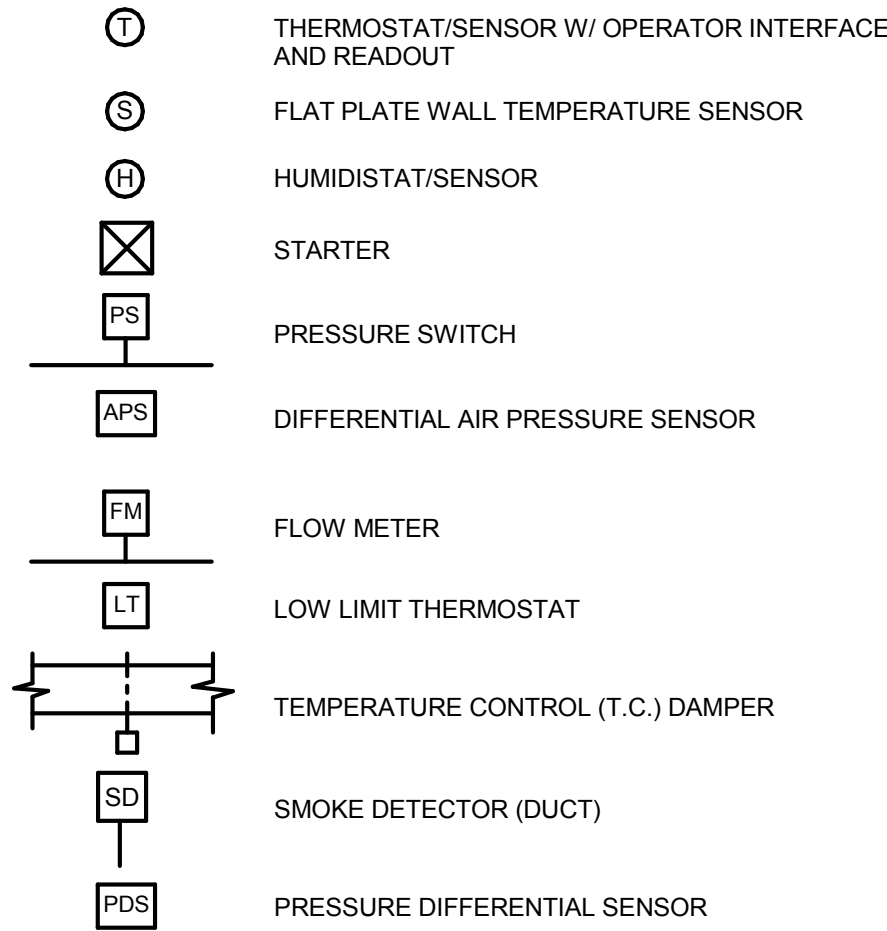


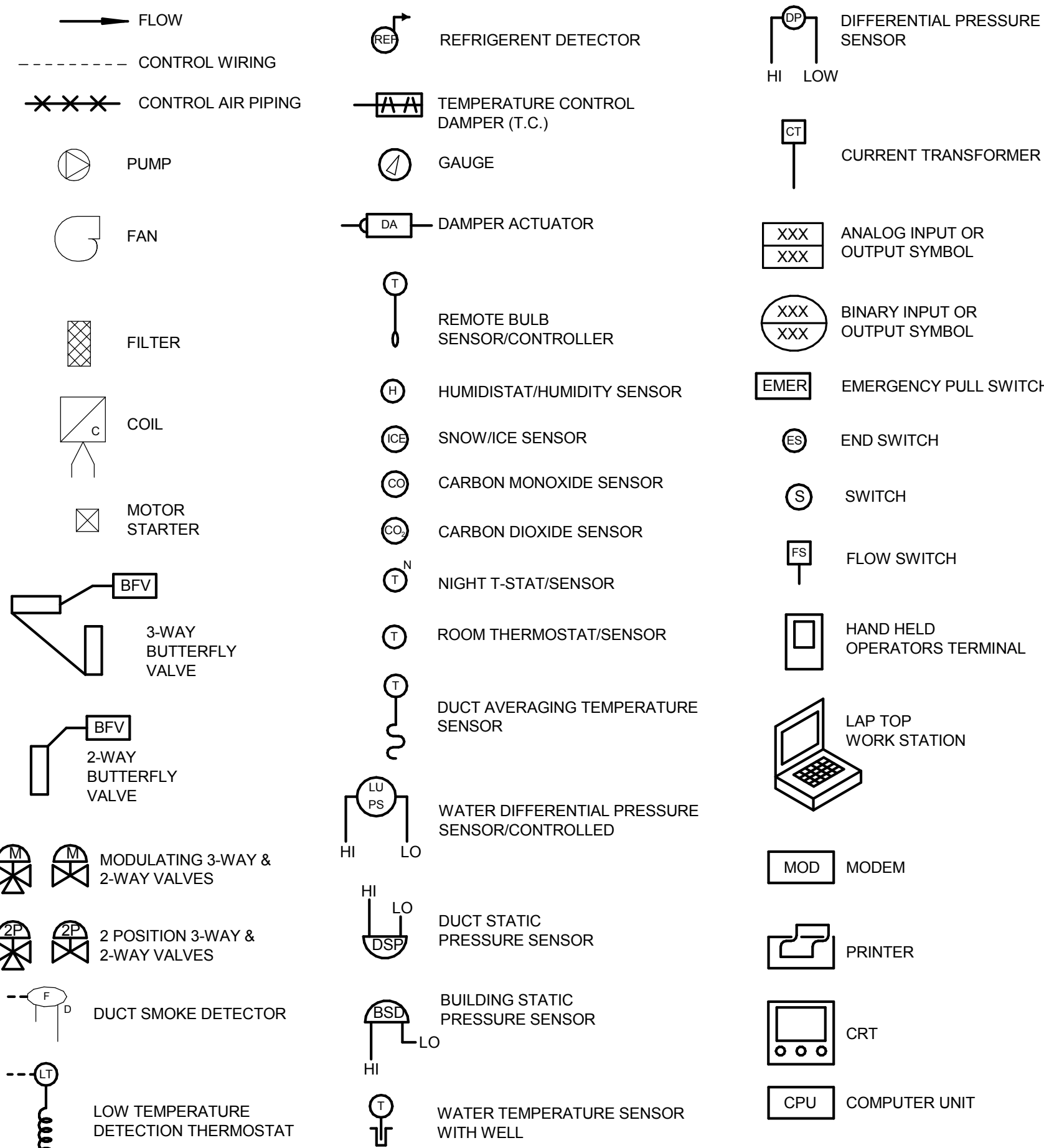
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ninety six inches = one foot
ninety seven inches = one foot
ninety eight inches = one foot
ninety nine inches = one foot
one hundred inches = one foot

CONTROLS LEGEND

CONTROLS SYMBOLS ON PLANS



CONTROLS SYMBOLS IN SCHEMATICS



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PROJECT INFORMATION

PROJECT LOCATION: SHERIDAN, WYOMING
PROJECT ALTITUDE: 4000 FEET ABOVE SEA LEVEL

DRAWING LIST

M000	MECHANICAL COVER SHEET
M001	MECHANICAL ABBREVIATIONS AND SYMBOLS
MD101	BOILER ROOM DEMOLITION PLAN
MD102	LOWER LEVEL PIPING DEMOLITION PLAN
MD103	BOILER ROOM AND MEZZANINE DEMOLITION PLAN
MD104	COAL SILO PLAN AND ELEVATIONS
MD105	BOILER ROOM DEMOLITION SECTIONS AND ELEVATIONS
MD106	DEMOLITION SECTIONS AND ELEVATIONS
MD107	BOILER ROOM AND ASH CONVEYOR PIPING DEMOLITION
MD108	DEMOLITION FLOW DIAGRAMS
MH101	MECHANICAL SITE PLAN
MH102	TEMPORARY BOILER PLAN
MH103	PUMP ROOM MECHANICAL PLAN
MH104	MAIN LEVEL BOILER ROOM MECHANICAL PLAN
MH105	MEZZANINE MECHANICAL PLAN
MH106	FUEL STORAGE ENLARGED PLAN
MI101	BOILER ROOM SECTION
MI102	BAGHOUSE SECTIONS
MI103	MISC. SECTIONS
MI104	BOILER PLANT PIPING ISOMETRIC - NORTH
MI105	BOILER PLANT PIPING ISOMETRIC - SOUTH
MI106	BOILER STEAM FLOW DIAGRAM
MI107	BOILER FEEDWATER FLOW DIAGRAM
MI108	COMPRESSED AIR SCHEMATIC
MI109	ASH AUGER AND BUCKET ELEVATOR SCHEMATIC
MI110	MECHANICAL DETAILS
MI111	MECHANICAL DETAILS
MI112	MECHANICAL DETAILS
MI113	MECHANICAL DETAILS
MI114	MECHANICAL DETAILS
MI201	MECHANICAL SCHEDULES
MI202	MECHANICAL SCHEDULES
MI301	CONTROLS
MI302	CONTROLS
P001	PLUMBING ABBREVIATIONS AND SYMBOLS
PD101	PLUMBING DEMOLITION PLAN
PL101	PLUMBING BOILER ROOM PLAN
PL102	PLUMBING PLANS PUMP ROOM AND MEZZANINE
PL201	PLUMBING DETAILS
FX101	FIRE PROTECTION BOILER ROOM PLAN
FX102	FIRE PROTECTION PLANS

GENERAL NOTES (FOR ALL MECHANICAL DRAWINGS)

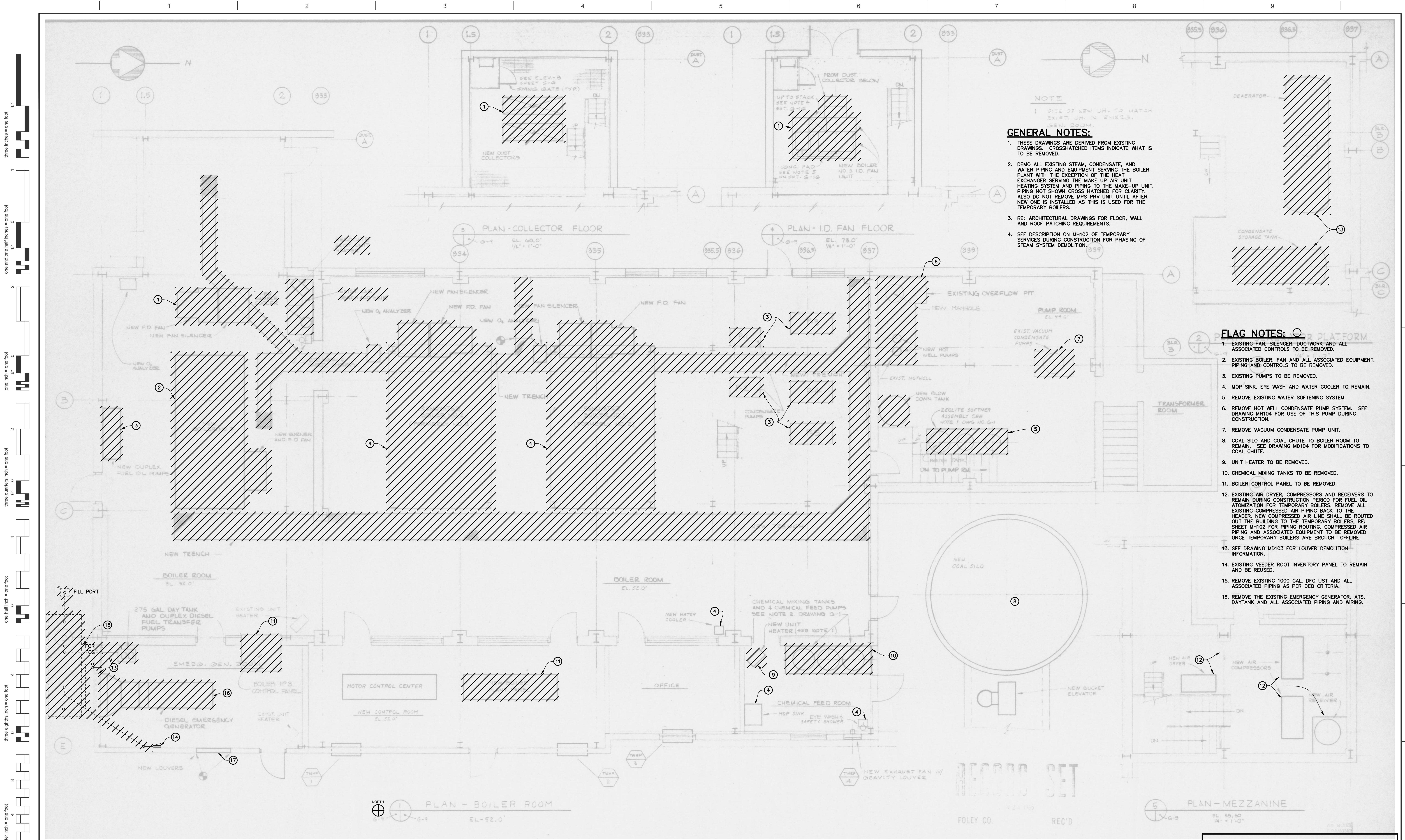
- EXISTING MECHANICAL SYSTEMS SHOWN LIGHT LINE WEIGHT. NEW MECHANICAL SYSTEMS SHOWN HEAVY LINE WEIGHT. MECHANICAL SYSTEMS TO BE REMOVED ARE SHOWN CROSS-HATCHED OR DESCRIBED IN SYSTEM DEMOLITION NOTES.
- THE INSTALLATION OR REMOVAL OF DUCTS, PIPES AND EQUIPMENT MAY REQUIRE THE REMOVAL OF EXISTING WALLS AND CEILINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING AND REPAIRING THESE WALLS AND/OR CEILINGS SO THEY MATCH THE EXISTING WHERE NOT REPLACED UNDER ARCHITECTURAL DIVISION.
- ALL FIXTURES AND EQUIPMENT REMOVED, AND NOT REUSED, SHALL BE DISPOSED OF, EXCEPT FOR THE EXISTING TRANSFORMER AND GENERATOR. CONTRACTOR IS TO PROVIDE CREDIT INFORMATION TO THE VA REGARDING THE GENERATOR DISPOSAL.
- INFORMATION ON THE DRAWINGS HAS BEEN ASCERTAINED FROM EXISTING DRAWINGS AND FIELD OBSERVATIONS. THIS INFORMATION IS AS ACCURATE AS CONDITIONS WOULD ALLOW. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE, PRIOR TO BID, AND BECOME FAMILIAR WITH THE EXTENT OF THE REMODEL WORK REQUIRED. NO EXTRAS WILL BE ALLOWED FOR ALTERATIONS OF A FORESEEABLE NATURE REQUIRED TO ACHIEVE THE END RESULT AS INDICATED BY CONTRACT DOCUMENTS.
- CONTRACTOR TO SEAL ALL AUDIBLE AND VISIBLE LEAKS ON ALL REUSED SUPPLY DUCTWORK.
- CONTRACTOR IS TO PROVIDE COMPLETE CONNECTIONS TO ALL NEW AND RELOCATED OWNER FURNISHED EQUIPMENT.
- ALL PIPING AND DUCTS INDICATED TO BE REMOVED UNDER THIS CONTRACT SHALL BE REMOVED COMPLETELY TO POINTS OF CONNECTION AT THE MAINS OR BRANCHES AND CAPPED.
- CONTRACTOR TO COORDINATE PHASING WITH THE VETERANS AFFAIRS CONTR. SEE DRAWING MH105 FOR DESCRIPTION. NO DOWN TIME IS ALLOWED UNDER THIS CONTRACT. EXCEPT FOR SEVERAL TWO-HOUR SHUT DOWNS TO INSTALL VALVES ON SYSTEMS USED FOR TEMPORARY SERVICE.
- THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF THE EXISTING EQUIPMENT LOCATIONS, EXISTING PIPE ROUTING AND EXISTING DUCT ROUTING. CONTRACTOR IS TO INSTALL NEW EQUIPMENT, DUCTS, AND PIPING IN LOCATIONS REQUIRED TO AVOID INTERFERENCE WITH EXISTING FACILITIES, EQUIPMENT, DUCTS AND PIPING. CONTRACTOR IS RESPONSIBLE FOR RAISING AND LOWERING EXISTING EQUIPMENT AND MAKING PROPER OFFSETS IN DUCTS AND PIPING TO AVOID CONFLICTS.
- CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING BID, AND VERIFY DIMENSIONS AND EXISTING CONDITIONS RELATED TO THE WORK.
- ALL CUTTING, PATCHING AND CORE DRILLING FOR THE INSTALLATION OF NEW EQUIPMENT, DUCTS, HANGERS, ETC. SHALL BE HELD TO A MINIMUM AND BE ACCOMPLISHED IN A CAREFUL MANNER. ALL PATCHING SHALL MATCH EXISTING CONSTRUCTION, TEXTURE AND FINISH AND BE DONE BY SKILLED CRAFTSMAN OF THE TRADES INVOLVED AT THE CONTRACTOR'S EXPENSE.
- MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS. CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.
- THE OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM HIS WORK.
- ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STATE CODES, LOCAL CODES AND OWNER'S STANDARDS INDICATED BY THE CONSTRUCTION DOCUMENTS.
- ALL EXTERIOR WALL AND ROOF PENETRATIONS SHALL BE SEALED WATERPROOF.
- XX## REFERS TO EQUIPMENT DESIGNATION. SEE SPECIFICATIONS AND EQUIPMENT SCHEDULES FOR FURTHER INFORMATION IN REFERENCE TO THAT DESIGNATED PIECE OF EQUIPMENT.
- ALL EQUIPMENT AND PIPING SUPPORTS FROM THE STRUCTURE ARE TO BE PROVIDED BY THE MECHANICAL CONTRACTOR. ALL SUPPORTS BY THE MECHANICAL CONTRACTOR SHALL UTILIZE THE NEW BEAMS AND SUPPORT SHOWN ON THE STRUCTURAL DRAWINGS.
- ALL SEISMIC BRACING BY MECHANICAL CONTRACTOR.

SCHEDULE OF DETAILS

DETAIL NUMBER	DRAWING NUMBER	DETAIL TITLE
MECHANICAL & PIPING		
1	MI110	PIPE HANGERS
2	MI110	SMALL PIPE ANCHOR 1-1/2"-4"
3	MI110	LARGE PIPE ANCHOR 6"-18"
4	MI110	STEAM SAFETY VALVE
5	MI110	CONCRETE EQUIPMENT BASES
6	MI110	STACK THROUGH ROOF DETAIL
7	MI110	BOILER FLOW DIAGRAM
8	MI111	FIRE TUBE BOILER
9	MI111	BOILER FEEDWATER PUMPS FLOW DIAGRAM
10	MI111	UNIT HEATERS (STEAM) PIPING CONNECTIONS
11	MI111	FEEDWATER DEAERATOR
12	MI111	CONDENSATE STORAGE AND TRANSFER FLOW DIAGRAM
13	MI112	ACCESS PLATFORM ARRANGEMENT
14	MI112	BASIC FLOW DIAGRAM-CONDENSATE AND BOILER FEEDWATER
15	MI112	STEAM LINE DRIP POCKET/STEAM TRAP ASSEMBLY
16	MI112	EXPANSION LOOP DETAIL
17	MI112	INSTALLATION OF THERMOMETER WELLS
18	MI112	CONDENSATE PUMPS - PIPING CONNECTIONS
19	MI112	END OF STEAM LINE DRIP TRAP
20	MI113	BOILER BLOWOFF TANK
21	MI113	FLOAT AND THERMOSTATIC STEAM TRAP ASSEMBLY
22	MI113	INVERTED BUCKET STEAM TRAP ASSEMBLY
23	MI113	STEAM PRESSURE REDUCING STATION DOUBLE VALVE (1/3 AND 2/3)
24	MI113	CHEMICAL FEED SYSTEM - PUMPED TYPE
25	MI113	FLUE THROUGH WALL DETAIL
26	MI113	WATER SAMPLE COILERS - BOILER WATER AND FEEDWATER
27	MI114	NATURAL GAS - BURNER AND IGNITER FUEL STANDARD PIPING DIAGRAM
28	MI114	2,500 GALLON DFO UST
PLUMBING & FIRE PROTECTION		
1	PL201	PIPE PENETRATION THROUGH WALLS BELOW GRADE DETAIL
2	PL201	REDUCED PRESSURE BACKFLOW PREVENTER PIPING DETAIL
3	PL201	WATER ENTRY DETAIL
4	PL201	HUB DRAIN AND STANDPIPE DETAIL
5	PL201	FIRE ENTRY DETAIL

CONSTRUCTION DOCUMENTATION SUBMISSION - BIDDING & CONTRUCTION

CONSULTANTS:			ARCHITECT/ENGINEERS:			Drawing Title MECHANICAL COVER SHEET		Project Title -BOILER PLANT -REPLACEMENT -		Project Number - 666-11-101		Office of Construction and Facilities Management			
MKK Consulting Engineers, Inc. 7600 East Orchard Road Suite 250S Greenwood Village, CO 80111 Phone: 303.796.6000 Fax: 303.796.6099			Calibre 9090 S Ridgeline Blvd. Suite 105 Highlands Ranch, CO 80129 Phone: 303.399.5154 Fax: 303.730.1130			Structural Consultants Inc. 3400 E Bayaud Ave # 300 DENVER, CO 80237 PHONE: 303-770-1020 FAX: 303-770-0922			Approved: Project Director JASON BROWN		Location - SHERIDAN, WY		Building Number - 90		
Revisions:			Date			Date 12/15/2011 BIDDING & CNSTN			Checked NGA		Drawn ARN		Drawing Number M000		
						GA Project Number 666-10-811					Dwg. of --		Department of Veterans Affairs		



- GENERAL NOTES:**
1. THESE DRAWINGS ARE DERIVED FROM EXISTING DRAWINGS. CROSSHATCHED ITEMS INDICATE WHAT IS TO BE REMOVED.
 2. DEMO ALL EXISTING STEAM, CONDENSATE, AND WATER PIPING AND EQUIPMENT SERVING THE BOILER PLANT WITH THE EXCEPTION OF THE HEAT EXCHANGER SERVING THE MAKE UP AIR UNIT HEATING SYSTEM AND PIPING TO THE MAKE-UP UNIT. PIPING NOT SHOWN CROSS HATCHED FOR CLARITY. ALSO DO NOT REMOVE MPS PRV UNIT UNTIL AFTER NEW ONE IS INSTALLED AS THIS IS USED FOR THE TEMPORARY BOILERS.
 3. RE: ARCHITECTURAL DRAWINGS FOR FLOOR, WALL AND ROOF PATCHING REQUIREMENTS.
 4. SEE DESCRIPTION ON MH102 OF TEMPORARY SERVICES DURING CONSTRUCTION FOR PHASING OF STEAM SYSTEM DEMOLITION.

- FLAG NOTES:**
1. EXISTING FAN, SILENCER, DUCTWORK AND ALL ASSOCIATED CONTROLS TO BE REMOVED.
 2. EXISTING BOILER, FAN AND ALL ASSOCIATED EQUIPMENT, PIPING AND CONTROLS TO BE REMOVED.
 3. EXISTING PUMPS TO BE REMOVED.
 4. MOP SINK, EYE WASH AND WATER COOLER TO REMAIN.
 5. REMOVE EXISTING WATER SOFTENING SYSTEM.
 6. REMOVE HOT WELL CONDENSATE PUMP SYSTEM. SEE DRAWING MH104 FOR USE OF THIS PUMP DURING CONSTRUCTION.
 7. REMOVE VACUUM CONDENSATE PUMP UNIT.
 8. COAL SILO AND COAL CHUTE TO BOILER ROOM TO REMAIN. SEE DRAWING MD104 FOR MODIFICATIONS TO COAL CHUTE.
 9. UNIT HEATER TO BE REMOVED.
 10. CHEMICAL MIXING TANKS TO BE REMOVED.
 11. BOILER CONTROL PANEL TO BE REMOVED.
 12. EXISTING AIR DRYER, COMPRESSORS AND RECEIVERS TO REMAIN DURING CONSTRUCTION PERIOD FOR FUEL OIL ATOMIZATION FOR TEMPORARY BOILERS. REMOVE ALL EXISTING COMPRESSED AIR PIPING BACK TO THE HEADER. NEW COMPRESSED AIR LINE SHALL BE ROUTED OUT THE BUILDING TO THE TEMPORARY BOILERS. RE: SHEET MH102 FOR PIPING ROUTING. COMPRESSED AIR PIPING AND ASSOCIATED EQUIPMENT TO BE REMOVED ONCE TEMPORARY BOILERS ARE BROUGHT OFFLINE.
 13. SEE DRAWING MD103 FOR LOUVER DEMOLITION INFORMATION.
 14. EXISTING VEEDER ROOT INVENTORY PANEL TO REMAIN AND BE REUSED.
 15. REMOVE EXISTING 1000 GAL. DFO UST AND ALL ASSOCIATED PIPING AS PER DEQ CRITERIA.
 16. REMOVE THE EXISTING EMERGENCY GENERATOR, ATS, DAYTANK AND ALL ASSOCIATED PIPING AND WIRING.

THESE DRAWINGS ARE AS-BUILT DRAWINGS AND ARE PROVIDED TO INDICATE THE EXTENT OF DEMOLITION AND FOR REFERENCE ONLY.

CONSTRUCTION DOCUMENTATION - BIDDING AND CONSTRUCTION

CONSULTANTS:		ARCHITECT/ENGINEERS:		Drawing Title BOILER ROOM DEMOLITION PLAN		Project Title BOILER PLANT REPLACEMENT		Project Number 666-11-101		Office of Construction and Facilities Management Department of Veterans Affairs		
MKK Consulting Engineers, Inc. 7600 East Orchard Road Suite 250S Greenwood Village, CO 80111 Phone: 303.796.6000 Fax: 303.796.6099		Calibre 9090 S Ridgeline Blvd. Suite 105 Highlands Ranch, CO 80129 Phone: 303.730.0434 Fax: 303.730.1130		Structural Consultants Inc. 3400 E Bayaud Ave # 300 Denver, CO 80209-2929 Phone: 303.399.5154 Fax: 303.333.9501		GREENFIELD ARCHITECTS 3650 S YOSEMITE ST., STE 402 DENVER, CO 80237 PHONE: 303-770-1020 FAX: 303-770-0922		Building Number 90			Drawing Number MD101	
Revisions:		Date		GA Project Number 666-10-811		Approved: Project Director JASON BROWN		Location SHERIDAN, WY				Date 12/15/2011 BIDDING & CNSTN