

# Pre-Manufactured Housing Unit (PHU)

This document contains a collection of handouts about building a new PHU in the County of Humboldt. Included are links to resources which are used by the Humboldt County Building Division to assess requirements for a proposed PHU. Click the gold star to get a PDF version of the handout it is next to.

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# Important GIS Layers | Pre-Manufactured Housing Unit ★

The [Humboldt County Geographical Information System \(GIS\)](#) is used by the building division to determine the jurisdictions, hazards, natural resources, and other geologic features associated with the proposed building site. Below are some important jurisdictional and geologic features that have a significant effect on what submittal documents you will need for a new PHU. To learn more about how to use the GIS, read the [Web GIS Guide](#).

Jurisdictions

## Wildfire Responsibility

The Wildfire Responsibility layer shows which parcels are in the state responsibility area (SRA), local responsibility area (LRA), and the federal responsibility area (FRA). If your construction is within the SRA you will need to comply with the counties [Fire Safe Regulations](#) (also summarized in the [SRA Fire Safe Regulations Checklist](#)). Furthermore, you will have to comply with the [Wildland Urban Interface](#) building regulations by providing a wildland urban interface rated PHU. To access the Wildfire Responsibility layer, check the following [GIS](#) layer list boxes to the right

▼  Jurisdiction Boundaries & Land Use

▶  Planning Layers

▼  Jurisdiction Boundaries

▶  City Boundary

▶  School Districts

▶  Fire Districts

▼  Wildfire Responsibility (Cal Fire)

SRA

LRA

FRA

## Community Services District

The community services district layer shows which parcels are served by potable water and sewer services. This layer is significant to the building division because if your parcel is not within a community service district you will be allowed to apply for an alternate-owner builder permit (AOB permit) described in the counties [Alternative-Owner Builders Ordinance](#). For more information refer to the [AOB Submittal Requirements Form](#). A PHU is *not* allowed to go AOB. To access the Community Services District layer, check the following [GIS](#) layer list boxes to the right.

▼  Jurisdiction Boundaries & Land Use

▶  Planning Layers

▼  Jurisdiction Boundaries

▶  City Boundary

▶  School Districts

▶  Fire Districts

▶  Wildfire Responsibility (Cal Fire)

▼  Community Service Districts

District



## FEMA Flood Zones

The FEMA Flood Zone layer shows the flood zone and floodway. A new PHU in the flood zone will have to comply with the [Flood Damage Prevention](#) chapter of the county ordinance, [Flood Resistant Construction](#) of the Residential Building Code, [Flood Hazard Reduction](#) of the California Plumbing Code, [Flood Hazard Areas](#) of the California Mechanical Code and will need to have a second floor certification [special inspection](#). To access the FEMA Flood Zone layer, check the following [GIS](#) layer list boxes to the right

- ▼  Hazards
  - ▶  Coastal and Dam Inundation
  - ▶  Tsunami
  - ▼  Flood
    - ▶  DWR Awareness Floodplain
  - ▼  FEMA Flood Zones (6/21/2017)
    - 100 Year Flood Zone (A, AE, AO, VE)
    - 500 Year Flood Zone (Shaded X)
    - Floodway

## Slope Less Than 15%

The slope less than 15% layer will tell you if you're construction site is likely to have a slope over 15%. Having a slope over 15% is considered an unusual hazard and will require more submittal documents than usual for grading and new construction. All grading on a slope over 15% will require an engineered grading plan per the [grading designation](#), a soils report per the [engineered grading application requirements](#), and final reports per [completion of work](#). A new PHU on a slope over 15% will require a soils report and a site-specific [sediment and erosion control plan](#) per the [erosion and sediment control plan requirements](#). To access the Slope Less Than 15% layer, check the following [GIS](#) layer list boxes to the right.

- ▼  Hazards
  - ▶  Coastal and Dam Inundation
  - ▶  Tsunami
  - ▶  Flood
  - ▼  Seismic Safety and Slope Stability
    - ▶  Area of Potential Liquefaction
    - ▶  Seismic Safety
    - ▶  Historic Landslides
    - ▶  Slope LiDAR - Elk/Freshwater
    - ▶  Slope USGS
  - ▼  Slope less than 15%
    - <15%




## Seismic Safety

The seismic safety layer shows relative stability of your construction site. A moderate or high instability is considered an unusual hazard and will require more submittal documents than usual for grading and new construction. Grading 50 cubic yards or more on sites with moderate or high instability will require an engineered grading plan per the [grading designation](#), a soils report per the [engineered grading application requirements](#), and final reports per [completion of work](#). You will notice the GIS lists seismic safety from 0 to 3 while the [geologic matrix](#) lists seismic safety from 1 to 4. In this case 0 matches with 1, 1 matches with 2, and so on. Per the geologic matrix a soils report will be required for a PHU with a moderate or high designation. Furthermore a PHU will require a site-specific sediment and erosion control plan with a moderate or high seismic safety designation per the [erosion and sediment control plan requirements](#). To access the Seismic Safety layer, check the following [GIS](#) layer list boxes to the right.

- ▼  Hazards
  - ▶  Coastal and Dam Inundation
  - ▶  Tsunami
  - ▶  Flood
  - ▼  Seismic Safety and Slope Stability
    - ▶  Area of Potential Liquefaction
    - ▼  Seismic Safety
      - 3 High Instability
      - 2 Moderate Instability
      - 1 Low Instability
      - 0 Relatively Stable

## Area of Potential Liquefaction

The area of potential liquefaction layer shows areas where the stiffness of the soil has a potential to temporarily behave like a liquid during an earthquake. An area of potential liquefaction is considered an unusual hazard and may require more submittal documents than usual for a PHU. To access the Area of Potential Liquefaction layer, check the following [GIS](#) layer list boxes to the right.

- ▼  Hazards
  - ▶  Coastal and Dam Inundation
  - ▶  Tsunami
  - ▶  Flood
  - ▼  Seismic Safety and Slope Stability
    - ▼  Area of Potential Liquefaction
      - 




## Streamside Management Area (SMA)

The Streamside Management Area (SMA) layer shows class 1 and class 2 streams. Development of a PHU in the SMA will need to comply with the [Streamside Management and Wetland Areas Ordinance](#) of the county code and will require a special permit from the planning department. To dispute the biological impact of your development you can submit a biological determination from a qualified biologist. Any grading over 50 cubic yards in the SMA will need to be engineered. To access the SMA layer, check the following [GIS](#) layer list boxes to the right.

## Wetlands

The Wetlands layer shows all wetlands. They are differentiated by type on the GIS, but the building department treats construction in any of these areas the same. Development of a PHU in a wetland will need to comply with the [Streamside Management and Wetland Areas Ordinance](#) of the county code and will require a special permit from the planning department. To dispute the biological impact of your development you can submit a biological determination from a qualified biologist. Any grading over 50 cubic yards in the SMA will need to be engineered. To access the SMA layer, check the following layer [GIS](#) list boxes to the right.

- ▼  Natural Resources
  - ▼  Streamside Management Areas
    - 

- ▼  Natural Resources
  - ▶  Streamside Management Areas
  - ▶  Williamson AG Preserves
  - ▶  SMARA Parcels
  - ▶  Prime Agricultural Soils
  - ▶  Agricultural Soils
  - ▶  NRCS 2014 Soils (Proposed)
  - ▼  Wetlands
    - ▶  NWI Wetlands
      - ▶  McKinleyville Wetlands
      - ▶  Mill Creek Wetlands



## Low Impact Development Area (MS4)

The MS4 layer shows areas subject to the State Water Quality Control Board’s requirements for storm water systems. For more information on what the MS4 is and what documentation is required refer to the [MS4 Stormwater Manual](#). If your parcel is less than 1-acre then you may apply for less restrictive requirements with the [MS4 Small Construction](#) form. To access the MS4 layer, check the following [GIS](#) layer list boxes to the right.

- ▼  Natural Resources
  - ▶  Streamside Management Areas
  - ▶  Williamson AG Preserves
  - ▶  SMARA Parcels
  - ▶  Prime Agricultural Soils
  - ▶  Agricultural Soils
  - ▶  NRCS 2014 Soils (Proposed)
  - ▶  Wetlands
  - ▶  Coastal Wetland Areas
- ▼  Low Impact Development Areas (MS4)



## Submittal Documents | Pre-Manufactured Housing Unit ★

Submittal documents are construction drawings, engineered calculations, forms, installation manuals, and any other documents which will describe the construction of your proposed PHU. Below is a list of all the submittal documents you could be required to provide. The submittal documents required for building permit issuance depend on the geologic/jurisdictional features of your building site.

### Required Submittals

- *Construction Plans*
  - Plot/Site Plan – The plot plan shows the entire parcel including all proposed structures, existing structures, setbacks from property lines, SRA areas, vegetation management area and more. Refer to the [plot plan checklist](#) to see what information a plot plan has.
  - Sediment and Erosion Control Plan - The purpose of an erosion and sediment control plan is to prevent sedimentation or damage to onsite and offsite property. At a minimum these general guidelines must be followed.
- *Engineering*
  - Building Manufacturer’s Instructions – The instruction manual that comes with the PHU.
- *Forms*
  - Building Application - A building application is used to gather personal information about the applicant and a project description. This must be filled out by the owner or agent.

### Potentially Required

- *Construction Plans*
  - Grading Plan – Required if your building site is on an existing or proposed graded flat where over 50 cubic yards of dirt was moved or will be moved. If unusual hazards (high slope, fill seismic instability, liquefaction potential) or natural resources (streamside management area, wetlands) exist at your building site then an engineered grading plan may be required.
- *Engineering*
  - Soils Report – If unusual hazards exist at your building site (over 15% slope, seismic instability, liquefaction potential) or if an engineered grading plan is required.
  - Flood Elevation Certificate – If the building site is in the flood zone.



- *Forms*
  - [Authorization of Agent](#) – If you want to authorize a 3<sup>rd</sup> party to act on your behalf.
  - [Erosion and Sediment Control Plan for Small Projects](#) – If you want to apply for less restrictive erosion and sediment control requirements.
  - [SRA Small Parcel Exemptions](#) – If you want to apply for reduced setbacks in an SRA area.
  - [Owner Builder Notice to Property Owner Form](#) – If you want to apply as an owner-builder.
  - [MS4 Small Construction](#) – If you are in the MS4 area and your parcel is less than 1 acre.





# Inspection Schedule | Pre-Manufactured Housing Unit ★

New PHU construction is inspected in 2 stages; foundation and final. You could manage to have only 2 inspections during the life of your project, but it is very common to have more. This document provides a description of each inspection including related building code, directions on when to call for your next inspection, and descriptions of special inspections that may be required. You must provide the inspection card, all county approved documents, and any relevant installation manuals on-site for each inspection. Refer to [Important GIS Layers](#) to determine if flood and fire hazard requirements apply.

## 1 Foundation

- *Setbacks* – We will verify that the setbacks described on your county approved site map match your development. You must be outside the setback distance from property lines, easements, streamside management areas, and rights of way. Your forms are required to be set prior to the setback inspection. If you cannot provide definitive proof you are outside setback areas you will be required to obtain a property survey from a qualified surveyor. The [Humboldt County Zoning Code](#) will be used as a minimum requirement.
- *Footings (if required)* – We will verify that your footings match what is required on the soils report and building plans. This includes proper depth, width, quality of soil, and sediment and erosion control. A [Footing Special Inspection](#) by the engineer on record may be required. The building codes relevant to this inspection are the [California Residential Code \(CRC\)](#), and the [Humboldt Code \(HC\)](#).

### *Important Chapters*

- [Foundations \(CRC\)](#)
- [Erosion and Sediment Control \(HC\)](#)

### *Important Sections*

- [Footings \(CRC\)](#)
- [Foundation Drainage \(CRC\)](#)
- [Erosion Control \(HC\)](#)

- *Forms* – We will verify that forms will produce a concrete foundation assembly described in the approved county documents and soils report. Installation manuals for the foundation system (such as the [Xi2 system](#)) to be used shall be provided at inspection. A UFER ground should be inspected at this stage if used. The building code relevant to this inspection are the [California Residential Code \(CRC\)](#), and the [California Electric Code \(CEC\)](#).

### *Important Chapters*

- [Foundations \(CRC\)](#)
- [Wall Construction \(CRC\)](#)
- [Grounding and Bonding \(CEC\)](#)

### *Important Sections*

- [Form Materials/Ties \(CRC\)](#)
- [Concrete-Encased Electrode 250.52\(A\)\(3\) \(CEC\)](#)



- *Temporary Electric (Optional)* – It is optional to install a pole mounted service panel to provide power during the initial inspection. A listed panel enclosure, a grounding electrode system, and a 20-amp GFCI protected outlet is required at minimum. The building codes relevant to this inspection are the [California Residential Code \(CRC\)](#), the [California Electric Code \(CEC\)](#), and the [Humboldt Code \(HC\)](#).

#### *Important Chapters*

- [General \(CEC\)](#)
- [Wiring and Protection \(CEC\)](#)
- [Wiring Methods and Materials \(CEC\)](#)

#### *Important Sections*

- [Grounding and Bonding \(CEC\)](#)
- [Overcurrent Protection \(CEC\)](#)
- [Services \(CEC\)](#)

Once all inspections have been approved you will be ready to set your PHU.

- *Plumbing Final (if required)* – We will verify that any gas lines installed at the exterior will be able to hold 10 PSI or half the working pressure of the gauge used for 15 minutes. For example, if a 30lbs gauge is used than the gas lines must be pressured to 15lbs for 15 minutes. The building codes relevant to this inspection are the [California Residential Code \(CRC\)](#), the [California Mechanical Code \(CMC\)](#) and the [California Plumbing Code \(CPC\)](#).

#### *Important Chapters*

- [Fuel Gas Piping \(CPC\)](#)
- [Fuel Gas Piping \(CMC\)](#)

#### *Important Sections*

- [Fuel Line Test \(CPC\)](#)
- [Fuel Line Test \(CMC\)](#)

- *Electrical Final* – We will verify functionality of the electrical system, AFCI/GFCI protection, the service panel, feeder circuits, trenches, and subpanels. The building codes relevant to this inspection are the [California Electric Code \(CEC\)](#) and the [Humboldt Code \(HC\)](#).

#### *Important Chapters*

- [General \(CEC\)](#)
- [Wiring and Protection \(CEC\)](#)

#### *Important Sections*

- [Branch Circuits \(CEC\)](#)
- [Branch Circuits, Feeder, and Service \(CEC\)](#)
- [Grounding and Bonding \(CEC\)](#)
- [Overcurrent Protection \(CEC\)](#)



- *Building Final* – We will verify the safety of all structural and path of travel elements and ensure the absence of hazards. Decks, stairs, and ramps must be stand-alone and will be inspected for egress. The building codes relevant to this inspection are the [California Residential Code \(CRC\)](#) and the [Humboldt Code \(HC\)](#).

#### *Important Chapters*

- [Building Planning \(CRC\)](#)
- [Environmental Quality \(CGB\)](#)

#### *Important Sections*

- [Means of Egress \(CRC\)](#)
- [Site Address \(CRC\)](#)
- [Pollutant Control \(CGB\)](#)

- *Exterior* – We will verify the exterior covering is watertight and free from hazards. This includes ensuring water will be shed away from the foundation and the correct installation of plumbing and flue terminations. The building codes relevant to this inspection are the [California Green Building Standards \(CGB\)](#), and the [California Residential Code \(CRC\)](#).

#### *Important Chapters*

- [Building Planning \(CRC\)](#)
- [Exterior Covering \(CRC\)](#)
- [Roof Assemblies \(CRC\)](#)

#### *Important Sections*

- [Exterior Covering](#)
- [Finish Material \(CBG\)](#)

Once you have passed all inspections you may contact the building department to receive your certificate of occupancy.

## Special Inspections

Depending on your engineering and site hazards your project may require special inspections.

- *Property Survey* – If the property lines are difficult to discern and potentially close to the proposed development the building official may require you to provide survey markers from a qualified surveyor.
- *Footings* – Your soils report may require an engineer to inspect footings.
- *Second Flood Certification* – If you are developing new construction in the flood zone a qualified engineer must provide a letter certifying the [floor level](#) is 1ft above base flood elevation, there is adequate flood vents correctly placed, and the construction is in compliance with the approved flood elevation certificate.



## FAQ's | Pre-Manufactured Housing Unit

### Who do I contact if I have more questions?

You can send an email to [buildinginspections@co.humboldt.ca.us](mailto:buildinginspections@co.humboldt.ca.us) and we will try to get back to you ASAP.

### Resources

- [California Building Codes \(UpCode\)](#)
- [County Code](#)
- [GIS](#)
- [GIS Guide](#)
- [Brochures and Handouts](#)
- [Forms](#)
- [Resource Library](#)
- [FAQ's](#)

