## **IRRIGATION NOTES:**

\* SUBMISSIONS REQUIRED PRIOR TO THE PRE-CONSTRUCTION MEETING

\*\* APPROVALS REQUIRED DURING CONSTRUCTION

### 1) SCOPE:

THE SCOPE OF WORK IS SHOWN IN THIS PLAN SET, AS AMENDED BY CONTRACT DOCUMENTS.

THE IRRIGATION CONTRACTOR (HEREAFTER CALLED CONTRACTOR) SHALL VERIFY ALL CONDITIONS IN THIS PLAN SET PRIOR TO BIDDING. ARRANGE A SITE VISIT AND BECOME FAMILIAR WITH THE EXISTING AND PROPOSED SITE CONDITIONS, MOT, ACCESS, SOIL CONDITIONS AND ANY OTHER CHALLENGES OF THIS PROJECT PRIOR TO BIDDING. ANY COSTS OR REQUIREMENTS NECESSARY FOR FINAL ACCEPTANCE SHALL BE CONSIDERED INCIDENTAL TO THE WORK

### 2) SYSTEM DESCRIPTION:

A) THESE PLANS ARE DESIGNED TO MEET, OR EXCEED, THE FLORIDA BUILDING CODE APPENDIX F AND THE FLORIDA IRRIGATION SOCIETY STANDARDS AND SPECIFICATIONS FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS, CURRENT

B) THIS IS A PRESURE DEMAND PUMP SYSTEM WITH A SURFACE WATER SUPPLY, ALL COMPONENTS SHALL BE COLOR CODED PURPLE TO INDICATE RE-USE WATER (FOR A FUTURE CONNECTION TO A RE-LISE WATER MAIN) C) COORDINATE ELECTRICAL SERVICE CONNECTION WITH FLORIDA POWER AND LIGHT. A LICENSED ELECTRICIAN SHALL PERFORM ALL ELECTRICAL CONNECTIONS. THE CONTRACTOR SHALL OBTAIN APPLICABLE ELECTRICAL PERMIT FROM THE CITY OF COCONUT CREEK CITY BUILDING DEPARTMENT.

D) CONNECTIONS SHALL BE ACCORDING TO THE CITY OF COCONUT CREEK'S ENGINEERING STANDARDS AND CODE

E) ALL FEES AND ASSOCIATED COSTS SHALL BE PAID BY THE CONTRACTOR

CONTROLLER GROUNDING SHALL NOT EXCEED 10 OHMS RESISTANCE.

\*\* CONTACT THE CITY OF COCONUT CREEK FOR APPROVAL OF THE RESISTANCE TESTING

THE CONTRACTOR SHALL BE CERTIFIED AS A CERTIFIED IRRIGATION CONTRACTOR BY THE IRRIGATION ASSOCIATION AND SHALL BE PRESENT ON SITE TO DIRECT ALL IRRIGATION ACTIVITIES.

PRIOR TO THE PRE-CONSTRUCTION MEETING, SUBMIT CERTIFICATION.

## 5) SHOP DRAWING/MANUFACTURES PRODUCT SHEETS:

\* PRIOR TO THE PRE-CONSTRUCTION MEETING, SUBMIT SHOP DRAWINGS/MANUFACTURES PRODUCT SHEETS OF EVERY ITEM SPECIFIED FOR THIS PROJECT.

ALL MATERIAL AND INSTALLATION SHALL BE SUBJECT TO INSPECTION AND APPROVAL, DO NOT MAKE SUBSTITUTIONS WITHOUT WRITTEN APPROVAL

\* PRIOR TO THE PRE-CONSTRUCTION MEETING, SUBMIT AN ITEMIZED UNIT COST BREAKDOWN OF EVERY ITEM SPECIFIED FOR THIS PROJECT.

### 7) INSTALLATION SCHEDULE:

\*\* CONTACT THE LANDSCAPE ARCHITECT PRIOR TO EACH STAGE OF WORK.

PREPARE AS-BUILT PLANS AS THE WORK PROGRESSES.

\*\* SUBMIT COPY OF AS-BUILTS FOR REVIEW ON A WEEKLY BASIS TO THE LANDSCAPE ARCHITECT. KEEP THE AS-BUILT PLAN SET ON SITE DURING CONSTRUCTION. SUBMIT FINAL AS-BUILTS TO THE SEMINOLE TRIBE OF FLORIDA AFTER THEY HAVE BEEN SUBMITTED TO AND APPROVED BY THE LANDSCAPE ARCHITECT. AS-BUILTS SHALL CLEARLY INDICATE THE ACTUAL LOCATION OF ALL MAIN LINES, LATERAL LINES, SLEEVING, VALVES, AND EQUIPMENT WITH AT LEAST TWO DIMENSIONS FROM FIXED LANDMARKS.

## 9) TRENCHING AND PIPE INSTALLATION:

CONTRACTOR SHALL REQUEST WRITTEN APPROVAL OF THE MAINLINE INSTALLATION FROM THE LANDSCAPE

PIPE LAYOUT ON PLANS IS SHOWN SCHEMATICALLY FOR GRAPHIC CLARITY. INSTALL ALL PIPE AND EQUIPMENT IN PERVIOUS AREAS (EXCEPT WHERE SLEEVING IS INDICATED). ROUTE PIPES TO AVOID ANY PRÔPOSED OR EXISTING TREES OR OTHER CONFLICTS. IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES FOUND IN

SOLVENT WELD JOINTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-2855, PVC PURPLE COLORED PRIMER IS REQUIRED AND SHALL MEET ASTM F-656. PVC CEMENT SHALL MEET ASTM D-2564

## 10) MAINLINE LEAKAGE TEST:

MAINLINE PIPING SHALL UNDERGO A LEAKAGE TEST AT 100 PSI FOR TWO (2) HOURS.

LEAKAGE IS DEFINED AS THE QUANTITY OF WATER THAT MUST BE SUPPLIED TO THE MAINLINE TO MAINTAIN THE TEST PRESSURE. THE QUANTITY OF WATER USED SHALL BE MEASURED BY PUMPING FROM A CALIBRATED CONTAINER. THE ALLOWABLE LIMITS FOR LEAKAGE OF GASKETTED PVC SHALL BE DETERMINED BY THE FOLLOWING FORMULA:

- L = ALLOWABLE LEAKAGE IN GALLONS PER HOUR
- N = NUMBER OF JOINTS
- D = NOMINAL PIPE DIAMETER IN INCHES
- P = AVERAGE TEST PRESSURE IN PSI

## **IRRIGATION NOTES (CONTINUED):**

SOLVENT WELDED PVC MAINLINE SHALL HAVE NO LEAKAGE.

### TEST PROCEDURE

NOTIFY THE LANDSCAPE ARCHITECT AT LEAST 3 WORKING DAYS PRIOR TO TESTING.

ALL PUMPS, GAUGES, AND MEASURING DEVICES SHALL BE FURNISHED, INSTALLED, AND OPERATED BY THE CONTRACTOR

\*\* CONTACT THE LANDSCAPE ARCHITECT FOR APPROVAL OF ALL ITEMS AND THEIR INSTALLATION.

AFTER THE MAINLINE PIPE HAS BEEN LAID AND APPROVED BY THE LANDSCAPE ARCHITECT PLACE BACKFILL ALONG THE PIPE BARREL TO HOLD THE PIPE SECURELY IN PLACE DURING THE LEAKAGE TEST, LEAVING THE JOINTS EXPOSED TO VIEW FOR THE DETECTION OF VISIBLE LEAKS. AT ALL TIMES, ALL OPEN TRENCHES, HOLES, ETC., SHALL BE BARRICADED

PRIOR TO TESTING, ALL CUTS TO THE MAINLINE SHALL BE COMPLETE. NO CUTTING OR MODIFICATIONS TO THE MAINLINE SHALL BE PERMITTED AFTER SUCCESSFUL COMPLETION OF THE LEAKAGE TEST

PRIOR TO TESTING, ISOLATE THE MAINLINE AND SLOWLY FILL THE MAINLINE WITH WATER TO THE TEST PRESSURE, THE MAINLINE SHALL REMAIN PRESSURIZED FOR 24 HOURS AND ANY AIR SHALL BE EXPELLED FROM THE MAINLINE AND ANY LEAKS SHALL BE CORRECTED.

AT THE DIRECTION OF THE LANDSCAPE ARCHITECT, THE LEAKAGE TEST SHALL BEGIN.

WHERE LEAKAGE EXCEEDS THE ALLOWARIE LIMIT REMOVE AND RECONSTRUCT AS MUCH OF THE WORK AS NECESSARY IN ORDER TO LOCATE AND REPAIR THE PROBLEM. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE CORRECTION OF DEFECTIVE WORK OR TO DAMAGE TO OTHER PARTS OF THE WORK RESULTING FROM SUCH CORRECTIVE WORK. AFTER ALL NECESSARY REPLACEMENTS AND CORRECTIONS THE TEST SHALL BE REPEATED UNTIL SUCCESSFUL COMPLETION OF THE LEAKAGE TEST.

UPON SATISFACTORY COMPLETION OF THE LEAKAGE TEST, BACKFILLING OF THE TRENCH SHALL BE COMPLETED PER ASTM D-2774. BACKFILL MATERIAL SHALL BE FREE OF STONES, ROCKS OR ANY OTHER MATERIAL THAT COULD CAUSE DAMAGE TO PIPE OR EQUIPMENT.

### 11) PRESSURE TEST

\* NOTIFY THE CITY AT LEAST 3 WORKING DAYS PRIOR TO TESTING

EACH ZONE SHALL BE SUBJECTED TO A PRESSURE TEST AT THE FIRST AND LAST HEAD. THE PRESSURE SHALL NOT BE MORE THAN PLUS OR MINUS 10% OF THE DESIGN OPERATING PRESSURE OF THE SYSTEM, SET THE ZONE VALVE

### 12) COVERAGE TEST:

\*\* NOTIFY THE CITY AT LEAST 3 WORKING DAYS PRIOR TO TESTING

ALL IRRIGATED AREAS SHALL PROVIDE THE COVERAGE PER PLANS. ADJUST HEAD HEIGHT, ARC AND RADIUS SETTINGS AS REQUIRED FOR PROPER COVERAGE. OVERSPRAY ON ANY PAVEMENT, WALKS, OR STRUCTURES SHALL NOT OCCUR

\*\* NOTIFY THE SEMINOLE TRIBE OF FLORIDA AT LEAST 3 WORKING DAYS PRIOR TO TRAINING.

PROVIDE TRAINING FOR MAINTENANCE PERSONNEL IN THE OPERATION AND MAINTENANCE OF THE SYSTEM. THE TRAINING PROGRAM SHALL BE CONDUCTED FOR A PERIOD OF NOT LESS THAN FOUR HOURS. CONTACT THE SEMINOLE

INSTALL IRRIGATION OPERATING SCHEDULE (PROVIDED BY THE LANDSCAPE ARCHITECT) TO THE INSIDE OF THE CONTROLLER DOOR

## 14) GUARANTEE

THE CONTRACTOR SHALL GUARANTEE IN WRITING THE IRRIGATION SYSTEM FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.

# 15) FINAL ACCEPTANCE:

NOTIFY THE LANDSCAPE ARCHITECT AT LEAST 2 WEEKS PRIOR TO FINAL INSPECTION FOR PURPOSES OF ATTENDING INSPECTION, FINAL ACCEPTANCE WILL NOT BE GIVEN BY THE UNTIL

A) COMPLETE INSTALLATION PER PLANS

B) SITE CLEAN UP AND RESTORATION

C) SUBMISSION OF WRITTEN GUARANTEE

D) SUBMISSION OF AS-BUILTS

E) SUBMISSION OF EQUIPMENT MANUFACTURER'S GUARANTEES AND OWNERS MANUALS

F) COMPLETION OF TRAINING FOR MAINTENANCE PERSONNEL.

G) COMPLETION OF PUNCH LIST ITEMS

H) FINAL WALK THROUGH BY THE LANDSCAPE ARCHITECT AND THE SEMINOLE TRIBE OF FLORIDA

## **GENERAL NOTES**

1) PRIOR TO CONSTRUCTION, PLACE BARRICADES AT THE DRIPLINE OF EXISTING TREES. OPERATE NO HEAVY MACHINERY (VEHICLES, TRUCKS, TRAILERS, BOBCATS, ETC.) OPERATE WITHIN THE DRIPLINE OF ANY EXISTING TREES. HAND DIG ALL INSTALLATIONS WITHIN THE DRIPLINE OF ANY EXISTING TREES.

2) REPLACE LANDSCAPE MATERIAL OR SITE IMPROVEMENTS DAMAGED DURING IRRIGATION INSTALLATION

3) COORDINATE OPERATIONS WITH OTHER CONSTRUCTION ACTIVITIES TO AVOID PAVEMENT CUTTING OR OTHER CONFLICTS. MAINTAIN GRADE STAKES SET BY OTHERS UNTIL REMOVAL IS MUTUALLY AGREED UPON BY ALL PARTIES

4) KEEP ALL INLETS FREE OF EXCAVATED MATERIAL AND DEBRIS FOR THE DURATION OF THE PROJECT WITH APPROPRIATE EROSION CONTROL DEVICES.

5) KEEP THE SITE KEPT NEAT AND ORDERLY AT ALL TIMES. KEEP PAVEMENT CLEAN AND WORK AREAS IN AN ORDERLY CONDITION. REMOVE ALL TRASH AND DEBRIS REMOVED FROM THE SITE DAILY, PROPERLY DISPOSE OF EXCAVATED

6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY ON SITE FOR EMPLOYEES AND THE PUBLIC.

7) AT THE END OF THE PROJECT. RESTORE THE STAGING AREA TO ITS ORIGINAL CONDITION

## **UTILITIES NOTES**

1) THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THERE ARE NO CONFLICTS WITH ABOVE OR BELOW GROUND UTILITIES PRIOR TO WORK. THE CONTRACTOR SHALL HAVE A DESIGNATED 'ON-CALL' OR 'STANDBY' REPRESENTATIVE TO FACILITATE IMMEDIATE REPAIR, REPLACEMENT OR RESTORATION ACTIONS. THE CONTRACTOR SHALL TAKE IMMEDIATE STEPS TO REPAIR, REPLACE OR RESTORE ALL SERVICES TO ANY UTILITIES WHICH ARE DISRUPTED OR DAMAGED DUE TO HIS OPERATIONS.

2) CONTACT SUNSHINE STATE ONE CALL OF FLORIDA, INC. (PHONE NUMBER 811) AND ALL OTHER APPROPRIATE UTILITIES COMPANIES TWO WORKING DAYS PRIOR TO WORK IN ORDER TO LOCATE UTILITIES.

3) THE CONTRACTOR SHALL BE PRESENT WHILE UTILITIES ARE BEING LOCATED.

4) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY EXISTING UTILITIES CAUSED BY HIS WORK, DETERMINE LOCATION OF UNDERGROUND UTILITIES PRIOR TO BEGINNING ANY WORK AND PERFORM WORK IN A MANNER THAT WILL AVOID POSSIBLE DAMAGE.

5) THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553.851, 'PROTECTION OF UNDERGROUND GAS PIPE LINES' AND FLORIDA STATUTE 556 'UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY'. CONTRACTOR SHALL NOTIFY THE CITY IMMEDIATELY OF ANY DISCREPANCIES FOUND IN THE FIELD

6) THESE PLANS ARE FOR THE INSTALLATION OF THE PROPOSED IRRIGATION SYSTEM, ALL UTILITIES, BUILDINGS AND SITE IMPROVEMENTS SHOWN ARE FOR REFERENCE PURPOSES ONLY. THE EXACT LOCATION OF EXISTING UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR AND UTILITY OWNER, EXPOSING THE SUBJECT FACILITY IF NECESSARY.

ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE TO BE CONSIDERED APPROXIMATE & SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF WORK OPERATIONS



ALL EXISTING UTILITIES RE TO BE CONSIDERED APPROXIMATE AND SHOULD BE VERIFIED

## NOTE ON IRRIGATION SYSTEM

ALL IRRIGATION COMPONENTS SHALL BE PURPLE CODED TO INDICATE REUSE WATER. THE COMPLETE SYSTEM SHALL BE INSTALLED WITH ALL REUSE WATER COLOR CODING AND SIGNAGE AS REQUIRED BY LAW.

CENTE TRANSPORTATION E C PHASE

Date Description

AUGUST 16, 2010 7796.42 IRRIGATION  $\Delta$ 

EITH AND SCHNARS, PA: M