Permit #: Address:

Compliance Path Used: □ Prescriptive □ Trade Off □ Performance

Project Type: □ New Mid/Highrise Residential Project □ Mid/Highrise Residential Addition □ Renovation

Key: Mandatory for all Compliance Approaches as Relevant to the Scope of Work

Mandatory for Prescriptive Path

2013 DC Energy Code Sect. #	Pre-Inspection Section Description	Prescriptive Code Value	Plan Value	Designer Identified Dwg Page	Plan Review	Field Insp.
101.4.7.6, C402.4.1.2 SR	Plans, specifications, and calculations give info for air-barrier energy compliance. Assemblies meet ASTM E 2357, ASTM E 1667, other. Materials require sealed joints	N/A				
C403.2.1 SR	Provide Sum of All Exterior Wall Area in Square Feet	N/A				
C403.2.1 SR	Provide Sum of All Exterior Window Area in Square Feet	N/A				
C403.2.1 SR	Calculate Window to Wall Area (WWA) based on values above.	N/A				
C403.2.1 SR	If WWA≥ 30%, then prescriptive path cannot be used, unless exemption and calculations.	N/A				
C402.3.2 SR	In enclosed spaces > 10,000 ft2 directly under a roof with ceiling heights >15 ft. and typical daytime occupancies (See Code), the following requirements apply: (a) the min. daylight zone under skylights is >= half the floor area; (b) the min. skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1%. Potential exemptions apply.	N/A				
101.4.7.6 MR	Plans, specifications, and calculations give info for mechanical energy compliance.	N/A				
C403.2.1, C403.2.2 MR	Load calculations per ASHRAE 183. Equipment sized to the smallest possible within available equipment options.	N/A				
101.4.7.6 ER	Plans, docs, specs./ calcs and exemption info. given for interior lighting systems and equipment.	N/A				
101.4.7.6 ER	Plans, docs, specs./ calcs and exemption info. given for exterior lighting systems and equipment.	N/A				
C403.2.4.5 ER	Freeze protection and snow/ice melting system sensors for future connection to controls.	N/A				
C406 ER & MR	Project team selects one of three options. Advanced: 1) Lighting performance 2) HVAC performance (whole project area) OR 3) Renewable Energy: 0.5 W/sqft for bldg OR 3% bldg hot water	N/A				

2013 DC Energy Code Sect. #	Foundation Inspections	Prescriptive Code Value	Plan Value	Identified Dwg Page	Plan Review	Field Insp.
C402.1.1 SR	Below Grade Insulation Wall Value.	R-7.5				
C303.2 INSP	Below Grade Insulation Wall Installed per manufacturer's instructions	N/A	N/A		N/A	
C402.1.1 SR	Slab edge insulation value	Heated: R-15,24" Unheated: R-20,24"				
C303.2 INSP	Slab edge Insulation Installed per manufacturer instructions	N/A	N/A		N/A	
C403.2.7, C408.2.8, SR	Ext. Insulation protected against damage, sunlight, moisture, wind, landscaping maintenance activities.	N/A				
C403.2.7 C403.2.8 MR	Piping, ducts and plenum are insulated and sealed when installed in or under a slab	N/A				
C402.2.8 M	Bottom surface of floor structures using radiant heating insulated to R-3.5	N/A				
C403.2.4 E	Freeze protection & snow/ice melting sys. sensors for future connection to controls.	N/A	N/A			

2013 DC Energy Code Sect. #	Framing/ Rough-In Inspection	Prescriptive Code Value	Plan Value/ Strategy	Identified Dwg Page	Plan Review	Field Insp.
C303.1.3 SR	Fenetration products are certified as to the performance labels or certificates.	N/A				
C402.4.1.2 SR	Continuous air-barrier is wrapped, sealed, caulked, gasketed, taped in approved manner. Assemblies meet ASTM E 2357, ASTM E 1677, or ASTM E 283	N/A	N/A			
C402.1.1 S	U-factor of opaque doors associated with the building themal envelope meets requirements.	Swinging: U-0.61 Non-Swing: R-4.75				
C303.1.3 S	Fenetration products rated in accordance with NFRC.	N/A				
C402.4.3 C402.4.4 S	Factory-built fenestration & doors are labeled as meeting air-leakage requirements.	N/A	N/A			
C402.4.7 S	Vestibules are installed where building entrances separate conditioned space from the exterior & meet exterior envelope requirements. Doors have self closing devices & are 7 feet apart.	N/A	N/A			
C402.4.3 C402.4.4 SR	Vertical Fenestration U-factor Fixed Fenestration: Operable Fenestration: Entrance doors:	U-0.38 U-0.45 U-0.77				
C402.3 SR	Skylight Fenestration U-factor	U-0,50				
C402.3 SR	Skylight Fenestration SHGC:	SHGC-0.40				
C402.3 S	Vertical Fenestration SHGC value.	SHGC-0.40				

2013 DC Energy Code Sect. #	Plumbing Rough-In Inspection	Prescriptive Code Value	Plan Value/ Strategy	Designer Identified Dwg Page	Plan Review	Field Insp.
C404.6 MR	Automatic or manual switches installed to switch off the recirculating hot water system or heat trace.	N/A				
C404.3 M	Temp. controls installed on service water heating systems (≤110 F to max. temp. range)	N/A				
C404.5 M	Recirculating service hot water pipes insulated. Under slab piping verified during Foundation Inspection.	1" ins. <=0.27 conductivity				
C404.4 M	Heat traps installed on non-circulating storage water tanks.	N/A				

2013 DC Energy Code Sect. #	Mechanical Rough-In Inspection	Prescriptive Code Value	Plan Value/ Strategy	# Systems	Designer Identified Dwg Page	Plan Review	Field Insp.
C403.2.5 MR	Demand control ventilation provided for spaces >500 ft2 & >25 ppl/1000 ft2 occupant density & served by systems with air side economizer, auto modulating outside air damper control or design air flow > 3,000 CFM	N/A					
C403.2.3(3) M	PTAC and PTHP with sleeves 16" by 42" labeled for replacement only.	N/A					
C402.4.5.1 M	Stair and elevator shaft vents have motorized dampers that automatically close.	N/A					
C402.4.5.2 M	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use & meet the maximum leakage rates. Check gravity dampers where allowed.	N/A					
C403.2.3 M	HVAC equipment regulated by Federal National Appliance Energy Conservation Act meets requirements.	See Code Tables					
C403.2.10 M	Each HVAC system with total fan motors ≥5HP does not exceed the allowable fan system mostor nameplate HP or the fans system brake horse power.	N/A					
C403.2.8.1 M	Insulation exposed to weather is protected from damage. Insulation outside of the conditioned space & assoc. with cooling systems is vapor retardant.	N/A					
C403.2.7 M	HVAC ducts and plenums insulated per space requirements.	Inside cond. space R-6, Outside cond space R-8					
C403.2.8 M	HVAC piping insulation thickness. Table C403.2.8						
C403.2.8 M	Thermally ineffective panel surfaces of sensible heating panels have insulation ≥3.5	R-3.5					
C403.2.7 M	Ducts and Plenums sealed based on static pressure.	N/A					
C403.2.7.1.3 M	Ductwork operating > 3 in. w.g. requires air leakage testing.	N/A					
C403.2.6 MR	Exhuast air energy recovery on systems meeting Table C403.2.6	N/A					
C403.3.1 MR	Air economizers provided where required, meet the requiremtns for design capacity, control signal, and high-limit shuf-off and integrated economizer control.	N/A					
C403.3.1.1.3 MR	Means provided to relieve excess outside air during economizer operation.	N/A					
C403.3.1 MR	Water economizers provided where required, meet the requirements for design capacity, maximum pressure drop and integrated economizer control and heating system impact.	N/A					
C403.4.1.4 MR	Economizer operation will not increase heating energy use during normal operation.	N/A					
C403.4.1.4 MR	Zone controls can limit simultaneous heating & cooling and sequence heating & cooling to each zone.	N/A					
C403.4.2 MR	VAV fan mostors>= 7.5 HP to be driven by variable speed drive, have vane-axial fan with variable pitch blades, or have controls to limit fan motor demand.	N/A					
C403.2.3 M	Hydronic heat pump systems connected to a common water loop meet heat rejection and heat addition requirements.	N/A					
C403.4.5 M	Dehumidification controls provided to prevent reheating, recooling, mixing of hot and cold airstreams or concurrent heating & cooling of the same airstream.	N/A					
C403.3.1 M	Water economizer specified on hydronic cooling & humidification systems designed to maintain inside humidity at >35 F dewpoint if an economizer is required.	N/A					

2013 DC Energy Code Sect. #	Mechanical Rough-In Inspection	Prescriptive Code Value	Plan Value/ Strategy	# Systems	Designer Identified Dwg Page	Plan Review	Field Insp.
C403.4.4 MR	Each fan powered motor >=7.5 HP, has capacity to automatically operate at ½ capacity for changed temp.	N/A					
C403.4.7 MR	Hot gas bypass systems limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	N/A					
C403.4.2.1 M	VAV fans have static pressure sensors positioned so setpoint <= 1/3 total design pressure.	N/A					
C403.4.2.2 M	Reset static pressure setpoint for DDC controlled VAV boxes reporting to central controller based on the zones requiring the most pressure.	N/A					
C403.4.2.2 M	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint rest controls.	N/A					
C403.4.5 M	Multiple zone HVAC systems have supply air temperature reset controls.	N/A					
C403.4.3.2 M	Hydronic, two pipe heating and cooling system allow 15 deg F exterior temp., and 4 hour deadband between heating and cooling.	N/A					
C403.4.3.4 M	Temperature reset by representative building loads in hydronic chiller and boiler systems >= 300,000 Btu/h.	N/A					
C403.4.3.3 M	Two-position automaitc valve interlocked to shut off water flow when hydronic heat pump with pumping system > 10 is off.	N/A					
C403.4.3.3.1 M	Hydronic heat pumps shall have a water dead band of 20 deg. F between heat rejection and heat addition.	N/A					
C403.4.3. 3.2.1 M	Hydronic heat pump, heat rejection systems shall be able to bypass cooling tower or stop heat exchange.	N/A					
C403.4.3.4 M	Hydronic systems >=300 kBTUh shall either: reset water temp. by outside or zone temp. OR reduce pump flow by 50% via VFD, or other						
C403.4.3.5 M	Hydronic Pump Isolation for systems w/ two or more chillers shall be included.	N/A					
C403.4.6 M	Condenser heat recovery system that can heat water to 85 F or provide 60% of peak heat rejection is installed for service hot water in ⅔ facility, water cooled systems reject >6 MMBtu, and SHW >=1 MMBtu.	N/A					
C403.2.11 M	Unenclosed spaces that are heated use only radiant heat.	N/A					
C404.2 M	Service water heating equipment meets efficiency requirements.	N/A					

2013 DC Energy Code Sect. #	Electrical Rough-In Inspection	Prescriptive Code Value	Plan Value/ Strategy	Designer Identified Dwg Page	Plan Review	Field Insp.
C405.2.2.1 ER	Automatic lighting control to shut off all project lighting by a time of day schedule, an occupant sensor, or from another control alarm system.	N/A				
C405.2.1.1 ER	Independent lighting control readily accessible and visible to occupants.	N/A				
C405.2.1.2 ER	Independent lighting control has at least three steps: OFF, ON, and one step <=50% lighting power.	N/A				
C405.2.2.2 ER	An occupancy sensor or timer automatically turns off lights 30 min. after occupants leave. Applicable to: 1) classrooms/ lecture halls 2) conference/ meeting room 3) lunch or break room 4) storage/ janitorial rooms 5) office spaces 7) other spaces <=300 square feet or less. Manual On or Auto. On to 50% power	N/A				
C405.2.2.1 ER	For spaces not included in C405.2.1.1, control device shall be activated "on" manually or by an occupant sensor. Override of any scheduled shut off control is allowed for maximum of 2 hours.	N/A				
C405.2.2.3 ER	Area within the sidelighted daylight zones have daylighting controls. lighting controls.	N/A				
C405.2.2.3 ER	Enclosed spaces under skylights are equipped with required lighting controls separate from general lighting (15 ft. from skylight).	N/A				
C405.2.4 E	Automatic lighting controls for exterior lighting included in project.	N/A				
C405.4 ER	Exit signs do not exceed 5 watts per face.	5 Watts/Face				
C405.3 ER	Tandem wiring is required for recessed, fluorescent lamps within 10 feet of one another AND for pendant or surface mounted fluorescent lights mounted 1 foot edge to edge of one another.	N/A				
C405.5.2 ER	Ext. lighting >100W provides >60 lm/W unless on motion sensor	N/A				
C405.5.2 ER	Lighting Power Density is calculated by Building Area Method or Space by Space Method. Calcuations provided in plans.	N/A				
C405.2.3 ER	Sleeping units have at least one master switch at the main entry door that controls the wired luminaries and switched receptacles.	N/A				
C405.2.3 ER	Separate lighting control devices for specific uses installed per approved lighting plans.	N/A				

2013 DC Energy Code Sect. #	Insulation Inspection	Prescriptive Code Value	Plan Value/ Strategy	Designer Identified Dwg Page	Plan Review	Field Insp.
C402.4.1.2 SR	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed or weather stripped to minimize air leakage.	N/A				
C402.1.1 SR	Roof R-value. Above Deck: Metal: Attic:	R-25 c.i. R-19+R-11 R-38				
C303.2 SR	Roof insulation installed per manufacturer's instructions. Blown or poured loose fill insulation installed only where the roof slope >= 3/12	N/A				
C402.2.1 SR	Skylight curbs insulated to the level of roofs with insulation above deck or R-5.	N/A				
C402.2.1.1 SR	High-albedo roofs meet solar reflectance requirements of 0.70 & thermal emittance of 0.75 or SRI of 82.	N/A				
C402.1.1 SR	Above Grade wall insulation R-value. Mass: Metal Bldg: Steel-framed: Wood-framed:	R-11.4 c.i. R-13+R13ci R-13+R7.5ci R-20				
C303.2 INSP	Above Grade wall insulation installed per manufacturer's requirements.	N/A			N/A	
C402.1.1 SR	Floor insulation R-value. Mass: Steel-joist: Wood-framed:	R-10.4 c.i. R-30 R-30				
C303.2 INSP	Floor insulation installed per manufacturer's requirements.	N/A	N/A		N/A	
C303.1.2 INSP	Bldg. envelope insul. is labeled w/ R-val or Insul. certificate.	N/A	N/A		N/A	
C303.2.1 S	Exterior insulation is protected from damage with protective material.	N/A				
C402.2.1 S	Thermal roof insulation cannot be installed on top of a suspended ceiling.	N/A				

2013 DC Energy Code Sect. #	Final Inspection	Prescriptive Code Value	Plan Value/ Strategy	Designer Identified Dwg Page	Plan Review	Field Insp.
C402.4.6 SR	Weatherseals installed on all loading dock cargo doors in Climate Zones 4-8	N/A				
C403.2.4 M	Heating and cooling to each zone is controlled by a thermostat	N/A				
C403.2.4 M	Thermostatic controls have a 5 degree F deadband.	N/A				
C403.2.4 M	Temperature controls have setpoint overlap restrictions.	N/A				
C403.2.4.3 M	Each Zone equipped with setback controls using automatic time clock or programmable control system.	N/A				
C403.2.4.3 M	Auto. Controls: Setback to 55 deg F (heat) and 85 deg. F (cool); 7 day, 2 hour occupant override, 10-hour backup.	N/A				
C403.2.4 M	Minimum of one humidity control device per installed dehumidification/ humidification system	N/A				
C403.2.4 M	Systems include optimum start controls.	N/A				
C403.2.4.1.1 M	Heat pump controls prevent supplemental elect. resistance heat from coming on when not needed.	N/A				
C403.2.2 M	HVAC systems and equipment capacity does not exceed calculated loads.	N/A				
C404.3 M	Provide lavatory faucet temperature <= 110 deg. F.	110 Deg F				
C404.6 M	Automatic or manual controls are installed that limit the operation of a recirculating service water heating or heat trace in low demand times.	N/A				
C404.7.1 M	Pool heaters are equipped with on/off switch and no continuous burning pilot light.	N/A				
C404.7.3 M	Pool covers that are vapor retardant are provided for heated pools.	Vapor Retardant				
C404.7.2 M	Automatic time switches are installed on all pool heaters and pumps.	N/A				
C402.4.8 E	Recessed luminaries in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.	N/A				
C405.5.2 ER	Installed lamps and fixtures are consistent with what is shown on the approved lighting plans, which demonstrate proposed watts are less than or equal to allowed watts.	N/A	N/A			
C405.6 ER	Exterior lighting power demonstrated proposed watts are less than or equal to allowed watts.	N/A	N/A			

This Energy Verification Sheet is based on DOE's Store and Score spreadsheets and was adapted to fit the 2013 DC Energy Conservation Code. This verification sheet does not replace the 2013 DC ECC or ASHRAE 90.1-2010 and is included for DCRA to verify significant requirements during permitting and inspection. The project team shall design and install the building to the full energy code, irrespective of any one measure's existence on this sheet. The project team shall also include this document into their drawings and fill it in for applicable projects.

Directions: Each trade shall be responsible for filling out the sections of this page that are applicable to their discipline. Architects should fill out any code section starting with "S" or "SR", Mechanical trades should fill out any section starting with "M" or "MR," and Electrical should fill out any section starting with "E" or "ER." Every row must be completed to have compliant documentation. The design team is responsible for filling out the "Plan Value," "Identified Drawing Page," and "# Systems" columns. The "Identified Drawing Page" means that the page number associated with the project should be input that shows how compliance is being met. Should a measure be not applicable to the project scope, then the project team may place "N/A" (not applicable) or cross out the cell in the "Plan Value" and "Identified Drawing Page." Exemptions to measures are not included in this verification sheet, so it is up to the design team to read the code for applicable exemptions and place "Exempt per Section (insert code section # here),"Projects using the Performance Path (energy modeling) need to fill in only the light gray, highlighted, mandatory rows. Other Compliance Approaches require filling in all rows. Completion of this page does not absolve project teams from providing other energy verification documentation. The "Plan Review" and "Field Insp." columns are for Plan Reviewers and Field Inspectors only. Plan Reviewers and Field inspectors should sign off on each item they inspected and confirm compliance. Photos of the completed sheets must be sent in to DCRA for storage.

DCRA Energy Verification Sheet

2013 DC Energy Code Mid/High-rise Multifamily Version 1.0_2014

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