

VOSH PROGRAM DIRECTIVE: 02-105A

ISSUED: 15 January 2014

SUBJECT: **Inspection Scheduling for Construction**

Purpose This Directive updates the VOSH process for Inspection Scheduling for the Construction Industry and explains the planned inspection program for the Construction Industry. The Directive includes an outline of the procedures followed to generate monthly inspection lists, the method those lists are made available to the Regional Offices, and a discussion of how procedures meet VOSH's obligation under the state plan agreement with OSHA to have a neutral targeting system. This program does not include General Industry or Maritime worksites.

This Program Directive is an internal guideline, not a statutory or regulatory rule, and is intended to provide instructions to VOSH personnel regarding internal operation of the Virginia Occupational Safety and Health Program and is solely for the benefit of the program. This document is not subject to the Virginia Register Act or the Administrative Process Act; it does not have general application and is not being enforced as having the force of law.

Scope This Directive applies VOSH-wide.

Reference OSHA Instruction CPL 02-00-155 (06 September 2013)

Cancellation VOSH PD 02-105 (July 1, 2007)

Effective Date 15 January 2014

Expiration Date Not Applicable.

Action Directors and Managers shall ensure that policies and procedures established in this Directive are understood by all affected personnel and that the requirements of this Directive are complied with.

William P. Burge
Acting Commissioner

Attachments **OSHA APPENDIX A: C-TARGETING APPLICATION** - OSHA CPL 02-00-155 (06 Sept. 2013)
 OSHA APPENDIX B: SELECTION CRITERIA OPTIONS - OSHA CPL 02-00-155 (06 Sept. 2013)
 OSHA APPENDIX C: SITE SELECTION DESCRIPTION - OSHA CPL 02-00-155 (06 Sept. 2013)

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Assistant Commissioner VOSH Compliance & Cooperative Programs Staffs
VOSH Directors and Managers OSHA Region III & OSHA Norfolk Area Offices
VOSH Legal Support & IMIS Staffs

Summary This Directive sets out VOSH’s “core inspection policy” for Construction Industry inspections and further explains the inspection program for the Construction Industry which is required under the state plan agreement with federal OSHA.

The OSHA Construction Inspection Targeting Application provides authorized personnel detailed information on construction projects that have been selected for a programmed inspection and other 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. It will include an outline of the procedures followed to generate monthly inspection lists, the method by which those lists are made available to each Regional Office, and a discussion of how procedures meet VOSH and OSHA’s obligations to have a neutral targeting system.

**Significant
Changes**

Construction Industry inspections will be conducted as “Safety Compliance Only” inspections and not as joint Safety and Health inspections for the purpose of conservation of overall inspection resources.

However, please note the following exceptions:

- If the Safety Compliance Officer observes and documents a health violation and makes a referral to Health Compliance, the inspection may then become a joint safety and health inspection if there is a significant reason to do so and it is documented in the casefile.

- Where the targeted site references the demolition of an existing building in preparation for new building construction or where selective or partial demolition or rehab of an existing building is being performed within the scope of the project or where there may be a potential for lead or asbestos exposure to employees or the Compliance Officer, the inspection shall be handled as a joint Safety and Health inspection with an Industrial Hygienist (IH) trained in lead and asbestos inspections. The inclusion of the IH is for the purpose of facilitating the taking of samples, reviewing abatement plans, inspecting PPE, containment areas, etc.

I. VOSH Construction Targeting System - Overview

- A. VOSH participates in Federal OSHA’s Construction Inspection Targeting System. It 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 each region 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., State or local government, authority, or private sector). The Regional Safety 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 Regional Office is conducting an LEP focusing on bridge construction, the Regional Safety Director can use the end-use option to exclude bridge building for the targeting lists generated under this Directive. These options must be used in a manner which retains the program's overall objective of establishing a presence in the entire construction industry. Regional Safety 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 Regional Safety Director must modify the options in a way that generates a randomly selected list.

As noted below, this system uses internal and/or third party reports on construction projects to produce monthly inspection lists which are posted on a secure password enabled website available to each VOSH Region to download as required. This system uses a computer-based methodology to select a broad range of construction projects for inspection on a neutral basis when they are projected to be between 30 percent and 60 percent complete.

- B.** The OSHA Construction Inspection Targeting Application provides authorized personnel in each region detailed information on construction projects in that region that have been selected for a programmed inspection as well as 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.
- C.** Each Regional Safety Director, in conjunction with the VOSH Director as needed, should review the construction targeting system as implemented to assure its accuracy, that it meets the requirements of this Directive, and make revisions for their region as appropriate.

II. Background

Due to the mobility and 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 OSHA Directorate of Evaluation and Analysis (DEA) developed the OSHA Construction Inspection Targeting System and it will provide each VOSH regional office a randomly selected monthly list of construction projects from all known covered active projects in that region. This list contains the projected number of worksites the region has indicated it anticipates inspecting in the next month.

This OSHA Construction Inspection Targeting System is required to comply with court decisions on OSHA's process of selecting worksites for inspection for itself and those of the VOSH program. 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. As is the case in OSHA's own situation, resource availability limits the number of VOSH's programmed inspections annually **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.

The OSHA Construction Inspection Targeting System relies upon a statistical abstract of information and other data available on construction project starts from one or more third party vendors, e.g., F.W. Dodge, and on estimated construction project durations derived from econometric modeling. As noted previously, the system is designed to get Compliance Officers onsite at neutrally-selected projects when such projects are between 30 percent and 60 percent complete. This range is generally when the greatest number of employees and contractors are anticipated to be active on the construction site.

In its development of these lists, OSHA, by itself or its contractor-developer, may add third party data, e.g., Dodge Reports, to specify such projects and the time period when each is active and maintains a file containing all active construction projects for each region. From the known active construction projects, a randomly selected construction inspection list will be generated for each VOSH region on a monthly basis. This selection is done without employer identifiers to ensure neutrality. The list is based upon:

- Counties located within the specific VOSH region's boundaries;
- Estimated number of worksites to be inspected during the monthly scheduling period *(to be determined by each VOSH region as previously noted)*;
- The specific selection criteria are determined by the Regional Safety Director based on local conditions.

III. Operational Specifics

- A. Selection Criteria. Each VOSH region will use the Construction Inspection Targeting Application available from the OSHA Construction Targeting secure website to set specific selection criteria and to access the monthly site inspection lists and associated construction inspection reports. The selection criteria will be determined by the Regional Safety Directors or their designees. Only authorized users from OSHA and VOSH will be able to access this website.
- B. Options. The targeting plan is designed to be a broad-based system that selects projects for the purpose of establishing a presence in the entire construction industry in each region. The Construction Inspection Targeting Application includes a function that allows 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., private sector or public sector (meaning a state,

county or municipal government or authority). The Regional Safety Director can use these options to exclude areas of construction that have had a significant amount of VOSH activity in recent months. For example, if the region is conducting an LEP focusing on bridge construction, the Regional Safety Director can also use the end-use option to exclude bridge building for the inspection lists generated under this targeting plan.

1. These options must be used in a manner which fosters the program's overall objective of establishing a presence in the entire construction industry. Regional Safety 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 Regional Safety 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.*
 2. Each option within the Construction Inspection Targeting Application is set to an initial program default. The Regional Safety Director must review these defaults to determine if they are appropriate for the local conditions. If any changes are necessary, the Regional Safety 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, such as valuation of less than one million dollars; or excluding or selecting projects with specific end-uses such as bridges or high-rise office buildings.
 3. Another option to facilitate inspection planning is to request projects in a cluster of counties within a region, 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 concentrated effort in a particular geographic area is warranted. However, the Regional Safety Director must ensure that all counties within the region's jurisdiction will be covered within a reasonable time period.
 4. The Regional Safety Director will set the monthly sample size, i.e., the number of inspection sites that will be provided for the upcoming 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 for duration of one calendar month. Each month, each region will access its programmed construction inspection list from the OSHA Construction Inspection Targeting Application website. Additionally, it 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 may be used immediately upon download 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 quickly 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. The following items should also be addressed:

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 existing VOSH policy.
3. A region is not authorized to make any deletions from that month's inspection list prior to its completion, except where the Regional Safety 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 there is any doubt as to whether a worksite has become ineligible, the Regional Safety Director, or designee shall contact the VOSH Director for clarification and resolution.)
 - c. A worksite has been approved for exemption from inspection through participation in the Voluntary Protection Program (VPP) or other VOSH construction inspection exemption program.
4. Any deletion from a monthly inspection list must be fully documented in accordance with III.H.3. 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 region 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 Regional Safety Director may request a supplemental inspection list through the Construction Inspection Targeting Application website. 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, the supplemental list must be completed before initiating the next month's list.
7. The Regional Safety 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, a decrease in the sample size should be considered.

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 Regional Safety Director shall assess progress in inspecting all worksites on the list in order to plan resources for the following cycle.

1. If it appears that not all worksites on the list will have been inspected by the end of the month, the Regional Safety Director may request a list with fewer sites from DEA 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 worksites 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 worksite is carried over as described at III.F. below.

That is, lists for two consecutive months can be combined to form one combined cycle; but the first month's worksites on the combined list must either be completed or classified as carryover before the remaining worksites, which originated from the second month's list, can be combined with the third month's list, etc.

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

1. A worksite may be carried over to the next cycle if it is determined that it is not operating normally at the time of the inspection by the Compliance Officer 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 construction activity at the site has not changed substantially since a prior inspection.
6. Approval for carrying over a worksite to the next month, i.e., the next cycle, for reasons not listed above must be requested from, and approved by, the VOSH Director.

G. Deferrals and Priority Reassignment. Upon review of their monthly list, regions may, but are not required to, defer an inspection or assign lower priority, for up to 75 days for any construction site if:

1. The employer has requested a full-service comprehensive consultation visit AND that visit has been already scheduled; or
2. The employer has submitted a VPP application.

H. Administration and Maintenance of Inspection List. The Regional Safety Directors, or their designees, are responsible for maintaining chain-of-custody documentation necessary to demonstrate that the construction inspection lists have:

- ✓ Been properly safeguarded, e.g., prevention of unauthorized review or duplication;
- ✓ Utilized solely in accordance with the requirements of this Directive; and
- ✓ The selection criteria are current and appropriate.

In addition, the Regional Safety Directors shall also be responsible for:

1. Each monthly construction inspection list (cycle) from OSHA must be maintained in the regional office for a period of 36 months (3 full years) after completion of the cycle, whether it is used or not.
2. New modifications to the regional office's selection criteria must be determined by the Regional Safety Director and approved by the VOSH Director. Such modifications will be effective for 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 by the VOSH Director and the Regional Safety Director.*
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.

IV. Inspections to Be Safety Compliance Only – Exceptions. Construction Industry inspections will be carried out as "Safety Compliance Only" inspections and not as joint Safety and Health inspections for the purpose of conservation of overall inspection resources. However, please note the following exceptions which, when they occur, shall be documented in the case file:

A. When the onsite Safety Compliance Officer observes and documents a health violation or suspected violation, and determines that there is significant reason to makes a referral to Health Compliance;

OR

- B. Where the targeted site references demolition of:
- an existing building in preparation for new building construction; or
 - where there is either selective or partial demolition, or the rehab of an existing building, that is being performed within the scope of the project; or,
 - where there may be a known potential for lead or asbestos exposure.

Only in the above situations, shall the inspection be handled as a joint Safety and Health inspection with an Industrial Hygienist (IH). For inspections classified under item B. above such IH shall be trained in lead and asbestos inspections. The inclusion of the IH is for the purpose of facilitating the taking of samples, reviewing abatement plans, inspecting Personal Protective Equipment (PPE) and containment areas, etc., as well as preventing or limiting employee or Compliance Officer exposures.

V. **Health Construction Inspections.** No separate scheduling method is applied for programmed construction health inspections. Rather, the Regional Safety Director is to determine which construction inspections are to be modified to be a joint inspection where:

- As noted above, the on-site Safety Compliance Officer has indicated that serious health hazards are likely to exist at the site, or
- An incident makes the need for a health inspection component obvious. A local emphasis plan may also be submitted and approved for scheduling health construction inspections where conditions warrant.

VI. **Recording and Tracking.**

A. “IMIS” Coding

1. On the OSHA-1, Item 25d, select “CTARGET” in the National Emphasis Program field.
2. The Project Identification Number* (PID) must be for each construction project inspected under this Directive. The PID is entered on all of the VOSH-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. *[OSHA CPL 02-00-141, 14 July 2006]*

The PID is coded as follows in Optional Information of the OSHA-1 Form:

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

**The Project Identification Number may also be referred to as the “Dodge Number.”*

B. "OIS" Coding

OIS Inspections must be coded as "programmed" for the Initiating Type or Secondary Type, depending on the circumstances which initiated the inspections. In addition, the code "CTarget" needs to be selected in the "National Emphasis Program" field (the Construction Targeting inspections are being coded under the NEP for ease of tracking).

The "CTarget" code must be entered for the general contractor and each of the subcontractors inspected at the worksite. All inspections conducted at the work-site must also be linked in OIS in the "Related Activities" tab under the "Multi-Employer Inspections" section. OIS Inspection coding:

Initiating Type	Programmed
Secondary Type	Programmed
National Emphasis Program**	CTARGET

**Code must be entered for the general contractor and the subcontractors at the worksite.

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 decision makers 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.