COVERED MULTI-FAMILY HOUSING—CITE-IT, WRITE-IT

These covered multi-family housing requirements reference the following codes and standards:

- Oregon Structural Specialty Code (OSSC)
- Oregon Mechanical Specialty Code (OMSC)
- ANSI A117.1, *Accessible and Usable Buildings and Facilities*

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COVERED MULTI-FAMILY HOUSING			
Type A units		**OSSC**	**ANSI**
1	Toilet and bathing fixtures do not meet accessibility requirements.		603, 604, 1003.11
2	Mirror height does not meet accessibility requirements.		603.3, 1003.11.2.3
3	Operating controls do not meet accessibility requirements.		1003.9
4	Bathing fixtures do not meet accessibility requirements.		603.2, 604.3, 1003.11
5	Fire alarms do not comply with accessibility requirements.	907.5.2.3.3	
Dwelling unit rooms		**OSSC**	**ANSI**
1	Door smoke seal is absent or insufficient.	710.5.2	
2	Smoke detectors are absent or insufficient.	907.2.10.2, 907.5.2.3.3	702
3	Installed door hardware does not meet minimum specifications. (Minimum 34 inches and a maximum of 48 inches above the floor.)	1010.1.9	
4	Egress window does not meet minimum specifications.	1030	1002.13
5	Exhaust fan in bathrooms containing bathing fixtures absent or insufficient.	1202.5.2.1	
6	Baseboard in bathroom does not meet minimum specifications. (Not less than 4 inches in height)	1209.2.1	
7	Bathroom wall finish does not meet minimum specifications.	1209.2.2	
8	Safety glazing is required in shower/tub area.	2406.4.5	
9	Exhaust fan fusible links in dampers	OMSC 607.3	
10	Heaters: Manufacturer’s installation instructions are required.	OMSC 304.1	

MECHANICAL STANDARDS—CITE-IT, WRITE-IT

Theses mechanical installation standards reference the following codes and standards:

- Oregon Mechanical Specialty Code (OMSC)
- Oregon Residential Specialty Code (ORSC)

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MECHANICAL INSTALLATIONS			
Underfloor		**ORSC**	**OMSC**
1	Duct insulation is absent or insufficient.	N1105.2, M1601.3	604
2	Dryer exhaust vent pipe exceeds allowable length.	M1502.4.5	504.8.4, 504.9
3	Duct support strapping is absent or insufficient.	M1502.4.2, M1601.4.4	603.1
4	Clearance from earth to ducts is insufficient.	M1601.4.8	603.14
Framing		**ORSC**	**OMSC**
1	Access to appliances in attic/crawl space does not meet the minimum specs.	M1305.1	306.3, 306.4
2	Exhaust fan ducts do not run to the exterior.	M1501.1, M1502.3, M1505.2	501.3
3	Duct support is absent or insufficient or not installed per manufacturer's installation instructions.	M1502.4.2, M1601.4.4	603.1
4	Combustion air obtained from the attic does not meet minimum specs.	G2407.11	C304.11
5	Gas line not completely installed or air pressure test not on.	G2417.4	C406.1
6	Chimney/vent connector clearances to combustibles do not meet minimum requirements. Type B gas vents do not have a minimum 1-inch clearance from wood, Romex wire, or combustibles. Oil or solid fuel vents do not have adequate clearance.	M1803.3.4, Tab. M1803.3.4 G2425.15.4, G2427.7.8 Tab. G2427.10.5	801.18.4 Tab. C503.10.5
7	Insulation shield is absent or insufficient.	G2426.4	802.8, C502.4
Final		**ORSC**	**OMSC**
1	Clearances to combustible construction does not meet requirements.	M1306.1	304.9
2	Water heater straps for SDC D_0, D_1 and D_2 are absent or insufficient.	M1307.2	301.15
3	Appliance is not installed to the listing or the labeling is missing.	M1307.1	304.1, 301.4, 301.6
4	Appliances in a garage need to be protected from impact.	M1307.3.1, Fig. M1307.3.1,	304.6, 304.7 Fig. 304.1
5	Bathroom exhaust fans are not functioning or providing proper cfm.	M1505.5	403.3.1.1, Tab. 403.3.1.1 Tab. 403.3.2.3
Gas appliances		**ORSC**	**OMSC**
1	Combustion air is not provided.	G2407	C304.1
2	Protection post is not provided in garage.	G2408.3 Fig. M1307.3.1	C303.4, Fig. C304.1
3	Equipment is not installed to manufacturer's installation instructions.	G2408.1	C305.1
4	Appliance location in garage does not meet minimum specifications.	G2408.2.1	C305.3, C305.4
5	Equipment is not meeting clearances to combustibles.	G2408.5	C305.8
6	Working clearance at service side of appliances is absent or insufficient.	M1305.1	C306.1, C306.2, C306.3, C306.4

Gas appliances—*continued*		ORSC	OMSC
7	Access to appliances in attic/crawl space does not meet minimum specs. Openings into attics/underfloor with appliances need to be large enough to remove the appliance but a minimum of 22 by 30 inches.	M1305.1.2, M1305.1.3	C306.2, C306.3, C306.4
8	Lighting with a switch is not provided within the passageway opening.	M1305.1.2.1, M1305.1.3.3	C306.3.1, C306.4.1
9	Outlet not provided at or near the appliance location.	M1305.1.2.1 M1305.1.3.3	C306.3.1, C306.4.1
10	Regulators not installed to manufacturer's installation instructions.	G2421	C305.1, C410.1
11	Equipment is not provided with a shut off valve within 6 feet.	G2420.5	C409.5
12	Appliance connectors exceed maximum allowable length.	G2422.1.2	C411, C411.1.3.1
13	Draft hood is not installed correctly	G2427.10.3	C503.12
14	Vent type is incorrect for the listing of the appliance.	Tab. G2427.4	C502.1, Tab. C503.4
15	Vent size does not meet minimum size requirements.	G2428.2.2	C504.2.2
16	Vent termination does not meet the minimum height.	G2427.6.4 G2427.6.5	C503.6.5, Fig. C503.6.5
17	Vent clearances do not meet the listing.	G2427.7.8	Tab. C503.10.5
18	Rooms with bathing or spa facilities shall be provided with mechanical ventilation controlled by de-humidistat or similar control.	M1505.6	Tab. 403.3.1.1, Note i

Commercial hoods and ducts		OMSC
1	Duct joint seals are absent or insufficient.	506.3.2
2	Duct exhaust does not meet the air velocity of 500 feet per minute.	506.3.4
3	Hood does not meet the listed flow rate or minimum cfm per linear foot of hood based on type.	507.1 Exc., 507.5
4	Grease duct does not meet minimum clearances. Not less than 18 inches from combustibles and 3 inches from noncombustible.	506.3.6
5	Duct slope is not adequate.	506.3.7
6	Cleanouts are absent or insufficient.	506.3.8
7	Duct support or enclosure/shaft is insufficient or does not meet the listing.	506.3.11
8	Exhaust termination location is not at an approved area.	506.3.13, 506.4.2
9	Hood type and listing is absent or insufficient on what is supposed to be listed per the application.	507.1
10	Grease filters are not provided as per listing.	507.2.8
11	Cook top and canopy distances must not exceed 4 feet.	507.4.1
12	Makeup-air needs to be provided when the hood is in operation.	508.1
13	Extinguishing system is absent or insufficient	OSSC 905.1
14	Trip test and gas and makeup air shutdown not acceptance tested and verified.	509.1

Smoke/fire dampers		OMSC
1	Direction of smoke/fire dampers installed incorrectly.	607.2
2	Smoke/fire dampers not Classified to meet UL 555 for penetration rating.	607.3
3	Fusible link does not meet the required operating temperature for the location.	607.3.3.1
4	Not accessible to motor and louvers.	607.4
5	Letters on access doors need to be a minimum of $^1/_2$ inches high.	607.4

ELECTRICAL STANDARDS—CITE-IT, WRITE-IT

The following are electrical installation references to the Oregon Electrical Specialty Code which includes:

- National Electrical Code, NFPA 70
- Oregon amendments specified in OAR 918-305-0105 Table 1-E

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ELECTRICAL INSTALLATIONS		
Rough-in		**OESC**
1	Oxidation inhibitor compound not installed on aluminum conductors in services and panel boards.	110.3(B)
2	Inadequate terminations or splices.	110.14(A)
3	Adequate working clearances not provided around services and panel boards.	110.26(A)(1),(2),(3)
4	Circuits not adequate for receptacle serving the dishwasher or garbage disposal.	210.23(A)(1),(2)
5	Receptacle outlet box spacing not arranged to meet requirements.	210.52(A)(1),(2),(3),(4)
6	Insufficient receptacle outlets in kitchen and countertops.	210.52(B)(3), 210.52(C)(1),(2),(3),(4),(5) Figure 210.52(C)(1)
7	Alcoves with area not less than 2 by 3 feet require at least one receptacle.	210.52(I), OESC Amendment
8	Separate circuit not provided for receptacle serving the laundry receptacle outlet(s).	210.52(F)
9	Lighting not provided in storage/equipment spaces.	210.70(A)(3)
10	Sign circuit and show window lighting provision inadequate.	220.14(F), 220.14(G), 600.5
11	Service entrance conductors or feeders need to be sized large enough for demand loads.	220.40
12	Aerial service conductors or feeders do not have correct clearance above grade or driveway.	230.24(B)
13	Sub-panels located in clothes closets are prohibited.	240.24(D)
14	Separately derived system improperly grounded.	250.30
15	No disconnect or grounding electrode at separate building.	250.32(B), 250.32(D)
16	Metallic gas lines and water lines not bonded | Statewide Code Interpretation 08-04.	250.104(B)
17	Metal well casing not grounded.	250.112(M)
18	Neutral sub-panel not isolated.	250.142(B)
19	Ground wires in boxes not made up with wire nut, crimps, or clips.	250.148(B)
20	All conductors of a circuit not routed together.	300.3
21	NM cable installed in bored holes closer than 1-$^1/_4$ inch to edge of framing member does not have $^1/_{16}$-inch nail guards installed.	300.4(A)(1) and (2)
22	Minimum cover and burial depth inadequate.	Table 300.5
23	Box(s) not securely mounted.	300.11(A)
24	A minimum of 6 inches of free conductors not provided at box for device make-up.	300.14
25	Box(s) required at all outlets and splices.	300.15
26	Fire rated walls in duplexes not protected at electrical openings around boxes.	300.21
27	Box(s) not sized large enough for number of conductors.	314.16
28	NM cable sheathing cover does not extend into box at least $^1/_4$ inches.	314.17(C)

Rough-in—*continued*		OESC
29	Box(s) not flush with combustible surfaces.	314.20
30	Incorrect outlet boxes used to support ceiling fans	314.27(C)
31	NM cable above ceiling not protected from damage.	334.15, OESC amendment
32	NM cable not secured and protected within 6 feet of attic access.	334.23
33	NM cable not secured at correct intervals or above service panel.	334.30
34	Lighting fixture boxes in closets do not meet minimum clearances to shelving.	410.16, Figure 410.2
35	Unused openings in boxes, panel boards, and services not plugged.	408.7, 314.17
36	No bonding and GFCI protection for hydro-massage bathtubs.	680 Section VII
37	Communication outlet not provided in dwellings.	800.156
38	Primary protector for communication circuits not bonded.	800.1
Final		**OESC**
1	Available fault current exceeds equipment rating.	110.9
2	Service and panel board internal parts damaged or contaminated during construction.	110.12 (B)
3	Cover-plates on plugs and switches missing.	110.27, 404.9(A), 406.6
4	Grounded conductor (neutral) not identified at terminals.	200.6
5	GFCI receptacles not installed or functioning.	210.8
6	Receptacles with incorrect polarity.	200.11
7	Arc-fault circuit interrupters not provided for circuits supplying outlets where required.	210.12
8	Over-current devices not rated for the conductor ampacity.	240.4
9	Receptacles have open ground.	250.138
10	Lock-nuts loose or missing.	300.1
11	Services, panel boards, and equipment not securely fastened.	300.11
12	No dimmer-controlled receptacles.	404.14(E)
13	Receptacles in wet or damp locations not WR rated.	406.9(B)
14	Circuits not labeled and identified in services and panel boards.	408.4(A)
15	Back-fed devices not secured.	408.36(D)
16	Panel board (sub-panel) grounded conductor (neutral) not isolated.	408.4
17	Terminal can only have one conductor at neutral bars and circuit breakers.	110.3, 408.41
18	Florescent lighting fixtures not grounded.	410.40
19	Branch circuit(s) do not meet minimum rating specifications.	422.10(A), 422.13
20	GFCI protection required for cables installed in heated floors.	424.44(E)
21	New GFCI devices not tested.	OAR 918-271-0040

PLUMBING STANDARDS—CITE-IT, WRITE-IT

The following plumbing requirements reference the Oregon Plumbing Specialty Code (OPSC).

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PLUMBING INSTALLATIONS		
Underground/underslab		**OPSC**
1	Test failed leaks	609.4, 712
2	Voids around piping not sealed appropriately	312.2
3	Improper depth of water piping exiting building through foundation wall	609.1
4	No test on waterlines	609.4
5	Improper configuration and size of DWV piping and fittings	Table 701.1, 703, 704, 706
6	Cleanouts absent or insufficient	707
7	Grade of horizontal drainage piping does not meet minimum specifications	708
8	System (or portion thereof) below upstream manhole without a backwater valve	710.6
9	No test on DWV system	712
10	Required primer lines on floor drains	1007.1
11	Water pipe sizing	610
12	Sewage ejector sizing	710.3
13	Approved materials, DWV, water piping	604.0, Table 604.1, 701.2, Table 701.2
14	Vent connections	901.1, 905.2, 905.3, 905.5
15	Vent size	904
16	Trap arm length	1002.2
17	Trap arm change of direction	1002.3
18	Vent opening	1002.4
Underfloor		**OPSC**
1	Test failed leaks	609.4, 712.1
2	Freeze protection for waterline below insulation not provided	312.6
3	Nail plate protection not provided	312.9
4	Support for DWV and/or waterlines system absent or insufficient	313, Table 313.3
5	Water pipe materials	604, Table 604.1
6	Improper depth of water line exiting building through foundation wall	609.1
7	Undersized water piping	610, Table 610.3, Table 610.4
8	Undersized DWV piping	702.1, Table 702.1, 703
9	Drainage change of direction	706
10	Required cleanouts and clearances absent or insufficient	707.4 - 707.14
11	Grade on DWV system does not meet minimum specifications	708

Underfloor—*continued*		OPSC
12	System (or portion thereof) below upstream manhole without a backwater valve	710.1
13	Sewage ejector requirements	710.2
14	Under-floor piping covered prior to inspection	OAR 918-785-0200
15	Vent requirements	901.2
16	Size of vents	904.1
17	Vent connections	905
18	Vertical wet vent	908.1
19	Horizontal wet vent	908.2
Rough-in/top out		**OPSC**
1	Test failed leaks	712
2	Freeze protection for pipes in unconditioned spaces is absent or insufficient.	312.6
3	Nail plate protection not provided.	312.9
4	Structural member weakened or impaired by notching or boring.	312.11
5	Hangers and supports do not meet minimum specifications.	313, Table 313.3
6	Improper spacing and clearances of fixtures.	402.5
7	Required pressure/temperature-balancing valves on fixtures not provided.	408.3, 409.4, 4010.3
8	Main shut off valves not provided.	606.2
9	Improper depth of water line exiting building through foundation wall.	609.1
10	No test on waterlines.	609.4
11	Undersized water and DWV system.	610.3, 610.4, 702.1, 703.2
12	Vent piping exceeds maximum allowable horizontal length.	Table 703.2 Footnote 6
13	Drainage change of direction.	706.1
14	Improper cleanout location, installation or clearances.	707
15	Required cleanouts and clearances not provided.	707.9
16	Grade on drainage system does not meet minimum specifications.	708
17	System (or portion thereof) below upstream manhole without a backwater valve.	710
18	No test on DWV system.	712
19	Sewage ejector installation requirements.	710.2
20	Macerating toilet systems.	710.13
21	Undersized and number of cross-sectional areas of vent(s).	904.1
22	Venting for island sinks and similar equipment does not meet minimum specifications.	909
23	Horizontal wet venting exceeds limitations.	908.2
24	Air admittance valves (AAV) installation requirements.	SAM 07-01
25	Approved DWV materials.	Table 701.2, Chapter 17

Water service		OPSC
1	Test failed leaks	609.4, 712
2	Drainage and related underground piping covered prior to inspection	105.2.1.2
3	Lack of listed primer when required	605.3.1, 605.12.2
4	Inappropriate use of plastic piping given electrical grounding system	604.1
5	Water pressure reducing valve not provided	608.2
6	Water service depth below frost	609.1
7	No test on water system	609.4
8	14-gauge copper blue tracer wire on waterline not provided	604.10.1
9	Waterline not correctly sized for building	610.1
10	Full-way valve required	606.2
Backflow		**OPSC**
1	Required backflow device	603.1
2	Connection to potable waterline covered prior to inspection	105.2.1.1
3	Backflow device does not meet minimum required clearances	Table 603.2, 603.4.3
4	Test results for backflow prevention assembly not provided	603.4.2
5	Required freeze protection for backflow prevention device absent or insufficient	312.6
Rain drains		**OPSC**
1	Expansion joints for roof drain connections	1105.1, 1101.5.1
2	Unsupported lines. (case by case)	313, Table 313.3
3	covered prior to inspection	105.2.1
4	Improper point of disposal	1101.2
5	Connection to underfloor or footing drain not provided. Sump/backwater valve/ejectors if required.	1101.6
6	Improper size for roof area and horizontal storm drains.	1103.2, Table 1103.2
7	Required cleanouts not provided	1101.13
8	Proper materials	1101.4
9	Testing	1107
Building sewer		**OPSC**
1	Improper materials	715
2	Improper connectors or adapters for joining dissimilar materials	705, 715.2
3	Undersized line	717, Table 717.1
4	Improper grade or slope, Tracer wire, Sewer water in same trench, Sewer location	718, 720, 721
5	Provide required test	723
6	Lack of required cleanouts	719
7	Line covered prior to inspection	105.2

Shower pan installation		OPSC
1	Shower pan does not meet minimum specifications	408.6
2	Required slope on sub-base does not meet minimum specifications	408.7
3	Liner not clamped properly with drain body	408.7
4	Required test not provided	408.7.5
5	Location of shower valve and heads	408.9
6	Shower riser secured	408.1
7	Shower liner material approval	408.7
Final		**OPSC**
1	Test failed – leaks	609.4, 712
2	Sealing of openings in walls	312.12.2
3	Hose bibbs not secured	402.3
4	Fixture not listed to approved standard	301.2
5	Fixtures not sealed at joint with wall/floor	402.3
6	Flashing not installed on vents	906.5
7	Access to pump motor for jetted tub not provided	409.6
8	Temperature exceeds 120 degrees at tub/showers/bidets	408.3, 409.4, 410.3
9	Required elevations and protective barriers on water heater located in garage are absent or insufficient	507.6, 507.6.1
10	Water heater not strapped	507.2
11	Water heater not properly sized	Table 501.1(1)
12	Hot- and cold-water pipes are crossed at …….	417.5
13	Backflow devices not provided	603.2, Table 603.2
14	Test results not provided for all backflow prevention assemblies	603.4.2
15	Required shut-off valves not provided	606.1, 606.5
16	Water softener sizing	611
17	Required expansion devices absent or insufficient	608.3
18	Temperature/pressure relief valves improperly routed or terminated	608.5
19	Water heater pan installed	507.4
20	Dishwasher drain connection	414.3, 807.3
21	Trap arm change of direction	1002.3
22	Primer valves absent or insufficient	1007.1
23	AAVs not properly installed	SAM 07-01