



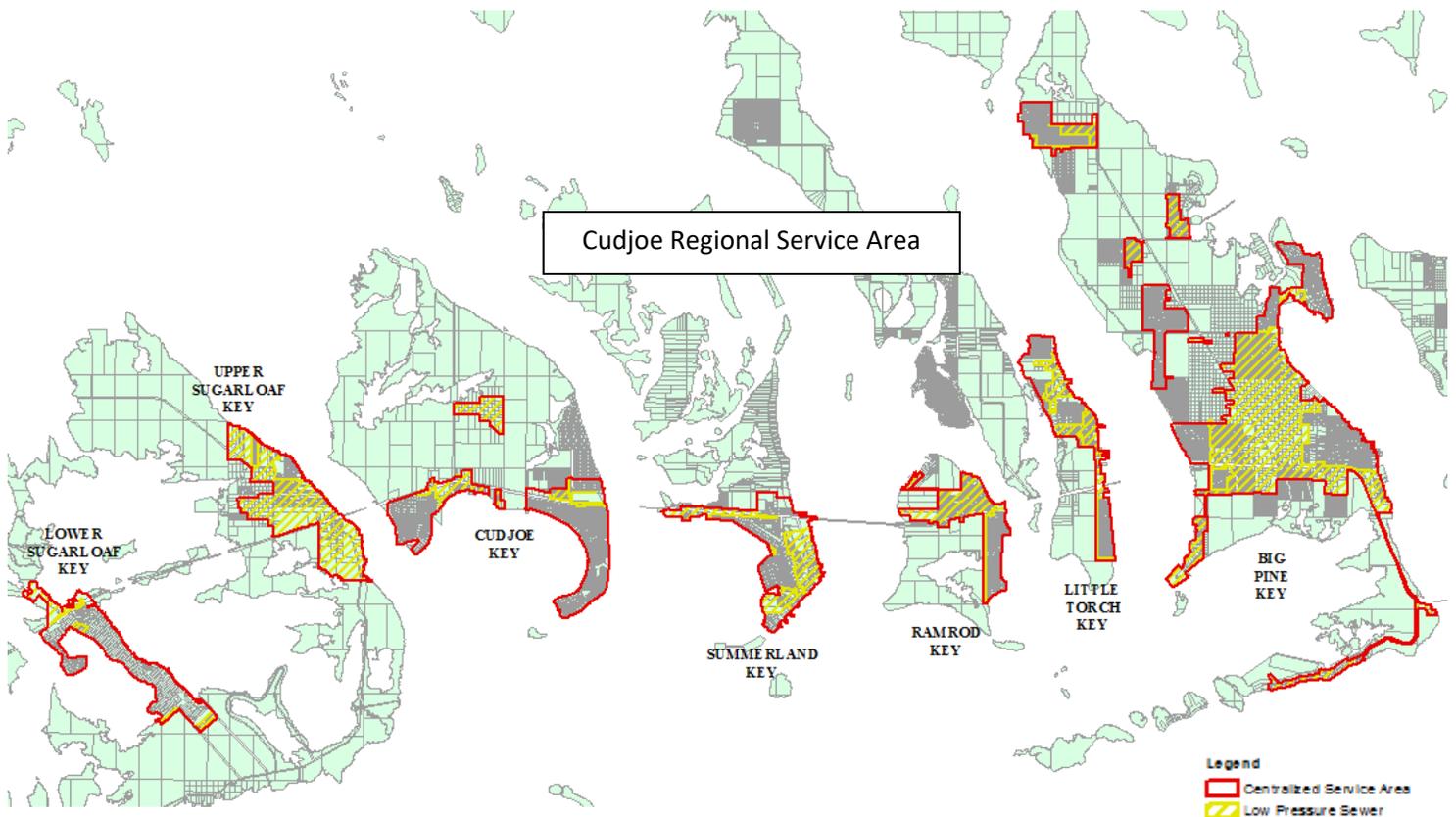
Florida Keys Aqueduct Authority

1100 Kennedy Drive

Key West Florida, 33040

Cudjoe Regional Wastewater Treatment District

LOW PRESSURE SEWER Lateral Connection Construction Packet Residential





Background

The Florida Keys Aqueduct Authority (FKAA) is installing a central wastewater system in the Cudjoe Regional service area, which includes Lower Sugarloaf, Upper Sugarloaf, Cudjoe Key, Summerland Key, Ramrod Key, Little Torch Key and Big Pine Key. This packet is intended to provide the basic information needed to connect a property to the central system for those areas utilizing Low Pressure Sewer (LPS). For the portions of the service area required to connect to gravity sewer please refer to the “Gravity Lateral Connection Construction Packet”. A figure illustrating the areas serviced by LPS is available on the project website at www.CudjoeWastewater.com. The process includes working with the Monroe County Building Department (MCBD), the FKAA and the Monroe County Health Department (DOH) or the Department of Environmental Protection (FDEP). If you need more specific information from an agency their contact information is provided at the end of the packet.

Connection Tasks Overview

1. Obtain Permits
2. Begin Construction
3. Receive Required Inspections
4. Hook-up electric to Disconnect Switch at the Pump Control Panel
5. Hook-up plumbing to the Connection Point at the Grinder Pump Station
6. Abandon the Septic/Cesspit or DEP Wastewater System

Responsibilities

The responsibility to connect a property ultimately falls with the property owner. Owners typically hire plumbers to make the connections and abandon the existing septic tank/cesspit and in some cases have the plumber obtain the necessary permits.

Owners who meet Monroe County’s requirement as an “owner-builder” may choose to forgo hiring a contractor and make the connection and complete the abandonment themselves. Typically, if you own and live in the house you may qualify as an “owner-builder” for that dwelling unit. If you are considering acting as an “owner builder” Please contact the Monroe County Building Department at (305) 295-3990 to ensure you meet the requirements.

Previous plumbing experience is highly recommended for any individual attempting to make the connection as an “owner-builder.”

Notifications

Property Owners will receive a “30-Day Notice of Service Availability” when the central system is available and ready for their connection. Construction may begin before the “Notice of Availability” is issued, however, **the sewer tie-in and electrical connection to the grinder pump system must not be completed until written notice is received from the FKAA and the owner has successfully passed the applicable Monroe County Inspections.** Connection prior to this notification can lead to sewage back-ups and equipment damage and may result in additional costs to the property owner.

Pre-notification Construction

Prior to receipt of the notice of availability portions of the construction can begin, including digging the trench and laying the pipe up to the house and street connection. Owners who choose to begin construction early are required to obtain a “Dry-line” permit from Monroe County. Obtaining an abandonment permit is not required for a dry-line permit, but will be required prior to connection to the central system.



Connection Tasks Checklist

- Obtain Abandonment Permit* (\$95)** Department of Health
 Juvenile Detention Center OR Ruth Ivins Center
 5503 Junior College Road 3333 Overseas Hwy
 Stock Island, FL 33040 Marathon, FL 33050
 (305) 676-3909 (305) 676-3970
 Open: Mon, Wed & Fri Open: Tue & Thur



Application Page 1: <http://www.floridahealth.gov/environmental-health/onsite-sewage/forms-publications/ documents/dh4015-page1-form-reader.pdf>

Application Page 2: <http://www.floridahealth.gov/environmental-health/onsite-sewage/forms-publications/ documents/dh4015-page2.pdf>

- Obtain Lateral Connection Permit* & Electrical Permit (\$70)**
 Monroe County Building Department
 Juvenile Detention Center OR Monroe County Government Center
 5503 Junior College Road 2798 Overseas Highway
 Key West Florida 33040 Marathon, FL 33040
 (305) 295-3990 (305) 289-2500



Download at: <http://www.monroecounty-fl.gov/DocumentCenter/Home/View/10602>

Complete the first three pages.

- File Notice of Commencement (\$11)** (only required if a job is over \$2,500)

- Begin Construction and Tie-in to Connection Provided at the Grinder Pump Station**

- Obtain Initial Inspections**
 (County & FKAA)

- Make Final Connection at House & Receive Final County Inspection**

- Abandon Septic Tank**

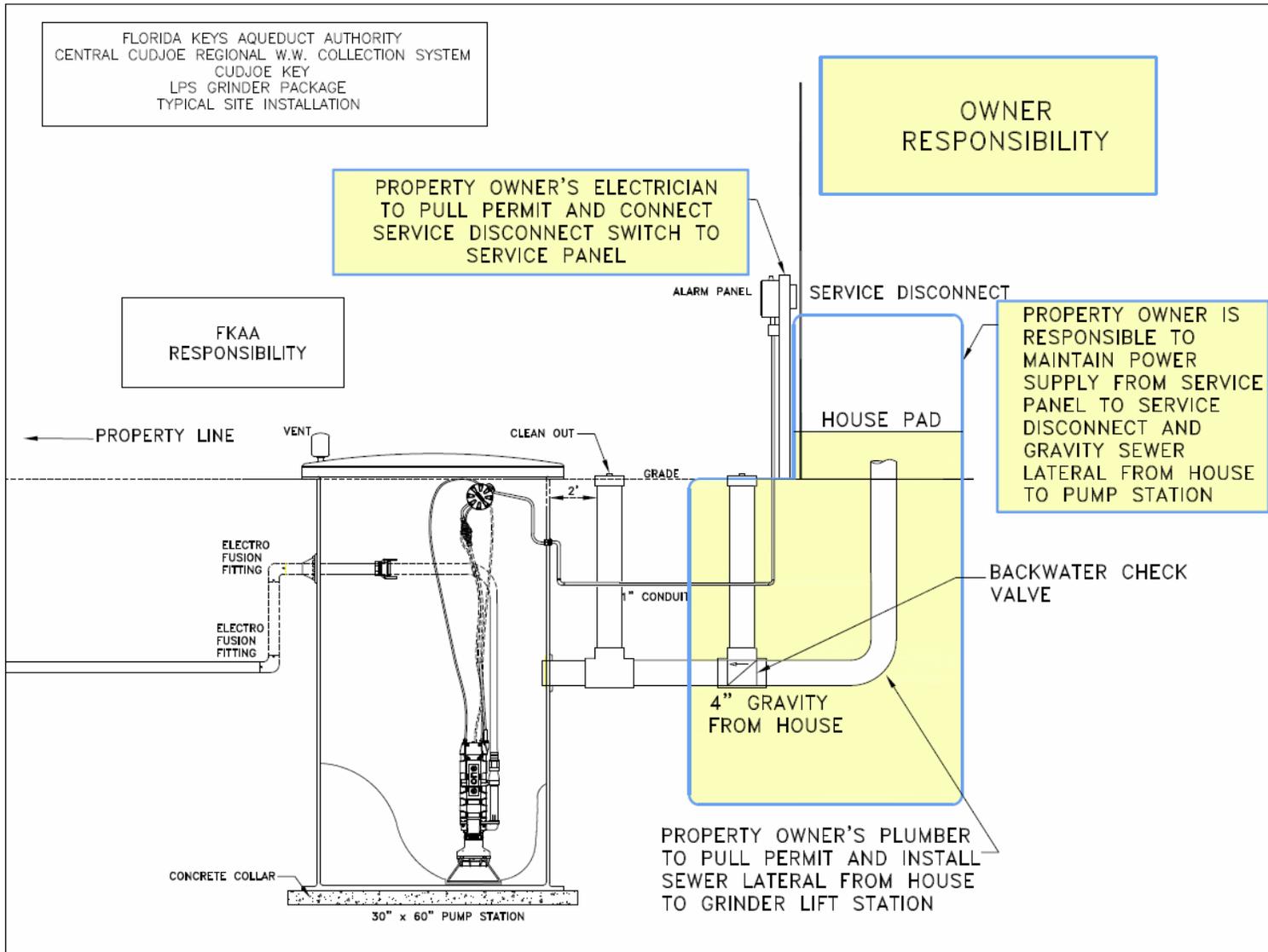
- Receive DOH Abandonment Inspection & Close Abandonment Permit**

- Supply Monroe County with Completed Abandonment Documentation and Close MC Connection Permit**



*Most properties, including single service connections from single family residences, will permit system abandonment through the DOH. However, properties with a wastewater treatment plant currently permitted through the FDEP or properties that require connections that are more complex than a single service connection should consult the FDEP for additional permitting or plant abandonment requirements. Additional information may be found through the FDEP contact information provided at the end of this packet or may be obtained through this link:

<http://publicfiles.dep.state.fl.us/SDRO/Water/ConnectionandAbandonmentBrochure.pdf>



**CUDJOE REGIONAL LATERAL CONNECTION DETAIL
FOR LOW PRESSURE SEWER**



Connection Details

****State Statute, in some instances, allows for property owners to complete their own wastewater plumbing installation. Prior plumbing experience is strongly recommended prior to undertaking this process. Please consult with the Monroe County Building Department to see if you qualify as an owner builder.*

ELECTRICAL CONNECTION

The grinder pump station requires a 120/240 volt, 30-Amp, single-phase circuit. The homeowner is responsible for bringing electrical power to the disconnect switch installed at the pump control panel. The FKAA will install the disconnect switch and pump control panel. Please contact the Monroe County Building Department at (305) 295-3990 for guidance on electrical permitting and installation requirements.

PLUMBING CONNECTION

Achieving Drainage Slope

Building sewer piping must slope away from the building at the usual minimum of 1/8" per foot (1% slope or 1' drop in 100'run). One method of ensuring that a 1/8" per foot slope exists is to shim a carpenter's level on one end so that the bubble will be centered when the pipe is at minimum slope. For example, on a two foot level a shim of 1/4" plywood might be taped. On a four foot level, a 1/2" shim would be used. Be certain that the shim is on the downhill end of the level! If the bubble is off center towards the un-shimmed/uphill side, then more than minimum slope exists, which is okay. Avoid the mistake of trying to use too small of a level—the longer the level, the more reliable the results.

Trenching

When trenching, over excavate to allow room for some bedding material such as sand or fine gravel. The bedding is easily adjusted to the correct slope with the shimmed level on a 2x4. Laying the pipe on the prepared bedding will result in fast achievement of the correct slope and even support for the pipe. When planning for the alignment that will most efficiently pipe your building sewer to the sewer collection system lateral, keep in mind that the Florida Standard Plumbing Code calls for 5 feet of horizontal separation from your water service pipe unless the sewer pipe is at least one foot lower.

Cleanouts

A cleanout is provided at the lateral connection (at the road right-of-way) and required at the building drain connection at a minimum. A cleanout is also required every 100 feet and at every change of direction of greater than 45 degrees. If there is more than one change of direction, a cleanout is required every 40 feet. Please keep in mind, a long radius bend will allow flow more easily than a sharp bend. Use only DWV Schedule 40 fittings. Review your proposed configuration and any difficult situations with the Building Inspector before construction to better ensure approval of the work. Situate your cleanouts such that there is 18" minimum clearance for working room. The cleanout at the lateral connection must be easily accessible.

Connection at the Grinder Pump Station

The connection from the building sewer to the sewer lateral must not be made with any connector utilizing stainless steel bands such as a "Fernco" or "no-hub" coupling. It has been the experience in Key West that they do not withstand anaerobic saltwater exposure. The connection point at the station will



be a 4" PVC pipe with glued cap. During connection of the building sewer pipe, this cap will need to be cut off. Care should be taken not to dislocate the connection point from the station.

Testing

Your inspector is going to want to see a static water test. A column of water in a temporary stack maintaining its level is recommended. You will need to plug the lateral connection with an inflatable test ball lowered into the cleanout at the station. Be certain to secure the ball with a chain to prevent the ball from being pushed out of reach by the test water when the ball is deflated! The chain on the ball comes with a ring that is too big to be pulled into the pipe. If you use an extension hose to inflate the test ball, be certain to keep the ring attached to the extension chain.

Backwater Valve

Per Monroe County Code a backwater valve is required to be placed within five (5) feet of the structure.

Warning!

It is **imperative** that rocks and debris not be allowed to enter the building sewer or lateral piping! Leave a 6-inch cap on the end of the 6-inch PVC service lateral until ready to connect. Only remove cap after test ball has been properly installed.

Cutting and Gluing PVC pipe to ASTM D2855-96(2002) Standards:

Cut pipe square to the axis using fine toothed hand saw and a miter box or equivalent that will not raise a burr or flare the cut end.

Any burr or flaring must be removed with a file, knife, or abrasive paper or the solvent cement and softened plastic may be scraped from the fitting socket, resulting in a leaky joint.

Clean joint surfaces free of dirt, moisture, oil, etc. Use a chemical or abrasive cleaner if a dry cloth is inadequate. Avoid skin contact with chemical cleaners. Keep pipe and fittings below 110 degrees F by avoiding direct sun on hot days.

Protect cement by keeping the can closed and shady when not in use. Use at least a 2" brush or dauber for 4" pipe. Work quickly when applying solvent cement, especially on humid days when condensation of moisture on the cement surface is possible.

Apply Purple Primer to inside socket surface using a scrubbing motion to assure penetration. Next, soften the male end of pipe to be inserted by applying a uniform, liberal coating of primer. Be sure entire surface has been softened. Again, brush inside socket with purple primer and **apply cement** to pipe while the surface is still primer wet. Apply a light, uniform coat of cement to the inside of the socket, taking care to avoid any excess. Work quickly and apply a second cement coat to the pipe end.

Immediately push the pipe end into the socket using a steady even motion while both inside socket and outside pipe surfaces are soft and wet with cement, turning about ¼ turn during insertion, and forcefully bottoming pipe end to socket bottom. After the cement is applied, assembly should be completed in less than 20 seconds.

Allow adequate set time, 30 minutes minimum between 60 and 100 degrees Fahrenheit, before handling pipe taking great care to not disturb the joints.



Information as to the location of your sewer lateral connection, the pipe utilized, the depth of soil before encountering rock at the lateral location, and a photo of the lateral as installed may be available from the FKAA if this might be useful to you. You may call **Stephanie Bruno** at **(305) 745-3991** or email sbruno@fkaa.com to see what information is available at your location.

Agency Contacts

Wastewater Connection & General Project Information	
 <p>Stephanie Bruno Construction Manager Florida Keys Aqueduct</p> <p>Office: 305-745-3991 Email: sbruno@fkaa.com</p>	
Monroe County Permitting Information	Project Funding and System Development Fee Structure
 <p>Corey Sellers Plumbing Inspector Monroe County (305) 481-2507 sellers-corey@monroecounty-fl.gov</p>	 <p>Tina LoSacco Sr. Administrator, Sewer Projects Monroe County (305) 292-4525 LoSacco-Tina@MonroeCounty-FL.gov</p>
Package Plant Abandonment and Multi-Structure Permitting	Septic Abandonment Information
 <p>Gary Hardie (305) 289-7074 Gary.Hardie@dep.state.fl.us</p> <p>Department of Environmental Protection</p>	 <p>Steven Whitfield Florida Department of Health Environmental Manager 305-289-2725 Steven.Whitfield@flhealth.gov</p>