



2006
CITY OF MESA
BUILDING SAFETY DIVISION, CITY PLAN REVIEW
MECHANICAL CODE REVIEW 2006

Applicant _____ Building Safety
 Copy _____ Copy _____

PROJECT STREET ADDRESS : _____

APPLICANT : _____ PROJECT : _____

REVIEW BY: _____

APPROVED : _____ DATE : _____ PERMIT # : _____

PLEASE SPECIFY BESIDE EACH "REQUIRED" ITEM THE PLAN SHEET NUMBER WHERE CORRECTION WAS MADE FOR THAT ITEM AND RETURN THESE CORRECTION SHEETS WITH RESUBMITTAL OF PLANS.

A. GENERAL

<u>Sheet</u>	Req'd	OK	
1.	<input type="checkbox"/>	<input type="checkbox"/>	The Mechanical Code reference is not on the plans, or is incorrect. The Current Mesa Mechanical Code (MMC) as adopted by the City of Mesa is the 2006 International Mechanical Code (IMC) with amendments.
2.	<input type="checkbox"/>	<input type="checkbox"/>	Provide with your resubmittal a minimum of (2, 3 or 4) complete sets, <u>24" x 36" SIZE</u> , of plans with your signed written responses for each discipline on your company letterhead. Provide clouded areas on plans to show where comments were addressed. If none made, do not resubmit specs or calcs unless otherwise noted. Calculations and/or specifications are to be revised and resubmitted if changes were made. <u>The number of plan sets required for resubmittal will be determined by the number of disciplines which have not approved your submittal, i.e. Building, Fire, Planning, and/or Civil.</u> Outsourced plans may require additional sets. You may visit our web site at (http://www.cityofmesa.org/building_safety/) to check the status of your plan review and obtain a copy of your review comments.
3.	<input type="checkbox"/>	<input type="checkbox"/>	Plans submitted are unfinished and consequently incomplete/inadequate. The following comments are preliminary only. Additional corrections may follow pending receipt and comprehensive review of completed plans.
4.	<input type="checkbox"/>	<input type="checkbox"/>	Plans, specifications and calculations must be sealed and signed by an architect or engineer licensed by the State of Arizona.
5.	<input type="checkbox"/>	<input type="checkbox"/>	Specify street address of job on all sheets of plans. Building shall be identified using the City assigned address numbers.
6.	<input type="checkbox"/>	<input type="checkbox"/>	Provide Structural analysis and calculations for the roof loading of all new and existing rooftop supported equipment and/or equipment hung from below. Calculations and analysis to include the existing and any new HVAC's, evaporative coolers, air handling units, kitchen exhaust fans, kitchen hoods, make-up air units, boilers and roof curbs with all ductwork to all equipment as required for the areas effected by their installations. Provide on the drawings all required structural modification details as specified from your structural analysis. IMC #302.1.

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<u>Sheet</u>	Req'd	OK	
7	<input type="checkbox"/>	<input type="checkbox"/>	Provide details on the plans to show how the new equipment is protected. IMC# 303.4 and 304.10.
8	<input type="checkbox"/>	<input type="checkbox"/>	Identify on the plans all new mechanical equipment to be installed and provide an equipment list and/or schedule for the equipment. Equipment list to include the make, model number, size operating weight and type. IMC# 304.1 and 1101.2.
9	<input type="checkbox"/>	<input type="checkbox"/>	Provide details on the plans to show how the new equipment is anchored and supported. IMC# 304.9.
10	<input type="checkbox"/>	<input type="checkbox"/>	Provide details on the plans to show compliance with the condensate disposal. IMC# 307 with sub-sections.

CHAPTER 4 - VENTILATION

1.	<input type="checkbox"/>	<input type="checkbox"/>	Identify on the plans the location of the ventilation for the occupied space. IMC# 401.2.
2.	<input type="checkbox"/>	<input type="checkbox"/>	Provide on the plans the opening locations for the exhaust and /or intakes to comply with IMC# 401.5 with sub-sections and 501.2.
3.	<input type="checkbox"/>	<input type="checkbox"/>	Provide on the plans the locations and details for collection and of removal of air-borne contaminants. IMC# 401.6 and 502 with sub-sections.
4.	<input type="checkbox"/>	<input type="checkbox"/>	Provide on the plans air balance calculations for the mechanical ventilation system to comply with IMC# 403.1and 501.3.
5.	<input type="checkbox"/>	<input type="checkbox"/>	Provide on the plans the minimum outdoor air ventilation rate. IMC# 403.2 with sub-sections.
6.	<input type="checkbox"/>	<input type="checkbox"/>	Provide on the plans minimum ventilation for the uninhabited space. IMC# 406.1.

CHAPTER 5 – EXHAUST SYSTEMS

1.	<input type="checkbox"/>	<input type="checkbox"/>	The exhaust system provided does not comply with IMC# 502 with subsections.
2.	<input type="checkbox"/>	<input type="checkbox"/>	Provide on the plans commercial clothes dryer information to show compliance with IMC# 504.7.
3.	<input type="checkbox"/>	<input type="checkbox"/>	Ducts on the plans serving the Type I hood(s) do not comply with IMC# 506.3 with sub-sections.
4.	<input type="checkbox"/>	<input type="checkbox"/>	Ducts on the plans serving the Type II hood(s) do not comply with IMC# 506.4 with sub-sections.

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<u>Sheet</u>	Req'd	OK	
5.	<input type="checkbox"/>	<input type="checkbox"/>	Provide on the plans the exhaust outlet locations for the Type I and/or Type II hoods. IMC# 506.3.12 with sub-sections, 506.4.1 and 506.5.5.
6.	<input type="checkbox"/>	<input type="checkbox"/>	Provide on the plans a Type I commercial kitchen hood complying with IMC# 507.1, 507.2.1 AND 507.2.1.1.
7.	<input type="checkbox"/>	<input type="checkbox"/>	Provide on the plans a Type II commercial kitchen hood complying with IMC# 507.1 and 507.2.2.
8.	<input type="checkbox"/>	<input type="checkbox"/>	Provide on the plans makeup air for the commercial kitchen exhaust. IMC# 508.1.
9.	<input type="checkbox"/>	<input type="checkbox"/>	Provide on the plans a hazardous exhaust system. IMC# 510 with sub-sections.
10.	<input type="checkbox"/>	<input type="checkbox"/>	Provide detailed engineering calculations and plans for required smoke control system. IMC# 513 with sub-sections.
11.	<input type="checkbox"/>	<input type="checkbox"/>	The energy recovery ventilation system on the plans is not allowed. IMC# 514.2.

CHAPTER 6 – DUCT SYSTEMS

1.	<input type="checkbox"/>	<input type="checkbox"/>	Positive exhausting, chimneys and venting through air plenums is not allowed. Revise the exhausting to show compliance with IMC# 601.4.
2.	<input type="checkbox"/>	<input type="checkbox"/>	The materials used within the plenum as indicated on the plans do not comply with IMC# 602 with subsections.
3.	<input type="checkbox"/>	<input type="checkbox"/>	Identify on the plans the classification of the duct based on the maximum operating pressure IMC# 603.3.
4.	<input type="checkbox"/>	<input type="checkbox"/>	Provide on the plans the locations of all smoke detectors as required by IMC# 606.2 with sub-sections.
5.	<input type="checkbox"/>	<input type="checkbox"/>	Identify on the plans the type and ratings of all dampers as required by IMC# 607.5 through 607.7.

CHAPTER 7 – CUMBUSTION AIR

1.	<input type="checkbox"/>	<input type="checkbox"/>	Identify on the plans the location(s) of the combustion air and dilution air as required for the fuel-burning appliance(s) as required by IMC# 701.2.
2.	<input type="checkbox"/>	<input type="checkbox"/>	Revise the combustion air ducts on the plans to show compliance with IMC# 708.1.
3.	<input type="checkbox"/>	<input type="checkbox"/>	Identify on the plans the net free area of the combustion and dilution air opening(s) as required by IMC# 709.1.

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CHAPTER 8 - CHIMNEYS AND VENTS

- | | | | |
|----|--------------------------|--------------------------|---|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Identify on the plans the fuel-burning appliance vent as required by IMC# 801.2. |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Provide manufactures installation details and locate on the plans the appliance direct-vent terminations. IMC# 804.1. |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans all information for the mechanical draft system(s) as required by IMC# 804.3 with sub-sections. |

CHAPTER 9 - SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL BURNING EQUIPMENT

- | | | | |
|----|--------------------------|--------------------------|---|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Fireplaces and solid fuel-burning appliances shall not be installed in hazardous locations. IMC# 901.3 |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Provide manufactures installation details for the factory-built barbecue appliance. IMC# 906.1. |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Provide incinerator and/or crematory installation details on the plans. Include manufactures cut sheets, and their listings in your resubmittal as required by IMC# 907.1. |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | Provide manufactures installation details for the cooling tower. IMC# 908.1. |
| 5. | <input type="checkbox"/> | <input type="checkbox"/> | The location of the cooling tower, evaporative cooler, and /or fluid cooler does not comply with IMC# 908.3. |
| 6. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans backflow protection for the cooling tower, evaporative cooler, and /or fluid cooler water lines. IMC# 908.5. |
| 7. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans details and clearances for the infrared radiant heaters. Include manufactures cut sheets, and their listings in your resubmittal as required by IMC# 912 with sub-sections. |
| 8. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans installation details with clearances for the cooking appliance(s). Include manufactures cut sheets, and their listings in your resubmittal as required by IMC# 917 with sub-sections. |
| 9. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans installation details with clearances for the small ceramic kiln(s). Include manufactures cut sheets, and their listings in your resubmittal as required by IMC# 923 with sub-sections. |

CHAPTER 10 - BOILERS, WATER HEATERS AND PRESSURE VESSELS

- | | | | |
|----|--------------------------|--------------------------|---|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Provide a note on the drawing stating that the contractor shall contact The Industrial Commission of Arizona, Division of Occupational Safety and Health, Phoenix, Arizona, at phone number 602-542-1648 for inspection of the steam generated equipment and/or pressure vessels per State of Arizona |
|----|--------------------------|--------------------------|---|

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statutes Title 23, Chapter 2, Article 11 and Title 20, Chapter 5.

CHAPTER 11 - REFRIGERATION

- | | | | |
|----|--------------------------|--------------------------|---|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans in an equipment schedule the type of refrigerant used in each of your refrigeration and/or HVAC systems. IMC # 1102.2 and Table 1103.1. |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans the occupancy classification of the area where the refrigeration equipment is to be located. IMC #1103.2. |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans the system classification for the refrigeration equipment installed. IMC #1103.3. |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans the quantity of refrigerant for each independent refrigerant circuit. Locate all components outside or in a machinery room as required by IMC# 1104.2 with sub-sections. |
| 5. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans the requirements for industrial occupancies and/or refrigerated rooms as required by IMC# 1104.2.2. with sub-sections. |
| 6. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans the maximum quantity of refrigerant for each independent refrigerant circuit, and show on the plans compliance with IMC# 1104.3. with sub-sections. |
| 7. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans all of the requirements for the machinery room as indicated in IMC# 1105 and 1106 with sub-sections. |
| 8. | <input type="checkbox"/> | <input type="checkbox"/> | Identify on the plans the type of material used for the refrigerant pipe and/or tubing . IMC# 1107.4. |

CHAPTER 12 - HYDRONIC PIPING

- | | | | |
|----|--------------------------|--------------------------|--|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Identify on the plans the type of material used for all of the Hydronic piping. IMC# 1202 with sub-sections. |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans the locations of the shutoff valves. IMC# 1205 with sub-sections. |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans protection for the potable water line from backflow. IMC# 1206.3. |

CHAPTER 13 - FUEL OIL PIPING AND STORAGE

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|----|--------------------------|--------------------------|---|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Identify on the plans the type of material used for all of the fuel oil piping. IMC# 1302 with sub-sections. |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Identify on the plans the type of pump(s) used and provide an electric schematic for the automatic shut. IMC# 1302.7. |

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|----|--------------------------|--------------------------|--|
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Identify on the plans the location of all vent piping. IMC# 1305.7. |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans the locations of the shutoff valves. IMC# 1307.1 and 1307.2. |
| 5. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans the locations of all relief valves. IMC# 1307.3 through 1307.5. |

CHAPTER 14 - SOLAR SYSTEMS

- | | | | |
|----|--------------------------|--------------------------|--|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans potable water contamination protection. IMC# 1401.2. |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Provide manufactures installation instructions for the new solar equipment and appliances. IMC# 1401.4. |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Provide on the plans all solar equipment as required from IMC# 1402.5.1 through 1402.5.4. |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | Identify on the plans the type of heat transfer fluids used and their flash points. IMC# 1403 with sub-sections. |

APPENDIX A

COMBUSTION AIR OPENINGS AND CHIMNEY CONNECTOR PASS-THROUGHS

- | | | | |
|----|--------------------------|--------------------------|--|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Provide details on the plans to show compliance with IMC# Appendix A Figure A-1. |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Provide details on the plans to show compliance with IMC# Appendix A Figure A-2. |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Provide details on the plans to show compliance with IMC# Appendix A Figure A-3 |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | Provide details on the plans to show compliance with IMC# Appendix A Figure A-4 |
| 5. | <input type="checkbox"/> | <input type="checkbox"/> | Provide details on the plans to show compliance with IMC# Appendix A Figure A-5 |