

MANUFACTURED HOME INSTALLATION SPECIFICATIONS

1.0 General

- 1.1 This specification establishes the minimum requirements for the transportation and installation of manufactured homes (MHs) to support FEMA disaster operations. The minimum requirements may be changed by FEMA to address the needs of the current mission. Specifically included are the Contractors' responsibilities for the transportation, labor, and materials to accomplish the following tasks:
- 1.1.1 Transportation of manufactured homes from the designated area to the installation site(s) beyond a 150-mile distance is an additive contract cost.
 - 1.1.2 Site preparation includes readying the site for foundation piers and anchoring systems. Also included are locating and exposing water, sewer, electrical, and natural or LP gas lines and connections whereby they can be hooked up and made serviceable for the MHS.
 - 1.1.3 Unit installation includes placement of manufactured homes on the designated lots, installing foundation piers, anchoring the units, and hooking up the utilities. Also, an air conditioning system must be installed, the units winterized and skirted, and steps or handicap ramps as specified, installed. Inside the units, furniture and appliances shall be unpacked, set-up and made ready for use. Units will be cleaned and inspected by the Contractor to ensure occupancy readiness. Contract performance will be determined by a final acceptance inspection of each unit by FEMA.
- 1.2 This specification addresses the technical requirements that govern the transport and installation of manufactured homes. Technical specifications include the "Manufacturer's Installation Guidelines", "FEMA Guidelines", and "State and Local Codes and Regulations". As a rule of thumb, if the State and Local entities have no problems with the following, contractors will utilize the manufacturer's guidance to preclude the potential void of the unit manufacturer's guarantees and/or warranties. *The Contractor is responsible for notifying the FEMA Project Officer (PO) of any conflict between the various technical requirements and request appropriate direction.*
- 1.3 Site preparation is limited to the work required to ready the individual lots for installation of the manufactured homes. MH pads may be located on private, group or commercial MH Park sites. Commercial and group sites rarely present any logistical problems for placement and set-up as they are

constructed for this purpose. Prior to approval of private sites, a close inspection of each one is required. *First, reassure that the site is not located in a floodplain (A or V zoned). Also, ascertain that the site has developed roadways and is accessible with no obstructions or debris hampering the placement or positioning of the unit on the proposed site.* The utilities located on each lot should have plumbing risers and electrical distribution boxes etc. ready for unit hook-up or points (within a reasonable distance) on the primary utility systems that can be readily tapped and extended to the unit's utility connecting points.

- 1.4 The Site Inspector will provide a layout of installation areas to include site locations and areas for the placement of each manufactured home. The contractor is responsible for verifying the layout prior to unit placement. Distance between units and overall positioning will be in accordance with local setback, fire and other installation codes. Directions and plat details may be provided by FEMA to the **contractor as required** for planning of site preparation and set-up of the manufactured homes. FEMA will also identify any special requirements (e.g., handicap ramps, and handicap modifications) for specific lots. The contractor is responsible for coordination with local code authorities to determine and ensure that specific installation code requirements are met.
- 1.5 The contractor must be, or have employed, registered/licensed technicians (plumbers, electricians' etc.) to conform to State and local requirements for installing and/or hooking up systems or repairing defects involving their particular trade. It is the contractor's responsibility to obtain all proper licenses and permits to set-up the units.
- 1.6 The contractor is responsible for supplying all materials and supplies needed to perform the assigned tasks and make the MHs ready for occupancy (RFO). The exceptions are the unit's furnishing, appliances, water heater, furnace, A/C and other items that are provided with the unit.

2.0 Base Bid Items (Line Item: MH-01)

Unless otherwise noted, all requirements covered by this section are included in Line Item MH-01.

2.1 Codes, Regulations and Standards

Work performed under the contract shall be in accordance with applicable Federal, State and local codes and regulations. The contractor for installation of manufactured homes will follow the manufacturer's installation instructions and guidelines unless overridden by a State or local code. As a supplement to the manufacturer's guidance, the American National Standard for Manufactured Home Installations

(NCSBCS/ANSI A225.1) provides additional installation details and standards and shall be followed for work not covered by the manufacturer or FEMA specifications. Precedent for applying codes and regulations are State and local first, manufacturers second, and NCSBCS/ANSI A 225.1, third.

2.2 Lot Preparations

All trenches shall be backfilled in accordance with applicable codes. All wood used on site (blocking, steps, ramps, etc.) shall be exterior grade lumber or construction grade lumber. All lumber must be treated.

2.3 Transport

Most of the deliveries of manufactured homes to site are within 250 miles of the designated staging area. Distances beyond 250-miles are additive costs.

Towing shall be from a designated staging area to designated sites. The manufactured home shall be properly placed, positioned and aligned on the site as laid out and staked by the Site Inspector. If the unit is improperly positioned, the Contractor must reposition the unit by the end of the day following delivery to site. If this is not accomplished as stated, FEMA reserves the rights to reassign the unit to another set-up contractor or have the unit repositioned by another party and back charge the original contractor the cost of the repositioning. The towing operator must be properly licensed and insured to protect the Government's interest.

2.4 Manufactured Home Set-Up

2.4.1 Blocking and Leveling

Manufactured home piers shall be installed in accordance with the manufacturer's installation instructions and based on the installation site soil bearing capacity. The contractor is responsible for determining the soil bearing capacity through contact with local building officials, soils engineers or other methods acceptable to local authorities. *The number and location of piers shall be in accordance with the manufacturer's instructions unless local codes provide for differing specifications.*

Minimum requirements include (Refer to Manufacturer Specifications):

Manufactured homes shall be blocked and leveled to the manufacturer specifications. The contractor shall clean away all grass roots, loose dirt, rocks or debris where at the base of the

piers. *The Contractor shall provide a base for each pier. The approximated size is 24" x 24".*

The pier installation must meet the manufacturer specification and include the following FEMA requirements. The space between the top of the pier's solid cap blocks and the bottom of the manufactured home I-beam frame shall not exceed seven inches (7"). Up to four inches (4") of this space may be filled with a solid concrete block laid parallel to the manufactured home steel I-beam frame. Up to three inches (3") of this space may be filled with blocking timber and wedges laid perpendicular to the manufactured home steel I-beam. No more than one inch (1") of this area shall be shimmed with wedges.

After the weight of the manufactured home is transferred to the concrete piers, the piers must be vertically aligned and tightly shimmed with wooden wedges. If the piers are not vertical at the time of final inspection, they shall be removed and reinstalled by the Contractor at no additional cost. The Contractor will be responsible for all necessary re-leveling and re-blocking of the manufactured home for a period of 90 days after final inspection.

Where approved by State and local regulations, metal piers may be used in lieu of concrete blocks. Metal piers must meet State and local requirements for load capacity, load failure ratings and spacing. In the absence of State or local standards, load capacity shall not exceed 8,000 pounds per pier; vertical concentrated load failure rating shall not exceed 14,000 pounds per pier and spacing shall not exceed eight feet (8') between piers with no more than two feet (2') from either end of I-beam.

The metal pier base will consist of two 4" x 8" x 16" solid concrete blocks laid side by side on level ground with 16" x 16" x 3/4" treated plywood between the blocks and metal pier. The pier height, including base material, shall not exceed thirty inches (30"). Metal and concrete block piers shall not be combined on any one unit.

2.4.2 Anchor and Strap (Tie-Downs)

Anchoring and strapping for tie-down of manufactured homes shall be based on the wind zone (I, II or III) and soil conditions of the installation site. *The units will be anchored to resist floatation, collapse, and lateral movement.* The HUD Part 3280 Manufactured Home Construction and Safety Standards determine the wind zone. The manufacturer's installation instructions will be followed in determining the location and

number of unit tie-down connecting points and method of securing the anchors. *The Contractor is responsible for determining the specific type anchors to be used and the method of securing the anchors based on the anchor manufacturer's instructions and local soil conditions.* The Contractor will determine soil conditions pertinent to anchor pullout resistance through contact with local building officials, soils engineers or other methods acceptable to local authorities.

Minimum requirements include (Refer to Manufacturer Specifications):

- a. In Wind Zone I, anchors must be capable of resisting 3150-lbs. allowable loading.
- b. In Wind Zone II and III, anchors must be capable of resisting 4000-lbs. allowable loading, except shearwall anchors. Shearwall anchors must be capable of 5000 lbs. loading.

2.4.3 Sewer Line Installation to Manufactured Home

At sites with sewer riser already installed, the Contractor will make the connection between the manufactured home connecting point and the riser. If a sewer riser is not in place, the Contractor will make an appropriate sewer tap on the sewer collection line and install the necessary piping and riser connection.

A clean-out fitting will be installed in an accessible location to facilitate snaking-out a clogged up line from the connection point, through the riser and into the main or service line. The pipefitting that attaches the sewer connection to the drain outlet of the manufactured home shall be threaded and screwed or installed with a removable adapter for the drain outlet.

The nominal inside diameter of the unit sewer connection shall not be less than three inches (3"). The slope shall be continuous and at least one-quarter inch (1/4") per foot and no more than one-half inch (1/2") per foot. Overhead (hanging) sewer straps shall be placed at four-foot (4') intervals (maximum) to prevent any deflections.

The fitting between the manufactured home sewer line and sewer riser (placed above ground) will be one of the following:

(1) An approved 4" x 3" adapter, or (2) the lower end of the manufactured home sewer line shall extend at least four inches (4") below the rim of the riser with an air tight connection provided by the use of a rubber ring. Pipe shall be rigid PVC sewer pipe ASTM D-2727; or Schedule 40 ASTM D-2261. The line shall be of the shortest practical length and include a clean-out wye. The Contractor shall test the sewer line for leakage, and any leaks shall be repaired at no additional cost.

All sewer piping and installation shall be installed in accordance with local codes and the Uniform Plumbing Code. If the manufactured home has multiple sewer drop points, they will be interconnected to a single unit drop point. This Line Item covers up to the initial 50 feet of the sewer line (above ground).

2.4.4 Water Line Installation to Manufactured Home

At sites with water service riser already installed, the Contractor will make the connection between the manufactured home connecting point and the riser. If the water service riser is not in place, the Contractor will make an appropriate tap on the water service line and install the necessary piping and riser connection.

A cut-off valve and a hose bibb with anti-siphon valve shall be located adjacent to the unit connecting point (must be in convenient location to facilitate shut-off of water to unit and make a watering hose connection).

The Contractor shall test the service line for leakage, and any leaks shall be repaired at no additional cost. Water lines shall be three-quarter inches (3/4") galvanized steel; type K or L copper tubing, ASTM B88-74A; or schedule 40 PVC plastic pipe, ASTM D-1785, three-quarter inch (3/4") CPS 200 psi, or equal, subject to prior approval. A back flow preventer valve will be properly installed.

All service line beneath the manufactured home shall be installed clear of the ground, made with the minimum number of joints, be of the shortest practical length, and be supported by metal straps at four foot (4') intervals (maximum).

Water piping and installation shall be installed in accordance with local codes and the Uniform Plumbing Code. This Line Item covers up to the initial 50 feet of the water line (above ground).

2.4.5 Direct Wiring of Manufactured Home

At sites with electrical service drop (meter box or other service connection point) already installed, the Contractor shall provide underground service (in compliance with all codes and regulations) from the electrical assembly to the manufactured home interior electrical distribution panel or manufactured home junction box, up to 50 feet. Service entrance cables shall be No. 2 THW copper, and must have an underground rating of 100 AMPS. Direct burial cable is to be buried at least twenty-four inches (24") below the grade. (Note: This includes the A/C breaker and burial cable) All service entrance cable, which cannot be buried twenty-four

inches (24") below ground, shall be encased in rigid or intermediate metal conduit or Schedule 80 PVC conduit. The conduit shall be securely attached to the electrical boxes in accordance with accepted methods and standards. Sweeps shall be used at the manufactured home junction box and meter loop assembly. If an electrical service drop is not in place, the Contractor shall install an electrical assembly for utility company connection. The AC hook-up is included in basic set-up.

NOTE: The air conditioner hook-up will be in accordance with the manufacturer specifications and installed by a certified heating and cooling technician. The AC unit must be within an eye's view of the A/C electrical breaker. The contractor will be required to get the appropriate permits and meet all local codes and ordinances pertaining to the installation of the A/C unit. The A/C unit installation will be considered part of the basic unit installation. The A/C electrical installation with includes burial cable and 30 Amp breakers (switch) are part of the basic installation. The installation contractor is responsible for supplying all the appropriate materials for this installation, with exception to the A/C unit. The A/C unit is provided with the unit.

The contractor shall provide underground service, in compliance with all codes and regulations, from the electrical service to A/C unit.

- A. All cable shall be installed and encased in approved metal conduit.
- B. Sweeps shall be used at the points where buried cable makes a 90-degree turn toward the meter loop assembly and A/C.
- C. A 30 Amp weatherproof overcurrent protective and disconnect device for the A/C shall be installed at the electrical service entrance and within eye view of the A/C unit.

2.4.6 Steps

The Contractor shall install steps at each manufactured home entrance in accordance with local codes. As a minimum, steps will be constructed of wood forty-eight inches (48") wide between two (2) sanded and painted with one coat of white paint handrails. The top step shall be constructed with a level platform such that the platform is centered on the door of principal entry into the manufactured home and flush with the doorsill. The handrails shall be constructed with 2" x 4" safety edge lumber shall be provided on all steps. All material requirements shall be in accordance with the applicable guidelines. Steps shall have a stable foundation, be level in both directions and anchored. The platform shall have a non-skid surface using materials that are State and Industrial approved (sand added to paint is unacceptable).

2.4.7 Making the Manufactured Home Ready for Occupancy

a. Assemble Accessories and Arrange for Use:

- (1) Arrange all furniture for occupancy;
- (2) Clean and mount storm window panels;
- (3) Install drawers;
- (4) Remove window clips; travel blocking and protective taping;
- (5) Hang fire extinguisher (report low charge to FEMA inspector);
- (6) Mount exterior light fixtures, and install bulbs;
- (7) Install interior light globes and covers;
- (8) Install unmounted screens;
- (9) Re-install any fallen curtains;
- (10) Install cabinet door panels and other knockout panels;
- (11) Install commode tank lid; and
- (12) Repair, if necessary, cabinet/door/drawer hardware.

b. Activate Utility Systems and Make Minor Repairs:

(All parts changed must be of same quality.)

- (1) Test water system and make minor repairs (i.e., tighten, adjust, or replace fittings, flare nuts, faucet washers, ball cocks, shower diverters, faucet sets, etc.);
- (2) Verify hot/cold water lines, reverse if required;
- (3) Tighten or replace loose drain line connections (traps, strainer assemblies, etc.);
- (4) Replace commode wax ring and tank gaskets, as needed;
- (5) Tighten loose connections in electrical system; and
- (6) Test electrical circuits and replace bulbs, breakers, switches, or receptacles, as needed.

c. Test Appliances and Appurtenances:

- (1) Activate, test and make any necessary minor repairs to the refrigerator, range, furnace, air conditioner, and water heater for proper operations. Adjust pilots and burners, change orifices, water heater elements, etc., as needed;
- (2) Test smoke detectors and replace if faulty. Smoke detector provided by FEMA upon receipt of damaged one; and
- (3) Test exhaust fans for proper operation, repair as needed.

d. Final Clean-Up and Readiness:

- (1) Clean floors, counters, kitchen equipment, bath fixtures, and windows as needed;

- (2) Perform any other minor work required to prepare the unit for occupancy (i.e., door adjustments, refasten moulding and panels, etc.);
- (3) Remove unit packing debris and excess set-up material from premises; and
- (4) Report major discrepancies or missing items to FEMA inspector.

3.0 Additional Cost Bid Items (Line Items)

Items listed in this section are added cost items to be bid separately from the work included in the basic bid (Line Item MH-01).

3.1 Sewer Lines

- a. (Line Item MH-02: Four-inch (4") sewer line extension from sewer tap to the manufactured home with riser, buried. Distance from tap to riser not to exceed 50 linear ft. per lot.)
- b. (Line Item MH-03: Six-inch (6") sewer line extension from sewer taps to four-inch (4") collection points. (Distance from tap to riser not to exceed 50 linear ft. per lot. Includes one (1) 6" x 4" x 4" "Y" or "T" fitting or 6" x 4" reducer.)
- c. (Line Item MH-04: Eight inch (8") sewer line extension from sewer tap to six inch (6") or four inch (4") collection points. (Distance from tap to riser not to exceed 50 linear ft. per lot. Includes four (4) 8" x 6" and/or 4" "Y" or "T" fittings or reducers.)

The Contractor shall run necessary sewer line and sewer riser from the sewer tap (at City sewer line, house lateral or septic tank) to the manufactured home. The connection or tap to the existing sewer facility shall be made in accordance with the Uniform Plumbing Code. The sewer line and riser shall be four inches (4") ID minimum to PVC, Schedule 40 pipe, ASTM D-2261 or equal. The sewer line shall be buried not less than twelve inches (12") below the surface of ground. The sewer line must be placed in a trench separate from the water line and at a distance from the water line that is in compliance with State and local codes. The slope shall be continuous and not less than one-quarter inch (1/4") per foot. The sewer riser shall be vertical and terminate no more than four inches (4") above ground level with a standing wye at the staked location. The clean out inlet will be plugged with a threaded cap. The vertical inlet shall be plugged or capped until such time as it is connected to the manufactured home unit. The Contractor shall leak test the sewer line and any leaks shall be repaired to the satisfaction of FEMA at no additional cost. *Backfill material will be free of rocks and other debris and will include a bed of compacted sand six inches (6") above and six inches (6") below the sewer line.*

3.2 Municipal Sewer Tap (Line Item MH-05: Install sewer tap)

If a municipal sewer tap is required, the Contractor shall excavate, install the tap, and connect to the sewer line from the manufactured home and backfill, according to local requirements. The sewer tap shall be made in accordance with local regulations regarding sewer tap installations. The sewer tap shall utilize a device such as a saddle. A connection of one pipe into another and projecting beyond inner wall is prohibited due to the resulting restriction to free flow. All piping shall be connected to assure free flow. If required by local regulations, the trench shall not be backfilled until the sewer tap has been inspected and approved by the sewer authority. In the event the governing entity has a predetermined fee for sewer taps, such fee shall be paid by the Contractor and reimbursed at actual expense (individual receipt required). In the event the governing entity makes the tap at no cost; the Contractor shall not be paid for this line item. Where pavement must be removed and replaced, the Contractor shall contact the FEMA PO for instructions.

3.3 Water Supply Line

- a. (Line Item MH-06: Three-quarter inch (3/4") water line extension from water tap to manufactured home pad with risers, buried).
- b. (Line Item MH-07: Two-inch (2") water line extension from water tap, buried).

The Contractor shall extend water service from the supply source (City main, house service line or well, etc.), to the manufactured home pad in accordance with the following and applicable specifications. Service line shall have normal size of three-quarter inch (3/4") and be any of the following: galvanized steel; copper tubing; ASTM B88-74A type K or L; polyethylene plastic pipe 160 psi, ASTM D-2239; three-quarter inch (3/4") CPS psi, Schedule 40, PVC plastic pipe, ASTM D-1785; or equivalent.

Water pipe riser shall be minimum three-quarter inch (3/4") and compatible with the service line. Service line is to be laid a minimum of six inches (6") below the frost line and not less than twenty-four inches (24") below the surface of the ground with a three-quarter inch (3/4") shut-off valve installed in the water line, or three-quarter inch (3/4") shut-off valve with pet-cock must be installed in the water line. The service line must be placed in a trench separate from the sewer line and at a distance that is in compliance with State and local codes. Backfill materials shall be free of rocks and other debris and shall include a bed of compacted sand six inches (6") above and below the water line. The Contractor shall check or test the line for leakage and any leaks repaired and eliminated at no additional cost. Where pavement must be removed and replaced, the Contractor shall contact the FEMA PO for instructions.

3.4 Municipal Water Tap (Line Item MH-08: Install Water Tap)

If a municipal water tap is required, the Contractor shall excavate, install the tap, and connect to the water line from the manufactured home and backfill, according to local requirements. The installation of the water tap (if required) will be accomplished in conjunction with, and according to the regulations of the local Water Company. If required by local regulations, the trench shall not be backfilled until the water tap has been inspected and approved by the water department. In the event the governing entity has a predetermined fee for water taps, such a fee shall be paid by the Contractor and reimbursed at actual expense (receipt required). In the event the governing entity makes the tap at no cost; the Contractor shall not be paid for this line item.

3.5 Electric Assembly for Manufactured Homes (Line Item MH-09: Furnish and install manufactured home electric power pole and meter loop).

The Contractor shall install an overhead electric assembly. The assembly shall be 100 AMP (120/240-volt service) with a weatherproof, rain-tight meter box containing 100 AMP circuit breakers. All components shall be installed in accordance with the National Electric Code (NEC). All conduit connections on the meter pole must be watertight. Pole shall have a minimum top diameter of six inches (6") and meet all code requirements.

3.6 Additional Towing (Line Item MH-10: Additional towing of manufactured home outside 250-mile radius).

The Contractor shall provide additional towing of manufactured home outside the requirement listed in section 2.3 Transport.

3.7 Difficult Site Units (Line Item MH-11: Furnish heavy equipment to position manufactured home).

The Contractor shall furnish and provide bulldozer or similar equipment to place manufactured home on designated site. Requirement for necessity of heavy equipment is at the discretion of the FEMA Inspector. Light equipment such as a farm tractor or any similar equipment used for the convenience of the Contractor shall be at the Contractor's expense and not reimbursable.

3.8 Winterized Water Line Installation (Line Item MH-12: Winterized water lines)

When specified, the Contractor shall install freeze protection heating tapes and insulation to water supply piping and shut-off valves to prevent freeze-up of the system (piping exterior of the manufactured home). Minimum requirements include:

- a. The heat cable shall be UL listed Commercial Pipe Heating Cable and be rated at a minimum of 3 watts per foot at 120 volts and have provisions for grounding. The heat cable shall be of a type that will not damage PVC or other non-metallic water pipe under the heat cable installation procedures required therein.
- b. The heat cable shall be installed in compliance with the cable manufacturer's instructions and the following additional details:
 - (1) The sealed end of the heat cable will be securely fastened to the unit water pipe at a point that is above grade and installed approximately eighteen inches (18") down the riser pipe and then wrapped up the riser into the manufactured home water heater compartment for a minimum of two inches (2"). The heat cable shall be applied to the outside of the bend at elbows and securely fastened with tape. Wrapping of the water line with the heat cable shall be 3 turns per linear foot (1 wrap every 4 inches). Cable shall be fastened every twelve inches (12") with tape to the riser.
 - (2) Preformed insulation and weatherproof covering shall be placed on the pipe and fastened with a continuous strap of weather resistant tape. The insulation, covering and tape shall extend into the water riser sleeve and water heater compartment approximately 12 inches (12") with the sealed end of the heat cable covered. Riser shall be filled an appropriate insulation and top of riser shall be sealed with an appropriate cover.

3.9 Direct Wiring of 100 AMP Service Cable in Excess of Fifty Feet (50')
(Line Item MH-13: Direct Wiring over fifty feet (50'))

The Contractor shall provide underground service in excess of fifty feet (50') where required. The initial fifty feet (50') is included in the basic set-up (Line Item MH-01). This installation shall be in accordance with applicable guidance.

3.9 Direct Wiring of Well Pump. (Line Item: MH- 14)

Must be installed in accordance with State and local codes to include all safety issues. Direct wiring to well pump, buried. The cable shall be No. 12-2 conductor with bare ground, direct burial copper, installed at least

24" below grade. All cable less than 24" below grade shall be encased in approved metal conduit; all sweeps shall used at the points where the buried cable makes a 90-degree turn toward the meter loop assembly and well pump.

3.10 30 AMP Well Pump Switch. (Line Item: MH-15)

A 30 Amp weatherproof overcurrent protective and disconnect device for the well pump shall be installed at the electric service entrance.

3.11 Manufactured Home Ramp
(Line Item MH-16: Furnish and install ramp)

The Contractor shall prepare the grade and construct a wooden ramp with level platform, such that the platform is centered on the door of principal entry into the manufactured home and flush with the doorsill. Contractor shall coordinate ramp design with local authorities to ensure compliance with the current American Disability Act, and State, and local requirements. If there are required changes the contractor needs to inform FEMA in writing for approval. The contractor shall provide all supplies and materials.

All wood shall be treated, exterior grade framing lumber and shall be used throughout, except for the platform and runway surface, which shall be exterior plywood. The handrail shall be 2" x 4" safety-edge lumber, sanded and painted with one coat of white paint. Nails shall be coated and sized consistent with industry standards.

The overall length of the ramp and platform shall be fixed by the height above the grade of the manufactured home sill and the distance to either a point abreast of the unit, or to a suitable, firm surface, approach to the ramp. The ramp pitch shall be one-inch (1") slope for each twelve inches (12") in length (maximum).

The ramp shall be firmly supported on grade, with mud seals added where necessary because of soil conditions. The ramp and the platform shall have a non-skid surface using materials that are Industrial approved (sand added to paint is unacceptable).

3.13 Install Complete Petroleum (LP) Gas System
(Line Item MH-17: Install LP gas system)

The Contractor shall have installed a complete LP gas system. The installation must be made so that convenient recovery of the tank is possible. The installation shall be in accordance with State and local

codes. The tank must be located no further than fifty feet (50') from the closest point to which the LP refueling truck can drive.

The terms shall include the contractor securing a one-year rental of a minimum 250-gallon tank and 100 gallons of gas at time of installation. The 250-gallon tank must be placed no closer than 10 feet (10') out from a manufactured home and be placed on concrete cap blocks embedded in the ground. If this is not in accordance with state and local codes, the contractor shall make adjustments to placate the governing officials

The entire system must be checked for leaks and repaired if any are found. The furnace orifice shall be converted to LP gas if necessary, pilot lit, unit cycled, and adjustments made.

3.14 Natural Gas Connections

- a. (Line Item MH-18: Furnish and install natural gas hook-up from existing riser to manufactured home)
- b. (Line Item MH-19: Furnish and install underground gas line extension and riser from gas meter)

The Contractor shall furnish and install natural gas service to the manufactured home. Connection shall be from the natural gas inlet on the manufactured home to the natural gas riser (Line Item MH-16) and/or extension (underground) from gas meter terminating with a riser (Line Item MH-17) in accordance with these specifications, State and local regulations.

The supply connection shall be as required by State and local codes.

As necessitated, extend main gas line from gas meter with approved pipe, underground, to terminate in a riser eighteen inches (18") to twenty-four inches (24") from side wall of pipe from the exterior wall gas inlet of the unit to the natural gas riser. The gas line shall be tested and accepted in accordance with local regulations. Pressure shall not be less than six inches (6") mercury column or 3-psi for 10 minutes without any drop. The pilot shall be lit, unit cycled, and any adjustments made. Minor repairs to the furnace may be required and will be the responsibility of the Contractor.

3.15 Skirting (Line Item MH-20: Furnish and install skirting)

The Contractor shall furnish and install vinyl skirting on entire perimeter of manufactured home in accordance with manufacturer's recommendations and normal standards of industry. Material shall be equal to "T-Lok Vinyl Skirt" manufactured by Mastic Corporation, be self-ventilating and have a top rail to conceal top fasteners. An access

panel or equivalent shall be provided adjacent to the manufactured home water inlet location. The skirting shall be securely fastened to the manufactured home and ground using accepted fastening methods. The contractor bid price for this line item must include the cost of skirting materials and complete skirting installation. The contractor must supply all materials.

3.16 Handicap Modifications (Line Item: MH-21 (Modification for handicap accessibility))

As identified by FEMA the contractor may have to perform modifications a designated unit. FEMA will identify what modifications are needed. The contractor is responsible for ensuring these modifications are within Federal, State, and local codes and ordinances and the current American Disability Act (refer to the Uniform Federal Accessibility Standards: FED-STD 795; also available on website <http://www.access-board.gov/>). The contractor must also furnish all supplies and materials to perform the designated tasks. FEMA reserves the right to assign these tasks to a contractor other the contractor installing the unit, if required.

3.17 Perform Site Inspection for MH (Line Item: MH-22 (Perform Site Inspection for MH))

The contractor will inspect sites identified by FEMA to determine the feasibility of installing the type of unit identified by FEMA. FEMA will initiate a Request for Site Inspection, assign a site control number, determined the flood zone, and forward to the contractor, if tasked.

When tasked to perform site inspections the contractor shall assess the site feasibility by performing the following:

Availability of Utilities. The applicant is responsible for obtain all appropriate permits prior to any determination of the feasibility of the site. The proposed site must have source for electric, running water, approved septic/sewer system

Electrical Service for supporting 100 Amp service.

Source for running water supply system. A municipal water service will be used unless the applicant has a functional well, which was used prior to the disaster. If a well is used the inspector will inspect the pump, pressure tank, and electrical service to the well to insure the system is operational. Prior to site being considered feasible the applicant must correct any deficiencies in the system. If the well has been flooded, the applicant must provide a sample of the water to be tested and approved by the Health Department prior to the site being considered feasible.

Septic or Sewer Service. Private systems must be inspected and approved by the Health Department before inspector can determine feasibility. Applicant is responsible for any repairs necessary to that system. Prior to using a local municipal sewer system the contractor must obtain the cost of tap fees. These costs could make the site infeasible. Taps must be within the established 50 feet of the placement of the unit, when possible.

On sites where no septic system exists, the applicant must wish (at their own expense) to install an approved septic system to make the site feasible.

It is their responsibility to obtain all permits and comply with all necessary requirements enforced by the Health Department. This includes all necessary requirements and permits enforced by the local government.

Unit Placement. Identify where the unit will be placed. The placement of the unit must not restrict the recovery activities. This includes debris removal, landowner repairs or replacement of the home, etc....

Site Accessibility. The contractor will identify the most direct route to be taken to deliver the unit.

Zoning Requirements. The site must have the proper zoning requirement.

Lot Size. The site must be the proper size in accordance with the lot boundary zoning requirements.

Special Needs. If the applicant has special needs this requirement should be forwarded to FEMA.

Infeasible Site Processing. If the site is determined to be infeasible the contractor notifies FEMA the site is infeasible, and returns the Request for Site Inspection to FEMA.

Feasible Site Processing.

Private. If the site is a feasible private site, the contractor:

- Completes the FEMA Form 90-1, Request For Site Inspection. All site inspections must be approved by FEMA rep.
- Provides the recommended installation line items to install the unit in the most efficient and safest approach for FEMA's approval. Any additional line items and/or services recommended outside of the basic installation (set-up) must be approved by FEMA. Also the contractor in no way obligate FEMA to use the proposed site nor can the contractor initiate work orders for unit delivery and/or installation. FEMA will make the determination of whether to use the site. The

contractor is only assessing the feasibility of the site. FEMA will initiate the work order for approved site for unit delivery and installation, as needed.

- Obtains a signed Landowners Authorization/Ingress-Egress Agreement or appropriate form, and

Commercial. If the site is a feasible commercial site, the contractor:

- Completes the FEMA Form 90-1, Request For Site Inspection. All site inspections must be approved by FEMA rep.
- Obtains information from the park management related to park address and lot identification, park rules and requirements, and point-of-contact and phone number (Note: The contractor in no way obligates FEMA to use the park. FEMA will make the determination of whether to use the park. The contractor is only assessing the feasibility of the site.), and
- Provides the recommended installation line items to install the unit in the most efficient and safest approach for FEMA's approval. Any additional line items and/or services recommended outside of the basic installation (set-up) must be approved by FEMA. Also the contractor in no way obligate FEMA to use the proposed site nor can the contractor initiate work orders for unit delivery and/or installation. FEMA will make the determination of whether to use the site. The contractor is only assessing the feasibility of the site. FEMA will initiate the work order for approved site for unit delivery and installation, as needed.
- FEMA will determine and initiates the work order FEMA Form 90-26, Installation Work Order.
- Site inspections are to be returned to the appropriate FEMA representative within 3 days.