



Contractor Packet

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2211 East X Street
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H.W. Buddy Rice
Fire Marshal

NOTICE OF INFORMATION

This letter of notice is to inform prospective builders, owners and contractors who are planning to build within the City of Deer Park, the proper requirements for system installations and testing needed by the Fire Marshal's Office. This notice shall serve for informational purposes only, actual installation requirements and testing may vary.

PLAN REVIEW

1. The City of Deer Park uses NFPA 101 – Life Safety Code 2006ed. and International Fire Code (ICC) 2006ed.
2. All Fire Sprinkler plans must be reviewed by ISO prior to submittal to this office.
3. Plan submittal for fire suppression and detection systems shall be provided for approval. Two (2) hard copies and one (1) set on disc in .pdf format are required. The two hard copies will be returned. One stamped set **MUST** remain on site at **ALL TIMES**.
4. All plans must be complete. Any incomplete submittals will be returned.
5. Any plans that are returned with corrections will be provided a list of needed corrections. Resubmitted plans shall be of the same style and returned stating corrections.
6. A current copy of licenses and proof of insurance, naming the City of Deer Park as certificate holder shall be provided for all licensed companies.

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BUILDING SITE PLANS

1. Approved vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available.
2. An approved water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible material arrives on the site.
3. The approved and stamped civil site plans shall be submitted with the building plans.
4. The approved set of plans shall remain on site at all times.

FIRE SPRINKLER SYSTEMS

These guidelines are to be followed when a business, facility, or organization proposes to install or modify a fire department connection (FDC) serving an automatic fire sprinkler system or standpipe system within the City of Deer Park. These guidelines are not to be interpreted as containing all data required for proper design, installation, or approval.

All fire department connections serving an automatic fire sprinkler and/or standpipe system for the purposes of these guidelines and any other guidelines or requirements of the Fire Department shall conform to the 2006 International Fire Code, as adopted and amended by the City of Deer Park and NFPA 13.

These guidelines do not replace, nor supersede any codes and/or ordinances adopted by the City of Deer Park, or determinations and positions of the Deer Park Fire Marshal's Office.



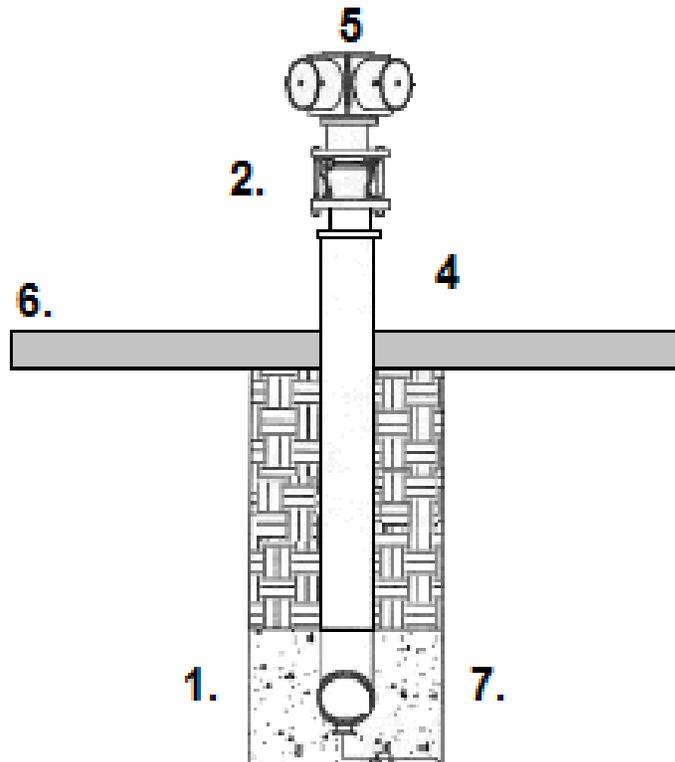
Information needed at time of construction drawings:

1. FDC's for automatic sprinkler systems and/or standpipe systems for new buildings should be equipped with a 5-inch "Storz" connection as well as the 2½-inch Siamese connection.
2. The "Storz" connection should be angled down with a "short bend" or 30° downturn
3. All FDC connections shall be equipped with a locking Knox FDC Cap. Knox products may be ordered online at www.knoxbox.com.
4. There shall be a check valve with ball drip located behind both connections. (See diagram)
5. Check valves shall be accessible for 5-year inspection. If located underground, shall be installed within a meter can/valve box. (See diagram for examples)
6. A double check back-flow preventor is required inside on the riser and is required to be certified and tested with a Fire Marshal present.
7. At least one system control valve shall be mounted outside and visible (wall valve, PIV, OS&Y). **No underground pits or keystone valves are permitted.**
8. FDC shall be facing and visible from the fire lane.
9. An approved, weatherproof, audible/visual device shall be provided on the exterior of the building above the FDC. This device shall be a minimum of 75 candelas and activate on waterflow alarms only.
10. The FDC must be within 100-feet of a fire hydrant and 50-feet of a fire lane.
11. The FDC shall be clear and unobstructed with a minimum of a 5-foot clear all-weather path from fire lane access.
12. FDC installed in a "yard" should have 4-feet x 4-feet x 4-inch concrete pad placed at the base to provide additional stability.
13. The FDC shall be installed no higher than 48-inches above grade.
14. Fire hose threads used shall be national standard hose thread.
15. Underground piping shall be designed and constructed as required for an underground fire main using NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*, as the installation standard.
16. The FDC shall discharge into the system on the discharge side of the pump if a pump is present.
17. Where the FDC is subject to vehicular damage, the connection shall be protected. Protection components shall not be closer than 36-inches to the connection and shall not interfere with the operation of the connection.
18. The pipe size and arrangement of the Fire Department Connection should conform to the latest edition of NFPA 13, *Standard for the Installation of Sprinkler Systems*.

If there are any other options other than the ones shown on the this page, the contractor may submit it to the Fire Marshal's Office for review.



Remote Fire Department Connection (FDC) Details Examples



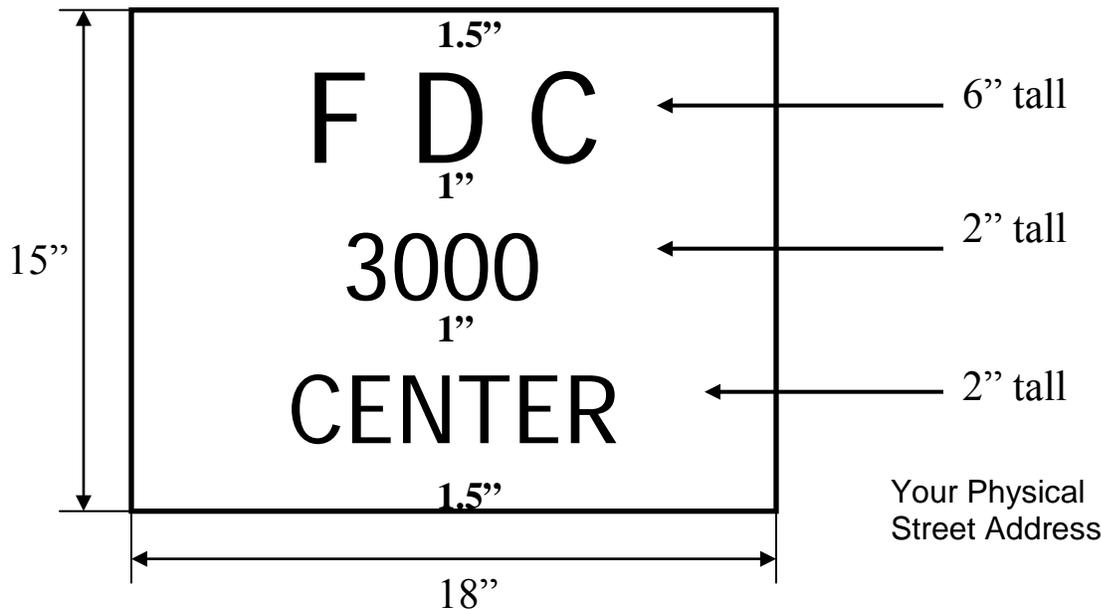
1. FROM RISER ROOM
2. 4" CHECK VALVE
4. 4" GALVANIZED SCH 40
5. 2 1/2" X 2 1/2" X 4" SIAMES FDC
6. 4'-0" SQUARE CONCRETE PAD BY 4" THICK
7. THRUST BLOCK BEYOND



FIRE DEPARTMENT CONNECTION (FDC) SIGN DESIGN REQUIREMENTS

1. Sign shall be constructed from a 15" high by 18" wide metal substrate no thinner than .063.
2. Sign shall have square corners.
3. Background color of the sign shall be "Fire Engine Red" non-reflective.
4. White reflective letters shall be used as set out below.
5. Letter shall be a font comparable to "Folio medium" or "Helvetica medium".
6. Sign shall be permanently attached to a wall directly above fire department connection (FDC) or below freestanding FDC. It shall be 72" from the ground to the bottom of the sign, unless otherwise approved by Fire Marshal.
7. First line (FDC) shall be 6" high letters with 3" between each letter.
8. Second and third lines shall be 2" high with 1/2" spacing between letters.
9. There shall be a 1" margin completely around sign and 1" spacing between lines of text.
10. There shall be 2" spacing between complete words.
11. Second and third line shall have address of building or suite number that system provides for.

EXAMPLE



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FIXED FIRE SUPPRESSION SYSTEMS

1. All FFS systems shall have local notification.
2. All lighting within the hood assembly shall shut off upon activation.
3. The remote pull station shall be located at a distance no greater than 30' from the system and be located in the path of egress.
4. All gas valves shall be located below the ceiling tile.
5. A class K fire extinguisher and sign shall be mounted near the pull station.
6. All owners, occupants, and employees shall be familiar with the operation of the system and manual activation.
7. NO WORK may begin without prior approval of plans and required permit has been submitted for payment.

FIRE ALARM SYSTEMS

1. All systems shall be installed in accordance to NFPA 72 by a licensed technician.
2. All components shall meet ADA compliance.
3. Alarm panels shall be monitored to a central station.
4. Fire alarm panels that are not accessible or visible by employees shall be provided with an annunciator panel near the main entrance.
5. All zones and devices shall be identifiable and labeled in the alarm panel cover.
6. Fire alarm panels shall have a primary and secondary phone line. The primary line shall be a dedicated line.
7. Keys to the alarm panel and pull stations shall be provided to the FMO.
8. All smoke detectors, including duct detectors will be tested using a smoke function test.
9. Smoke detectors shall recall elevator to ground level discharge.
10. NO WORK may begin without prior approval of plans and required permit has been submitted for payment.



General Requirements

General Requirements

1. Temporary site address shall be displayed plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Numbers shall be a minimum of 12 inches (304.8 mm) high with a minimum stroke width of 0.5 inch (12.7 mm) facing addressed street.
2. All fire department inspection forms and permits shall be kept in a permit packet on the job site until final inspection.
3. See *Inspection Process* Section for further information.

Vertical Construction Approval

4. All permanent fire hydrants and fire lane access roadways shall be installed and approved prior to vertical construction of any building or structure.
5. A fire hydrant confidence test shall be conducted to verify ability to meet the Needed Fire Flow for the building or structure. See *Fire Hydrant Confidence Testing* for details on this test.
6. A "Go Vertical Meeting" must be schedule through the Fire Marshal's Office.
7. Written approval must be given prior to any above slab construction.

Furniture, Fixture and Equipment Placement (FF&E) Approval

8. All required fire protection systems must be installed and approved prior to any stock and/or equipment being installed within a building.
9. An "OK to Stock Meeting" must be schedule through the Building and Fire Marshal's Office Inspectors.
10. Written approval must be given prior to any stock and/or equipment to be placed within the building.

Outdoor Burning

11. A permit shall be obtained from the Texas Commission on Environmental Quality and the Deer Park Fire Marshal's Office prior to any outdoor burning.
12. Copy of State permit and any other required documents shall be presented to the fire code official with Outdoor Burn Permit application.
13. The location for open burning shall not be less than 300 feet (91,440 mm) from any structure, and provisions shall be made to prevent the fire from spreading to within 300 feet (91,440 mm) of any structure.
14. Temporary fencing shall be provided around pit after hours.

Temporary Fuel Storage Tanks

15. A permit shall be obtained from the Deer Park Fire Marshal's Office prior to placement of any above ground fuel dispensing tanks or containers on construction sites.
16. See *Temporary Storage and Dispensing of Flammable and Combustible Liquids* section in this handbook for additional requirements.

Temporary Heating Devices

17. Temporary heating devices shall be listed and labeled. Installation, maintenance, and use of temporary heating devices shall be in accordance with the terms of the listing.
18. Refueling operations shall be conducted only when the appliance shall be allowed to cool prior to refueling.



19. Clearance to combustibles from temporary heating devices shall be maintained in accordance with the labeled equipment. When in operation, temporary heating devices shall be fixed in place and protected from damage, dislodgement, or overturning in accordance with the manufacturer's instructions.
20. The use of temporary heating devices shall be supervised and maintained only by competent personnel.

Precautions against Fire

21. Smoking shall be prohibited except in approved areas. Signs shall be posted in conspicuous locations. In approved areas where smoking is permitted, approved noncombustible ashtrays shall be provided.
22. Combustible debris shall not be accumulated within buildings. Combustible debris, rubbish, and waste material shall be removed from buildings at the end of each shift of work. Combustible debris, rubbish, and waste material shall not be disposed of by burning on the site.
23. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container.
24. Where required by the code official for building demolition that is hazardous in nature, qualified personnel shall be provided to serve as an on-site fire watch. The sole duty of fire-watch personnel shall be to watch for the occurrence of fire.
25. Operations involving the use of cutting and welding shall be done in accordance with IFC Chapter 26.
26. Temporary wiring for electrical power and lighting installations used in connection with the construction, alteration, or demolition of buildings, structures, equipment, or similar activities shall comply with the ICC Electrical Code.

Flammable and Combustible Liquids

27. Ventilation shall be provided for operations involving the application of materials containing flammable solvents.
28. Flammable and combustible liquid storage areas shall be maintained clear of combustible vegetation and waste materials. Such storage areas shall not be used for the storage of combustible materials.
29. Sources of ignition and smoking shall be prohibited in flammable and combustible liquid storage areas. Signs shall be posted.
30. Class I and II liquids shall be kept in approved safety containers.
31. Leaking vessels shall be immediately repaired or taken out of service and spills shall be cleaned up and disposed of properly.

Owner's Responsibility for Fire Protection

32. The owner shall designate a person to be the Fire Prevention Program Superintendent who shall be responsible for the fire prevention program and ensure that it is carried out through completion of the project. The fire prevention program superintendent shall have the authority to enforce the provisions of these guidelines and other provisions as necessary to secure the intent of this chapter. Where guard service is provided, the superintendent shall be responsible for the guard service.
33. The fire prevention program superintendent shall develop and maintain an approved prefire plan in cooperation with the fire chief. The fire chief and the code official shall be notified of changes affecting the utilization of information contained in such prefire plans.
34. Training of responsible personnel in the use of fire protection equipment shall be the responsibility of the fire prevention program superintendent.
35. The fire prevention program superintendent shall determine that all fire protection equipment is maintained and serviced in accordance with this code. The quantity and type of fire protection equipment shall be approved.



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36. The superintendent shall be responsible for supervising the permit system for hot work operations in accordance with the IFC.
 37. Impairments to any fire protection system shall be in accordance with IFC 901. See *Fire Watch Guidelines* for more information
 38. Temporary covering of fire protection devices. Coverings placed on or over fire protection, devices to protect them from damage during construction processes shall be immediately removed upon the completion of the construction processes in the room or area in which the devices are installed.
 39. Readily accessible emergency telephone facilities shall be provided in an approved location at the construction site. The street address of the construction site and the emergency telephone number of the fire department shall be posted adjacent to the telephone.

Means of Egress

40. Where a building has been constructed to a height greater than 50 feet (15 240 mm) or four stories, or where an existing building exceeding 50 feet (15 240 mm) in height is altered, at least one temporary lighted stairway shall be provided unless one or more of the permanent stairways are erected as the construction progresses.
41. Required means of egress components shall be maintained during construction and demolition.

Automatic Sprinkler System

42. In buildings where an automatic sprinkler system is required by this code or the International Building Code, it shall be unlawful to occupy any portion of a building or structure until the automatic sprinkler system installation has been tested and approved
43. Operation of sprinkler control valves shall be allowed only by properly authorized personnel and shall be accompanied by notification of duly designated parties. When the sprinkler protection is being regularly turned off and on to facilitate connection of newly completed segments, the sprinkler control valves shall be checked at the end of each work period to ascertain that protection is in service.

Portable Fire Extinguishers

44. Structures under construction, alteration, or demolition shall be provided with not less than one approved portable fire extinguisher at each stairway on all floor levels where combustible materials have accumulated. An approved portable fire extinguisher shall be provided in every storage and construction shed. The code official is authorized to require additional approved portable fire extinguishers where special hazards exist, such as flammable or combustible liquid storage hazards.

Safeguarding Roofing Operations

45. Roofing operations utilizing heat-producing systems or other ignition sources shall be performed by a contractor licensed and bonded for the type of roofing process to be performed.
46. Asphalt and tar kettles shall be operated in accordance with IFC 303.
47. Fire extinguishers for roofing operations. There shall be at least one multi-purpose portable fire extinguisher with a rating of 2-A:20B:C on the roof being covered or repaired.



Fire Lanes

All fire lanes shall be reviewed and approved by the Fire Marshal prior to installation. All fire lanes shall be installed in accordance to the below listed items.

I. GENERAL GUIDELINES

- 1) All new and existing buildings within the city shall have adequate access for the Fire Department apparatus. The Fire Marshal and building owner/tenant shall designate fire lanes. In no case shall a fire lane be less than twenty-four (24) feet in width, have vertical clearance no less than fourteen (14) feet, slope no more than 10% maximum grade, turning radius shall be 25 foot inside and 50 foot outside. All fire lanes shall be marked on both sides as a travel lane, including behind parking spaces and dead-end drives.
- 2) All fire lanes shall extend to within one hundred-fifty (150) feet of all exterior portions of the facility and exterior walls of the first story of the building as measured by an approved route.
- 3) All fire lanes shall be posted and marked, and shall be designated as tow away zones by the building owner/tenant. All fire lanes within the city shall be marked using signs, pavement markings or curb markings with the following specifications:
 - a. **Pavement Markings** – All pavement markings shall be installed using red and white traffic paint. The boundaries of the fire lane shall be identified by red stripes at least six (6) inches wide. The words "FIRE LANE – NO PARKING – TOW AWAY ZONE" shall appear in four (4) inch white letters at twenty-five (25) foot alternating intervals on the red border markings.
 - b. **Curb Markings** – Curb markings shall be painted in red traffic paint from the top seam of the curb to a point even with the driving surface. The words "FIRE LANE – NO PARKING – TOW AWAY ZONE" shall appear in four inch letters at 25 foot intervals along the curbs
- 4) Signs may be used in lieu pavement markings, as approved. Signs shall conform to the standards listed below and in accordance to City of Deer Park ordinance Sec. 34-74 a) Signs shall read "NO PARKING FIRE LANE TOW-AWAY ZONE". Signs shall be 12" wide and 18" high. Signs shall be painted on a white background with letters and borders in red, using not less than 2" lettering. Signs shall be permanently affixed to a stationary post and the bottom of the sign shall be six feet, six inches (6'6") above finished grade. Signs shall be spaced not more than thirty feet (30') apart. Signs may be installed on permanent buildings or walls or as approved by the Fire Marshal.

II. BUILDINGS EXCEEDING 30 FEET IN HEIGHT

Fire apparatus access roads for buildings exceeding three stories or thirty (30) feet in height shall be provide with at least three means of fire apparatus access.

III. REQUIREMENTS FOR LARGE AREA BUILDINGS

Buildings exceeding sixty-two thousand (62,000) square feet in area shall provide two separate approved fire apparatus access roads.



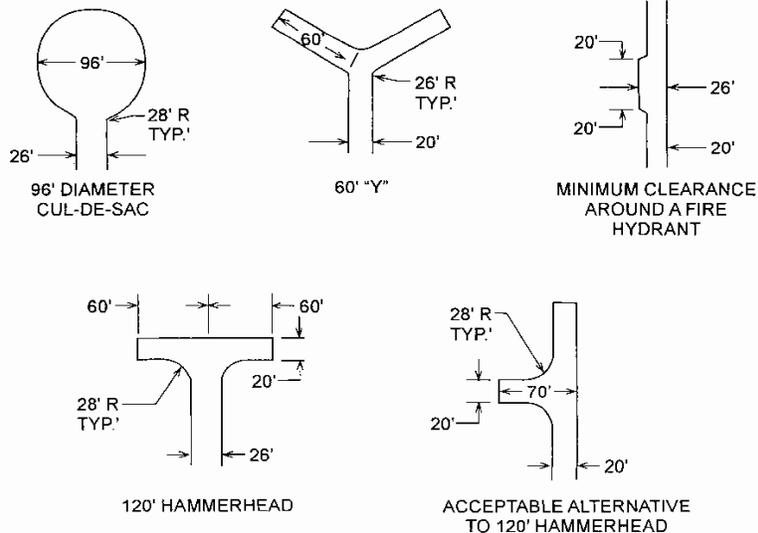
Exception: Projects with a gross building area up to one hundred twenty-four thousand (124,000) square feet may have a single approved fire apparatus access road when all buildings are equipped with an approved automatic sprinkler system.

IV. AERIAL FIRE APPARATUS ACCESS ROADS

- 1) Buildings or portions of buildings or facilities exceeding 30 feet in height above the lowest level of fire department vehicle access shall be provided with approved fire access roads capable of accommodating fire department aerial apparatus. Overhead utility and power lines shall not be located within the aerial fire apparatus access roadway.
- 2) Fire apparatus access roads shall have a minimum unobstructed width of 26 feet in the immediate vicinity of any building or portion of building more than 30 feet in height.
- 3) At least one of the required access routes meeting this condition shall be located within a minimum of 15 feet and a maximum of 30 feet from the building, and shall be positioned parallel to one entire side of the building.



DEAD-END FIRE APPARATUS ROAD TURNAROUND



V. ONE OR TWO FAMILY RESIDENTIAL DEVELOPMENTS

Where the number of dwelling units exceeds 30, there shall be two separate and approved fire apparatus access roads.



PERMITS

All system installation permits are 50% of total cost of the permit as per Section 18-36(b).

- **Sprinkler System Plan Review and Inspection**
 - 50% of total cost of the permit
 - \$50.00 per each riser
 - \$50.00 Up to 20 heads
 - \$50.00 plus \$2.00 per each sprinkler head
 - \$10.00 Cover up fee, additional \$10.00 if covered before approval
 - 50% of total cost, plus \$2.00 per head for changes to existing system
- **Fire Alarm System Plan Review and Inspection**
 - 50% of total cost of the permit
 - \$40.00 Fire Panel
 - 2.00 per device (pull stations, smoke, heat detectors, horns and strobes)
- **Fixed Fire Suppression (Kitchen/Spray Booths)**
 - 50% of total cost of the permit
 - \$50.00 Inspection Fee
- **Miscellaneous**
 - \$50.00 Emergency Generator
 - \$50.00 Access Gates
 - \$50.00 After Hours Inspection, per hour with 4 hour minimum
 - \$30.00 Certificate of Occupancy
 - \$50.00 Occupancy load evaluation
 - \$50.00 Re-Inspect Fee after the first inspection (Fire Marshal's Discretion)
- **Permanent Combustible and Flammable Liquid Tank Installation**
 - 50% of total cost of the permit Plan review
 - \$150.00 per year

All system and final occupancy inspections that fail will require \$50.00 re-inspection fee, prior to inspection.

This notice does not relieve the owner, designers, and contractors or their representatives from their individual or collective responsibility to comply with applicable provisions of the codes governing the site. This information is not to be construed as a check of every item required, including items noted or not otherwise detailed, and does not prevent the Fire Official from hereafter requiring corrections of errors.