

# ***Hiring a Building Contractor***

*(The Construction Supervisor (CSL) Program)*

## ***Consumer's Frequently Asked Questions***

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## **Answers:**

### Work Requiring a CSL

#### **Q. What is a CSL?**

A CSL is a license issued by the Board of Building Regulations and Standards ("Board") to an individual that allows him/her to perform and/or supervise others in doing certain types of construction work. In most instances, the law prohibits individuals from doing those certain types of construction work without having been issued a CSL.

#### **Q. What types of CSL's are issued?**

The Board issues eight types:

**CSL** – Allows individuals to perform and supervise construction, reconstruction, alteration, repair, removal, or demolition on: buildings of any use group which contain less than 35,000 cubic feet of enclosed space; one- and two-family dwellings or any accessory building thereto, irrespective of size; building or structures for agricultural use; and retaining walls less than ten feet in height at all points along the wall as measured from the base of the footing to the top of the wall. (This was formerly known as the “Unrestricted” CSL.)

**CSL 1&2 Family Dwellings** – Allows individuals to perform and supervise construction, reconstruction, alteration, repair, removal, or demolition on: one and two-family dwellings or any accessory building thereto, irrespective of size.

**CSL Masonry (IA)** - Allows individuals to perform and supervise construction, reconstruction, alteration, repair, removal, or demolition on: masonry structures that require a permit; buildings of any use group which contain less than 35,000 cubic feet of enclosed space; one- and two-family dwellings or any accessory building thereto, irrespective of size; building or structures for agricultural use; and retaining walls less than ten feet in height at all points along the wall as measured from the base of the footing to the top of the wall. But it is not applicable for construction of masonry buildings.

**CSL Roof Covering (RF)** - Allows individuals to perform and supervise construction, reconstruction, alteration, repair or removal of roof covering, including repair and replacement of 25% of sheathing and 25% of sistering roof rafters on: buildings of any use group which contain less than 35,000 cubic feet of enclosed space; one- and two-family dwellings or any accessory building thereto, irrespective of size; building or structures for agricultural use.

**CSL Window and Siding (WS)** - Allows individuals to perform and supervise construction, reconstruction, alteration, repair or removal of doors, windows and siding including repair and replacement of damaged window or door framing less than four (4) feet wide and up to 25% of sheathing on: buildings of any use group which contain less than 35,000 cubic feet of enclosed space; one- and two-family dwellings or any accessory building thereto, irrespective of size; building or structures for agricultural use.

**CSL Solid Fuel-Burning Appliance (SF)** - Allows individuals to perform and supervise the installation of solid fuel burning appliances but does not allow work on any structural elements, including sheathing, with the exception of that required for either the inlet or exhaust elements on: buildings of any use group which contain less than 35,000 cubic feet of enclosed space; one- and two-family dwellings or any accessory building thereto, irrespective of size; building or structures for agricultural use.

**CSL Demolition (DM)** - Allows individuals to perform and supervise demolition only on: buildings of any use group which contain less than 35,000 cubic feet of enclosed space; one- and two-family dwellings or any accessory building thereto, irrespective of size; building or structures for agricultural

use; and retaining walls less than ten feet in height at all points along the wall as measured from the base of the footing to the top of the wall.

**CSL Insulation (IC)** - Allows individuals to perform and supervise the installation of insulation including repair and replacement of sheathing and siding necessary to access wall cavities on: buildings of any use group which contain less than 35,000 cubic feet of enclosed space; one- and two-family dwellings or any accessory building thereto, irrespective of size; building or structures for agricultural use.

**Q. Are other types of licenses required to perform construction work?**

Depending upon the types of construction activities, other types of licenses may be required. Some cities and towns have construction license requirements in addition to those required by the Commonwealth for construction supervisors. You should always check with your municipality about other licensing requirements.

When construction activities involve plumbing or electrical work, licensed plumbers or licensed electricians may be required to do the work. You should check with your municipal building officials and the Commonwealth's Division of Professional Licensure. Often, a licensed engineer must be involved when the work involves issues about the strength and load-bearing qualities of the construction.

In some circumstances, a licensed architect and/or a licensed engineer also may be required in order to create adequate plans for a project.

Licensing Qualifications and Procedures

Please refer to the building code, 780 CMR 110.R5.2, "Registering and Licensing," which is on our web site.

Continuing Educational Requirement for CSL Holders

Please refer to the building code, 780 CMR 110.R5.4, "Continuing Education," which is on our web site.

Project Responsibilities

**Q. Where do I look up the contractor to verify that s/he holds a CSL?**

You should select the license look-up part on our website ([www.mass.gov/dps](http://www.mass.gov/dps)). The license look-up provides information about whether the CSL is active, or has been reprimanded, suspended, or revoked. It also lists pending complaints against the CSL holder.

**Q. I cannot find the CSL holder on the web site, but the CSL holder assures me he has a license. Why am I unable to find the CSL?**

Make sure you have the correct license number. If you search the database with a different number, you will likely not find the individual. Similarly, if a name is not spelled the same as it is listed in the Department's database, you may not be able to find the individual when searching only by the name. Again, anyone who says that he/she holds a CSL must be able to show you the actual CSL card issued to her/him, which contains the CSL number and the name as entered in the Department's database. Some CSL holders have the same names, such as fathers and sons, so be sure you obtain enough information about the individual to correctly identify him or her. The CSL holder is responsible for reporting any change of address and/or change of circumstance to the Board and ensuring that the information on file with the Board is correct.

**Q. The contractor I want to hire does not hold a CSL, what should I do?**

The Building Code does not prohibit you from hiring any individual or entity who proposes to perform construction work on your home. But, regardless of the person you hire, most construction activities will require the active involvement of a CSL holder. For example, a construction business may have someone who handles all the contract documentation and deals with you, while the business employs a CSL holder to supervise the actual construction activities. Regardless of how the business is organized, you should know the CSL holder who will be actively on the job and will be actually supervising the work. It is common (and helpful) for the individual who is acting as your general contractor also to hold a valid CSL. (Sometimes, when fewer people are involved, everyone's responsibilities are clearer, and there are reduced risks that the people you hire might "point their fingers at each other" if something goes wrong.)

In addition, you should consult reliable professionals, such as a licensed architect (about design matters), and such as an attorney (about legal responsibilities), before entering into any type of business relationship with a contractor.

**Q. What is a building permit?**

It is a written approval issued by a town or city building official that must be obtained **before** construction activities on site can begin. Building permit applications, with certain types of supporting documents, are submitted to municipal officials for their review and approval in order to assure that the project will be completed in compliance with the Building Code. Upon approval, a building permit is issued and must be posted at the job site.

**Q. I want to do the project myself. I've heard something about a "homeowner's exemption" in the Building Code. What does the "homeowner's exemption" mean?**

Let's begin with what it does **not** mean. It does not mean that a homeowner is exempt from complying with the Building Code (or any other applicable codes, regulations or laws). If the work requires a building permit, the homeowner must ensure that s/he has a building permit in place **before**

beginning to do work. Further, the homeowner must ensure that municipal inspections and approvals are obtained as certain parts are completed and **before** continuing on to other parts of the project.

The so-called “exemption” means that a homeowner performing construction work himself on his own home is not required to comply with the CSL licensing requirements under 780 CMR 110.R5. He or she does not have to hold a valid CSL. Further, if the homeowner hires others to help him perform the work, the homeowner must act as his own supervisor.

But, if a homeowner who supervising work on his own home also hires a CSL holder, the CSL holder shall be responsible for performing the work in compliance with the Building Code and the manufacturer’s recommendations (as applicable), regardless of whether the CSL holder obtained the building permit for the work.

For example, it is not unusual for homeowners to act as their own general contractors for work on their own homes. As such, they, in turn, might hire licensed plumbers or licensed electricians as subcontractors. While the licensed plumber and/or licensed electrician would be responsible for complying with the State Plumbing Code/State Electrical Code, the homeowner would be responsible for ensuring compliance with the State Building Code.

By way of further example, suppose you want to remodel a bathroom or a kitchen. Regardless of how you do it, all the work must meet all the applicable codes, which usually include the Building Code, Plumbing Code, and Electrical Code. These three codes, in most instances, require that permits from your municipality be obtained **before** any building, plumbing, or electrical work can begin. Using licensed professionals in each of these regulated areas will make it easier to comply with the applicable codes. You, as the homeowner, are legally obligated to have all the work comply with all applicable codes.

Many construction projects around one’s own home can become complex and difficult, even after one has attempted to follow any number of self-help home-improvement sources. Knowledge and skills are required to achieve Building Code compliance, let alone achieving everything else you want to see in your own finished project. Thus, you may find that, just as you should “think long and hard” before performing your own electrical or plumbing work, you should also carefully consider hiring a competent CSL holder who holds a CSL for the type of work being undertaken. The need to hire licensed professionals to get the best outcome for your project should not be underestimated.

As a result, when it makes sense to hire a CSL holder, it also makes best sense to have the CSL holder fully participate in the building permit application process and ensure that a building permit is issued and is on site **before** any work begins. Regardless of what you decide, a realistic understanding of the scope of your project will help you determine whether “you can do it yourself.”

**Q. Are there insurance requirements?**

The Board does not require CSL holders to possess liability or other types of insurance. But the Department of Industrial Accidents (“DIA”) and the Building Code require compliance with the Workers’

Compensation Insurance laws. See [www.mass.gov/dia](http://www.mass.gov/dia) for more information about Workers' Compensation Insurance requirements.

Also, as a matter of good business practice, contractors often carry liability and other types of insurance. Homeowners should always review their own insurance policies and consult their own insurer about how a project will affect their coverage and what policy changes they should consider.

**Q. Are municipal inspections of the work required?**

Yes. Although the homeowner may request and schedule municipal inspections, the requests should be coordinated by the CSL holder (if one is involved in the project). This helps ensure that the CSL holder, in turn, achieves Building Code compliance. The types of required municipal inspections will depend upon the scope of the project. For projects "from the ground up" there must be at least foundation, framing, plumbing/electrical/mechanical, and final inspections. Other types of inspections may be required for buildings located in areas prone to flooding or in coastal areas. Certain types of structures may require a fire-resistance rated construction inspection. Regardless, all of the potential inspection points must be reviewed with a municipal building official before construction begins.

In addition, after construction begins, certain municipal inspections and approvals must take place **before** construction may continue. For example, framing on top of a foundation may not begin until the foundation has been inspected and approved. Similarly, insulation and interior walls may not be installed until the framing has been inspected and approved.

Most municipal building departments provide useful information on their web sites. In addition, it is normal to have questions about the municipal review, permitting, inspection, and approval processes for any project, regardless of its scope. The need to consult building officials, ask questions, and listen carefully to their answers cannot be over emphasized.

**Q. How often should the CSL holder be on the site?**

The CSL holder should be on the site as often as needed to ensure that all the work complies with the Building Code. The Building Code specifies that the CSL holder must be present on the site to approve construction, reconstruction, alterations, removal or demolition involving certain elements of the work including foundation, frame, energy conservation, fire protection, and special construction elements such as chimneys and retaining walls. The CSL holder must be fully and completely responsible for all the work for which s/he is supervising. The CSL holder must be responsible to supervise work involving any activity regulated by any part of the Building Code "and all other applicable Laws of the Commonwealth."

The scope of the work, the number of workers involved, and their skills are some of the factors to help determine how often and for how long (at any given time) the CSL holder must be on the site. But, in any event, a CSL holder's failure to be on site when it is necessary is often a failure to meet his/her supervisory requirements under the Building Code. The CSL holder who is **never** on the site cannot meet his supervisory obligations as required by the Building Code.

## Complaint Procedures

### **Q. What can I do when the project fails and the contractor does not resolve the problems?**

There are a number of things you can do. We recommend that (if you had not already done so **before** you hired the contractor) you consult the Office of Consumer Affairs and Business Regulation ([www.mass.gov/ocabr](http://www.mass.gov/ocabr)) with respect to whether the Home Improvement Contractor law, G. L. c. 142A, applies to your circumstances. You should also consult the Office of the Attorney General for useful information ([www.mass.gov/ago](http://www.mass.gov/ago)). You should also seek legal advice from an attorney with expertise in contract and construction law. The Massachusetts Bar Association and/or the Boston Bar Association, ([www.massbar.org](http://www.massbar.org); [www.bostonbar.org](http://www.bostonbar.org)), county bar associations, or legal services organizations in your area can provide names of attorneys who specialize in these matters.

If a CSL holder has been involved in the work, and you have reason to believe that there are failures to comply with the Building Code, then you may submit a complaint to the Board. The form, entitled “Construction Supervisor License (CSL) Complaint Application,” and the directions for submitting a complaint are on our web site.

You are not required to file a complaint with the Board before considering or taking any other action against the contractor through another forum, state agency or the court system.

### **Q. I am not satisfied with the workmanship on my project, may I file a complaint against the CSL holder?**

For the Board to consider a complaint, the complaint must describe “plausible potential violations” of the Building Code. “The purpose of [the Code] is to establish minimum requirements to safeguard the public safety, health and general welfare through affordability, structural strength, means of egress facilities, stability, sanitation, light and ventilation, energy conservation and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to fire fighters and emergency responders during emergency operations.”

Thus, the “minimum requirements” required by the Building Code are a subset of all the terms and conditions in a contract. A project could comply with the Building Code, but might not satisfy all the terms and conditions you bargained for in your contract. Building Code compliance does not guarantee quality of workmanship that was, according to your contract, supposed to *exceed* Building Code minimums. Generally, a complaint that describes only aesthetic concerns that do not raise Building Code compliance issues will not be scheduled for a hearing. Contractual disputes over terms and conditions that do not implicate the Building Code will not be scheduled for a hearing. Although holding a CSL indicates that one knows the Building Code, the CSL does not ensure that the construction supervisor is skilled in achieving all the results you expected.

**Q. When can I submit a complaint?**

Let's start with the latest you can submit a complaint. The Board has a "statute of limitations" which means that, for a complaint to be considered, the Board must receive it no later than three years from "the date the parties entered into an agreement to perform the work requiring licensure pursuant to 780 CMR 110.R5." Thus the date when the parties first contracted starts the "running of the clock" for the three-year period.

Within the three-year period, you could file a complaint at any time. But you might consider whether the CSL holder is in the process of correcting the Building Code failures or there is any likelihood that the CSL holder will correct the Code failures within a reasonable time.

As you might expect, the three-year limitations period exists because, over time, it becomes increasingly difficult to determine the facts about any given set of problems.

**Q. Who can file a complaint?**

Any person, including a building official or the Board itself, may file a complaint. Thus, for example, a neighbor and/or a building official may file a complaint even if the homeowner who hired the contractor does not want to file a complaint.

**Q. If I submit a complaint to the Board about an individual, or individuals, holding a CSL, what happens next?**

The complaint is reviewed to be sure that the Board has legal jurisdiction over what you have described and whether you have provided sufficient information about allegations of failure(s) to comply with the Building Code. The Board has legal jurisdiction over only whether a CSL holder has failed to comply with any part of the Building Code. The Board does not have the legal authority to, for example, determine whether you are entitled to monetary damages, or to order any party to pay or reimburse funds.

If the complaint contains sufficient information about allegation(s) of violations of the Building Code, then notices of the complaint are mailed to you, the CSL holder (with copies of the complaint and the information you submitted with the complaint), and municipal building department in your city or town.

Thereafter, the CSL holder has 30 days to submit a response to the complaint. Typically within a short time after that 30-day period, the Board issues notices of the hearing date and time. These are mailed to you, the CSL holder, and to the municipal building department in your town or city. Depending upon the number of complaints pending with the Board, a hearing date may be within a few weeks or months thereafter.

**Q. What happens at the hearing?**

The hearing is conducted by a Hearings Officer who will give each individual who appears at the hearing the opportunity to provide testimony under oath and submit other evidence relevant to the allegations specified in the complaint. The individual who filed the complaint (whether that was the homeowner, a building official, or some other individual) and the CSL holder will each have the opportunity to present any relevant information and to ask questions to anyone who testifies. Anyone may be represented by an attorney at the hearing, but no one is required to have an attorney involved.

The general scope of the hearing is to determine whether there is substantial evidence of any failure to comply with any part of the Building Code relevant to the allegations in the complaint.

**Q. What happens after the hearing?**

After the close of the hearing, the Hearings Officer will issue a written decision on behalf of the Board, usually within 90 days of the hearing. The decision will describe the findings and how the relevant Code provisions apply to those findings. If the decision concludes that there was substantial evidence of any Code violation, the decision may order **only** the following: issue a reprimand against the CSL holder, or suspend the CSL holder’s license for a period of time, or permanently revoke the CSL holder’s license. In addition, the Hearings Officer may order the license holder to retake the CSL examination for his particular type of license.

**Q. What happens if the CSL is suspended or revoked?**

The CSL holder is prohibited from operating as the CSL holder of record on a building permit for a project where a CSL holder is required. But s/he is **not prohibited** by the Building Code from continuing to work in his or her field. S/he may work with or for another CSL holder who is supervising the work, holds a valid license for the work, and is serving as the CSL holder of record for the building permit during the suspension period.

If the CSL is suspended, then, at the end of the suspension period, s/he must submit a written request to the Board to alert the Board that s/he intends to continue using the CSL after the suspension period.

If the CSL is revoked, the former CSL holder must wait at least two years before applying, in writing, to the Board for reinstatement of his/her CSL.

**Q. Can the decision be appealed?**

“Any person aggrieved by a decision” may appeal the decision to Superior Court pursuant to G. L. c. 30A, §14. Before filing an appeal under G. L. c. 30A, §14, “any person aggrieved by a decision” may, in writing, request further review by the Board. The Board may review the decision at its discretion. If the Board decides to review the decision, it may either deny the request for further review (or make change(s) to the decision) or remand the decision to the Hearings Officer for further proceedings as directed.

## **Tips From the Hearings Officer's Desk**

### *Planning Considerations:*

#### **Q. I am thinking about having work done on my house, what is the first thing I should do?**

Before hiring anyone, make a realistic evaluation of what you want and what you are able to do. Look at projects taking place in your neighborhood. Consult family and friends about projects they have recently undertaken. Review all the materials provided by the Office of Consumer Affairs and Business Regulation ([www.mass.gov/ocabr](http://www.mass.gov/ocabr)) the Attorney General's Office Consumer Protection Bureau ([www.mass.gov/ago](http://www.mass.gov/ago)) , and the Department of Public Safety ([www.mass.gov/dps](http://www.mass.gov/dps)).

In addition, there is a tremendous amount of information available from home improvement television programs, on-line sources, and retail building stores, but you need to take lots of time to review that information and turn it into useful *knowledge* for your specific project(s). Note that, during this preliminary analysis, you're not yet ready to speak with contractors, let alone get bids and select one for your project. Consult professionals, such as licensed architects and attorneys, about what you need to consider in the design and contract documents.

Being realistic includes deciding how much money you have available and how much you should spend. Those decisions are part of larger questions you must ask *and answer* as part of your cost/benefit analysis of the project before you proceed any further.

#### **Q. OK. I've spent quite some time consulting every source you suggested (and more) and have a general concept of what I want to accomplish, what's next?**

Being realistic also means being honest with yourself about how much or how little you want to do yourself. Popular media often encourage homeowners to do the work themselves. Can you? And, if you can, do you want to? Doing a realistic cost/benefit analysis about your role is essential.

If you plan on hiring anyone, what will be your business relationship with the people you hire? For example, will you act as your own general contractor, directly hiring others to do various parts of the project? Or, will you hire a general contractor, who, in turn, will be responsible for hiring various subcontractors as needed?

#### **Q. I have decided that I need a general contractor, what must happen before I select one?**

If you have read and understood the advice from the Office of Consumer Affairs and the Attorney General's Office (among others), then you should appreciate the need to obtain estimates from at least three contractors. You need to check the Home Improvement Contractor ("HIC") database through the Office of Consumer Affairs, the Construction Supervisor License database through the

Department of Public Safety, and any customer reviews for any signs of trouble about the contractor(s) you have identified. If you have not already seen examples of their work (not only photographs and/or on-line materials but also actual site visits) you should do so **before** selecting anyone. As part of that process, you should check their references---talk and/or meet with actual customers.

**Q. What are the main potential contract problems?**

Accurate pricing; realistic time estimates; sufficiently detailed description of the project.

**Pricing:** Part of the reason for obtaining at least three quotes is to help obtain a realistic budget for the work. **Time:** Similarly, obtaining at least three proposals will help you obtain a realistic time frame to complete the project. **Details:** Every home improvement contract must contain at least the information specified in G. L. c. 142A (See [www.mass.gov/ocabr](http://www.mass.gov/ocabr)). But, it is nearly impossible to have *too many* details; most projects where we see problems have contracts that leave too much unwritten, too much “to be determined later.”

When building an addition or a new home “from scratch,” the plans must be detailed and the structural issues sufficiently resolved by an architect or engineer so the CSL can follow the plans and actually construct what has been designed. The best designers, be they architects, engineers, or do-it-yourselfers with comparable knowledge and skills, may make mistakes. For example, they draw a feature that the CSL cannot build, or cannot build within your budget.

**Q. How do I handle changes in the project?**

Be sure to have written change orders. A verbal change order is “not worth the paper it’s written on.” Keep accurate records of everything said and/or done. Get the change order decided and agreed upon in writing **before** the change is made on site.

**Q. Who should apply for the building permit?**

If the work requires the involvement of a CSL holder, he should be directly involved in applying for the building permit and ensuring that all the information required by the municipality is accurate. This information includes, among other things, the scope of work, adequate plans, the cost (for determining the building permit fee), and required Workers’ Compensation insurance information. Other municipal approvals may be needed before a building permit may be issued, such as zoning, health, wetlands, or historic relief. Municipalities may require submission of a copy of the contract to help verify the scope and cost of the work.

**Q. How should building permits be handled before work begins?**

The Building Code mandates that construction activities may not begin until a building permit has been issued and is on the site. Although the Building Code does not expressly require the CSL holder, himself, to physically retrieve the building permit from the building department and bring it to the site, the best way for a CSL holder to avoid violating this part of the Code is pick up the building permit himself, rather than rely on the homeowner, or the CSL holder’s business partner, or anyone else.

Construction Activities:

**Q. What general site conditions should be expected?**

Existing parts of the house should be protected from the elements. The site should be kept orderly, understanding that during demolition and construction there will be messes, but they must be contained, such as through the use of (and timely removal of) dumpsters for construction debris. The site should be kept safe. There must be barriers to hazards such as holes, openings to places with no landings, railings, etc., and adequate sanitation measures. (Many projects need portable toilets, for example.)

**Q. What are some problems involving municipal inspections?**

One major concern is the failure to have the appropriate inspection done **before** moving on to the next phase of construction. For example, a building official cannot properly inspect a foundation **after** it has been back filled. Similarly, building officials do not have “x-ray vision” so framing cannot be enclosed by insulation and/or walls before they have completed a framing inspection.

**Q. What are the main problem areas that lead to Building Code violations in the actual construction of a home?**

Let’s start at the bottom and work up. (These are not necessarily all the parts of a project in which problems can arise; these are many of the main problems we have seen in the CSL hearing process.)

**Site preparation:** For an addition to, or constructing, a new home, getting the soil conditions correct for the foundation is absolutely critical. Did the excavation reveal sand, or clay, or organic matter, or ledge, or very wet conditions, or a combination of any or all of these conditions? Depending upon what conditions are found, certain steps must be taken to ensure that the foundation itself can be properly supported by the ground it sits on.

**Foundation:** The footings (the bases for the foundation walls) for the foundation must be of certain sizes and composition, depending upon the site conditions. After the footing type is determined and installed, the foundation must be of certain size and height, depending upon location and design of the structure the foundation is to support. A concrete foundation must have a certain strength to support the structure it will carry.

**Water Penetration in Basements:** After the foundation has been installed and **before** any backfilling (putting in material to fill the space between the outside wall of the foundation and sides of the excavation) can occur, certain water protection or water proofing steps must take place, depending upon the site’s conditions. Regardless of what steps are taken to keep water from getting into

basements, basements must not leak. The exterior walls of the foundation must be protected from water penetration. Certain sites may require the installation of drainage systems around the perimeter of the foundation to divert water away from the foundation.

**Water Vapor in Basements:** Even if a basement does not show any signs of visible water leakage, water vapor may collect in the basement and condense, for any number of reasons. Although high humidity in a basement can cause problems, the Building Code requires only certain measures that help, but do not completely, prevent vapor build up. If a concrete slab floor is installed, the Building Code requires the installation of a vapor barrier before the concrete floor is poured. To some extent, water protection or water proofing measures installed on the outside of the foundation wall may help prevent water vapor from penetrating the walls. But, concrete is porous and will transmit moisture. Air temperature and air circulation also affect how much moisture accumulates in the air in a basement.

**Backfilling:** When all water protection measures have been installed, the foundation is properly supported from the inside, and municipal inspections/approvals have taken place, the foundation may be backfilled.

Generally floor joists or some type of interior bracing must be installed before backfilling to help prevent the foundation from shifting. Yet, in many instances, we have seen that foundations have been backfilled before those interior means of support have been installed. We generally understand why contractors do this--it makes it easier to work around the foundation for the next phase of construction. But the risks include that the foundation may move, crack, or fail to provide adequate support, sooner or later.

The materials used to backfill must be correct. The space to be backfilled is not to be used as another dumpster for all that stuff you want to be rid of. Over time, poor backfilled materials can damage a foundation wall or cause the surface around the foundation wall to shift or sink.

The area around the foundation must be graded so it clearly pitches away from the foundation wall so water will flow away from the foundation wall. This rough grade with the correct pitch must be established **before** final landscaping (which typically takes place after all the main construction work on the building has been completed). We've seen where the "rough" grade after backfilling has not been properly pitched. As a result, water accumulated around the foundation then flowed into the basement. The CSL holder must ensure that the rough grading is proper, regardless of whether he will have any involvement in the finish landscaping.

The distance between the top of the foundation wall and the rough (properly pitched) grade must be adequate. If the top of the soil is too close to the top of the foundation wall, moisture, rot, pest problems are more likely to follow.

**Framing:** Many framing problems arise from not following the plans. We have often seen that changes to the framing, as initially planned and approved by the building official, get made "in the field" *without* first amending the plans on file with the municipality. The plans must be amended, then filed with and approved by the municipality **before** anyone tries to implement that change on site.

How the framing elements are fastened together has created problems. Some people “go nuts” with a nail gun so wood gets too damaged to be fastened properly. Sometimes builders forget to change the nails in the nail gun and use fasteners of the incorrect size. Certain applications require different intensity settings on the nail gun, or need hand nailing to avoid driving fasteners too deeply into the material. Sometimes framing is “temporarily” tacked together, and builders forget to go back and install the correct fasteners or ties.

Although not as common, we still see problems where walls are not plumb or floors or openings are not level or square.

**Plumbing/Electrical:** The CSL holder (and/or others he supervised) have violated rules by doing plumbing and/or electrical work without having a plumbing or electrical license issued by the Commonwealth. In some cases, the unlicensed individuals created life-threatening electrical fires or extreme nuisances due to water problems. Sometimes CSL holders have allowed plumbing or electrical work to take place without having the proper plumbing/electrical permit in place.

**Window/Door/Skylight Installations:** Most problems in the installation of windows, doors, or skylights can be avoided if people follow the manufacturer’s instructions “to the letter.” In addition to providing detailed, written instructions on paper and on their web sites, most manufacturers provide guidance over the telephone. These include proper sealing and flashing measures so the windows/doors/skylights do not leak.

**Siding:** With respect to vinyl and/or aluminum siding, we’ve seen failures to follow the manufacturer’s instructions and/or obvious workmanship problems around windows, doors, and trim. Regarding clapboard siding, poor nailing has been a problem. Before siding is applied, getting the underlayment correctly applied has been a challenge for some builders.

Although all exterior siding should be applied to ensure weather tightness, we’ve seen cases where interior finish work has proceeded (without the frame inspection) before the exterior is weather tight.

**Roofing:** Again, following the manufacturer’s installation instructions is very important. Too many times roofers do not follow those instructions, especially where the task involves correctly installing flashing around chimneys and/or where a roof meets a wall. A particular challenge has been the replacement of roofing materials around existing skylights. Sometimes the flashing systems for the original skylights are too old and/or damaged and must be replaced to ensure that the skylight won’t leak. Depending upon the age and manufacturer of the skylight, the replacement of roof coverings might also require the replacement of the entire skylight.

The edges of roofs, especially where water drains, have had problems because drip edges have not been properly applied, which led to water penetration and damage. Over nailing---driving roofing nails too deeply into the material---is a common problem. Many experienced roofers avoid using nail guns, because people fail to set the nail depth correctly, and would rather hand nail roofing materials.

Properly applying roof underlayment, especially where ice accumulates, has been a problem. If roofing materials are applied correctly, roofs do not leak. With today's roofing materials (properly installed), ice can accumulate on a roof and still not penetrate when it melts.

In keeping with the need to follow directions, one must also know how to install certain materials. Many problems have happened when contractors installed membrane roofing materials, such as rubber roofing materials, and did not know how to properly install them. We've seen low-sloped roofs where membrane materials or other comparable materials should have been used instead of shingles.

**Ventilation problems:** Generally unfinished attic spaces and roof framing systems where fiberglass insulation has been installed between the rafters require some type of ventilation so air can flow. By contrast, the use of some types of foam insulation that is sprayed to fill the spaces between rafters may eliminate the need for roof ventilation. Regardless, when replacing a roof, you need to review the Building Code and roofing material manufacturer's instructions **and** consult with your building official about the need for, and type of, ventilation methods for the attic/roof system.

**Exterior Decks:** The main problems have been: poor foundations; improper fastening to the building; improper sealing and flashing where decks join the buildings; improper fastening of deck materials (including failure to follow the directions provided by the manufacturer of decking materials--- many manufactured products are being used instead of wood); improper stairway installation, including railings; improper installation of railings around decks.

Although there is no doubt that the installation of a deck requires a building permit, there have been many cases where decks have been constructed without building permits, possibly under the mistaken belief that the replacement of a deck was just "ordinary repairs." For example, the replacement of two or three broken deck boards grew into complete deck replacement, which could not be described as an ordinary repair of the deck.

**Mechanical Systems:** Improper duct work and venting for HVAC systems, poor draining for condensate, or poor sizing of systems have been among the most prominent errors. Failing to follow manufacturer's specifications and parts of the Building Code for energy conservation have led to these types of errors.

Furnace installation and corresponding venting, especially when having to upgrade existing chimneys to properly exhaust the heating system, have shown remarkable "disconnects" between the contractor handling the chimney work and the contractor installing the furnace. Their work has to be coordinated so the chimney is properly sized and lined to be compatible with the type of furnace.

**Wood Burning or other stoves:** Like heating systems, these require proper installation according to the manufacturer's instructions to be sure they are correctly vented, are correctly protected from combustible materials in the building, and their chimney systems are properly installed.

**Q. If you could pick the primary cause for any of these problems, what would it be?**

A main cause for problems would be the failure of the CSL holder to adequately supervise the work on the site. This includes the failure to spend sufficient time on the site to ensure that the work complies with the Building Code.

The Project Ends:

**Q. What happens when construction activities conclude?**

When the project is complete, there must be a final inspection and approval by the municipality, usually in the form of a certificate of completion or certificate of occupancy, which is part of ensuring that the work complies with the Building Code. Code compliance is **not** the same as substantial completion for purposes of meeting contractual obligations. Building Code compliance is only part of those greater obligations. The building permit may not be removed from the site until the work is completed in compliance with the Building Code.

**Q. What happens when construction activities stop before all the work has been completed and achieved Building Code compliance?**

Work might stop “short of the goal” for any number of reasons. Regardless, the site must be left in a reasonably safe condition. We’ve seen that latent problems have been especially troublesome, such as where certain aspects appear to have been completed but the errors might not be found by a subsequent contractor or a building official. For example, was an exterior deck’s ledger board fastened correctly to the house to provide adequate support for the deck system? Those features are often hard to see *after* the deck boards have been installed.

Open doorways, excavations, etc. must have proper barriers to address hazardous conditions.

A building official should be asked to perform an interim inspection to help assess the Building Code status of incomplete aspects of the project.

Even if the CSL holder quits the job, or is fired, he should identify what he did, and did not, do. It’s very helpful to take lots of work-in-progress photographs. Regardless of the how his relationship with his customer concludes, the CSL holder may **not take the building permit and “hold it hostage”** while in a dispute with the customer.

Finally, there may be explanations and/or reasons which, sometimes, provide excuses for what happened on a project. The hearing process has revealed many stories. But it is a higher burden to provide credible *justifications* for one’s actions. Most times, failures to comply with the Building Code, even if explained, cannot be excused or justified.

