

# Substantial Improvement Workbook Harwich MA Notice to Property Owners and Contractors

## **Owner/Contractor to fill out below;**

Project Address;		
Flood Zone;		
Zoning District;	/ Map & Lot	
FROM:	Harwich Building Department	

## SUBJECT: Work on Existing Buildings in Special Flood Hazard Areas, i.e. Substantial Improvement, Damage & Foundation Repair Worksheets

The Town of Harwich's floodplain management regulations and the State of Massachusetts Building Code specify that all new buildings to be constructed in Special Flood Hazard Areas (SFHAs) are required to have their lowest floors elevated to or above the base flood elevation (BFE). The regulations also specify that if the following work is performed on existing buildings;

- <u>Substantial Improvement</u> of existing buildings (remodeling, rehabilitation, improvement, or additions as per the 2015 IRC, R105.3.1.1), or
- <u>Substantial Repair of a Foundation</u> (exceeding 50 % replacement , as per the 2015 IRC R105.3.1.1.1) or
- <u>Substantially Damaged Existing Building</u> (exceeding 50% repair as per the 2015 IRC, R105.3.1.1)

Then the building must be brought in to compliance with the requirements for new construction; i.e. flood regulation compliance.

Please note that a building maybe substantially damaged by any cause, including fire, flood, high wind, seismic activity land movement, or neglect. Itisimportanttonotethatallcoststorepairasubstantiallydamagedbuilding to its pre-damage condition must be identified.

There are several aspects that must be addressed to achieve compliance with the floodplain management requirements; the requirements depend on several factors, including the flood zone at your property. The most significant compliance requirement is that the lowest floor, as defined in the regulations/code, must be elevated to or above the BFE in accordance with the State Building Code.

Please plan to meet with this department to review your proposed project, to go over the requirements, and to discuss how to bring your building into compliance.

#### **DEFINING SUBSTANTIAL CHANGE**

The Massachusetts State Building Code (2015 IRC, Section 105.3) defines these terms as follows:

**Substantial damage** means damage of any origin sustained by a structure whereby the cost of restoring the structure to it's before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

**Substantial improvement** means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures that have incurred "substantial damage," regardless of the actual re- pair work performed. The term does not, however, include either:

(1) Any project for improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and that are the minimum necessary to assure safe living conditions or

(2) Any alteration of a *"historic structure,"* provided that the alteration will not preclude the structure's continued designation as a "historic structure."

**Substantial Repair** of a Foundation means repair or replacement of a foundation that equals or exceeds 50% of the perimeter along the base of the foundation or replacement of more than 50% of the existing piers of the foundation.

#### **DETERMINING SUBSTANTIAL CHANGES**

To make the substantial improvement determination or the substantial damage determination, we compare the cost of the proposed improvement or repairs to the market value of the building (excluding land, accessory structures, and landscaping). If the resulting ratio equals or exceeds <u>50 percent</u>, the existing building must be brought into compliance with the floodplain management requirements for new buildings.

Please note:

- You must provide a <u>detailed estimate</u> of the cost to perform the proposed improvements or repairs. If your building has been damaged, the cost estimate must include all work required to repair the building to its pre-damage condition. The cost estimate must include all labor and materials. If the work will be done by a contractor, the contractor's overhead and profit must be included. Lf the work will be done by the owner or volunteers, market rates must be used to estimate the cost of materials and the value of labor. Attached to this notice is a list of costs that must be included and costs that are excluded. After we review the cost estimate, we may require that it be broken down to show all materials and labor estimates.
- You must provide a <u>market value appraisal</u> of the building that is prepared by a professional appraiser according to standard practices of the profession. We will review the appraisal to determine that it accurately describes your building and does not include the value of the land, accessory buildings, and landscaping. Alternatively, we will use the tax assessment value of your building as the estimate of the market value of the building before the work is performed.

If you have any questions regarding this information, please contact the Building Department.

#### Requirements for Permit Applications for Substantial Improvements and Repair of Substantial Damage

Please contact the Harwich Building Department if you have questions about the substantial improvement and substantial damage requirements. Your building may have to be brought into compliance with the floodplain management requirements for new construction.

Applications for permits to work on existing buildings that are located in Special Flood Hazard Areas must include the following:

- Current photographs of the exterior (front, rear, sides)
- If your building has been damaged, include photographs of the interior and exterior; provide pre-damage photos of the exterior, if available
- Detailed description of the proposed improvement (rehabilitation, remodeling, addition, etc.) or repairs
- Cost estimate of the proposed improvement or the cost estimate to repair the damaged building to its before-damage condition
- Elevation certificate or elevation survey
- You may submit a market value appraisal prepared by a licensed professional appraiser or we will use the tax assessment value of the building
- Owner's affidavit (signed and dated)
- Contractor's affidavit (signed and dated)

## Costs for Substantial Improvements and Repair of Substantial Damage

#### **Included Costs**

Items that must be included in the costs of improvement or costs to repair are those that are directly associated with the building. The following list of costs that must be included is not intended to be exhaustive, but characterizes the types of costs that must be included:

- Materials and labor, including the estimated value of donated or discounted materials and owner or volunteered labor
- Site preparation related to the improvement or repair (foundation excavation, filling in basements)
- Demolition and construction debris disposal
- Labor and other costs associated with demolishing, moving, or altering building components to accommodate improvements, additions, and making repairs
- Costs associated with complying with any other regulation or code requirement that is triggered by the work, including costs to comply with the requirements of the Americans with Disabilities Act (ADA)
- Costs associated with elevating a structure to an elevation that is lower than the BFE
- Construction management and supervision
- Contractor's overhead and profit
- Sales taxes on materials
- Structural elements and exterior finishes, including:
  - Foundations (e.g., spread or continuous foundation footings, perimeter walls, chain walls, pilings, columns, posts, etc.)
  - Monolithic or other types of concrete slabs
  - \* Bearing walls, tie beams, trusses
  - Joists, beams, subflooring, framing, ceilings
  - \* Interior non-bearing walls
  - Exterior finishes (e.g., brick, stucco, siding, painting, and trim)

- Structural elements and exterior finishes (cont.):
  - \* Windows and exterior doors
  - \* Roofing, gutters, and downspouts
  - \* Hardware
  - \* Attached decks and porches
- Interior finish elements, including:
  - Floor finishes (e.g., hardwood, ceramic, vinyl, linoleum, stone, and wall-to-wall carpet over subflooring)
  - \* Bathroom tiling and fixtures
  - \* Wall finishes (e.g., drywall, paint, stucco, plaster, paneling, and marble)
  - \* Built-in cabinets (e.g., kitchen, utility, entertainment, storage, and bathroom)
  - \* Interior doors
  - \* Interior finish carpentry
  - \* Built-in bookcases and furniture
  - \* Hardware
  - \* Insulation
- Utility and service equipment, including:
  - \* HVAC equipment
  - \* Plumbing fixtures and piping
  - \* Electrical wiring, outlets, and switches
  - \* Light fixtures and ceiling fans
  - \* Security systems
  - \* Built-in appliances
  - \* Central vacuum systems
  - \* Water filtration, conditioning, and recirculation systems

## **Excluded Costs**

Items that can be excluded are those that are not directly associated with the building. The following list characterizes the types of costs that may be excluded:

• Clean-up and trash removal

• Costs to temporarily stabilize a building so that it is safe to enter to evaluate required repairs

- Costs to obtain or prepare plans and specifications
- Land survey costs
- Permit fees and inspection fees
- Carpeting and re-carpeting installed over finished flooring such as wood or tiling
- Outside improvements, including landscaping, irrigation, sidewalks, driveways, fences, yard lights, swimming pools, pool enclosures, and detached accessory structures (e.g., garages, sheds, and gazebos)
- Costs required for the minimum necessary work to correct existing violations of health, safety, and sanitary codes \*
- Plug-in appliances such as washing machines, dryers, and stoves

#### \*Existing Violation Exclusion

- A. This exclusion does not include old, existing work that is to be upgraded as a part of the overall proposed scope of work.
- B. Violations to be excluded must be specifically cited, in writing by the AHJ and must pre-date application status.
- C. Work requested to be excluded must cite, in writing, any exemption as per FEMA P-758, Section 4.4.8

## Owner's Affidavit: Substantial Improvement or Repair of Substantial Damage

Property Address:

Map/Lot:

**Owner's Name:** 

**Owner's Address/ Phone/ Email:** 

**Contractor:** 

**Contractor's License Number:** 

#### Date of Contractor's Estimate:

*I hereby attest* that the description included in the permit application for the work on the existing building that is located at the property identified above, is all of the work that will be done, including all improvements, rehabilitation, remodeling, repairs, additions, and any other form of improvement.

*I further attest* that I have requested the above-identified contractor to prepare a cost estimate for all of the work, including the contractor's overhead and profit.

*I acknowledge* that if, during the course of construction, I decide to add more work or to modify the work described, that the Town of Harwich will re-evaluate its comparison of the cost of work to the market value of the building to determine if the work is substantial improvement. Such re-evaluation may require revision of the permit and may subject the property to additional requirements.

*I also understand* that I am subject to enforcement action and/ or fines if inspection of the property reveals that I have made or authorized repairs or improvements that were not included in the description of work and the cost estimate for that work that were the basis for issuance of a permit.

Owner's Signature:

Date:

Notarized:

## **Contractor's Affidavit: Substantial Improvement or Repair of Substantial**

### **Damage**

Property Address:

Parcel ID Number:

Contractor's Name:

Contractor's:

Address/ Phone/Email:

Contractor's License Number:

Date of Contractor's Estimate:

*I hereby attest* that I have personally inspected the building located at the above-referenced address and discussed the nature and extent of the work requested by the owner, including all improvements, rehabilitation, remodeling, repairs, additions, and any other form of Improvement.

At the request of the owner, I have prepared a cost estimate for all of the improvement work requested by the owner and the cost estimate includes, at a minimum, the cost elements identified by the Town of Harwich that are appropriate for the nature of the work. If the work is repair of damage, I have prepared a cost estimate to repair the building to its pre-damage condition.

*I acknowledge that* if, during the course of construction, the owner requests more work or modification of the work described in the application, that a revised cost estimate must be provided to the Town of Harwich, which will re-evaluate its comparison of the cost of work to the market value of the building to determine if the work is substantial improvement. Such reevaluation may require revision of the permit and may subject the property to additional requirements.

*I also understand that* I am subject to enforcement action and/or fines if inspection of the property reveals that I have made or authorized repairs or improvements that were not included in the description of work and the cost estimate for that work that were the basis for issuance of a permit.

Contractor's Signature:

Date:

Notarized:

## **Substantial Improvement Ratio Worksheet**

(For reconstruction, rehabilitation, addition, or other improvements, and repair of damage from any cause)

### Applicant to fill out in Box below;

Property Owner:	
<b>Present Market Value</b> of structure ONLY (market appraisal or adjusted Assessed value, BEFORE improvement, or if damaged, Before the damage occurred), not including land value:	\$
Cost of Improvement - Actual cost of the construction** (see items to include/exclude) "Include volunteer labor and donated supplies. **	\$
Ratio = <u>Cost of Improvement (or Cost to Repair)</u> Market Value X 100	%

If ratio is 50 percent or greater (Substantial Improvement), entire structure including the existing building must be elevated to the base flood elevation (BFE) and all other aspects brought into compliance

#### **Important Notes:**

- 1. Review cost estimates to ensure that all appropriate costs are included or excluded.
- 2. If a residential pre-FIRM building is determined to be substantially improved, it must be elevated to or above the BFE. If a non-residential pre-FIRM building is substantially improved, it must be elevated or dry flood proofed to the BFE.
- 3. Proposals to repair damage from any cause must be analyzed using the formula shown above.
- 4. Any proposed improvements or repairs to a post-FIRM building must be evaluated to ensure that the improvements or repairs comply with floodplain management regulations and to ensure that the improvements or repairs do not alter any aspect of the building that would make it non-compliant.
- 5. Alterations to and repairs of designated historic structures may be granted a variance or be exempt under the substantial improvement definition) provided the work will not preclude continued designation as a "historic structure."
- 6. Any costs associated with directly correcting health, sanitary, and safety code violations may be excluded from the cost of improvement. The violation must have been officially cited prior to submission of the permit application.

Determination completed by:	

Date:

## **Important FAQ's**

- All Work taking place on an existing structure in a Flood Zone is subject to review under these guidelines. This includes any work that falls within the work definition of Substantial Improvement including cabinets & countertops, trim, paint, etc. exclusive of exclusions per code R105.2.
- Completion of this Workbook is required for all Projects that are being Substantial Improved as defined by the Mass. State Building Code in all Flood Zones.
- Completion of this Work book is required for all Projects that exceed, or are likely to exceed, **25%** of the Value of the Structure as determined by the Building Commissioner.
- You must attach/provide all information as identified on the Checklist.
- You must fill out the Workbook fully as identified on the Checklist.
- You must submit all documents in their original, paper format.
- Please be aware should the value of the work in place exceed the 50% value, or show that it is likely to exceed the 50% value, during construction due to unforeseen condition; the Project may be subject to a stop work order.
- Harwich is a `CRS' Community within the NFIP Program and your information, project estimates and worksheets are subject to FEMA NFIP review and enforcement.
- This Project is also subject to regulations of and enforcement as allowed under the State of Massachusetts Building Code, MGL 143.
- The Building Department will review all documentation and has the jurisdiction to determine if your values and estimates are acceptable when measured against standards.
- Per Code; ALL work permitted within a 12 month period will be considered as a Single Project and Work Values will be summed for purposed of determining Compliance.
- FEMA P-758 `Substantial Improvement/Substantial Damage Desk Reference' will be used as a guideline. You may download your own copy from the FEMA Website.
- If a project is determined to have exceeded the 50% Value target, it will require compliance with all current NFIP and Building Code flood regulations for the entire structure

## **Substantial Improvement Worksheet Checklist**

#### Complete the Substantial Improvement Workbook including the following;

- A \_\_\_\_Owner to initial each Page, bottom right hand corner
- B \_\_\_\_Complete Substantial Improvement Affidavits Owner & Contractor
- **C** \_\_\_\_Complete Substantial Improvement Ratio Worksheet
- D \_\_\_\_Attach Two (2) Each Independent Appraisals and/or Assessors Record Card
- E \_\_\_\_Completed Substantial Improvement Cost Breakdown
  - **1** \_\_\_\_Provide copies of Contractor's estimates/bids for PGEM, non-self-performed trades, all materials

**2** \_\_\_\_Provide copies of invoices/materials estimates for all Owner supplied materials, labor or trade work

- F \_\_\_\_Include Photographs of Existing Conditions included in Work Scope
- **G** \_\_\_\_Submit all documents in paper format with original signatures, notaries' stamps
- **H** \_\_\_\_Elevation Certificate for Floor elevations (for existing structures only)
- I \_\_\_\_\_FEMA Firmette for Project Address (FEMA Flood Map site)

#### Additional Documents to be provided as required;

- J \_\_\_\_Copy of Acceptance Letter for MT-1 for LOMA/CLOMA/LOMR/CLOMR
- **K** \_\_\_\_\_V-Zone Engineering Certificate (for all projects in a V Flood Zone)
- L \_\_\_\_Site Plan indicating Mean Grade, Flood Zone, Design Flood elevation (DFE) and Base Flood Elevation (BFE)
- M \_\_\_\_Copy of Conservation Approval via Recorded & Stamped NOI

#### **Applicant Signature**

#### **PROJECT ADDRESS:**

WORK SCOPE:					
OWNER: CO	ONTRACTOR:		DATE:		
* A dollar value is required for both labor and materia limited to the foll		ory listed including but	not		
* If a category does not a * if work is proposed that is not covered in this document/verify t * All Sub-Contractor estimates must have a c	pply, enter N/A document, provi the cost	-		LEGEND LS - Lump Sum SF - Square Foot LF - Lineal Foot SO - Roof Square	
Interior Demolition				<u>\$</u> L;	abor
Description of Work		Quantity	_ MH	<u>\$</u> N	/latl.
Trash Removal (Dumpsters or Truckloads)		Quantity	EA		
		Labor, Material, Tra	ish Total	<u>\$</u>	
Source of Value   Sub-Contractor Estimate   Determined   Determined   Sub-Contractor Estimate   Determined   Sub-Contractor   Sub-Cont	etailed Estimate	Sq. Ft Method	Detaile	ed Labor & Material Ta	keof
Foundation/Concrete				<u>\$</u> La	abor
Description of Work		Quantity	LF	<u>\$</u> N	/latl.
		Labor & Mater	ial Total	 Ś	
Source of Value 🛛 Sub-Contractor Estimate 🗆 De	etailed Estimate			ed Labor & Material Ta	<u> </u>
Foundation/Piers				\$ 1;	abor
Description of Work		Quantity	EA		/atl.
(Des. Cont.)				<u>\$</u> IV	//dll.
		Labor & Ma	terial Tota	al <u>\$</u>	_
Source of Value   Sub-Contractor Estimate   Determines	etailed Estimate	🗆 Sq. Ft Method 🗆	Detaile	ed Labor & Material Ta	ikeof
Masonry				Ś Li	abor
Description of Work (Des. Cont.)		Quantity	SF		/latl.
		Labor & Ma	terial Tota	ıl <u>\$</u>	
Source of Value 🛛 Sub-Contractor Estimate 🗆 De	etailed Estimate	🗆 Sq. Ft Method 🗆	Detaile	ed Labor & Material Ta	ikeof

Framing w/Studs, Lumber			ć	Labor
Description of Work	Quantity	IF	<u>&gt;</u>	Labor
(Des. Cont.)	Quantity	Ľ.	<u>\$</u>	Matl.
	Labor 8	Material Total	\$	
			<u>*</u>	
Source of Value   Sub-Contractor Estimate   Detailed Estimate	🗆 Sq. Ft Method	Detailed	Labor & Mate	erial Takeoff
Framing w/Engineered Lumber			<u>\$</u>	Labor
Description of Work	Quantity	EA	¢	Matl.
(Des. Cont.)			<u> -</u>	Wati.
	Labor &	Material Total	\$	
Source of Value   Sub-Contractor Estimate  Detailed Estimate	Sq. Ft Method	Detailed	Labor & Mate	erial Takeoff
Framing/Decks & Exterior Stairs			Ś	Labor
Description of Work	Quantity	SF		
(Des. Cont.)			<u>\$</u>	Matl.
	Labor 8	& Material Total	\$	
			<u></u>	
Source of Value   Sub-Contractor Estimate   Detailed Estimate	Sq. Ft Method	Detailed	Labor & Mate	erial Takeoff
Roofing				
	Quantity	SF	<u>&gt;</u>	Labor
Description of Work		5	<u>\$</u>	Matl.
(bes. cont.)	Labor 8	Material Total	\$	
			<u>¥</u>	
Source of Value Sub-Contractor Estimate Detailed Estimate	Sq. Ft Method	Detailed	Labor & Mate	erial Takeoff
Siding			<u>\$</u>	Labor
Description of Work	Quantity	SF	<u>\$</u>	Matl.
(Des. Cont.) 🗌 Wood 🗆 Vinyl 🗆 Cementitious 🗆	Other		<del></del>	
	Labor	& Material Total	<u>\$</u>	
Source of Value		Detailed	Labar Q Mate	uial Talvaaff
	Sq. Ft Method	Detailed		
Insulation			<u>\$</u>	Labor
Description of Work	Quantity	LF	\$	Matl.
(Des. Cont.) _ Foam _ F'Glass Batt _ Blow in	Other		<u>+</u>	
	Labor Q A	Naterial Total	<u> </u>	<u></u>
			<u>¥</u>	
Source of Value 🛛 Sub-Contractor Estimate 🗌 Detailed Estimate	Sq. Ft Method	Detailed	Labor & Mate	erial Takeoff

Drywall/Plaster		\$ Labor
Description of Work (Des. Cont.)	QuantityLF	<u>\$</u> Matl.
	Labor & Material To	tal <u>\$</u>
Source of Value   Sub-Contractor Estimate  Detailed Estimate	🗆 Sq. Ft Method 🗆 Deta	ailed Labor & Material Takeoff
Finish Carpentry/Doors & Windows		<u>\$</u> Labor
Description of Work (Des. Cont.)	QuantityLF	<u>\$</u> Matl.
Interior Exterior Sliders Ga	age Labor & Material Tot	tal <u>\$</u>
Source of Value   Sub-Contractor Estimate  Detailed Estimate	🗆 Sq. Ft Method 🗆 Deta	ailed Labor & Material Takeoff
Finish Carpentry/Trim & Millwork		\$ Labor
Description of Work (Des. Cont.)	QuantityLF	<u>\$                                    </u>
	Labor & Material T	otal <u>\$</u>
Source of Value   Sub-Contractor Estimate  Detailed Estimate	🗆 Sq. Ft Method 🗆 Deta	ailed Labor & Material Takeoff
Finish Carpentry/Casework, Cabinets & Countertops		<u>\$</u> Labor
Description of Work	QuantityLF	<u>\$</u> Matl.
C'Top       Laminate       Solid Surface       Granite       Other         Cabinet       Laminate       Modular       Wood       Custom	Labor & Material	Total <u>\$</u>
Source of Value   Sub-Contractor Estimate  Detailed Estimate	🗆 Sq. Ft Method 🗆 De	tailed Labor & Material Takeoff

Painting/Wall Finish		\$ Labor
Description of Work	QuantityLF	<u>\$</u> Matl.
Paint I Tile I Other	Labor & Material Total	<u>\$</u>
Source of Value   Sub-Contractor Estimate   Detailed Estimate	🗆 Sq. Ft Method 🗆 Detailed	d Labor & Material Takeoff
Flooring		\$ Labor
Description of Work (Des. Cont.)	QuantityLF	<u>\$</u> Matl.
<ul> <li>Tile SF</li> <li>Carpet SF</li> <li>Wood SF</li> <li>Other SF</li> </ul>	Labor & Material Total	<u>\$</u>
Source of Value 🛛 Sub-Contractor Estimate 🗆 Detailed Estimate	🗆 Sq. Ft Method 🗆 Detaile	d Labor & Material Takeoff
Plumbing & Gas		\$ Labor
Description of Work (Des. Cont.)	QuantityLF	<u>\$</u> Matl.
Lavs  Toilets  Showers  Tubs    Kitchen Sink  Other	Labor & Material Tota	<u>\$</u>
Source of Value 🛛 Sub-Contractor Estimate 🗌 Detailed Estimate	🗆 Sq. Ft Method 🗌 Detailed	d Labor & Material Takeoff
Electrical		<u>\$</u> Labor
Description of Work (Des. Cont.)	QuantityLF	<u>\$</u> Matl.
<ul> <li>Service/New</li> <li>Service Upgrade</li> <li>Sub Panel</li> <li>Othe</li> <li>Devices</li> <li>Smoke/CO</li> <li>Lights</li> <li>Ceilir</li> <li>Other</li> </ul>	r Labor & Material Tor Ig Fan	tal <u>\$</u>
Source of Value   Sub-Contractor Estimate   Detailed Estimate	Sq. Ft Method Detailed	d Labor & Material Takeoff

Mechanical HV	NC .					<u>\$</u> I	Labor
Description of Wor (Des. Cont.	k			Quantity	LF	<u>\$</u> 1	Matl.
				Labor &	Material Total	\$	_
	Mini-Splits	Furnace/Heat	Only 🗌 Furnace	w/AC			
Source of Value	Sub-Contract	or Estimate	Detailed Estimate	🗆 Sq. Ft Method	Detailed	Labor & Material Ta	akeoff
Appliances/Buil	t In					<u>\$</u> 1	Labor
Description of Wo (Des. Cont	rk			Quantity	LF	<u>\$</u> I	Matl.
	<ul><li>Kitchen</li><li>Laundry</li><li>Other</li></ul>	SF SF SF		Labor &	Material Total	<u>\$</u>	
Source of Value	□ Sub-Contract	or Estimate	Detailed Estimate	🗆 Sq. Ft Method	Detailed	Labor & Material Ta	akeoff
General Contrac	tor Overhead &	Profit			LS	<u>\$</u>	
Contingency per Co	ontract					<u>\$</u>	
Other Work within	12 Mos.	Permit# Permit#	Desc. Desc.		EA EA	<u>\$</u>	
Source of Value	Sub-Contract	or Estimate	Detailed Estimate	Sq. Ft Method	Detailed	Labor & Material Ta	akeoff