Chapter 4-10: Specialties

Table of Contents

Chapter 4-10: Specialties 1
4-10.01 General 3
4-10.01A Work Included 3
4-10.01B Tips and Suggestions to Prepare for Inspection of Specialties 3
4-10.01C Submittal Review 6
4-10.01D Installation 7
4-10.02 Chalk Boards 7
4-10.03 Tackboards 7
4-10.04 Marker Boards 8
4-10.05 Metal Toilet Partitions 9
4-10.06 Louvers (General) 10
4-10.07 Flagpole 12
4-10.08 Information Display Board 12
4-10.09 Information Display Cases 12
4-10.10 Routed Redwood Signs 12
4-10.11 Metal Signs 12
4-10.12 Signs 13
4-10.13 Wardrobe Lockers 14
4-10.14 Wood Benches 14
4-10.15 Fire Extinguisher and Cabinet 15
4-10.16 Fire Access Key Box 15
4-10.17 Prefabricated Wire Mesh Partitions 17
4-10.18 Portable Partition 17
4-10.19 Folding Partition Wall 17
4-10.20 Folding Gates 17
4-10.21 Freestanding Steel Shelving 17
4-10.22 Cantilever Steel Shelving 17

4-10.23 Sun Screens 18
4-10.24 Telephone Shelter 18
4-10.25 Telephone Enclosures 18
4-10.26 Toilet and Shower Accessories 18
4-10.26A Toilet Room Accessories 18
4-10.27 Truck Weighing System 19
4-10.28 Truck Screening Weighing System 20

4-10.01 General

4-10.01A Work Included

Division 10, *Specialties*, involves incidental fixtures (primarily interior) necessary for the intended building usage. These consist of the accessories that may be necessary to occupy the facility.

The information required to install specialty items is not found in any one division of the *Special Provisions*, nor in any one section of the project plans, nor in any singular authorized submittal. There may be a need to look in several different locations to find such information.

This section, per the Construction Specifications Institute format, covers a broad range of items which are considered specialty items; however, items included are limited to those specifically found within Caltrans building contracts. Those specialty items are as follows: chalkboards; marker boards; tack boards and visual aids; information display boards; toilet partitions; shower and dressing stall enclosures; louvers and vents; wall and corner guards; pest control; flagpoles; directories; exterior signs; interior signs; lockers and benches; fire extinguisher cabinets; operating and folding partitions; storage shelves; toilet and bath accessories; clothes hooks; information display cases; routed redwood signs; metal signs; prefabricated wire mesh partitions; portable partitions; forwarding gates; cantilever steel shelving; sunscreens; telephone shelters; telephone enclosures; and truck weighing systems.

Review any Standard Special Provisions (SSPs) from Section 99[1], *Building Construction*, Division 10, *Specialties*, that have been included in the project *Special Provisions*, since much of the information therein typically will not be repeated in the following sections of this chapter.

4-10.01B Tips and Suggestions to Prepare for Inspection of Specialties

1. Authorized submittals, which may include such items as material and color samples, are required for all specialty items. The unique characteristics of each of the specialty items will require a review of the authorized submittals to understand how these individual items are to be furnished, installed, and maintained.
2. Specialty items that are wall-mounted can be found on the interior elevations of the architectural section of the project plans. Other items such as wall and corner guards and signs may only be found on the detail sheets of the architectural

[1] Caltrans internal use only

section of the project plans. Many of the remaining items, such as lockers, benches, toilet partitions, folding partitions, and shelving, will be found either on the floor plans or on the interior elevations of the architectural section of the project plans.

3. The location for toilet partitions and shower stalls will be found dimensioned on both the floor plan and the interior elevations of the architectural section of the project plans. There are specific requirements of the Americans with Disabilities Act (ADA) controlling many of the dimensions. Those dimensions are critical and should be checked to verify they match the project plans.
4. Louvers and vents may include both interior and exterior wall units. Some may have self-closing, gravity-operated shutters for protection against wind-driven inclement weather. Others will have the louvers designed in a manner to protect against moisture penetration from wind-driven conditions. The unit should be carefully inspected for insect screen, size of mesh openings, as well as the material from which those screens are made.
5. Flagpoles, when specified, will be shown on the site plan of the architectural section of the project plans.
6. Interior and exterior signs are shown on the standard details of the architectural section of the project plans. Observe the mounting heights and locations, as ADA requirements govern the installation. Figure 4-10.1 shows an example of a sheet of standard accessibility details for exterior signage found in the beginning of the architectural section of the project plans, usually A0-X sheets. The details shown in this figure may not be the most up-to-date; therefore, refer to the respective sheet(s) in contract plans for appropriate details and dimensions.
7. Lockers and benches are normally all pre-finished; however, they may be shipped in a knockdown condition and require assembly. Lockers will normally be designed to sit on a concrete or framed curb to raise them above the finish floor and prevent moisture migration associated with normal restroom and locker room uses.
8. Fire extinguisher cabinet mounting heights are again governed by ADA requirements and are shown within the architectural section of the project plans. Since these will be inspected by the Fire Marshal as well, be sure to check any applicable Fire Code Regulations.
9. Folding and operating partitions are often specified in the Break Room, the Crew Rooms, or Conference Rooms. They divide large areas into smaller rooms. In most instances, the folding partitions are designed for the loads to be carried by the roof framing. The framing for hanging these units is normally shown on the structural section of the project plans, and additional information can be found in submittals.

10. Sound attenuation is an important requirement of the folding partitions. It is necessary to confirm that the proper sound attenuation blankets and other insulation designed for the ceiling above the folding partitions, as well as the closure from the folding partitions to the floor, are completed in accordance with the project plans and the authorized submittal.
11. Storage shelving units are normally pre-finished, shipped in a knockdown condition, and assembled and installed in the storage areas. Review the project plans, *Special Provisions*, and the authorized submittals to determine where seismic anchors to the wall or the floor are required.
12. Toilet and bath accessories are normally shown in the architectural section of the project plans. Figure 4-10.2 is another example of a sheet showing accessibility details for toilet fixtures and miscellaneous interior items. These will also usually be in the architectural A0-X sheets. The details shown in this figure may not be the most up-to-date; therefore, refer to the respective sheet(s) in the contract plans for appropriate details and dimensions.

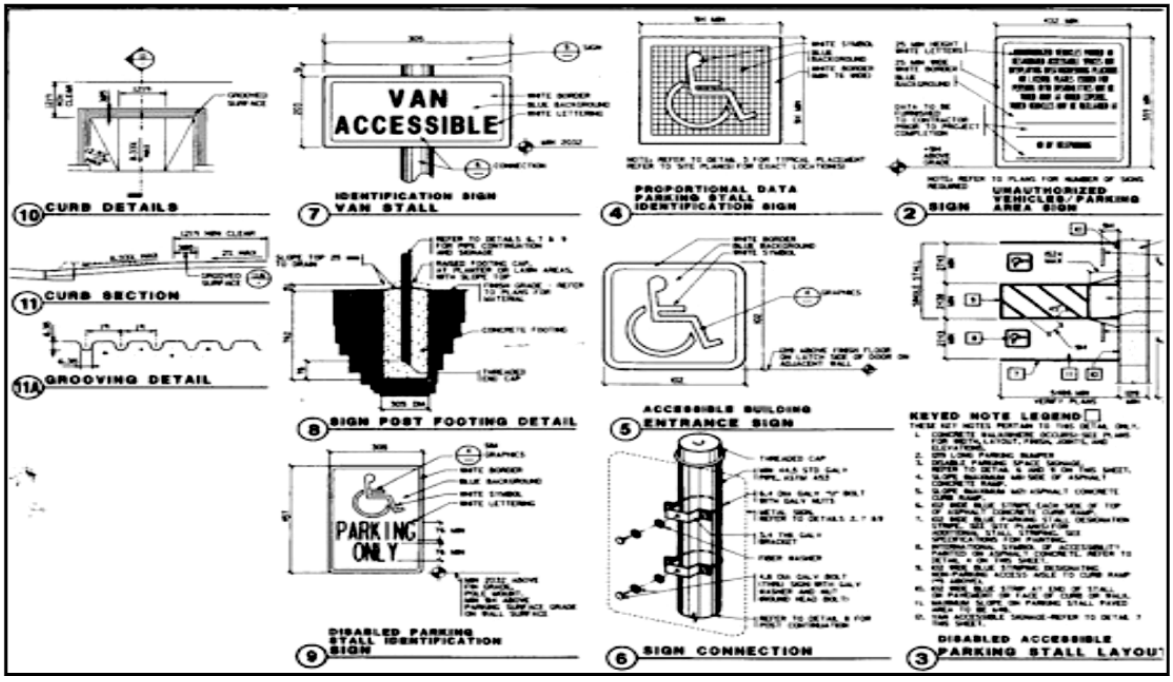


Figure 4-10.1. Example of an Exterior Accessibility Details Sheet

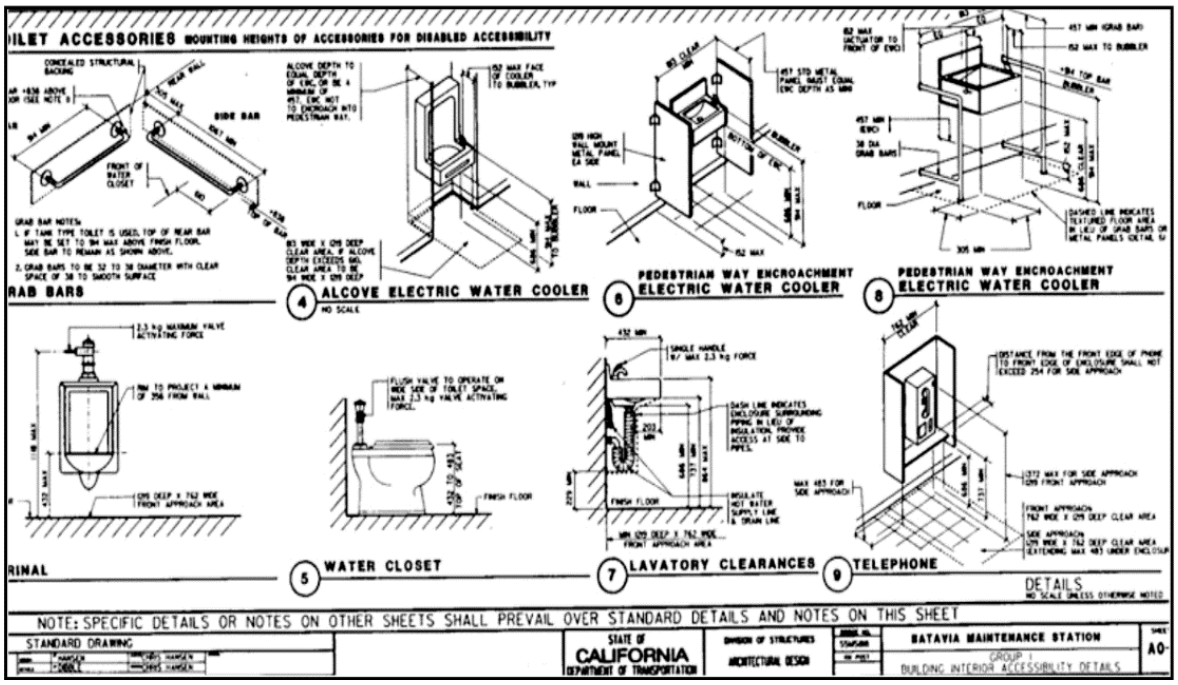


Figure 4-10.2. Example of an Interior Accessibility Details Sheet

4-10.01C Submittal Review

The Project Architect will review and authorize all the submittals for specialty items. During this review of accessory submittals, the Project Architect will ensure that the product(s) meets the following:

1. The requirements of the project plans and the *Special Provisions*. Consideration is also given to user requirements.
2. Individual components of the specialty items are compatible with other interacting components.
3. The specialty items can be installed to meet all dimensional requirements per the project plans for clearance, accessibility, and ADA compliance. Submittals should include all dimensions necessary for review and to confirm the layout.

Except for specialized equipment such as truck weighing systems, closeout submittals and warranties are not usually required for the items included in this Division. Ensure products recommended by the Contractor (such as bathroom wall fixtures) are similar to those currently being used by the facility operator.

Different suppliers may supply the fire extinguisher and the extinguisher cabinet. Confirm that both are compatible dimensionally and meet all applicable fire codes.

4-10.01D Installation

Most accessories require the addition of blocking in the wall framing for fixture anchorage. This is especially critical for toilet partitions, grab bars, and wall-supported shelving. Since blocking is important, perform at least one complete “blocking review” prior to placing wall coverings. It may be prudent to create an as-built sketch of certain walls with preinstalled anchorage blocks, illustrating the elevation and limits of the blocks prior to drywall/wall covering installation. Photos of the walls prior to closing up are helpful to show blocking, as well as the location of plumbing or electrical items.

As the blocking, fixture supports, electrical device boxes, and piping may create crowded areas within the walls, adequate clearances for all items should be verified. Manufactured items in this division shall be installed securely, plumb and true, and in accordance with the authorized submittals, the project plans, and the *Special Provisions*. Locations shall be as shown on the project plans.

Chalk boards, marker boards, tack and visual aid boards, and display boards are normally specified with an aluminum pre-finished frame, which will also include hangers for the unit. Trays will normally be specified to be attached to the bottom of the frame for markers and erasers on chalk and marker boards. Figure 4-10.4 shows some typical dry erase marker boards.

4-10.02 Chalk Boards

Chalk boards have been replaced with marker boards; see SSP 99-10125, *Marker Boards*. Check the project’s *Special Provisions* for information if chalk boards are specified on the project’s plans.

4-10.03 Tackboards

It is important when laying out electrical switches and room thermostats that placement of marker boards, tackboards, and chalk boards be considered. The placement of these items should be resolved during the submittal stage. Figure 4-10.3 shows some typical tackboards.



Figure 4-10.3. Typical Tackboards

4-10.04 Marker Boards

SSP 99-10125 covers the installation of marker boards, including the requirement to provide one felt eraser and a set of 12 liquid-chalk markers per board. It requires submittal of the manufacturer's product data and installation instructions, along with LEED documentation for recycled content when applicable. Materials must meet Porcelain Enamel Institute standards and consist of a porcelain enamel writing surface laminated to tempered hardboard with an aluminum backing, along with factory-installed anodized aluminum trim and trays. Installation must follow the manufacturer's instructions to ensure a rigid, secure, plumb, and true final product. Payment provisions are not included; Figure 4-10.4 shows typical marker boards.

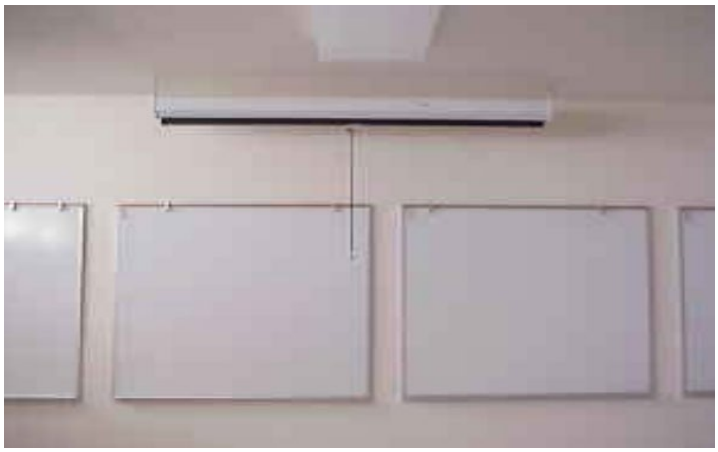


Figure 4-10.4. Typical Marker Boards

4-10.05 Metal Toilet Partitions

Metal toilet partitions consist of panels, doors, floor-anchored pilasters and shoes, urinal screens, fasteners, anchorages, and hardware. Internal reinforcement must be provided at all fasteners, anchorages, hardware, and accessories. See Figure 4-10.5 for typical metal toilet partitions.

Metal toilet partition submittals will include the actual interior dimensions of the room and the layout for the toilet partitions. These dimensions should be verified after the framing is complete. Manufacturer's descriptive data, catalog cut sheets, and installation instructions must be submitted.

Check the authorized submittals for the type and location of fasteners to be used for the installation of the toilet partitions. It is essential that the framing be checked to verify there is sufficient blocking to receive the anchors for the toilet partitions, prior to installation of drywall or wall coverings.

If the project has a stainless steel finish on the metal toilet partitions, discuss this with the Project Architect, as while these can look nice, they show fingerprints more than a painted partition.



Figure 4-10.5. Standard Metal Toilet Partitions
(Protective Gray Sheathing Still on Metal)

4-10.06 Louvers (General)

Louvers for walls, doors, and overhead doors will be detailed in the project plans and authorized submittals; specifications for them can be found in SSP 99-10202, *Louvers (General)*. Louvers may be fixed, adjustable, or operable, controlled by pressure differential, such as a fan turning on, or controlled by a control panel or relay that opens them on command of a specific function. Typical louver types are shown in the following figures. Figure 4-10.6 shows two door louvers and a wall louver. Figure 4-10.7 shows a fixed wall louver above a door. Figures 4-10.8 and 4-10.9 show interior and exterior views of operable wall louvers.



Figure 4-10.6. Door and Wall Louvers



Figure 4-10.7. A Fixed Wall Louver



Figure 4-10.8. Operable Wall Louvers Interior View Including the Motor that Operates Them



Figure 4-10.9. Exterior View of Operable Wall Louvers

Equipment and service bay overhead doors will often include louvers in the bottom panel of the door to work with declassification fans to remove fumes from gasoline that settle above the floor, and as such, these louvers need to be within 18 inches of the floor. An example of these is shown in Figure 4-10.10.



Figure 4-10.10. Sectional Overhead Door with Louvers in the Bottom Panel

4-10.07 Flagpole

The information concerning flagpoles and their bases is located in the authorized submittals.

4-10.08 Information Display Board

The information concerning display boards is located in the authorized submittals.

4-10.09 Information Display Cases

The information concerning display cases is located in the authorized submittals.

4-10.10 Routed Redwood Signs

Reserved

4-10.11 Metal Signs

Reserved

4-10.12 Signs

Signs used on Caltrans building projects may be made from a variety of materials, with common options including plastic, metal, and self-adhesive decals. Examples of typical signage can be found in Figures 4-10.11 through 4-10.14. As illustrated, signs can be located in both interior and exterior locations. To determine the specific signs required, consult the project plans and *Special Provisions*. Signage may appear throughout the building plan set, including architectural standards, door schedules, floor plans, and sheets related to electrical, mechanical, water, and wastewater systems.

ADA signage requirements are subject to frequent updates, so it is essential to review the contract for the most current standards. Additionally, coordinate with the Deputy State Fire Marshal to identify any fire and life safety signage requirements. These may not be included in the contract and could necessitate a change order to ensure compliance with fire codes.



Figure 4-10.11. Typical Signage- Identify Exit Locations or Occupancy Limits



Figure 4-10.12. Men's and Women's Restroom & ADA Accessibility Signs



Figure 4-10.13. Signage: Fire Extinguisher, Exit with Emergency Lighting and Room ID



Figure 4-10.14. Signage on a Fire Pump House Door

4-10.13 Wardrobe Lockers

Reserved

4-10.14 Wood Benches

Reserved

4-10.15 Fire Extinguisher and Cabinet

Fire extinguishers and cabinets are either surface mounted, semi-recessed, or fully recessed; see Figure 4-10.15 for a fully recessed fire extinguisher cabinet. Fire extinguisher requirements are included in the *Special Provisions*, while the details are shown in various sections of the project plans. Size requirements are usually shown on the mechanical section, while mounting locations and typical mounting height will be shown in the architectural section on the interior elevations of the project plans. Verify fire extinguisher size and placement per applicable fire code and the Fire Marshal before installation. The mounting height may be affected by current accessibility standards; therefore, verify the mounting height with the Project Architect. Verify proper signage for fire extinguishers with the architect and the Fire Marshal, as fully recessed cabinets may require a triangular sign installed above, that protrudes from the wall. See example of this in Figure 4-10.13 above.

The *Special Provisions* will provide time limitations for final extinguisher charging, servicing, and tagging just prior to the completion of the project.



Figure 4-10.15. Fully Recessed Fire Extinguisher Cabinet

4-10.16 Fire Access Key Box

A Fire Access Key Box as specified in SSP 99-10560 will often be required when there is a 24-hour monitored fire alarm and/or fire sprinkler system. This is a box mounted to the exterior of the building or on a facility gate. The local fire department has the master key to the box, and the building and/or gate access keys or cards are placed inside. This provides the fire department access to the building/facility in the event of an after-

hours alarm callout or response. This saves time in accessing the building in the event of a fire and minimizes the potential damage that is done in gaining access to the building. To order one of these boxes, the Contractor will need to provide the vendor with the name of the local fire department so that the box can be shipped keyed to that fire department's key. One of the big vendors carries a version of it called the "KnoxBox". See photos below (Figure 4-10.16 and Figure 4-10.17), which illustrate a gate post and wall-mounted box, respectively. These boxes are shipped unlocked; after the fire department places the building key(s) inside, they lock the box.



Figure 4-10.16. KnoxBox Mounted on a Gate Post



Figure 4-10.17. KnoxBox Mounted on a Wall

4-10.17 Prefabricated Wire Mesh Partitions

Reserved

4-10.18 Portable Partition

Reserved

4-10.19 Folding Partition Wall

A folding partition wall is used to allow a room to be used as one large room (partition wall open) or divided into two smaller rooms (partition wall closed). See Figure 4-10.18 for an example of a folding partition wall. A folding partition wall may also be made of connected panels in 2- to 4-foot sections that are made of heavier material than the accordion folding wall shown in the figure.



Figure 4-10.18. Typical Folding Partition Wall

4-10.20 Folding Gates

Reserved

4-10.21 Freestanding Steel Shelving

Reserved

4-10.22 Cantilever Steel Shelving

Reserved

4-10.23 Sun Screens

Reserved

4-10.24 Telephone Shelter

Reserved

4-10.25 Telephone Enclosures

Reserved

4-10.26 Toilet and Shower Accessories

Reserved

4-10.26A Toilet Room Accessories

Toilet room accessories will include such items as toilet paper dispensers, toilet seat cover dispensers, paper towel dispensers, soap dispensers, waste receptacles, clothes hooks, etc. Some of these items are shown in Figures 4-10.19 and 4-10.20. These items need to be referenced and laid out in the wall framing stage so that appropriate blocking and backing can be installed in the wall framing. Any items that are recessed or partially recessed need to be custom framed during the framing stage.

It is also advisable early in the project to confirm with the facility end user as to the type of material supplies they are able to obtain for the toilet room, such as paper towels, toilet paper, and seat covers. Check the corresponding accessories to see whether they can accommodate the available supplies.



Figure 4-10.19. Hand Towel and Soap Dispensers Are Typical Toilet Accessories



Figure 4-10.20. A Restroom Showing Various Toilet Accessories

4-10.27 Truck Weighing System

This work shall consist of furnishing, installing, and constructing a truck weighing system in accordance with the details shown on the project plans and the *Special Provisions*. See examples of truck weighing systems in Figures 4-10.21 through 4-10.24.

Install the truck weight assemblies and electrical weighing equipment according to the authorized submittals. The electrical work involved with truck weighing systems is covered further in Division 16, *Electrical Work*.



Figure 4-10.21. Truck Weighing System Pit and Weighing Panels

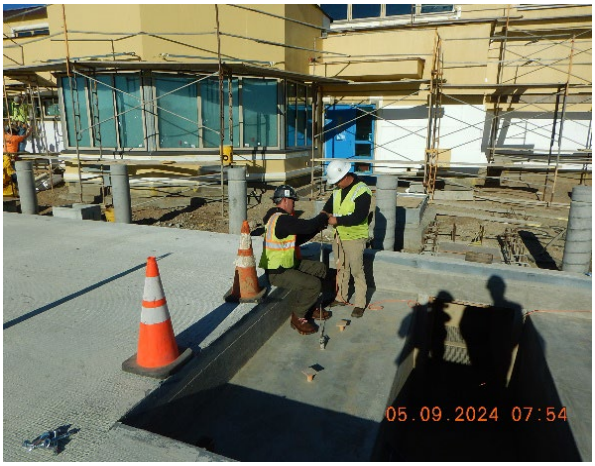


Figure 4-10.22. Truck Axle Weigh System Pit



Figure 4-10.23. Truck Axle Weigh System Deck



Figure 4-10.24. Truck Axle Weigh System Completed Scale Deck

4-10.28 Truck Screening Weighing System

This system would be utilized in a Commercial Vehicle Enforcement Facility (CVEF), which includes truck weigh stations with or without inspection facilities.
A truck-screening weighing system uses weigh-in-motion (WIM) pads to record axle and gross vehicle weights as trucks pass over them. The system then classifies or sorts the vehicles—either manually or automatically through an integrated weigh meter—and identifies any axle loads that exceed preset thresholds. Trucks flagged for potential overloads are directed to a static scale (Truck Weighing System) for an official certified weight measurement, which serves as the basis for any overweight enforcement actions. Figures 4-10.25 through 4-10.27 show WIM pads being installed in a CVEF.

Refer to the *Special Provisions* for specific hardware and software for the truck screening weighing system. There may be electrical components of the SSP 99-10882, *Truck Screening Weighing System,* specified in Division 16, *Electrical Work*, of the *Special Provisions*.



Figure 4-10.25. WIM Pad Frames



Figure 4-10.26. WIM Pad Frame Installation



Figure 4-10.27. Completing WIM Pad Installation