

As-Built Commercial

This document contains a collection of handouts about permitting an as-built commercial building 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 as-built commercial building. Click the gold star to get a PDF version of the handout it is next to.

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Important GIS Layers | As-Built Commercial ★

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 existing buildings location. Below are some important jurisdictional and geologic features that have a significant effect on what submittal documents you will need for an as-built commercial building. 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 *not* need to comply with the counties [Fire Safe Regulations](#) (also summarized in the [SRA Fire Safe Regulations Checklist](#)). Furthermore, you will *not* have to comply with the [Wildland Urban Interface](#) building regulations. 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](#). As-built commercial buildings will *not* be able 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. An as-built commercial building in a flood zone will have to comply with the [FEMA Technical Bulletin 3-93](#), the [Flood Damage Prevention](#) chapter of the county ordinance, Flood Resistant Construction (Appendix G) of the California Building Code, [Flood Hazard Reduction](#) of the California Plumbing Code, [Flood Hazard Areas](#) of the California Mechanical Code, will need to have a second floor certification special inspection, and will need a third final flood certification special inspection. To access the FEMA Flood Zone layer, check the following [GIS](#) layer list boxes to the right

Slope Less Than 15%

The slope less than 15% layer will tell you if you're construction site is likely to have a slope less than 15%. Having a slope over 15% is considered an unusual hazard and will generally 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](#). An as-built commercial building 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
 - ▶ DWR Awareness Floodplain
- ▼ FEMA Flood Zones (6/21/2017)
 - 100 Year Flood Zone (A, AE, AO, VE)
 - 500 Year Flood Zone (Shaded X)
 - Floodway

- ▼ 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 on the GIS matches with 1 on the geologic matrix, 1 on the GIS matches with 2 on the geologic matrix, and so on. Per the geologic matrix a soils report will be required for an as-built commercial building with a high designation and may still be required for other designations depending on the building use and location. Furthermore an as-built commercial building 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.

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 an as-built commercial building. 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
- ▼ Seismic Safety
 - 3 High Instability
 - 2 Moderate Instability
 - 1 Low Instability
 - 0 Relatively Stable

- ▼ 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. Permitting an as-built commercial building 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. Permitting an as-built commercial building 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 building 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 requirements for stormwater management and erosion/sediment control. 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 | As-Built Commercial ★

Submittal documents are construction drawings, engineered calculations, forms, installation manuals, and any other documents which will describe the existing conditions of your as-built commercial building. 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 and the scale and complexity of your as-built commercial building.

- *Construction Plans*
 - Cover Sheet – The cover sheet should provide general building project information such as assessor parcel number (APN), address, directions to site, signature/stamp of design professional, use of structure, referenced building codes, occupancy, occupant load, type of construction, stories, height, floor area, etc. The owners name, APN, address, and north directional arrow shall also be included on all pages of the 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.
 - Utility Plan – A utility plan shows all connections from the proposed structure to community services like water and sewer. These plans are most common with large scale as-built commercial building projects.
 - Accessibility Plans – Accessibility plans show accessible routes and other building code requirements described in Chapter [11A](#) and [11B](#) of the California Building Code.
 - Floor Plan - The floor plan is a birds-eye view showing the dimensions and use of each room in a structure including windows, doors, and egress windows and doors.
 - Elevations Plans – Elevation plans show the height of the proposed structure, details on the exterior walls, required building code notes, and cross section details.
 - Foundation Plan – The foundation plan shows footing details, hold downs, shear wall schedule, required building code notes, and more.
 - Floor Framing Plan – The floor framing plan shows size, type, and spacing of joists, girders, required building code notes, and mechanical fasteners.
 - Roof Framing Plan – Roof framing drawings show critical connections in the roof framing and detail framing members, fastener type/size, required building code notes, and mechanical fastener type and size.



- [Electrical Plans](#) – Electrical plans detail required building code notes and electrical switches, outlets, and fixtures with their configuration overlaid on a floor plan.
- [One-Line Diagram](#) – A one-line diagram describes the size and type of the enclosures, conduit, sheathing, and conductors with a focus on connections over how the circuits overlay on the floor plan.
- [Mechanical Plans](#) – Mechanical plans or heating, ventilation, and air-conditioning (HVAC) plans detail what appliances will be used and includes notes about relevant building code requirements.
- [Plumbing Plans](#) – The plumbing plans will provide a layout of plumbing, show all, materials and appliances used and will include notes on related building code.
- [General Notes](#) – The general notes page will detail California Green Building Standard requirements and will further detail electrical, mechanical, plumbing, sprinkler, and energy code requirements.
- *Engineering*
 - [Energy Calculations](#) - Energy calculations ensure your building will be well insulated and energy efficient. They require such things as quality insulation, windows, appliances, photovoltaic systems, title 24 energy report, and special inspections. required building code notes from the California Green Building Standards and California Energy code should be included. This document must be created by a qualified energy consultant.
 - [Structural Certification Letter](#) – A structural certification letter must be submitted by an engineer licensed in California and must address the entire structure to be permitted.
- *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.
 - [Electrical As-Built Form](#) – A checklist to be filled out by a California licensed electrician.
 - [Plumbing As-Built Form](#) – A checklist to be filled out by a California licensed plumber.
 - [HVAC As-Built Form](#) – A checklist to be filled out by a California licensed mechanical contractor.



- *Construction Plans*
 - Photovoltaic Plans – Required if a PV system is existing.
 - Grading Plan – Required if your building site is on an existing graded flat where over 50 cubic yards of dirt was 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.
 - Sprinkler Plans – Required if a sprinkler system is existing.
- *Engineering*
 - Structural Calculations – Required if the building official determines that the existing structure is outside the prescriptive building code requirements.
 - Truss Calculations – If engineered trusses were used.
 - Soils Report – If unusual hazards exist at your building (over 15% slope, seismic instability, liquefaction potential) or if an engineered grading plan is required.
 - Flood Elevation Certificate – If the building is in the flood zone.
- *Forms*
 - Authorization of Agent – If you want to authorize a 3rd 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.
 - Construction Hardship – If you want to apply to limit your cost of compliance with 11B to 20% of the adjusted cost of alterations.



Inspection Schedule | As-Built Commercial ★

Permitting an existing commercial building is inspected in 1 stage, the final. We will review the as-built forms and ensure corrections required by each contractor is addressed. This document provides a description of each inspection including related building code and descriptions of special inspections that may be required. The inspection card, all county approved documents, and any relevant installation manuals must be provided on-site for each inspection. Refer to [Important GIS Layers](#) to determine if flood and fire hazard requirements apply.

- *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. 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.
- *Mechanical Final* – We will review the mechanical as-built form and address any corrections required by the mechanical contractor. Your energy calculations may require a [HERS Special Inspection](#) at this time. The building codes relevant to this inspection are the [California Building Code \(CBC\)](#), the [California Mechanical Code \(CMC\)](#), the [California Energy Code \(CEnC\)](#), and the [California Green Building Standards \(CGB\)](#).

Important Chapters

- [General Regulations \(CMC\)](#)
- [Installation of Specific Appliances \(CMC\)](#)
- [Environmental Quality \(CGB\)](#)
- [Mandatory Requirements \(CEnC\)](#)

Important Sections

- [Installation \(CGB\)](#)
- [Location \(CMC\)](#)
- [Exhaust System Termination \(CMC\)](#)
- [Grills and Screens \(CMC\)](#)

- *Plumbing Final* – We will review the plumbing as-built form and address any corrections required by the plumbing contractor. We will verify functionality and efficiency of all plumbing fixtures and ensure the absence of plumbing hazards. The building codes relevant to this inspection are the [California Green Building Standards \(CGB\)](#), and the [California Plumbing Code \(CPC\)](#).

Important Chapters

- [Plumbing Fixtures and Fixture Fittings \(CPC\)](#)
- [Water Heaters \(CPC\)](#)
- [Residential Mandatory Measures \(CGB\)](#)

Important Sections

- [Installation \(CPC\)](#)
- [Water Efficiency and Conservation \(CGB\)](#)

6 Final



- *Electrical Final* – We will review the electrical as-built form and address any corrections required by the electrical contractor. We will verify functionality of the electrical system, AFCI/GFCI protection, and absence of electrical hazards. The building codes relevant to this inspection are the [California Building Code \(CBC\)](#), the [California Electric Code \(CEC\)](#), the [California Green Building Standards \(CGB\)](#), the [California Energy Code \(CEnC\)](#), and the [Humboldt Code \(HC\)](#).

Important Chapters

- [General \(CEC\)](#)
- [Wiring and Protection \(CEC\)](#)
- [Residential Mandatory Measures \(CGB\)](#)
- [Mandatory Requirements \(CEnC\)](#)

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. The building codes relevant to this inspection are the [California Building Code \(CBC\)](#) and the [Humboldt Code \(HC\)](#).

Important Chapters

- [Fire and Smoke Protection Features \(CBC\)](#)
- [Environmental Quality \(CGB\)](#)
- [Public Accessibility \(CBC\)](#)
- [Housing Accessibility \(CBC\)](#)

Important Sections

- [Fire Alarm and Detection Systems \(CBC\)](#)
- [Pollutant Control \(CGB\)](#)

- *Exterior (if altered/added)* – 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 Building Code \(CBC\)](#).

Important Chapters

- [Exterior Walls \(CBC\)](#)

Important Sections

- [Exterior Combustible Material \(CBC\)](#)
- [Finish Material \(CBG\)](#)



- *Accessibility* – We will require a CASp special inspection from a certified access specialist. We will verify all accessible elements are in accordance with Chapter 11B if open to the public and/or Chapter 11A if used for public housing. The building codes relevant to this inspection are the [California Building Code \(CBC\)](#) and the [Humboldt Code \(HC\)](#).

Important Chapters

- [11B Public Accessibility \(CBC\)](#)
- [11A Housing Accessibility \(CBC\)](#)

Important Sections

- [11B Existing Buildings \(CBC\)](#)
- [11A Existing Buildings \(CBC\)](#)

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.
- *Structural Certification* – If you installed a structural assembly that does not match your building plans you will be required to have an engineer inspect and certify as-built conditions.
- *HERS* – Your energy calculations may require field verification of your cooling system, heating system, HVAC distribution system, and/or your domestic hot water system by a certified HERS Rater.
- *CASp* – A Certified Access Specialist (CASp) inspection will be required at final. In general they inspect for compliance with Chapter 11B of the CBC if open to the public and/or Chapter 11A of the CBC if used for public housing.



FAQ's | As-Built Commercial

Who do I contact if I have more questions?

You can send an email to 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](#)

