



OpenStreetMap Data in Layered GIS Format

Free shapefiles – 2019-11-06

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Version History and Copyright

| Version | Created At | Changes |
|---------|------------|---|
| initial | 2016-08-12 | Revamped free shape files now based on the commercially produced “0.7.0” shapes by Geofabrik. |
| 2 | 2016-12-07 | Updates in section 7 reflecting some changes made to the commercial shapes. |
| 3 | 2017-01-24 | Use amenity=taxi instead of amenity=taxi_rank. See taginfo.osm.org for details. Add waterway=dock. |
| 4 | 2017-03-02 | Swap codes 5205 and 5208 (ford and speed camera). They were swapped in the produced shape files. Add Buddhist, Taoist, Shintoist, Sikh and Hindu places of worship. |
| 5 | 2017-10-06 | Updates in chapter “Differences to Commercial “0.7” Shape Files”. Split up feature class “farm” into “farmyard” and “farmland”. |
| 6 | 2019-01-17 | Interpret OSM tags natural=water + water=river and natural=water + water=reservoir for feature classes “river” and “reservoir” in addition to waterway=riverbank and landuse=reservoir. |
| 7 | 2019-05-21 | Updates in chapter “Differences to Commercial “0.7” Shape Files”. |

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1 Preface

The OpenStreetMap (OSM) project (www.openstreetmap.org) has collected an enormous amount of free spatial data and the database is growing every day. Many people want to use this data for their own GIS projects but have been hindered by the use of a non-standard data format in the OSM project. This document describes a mapping from OSM data formats to the usual GIS formats to make the OSM data accessible to more people.

The mapping from OSM data to other formats is not an exact science. OSM rules on how to map certain features are often not well defined and there is no mandatory quality control. This openness allows a lot of flexibility and is part of the reason why OSM has been able to collect so much data in such a short time frame, but it makes using the data more difficult. When using or exporting the data, many decisions have to be made on how to extract the different features into something usable for the task at hand.

The mapping described in this document is in no way the only mapping possible, in fact there is an infinite number of possible mappings. In this document we have specified a general-use mapping of the basic features like roads, waterways, different land use types, and points of interest. Other uses might need specialized mappings, but they are out of the scope of this document.

The format described in this document is used by Geofabrik to create shapefiles which are offered for free download from download.geofabrik.de.



2 Introduction

2.1 Versions

The commercially available shape files from Geofabrik carry a version identifier in each layer name. The free shapes contain the name “free” in each layer name to distinguish them.

2.2 Map datum

All coordinates are unprojected WGS84 (EPSG:4326).

2.3 Character encoding

All strings are encoded in UTF-8.

2.4 Attribute names

All attribute names are lower case and are less than 11 characters long so that they are not truncated in shapefiles.

2.5 Common attributes

Most tables/shape files will have the following columns/attributes:

| Attribute | PostGIS Type | Description |
|-----------|-----------------------|--|
| id | VARCHAR (4 Bytes) | Id of this feature. Unique in this layer. |
| osm_id | VARCHAR (10) | OSM Id taken from the Id of this feature (node_id, way_id, or relation_id) in the OSM database. In case several features in the OSM database are joined into one feature, this is one of the Ids. This Id is not necessarily unique because one OSM object can result in several geometry objects. Also note that when doing shape file exports, this will be exported as a VARCHAR type since shape files don't support long integers. |
| code | SMALLINT (2 Bytes) | 4 digit code (between 1000 and 9999) defining the feature class. The first one or two digits define the layer, the last two or three digits the class inside a layer. |
| fclass | VARCHAR(40) | Class name of this feature. This does not add any information that is not already in the “code” field but it is better readable. |
| name | VARCHAR(100) | Name of this feature, like a street or place name. If the name in OSM contains obviously wrong data such as “fixme” or “none”, it will be empty. |

The code and the combination of layer name and fclass always contains the same information.

2.6 International Names

In OpenStreetMap, every feature can have many names. The standard name is always the name used on the ground, locally, usually the name as it would be written on a sign. There may be any number of additional names in different languages, plus also a specific



“international name”. In cases where the local script is not latin script, the international name will often contain a transcribed version of the standard name.

By default, Geofabrik shape files will always carry the standard name, the one that is given in OSM's “name” tag. If you need additional name (e.g. international name or names in a specific language), that can be arranged in the paid shape service – please contact us.

2.7 Layers

In OSM there are no layers in the traditional GIS sense. All features are in one big coherent database.

For the purpose of the mapping described in this document, the features stored in the OSM database are extracted into different layers depending on their type.

All layers defined in this document use the “osm_” prefix for their names.

2.8 Points and Areas

The availability of high-resolution aerial imagery has led to many POI features being recorded as areas (building or site outlines), not points, in OpenStreetMap. You will, for example, often find a restaurant or hotel drawn as an area. Features drawn as area in OpenStreetMap will be written to the layer with an _a suffix. Features drawn als line/point in OpenStreetMap will be written to the layer without an _a suffix.

2.9 Spillover Shape Files

When a certain layer becomes too large for one shape file (shape files are limited to 2 GB in size), it will automatically spill over into additional shape files. A shape file named “osm_pois_v07_1.shp” will have spillover shape files names “osm_pois_v07_2.shp”, “osm_pois_v07_3.shp” and so on.

3 Feature Catalogue - Overview

The following layers are available:

| Geometry | Code | Layer | page | Description |
|----------|------|--------|------|--|
| Point | | | | |
| | 10xx | places | 5 | Cities, towns, suburbs, villages,... |
| | 2xxx | pois | 6 | Points of Interest, therein: |
| | 20xx | | | Public facilities such as government offices, post office, police, ... |
| | 21xx | | | Hospitals, pharmacies, ... |
| | 22xx | | | Culture, Leisure, ... |
| | 23xx | | | Restaurants, pubs, cafes, ... |
| | 24xx | | | Hotel, motels, and other places to stay the night |



| Geometry | Code | Layer | page | Description |
|----------|------|-----------|------|--|
| | 25xx | | | Supermarkets, bakeries, ... |
| | 26xx | | | Banks and atms |
| | 27xx | | | Tourist information, sights, museums, ... |
| | 29xx | | | Miscellaneous points of interest |
| | 3xxx | pofw | 11 | Places of worship such as churches, mosques, ... |
| | 41xx | natural | 12 | Natural features |
| | 52xx | traffic | 12 | Traffic related |
| | 50xx | transport | 13 | Parking lots, petrol (gas) stations, ... |
| Line | | | | |
| | 51xx | roads | 14 | Roads, tracks, paths, ... |
| | 61xx | railway | 15 | Railway, subways, light rail, trams, ... |
| | 81xx | waterways | 16 | Rivers, canals, streams, ... |
| Polygon | | | | |
| | 15xx | buildings | 16 | Building outlines |
| | 72xx | landuse | 17 | Forests, residential areas, industrial areas,... |
| | 82xx | water | 17 | Lakes, ... |

4 Point Features

4.1 Places ("places")

Location for cities, towns, etc. Typically somewhere in the centre of the town.

Additional attributes:

| Attribute | PostGIS Type | Description | OSM Tags |
|------------|--------------|---------------------------------------|--------------|
| population | INTEGER | Number of people living in this place | population=* |

Note that for many places the population is not available and will be set to 0. For islands the population is always 0.

The following feature classes exist in this layer:

| code | | fclass | Description | OSM Tags |
|------|-------|---------|--|---------------------------|
| 1000 | place | | | |
| 1001 | place | city | As defined by national/state/provincial government. Often over 100,000 people | place=city (but see 1005) |
| 1002 | place | town | As defined by national/state/provincial government. Generally smaller than a city, between 10,000 and 100,000 people | place=town |
| 1003 | place | village | As defined by national/state/provincial government. Generally smaller than a town, below 10,000 people | place=village |
| 1004 | place | hamlet | As defined by national/state/provincial government. Generally smaller than a village, just a few houses | place=hamlet |



| code | | fclass | Description | OSM Tags |
|------|-------|------------------|--|---|
| 1005 | place | national_capital | A national capital | place=city with (a) is_capital=country or (b) admin_level=2 or (c) capital=yes and no admin_level set |
| 1010 | place | suburb | Named area of town or city | place=suburb |
| 1020 | place | island | Identifies an island | place=island |
| 1030 | place | farm | Named farm | place=farm |
| 1031 | place | dwelling | Isolated dwelling (1 or 2 houses, smaller than hamlet) | place=isolated_dwelling |
| 1040 | place | region | A region label (used in some areas only) | place=region |
| 1041 | place | county | A county label (used in some areas only) | place=county |
| 1050 | place | locality | Other kind of named place | place=locality |

4.2 Points of Interest

This layer has an associated area layer (see section 2.8).

The following feature classes exist in this layer:

| code | layer | fclass | Description | OSM Tags |
|------|---------------|------------------|---|--|
| 20xx | public | | | |
| 2001 | | police | A police post or station. | amenity=police |
| 2002 | | fire_station | A fire station. | amenity=fire_station |
| 2004 | | post_box | A post box (for letters). | amenity=post_box |
| 2005 | | post_office | A post office. | amenity=post_office |
| 2006 | | telephone | A public telephone booth. | amenity=telephone |
| 2007 | | library | A library. | amenity=library |
| 2008 | | town_hall | A town hall. | amenity=townhall |
| 2009 | | courthouse | A court house. | amenity=courthouse |
| 2010 | | prison | A prison. | amenity=prison |
| 2011 | | embassy | An embassy. | amenity=embassy |
| 2012 | | community_centre | A public facility which is mostly used by local associations for events and festivities. | amenity=community_centre |
| 2013 | | nursing_home | A home for disabled or elderly persons who need permanent care. | amenity=nursing_home |
| 2014 | | arts_centre | A venue at which a variety of arts are performed or conducted, and may well be involved with the creation of those works, and run occasional courses. | amenity=arts_centre |
| 2015 | | graveyard | A graveyard. | amenity=grave_yard or landuse=cemetery |
| 2016 | | market_place | A place where markets are held. | amenity=market_place |
| 2030 | | recycling | A place (usually a container) where you can drop waste for recycling. | amenity=recycling with none of the specifics below |
| 2031 | | recycling_glass | A place for recycling glass. | ... recycling:glass=yes |
| 2032 | | recycling_paper | A place for recycling paper. | ... recycling:paper=yes |



| code | layer | fclass | Description | OSM Tags |
|------|-----------------|-------------------|---|---|
| 2033 | | recycling_clothes | A place for recycling clothes. | ... recycling:clothes=yes |
| 2034 | | recycling_metal | A place for recycling metal. | ... recycling:scrap_metal=yes |
| 208x | | | Education | |
| 2081 | | university | A university. | amenity=university |
| 2082 | | school | A school. | amenity=school |
| 2083 | | kindergarten | A kindergarten (nursery). | amenity=kindergarten |
| 2084 | | college | A college. | amenity=college |
| 2099 | | public_building | An unspecified public building. | amenity=public_building |
| 21xx | health | | | |
| 2101 | | pharmacy | A pharmacy. | amenity=pharmacy |
| 2110 | | hospital | A hospital. | amenity=hospital |
| 2120 | | doctors | A medical practice. | amenity=doctors |
| 2121 | | dentist | A dentist's practice. | amenity=dentist |
| | | veterinary | A veterinary (animal doctor) | amenity=veterinary |
| 2129 | | | | |
| 22xx | leisure | | | |
| 2201 | | theatre | A theatre. | amenity=theatre |
| 2202 | | nightclub | A night club, or disco. | amenity=nightclub |
| 2203 | | cinema | A cinema. | amenity=cinema |
| 2204 | | park | A park. | leisure=park |
| 2205 | | playground | A playground for children. | leisure=playground |
| 2206 | | dog_park | An area where dogs are allowed to run free without a leash. | leisure=dog_park |
| 225x | | | Sports | |
| 2251 | | sports_centre | A facility where a range of sports activities can be pursued. | leisure=sports_centre |
| 2252 | | pitch | An area set aside for a specific sport. | leisure=pitch |
| 2253 | | swimming_pool | A swimming pool or water park. | amenity=swimming_pool, leisure=swimming_pool, sport=swimming, leisure=water_park |
| 2254 | | tennis_court | A tennis court. | sport=tennis |
| 2255 | | golf_course | A golf course. | leisure=golf_course |
| 2256 | | stadium | A stadium. The area of the stadium may contain one or several pitches. | leisure=stadium |
| 2257 | | ice_rink | An ice rink. | leisure=ice_rink |
| 23xx | catering | | Catering services | |
| 2301 | | restaurant | A normal restaurant. | amenity=restaurant |
| 2302 | | fast_food | A fast-food restaurant. | amenity=fast_food |
| 2303 | | cafe | A cafe. | amenity=cafe |
| 2304 | | pub | A pub. | amenity=pub |
| | | bar | A bar. The difference between a pub and a bar is not clear but pubs tend to offer food while bars do not. | amenity=bar |
| 2305 | | | | |

| code | layer | fclass | Description | OSM Tags |
|------|----------------------|-------------------|--|---------------------------|
| 2306 | | food_court | A common seating area with various fast-food vendors. | amenity=food_court |
| | | biergarten | An open-air area where food and drinks are served. | amenity=biergarten |
| 2307 | | | | |
| 24xx | accommodation | | (indoor) | |
| 2401 | | hotel | A hotel. | tourism=hotel |
| 2402 | | motel | A motel. | tourism=motel |
| 2403 | | bed_and_breakfast | A facility offering bed and breakfast. | tourism=bed_and_breakfast |
| 2404 | | guesthouse | A guesthouse. The difference between hotel, bed and breakfast, and guest houses is not a strict one and OSM tends to use whatever the facility calls itself. | tourism=guest_house |
| 2405 | | hostel | A hostel (offering cheap accommodation, often bunk beds in dormitories). | tourism=hostel |
| 2406 | | chalet | A detached cottage, usually self-catering. | tourism=chalet |
| 2420 | | | (outdoor) | |
| 2421 | | shelter | All sorts of small shelters to protect against bad weather conditions. | amenity=shelter |
| 2422 | | camp_site | A camp site or camping ground. | tourism=camp_site |
| 2423 | | alpine_hut | An alpine hut is a building typically situated in mountains providing shelter and often food and beverages to visitors. | tourism=alpine_hut |
| 2424 | | caravan_site | A place where people with caravans or motorhomes can stay overnight or longer. | tourism=caravan_site |
| 25xx | shopping | | | |
| 2501 | | supermarket | A supermarket. | shop=supermarket |
| 2502 | | bakery | A bakery. | shop=bakery |
| 2503 | | kiosk | A very small shop usually selling cigarettes, newspapers, sweets, snacks and beverages. | shop=kiosk |
| 2504 | | mall | A shopping mall. | shop=mall |
| 2505 | | department_store | A department store. | shop=department_store |
| 2511 | | convenience | A convenience store is a small shop selling a subset of items you might find at a supermarket. | shop=convenience |
| 2512 | | clothes | A clothes or fashion store. | shop=clothes |
| 2513 | | florist | A store selling flowers. | shop=florist |
| 2514 | | chemist | A shop selling articles of personal hygiene, cosmetics, and household cleaning products. | shop=chemist |
| 2515 | | bookshop | A book shop. | shop=books |
| 2516 | | butcher | A butcher. | shop=butcher |



| code | layer | fclass | Description | OSM Tags |
|------|--------------|-------------------|---|--|
| 2517 | | shoe_shop | A shoe shop. | shop=shoes |
| 2518 | | beverages | A place where you can buy alcoholic and non-alcoholic beverages. | shop=alcohol, shop=beverages |
| 2519 | | optician | A place where you can buy glasses. | shop=optician |
| 2520 | | jeweller | A jewelry shop. | shop=jewelry |
| 2521 | | gift_shop | A gift shop. | shop=gift |
| 2522 | | sports_shop | A shop selling sports equipment. | shop=sports |
| 2523 | | stationery | A shop selling stationery for private and office use. | shop=stationery |
| 2524 | | outdoor_shop | A shop selling outdoor equipment. | shop=outdoor |
| 2525 | | mobile_phone_shop | A shop for mobile phones. | shop=mobile_phone |
| 2526 | | toy_shop | A toy store. | shop=toys |
| 2527 | | newsagent | A show selling mainly newspapers and magazines. | shop=newsagent |
| 2528 | | greengrocer | A shop selling fruit and vegetables. | shop=greengrocer |
| 2529 | | beauty_shop | A shop that provides personal beauty services like a nail salon or tanning salon. | shop=beauty |
| 2530 | | video_shop | A place where you can buy films. | shop=video |
| 2541 | | car_dealership | A car dealership. | shop=car |
| 2542 | | bicycle_shop | A bicycle shop. | shop=bicycle |
| 2543 | | doityourself | A do-it-yourself shop where you can buy tools and building materials. | shop=doityourself and shop=hardware |
| 2544 | | furniture_shop | A furniture store. | shop=furniture |
| 2546 | | computer_shop | A computer shop. | shop=computer |
| 2547 | | garden_centre | A place selling plants and gardening goods. | shop=garden_centre |
| 2561 | | hairdresser | A hair salon. | shop=hairdresser |
| 2562 | | car_repair | A car garage. | shop=car_repair |
| 2563 | | car_rental | A place where you can rent a car. | amenity=car_rental |
| 2564 | | car_wash | A car wash. | amenity=car_wash |
| 2565 | | car_sharing | A car sharing station. | amenity=car_sharing |
| 2566 | | bicycle_rental | A place where you can rent bicycles. | amenity=bicycle_rental |
| 2567 | | travel_agent | A travel agency. | shop=travel_agency |
| 2568 | | laundry | A place where you can wash clothes or have them cleaned. | shop=laundry, shop=dry_cleaning |
| 2590 | | vending_machine | An unspecified vending machine. | amenity=vending_machine with none of the specifics below |
| 2591 | | vending_cigarette | A cigarette vending machine. | vending=cigarettes |
| 2592 | | vending_parking | A vending machine for parking tickets. | vending=parking_tickets |
| 2600 | money | | | |
| 2601 | | bank | A bank. | amenity=bank |



| code | layer | fclass | Description | OSM Tags |
|------|----------------|---------------------|--|--|
| 2602 | | atm | A machine that lets you withdraw cash from your bank account. | amenity=atm |
| 2700 | tourism | | information | |
| 2701 | | tourist_info | Something that provides information to tourists; may or many not be manned. | tourism=information with none of the specifics below |
| 2704 | | tourist_map | A map displayed to inform tourists. | tourism=information and information=map |
| 2705 | | tourist_board | A board with explanations aimed at tourists. | and information=board |
| 2706 | | tourist_guidepost | A guide post. | and information=guidepost |
| | | | destinations | |
| 2721 | | attraction | A tourist attraction. | tourism=attraction |
| 2722 | | museum | A museum. | tourism=museum |
| 2723 | | monument | A monument. | historic=monument |
| 2724 | | memorial | A memorial. | historic=memorial |
| 2725 | | art | A permanent work of art. | tourism=artwork |
| 2731 | | castle | A castle. | historic=castle |
| 2732 | | ruins | Ruins of historic significance. | historic=ruins |
| 2733 | | archaeological | An excavation site. | historic=archaeological_site |
| 2734 | | wayside_cross | A wayside cross, not necessarily old. | historic=wayside_criss |
| 2735 | | wayside_shrine | A wayside shrine. | historic=wayside_shrine |
| 2736 | | battlefield | A historic battlefield. | historic=battlefield |
| 2737 | | fort | A fort. | historic=fort |
| 2741 | | picnic_site | A picnic site. | tourism=picnic_site |
| 2742 | | viewpoint | A viewpoint. | tourism=viewpoint |
| 2743 | | zoo | A zoo. | tourism=zoo |
| 2744 | | theme_park | A theme park. | tourism=theme_park |
| 2900 | miscpoi | | | |
| 2901 | | toilet | Public toilets. | amenity=toilets |
| 2902 | | bench | A public bench. | amenity=bench |
| 2903 | | drinking_water | A tap or other source of drinking water. | amenity=drinking_water |
| 2904 | | fountain | A fountain for cultural, decorative, or recreational purposes. | amenity=fountain |
| 2905 | | hunting_stand | A hunting stand. | amenity=hunting_stand |
| 2906 | | waste_basket | A waste basket. | amenity=waste_basket |
| 2907 | | camera_surveillance | A surveillance camera. | man_made=surveillance |
| 2921 | | emergency_phone | An emergency telephone. | amenity=emergency_phone, emergency=phone |
| 2922 | | fire_hydrant | A fire hydrant. | amenity=fire_hydrant, emergency=fire_hydrant |
| 2923 | | emergency_access | An emergency access point (signposted place in e.g. woods the location of which is known to emergency services). | highway=emergency_access _point |
| 2950 | | tower | A tower of some kind. | man_made=tower and none of the specifics below |



| code | layer | fclass | Description | OSM Tags |
|------|-------|-------------------|--|---|
| 2951 | | tower_comms | A communications tower. | man_made=tower and tower:type=communication |
| 2952 | | water_tower | A water tower. | man_made=water_tower |
| 2953 | | tower_observation | An observation tower. | man_made=tower and tower:type=observation |
| 2954 | | windmill | A windmill. | man_made=windmill |
| 2955 | | lighthouse | A lighthouse. | man_made=lighthouse |
| 2961 | | wastewater_plant | A wastewater treatment plant. | man_made=wastewater_plant |
| 2962 | | water_well | A facility to access underground aquifers. | man_made=water_well |
| 2963 | | water_mill | A mill driven by water. Often historic. | man_made=watermill |
| 2964 | | water_works | A place where drinking water is processed. | man_made=water_works |

4.3 Places of Worship ("pofw")

This layer has an associated area layer (see section 2.8).

The following feature classes exist in this layer:

| code | layer | fclass | Description | OSM Tags |
|-------------|-------------|-----------------------|--|----------------------------|
| 3000 | pofw | | Places of worship | |
| 3100 | pofw | christian | A christian place of worship (usually a church) without one of the denominations below. | religion=christian |
| 3101 | pofw | christian_anglican | A christian place of worship where the denomination is known. (Note to German users: "protestant" is "evangelisch" in German; "evangelical" is "evangelikal" in German.) | + denomination=anglican |
| 3102 | pofw | christian_catholic | | + denomination=catholic |
| 3103 | pofw | christian_evangelical | | + denomination=evangelical |
| 3104 | pofw | christian_lutheran | | + denomination=lutheran |
| 3105 | pofw | christian_methodist | | + denomination=methodist |
| 3106 | pofw | christian_orthodox | | + denomination=orthodox |
| 3107 | pofw | christian_protestant | | + denomination=protestant |
| 3108 | pofw | christian_baptist | | + denomination=baptist |
| 3109 | pofw | christian_mormon | | + denomination=mormon |
| 3200 | pofw | jewish | A jewish place of worship (usually a synagogue). | religion=jewish |
| 3300 | pofw | muslim | A muslim place of worhsip, (usually a mosque) without one of the denominations below. | religion=muslim |
| 3301 | pofw | muslim_sunni | A Sunni muslim place of worship. | + denomination=sunni |
| 3302 | pofw | muslim_shia | A Shia muslim place or worship. | + denomination=shia |
| 3400 | pofw | buddhist | A Buddhist place of worship. | religion=buddhist |
| 3500 | pofw | hindu | A Hindu place of worship. | religion=hindu |
| 3600 | pofw | taoist | A Taoist place of worship. | religion=taoist |
| 3700 | pofw | shintoist | A Shintoist place of worship. | religion=shintoist |
| 3800 | pofw | sikh | A Sikh place of worship. | religion=sikh |

4.4 Natural Features (“natural”)

The following feature classes exist in this layer:

| code | layer | fclass | Description | OSM Tags |
|------|---------|---------------|--|-----------------------|
| 4101 | natural | spring | A spring, possibly source of a stream. | natural=spring |
| 4103 | natural | glacier | A glacier. | natural=glacier |
| 4111 | natural | peak | A mountain peak. | natural=peak |
| 4112 | natural | cliff | A cliff. | natural=cliff |
| 4113 | natural | volcano | A volcano. | natural=volcano |
| 4121 | natural | tree | A tree. | natural=tree |
| 4131 | natural | mine | A mine. | natural=mine |
| 4132 | natural | cave_entrance | A cave entrance. | natural=cave_entrance |
| 4141 | natural | beach | A beach. (Note that beaches are only rarely mapped as point features.) | natural=beach |

4.5 Traffic Related (“traffic”)

This layer exists both as area and as point layer (see section 2.8).

The following feature classes exist in this layer:

| code | layer | fclass | Description | OSM Tags |
|-------------------------|---------|---------------------|--|--|
| 5201 | traffic | traffic_signals | Traffic lights. | highway=traffic_signals |
| 5202 | traffic | mini_roundabout | A small roundabout without physical structure, usually just painted onto the road surface. | highway=mini_roundabout |
| 5203 | traffic | stop | A stop sign. | highway=stop |
| 5204 | traffic | crossing | A place where the street is crossed by pedestrians or a railway. | highway=crossing, railway=level_crossing |
| 5205 | traffic | ford | A place where the road runs through a river or stream. | highway=ford |
| 5206 | traffic | motorway_junction | The place where a slipway enters or leaves a motorway. | highway=motorway_junction |
| 5207 | traffic | turning_circle | An area at the end of a street where vehicles can turn. | highway=turning_circle |
| 5208 | traffic | speed_camera | A camera that photographs speeding vehicles. | highway=speed_camera |
| 5209 | traffic | street_lamp | A lamp illuminating the road. | highway=street_lamp |
| Fuel and Parking | | | | |
| 5250 | traffic | fuel | A gas station. | amenity=fuel |
| 5251 | traffic | service | A service area, usually along motorways. | highway=services |
| 5260 | traffic | parking | A car park of unknown type. | amenity=parking with none of the specifics below |
| 5261 | traffic | parking_site | A surface car park. | amenity=parking and... ... parking=site |
| 5262 | traffic | parking_multistorey | A multi storey car park. | ... parking=multi-storey |
| 5263 | traffic | parking_underground | An underground car park. | ... parking=underground |



| code | layer | fclass | Description | OSM Tags |
|----------------------|---------|-----------------|---|-------------------------|
| 5270 | traffic | parking_bicycle | A place to park your bicycle. | amenity=bicycle_parking |
| Water Traffic | | | | |
| 5301 | traffic | slipway | A slipway. | leisure=slipway |
| 5302 | traffic | marina | A marina. | leisure=marina |
| 5303 | traffic | pier | A pier. | man_made=pier |
| 5311 | traffic | dam | A dam. | waterway=dam |
| 5321 | traffic | waterfall | A waterfall. | waterway=waterfall |
| 5331 | traffic | lock_gate | A lock gate. | waterway=lock_gate |
| 5332 | traffic | weir | A barrier built across a river or stream. | waterway=weir |

Note: Most of the 53xx type objects do sometimes appear as linear features in OSM as well but those are not yet available in the shape files.

4.6 Transport Infrastructure (“transport”)

This layer exists both as area and as point layer (see section 2.8).

The following feature classes exist in this layer:

| code | layer | fclass | Description | OSM Tags |
|------|-----------|-----------------|--|--|
| 5601 | transport | railway_station | A larger railway station of mainline rail services. | railway=station |
| 5602 | transport | railway_halt | A smaller, local railway station, or subway station. | railway=halt, or public_transport=stop_position + train=yes |
| 5603 | transport | tram_stop | A tram stop. | railway=tram_stop, or public_transport=stop_position + tram=yes |
| 5621 | transport | bus_stop | A bus stop. | highway=bus_stop, or public_transport=stop_position + bus=yes |
| 5622 | transport | bus_station | A large bus station with multiple platforms. | amenity=bus_station |
| 5641 | transport | taxi_rank | A taxi rank. | amenity=taxi |
| 565x | | | Air Traffic | |
| 5651 | transport | airport | A large airport. | amenity=airport or aeroway=aerodrome unless type=airstrip |
| 5652 | transport | airfield | A small airport or airfield. | aeroway=airfield, military=airfield, aeroway=aeroway with type=airstrip |
| 5655 | transport | helipad | A place for landing helicopters. | aeroway=helipad |
| 5656 | transport | apron | A apron (area where aircraft are parked) | aeroway=apron |
| 566x | | | Water Traffic | |
| 5661 | transport | ferry_terminal | A ferry terminal. | amenity=ferry_terminal |
| 567x | | | Other Traffic | |



| code | layer | fclass | Description | OSM Tags |
|------|-----------|-------------------|---|-------------------|
| 5671 | transport | aerialway_station | A station where cable cars or lifts alight. | aerialway=station |

5 Line Features

5.1 Roads and Paths ("roads")

All kinds of roads from motorways to gravel tracks as well as cycleways, footpaths, etc.

Additional attributes:

| Attribute | PostGIS Type | Description | OSM Tags |
|-----------|--------------|---|------------|
| ref | VARCHAR(20) | Reference number of this road ('A 5', 'L 605', ...) | ref=* |
| oneway | VARCHAR(1) | Is this a oneway road? "F" means that only driving in direction of the linestring is allowed. "T" means that only the opposite direction is allowed. "B" (default value) means that both directions are ok. | oneway=* |
| maxspeed | SMALLINT | Max allowed speed in km/h | maxspeed=* |
| layer | SMALLINT | Relative layering of roads (-5, ..., 0, ..., 5) | layer=* |
| bridge | VARCHAR(1) | Is this road on a bridge? ("T" = true, "F" = false) | bridge=* |
| tunnel | VARCHAR(1) | Is this road in a tunnel? ("T" = true, "F" = false) | tunnel=* |

Roads of type 5111 (motorway) and 5112 (trunk) are always oneway.

The following feature classes exist in this layer:

| code | layer | fclass | Description | OSM Tags |
|------|-------|---------------|--|-----------------------|
| 511x | roads | | Major roads | |
| 5111 | roads | motorway | Motorway/freeway | highway=motorway |
| 5112 | roads | trunk | Important roads, typically divided | highway=trunk |
| 5113 | roads | primary | Primary roads, typically national. | highway=primary |
| 5114 | roads | secondary | Secondary roads, typically regional. | highway=secondary |
| 5115 | roads | tertiary | Tertiary roads, typically local. | highway=tertiary |
| 512x | roads | | Minor Roads | |
| 5121 | roads | unclassified | Smaller local roads | highway=unclassified |
| 5122 | roads | residential | Roads in residential areas | highway=residential |
| 5123 | roads | living_street | Streets where pedestrians have priority | highway=living_street |
| 5124 | roads | pedestrian | Pedestrian only streets | highway=pedestrian |
| 513x | roads | | Highway links (sliproads/ramps) | |
| 5131 | roads | motorway_link | Roads that connect from one road to another of the same or lower category. | highway=motorway_link |
| 5132 | roads | trunk_link | | highway=trunk_link |

| code | layer | fclass | Description | OSM Tags |
|---------|-------|---------------------------|---|---|
| 5133 | roads | primary_link | | highway=primary_link |
| 5134 | roads | secondary_link | | highway=secondary_link |
| 514x | roads | Very small roads | | |
| 5141 | roads | service | Service roads for access to buildings, parking lots, etc. | highway=service |
| 5142 | roads | track | For agricultural use, in forests, etc. Often gravel roads. | highway=track without tracktype specification |
| 5143 | roads | track_grade1 | Tracks can be assigned a “tracktype” from 1 (asphalt or heavily compacted) to 5 (hardly visible). A detailed description is here: http://wiki.openstreetmap.org/wiki/Tracktype | ... with tracktype=grade1 |
| 5144 | roads | track_grade2 | | ... with tracktype=grade2 |
| 5145 | roads | track_grade3 | | ... with tracktype=grade3 |
| 5146 | roads | track_grade4 | | ... with tracktype=grade4 |
| 5147 | roads | track_grade5 | | ... with tracktype=grade5 |
| 515x | roads | Paths unsuitable for cars | | |
| 5151 | roads | bridleway | Paths for horse riding | highway=bridleway or highway=path with horse=designated |
| 5152 | roads | cycleway | Paths for cycling | highway=cycleway or highway=path with cycle=designated |
| 5153 | roads | footway | Footpaths | highway=footway or highway=path with foot=designated |
| 5154 | roads | path | Unspecified paths | highway=path without cycle/foot/horse=designated |
| 5155 | roads | steps | Flights of steps on footpaths | highway=steps |
| Unknown | | | | |
| 5199 | roads | unknown | Unknown type of road or path | highway=road |

5.2 Railways, Subways, Trams, Lifts, and Cable Cars (“railways”)

Railways do not have a name attribute. Instead, they have the following additional attributes:

| Attribute | PostGIS Type | Description | OSM Tags |
|-----------|--------------|--|----------|
| layer | SMALLINT | Relative layering of railways/roads (-5, ..., 0, ..., 5) | layer=* |
| bridge | VARCHAR(1) | Is this road on a bridge? (“T” = true, “F” = false) | bridge=* |
| tunnel | VARCHAR(1) | Is this road in a tunnel? (“T” = true, “F” = false) | tunnel=* |

The following feature classes exist in this layer:

| code | layer | fclass | Description | OSM Tags |
|------|----------|--------------|--|---|
| 6101 | railways | rail | Regular railway tracks. | railway=rail (unless traction=* also set) |
| 6102 | railways | light_rail | Light railway tracks, often commuter railways. | railway=light_rail |
| 6103 | railways | subway | Underground railway tracks. | railway=subway |
| 6104 | railways | tram | Tram tracks (may be incident with roads). | railway=tram |
| 6105 | railways | monorail | A monorail track. | railway=monorail |
| 6106 | railways | narrow_gauge | A narrow gauge railway track. | railway=narrow_gauge |
| 6107 | railways | miniature | A miniature railway track. | railway=miniature |
| 6108 | railways | funicular | A funicular, or cable railway usually on a | railway=funicular, or |



| code | layer | fclass | Description | OSM Tags |
|------|----------|------------|--|---|
| | | | steep incline. | railway=rail with traction=funicular |
| 6109 | railways | rack | A rack railway | railway=rack, or railway=rail with traction=rack or railway=rail with rack=yes |
| 6111 | railways | drag_lift | An overhead tow-line for skiers. | aerialway=drag_lift |
| 6112 | railways | chair_lift | An open chairlift run. | aerialway=chair_lift or high_speed_chair_lift |
| 6113 | railways | cable_car | A cabin cable car run. | aerialway=cable_car |
| 6114 | railways | gondola | An aerialway where the cabins go around in a circle, | aerialway=gondola |
| 6115 | railways | goods | An aerialway for the transport of goods. | aerialway=goods |
| 6119 | railways | other_lift | Another type of lift. | aerialway=one of platter, t-bar, j-bar, magic_carpet, zip_line, rope_tow, or mixed_lift |

5.3 Waterways ("waterways")

Additional attributes:

| Attribute | PostGIS Type | Description | OSM Tags |
|-----------|--------------|----------------------------------|----------|
| width | SMALLINT | Width of the waterway in metres. | width=* |

The following feature classes exist in this layer:

| code | layer | fclass | Description | OSM Tags |
|------|-----------|--------|--|-----------------|
| 8101 | waterways | river | A large river. | waterway=river |
| 8102 | waterways | stream | A smaller river or stream. | waterway=stream |
| 8103 | waterways | canal | An artificial waterway. | waterway=canal |
| 8104 | waterways | drain | A small drainage ditch or similar structure. | waterway=drain |

Note that in OSM larger rivers are often available as polygon geometries and line geometries; the line geometry will then run through the middle of the river in the direction of the water flow.

6 Polygon Features

Polygon features are extracted from simple polygons and from multipolygons in OSM.

6.1 Building outlines ("buildings")

Buildings don't have a name attribute.

Additional attributes:



| Attribute | PostGIS Type | Description | OSM Tags |
|-----------|--------------|---|------------------------------------|
| type | VARCHAR(20) | The type of building, if specified in OSM; otherwise empty. | building=(anything other than yes) |

The following feature classes exist in this layer:

| code | layer | fclass | Description | OSM Tags |
|------|-----------|--------|-------------------|------------|
| 1500 | buildings | | Building outlines | building=* |

6.2 Land use and land cover ("landuse")

The following feature classes exist in this layer:

| code | layer | fclass | Description | OSM Tags |
|------|---------|-------------------|---|---|
| 7201 | landuse | forest | A forest or woodland. | landuse=forest, natural=wood |
| 7202 | landuse | park | A park. | leisure=park, leisure=common |
| 7203 | landuse | residential | A residential area. | landuse=residential |
| 7204 | landuse | industrial | An industrial area. | landuse=industrial |
| 7206 | landuse | cemetery | A cemetery or graveyard. | landuse=cemetery |
| 7207 | landuse | allotments | An area with small private gardens. | landuse=allotments |
| 7208 | landuse | meadow | A meadow, possibly used for grazing cattle. | landuse=meadow |
| 7209 | landuse | commercial | A commercial area. | landuse=commercial |
| 7210 | landuse | nature_reserve | A nature reserve. | leisure=nature_reserve |
| 7211 | landuse | recreation_ground | An open green space for general recreation. | leisure=recreation_ground or landuse_recreation_ground |
| 7212 | landuse | retail | An area mainly used by shops. | landuse=retail |
| 7213 | landuse | military | Military landuse, usually no access for civilians. | landuse=military |
| 7214 | landuse | quarry | A quarry. | landuse=quarry |
| 7215 | landuse | orchard | An area used for growing fruit-bearing trees. | landuse=orchard |
| 7216 | landuse | vineyard | An area used for growing grapes. | landuse=vineyard |
| 7217 | landuse | scrub | An area where scrub grows. | landuse=scrub |
| 7218 | landuse | grass | An area where grass grows. | landuse=grass |
| 7219 | landuse | heath | Heath areas. | natural=heath |
| 7220 | landuse | national_park | A national park. | boundary=national_park |
| 7228 | landuse | farmland | Agricultural land (areas where crops are grown) | landuse=farmland |
| 7229 | landuse | farmyard | Area of land with farm buildings and the shrubbery/trees around them. | landuse=farmyard |

6.3 Bodies of Water ("water")

The following feature classes exist in this layer:

| code | layer | fclass | Description | OSM Tags |
|------|-------|--------|---|--|
| 8200 | water | water | Unspecified bodies of water. Typically lakes, but can also be larger rivers, harbours, etc. | natural=water + water! =river/reservoir |

| code | layer | fclass | Description | |
|------|-------|-----------|--|--|
| 8201 | water | reservoir | Artificial lakes, typically above a dam. | landuse=reservoir, natural=water + water=reservoir |
| 8202 | water | river | Polygons for larger rivers. | waterway=riverbank, natural=water + water=river |
| 8203 | water | dock | Dock (to repair ships, don't confuse it with the American term "dock") | waterway=dock |
| 8211 | water | glacier | Glaciers | natural=glacier |
| 8221 | water | wetland | Swamp, bog, or marsh land | natural=wetland |

Note that in OSM larger rivers are often available as polygon geometries and line geometries; the line geometry will then run through the middle of the river in the direction of the water flow.

7 Differences to Commercial "0.7" Shape Files

Geofabrik offers an extended version of these shapes, for arbitrary areas, commercially. These 0.7 files contain the following extensions compared to the free files:

7.1 Associated Area Layer

As described in section 2.8, some features are drawn at OpenStreetMap sometimes as area and sometimes as points. Geofabrik's paid shape files contain centroids of the areas if a feature class exists both as area and as point.

7.2 Additional Layers

The following additional layers are available in the commercial shape files:

| Geometry | Code | Layer | Description |
|----------|------------------------------------|----------------------|--|
| Point | 521x | traffic | Barriers on roads and paths, e.g. lift gates or bollards |
| | 64xx | power | Power generators, substations, ... |
| Line | 11xx | boundaries | Borders between countries ... |
| | 55xx | barriers | Natural or man-made barrier lines like fence, hedges or walls |
| | 66xx | powerlines | Power lines |
| | 67xx | aeroways | Runways and taxiways at airports |
| | 83xx | coastline | Coastline |
| | 53xx, 54xx, nonop | | Roads and railways planned, under construction, or disused |
| | 55xx, 56xx, 62xx, 63xx, 64xx, 65xx | | |
| | 91xx | cycle_route_segments | Roads which are part of cycle routes not provided by the routes layer. |
| Polygon | 12xx | adminareas | Administrative areas (countries, states, counties, ...) |

| Geometry | Code | Layer | Description |
|-----------------|------|--------|--|
| MultiLineString | 90xx | routes | Routes for cycling, hiking, mountain bikes, nordic walking and running |

7.3 Additional Feature Classes

The following layers have additional features in the paid shape files:

| code(s) | layer | fclass(es)/description |
|------------|-----------|---|
| 1005 | places | national_capital |
| 1099 | places | named_place – something tagged area=yes in OpenStreetMap and carrying a name but with no other meaningful information |
| 565x | transport | airport, airfield, helipad |
| 5671 | transport | aerialway_station |
| 2524 | pois | outdoor_shop |
| 2525 | pois | mobile_phone_shop |
| 2529 | pois | beauty_shop |
| 2530 | pois | video_shop |
| 2541 | pois | car_dealership |
| 2544 | pois | furniture_shop |
| 2923 | pois | emergency_access_point |
| 4103 | natural | glacier |
| 4121 | natural | tree |
| 5208 | traffic | speed_camera |
| 5209 | traffic | street_lamp |
| 5160 | roads | ferry |
| 521x, 522x | traffic | barriers on roads and paths, e.g. lift gates and bollards |
| 523x | traffic | traffic calming |
| 7210 | landuse | nature_reserve |
| 7220 | landuse | national_park |
| 7221 | landuse | basin |
| 7222 | landuse | village_green |
| 7223 | landuse | plant_nursery |
| 7224 | landuse | brownfield |
| 7225 | landuse | greenfield |
| 7226 | landuse | construction |
| 7227 | landuse | railway |
| 8211 | water | glacier |
| 611x | railways | drag_lift, chair_lift, cable_car, gondola, goods, other_lift |

7.4 Additional Fields

The following fields are additionally available in the paid shape files:



| Layer | Attribute | PostGIS Type | Description | OSM Tags |
|-------------------|------------|-----------------------------|--|-------------------|
| <i>all layers</i> | lastchange | TIMESTAMP WITHOUT TIME ZONE | Last change of this feature. Comes from the OSM last_changed attribute. Reflects changes in the attributes of a feature; changes in the geometry will not necessarily change this. | |
| natural | elevation | INTEGER | Height of the feature above mean sea level, in metres. | elevation=* |
| roads | maxspeed | SMALLINT | Max allowed speed in km/h | maxspeed=* |
| roads | surface | VARCHAR(20) | The surface of the road | surface=* |
| traffic | ref | VARCHAR(8) | Reference number (motorway junctions) | ref=* |
| buildings | height | SMALLINT | Height of the building. | height=* |
| buildings | levels | SMALLINT | Number of floors | building:levels=* |