

Guidelines for Permitting – Flame Effects



DISTRICT
FIRE DEPARTMENT

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Introduction

A **Flame Effects (FE)** permit is required for:

1. The installation and use of temporary or permanently installed flame effect systems
2. Fire knives, fire juggling acts, fire eaters, or other similar manual flame use.

When Additional Permits Are Required

Certain other installations may require permits in addition to FE permits. The following permits are frequently required when permanent flame effects are installed in or on a building:

- **Electrical (EL)** – Required for all control power
- **Fire Alarm (AF)** – Maybe required for all show control integration
- **Fire Suppression (FS)** – May be required for protection of fuel or equipment
- **Gas (GS) or Mechanical (ME)**– Required when temporary use of any natural or propane gas appliance or piping system is installed, including but not limited to portable heaters, cooking appliances and fire pits
- **Pyrotechnic (PT)** – Required for all use of pyrotechnics, flame effects, fire acts inside or outside of any structure
- **Plumbing (PL)** – Required for temporary water or sanitary installations. In most cases, a bacteriological test for potable water systems will be required. For temporary structures located outside of a permanent building, a utility permit obtained from Walt Disney World Environmental may also be required.

For permanent installation and permit guidance, it is suggested to setup a design review with the Fire and Building officials. Requests to meet can be made to fireprevention@oversightdistrict.org .

General Permitting Requirements

All permit application and submittal packages shall be submitted by registered users of the online permitting system, Accela Citizen Access (ACA) at: <https://ca.rcid.org/CitizenAccess/>.

Request for registration to apply for permits via ACA shall be sent to permitting@oversightdistrict.org .

Flame Effect Permit Application Deadline

Flame Effect permits shall be submitted a minimum of 21 days in advance of the event. Revisions will not be considered within 3 days of the event. Sufficient time shall be allotted to gain the necessary credentials and licensing for the permitting process.

The permit and plan review process may take longer if incomplete information is provided or additional information is required. To ensure timely processing, it is suggested that the permit application process be initiated as early as possible, but no more than 6 months in advance.

Permit Duration

Flame Effect permits for temporary events are issued only for the duration of the event. Permanent installations require an annual permit which is good for one year from the date issued.

Licensing Requirements

Vendors providing services that do not require construction licensing will be required to provide proof of local Business Tax Receipt when working within the District. These may be obtained through Orange or Osceola County as applicable.

Proof of Insurance

A certificate of insurance in the amount of \$1,000,000.00 shall be submitted with all pyrotechnic permit applications. Central Florida Tourism Oversight District shall be listed as additional insured and as the certificate holder. When listing additional insured and certificate holder, the document should read: Central Florida Tourism Oversight District, a special taxing district of the State of Florida.

Provided that a permittee has a tangible net worth (i.e., excluding "goodwill") calculated in accordance with generally accepted accounting principles equal to or greater than \$25,000,000.00, as verified by a certified public accounting firm, permittee's insurance may include a self-insured amount, which shall be a commercially reasonable amount given the size and financial strength of the permittee and the affiliated group of entities of which permittee is a part that are covered under the same insurance program.

Submitting Documents for Plans Review:

The permittee shall prepare and submit plans to the AHJ for approval. All plans should be drawn to scale, illustrate compliance with applicable codes, and shall contain the following information:

1. Name of the person, group, or organization sponsoring the production
2. Name and phone number of the onsite contact
3. Date and time of the production
4. Building address or event location

Detailed requirements for specific displays can be found at the end of this document.

Inspections

Inspections may be required prior to any use of fireworks, pyrotechnics or camp fires and can be scheduled via IVR or online via ACA. At the request of the fire marshal, a demo of the proposed product may be required prior to issuance of the permit. If requested, the product may be required to be tested in venue. After hours / weekend inspections are available and will be charged in accordance with CFTOD's after-hours inspection policy.

Revisions

Revisions may be submitted for flame effect permits that are still open. Revisions shall be subject to plans review and approval by the Fire Department.

Inspections

Inspections of the completed flame effect system shall be required prior to use shall be scheduled via Interactive Voice Response (IVR) or online via ACA. At the request of the Fire Marshal, a demo of the

proposed effect may be required to be tested in venue. After hours / weekend inspections are available and will be charged in accordance with the District's after-hours inspection policy.

Firewatches

The use of flame effects inside any building will require fire watch provided by District Fire Department personnel. When it is determined that a firewatch will be required, the permit will not be issued until all fees are paid and the firewatch is scheduled. At the discretion of the fire marshal, certain other special effects or use of flame may require a standby depending on the location and nature of the effect.

Contact fireprevention@oversightdistrict.org for questions regarding fees or standbys.

Requirements for Flame Effects Systems:

The installation and use of permanent or temporary flame effect systems will require:

- A **flame effects narrative** – A narrative that includes an overview of the effect and the safety procedures associated with its use.
- A **site plan** – A dimensioned plan showing the effect in relation to the area / building.
- A **design plan** – The piping / control system plan showing a code complaint fuel delivery and control system.

The **flame effect narrative** shall include:

1. The flame effect classification (See NFPA 160);
2. The name, age, and telephone number of the effect operator. **Note: Flame effect operators are required to be 21 years of age. Proof of age (DL) will be required;**
3. Building life safety systems and building fire protection systems as applicable;
4. Detailed narrative description and summary of each flame effect to be utilized;
5. The proposed safe clearance distance from the flame effect to non-performers with the justification (basis) for that distance;
 - a. An audience should not be located so that the incident thermal radiation causes the surface temperature of the audience member's exposed skin to exceed 111 degrees Fahrenheit (440 C).
 - b. Temperatures of combustible materials subject to the heat of the flame effect shall not exceed 117 degrees Fahrenheit (47.20 C) above the ambient temperature after equilibrium temperatures is attained.
 - c. Documentation of the testing and evaluation of the flame effect in relation to the safe clearance distance to both the exposed skin temperature and to combustible materials shall be provided.

- d. Flame effects shall be evaluated to verify that spectators, performers, support personnel, and the operator are not exposed to a hazardous situation. Other factors shall be considered in evaluating the proposed safe clearance distance, including the experience and qualifications of the operations and maintenance personnel, visual conditions, magnitude of the potential hazard, and whether the flame effect is static (stationary) or dynamic (mobile) during the performance.

NOTE: Justification for the determination of the proposed safe clearance distance from the flame effect to the audience and combustibles denoted by the fire safety perimeter line is required and shall be included with the application document package.

6. Provisions to prevent intrusion by non-performers from the safe clearance distance into the hazard area;
7. Flame effect safety provisions for ventilation systems (if indoors) or weather conditions (if outdoors) as applicable;
8. Documentation providing proof that combustible materials and clothing are flame-proof or have been treated with flame retardant when required

The **Site Plan** shall include a dimensional plot map of the site which shall indicate:

1. The location of flame effect devices to be fired and their controls;
2. The area affected by the flame effect device;
3. The location of the audience;
4. The fuels used and their estimated consumption;
5. Air for combustion and ventilation (*for indoor effects*);
6. Flammable materials piping;
7. Fuel storage and holding areas and their capacities;
8. Supplemental fire protection features, including the location and type of required fire extinguishers;
9. Emergency response procedures;
10. Means of egress;
11. Safety data sheet (SDS) for the materials to be used;
12. Documentation that the combustible materials used for construction of the flame effects have been rendered flame retardant;
13. Certification that all materials worn by performers shall be inherently flame-retardant or have been treated to achieve flame-retardancy;

A **design plan** is required prior to approval of the production of flame effects using devices or appliances. The design plan shall provide the system design criteria with complete design information (including schematic drawings) and sequence of operation & shall include the following as applicable:

1. Flame effect equipment and components with proof of UL listings and/or proof of compliance with appropriate standards;
2. Flame effect control system including emergency stop, fuel management, effect valve, and the enabling, arming and firing of the effect;
3. Flame effect control sequence;
4. Manual fuel shutoff valve and power control;
5. Automatic fuel shutoff valve;
6. Method of confirmation of means of ignition;
7. Method and frequency of leak detection;
8. Type(s) of fuel used;
9. Minimum amount of fuel required to produce the flame effect and minimum size of fuel tank required for the duration of the performance with supporting calculations;
10. Provisions for the removal of unconsumed fuel from the device or appliance in a safe location;

Requirements for Fire Acts

Fire acts require the following to be submitted with permit application:

- A **flame effects narrative or flame act safety form** – A narrative that includes an overview of the effect and the safety procedures associated with its use. For fire acts, a flame act safety form can be submitted in lieu of a narrative.
- A resume of all performers showing a minimum 5 years' experience with flame effects.
- A copy of all performers driver's license. **Note: Fire actors are required to be 21 years of age.**
- A **site plan** – A dimensioned plan showing the performance area in relation to the area / building.

A flame act safety form shall be completed and submitted with the site plan. Additional information such as photos of equipment and the proposed location are encouraged to be submitted with the permit application.

The **Site Plan** shall include a dimensional plot map of the site which shall indicate:

1. The performance area of flame effect;
2. The area affected by the flame effect device;
3. The location of the audience;
4. The fuels used and their estimated consumption;
5. Fuel storage and holding areas and their capacities;
6. Supplemental fire protection features, including the location and type of required fire extinguishers;
7. Emergency response procedures;
8. Means of egress;
9. Safety data sheet (SDS) for the materials to be used;
10. Documentation that the combustible materials used for construction of the flame effects have been rendered flame retardant;

11. Certification that all materials worn by performers shall be inherently flame-retardant or have been treated to achieve flame-retardancy;

Flame Act Safety Form

Building or Location Name:	
Address:	
Event Date:	
Event Time:	

Devices used in the performance (check all that apply):

- | | |
|--------------------------------------|--------------------------------------|
| <input type="checkbox"/> Fire Chain | <input type="checkbox"/> Fire Fans |
| <input type="checkbox"/> Fire Knives | <input type="checkbox"/> Fire Rings |
| <input type="checkbox"/> Fire Staff | <input type="checkbox"/> Fire Stilts |
| <input type="checkbox"/> Fire Wands | <input type="checkbox"/> Fire Art |

Fuel Details:

Type(s) of Fuel	
Amount of fuel traveling to site	_____ ounce(s)
	_____ pint(s)
	_____ quart(s)
Amount of fuel to be used during performance	_____ ounce(s)
	_____ pint(s)
	_____ quart(s)
Application method	<input type="checkbox"/> soak <input type="checkbox"/> pour
Containment method for excess fuel	<input type="checkbox"/> catchpot or pan <input type="checkbox"/> Other: _____

Fuel Containers – NO GLASS OR DRINKING BOTTLES:

- Original product container
- 1 quart metal container
- DOT certified container
- Other (specify): _____

Safety Details

I, _____

We, _____ will have the following fire control methods present:

Fire Extinguisher:

- 2A-10BC minimum rating. Quantity: _____
- Water spray can
- Wet towels
- Trained Safety Staff
- Other (specify): _____

Performance extinguishing method:

- Burn out
- Wet Towel
- Smother

When the performance is complete, the used fire devices will be:

- Returned to their original container/carrying case
- Wrapped up in a tarp
- Other (specify):

Performance Area Details

Type of barricade if any:		
Size of Fire Performance Space:		
Distance from Audience:		
Backdrops present?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
If so, what type?		
Are drapes or backdrops fire retardant?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Certified retardant?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Are performers' costumes fire retardant?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Certified retardant?	<input type="checkbox"/> YES	<input type="checkbox"/> NO