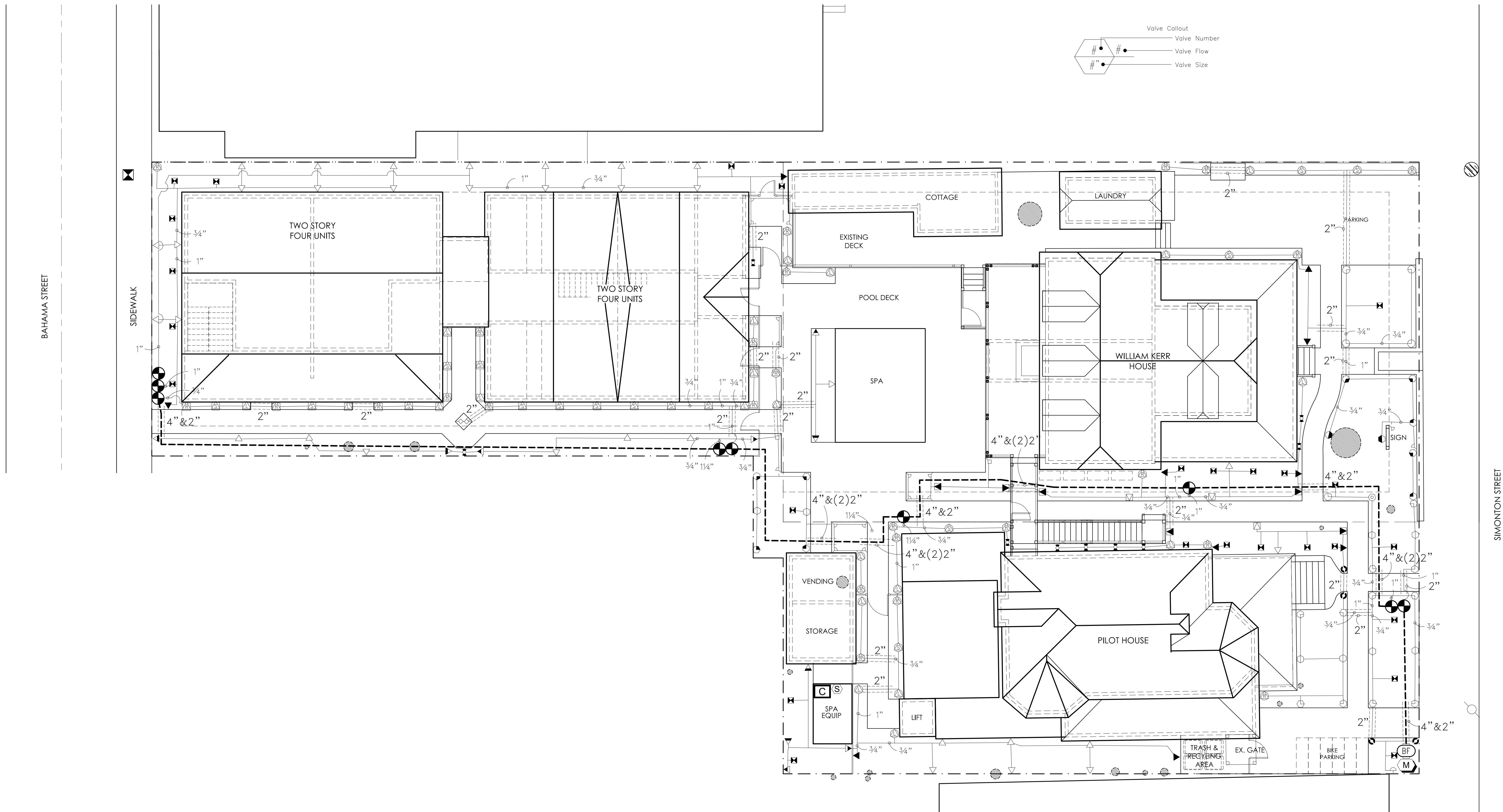


DATE: 08/25/15  
SCALE: 1/8" = 1'-0"  
SHEET: IR-1

**CRAIG REYNOLDS**  
landscape architecture  
craigreynolds.net 305.292.7243  
517 Duval Street, Suite 204 Key West, Florida 33040





UNDERGROUND IRRIGATION SPECIFICATIONS

1.0 GENERAL

- 1.1 SUMMARY: Includes but not limited to:
- A. Furnishing and installing sprinkler system as described in Contract Documents complete with accessories necessary for proper functioning.
- 1.2 SYSTEM DESCRIPTION:
- A. Design Requirements:
    - 1. Layout of Irrigation Heads:
      - a. Location of heads shown on Drawings is approximate. Actual placement may vary slightly as is required to achieve full, even coverage without spraying onto buildings, sidewalks, fences, etc.
      - b. During layout, consult with Landscape Architect to verify proper placement and make recommendations, where revisions are advisable.
- 1.3 QUALITY ASSURANCE:
- A. Regulatory Requirements:
    - 1. Work and materials shall be in accordance with latest rules and regulations, and other applicable state or local laws. Nothing in Contract Documents is to be construed to permit work not conforming to these codes.
  - B. Pre-Installation Conference:
    - 1. Meet with Owner and Landscape Architect to discuss and clarify all aspects of job requirements prior to commencing work of this Section.
  - C. System Adjustments:
    - 1. Minor adjustments in system will be permitted to avoid existing fixed obstructions.
    - 2. Mainline, laterals, and valves are shown for clarity purposes only. All irrigation equipment to be with landscape area. Mainline, laterals and valves to be installed as far away from existing and new specimen trees as possible.
    - 3. Documentation and submittal of actual water supply performance prior to commencing installation.
- 1.4 SUBMITTALS:
- A. Record Drawings:
    - 1. Prepare an accurate as-built drawing as installation proceeds to be submitted prior to final inspection. Drawing shall include:
      - a. Detail and dimension changes made during construction.
      - b. Significant details and dimensions not shown in original Bidding Documents.
    - 2. Maintain, at job site, one copy of Contract Documents (as defined in General Conditions) and relevant shop drawings.
    - 3. Clearly mark each document "PROJECT RECORD COPY" and maintain in good condition for use of the Landscape Architect and Owner.
    - 4. As-built drawing shall be provided in pdf format.
    - 5. Submit product literature for all sprinklers, valves, pipe, wire, wire connectors and controller.
    - 6. Final payment for system will not be authorized until accurate and complete submittals are delivered to the Landscape Architect.
  - B. Instruction Manual:
    - 1. Provide instruction manual which lists complete instructions for system operation and maintenance.
- 1.5 PRODUCT STORAGE:
- A. During construction and storage, protect materials from damage and prolonged exposure to sunlight.
- 1.6 WARRANTY:
- A. Standard one (1) year warranty stipulated in General Conditions shall include:
    - 1. Completed system including parts and labor.
    - 2. Filling and repairing depressions and replacing plantings due to settlement of irrigation trenches for one (1) year following final acceptance.
    - 3. System adjustment to supply proper coverage to areas to receive water.
- 1.7 MAINTENANCE:
- A. Extra Materials:
    - 1. In addition to installed system, furnish Owner with the following items at close-out:
      - a. Two sprinkler head bodies of each size and type.
      - b. Two nozzles for each size and type.
      - c. Two adjusting keys for each sprinkler head cover type.

2.0 PRODUCTS:

- 2.1 PIPE, PIPE FITTINGS, AND CONNECTIONS:
- A. Pipe shall be continuously and permanently marked with Manufacturer's name, size, schedule, type, and working pressure.
  - B. Pipe:
    - 1. Pressure Lines: as indicated on plans.
    - 2. Lateral Lines: as indicated on plans.
    - 3. Risers: sch. 80 PVC, gray
  - C. Fittings:
    - 1. Schedule 40 PVC.
  - D. Sleeving:
    - 1. Schedule 40 PVC.
- 2.2 SPRINKLER HEADS:
- A. Conform to requirements shown on Drawings as to type, radius of throw, pressure, and discharge.
- 2.3 AUTOMATIC SPRINKLER SYSTEM:
- A. Control valves shall be of size and type indicated on Drawings.
  - B. Control wire shall be UL listed, color coded copper conductor direct burial size 14. Use 3M-DEY waterproof wire connectors at splices and locate all splices within valve boxes. Use white or gray color for common wire and other colors for all other wire. Each common wire may serve only one controller.
  - C. Add two extra control wires from panel to valves for use if a wire fails and mark it in the control box as extra wires. These wires shall be of a different color than the others.
- 2.4 VALVES:
- A. Electric Valves:
    - 1. Make and model shown on Drawings.
  - B. Gate valves:
    - 1. Bronze construction, angle type, 150 pound class, threaded connections, with cross-type operating handle designed to receive operating key.
  - C. Automatic Controller:
    - 1. Make and model shown on Drawings.
  - D. Backflow Preventor:
    - 1. Make and model shown on Drawings.
- 2.5 VALVE ACCESSORIES:
- A. Valve Boxes:
    - 1. Ametek or Brooks rectangular heavy duty valve box with locking lid or Landscape Architect approved equal.
    - 2. Do not install more than one (1) valve in a single box.
    - 3. Valve boxes shall be large enough for easy removal or maintenance of valves.

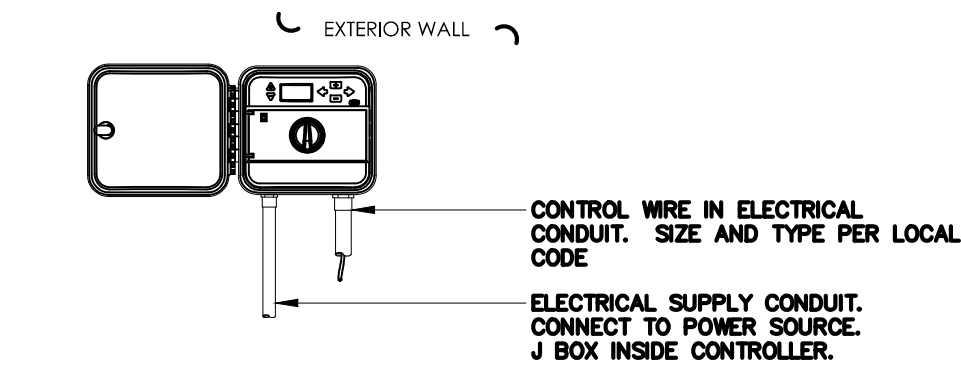
3.0 EXECUTION:

- 3.1 PREPARATION:
- A. Protection:
    - 1. Work of others damaged by this Section during course of its work shall be replaced or repaired by original installer at this Section's expense.
- 3.2 INSTALLATION:
- A. Trenching and Backfilling:
    - 1. Over-excavate trenches by two (2") inches and bring back to indicated depth by filling with fine, rock-free soil or sand.
    - 2. Cover pipe both top and sides with two (2") inches of material specified in paragraph above. In no case shall there be less than two (2") inches of rock-free soil or sand surrounding pipe.

- 3. Do not cover pressure main, sprinkler pipe, or fittings until the Landscape Architect has inspected and approved system.
- B. Installation of Plastic Pipe:
1. Install plastic pipe in a manner to provide for expansion and contraction as recommended by Manufacturer.
  2. Unless otherwise indicated on Drawings, install main lines with a minimum cover of eighteen (18") inches based on finish grade. Install lateral lines with a minimum cover of twelve (12") inches based on finish grade.
  3. Install pipe and wires under driveways or parking areas in specified sleeves a minimum of eighteen (18") inches below finish grade or as shown on Drawings.
  4. Locate no sprinkler head closer than twelve (12") inches from building foundation. Heads immediately adjacent to mowing strips, walks or curbs shall be one (1") inch below top of mowing strip, walk or curb and have a minimum of one (1") inch clearance between head and mowing strip, walk or curb.
  5. Drawings show arrangement of piping. Should local conditions necessitate rearrangement, obtain approval of Landscape Architect prior to proceeding with work.
  6. Cut plastic pipe square. Remove burrs at cut ends prior to installation so unobstructed flow will result.
  7. Make solvent weld joints in the following manner:
    - a. Clean mating pipe and fitting with clean, dry cloth and apply one (1) coat of P-70 primer to each.
    - b. Apply uniform coat of 711 solvent to outside of pipe.
    - c. Apply solvent to fitting in similar manner.
    - d. Reapply a light coat of solvent to pipe and quickly insert into fitting.
    - e. Give pipe or fitting a quarter turn to insure even distribution of solvent and make sure pipe is inserted to full depth of fitting socket.
    - f. Hold in position for fifteen (15) seconds minimum or long enough to secure joint.
    - g. Wipe off solvent appearing on outer shoulder of fitting.
    - h. Do not use an excessive amount of solvent thereby causing an obstruction to form on the inside of pipe.
    - i. Allow joints to set at least 24 hours before applying pressure to PVC pipe.
  8. Tape threaded connection with teflon tape.
  9. Install concrete thrust blocks wherever change of direction occurs a PVC main pressure lines unless otherwise detailed on Drawings.
- C. Control Valves and Controller:
1. Install controller, control wires, and valves in accordance with Manufacturer's recommendations and according to applicable electrical code.
  2. Install valves in plastic boxes with reinforced heavy duty plastic covers. Locate valve box tops at finish grade.
  3. Install remote control valves in valve boxes positioned over valve so all parts of valve can be reached for service. Set cover of valve box even with finish grade.
  4. Install all valve boxes over nine (9") inches of gravel for drainage.
- D. Sprinkler Heads:
1. Prior to the installation of sprinkler heads, open control valves and use full head of water to flush out system.
  2. Set sprinkler heads perpendicular to finish grade.
  3. Set lawn sprinkler heads adjacent to existing walks, curbs, and other paved areas to grade.

- 3.3 ADJUSTMENT AND CLEANING:
- A. Adjust heads to proper grade when turf is sufficiently established to allow walking on it without appreciable harm. Such lowering or raising of heads shall be part of the original contract with no additional charge to the Owner.
  - B. Adjust sprinkler heads for proper distribution and trim to ensure spray does not fall on building.
  - C. Adjust watering time of valves to provide proper amounts of water to all plants.
- 3.4 DEMONSTRATION:
- A. After system is installed and approved, instruct Owners Representative in complete operation and maintenance.

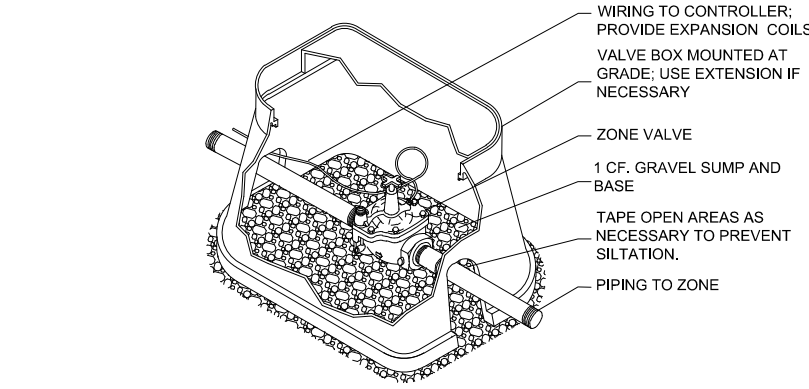
END OF SECTION



\*NOTE\*  
1. MOUNT CONTROLLER WITH LCD SCREEN AT EYE LEVEL. CONTROLLER SHALL BE HARD WIRED BY A LICENSED ELECTRICIAN.

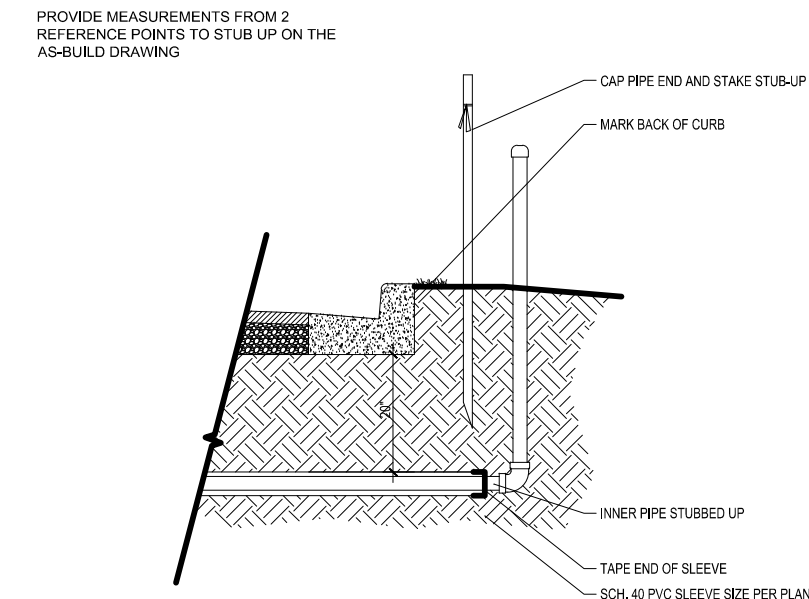
CONTROLLER INSTALLATION DETAIL

SCALE: NTS



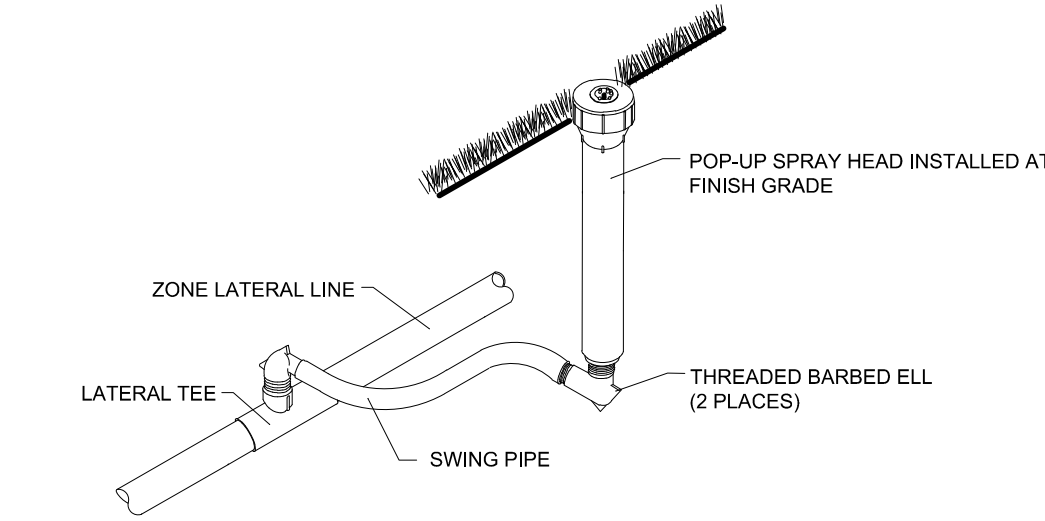
ZONE VALVE INSTALLATION DETAIL

SCALE: NTS



SLEEVEING ROUGH-IN DETAIL

SCALE: NTS



SPRAY HEAD INSTALLATION DETAIL

SCALE: NTS

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL	QTY	ARC	PSI	GPM	RADIUS
◀	Rain Bird 1806 15 Stnp Series	6	EST	30	0.61	4x15'
◻	Rain Bird 1806 15 Stnp Series	3	SST	30	1.21	4x30'
↷	Rain Bird 1806 5 Series MPR	4	90	30	0.10	5'
◀	Rain Bird 1812 15 Stnp Series	10	EST	30	0.61	4x15'
◀	Rain Bird 1812 15 Stnp Series	5	LCS	30	0.49	4x15'
◀	Rain Bird 1812 15 Stnp Series	5	RCS	30	0.49	4x15'
◀	Rain Bird 1812 15 Stnp Series	33	SST	30	1.21	4x30'
↷	Rain Bird 1812 5 Series MPR	1	180	30	0.20	5'
↷	Rain Bird 1812 5 Series MPR	17	90	30	0.10	5'
⊙	Rain Bird 1812 8 Series MPR	8	180	30	0.52	8'
⊙	Rain Bird 1812 8 Series MPR	11	90	30	0.26	8'
⊙	Rain Bird 1812 10 Series MPR	2	180	30	0.79	10'
⊙	Rain Bird 1812 10 Series MPR	8	90	30	0.39	10'
⊙	Rain Bird 1812 10 Series MPR	1	120	30	0.53	10'
⊙	Rain Bird 1812 12 Series MPR	5	90	30	0.65	12'
⊙	Rain Bird 1812 6 Series VAN	4	Adj	30		6'
⊙	Rain Bird 1812 8 Series VAN	1	Adj	30		8'
⊙	Rain Bird 1812 15 Stnp Series	13	LCS	30	0.49	4x15'
⊙	Rain Bird 1812 15 Stnp Series	17	RCS	30	0.49	4x15'
⊙	Rain Bird 1812 15 Stnp Series	5	SST	30	1.21	4x30'
⊙	Rain Bird 1806 15 Stnp Series w/PCS-030 screen	8	LCS	30	0.49	4x15'
⊙	Rain Bird 1806 15 Stnp Series w/PCS-030 screen	8	RCS	30	0.49	4x15'
⊙	Rain Bird 1806 15 Stnp Series w/PCS-030 screen	11	SST	30	1.21	4x30'
⊙	Rain Bird 1806-5 Series Stream	9	180	30	0.50	1x10'
⊙	Rain Bird 1806 w/Maxjet ARCCHFG09H	26	90	30	0.25	5'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
⊙	Rain Bird 100HVf in 10" Valve Box	9
⊙	Wilkins 975XL 1" Backflow Preventer	1
⊙	Rain Bird ESP12m 12 Station Controller	1
⊙	Rain Bird R5D-BEx Rain Sensor	1
⊙	Water Meter 1"	1
— — — — —	Irrigation Lateral Line: PVC Class 160	1,500 l.f.
- - - - -	Irrigation Mainline: PVC 1-1/2" Schedule 40	300 l.f.
- - - - -	Pipe Sleeve: PVC Schedule 40 Extend sleeves 18 inches beyond edges of paving or construction.	
	IRRIGATION CONTRACTOR RESPONSIBLE FOR THEIR OWN TAKE OFF	

# **Staff Report**

# STAFF REPORT

DATE: August 27 2015

RE: **410-414 Simonton Street/411 Bahama Street**  
**(permit application # T15-7560)**

FROM: Karen DeMaria, City of Key West Urban Forestry Manager

An application was received for the Conceptual Approval of a Landscape Plan to redevelop the above listed properties. The redevelopment involves the removal of the following regulated species: **(1) Gumbo Limbo tree (1) Chinese Fan Palm, (1) Solitaire Palm, (2) Queen Palms, (8) Christmas Palms, and (6) Montgomery Palms and the transplantation of (1) Blackbead tree and (11) Thatch Palms.** A site inspection was done on August 19, 2015 and documented the following:

1. Tree Species: Gumbo Limbo (*Bursera simaruba*) Tree #44 located at 414 Simonton Street



Diameter: 3"  
Location: 70%  
Species: 100% (on  
protected tree list)  
Condition: 70% (fair-young)

Total Average Value = 80%

**Value x Diameter = 2.4"**  
**replacement caliper**  
**inches**



## Palms to be removed at 410 and 414 Simonton Street:

Tree #16-Mahogany to remain



Tree #36 & #37-Christmas Palms to remain



Tree #11-Chinese Fan Palm



Tree #35-Christmas Palm

Tree #27, 28, & 29-  
Christmas Palms (tree  
#26 Christmas palm not  
regulated)





Tree #25-Christmas Palm

**Palms to be removed at 411 Bahama Street:**



Trees #38, 39, 40, and 41-Montgomery Palms





Tree #23-Christmas  
Palms

Tree #14-Solitaire  
Palms

Tree #43-Montgomery  
Palms



#43

#23





Tree #22, #17, and #18-Christmas Palm and 2 Queen Palms







Tree #42

Tree #13 to be  
transplanted

Note: The buildings at 411 Bahama Street are to be demolished.

**Total of 18 palms to be removed from the properties.**

### Transplants:



Tree #55-Blackbead (planted  
as replacement credit for  
T13-6354)





Tree #45, #46, #47, #48, #49, #50,  
#51, #52, #53, and #54-Thatch palms  
planted as replacement credit for  
T13-6355





Tree #20-Thatch Palm

**Recommendation: Recommend approval of the Conceptual Landscape Plan to include the removal of (1) Gumbo Limbo tree (1) Chinese Fan Palm, (1) Solitaire Palm, (2) Queen Palms, (8) Christmas Palms, and (6) Montgomery Palms and the transplantation of (1) Blackbead tree and (11) Thatch Palms. The conceptual landscape plan does include the replacement of 18 native palms and 2.4 caliper inches of approved native dicot trees and incorporates over 70% native vegetation.**

# Application





7560

## Tree Permit Application

Conceptual Landscape Plan

Date: 8/25/18

Please Clearly Print All Information unless indicated otherwise.

Tree Address 410 SIMONTON ST.  
Cross/Corner Street FLEMING ST.  
List Tree Name(s) and Quantity SEE TREE DISPOSITION PLAN → T5-1  
Species Type(s) check all that apply ☒ Palm ( ) Flowering ( ) Fruit ☒ Shade ( ) Unsure  
Reason(s) for Application:

( ) REMOVE ( ) Tree Health ( ) Safety ( ) Other/Explain below  
( ) TRANSPLANT ( ) New Location ( ) Same Property ( ) Other/Explain below  
( ) HEAVY MAINTENANCE ( ) Branch Removal ( ) Crown Cleaning/Thinning ( ) Crown Reduction

Other/Explain MAJOR REDEVELOPMENT PLAN

Reason for Request \_\_\_\_\_

Property Owner Name Inter-Ocean Holdings LLC  
Property Owner eMail Address edeboere@bellsouth.net  
Property Owner Mailing Address 600 Fleming St.  
Property Owner Mailing City Key West State FL Zip 33040  
Property Owner Phone Number (305) 304-5757  
Property Owner Signature \_\_\_\_\_

Representative Name ALEX THOMAS (CRAIG REYNOLDS LANDSCAPE ARCH.)  
Representative eMail Address ALEX@CRAIGREYNOLDS.NET  
Representative Mailing Address 517 DUVAL ST. SUITE 20A  
Representative Mailing City KEY WEST State FL Zip 33040  
Representative Phone Number (772) 631-9598

NOTE: A Tree Representation Authorization form must accompany this application if someone other than the owner will be representing the owner at a Tree Commission meeting or picking up an issued Tree Permit.

Tree Representation Authorization form attached ( )

<<<<< Sketch location of tree in this area including cross/corner Street >>>>>

Please identify tree(s) with colored tape

SEE ATTACHED PROPOSED PLANTING PLAN.

If this process requires blocking of a City right-of-way, a separate ROW Permit is required. Please contact 305-809-3740.



7560

## Tree Representation Authorization

Date: 8/25/15

Attendance at the Tree Commission meeting on the date when your request will be discussed is necessary in order to expedite the resolution of your application. This Tree Representation Authorization form must accompany the application if the property owner is unable to attend or will have someone else pick up the Tree Permit once issued.

Please Clearly Print All Information unless indicated otherwise.

Tree Address 410 SIMONSON ST.

Property Owner Name Inter-Ocean Holdings LLC

Property Owner eMail Address edeboer@bellsouth.net

Property Owner Mailing Address 600 Fleming St

Property Owner Mailing City Key West State FL Zip 33040

Property Owner Phone Number (305) 304 5757

Property Owner Signature Erik de Boer

Representative Name ALEX THOMMES (CRAIG REYNOLDS LANDSCAPE ARCHITECTURE)

Representative eMail Address ALEX@CRAIGREYNOLDS.NET

Representative Mailing Address 517 DUVAL ST. ; SUITE 204

Representative Mailing City KEY WEST State FL Zip 33040

Representative Phone Number (772) 631-9598

I Erik de Boer, hereby authorize the above listed agent(s) to represent me in the matter of obtaining a Tree Permit from the City of Key West for my property at the tree address above listed. You may contact me at the telephone listed above if there are any questions or need access to my property.

Property Owner Signature

Erik de Boer Managing Partner

The foregoing instrument was acknowledged before me on this 24th day August 2015

By (Print name of Affiant) Erik de Boer who is personally known to me or has produced as identification and who did take an oath.

### NOTARY PUBLIC

Sign Name: Jo Bennett

Notary Public - State of Florida (seal)

Print Name: Jo BennettMy Commission Expires: May 26, 2019