEXTURE. WHICH DOES NOT READILY ADHERE TO THE ROOT SYSTEM, ESPECIALLY IN THE CASE OF LARGE PLANTS OR TREES, SHALL HAVE THE ROOTBALL TIGHTLY WRAPPED IN NATURAL BURLAP AND SECURED WITH A BIO-DEGRADABLE NATURAL HEMP ROPE, UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT.

B. NO SYNTHETIC WRAPPING MATERIALS MAY BE USED,

1.06 TRANSPLANTING PLANT MATERIAL

A. MOVEMENT OF PLANTS ON PUBLIC R.O.W.'S SHALL COMPLY WITH ALL ORDINANCES, CODES AND SAFETY REQUIREMENTS, ETC.

B. TRANSPORT MATERIALS ON VEHICLES LARGE ENOUGH TO ALLOW PLANTS TO NOT BE CROWDED AND DAMAGED. PLANTS SHALL BE COVERED TO PREVENT WIND DAMAGE DURING TRANSIT.

C. PROTECT PLANT MATERIAL DURING TRANSPORTING TO PREVENT DAMAGE TO THE ROOT SYSTEM AND DESICCATION OF LEAVES. TREES SHALL BE PROTECTED BY TYING IN THE BRANCHES AND COVERING ALL EXPOSED BRANCHES AS NECESSARY. DO NOT BEND OR BIND-TIE PLANT MATERIAL IN SUCH A MANNER AS TO DAMAGE BARK. BREAK BRANCHES OR ALTER THE NATURAL SHAPE.

D. ALL TRUNKS AND LIMBS THAT COULD BE DAMAGED DURING TRANPLANTING SHALL BE WRAPPED WITH AT LEAST TWO LAYERS OF BURLAP OR SIMILAR FABRIC PRIOR TO MOVING.

E. THE CONTRACTOR SHALL EXERCISE CARE IN HANDLING, LOADING, UNLOADING, STORING, AND TRANSPORTING MATERIAL TO PREVENT DAMAGE. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR PROTECTION AND SAFEKEEPING OF MATERIALS STORED.

F. TRANSPORTING MUST BE DONE WITHIN 24 HOURS AFTER BEING DUG, STORE TREES IN SHADE, WHEN APPLICABLE, AND KEEP THE ROOT BALL AND CANOPY MOIST.

G. WHEN TREE IS READY TO BE TRANSPLANTED, EXISTING BACKFILLED ROOT PRUNE TRENCH SHALL BE CAREFULLY EXCAVATED SO AS NOT TO DISTURB OR DAMAGE NEW ROOTS WHEN TREE IS READY TO BE TRANSPLANTED.

H. THE TREE SHALL BE GENTLY LIFTED BY THE ROOT BALL NOT THE TRUNK. IF THE ROOT BALL BREAKS DUE TO AN UNSTABLE SOIL OR ANY OTHER REASON THE TREE MAY BE PINNED. THE LAST RESORT IS TO CHOKE THE TREE. EXTRA CARE SHOULD BE MADE SO THE BARK IS NOT STRIPPED DURING THIS OPERATION. ALL AREAS OF THE TRUNK SHOULD BE ADEQUATELY PROTECTED WITH BURLAP OR OTHER TYPE OF FABRIC.

1.07 INSTALLATION

EXCAVATION OF HOLES: PLANT HOLES SHALL BE ROUGHLY CYLINDRICAL IN SHAPE WITH SIDES APPROXIMATELY VERTICAL. THE DEPTH OF THE HOLE SHALL BE EQUAL TO THE ROOTBALL DEPTH. THE DIAMETER OF THE HOLE SHALL BE A MINIMUM OF TWO (2) TIMES THE WIDTH OF THE ROOTBALL DIAMETER. THE BOTTOM OF THE HOLE SHOULD BE COMPACTED SO THAT A MINIMAL AMOUNT OF DOWNWARD SETTLING TAKES PLACE.

<u>SETTING OF PLANTS</u>

PLANT MATERIAL SHALL BE PLANTED A MINIMUM OF 2" HIGHER THAN THEIR NATURAL AND ORIGINAL PLANTING LEVEL PRIOR TO THEIR RELOCATION AND PLACEMENT ON THE NEW SITE. WHEN LOWERED INTO THE HOLE, THE PLANTS SHALL REST ON THE PREPARED HOLE BOTTOM SUCH THAT THE SURFACE ROOTS AT THE TOP OF THE ROOTBALL ARE LEVEL OR SLIGHTLY ABOVE THE LEVEL OF THE TOP OF THE HOLE CREATE A SAUCER, APPROXIMATELY 6" DEEP TO HELP HOLD WATER. THE PLANTS SHALL BE SET STRAIGHT OR PLUMB OR NORMAL TO THE RELATIONSHIP OR THEIR GROWTH PRIOR TO TRANSPLANTING. THE PROJECT LANDSCAPE ARCHITECT OR REPRESENTATIVE RESERVES THE RIGHT TO REALIGN ANY PLANT MATERIAL AFTER IT HAS BEEN SET, WITHOUT ADDITIONAL COST.

USE PLANTING SOIL FOR TREE INSTALLATION WHEN POOR SOILS ARE PRESENT AT NEW LOCATION CONSISTING OF 50/50 MIX OF GENERAL PURPOSE PLANTING SOIL TO SAND. PALMS RECEIVE 30/70 GENERAL PURPOSE PLANTING SOIL TO SAND MIX. EXCEPTION SHALL BE MADE BY LANDSCAPE ARCHITECT. 2) BACKFILL THE BOTTOM TWO-THIRDS OF THE PLANTING HOLE AND FIRMLY TAMP AND SETTLE BY WATERING AS BACKFILLING PROGRESSES. AFTER HAVING TAMPED AND SETTLED THE BOTTOM TWO-THIRDS OF THE HOLE, THOROUGHLY PUDDLE WITH WATER AND FILL REMAINING ONE-THIRD OF THE HOLE WITH PLANTING SOIL, TAMPING AND WATERING TO ELIMINATE AIR POCKETS.

1.08 WATERING TRANSPLANTED TREES:

A. ROOTBALL WATERING: MAINTAIN A SOIL MOISTURE IN THE ROOT ZONE AT AN OPTIMUM LEVEL FOR HEALTHY GROWTH. DEEP WATER THE ENTIRE ROOTBALL AREA AT A MINIMUM ACCORDING TO THE FOLLOWING RECOMMENDED SCHEDULE:

FIRST MONTH - EVERY DAY SECOND MONTH - 2 TIMES PER WEEK FOLLOWING TWO MONTHS - 1 PER WEEK LAST EIGHT MONTHS - BI WEEKLY

B. IF THERE IS NO SOURCE FOR WATER AVAILABLE AT THE PROJECT, SUCH AS A HOSEBIB(S) OR FIRE HYDRANTS(S) IF APPROVED FOR USE, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING WATER BY MEANS OF A TRUCK OR TANK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PAY ANY FEES FOR WATER USE.

C. THE CONTRACTOR SHALL ADHERE TO THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT'S WATER RESTRICTIONS CURRENT AT THE TIME OF RELOCATION ACTIVITIES.

1.09 MULCHING OF PLANT SAUCER:

A. MULCH SHALL BE SHREDDED EUCALYPTUS OR MELALEUCA GRADE 'B' MULCH OR EQUAL (NO CYPRESS MULCH OR RED MULCH). THE WATERING SAUCER SHALL RECEIVE A 3" DEPTH LAYER WHICH SHALL TAPER TO A 1" DEPTH LAYER UP TO 3" FROM THE TRUNK OF TREE. (REFER TO APPROPRIATE DETAIL THIS SHEET FOR INSTALLATION)

1.10 APPLICATION OF FERTILIZER:

A. AT TIME OF WATERING ROOT-PRUNED TREES PRIOR TO TRANSPLANTING, DRENCH ROOTBALL ONCE PER WEEK DURING THE COURSE OF WATERING WITH A SOLUBLE FERTILIZER THAT HAS A 20.20.20 ANALYSIS AT THE MANUFACTURER'S RECOMMENDED

B. RELOCATED TREES SHALL NOT BE FERTILIZED AT TIME OF PLANTING, BUT SHALL BE WATERED SUFFICIENTLY UNTIL THE TREE GROWTH IS REESTABLISHED. THREE (3) WEEKS AFTER TRANSPLANTING, AND AFTER MULCHING, APPLY ON THE SURFACE, EVENLY SPREAD OVER THE AREA OF THE ENTIRE ROOTBALL, FEC (FLORIDA EAST COAST FERTILIZER CO.) #5231 (12-6-8) OR EQUAL AT THE RATE OF 0.5KG PER 1" OF TRUNK

1.11 STAKING TREES:

A. STAKE ALL TREES AT THE NEW SITE WITH NEW TIMBERS WITH A MINIMUM 2" X 4" DIMENSION AS PER THE DETAILS ENCLOSED, OR IN THE CASE OF OBSTACLE, IN ANOTHER MANNER WHICH WILL SUPPORT THE TREES.

1.12 CLEAN-UP:

A. DISPOSAL OF WASTE: ALL WASTE AND OTHER OBJECTIONABLE MATERIAL CREATED THROUGH PLANTING OPERATIONS AND LANDSCAPE CONSTRUCTION SHALL BE REMOVED COMPLETELY ON A DAILY BASIS FROM THE JOB OR AS DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT. ANY PAVED AREAS, INCLUDING CURBS AND SIDEWALKS THAT HAVE BEEN STAINED WITH SOIL, SOD WASTE, FERTILIZER OR OTHER WASTE SHALL BE THOROUGHLY SWEPT.

B. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF STAKES AND BATTENS AND UNTIE ANY TIED-UP CANOPIES WHEN IT IS DETERMINED BY THE PROJECT LANDSCAPE ARCHITECT THAT SUFFICIENT TIME HAS ELAPSED FOR THE PLANTS TO ROOT STABILIZE AND/OR AT THE END OF THE ONE YEAR GUARANTEE PERIOD. THIS SHALL BE DONE EVEN IF THE PROJECT HAS BEEN COMPLETED AND GIVEN FINAL ACCEPTANCE. THE CONTRACTOR SHALL UNTIE CANOPIES IMMEDIATELY AFTER INSTALLATION AND REMOVE STAKES AFTER ONE YEAR.

C. BACKFILLING OF HOLE LEFT BY RELOCATED OR REMOVED TREE SHALL BE DONE IMMEDIATELY AFTER TREE REMOVAL TO PREVENT INJURIES. THE CONTRACTOR SHALL BACKFILL HOLES WITH CLEAN FILL FROM SITE, FLUSH WITH ADJACENT GRADE.

1.13 GUARANTEE AND REPLACEMENT:

A. ALL RELOCATED PLANT MATERIAL SHALL BE GUARANTEED DURING RELOCATION ACTIVITIES INCLUDING ROOT PRUNING, AND SHALL HAVE AN ADDITIONAL ONE (1) YEAR GUARANTEE STARTING AT TIME OF FINAL RELOCATION AND ACCEPTANCE BY LANDSCAPE ARCHITECT.

B. ALL TREES THAT LEAN OR ARE BLOWN OVER, CAUSED BY WINDS LESS THAN 75 MPH AS DEFINED BY THE MIAMI HURRICANE CENTER, WILL BE RE-SET AND BRACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

1.14 SCHEDULE AND APPROVALS:

THE LANDSCAPE CONTRACTOR SHALL SUBMIT A WRITTEN SCHEDULE OF OPERATIONS AND WRITTEN REQUESTS FOR APPROVALS IN ACCORDANCE WITH PROJECT SPECIFICATIONS OR AS OTHERWISE AGREED UPON WITH THE OWNER.

1.15 FINAL ACCEPTANCE:

OWNER SHALL REVIEW PROJECT UPON NOTIFICATION BY CONTRACTOR. OWNER SHALL ISSUE A FINAL ACCEPTANCE AFTER ALL CONTRACT ITEMS AND OBLIGATIONS ARE SATISFACTORY.

> LA 6667184 STATE OF

FINAL SUBMITTAL: NOV DRB

CASTO MIGUEL JUNCAL, RLA __ _{DATE} : <u>9/7/2018</u> FLA. REGISTRATION NO. 6667184

DES. DWN. CHK. PROJECT / FILE NO. 18-00020 DRAWING NO.

LNP-2 DATE DRAWN: 7/16/18

CERTIFICATES OF AUTHORIZATIO

EB7318 LB6680 LC03

CMJ RNG CMJ

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DES. DWN. CHK.

PROJECT / FILE NO.

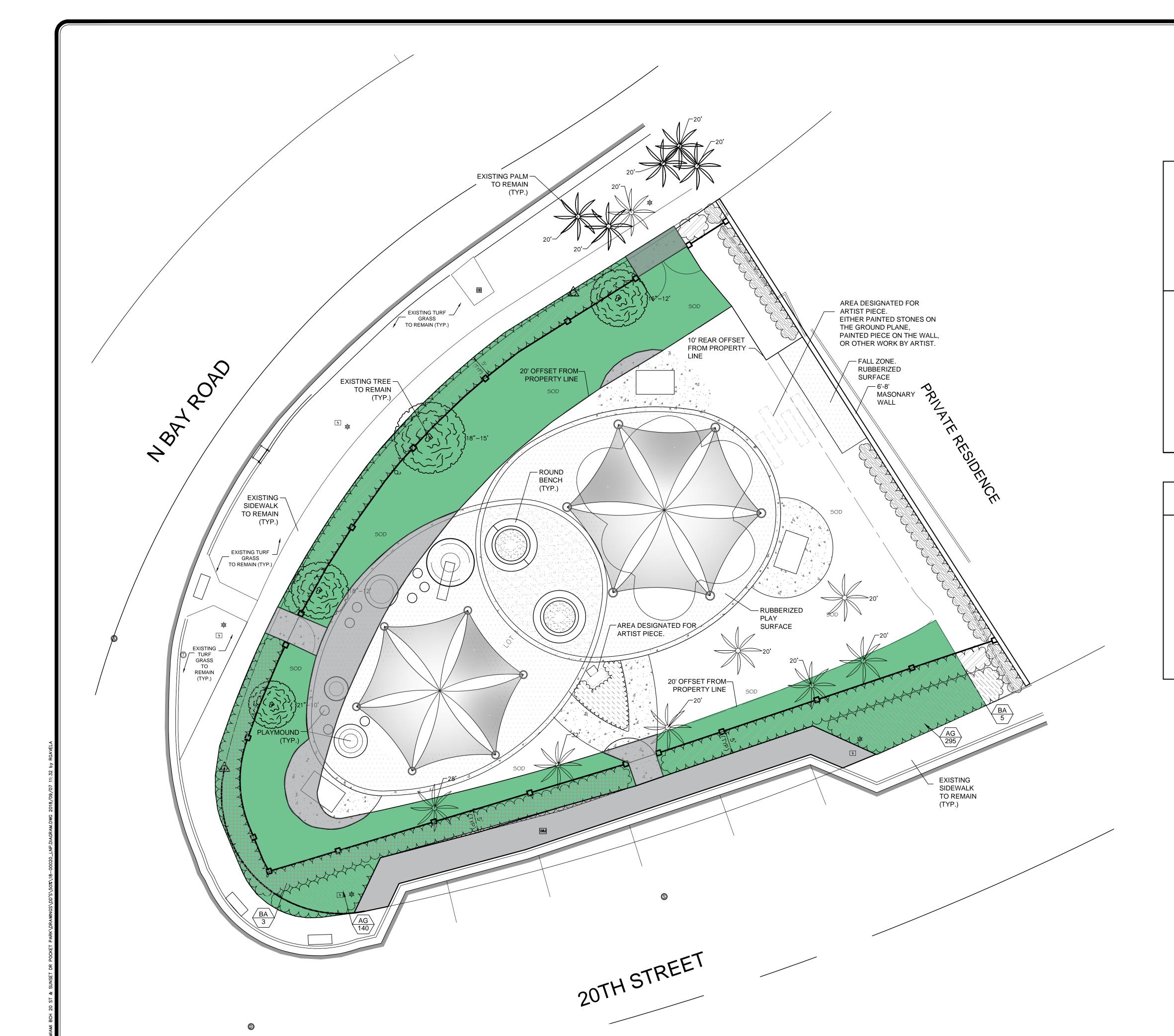
18-00020 OSD-1

9/7/2018

___ DATE : 9/7/2018

3 LA 6667184

—★— STATE OF



TOTAL AREAS



LANDSCAPE AREAS



AREAS 1550 SF



AREAS 2045.8 SF

TOTAL: 1,409 SF

AREAS 918.7 SF

TOTAL: 4,514.5 SF

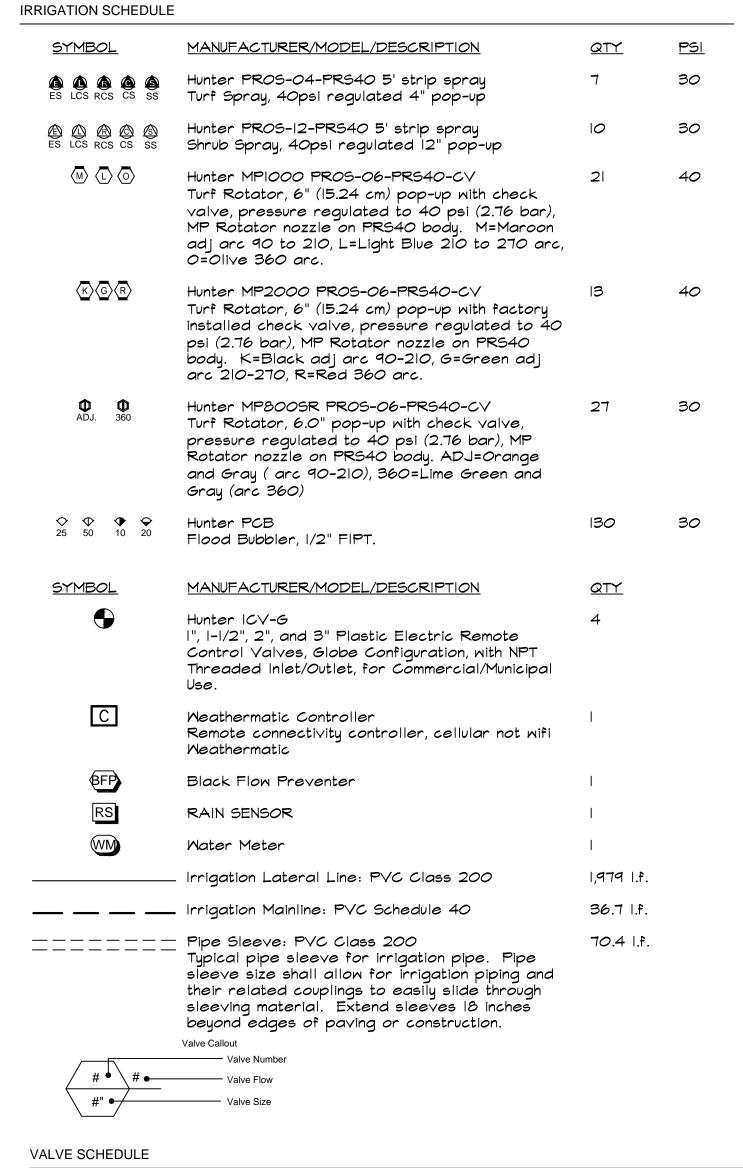
HARDSCAPE AREAS

536.09

652

FINAL SUBMITTAL: NOV DRB





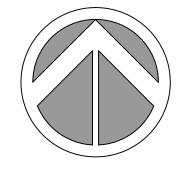
 NUMBER
 MODEL
 SIZE
 TYPE
 GPM
 PSI
 PSI @ POC
 PRECIP

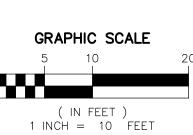
 I
 Hunter ICV-G
 2"
 Bubbler
 64.00
 37.46
 4.56 in/h

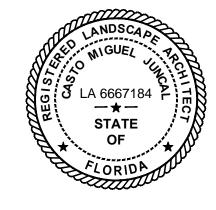
 2
 Hunter ICV-G
 2"
 Turf Rotary
 27.32
 36.78
 I.02 in/h

 3
 Hunter ICV-G
 2"
 Turf Rotary
 I5.46
 48.13
 0.31 in/h

 4
 Hunter ICV-G
 2"
 Bubbler
 61.00
 36.47
 4.78 in/h







approved : CASTO MIGUEL JUNCAL, RLA fla. registration no. $\underline{6667184}$ date : $\underline{9/7/2018}$

NCAL, RLA

RIGATION

RRIGATI

18-00020

DRAWING NO.

IRR-1

DATE DRAWN:

ORID,

COUNTY

AMI-

THE SCOPE OF WORK IS SHOWN ON THE PLANS, NOTES AND DETAILS. THE IRRIGATION CONTRACTOR SHALL BE CERTIFIED AS A CERTIFIED IRRIGATION CONTRACTOR BY THE IRRIGATION ASSOCIATION. THE CERTIFICATION SHALL BE CURRENT AND IN GOOD STANDING.

SCOPE OF WORK

THE WORK SPECIFIED IN THIS SECTION CONSISTS OF FURNISHING ALL COMPONENTS NECESSARY FOR THE INSTALLATION, TESTING, AND DELIVERY OF A COMPLETE, FULLY FUNCTIONAL AUTOMATIC LANDSCAPE IRRIGATION SYSTEM THAT COMPLETELY COMPLIES WITH THE 100% IRRIGATION PLANS, SPECIFICATIONS, NOTES, DETAILS AND ALL APPLICABLE LAWS, REGULATIONS, CODES AND ORDINANCES. THIS WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, THE PROVIDING OF ALL REQUIRED MATERIAL (PIPE, VALVES, FITTINGS, CONTROLLERS, WIRE, PRIMER, GLUE, ETC.), LAYOUT, PROTECTION OF THE PUBLIC, EXCAVATION, ASSEMBLY, INSTALLATION, BACK FILLING, COMPACTING, REPAIR OF ROAD SURFACES, CONTROLLER AND LOW VOLTAGE FEEDS TO VALVES, CLEANUP, MAINTENANCE, GUARANTEE AND AS-BUILT PLANS.

ALL IRRIGATED AREAS SHALL PROVIDE 100% HEAD-TO-HEAD COVERAGE FROM A FULLY AUTOMATIC IRRIGATION SYSTEM WITH A RAIN SENSOR AS SHOWN. THE RAIN SENSOR SHALL BE INSTALLED TO PREVENT ITS ACTIVATION BY ADJACENT HEADS. ALL WATERING PROCEDURES SHALL CONFORM TO LOCAL CODES, AS WELL AS THIS PROJECT'S REGIONAL WATER MANAGEMENT DISTRICT RESTRICTIONS AND REGULATIONS. ZONES ARE PRIORITIZED FIRST BY PUBLIC SAFETY AND THEN BY HYDRAULIC CONCERNS. THIS SEQUENCING WILL BE A MANDATORY PUNCH LIST ITEM. THESE PLANS HAVE BEEN DESIGNED TO SATISFY/EXCEED THE FLORIDA BUILDING CODE (FBC) APPENDIX F AND THE FLORIDA IRRIGATION SOCIETY STANDARDS AND SPECIFICATIONS FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS, FOURTH EDITION.

CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES 72 HOURS PRIOR TO COMMENCEMENT OF WORK.

IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE THEMSELVES WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, STRUCTURES AND UTILITIES, DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTION, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN. SUCH OBSTRUCTIONS, OR DIFFERENCES. SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER' AUTHORIZED REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL EXISTING SITE ITEMS DAMAGED BY THEIR WORK. IRRIGATION CONTRACTOR SHALL COORDINATE THEIR WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS THROUGH WALLS, UNDER ROADWAYS AND PAVING, ETC.

THE CONTRACTOR SHALL TAKE IMMEDIATE STEPS TO REPAIR, REPLACE, OR RESTORE ALL SERVICES TO ANY UTILITIES WHICH ARE DISRUPTED DUE TO THEIR OPERATIONS. ALL COSTS INVOLVED IN DISRUPTION OF SERVICE AND REPAIRS DUE TO NEGLIGENCE ON THE PART OF THE CONTRACTOR SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

POINT OF CONNECTION (P.O.C.)

THE P.O.C. IS TO AN EXISTING WATER MAIN. CONTRACTOR SHALL VERIFY THESE MINIMUM CONDITIONS CAN BE MET PRIOR TO BEGINNING IRRIGATION SYSTEM INSTALLATION IF THE CONDITIONS CANNOT BE MET: THE CONTRACTOR MUST NOTIFY THE DESIGNER PRIOR TO PROCEEDING WITH THE WORK. IF THE CONTRACTOR DOES NOT DO SO, THE CONTRACTOR PROCEEDS AT THEIR OWN RISK AND BECOME RESPONSIBLE FOR ANY FUTURE WORK REQUIRED TO MAKE THE SYSTEM PERFORM AS REQUIRED.

PIPE LOCATIONS SHOWN ON THE PLAN ARE SCHEMATIC AND SHALL BE ADJUSTED IN THE FIELD. WHEN LAYING OUT MAINLINES PLACE A MAXIMUM OF 18" AWAY FROM EITHER THE BACK OF CURB. FRONT OF WALK, BACK OF WALK, OR OTHER HARDSCAPE TO ALLOW FOR EASE IN LOCATING AND PROTECTION FROM PHYSICAL DAMAGE. INSTALL ALL LATERAL PIPE NEAR EDGES OF PAVEMENT OR AGAINST BUILDINGS WHENEVER POSSIBLE TO ALLOW SPACE FOR PLANT ROOT BALLS. ALWAYS INSTALL PIPING INSIDE PROJECT PROPERTY BOUNDARY.

PIPES SHALL ALWAYS BE PLACED IN PLANTING BEDS. IF IT IS NECESSARY TO HAVE PIPING UNDER HARDSCAPES, SUCH AS ROADS, WALKS, AND PATIOS, THE PIPES MUST BE SLEEVED USING SCH 40 PVC WITH THE SLEEVE DIAMETER BEING TWICE THE SIZE OF THE PIPE IT IS CARRYING WITH A MINIMUM SLEEVE SIZE OF 2".

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

MAINLINE SHALL BE PVC SCHEDULE 40 WITH PVC SCHEDULE 40, SOLVENT WELD FITTINGS (SIZED PER PLANS).

CONTRACTOR TO ENSURE ALL MAINLINE PIPING IS PROPERLY RESTRAINED USING MECHANICAL JOINT FITTINGS, RESTRAINING COLLARS, THREADED RODS, THRUST BLOCKS, ETC., AS AND WHERE REQUIRED. CONTRACTOR SHALL REFER TO PIPE MANUFACTURER'S RECOMMENDED INSTALLATION PRACTICES FOR FURTHER DIRECTION.

PVC PIPE JOINT COMPOUND AND PRIMER: SLOW-DRYING, HEAVY DUTY CEMENT AND TINTED (PURPLE) PRIMER THAT IS COMPATIBLE WITH THE CEMENT. THE PVC CEMENT SHALL BE WELD-ON 2711 GREY AND THE PRIMER SHALL BE WELD-ON P70 PURPLE PRIMER, OR APPROVED EQUALS.

ELECTRICAL POWER SUPPLY

ELECTRICAL SUPPLY FOR PUMPS AND CONTROLLERS TO BE PROVIDED BY IRRIGATION CONTRACTOR. CONTRACTOR TO COORDINATE WITH LOCAL UTILITIES FOR THE INSTALLATION OF AND CONNECTION TO AVAILABLE SITE POWER SUPPLY FOR REQUIRED ELECTRICAL COMPONENTS AS SET FORTH IN THE 100% IRRIGATION PLANS.

ALL ELECTRICAL INSTALLATION TO COMPLY WITH THE NATIONAL ELECTRICAL CODE AND ANY AND ALL OTHER APPLICABLE ELECTRICAL CODES, LAWS AND REGULATIONS. A LICENSED ELECTRICIAN SHALL PERFORM ALL ELECTRICAL HOOK-UPS.

IRRIGATION CONTROL WIRE SHALL BE THERMOPLASTIC SOLID COPPER, SINGLE CONDUCTOR, LOW VOLTAGE IRRIGATION CONTROLLER WIRE SUITABLE FOR DIRECT BURIAL AND CONTINUOUS OPERATION AT RATED VOLTAGES.

TAPE AND BUNDLE CONTROL WIRES EVERY 10' AND RUN ADJACENT TO THE MAINLINE. AT ALL TURNS IN DIRECTION MAKE A 2' COIL OF WIRE. AT ALL VALVE BOXES COIL WIRE AROUND A 3/4" PIECE OF PVC PIPE TO MAKE A COIL USING 30 LINEAR INCHES OF WIRE. MAKE ELECTRICAL CONNECTIONS WITH 3M-DBY, DBR CONNECTORS.

NUMBER ALL WIRES USING AN ELECTRICAL BOOK OF NUMBERS ACCORDING TO THE PLANS. NUMBER WIRES IN ALL VALVE BOXES, JUNCTION BOXES AND AT THE CONTROLLER.

WIRE SIZED, NUMBERED AND COLORED AS FOLLOWS:

#14 WHITE FOR COMMON #14 SPARE BLACK COMMON

#14 RED FOR HOT WIRES

#14 SPARE YELLOW HOT WIRE

CONTROLLER GROUNDING

CONTRACTOR TO UTILIZE 4"X8'X5/8" COPPER GROUNDING PLATES, 5/8"X10' COPPER CLAD GROUNDING RODS, 'ONE STRIKE' CAD WELLS AT ALL CONNECTION POINTS, #6 BARE COPPER WIRE, AND EARTH CONTACT MATERIAL. INSTALL THESE AND OTHER REQUIRED COMPONENTS AS OUTLINED IN THE DETAIL. CONTRACTOR TO VERIFY THAT THE EARTH TO GROUND RESISTANCE DOES NOT EXCEED 10 OHMS. CONTRACTOR SHALL PROVIDE A WRITTEN CERTIFICATION ON A LICENSED ELECTRICAL CONTRACTORS LETTER HEAD SHOWING THE DATE OF THE TEST, CONTROLLER LOCATION, AND TEST RESULTS. EACH CONTROLLER SHALL BE SO GROUNDED AND TESTED.

LAY OUT IRRIGATION SYSTEM MAINLINES AND LATERAL LINES. MAKE THE NECESSARY ADJUSTMENTS AS REQUIRED TO TAKE INTO ACCOUNT ALL SITE OBSTRUCTIONS AND LIMITATIONS PRIOR TO EXCAVATING

STAKE ALL SPRINKLER HEAD LOCATIONS. ADJUST LOCATION AND MAKE THE NECESSARY MODIFICATIONS TO NOZZLE TYPES, ETC. REQUIRED TO INSURE 100% HEAD TO HEAD COVERAGE. REFER TO THE EDGE OF PAVEMENT DETAIL ON THE IRRIGATION DETAIL SHEET.

SPRAY HEADS SHALL BE INSTALLED 4" FROM SIDEWALKS OR CURBED ROADWAYS AND 12" FROM UNCURBED ROADWAYS AND BUILDING FOUNDATIONS. ROTORS SHALL BE INSTALLED 4" FROM SIDEWALKS OR CURBED ROADWAYS, 12" FROM BUILDING FOUNDATIONS, AND 36" FROM UNCURBED ROADWAYS.

SHRUB HEADS SHALL BE INSTALLED ON 3/4" SCH 40 PVC RISERS. THE RISERS SHALL BE SET AT A MINIMUM OF 18" OFF SIDEWALKS, ROADWAY CURBING, BUILDING FOUNDATIONS, AND/OR ANY OTHER HARDSCAPED AREAS. SHRUB HEADS SHALL BE INSTALLED TO A STANDARD HEIGHT OF 4" BELOW MAINTAINED HEIGHT OF PLANTS AND SHALL BE INSTALLED WITHIN PLANTED MASSES TO BE LESS VISIBLE AND OFFER PROTECTION. PAINT ALL SHRUB RISERS WITH FLAT BLACK OR FOREST GREEN PAINT, UNLESS IRRIGATION SYSTEM WILL BE INSTALLED FROM A REUSE WATER SYSTEM WITH PURPLE PVC RISERS.

LOCATE VALVES PRIOR TO EXCAVATION. INSURE THAT THEIR LOCATION PROVIDES FOR EASY ACCESS AND THAT THERE IS NO INTERFERENCE WITH PHYSICAL STRUCTURES, PLANTS, TREES, POLES, ETC. VALVE BOXES MUST BE PLACED A MINIMUM OF 12" AND A MAXIMUM OF 15" FROM THE EDGE OF PAVEMENT, CURBS, ETC., AND THE TOP OF THE BOX MUST BE 2" ABOVE FINISH GRADE, NO VALVE BOXES SHALL BE INSTALLED IN TURF AREAS WITHOUT APPROVAL BY THE IRRIGATION DESIGNER; ONLY IN SHRUB BEDS. NEVER INSTALL VALVE BOXES IN SPORT FIELD AREAS.

SEQUENCE ALL VALVES SO THAT THE FARTHEST VALVE FROM THE P.O.C. OPERATES FIRST AND THE CLOSEST TO THE P.O.C. OPERATES LAST. THE CLOSEST VALVE TO THE P.O.C. SHOULD BE THE LAST VALVE IN THE PROGRAMMED SEQUENCE.

ADJUST THE FLOW CONTROL ON EACH RCV TO ENSURE SHUT OFF IN 10 SECONDS AFTER DEACTIVATION BY THE IRRIGATION CONTROLLER

USING 3" HIGH NUMBER STENCILS. PAINT THE VALVE NUMBER IN WHITE ON THE LID OF EACH VALVE

<u>EQUIPMENT</u>

ALL POP-UP HEADS AND SHRUB RISERS SHALL BE PRESSURE COMPENSATING. ALL POP-UP HEADS SHALL BE MOUNTED ON FLEX-TYPE SWING JOINTS.

ALL SPRINKLER EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS, AND IN ACCORDANCE WITH LOCAL AND

TRENCHING

EXCAVATE STRAIGHT AND VERTICAL TRENCHES WITH SMOOTH, FLAT OR SLOPING BOTTOMS. TRENCH WIDTH AND DEPTH SHOULD BE SUFFICIENT TO ALLOW FOR THE PROPER VERTICAL AND HORIZONTAL SEPARATION BETWEEN PIPING AS SHOWN IN THE PIPE INSTALLATION DETAIL ON THE DETAIL SHEET.

PROTECT EXISTING LANDSCAPED AREAS. REMOVE AND REPLANT ANY DAMAGED PLANT MATERIAL UPON JOB COMPLETION. THE REPLACEMENT MATERIAL SHALL BE THE SAME GENUS, SPECIES, AND SIZE OF THE MATERIAL IT IS REPLACING. THE FINAL DETERMINATION AS TO WHAT NEEDS TO BE REPLACED AND THE ACCEPTABILITY OF THE REPLACEMENT MATERIAL SHALL BE SOLELY DETERMINED BY THE OWNER OR OWNER'S REPRESENTATIVE.

INSTALLATION

CUT ALL PIPE SQUARE AND DEBURR. CLEAN PIPE AND FITTINGS OF FOREIGN MATERIAL, THEN APPLY A SMALL AMOUNT OF PRIMER WHILE ENSURING THAT ANY EXCESS IS WIPED OFF IMMEDIATELY. PRIMER SHOULD NOT PUDDLE OR DRIP FROM PIPE OR FITTINGS. NEXT APPLY A THIN COAT OF PVC CEMENT. FIRST APPLY A THIN LAYER TO THE PIPE, THEN A THIN LAYER INSIDE THE FITTING, AND FINALLY ANOTHER VERY THIN LAYER ON THE PIPE. INSERT THE PIPE INTO THE FITTING. INSURE THAT THE PIPE IS INSERTED TO THE BOTTOM OF THE FITTING, THEN TURN THE PIPE A 1/4 TURN AND HOLD FOR 10 SECONDS. MAKE SURE THAT THE PIPE DOESN'T RECEDE FROM THE FITTING. IF THE PIPE ISN'T AT THE BOTTOM OF THE FITTING UPON COMPLETION, THE GLUE JOINT IS UNACCEPTABLE AND MUST BE DISCARDED.

PIPES MUST CURE A MINIMUM OF 30 MINUTES PRIOR TO HANDLING AND PLACING INTO TRENCHES. A LONGER CURING TIME MAY BE REQUIRED: REFER TO THE MANUFACTURER'S SPECIFICATIONS. THE PIPE MUST CURE A MINIMUM OF 24 HOURS PRIOR TO FILLING WITH WATER.

<u>BACKFILLING</u>

THE BACKFILL 6" BELOW AND 6" ABOVE ALL PIPING SHALL BE CLEAN SAND. ALL OTHER TRCNCH BACKFILL CAN BE NATIVE MATERIAL BUT SHALL NOT CONTAIN ANYTHING LARGER THAN 2" IN DIAMETER.

MAIN LINE PIPE DEPTH MEASURED TO THE TOP OF PIPE SHALL BE 24" MINIMUM, 36" MINIMUM AT VEHICULAR CROSSINGS.

LATERAL LINE DEPTHS MEASURED TO TOP OF PIPE SHALL BE 18" MINIMUM, 30" MINIMUM AT VEHICULAR CROSSINGS.

CONTRACTOR SHALL BACKFILL ALL PIPING, BOTH MAINLINE AND LATERALS, PRIOR TO PERFORMING ANY PRESSURE TESTS. THE PIPE SHALL BE BACKFILLED WITH THE EXCEPTION OF 2' ON EACH SIDE OF EVERY JOINT (BELL FITTINGS, 90'S, TEES, 45'S, ETC.). THESE JOINTS SHALL NOT BE BACKFILLED UNTIL ALL PIPING HAS SATISFACTORILY PASSED ITS APPROPRIATE PRESSURE TEST AS OUTLINED BELOW.

PRIOR TO THE PLACEMENT OF HEADS, FLUSH ALL LINES FOR A MINIMUM OF 10 MINUTES OR UNTIL LINES ARE COMPLETELY CLEAN OF DEBRIS, WHICHEVER IS LONGER.

USE SCREENS IN HEADS AND ADJUST HEADS FOR PROPER COVERAGE AVOIDING EXCESS WATER ON WALLS, WALKS AND PAVING.

REMOVE ALL REMOTE CONTROL VALVES AND CAP USING A THREADED CAP. FILL MAINLINE WITH WATER AND PRESSURIZE THE SYSTEM TO 100 PSI. MONITOR THE SYSTEM PRESSURE AT TWO GAUGE LOCATIONS; THE GAUGE LOCATIONS MUST BE AT OPPOSITE ENDS OF THE MAINLINE. WITH THE SAME RESPECTIVE PRESSURES, MONITOR THE GAUGES FOR TWO HOURS. THERE CAN BE NO LOSS IN PRESSURE AT EITHER GAUGE FOR SOLVENT-WELDED PIPE. GASKETED PIPING SHALL LOSE NO MORE WATER THAN ALLOWED PER THE FLORIDA STATE BUILDING CODE, VOLUME II PLUMBING, PART VI, APPENDIX 'F'. REFER TO THIS SECTION FOR THE FORMULA TO BE USED TO CALCULATE THE MAXIMUM ALLOWABLE WATER LOSS DURING THE TESTING TIME. IF THESE PARAMETERS ARE EXCEEDED, LOCATE THE PROBLEM; REPAIR IT; WAIT 24 HOURS AND RETRY THE TEST. THIS PROCEDURE MUST BE FOLLOWED UNTIL THE MAINLINE PASSES THE TEST.

THE LATERAL LINES MUST BE FILLED AND VISUALLY CHECKED FOR LEAKS. ANY LEAKS DETECTED MUST BE REPAIRED. NO PRESSURE TEST OF THE LATERAL LINES IS REQUIRED.

ONCE THE MAINLINE AND LATERAL LINES HAVE PASSED THEIR RESPECTIVE TESTS AND THE SYSTEM IS COMPLETELY OPERATIONAL, A COVERAGE TEST AND DEMONSTRATION OF THE SYSTEM IS REQUIRED. THE IRRIGATION CONTRACTOR MUST DEMONSTRATE TO THE OWNER OR HIS/HER REPRESENTATIVE THAT PROPER COVERAGE IS OBTAINED AND THAT THE SYSTEM WORKS AUTOMATICALLY FROM THE CONTROLLER. THIS DEMONSTRATION REQUIRES THAT EACH ZONE BE TURNED ON IN THE PROPER SEQUENCE AS SHOWN ON THE PLANS FROM THE CONTROLLER. EACH ZONE WILL BE INSPECTED FOR PROPER COVERAGE AND FUNCTION. THE DETERMINATION OF PROPER COVERAGE AND FUNCTION WILL BE SOLEY DETERMINED BY THE OWNER OR OWNER'S REPRESENTATIVE.

OPERATIONAL TESTING - UPON COMPLETION OF BACKFILLING, FINISH GRADING AND CONTOURING, TEST THE ENTIRE SYSTEM FOR PROPER OPERATION, INCLUDING ELECTRICALLY ACTUATING THE REMOTE CONTROL VALVES. RUN EACH ZONE UNTIL WATER BEGINS TO PUDDLE OR RUN OFF. THIS WILL ALLOW DETERMINATION OF THE NUMBER OF IRRIGATION START TIMES NECESSARY TO MEET THE WEEKLY EVAPOTRANSPIRATION REQUIREMENTS OF THE PLANTING MATERIAL IN EACH ZONE. IN SANDY SOILS NO PUDDLING WILL OCCUR. IN THESE CASES, CALCULATE THE REQUIRED RUN TIMES.

THE CONTRACTOR MUST SUBMIT FOR APPROVAL. PRIOR TO INSTALLATION. COPIES OF THE MANUFACTURER'S CUT SHEETS/SPECIFICATIONS FOR ALL COMPONENTS TO BE USED IN THE IRRIGATION

AFTER PROJECT COMPLETION, AND AS A CONDITION OF FINAL ACCEPTANCE, THE IRRIGATION CONTRACTOR SHALL PROVIDE THE OWNER WITH A HIGH QUALITY, ACCURATE, AND LEGIBLE SET OF AS-BUILT DRAWINGS. THE AS-BUILTS MUST IDENTIFY ALL REMOTE CONTROL VALVES, GATE VALVES, BALL VALVES, SPLICE BOXES, CONTROLLERS, MAINLINE, SLEEVING, AND LOW VOLTAGE WIRING. EACH OF THESE ITEMS IS SHALL LOCATED USING A SUBMETER GPS SYSTEM. THE IRRIGATION CONTRACTOR MUST ALSO PROVIDE ACCURATE, INFORMATIVE, AND EASY TO FOLLOW AND UNDERSTAND OPERATION AND MAINTENANCE MANUALS FOR ALL COMPONENTS OF THE IRRIGATION SYSTEM.

CONTROLLER CHARTS — UPON COMPLETION OF "AS-BUILTS". CONTRACTOR SHALL PREPARE CONTROLLER CHARTS AT ONE PER CONTROLLER. INDICATE ON EACH CHART THE AREA CONTROLLED BY A REMOTE CONTROL VALVE (USING A DIFFERENT COLOR FOR EACH ZONE). THIS CHART SHALL BE REDUCED TO A SIZE THAT WILL FIT INSIDE OF THE CONTROLLER DOOR. THE REDUCTION SHALL BE HERMETICALLY SEALED INSIDE TWO 2ML PIECES OF CLEAR PLASTIC.

CONTRACTOR SHALL FURNISH EXTRA MATERIALS DESCRIBED BELOW THAT MATCH PRODUCTS INSTALLED AND THAT ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE AND IDENTIFIED WITH LABELS DESCRIBING CONTENTS. INCLUDE TOOLS TO SERVICE THESE PRODUCTS. 1. SPRINKLER UNITS: FIVE OF EACH UNIT FOR EACH TYPE AND SIZE INSTALLED, BUT NO FEWER THAN TWO UNITS.

2. EMITTER UNITS: FIVE OF EACH UNIT FOR EACH TYPE AND SIZE INSTALLED, BUT NO FEWER THAN TWO UNITS. 3. DRIP TUBE UNITS: FIVE OF EACH UNIT FOR EACH TYPE AND SIZE INSTALLED, BUT NO FEWER THAN TWO UNITS.

FINAL ACCEPTANCE

FINAL ACCEPTANCE OF THE IRRIGATION SYSTEM WILL BE GIVEN AFTER THE FOLLOWING DOCUMENTS AND CONDITIONS HAVE BEEN COMPLETED AND APPROVED. FINAL PAYMENT WILL NOT BE RELEASED UNTIL THESE CONDITIONS ARE SATISFIED.

- 1. FINAL WALK-THRU AND CORRECTION OF ALL PUNCH LIST ITEMS. 2. COMPLETION AND ACCEPTANCE OF 'AS-BUILT' DRAWINGS.
- 3. ACCEPTANCE OF REQUIRED CONTROLLER CHARTS AND PLACEMENT INSIDE OF CONTROLLERS. 4. TURNOVER OF ALL REQUIRED PARTS AND TOOLS AS OUTLINED IN THE PROJECT SPECIFICATIONS.

GUARANTEE: THE IRRIGATION SYSTEMS SHALL BE GUARANTEED FOR A MINIMUM OF ONE CALENDAR YEAR FROM THE TIME OF FINAL ACCEPTANCE.

> LA 6667184 $-\star-$ STATE OF FLORID

FINAL SUBMITTAL: NOV DRB

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CERTIFICATES OF AUTHORIZATION B7318 LB6680 LC0 M.J R.N.G M.J DES. DWN. CHK. PROJECT / FILE NO. 18-00020

CASTO MIGUEL JUNCAL, RLA fla. registration no. 6667184 ___ date : <u>9/7/2018</u> IRR-2DATE DRAWN: 9/7/18

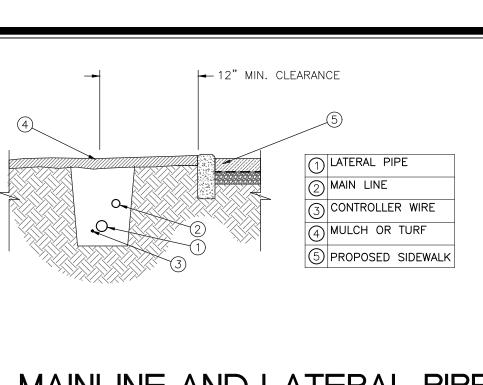
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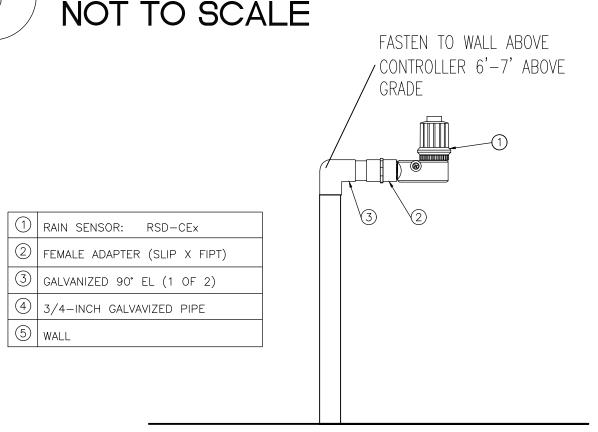








MAINLINE AND LATERAL PIPE 5



RAIN SENSOR NOT TO SCALE

1) FINISH GRADE

(4) LATERAL PIPE

(3) LATERAL TEE OR ELL

5 HUNTER SWING JOINT MODEL SJ-5XX-X

6 RECLAIMED CAP, MODEL #45852X

6 RECLAIMED CAP, MODEL #45852X

PROS-06 SPRAY HEAD

(1) STANDARD VALVE BOX

WITH FILTER SENTRY

(5) 18-24" COILED WIRE

6 SCH 80 T.O.E. NIPPLE

8 BRICK SUPPORTS (4)

(10) PVC SLIP UNIONS

SLEEVES

24" MIN. TO

FINISH GRADE

36" MIN. 48" MAX.

(7) MAIN LINE PIPE & FITTINGS

9 3/4" MINUS WASHED GRAVEL

(4) WATERPROOF CONNECTORS (2)

REMOTE CONTROL VALVE MODEL ICV-101G CCU-SYNC-XX

2) FINISH GRADE

NOT TO SCALE

HUNTER ICV VALVE

→ 4" Min. Clearance

NOTES:

1. ALL PVC IRRIGATION SLEEVES TO BE SCH 80 PVC PIPE.

2. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.

MPR ROTATOR HEAD

3. MECHANICALLY TAMP TO 95% PROCTOR.

NOT TO SCALE

SLEEVING

2 MODEL PGP ROTOR HEAD

(3) 3/4" PVC STREET ELLS (3)

1) FINISH GRADE

(4) SCH 80 NIPPLE

(6) LATERAL PIPE

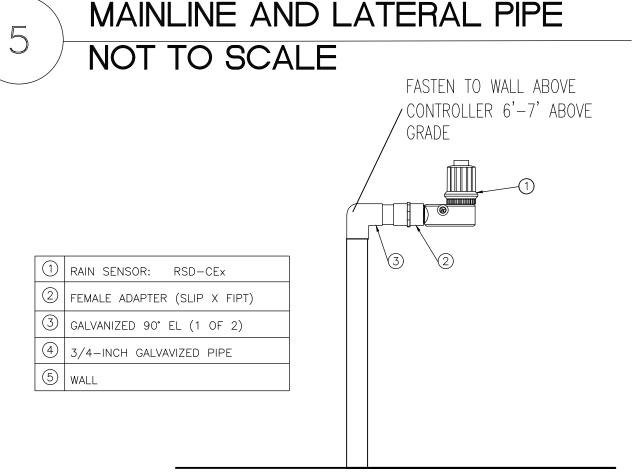
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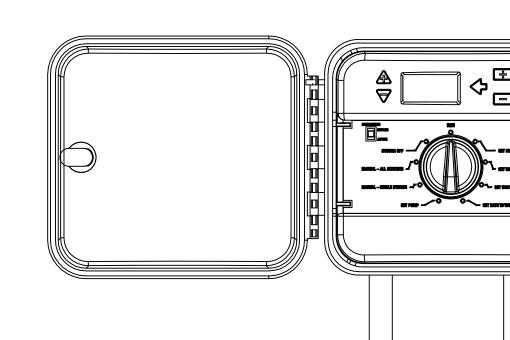
(5) LATERAL TEE OR ELL

NOT TO SCALE

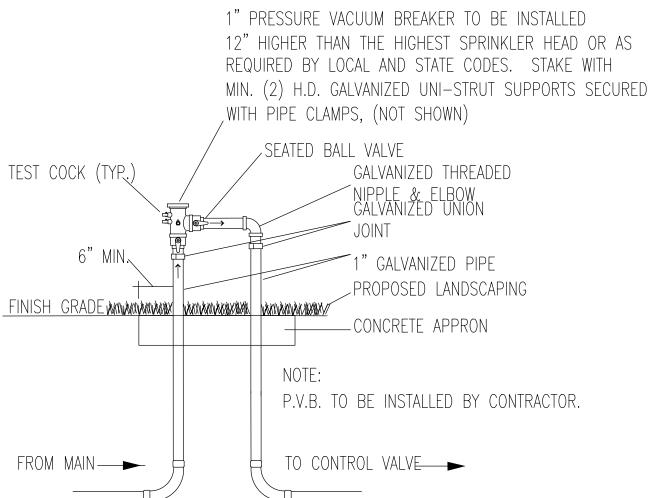
TEMPORARY,
DURING
CONSTRUCTION,

(2) MODEL PROS-06 SPRAY HEAD





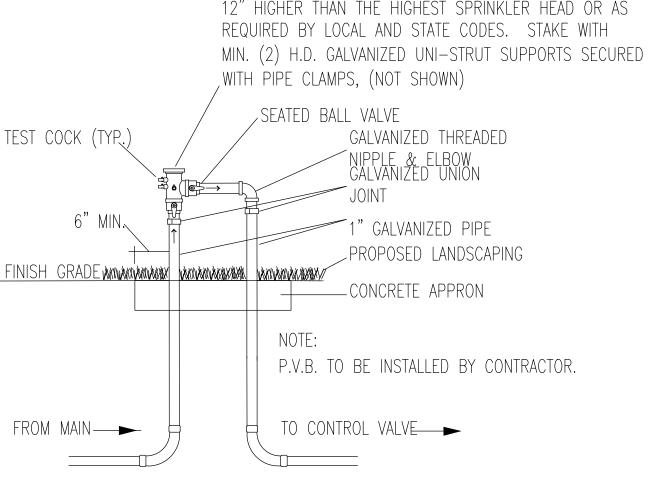
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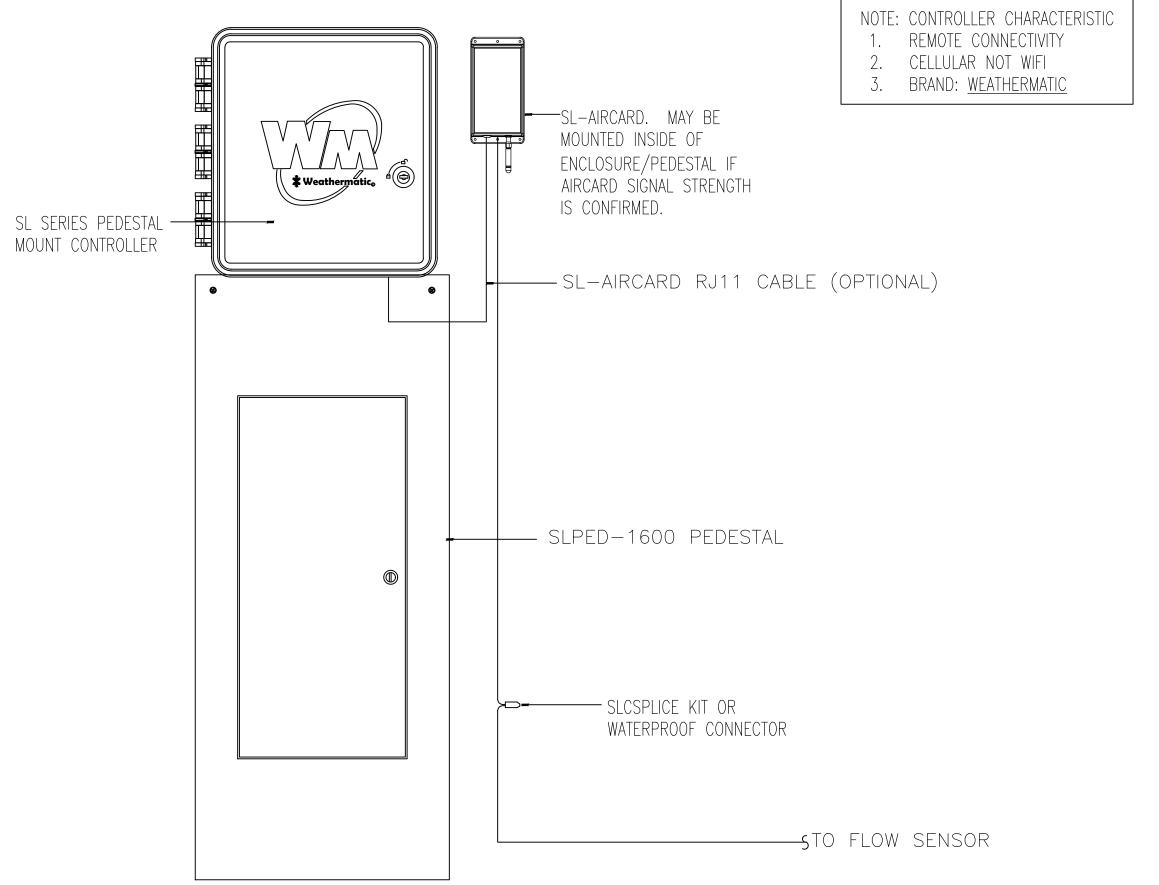


BACKFLOW PREVENTER NOT TO SCALE

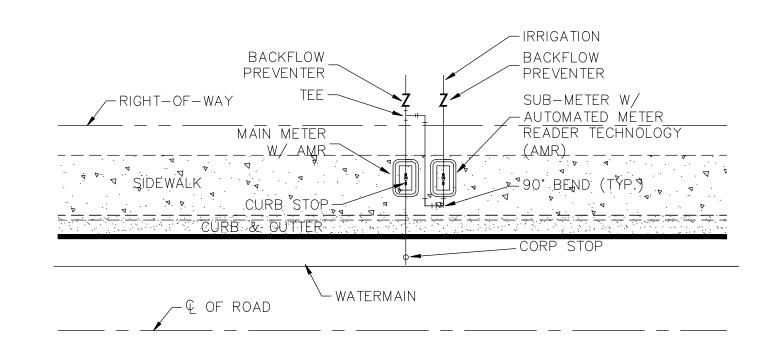
DOOR CLEARANCE

CONTROLLER (OUTDOOR) WEATHERMATIC





SL1600 ON SLPED-1600 PEDESTAL NOT TO SCALE



- MUST USE RECTANGULAR BOX TO ACCOMMODATE BOTH THE SUB-METER AND SHUT-OFF VALVE.
 MUST HAVE SHUT-OFF VALVE ON INLET SIDE BEFORE METER.
 MUST PLACE SUB-METER BOX WITHIN 5 FEET OF MAIN METER, EASILY

- ACCESSIBLE TO METER READER.

 4. MUST CALL METER SHOP AT 305-673-7681 WHEN INSTALLATION IS COMPLETED FOR FINAL INSPECTION IN ORDER TO OBTAIN SEWER CREDIT. 5. SUB-METER CANNOT BE LARGER THAN THE DOMESTIC METER WATER SERVICE
- METER INSTALLATION DETAIL

NOT TO SCALE



FINAL SUBMITTAL: NOV DRB



CASTO MIGUEL JUNCAL, RLA fla. registration no. 6667184 ___ date : <u>9/7/2018</u>___

SHADE STRUCTURE: SAIL

COOL NET



DOCT DAD

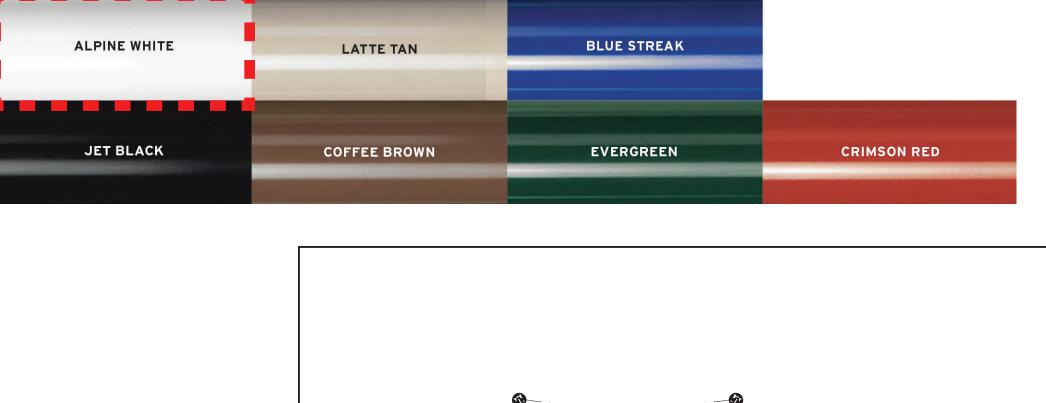
ALPINE WHITE	JET BLACK	LATTE TAN	BLUE STREAK	EVERGREEN

POWDER COATED COLORS

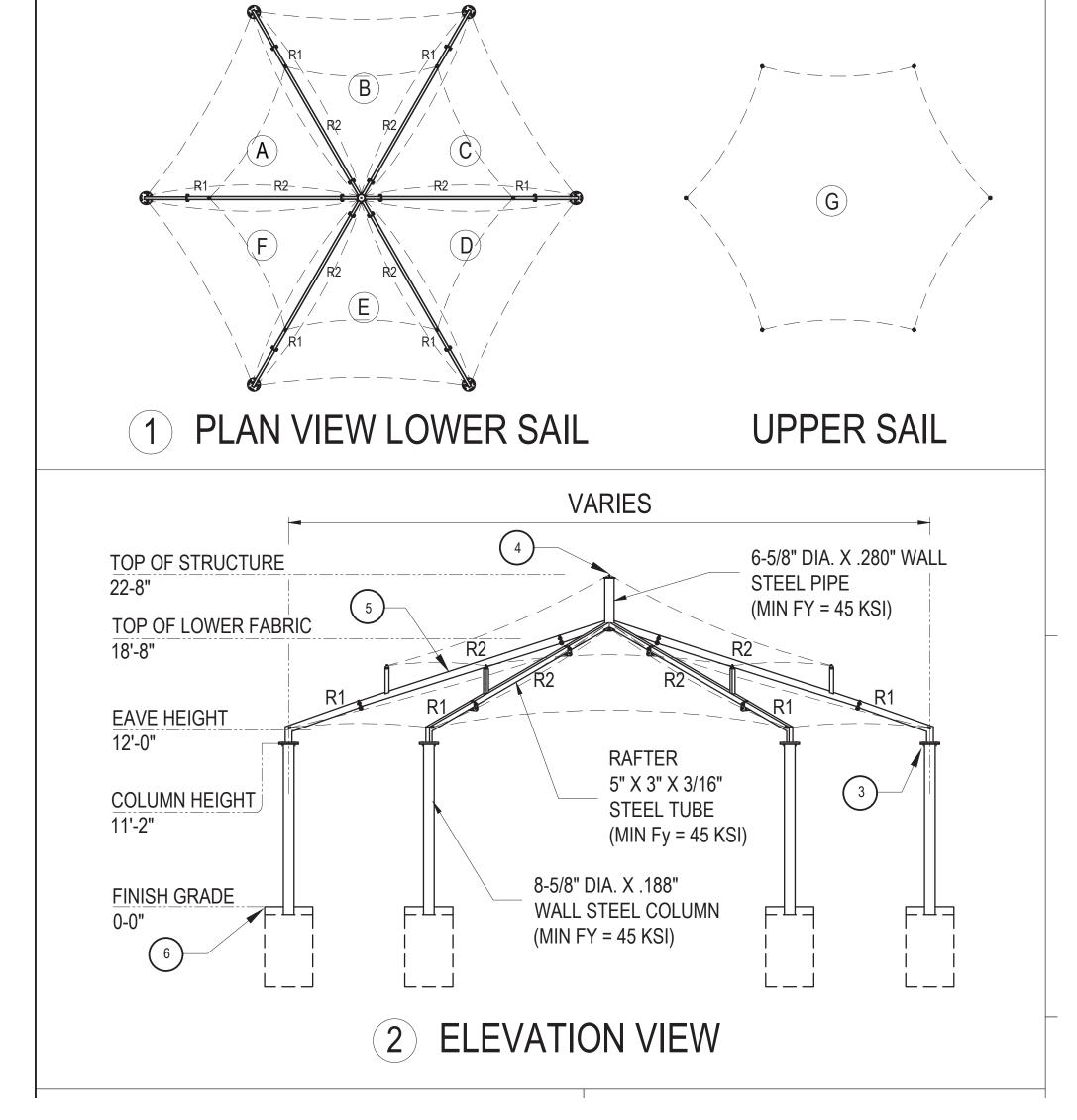
	CONTRACTOR OF THE PARTY OF THE		I
ALPINE WHITE	LATTE TAN	BLUE STREAK	
JET BLACK	COFFEE BROWN	EVERGREEN	CRIMSON RED
SET BEAGN	COLLE BROWN	EVEROREEN	CRIMOON RE

SHADE COLOR PERCENTAGES

COLOR	WEIGHT (g/m ²)	SHADE FACTOR %	UVR BLOCK %
Canary Yellow	342	77	93
Eggshell White	342	79	95
Lime Green	400	87	94
Fire Orange	400	82	94
Hot Pink	400	89	95
Grape Purple	400	82	90
Desert Sand	322	84	95
Rivergum Green	318	86	93
Bright Red	342	81	91
Brick Red	340	95	94
Silver Grey	318	92	97
Light Blue	348	95	97
Navy Blue	316	96	99
Aquatic Blue	348	88	94
Forest Green	340	96	97







LNP-3

BERLINER: Cosmo.S4 Design Colors of tubes and posts (matte finish) Cosmo S 04 –At a glance. Number of Foundations: Product Family: 6 pc. 0.8 m³ (28.3 ft³) Concrete Volume C20/C25: Item Number: Children's Age: Number of skilled installers required: Fall Height (DIN EN 1176): 1.83 m (6'-0") Installation Time without foundation: Traffic black Pure white Red brown 1.2 m x 0.8 m x 1.0 m (3'-11" x 2'-7" x 3'-3") Length x Width x Height: 5.7 m x 4.6 m x 2.9 m Dimensions of largest part: aluminium (18'-9" x 15'-1" x 9'-6") 110 kg (242.5 lbs) 3.4 m³ (120.1 ft³) Protective Surfacing Area (DIN EN 1176): 9.4 m x 8.3 m Weight of heaviest part: Protective Surfacing Area (ASTM 1487): 9.4 m x 8.3 m Shipping Volume: Lifelong No.: Z2 15 12 10256 245 TUV Product Serivce (30'-9" x 27'-1") Spare part guarantee: Minimum space required DIN EN 1176: Minimum space required ASTM 1487: Certificate according to DIN EN 1176: 53.1 m² (571.6 sf) Traffic Blue lilac Light pink Pastel blue Light blue Traffic blue Water blue Pine green orange RAL 6034 Pale green turquoise Classic Colors of tubes and posts (glossy finish) RAL 3004 Purple red RAL 3020 RAL 5010 40 50 Gentian blue Water blue "Cosmo RAL 6018 80 80 Yellow green Fir green Colors of HDPE-panels Colors of Steps and Climbing Holds BERLINER: Cosmo.02 Colors of Ball Joints Cosmo.02 - At a glance. Product Family: 1.8 m³ (63.6 ft³) Concrete Volume C20/C25: Number of skilled installers required: Children's Age: Fall Height (DIN EN 1176): 2.30 m (7'-7") Length x Width x Height: 0.1 m x 0.1 m x3.9 m (0'-4" x 0'-4" x 12'-10") 8.6 m x 6.0 m x 3.8 m Dimensions of largest part: 105 kg (231.5 lbs) 4.0 m³ (141.3 ft³) Protective Surfacing Area (DIN EN 1176): 9.6 m x11.6 m Weight of heaviest part: 12.2 m x 9.7 m (40'-0" x 31'-9") Protective Surfacing Area (ASTM 1487): Minimum space required DIN EN 1176: 70.3 m²

LNP-4

Minimum space required ASTM 1487:

75.4 m² (811.6 sf)

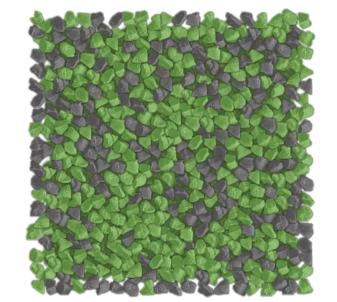
INNOVATIVE PLAY SOLUTIONS







RUBBERIZED SURFACE TEXTURE SAMPLE



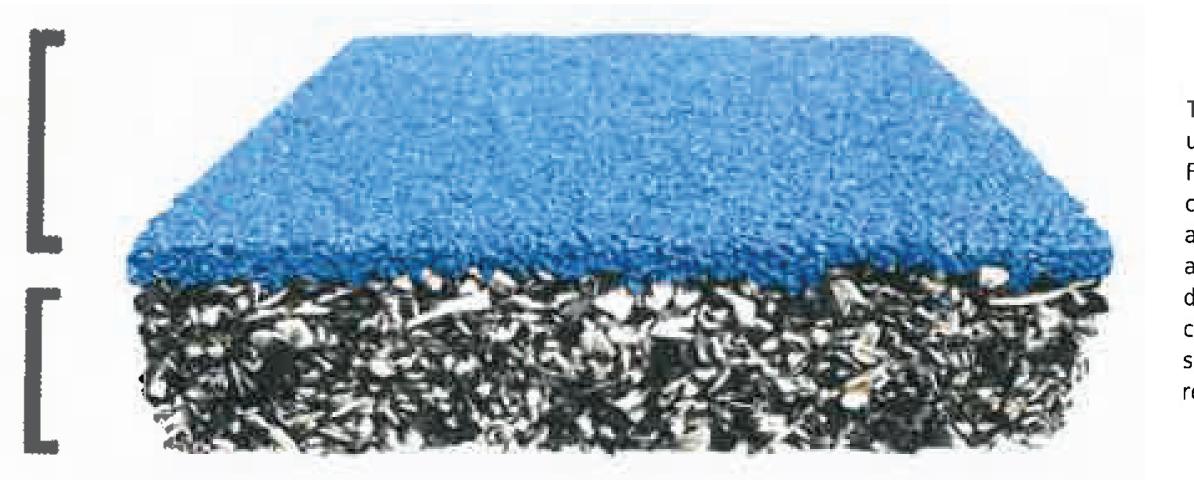
RUBBERIZED SURFACE COLOR PALETTE



AQUASEAL SAFETY SURFACE

Any of our **Pour & Place** Safety Surfacing product line

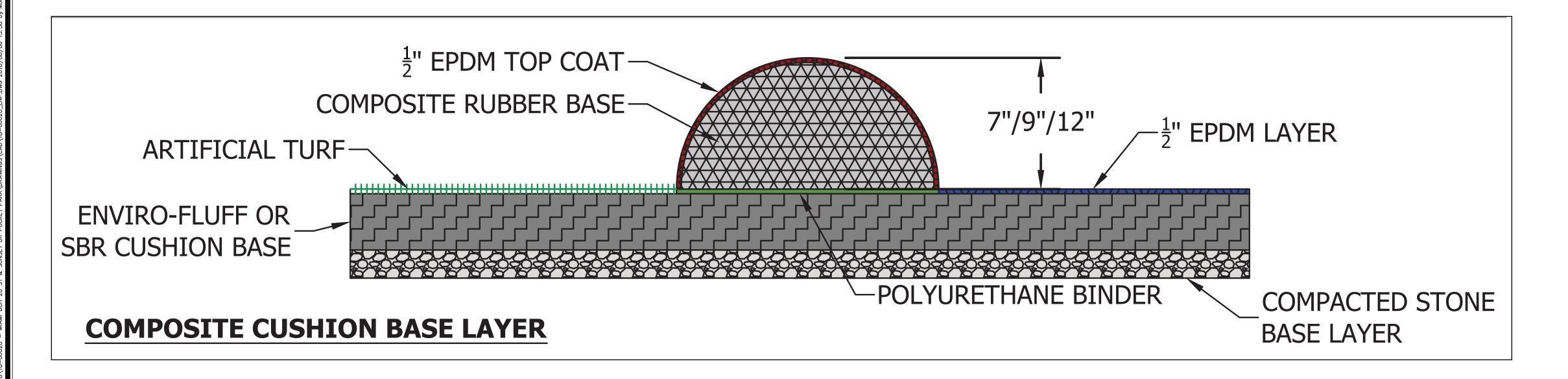
EnviroFluff



The Envirofluff is a new state of the art cushion base material used in playgrounds and water play applications to provide vertical Fall height protection. Combination of a polyethylene foam base, coated with a tough layer of black thermoplastic olefin coating allows for the material to have a very high degree of energy absorption qualities. Envirofluff has a great resistance to the degradation in the outdoor elements and is also very resistant to chlorinated water. Unlike SBR that is widely used in the safety surfacing industry it is safe for the environment, and is totally recyclable with no hazard materials.

Key Benefits:

- **⊘**100% Recyclable
- **Total Seamless Surface**
- **S** Not Harmful to Children or the Environment
- Will not Degradation Over Time
- **O** Chlorine Resistant Easy to Install
- **S** Lower Instillation Cost
- Meets and Exceeds "Critical Fall Height" Test Standards



18-00020 LNP-5

EARTHPLAY: HILL SLIDE





ADDITIONAL INFORMATION

Size Small Single (2' high), Medium Single (3' high), Large Single (4' high), XL Single (5' high), Medium Double (3' high), Large Double (4' high)

Color Blue, Green, Red, Yellow, Tan

CITY OF MIAMI BEACH, MIAMI- DADE COUNTY, FLORIDA

MILLER LEGG
South Florida Office: 5747 N. Andrews Way
Ft. Landerdale Florida : 33309-2364

CERTIFICATES OF AUTHORIZATION:
EB7318 LB6680 LC0337

DES. DWN. CHK.

PROJECT / FILE NO.
18-00020

DRAWING NO.
LNP-6

DATE DRAWN:

METALCO: AIR-A



AIR A

Metalco normally uses stainless steel AISI 304 or 304L.

Stainless steel may be supplied with the following finishing:

2. Shot peening (on small products and/or accessories)

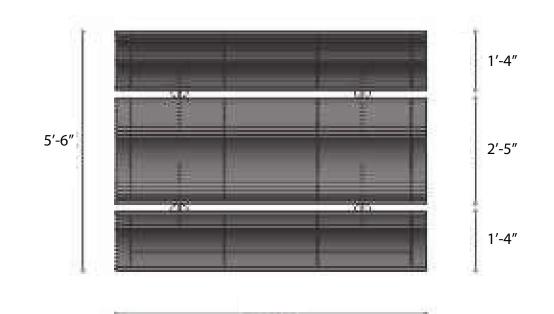
On request, subject to extra-charges, eclectropolishing treatment can be provided.

In case of installation of stainless steel products in areas characterized by salty air (e.g. near the sea) or by severe pollution, Metalco recommends to request ELECTROPOLISHING treatment.

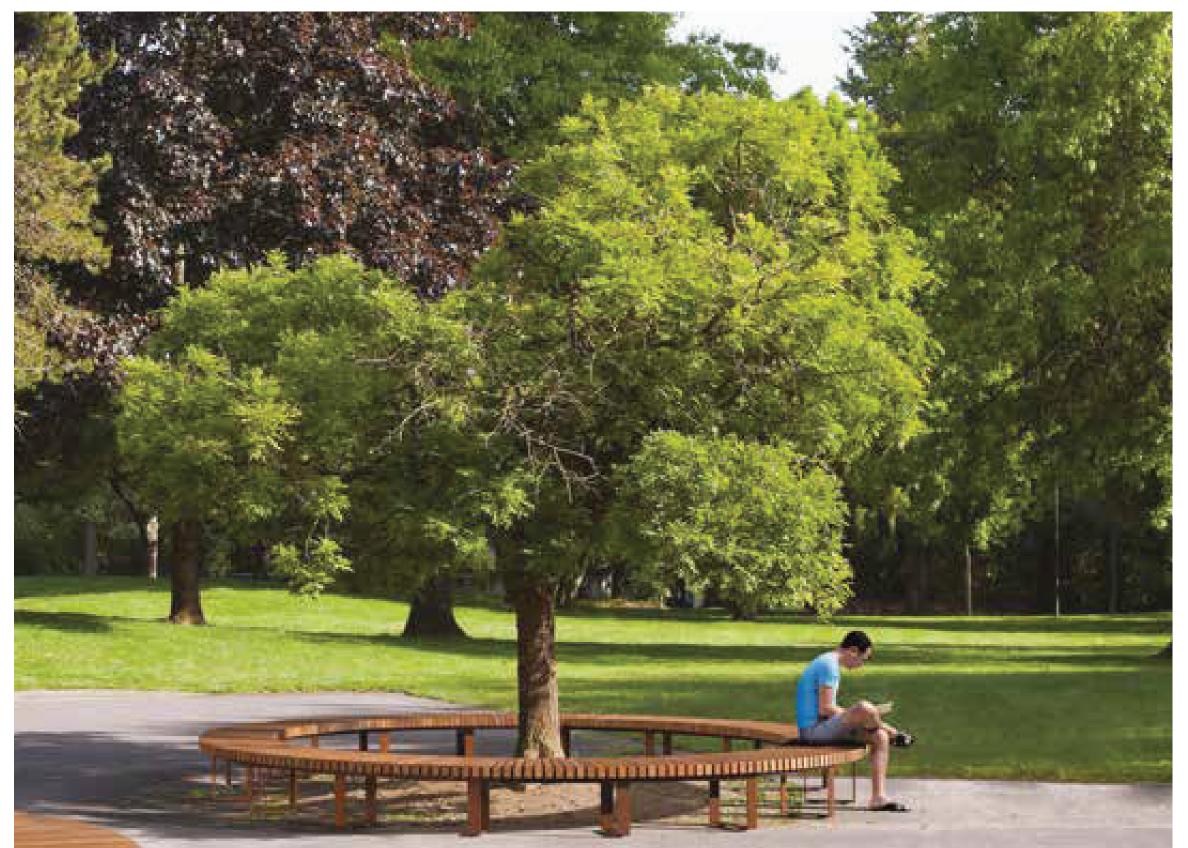
This treatment improves stainless steel resistance to corrosion. This treatment is subject to extra-charges.

Metalco recommends to periodically clean stainless steel products to eliminate salt, dust and other deposits which may alter the protective layer of the material. Washing, as well as making the product clean, reduces the risk of corrosion. Normally it's sufficient to simply wash the stainless steel with water, detergent and a soft cloth. In the case of lime scale deposits, use a cream all-purpose cleaner with a soft cloth; while in case of thicker deposits, very hot water with 1/4 of vinegar is necessary. For grease and oil stains, use a mild liquid dishwashing product. For rust stains, use a mild cream using a soft damp cloth. For an optimal cleaning of stainless steel, Metalco uses a specific cleaner to remove dirt, stains and processing residues, which can be provided

For any doubt on proper maintenance procedure, please contact Metalco Quality Department.



METALCO: COBRA SEATING





Metalco normally uses stainless steel AISI 304 or 304L.

Stainless steel may be supplied with the following finishing:

2. Shot peening (on small products and/or accessories)

On request, subject to extra-charges, eclectropolishing treatment can be provided.

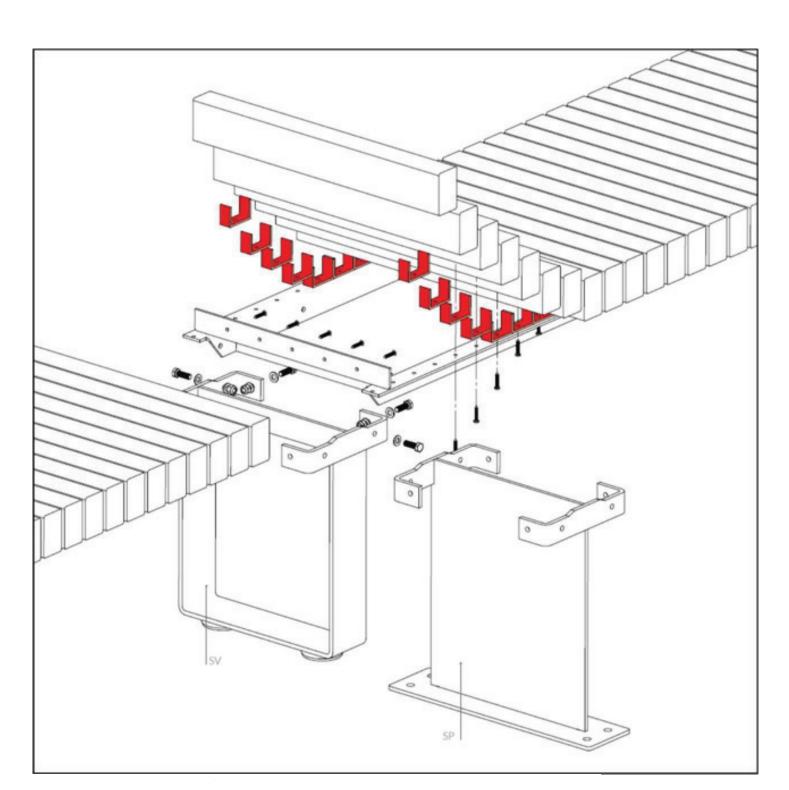
In case of installation of stainless steel products in areas characterized by salty air (e.g. near the sea) or by severe pollution, Metalco recommends to request ELECTROPOLISHING treatment.

This treatment improves stainless steel resistance to corrosion. This treatment is subject to extra-charges.

Metalco recommends to periodically clean stainless steel products to eliminate salt, dust and other deposits which may alter the protective layer of the material. Washing, as well as making the product clean, reduces the risk of corrosion. Normally it's sufficient to simply wash the stainless steel with water, detergent and a soft cloth. In the case of lime scale deposits, use a cream all-purpose cleaner with a soft cloth; while in case of thicker deposits, very hot water with 1/4 of vinegar is necessary. For grease and oil stains, use a mild liquid dishwashing product. For rust stains, use a mild cream using a soft damp cloth. For an optimal cleaning of stainless steel, Metalco uses a specific cleaner to remove dirt, stains and processing residues, which can be provided

For any doubt on proper maintenance procedure, please contact Metalco Quality Department.







FLA. REGISTRATION NO. _

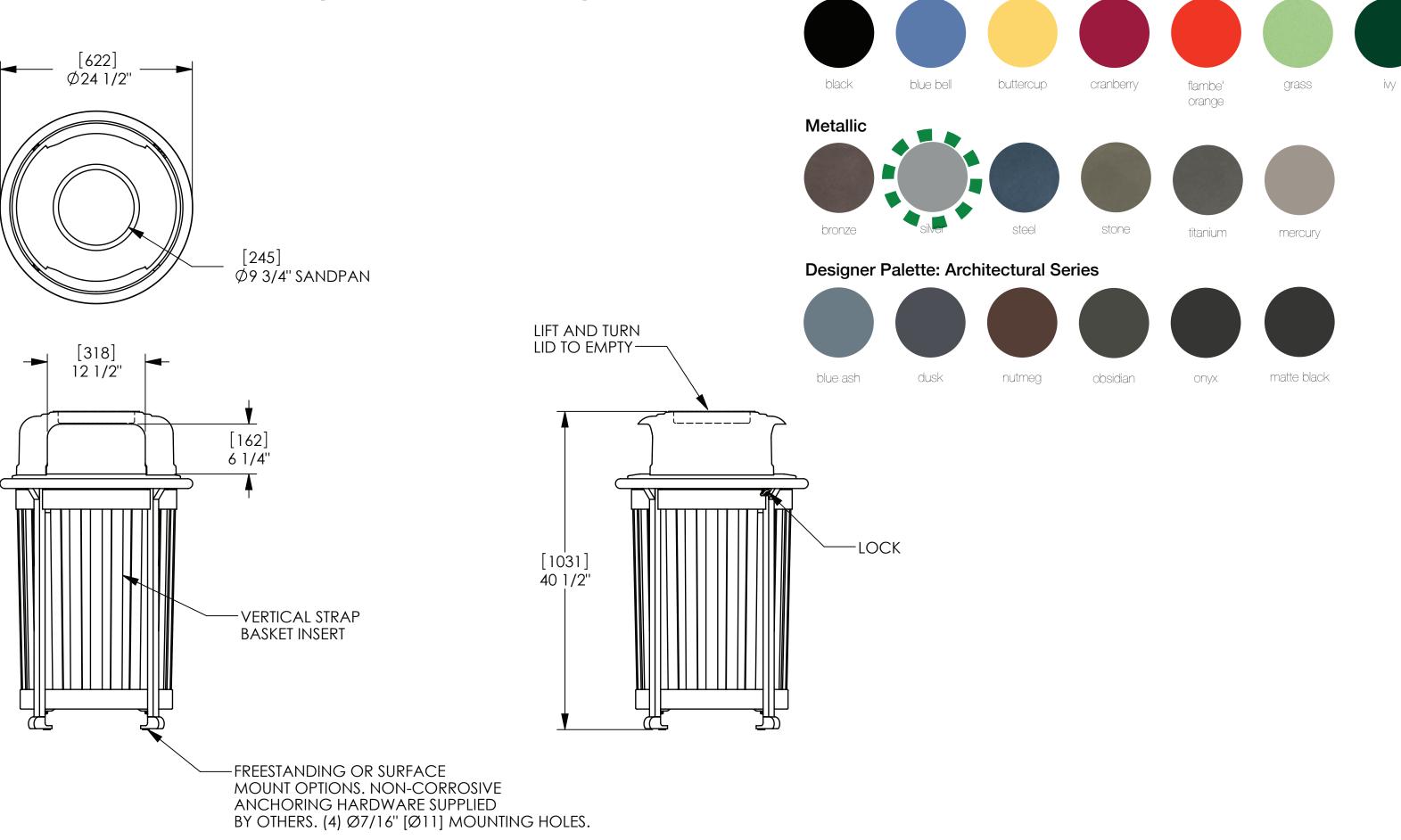
37318 LB6680 LC03

18-00020 LNP-7

8/8/18

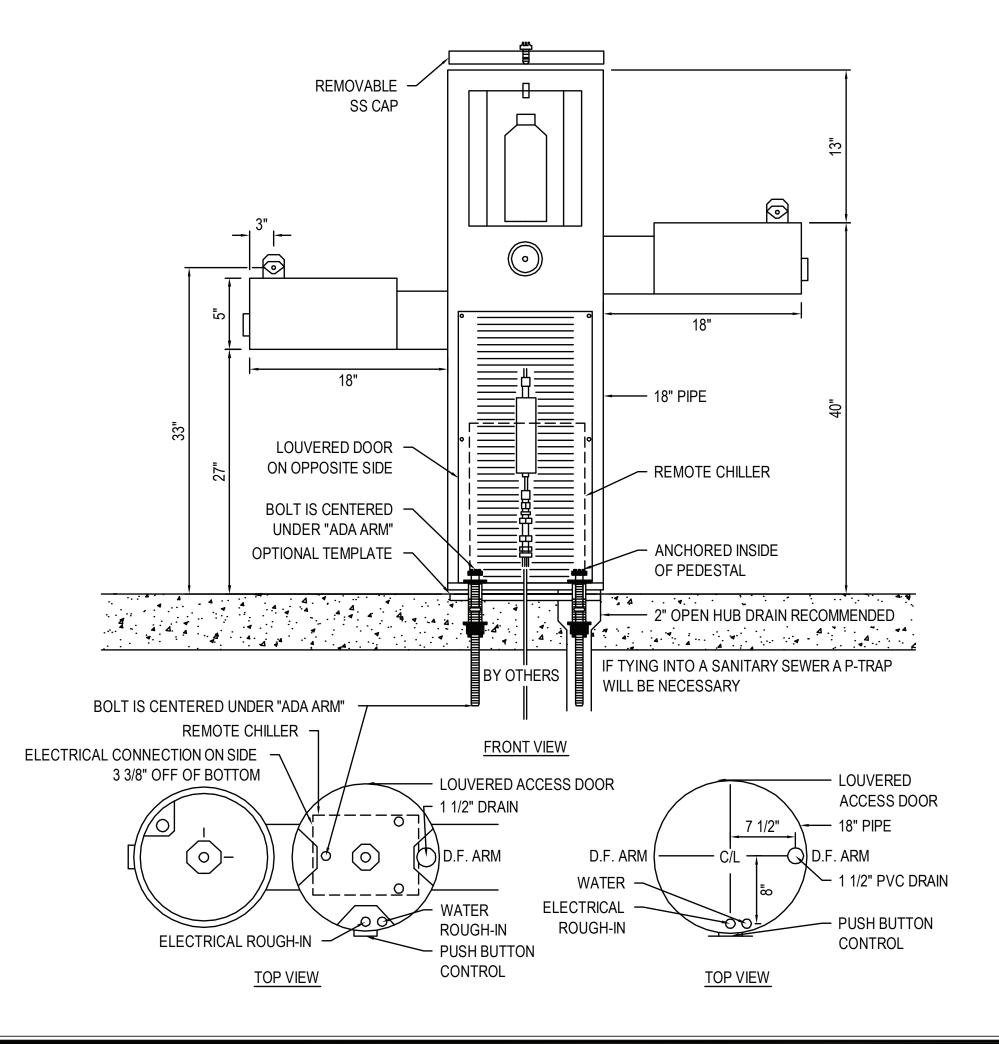
LANDSCAPEFORMS: SCARBOROUGH RECEPTACLE (SIDE OPEN)





MOSTDEPENDABLE: 10145-18 SMSS CHILLED







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CERTIFICATES OF AUTHORIZATION
B7318 LB6680 LC033

18-00020

LNP-8

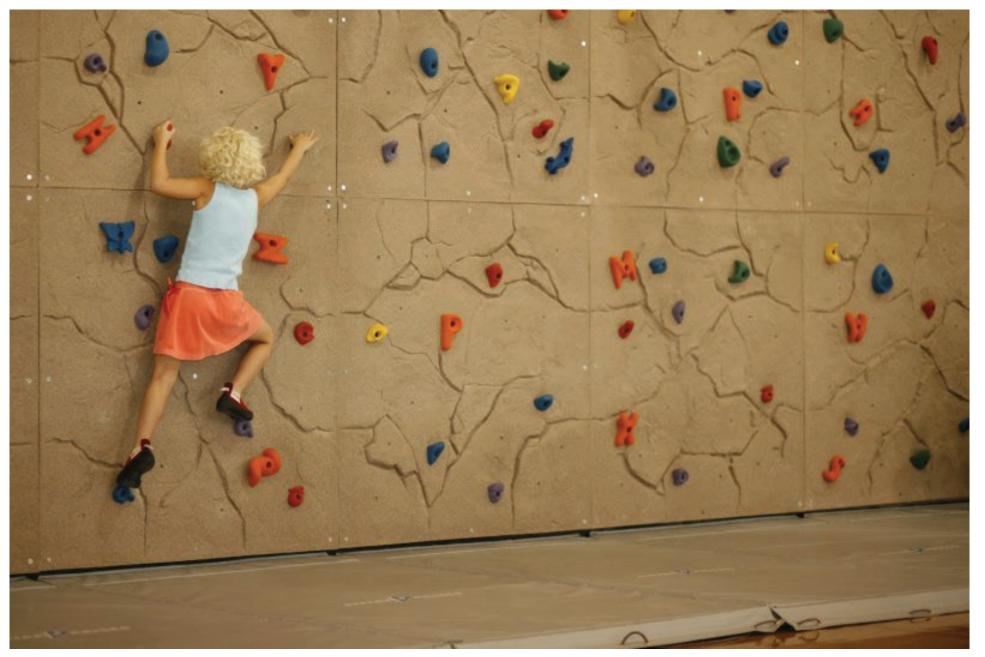
date drawn: 8/8/18

BOARD

ANDSC

CLIMBING WALL



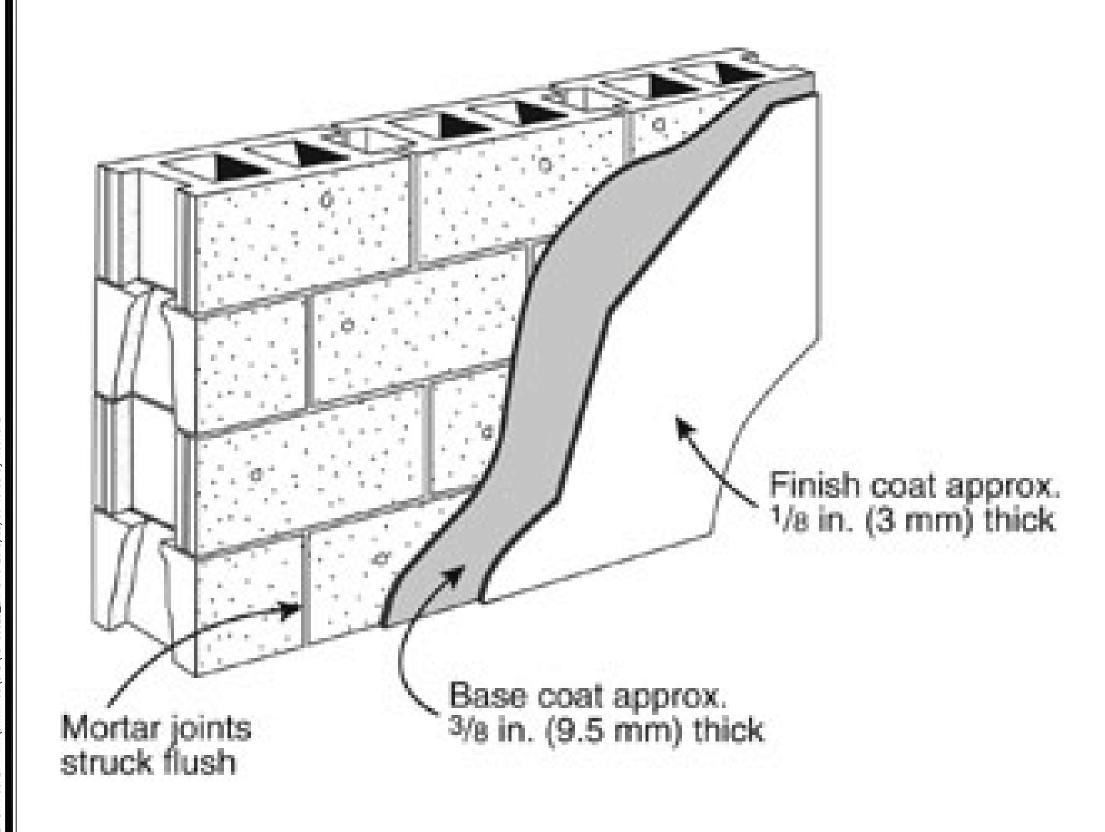


CLIMBING HOLDS COLOR PALETTE

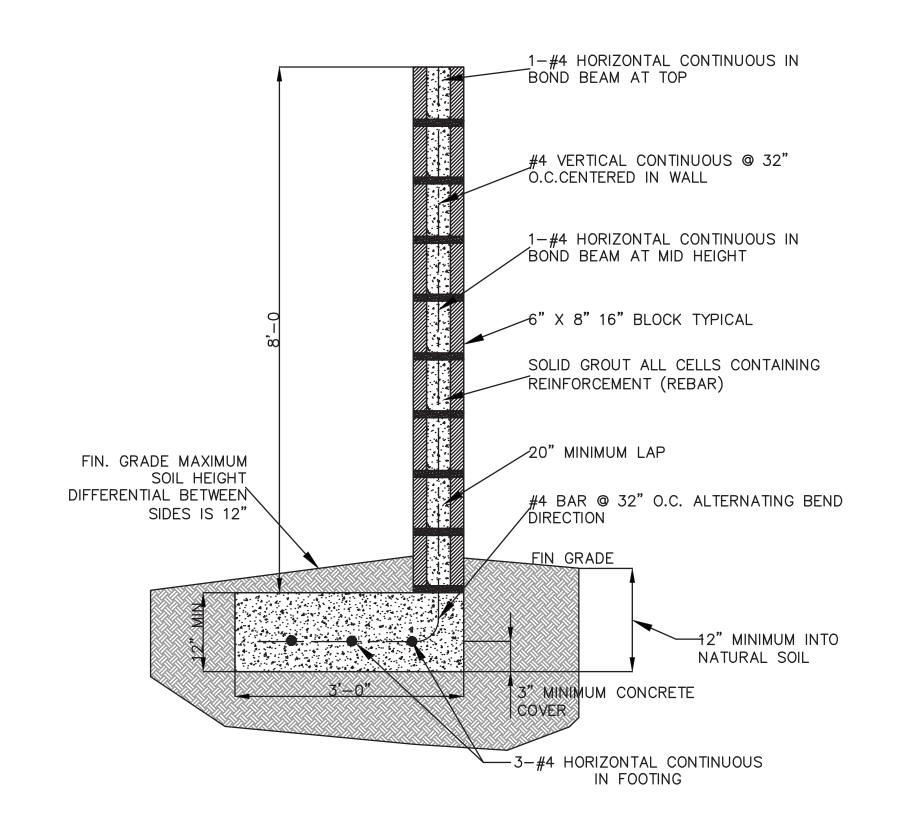




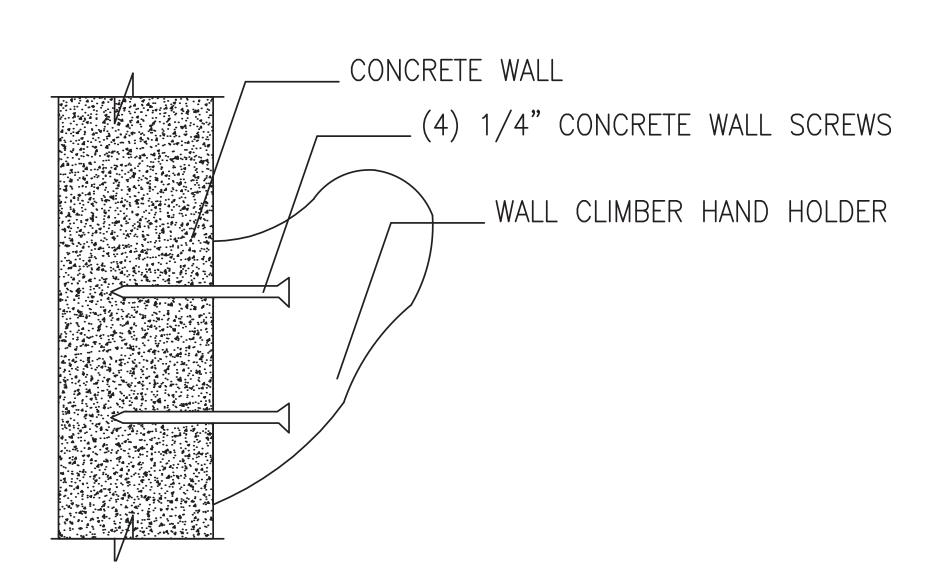
WALL DETAILS



STUCCO WALL FINISH



STUCCO WALL DETAIL



CLIMBING HOLD DETAIL

NDSCAPE IMAGE BOARD

CERTIFICATES OF AUTHORIZATION:
EB7318 LB6680 LC0337

DES. DWN. CHK.

PROJECT / FILE NO.

18-00020

DRAWING NO.
LNP-9

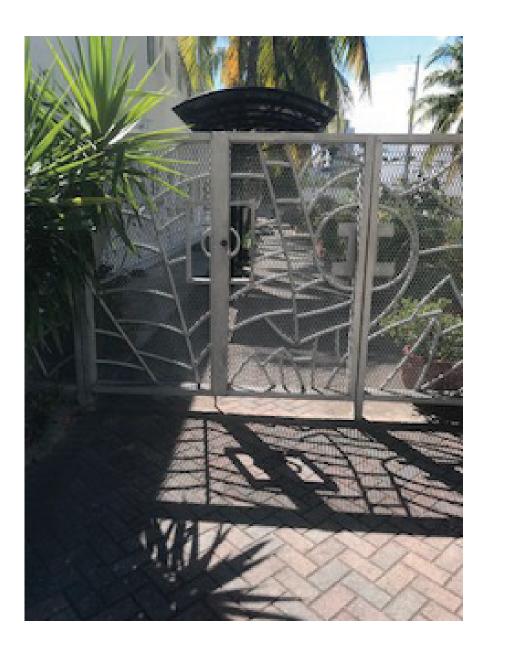
DATE DRAWN:

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ACCENT PANELS

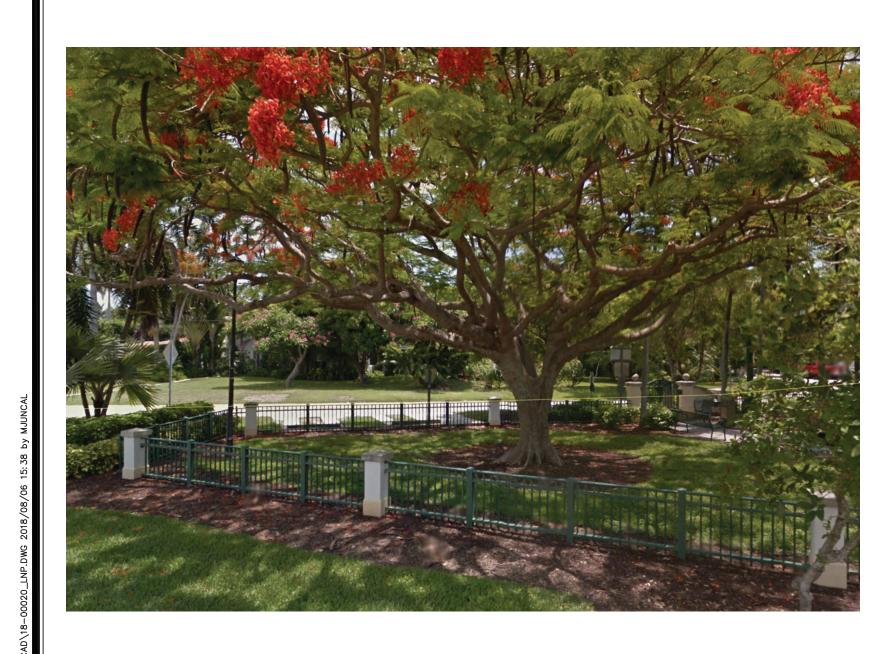




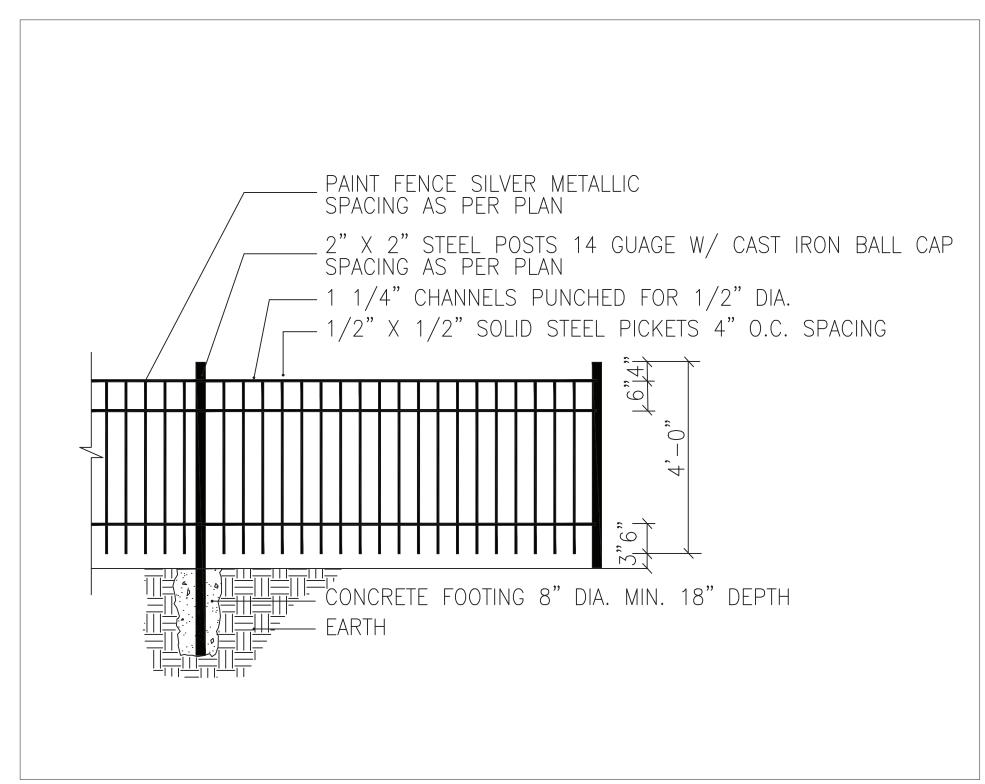


Victory Garden Washington

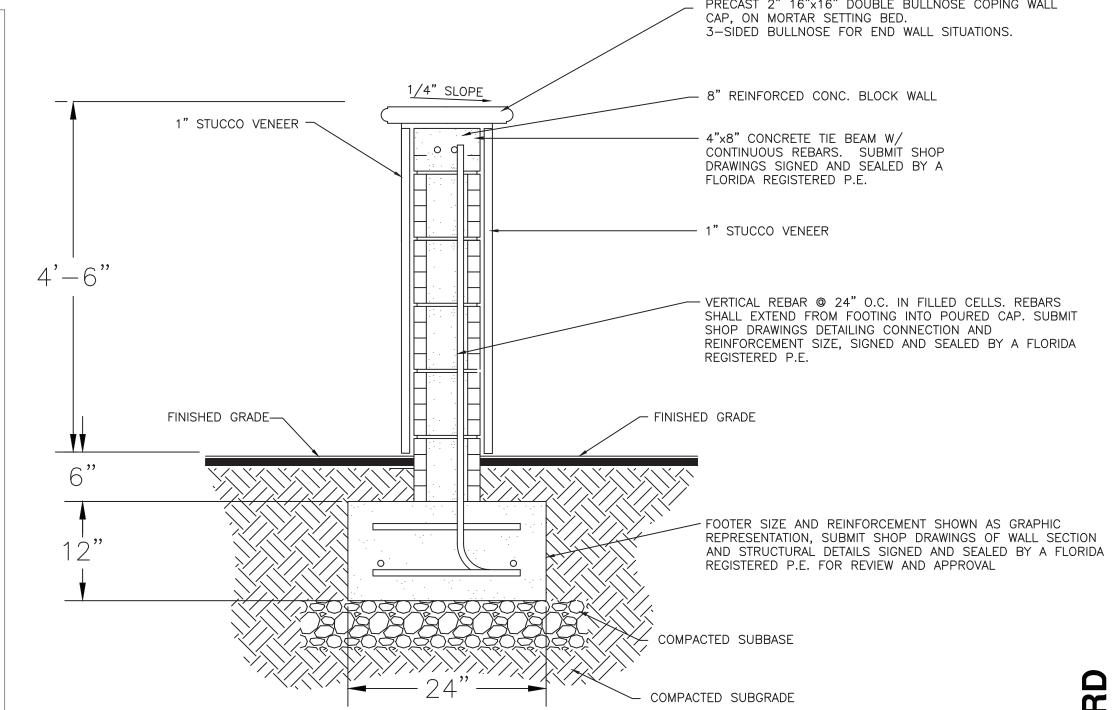
FENCE AND COLUMN DETAILS



MIAMI BEACH LA GORCE PARK FENCE FOR REFERENCE



PICKET FENCE DETAIL



FENCE COLUMN DETAIL

18-00020 LNP-10

8/8/18