107 LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

107.02 Permits, Licenses and Taxes

The Department requires the Contractor to comply with all local, tribal, county, state and federal regulations, laws, and ordinances, and bear any costs or inconveniences associated with those requirements. Regulations or permit requirements unfamiliar to either the Contractor or the Resident Engineer do not relieve the Contractor of the obligation to comply. The Special Provisions will often identify some of the requirements, but they should not be construed to be the only requirements.

Local ordinances such as noise limitations, haul restrictions, and permit fees are usually the most cumbersome for the Contractor. For example, most cities require a connection fee and permit when a Contractor taps into a city waterline. Some cities require a permit to use and haul explosives. Usually permits associated with construction and installation activities such as hauling, dust control, and connecting to utilities are the Contractor's responsibility. Specialized permits that could not be foreseen by the Contractor at bid time and royalties are usually the Department's responsibility.

Permits required to construct the project in the first place, such as 404 Permits for the Corps of Engineers or utility relocation clearances, are usually the Department's responsibility.

Contractors are responsible for paying all existing federal, state, county, and local sales taxes associated with the work. This includes future taxes or tax increases passed into law before bid opening. Any new taxes or tax increases passed after bid opening will be reimbursed to the Contractor through execution of a supplemental agreement.

ADOT Fuel Tax and Vehicle Registration

Every year millions of dollars in fuel taxes and vehicle registration fees go uncollected. These taxes and fees fund the construction and maintenance of the state's roads and bridges. Although ADOT's Motor Vehicle Division is responsible for collecting fuel tax and registration fees, Inspectors and Project Supervisors, as part of the ADOT team, should assist in the enforcement process whenever possible.

Vehicle Registration Information

All vehicles must have Arizona license plates, or an International Registration Plan (IRP) registration indicating Arizona as an authorized State.

EXCEPT IN VERY LIMITED SITUATIONS, TEMPORARY OR SHORT-TERM ARIZONA REGISTRATION PERMITS ARE NOT ACCEPTABLE FOR ADOT PROJECT WORK.

No vehicle registration is required for equipment that operates exclusively off Arizona highways.

Should you have any questions about vehicle registration, please call Licensing Services (602) 712-6775.

107.04 Federal Aid Participation

Most of ADOT's highway projects are funded by the U.S. Government. When federal funding is involved, a project has additional federal contract requirements that both the Contractor and ADOT must meet. These additional requirements are numerous and contained in the project Special Provisions.

The requirements that have the biggest effect on administering a project are summarized below.

Disadvantaged Business Enterprise Program

Most federal aid projects require that a certain percentage of the contract work be given to a certified disadvantaged business such as a minority-owned or woman-owned business. The Contractor is responsible for selecting a disadvantaged business enterprise (DBE) firm and subcontracting a portion of the work to them. Some DBE firms are material suppliers, so the Contractor may purchase a portion of their materials for use on the project. The Contractor is required to submit DBE affidavits when submitting a bid. These affidavits list the DBE firms the Contractor intends to use and certifies that the DBE goal for the project will be met.

At the preconstruction conference the Contractor is required to submit copies of all DBE Subcontractors, purchase orders, or quotes to the Resident Engineer (see Subsection 108.03). Copies of these should be forwarded to ADOT's Business Engagement and Compliance Office (BECO).

During construction, the Resident Engineer should monitor the Contractor's use of DBE firms to ensure that the DBEs are performing their committed share of the project work. The Field Office should have a copy of the DBE's approved subcontract or quote for materials. The Resident Engineer's job is to ensure the Contractor lives up to the terms of the subcontract or quote. DBE compliance and work should be discussed at each weekly meeting when DBEs are on the project. Any questionable situations or apparent non-compliance situations should be reported to ADOT's BECO office.

Compliance means meeting the numerical percentage shown in the Special Provisions and using all the firms shown on the DBE affidavit. The Contractor is not free to drop or replace DBE firms without the approval of the BECO office. The Special Provisions explain the requirements for changing DBE firms on the project.

At the end of the project, the Resident Engineer must ensure that the Contractor submits the required "Certification of Final Payments" form for each DBE. The certification must be forwarded promptly to the Business Engagement and Compliance Office.

Bulletin Board Requirements

Certain postings and notices are required on all projects that receive federal aid. These are supplementary postings beyond the usual postings required in a place of business. The Resident Engineer is cautioned to differentiate between those postings required by a business and those postings required to be on a construction project bulletin board. The Resident Engineer should ensure that the following postings (as included in the contract) are displayed prominently by the Contractor on the bulletin board:

- Fraud Poster (Form PR-1022) required by Title 18 of the United States Code
- EEO Poster (Form GPO 1984 O. - 438-915) in English and Spanish
- Wage Rate Information Poster (DOL poster WH-1321)
- The Wage Decision listed in the project Special Provisions
- EEO Policy of the Contractor and major Subcontractors
- List of safety officers for the Contractor and major Subcontractors
- The Notice of Intent for Storm Water Discharges (EPA form 3510-618-98)

Additional recommended postings include:

- Name and telephone number of Contractor's EEO policy enforcement officer;
- Emergency contact telephone numbers; and
- OSHA postings and other project safety and security information.

The Resident Engineer should see that the Contractor furnishes a bulletin board of sufficient size to accommodate all of the required posters: generally, a minimum area of 12 square feet (1 meter square) is sufficient. The bulletin

board should be suitable for outside installation and covered with a transparent window for the purpose of displaying required posters on the project.

The various required posters can be found on the Posters link on the Construction Group's homepage.

The Fraud Poster, required by Section 1020, Title 18, United States Code, must be displayed during the course of the work. The poster is normally displayed on the Contractor's and Subcontractor's bulletin boards, in the engineering office, and in the project laboratory. This poster points out the consequences of impropriety on the part of any Contractor or Departmental employee working on the project. The Deputy State Engineer's name and address appear on the poster, as does the name and address of the Division Administrator of the Federal Highway Administration (FHWA).

NOTE: The size, location, lighting, and visibility are not specified in the contract, except as noted in the quotations below (taken from the federal requirements in a typical special provision):

"Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the state highway agency setting forth the provisions of this non-discrimination clause."

"The wage determination...shall be posted at all times by the Contractor and their Subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers."

On-The-Job Training

Most federal aid projects have a requirement for on-the-job training of construction trade workers. The training must be part of a recognized apprenticeship program approved by the Department. The Contractor will usually submit a training program with a list of apprentices at the preconstruction conference.

During construction, the Project Supervisor or Inspector should verify that apprentices are:

- enrolled in an approved training program;
- performing the type of work normally performed by their craft (i.e., carpenter apprentices should not be tying rebar or operating heavy equipment); and
- being supervised by a journeyman or journeywoman of the same craft.

Apprentices are paid less than Davis-Bacon wage rates and each hour an apprentice works is partially paid for by the Department. The project Special Provisions establishes the minimum number of training hours the Contractor must provide as well as the hourly rate at which the Department will subsidize on-the-job training.

Liaison with the FHWA

The Phoenix office of the FHWA oversees all federal aid projects in Arizona. Federal aid projects can be divided into two categories:

1. *Delegated Oversight* are projects in which the FHWA has very little involvement except at the final inspection and acceptance. Most projects off the Interstate Highway System are delegated oversight. These projects have an "A", "T" or "D" at the end of the federal aid project number.

2. *Full Oversight* projects are projects in which the FHWA oversees the contract administration activities of the Department. These projects are typically the interstate highway projects and some other specialized or unusual projects. Full Oversight projects can be identified by the last letter in the project number; "N", "X", "S" or "F".

In recent years the FHWA has given the state more responsibility in administering federal aid funds. FHWA staff

members conduct fewer reviews and inspections for specific projects than previously, focusing instead on reviewing operational processes. ADOT's own Construction Operations Section has been charged with ensuring compliance with federal requirements, including conducting periodic field inspections.

Local Public Agency Projects

Local government projects require special consideration. Coordination for project development is provided by ADOT's Local Public Agency (LPA) Section. The LPA Projects Manual will provide additional information.

Project sponsors may be cities, counties, or Indian tribes. Funds for local government project construction are provided by the FHWA with matching funds provided by the sponsor. Usually no state funds are involved.

The construction for all local government projects is administered by ADOT or by the local public agency through Self-Administration (SA) and/or Certification Acceptance Program (CA). The CA Program sets forth the policies to be used by ADOT in the administration of projects financed with federal aid highway funds. An "A", "T" or "D" after the parentheses in the federal aid project number identifies CA Program projects.

Agencies that are certified through the CA Program may provide the following tasks with their personnel:

- Project Plans and Special Provisions;
- environmental, right-of-way and utility clearance certification;
- project bid package preparation;
- advertisement for bids;
- award of contract; and
- construction administration.

Construction of Delegated Oversight projects is accomplished in accordance with ADOT's Standard Specifications. Materials are tested and approved in accordance with ADOT's Materials Quality Assurance Program (ADOT Materials Testing Manual – Series 900) or use an ADOT-approved quality assurance program and the specific requirements employed on all federal aid projects within the state.

On any project administrated by ADOT, construction inspection and contract administration will normally be under the direction of an ADOT Resident Engineer. The sponsor's employees, who are adequately trained, may perform inspection and administration for the Resident Engineer.

The following are required construction practices on all CA projects.

1. Construction Quality Assurance

   Construction will be in accordance with all standards, specifications, plans and contract documents of ADOT.

   The LPA Section or the Construction Operations Section will conduct random quality assurance field reviews as needed. Random inspections should be conducted at the beginning and near the end of each project, as well as throughout the term of the project at 30- to 45-day intervals.

   Field reviews will be of a general nature. A report on the inspection should be filed consisting of:

   - a description of work underway;
   - a report on the quality of the work from a visual observation of the activities;
   - spot checking of project documentation; and
   - whenever possible, inclusion of a measurement of some item of work.

Copies of the random inspection reports should be filed in the project file at the project office and the Construction Operations Section.

2. Contract Modifications

Change orders, force accounts, minor alterations, and other activities, which may increase project costs must be discussed as required by normal ADOT procedures, including notification of the Project Manager. On local government projects, they must be discussed with the sponsor, the applicable Council of Government Representative, and the Local Public Agency Section. The FHWA does not need to be contacted when there is a change. Only changes in the project scope should be discussed with the FHWA.

Changes in project costs resulting from design errors and requests from the Contractor for design changes must be coordinated through the local government and their design consultant. The local government design consultant is required to be available for post-design services during project construction. Local government design consultants should be invited to attend Partnering Workshops and the Preconstruction Conference prior to the start of the project construction.

3. Final Inspections

Final inspections must be attended by representatives of the sponsor, the District Engineer's Office, and the FHWA.

Certification Acceptance (CA) Agencies operate under a CA Agreement when administering local government projects and typically do not require an Intergovernmental Agreement (IGA). However, some local government projects are self-administered (SA) by local public agencies which require an Intergovernmental Agreement (IGA) with special clauses to address effects of construction on existing or future facilities. These clauses call for special considerations or performance by ADOT during the work. The Resident Engineer must contact the Joint Projects Agreements Branch to obtain a copy of the IGA or contact the LPA Section for a copy of the CA Agreement. After discussing any special clauses with the Intergovernmental Agreement Coordinator, the Resident Engineer should establish a system to track and account for any special work performed by ADOT or the Contractor, as required by the IGA. Field Reports must also be notified of the requirements.

Every courtesy must be extended to the representatives of the local governments. Not only do the cities, counties, or Indian tribes have a financial interest in the project, the project will serve their communities for many years. The representatives should inspect the work and give the Resident Engineer counsel; however, the Resident Engineer is not obligated to accept and implement suggestions given. In case of conflicting thoughts between the Resident Engineer and the local government representative, the matter should be referred to the Project Manager and the District Engineer.

Full Oversight Projects

The FHWA is an active partner with ADOT in the administration of full oversight projects. The FHWA Area Engineer will make periodic inspections of both the project work and the project inspection records (including test results and material certifications).

The FHWA Area Engineer is required to be contacted (per The FHWA and ADOT Stewardship and Oversight Agreement for Arizona) and concur on all supplemental agreements before an agreement is reached with the Contractor. Also the FHWA Area Engineer should be invited to the preconstruction conference / partnering workshop, as well as to the final inspection.

It is important to involve the FHWA Area Engineer in all escalation hearings beyond the District level. Since the Area Engineer recommends federal aid participation on all contract changes, early involvement of the Area

Engineer in a contract dispute is highly desired. Early involvement will help avoid any misunderstandings or courses of action that may result in the FHWA's withholding federal aid participation.

107.07 Sanitary, Health, and Safety Provisions

Safety is an integral part of construction. Every construction activity has specific safety considerations. Safety issues are inseparable from the construction activity. Safety is discussed throughout this manual in conjunction with the different activities.

The most effective safety programs include assessing the unique hazards associated with the actual work activity. This takes many forms, but a common one is a Job Hazard Analysis completed by the crew performing the activity. This analysis is critical for those work activities where there is no regulatory basis for safety program elements. Examples would be lowering falsework, temporary decking between bridge beams, or any work that is so specialized to the project that the regulations could not anticipate this. A hazard analysis can be completed on any activity, that potentially affects worker safety and/or protection of the public.

In its most basic form, a job hazard analysis takes the following form:

- Identify the steps to complete the work,
- Identify the hazards associated with each step;
- Identify control measures to mitigate each hazard.

Most worker injuries stem from two causes: an unsafe physical condition or an unsafe act. The unsafe physical condition is often a product of the environment; the general conditions at the site of the work, the equipment and materials used, or the process employed.

The unsafe act can usually be traced to inadequate training, a momentary lapse of attention or inexperience. Construction sites are unpredictable places and employees must be constantly aware of what is going on around them.

The rest of this subsection will introduce the various safety regulations that govern a construction site and indicate where to find additional information on safety.

Occupational Safety and Health Administration (OSHA) Standards for the Construction Industry (29 CFR Part 1926)

These standards apply to all construction sites in Arizona. This may include projects that ADOT defines as maintenance activity, but may be classified as construction by FHWA / OSHA. The Office of Safety & Risk Management can assist if there is any question about which standards apply to a particular project.

Everyone on a construction site must comply with these minimum standards. In many cases the General Contractor will develop a safety plan with rules or policies more stringent than OSHA standards. In that case, ADOT and all Subcontractors must comply with the Contractor's safety plan. These policies can be enforced by an OSHA enforcement officer.

The state of Arizona generally adopts all federal OSHA standards verbatim. The standards are available at www.osha.gov or they may be purchased in book form from the Arizona Industrial Commission. Every Inspector and Resident Engineer should have access to these standards.

The Arizona Industrial Commission, Department of Occupational Safety & Health (ADOSH) is responsible for enforcement of the standards within the state. On tribal lands and some federal lands, the federal OSHA office in Arizona may have enforcement responsibilities. The Office of Safety & Risk Management can assist if there is any

question about enforcement jurisdiction.

Hazardous Materials

All workers on a construction project, including ADOT, the Contractor, and Subcontractor must be informed about any hazardous material they may come in contact with at the work place. The Contractor is required by law and by the contract specifications to make available safety data sheets (SDS) to everyone at the project site. The location of these SDS must be identified and communicated to all personnel. Refer to Section 1926.59 of OSHA standards for further information on right-to-know requirements.

When hazardous materials are spilled, accidentally discharged, or encountered at the project site, Subsection 107.07 describes how ADOT requires the situation handled. When ADOT's field staff is notified of a hazardous material situation, the following actions should be taken:

- ensure all workers are removed from the contaminated area;
- ensure the area is secured to the extent that no one else can become contaminated; and
- call the Resident Engineer.

Depending on the seriousness of the situation and how much the public is affected, contact 911. In addition, contacts should be made with the:

- District Office,
- ADOT Office of Safety & Risk Management, and
- ADOT Traffic Operations Center (ask for hazmat response).

Resident Engineers and Lead Inspectors can download a copy of the Emergency Response Guidebook published by the U.S. Department of Transportation. This book helps identify hazardous materials, the potential danger of hazardous materials, and some basic precautionary measures that can be taken. However, experts should handle the more serious hazardous material incidences. Resident Engineers and lead inspectors should be to isolate and seal off the area containing the hazardous material until qualified help arrives.

ADOT Office of Safety & Risk Management

The ADOT Office of Safety & Risk Management (SRM) has full-time Safety Professionals whose sole responsibility is safety issues and regulations affecting the Department. The staff can be a valuable resource in interpreting OSHA standards, identifying safety hazards at the project site, and recommending reasonable protective measures.

ADOT SRM office should be notified when:

- an employee of ADOT or the Contractor is seriously injured at the project site;
- there is a serious injury or fatal crash on the project;
- there is a chronic safety problem suspected at the project site which is not being corrected; and
- dangerous hazardous materials are spilled or encountered.

Safety Program Enforcement

Resident Engineers are empowered to shut down unsafe operations at the project site. However, some judgment is needed in deciding whether to shut down unsafe activities or to let them continue until corrective action can be taken. Here are some questions to consider as the Resident Engineer and Project Supervisor arrive at their decision.

1. Is an unsafe condition away from the main site activities? Can the area be isolated or barricaded until the

condition is made safe?
2. Most serious accidents are caused by unsafe acts. Are the workers' activities jeopardizing their own or other people's safety? How high is the risk of serious injury?
3. Assess the risk to the general public. Could the Contractor's operation cause property damage or injury to those not associated with the construction?
4. Call the Contractor's superintendent and safety supervisor to the site. Review the situation with them. Involve one of ADOT's safety consultants, if available.
5. Can something be done to make the hazard temporarily safe? Can someone be assigned to closely monitor the hazard full-time while people are at risk?
6. Consult the OSHA standards as well as any available safety experts. Do the standards or previous enforcement actions offer any direction on what to do?

Answering these questions will help prepare the Resident Engineer for making a well-thought-out, carefully deliberated decision.

For example, an unsecured, infrequently used, 10-foot (3-meter) high ladder at a remote corner of the job site is probably not enough to warrant a stop work order. Even if the Contractor does not rectify the problem for a few days, the most a Resident Engineer should do initially is to strongly warn the Contractor in writing about the hazard.

On the other hand, workers found in an un-protected 10 foot (3-meter) deep vertical trench is a serious safety violation, which obviously warrants an immediate stop work order and a meeting with the Contractor.

Unfortunately most safety hazards lie between these two extremes. Making a good decision that balances strict adherence to safety standards with the perceived risk of injury can be difficult. For those difficult decisions, the best words of advice are "**err on the side of safety!**"

Industrial Commission

The Industrial Commission's Division of Occupational Safety and Health (ADOSH) are divided into two sections. The enforcement section makes site inspections, issues violation notices, assesses fines, and shuts down unsafe projects. Resident Engineers should call the enforcement section as a last resort when chronic safety problems cannot be quickly resolved with the Contractor.

The other section is a consultation section that advises business owners, such as Contractors, how to improve worker safety. This section has safety consultants who inspect job sites and point out safety hazards and violations. These Inspectors do not issue citations but are there to advise on safety issues. When there have been chronic safety violations, some Resident Engineers have required Contractors to invite these Inspectors to the site instead of calling the enforcement section.

107.08 Public Convenience and Safety

Traffic Disruptions

Much of ADOT's construction work is situated in and interfaces with traffic. As a result, there is often a conflict between how to construct the work and how to least disrupt traffic. Contractors sometimes want to perform the work in the most efficient manner, but at the expense of disrupting traffic. The Resident Engineer must then decide how much of a traffic disruption is tolerable.

A Resident Engineer's number one concern is public welfare and safety. This is the Resident Engineer's legal and ethical duty, both as a Professional Engineer and an ADOT employee. Traffic restrictions have two impacts on the public. First, they are an inconvenience that causes travel delay, extra fuel consumption, vehicle wear, economic

loss, and driver stress. Second, they are a safety hazard. The restrictions eliminate some of the safety features of the road (i.e., shoulders), require quicker adjustments in driving behavior, and expose drivers to unusual situations—all result in higher vehicle accident risk.

In addition to decisions regarding safety, the Resident Engineer must carefully consider and investigate all the alternatives and weigh the impacts on public safety and the project work. For instance, shutting down the road for a day or two may be a significant disruption and inconvenience to the traveling public, but it may be preferred to several weeks of lane closures that might be more of a disruption and cause more accidents. On the other hand, a series of lane closures may be preferred to a full road closure. This situation can occur when previous full closures have resulted in accidents, frustrated motorists behaving erratically, and very long traffic lines. In deciding what to do, the Resident Engineer's priorities should be:

1. risk to public safety (accident risk in particular),
2. major public inconvenience, and
3. construction efficiency.

The risk of an accident involving personal injury must be weighed against the alternatives that are available. Assessing the risks ahead of time requires judgment, experience, and sometimes expert advice. Resident Engineers are often pressured by the Contractor to favor construction efficiency. The Resident Engineer should also draw on the experience of traffic control experts including the Regional Traffic Engineer, a city or county Traffic Engineer, and the Contractor's own traffic control coordinator and barricade Subcontractor in weighing the alternatives.

Sometimes there is no feasible alternative, and the disruption and accident risk must be endured. However, the Resident Engineer should be the one to make the decision. Do not remain passively silent and let the Contractor do what they think is appropriate. The Resident Engineer should proactively approve or disapprove each closure or traffic restriction, even when there is a previously approved traffic control plan.

Liaison with Local Government Officials, Business Owners, and Residences

During construction, phasing of the site work and public information are crucial elements of ADOT's desired coordination effort with the surrounding community. Construction sequencing, local access, and traffic control should be outlined at the preconstruction conference and at other critical milestones during construction. The local government officials should be kept informed of these matters at least monthly or more often so all affected parties can be alerted to ongoing construction impacts.

The Resident Engineer should hold periodic meetings with local business owners/managers and neighborhood associations, preferably at one of the business establishments or at a local community center or school. The Resident Engineer should invite the Contractor and all affected businesses and residences to attend. The Resident Engineer and the Contractor's representative can explain the construction schedule and answer questions about ongoing work. The Contractor needs to feel a sense of accountability to the community concerning project progress and construction impacts. ADOT's Communications and Government Relations office can assist the Resident Engineer in coordinating and conduction the meeting.

When construction is completed, the Resident Engineer should contact each business and resident to ensure that any cleanup or property damage issues are resolved. If there has been a significant involvement by local individuals or groups, then a letter expressing appreciation for their participation is recommended. ADOT's Communications and Government Relations office can assist.

Local Access and Signing

Adjacent businesses should be contacted to establish the level of access and hours of high use. Signs stating "Business Access" or "Driveway Entrance" may be used to denote access driveways to individual businesses or

business complexes. Other special construction signing may be identified on a project-by-project basis. Signs should not identify business names and must not be furnished or altered by the businesses. Special signs can be made by ADOT if unavailable from the Contractor.

Traffic control plans should require that local cross streets have access across construction activities whenever possible. This cross street access should be a smooth, well-graded subgrade material or base course material with a paved surface where feasible.

Temporary access must be provided to businesses, commercial and institutional properties during construction. Access roads should be made of a base course, material at least one half the width of the property's driveway. The minimum driveway width should be 20 feet (6 meters). If possible, driveway grades should be maintained at less than a 10:1 slope.

Whenever possible, open trenches for utilities or culvert work must be provided with steel-plate crossings for cross streets and driveways.

Stranded Motorists

Occasionally some of ADOT's customers need immediate help. ADOT field staff may give stranded motorists limited assistance.

This assistance may include:

- notifying the Department of Public Safety (DPS) of the stranded motorist;
- telephoning a roadside service for the stranded motorist;
- making a phone call to get in touch with a relative or acquaintance; and
- providing drinking water and other first-aid assistance.

The assistance does not include:

- phone calls to more than one relative or acquaintance;
- calling a towing company (DPS does this);
- running errands; and
- transporting stranded motorist, their passengers, or their cargo, unless there is an immediate safety hazard.

Site Specific Safety Plan Submittal

The safety plan a Contractor submits at the preconstruction conference must be site specific and customized for the project. A corporate plan that covers general topics as fall protection, scaffolding, crane safety, and confined spaces by itself is rarely adequate for a project.

ADOT and the AGC have developed a "Site Specific Safety Plan" checklist that can be a reference guide for reviewing Contractor's safety plans. This is available from the ADOTNet Forms directory. The checklist is useful for identifying hazards on a project and what elements are required in a safety plan.

As the Contractor develops the site specific plan, the safety issues specific to the type of work should be combined with general safety practices so a coordinated, unified plan is developed. The general contractor must also address all Subcontractors in their plan, or may review and approve, then submit a Subcontractor's safety plan for those specific exposures or work activities.

The Resident Engineer shall review and approve the safety plan. ADOT's office of Safety & Risk Management can

assist with the technical questions. Their staff may make recommendations about whether to approve the plan and any suggested changes needed to make the plan acceptable.

Some of the key elements that the Engineer should look for in a site specific plan include:

- Hazard identification or risk assessment (Often called a Job Hazard Analysis)
- Site Security and Loss Prevention
- Contractor Safety Training and Education Program
- Contractor Medical/First Aid Services Program
- Contractor Fire Prevention/Protection Program
- Contractor Personal Protective Equipment Program
- Special regulatory programs such as trenching and excavation, crane operations, and confined space entry.
- Contacts lists including: emergency, safety, and competent persons.
- Contractor emergency procedures and reporting of recordable injuries or fatalities

Certain special activities may require additional planning or require special permits. For example, onsite living quarters on a project may require compliance with local zoning and building codes for a trailer park. Potable water, sanitary waste disposal and fire protective systems may be required that are beyond what is provided in a typical RV that may be brought onto the site.

Accident Notification

When any workplace incident occurs that seriously injures ADOT personnel or any construction worker, 911 emergency services should be called first. ADOT's office of Safety and Risk Management must also be notified immediately. The District should be notified as well. ADOT's Communications and Government Relations Office should be notified if the media covers any on-site emergency operation.

Incidents involving injuries to many people at the site or injuries involving the traveling public require more extensive notification requirements. ADOT's Traffic Operations Center can be contacted 24 hours a day via radio or telephone, and their staff will handle all the required contacts.

All serious project incidents should be documented regardless of who is involved (a construction worker, an ADOT employee, or the general public). The amount of detail and the form of the documentation depends on the seriousness of the incident and ADOT's *potential* liability. Documentation can take the form of:

- diary entries,
- completed accident forms,
- police reports,
- photographs,
- video,
- drawing and sketches,
- measurements, and
- approved traffic control plans in use.

ADOT's Office of Safety & Risk Management can provide guidance regarding the documentation requirements for a particular incident.

Temporary Fencing and Protecting the Project Site

One of the intents of this subsection is to make our construction sites reasonably safe after working hours. Inspectors and project supervisors need to actively enforce temporary fencing requirements. During non-working

hours, curious adults, transients, lost travelers, children, and others must be reasonably prevented from entering the more dangerous areas of the construction site. Temporary fencing will probably not stop the determined trespasser, but fencing should prevent people from accidentally entering a dangerous area and serve as a warning to those who try.

Children are impulsively drawn to construction sites and often do not understand the dangers involved. Under the "attractive nuisance" legal doctrine, the Contractor and the Department must reasonably protect trespassing children from hazards at the project site. Temporary fencing is an effective method of keeping children away from attractive nuisances. In addition, the Contractor should take other precautions (i.e., removing ladders, blocking openings, locking equipment, etc.) to make the site reasonably child- and teenager-proof.

Temporary fencing should be supplemented with barricades, flashing lights, flags, and other traffic control devices to direct motorists, bicyclists, and pedestrians away from the hazard.

In heavily traveled areas where trespassing is a chronic problem, "no trespassing" signs should be placed in key areas around the site. To be legally enforceable the signs should read:

State Property
No Trespassing
Violators Will Be Prosecuted
ARS 13-1502A.1 ARS 13-1503A ARS 13-1504A.1

The signs are usually 12 x 24 inches (300 x 600 millimeters) in size with black lettering on a white background. They should be posted at all possible entrances to the project site or in the more hazardous areas. Good coverage is important to make the signs enforceable. These signs can be ordered through the Regional Signing and Striping Supervisor or can be purchased by supplemental agreement from a signing Subcontractor.

Inspectors should not allow the use and amount of temporary fencing to be minimized when public safety is at risk. Temporary fencing can become an acute problem for the Contractor during trenching or mass excavating. Arrange to meet with the Contractor ahead of earthwork operations so that both of you can discuss public safety and the precautions that should be taken.

Sometimes temporary fences can be eliminated by laying back slopes or by suitably covering excavations. Erecting permanent fencing where it will not conflict with the Contractor's operations is another important method of protecting the public. The Inspector should communicate public safety requirements to the Contractor ahead of time, and then work with the Contractor to minimize temporary fence use.

107.10 Use of Explosives

See Subsection 203-3.03(C) of this manual.

107.11 Protection and Restoration of Property and Landscape

For erosion control and temporary drainage measures to protect adjacent properties refer to Subsection 104.09 of this manual.

Contractors sometimes use private property or adjacent public land as a staging area, construction yard, stockpile area, or for improved access to the project. Regardless of the reason, the Contractor must have written permission from the property owner or the operating public agency (Subsections 106.09 and 107.11).

It does not matter where the property is located or who owns it. If the Contractor needs to use the property in order to carry out or accomplish any activities for the project, then written permission is needed.

The written permission should clearly describe what the property is to be used for. This is important, because many times the Department has been drawn into disputes between the property owner and the Contractor as to what can or cannot be done on the property. For instance, if the property owner is allowing the Contractor to store a few materials, the Contractor should not be setting up a fully equipped construction office on the property.

The Contractor must furnish evidence that the owner is satisfied with the cleanup and restoration of the property at the completion of the project. Unless the owner states otherwise, private property should be cleaned and restored to its original condition.

Lack of written permission to use private or public property is grounds for withholding part of the Contractor's monthly progress payment (5 to 10 percent range). In addition, any material stockpiled on private or public property should not be paid for until written permission is received.

107.12 Forest Protection

The primary intent of this subsection is to minimize the environmental impacts of construction activities on Forest Service land. This includes preserving the natural condition of the land and the vegetation in and adjacent to the project.

When working on Forest Service property, the Forest Service strictly regulates the Department's activities, including those of our Construction Contractor. This Subsection, as well as requirements in the project Special Provisions, identifies what the Department and the Contractor must do when working on Forest Service land.

The Department has a memorandum of understanding with the U.S. Forest Service on how we will cooperate with them in meeting their environmental objectives. The Roadside Development Section has a copy of this document.

The Department has a good working relationship with the Forest Service. The Resident Engineer, Project Supervisor, and Inspectors can help sustain this relationship by ensuring the Contractor meets the environmental requirements and concerns listed in the Project Plans, Special Provisions, and Standard Specifications. The Department needs the continued cooperation of the Forest Service as the state continues to grow. How the Resident Engineer and inspection staff handle the Forest Service concerns on each project does have a long-term effect on our relationship with the Forest Service.

If the Contractor enters into a special-use permit with the Forest Service, a copy should be furnished to the Resident Engineer.

107.14 Insurance

When a contract is issued for a project, the insurance requirements are detailed in that agreement. In all cases, every ADOT Contractor is required to carry general liability and automobile insurance with certain minimum limits. They are also required to carry worker's compensation insurance.

A certificate of insurance from the Contractor is required by the executed contract. ADOT's Contracts and Specification (C&S) Section will ensure all insurance requirements are met. C&S will coordinate with the Office of Safety & Risk Management on technical issues regarding insurance and meeting the contract requirements.

During the course of construction the Contractor's insurance policy may expire. As a result, it is important for the Resident Engineer to check the insurance certificate for the policy expiration date. When the policy has expired, make sure the Contractor submits a new certificate. The field office and Accounts Receivable office should get a copy of the new insurance certificate. To assist the field office, if the Contractor's insurance policy expires within a few months of the execution of the contract, C&S will send a letter to the Resident Engineer advising of the expiration date.

Contractors must not be allowed to work without insurance. Lack of proper insurance is grounds for stopping all work on the project and withholding progress payments.

Third-Party Damages and Claims

Motorists, pedestrians, property owners, neighboring businesses, and others who come in contact with construction activities are sometimes harmed by those activities. They could be injured, their property could be damaged, or they could suffer some other type of loss.

Although the contract and Contractor's insurance policy protects the Department from third-party damage claims, it is a good idea to document any third-party accidents or incidents. Documenting incidents that occur on weekends can be difficult. However, a police report can be obtained for the more serious incidents. The time you spend documenting an incident, even after the fact, can potentially save the Department thousands of dollars.

The level of documentation should depend on:

- the seriousness of the incident;
- the potential liability for the Department and the Contractor;
- the documentation effort by others, such as the Contractor or the police; and
- how much first-hand information you can get about the incident.

For example, an Inspector's documentation of an incident that occurred over a holiday will probably be just a note or short paragraph in a daily diary. The police report should be the primary source of documentation. On the other hand, a serious traffic incident in the construction zone occurring during work hours should be well documented including photographs and sketches. In documenting a traffic incident or worker injury, avoid duplicating much of what would be found in a police or accident report. Instead, refer to those reports in your documentation and supplement their information. The important documentation that is often not included in a police report is the specific location of traffic control devices or temporary signs and structures.

It is important for the Resident Engineer to investigate any incidents involving third-parties in order to detect and correct any unsafe conditions or hazardous construction operations.

When the traveling public calls about property damage or injury alleged from an ADOT construction site, the caller should be referred to the ADOT's Office of Safety & Risk Management. They will ensure the caller receives the correct state of Arizona Notice of Claim form and filing instructions. Do not discuss the details of the claim or admit any liability for the caller's alleged damages. Instead, advise the caller that the State of Arizona Department of Administration Risk Management will review and adjust their claim. In order to do so, they must complete the State of Arizona Notice of Claim form in accordance with the instructions.

Do not refer a claimant to the Contractor, even though the Contractor has third-party liability insurance. The claimant must still file a claim with the Arizona Department of Administration in order to protect his or her legal rights should the Contractor's insurance company refuse the claim. The Arizona Department of Administration Risk Management will tender the claim to the Contractor for processing.

107.15 Contractor's Responsibility for Utility Property and Services

General

Arizona state law (ARS 40-360.21-.29) requires anyone excavating in public streets, alleys or utility easements to first identify the location of all underground facilities in the vicinity of the excavation. The Contractor is responsible for contacting the Blue Stake Center (Arizona 811) and locating all utilities before excavating. See the Special Provisions for the Blue Stake phone number, and known utility conditions and arrangements. The Resident

Engineer and Project Supervisor should have a copy of *How To Locate Underground Utilities Before You Dig*, published by the Arizona Blue Stake, Inc.

The preconstruction conference should deal with known conditions and discuss the arrangements for cooperation between the Contractor and the utility company.

On projects where utility companies relocate their own utilities, the Resident Engineer should obtain copies of all permits. The Field Office is responsible for inspecting this work and ensuring that all requirements and conditions of the permit are fulfilled. The results of the inspection should be provided to ADOT's Utility and Railroad Engineering Section.

Notifications

When unforeseen problems are encountered or when a Contractor serves notice of a potential claim due to utility conflicts, the Resident Engineer should follow these procedures.

1. At the first indication of a utility-related problem, the Field Office must notify the District and the Utility & Railroad Engineering Section.

2. Utility & Railroad Engineering will provide the Field Office with copies of all related documents, agreements, permits, and utility company commitments, etc.

3. The project office should notify the appropriate utility company representative by certified mail of the potential claim. This will allow the utility company the opportunity to eliminate or mitigate potential damages by accelerating relocation work, rescheduling the work to avoid the conflict, or adjusting the location to avoid a conflict, etc. The Resident Engineer should contact the Utility and Railroad Engineering Section to obtain the appropriate utility company representatives contact information.

4. If the Contractor files notice under 104.03, any negotiations conducted with the Contractor should involve the utility company. Input from the utility company should be sought concerning proposed claim settlements or supplement agreements to which the utility company has liability.

5. Under the terms of the construction contract, the Contractor's claim is filed with the Department, not the utility company. The Resident Engineer should encourage the Contractor and the utility company to resolve the problem between themselves. However, it is important for the Resident Engineer to receive the details of any settlement agreement in order to avoid possible ripple effects or future claims against the Department.

6. The project office should send any utility claim settlements paid by change order, force account, or supplemental receiving report to the Utility and Railroad Engineering Section for review and processing.

7. If the Department determines that there is a utility company liability, the Utility and Railroad Engineering Section will seek recovery. If the company does not reimburse the Department, the documentation may be transferred to the Attorney General's Office for legal action.

Like any other potential dispute, the Resident Engineer and Inspectors are advised to keep good records of conditions relating to unforeseen problems.