

**Fire Station No. 80 - FIRE STATION NO. 80 - TRAINING
CENTER, 6585 CHERRY AVENUE, FONTANA, CALIFORNIA**

Project

BID NO.: DE-26-01-SP

Addendum Information

10/01/2025

A. Revised “NOTICE INVITING SEALED BIDS FOR CONSTRUCTION” are hereby included and shall replace the previously released **VOLUME 1 SPECIFICATIONS FOR THE CONSTRUCTION OF FIRE STATION NO. 80 - TRAINING CENTER 6585 CHERRY AVENUE, FONTANA, CALIFORNIA BID NO.: DE-26-01-SP** page 9. Changes are to include:

- a. The bid opening date has been extended to October 6th at 11:00 A.M.
 - i. PUBLIC NOTICE IS HEREBY GIVEN that the City OF FONTANA, as City, invites sealed bids to be received only by submitting electronically at www.fontanapurchasing.org, for the above stated project and will receive such bids no later than the hour of **11:00 A.M. on the 6th day of October, 2025**, at which time or thereafter said bids will be electronically opened and available online. Bids received after this time will not be able to submit electronically.
 - ii. See revised attached Exhibit A.

B. Revised “SPECIAL PROVISIONS FOR THE CONSTRUCTION” are hereby included and shall include the following language to the previously released **VOLUME 1 SPECIFICATIONS FOR THE CONSTRUCTION OF FIRE STATION NO. 80 - TRAINING CENTER 6585 CHERRY AVENUE, FONTANA, CALIFORNIA BID NO.: DE-26-01-SP** under **SECTION 3 – CONTROL OF WORK** page 77-78. Addition is to include:

- a. A new Section **3-15 ALLOWANCE ITEMS** is now included.
 - i. See revised attached Exhibit B.

This Addendum (Addendum #6) supersedes the Addendum dated 09/17/25 (Addendum #4).

- 1.** Revised “INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION” are hereby included and shall replace the previously released **VOLUME 1 SPECIFICATIONS FOR THE CONSTRUCTION OF FIRE STATION NO. 80 - TRAINING CENTER 6585 CHERRY AVENUE, FONTANA, CALIFORNIA BID NO.: DE-26-01-SP** page 15-16. Changes are to include:
 - a. The final date to receive questions through PlanetBid will be on **September 21st**.
 - i. If any bidder contemplates submission of a bid for the proposed contract and is in doubt as to the true meaning of any part of the plans, specifications or other proposed contract documents, or finds discrepancies in, or omissions from, the Plans, Specifications or other Contract Documents or questions as to their meaning shall be immediately brought to the attention of the City by submission of a written request for an interpretation or correction to the City. Such submission, if any, must be sent using the “Q&A” tab of the electronic bid system at www.fontanapurchasing.org. **Interpretations or corrections received after September 21st will not be answered.**
 - ii. See revised attached Exhibit 1a.
 - b. Section “**ALLOWANCE INSTRUCTIONS TO BIDDERS**” is now added into the “INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION.”
 - i. Bidders shall include the full value of each allowance item listed in the Bid Schedule in their Total Base Bid. These amounts are not to be altered by the bidder. Allowance amounts are predetermined by the City and are not subject to markup (as it is already incorporated), escalation, or substitution. These amounts are included to provide flexibility for unforeseen or owner-directed work. Inclusion of an allowance does not guarantee full or partial payment. Only actual, approved costs incurred under the allowance will be reimbursed.

ii. See revised attached Exhibit 2b.

- 2.** It is recommended that all bidders utilize the services of WHP Trainingtowers (OFCL) manufacturer for the tower installation. This amount includes but is not limited to tower erection, concrete work (e.g., foundation, slab-on-grade (SOG), slab-on-deck (SOD), anchor bolts), excavation for the foundation, and applicable taxes. The manufacturer (WHP) will also provide plans, footing design, and structural calculations to support the General Contractor (GC) during the permitting process; however, the GC will be responsible for obtaining deferred submittal approval from the appropriate agencies. **This cost with allowed markup is now included in the bid schedule (revision attached Exhibit 2a) as an Allowance.**

The manufacturer's estimated cost does not include special insurance requirements (if any), field painting of exterior handrails and stairs, mechanical, electrical, elevator cab, fire protection systems, gas fired simulators, winter conditions, site work, excavation other than foundation, engineering layout and general condition items, and any other miscellaneous fees. The pad grading must be prepared and certified by the GC along with applicable construction staking. **Items such as electrical, site work, excavation other than foundation, engineering layout and general condition items and any other miscellaneous fee items will, or may potentially, fall under the GC's original scope of work.**

The City will be procuring and furnishing the materials except for "Concrete Subcontract (Foundation, SOG, SOD, Anchor Bolts)".

The Contractor shall follow SECTION 3-15 ALLOWANCE ITEMS under VOLUME 1 SPECIFICATIONS FOR THE CONSTRUCTION OF FIRE STATION NO. 80 - TRAINING CENTER 6585 CHERRY AVENUE, FONTANA, CALIFORNIA BID NO.: DE-26-01-SP.

Bidders that choose not to use WHP shall contract with a qualified subcontractor and will have the same allowance provided in the bid schedule for the installation cost, including the items listed above.

See attached Exhibit 2b. for Bid Scope from WHP.

***As stated in the attached, the WHP installation cost is valid until December 31st, 2025.**

- 3. It is recommended that all bidders utilize the services of a licensed subcontractor familiar with the installation of FireBlast HD Interior Fire System and make their own estimates of the installation cost, including the items listed attached, and account for this cost in their overall lump sum bid price.**

The City will be procuring and furnishing the materials.

See attached Exhibit 3. HD Interior Fire System Product Information for City Procured Materials to be installed by Contractor.

Exhibit A.

NOTICE INVITING SEALED BIDS FOR CONSTRUCTION OF

**FIRE STATION NO. 80 - TRAINING CENTER 6585 CHERRY
AVENUE, FONTANA, CALIFORNIA**

BID NO.: DE-26-01-SP

PUBLIC NOTICE IS HEREBY GIVEN that the **City OF FONTANA**, as **City**, invites sealed bids to be received only by submitting electronically at www.fontanapurchasing.org, for the above stated project and **will receive such bids no later than the hour of 11:00 A.M. on the 6th day of October, 2025**, at which time or thereafter said bids will be electronically opened and available online. Bids received after this time will not be able to submit electronically.

A non-mandatory pre-bid conference will be held at the **City of Fontana on September 9, 2025, at 10:00 a.m., in the DSO Conference Room 125**. Bidders are encouraged to attend.

The **City** reserves the right to reject any or all bids, to waive any irregularity, to accept any bid or portion thereof, and to take all bids under advisement for a period of ninety (90) calendar days.

The work of improvement consists of furnishing all materials, equipment, tools, labor, and incidentals as required by the Plans, Specifications and Contract Documents for the above stated project. The general items of work to be done hereunder consist of on-site and off-site improvements required for the construction of the Fire Station 80- Training Center Project, located at 6585 Cherry Avenue; and all project related improvements as indicated in the project plans and specifications.

Bid must be submitted electronically for the exact item(s) requested in the bid specifications. Copies of the plans, specifications, and contract documents are available **for free** from the City's Purchasing website www.fontanapurchasing.org.

Each Bid submitted electronically is required to be accompanied by the Proposal Documents; Proposal, Bidder's Information, Contractor's Licensing Statement, List of Subcontractors (enter online), References, Designator of Sureties, Bid Bond, Non-Collusion affidavit, Certificate of Non-Discrimination by Contractors, Proposal Bid Sheet (enter online), Addendum Acknowledgement, and all additional documentation required by the Instructions to Bidders. Bids must be submitted on the City's bid forms. Any questions pertaining to this project should be directed to **Sid Lambert at phone number (909) 350-7678 or email at slambert@fontana.org**.

Proposals must be accompanied by a proposal guarantee in the form of cash, cashier's check, a certified check or bid bond available to the **City** in the amount of at least ten percent (10%) of the total amount bid. Any proposal not accompanied by such a guarantee will not be considered. A payment bond and a performance bond, each in an

Exhibit B.

stable when subjected to high wind gusts. The sign must be installed on 6 x 6 posts at 96" above existing grade. The sign shall be installed and anchored with a minimum of ½" thru lag bolts with washers at three locations spaced approximately equidistant on each post. The location of the drilling on the sign must not be on the NAME/TITLE; anchoring must be angle-braced or "kicked" in both directions at approximately 45-degrees to resist the prevailing northeast to southwest winds with 2 x 6 bracing; utilization of a Simpson connector at post/angle-brace should be utilized. The point of connection shall be at the bottom of the sign when the angle brace is in front of the sign. Anchorage into the existing grade shall be four feet minimum. The Contractor shall maintain the sign for graffiti and shall provide a new sign if the graffiti or other event which damages the sign cannot remediate the sign. The Contractor may apply an anti-graffiti coating or cover the sign with clear plexiglass as an alternative. The conditions for sign maintenance would remain the same, resulting in sign- replacement or plexiglass replacement. At the end of construction, the Contractor shall be responsible for removal and safe disposal of this sign board and related material.

Payment for project notifications, including the project sign, shall be deemed as included in the items of work as shown on the proposal bid sheet and no additional compensation will be allowed.

3-15 ALLOWANCE ITEMS

[Add the following]:

3-15.1 General

The Contractor shall include the following allowance items in the total bid amount. These allowances are intended to cover work that is anticipated but not fully defined at the time of bidding. The use of any Allowances by the Contractor will be subject to the Owner's sole approval, and the Contractor shall make reasonable efforts to minimize costs associated with allowance work.

3-15.2 Allowance Scope

Allowance items shall include, but are not limited to, the following components associated with the WHP Trainingtowers™ Fire Fighting Simulator VOLUME 2 – ARCHITECT PROJECT MANUAL, SECTION 13 14 40 and installation of the Custom High Rise Six-Story WHP Training Tower simulator (Fire Fighting Simulator). Any unforeseen conditions or owner-directed modifications related to the simulator installation shall also be included.

3-15.4 Documentation

The Contractor shall submit itemized schedule of value, cost breakdowns, time and material records, and supporting documentation for all allowance work. Coordinate and process submittals for Allowance items in accordance with WHP Trainingtowers™

Fire Fighting Simulator VOLUME 2 – ARCHITECT PROJECT MANUAL, SECTION 13 14
40. All documentation shall comply with Section 2 – Scope of Work. The City reserves the right to audit all allowance-related expenditures.

3-15.3 Use of Allowances

No work shall be performed under an allowance without prior written authorization from the City Engineer or Project Manager. All work must be documented and approved through a formal written approval or Contract Change Order.

For any Allowances which the Owner allows the Contractor to use, the following shall apply: (i) the Allowance shall cover the cost to the Contractor of the cost of Work, as defined in Section 3-15.2 Allowance Scope, and the Contractor's portion of overhead and profit associated with the stated Allowance; and (ii) upon completion of the portion of the Work subject to an Allowance, the Contract Amount for that portion of the Work will be adjusted based upon the approved actual Cost of the Work, including the proportionate overhead and profit.

Once the cost proposal for the Allowance has been incorporated into the Contract by Change Order, Payment for the Allowance will be based upon 3-15.4 Documentation provided with the proposal and incorporated in the Change Order. Funds allocated to one allowance item may not be transferred to another without prior written approval from the City.

3-15.5 Unused Allowances

Any unused portion of an allowance shall be credited to the City via a deductive change order at project closeout.

SECTION 4 - CONTROL OF MATERIALS

4-1 GENERAL

[Replace the third paragraph with the following]:

If the Contractor fails to remove or replace any defective material after reasonable notice, the Engineer may cause such work or materials to be removed or replaced. The removal or replacement expense will be deducted from the amount to be paid to the Contractor.

4-4 TESTING

[Replace the first paragraph with the following]:

Before incorporation into the Work, the Contractor shall submit samples of materials, as the Engineer may require, at no cost to the Agency. The Contractor, at its expense, shall deliver the materials for testing to the place and at the time designated by the Engineer. All

Exhibit 1a.

IRREGULAR PROPOSALS

Unauthorized conditions, limitations, or provisions attached to a proposal will render it irregular and may cause its rejection. The completed proposal forms shall be without interlineations, alterations, or erasures. Alternative proposals will not be considered unless specifically requested. No oral, telegraphic, or telephonic proposal, modification, or withdrawal will be considered.

SALES AND OTHER APPLICABLE TAXES, PERMITS, LICENSES AND FEES

Contractor and its subcontractors performing work under this Contract will be required to pay California sales tax and other applicable taxes, and to pay permits, licenses and fees required by the agencies with authority in the jurisdiction in which the work will be located, unless otherwise expressly provided by the Contract Documents.

INTERPRETATION OF PLANS AND DOCUMENTS

If any bidder contemplates submission of a bid for the proposed contract and is in doubt as to the true meaning of any part of the plans, specifications or other proposed contract documents, or finds discrepancies in, or omissions from, the Plans, Specifications or other Contract Documents or questions as to their meaning shall be immediately brought to the attention of the City by submission of a written request for an interpretation or correction to the City. Such submission, if any, must be sent using the "Q&A" tab of the electronic bid system at www.fontanapurchasing.org. **Interpretations or corrections received after September 21st will not be answered.**

Any interpretation of the Contract Documents will be made only by addendum duly issued electronically to each person registered on the prospective bidder's list. The City will not be responsible for any explanations or interpretations provided in any other manner. No person is authorized to make any oral interpretation of any provision in the Contract Documents to any Bidder, and no Bidder should rely on any such oral interpretation.

Bids shall include complete compensation for all items that are noted in the Contract Documents and are the responsibility of the Contractor.

ADDENDA

The City reserves the right to revise the Contract Drawings prior to the Bid opening date. Revisions, if any, shall be made by written Addenda. All Addenda issued by the City shall be included in the Bid and made part of the Contract Documents. Pursuant to the Public

Exhibit 1b.

general scope of work, but the accuracy of figures is not guaranteed, and the bidder shall make his own estimates from the drawings. In case of a variation between the unit price and the totals shown by the bidder, the unit price will be considered to be the bid.

ALLOWANCE INSTRUCTIONS TO BIDDERS

Bidders shall include the full value of each allowance item listed in the Bid Schedule in their Total Base Bid. These amounts are **not to be altered** by the bidder. Allowance amounts are predetermined by the City and are not subject to markup (as it is already incorporated), escalation, or substitution. These amounts are included to provide flexibility for unforeseen or owner-directed work. Inclusion of an allowance does not guarantee full or partial payment. Only actual, approved costs incurred under the allowance will be reimbursed.

REJECTION OF BIDS

The **City** reserves the right to reject any or all bids or waive any irregularity in any one or all bids received.

SUBMISSION OF BIDS

Once the Bid and supporting documents have been completed and signed as set forth herein, they shall be submitted electronically.

Only where expressly permitted in the Notice Inviting Bids, may Bidders submit their Bids via electronic transmission pursuant to Public Contract Code Sections 1600 and 1601. The acceptable method(s) of electronic transmission shall be stated in the Notice Inviting Bids.

DELIVERY AND OPENING OF BIDS

Bids are to be submitted electronically. Electronic Bid System will close exactly at the time set forth in the Notice Inviting Bids. All applicable forms required to be completed per the Bid Documents shall be submitted electronically prior to the Bid date and time. Hard copies will not be accepted as a viable bid. It is the Bidder's sole responsibility to ensure that its bid is received as specified. Bids may be submitted earlier than the date(s) and time(s) indicated.

Exhibit 2a.

REVISED PROPOSAL BID SHEET (SUBMIT ONLINE)
FOR CONSTRUCTION OF

FIRE STATION NO. 80 - TRAINING CENTER 6585 CHERRY
AVENUE, FONTANA, CALIFORNIA

BID NO.: DE-26-01-SP

ITEM NO.	Description General	ESTIMATED QUANTITY	UNIT	Total Price
1	Construction of Fire Station No. 80 Training Center and all related on-site and off-site improvements.	1	LS	
2	Install, maintain, and remove temporary water facilities (highline) from San Sevaine Rd to the project site (120 Calendar Days).	1	LS	
3	Allowance – Installation of the Custom High Rise Six-Story WHP Training Tower simulator (Fire Fighting Simulator) with 5% Contractor markup.	ALLOW	LS	\$2,485,000.00

Exhibit 2b. Bid Scope from WHP

Bid Scope

Ref. Number: 2025R600 (via email)

Project Name: Fontana Fire Station No. 80 and Training Center

Owner: City of Fontana

Owner Project/Bid #: W2100100AR

Location: 6585 Cherry Avenue, Fontana, CA 92336

Bid Scope: Fire Fighting Simulator Section 13 14 40

Addenda Received: 1, 2, 3

We are pleased to provide you with the following WHP Trainingtowers™ Proposal for the labor to erect our **CUSTOM HIGH RISE SIX-STORY** WHP training simulator as well as foundation design and the installation of the foundation, slab on grade, slab on decks and anchor bolts. Foundation design will be stamped by a State of California Engineer.

1. Overall dimensions are 93'-4.5" Long + 78'-8" Long x 21'-11" Wide with varying roof heights. Section A will be a **Five-Story Tower with a Six-Story enclosed Stair Tower**. The tower will be 21'-11" W x 21'-11" L x 54'-0" H with a 21'-11" W x 11'-8" L x 64'-0" H stair tower.
 - a. Five (5) interior floors (1st, 2nd, 3rd, 4th, 5th) tower
 - b. Two (2) flat roofs with concrete working surface and 48" H parapet walls. The concrete mix design and installation is not covered in this section
 - c. Three (3) 3' swing gates for rappelling
 - d. Multiple rappelling anchor locations as per drawings
 - e. One (1) six-story interior stair with welded stair railing
 - f. One (1) two-story exterior stair with welded stair railing
 - g. One (1) six-story interior confined space prop
 - h. One (1) six-story galvanized standpipe with FDC and two-head sprinkler run
 - i. Fourteen (14) 3' x 7' plate steel doors with continuous hinges and hardware
 - j. One (1) 3' x 7' burn room plate steel doors with continuous hinges and hardware
 - k. Thirteen (13) 3' x 4' window openings with latching shutters
 - l. One (1) 3' x 4' burn room window opening with latching shutters
 - m. Six (6) coiling doors at elevator entry
 - n. One (1) inset balcony with railing on the 5th floor
 - o. One (1) 10' x 11' burn room protected with a Padgenite Interlock™ liner system on the 5th floor
 - p. One (1) steel canopy over the tower roof
 - q. Twenty (20) lineal feet of interior non-structural walls
 - r. Entire façade to be Shale Brown Nichiha brick
2. Section B will be a **Two-Story Residential/Industrial/Garage** section approximately 21'-11" W x 72'-7" L + 56'-8" x 24'-0" H/14'-0" H.
 - a. One (1) 35' gabled roof, 4/12 equal pitch with perimeter welded guardrail with four (4) 96" x 96" chop outs with an attic space below the roof with two (2) shutters for attic access
 - b. Four (4) 8'-0" chain gates, one (1) on each corner of the residential/industrial gabled roof
 - c. One (1) 22' gabled roof, 4/12 equal pitch
 - d. One (1) 3' x 22'-6" non-accessible sloped-roof overhang at the front door entry
 - e. Remaining roofs will be flat roofs with 4' parapet
 - f. Two (2) 4'x12' flat roof trench props on the parapet roof (into the 1st floor) above the Commercial Strip Mall Simulator
 - g. One (1) over-window rappelling anchor with bailout prop at Bedroom 2

- h. Twenty (20) 3' x 7' plate steel doors with continuous hinges and hardware
- i. Thirteen (13) 3' x 7' burn room plate steel doors with continuous hinges and hardware
- j. Five (5) 9'x7' sectional doors
- k. One (1) attic space provided between the gabled roof and the first floor
- l. One (1) 3' x 3' framed window openings with latching shutter at exterior gabled end of the attic
- m. Nine (9) 3' x 4' windows with latching shutters
- n. Nine (9) 3' x 4' burn room windows with latching shutters
- o. One (1) two-story interior stair with welded stair railing
- p. One (1) two-story exterior stair with welded stair railing leading to a 7'x32' column mounted balcony with welded railing on the "C" side of the structure connecting to the exterior tower stairs
- q. One (1) 3' x 28' mall eyebrow shade canopy on the "A" side of the structure
- r. One (1) 22' x 22' burn room protected with a Padgenite Interlock™ liner system at the Class B Vehicle Fire Prop
- s. One (1) 12.5' x 17.5' burn room protected with a Padgenite Interlock™ liner system at the Class B room on the first floor
- t. One (1) 24' x 10.5' burn room protected with a Padgenite Interlock™ liner system at the Class B room on the first floor
- u. One (1) 9' x 10' Class A burn room protected with a Padgenite Interlock™ liner system at the Commercial Strip Mall Simulator
- v. One (1) Class B burn hallway at the second floor protected with a Padgenite Interlock™ liner system
- w. One (1) 24' x 10.5' burn room protected with a Padgenite Interlock™ liner system at the Class B room on the second floor
- x. One (1) 12' x 12' burn rooms protected with a Padgenite Interlock™ liner system at the 2nd floor bedrooms
- y. One (1) 14' x 14' burn room protected with a Padgenite Interlock™ liner system at the 2nd floor Class B master bedroom
- z. Three (3) 49"x49" pallet style Class A burn cribs
- aa. One (1) Data Logger GL840 wireless temperature monitoring system with expansion pack. The pyrometer includes eighteen (18) thermocouples and one NEMA box
- bb. Entire façade to be Shale Brown Nichiha brick

	Set Up Fee is:	\$1,581,059.32
Concrete Subcontract (Foundation, SOG, SOD, Anchor Bolts):		\$622,270.40
	Subtotal:	\$2,203,329.72
	Materials Tax at 8.75%:	\$54,448.66
	Total:	\$2,257,778.38

Add Option:

- All metal stair treads fabricated for pan-fill. \$25,000.00

All pricing is in US Dollars and is valid until December 31st, 2025. It is the policy of WHP Trainingtowers™ to provide a reasonable cost estimate for your budgeting purposes. It is not uncommon in the construction industry to offer cost estimates that are for low end or stripped-down structures. WHP believes the cost estimate should reflect a training simulator that meets OSHA safety requirements, is of the highest quality, and will meet the expectations of the customer.

Schedule: We would require 2-4 weeks to prepare conceptual drawings after award of the contract or purchase order and 18-20 weeks for delivery after receipt of approved drawings. If the foundation is in place the erection would be complete approximately 35-37 weeks after delivery of building.

Design Criteria: Pricing is based on the following structural design criteria per IBC 2012:

1. *Live Loads-* **(a)** Roof: 100 psf **(b)** Floor: 100 psf **(c)** Attic: 100 psf
2. *Wind Loads-* **(a)** Speed: **115 mph** **(b)** Exposure: C
3. *Seismic Loads-* **(a)** Coefficient S_s [max]: **165** **(b)** Coefficient S_1 [max]: 60
4. *Soil Capacity-* Minimum 1500 lbs/sq.ft.

*Requirements exceeding these loads may result in additional costs.

Exclusions: We exclude from our proposal: bonds, permits, special insurance requirements if any, field painting of exterior handrails and stairs, mechanical, electrical, elevator cab, fire protection systems, gas fired simulators, winter conditions, site work, excavation other than foundation, engineering layout and general condition items and any other miscellaneous fees.

Terms: For materials a deposit of 25% on the building package is due on receipt of order (signing of contract). Balance of payment on materials due on delivery to site. No retention on materials. Labor will be billed monthly. Invoices not in dispute over 30 days will be assessed 1 ½ % per month on balances in excess of 30 days. Financing is available through lease purchase programs.

We hope you find the proposal acceptable. If we can provide you with further information, please feel free to call.

Sincerely,

A handwritten signature in blue ink that reads "Rob Van Bibber".

Capt. Rob Van Bibber (Ret.)
WHP Trainingtowers™

California State License Number:
865784

Approval

Print Name _____

Signature _____

Date _____

**Tax Exempt
Number** _____

Exhibit 3. HD Interior Fire System Product Information



HD INTERIOR SERIES



PRODUCT INFORMATION 2025



CHECK OUT OUR NEW WEBSITE

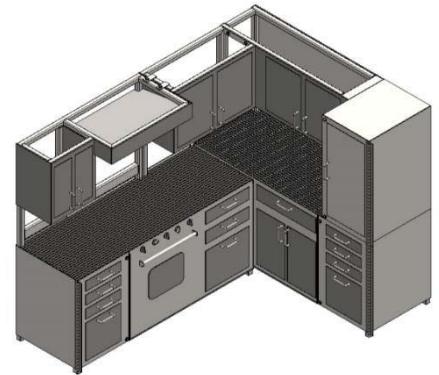
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PRODUCT INFORMATION HD INTERIOR FIRE SYSTEM



General Information

This is a summary of specifications for Gas Fired Training Props utilized for training in response to residential, industrial, and commercial structure fires. The system is designed to accommodate training in a manner which provides for safety first, while allowing for realistic training scenarios.

Fireblast systems are designed to utilize Liquid Petroleum Gas (LPG) Propane in the vapor state, or Natural Gas (NG).

Fireblast systems are designed and built utilizing the most current codes, standards and recommendations published for this type of equipment. The system is tested and compliant with these codes and standards.

This specification includes gas fired props from the Soaring Series. The Series utilizes an Industrial grade operating system with Programmable Logic Controllers on each platform. The platforms include Infrared gas monitoring, fail safe FM approved gas equipment, smoke discharge system, and UL approved and listed components including a UL 508A certified control panel.

The Soaring Series incorporates innovative technology with the highest level of safety equipment to provide realistic real life training environments. The system provides the end user with state-of-the-art operational equipment. The system provides the operator a wireless handheld pendant controller for each gas fired prop with flame spread and extension capabilities where applicable. Features include remote access diagnostic capabilities, 60,000cfm smoke machine with discharge station for each burn room, expansion capabilities, data tracking and password protection along with event and archive logging.

Each prop is constructed of heavy-duty steel. All pilot and burner equipment utilize stainless steel components with constant ignition. The burner management equipment consists of a series of ultraviolet flame detection sensors for both the pilot and main burner flame verification.

All operational equipment is factory pre-assembled, tested and certified prior to delivery.

Purpose

The training unit is designed to meet both the minimum requirements of entry level fire service personnel, and advance training scenarios to provide refresher skills and meet ongoing training requirements for the certification as specified in the NFPA 1001.

Training Objective

Flashover recognition and tactics for suppression
Direct and indirect fire attack
Interior fire attack
Exterior fire attack
Extension fire control
Search/rescue in low or limited visibility environments
Tactics and strategies
Fire suppression techniques

Code Compliancy

This system meets or exceeds codes, standards and recommendations for this type of equipment.
Applicable codes include:

NFPA 54	National Fuel Gas Code
NFPA 58	Liquefied Petroleum Gas Code
NFPA 86	Standards for Ovens and Furnaces
	Sections: 8.8.1.3 - 8.8.2.2 - 8.4 as <i>specified in NFPA 1402</i>
NFPA 70	National Electric Code
NFPA 79	Electrical Standards for Industrial Machinery
UL 508A	Standard for Industrial Control Equipment
NFPA 1001	Standard for Fire Fighter Professional Qualifications
NFPA 1402	Standard on Facilities for Fire Training and Associated Props
NFPA 1403	Standard on Live Fire Training Evolutions
ANSI Z21 & 83	Series Standard for Gas Utilization Equipment

Fire System

Available Operating Systems/Safety Devices:

Item #	Description
10-000401	TALON INTERIOR FIRE SYSTEM 1-1
10-000425	TALON INTERIOR FIRE SYSTEM 2-2
10-000403	TALON INTERIOR FIRE SYSTEM 3-1
10-000413	TALON INTERIOR FIRE SYSTEM 3.2
10-000043	FALCON EX 10 CONTROLLER QUAD

Operating System Descriptive Literature

Controls

The operating system equipment includes a Programmable Logic Controller (PLC) with a minimum 12" color display Human Machine Interface Touch Panel (TP). The system is password protected and shall provide for verification of a trained operator, to prevent unauthorized use or access to the controls. Viewings of all operational functions are displayed on the TP, including maintenance and operation history for convenience. The offered system provides operational control of all live fire training mockups from within the burn area utilizing wireless control technology.



The PLC in conjunction with the burner management system monitors and controls all operating functions including the gas delivery system, smoke distribution, and safety systems as desired by the operator utilizing the wireless control features. The PLC shall be programmed to place the system in fail safe shut down in the event of safety device activation, manual e-stop depression or system inaccuracy.

The Touch Panel display shall offer the ability for the operator to view and control, at a minimum, the following equipment.

<i>Burner Status</i>	Verifies that the flame propagation is adequate.
<i>Flame Control</i>	Varied modes offer the operator to control fire growth.
<i>Fixed Mode</i>	Factory programmed flame control setting for automatic flame operation.
<i>Button Mode</i>	Operator selection of Low and High flame control settings that can vary during operation.
<i>Smoke</i>	Provides manually or automatically controlled discharge of smoke into the training area.
<i>Flashover</i>	Control and verification of ignition pilot and flame.
<i>Ventilation</i>	Verification of interlocked activation and provides an additional manual activation of the exhaust fan to remove gas and heat.
<i>Gas Monitoring</i>	Displays the level of LEL in percentage measurements within the training area. (Color and alarm system indicate status).
<i>Temperature</i>	Displays temperature levels at 5ft (1.54m) above floor within the training area. (Color and alarm system indicate status).
<i>E-stop</i>	Records the status of each emergency stop station and displays the status.
<i>Alarm</i>	The PLC displays functional status of all operating and safety equipment.
<i>Passwords</i>	All functions are password protected to each operator trained on the unit. Operators are system monitored via the Touch Panel.

Each wireless handheld pendant controller at minimum, will include the following functions and features:

- E-stop
- Burner enable
- Pilot and burner flame activation
- Flame mode capabilities of Fixed-Button
- Smoke machine controls
- System reset
- Flashover/flame spread activity
- Exhaust fan activity



Emergency Stop

A hard wired emergency shutdown (E-STOP) circuit is provided for the interior fire system burn room, operating independently of the control system. The E-stop buttons shall be normally out (press to activate) and are hard wired.

Smoke System

A smoke generation system is included with each live fire training mockup. The unit shall include a fluid reservoir and a distribution center capable of delivering a minimum of 60,000 cfm (1700m³/min). The smoke generation machine shall be programmable with an operator controlled variable output. The system provides the operator the ability to vary discharge duration and intervals between cycles from the main control touch panel without the use of any external equipment. The system can provide low visibility training environments during fire conditions. The smoke generation unit shall meet all applicable codes and standards for this type of equipment and shall be suitable for the application. Smoke fluid shall be non-combustible and non-toxic. There shall be no environmental impact caused using the smoke system.

Gas Detection

The interior training systems shall include a minimum of one (1) gas monitoring unit in each equipment space and a minimum of one (1) in each compartment where live fire training burners are installed. Each gas monitoring unit shall be infrared and include a draw sample of the interior air quality of the training unit. The unit shall be based on infrared absorption principle incorporating a heated double-compensated optical bench (2 lamps, 2 detectors) with non-focusing optics design in two (2) locations. The sensor shall be temperature compensated and able to operate within an ambient temperature range of -40°F to 150°F and within ambient humidity conditions of 0 to 100%. Optics and electronics shall be hermetically sealed. Constant monitoring is provided whenever power is supplied to the system. The system shall be designed to verify a safe atmosphere prior to and during all burn operations. The gas monitoring unit shall be interlocked with the gas delivery system, and additional safety features, and be designed to provide a fail-safe closure of all operational components, if required, as specified in the NFPA 1402 and DIN 14097 Part 2. The gas concentration level shall be constantly displayed on the touch panel.

The systems shall be preset to a 15% LEL warning level and 25% LEL alarm and shut down. A purge cycle shall then activate automatically. The gas monitoring unit features shall be interlocked to gas delivery and exhaust fan systems. An audible and visual alarm shall be activated during all elevated LEL conditions.

Temperature Monitoring

Temperature monitoring shall be included in each interior compartment where live fire training burners are installed. Constant temperature monitoring is provided whenever power is supplied to the system. The temperature monitoring system shall be interlocked with the gas delivery system, and additional safety features, and be designed to provide a fail-safe closure of all operational components, if required, as specified in the NFPA 1402 and DIN 14097 Part 2. Temperature sensors shall be located 5ft above the floor level and initiate warning and automatic compartment ventilation at predetermined levels within the PLC program. The temperature level shall be constantly displayed on the touch panel.

Training room temperature activation shall occur when the room temperature reaches 450°F above floor level. The system shall activate the ventilation system and display on the touch panel a color indicator that represents to the operator that an over temperature shut down is approaching.

Training room temperature shutdown shall occur when the room temperature reaches 500°F five (5) feet above floor level. The systems shall activate an emergency shut down. All gas delivery system functions and smoke machine operation shall cease. A full cycle purge shall then activate automatically through interlocks in the safety system and provide compartment ventilation until the temperature is reduced below the warning point.

Exhaust/Ventilation

All interior live fire training compartments include an independent exhaust ventilation fan that can provide an air exchange of the interior atmosphere every 60 seconds to remove heat and byproduct of combustion from the training environment. The exhaust system, ducting and installation shall utilize equipment that is rated for the high temperature environment. The system shall include air flow verification on each exhaust system and provides fail-safe shut down of the system if adequate air flow is not provided. Safety feature functions shall be interlocked with the fuel delivery system and provide a fail-safe closure of all operational components, if required, as specified in the NFPA 1402 and DIN 14097 Part 2.

The system shall be programmed, upon start up, to exchange air and establish a safe training environment. Upon a system safety fault (over temperature, high gas level, system malfunction status) or manual activation of an emergency stop, automatic activation of the exhaust system shall initiate. The purge cycle shall continue until predetermined safety levels have been reached and reset. Safety reset parameters shall insure that a complete air exchange is provided prior to reactivation of the training equipment. This system includes fan controls.

Pilot Flame Status Monitoring

Each pilot and burner include a burner management system that utilizes ultraviolet technology. Independent constant monitoring of flame propagation at each pilot and main burner is provided whenever power is supplied to the system. The system shall be designed to verify a safe atmosphere prior to and during all burn operations. The burner management system shall be interlocked with the gas delivery system, and additional safety features, and be designed to provide a failsafe closure of all operational components, if required, as specified in the NFPA 1402 and DIN 14097 Part 2. Flame propagation shall be constantly displayed on the touch panel.

Pneumatics

The unit includes a pneumatic delivery system attached to the fuel delivery equipment. The pneumatic system shall be sized appropriately to the installed equipment (minimum 2 horsepower, 30-gallon capacity system) and operates all live fire training equipment simultaneously without interruption throughout the live fire training exercise. The pneumatic system shall supply, on demand, the required flow rates to control the operation of the prop control valves. The prop control valves shall provide the operator with the ability to control flame growth with flame spread and extension with a realistic appearance. The system shall allow for flame controls with a full range of propagation, level preset flame control functionality, and fixed preset fire mode.

Fuel Delivery/Valve Assembly

The fuel valve assembly shall be installed complete within an operation control space or cabinet. The fuel delivery system shall be equipped with fail-safe, safety shutoff valves that are UL listed and FM approved for gas use. A proof of closure switch and position status shall be included on all operational valves. Safety feature functions shall be interlocked with the fuel delivery system and provide a fail-safe closure of all operational components, if required, as specified in the NFPA 1402 and DIN 14097 Part 2. All gas pipe installation shall be compliant with NFPA 54 and 58. The fuel delivery system shall utilize stainless steel piping.

Makeup/Combustion Air

Each live fire training mockup includes a makeup/combustion air system. The system shall be designed to supply the required air to the pilot and burner system to sustain adequate combustion and flame propagation. Combustion fans shall provide assisted burner management during burn operations. The combustion components and installation utilize equipment that is rated for the high temperature environment.

Data Tracking/Logging

The Fireblast operating system is equipped with the most advanced levels of data tracking available in the fire training industry. Recording of data information is tracked and stored within the system's hard drive by date, time, event, action taken, and the operator, via password protection. Information that is tracking while the system is in operation includes password logging, event messaging, alarm messaging, fault counters, system messaging, and component run timers and counters. The need for external equipment for data retrieval and storage, such as laptop computers and cables, are removed with the integration of the data tracking components with the industrial operating system. The information can be viewed from the main operator control screen at any time by selecting the appropriate icon on the Windows® based operational screen.

HD Mockup Features

Quickburner™

Each prop mockup includes the Fireblast Quickburner™, an independent removable pilot and burner device. The Quickburner™ device is not a portable device. This is a fixed mounted unit that is designed to be completely removable and interchangeable with all additional HD mockups in the training center. The device is designed to be removed in its entirety for service and maintenance in under two (2) minutes without the use of any tools. The device includes ignition system components, gas delivery, and flame safeguard equipment. All components of the pilot and burner system are manufactured utilizing stainless steel to extend the life of the product.

The Quickburner™ includes electronic ignition, pilot and flame verification, integrated air supply, constant monitoring of flame propagation, and is designed to provide the instructor the ability to provide a full range of flame control from incipient to a free burn utilizing the wireless handheld controller. If a failure of the pilot or main burner occurs, the system is designed to automatically shut down. If there is a failure of adequate flame production, the main valve, and all inline safety valves, will fail safe close. The system provides a safety switch for burn operations on the control pendant. In the event of a power loss, all systems will have interlocked to fail safe (closed) position. Upon manual or automatic shutoff, an operator acknowledgment is required before system operation can continue.



The Quickburner™ provides the customer with easy maintenance and service capabilities and reduces the expense of service and maintenance visits over the life of the product. The Quickburner™ can be easily removed and sent to the Fireblast Global® facility for service without the travel cost of Customer Care personnel. Additionally, spare units can be purchased or existing units from other HD equipment can be inserted to minimize downtime during training demands and maintenance periods.

Mockup Structure

Each Heavy Duty (HD) mockup is designed for durability and constructed of .250 (1/4in) material. The main flame producing components within the structure are constructed of stainless steel and are permanently integrated in the HD mockup as required to produce flame growth in and around the prop's structure consistent with the represented fire. The main burner components consist of a 10ga stainless steel burner with stainless steel piping. The burner is designed for wet and dry fire scenarios. The system is designed to preset flame height capacities by way of a pneumatic system, which will distribute a full range of variable flame heights.

Performance

The operator, utilizing the wireless control pendant, initiates and controls each fire scenario consisting of the Quickburner™ ignition point, 4.2 MBTU per hour (1230kw. The system is capable of flame heights from 1ft above the mockup, creating fire behavior capability, to a free burn level that will extend to the ceiling of the training area. The system is BTU selectable and can be adjusted to meet expected fire conditions for each burn room. Each fire scenario includes a smoke system with a distribution rate of 60,000 cfm.

Training Mockups

<i>Item #</i>	<i>Description</i>	<i>Item #</i>	<i>Description</i>
10-000124	INTERIOR FLASHOVER	10-000250	HD INDUSTRIAL MID STORAGE
10-000115	HD DOUBLE BED	10-000121	HD STOVE 2400
10-000116	HD DESK	10-000333	HD WINDOW FIRE INSIDE
10-000252	HD ENTERTAINMENT CENTER	10-000013	FALCON CX CAR (INTERIOR AND EXTERIOR)

Interior Flashover

The Flashover prop is designed to connect to an additional installed HD mockup and react based on fire conditions set by the operator. The fire control system will allow the operator to select the fire scenario and create a realistic fire condition on demand. Fireblast Global® includes our industry proven Flashover design that consist of a multiple burn bar configuration and positive ignition with burner management. The unit is constructed of 14ga stainless steel. The Interior Flashover can produce up to 4.2 MBtUH or (1230kw) with bursts that can travel across a burn space or more than 50ft in a hallway.



HD Desk Fire

The HD Desk mockup is designed to represent a wall desk typically found in a residential or commercial office setting. The fire control system, utilizing the wireless device and a Quickburner™, allows the operator to select the fire scenario and create a realistic fire condition that begins on the desktop and extends to the computer monitor on operator demand.

HD Double Bed Fire

The HD Double Bed mockup is designed to represent a double bed and nightstand typically found in a residential home. The fire control system, utilizing the wireless device and a Quickburner™, allows the operator to select the fire scenario and create a realistic fire condition that begins at the base of the bed and extends above the prop mockup on operator demand.

HD Entertainment Center

The HD Entertainment Center mockup is designed to represent a residential wall unit with a television screen. The fire control system, utilizing the wireless device and a Quickburner™, allows the operator to select the fire scenario and create a realistic fire condition that begins at the base of the entertainment center and extends throughout the mockup to the television monitor on operator demand.

HD Industrial Mid Storage

The HD Industrial Mid Storage mockup is designed to represent a midsize storage rack typically found in an industrial warehouse setting. The fire control system, utilizing the wireless device and a Quickburner™, allows the operator to select the fire scenario and create a realistic fire condition that begins on the lower shelf and extends up through the additional shelves on operator demand.

HD Stove 2400 Fire

The HD Stove 2400 mockup is designed to represent a residential kitchen stove. The fire control system, utilizing the wireless device and a Quickburner™, allows the operator to select the fire scenario and create a realistic fire condition that can begin at the base of the stove and spread throughout the mockup on operator demand.

HD Window Interior

The HD Window Interior mockup is designed to represent a residential or commercial window where interior window coverings have ignited from extension or an additional structure. The fire control system, utilizing the wireless device and a Quickburner™, allows the operator to select the fire scenario and create a realistic fire condition that begins at the base of the window and extends upward on the interior wall of the structure on operator demand.

Falcon CX Car Fire (Interior and Exterior)

The Falcon CX Car Trainer is designed to represent a midsize vehicle with multiple burn zones. The fire zones include an engine fire, front and back seat fires, and a rear tire fire. The system shall be compliant with all required safety and operating features for the designed training prop.



The prop control unit includes a Quickburner™, an independent removable pilot and burner device. This is a fixed mounted unit that is designed to be completely removable and interchangeable with all additional Falcon CX and DX mockups in the training center.

The main flame producing components are constructed of stainless steel and are permanently integrated in the Falcon Car Trainer as required to produce flame growth in and around the props structure and consistent with the represented fire.

The prop is designed to include operational equipment for an exterior fire scenario and have the ability to connect to the interior fire system equipment and safety features for interior fire scenarios.

Warranty

The offered system includes a 1-year warranty on manufacturer defects and system component failures that occur during normal operations.

Operational Training

Fireblast will provide one (1) day, eight (8) hour training class that includes set up, commissioning, operation and shut down/storage procedures for eight (8) instructors.

Fireblast Global® Advantage – The control system utilizes high quality electronic components including PLC and flame sensors with burner management equipment that is available worldwide making service and maintenance items available locally.

Fireblast Global® Advantage – Fireblast Global is a California Corporation with a 34,000sqft manufacturing facility in Murrieta. All products are 100% made in the USA.

Fireblast Global® Advantage – Fireblast Global has a culture of continuous improvement working to improve processes, products and the customer experience daily. Each member of our team is actively engaged in the learning culture that is modeled from Lean Manufacturing principals, better known as TPS or the Toyota Production System.

Fireblast Global® Advantage – Fireblast Global is a Certified UL 508A panel building facility. All electrical control panels are labeled in compliancy. Additionally, all Fireblast products are tested in compliancy to all required codes and standards.





PRODUCT INFORMATION HD INTERIOR FIRE SYSTEM

	BUDGETARY PRICING		
ITEM #	DESCRIPTION	QTY	PRICE
10-000401	TALON INTERIOR FIRE SYSTEM 1-1	2	
10-000425	TALON INTERIOR FIRE SYSTEM 2-2	1	
10-000403	TALON INTERIOR FIRE SYSTEM 3-1	1	
10-000413	TALON INTERIOR FIRE SYSTEM 3.2	1	
10-000043	FALCON EX 10 CONTROLLER QUAD	1	
10-000124	INTERIOR FLASHOVER	2	
10-000115	HD DOUBLE BED	1	
10-000116	HD DESK	1	
10-000252	HD ENTERTAINMENT CENTER	1	
10-000250	HD INDUSTRIAL MID STORAGE	1	
10-000121	HD STOVE 2400	1	
10-000333	HD WINDOW FIRE INSIDE	1	
10-000013	FALCON CX CAR (INTERIOR AND EXTERIOR)	1	



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