



OSHA INSTRUCTION

U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration

DIRECTIVE NUMBER: CPL 02-00-141

EFFECTIVE DATE: July 14, 2006

SUBJECT: Inspection Scheduling for Construction

ABSTRACT

- Purpose:** This Instruction implements OSHA's programmed inspection plan for the construction industry, and cancels section B.1.b. (2) of OSHA Instruction CPL 02-00-025 Scheduling System for Programmed Inspections, January 4, 1995. This program does not include general industry or maritime worksites.
- Scope:** OSHA-wide.
- References:** OSHA Instruction CPL 02-00-025, Scheduling System for Programmed Inspections, January 4, 1995; OSHA Instruction CPL 02-00-103, Field Inspection Reference Manual (FIRM), September 26, 1994; OSHA Instruction CSP 01-00-002, State Plan Policies and Procedures Manual, March 21, 2001; and OSHA Instruction CSP 03-02-002, OSHA Strategic Partnerships for Worker Safety and health, February 10, 2005.
- Cancellations:** Section B.1.b. (2) of OSHA Instruction CPL 02-00-025, Scheduling System for Programmed Inspections, January 4, 1995.
- Expiration Date:** None.
- State Impact:** State adoption required in part, See paragraph VI.
- Action Offices:** National, Regional, and Area Offices.
- Originating Office:** Directorate of Evaluation and Analysis

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By and Under the Authority of

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Executive Summary

This Instruction explains OSHA's major site-specific targeting inspection program for the construction industry. This Instruction also cancels Section B.1.b. (2) of OSHA Instruction CPL 02-00-025, Scheduling System for Programmed Inspections, January 4, 1995.

Due to the mobility of the construction industry, the transitory nature of construction worksites, and the fact that construction worksites frequently involve more than one construction employer, inspections are scheduled from a list of construction worksites rather than construction employers. The National Office will provide to each Area/District Office a randomly selected list of construction projects from all identified or known covered active projects. This list will contain the projected number of sites the office plans on inspecting during the next month.

Significant Changes

- Incorporation of the construction programmed inspection targeting procedures into a stand-alone OSHA Instruction.
- Incorporation of the Construction Inspection Targeting Application into the inspection targeting process.

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- I. Purpose. This Instruction implements OSHA’s programmed inspection plan for the construction industry and cancels section B.1.b. (2) of OSHA Instruction CPL 02-00-025, Scheduling System for Programmed Inspections, January 4, 1995. This program does not include general industry or maritime worksites.
- II. Scope. This Instruction applies OSHA-wide.
- III. References.
- A. Revisions to the Voluntary Protection Programs to Provide Safe and Healthful Working Conditions, *Federal Register*, December 8, 2003 (68 FR 68475).
- B. 29 CFR Part 1908, Consultation Agreements.
- C. OSHA Directives.
- CPL 02-00-051, Enforcement and Limitations under the Appropriations Act, May 28, 1998.
 - CPL 02-00-025, Scheduling System for Programmed Inspections, January 4, 1995.
 - CPL 02-00-103, Field Inspection Reference Manual (FIRM), September 26, 1994.
 - CSP 03-02-002, OSHA Strategic Partnerships for Worker Safety and Health, February 10, 2005.
 - CSP 02-00-001, Consultation Policies and Procedures Manual, August 6, 2001.
 - CSP 01-00-002, State Plan Policies and Procedures Manual, March 21, 2001.
 - ADM 03-01-005 OSHA Compliance Records, August 3, 1998.
 - CPL 04-00-001 Procedures for Approval of Local Emphasis Programs (LEPs), November 10, 1999.
- IV. Cancellations. Section B.1.b. (2) of OSHA Instruction CPL 02-00-025, Scheduling System for Programmed Inspections, January 4, 1995.
- V. Expiration Date. None.

VI. Federal Program Change. This Instruction describes a Federal program change for which State adoption is not required. However, States are required to have their own inspection targeting systems (a “core inspection policy”), which must be documented in their State Plans and revised as necessary to reflect current practices.

A. State Targeting Systems.

1. CPL 02-00-025 (CPL 2.25I, January 4,1995), discussed options for State targeting systems. The general industry option has been updated in the past through Notices discussing OSHA’s Site-Specific Targeting Plan; this Instruction addresses targeting for construction. States have two options for targeting construction inspections:
 - a. Use an existing State-developed construction inspection targeting system based on available State data.
 - b. Participate in the OSHA Construction Inspection Targeting System described in this Instruction. As noted in Section VII, the system uses F.W. Dodge reports on construction projects to produce monthly inspection lists which are posted on a website available to participating States upon request. This system uses a computer-based methodology to select construction projects for inspection on a neutral basis when they are 30-60% complete. Selected sites represent a broad range of construction projects.
2. Each State should review the construction targeting system described in its State plan to assure its accuracy and that it meets the requirements of this directive, and make revisions as appropriate. If a State adopts, develops, or revises an inspection scheduling system different from that indicated in its response to CPL 02-00-025, the State must notify the Regional Administrator of the change and, if the revised procedures differ from the Federal system outlined in this Instruction, provide a plan supplement describing these procedures within six months of the date of this Instruction.

B. Deferrals.

1. States may, but are not required to, defer an inspection or assign lower priority, for up to 90 days, to construction sites for which the employer has requested a full-service comprehensive consultation visit and that visit has been scheduled. See paragraph X.F.6 of this Instruction.

2. States may, but are not required to, defer an inspection for up to 75 days at a construction site for which the employer has submitted a VPP application. See paragraph X.F.7 of this Instruction.

VII. Background.

- A. Due to the mobility of the construction industry, the transitory nature of construction worksites and the fact that construction worksites frequently involve more than one construction employer, inspections are scheduled from a list of construction worksites rather than construction employers. The National Office will provide to each Area/District Office a randomly selected list of construction projects from all known covered active projects. This list contains the projected number of sites the office plans on inspecting in the next month.
- B. OSHA's Construction Inspection Targeting System is required to comply with court decisions on OSHA's process of selecting worksites for inspection. The system is designed to provide timely information on known active construction projects, including the project's location and the name of the owners, project managers and contractors working on the projects. Since resources limit OSHA programmed inspections to approximately 5% of construction projects (excluding single-family housing) started each year, this targeting plan is designed to be a broad based system that selects projects in a way to establish a presence in the entire construction industry. Targeting systems intended to address specifically identified hazards or a narrow range of construction activity are to be developed under the protocols for Local Emphasis Programs contained in CPL 04-00-001.
- C. The construction inspection system relies upon a statistical abstract of information available on construction project starts from F.W. Dodge and on estimated construction project durations derived from econometric modeling. The system is designed to get CSHOs on-site at neutrally-selected projects when they are between 30 percent and 60 percent complete, the time when the greatest number of employees and contractors are expected to be on the construction site.
- D. OSHA's contractor adds to the Dodge data a time period when each project is active and maintains a file containing all active construction projects. From active construction projects, a randomly selected construction inspection list will be generated for each Area Office on a monthly basis. This selection is done without employer identifiers to ensure neutrality. The list is based upon:
 1. Counties located within Area Office boundaries;
 2. Estimated number of worksites to be inspected during the monthly scheduling period (to be determined by the Area Director);
 3. The selection criteria are to be determined by the Area Director based on

local conditions.

VIII. Significant Changes.

- A. Incorporation of the construction programmed inspection targeting procedures into a stand-alone OSHA Instruction. The instruction will include an outline of the procedures followed to generate monthly inspection lists, the method those lists are made available to the Area Offices, and a discussion of how procedures meet OSHA obligation to have a neutral targeting system.
- B. Incorporation of the Construction Inspection Targeting Application into the targeting process. The OSHA Construction Inspection Targeting Application is an efficient, electronic way to provide authorized personnel detailed information on construction projects in your area that have been selected for a programmed inspection and projects that meet criteria established for any construction special emphasis programs. The application consolidates and facilitates timely access to information on the selected project sites in a secure database that authorized personnel can access via the Internet anywhere and at anytime.

IX. Action Information.

- A. Responsible Office. Directorate of Evaluation and Analysis (DEA).
- B. Action Offices. National, Regional, and Area Offices.
- C. Information Offices. State Plan States, OSHA Training Institute, Consultation Project Managers, VPP Managers, Partnership Coordinators/Managers, Compliance Assistance Coordinator, and Compliance Assistance Specialists.

X. Description of the Construction Targeting Plan.

- A. Inspection List Selection Criteria: The Area Office will use the Construction Inspection Targeting Application located at OSHA's Construction Targeting website to set specific selection criteria and to access the monthly site inspection lists and associated construction inspection reports (also known as the Dodge reports). The selection criteria will be determined jointly by the Regional Administrator and the designated Area Office representative. Only authorized users from the OSHA National Office, Regional Offices, Area Offices, and State Plan States will be able to access this website.
- B. This targeting plan is designed to be a broad based system that selects projects in a way to establish a presence in the entire construction industry. The Construction Inspection Targeting Application includes a function that allows the Area

Office/State Plan State to make minor adjustments by excluding categories of projects from the next monthly random sample of inspection sites. These categories are end-use, construction type, dollar value, number of stories, and type of owner (i.e. Federal government, State, municipality, military or private). The Area Director can use these options to exclude areas of construction that have had a significant amount of focused OSHA activity in recent months. For example, if the Area Office is conducting an LEP focusing on bridge construction, the Area Director can use the end-use option to exclude bridge building for the targeting lists generated under this instruction. These options must be used in a manner which retains the program's overall objective of establishing a presence in the entire construction industry. Area Directors who exercise one or more of the options will also ensure that the generated targeting lists are not limited in a way that compromises the random selection component of the targeting system. If the selected options take away the random selection component, the Area Director must modify the options in a way that generates a randomly selected list. Note: Targeting systems intended to address specifically identified hazards are to be developed under the protocols for Local Emphasis Programs contained in CPL 04-00-001.

1. Each option within the Construction Inspection Targeting Application is set to a default. The Area Director must review these defaults to determine if they are appropriate for the local conditions. If any changes are necessary, the Area Director must set the desired deletion or inclusion criteria for the inspection site list or special emphasis site list, respectively. Examples are: excluding or including projects with specific dollar values (less than 1 million dollars); or excluding or selecting projects with specific end-uses (high-rise offices or bridges).
 2. Another option to facilitate inspection planning is to request projects in a cluster of counties within an Area Office/State Plan State jurisdiction, so that monthly inspections can be focused in selected areas each month. This may result in reducing travel time to remote locations or in saturating counties where a jurisdiction wants to make OSHA's presence felt. However, the Area Director must ensure that all counties with the Area Office jurisdiction will be covered within a reasonable time period.
 3. The Area Director will set the current sample size (i.e., the number of inspection sites that will be provided each month). The office will not receive a list if a sample size of zero is indicated.
- C. Scheduling Cycle. The scheduling period (cycle) for construction inspections is one calendar month. Each month, each Area Office will access its programmed construction inspection list from the Construction Inspection Targeting

Application. The Area Office will also access the OSHA Construction Inspection Reports corresponding to the sites on the inspection list through the Construction Inspection Targeting Application. The inspection list will be dated the following month. It can be used when received and should be completed by the end of the month it is dated. The use of the current list is important because conditions change rapidly and the lists become outdated. The best planning strategy is to receive the required number of sites for the month to ensure that the most current list is always being used.

1. All sites on the inspection list must be inspected, and the sites can be scheduled in any order to make efficient use of resources.
2. Complaints and referrals must be treated in accordance with the Complaint Policies and Procedures directive.
3. The Area Office is not authorized to make any deletions from that month's inspection list prior to its completion, except where the Area Director documents that:
 - a. Little or no construction activity at a worksite on the list has begun or construction activity has already been substantially completed before an inspection can be made.
 - b. A worksite has become ineligible for any legitimate reason; e.g., where a substantially complete inspection of the worksite has been conducted as a result of a complaint investigation. (If in doubt whether a worksite has become ineligible, the Area Director is to contact the Regional Office.)
 - c. A worksite has been approved for exemption from inspection through participation in the Voluntary Protection Program.
4. Any deletion from a monthly inspection list must be fully documented in accordance with X.F., below.
5. If a new list is posted for the following month and it is anticipated that it will not be used at all because of a large number of sites remaining on the current list, the Area Office should reject the list using the Construction Inspection Targeting Application as soon as practicable so that the unused sites may be restored to be eligible for possible selection on the next list.
6. If it appears that all sites on the list will have been inspected by the end of the third week of the month, the Area Director may request a supplemental

inspection list through the Construction Inspection Targeting Application.

- a. If a supplemental list is requested and received, it is to be treated in the same manner as a list received at the beginning of the month, i.e., once started, it must be completed.
- b. The Area Director should consider increasing the sample size if supplemental sites are repeatedly requested. Similarly, if the lists are not routinely completed by the end of the month, consider decreasing the sample size.

D. Limitation on Frequency of Selection. Normally, no site will be selected for inspection more frequently than once per trimester. Therefore, any project selected for an inspection will be removed from the master file for a period of four months and reentered in the fifth month if it is still active.

E. Completion of Inspection List. By the middle of each cycle, the Area Director shall assess progress in inspecting all sites on the list in order to plan resources for the following cycle.

1. If it appears that not all sites on the list will have been inspected by the end of the month, the Area Director may request a shortened list from CIRPC for the following month by adjusting the sample size through the Construction Inspection Targeting Application.
2. Consecutive months' lists may be combined and used concurrently. However, all sites from the first month of a combined list must be inspected before worksites from the second month's list are combined with a third month, except when a site is carried over as described at X.F., below. That is, lists for two consecutive months can be combined to form one combined cycle; but the first month's list must be completed or classified as carryover before the second month's list can be combined with the third month's list, and so on.

F. Carryovers. Worksites on one inspection list may be carried over to the next cycle only under the following circumstances:

1. A worksite may be carried over to the next cycle if it is not operating normally at the time of the inspection because of personnel strikes, environmental conditions or other factors.

2. A worksite may be carried over to the next cycle if necessary equipment or personnel with experience and qualifications to perform the inspection are not presently available.
3. A worksite may be carried over to the next cycle in the interest of efficient use of resources. The number of such carryovers may not exceed 50% of the total number of sites on the original cycle. Any worksite carried over in this manner may not be carried over a second time.
4. A worksite may be carried over to the next cycle if the inspection cannot be completed due to the employer's refusal to allow it.
5. A worksite may be carried over to the next cycle if conditions (construction activity at the site) have not changed substantially since a prior inspection.
6. A worksite may be carried over to the next cycle if the inspection must be deferred because the employer has requested a full-service comprehensive OSHA consultation visit and that visit has been scheduled.
7. A worksite may be carried over to the next cycle if the inspection must be deferred because the employer has submitted a VPP application for the site.
8. Approval for carrying over a worksite for reasons not listed above must be requested from the Regional Administrator and approved by the Directorate of Construction (DOC).

G. Area Director Administration of Inspection List. The Area Director is responsible for maintaining documentation necessary to demonstrate that the construction inspection lists have been properly utilized in accordance with the requirements of this Directive and that selection criteria are current and appropriate.

1. The monthly construction inspection lists must be maintained in the Area Office for a period of three (3) years after completion of the cycle, whether they are used or not. (See OSHA Instruction ADM 03-01-005 OSHA Compliance Records.)
2. New modifications to the Area Office's selection criteria must be determined jointly by the Regional Administrator and the designated Area Office representative. Such modifications will be effective the month following entry into the computer if they are received by the 23rd of the month. Note: Ongoing changes to the selection criteria, such as rotating

counties, do not need Regional approval for each monthly change. Only the initial determination that the ongoing change will be used should be made jointly between the Area and Regional offices.

3. Deletions from a monthly inspection list must be documented by using the “Archive Site” function within the Construction Inspection Targeting Application. The appropriate reason for deletion will be chosen from the drop down menu located in the function.

XI. Health Construction Inspections. No separate scheduling method is applied for programmed construction health inspections. Rather, the Area Director is to determine which construction inspections are to be conducted as a joint inspection where serious health hazards are likely to exist at the site. A local emphasis plan may be submitted and approved for scheduling health construction inspections.

XII. Recording and Tracking. The Project Identification Number (PID) must be recorded into the IMIS for each construction project inspected under this Directive. The PID is entered on all of the OSHA 1s generated for the general contractor and the subcontractors at the worksite. The PID number is the unique six-digit number that identifies each project on the monthly programmed construction inspection list provided through the Construction Inspection Targeting Application. The PID is coded as follows in Item 42, Optional Information of the OSHA-1 Form:

<u>Type</u>	<u>ID</u>	<u>Value</u>
N	06	PID (six-digit PID Number)

Note: The PID is also referred to as the Dodge Number.

APPENDIX A

C-Targeting Application

What is the Construction Inspection Targeting Application?

The OSHA Construction Inspection Targeting Application is an efficient, electronic way to provide authorized personnel detailed information on construction projects in your area that have been selected for a programmed inspection and projects that meet criteria established for any construction special emphasis programs. The application consolidates and facilitates timely access to information on the selected project sites in a secure database that authorized personnel can access via the Internet anywhere and at anytime.

What functions are available in Construction Targeting?

The following functions are available:

- View each of the five lists (Inspection Sites, Supplemental Sites, Special Emphasis Sites, Early Warning Sites, and Archived Sites).
- View detailed data on a project/site, multiple sites, or all sites from a list.
- View or change deletion criteria for the Inspection Site list.
- Change the number of inspection sites that are requested each month.
- Request additional supplemental inspection sites to inspect.
- View or change selection criteria for the Special Emphasis Site list.
- Print lists and detailed data on a project/site, multiple sites, or all sites from a list.
- Archive a site that has been inspected, completed prior to inspection, or canceled.
- Re-sort a list based on any of the data in the list.
- Search the database using specified data fields.

What worksites do I have access to?

OSHA Area Offices, Regional Offices, and State Plan States can only view project sites that have been selected in their area. Non-authorized users will not be able to see any of this information.

How do I archive inspected sites?

When an inspection is completed for a project that is on the Inspection Site List, the Supplemental Site List, or the Special Emphasis Site list, enter in the IMIS Activity Number (OSH1) of the inspection in the designated field on the detailed display for the site. This removes

the project site from the Inspection Site List to the Archives.

If a project was completed prior to an inspection, enter the word “completed” into the activity number field. If a project was canceled, enter the word “canceled” into the activity number field. Entering “completed” or “canceled” into the activity number field moves the project site to the Archives.

Early Warning sites are automatically removed from the database each month when the new sites are posted to the application.

Project sites will stay in the archives indefinitely.

For large projects, inspection lists may include what appear to be duplicate entries for the same site. This occurs when a separate bidding process was used for different portions of a project.

What options does the Area Office/State Plan State have to focus the inspection lists on particular categories of construction?

The construction inspection system is designed to be responsive to the needs of Area Offices/State Plan States.

Options are built in to help target the different categories (end-use, type, dollar value, number of stories, and type of owner (i.e. Federal government, State, municipality, military or private)) of construction projects. An Area Office/State Plan State can specify or update criteria to exclude categories of projects from the monthly random sample of inspection sites or obtain all sites meeting specified criteria for special emphasis programs by clicking on the Options tab. Click on 'view or change' criteria and then on 'Update'.

Use the check boxes to indicate the desired deletion or inclusion criteria for the inspection site list or special emphasis site list, respectively. Examples are: excluding or including projects with specific dollar values (less than 1 million dollars); or excluding or selecting projects with specific end-uses (high-rise offices or bridges). The deletion and inclusion criteria focus inspection lists on particular categories of construction projects.

Another option to facilitate inspection planning is to request projects in a cluster of counties within an Area Office/State Plan State jurisdiction, so that monthly inspections can be focused in selected areas each month. This may result in reducing travel time to remote locations or in saturating counties where a jurisdiction wants to make OSHA's presence felt. Indicate this choice by selecting 'other' and typing a description of desired county rotation in the text box.

How can the size of the monthly inspection site list be managed?

The Options page indicates the current sample size; i.e., the number of inspection sites that have been requested for a month. Click on 'change' to increase or decrease that sample size. The Office will not receive a list if a sample size of zero is indicated.

If the Office has inspected all listed sites before the end of the month, the user can click on

'request' under Supplemental Sites to obtain more sites.

An Office should consider increasing the sample size if it repeatedly has to request supplemental sites. Similarly, if the Office is not completing its lists by the end of the month, it should consider decreasing the sample size.

When do I have to make changes for the next month's list?

Supplemental lists can be requested any time during the month. The request for additional sites will be filled and posted to the database as soon as possible.

Changes to sample size and deletion criteria for the inspection site list and changes to selection criteria for the special emphasis site list must be made by the 23rd of the month (or first business day after a weekend or holiday) to be processed for the next month's list.

Where do I get more information about the Construction Inspection Targeting System?

Please e-mail comments or questions about this web-based application to the Office of Statistical Analysis using the e-mail link found on the C-Targeting Home Page.

APPENDIX B

Selection Criteria Options

Sample Size

The sample size is the number of construction project sites requested each month. The sample size can be changed as frequently as needed, based on an office's current workload.

Request Supplemental Sites

If an office completes all of its listed inspections, authorized personnel may request additional supplemental sites to inspect.

Request Special Emphasis Sites

An office may request a list of construction project sites for its own construction targeting initiatives. Note that these targeting initiatives need to be approved by the National Office.

Inspection Site Deletion Criteria

The Inspection Site Deletion Criteria are used to exclude categories or types of construction project sites from being selected for inspection. These criteria can be viewed or changed to meet the needs of the office.

Special Emphasis Selection Criteria

The Special Emphasis Selection Criteria are used to select categories or types of construction project sites for your office's construction targeting initiatives. These criteria can be viewed or changed to meet the needs of the office.

APPENDIX C

Site Selection Description

What is the legal basis for the OSHA Construction Inspection Targeting System?

Due to several court challenges to the worksite selection process for inspections, OSHA developed the current Federal programmed construction inspection system. The project selection process which drives the system meets the legal requirement that projects be selected pursuant to an administrative plan containing specific neutral criteria. Projects are randomly selected from a file representing the universe of active construction projects that contains no contractor identifiers.

In addition, the Office of Inspector General (OIG) requires documentation of the project selection procedures for construction inspections that Area Offices follow. However, since preparation and maintenance of such documentation would be impracticable and unduly burdensome on Area Offices, the current system serves as the documentation.

How are sites selected?

A computer-based methodology is used to select projects for inspection on a random, statistical basis. Selected sites represent a broad range of construction projects: residential (excluding single-family housing); nonresidential buildings, such as commercial, manufacturing, transport, industrial, educational, leisure, & public buildings; heavy construction, such as cogenerators, nuclear power, sewage treatment, communications, shoreline maintenance; and highway and highway-related construction, including bridges, tunnels.

Each month, F.W. Dodge provides CIRPC with the names of projects that have entered the start stage (about 18,300 projects per month), based upon the date of the award of a general contract or the date when project decisionmakers state that "work is to start on a particular date". Using a sophisticated construction duration model that factors in the start date of the project, estimated duration of the project, type of construction project, dollar value, type of owner (i.e. Federal government, State, municipality, military or private), number of stories, and a seasonal adjustment, projects are identified that are estimated to be at some stage of construction, i.e., active. Accurate start date information is critical to estimates of when projects will be prime for inspection (30 percent to 60 percent complete).

Projects are randomly selected to obtain the number requested by the Area Office/State Plan State. Initially, only projects \$950,000 and more which are estimated to be between 30 percent and 60 percent complete are considered for selection. If the requested quota cannot be met using these criteria, the "percent complete" criterion is expanded to 25 percent to 65 percent and then to 25 percent to 70 percent complete, if necessary. If more projects are still required, the value criterion is lowered to \$500,000 (30 percent - 60 percent complete). The final step to meet a sufficient number of projects reduces the value criterion to \$250,000 with a 30 to 60 percent completion criterion.

Projects are identified by project identification numbers (PID). Once selected, the PIDs are used to order an OSHA Construction Report for each project from F.W. Dodge. Each report contains the following information: project identification number - unique to each project; project title; project address (or site location information when address not applicable); project owner's name, business address, & telephone number; estimated contract value; estimated square footage of buildings; number of units (on residential projects); number of buildings; estimated construction start date; type of ownership (i.e. Federal government, State, municipality, military or private).

How accurate are the data on the projects?

The information source on construction projects for the construction inspection targeting system is F.W. Dodge, Inc., the most extensive construction news gathering operation in the world. Dodge employs 400 full-time reporters and more than 1,000 correspondents to collect information from a large network of news sources, including permit offices. After the information is collected, individual project reports are created. To ensure coverage of as much construction activity as possible, Dodge maintains 100 branch offices around the country. Reporters make personal visits and phone calls, daily, to about 55,000 private firms, permit offices, municipal, state, and government offices to obtain information pertaining to approval, design, development, and construction of all types of construction projects over \$50,000, including new construction, additions and alterations. Coverage is not restricted to bid contracts but includes negotiated contracts and major force account work (use of owner's employees rather than contractor's) as well.

F.W. Dodge files represent the best available universe of active construction projects. An independent study funded by OSHA found that the Dodge database covers over 90 percent of the universe of all construction projects over \$50,000, excluding single-family housing. Farm construction and small force account projects were areas with less complete coverage.

In an ideal world, all construction projects would be known, each project would start in the month it was planned to start, each project would remain active the number of months estimated by econometric models, and each project would proceed along an orderly path of construction operations that would accurately estimate in advance the day that excavation, steel erection or landscaping, would begin and end.

However, actual construction activity is less orderly. Construction plans are constantly changing; project duration is not available from construction permits or other sources; each project is unique; the scheduling of construction operations and their duration differ from project to project, even of the same type, and schedules are rarely met. Construction schedules for similar end-use projects, such as office buildings, highways, bridges or schools of equal contract value may vary dramatically in duration due to different design features, site conditions and the owner's cost of delayed occupancy (use). Even assuming that scheduled duration of projects were available from owners or contractors, project duration errors would still exist because of schedule interruptions due to such things as litigation among contractors/owners, industrial relations disputes, financial problems, or unforeseen construction problems, which are all common events on construction projects.

Given the uncertainties, some of the projects expected to be 30 percent to 60 percent complete will be in an earlier stage (or not even started) or at a later stage (or even completed). On the other hand, the systematic process of identifying projects and estimating their status using the best available data increases the likelihood that inspections will occur at all stages of construction.

What are Early Warning Sites?

In addition to the random selections of project sites for inspection each month, high-value projects at the start stage (month the project is planned to start) are identified. The purpose of the Early Warning Site (EWS) List is to alert Area Offices/State Plan States to the initiation of major construction projects, so that their progress might be followed to ensure a timely inspection of specific phases. Each Early Warning Site will appear on the Inspection Site List for the month the project is estimated to be 30 percent complete.

The value threshold to qualify as an Early Warning Site varies by Area Office/State Plan State, ranging from \$5 million to \$20 million, depending upon the five-year historical pattern of project values in the respective area office jurisdiction.