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> D1 Commissioner Wilfredo (Willy) Gort

> > D3 Commissioner Joe Carollo

D4 Commissioner Manolo Reyes

City Manager Emilio T. Gonzalez



REVISIONS:

1 08.06.18 CITY COMMENTS

# HADLEY PARK SYNTHETIC TURF **AND PARK IMPROVEMENTS**

# CITY OF MIAMI **OFFICE OF CAPITAL IMPROVEMENTS**

**B-173515 1350 NW 50th STREET** MIAMI, FLORIDA 33142

**PERMIT SET 4/30/18** 



N.T.S.



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CITY OF MIAN OFFICE OF CAPITAL IMPROVEMENTS

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## GENERAL NOTES

GENERAL NOTES ON THE PROJECT PLANS AND DRAWINGS ARE SOLELY TO AID AND ASSIST THE CONTRACTOR WITH THE FIELD OPERATIONS FOR THE PROJECT. SAID GENERAL NOTES MAY NOT FULLY DESCRIBE ALL OF THE REQUIREMENTS FOR AN ITEM. THEREFORE, THE CONTRACTOR SHALL READ AND VERIFY THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE PLANS, SPECIFICATIONS, GENERAL TERMS AND CONDITIONS, AND THE SUPPLEMENTAL TERMS AND CONDITIONS, TO FULLY UNDERSTAND AND COMPLY WITH ALL THE REQUIREMENTS THEREIN.

- APPLICABLE CODES
- A. GENERAL

ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF CITY OF MIAMI, MIAMI-DADE COUNTY ENVIRONMENTAL RESOURCES

DEPARTMENT (MD DERM), SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD), AND ALL OTHER LOCAL AND NATIONAL CODES WHERE APPLICABLE.

B. CONSTRUCTION SAFETY

ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER. SPECIFICALLY. THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL BE STRICTLY OBSERVED.

- C. TRENCH SAFETY ACT
- 1. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLIANCE WITH THE STATE OF FLORIDA TRENCH SAFETY ACT.
- WHERE EXCAVATIONS TO A DEPTH IN EXCESS OF FIVE FEET (5') ARE REQUIRED, THE CONTRACTOR SHALL INCLUDE THE FOLLOWING INFORMATION IN THE BID:
  - A REFERENCE TO THE TRENCH SAFETY STANDARDS а. THAT WILL BE IN EFFECT DURING THE PERIOD OF CONSTRUCTION OF THE PROJECT.
  - WRITTEN ASSURANCES BY THE CONTRACTOR PERFORMING THE TRENCH EXCAVATION THAT SUCH CONTRACTOR WILL COMPLY WITH THE APPLICABLE TRENCH SAFETY STANDARDS.
  - c. A SEPARATE ITEM IDENTIFYING THE COST OF COMPLIANCE WITH THE APPLICABLE TRENCH SAFETY STANDARDS.
- WHEN A BID IS NOT SUBMITTED, THE CONTRACTOR SHALL SUBMIT THE INFORMATION LISTED IN ITEM 2 TO THE ENGINEER PRIOR TO STARTING WORK.
- D. ELEVATION NOTE:

IN ACCORDANCE WITH SURVEY BY HADONNE (PROJECT NUMBER 17043 DATED MAY 8th,2017) ELEVATIONS SHOWN ARE RELATIVE TO CITY OF MIAMI VERTICAL DATUM AND ARE BASED ON DADE COUNTY BENCHMARK N-3116 (ELEVATION + 14.11' NGVD) LOCATED AT NW 47th TERRACE AND NW 12th AVENUE, CITY OF MIAMI, MIAMI-DADE COUNTY, FLORIDA.

ELEVATION WAS CONVERTED BY ADDING 0.26

BM ELEVATION = 11.40' (NGVD) + 0.26' = 11.46' (CITY OF MIAMI)

- II. PRECONSTRUCTION RESPONSIBILITIES
- A. UPON RECEIPT OF NOTICE OF AWARD, THE CONTRACTOR SHALL ARRANGE A PRECONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, ALL AFFECTED UTILITY OWNERS, THE OWNER, THE ENGINEER AND ITSELF.
- B. THE CONTRACTOR SHALL OBTAIN AN UNCLE CERTIFICATION NUMBER AT LEAST 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION.
- C. PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, ELEVATION, AND MATERIAL OF ALL EXISTING UTILITIES WITHIN THE AREA OF CONSTRUCTION.
- D. EXISTING UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING UTILITIES SHOWN OR FOR ANY EXISTING UTILITIES NOT SHOWN.
- E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY EXISTING UTILITIES FOR WHICH IT FAILS TO REQUEST LOCATIONS FROM THE UTILITY OWNER. THE CONTRACTOR IS RESPONSIBLE AS WELL FOR DAMAGE TO ANY EXISTING UTILITIES WHICH ARE PROPERLY LOCATED.
- F. IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED CONSTRUCTION OR TO BE OF A SIZE OR MATERIAL DIFFERENT FROM THAT SHOWN ON THE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

## III. INSPECTIONS

- A. THE CONTRACTOR SHALL NOTIFY THE CITY OF MIAMI AND THE ENGINEER OF RECORD AT LEAST 24 HOURS PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO THE INSPECTION OF THE FOLLOWING ITEMS:
- STORM DRAINAGE
- SUBBASE, LIMEROCK AND HARDSCAPE SURFACE MATERIALS SUBSTANTIAL COMPLETION
- FINAL COMPLETION
- B. ALL INSPECTIONS SHALL BE MADE BY CITY OF MIAMI. THE ENGINEER OF RECORD WILL PROVIDE GENERAL CONSTRUCTION OBSERVATION SERVICES.

## IV. SHOP DRAWINGS

A. PRIOR TO THEIR CONSTRUCTION OR INSTALLATION, SHOP DRAWINGS SHALL BE SUBMITTED TO AND REVIEWED BY THE ENGINEER OF RECORD FOR CATCH BASINS, TRENCH DRAINS AND OTHER ACCESSORIES.

- B. PRIOR TO SUBMITTING SHOP DRAWINGS TO THE ENGINEER. THE CONTRACTOR SHALL REVIEW AND APPROVE THE DRAWINGS, AND SHALL NOTE IN RED ANY DEVIATIONS FROM THE ENGINEER'S PLANS OR SPECIFICATIONS.
- V. TEMPORARY FACILITIES
- A. TEMPORARY UTILITIES
- 1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES AND ELECTRICITY TO ITS EMPLOYEES AND SUBCONTRACTORS FOR THEIR USE DURING CONSTRUCTION.
- B. TRAFFIC REGULATION
- ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAYS OR WALKWAYS SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
- NO TRENCHES OR HOLES NEAR WALKWAYS OR IN ROADWAYS OR 2. THEIR SHOULDERS ARE TO BE LEFT OPEN DURING NIGHTTIME HOURS WITHOUT EXPRESS PERMISSION OF THE CITY OF MIAMI

## VI. PROJECT CLOSEOUT

- A. CLEANING UP
- 1. DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER. UPON FINAL CLEAN UP, THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE SWEPT BROOM CLEAN.
- THE CONTRACTOR SHALL RESTORE OR REPLACE, WHEN AND AS DIRECTED BY THE ENGINEER, CITY OF MIAMI, ANY PUBLIC OR PRIVATE PROPERTY DAMAGED BY ITS WORK, EQUIPMENT, EMPLOYEES OR THOSE OF ITS SUBCONTRACTORS TO A CONDITION AT LEAST EQUAL TO THAT EXISTING IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS. TO THIS END, THE CONTRACTOR SHALL DO ALL NECESSARY HIGHWAY OR DRIVEWAY, WALK AND LANDSCAPING WORK. SUITABLE MATERIALS AND METHODS SHALL BE USED FOR SUCH RESTORATION.
- WHERE MATERIAL OR DEBRIS HAS WASHED OR FLOWED INTO OR .3 BEEN PLACED IN WATER COURSES, DITCHES, DRAINS, CATCH BASINS, OR ELSEWHERE AS A RESULT OF THE CONTRACTOR'S OPERATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED AND SATISFACTORILY DISPOSED OF DURING PROGRESS OF THE WORK, AND THE AREA KEPT IN A CLEAN AND NEAT CONDITION.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL UTILITY MARKINGS ONCE THE WORK IS COMPLETED. CONTRACTOR SHALL USE SPECIAL CARE WHEN REMOVING THE UTILITY MARKINGS. THE REMOVAL METHOD NEEDS TO BE SUCH THAT IT DOES NOT DAMAGE THE SURFACES OF THE EXISTING WORK ALREADY IN PLACE. IF WATER-BLASTING OLDER ASPHALT PAVEMENT, CARE NEEDS TO BE TAKEN TO NOT DISCOLOR THE ASPHALT OR POLISH THE AGGREGATE. IF THE REMOVALS ARE ON OLDER CONCRETE SURFACES. THE ENTIRE SURFACE OF A PANEL OR SECTION NEEDS TO BE BLASTED TO SHOW UNIFORM COLOR THROUGHOUT THAT SAME PANEL OR SECTION. IN ANY CASE (ASPHALT OR CONCRETE SURFACE), THE METHOD NEEDS TO BE SUCH THAT A SLICK SURFACE IS NOT LEFT BEHIND. FINAL PAYMENT TO THE CONTRACTOR MAY BE WITHHELD UNTIL THE UTILITY MARKS ARE PROPERLY REMOVED.
- B. PROJECT RECORD DOCUMENTS
- 1. THE CONTRACTOR SHALL MAINTAIN ACCURATE AND COMPLETE RECORDS OF WORK ITEMS COMPLETED.
- PRIOR TO THE PLACEMENT OF ANY ASPHALT, PAVERS OR CONCRETE PAVEMENT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER "AS-BUILT" PLANS SHOWING LIMEROCK BASE GRADES. ALL DRAINAGE IMPROVEMENTS. PAVING OPERATIONS SHALL NOT COMMENCE UNTIL THE ENGINEER HAS REVIEWED THE "AS-BUILTS".
- ALL REQUIRED DENSITY AND LBR TEST RESULTS FOR SUB-GRADE SHALL BE PROVIDED TO THE ENGINEER PRIOR TO PLACING LIMEROCK BASE MATERIAL
- 4. ALL REQUIRED DENSITY AND LBR TEST RESULTS FOR LIMEROCK SHALL BE PROVIDED TO THE ENGINEER PRIOR TO PLACING ASPHALT.
- 5. ALL "AS-BUILT" INFORMATION SUBMITTED TO THE ENGINEER SHALL BE SUFFICIENTLY ACCURATE. CLEAR AND LEGIBLE TO SATISFY THE ENGINEER THAT THE INFORMATION PROVIDES A TRUE REPRESENTATION OF THE IMPROVEMENTS CONSTRUCTED.
- 6. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD COMPLETE SETS OF "FINAL AS-BUILT" CONSTRUCTION DRAWINGS AS REQUIRED FOR SUBMITTAL AND APPROVAL BY THE ENGINEER, CITY OF MIAMI AND MDDERM. THESE DRAWINGS SHALL BE MARKED TO SHOW "AS-BUILT" CONSTRUCTION CHANGES AND DIMENSIONED LOCATIONS AND ELEVATIONS OF ALL IMPROVEMENTS. THE AS-BUILT INFORMATION MUST BE SHOWN ON THE ENGINEER'S BASE CONSTRUCTION DRAWINGS. CONSTRUCTION CHANGES, DIMENSIONED LOCATIONS AND FINAL ELEVATIONS MUST BE ADDED TO THE ENGINEER'S BASE WITH THE ORIGINAL DESIGN INFORMATION "CROSSED OUT" AND THE CONSTRUCTED INFORMATION NEXT TO IT. CERTIFICATION STATEMENTS MUST BE PROVIDED AS REQUIRED BY THE PERMITTING AGENCIES. ALL SHEETS MUST BE LABELED "FINAL AS-BUILTS" AND SHALL BE SIGNED AND SEALED BY A REGISTER LAND SURVEYOR.
- ALL "AS-BUILT" INFORMATION ON ELEVATIONS OF PAVING, AND DRAINAGE SHALL BE CERTIFIED BY A REGISTERED LAND SURVEYOR.

### EARTHWORK VII.

A. GENERAL

1. NONE OF THE EXISTING MATERIAL IS TO BE INCORPORATED IN THE LIMEROCK BASE.

- 2. ALL SUB-GRADE UNDER PAVED/RESURFACED AREAS SHALL HAVE A MINIMUM LBR VALUE OF 40 AND SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
- ALL FILL MATERIAL IN AREAS NOT TO BE PAVED/RESURFACED SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
- A 2" BLANKET OF TOP SOIL SHALL BE PLACED OVER ALL AREAS TO BE SODDED.
- SOD SHALL BE PER THE LANDSCAPING PLANS AND SHALL BE PLACED ON THE GRADED TOP SOIL AND WATERED TO ENSURE SATISFACTORY CONDITION UPON FINAL ACCEPTANCE OF THE PROJECT.
- B. ON-SITE
- 1. ALL ORGANIC AND OTHER UNSUITABLE MATERIAL UNDER THOSE AREAS TO BE PAVED/RESURFACED WHICH INCLUDE NEW UNDERLYING BASE MATERIAL, SHALL BE REMOVED TO A DEPTH OF THREE (3) FEET BELOW FINISHED GRADE AND FOR THREE (3) FEET BEYOND THE PERIMETER EDGE OF THE PAVED/RESURFACED AREA.
- 2. SUITABLE BACKFILL SHALL BE MINIMUM LBR 40 MATERIAL COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 THREE (3) FEET BEYOND THE PERIMETER OF THE PAVING/RESURFACING AREA.

## STORM DRAINAGE

- HIGH-DENSITY POLYETHYLENE PIPE (HDPE) FOR STORM SEWERS SHALL CONFORM TO AASHTO M294, TYPE S OR ASTM F2306. ALL PIPE SHALL BE JOINED WITH THE N-12 WT IB JOINT MEETING THE REQUIREMENTS OF AASHTO M252, AASHTO M294, OR ASTM F2306.
- JOINTS SHALL BE WATERTIGHT ACCORDING TO THE REQUIREMENTS OF ASTM D3212.
- GASKETS SHALL BE MADE OF POLYISOPRENE MEETING THE REQUIREMENTS OF ASTM F477. GASKETS SHALL BE INSTALLED BY THE PIPE MANUFACTURER AND COVERED WITH REMOVABLE, PROTECTIVE WRAP TO ENSURE THE GASKET IS FREE FROM DEBRIS. A JOINT LUBRICANT AVAILABLE FROM THE MANUFACTURER SHALL BE USED ON THE GASKET AND BELL DURING ASSEMBLY.
- NO TRENCHES OR EXCAVATIONS SHALL BE BACKFILLED UNTIL THE TRENCH AND INSTALLATION HAS BEEN INSPECTED BY THE OWNER'S REPRESENTATIVE. UNDER NO CIRCUMSTANCES SHALL WATER BE PERMITTED TO RISE IN UNBACKFILLED TRENCHES AFTER PIPE HAS BEEN PLACED.
- TRENCHES SHALL BE BACKFILLED WITH APPROVED MATERIAL, FREE OF LARGE CLODS, STONES OR ROCKS AND CAREFULLY DEPOSITED IN LAYERS NOT TO EXCEED 6" UNTIL ENOUGH FILL HAS BEEN PLACED TO PROVIDE A COVER OF NOT LESS THAN 2' ABOVE THE PIPE. EACH LAYER SHALL BE PLACED. THEN CAREFULLY AND UNIFORMLY TAMPED, SO AS TO ELIMINATE THE POSSIBILITY OF PIPE DISPLACEMENT.
- THE REMAINDER OF BACKFILL MATERIALS SHALL THEN BE PLACED. 6. MOISTENED AND COMPACTED 6" LAYERS TO 98% MAXIMUM AASHTO T-180 DENSITY.
- BACKFILL MATERIAL UNDER PAVED/RESURFACED AREAS SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
- BACKFILL MATERIAL UNDER AREAS NOT TO BE PAVED/RESURFACED SHALL BE COMPACTED TO 95% OF THE MAXIMÚM DENSITY AS DETERMINED BY AASHTO T-180.

# IX. PAVING / RESURFACING

A. GENERAL

- 1. ALL UNDERGROUND UTILITIES SHALL BE COMPLETED PRIOR TO THE PLACEMENT OF THE LIMEROCK BASE.
- 2. ALL REPAIRS TO EXISTING PAVEMENT/CONCRETE SHALL RECEIVE SAW-CUT EDGES.
- 3. ALL EXISTING CONTROL POINTS AND/OR REFERENCE MARKERS SHALL BE RAISED TO FINAL GRADE. THESE POINTS AND REFERENCE MARKERS SHALL BE LOCATED AND NOTED ON THE PLAN.
- B. MATERIALS
- LIMEROCK BASE MATERIAL SHALL HAVE A MINIMUM OF 70% CARBONATES (CALCIUM AND MAGNESIUM) WITH A MINIMUM LBR OF 100.
- C. INSTALLATION
- LIMEROCK BASE MATERIAL SHALL BE 4" THICKNESS AND COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. ANY SECTIONS GREATER THAN 6" IN THICKNESS SHALL BE PLACED IN TWO OR MORE EQUAL LIFTS AND COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.
- D. TESTING
- 1. ALL SUB-GRADE AND LIMEROCK TESTS REQUIRED SHALL BE TAKEN AT THE DIRECTION OF THE ENGINEER.









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HADLEY PARK SYNTHETIC TURF AND PARK IMPROVEMENTS CITY OF MIAMI PROJECT B-173515 1350 NW 50th ST, MIAMI, FL 33142	FIELD LAYOUT
DATE: 7/19, DESIGN: E.G. DRAWN: P.G. CHECKED: N.T.A. REVISIONS: PERMIT SET 4/3	/17  0/18
JOB No. 17-00 FILE:	0058
ARCHITECT/ENGINEER NORMA T. ALVARE FL. REG. 70612 SEAL	2: Z, P.E.
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LEGG MILLER Miami-Dade Office: 7743 NW 48th Street, Suite 140 Miami, Florida · 33166-5407 305-599-6381 · Fax: 305-599-2797 www.millerlegg.com

PROPOSED FOOTBALL GOALPOST (TYP.) (REFER TO DETAILS ON SHEET C-5.5)





PROJECTS\2017\17-00058 - HADLEY PARK SYNTHETIC TURF &\DRAWINGS\ENGINEERING\17-00058\_PGD.DWG 2018/09/17 15:31 by EGOME



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N.T.S.



**BIKE RACK:** BIKE RACK BY ULTRASITE 5 LOOP SURFACE MOUNT BLACK POWEDER COAT FINISH MODEL 5805S



# TRASH RECEPTICLE

**RECYCLE AWAY LANDSCAPE 34 RECYCLING AND** TRASH COMBO. MODEL: RC-34R DM CANS RBL, WR-34R DM BLACK CAPACITY: 2 X 34 = 68 GAL DIMENSIONS: 2 (18" DIA X 44" H) MATERIAL: STEEL









![](_page_15_Figure_0.jpeg)

![](_page_15_Figure_1.jpeg)

![](_page_15_Figure_3.jpeg)

	CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS
	HADLEY PARK SYNTHETIC TURF AND PARK IMPROVEMENTS CITY OF MIAMI PROJECT B-173515 1350 NW 50th ST, MIAMI, FL 33142 DETAILS
	DATE: 7/19/17 DESIGN: E.G. DRAWN: P.G. CHECKED: N.T.A. REVISIONS: PERMIT SET 4/30/18
	JOB No. 17-00058 FILE:
	ARCHITECT/ENGINEER: NORMA T. ALVAREZ, P.E. FL. REG. 70612 SEAL
	SCALE: AS SHOWN
	SHEET No.
MILLER LEGG Miami-Dade Office: 7743 NW 48th Street, Suite 140 Miami, Florida · 33166-5407	C-5.5
305-599-6381 · Fax: 305-599-2797 www.millerlegg.com	OF SHEETS

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![](_page_18_Picture_2.jpeg)

LEGEND:

![](_page_18_Picture_4.jpeg)

BARRIER PROTECTION

![](_page_18_Picture_6.jpeg)

![](_page_18_Picture_7.jpeg)

![](_page_19_Figure_0.jpeg)

STORM WATER POLLUTION PREVENTION PRACTICES

- FOR PROJECTS OF 0.5 ACRE OR MORE CITY ORDINANCE No. 13081
- I. TREE PROTECTION AND PRUNING SHALL BE ACCOMPLISHED AS DETAILED IN SPECIAL PROVISIONS, THE CONSTRUCTION PLANS, AND OR TREE ORDINANCE 12636.
- 2. THE STORM WATER POLLUTION PREVENTION PLAN, SWPPP, SUBMITTED TO PUBLIC WORKS, SHALL DESCRIBE IN DETAIL HOW THE CONSTRUCTION EFFORT WILL BE PHASED WITH REGARDS TO MINIMIZING EROSION PROBLEMS BY THE USE OF TEMPORARY AND PERMANENT EROSION CONTROL MEASURES, FOR THE VARIOUS SEQUENCES OF CONSTRUCTION OPERATIONS. ANY MODIFICATIONS MUST BE APPROVED BY THE CITY OF MIAMI - MPDES SECTION, DEPARTMENT OF PUBLIC WORKS.
- 3. ENVIRONMENTAL CONTROL FEATURES AS PROVIDED IN THE SWPPP, ARE TO BE INSTALLED AT ALL AREAS OF EXCAVATION OR FILL FOR DRAINAGE SYSTEM, OR STRUCTURE CONSTRUCTION PRIOR TO SUCH EXCAVATION OR FILL INLET ENTRANCES ARE ALSO TO PROTECTED FROM SILTATION AS DETAILED ON SHEET 2 OF 4 OF MISC. 35-89-6.
- 4. ALL ENVIRONMENTAL CONTROL FEATURES ARE TO BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT IN ACCORDANCE WITH N.P.D.E.S. REQUIREMENTS. THE CONTRACTOR MUST INSURE THAT ALL EROSION CONTROL FEATURES FUNCTION PROPERLY AT ALL TIMES.
- 5. ALL EROSION AND MATERIAL DEPOSITS MUST BE CONTAINED WITHIN THE PROJECT LIMITS.
- 6. ANY DAMAGED OR INEFFECTIVE ROCK BAGS ARE TO BE REPLACED WITH NEW ONES. THE LOCATION OF ROCK BAGS INSTALLATION IS AS MENTIONED IN THE SWPPP PLANS. THE PROJECT ENGINEER MAY SPECIFY OTHER AREAS AS NECESSARY
- 7. DITCH BOTTOM INLETS SHALL BE PROTECTED FROM SEDIMENT INTAKE UNTIL PROJECT IS COMPLETE. ELEVATION OF GROUND OUTSIDE INLET TOP SHALL NOT BE HIGHER THAN INLET TOP. ROCK BAGS SHALL BE INSTALLED AROUND INLET TOP. COMPLETED INLETS IN PAVED AREAS SHALL ALSO BE PROTECTED WITH ROCK BAGS TO PREVENT SEDIMENT INTAKE.
- 8. CURB INLETS ALSO SHALL BE PROTECTED FROM SEDIMENT INTAKE UNTIL THE PROJECT IS COMPLETE. ALL EXPOSED SLOPED MATERIAL ADJACENT TO INLET, SHALL BE COVERED WITH EROSION CONTROL MATTING WITH OUTER LIMITS PROTECTED BY ROCK BAGS.
- 9. STOCKPILED MATERIAL SHALL NOT BE LEFT IN EROSION PRONE AREAS UNLESS PROTECTED BY COVER OR ROCK BAGS.
- 10. INSPECTION OF EROSION CONTROL MEASURES AND CONDITION OF ADJACENT PROPERTIES, SHALL BE PERFORMED DAILY BY THE CONTRACTOR'S REPRESENTATIVE AND THE PROJECT ENGINEER. DEFICIENCIES SHALL BE NOTED AND CORRECTED.
- I. ANY OFFSITE SEDIMENT DISCHARGE TO A MUNICIPAL SEPARATE STORM WATER SYSTEM ARISING FROM THE CONTRACTOR'S ACTIVITIES IS NOT ALLOWED. REFER TO PUBLIC WORKS DEPARTMENT BULLETIN No. 25 AND CITY ORDINANCE 13081
- I 2. THE USE OF SANITARY SEWERS, FRENCH DRAINS, COVER DITCHES AND / OR ROCK DRAINS FOR THE DISPOSAL OF WASTEWATER IS EXPRESSLY PROHIBITED. REFER TO PUBLIC WORKS DEPARTMENT BULLETIN No. 25 AND CITY ORDINANCE 13081.
- \* NPDES NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM AUTHORIZED BY NPDES PERMIT FLS 00002. BMP - BEST MANAGEMENT PRACTICE

FERTILIZERS, PESTICIDES AND TREE UTRIENT FILTERS WILL BE PROVIDED TO THE PLANTERS. PROTECT ALL TREES WITHIN PROJECT LIMITS THAT ARE TO REMAIN AS PER FDOT INDEX No. 544

- 5) TOXIC SUBSTANCES TOXIC SUBSTANCES WILL NOT BE STORED AT THE SITE
- NON-STORM WATER DISCHARGE (INCLUDING SPILL REPORTIN
- NO NON-STORMWATER DISCHARGE ARE ANTICIPATED AT THIS TIME. CONTAMINATED SOIL OR GROUNDWATER ENCOUNTERED SHALL BE REPORTED IMMEDIATELY TO THE CITY PERSONNEL IN ACCORDANCE WITH PW BULLETIN No. 25. WHEN DEWATERING IS IMPLEMENTED. THE WATER WILL BE DEPOSITED IN A CONTROLLED AREA ON-SITE TO PREVENT OFF-SITE DISCHARGE OR AS APPROVED BY
- EROSION CONTROL DEVICES:
   LOCATIONS AND TYPES OF ALL EROSION CONTROL DEVICES SHALL BE INSTALLED AS DIRECTED BY PLAN
   AND / OR BY THE CITY OF MIAMI. CONTRACTOR SHALL IMPLEMENT THE SWPPP AS PER CONTRACT
   PLANS. HOWEVER, IT MAY BE REVISED BASED ON ACTUAL FIELD CONDITIONS AT THE TIME WORK IS
   BEING PERFORMED. FIELD MODIFICATION WILL BE APPROVED BY THE CITY OF MIAMI.
   MONITORING SHALL BE PERFORMED ON A WEEKLY BASIS AND AFTER A 1/2" STORM EVENT WITH ROUTINE
- MAINTENANCE AND REPLACEMENT OF ANY DEVICES AS REQUIRED CONTAINMENT OR REMOVAL OF POLLUTANTS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE AND CITY OF MIAMI REGULATIONS AND / OR FOOT STANDARD SPECIFICATIONS THE RESPONSIBLE PERSONS FOR MONITORING AND MAINTAINING THE EROSION CONTROL DEVICES
- SHALL BI PMARKS IF CONTAMINATED SOIL OR GROUNDWATER IS ENCOUNTERED, CONTAC PROJECT ENGINEER AT
- APPROVED STATE, LOCAL PLANS, OR STORM WATER PERMITS: (CHECK ALL THAT APPL'
- I. NPDES PERMIT (0.5 ACRE OR MORE) 2. NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FROM THE FLORIDA
- DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) FOR PROJECTS DISTURBING MORE THAN I ACRE. 3. MIAMI-DADE DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) CLASS II-STORMWATER MANAGEMENT PERMIT AND DEWATERING PERMIT
- 4. ENVIRONMENTAL RESOURCES (ERP) PERMIT FROM THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)
- 5. U.S. ARMY CORPS OF ENGINEERS DREDGE AND FILL PERMIT 6. SOUTH FLORIDA WATER MANAGEMENT DISTRICT DISTRICT (SFWMD) RIGHT-OF-WAY USE PERMIT
- 7. PUBLIC WORKS EXCAVATION PERMI
- 8. POLICE
- 9. TREE PERMIT I O. CITY DEWATERING PERMIT
- MAINTENANCE
- ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD OF THE HEIGHT
- PROTECT ALL INLETS STREET SWEEPING AND DUST PREVENTION MUST BE IMPLEMENT DAIL
- 4. INSPECTION a. QUALIFIED PERSONNEL FROM THE CITY AND CONTRACTOR SHALL INSPECT THE FOLLOWING ITEMS DAILY PREPARATION OF THE CONTRACTOR'S WEEKLY REPORT OF INSPECTION, MAINTENANCE AND REPAIRS FOR FOR THE CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION SHALL BE INCLUDED IN THE OF THE RESPECTIVE PAY ITEMS. WHERE SITES HAVE BEEN FINALLY STABILIZED. INSPECTIONS SHALL CONDUCTED WEEKLY AND SHALL INCLUDE THE FOLLOWING:
- OISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED
   AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION
- STRUCTURAL CONTROLS - STORMWATER MANAGEMENT SYSTEMS - LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE - STREET SWEEPING AND DUST CONTROL
- A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. IF REPAIRS IS NECESSARY,
- IT WILL BE INITIATED WITHIN 24 HOURS OF THE REPORT A. REMOVE EXCESS DIRT FROM ALL ROADS ADJACENT TO PROJECT AREA ON A DAILY BASIS. 2. SEDIMENT FOUND IN DRAINAGE INSPECTION WILL REQUIRE DRAINAGE SYSTEM CLEANING BY CONTRACTOR

![](_page_19_Figure_59.jpeg)

OF

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# LANDSCAPE NOTES:

MICRONUTRIENTS.

- 1. PLANT MATERIAL: <u>ALL PLANT MATERIAL SHALL BE FLORIDA #1 OR BETTER</u> AS ESTABLISHED BY MOST CURRENT "GRADES AND STANDARDS FOR NURSERY PLANTS" OF THE STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE, AND REFER TO GRADES STANDARDS FOR NURSERY PLANTS PART I AND II.
- 2. ALL SHRUBS AND GROUNDCOVERS SHALL BE OF THE SIZES AS SPECIFIED IN THE PLANT LIST.
- 3. QUANTITIES LISTED ON THE THE PLANT LIST ARE FOR ESTIMATING PURPOSES. CONTRACTOR SHALL VERIFY ALL QUANTITIES. MULCH, TOPSOIL, FERTILIZER, ETC. SHALL BE INCLUDED IN THE UNIT COST OF THE PLANTS.
- 4. WHERE THERE IS A DISCREPANCY EITHER IN QUANTITIES, PLANT NAMES, SIZES OR SPECIFICATIONS BETWEEN THE PLAN OR PLANT LIST, THE PLAN TAKES PRECEDENCE.
- 5. MULCH: ALL PLANTING BEDS AND WATER BASINS SHALL BE COVERED WITH A 3" MINIMUM DEPTH OF SHREDDED EUCALYPTUS OR FLORIMULCH GRADE 'B' OR BETTER. NO CYPRESS MULCH SHALL BE USED.
- 6. THE PLANTING PLAN SHALL BE INSTALLED IN COMPLIANCE WITH ALL EXISTING CODES AND APPLICABLE DEED RESTRICTIONS.
- 7. ALL LANDSCAPE AREAS EXCAVATED SHALL BE REPLACE EXCAVATED AREAS TO MATCHING DEPTH WITH 50 % MUCK AND 50 % SAND MIX.
- 8. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALL UTILITY LOCATIONS AND INSTALLING FACILITIES SO AS TO NOT CONFLICT. ALL DAMAGE TO EXISTING UTILITIES OR
- IMPROVEMENTS CAUSED BY CONTRACTOR SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. 9. CONTRACTOR TO NOTIFY "SUNSHINE STATE ONE CALL OF FLORIDA, INC." AT 811 TWO FULL BUSINESS DAYS PRIOR TO DIGGING FOR UNDERGROUND UTILITY LOCATIONS. 10. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FINAL GRADING OF ALL ASSOCIATED PLANTING AREAS.
- 11. AFTER FINAL GRADE, AREA TO BE RAKED TO 6" DEPTH AND ALL ROCK AND FOREIGN INORGANIC MATERIALS REMOVED AND DISPOSED OF PROPERLY OFF-SITE.
- 12. ALL PLANTING HOLES TO BE HAND DUG EXCEPT WHERE MACHINE DUG HOLES WILL NOT ADVERSELY AFFECT OR DAMAGE UTILITIES OR IMPROVEMENTS (SEE NOTE 8).
- 13. FERTILIZER FOR GRASS AREAS SHALL BE NPK 16-4-8 @ 12.5 LBS/1000 S.F. OR 545 LBS/ACRE. NITROGEN 50% SLOW RELEASE FORM & FERTILIZER TO INCLUDE SECONDARY
- 14. SUBSTITUTIONS AND CHANGES: ALL SUBSTITUTIONS AND CHANGES SHALL BE APPROVED IN WRITING PRIOR TO INSTALLATION. ANY DISCREPANCIES BETWEEN PLANS, SITE AND SPECIFICATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE LANDSCAPE ARCHITECT, THE OWNER AND GOVERNING MUNICIPALITY.
- 15. WATERING: ALL PLANT MATERIAL SHALL BE WATERED IN AT TIME OF PLANTING IN ACCORDANCE WITH STANDARD NURSERY PRACTICES. IN ADDITION, CONTRACTOR WILL CONTINUE WATERING OF PLANT MATERIAL UNTIL SUBSTANTIAL COMPLETION AND AS NEEDED THEREAFTER FOR A PERIOD OF 6 MONTHS.
- 16. ALL NEW PLANT MATERIAL SHALL BE GUARANTEED FOR 1 YEAR FROM TIME OF FINAL ACCEPTANCE OF PROJECT. ANY PLANT MATERIAL NOT IN A HEALTHY GROWING CONDITION WILL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER WITHIN 10 DAYS OF NOTIFICATION. FOR ALL REPLACEMENT PLANT MATERIAL, THE WARRANTY PERIOD SHALL BE EXTENDED AN ADDITIONAL 45 DAYS BEYOND THE ORIGINAL WARRANTY PERIOD. ALL TREES THAT LEAN OR ARE BLOWN OVER, CAUSED BY WINDS LESS THAN 75 MPH, WILL BE RE-SET AND BRACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 17. THE SUCCESSFUL BIDDER SHALL FURNISH TO THE OWNER A UNIT PRICE BREAKDOWN FOR ALL MATERIALS. THE OWNER MAY, AT ITS DISCRETION, ADD OR DELETE FROM THE MATERIALS UTILIZING THE UNIT PRICE BREAKDOWN SUBMITTED.
- 18. NO PLANT MATERIAL WILL BE ACCEPTED SHOWING EVIDENCE OF CABLE, CHAIN MARKS, EQUIPMENT SCARS, OR OTHERWISE DAMAGED.
- 19. PLANT MATERIAL WILL NOT BE ACCEPTED WHEN THE BALL OF EARTH SURROUNDING ITS ROOTS HAS BEEN CRACKED, BROKEN OR OTHERWISE DAMAGED.
- 20. GROUND COVER PLANTINGS SHALL PROVIDE NOT LESS THAN 50 PERCENT COVERAGE IMMEDIATELY UPON PLANTING AND 100 PERCENT COVERAGE WITHIN 6 MONTHS AFTER PLANTING.
- 21. SOIL BACKFILL MIXTURE: SOIL BACKFILL FOR THE INSTALLATION OF ALL PLANT MATERIALS SHALL BE A UNIFORM MIXTURE OF 25% DECOMPOSED COMPACT AND 75% EXISTING SITE SOIL. CLEANED FREE OF WEEDS AND ROCKS 1-1/2 INCH OR GREATER. PRIOR TO THE PRE-CONSTRUCTION MEETING, SUBMIT COMPOST MANUFACTURERS CERTIFIED ANALYSIS TO THE ENGINEER FOR REVIEW. THE CONTRACTOR SHALL PAY TO HAVE COMPOST TESTED IF REQUESTED BY THE ENGINEER.
- 22. IF THERE IS A NEED FOR A CERTIFIED ARBORIST, IT WILL BE UP TO THE CONTRACTOR TO PROVIDE ONE.

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![](_page_23_Picture_38.jpeg)

![](_page_24_Figure_0.jpeg)

<u>NUMBER</u>	MODEL	<u>SIZE</u>	<u>type</u>	<u>GPM</u>	<u>PSI</u>	<u> PSI @ POC</u>	PRECIP
IB	ICV-A (2)	2"	Bubbler	70.00	37.59		3.97 in/
2	ICV-G	/2"	Turf Rotary	40.6	49.76		0.33 in/
З	ICV-G	/2"	Turf Rotary	53.01	49.64		0.33 in/
4	ICV-G	/2"	Turf Rotary	48.42	49.50		0.34 in/
5B	ICV-A (2)	2"	Bubbler	83.00	37.82		3.93 in/
6	C <b>√-</b> G	/2"	Turf Rotary	59.04	50.30		0.31 in/ł

CITY OF CAPITAL MPROVEMENTS
HADLEY PARK SYNTHETIC TURF AND PARK IMPROVEMENTS CITY OF MIAMI PROJECT B-173515 1350 NW 50th ST, MIAMI, FL 33142 IRRIGATION PLAN
DATE: 4.13.2018 DESIGN: M.J. DRAWN: R.N.G. CHECKED: M.J REVISIONS: PERMIT SET 4/30/18
JOB No. 17-00058 FILE:
ARCHITECT/ENGINEER: CASTO MIGUEL JUNCAL, RLA FL. REG. 6667184 SEAL
SCALE: AS SHOWN
SCALE: AS SHOWN

SHEETS

THE SYSTEM HAS BEEN DESIGNED TO CONFORM WITH THE REQUIREMENTS OF ALL APPLICABLE CODES. SHOULD ANY CONFLICT EXIST, THE REQUIREMENTS OF THE CODES SHALL PREVAIL. IT IS THE RESPONSIBILITY OF THE OWNER/INSTALLATION CONTRACTOR TO INSURE THE ENTIRE SYSTEM IS INSTALLED ACCORDING TO ALL APPLICABLE LAWS, RULES, REGULATIONS AND CONVENTIONS. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS ACCORDING TO FEDERAL, STATE AND LOCAL LAWS.

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.

## <u>PIPING</u>

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.

## <u>WIRING</u>

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.

## <u>LAYOUT</u>

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 TRENCHES.

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.

<u>VALVES</u>

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 BOX.

## <u>EQUIPMENT</u>

BUBBLERS SHALL BE INSTALLED USING SCH 80 NIPPLES AND SHALL BE PLACED AT THE BASE OF TREES FOR LOW LEVEL WATERING.

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 STATE LAWS.

## <u>TRENCHING</u>

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 DEBURE 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.

## **BACKFILLING**

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. <u>FLUSHING</u>

WALLS, WALKS AND PAVING.

<u>TESTING</u>

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.

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 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 SYSTEM.

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

TWO UNITS.

THAN TWO UNITS.

FINAL ACCEPTANCE

**SUBMITTALS** 

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.

CITY OF MI OFFICE OF CAF IMPROVEMEN	AMI TS
HADLEY PARK SYNTHETIC TURF AND PARK IMPROVEMENTS CITY OF MIAMI PROJECT B-173515 1350 NW 50th ST, MIAMI, FL 33142	IRRIGATION NOTES
DATE: 4.13.2018 DESIGN: M.J. DRAWN: R.N.G. CHECKED: M.J REVISIONS: PERMIT SET 4/30	0/18
JOB No. 17-00	058
ARCHITECT/ENGINEER CASTO MIGUEL JUNC FL. REG. 6667184 SEAL	AL,RLA
SCALE: AS SHO	MN
SHEET NO.	
IRR-2.	2

SHEETS

![](_page_25_Picture_76.jpeg)

![](_page_26_Figure_0.jpeg)

	INF SIZE TEE											
	() LINE SIZE CROSS	MINIMUM RESTRAINED LENGTH IN FEET										
	(3) TT ,22 ,43 BEND (TTF)	PIPE	DEGREE OF BEND				GATE	GATE	REDUCERS			DEAD
	6 LINE REDUCER 7 GATE VALVE	SIZE	11	22	45	90	TEE	VALVE	1 STEP	2 STEP	3 STEP	END
	(8) LINE SIZE TEE EXAMPLE	2"	0'	3'	8'	24'	24'	33'	0'	0'	0'	43'
	C	2.5"	1'	4'	9'	27'	27'	36'	23'	0'	0'	56'
		3"	3'	5'	12'	29'	29'	41'	27'	0'	0'	83'
	NOTES	4"	4'	7'	15'	35'	35'	49'	32'	67'	0'	99'
		6"	5'	9'	20'	49'	49'	69'	71'	92'	107'	139'
	RECEIVE LEEMCO JOINT RESTRAINTS	8"	5'	11'	21'	52'	52'	73'	61'	105'	119'	147'
	2. REFERENCE ONLY REFER TO JOINT	10"	7'	12'	25'	63'	63'	87'	59'	108'	143'	173'
	MANUFACTURER'S SPECIFICATIONS FOR	12"	7'	15'	31'	72'	72'	104'	101'	109'	149'	207'
		14"	8'	16'	33'	81'	81'	117'	60'	145'	152'	235'
		16"	9'	19'	37'	91'	91'	131'	60'	112'	187'	260'

TABLE A ESTABLISHES VALUES FOR THE MINIMUM LENGTH OF PIPE (L) WITHIN WHICH OTHER JOINTS MUST BE RESTRAINED. TABLE A VALUES (IN FEET) ARE BASED ON 200 PSI LINE PRESSURE, 36" COVER, SAND-CLAY TYPE SOIL, AND A SAFETY FACTOR OF 2.

![](_page_26_Figure_6.jpeg)

![](_page_26_Figure_7.jpeg)

1) EXTERIOR WALL (SEE NOTE)

2 MODEL RAIN-CLIK

3 RUN LEAD WIRES TO CONTROLLER

NOTE: MOUNT ON ANY SURFACE WHERE IT WILL BE EXPOSED TO UNOBSTRUCTED RAINFALL, BUT NOT IN PATH OF SPRINKLER SPRAY.

# RAIN-CLIK

N.T.S

03

- () IRRIGATION CONTROLLER (12C-800-M) PER PLAN
- ② IRRIGATION CONTROL WIRE IN CONDUIT SIZE AND TYPE PER LOCAL CODES
- ③ ELECTRICAL SUPPLY CONDUIT CONNECT TO POWER SOURCE, J-BOX INSIDE CONTROLLER
- (4) ADJACENT SURFACE TO MOUNT CONTROLLER PER PLAN NOTE MOUNT CONTROLLER LCD SCREEN AT EYE LEVEL, CONTROLLER SHALL BE HARD-WIRED TO GROUNDED 110 VAC POWER SOURCE

![](_page_26_Picture_18.jpeg)

![](_page_26_Picture_19.jpeg)

![](_page_27_Figure_0.jpeg)

	<u>GENERAL ELEC</u>		<u>LEGEND</u>
			INDICATES BRANCH CIRCUIT WIRING OR
	WIRING DEVICES	/\ \	INDICATES LOADS CONNECTED TO THE SAME PANEL
$\Rightarrow$	20A, 120V, DUPLEX RECEPTACLE WALL MOUNTED.		GROUPS AS INDICATED.
••• 	WALL MOUNTED. 20A, 120V, SINGLE RECEPTACLE.	OUL OUL	INDICATES EXISTING OVERHEAD UTILITY WIRING, REFER TO NOTED SCOPE OF WORK ON EACH CASE. INDICATES EXISTING UNDERGROUND ELECTRICAL WIRING,
-	20A, 120V, QUAD RECEPTACLE.	E L	REFER TO NOTED SCOPE OF WORK ON EACH CASE.
•	20A, 120V, QUAD ISOLATED GROUND RECEPTACLE WALL MOUNTED.	SSVT "	TRANSIENT VOLTAGE SURGE SUPPRESSION DEVICE. (S-SERVICE ENTRANCE LEVEL, P-PANELBOARD LEVEL) (INTERMATIC OR APPROVED EQUAL)
	20A, 120V, GROUND FAULT TYPE DUPLEX RECEPTACLE	5 1	LIGHTING
	20A, 120V, GROUND FAULT TYPE ISOLATED GROUND DUPLEX RECEPTACLE		
-	20A, 120V, GROUND FAULT TYPE ABOVE COUNTER, DUPLEX RECEPTACLE.		CONTRICT TIONS
$\bigcirc$	20A, 120V, DUPLEX RECEPTACLE FLOOR MOUNTED.		
	20A, 120V, GFCI DUPLEX RECEPTACLE FLOOR MOUNTED.	$\vdash \!$	TELEVISION OUTLET WALL MOUNTED.
	20A, 120V, DUPLEX RECEPTACLE CEILING MOUNTED.	◀	TELEPHONE OUTLET WALL MOUNTED.
€	PROVIDE METALLIC FACE PLATE 208/240V, 3 PHASE POWER RECEPTACLE WALL MOUNTED AMPACITY TO BE VERIES W/FOUNDEMNT	E	EMERGENCY TELEPHONE OUTLET 48" A.F.F WALL MOUNTED.
	SPECIFICATION. NEUTRAL REQUIREMENT TO BE VERIFIED. 208/240V, 1 PHASE POWER RECEPTACLE WALL MOUNTED. AMPACITY TO BE VERIFY W/EQUIPEMNT		COMBINATION OF TELEPHONE & DATA OUTLET WALL MOUNTED. (VERIFY LOCATIONS WITH OWNER).
Þ	SPECIFICATION. NEUTRAL REQUIREMENT TO BE VERIFIED.	4	TELEPHONE BACKBOARD
Ψ •		$\triangleleft$	DATA OUTLET.
Ϋ́D	LIGHT SWITCH DIMMER TYPE, VERIFY REQUIREMENT W/ LOAD ON EACH CASE		FIRE SERVICE TELEPHONE STATION (JACK) AT (48") AFF
₹3	LIGHT SWITCH. SILENT TYPE 3WAY.		SECURITY CAMERA BY OWNER SELECTION
Ъ	MOTOR RATED SWITCH.		PA HORN/SPEAKER BY OWNER SELECTION
<b>Ž</b> 2	TWO POLES SWITCH RATED 240V/30A		ABBREVIATIONS
$\leftrightarrow$	SINGLE SWITCH WITH OCCUPANCY SENSOR		
	DISTRIBUTION		AFFABOVE FINISHED FLOORAWGAMERICAN WIRE GAUGEDLDAMP LOCATION
	ELECTRICAL PANEL		DISC DISCONNECT
۲	ELECTRICAL METER		JB JUNCTION BOX
	DISCONNECT SWITCH CIRCUIT REFARED TYPE		TYP TYPICAL KCMIL THOUSAND CIRCULAR MILS
	CEILING/WALL/FLOOR MOUNTED JUNCTION BOX.		XFMR TRANSFORMER 3R WP WEATHER PROOF, NEMA 3R ENCLOSURE.
$\overline{\bigcirc}$	WEATHER PROOF JUNCTION BOX.		WL WET LOCATION ENCLOSURE.
WP (E)			RE ELECTRICAL FIXTURE TO BE RELOCATED.
Ŀ	FAN MUTUR.		AVPDSAUDIO/VIDEOPOWERDISTRIBUTIONSYSTEMAVAUDIO/VIDEOPOWERDISTRIBUTIONSYSTEM
	DISCONNECT SWITCH SIDE HANDLE TYPE		C.B. CIRCUIT BREAKER I.W.H TANK-LESS INSTANT WATER HEATER
www	FLEXIBLE CONDUIT (NO LONGER THAN 6'-0"		E.W.H TANK ELECTRIC WATER HEATER LTS LIGHTS NIC NOT INCLUDED UNDER THIS DESIGN CTROL. CONTROL

## UTILITIES NOTE TO CONTRACTOR:

"THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL UTILITY MARKINGS CONTRACTOR SHALL USE SPECIAL CARE WHEN REMOVING THE UTILITY MARKINGS NEEDS TO BE SUCH THAT IT DOES NOT DAMAGE THE SURFACES OF THE PLACE. IF WATER-BLASTING OLDER ASPHALT PAVEMENT, CARE NEEDS TO ASPHALT OR POLISH THE AGGREGATE. IF THE REMOVALS ARE ON OLDER SURFACE OF A PANEL OR SECTION NEEDS TO BE BLASTED TO SHOW UN SAME PANEL OR SECTION. IN ANY CASE (ASPHALT OR CONCRETE SURFACE SUCH THAT A SLICK SURFACE IS NOT LEFT BEHIND. FINAL PAYMENT TO WITHHELD UNTIL THE UTILITY MARKS ARE PROPERLY REMOVED."

## DEMOLITION NOTE TO CONTRACTOR:

BEFORE DEMOLITION ACTIVITIES BEGIN, CONTRACTOR TO COORDINATE WITH ELEMENTS TO BE SALVAGED. VALUABLE MATERIALS SUCH AS COPPER, LIG BREAKERS SHALL BE PROTECTED, CLEANED AND RETURNED TO THE CITY.

	CITY OF
CENERAL ELECTRICAL NOTES: RAL NOTES ON THE PROJECT PLANS AND DRAWINGS ARE SOLELY TO AID AND ASSIST THE CONTRACTOR WITH IELD OPERATIONS FOR THE PROJECT. SAID GENERAL NOTES MAY NOT FULLY DESCRIBE ALL OF THE REMENTS FOR AN ITEM. THEREFORE, THE CONTRACTOR SHALL READ AND VERIFY THE CONTRACT DOCUMENTS, DING BUT NOT LIMITED TO THE PLANS, SPECIFICATIONS, GENERAL TERMS AND CONDITIONS, AND THE LEMENTAL TERMS AND CONDITIONS, TO FULLY UNDERSTAND AND COMPLY WITH ALL THE REQUIREMENTS THEREIN"	
<ul> <li>ALL WORK SHALL BE IN ACCORDANCE WITH THE 2014 NATIONAL ELECTRICAL CODE, 2017 FLORIDA BUILDING CODE (6TH EDITION) AND OTHER APPLICABLE CODES &amp; STANDARDS.</li> <li>THE CONTRACTOR SHALL SATISFACTORILY REPAIR/REPLACE EQUIPMENT OR PART OF STRUCTURE DAMAGED AS A RESULT OF HIS WORK. SURFACES AND FINISHED AREAS SHALL BE RESTORED TO MATCH ADJACENT AREAS.</li> <li>APPROVAL SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO CUTTING OR DRILLING ANY STRUCTURAL SUPPORT MEMBER.</li> <li>ALL DEVICE BOXES SHALL BE INSTALLED FLUSH AND CONDUITS RUN CONCEALED IN EINISHED AREAS SPECIFICALLY SHOWN/ NOTED OTHERWISE</li> </ul>	CITY OF MIAMI OFFICE OF CAPITAL IMPROVEMENTS
<ul> <li>FINISHED AREAS EXCEPT AS SPECIFICALLY SHOWN/ NOTED OTHERWISE.</li> <li>MINIMUM WIRE SIZE SHALL BE #12 THHN/THWN UNLESS OTHERWISE NOTED ON PLANS. CONDUCTORS #6 AND LARGER SHALL BE THWN.</li> <li>ALL CONDUCTORS SHALL BE COPPER UNLESS OTHERWISE NOTED ON PLANS.</li> <li>ALL CONDUCTORS SHALL BE RUN IN CONDUIT (METALLIC TYPE). USE PVC SCHEDULE 40 FOR UNDERGROUND BRANCH/FEEDERS, IN ALL CONDUITS AN EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH THE NEC 250-122 MUST BE INSTALLED AND CONDUIT SIZE IN COREASED AS REQUIRED.</li> <li>ALL BRANCH CIRCUITS SHALL BE PROPERLY PHASE BALANCED.</li> <li>ALL BRANCH CIRCUITS SHALL BE PROPERLY PHASE BALANCED.</li> <li>CONTRACTOR SHALL SEAL ALL FIRE RATED PENETRATION WITH A FIRE SEALANT EQUAL TO THE RATINGS OF THE PENETRATION.</li> <li>ALL EMPTY CONDUITS TO BE PROVIDED WITH NYLON PULL STRINGS.</li> <li>FUSES SHALL BE DUAL ELEMENT, TIME DELAY TYPE UNLESS OTHERWISE NOTED.</li> <li>IN ORDET TO PREVENT SOUND TRANSMISSION AND THE SPREAD OF FIRE, ALL BOXES MOUNTED ON FIRE RATED WALLS MUST BE STAGGERED AND BE WRAPPED WITH U.L FIRE RATED MATERIAL EQUAL TO THE RATING OF WALL. THIS NOTE IS APPLICABLE EVEN WHEN BOXES FOR DEVICES ON DRAWING ARE SHOWN BACK TO BACK.</li> <li>NOT USED.</li> <li>ALL LUMINARIES SHALL BE PROPERLY SUPPORTED IN ACCORDANCE WITH THE SYSTEM MANUFACTURER RECOMMENDATIONS AND LOCAL CODE REQUIREMENTS.</li> <li>RISERS ARE DIAGRAMMATIC ONLY. THEY DO NOT SHOW EVERY BEND REQUIRED FOR THE INSTALLATION</li> <li>THESE DRAWING ARE A GUIDE FOR THE INSTALLATION OF ELECTRICAL EQUIPMENT. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE A FUNCTIONING SYSTEM.</li> <li>ALL CABLES SHALL BE RUN WITHOUT SPLICES. EXCEPT AS OTHERWISE INDICATED.</li> <li>ALL VULL AND JUNCTION BOXES SHALL BE ACCESSIBLE AT ALL TIMES.</li> <li>EXACT POINT AND METHODS OF CONNECTIONS TO EQUIPMENT'S SHALL BE DETERMINED IN FIELD.</li> <li>ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER.</li> <li>COORDINATE LOCATION OF ALL DI</li></ul>	PARK SYNTHETIC TURF AND PARK IMPROVEMENTS CITY OF MIAMI PROJECT B-173515 1350 NW 50th ST, MIAMI, FL 33142 TRICAL LEGEND, NOTES AND DETAILS
<ol> <li>SECURITY SYSTEM CONTRACTOR SHALL PROVIDE AND TERMINATE ALL WIRES AND CABLES. ELECTRICAL CONTRACTOR IS TO PROVIDE A COMPLETE CONDUIT RACEWAY SYSTEM, BACK BOXES, JUNCTION BOXES, OUTLETS AND COVER PLATES FOR ALL ELECTRONIC SECURITY SYSTEM. INCLUSIVE OF ALL REQUIRED 120VAC POWER CIRCUITS.</li> <li>NON-LOCKING RECEPTACLES IN DAMP AND WET LOCATIONS SHALL BE LISTED WHEATER-PROOF (IN ADDITION TO PROVISION OF THE REQUIRED TYPE OF COVERS) AS PER NEC 406.8(A)&amp;(B).</li> <li>NO ELECTRICAL CONDUIT SHALL BE FILLED ABOVE 40% OF CONDUIT AREA. IF ANY AREA REQUIRE ADDITIONAL CONDUITS FOR CONTROL, SECURITY OR OTHER LOW VOLTAGE WIRING, CONTRACTOR SHALL INSTALL ADDITIONAL CONDUITS AS NEEDED.</li> <li>AN OPERATING MANUAL AND MAINTENANCE SHALL BE PROVIDED TO OWNER, INCLUDING SUBMITTAL DATA STATING EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PEACE OF EQUIPMENT REQUIRING MAINTENANCE WITH CLEARLY IDENTIFIED REQUIRED ROUTINE MAINTENANCE OPTION, AND NAMES AND ADDRESSES OF AT LEAST ONE QUALIFY SERVICE AGENCY, AS PER FBC EC 405.7.4.2.</li> <li>WITHIN 30 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE, RECORD DRAWING OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER, INCLUDING A SINGLE LINE DIAGRAM OF THE BUILDING ELECTRICAL DISTRIBUTION AND FLOOR PLAN INDICATING THE AREA SERVED FOR ALL DISTRIBUTION (AS PER FBC EC 505.7.4.1.)</li> <li>NOT USED.</li> </ol>	DATE: 04/30/2018 DESIGN: M.G./Y.P. DRAWN: M.G./Y.P. DRAWN: M.G./Y.P. CHECKED: T.N. REVISIONS: PERMIT SET 4/30/18 1 06.29.18 BLDG. DEPT. PERMIT COMMENTS
TRACEABLE WARNING TAPE CONCRETE SURFACES, THE ENTIRE NIFORM COLOR THROUGHOUT THAT ACE), THE METHOD NEEDS TO BE THE CONTRACTOR MAY BE COMPACTED COMPACTED COMPACTED CONCRETE SURFACES, THE ENTIRE NIFORM COLOR THROUGHOUT THAT ACE), THE METHOD NEEDS TO BE THE CONTRACTOR MAY BE	JOB NO. B-173515 FILE: ARCHITECT/ENGINEER: ANTONIO NARANJO, PE - 35664
H CITY PERSONNEL ON ELECTRICAL GHTING CONTACTORS AND C.	SEAL
CAUTION:         BEFORE START DIGGING FOR NEW ELECTRICAL         INSTALLATION CONTRACTOR SHALL CALL: FLORIDA         SUNSHINE 811, 811 OR 1-800-432-4770         WWW.SUNSHINE811.COM TO IDENTIFY EXISTING         UNDERGROUND UTILITIES.         INSIDE THE PROPERTY, CONTRACTOR IS         RESPONSIBLE TO IDENTIFY EXISTING UNDERGROUND         UTILITIES IN THE AREAS UNDER SCOPE OF WORK	SHEET NO. E-0.1
MEPENGINEERING INC. MEDENGINEERING INC. MEDENGINEERING INC. MEPENGINEERING INC. MEPENGINEERING INC. MEPENGINEERING INC. MEPENGINEERING INC. MEPENGINEERING INC. MEPENGINEERING INC.	O PE35664 5) 471-0160 FL. 33172 OF SHEETS

![](_page_28_Figure_0.jpeg)

![](_page_29_Figure_0.jpeg)

![](_page_30_Figure_0.jpeg)

![](_page_31_Figure_0.jpeg)

NEW SPC	ORT LIGH	TS RETROF	IT BY O	THERS,	SHOW	N FOR	CALC	ULATION	PURPOSE	
Hadley Park Retrofit Miami,FL										
Lighting Syst	tem									
Pole / Fixture	Summary									
Pole ID	Pole Height	Mtg Height	Fixture Qty		Lumina	aire Type		Load	Group	
F1-F4	70'	15'	2		TLC-	<b>3T-</b> 575		1.15 kW	A	
		70'	7		TLC-L	ED-1150		8.05 kW	A	
4			36					36.80 kW		
Croup Summ		_	_	_	_	_				
Group Summ	lary	Description	_		ood F	lixture Otv				
A		Football/Soccer	r	36	8 kW	36				
Fixture Type	Summary									
Тур	e	Soι	urce	Wa	ttage	Lumens	L90	L80	L70	
TLC-LEE	D-1150	LED 5700	K - 75 CRI	11	50W	121,000	>51,000	>51,000	>51,000	
TLC-B1	Г-575	LED 5700	K - 75 CRI	57	′5W	52,000	>51,000	) >51,000	>51,000	
Light Level S	Summary									
Calculation G	Brid Summary									
Grid N	ame	Calculati	on Metric		NO 1	Illumi	nation	w/Min Ave/Min	Groups	
Football /	Soccer	Horizontal	Illuminance	32	24 X	25	40 ·	1.61 1.30	Α	
Spi		Horiz	zontal			0 0	02 0		Δ	
Spi	11	TIUNZ	lontai			0	.02 (	5.00	~	

![](_page_31_Figure_4.jpeg)

TYPE: SQD PANE VOLTAGE: 120/2 MAINS: 60A/3P AIC RATINGS: 10	ELBOARD 208V, 1PH, 3W M.C.B. 0K AI.C (EXIS	TING)			EX
====	SERVING	= =	WIRE AND COND SIZE	LOAD KVA	POL TRIF
EXISTING LOAD		(NIC)	EXISTING	0.72	1
EXISTING LOAD		(NIC)	EXISTING	0.72	1
EXISTING LOAD		(NIC)	EXISTING	0.72	1
EXISTING LOAD		(NIC)	EXISTING	0.72	1
EXISTING LOAD		(NIC)	EXISTING	0.72	1
EXISTING LOAD		(NIC)	EXISTING	0.72	1
SPACE			_	-	_
SPACE			_	-	-
SPACE			_	-	-
SPACE			_	-	-
SPACE			_	-	-
SPACE			_	-	-
THERE IS NOT MAU CONTRACTOR TO P	IOR LOAD ADDE ROVIDE AN UPE	D TO TI	HIS PANEL, Anel directo	<b>— —</b>	

![](_page_32_Figure_0.jpeg)

![](_page_32_Figure_2.jpeg)

![](_page_33_Picture_0.jpeg)

The THORGUARDIANisthe first, totally integrated advance warning system for lightning. The sensor continuously monitors the atmosphere's electrostatic energy as far away as 15 miles and evaluates the potential for lightning within an area approximately 2 miles in radius. When the system determines a hazardous condition, the air-horns and strobe light provide necessary alerts.

As a leader in lightning prediction, THOR GUARD has advanced its state of the art lightning prediction technology by the development of its propriety L125 prediction computer.

The entire system can be easily installed outdoors as a single unit, or the control box can be located separately. Under normal conditions, the air hornshave a range of approximately 700 yards, in a 360' pattern. An external status LED indicates THORGUARDIAN is operational.

- THOR GUARD L125 lightning prediction computer.
- Sensor, Strobe, Air-horns, Mtg. Bar & Tripod included.
- · Automatic notification, both visual and audible, of "RED - ALERT" and "ALL - CLEAR" conditions.
- Strobe light that remains on during "RED ALERT".
- AC Power (120V) or Optional Solar Power.
- RS232 port (DB9) allows interface to users computer providing data for THOR GUARD's ThorPCX (Optional) visual display and storm storage software.
- Audible notification for low battery or test failure.
- High performance long life rechargeable battery

# THORGUARDIAN LIGHTNING PREDICTION SYSTEM

![](_page_33_Picture_17.jpeg)

![](_page_33_Picture_18.jpeg)

	SELECTED SPECIFICATIONS	
Model:	THORGUARDIAN L125	
Power Requirements:	Voltage: 120-240 volts AC, 50-60 Hz, Single Phase Power: .25A, 30 Watts	
	>>> Optional Solar Power Using 40 Watt Panel	
Power Supply:	100-240 volts AC 50-60 Hz 0.6A Dimensions: 1.96" W x 1.5" D x 2.8" H Safety Requirements: UL, CSA Power Cord: 5 ft. Weight: 5.220z.	THORQUARDIAN
Enclosure Control Box:	Dimensions: 13" W x 6 ½" D x 15 ¼" H Safety Requirements: UL, CSA, Type 4X Material: Sealed Gray Fiberglass Enclosure Weight: 26 Lbs.	Thorguardian Enclosure
THOR GUARD L125:	Dimensions: 7.325" W x 6.0" D x 1.5" H Power: 12V DC (Supplied by System Battery) Safety Requirements: FCC Part, 15 Class B	
D-ASA Sensor:	Dimensions: 12" L x 6"W x 14"H Weight: 2 Lbs. (Excludes Cable)	
		Lightning Prediction Sensor (Maintenance-free)
Sensor Cable:	West Penn 5992 (Optional Plenum Cable) 3/8" Dia. Doubled Shielded Triaxial with Teflon Core Standard Lengths: 12ft., 40ft.	
VOT Air Horn Cluster:	Manufacture: THOR GUARD Material: ASA; Dome & Horn Mounting Plate Weight: 8Lbs. (Excludes Cable) Cable: General Cable 234600 12 AWG (UL) Type TC-ER Sound Output: 113db @ 10ft., 700 Yard Radius, Typical Coverage	<b>VOT Horn</b>
Strobe Light:	Manufacture: Whelen 51 Series (UL) Listed Dimensions: 3.90" H x 5.2" Dia. Weight 1Lb. Light Output: LED High Intensity Multi-Flash, Amber Cable: West Penn AQ224, 18 AWG 2-Conductor Length: Standard 12ft., 40ft. (Additional Lengths Available)	LED Strobe Light
	(Specifications & Features subject to change without notice)	

THOR GUARD, Inc. 1193 Sawgrass Corporate Parkway, Sunrise, FL 33323 Tel (954) 835-0900 (888) 571-1212 Fax(954) 835-0808 Email:\_Sales@thorguard.com

www.thorguard.com

REV 17.1

![](_page_33_Picture_23.jpeg)

![](_page_33_Figure_24.jpeg)

![](_page_33_Figure_25.jpeg)

OF

MEP ELECTRICAL PLUMBING	electrical engineer {#EBOOO6115}	ANTONIO	NARANJO TEL.(305)	PE356 471-01
MEP ENGINEERING INC.	10590 N.W. 27 ST	Г. <b>SUITE</b> 10	)1 MIAMI I	FL. 331

![](_page_34_Picture_0.jpeg)

![](_page_34_Figure_8.jpeg)

![](_page_34_Figure_9.jpeg)

- 6. External DC Supply Input Connections for an external 24V DC supply to power the amplifier.
- 7. Speaker Outputs
- Output terminals for connection to either 70V. 25V, or low-impedance speaker types. 8. Input 1- Balanced LINE/MIC
- Input 1 will provide an electronically-balanced input with selectable gain suitable for linelevel signals, including dry loop telephone signals as well as balanced low-impedance microphones. The associated slide switch sets the input for LINE, MIC or PP (MIC with phantom power). This input can be set to mute Input 2 when active.

## 9. Mute Send

The ability of Input 1 to mute Input 2 can be enabled or disabled using this switch.

![](_page_34_Figure_16.jpeg)

- 10. Input 2 Unbalanced AUX Provides a high-impedance input through a set of stereo combining RCA jacks. This input is muted by Input 1 when muting is enabled.
- 11. REC Output These RCA connectors provide a signal-level output of the program material provided to the speaker.
- 12. AC Mains
- AC mains voltage will be provided through an IEC connector with fuse holder and detachable 3-conductor IEC cord. The nominal line voltage is 120V AC, 60 Hz.

lating (RMS):	15 watts continuous, 20 watts equalized						
cy Response:	275 Hz to 1	4 kHz					
Impedance:							
SPT15A —	25/70 volts						
SP158A —	8 ohms						
essure Level:	121 dB @ f	our feet on	axis with	15 watt	input		
	@ 1000 Hz						
<b>Dispersion:</b>	110°						
Microphone:	-22 dBm [Re	ef: 10 dynes	(cm2]				
Dimensions:	9" Diameter	x 9-1/4" D	-				
duct Weight:							
SPT15A	4 lb.						
SP158A —	3 lb.						
Finish:	Textured mo	Textured mocha enamel					
PT15A only):	25V @ 15,7	7.5, 1.8, 0.94	, 0.46 wa	itts			
.,	70V @ 15,7	7.5, 3.8, 1.8,	0.9 watts				
B @ 1000Hz:	Watts	Feet	on Axis				
	Input:	4	8	16	32	64	
	15	121	115	109	103	97	
	7.5	118	112	106	100	94	
	3.8	115	109	103	97	91	
	1.8	112	106	100	94	88	
	0.9	109	103	97	91	85	
	0.46	106	100	94	88	82	

![](_page_34_Picture_26.jpeg)

								ELFY OF	
	SECUR	RITY SY	STEM	NFORM	IOITAN	N			
8–40 Megapixels <b>Arecont Vision</b> ° Leading the Way in Megapixel Video <sup>™</sup>									
Surro H.264 All-in-C Camera Models	oundVic	Deco® IP Me	egapixel Do Day/Night Indoor	me Camera ⁄Outdoor Dome IF	aS ? Cameras			CITY OF M Office of Cap IMPROVEMEN	IAMI PITAL NTS
8MP Panoramic AV8185CO AV8185CO-HB	180°         8MP P           AV83650         AV83650	anoramic 360°	<b>20MP Panoramic 180°</b> AV20185CO AV20185CO-HB	20MP Panoram           AV20365CO           AV20365CO-HB	ic 360° 40MP AV4018 AV4018	Panoramic 180° 35DN 35DN-HB			
AV8185DN AV8185DN-HB	AV83651 AV83651	DN-HB	AV20185DN AV20185DN-HB	AV20365DN AV20365DN-HB				<u></u>	
	tao° Panoramic		Je recent state	Surro came area are h impar are a resolu A sin replar ability Their way y	undVideo panoramia aras provide all-in-or video surveillance. For ioused in an outdoor ct-resistant dome en vailable in 180° and 3 utions of 8-, 20- and igle SurroundVideo p ce multiple convention / to zoom into multipreturn on investment you view it.	c view megapixel IP ne solutions for wide our sensors and lenses -rated IP66 and IK-10 closure. The cameras 60° configurations and d 40-megapixels (MP). anoramic camera can onal cameras with the ole regions of interest. is easily measured any		ARK IMPROVEMEN F B-173515 FL 33142	TY SYSTEMS
180° Panoramic at 8, 20 and 40MP	360° Panoramic at 8 and 20MP	True Day/Night with IR Cut Filter	Dome Solution Impact / We grated Lens IK-10 an	eather Resistant Pixel Binn d IP66 Rated on 20 and 40	ing Mode Heater/Bl DMP Models Optio	lower Dual Encoder n H.264/MJPEG		MI, MI	JRI.
<ul> <li>Industry's First 8</li> <li>Forensic Zoomir Field-of-View in I</li> <li>Binning Mode for</li> <li>True Day/Night F</li> <li>Outdoor Rated I</li> <li>PoE and Auxiliar</li> <li>Easily Adjustable</li> <li>+/- 5° Electrical N</li> <li>+/- 10° Mechani</li> <li>Complete Mouri</li> <li>Dual Encoder H.</li> <li>Privacy Mask, M Multi-Streaming</li> <li>Fast Frame Rate</li> <li>Reduced Overal</li> </ul>	MP, 20MP and 40MF ng – Zoom Live or Afte HD – Replace PTZ De r Strong Low Light Per Functionality with Mec P66 and IK-10 Impac y Power: 12–48V DC, e 2-Axis Camera Gimt Vertical Alignment to L cal Tilt Adjustment to to ting Options .264/MJPEG totion Detection, Flexil es I System Cost USA	Panoramic Megapixel ( er the Event While Recor evices formance in 20MP and 4 hanical IR Cut Filter (DN t-Resistant Housing (24V AC bal with 360° Pan and 90 locate Each Sensor Posi Locate Each Sensor Ang ble Cropping, Bit Rate C	Cameras ding Full 40MP Resolutions Models) 0° Tilt tion (180° Series) gle (360° Series) ontrol and +1.818.937.	Model     Resolution       AV8185     8MP       AV8365     8MP       AV20185     20MP       AV20365     20MP       AV40185     40MP       Build-to-Order Option       CO     Color       DN     True Day/N       -HB     Heater and       0700     877.CAMERA.8	Configuration     Frame       180° Panoramic     6f       360° Panoramic     3.5       360° Panoramic     3.5       180° Panoramic     1.5	a Rate       Features         ps       –         ps       –         fps       Binning         fps       Binning         fps       Binning         fps       Binning         search       Figure 1         search       Search         avsales@arecontvision.com		Y PARK SYNTHETIC TURF CITY OF MIAMI PRC 1350 NW 50th ST, N	ROPOSED PA AND SE
Surroun		Megapixel Dor	ne Cameras		Sp	ecifications		HADL	۵.
Model Image Sensor (CMO	specifications	AV8185	AV8365 8MP = 2MP x 4	AV20185	AV20365	AV40185 40MP = 10MP x 4		DATE: 04/30/20	18
Optical Format Pixel Pitch	Color	1/2* 4.2µm 0.1 Lux	1/2" 4.2µm 0.1 Lux	1/2.5" 2.2µm	1/2.5" 2.2μm 0.3 Lux	1/2.3* 1.67µm 0.42 Lux		DRAWN: M.G./Y.P. CHECKED: T.N	
Minimum Illumination	Color Binning True Day/Night (-DN Mode		- 0 Lux, IR sensitive	0.15 Lux 0.15 Lux 0 Lux, IR sensitive	0.15 Lux 0.15 Lux 0 Lux, IR sensitive	0.42 Lux 0.21 Lux 0 Lux, IR sensitive 14592 H x 2752 V			0/10
Full FOV Resolution	Per Sensor Total	1600 H x 1200 V 3200 H x 600 V	1600 H x 1200 V 3200 H x 600 V	2560 H x 1920 V 5120 H x 960 V	2560 H x 1920 V 5120 H x 960 V	3648 H x 2752 V 7296 H x 1376 V		PERMITSET 4/3	0/10
Dynamic Range Frame Rates	Full Resolution	61dB 6fps (6400x1200)	61dB 6fps (6400x1200)	1280 H x 960 V 70.1dB 3.5fps (10240x1920)	1280 H x 960 V 70.1dB 3.5fps (10240x1920)	1824 H x 1376 V 57.2dB 1.5fps (14592x2752)			
Lone	1/4 Resolution Binning Mode	20fps (3200x600) - - CS, F1.8, 7.8mm, IR,	20fps (3200x600) - CS, F1.8, 3.5mm, IR,	4.2(ps (10240(1600)) 11fps (5120x960) 13fps (5120x960) CS, F1.8, 6.2mm,	4.2(ps (10240X1600) 11fps (5120x960) 13fps (5120x960) CS, F1.8, 3.5mm,	5.5fps (7296x1376) 6.5fps (7296x1376) CS, F2.4, 7.2mm,			
Data Transmission	Compression Type Network Protocols Network Interface	H-FOV = 47° H 264 (MPEG-4, Part 10) / Mot 21 levels of quality RTSP, RTP/TCP, RTP/UDP, HTT 100Base-T Ethernet	H-FOV = 96° on JPEG Environ P, DHCP, TFTP	H-FOV = 47° mental Operating temper Humidity Stable image ter Storage tempera	H-FOV = 96° erature -40°C (-40°F 0% to 90% 0°C (32°F) to ature -30°C (-22°F	H-FOV = 47° To +50°C (122°F) w/Heater (non-condensing) p+50°C (122°F) To +60°C (140°F)		JOB No. B-17351	5
Programmability	Multi-Streaming On-camera real-time moti detection zones (per sens Privacy mask Pixel Binning Mode (20 ar +/-5° Digital Vertical Align Flexible Cropping (resolut 2x2 pixels for H 264) Low light noise filter contr Bit rate and bandwidth im Backlight compensation a 50/60Hz selectable flicker Electronic pan, tilt, zoom Programmable resolution, Bandwidth and storage se Simultaneous delivery of fi	Non-identical streams (2 per se on detection and privacy mask w or) ind 40MP) ment to adjust images (180° Moo ion windowing down to 1x1 pixel ol itation control ind auto multi-matrix white balan control (PTZ) and image flip 180° brightness, saturation, gamma, avings by running at 1/4 resolutio full field-of-view and zoomed ima	Insor) Mechan lith up to 1024 lel) for JPEG and sharpness, tint n ges	nical Casing d Gimbal E Total Unit Dimensions P Weight U	ie-cast aluminum chassis with bome bubble 266 weather proof standard mpact resistant, IK-10 rated asily adjustable, 2-axis w/360 unit Ø6.9* (175mm) ubble Only Ø5.5* (140mm) rackaged 8.5* (215mm) x ackaged 8.5* (215mm) x ackaged 4.63 lbs (1.75kg tackaged 4.63 lbs (2.1kg)	n 5.5" (140mm) polycarbonate (° pan and 90° tilt x 6.55" H (166mm) x 3.4" H (87mm) 8.5" (215mm) x 8.5" (215mm) a)		FILE: ARCHITECT/ENGINEER ANTONIO NARANJO PE - 35664 SEAL	2:
Compliance	Programmable shutter spo Industry Standard Listings FCC Compliance Environmental Markings Mechanical	eed to help control motion blur ONVIF Profile S Conformant UL (CB) 47 CFR 15 Class A RoHS, REACH, WEEE (CE) EN55022 Class A, EN5502 EN61000-3-2, EN61000-3-3, E IK-10 (EN62262), IP66 (EN6052	<sup>24</sup> , №0950-1 19)		- Ø 138.0 - 0 175.3 - 0 (6.90)				
Electrical	Input/Output Power Over Ethernet Auxiliary Power Power Consumption	General purpose opto-coupled           PoE 802.3af, Class 3           12-48V DC, 24V AC           AV8185/AV8365         9 Watts           AV20185/AV20365         9 Watts	Access DC Power DC Power	AV-CRMA C AV-EBA H AV-JBA P AV-PMA P	Auther Mount Adapter lectrical Box Adapter Plate fi ISG2-WMT, MicroDome® and unction Box Adapter for HSG leplacement Part for: MegAV fole Mount Adapter rendant Mount Bracket with	or SV-WMT, MD-WMT2, 4 MegaView®. 32-WMT, D4S-WMT. iew®2, AV-PMJB, AV-WMJB Junction Box (Mount Cap			
Heater & Blower Electrical (-HB only)	Voltage Input     12V       Power Output     11V       Heater Switch     On       Blower Switch     On	AV40185         11.7 W.           / to 20V DC/24V AC (separate po N Max (DC 12V); 13W Max (AC 2 17°C (62.6°F), Off. 30°C (86°F)         10°C (50°F), Off. 5°C (59°F)           10°C (50°F), Off. 15°C (59°F)         50°C (12°P), Off. 45°C (41°P)	atts DC Power wer required) 4\V)	AV-PMJB n F AV-WMJB ir SV-CAP C S	ot included) for SurroundVid emaile Vall Mount Bracket with Junc cluded) for SurroundVideo ( emaile vap only for 8MP, 20MP and - urroundVideo Models – 1.5* alon Colling Colling Colling	eo Omni Series – 1.5" NPT tion Box (Mount Cap not Omni Series – 1.5" NPT 40MP Panoramic NPT Male		SCALE: AS SHO	DMN
Rev 003.002 © 2016 Arec- MicroDome,	ont Vision®. All rights reserved. An and MegaView are registered trac	econt Vision, the Arecont Vision logo, lemarks of the company.	SurroundVideo,	SV-FMA P	anoramic Series	ap tor non detyrnigni		SHEET NO.	
🔚 Made in the U	USA (E s()) is		+1.818.937.	0700   877.CAMERA.8   x	www.arecontvision.com	avsales@arecontvision.com		E-3.1	
			ANICAL MECHA RICAL PLUM G INC.	NICAL / ELECTRICA IBING {#EBC 10590	l engineer An DOO6115} N.W. 27 ST. 5	TONIO NARANJO TEL.(305 SUITE 101 MIAMI	) PE35664 ) 471-0160 FL. 33172	OF SHEETS	

![](_page_35_Picture_0.jpeg)

DOME SECURITY CAMERA MOUNTING DETAIL #1

![](_page_35_Figure_4.jpeg)

![](_page_35_Figure_5.jpeg)

![](_page_35_Picture_6.jpeg)

SLAB CONCRETE

PIPE SIZE-----

N.T.S.

![](_page_36_Figure_11.jpeg)

- 1. THE WORK INCLUDES MODIFICATION TO THE EXISTING PLUMBING SYSTEM AND PROVIDING NEW MATERIALS, FITTINGS AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING PLUMBING SYSTEM. ALL WORK SHALL BE IN ACCORDANCE WITH 2017 LOCAL CODES AND/OR ORDINANCES
- 2. HOOK-UP CHARGES, PERMITS AND ALL OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING PLUMBING SYSTEM ARE INCLUDED AS A PART OF THIS SECTION.
- 3. THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, FIXTURES AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURER'S STANDARD ROUGH-IN DRAWINGS FOR PLUMBING FIXTURE INSTALLATION REQUIREMENTS. COMPLY WITH ALL APPLICABLE ADA INSTALLATION REQUIREMENTS.
- 4. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.
- 5. PIPING SYSTEMS GENERAL: ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONDUIT. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING, PROVIDE AN ISOLATING DIALECTIC UNION. ALL HANGERS SHALL BE COMPATIBLE WITH PIPING MATERIAL TO PREVENT CORROSION.
- 6. PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.

- SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE, CONFORMING TO CODE REQUIREMENTS. PROVIDE SUITABLE WALL OR FLOOR CLEANOUTS WITH ACCESSORIES TO OBSCURE FROM VIEW.
- 12. WATER DISTRIBUTION PIPING: LAYOUT WATER PIPING SO THAT THE ENTIRE SYSTEM CAN BE DRAINED. HOT AND COLD WATER PIPING SHALL BE 1/2" MIN. TYPE L COPPER TUBING WITH WROUGHT COPPER FITTINGS AND SWEAT CONNECTIONS. PROVIDE WATER HAMMER ARRESTOR AT EACH FIXTURE STOP. INSTALL CHROME PLATED BRASS ESCUTCHEON PLATES AT ALL PENETRATIONS THROUGH FINISHED SURFACES (INCLUDING CABINET INTERIORS). USE TIN-ANTIMONY SOLDER, 95/5 FOR ALL SWEAT FITTINGS OF COPPER PIPING.
- 13. SHUTOFF VALVES, WITH UNIONS SHALL BE PROVIDED FOR SERVICE TO EACH PLUMBING FIXTURE, FOOD SERVICE EQUIPMENT ITEM OR OTHER EQUIPMENT ITEM, TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT. VALVES SHALL BE EQUAL TO JENKINS #902-T BALL VALVE, CHROME-FINISHED BRONZE, TEFLON SEATS AND PACKING, 400 LB. W.O.G., SOLDER END.
- 14. ACCESS PANELS SHALL BE PROVIDED WHERE CONCEALED CONTROL DEVICES, VALVES, ETC. ARE CONCEALED WITHIN WALLS. WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THROUGH LAY-IN SUSPENDED CEILINGS, ACCESS PANELS ARE NOT REQUIRED.

17. TEST WATER SYSTEM UNDER 150 PSIG HYDROSTATIC PRESSURE, FOR FOUR (4) HOURS MINIMUM. WHEN TESTING INDICATES MATERIALS OR WORKMANSHIP IS DEFICIENT, REPLACE OR REPAIR AS REQUIRED, AND REPEAT TEST UNTIL STANDARDS ARE ACHIEVED.

CONSTRUCTION OPERATIONS AND RESTORE TO ORIGINAL CONDITIONS.

- 18. DISINFECT AND SANITIZE WATER DISTRIBUTION SYSTEMS PER APPROVED METHODS AND PROCEDURES.
- 19. PROVIDE PLUMBING FIXTURES BY AMERICAN 10 STANDAND OR APPROVED EQUAL. PROVIDE ALL TRIM AND ACCESSORIES
- 21. SHUTOFF VALVES, WITH UNIONS SHALL BE PROVIDED FOR SERVICE TO EACH PLUMBING FIXTURE, FOOD SERVICE EQUIPMENT ITEM OR OTHER EQUIPMENT ITEM, TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT. VALVES SHALL BE EQUAL TO JENKINS #902–T BALL VALVE, CHROME-FINISHED BRONZE, TEFLON SEATS AND PACKING, 400 LB. W.O.G., SOLDER END.

	CITY OF ATTENDED	A LIB A
	HADLEY PARK SYNTHETIC TURF AND PARK IMPROVEMENTS CITY OF MIAMI PROJECT B-173515 1350 NW 50th ST, MIAMI, FL 33142	PLUMBING LEGEND, NOTES AND DETAILS
	DATE: 04/30/20 DESIGN: M.G./Y.P. DRAWN: M.G./Y.P. CHECKED: T.N. REVISIONS: PERMIT SET 4/3	0/18
	JOB No. B-17351 FILE: ARCHITECT/ENGINEER ANTONIO NARANJO PE - 35664 SEAL	5 R: /
	SCALE: AS SHO	PMN
664 160 172	SHEET №. Р-0.1	

MEP MECHANICAL MECHANICAL / 1	electrical engineer	ANTONIO	NARANJO	PE3566
ELECTRICAL PLUMBING	{#EBOOO6115}		TEL.(305)	471-016
EP ENGINEERING INC.	10590 N.W. 27 S	T. SUITE 10	1 MIAMI H	FL. 3317

![](_page_37_Figure_0.jpeg)

![](_page_38_Figure_0.jpeg)

![](_page_38_Figure_1.jpeg)

PLUMBING FIXTURE SCHEDULE ALL FIXTURES SHALL COMPLY WITH WITH F.B.CPLUM. TABLE 604.4 + 604.5 AND WITH MIAMI DADE COUNTY CODE SECTION 8-31							
MARK	TRAP SIZE	FIXTURE UNITS	HOT WATER	COLD WATER	MFG. MODEL	REMARKS	
W.F.	1-1/4"	0.5		1/2"	ELKAY OUTDOOR EZH20 BOTTLE FILLING STATION BI–LEVEL NON–FILTERED NON REFRIGERATED. MODEL: LK4420BF1U	316 STAINLESS. FLOOR MOUNTED/FREESTANDING COLOR: EVERGREEN, UNIT IS LEAD-FREE AND ADA COMPLIANT WITH NSF/ANSI 61 & 372 CERTIFIED.	

![](_page_38_Figure_3.jpeg)

![](_page_38_Picture_6.jpeg)

![](_page_38_Figure_7.jpeg)

![](_page_38_Figure_10.jpeg)

![](_page_38_Picture_11.jpeg)

![](_page_38_Figure_16.jpeg)