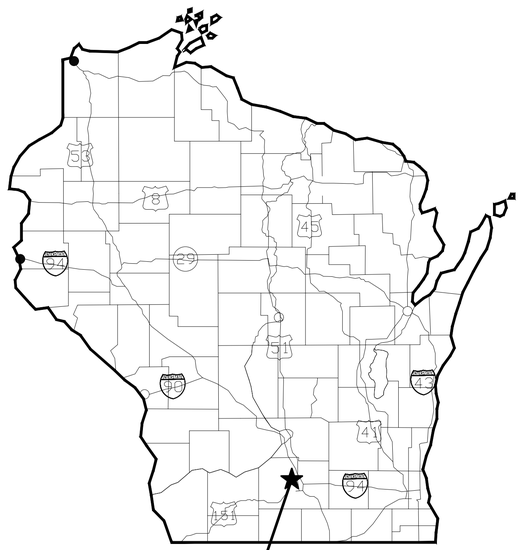
WELL NO. 6 WELL FACILITY

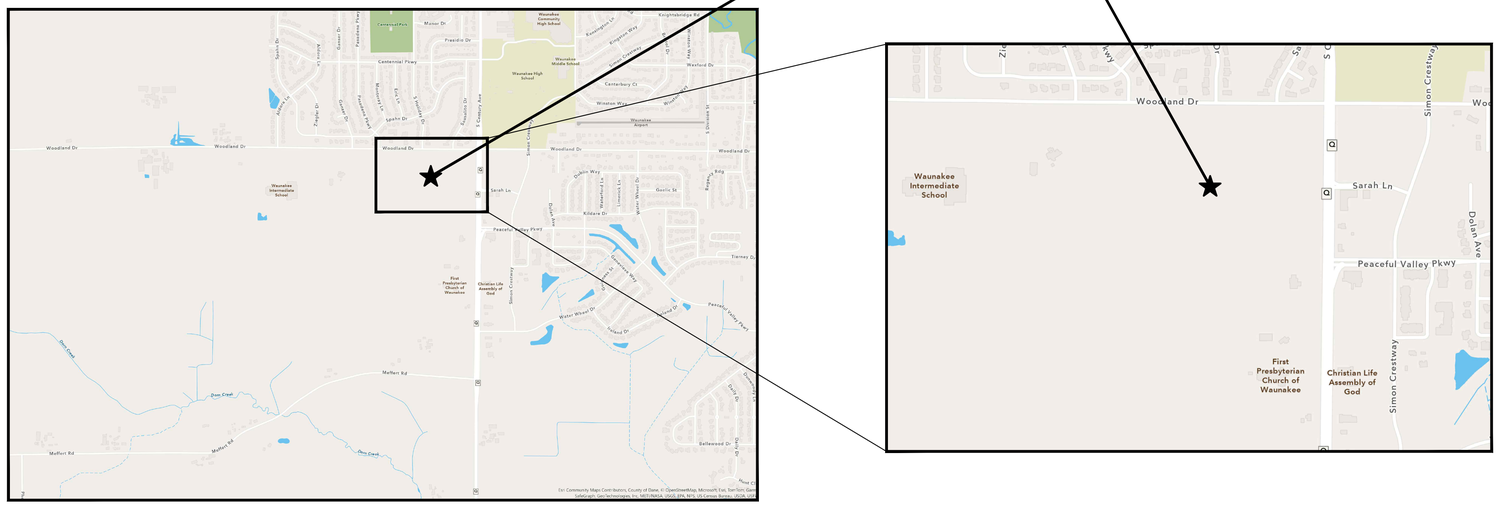
FOR THE

WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN



PROJECT LOCATION
DANE COUNTY

PROJECT LOCATION
1520 REX'S WAY
WAUNAKEE, WI 53597



PROJECT LOCATION MAP
NO SCALE

N

910 West Wingra Drive
Madison, WI 53715
608-251-4843
608-251-8655 fax
www.strand.com

WISCONSIN
MICHAEL J. FORSLUND
E-37315
MADISON
WI
PROFESSIONAL ENGINEER

10/24/2025

CONTRACT 4-2025

ISSUED FOR BID 10/24/2025

SHEET 1 G0.1

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LIST OF DRAWINGS

SHEET NO.	DRAWING NO.	DRAWING TITLE
1	G0.1	TITLE SHEET, LOCATION MAP, AND LIST OF DRAWINGS
2	G0.2	DRAWING LIST
3	G0.3	STANDARD SYMBOLS - 1
4	G0.4	STANDARD SYMBOLS - 2
5	G0.5	ACCESSIBILITY GUIDELINES
6	P0.1	PLUMBING SYMBOLS AND ABBREVIATIONS
7	FP0.1	FIRE PROTECTION SYMBOLS AND ABBREVIATIONS
8	H0.1	HVAC SYMBOLS AND ABBREVIATIONS
9	G0.9	ABBREVIATIONS
10	G1.1	LIFE SAFETY PLAN AND CODE SUMMARY
11	C1.1	SITE PLAN
12	C1.2	EROSION CONTROL PLAN
13	C1.3	LANDSCAPE PLAN
14	CE1.1	ELECTRICAL SITE PLAN
15	C5.1	SITE DETAILS
16	ASM1.1	FOUNDATION PLAN
17	ASM1.2	FLOOR PLAN
18	ASM1.3	PRECAST PLANK AND ROOF FRAMING PLAN
19	ASM1.4	ROOF PLAN
20	ASM2.1	BUILDING ELEVATIONS
21	ASM3.1	BUILDING SECTIONS
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23	ASM4.1	ENLARGED PLANS AND ELEVATIONS
24	ASM5.1	DETAILS - 1
25	ASM5.2	DETAILS - 2
26	ASM5.3	DETAILS - 3
27	ASM6.1	ARCHITECTURAL AND STRUCTURAL SCHEDULES
28	ASM6.2	ARCHITECTURAL SCHEDULES
29	P1.1	PLUMBING PLANS
30	P5.1	PLUMBING DETAILS
31	P6.1	PLUMBING SCHEDULES
32	P7.1	PLUMBING SCHEMATICS
33	FP1.1	FIRE PROTECTION FLOOR PLAN
34	H1.1	HVAC FLOOR PLAN
35	H5.1	HVAC DETAILS
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37	E1.1	ELECTRICAL POWER AND SYSTEMS PLAN
38	E1.2	ELECTRICAL LIGHTING PLAN
39	E5.1	ELECTRICAL DETAILS
40	E6.1	ONE-LINE DIAGRAM AND SCADA RISER DIAGRAM
41	E6.4	MCC-6 SCHEDULE AND ELEVATION AND VFD SCHEDULE
42	E6.5	ELECTRICAL SCHEDULES

DATE:

REVISIONS

NO.

DRAWING LIST

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

PROJECT MGR.
MIKE FORSLUND

STRAND ASSOCIATES®

SHEET
2
G0.2

DRAFTING SYMBOLS

DETAIL NOTATION
A — DETAIL LETTER
A5.1 — SHEET WHERE SHOWN

SECTION NOTATION
1 / A3.1 — SECTION NUMBER; SHEET WHERE SECTION IS SHOWN

SECTION — SCALE
1 / A1.1 — SECTION NUMBER; DRAWING THAT SECTION IS SHOWN ON

ELEVATION NOTATION
B / A1.1 — ELEVATION LETTER; SHEET WHERE SHOWN

Type / Group — EQUIPMENT IDENTIFICATION; TYPE OF EQUIPMENT; EQUIPMENT GROUP

NAME
9999 — ROOM IDENTIFICATION
101A — DOOR IDENTIFICATION
999 — WINDOW IDENTIFICATION
1 — KEY/SPECIFIC NOTE CALL-OUT
X — PARTITION TYPE REFERENCE
A — CENTER LINE OF BEAM-COLUMN FRAME SYSTEM
M11 — POINTS OF VIEW BEING CONSIDERED MATCH LINE
3 — REVISION
+EL 1000.00 — FINISH ELEVATION
EL 1000.00 — SPOT ELEVATION
EXISTING OBJECTS ARE SCREENED
EXISTING OBJECTS TO BE ABANDONED
EXISTING OBJECTS TO BE DEMOLISHED
HIDDEN OBJECT
FUTURE OBJECT
OBJECT SUPPLIED BY OWNER

ARCHITECTURAL SYMBOLS

EARTH
SAND, PLASTER, STUCCO
CONCRETE
BRICK
CONCRETE BLOCK
ACOUSTIC BLOCK
ASHLAR STONE VENEER
METAL
METAL LATH
WOOD-FINISH
WOOD-FRAMING
PLYWOOD
ACOUSTICAL TILE
GYPSUM BOARD
BATT INSULATION
RIGID INSULATION
GRATING
CHECKERED PLATE
HANDRAIL

TOPOGRAPHICAL SYMBOLS

AREA OF THE SITE
CORPORATE LIMITS
PROPERTY LINE AND/OR RIGHT OF WAY

RIGHT OF WAY MARKER
CONSTRUCTION EASEMENT ON SEWER AND WATER PLANS
PERMANENT EASEMENT ON SEWER AND WATER PLANS
SECTION LINE
CENTER LINE
4 — BENCH MARK
2 — SOIL BORING
PROPERTY STAKE
PRIVATE WELL
EXISTING UTILITY POLE
NEW UTILITY POLE
BURIED TELEPHONE CABLE PEDESTAL
SIGN
LIGHT POLE
DECIDUOUS TREE
CONIFEROUS TREE
DECIDUOUS SHRUBS
CONIFEROUS SHRUBS
INTERMITTENT STREAM
STREAM OR RIVER
WETLAND AREA
RAILROAD - LARGE SCALE
BRIDGE
EXISTING CULVERT
SILT FENCE
FENCE
GUARD RAIL
CURB, GUTTER AND INLET
REJECT CURB
960 — CONTOUR LINES
EXISTING DEPRESSION
TOP OF CUT OR BERM

UNDERGROUND UTILITY SYMBOLS

6" W — NEW WATER MAIN AND VALVE MANHOLE
6" W — WATER MAIN AND VALVE IN ROAD BOX
6" W — EXISTING WATER MAIN AND FIRE HYDRANT
6" W — NEW WATER MAIN AND FIRE HYDRANT WITH AUXILIARY VALVE
6" S — EXISTING SANITARY SEWER AND MANHOLE
6" S — NEW SANITARY SEWER AND MANHOLE
6" ST — EXISTING STORM SEWER AND MANHOLE (I-INLET)
6" ST — NEW STORM SEWER AND MANHOLE (I-INLET)
6" F — FORCE MAIN
F — VALVE MANHOLE ON FORCE MAIN
S — WYE BRANCH
S / R — RISER
S / MR — MODIFIED RISER
T — TELEPHONE OR TV CABLE AND MANHOLE
2" G — GAS MAIN
E — UNDERGROUND ELECTRIC CABLE

EXISTING WATER MAIN, SEWER MANHOLE, AND FORCE MAIN IN PROFILE
NEW WATER MAIN, SEWER, MANHOLE AND FORCE MAIN IN PROFILE
CULVERT IN PROFILE
NEW GRADE LINE
SLOPE INTERCEPT
ORIGINAL GROUND IN PROFILE
ROCK IN PROFILE
SURVEY OR REFERENCE LINE
165° — POINT OF INTERSECTION
POINT ON REFERENCE LINE
N / S — BUILDING IN PROFILE
DIRECTION OF TRAFFIC
CAUTION — NOTATION FOR COMBUSTIBLE FLUIDS

PIPING SYMBOLS

FLANGE JOINT
GROOVED JOINT
MECHANICAL JOINT
PUSH - ON JOINT
RUBBER EXPANSION JOINT
SOLVENT WELD OR THREADED JOINT
PIPE COUPLING WITH TENSION TIES
SMALL DIAMETER PIPE
WALL PIPE
WALL SLEEVE
FABRICATED WALL SLEEVE
SHUT OFF VALVE
FLOOR STAND IN PLAN
STOP PLATE - EMBEDDED
SLIDE GATE - EMBEDDED
SLIDE GATE - SURFACE MOUNTED
SLUICE GATE
P/VR — PRESSURE/VACUUM RELIEF
LIQUID RING COMPRESSOR
OP — ORIFICE PLATE
M — MANOMETER
FD — FLOOR DRAIN
RD — ROOF DRAIN
HD — HUB DRAIN
HOSE BIBB
WATER HAMMER ARRESTER
8 — WATER SUPPLY/DRAINAGE FIXTURE UNITS
THERMOMETER
TRAP PRIMER
YARD HYDRANT

PIPING DESIGNATIONS

A — AIR
CA — COMPRESSED AIR
CW — COLD WATER
CWR — COLD WATER RETURN
CWS — COLD WATER SUPPLY
DEW — DISINFECTED EFFLUENT WATER
G — NATURAL GAS PIPING
HW — HOT WATER
HHWR — HEATING HOT WATER RETURN
HHWS — HEATING HOT WATER SUPPLY
LPC — LOW PRESSURE CONDENSATE
LPS — LOW PRESSURE STEAM
NPW — NONPOTABLE WATER
RL — REFRIGERANT LIQUID
RS — REFRIGERANT SUCTION
SPD — SUMP PUMP DISCHARGE
SW — SOFT WATER
VENT PIPE
WASTE BELOW GRADE
WASTE ABOVE GRADE
STORM BELOW GRADE
STORM ABOVE GRADE

VALVE SYMBOLS

AIR PRESSURE RELIEF VALVE
BALANCING VALVE
BALL VALVE
BALL CHECK VALVE
BUTTERFLY VALVE
CHECK VALVE
GAS SHUTOFF PLUG VALVE
GATE VALVE
GLOBE VALVE
LP — LOW PRESSURE CHECK VALVE
PRESSURE REDUCING VALVE
PVR — PRESSURE RELIEF VALVE
TELESCOPIC VALVE
3-WAY VALVE
TRIPLE DUTY VALVE

PIPING SYMBOLS

ELBOW DOWN
ELBOW UP
M — METER
STRAINER
TEE DOWN
TEE UP
UNION
GAS PRESSURE REGULATOR
PI — PRESSURE INDICATOR
PT — PRESSURE TRANSMITTER
TE — TEMPERATURE ELEMENT
TI — TEMPERATURE INDICATOR
TT — TEMPERATURE TRANSMITTER
MANUAL AIR VENT
CONCENTRIC REDUCER
ECCENTRIC REDUCER
FLEXIBLE CONNECTOR

NO.	REVISIONS	DATE:

STANDARD SYMBOLS - 1

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO. 1602.175
PROJECT MGR. MIKE FORSLUND

STRAND ASSOCIATES®

SHEET 3
G0.3

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ELECTRICAL SYMBOLS

LIGHTING

- FIXTURE SYMBOL (TYPICAL) A–INDICATES FIXTURE TYPE 2–INDICATES CIRCUIT NUMBER b–INDICATES SWITCHING SOLID CIRCLE INDICATES ALWAYS ON
- SURFACE OR PENDANT MOUNTED
- WALL MOUNTED
- 1X4 SURFACE OR PENDANT MOUNTED LINEAR
- 1X8 SURFACE OR PENDANT MOUNTED LINEAR
- WALL MOUNTED LINEAR
- 1X4 RECESSED LINEAR
- 2X2 RECESSED LINEAR
- 2X4 RECESSED LINEAR
- RECESSED CAN
- EXIT, SURFACE, PENDANT OR RECESSED
- EXIT, WALL
- EMERGENCY LIGHTING

SWITCHES

- SINGLE POLE
  #: (BLANK) = SINGLE POLE
  2 = TWO–WAY
  3 = THREE–WAY
  4 = FOUR–WAY
  K = KEYED
  D = DIMMER
  M = MANUAL MOTOR SWITCH (3 PHASE)
  P = SWITCH WITH PILOT LIGHT
  WP = WEATHERPROOF
- LC — LIGHTING CONTROL STATION
- PC — PHOTOCELL

EQUIPMENT AND WIRING

- DISCONNECT, F=FUSED, B=CIRCUIT BREAKER, BLANK=NON–FUSED
- CIRCUIT BREAKER COMBINATION STARTER
- JUNCTION BOX
- T — LINE VOLTAGE THERMOSTAT
- P–01–01 — 480V LOAD, REFER TO MCC/PANEL SCHEDULE FOR EQUIPMENT NUMBER
- SOLENOID VALVE

POWER AND ONE–LINE DIAGRAM SYMBOLS

- CIRCUIT NUMBER (TYPICAL); OTHERWISE SHOWN PANEL DESIGNATION (TYP.)
- 2(X) — DUPLEX, 120 VOLT, 15" AFF WP INDICATES WEATHERPROOF
- DUPLEX, 120 VOLT, 3'–6" AFF
- DOUBLE DUPLEX, 120 VOLT, 3'–6" AFF
- DOUBLE DUPLEX, 120 VOLT, 15" AFF
- EWC — SINGLE CONVENIENCE, 120 VOLT FOR ELECTRIC WATER COOLER
- EXPLOSION–PROOF, 3'–6" AFF
- EXPLOSION–PROOF, 15" AFF
- FIXED EQUIPMENT CONNECTION
- POWER OUTLET, VOLTAGE & AMPERAGE AS INDICATED
- AUTOMATIC TRANSFER SWITCH
- CIRCUIT BREAKER
- PANELBOARD
- FUSE
- M — METER
- DRAW–OUT TYPE CIRCUIT BREAKER
- X:YA — CURRENT TRANSFORMER, X:YA INDICATES RATIO
- PROTECTIVE RELAY *: SEE LEGEND
- TRANSFORMER
- DISCONNECT SWITCH
- CIRCUIT BREAKER INTERLOCK *: K = KIRK KEY, E = ELECTRONIC

FIRE ALARM AND DETECTION SYMBOLS

- FACP — FIRE ALARM CONTROL PANEL
- FAAP — FIRE ALARM ANNUNCIATOR PANEL
- FA ##: STROBE; WALL MOUNT — STROBE CANDELA RATING 80" AFF
- FA H: HORN STROBE; WALL MOUNT — STROBE CANDELA RATING 80" AFF
- FA S: SPEAKER STROBE; WALL MOUNT — STROBE CANDELA RATING 80" AFF
- FA H: HORN; WALL MOUNT
- FA S: SPEAKER; WALL MOUNT
- ## (X): STROBE; CEILING MOUNT — STROBE CANDELA RATING
- ## (H): HORN STROBE; CEILING MOUNT — STROBE CANDELA RATING
- ## (S): SPEAKER STROBE; CEILING MOUNT — STROBE CANDELA RATING
- ARA — AREA OF RESCUE ASSISTANCE
- EMERGENCY TELEPHONE SYSTEM
- H — HEAT DETECTOR; CEILING MOUNT
- Z — SMOKE DETECTOR; CEILING MOUNT
- ZR — ELEVATOR RECALL SMOKE DETECTOR
- NOX — NITROUS OXIDE SENSOR
- CO — CARBON MONOXIDE SENSOR
- DSD ##: SWITCH INDICATION — DUCT SMOKE DETECTOR — DUCT SIZE
- RTS: REMOTE TEST SWITCH — SWITCH INDICATION
- FIRE ALARM PULL STATION
- SFS — SPRINKLER FLOW SWITCH
- TM — SPRINKLER VALVE TAMPER SWITCH
- B — FIRE ALARM BELL

TECHNOLOGY SYMBOLS

- (*) — DATA JACK; * = # OF JACKS
- (*) — POTS ANALOG PHONE JACK; * = # OF JACKS
- (*P *D) — POTS ANALOG PHONE AND DATA JACKS; * = # OF JACKS
- VOIP — WALL MOUNT VOIP PHONE JACK ABOVE FURNITURE
- WALL MOUNT POTS ANALOG PHONE JACK ABOVE FURNITURE
- SCADA NETWORK JACK
- 2–POST DATA RACK
- COAX CABLE JACK
- POWER POLE
- PA H — PA SYSTEM HORN; 10'–0" AFF
- PA S — PA SYSTEM SPEAKER
- A — CEILING MOUNT SPEAKER A=SPEAKER TYPE
- K — KEY PAD
- GBD — GLASS BREAK DETECTOR
- MS — MOTION SENSOR
- P — PUSH BUTTON
- ES — ELECTRIC STRIKE
- ML — MAGNETIC LOCK
- I — INTERCOM STATION
- OS ##: OCCUPANCY SENSOR, CEILING, OR WALL — SEE SPECIFICATION FOR SENSOR TYPE
- YE — CARD READER
- RVC — REMOTE VOLUME CONTROL
- FIX — FIXED SECURITY CAMERA
- PTZ — PAN, TILT, ZOOM SECURITY CAMERA
- PAN — PANORAMIC SECURITY CAMERA
- H — ALARM HORN; WALL MOUNT
- WARNING LIGHT; WALL MOUNT
- OMNI–DIRECTIONAL ANTENNA
- DIRECTIONAL (YAGI) ANTENNA

SITE SYMBOLS

- E — UNDERGROUND ELECTRIC
- OH — OVERHEAD ELECTRIC
- C — CABLE TELEVISION SERVICE
- T — TELEPHONE SERVICE
- FO — FIBER OPTIC CABLE
- UTILITY POLE

EQUIPMENT SYMBOLS

- ACU — ACCUMULATOR
- AIR FLOW DIRECTION
- BASE MOUNTED PUMP
- BLOWER
- CEILING DIFFUSER WITH FLEXIBLE DUCT
- CENTRIFUGAL PUMP
- CONNECT TO EXISTING
- DT — DRIP TRAP
- DUCT BOOST COIL
- Type / Group — EQUIPMENT TAG
- FA — FLAME ARRESTER
- FC — FLAME CELL
- FT — FLAME TRAP ASSEMBLY
- G — GRINDER
- INLINE PUMP
- POSITIVE DISPLACEMENT PUMP
- ROOF EXHAUST FAN
- UNIT HEATER
- VARIABLE AIR VOLUME (VAV) BOX WITH ELECTRIC REHEAT COIL
- VARIABLE AIR VOLUME (VAV) BOX WITH HEATING HOT WATER REHEAT COIL
- FLOATING MIXER
- SCREW CONVEYOR

DUCTWORK SYMBOLS

- SUPPLY DUCT (UP OR SECTION)
- SUPPLY OR OUTSIDE AIR DUCT (DOWN/OR AWAY)
- EXHAUST DUCT (UP OR SECTION)
- EXHAUST OR RETURN DUCT (DOWN/OR AWAY)
- ROUND DUCTWORK UP
- ROUND DUCTWORK DOWN
- FLEXIBLE CANVAS CONNECTION
- TURNING VANES

FIELD MOUNTED HVAC CONTROLS

- T — THERMOSTAT
- H — ROOM HUMIDISTAT
- P — PRESSURE SENSOR
- S — ROOM SENSOR
- S — DUCT SMOKE DETECTOR
- PRESSURE GAUGE

INSTRUMENTATION SYMBOLS

INTERNATIONAL SOCIETY OF AUTOMATION (ISA) DEFINITION TABLE

LETTER	FIRST LETTERS: PROCESS OR INITIATING VARIABLE	FIRST LETTERS: MODIFIER	SUCCEEDING LETTERS: READOUT OR PASSIVE FUNCTION	SUCCEEDING LETTERS: OUTPUT FUNCTION	SUCCEEDING LETTERS: MODIFIER
A	ANALYSIS (+)		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE (+)	USER'S CHOICE (+)	USER'S CHOICE (+)
C	USER'S CHOICE (+)			CONTROL	CLOSE
D	USER'S CHOICE (+)	DIFFERENTIAL			DEVIATION
E	VOLTAGE		PRIMARY ELEMENT (SENSOR)		
F	FLOW, FLOW RATE	RATIO			
G	USER'S CHOICE (+)		GLASS, GAUGE	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME, SCHEDULE	TIME RATE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	USER'S CHOICE (+)	MOMENTARY			MIDDLE
N	USER'S CHOICE (+)		USER'S CHOICE (+)	USER'S CHOICE (+)	USER'S CHOICE (+)
O	USER'S CHOICE (+)		ORIFICE, RESTRICTION		OPEN
P	PRESSURE, VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY (+)	INTEGRATE	INTEGRATE		
R	RADIATION		RECORD		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE (+)		MULTIFUNCTION (+)	MULTIFUNCTION (+)	MULTIFUNCTION (+)
V	VISCOSITY, VIBRATION			VALVE, DAMPER	
W	WEIGHT, FORCE		WELL, PROBE		
X	UNCLASSIFIED (+)	X–AXIS	UNCLASSIFIED (+)	UNCLASSIFIED (+)	UNCLASSIFIED (+)
Y	EVENT,STATE, PRESENCE (+)	Y–AXIS		RELAY, COMPUTE (+)	
Z	POSITION, DIMENSION	Z–AXIS		DRIVE, ACTUATOR OR UNCLASSIFIED FINAL CONTROL ELEMENT	

(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS.

DEVICE TAG NAMING & DESCRIPTORS

EQUIPMENT

TAG NAMING: W–XY–Z
- W = TYPE OF EQUIPMENT
- XY = LOOP/STRUCTURE NUMBER
- Z = UNIT NUMBER

CONTROL & INSTRUMENTATION

TAG NAMING: TRC–XY–Z
- T = FIRST LETTER FROM ISA DEFINITION TABLE
- RC = SUCCEEDING LETTERS FROM ISA DEFINITION TABLE
- XY = LOOP/STRUCTURE NUMBER
- Z = UNIT NUMBER

ADDITIONAL DESCRIPTORS:
- A = NUMBER OF UNITS DEPICTED (BLANK IF ONE)
- B = NUMBER OF SETS DEPICTED (BLANK IF ONE)
- D = SUPPLEMENTAL DESCRIPTION (REFER TO INSTRUMENT–SPECIFIC ELECTRICAL ABBREVIATIONS)

INSTRUMENTS

- TRC XY–Z: D; (A)(B) — GENERAL INSTRUMENT (SEE DEVICE TAG NAMING & DESCRIPTORS ABOVE AND ABBREVIATIONS SHEET)

MECHANICAL/HVAC SYMBOLS

DAMPER AND ACTUATOR SYMBOLS

- M — AUTOMATIC DAMPER
- BDD — BACKDRAFT DAMPER
- MANUAL VOLUME DAMPER
- FD — 1–1/2 HR. FIRE DAMPER
- M — MOTOR (ELECTRIC)
- P — PNEUMATIC
- S — SOLENOID

DATE: / REVISIONS / NO.

STANDARD SYMBOLS - 2

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO. 1602.175

PROJECT MGR. MIKE FORSLUND

STRAND ASSOCIATES®

SHEET 4
G0.4

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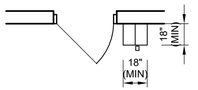


NOTE: WHERE PERMANENT IDENTIFICATION IS PROVIDED FOR ROOMS AND SPACES, SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR WHERE THERE IS NO WALL SPACE TO THE LATCH SIDE OF THE DOOR, INCLUDING DOUBLE LEAF DOORS. SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL. PICTOGRAMS ARE REQUIRED AT ALL RESTROOMS.

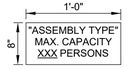
UNISEX RESTROOM W/ACCESSIBLE FIXTURES

MENS RESTROOM W/ACCESSIBLE FIXTURES

WOMENS RESTROOM W/ACCESSIBLE FIXTURES

1. SIGNAGE TO BE MOLDED PLASTIC FRAMES WITH SEMI-PERMANENT SIGNAGE.
2. TEXT TO BE:
   - 1 1/2" LETTERS
   - RAISED 1/32"
   - CENTERED IN PANEL
   - ACCOMPANIED BY GRADE 2 BRAILLE
   - ALL COLORS TO BE MATTE FINISH
3. NOT ALL SIGNS ARE USED, SEE PLANS FOR ALL APPLICABLE SIGNS.

TYPICAL PROJECT SIGNAGE



"ASSEMBLY TYPE" INDICATES TYPE OF ASSEMBLY

XXX INDICATES CALCULATED LOAD IN ROOM OR SPACE

1. COORDINATE INSTALLATION LOCATION WITH ARCHITECT AND BUILDING OFFICIAL
2. TEXT TO BE:
   - 3/8" HELVETICA LETTERS
   - CENTERED IN PANEL
3. COLORS TO BE:
   - BACKGROUND - WHITE
   - LETTERS - BLACK
   - ALL COLORS TO BE MATTE FINISH

PER IBC 1004.3: POSTING OF OCCUPANT LOAD
EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD OF THE ROOM OR THE SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE ROOM OR SPACE. POSTED SIGN SHALL BE OF AN APPROVED LEGIBLE PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER.

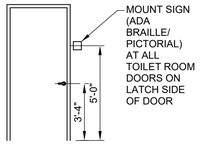
GENERAL NOTES

1. THIS DRAWING IS INTENDED TO BE USED AS A GUIDE FOR CONSTRUCTABILITY PURPOSES ONLY. REFER TO ICC/ANSI A117.1-2009.
2. THESE DRAWINGS AND DETAILS IDENTIFY SOME BUT NOT ALL OF THE REQUIREMENTS OF THE ADAAG. EACH DETAIL MAY BE USED FOR THE GENERAL LAYOUT OF THE STRUCTURAL AND ARCHITECTURAL ENTITIES OF THE DESIGN BUT THE ACTUAL ARCHITECTURAL DIMENSIONS, LAYOUT, MECHANICAL AND ACCESSORIES LAYOUT IN THIS SET OF DOCUMENTS TAKES PRECEDENCE.

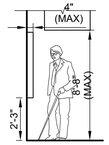
STANDARD MOUNTING HEIGHT NOTES

1. ALL SIGNAGE SHALL MEET THE REQUIREMENTS OF ADA AND ANSI A117.1 SECTION 703.
2. ADA TOILET ROOM SIGNAGE SHALL BE MOUNTED WHERE INDICATED. WHERE THERE IS NO WALL SPACE ADJACENT TO LATCH SIDE OF DOOR, SIGN SHALL BE MOUNTED ON NEAREST ADJACENT WALL.
3. MOUNTING LOCATION FOR SIGNAGE SHALL BE SO THAT A PERSON MAY APPROACH WITHIN 3" OF SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING OF THE DOOR.
4. STANDARD MOUNTING HEIGHTS APPLY TO DRAWINGS UNLESS INDICATED OTHERWISE.
5. GRAB BARS SHALL BE INSTALLED PLUMB OR LEVEL.
6. ALL DIMENSIONS SHOWN HERE ARE TYPICAL UNLESS NOTED OTHERWISE.
7. ALL FIXTURES AND ACCESSORIES AT ACCESSIBLE ROOMS ARE TO MEET THE MOST CURRENT ACCESSIBLE CODE REQUIREMENTS.
8. SEE ELECTRICAL AND PLUMBING DRAWINGS FOR FURTHER MOUNTING HEIGHT INFORMATION
9. SEE ENLARGED TOILET ROOM PLANS FOR A.D.A. ACCESSIBLE TOILET FIXTURES CLEAR SPACE REQUIREMENTS.

SEE 703/603.3/308 & 309

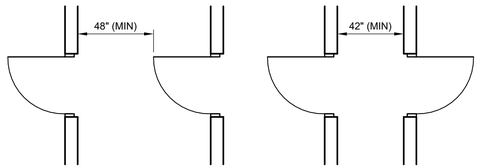


ADA TOILET ROOM SIGNAGE



PROTRUSION LIMITS

ACCESSORY MOUNTING HEIGHT FOR HC



TWO HINGED DOORS IN SERIES
FIRE EXTINGUISHER CABINET, FULLY RECESSED

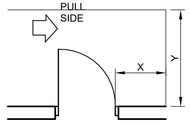


FIGURE 404.2.3.1(C&D)
NOTE X=36" MINIMUM IF Y=60",
X=42" MINIMUM IF Y=54"

HINGE SIDE APPROACHES

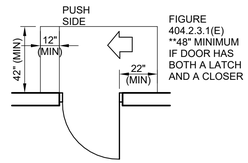
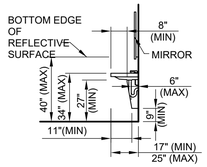
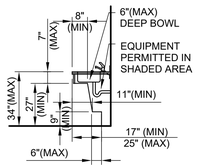


FIGURE 404.2.3.1(E)
**48" MINIMUM IF DOOR HAS BOTH A LATCH AND A CLOSER





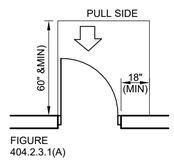


FIGURE 404.2.3.1(A)

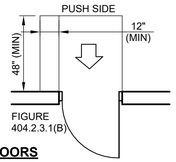


FIGURE 404.2.3.1(B)

MANEUVERING CLEARANCES AT DOORS

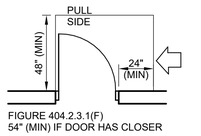


FIGURE 404.2.3.1(F)
54" (MIN) IF DOOR HAS CLOSER

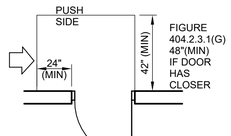
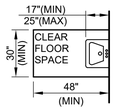


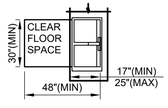
FIGURE 404.2.3.1(G)
48"(MIN) IF DOOR HAS CLOSER

LATCH SIDE APPROACHES



NOTE: HOT WATER AND DRAIN PIPES UNDER LAV/SINK SHALL BE INSULATED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAV/SINK.

LAVS. & SINKS
SEE SECTION 606



PARALLEL APPROACH PERMITTED TO SINKS IN A SPACE WHERE A COOK TOP IS LOCATED AND WET BARS. ALL OTHERS MUST PROVIDE FORWARD APPROACH

KNEE & TOE CLEAR
FIGURE 306.2 & 306.3

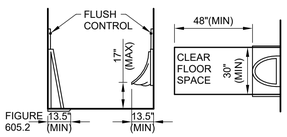
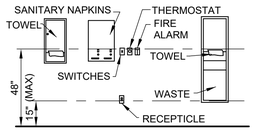


FIGURE 605.2

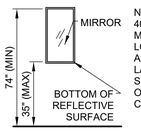
URINALS
SEE SECTION 605



REACH RANGE AND OPERABLE PARTS
SEE SECTIONS 308 & 309

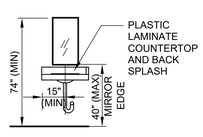
NOTE:
THE HIGHEST PART OF CONTROLS, DISPENSERS, RECEPTACLES AND OTHER OPERABLE EQUIPMENT SHALL BE PLACED IN THIS REACH ZONE.

NOTE:
46"(MAX) IF THERE IS AN OBSTRUCTION

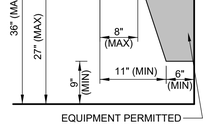


NOTE:
40" (MAX) FOR MIRRORS LOCATED ABOVE LAV., SINKS, OR COUNTERS

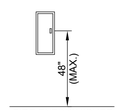
MIRRORS



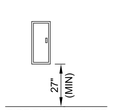
ADA COUNTERTOP DROP-IN SINK



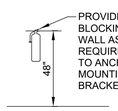
EQUIPMENT PERMITTED IN SHADED AREA



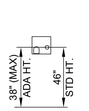
FIRE EXTINGUISHER



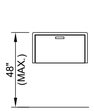
FIRE EXTINGUISHER



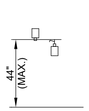
FIRE EXTINGUISHER



HAND DRYER

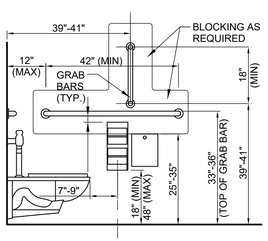


BABY CHANGING STATION

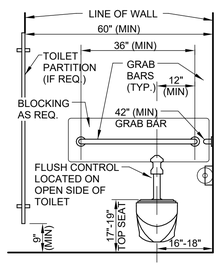


SOAP DISPENSER

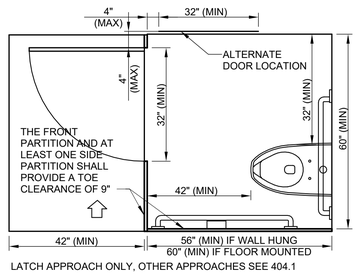
TYP. TOILET ROOM A.D.A. ACCESSORY ELEVATIONS



SEE SECTION 604.5.1

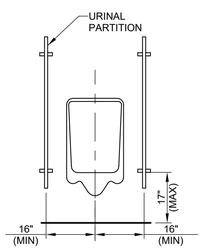


SEE SECTION 604.5.2



LATCH APPROACH ONLY, OTHER APPROACHES SEE 404.1

SEE SECTION 604.9



A.D.A. WATER CLOSETS AND TOILET COMPARTMENTS

SEE SECTION 602

DRINKING FOUNTAIN

REVISIONS

NO.	DATE:

ACCESSIBILITY GUIDELINES

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
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TAGS

(1) KEY/SPECIFIC NOTE CALL-OUT

<1> REVISION NUMBER CALL-OUT

6 WATER SUPPLY/DRAINAGE FIXTURE UNITS

PLUMBING SYSMBOLS

FD	FLOOR DRAIN
RD	ROOF DRAIN
HD	HUB DRAIN
FCO	FLOOR CLEANOUT
CB	CATCH BASIN
	CHECK VALVE
	HOSE BIBB
	THERMOMETER

GENERAL NOTES:

(APPLICABLE TO ALL PLUMBING DRAWINGS):

1. COORDINATE WITH OTHER TRADES TO ELIMINATE ANY CONFLICTS BETWEEN PIPING, DUCTWORK, ELECTRICAL WORK, ETC.
2. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPES SIZES NOT SHOWN ON FLOOR PLANS, REFER TO DETAILS, ISOMETRICS AND SCHEDULES.
3. PIPE ROUTING IS SHOWN IN APPROXIMATE LOCATIONS.
4. PLUMBING CONTRACTOR SHALL COORDINATE WITH MECHANICAL, ELECTRICAL, AND GENERAL CONTRACTORS FOR VERTICAL CHASE AND WALL REQUIREMENTS.
5. VERIFY PLUMBING EQUIPMENT CONNECTION REQUIREMENTS.
6. PLUMBING CONTRACTOR SHALL PROVIDE ACCESSIBILITY TO ALL VALVES AND CONTROL DEVICES. FURNISH ACCESS PANELS WHERE SHOWN OR REQUIRED FOR ACCESS TO ALL CONCEALED VALVES OR OTHER EQUIPMENT FURNISHED UNDER THIS CONTRACT WHERE NO OTHER MEANS IS PROVIDED.
7. PLUMBING CONTRACTOR TO SEE ARCHITECTURAL PLANS FOR CHANGES IN CEILING HEIGHTS.
8. DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK, AND IS PARTIALLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.
9. CONTRACTOR SHALL PROVIDE EQUIPMENT AND INSTALLATION TO MEET APPLICABLE CODE REQUIREMENTS IN CONJUNCTION WITH THESE DRAWING DOCUMENTS AND ASSOCIATED SPECIFICATIONS.
10. PROVIDE A MINIMUM OF 1" CLEAR BETWEEN PIPING AND WALL TO ALLOW FOR CLEANING.
11. SEE SCHEDULES FOR FIXTURE INFORMATION.
12. SEE SCHEMATICS FOR PIPING DRAIN FIXTURE UNITS.
13. EQUIPMENT SHOWN DASHED IN BACKGROUNDS IS FUTURE EQUIPMENT WHICH WILL NOT BE INSTALLED AS PART OF THIS PROJECT.
14. PROVIDE ISOLATION VALVES AT ALL BRANCH TAKEOFFS FROM MAIN PIPING.
15. UNLESS OTHERWISE INDICATED, SLOPE ALL DRAIN, WASTE, AND VENT PIPING AS FOLLOWS:
    3" AND SMALLER: MINIMUM 1/4" PER FOOT.
    LARGER THAN 3": MINIMUM 1/8" PER FOOT.
16. VENT PIPING IN FINISHED AREAS SHOULD BE CONCEALED AND NOT EXPOSED.

PLUMBING ABBREVIATIONS

BF	BLIND FLANGE
CB	CATCH BASIN
CA	COMPRESSED AIR
CD	CONDENSATE DRAIN
CL	CENTERLINE
CI	CAST IRON
CKV	CHECK VALVE
CO	CLEAN OUT
COND	CONDENSATE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CS	CIRCUIT SETTER
CW	COLD WATER PIPE
D	DRAIN
DCBP	DOUBLE CHECK BACKFLOW PREVENTER
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DI	DUCTILE IRON
DS	DOWN SPOUT
EEWS	EMERGENCY EYEWASH AND SHOWER
EW	EYEWASH
EWC	ELECTRIC WATER COOLER
EQC	EQUIPMENT CONNECTION
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
GD	GARBAGE DISPOSAL
HB	HOSE BIBB
HD	HUB DRAIN
HDPE	HIGH DENSITY POLYETHYLENE
HR	HOSE REEL
HWL	HIGH WATER LEVEL
HW	HOT WATER PIPE
HWR	HOT WATER RETURN
IE	INVERT ELEVATION
IWP	INDIRECT WASTE PIPE
LV	LAVATORY
LT	LAUNDRY TRAY
MSB	MOP SERVICE BASIN
MH	MANHOLE
P	PUMP
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PVC	POLYVINYL CHLORIDE
QC	QUICK CONNECT
RD	ROOF DRAIN
ROC	RO CONCENTRATE
RZBP	REDUCED ZONE BACKFLOW PREVENTER
SD	SHOWER DRAIN
SE	SEWAGE EJECTOR
SH	SHOWER
SK	SINK
SP	SUMP PUMP
SSK	SERVICE SINK
SS	STAINLESS STEEL
SV	SOLENOID VALVE
TD	TRENCH DRAIN
TMV	TEMPERED MIXING VALVE
TOP	TOP OF PIPE
UR	URINAL
V	VENT
VB	VACUUM BREAKER
VCP	VITRIFIED CLAY PIPE
VTR	VENT THRU ROOF
W	WASTE PIPE
WCO	WALL CLEANOUT
WC	WATER CLOSET
WD	WASH DOWN STATION
WH	WATER HEATER
WS	WATER SOFTENER
WSFU	WATER SUPPLY FIXTURE UNIT

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PLUMBING SYMBOLS AND ABBREVIATIONS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

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FIRE PROTECTION SYMBOLS

- UPRIGHT SPRINKLER
- PENDANT SPRINKLER
- SPRINKLER, WITH GUARD
- SIDEWALL SPRINKLER
- OUTSIDE SPRINKLER
- FULLY SPRINKLERED SPACE, ZONE (AS / xx)
- PARTIALLY SPRINKLERED SPACE, ZONE (AS / xx)
- NONSPRINKLERED SPACE (NS)
- CONCEALED SPRINKLER
- DRY SPRINKLER
- DOOR HOLDER
- FIRE-FIGHTING EQUIPMENT (xx)
- AGENT STORAGE CONTAINER, TYPE (xx)
- UNDERGROUND VALVE, NRS
- PRESSURE GAUGE
- FIRE EXTINGUISHER (FE)
- FIRE HYDRANT, PUBLIC (FH)
- FIRE HYDRANT, PRIVATE (FH)
- DOUBLE CHECK BACKFLOW PREVENTER (DCBP)
- REDUCED PRESSURE BACKFLOW PREVENTER (RPZ)
- POST INDICATOR VALVE - PIV
- OS&Y VALVE - OSY
- DRY PIPE VALVE
- CHECK VALVE
- BUTTERFLY VALVE
- BALL VALVE
- ANGLE VALVE (ANGLE HOSE VALVE)
- MANUAL RELEASE STATION, AGENT TYPE (xx)
- ABORT SWITCH (xx)
- WATER ALARM BELL
- FIRE DEPARTMENT CONNECTION
- EQUIPMENT TAG (Type / Group)
- DRAIN PIPE (D)
- WATERMAIN, PUBLIC (W)
- WATERMAIN, PRIVATE (WP)
- FIRE SPRINKLER PIPING (F/SP)
- DRAIN PIPE (D)
- WATERMAIN, PUBLIC (W)
- WATERMAIN, PRIVATE (WP)
- FIRE SPRINKLER PIPING (F)
- DRY SPRINKLER PIPING (DP)
- TEE DOWN
- TEE UP
- ELBOW DOWN
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- BRANCH DOWN
- PRESSURE SWITCH (PS)
- FLOW SWITCH (FS)
- VALVE WITH TAMPER SWITCH (TS)
- WALL FIRE PUMP TEST HEADER
- DISCHARGE NOZZLE, CEILING, AGENT TYPE (xx)
- DISCHARGE NOZZLE, BELOW FLOOR, AGENT TYPE (xx)
- PREDISCHARGE WARNING BELL, SYSTEM TYPE (B / xx)
- FIRE VALVE CABINET (FVC)
- FIRE DEPARTMENT VALVE (FDV)
- FIRE HYDRANT WITH AUXILIARY VALVE (FH)
- FIRE DEPARTMENT CONNECTION

FIRE PROTECTION GENERAL NOTES (APPLICABLE TO ALL PLUMBING DRAWINGS):

1. COORDINATE WITH OTHER TRADES TO ELIMINATE ANY CONFLICTS BETWEEN PIPING, DUCTWORK, ELECTRICAL WORK, ETC.
2. FIRE PROTECTION CONTRACTOR SHALL PROVIDE AN AUTOMATIC SPRINKLER SYSTEM TO PROTECT ALL AREAS OUTLINED ON THE DRAWINGS.
3. ALL WORK SHALL BE COORDINATED AMONG ALL INDIVIDUAL CONTRACTORS BEFORE ANY WORK IS PERFORMED.
4. VERIFY ALL CEILING HEIGHTS AT SITE PRIOR TO INSTALLATION.
5. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF CEILINGS AND CEILING TYPES.
6. PIPE ROUTING IS SHOWN IN APPROXIMATE LOCATIONS.
7. SPRINKLER CONTRACTOR SHALL PERFORM WATER FLOW TEST AT FIRE HYDRANT PRIOR TO FINAL SPRINKLER DESIGN.
8. FIRE PROTECTION HYDRAULIC CALCULATIONS FOR AUTOMATIC SPRINKLER SYSTEM SHALL INCORPORATE MINIMUM 10 PSI SAFETY FACTOR. SIZE PIPING IN ACCORDANCE WITH NFPA 13.
9. PRESSURE TEST OF THE AUTOMATIC SPRINKLER SYSTEM SHALL BE WITNESSED BY THE FIRE DEPARTMENT AND OWNERS INSURANCE AGENCY UNLESS SPECIFICALLY WAIVED. TWO (2) WEEKS WRITTEN ADVANCE NOTICE OF TEST SHALL BE GIVEN.
10. ALL LEAKAGE EVIDENCED BY TESTING SHALL BE REPAIRED BY TIGHTENING OR REPLACING FITTING OR EQUIPMENT ONLY.
11. ALL REPAIRS SHALL BE AT THE CONTRACTORS EXPENSE. CAULKING, WRAPPING OR OTHER MEANS OF REPAIR SHALL NOT BE PERMITTED.
12. ALL DRAIN LINES INCLUDING THE DRAIN FOR THE AUTOMATIC SPRINKLER SYSTEM INSPECTORS TEST VALVE AND THE AUTOMATIC SPRINKLER SYSTEM MAIN DRAIN SHALL BE GALVANIZED STEEL.
13. SPRINKLER COVERAGE SHALL INCLUDE AREAS BELOW ALL OBSTRUCTIONS OVER 4'-0" WIDE (I.E. DUCTWORK, STAIRS, MEZZANINES, TANKS, ETC.).
14. ALL PIPE PENETRATIONS THROUGH FLOORS OR WALL SHALL BE SLEEVED AND SEALED TO MAKE WATERTIGHT AND MAINTAIN FIRE RATING.
15. DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK, AND IS PARTIALLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.
16. ALL VALVE SUPERVISORY SWITCHES AND WATER FLOW SWITCHES SHALL BE PROVIDED AND INSTALLED BY THE FIRE PROTECTION CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR.
17. THE COMPLETE INSTALLATION AND TESTING OF THE AUTOMATIC SPRINKLER SYSTEM SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF NFPA.
18. CONTRACTOR SHALL PROVIDE ACCESSIBILITY TO ALL VALVES AND CONTROL DEVICES. FURNISH ACCESS PANELS WHERE SHOWN OR REQUIRED FOR ACCESS TO ALL CONCEALED VALVES OR OTHER EQUIPMENT FURNISHED UNDER THIS CONTRACT WHERE NO OTHER MEANS IS PROVIDED.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF ALL REQUIRED PIPING OFFSETS FOR COMPLETE SYSTEM INSTALLATION.
20. SEE SPECIFICATION SECTION 21 00 00 FOR MORE INFORMATION.

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FIRE PROTECTION SYMBOLS AND ABBREVIATIONS

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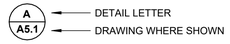
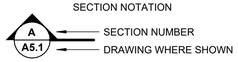
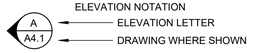
DETAIL NOTATION



SECTION NOTATION

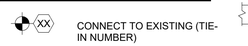


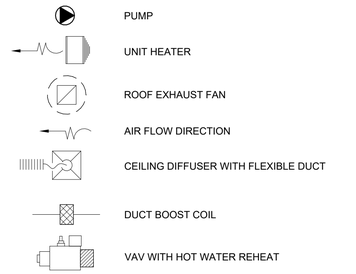
ELEVATION NOTATION



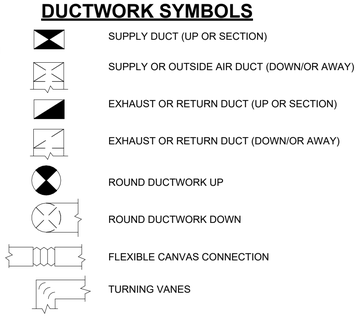
TAGS

EQUIPMENT SYMBOLS

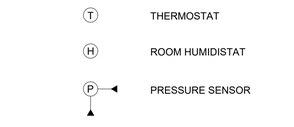




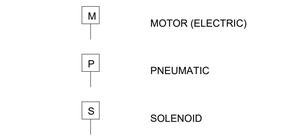
DUCTWORK SYMBOLS



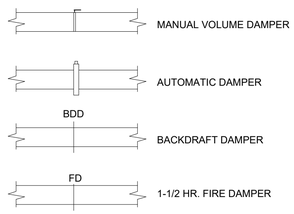
FIELD MOUNTED CONTROLS



ACTUATORS



DAMPER SYMBOLS



GENERAL NOTES

1. CONTRACT DOCUMENT DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
2. ALL WORK SHALL BE COMPATIBLE WITH BUILDING CONSTRUCTION CLASS AND OCCUPANCY.
3. COORDINATE WITH OTHER TRADES TO ELIMINATE CONFLICTS BETWEEN PIPING, DUCTWORK, ELECTRICAL WORK, ETC.
4. LOCATE ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES AND OTHER APPURTENANCES IN ACCESSIBLE LOCATIONS.
5. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR TO INSTALL COMPLETE AND OPERABLE SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED, AND AS REQUIRED BY CODE.
6. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
7. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED SHOP DRAWINGS.
8. LOCATE ALL TEMPERATURE, PRESSURE, AND FLOW MEASURING DEVICES AND OTHER INSTRUMENTS IN ACCESSIBLE LOCATIONS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
9. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF CEILINGS AND CEILING TYPES.
10. ALL PIPE LOCATIONS AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PIPE ROUTING AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.
11. CONTRACTOR SHALL COORDINATE ROOFING AND FLASHING REQUIREMENTS FOR ALL ROOF AND IMP CEILING PENETRATIONS WITH GENERAL CONTRACTOR.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DUCTWORK AND PIPING OFFSETS REQUIRED FOR COMPLETE SYSTEM INSTALLATION.
13. COORDINATE AND PROVIDE ALL DUCTWORK TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS. FIELD VERIFY AND COORDINATE ALL DUCTWORK AND PIPING DIMENSIONS PRIOR TO FABRICATION.
14. DUCT AND EQUIPMENT PENETRATIONS SHALL BE COORDINATED AS TO NOT INTERFERE WITH ROOF STRUCTURE. ALL PENETRATIONS SHALL BE FIELD COORDINATED WITH GENERAL CONTRACTOR.

NO. | REVISIONS | DATE:

HVAC SYMBOLS AND ABBREVIATIONS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

PROJECT MGR.
MIKE FORSLUND

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GENERAL EQUIPMENT ABBREVIATIONS

AC	AIR COMPRESSOR
ACU	ACCUMULATOR
ADT	AUTOMATIC DRIP TRAP
AFT	AUTOMATIC FILTER
AOV	AIR OPERATED VALVE
AM	ANOXIC MIXER
AST	AUTOMATIC STRAINER
BSLP	BLENDED SLUDGE PUMP
B	BLOWER
BC	BRIDGE CRANE
BFP	BELT FILTER PRESS
BFPFP	BFP FEED PUMP
BFV	BUTTERFLY VALVE
BLP	BIOSOLIDS LOADING PUMP
BLR	BOILER
BP	BOOSTER PUMP
BSLMP	BLENDED SLUDGE MIXING PUMP
BSLP	BLENDED SLUDGE PUMP
BSTM	BIOSOLIDS STORAGE MIXER
BTP	BIOSOLIDS TRANSFER PUMP
BWP	BACKWASH PUMP
CENT	CENTRIFUGE
CNTP	CENTRATE PUMP
CENTP	CENTRIFUGE FEED PUMP
CP	CHEMICAL PUMP
COMP	COMPRESSOR
CON	CONVEYOR
DBC	DEWATERED BIOSOLIDS CONVEYOR
DCP	DECANT PUMP
DEWP	DISINFECTED EFFLUENT PUMP
DP	DRAINAGE PUMP
DRLP	DIGESTER RECIRCULATION PUMP
DSLMP	DIGESTER MIXING PUMP
DSLTP	DIGESTED SLUDGE TRANSFER PUMP
DT	DRIP TRAP
DOW	DOWNWARD OPENING WEIR GATE
EFC	EXCESS FLOW CLARIFIER
EFP	EXCESS FLOW PUMP
EFSP	EXCESS FLOW SOLIDS PUMP
EP	EFFLUENT PUMP
FC	FINAL CLARIFIER
FCD	FINAL CLARIFIER DRIVE
FEP	FINAL EFFLUENT PUMP
FILT	FILTER
FM	FLOW METER
FO	FERMENTER OVERFLOW
FRS	FERMENTED SLUDGE
FT	FLAME TRAP
GBT	GRAVITY BELT THICKENER
GC	GRIT CLASSIFIER
GFM	GAS FLOW METER
GCS	GAS COMPRESSOR SKID
GP	GRIT PUMP
GRN	GRINDER
GT	GRIT TRAP
GUH	GAS UNIT HEATER
GW	GRIT WASHER
H	HOIST
HBT	HYDROPNEUMATIC BOOSTER TANK
HTX	HEAT EXCHANGER
IP	INFLUENT PUMP
MA	MOTORIZED ACTUATOR
MBV	MOTORIZED BALL VALVE
MFS	MECHANICAL FINE SCREEN
MIX	MIXER
MOV	MOTOR OPERATED VALVE
MP	MIXING PUMP
MPE	MISCELLANEOUS PROCESS EQUIPMENT
MST	MANUAL STRAINER
MT	MICROTURBINE
NRP	NITRATE RECYCLE PUMP
OCD	OVERHEAD COILING DOOR
OCE	ODOR CONTROL EQUIPMENT
ODE	OXIDATION DITCH EQUIPMENT
PC	PROGRESSING CAVITY PUMP
PCD	PRIMARY CLARIFIER DRIVE
PCFD	PRIMARY CLARIFIER FLOCCULATOR DRIVE
PF	POLYMER FEEDER
PFP	POLYMER FEED PUMP
PLWP	PLANT WATER PUMP
PRCP	PHOSPHORUS REMOVAL CHEMICAL PUMP
PRCT	PHOSPHORUS REMOVAL CHEMICAL TANK
PREP	PRIMARY EFFLUENT PUMP
PRFP	PROCESS RETURN FLOW PUMP
PRSP	PRIMARY SLUDGE PUMP
PTP	POLYMER TRANSFER PUMP
RAD	REFRIGERATED AIR DRYER
RASP	RETURN ACTIVATED SLUDGE PUMP
RDT	ROTARY DRUM THICKENER
RDTP	ROTARY DRUM THICKENER FEED PUMP
RM	RAPID MIXER
SA	SAMPLER
SBFP	SODIUM BISULFITE FEED PUMP
SBST	SODIUM BISULFITE STORAGE TANK
SCMP	SCUM PUMP
SCW	SCREENINGS WASHER
SEJ	SEWAGE EJECTOR
SG	SLIDE GATE
SHFP	SODIUM HYPOCHLORITE FEED PUMP
SHST	SODIUM HYPOCHLORITE STORAGE TANK
SLG	SLUICE GATE
SP	SUMP PUMP
SRT	SILOXANE REMOVAL TANK
SSC	SCREENINGS SCREW CONVEYOR
STCP	STRUVITE CHEMICAL PUMP
STG	STOP GATE
STR	STRAINER
SV	SOLENOID VALVE
SWP	SCREENINGS WASHER/PRESS
TV	TELESCOPING VALVE
TWASP	TWAS PUMP
UV	ULTRAVIOLET DISINFECTION
WASP	WAS PUMP

FLUID ABBREVIATIONS

A	AIR
BOX	BIOXIDE
BSL	BLENDED SLUDGE
BWW	BACKWASH WATER
CA	COMPRESSED AIR
CNT	CENTRATE
CDG	COMPRESSED DIGESTER GAS
CLS	CHLORINE SOLUTION
CNT	CENTRATE
CW	COLD WATER
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
D	DRAIN
DEW	DISINFECTED EFFLUENT WATER
DG	DIGESTER GAS
DIV	DIVERSION
DRL	DIGESTER RECIRCULATION
DS	DIGESTER SUPERNATANT
DSL	DIGESTED SLUDGE
DSL MD	DIGESTER SLUDGE MIXER DISCHARGE
DSL MS	DIGESTER SLUDGE MIXER SUCTION
DWB	DEWATERED BIOSOLIDS
EF	EXCESS FLOW
FC	FERRIC CHLORIDE
EFS	EXCESS FLOW SOLIDS
FE	FINAL EFFLUENT
F	FORCE MAIN
G	NATURAL GAS
GR	GRIT
GTS	GRAVITY THICKENER SUPERNATANT
HHGR	HEATING HOT GLYCOL RETURN
HHGS	HEATING HOT GLYCOL SUPPLY
HOCL	HYPOCHLORITE
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
ML	MIXED LIQUOR
MLW	MILL WASTE
MTW	METRO WASTE
NAOH	SODIUM HYDROXIDE
NPW	NONPOTABLE WATER
OF	OVERFLOW
OC	ODOR CONTROL
PD	PLANT DRAIN
PDP	PERFORATED DRAIN PIPE
PE	PLANT EFFLUENT
PEC	POLYELECTROLYTE CHEMICAL
PER	PLANT EFFLUENT REUSE
PI	PLANT INFLUENT
PRC	PHOSPHORUS REMOVAL CHEMICAL
PRE	PRIMARY EFFLUENT
PRF	PROCESS RETURN FLOW
PRI	PRIMARY INFLUENT
PRS	PRIMARY SLUDGE
PSS	PLANT SANITARY SEWER
PW	POTABLE WATER
PWR	PROCESS WATER RETURN
PWS	PROCESS WATER SUPPLY
RAS	RETURN ACTIVATED SLUDGE
RW	RAW WASTEWATER
SAM	SAMPLE
SAN	SANITARY SEWER
SB	SODIUM BISULFITE
SCM	SCUM
SCMD	SCUM DECANT
SE	SECONDARY EFFLUENT
SH	SODIUM HYPOCHLORITE
SL	SLUDGE
SPD	SUMP PUMP DISCHARGE
SSM	SECONDARY SCUM
ST	STORM SEWER
STC	STRUVITE CHEMICAL
SW	SERVICE WATER
SWS	SEAL WATER SUPPLY
TE	TERTIARY EFFLUENT
TFR	THERMAL FLUID RETURN
TFS	THERMAL FLUID SUPPLY
TSL	THICKENED SLUDGE
TWAS	THICKENED WASTE ACTIVATED SLUDGE
V	VENT
W	POTABLE WATER
WAS	WASTE ACTIVATED SLUDGE
WML	WASTE MIXED LIQUOR
W3	DISINFECTED EFFLUENT WATER

PLUMBING ABBREVIATIONS

AEW	APRON END WALL
BF	BLIND FLANGE
CA	COMPRESSED AIR
CB	CATCH BASIN
CD	CONDENSATE DRAIN
CI	CAST IRON
CO	CLEAN OUT
COND	CONDENSATE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CW	COLD WATER
D	DRAIN
DCBP	DOUBLE CHECK BACKFLOW PREVENTER
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DI	DUCTILE IRON
EEWS	EMERGENCY EYEWASH SHOWER
EW	EYEWASH
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
HB	HOSE BIBB
HD	HUB DRAIN
HDPE	HIGH DENSITY POLYETHYLENE
HHGR	HEATING HOT GLYCOL RETURN
HHGS	HEATING HOT GLYCOL SUPPLY
HR	HOSE REEL
HWL	HIGH WATER LEVEL
HW	HOT WATER
HWR	HOT WATER RETURN
IE	INVERT ELEVATION
IWP	INDIRECT WASTE PIPE
L	LAVATORY
MB	MOP BASIN
MH	MANHOLE
MV	MUD VALVE
PHW	PROCESS HOT WATER
P	PUMP
PLW	PLANT WATER
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVR	PRESSURE VACUUM RELIEF ASSEMBLY
QC	QUICK CONNECT
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
RZBP	REDUCED ZONE BACKFLOW PREVENTER
S	SINK
SD	SHOWER DRAIN
SEJ	SEWAGE EJECTOR
SHR	SHOWER
SP	SUMP PUMP
SS	STAINLESS STEEL
SV	SOLENOID VALVE
SVS	SERVICE SINK
T	TANK
TD	TRENCH DRAIN
U	URINAL
V	VENT
VB	VACUUM BREAKER
VCP	VITRIFIED CLAY PIPE
VTR	VENT THRU ROOF
WCO	WALL CLEANOUT
WC	WATER CLOSET
WH	WATER HEATER
WS	WATER SOFTENER
WSFU	WATER SERVICE FIXTURE UNIT

GENERAL/HVAC ABBREVIATIONS

ACH	AIR CHANGES PER HOUR
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
AP	ACCESS PANEL
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
COND	CONDENSATE
DAT	DISCHARGE AIR TEMPERATURE
DB	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DG	DOOR GRILLE
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EL	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
FC	FAIL CLOSED
FLA	FULL LOAD AMPS
FO	FAIL OPEN
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FT	FEET
GA	GAUGE
GPM	GALLONS PER MINUTE
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OC	ON CENTER
OV	OUTLET VELOCITY
PD	PRESSURE DROP
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SP	STATIC PRESSURE

HVAC EQUIPMENT ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT
AFR	ARCHITECTURAL FINE TUBE RADIATION
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
BLR	BOILER
BB	BASEBOARD
C	CONVECTOR
CD	CEILING DIFFUSER
CHILL	CHILLER
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CWP	CHILLED WATER PUMP
DC	DRY COOLER
DH	DEHUMIDIFIER
DL	DRUM LOUVER
EBB	ELECTRIC BASEBOARD
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EJ	EXPANSION JOINT
EL	EXPANSION LOOP
ER	EXHAUST REGISTER
ERC	ELECTRIC REHEAT COIL
ERU	ENERGY RECOVERY UNIT
EUH	ELECTRIC UNIT HEATER
EWH	ELECTRIC WALL HEATER
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FR	FINNED TUBE RADIATION
FUR	FURNACE
GDF	GAS DUCT FURNACE
GRV	GRAVITY ROOF VENTILATOR
GUH	GAS UNIT HEATER
HC	HEATING COIL
HP	HEAT PUMP
HRP	HEAT RECOVERY PUMP
HU	HUMIDIFIER
HUH	HOT WATER UNIT HEATER
HWP	HOT WATER PUMP
HTX	HEAT EXCHANGER
ICF	INDUSTRIAL CEILING FAN
IR	INFRARED HEATER
L	LOUVER
MAU	MAKE-UP AIR UNIT
P	PUMP
PWP	PROCESS WATER PUMP
RF	RETURN FAN
RG	RETURN GRILLE
RR	REGISTER
RTU	ROOFTOP UNIT
SD	SUCTION DIFFUSER
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SR	SUPPLY REGISTER
ST	STEAM TRAP
SUH	STEAM UNIT HEATER
TCP	TEMPERATURE CONTROL PANEL
TG	TRANSFER GRILLE
UH	UNIT HEATER
UV	UNIT VENTILATOR
VAV	VARIABLE AIR VOLUME BOX
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
WSHP	WATER SOURCE HEAT PUMP
XT	EXPANSION TANK

ELECTRICAL ABBREVIATIONS

A	AMPERE
AF	AMPERE FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
A/V	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
C	CONDUIT
CAT	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CL	CENTERLINE
CLG	CEILING
COL	COLUMN
CT	CURRENT TRANSFORMER
CTE	CONNECT TO EXISTING
CU	COPPER
CUH	CABINET UNIT HEATER
D	DEDICATED
DC	DIRECT CURRENT
DISC	DISCONNECT
DWG	DRAWING
E	EMERGENCY
EC	ELECTRICAL CONTRACTOR
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EHH	ELECTRICAL HANDHOLE
EMT	ELECTRICAL METALLIC TUBING
EOL	END OF LINE DEVICE
EWC	ELECTRIC WATER COOLER
EX	EXISTING
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FLA	FULL LOAD AMPERES
FPCP	FIRE PUMP CONTROL PANEL
FR	FIRE RETARDANT
FT	FEET
FDA	FOOD AND DRUG ADMINISTRATION
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
G	GROUND
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION (EQUIPMENT)
GFCI	GROUND FAULT CKT INTERRUPTER
GRS	GALVANIZED RIGID STEEL
HACR	HEATING AND AIR CONDITIONING RATED
HP	HORSEPOWER
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
HZ	HERTZ
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KCMIL	ONE THOUSAND CIRCULAR MILS
KO	KNOCKOUT
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KW	KILOWATT
LP	LIGHTING PANEL
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION
MC	METAL CLAD
MCC	MOTOR CONTROL CENTER
MCB	MAIN CIRCUIT BREAKER
MCCB	MOLDED CASE CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MILS
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANELBOARD
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MO	MOTOR OPERATED
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
MW	MICROWAVE OR MEGAWATT
N	NEUTRAL
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NAC	NOTIFICATION APPLIANCE CIRCUIT PANEL
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NM	NONMETALLIC
NO	NORMALLY OPEN
NSF	NATIONAL SANITARY FOUNDATION
NTS	NOT TO SCALE
OCB	OIL CIRCUIT BREAKER
OL	OVERLOAD
OIP	OPERATOR INTERFACE PANEL
OT	OVERTEMP
PR	PAIR
P	POLE
PB	PULL BOX
PC	PULL CORD
PH	PH SENSOR
ø	PHASE
PNL	PANELBOARD
PP	POWER PANEL
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PTZ	PAN, TILT, ZOOM CAMERA
PVC	POLYVINYL CHLORIDE
PWR	POWER
RSC	RIGID GALVANIZED STEEL CONDUIT
RTS	REMOTE TEST SWITCH
RVNR	REDUCED VOLTAGE NON-REVERSING
RVSS	REDUCED VOLTAGE SOLID STATE
SC	SHORT CIRCUIT
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SCC	SUPERVISORY CONTROL CENTER
SE	SERVICE ENTRANCE
SEC	SECONDARY
SH	SHIELDED
SPD	SURGE PROTECTION DEVICE
SS	STAINLESS STEEL
SSRV	SOLID STATE REDUCED VOLTAGE
STP	SHIELDED TWISTED PAIR
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
TEL	TELEPHONE
TS2W	TWO SPEED TWO WINDING
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE OR WATT
WD	HIGH PRESSURE WASH DOWN
WL	WET LOCATION
WP	WEATHERPROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
Y	WYE

INSTRUMENT-SPECIFIC ELECTRICAL ABBREVIATIONS

A	AIR FLOW
ALT	ALTERNATOR
BF	BUILDING FLOODING
C	CAPACITANCE
CA	CHLORINE ANALYZER
CH4	METHANE
CON	CONDUCTANCE
CS-1	CONSTANT (SINGLE) SPEED
CS-2	CONSTANT (TWO) SPEED
D	DENSITY
DISC	DISCONNECT SWITCH
DO	DISSOLVED OXYGEN
DOU	DOWN-OFF-UP SELECTOR SWITCH
DP	DIFFERENTIAL PRESSURE
ESPB	EMERGENCY STOP PUSHBUTTON
ESPC	EMERGENCY STOP PULLCORD
ETM	ELAPSED TIME METER
F	BALL FLOAT
FL	FLANGE-MOUNTED
FS	FAST-SLOW SELECTOR SWITCH
FOR	FORWARD-OFF-REVERSE SELECTOR SWITCH
GD	GAS DETECTION
H	HORN
H2S	HYDROGEN SULFIDE
HLOA	HIGH-LOW-OFF-AUTO SELECTOR SWITCH
HLOR	HIGH-LOW-OFF-REVERSE SELECTOR SWITCH
HOA	HAND-OFF-AUTO SELECTOR SWITCH
L	LIMIT
LOR	LOCAL-OFF-REMOTE SELECTOR SWITCH
LOS	LOCKOUT STOP
M	MAGNETIC
MST	MOISTURE
MY	MOTOR PROTECTION RELAY
O/C	OVERCURRENT
O/L	OVERLOAD
O/T	OVERTEMPERATURE
OC	OPEN-CLOSE SELECTOR SWITCH
OCA	OPEN-CLOSE-AUTO SELECTOR SWITCH
OO	ON-OFF SELECTOR SWITCH
OP	OXYGEN PURITY
ORP	OXIDATION REDUCTION POTENTIAL
P	PADDLE
pH	pH
PO4	ORTHOPHOSPHATE
POT	POTENTIOMETER
PR	PROXIMITY
R	RADAR
ROF	REVERSE-OFF-FORWARD SELECTOR SWITCH
RST	RESET PUSHBUTTON
RTD	RESISTANCE TEMPERATURE DETECTOR
S	SUBMERSIBLE
SF	SEAL FAIL
SIL	SILENCE
SS	START-STOP SELECTOR SWITCH
ST	START PUSHBUTTON
STP	STOP PUSHBUTTON
T	THERMAL
TAB	TRANSDUCER-AUTO-BACKUP FLOATS SELECTOR SWITCH
TH	THERMOCOUPLE
TM	THERMAL MASS
TRB	TURBIDITY
TSS	TOTAL SUSPENDED SOLIDS
U	ULTRASONIC
V	VIBRATING FORK
VFD	VARIABLE FREQUENCY DRIVE
VM	VENTILATION MONITORING
VS	VARIABLE SPEED
YW	LEAKAGE SENSOR

NO.	REVISIONS	DATE:

ABBREVIATIONS

WELL NO. 6 WELL FACILITY
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WAUNAKEE, WISCONSIN

JOB NO.
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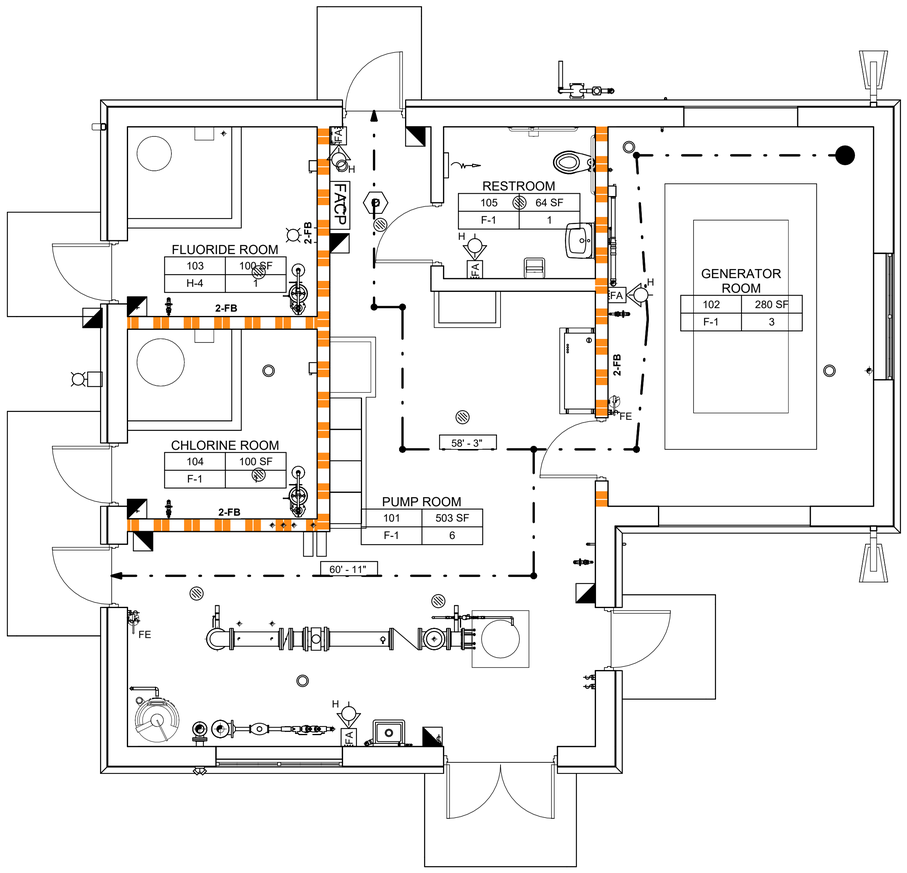
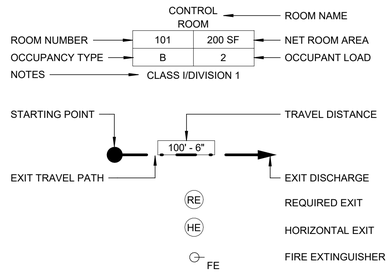


LIFE SAFETY PLAN

0 1' 2' 4' 8'

LIFE SAFETY LEGEND



FIRE-RATING LEGEND

FIRE WALLS	
1-FW	1-HOUR FIRE WALL
2-FW	2-HOUR FIRE WALL
3-FW	3-HOUR FIRE WALL
4-FW	4-HOUR FIRE WALL
FIRE BARRIERS	
1-FB	1-HOUR FIRE BARRIER
2-FB	2-HOUR FIRE BARRIER
3-FB	3-HOUR FIRE BARRIER
4-FB	4-HOUR FIRE BARRIER

BUILDING CODE INFORMATION

BUILDING CODE	2015 INTERNATIONAL BUILDING CODE (SPS 362)		
	2015 INTERNATIONAL ENERGY CONSERVATION CODE (SPS 363)		
	2015 INTERNATIONAL MECHANICAL CODE (SPS 364)		
	2015 INTERNATIONAL FUEL GAS CODE (SPS 365)		
	2015 INTERNATIONAL FIRE CODE		
	WISCONSIN PLUMBING CODE (SPS 382)		
	2017 NATIONAL ELECTRIC CODE (SPS 316)		
SCOPE OF WORK:			
CONSTRUCTION OF NEW 1-STORY ± 1,310 SF WELL BUILDING.			
OCCUPANCY TYPE	NON-SEPARATED USE		
USE GROUPS	F-1 MODERATE-HAZARD FACTORY INDUSTRIAL		
	H-4 HIGH-HAZARD (ACCESSORY USE)		
HAZARDOUS MATERIALS			
MATERIAL	MATERIAL CLASSIFICATION	MAX. ALLOWABLE QUANT. PER CONTROL AREA[b]	ACTUAL QUANTITY[a]
SODIUM HYPOCHLORITE	CORROSIVE	500 GALLONS	100 GALLONS
FLUOROSILICIC ACID	CORROSIVE	500 GALLONS	70 GALLONS
	TOXIC	**50 GALLONS**	
NOTES: a. ACTUAL QUANTITY IS FOR COMBINED STORAGE AND CLOSED SYSTEMS USE. b. CONTROL AREA QUANTITY PER TABLE 307.1(1) FOOTNOTE i. BOLD INDICATES CONTROLING HAZARD CLASSIFICATION FOR MATERIAL.			
CONSTRUCTION TYPE	TYPE 5B		
OCCUPANCY SEPARATION		FIRE-RESISTANCE RATING	
F-1:H-4		2 HOUR	
GENERAL BUILDING INFORMATION			
	ALLOWABLE		ACTUAL
NO. OF STORIES	1 STORY		1 STORY
HEIGHT	40 FEET		± 20'-6"
AREA PER FLOOR LEVEL			
F-1	8,500 SF		1,132 SF
H-4 (ACCESSORY USE)	125 SF		121 SF
TOTAL ALLOWABLE AREA PER FLOOR LEVEL	15,500 SF	TOTAL ACTUAL AREA	1,253 SF
PROJECT AREA	± 1,300 SF		
PUBLIC WAYS OR YARDS	ACCESSIBLE FROM 4 SIDES, MIN. 30-FOOT ACCESS WIDTH		
FIRE SUPPRESSION SYSTEMS			
AUTOMATIC SPRINKLER SYSTEM - ORDINARY HAZARD (FLUORIDE ROOM AND CHLORINE ROOM ONLY) [1] PORTABLE FIRE EXTINGUISHERS, RATED CLASS A,B,C; 10-POUND CAPACITY.			
NUMBER OF OCCUPANTS			
OCCUPANT LOAD FACTOR	INDUSTRIAL AREAS - 100 GROSS		
OCCUPANT CALCULATION	SEE PLAN		
ACTUAL NUMBER OF OCCUPANTS	ZERO PERMANENT OCCUPANTS, ONLY PRESENT FOR MAINTENANCE AND OPERATION.		
TRAVEL DISTANCE	OCCUPANCY	EXIT ACCESS	COMMON PATH
	F-1	200 FEET	75 FEET
	H-4	175 FEET	75 FEET
EXITS	ALL ROOMS REQUIRE (1) EXIT.		
NOTES: 1. 2-HR FIRE-RESISTANCE SEPARATION AND AUTOMATIC SPRINKLER SYSTEM PROTECTION PROVIDED IN CHLORINE ROOM PER OWNER REQUEST.			

DATE:

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NO.

LIFE SAFETY PLAN AND CODE SUMMARY

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

PROJECT MGR.
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BENCHMARK POINTS:

POINT NUMBER	NORTHING	EASTING	ELEVATION
BM100	518533.8190	798861.5650	955.61
BM102	519201.5210	799785.1750	961.05

GENERAL NOTES:

1. CONTRACTOR SHALL CONTACT APPROPRIATE AGENCIES FOR UTILITY LOCATIONS.
2. RESTORE ALL DISTURBED AREAS AS SPECIFIED.
3. LOCATIONS AND ELEVATIONS OF EXISTING PIPING AND OTHER SITE FEATURES ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY DEPTHS AND LOCATIONS OF EXISTING PIPING PRIOR TO INSTALLING NEW PIPING THAT CONNECTS TO EXISTING.
4. THESE DRAWINGS DO NOT INDICATE ALL PIPE FITTINGS REQUIRED TO INSTALL YARD PIPING AS SHOWN. CONTRACTOR IS RESPONSIBLE FOR DETERMINING AND PROVIDING ALL REQUIRED FITTINGS.
5. PROVIDE MINIMUM 6'-6" COVER OVER ALL NEW YARD WATER AND SEWER PIPING.
6. UNLESS OTHERWISE NOTED OR SPECIFIED, ALL YARD PIPING SHALL BE DUCTILE IRON AND WRAPPED IN POLYETHYLENE. SEE SPECIFICATIONS.
7. CONTRACTOR SHALL NOT DISTURB THE EXISTING PARK. PROTECT EXISTING SIDEWALK, CURB, GUTTER, AND PAVEMENT. THE LOT TO THE WEST OF THE PROPERTY IS OPEN FOR USE DURING CONSTRUCTION. RESTORE ALL DISTURBED AREAS AND SEED ALL DISTURBED AREAS AS SPECIFIED.
8. BUILDING SHALL BE DIMENSIONED FROM THE CENTERLINE OF THE WELL.

KEY NOTES:

1. SIDEWALK MATCH ELEVATION TO BE CONFIRMED IN FIELD BY CONTRACTOR.
2. MILL CURB HEAD TO MATCH PROPOSED PAVEMENT GRADE. REPAIR ANY DAMAGED CONCRETE SIDEWALK AND GO FROM JOINT TO JOINT.
3. NEW PAVEMENT DRIVEWAY PER C5.1
4. NEW CONCRETE SIDEWALK PER D C5.1
5. AREA OF SITE AND TEMPORARY CONSTRUCTION CHAIN-LINK FENCING.
6. 6" WATER SERVICE LINE.
7. 6" GATE VALVE.
8. FIRE HYDRANT WITH AUXILIARY GATE VALVE IN VALVE BOX.
9. 12" GATE VALVE.
10. 12" DUCTILE IRON WATER MAIN. CONNECT INTO EXISTING 12" DUCTILE IRON WATER MAIN. USE TEE BRANCH WITH 6" REDUCER FOR SERVICE MAIN.
11. 12" TO 8" REDUCER FOR THE WATER MAIN ENTERING THE BUILDING.
12. BURIED DOWNSPOUT. DOWNSPOUT SHALL DAYLIGHT AND HAVE POSITIVE DRAINAGE TO THE NORTHEAST.
13. COORDINATE WITH GAS UTILITY FOR INSTALLATION OF NATURAL GAS SERVICE. SEE SPECIFICATIONS SECTION 33 52 16 FOR MORE INFORMATION.
14. CONNECT 4" SANITARY INTO EXISTING SANITARY MAIN. CONTRACTOR SHALL VERIFY ELEVATIONS BEFORE FINAL CONNECTION.
15. CONTRACTOR TO FIELD VERIFY CENTER OF WELL LOCATION.

LEGEND:

- PROPOSED CONCRETE SIDEWALK
- PROPOSED ASPHALT PAVEMENT
- STONE TRACKING PAD
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE SIDEWALK/PATH

PROPERTY BOUNDARIES
SW EL. 953.68 MATCH
SW EL. 953.92 MATCH
SW EL. 953.69 MATCH
SW EL. 953.63 MATCH
SW EL. 953.51 MATCH
SW EL. 953.02 MATCH
SW EL. 953.94 MATCH
SW EL. 953.80 MATCH
SW EL. 953.43 MATCH
SW EL. 953.25 MATCH
SW EL. 952.93 MATCH
N=518686.94
E=798913.14
N=518651.81
E=798936.15
N=518652.01
E=798900.56
F.F EL = 954.00
UTILITY-PROVIDED NATURAL GAS SERVICE
UTILITY-PROVIDED NATURAL GAS METER
12" DI WATER MAIN
8" DI WATER MAIN
WELL NO.6 WELL HEAD
4" SAN I.E. 946.67
4" SAN I.E.=943.00
EOP MATCH GRADE OF EXISTING SIDEWALK
REX'S WAY
12.0'
5.0'
35.3'
42.0'
22.3'
22.7'
50.0'
18.0'
5.7'
15.0'
2.0%
1.5%
5.0%
3.8%
R5.0'
R9.0'

PLAN
0 5 10 20
N

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SITE PLAN

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

PROJECT MGR.
MIKE FORSLUND

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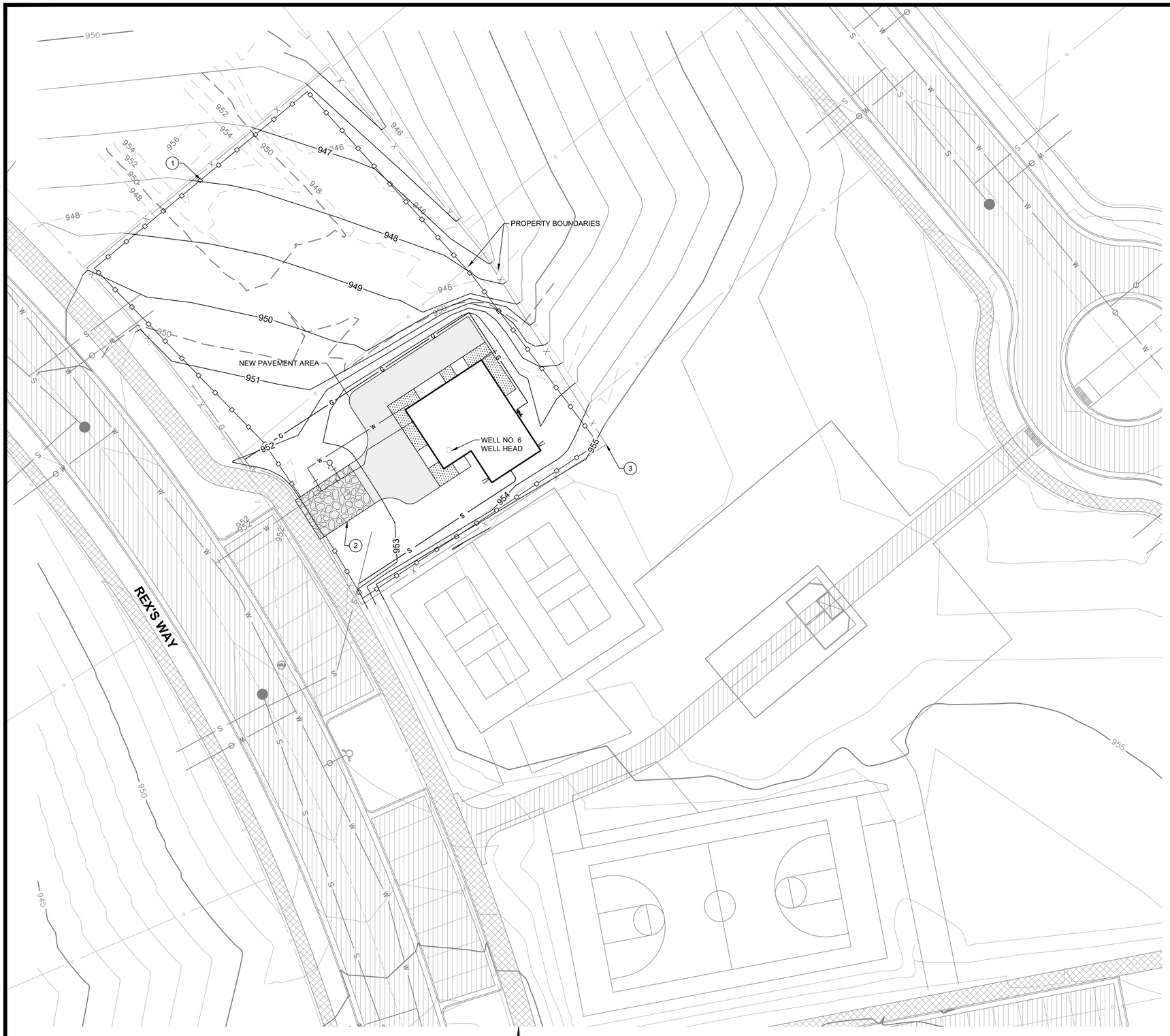

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EROSION CONTROL NOTES:

1. ANY SOIL STOCKPILED THAT REMAINS FOR MORE THAN 7 DAYS SHALL BE COVERED OR TREATED WITH STABILIZATION PRACTICES SUCH AS TEMPORARY OR PERMANENT SEEDING AND MULCHING.
2. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED OF AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.
3. ALL OFF-SITE SEDIMENT DEPOSITS OCCURING AS A RESULT OF CONSTRUCTION WORK OR A STORM EVENT SHALL BE CLEANED UP BY THE END OF EACH DAY. FLUSHING SHALL NOT BE ALLOWED.
4. ANY SOIL EROSION THAT OCCURS AFTER FINAL GRADING AND/OR THE APPLICATION OF STABILIZATION MEASURES MUST BE REPAIRED AND THE STABILIZATION WORK REDONE.
5. FOR ANY DISTURBED AREA THAT REMAINS INACTIVE FOR GREATER THAN 7 WORKING DAYS, OR WHERE GRADING WORK EXTENDS BEYOND THE PERMANENT SEEDING DEADLINES, THE SITE MUST BE TREATED WITH TEMPORARY STABILIZATION MEASURES SUCH AS SOIL TREATMENT, TEMPORARY SEEDING AND/OR MULCHING.
6. ALL TEMPORARY EROSION CONTROL PRACTICES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED WITH 70% VEGETATION.
7. WIND EROSION SHALL BE KEPT TO A MINIMUM DURING CONSTRUCTION. WATERING, MULCH OR A TRACKING AGENT MAY NEED TO BE UTILIZED TO PROTECT NEARBY RESIDENCES/WATER RESOURCES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL THE EROSION CONTROL MEASURES IN CONFORMANCE WITH WDNR.

KEY NOTES:

1 AREA OF SITE AND SILT FENCE PER (B / C5.1).

2 STONE TRACKING PAD PER (A / C5.1).

3 AREA OF SITE AND TEMPORARY CONSTRUCTION FENCE.

LEGEND:

- PROPOSED SIDEWALK
- PROPOSED PAVEMENT
- STONE TRACKING PAD
- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK/PATH

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EROSION CONTROL PLAN

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
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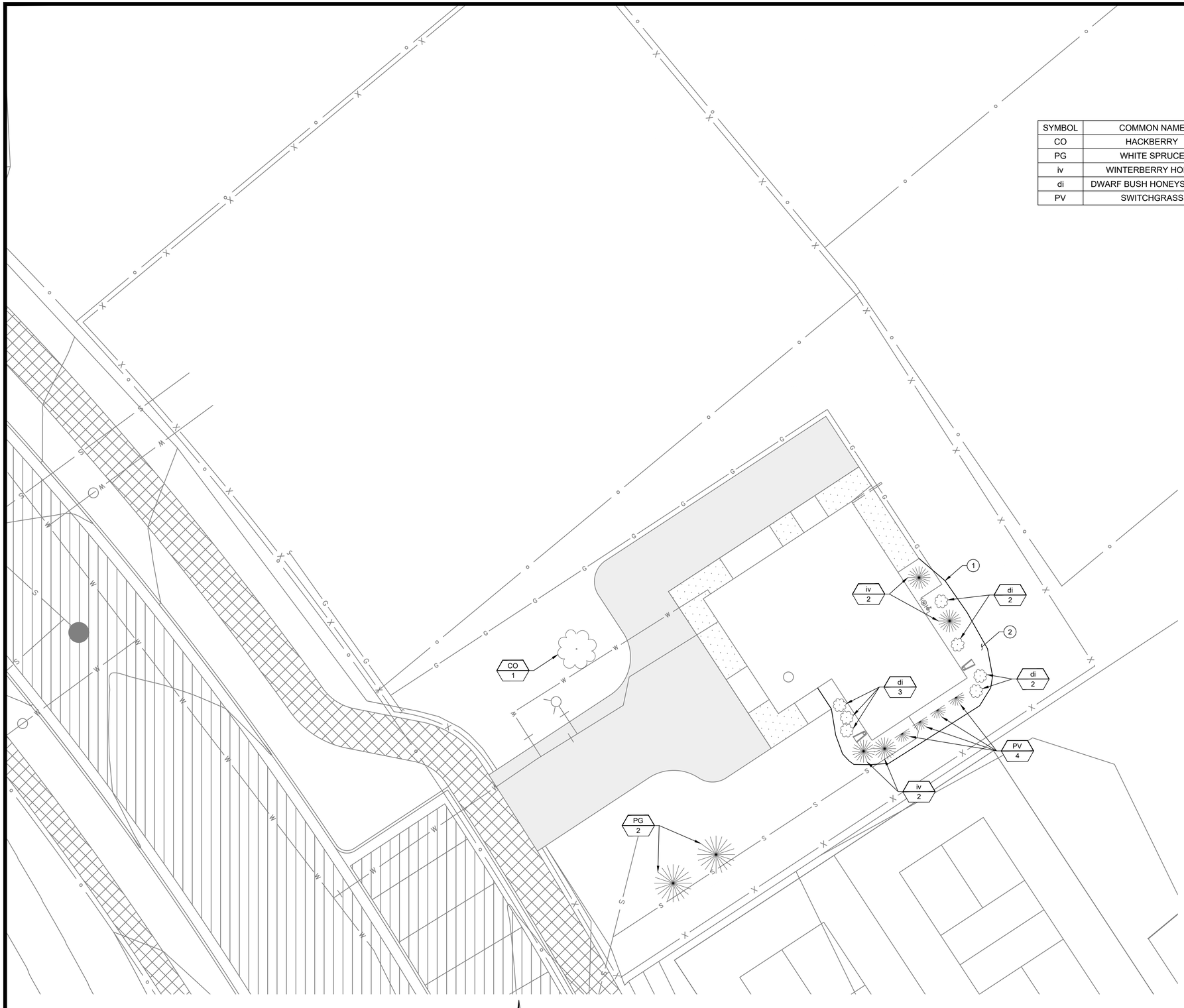
KEY NOTES:

1. PLASTIC LANDSCAPE EDGING AS SPECIFIED.
2. STONE MULCH AS SPECIFIED.

SYMBOL	COMMON NAME	SCIENTIFIC NAME	QANTITY	SIZE (MIN.)
CO	HACKBERRY	CELTIS OCCIDENTALIS	1	2" CAL.
PG	WHITE SPRUCE	PICEA GLAUCA	2	6' TO 7'
iv	WINTERBERRY HOLLY	ILEX VERTICILLATA	4	5 GAL.CONTAINER
di	DWARF BUSH HONEYSUCKLE	DIERVILLA IONICERA	7	#2 CONTAINER
PV	SWITCHGRASS	PANICUM VIRGATUM	4	#1 CONTAINER



LEGEND:

- PROPOSED CONCRETE SIDEWALK
- PROPOSED ASPHALT PAVEMENT
- STONE TRACKING PAD
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE SIDEWALK/PATH

LANDSCAPE PLAN

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LANDSCAPE PLAN

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

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GENERAL NOTES:

1. ONLY MAJOR ELECTRICAL FEEDER ROUTES ARE SHOWN ON THIS DRAWING. CONDUIT ROUTES FOR BRANCH CIRCUITS, INSTRUMENTATION, COMMUNICATION, AND CONTROL CIRCUITS ARE NOT SPECIFICALLY SHOWN. PROVIDE CONDUIT AND HANDHOLES AS REQUIRED FOR ALL OTHER CIRCUITS.

KEY NOTES:

(1) RADIO ANTENNA SHALL BE MOUNTED MINIMUM 20' AFG. ANTENNA DIRECTION SHALL BE COORDINATED WITH THE SECTION 26 09 00 SYSTEM SUPPLIER.

PROVIDE WALL-MOUNTED ANTENNA-MOUNTED MAST FOR RADIO ANTENNA (1) D E5.1

SE-ATS

MCC-6

SCC-34

GENERATOR

GROUND GRID B E5.1

FRONT

UTILITY COMPANY TRANSFORMER PROVIDED BY UTILITY (PAD BY CONTRACTOR)

METER SOCKET AND CT CABINET

LEGEND:

- PROPOSED CONCRETE SIDEWALK
- PROPOSED ASPHALT PAVEMENT
- STONE TRACKING PAD
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE SIDEWALK/PATH

ELECTRICAL SITE PLAN

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ELECTRICAL SITE PLAN

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

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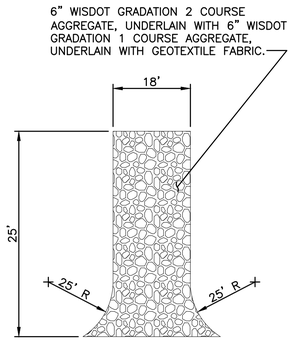
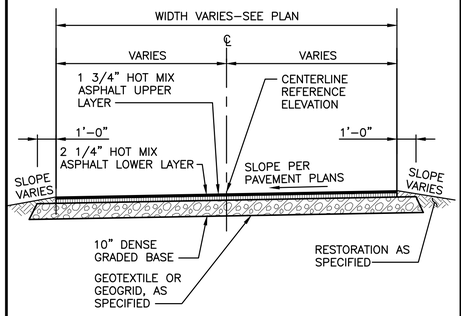
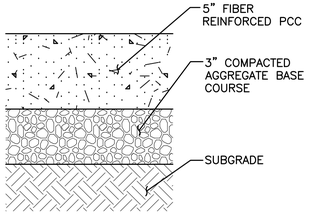


A C5.1 STONE TRACKING PAD
NO SCALE



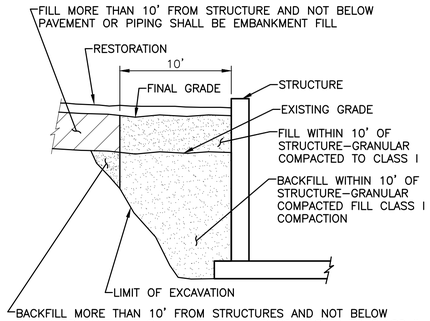
C C5.1 NEW PAVEMENT SECTION
NO SCALE



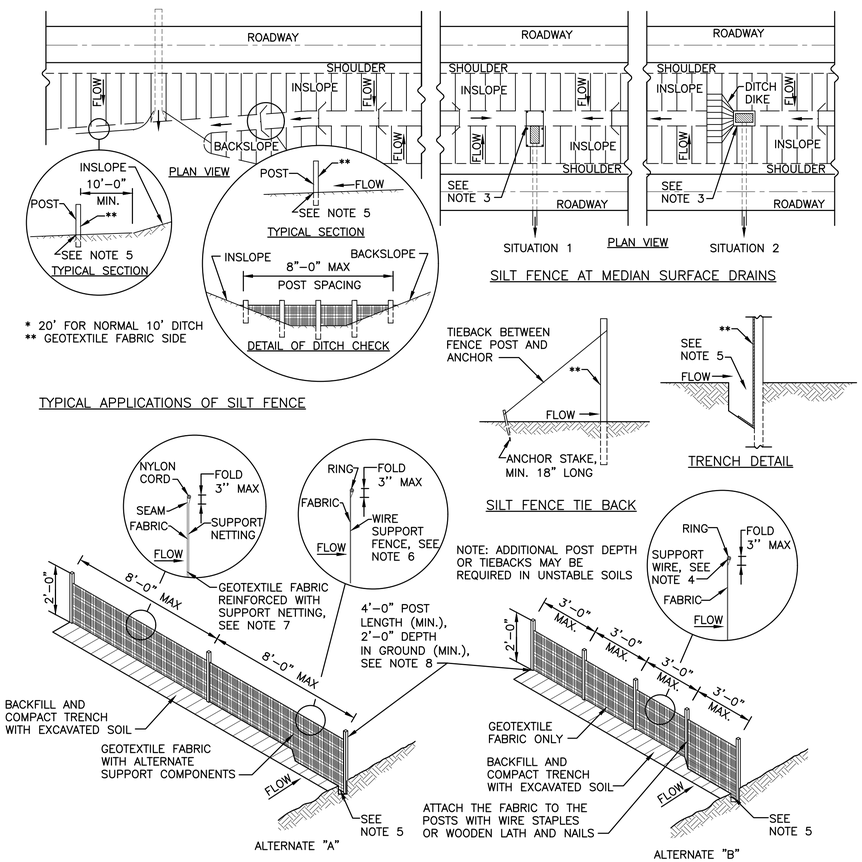
NOTES:

PROVIDE CONTROL JOINTS AS SPECIFIED IN SECTION 32 16 13.

D C5.1 CONCRETE SIDEWALK
NO SCALE



E C5.1 FILL & BACKFILL REQUIREMENTS
NO SCALE



B C5.1 SILT FENCE
NO SCALE

NOTES:

1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
2. WHEN POSSIBLE THE SILT FENCE SHALL BE CONSTRUCTED IN AN ARC OR HORSESHOE SHAPE, WITH THE ENDS POINTING UPSLOPE TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS.
3. CROSS BRACE WITH 2"x4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
4. MINIMUM 14 GAGE WIRE REQUIRED, FOLD FABRIC 3" OVER THE WIRE AND STAPLE OR PLACE WIRE RINGS ON 12" C–C.
5. EXCAVATE TRENCH A MINIMUM OF 4" WIDE AND 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC, FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
6. WIRE SUPPORT FENCE SHALL BE 14 GAGE MINIMUM WOVEN WIRE WITH A MAXIMUM MESH SPACING OF 6". SECURE TOP OF GEOTEXTILE FABRIC TO TOP OF FENCE WITH STAPLES OR WIRE RINGS AT 12" C TO C.
7. GEOTEXTILE FABRIC SHALL BE REINFORCED WITH AN INDUSTRIAL POLYPROPYLENE NETTING WITH A MAXIMUM MESH SPACING OF 1/4" OR EQUAL. A HEAVY DUTY NYLON TOP SUPPORT CORD OR EQUIVALENT IS REQUIRED.
8. STEEL POSTS SHALL BE STUDDED "TEE" OR "U" TYPE WITH A MINIMUM WEIGHT OF 1.2 LBS/LINEAR FOOT WITHOUT ANCHORS, OR ANCHORS SUFFICIENT TO RESIST POST MOVEMENT ARE REQUIRED. WOOD POSTS SHALL BE A MINIMUM SIZE OF 4" DIAMETER, OR 2 1/2"x3 1/2", EXCEPT WOOD POSTS FOR GEOTEXTILE FABRIC REINFORCED WITH NETTING SHALL BE A MINIMUM SIZE OF 1 1/8"x1 1/8" OAK OR HICKORY.
9. ALTERNATES "A" AND "B" ARE EQUAL AND EITHER MAY BE USED.

NO.

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SITE DETAILS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

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15
C5.1

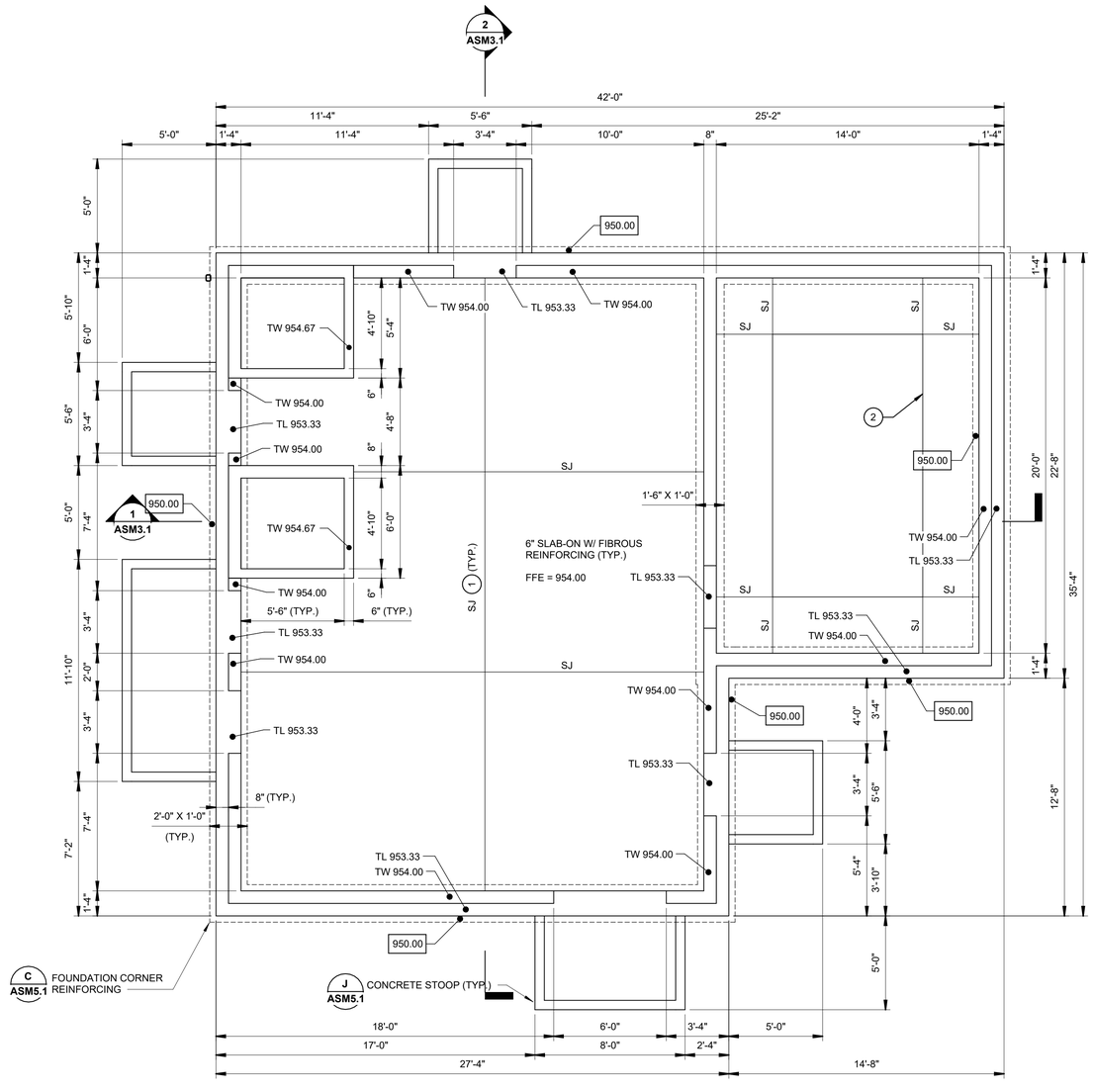
GENERAL NOTES:

1. FOR FOUNDATION LEGEND SEE G ASM5.1
2. FFE = 954.00, LOCALLY DISH FLOOR SLAB TO FLOOR DRAINS. FFE = 953.96 AT FLOOR DRAINS.

KEY NOTES:

(1) SAWN JOINT(SJ) A ASM5.1

(2) GENERATOR BASE. 12" SLAB ON GRADE W/ #5@12" E.W. T&B. PROVIDE EXPANSION MATERIAL BETWEEN BASE AND FLOOR SLAB FULL PERIMETER. HOLD DOWN EXP. MATERIAL 1/2" AND CAULK JOINT.



FOUNDATION PLAN

0 1" 2" 4" 8"

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FOUNDATION PLAN

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

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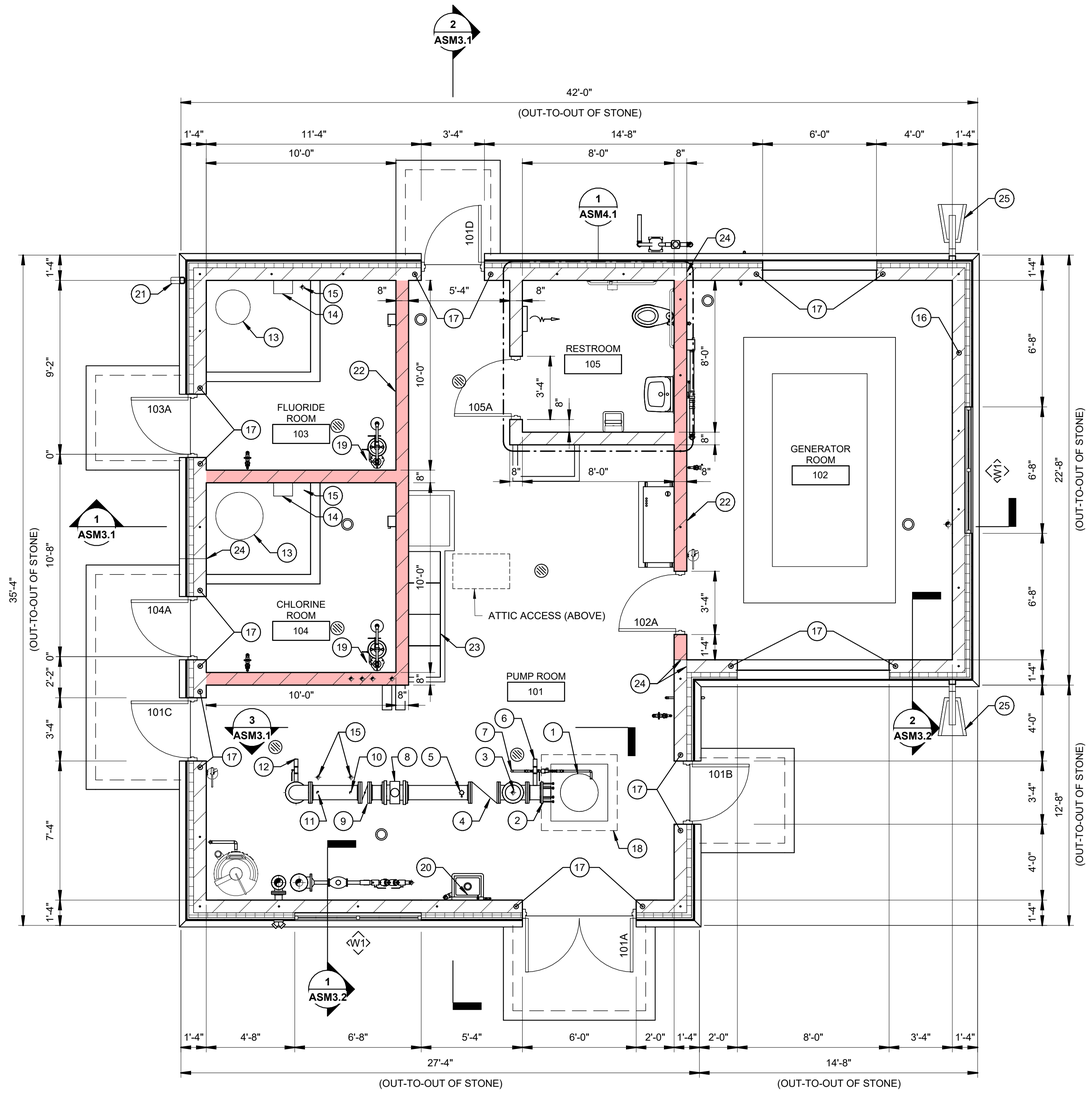

FLOOR PLAN

0 1' 2' 4' 8'

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GENERAL NOTES:

1. SEE DRAWINGS ASM6.1 AND ASM6.2 FOR ARCHITECTURAL AND STRUCTURAL GENERAL NOTES AND SCHEDULES.
2. CHEMICAL ROOMS SHALL BE NEMA 4X RATED.
3. FFE = 954.00 FEET. LOCALLY DISH FLOORS TO FLOOR DRAINS. FLOOR DRAIN ELEVATION 953.96 TYP.

KEY NOTES:

1. WELL HEAD PER E ASM5.1. PROVIDE PUMP PRELUBE SYSTEM PER SPECIFICATIONS. COORDINATE CONNECTION LOCATION IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. SEE A ASM5.3 FOR DETAIL.
2. 8-INCH COUPLING. CONTRACTOR TO COORDINATE FINAL PIPE ELEVATION WITH DIMENSIONS OF WELL DISCHARGE HEAD.
3. 8-INCH UP-TURNED TEE BRANCH WITH A BLIND FLANGE AND TAP FOR A 2-INCH COMBINATION AIR RELEASE AND VACUUM RELIEF VALVE. PROVIDE ISOLATION VALVE UPSTREAM OF AIR RELEASE VALVE. ROUTE DISCHARGE 24 INCHES ABOVE FINISHED FLOOR AND ABOVE HUB DRAIN WITH 24 STAINLESS STEEL MESH SCREEN.
4. 8-INCH SWING CHECK VALVE AND LIMIT SWITCH.
5. PRESSURE TRANSDUCER AND PRESSURE GAUGE. PROVIDE ISOLATION VALVE UPSTREAM OF PRESSURE GAUGE AND PRESSURE TRANSDUCER.
6. RAW WATER SAMPLE TAP.
7. PROVIDE PVC CARRIER PIPE FOR WATER SUPPLY PIPING UNDER GROUND TO PERMIT REMOVAL OF UNDERGROUND WATER SUPPLY. PROVIDE LONG SWEEP 90° ELBOWS.
8. 8-INCH MAGNETIC FLOW METER.
9. 8-INCH BUTTERFLY VALVE.
10. 3/4-INCH CHLORINE INJECTION TAP. PIPED FROM CHEMICAL FEED SYSTEM. TAP IN LOWER QUADRANT OF PIPE. C ASM5.3
11. 3/4-INCH FLUORIDE INJECTION TAP. PIPED FROM CHEMICAL FEED SYSTEM. TAP IN LOWER QUADRANT OF PIPE. C ASM5.3
12. FINISHED WATER SAMPLE TAP IN THE VERTICAL PIPING BENEATH THE ELBOW.
13. CHEMICAL STORAGE TANK. SEE DETAIL B ASM5.3.
14. CHEMICAL FEED PUMP AND WALL MOUNTED CHEMICAL FEED PUMP STAND.
15. 2-INCH PVC CONDUIT TO CONVEY CHEMICAL TUBING.
16. #4@48" VERTICAL MASONRY REINFORCING, (TYP.)
17. PROVIDE (1)#5 VERTICAL MASONRY REINFORCING BAR AT CORE ADJACENT TO OPENING.
18. SKYLIGHT ABOVE PUMP BASE. SEE DETAIL. H ASM5.1 D ASM5.3
19. EMERGENCY CHEMICAL EYEWASH SHOWER STATION.
20. FINISHED WATER SAMPLE FAUCET ABOVE SERVICE SINK.
21. 4"X3" DOWNSPOUT TO DRAIN INTO STORM DRAIN PIPE, SEE SITE PLAN.
22. GROUT FULL ALL CMU CORES AT RATED WALLS.
23. MCC/SCC PAD A E5.1
24. MCJ-2 K ASM5.1
25. DOWNSPOUT W/ SPLASH PAD.

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FLOOR PLAN

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

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ASM1.2

GENERAL NOTES:

1. ROOF LOADS
   Lr = 20 PSF
   S = 25.4 PSF
   D= 10 PSF

2. PLANK LOADS
   L = 20 PSF
   D = 5 PSF (COLLATERAL)

KEY NOTES:

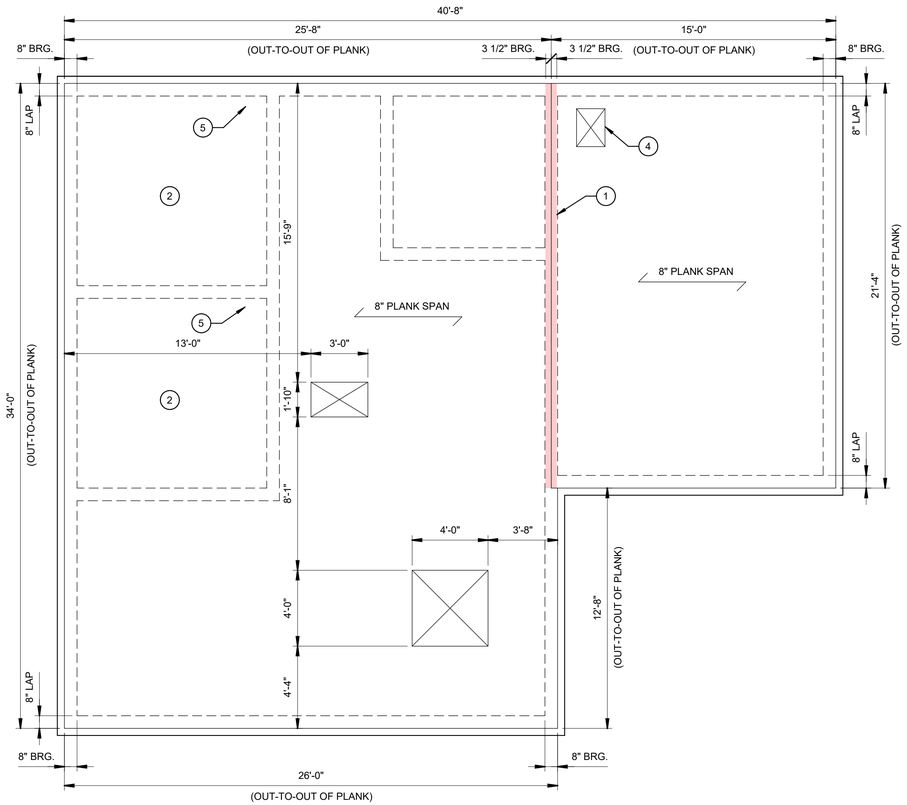
(1) 2X10 ROOF TRUSS BEARING. D+S = 554 PLF

(2) PLANK ABOVE FLOURIDE ROOM SHALL BE 2-HOUR FIRE-RATED.

(3) 2X6 STUD WALL ABOVE CMU BACKUP WALL.

(4) OPENING FOR HVAC EQUIPMENT. COORDINATE WITH MANUFACTURER AND LOCATION OF TRUSSES.

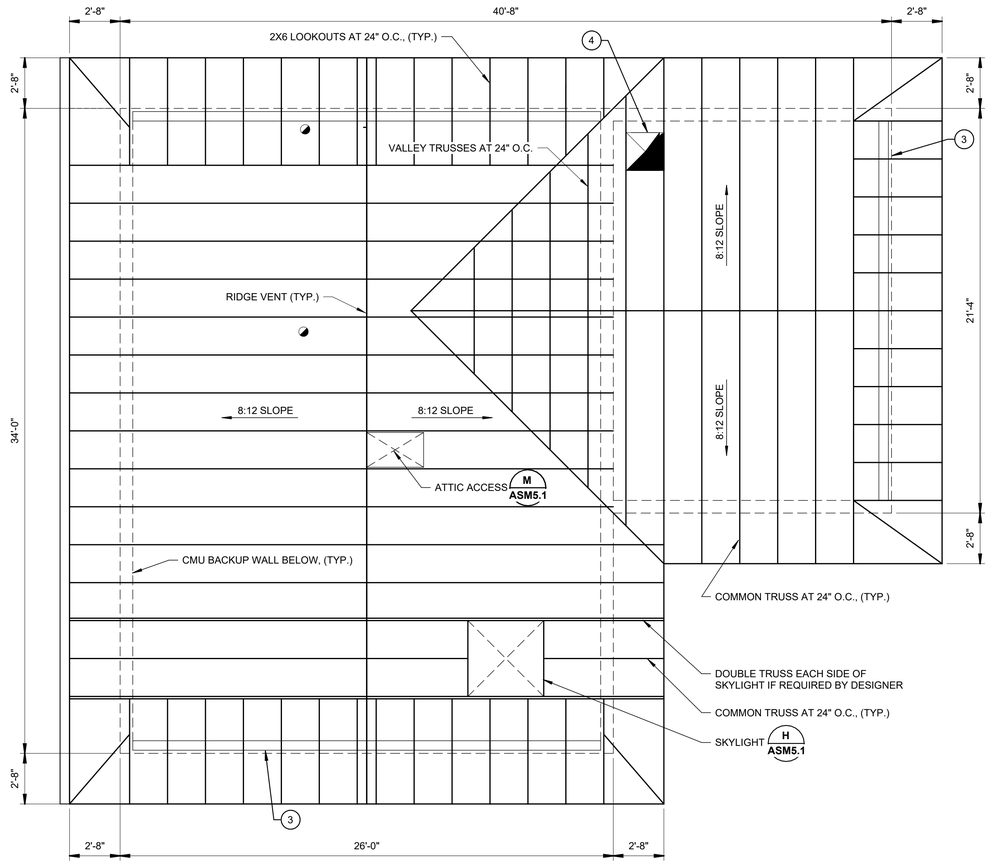
(5) ROUND DUCT PENETRATION THROUGH PRECAST PLANK. COORDINATE FINAL LOCATION WITH HVAC DRAWINGS.



PRECAST PLANK PLAN

0 1' 2' 4' 8'

N



ROOF FRAMING PLAN

0 1' 2' 4' 8'

N

NO.	REVISIONS	DATE:

PRECAST PLANK AND ROOF FRAMING PLAN

WELL NO. 6 WELL FACILITY
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WAUNAKEE, WISCONSIN

JOB NO.
1602.175

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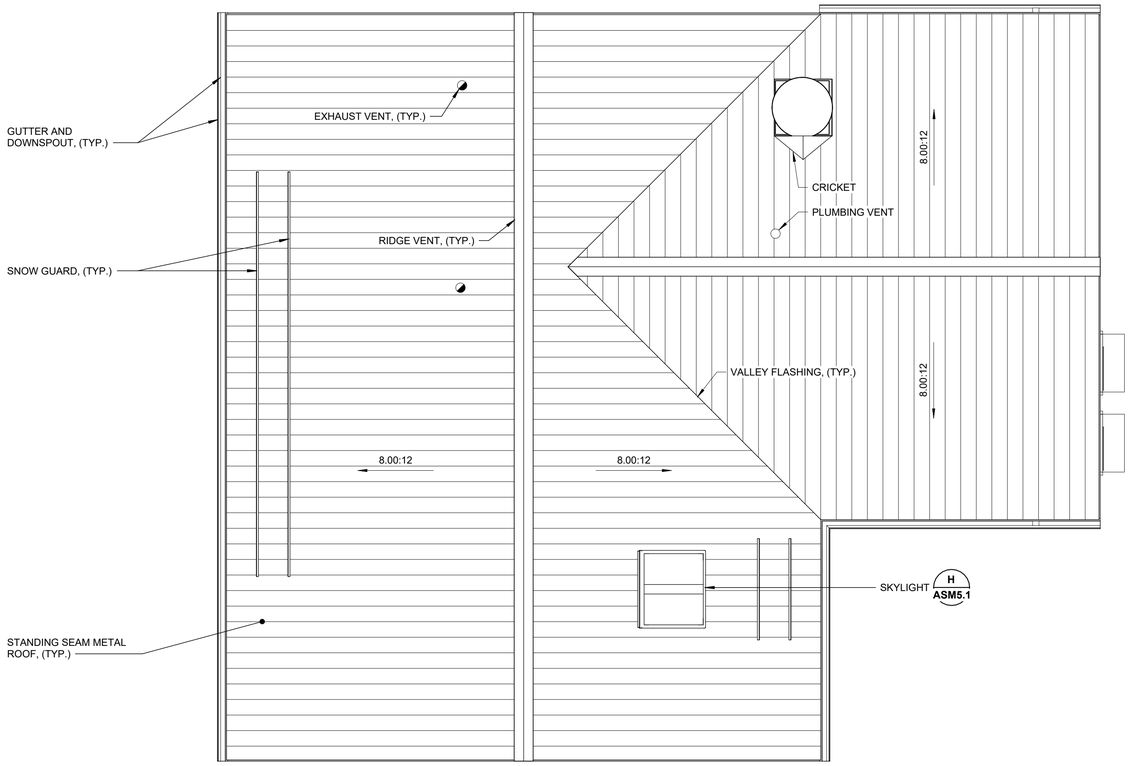
SHEET
18
ASM1.3



ROOF PLAN

0 1' 2' 4' 8'

N

DATE:

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ROOF PLAN

WELL NO. 6 WELL FACILITY
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WAUNAKEE, WISCONSIN

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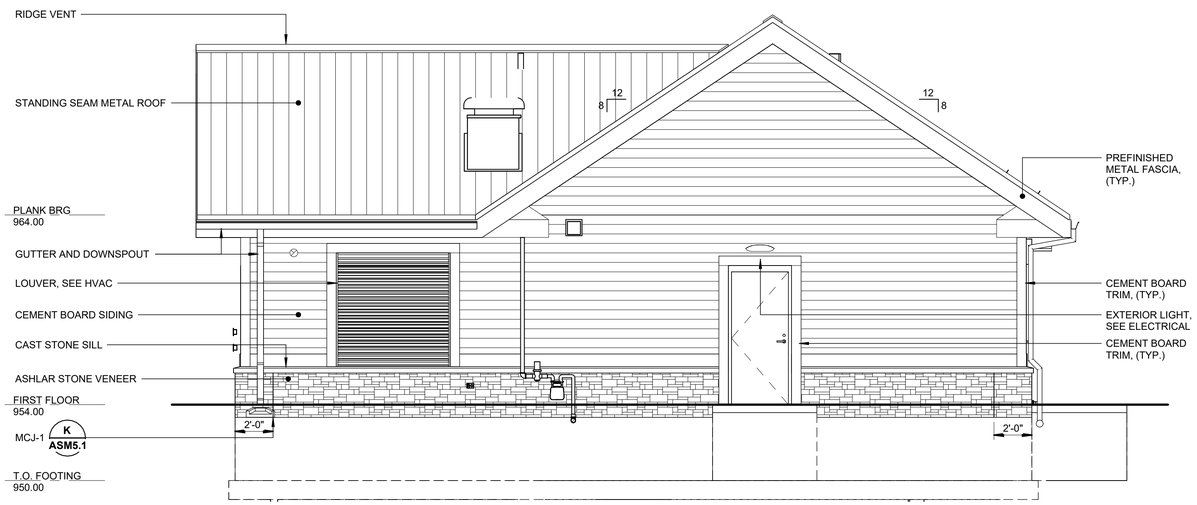
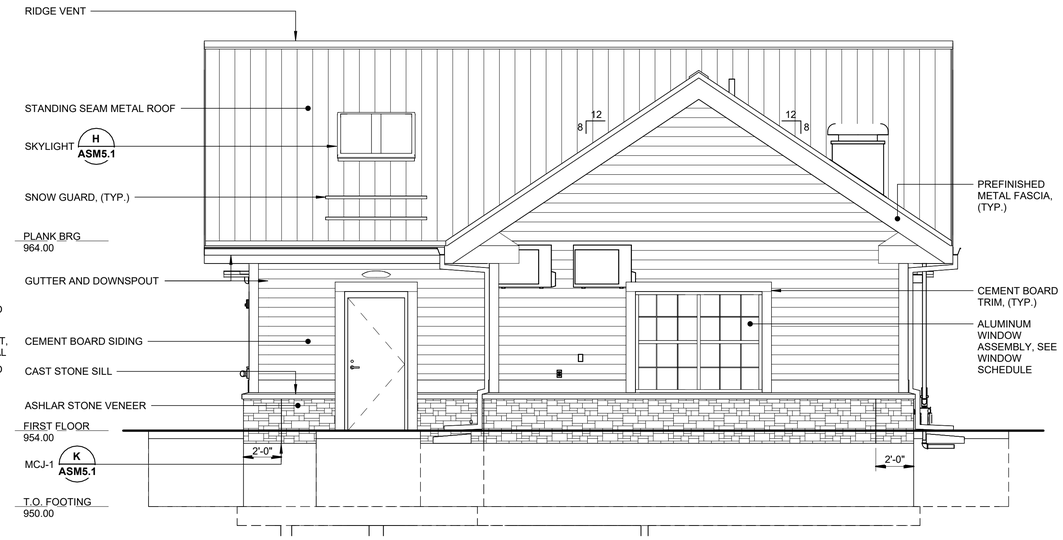
SHEET
19
ASM1.4



NORTH ELEVATION

0 1" 2" 4" 8"



EAST ELEVATION

0 1" 2" 4" 8"

SOUTH ELEVATION

0 1" 2" 4" 8"

WEST ELEVATION

0 1" 2" 4" 8"

DATE:
REVISIONS
NO.

BUILDING ELEVATIONS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

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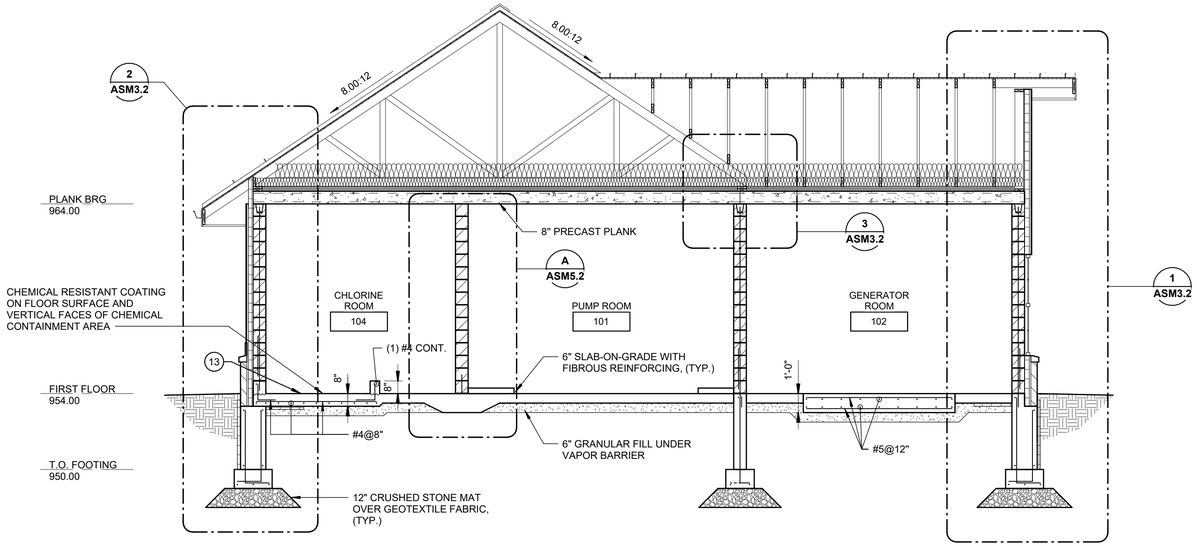
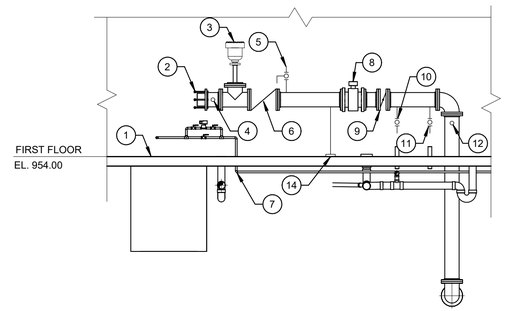
SHEET
20
ASM2.1



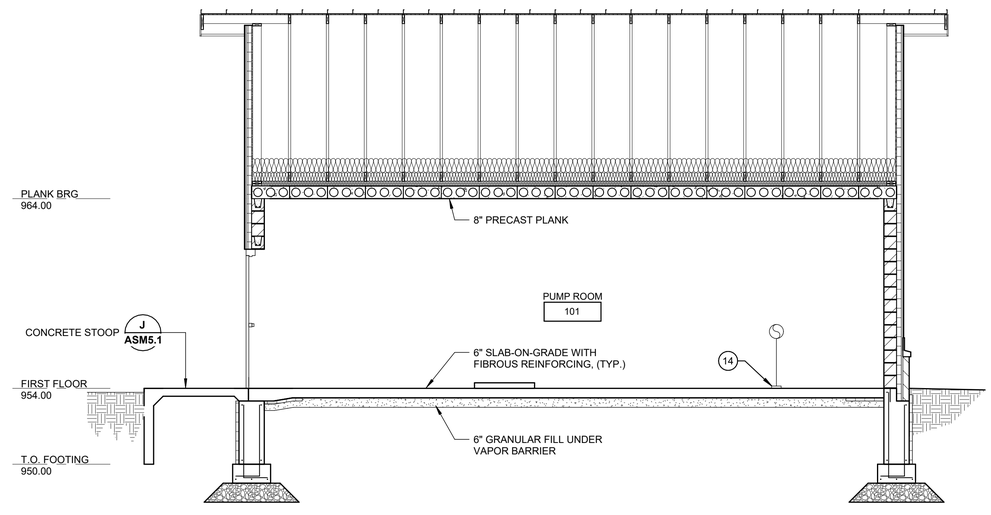
BUILDING SECTION 1 ASM3.1

0 1' 2' 4' 8'



BUILDING SECTION 3 ASM3.1

0 1' 2' 4' 8'



BUILDING SECTION 2 ASM3.1

0 1' 2' 4' 8'

KEY NOTES

1. WELL HEAD PER E ASM5.1. PROVIDE PUMP PRELUBE SYSTEM PER SPECIFICATIONS. COORDINATE CONNECTION LOCATION IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. SEE A ASM5.3 FOR DETAIL.
2. 8-INCH COUPLING.
3. 2-INCH COMBINATION AIR RELEASE AND VACUUM RELIEF VALVE. PROVIDE ISOLATION VALVE UPSTREAM OF AIR RELEASE VALVE, ROUTE DISCHARGE 24 INCHES ABOVE FINISHED FLOOR AND ABOVE HUB DRAIN WITH 24 STAINLESS STEEL MESH SCREEN.
4. RAW WATER SAMPLE TAP.
5. PRESSURE TRANSDUCER AND PRESSURE GAUGE. PROVIDE ISOLATION VALVE UPSTREAM OF PRESSURE GAUGE AND PRESSURE TRANSDUCER.
6. 8-INCH SWING CHECK VALVE.
7. PROVIDE PVC CARRIER PIPE FOR WATER SUPPLY PIPING UNDER GROUND TO PERMIT REMOVAL OF UNDERGROUND WATER SUPPLY. PROVIDE LONG SWEEP 90° ELBOWS.
8. 8-INCH MAGNETIC FLOW METER.
9. 8-INCH BUTTERFLY VALVE.
10. 1/2-INCH CHLORINE INJECTION TAP. PIPED FROM CHEMICAL FEED SYSTEM. TAP IN LOWER QUADRANT OF PIPE. C ASM5.3
11. 1/2-INCH FLUORIDE INJECTION TAP. PIPED FROM CHEMICAL FEED SYSTEM. TAP IN LOWER QUADRANT OF PIPE. C ASM5.3
12. FINISHED WATER SAMPLE TAP.
13. PROVIDE SIMILAR REINFORCING AT BOTH CHEMICAL CONTAINMENT AREAS.
14. PIPE SUPPORT EVERY 8 FEET AS SPECIFIED.

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BUILDING SECTIONS

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SHEET
21
ASM3.1

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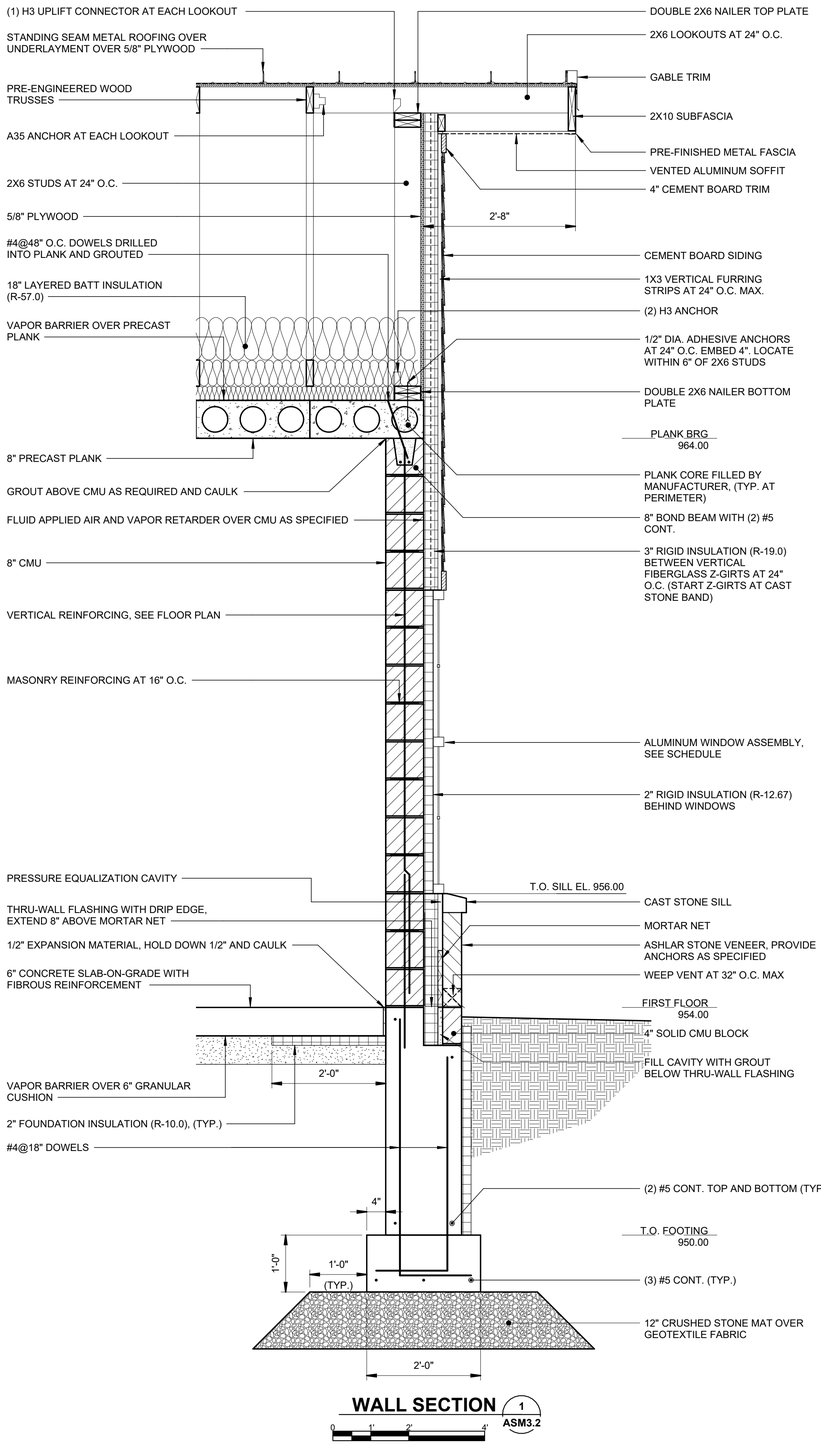

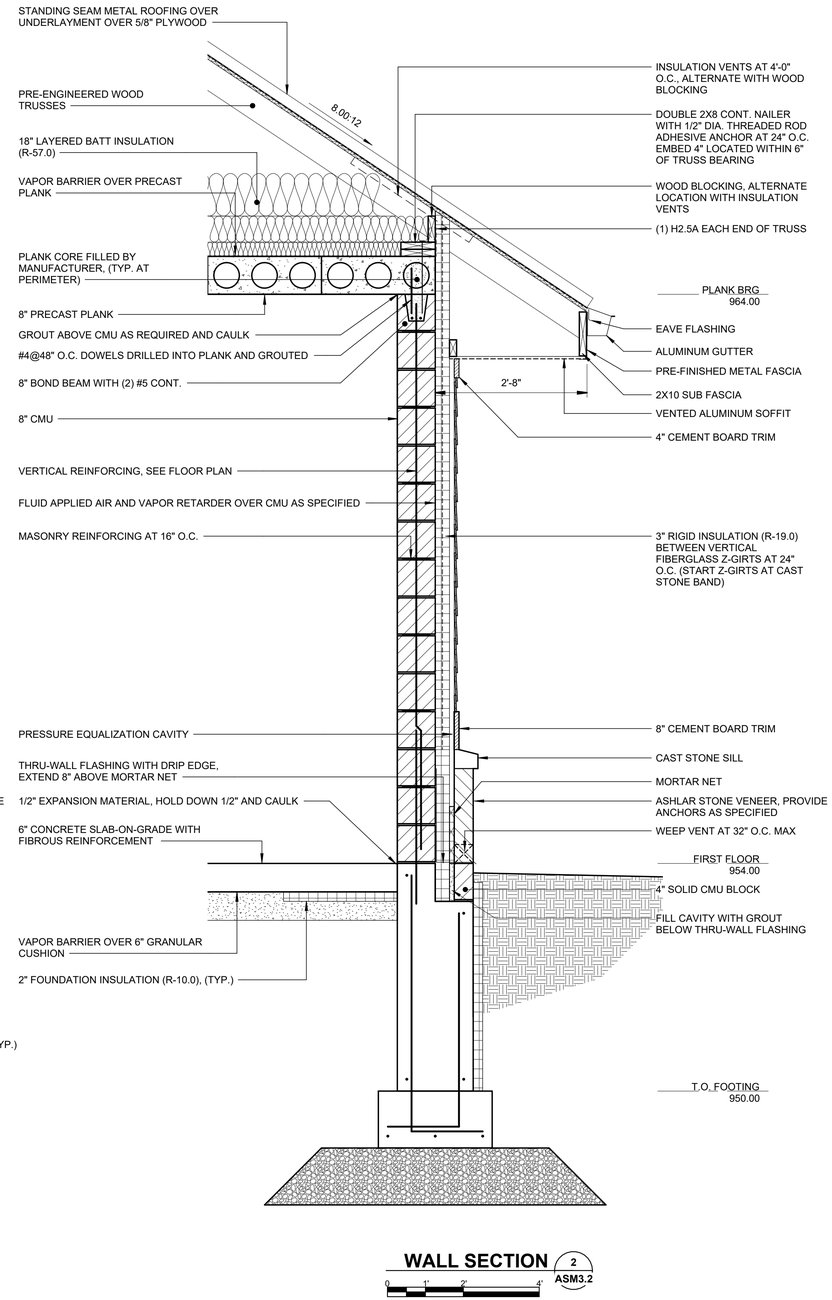

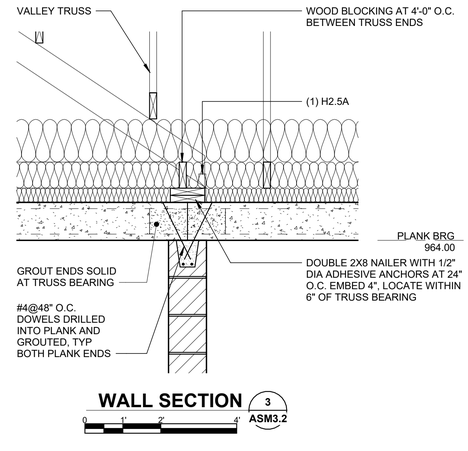

DATE:

REVISIONS

NO.

WALL SECTIONS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

PROJECT MGR.
MIKE FORSLUND

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SHEET
22
ASM3.2

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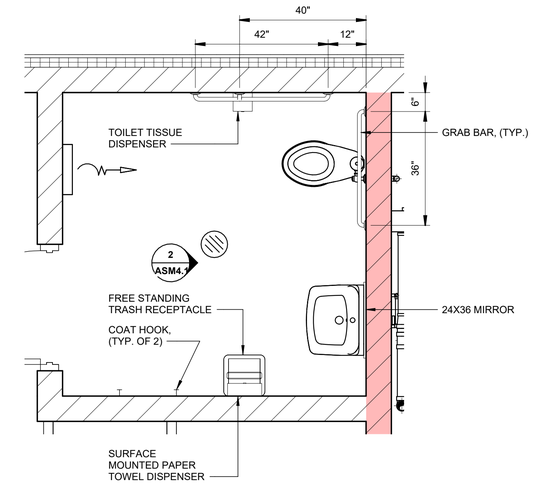
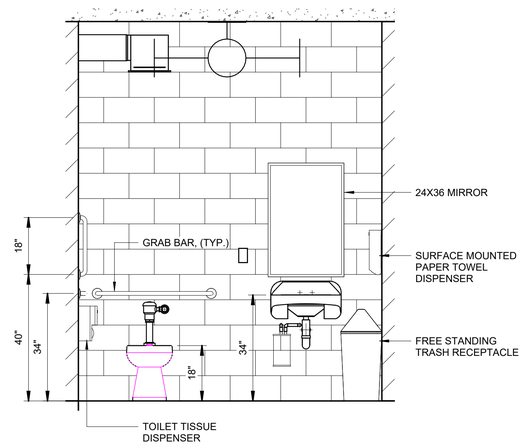


1 ASM4.1 RESTROOM 105 ENLARGED PLAN

0 1' 2' 4'



2 ASM4.1 RESTROOM 105 ELEVATION

0 1' 2' 4'

DATE:

REVISIONS

NO.

ENLARGED PLANS AND ELEVATIONS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
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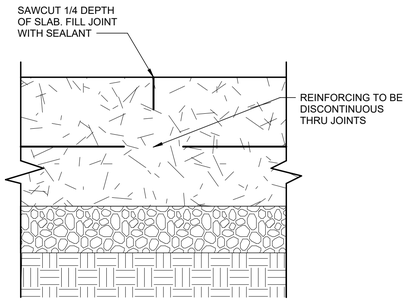
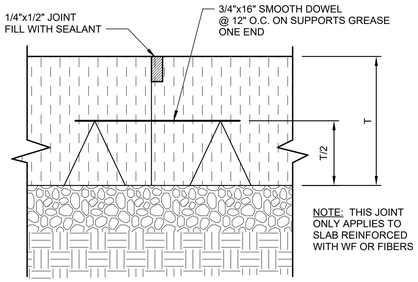
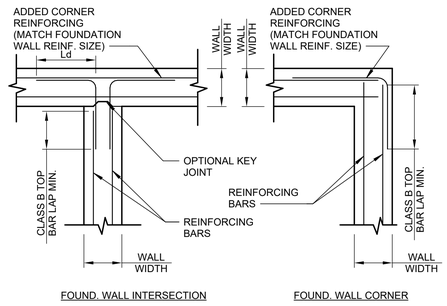
SHEET
23
ASM4.1



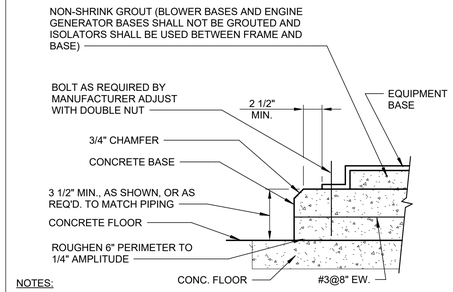
A ASM5.1 **SLAB SAWN JOINT** NO SCALE



B ASM5.1 **SLAB ON GRADE JOINT** NO SCALE



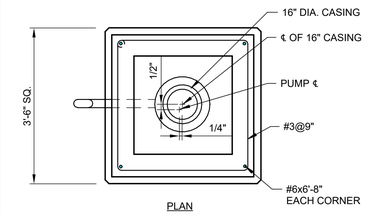
C ASM5.1 **FOUNDATION WALL CORNER REINFORCING** NO SCALE



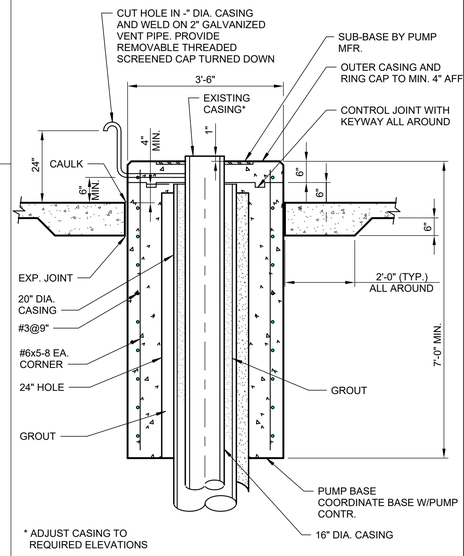
NOTES:

1. CONCRETE PAD BY CONTRACTOR SUPPLYING EQUIPMENT.
2. ANCHOR CONCRETE BASE TO FLOOR WITH 1/2" EXPANSION BOLTS @ 18" O.C., MINIMUM 4 PER PAD. IF CONCRETE PAD IS LESS THAN 10" HIGH, ANCHOR EQUIPMENT PAD DIRECTLY TO CONCRETE FLOOR.
3. APPLY BONDING AGENT TO FLOOR PRIOR TO PLACING CONCRETE PAD.

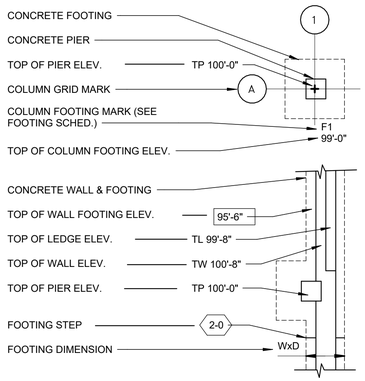
D ASM5.1 **CONCRETE EQUIPMENT BASE** NO SCALE



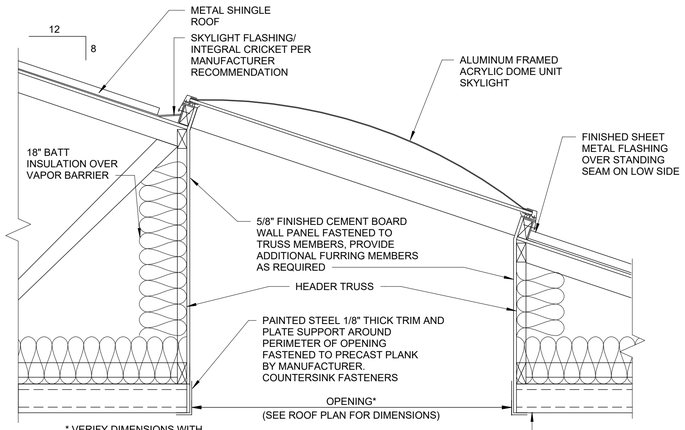
PLAN



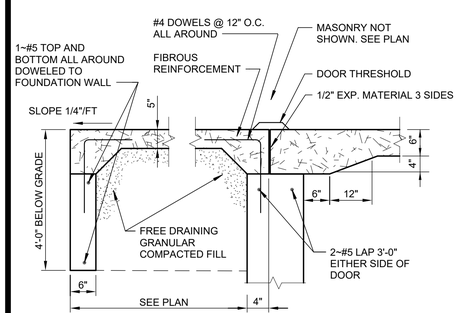
E ASM5.1 **WELL HEAD (LINE-SHAFT PUMP)** NO SCALE



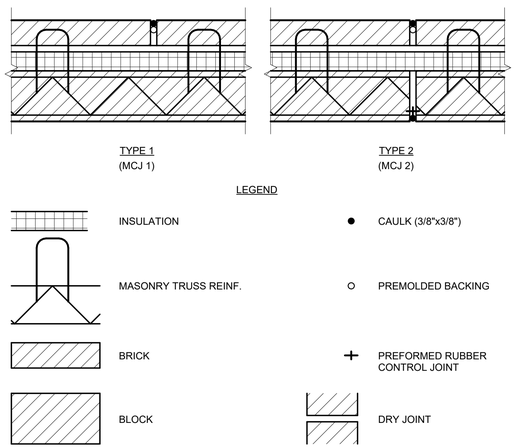
G ASM5.1 **FOUNDATION LEGEND** NO SCALE



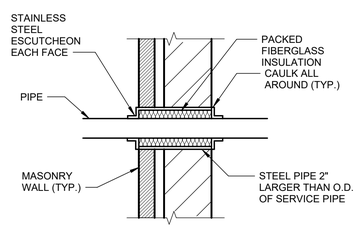
H ASM5.1 **SKYLIGHT DETAIL** NO SCALE



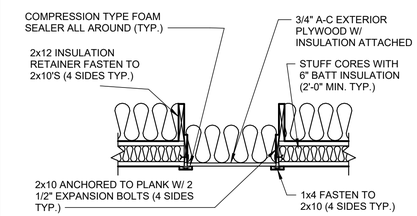
J ASM5.1 **CONCRETE STOOP** NO SCALE



K ASM5.1 **MASONRY CONTROL JOINT** NO SCALE



L ASM5.1 **S4-03-MASONARY SLEEVE** NO SCALE



NOTE: PLANK SUPPORT ANGLES (NOT SHOWN)

M ASM5.1 **ATTIC ACCESS** NO SCALE

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DETAILS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
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SHEET
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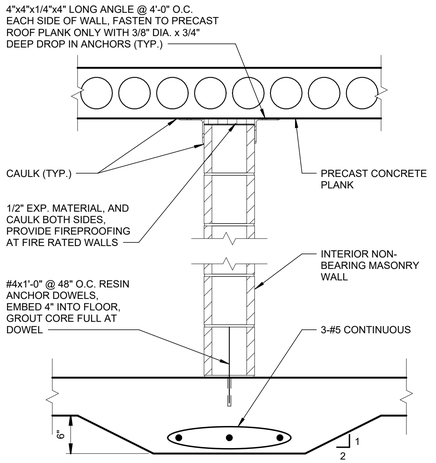
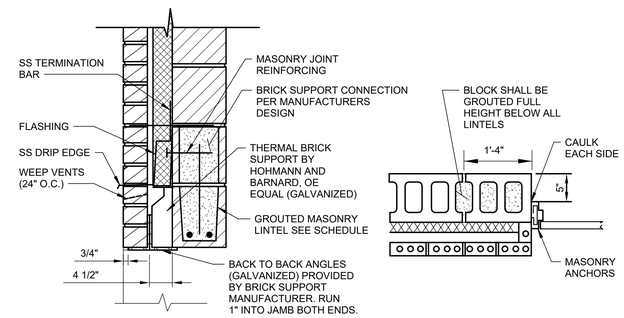
ASM5.1



A ASM5.2 **INTERIOR NON-BEARING WALL** NO SCALE

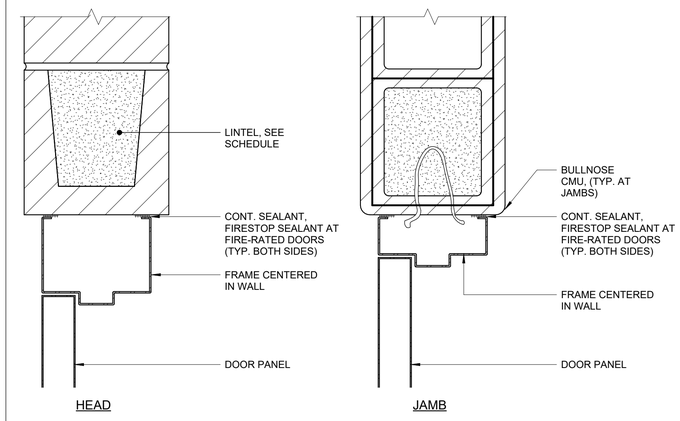


LINTEL W/BRICK SUPPORT DOOR JAMB

MISCELLANEOUS LINTELS		
TYPE B-1 (SEE NOTE 5)	LINTEL BLOCK	2~#5 CONTINUOUS
TYPE B-2 (SEE NOTE 5)	LINTEL BLOCK	2-BLOCK COURSES GROUTED #4@16" 2~#5 CONTINUOUS

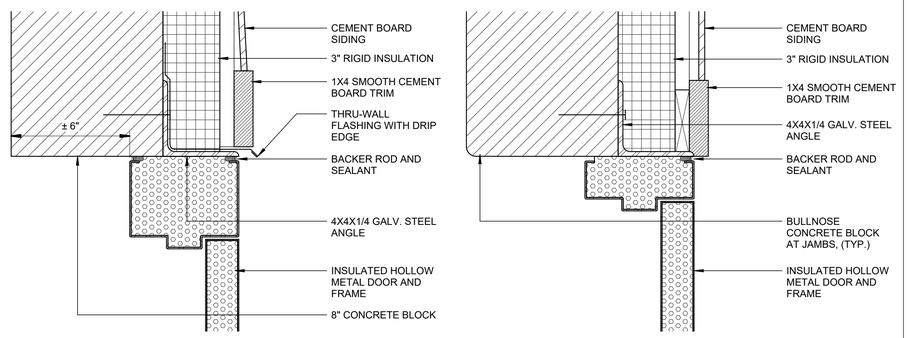
NOTES:
1. LINTELS ARE REQUIRED OVER ALL MASONRY OPENINGS.
2. LINTELS SHALL HAVE A MINIMUM BEARING OF 8".
3. GROUT MASONRY FULL 16" EACH SIDE OF OPENINGS UNDER ALL LINTELS TO FLOOR.
4. LINTEL BLOCK WIDTH SHALL MATCH YPICAL BLOCK WIDTH OF WALL WHERE OPENING IS LOCATED.
5. PROVIDE BRICK SUPPORTS AT ALL EXTERIOR OPENINGS. SEE DETAIL AT LEFT.

B ASM5.2 **MASONRY LINTEL** NO SCALE



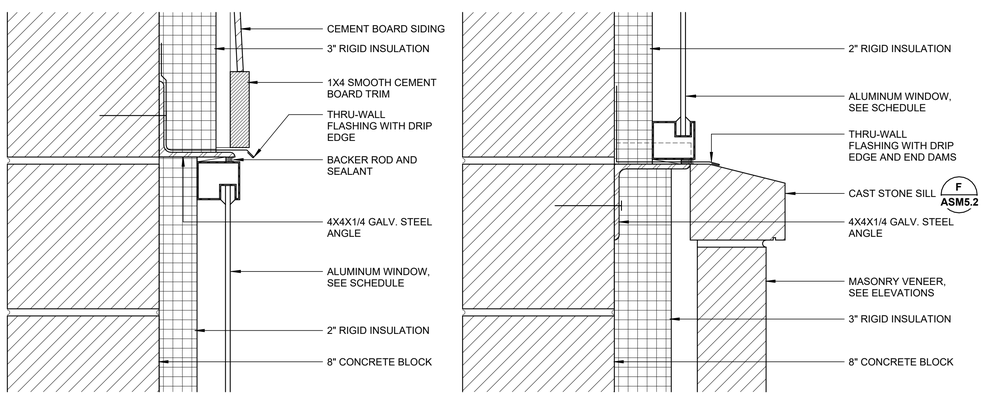
HEAD JAMB

C ASM5.2 **INTERIOR PERSONNEL DOOR AT CMU WALL** NO SCALE



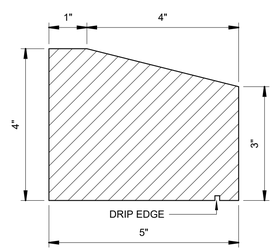
HEAD JAMB

D ASM5.2 **EXTERIOR DOOR DETAILS** NO SCALE



HEAD SILL JAMB

E ASM5.2 **WINDOW DETAIL** NO SCALE



F ASM5.2 **CAST STONE SILL** NO SCALE

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WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
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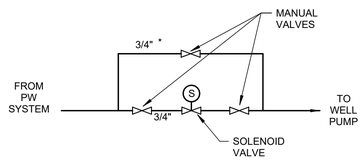
SHEET 25 ASM5.2



* VERIFY SIZE WITH PUMP MANUFACTURER

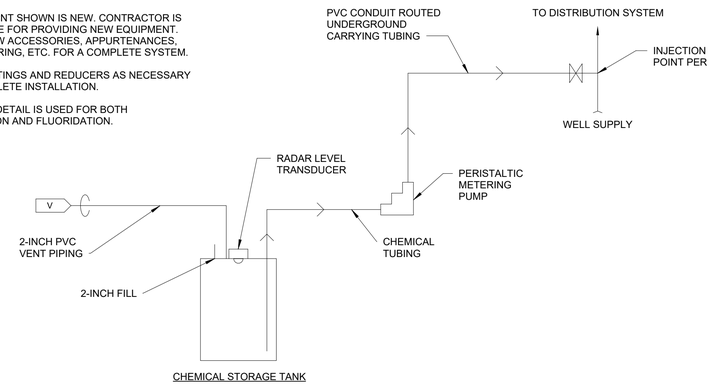
- CHANGE SIZE AS REQUIRED

A PRELUBRICATION PIPING SCHEMATIC

ASM5.3 NO SCALE

GENERAL NOTES:

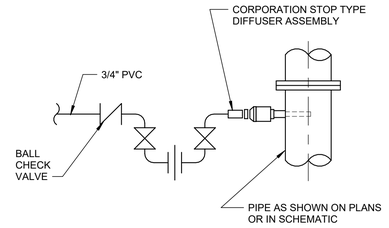
1. ALL EQUIPMENT SHOWN IS NEW. CONTRACTOR IS RESPONSIBLE FOR PROVIDING NEW EQUIPMENT. PROVIDE NEW ACCESSORIES, APPURTENANCES, FITTINGS, WIRING, ETC. FOR A COMPLETE SYSTEM.
2. PROVIDE FITTINGS AND REDUCERS AS NECESSARY FOR A COMPLETE INSTALLATION.
3. SCHEMATIC DETAIL IS USED FOR BOTH CHLORINATION AND FLUORIDATION.



CHEMICAL STORAGE TANK

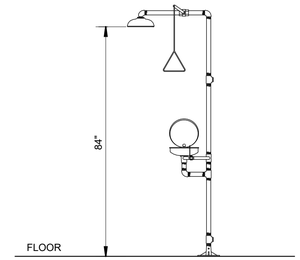
B CHEMICAL SCHEMATIC

ASM5.3 NO SCALE



C CORPORATION STOP

ASM5.3 NO SCALE



D EMERGENCY EYE WASH & SHOWER

ASM5.3 NO SCALE

DATE:

REVISIONS

NO.

DETAILS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

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SHEET
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ASM5.3

STRUCTURAL DESIGN CRITERIA

DESIGN CODES	BUILDING CODE		2015 IBC
	CONCRETE DESIGN CODE		ACI 318-14
	MASONRY DESIGN CODE		ACI 350-13
	OCCUPANCY CATEGORY		III
FLOOR LIVE LOAD	UNIFORMLY DISTRIBUTED (PSF)		100
	CONCENTRATED (LBS)		EQUIPMENT OPERATING WEIGHTS VARY
	IMPACT		FROM EQUIP. MFR.
	REDUCTION		PER IBC CODE
ROOF LIVE LOAD	MINIMUM ROOF LIVE LOAD (PSF)		20
	GROUND SNOW LOAD (Pg) (PSF)		30
	FLAT ROOF SNOW LOAD (Pf)		N/A
	SLOPED ROOF SNOW LOAD		25.4
	SNOW EXPOSURE FACTOR (Ce)		1.0
	SNOW LOAD IMPORTANCE FACTOR (Is)		1.1
	THERMAL FACTOR (Ct) -		1.0
	DRIFT LOADS		PER IBC CODE
WIND LOAD	BASIC 3-SECOND GUST WIND SPEED (MPH)		120
	WIND IMPORTANCE FACTOR (Iw)		1
	WIND EXPOSURE		C
	INTERNAL PRESSURE COEFFICIENT (GCpi)		0.18
	COMPONENTS AND CLADDING DESIGN WIND PRESSURE (PSF)		PER IBC CODE
EARTHQUAKE DESIGN DATA	SEISMIC IMPORTANCE FACTOR (IE)		1.25
	SITE CLASS		D
	SPECTRAL RESPONSE COEFFICIENTS	SDS	0.064
		SD1	0.05
	SEISMIC DESIGN CATEGORY		C
	BASIC SEISMIC FORCE RESISTING SYSTEM (ALL CONCRETE BLOCK BUILDINGS)		ORDINARY REINFORCED MASONRY SHEAR WALLS
	RESPONSE MODIFICATION COEFFICIENT (R)		2
	DESIGN BASE SHEAR		.04W
	ANALYSIS PROCEDURE		EQUIVALENT LATERAL FORCE ANALYSIS
OTHER LOADS	LATERAL EARTH PRESSURE (PCF EQUIV. FLUID)	DRY - ACTIVE PRESSURE	37
		DRY - AT-REST PRESSURE	56
		BELOW WATER TABLE	80

GENERAL STRUCTURAL NOTES

1. FOR DOOR, WINDOW, LINTEL, AND ROOM FINISH SCHEDULES SEE THIS SHEET
2. PROVIDE LINTELS AS PER DOOR AND WINDOW SCHEDULES AND PER LINTEL SCHEDULES ON THIS SHEET
3. SEE (E/C5.1) FOR FILL AND BACKFILL REQUIREMENTS
4. PROVIDE MINIMUM LAP LENGTHS AS SHOWN ON LAP LENGTH SCHEDULE ON THIS SHEET
5. PROVIDE MINIMUM CLEAR COVER OVER REINFORCING STEEL PER THE TABLE ON THIS SHEET.
6. SEE (G/ASM5.1) FOR FOUNDATION LEGEND
7. HORIZONTAL REINFORCING BARS IN WALLS SHALL BE PLACED OUTSIDE OF VERTICAL BARS UNLESS SHOWN OTHERWISE
8. FOR HORIZONTAL REINFORCING AT FOUNDATION WALL CORNERS, SEE (C/ASM5.1)
9. UNLESS NOTED OTHERWISE, PROVIDE #4@48" VERTICAL REINFORCING FULL HEIGHT CENTERED IN CMU WALLS. LAP BARS 2'-0". PROVIDE #4@48"x2'-6" LONG DRILLED ADHESIVE DOWELS EMBEDDED 6" INTO SLAB OR FOUNDATION WALL. EXTEND BARS 6" INTO BOND BEAM AT TOP OF WALL.
10. UNLESS NOTED OTHERWISE, PROVIDE VERTICAL REINFORCING BARS FULL HEIGHT CENTERED IN CMU CORES ON EACH SIDE OF OPENINGS 3'-0" AND GREATER IN WIDTH. LAP BARS 2'-0"/ PROVIDE DRILLED ADHESIVE DOWELS EMBEDDED 6" INTO SLAB OR FOUNDATION WALL. EXTEND BARS 6" INTO BOND BEAM AT TOP OF WALL. REINFORCING SIZE PER PLAN.
11. WHERE ADHESIVE ANCHOR DOWELS ARE CALLED OUT ON DRAWINGS, ROUGHEN JOINT SURFACE TO 1/4" AMPLITUDE MINIMUM, PROVIDE BONDING AGENT AND HYDROPHILIC WATERSTOP AND EMBED DOWELS 6" MIN INTO EXISTING CONCRETE UNLESS NOTED OTHERWISE.
12. WHERE PIPING PASSES THROUGH MASONRY WALLS, PROVIDE SLEEVE PER (L/ASM5.1)
13. WHERE PIPING PASSES BENEATH FOUNDATION WALLS, ENCASE PER (F/ASM5.1)

MASONRY LAP LENGTHS FOR...

BAR SIZE	8" CMU	12" CMU
#3	1'-3"	1'-3"
#4	1'-3"	1'-3"
#5	1'-3"	1'-3"
#6	2'-3"	2'-3"
#7	3'-3"	2'-3"

NOTES:

1. USE LAP LENGTHS IN THIS TABLE UNLESS NOTED...
2. TABLE DOES NOT APPLY FOR COLUMNS.
3. TABLE DOES NOT APPLY FOR MULTIPLE BARS PER CELL.
4. LAP LENGTHS FOR CMU ARE BASED ON f'm = 2500 PSI.

ALLOWABLE STRESSES AND LOADS

MATERIAL	MATERIAL STRESS, DESIGNATION, OR ALLOWABLE LOAD
CIP CONCRETE	fc' = 4000 psi
CONCRETE BLOCK	fm' = 2500 psi
REINFORCING STEEL (GRADE 60)	Fy = 60 ksi
STRUCTURAL STEEL	Fy = 36 ksi or 50 ksi
STRUCTURAL ALUMINUM (6061-T6)	Fy = 35 ksi
WELDING ELECTRODES	E70XX
ANCHOR BOLTS	ASTM F1554 GRADE 36
CONNECTION BOLTS	ASTM A325
ALLOWABLE SOIL BEARING (NET):	5000 PSF

CLEAR COVER TO REINFORCING BARS

ITEM	MINIMUM CLEAR COVER
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH, LIQUID, OR WEATHER	2"
SLABS, WALLS, OR JOISTS NOT EXPOSED TO WEATHER, LIQUID, OR IN CONTACT WITH GROUND	1"
BEAMS AND COLUMNS NOT EXPOSED TO WEATHER, LIQUID, OR IN CONTACT WITH GROUND	1 1/2"

NOTES:

1. CLEAR COVER IS MEASURED FROM MEMBER FACE TO NEAREST EDGE OF REINFORCING BAR
2. CLEAR COVER FOR BEAMS AND COLUMNS IS MEASURED TO NEAREST EDGE OF STIRRUPS.
3. FOR WALLS AND SLABS WITH SINGLE MAT OF REINFORCING, PLACE REBAR WHERE SHOWN ON THE DRWGS. WHERE COVER IS NOT INDICATED, CENTER SINGLE MAT OF REINFORCING IN WALL OR SLAB.

MINIMUM LAP LENGTHS FOR REINFORCING BARS

	VERT. BARS	HORIZ. BARS	TOP MAT BARS	BOTTOM MAT BARS
#4	1'-6"	1'-10"	1'-10"	1'-6"
#5	1'-9"	2'-2"	2'-2"	1'-9"
#6	2'-0"	2'-7"	2'-7"	2'-0"
#7	2'-11"	3'-8"	3'-8"	2'-11"
#8	3'-3"	4'-2"	4'-2"	3'-3"
#9	4'-0"	5'-2"	5'-2"	4'-0"
#10	4'-11"	6'-4"	6'-4"	4'-11"
#11	5'-10"	7'-8"	7'-8"	5'-10"

NOTES:

1. WHERE TWO BARS OF DIFFERENT SIZE ARE LAPPED, USE LAP LENGTH FOR SMALLER...
2. USE LAP LENGTHS IN THIS TABLE WHERE LAP LENGTH IS NOT SHOWN ON DRAWING.

LINTEL SCHEDULE

LOCATION	OPENING TYPE	OPENING CLEAR WIDTH(S)	LINTEL TYPE
102 - GENERATOR ROOM			
NORTH EAST WALL	LOUVER	6'-0"	B-2
SOUTHWEST WALL	LOUVER	8'-0"	B-2

NOTES:

1. SEE DOOR SCHEDULE FOR LINTELS AT DOOR OPENINGS
2. SEE (B/ASM5.2) FOR LINTEL DETAIL

DATE:
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ARCHITECTURAL AND STRUCTURAL SCHEDULES

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

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ASM6.1

PERSONNEL DOOR SCHEDULE

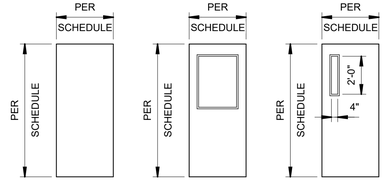
DOOR NUMBER	SIZE (W x H)	DOOR					FRAME		FIRE RATING	HARDWARE GROUP		LINTEL TYPE	DETAILS			NOTES
		MATERIAL	TYPE		SWING		MATERIAL	TYPE		ACTIVE	INACTIVE		HEAD	JAMB	SILL	
			ACTIVE	INACTIVE	ACTIVE	INACTIVE										
101A	(2)2'-10"x7'-0"	IHM	F	F	LHR	RHR	IHM	3	--	1	3	B-2	D/ASM5.2	D/ASM5.2	J/ASM5.1	
101B	(1)3'-0"x7'-0"	HM	F		RHR	--	HM	3	--	1	--	B-2	D/ASM5.2	D/ASM5.2	J/ASM5.1	
101C	(1)3'-0"x7'-0"	IHM	F		LHR	--	IHM	3	--	1	--	B-2	D/ASM5.2	D/ASM5.2	J/ASM5.1	
101D	(1)3'-0"x7'-0"	IHM	F		LHR	--	IHM	3	--	1	--	B-2	D/ASM5.2	D/ASM5.2	J/ASM5.1	
102A	(1)3'-0"x7'-0"	HM	F		RHR	--	HM	3	--	4	--	B-2	C/ASM5.2	C/ASM5.2	--	
103A	(1)3'-0"x7'-0"	FRP	F		LHR	--	FRP	5	--	2	--	B-2	D/ASM5.2	D/ASM5.2	J/ASM5.1	2
104A	(1)3'-0"x7'-0"	FRP	F		LHR	--	FRP	5	--	2	--	B-2	D/ASM5.2	D/ASM5.2	J/ASM5.1	2
105A	(1)3'-0"x7'-0"	HM	F		RHR	--	HM	3	--	5	--	B-1	C/ASM5.2	C/ASM5.2	--	1

LEGEND:

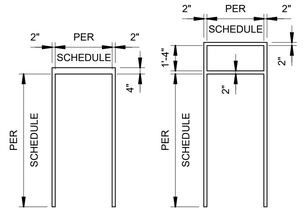
MATERIAL		DOOR TYPE		DOOR SWING	
HM	HOLLOW METAL	F	FLUSH	LH	LEFT HAND
IHM	INSULATED HOLLOW METAL	HG	HALF GLASS	RH	RIGHT HAND
FRP	FIBERGLASS	NG	NARROW GLASS	LHR	LEFT HAND REVERSE
WD	WOOD	SG	SQUARE GLASS	RHR	RIGHT HAND REVERSE
		FG	FULL GLASS		

NOTES:

1. PROVIDE 1" UNDERCUT ON DOOR.
2. PROVIDE LOUVER IN TRANSOM ABOVE DOOR. COORDINATE WITH HVAC.



PERSONNEL DOOR TYPES
NO SCALE



METAL FRAME TYPES
NO SCALE

WINDOW SCHEDULE

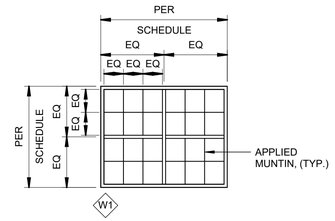
NUMBER	SIZE (WxH)	SILL ELEVATION	WINDOW TYPE	FRAME MATERIAL	GLAZING TYPE	FIRE RATING	LINTEL TYPE	DETAILS			NOTES
								HEAD	SILL	JAMB	
W1	6'-8"x5'-4"	956'-0"	FIXED	AL	SPAN	--	--	E/ASM5.2	E/ASM5.2	E/ASM5.2	

LEGEND:

MATERIAL		GLAZING TYPE	
AL	ALUMINUM	SPAN	SPANDREL GLASS

NOTES:

1. XXX.



WINDOW TYPES
NO SCALE

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL				CEILING		NOTES
				NORTH	EAST	SOUTH	WEST	TYPE	HEIGHT	
101	PUMP ROOM	F1	B1	W1	W1	W1	W1	C1	10'-0"	
102	GENERATOR ROOM	F1	B1	W2	W2	W2	W2	C1	10'-0"	
103	FLUORIDE ROOM	F1	B1	W1	W1	W1	W1	C1	10'-0"	1
104	CHLORINE ROOM	F1	B1	W1	W1	W1	W1	C1	10'-0"	1
105	RESTROOM	F1	B1	W1	W1	W1	W1	C1	10'-0"	

LEGEND:

FLOOR		BASE		WALL		CEILING	
CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION
F1	SEALED CONCRETE	B1	NONE	W1	PAINT CONCRETE BLOCK	C1	PAINT PRECAST PLANK
				W2	PAINT CONCRETE SOUND-ABSORBTIVE BLOCK		

NOTES:

1. COAT CONTAINMENT AREA FLOOR AND CURBS WITH CHEMICAL RESISTANT COATING.

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ARCHITECTURAL SCHEDULES

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

PROJECT MGR.
MIKE FORSLUND

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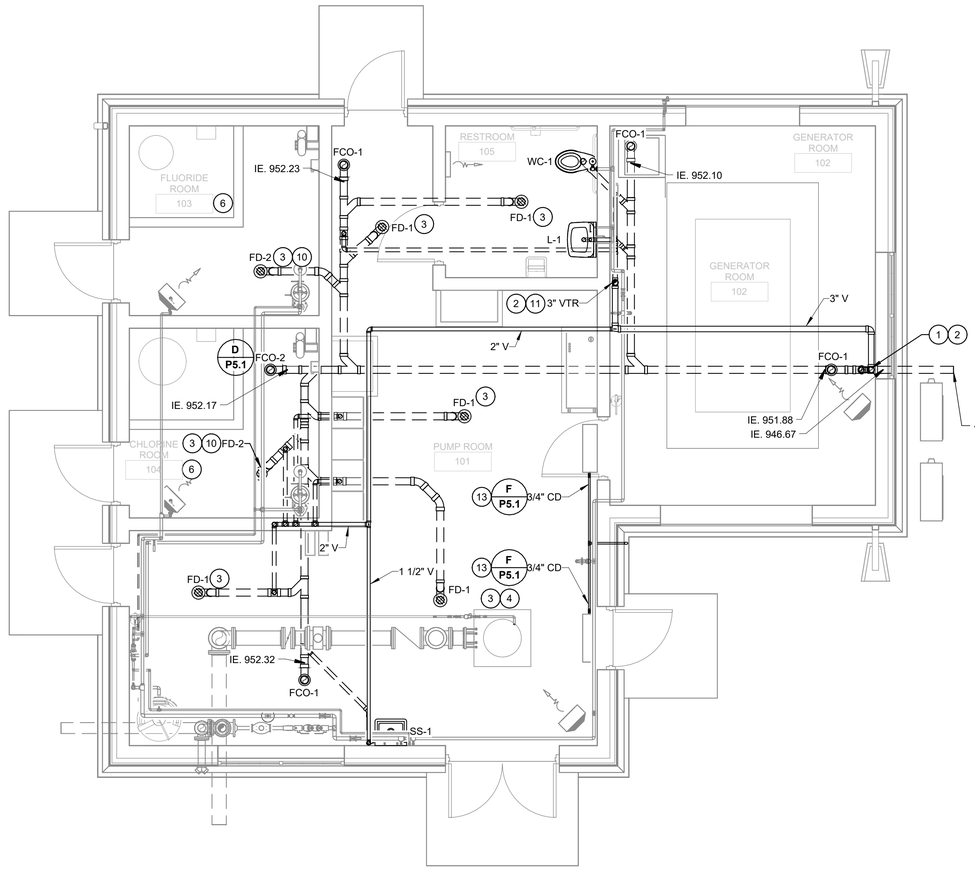
28
ASM6.2

GENERAL NOTES:

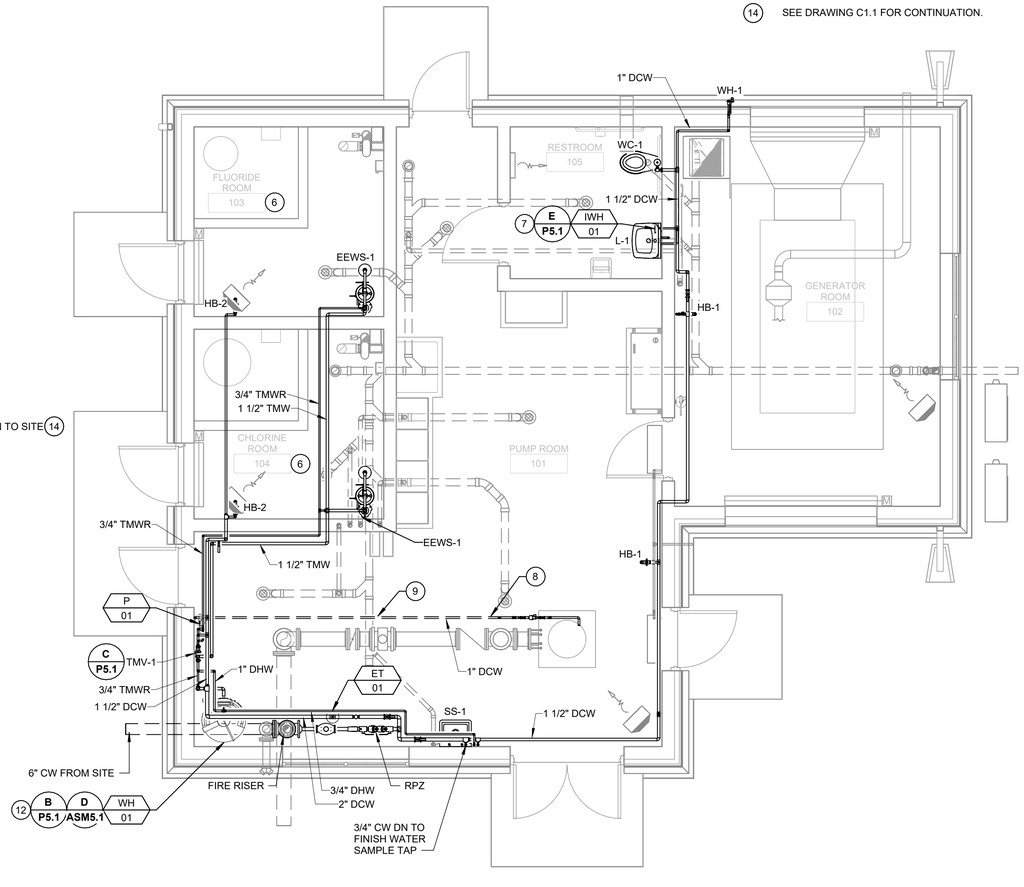
1. SEE DRAWING P0.1 FOR PLUMBING GENERAL NOTES.

KEY NOTES:

1. AT WALL, ELBOW DOWN TO I.E. = 946.67 AND CONTINUE OUT OF BUILDING. PROVIDE 3" VENT AT ELBOW.
2. ROUTE VENT PIPE UP INTO ATTIC SPACE. IN ATTIC, CONNECT TO OTHER VENTS AND ROUTE ONE COMMON VENT UP THROUGH ROOF. SEE DRAWING P7.1 FOR MORE INFORMATION.
3. PROVIDE TRAP GUARD AT FLOOR DRAIN.
4. OTHER THAN THIS DRAIN, NO OTHER FLOOR DRAINS OR SANITARY PIPING SHALL BE LOCATED WITHIN 8'-0" OF WELL HEAD.
5. ROUTE VENT UP TO 3'-2" AFF BEFORE TYING INTO OTHER VENT PIPING.
6. EQUIPMENT AND ACCESSORIES SERVING AND LOCATED WITHIN THIS ROOM SHALL BE SUITABLE FOR CORROSIVE (NEMA 4X) ENVIRONMENTS. ALL WATER SUPPLY PIPING SHALL BE SCH 40 CPVC.
7. ROUTE CW TO IWH-1 BELOW LAVATORY.
8. WELL PUMP PRELUBE INCLUDING SOLENOID VALVE AND BYPASS ARRANGEMENT. SEE DETAIL A / ASM5.3
9. ROUTE 1" CW UNDERGROUND TO WELL HEAD.
10. INSTALL REMOVABLE PLUG AT CHEMICAL ROOM DRAINS, SUITABLE FOR CORROSIVE ENVIRONMENTS.
11. AT VENT TERMINATION ABOVE ROOF, PROVIDE RAIN HOOD.
12. PROVIDE CONCENTRIC VENTING KIT WITH WATER HEATER AND ROUTE THROUGH SOUTH WALL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
13. ROUTE CONDENSATE TO BUILDING EXTERIOR. BEFORE EXITING BUILDING, COMBINE WITH OTHER SPLIT SYSTEM CONDENSATE DRAIN AND ROUTE DN TO 6" AFF.
14. SEE DRAWING C1.1 FOR CONTINUATION.



WASTE AND VENT PLAN



WATER SUPPLY PLAN

REVISIONS

NO.	DATE:

PLUMBING PLANS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO. 1602.175

PROJECT MGR. MIKE FORSLUND

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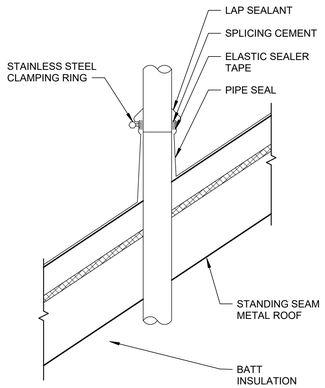
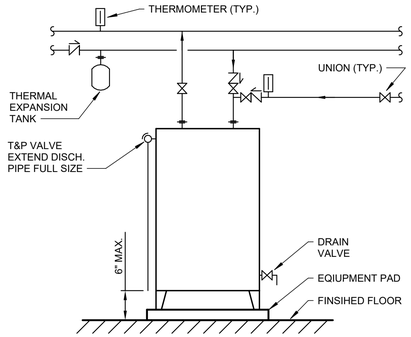
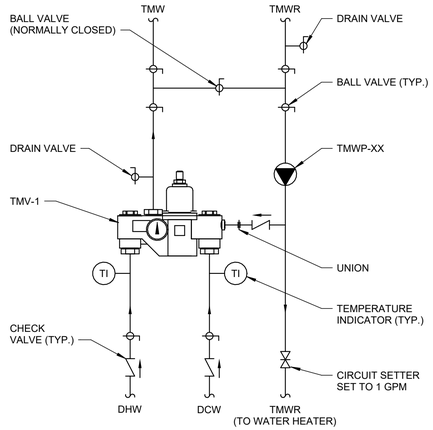
SHEET 29 P1.1



A / P5.1 COLD PIPE ROOF PENETRATION
NO SCALE

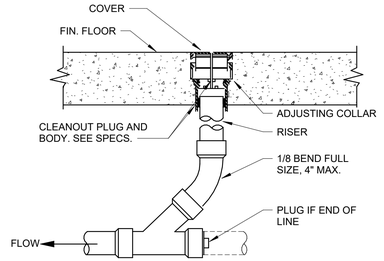


B / P5.1 WATER HEATER
NO SCALE

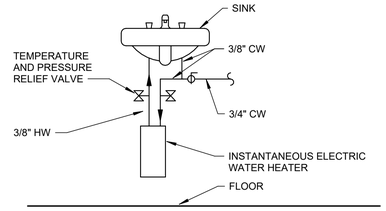


PROVIDE WALL MOUNTED SUPPORT STRUCTURE FOR MIXING VALVE ASSEMBLY.

C / P5.1 RECIRCULATION STATION DETAIL
NO SCALE



D / P5.1 FLOOR CLEANOUT
NO SCALE



E / P5.1 TYPICAL INSTANTANEOUS ELECTRIC WATER HEATER CONNECTION
NO SCALE

* H= FAN INLET PRESSURE + 1" W.C.

F / P5.1 CONDENSATE DRAIN
NO SCALE

G / P5.1 PIPE HANGERS
NO SCALE

REVISIONS

NO.	DATE:

PLUMBING DETAILS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
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P5.1

PUMP SCHEDULE

UNIT NO.	LOCATION	SERVICE	TYPE	BELL & GOSSETT MODEL NO.	FLOW RATE (GPM)	TOTAL HEAD (FT. OF WATER)	MOTOR SIZE (HP)	MOTOR SPEED (RPM)	SUCTION SIZE (IN.)	DISCHARGE SIZE (IN.)	ELECTRICAL					REMARKS
											VOLTAGE	PHASE	STARTER BY	STARTER TYPE	DISCONNECT BY	
P-01	PUMP ROOM	TMW RECIRC	INLINE	E³-4	1	4.5	FRAC.	VARIABLE	1/2"	1/2"	115	1	MANUFACTURER	ECM	DIV. 26	

DOMESTIC WATER HEATER SCHEDULE

UNIT NO.	LOCATION	A.O. SMITH MODEL NO.	INPUT (MBH)	OUTPUT (MBH)	AIR INTAKE (IN.)	FLUE EXHAUST (IN.)	TEMPERATURE RISE (°F)	RECOVERY CAPACITY (GPH)	TANK CAPACITY (GAL.)	ELECTRICAL			REMARKS
										VOLTAGE	PHASE	FLA	
WH-01	PUMP ROOM	BTH-300(A)	300	291	4	4	90	384	119	120	1	5	

INSTANTANEOUS WATER HEATER SCHEDULE

UNIT NO.	LOCATION	MANUFACTURER	MODEL	INPUT (KW)	FLOW (GPM)	TEMPERATURE RISE (°F)	ELECTRICAL SECTION			WEIGHT (LBS.)	REMARKS
							VOLTAGE	PHASE	FLA		
IWH-01	RESTROOM	EEMAX	SPEX4208T	4.1	0.5	56	208	1	20	4	

PLUMBING EXPANSION TANK SCHEDULE

UNIT NO.	MANUFACTURER	MODEL	SERVICE	TANK VOLUME (GAL.)	REMARKS
ET-01	BELL & GOSSET	PT-5	COLD WATER	2	

DATE:

REVISIONS

NO.

PLUMBING SCHEDULES

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

PROJECT MGR.
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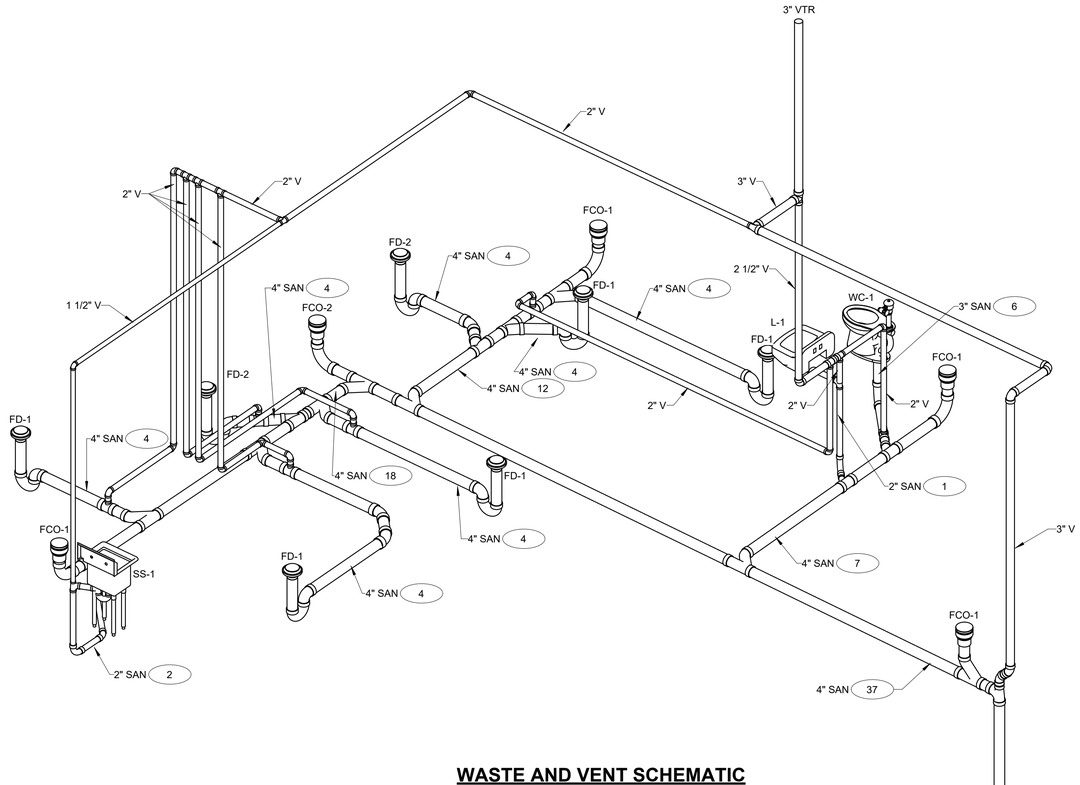
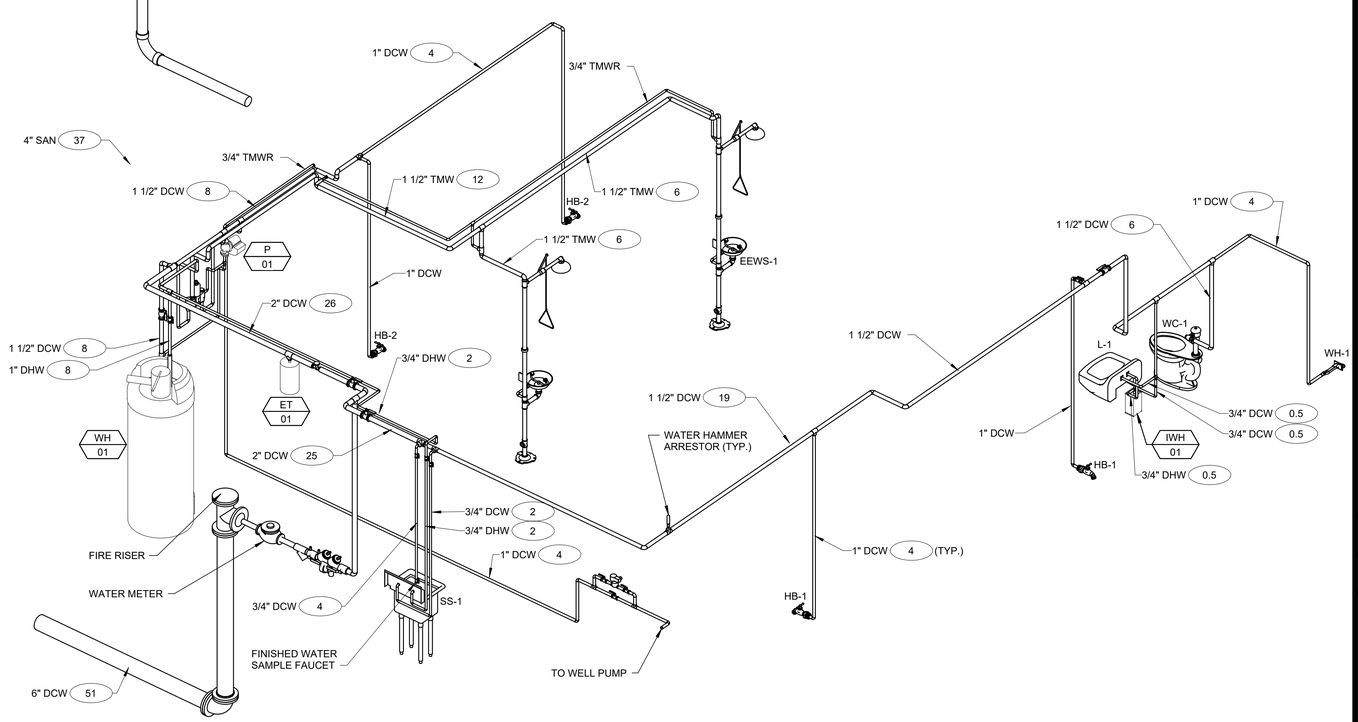
P6.1



WASTE AND VENT SCHEMATIC
NO SCALE



WATER SUPPLY SCHEMATIC
NO SCALE

REVISIONS

NO. | DATE:

PLUMBING SCHEMATICS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

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SHEET
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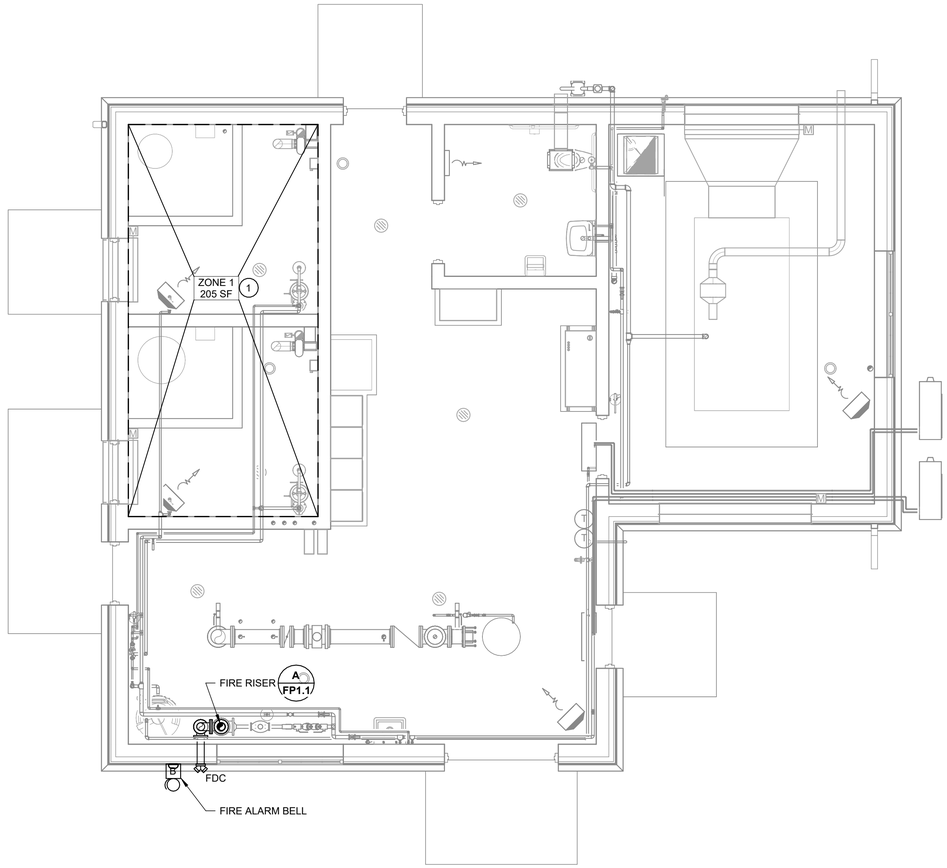
P7.1

GENERAL NOTES:

1. SEE DRAWING FP0.1 FOR PLUMBING GENERAL NOTES.

KEY NOTES:

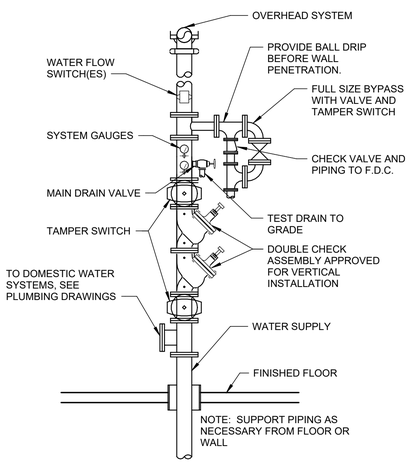
(1) ALL FIRE PROTECTION PIPING, HEADS, AND DEVICES IN THIS ROOM SHALL BE SUITABLE FOR CORROSIVE ENVIRONMENTS. PIPING SHALL BE SCH 80 CPVC. SPRINKLERS SHALL BE SIDEWALL STYLE.



FIRE PROTECTION FLOOR PLAN

0 1' 2' 4' 8'

N



A FP1.1 **FIRE RISER**
NO SCALE

NO. | REVISIONS | DATE:

FIRE PROTECTION FLOOR PLAN

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

PROJECT MGR.
MIKE FORSLUND

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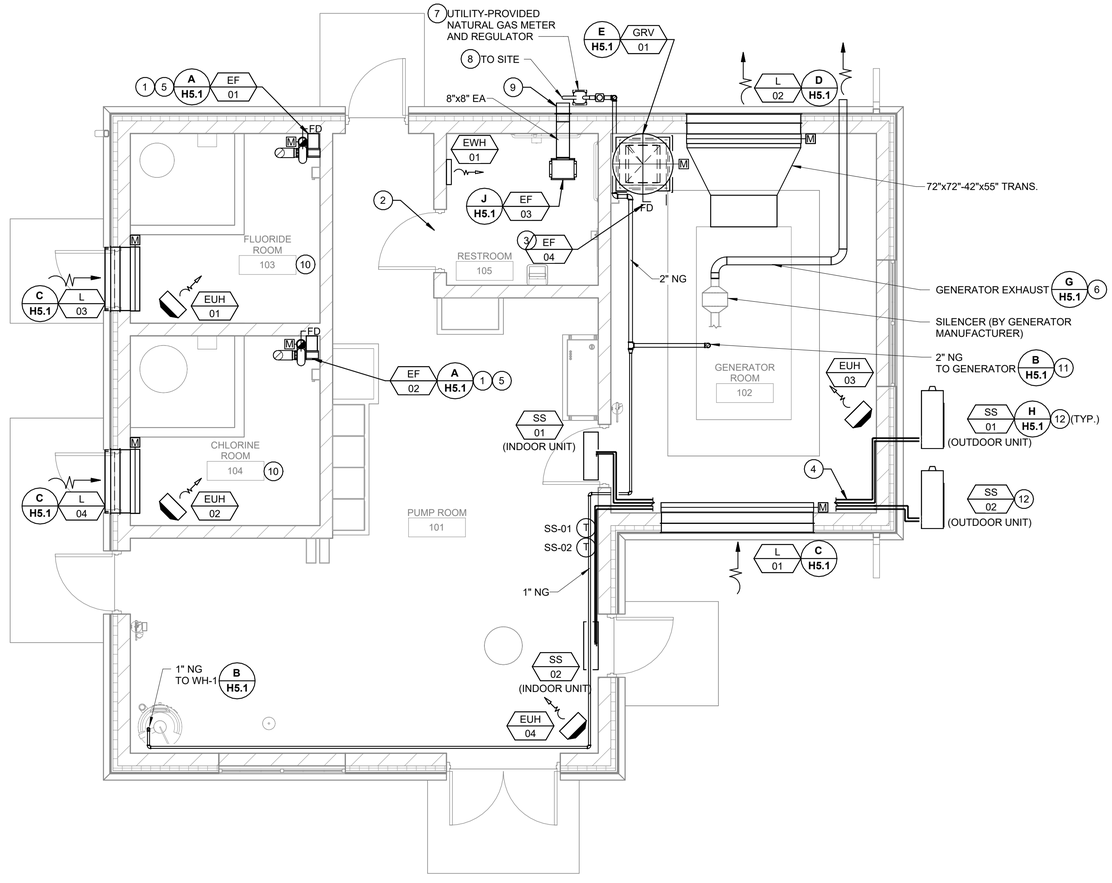
SHEET
33
FP1.1



HVAC FLOOR PLAN

0 1" 2" 4" 8"

GENERAL NOTES:

1. SEE DRAWING H0.1 FOR HVAC GENERAL NOTES.

KEY NOTES:

1. ROUTE 5" PVC DUCT FROM BLOWER INLET DN TO 12" AFF AND PROVIDE SCREEN.
2. UNDERCUT THE DOOR BY 3/4".
3. MOUNT INLINE EXHAUST FAN SUCH THAT OUTLET POINTS UPWARD, AT BOTTOM ELEVATION = 6'-6" AFF. PROVIDE SCREEN AT FAN INLET. AT FAN OUTLET, MOUNT ACTUATED DAMPER IN 22X24 DUCT. AFTER DAMPER, TRANSITION FROM 22X24 TO 18X24. AT CEILING, PROVIDE FIRE DAMPER, AND CONTINUE UP THROUGH ROOF TO GRV. WITHIN ROOF CURB, TRANSITION FROM 18X24 TO GRV DUCT CONNECTION SIZE.
4. ROUTE RL AND RS BETWEEN INDOOR AND OUTDOOR UNITS.
5. ROUTE 5" PVC DUCT FROM BLOWER OUTLET UP THROUGH ROOF. BEFORE ENTERING ATTIC, MOUNT CPVC CONTROL DAMPER AND ACTUATOR IN 6"Ø DUCT. AT CEILING, PROVIDE FIRE DAMPER IN DUCTWORK. ABOVE ROOF, PROVIDE ELBOW AND ANGLED OUTLET TO PREVENT RAIN INFILTRATION. PROVIDE SCREEN AT OUTLET.
6. ROUTE 5" GENERATOR EXHAUST FROM SILENCER OUTLET TO BUILDING EXTERIOR, TIGHT TO CEILING.
7. REGULATOR SHALL BE ADJUSTED TO 11" WC ON THE CUSTOMER SIDE OF THE METER.
8. REFER TO DRAWING C1.1 FOR CONTINUATION.
9. PROVIDE WALL CAP AT EXHAUST AIR OUTLET, GREENHECK MODEL WC-8X8 OR EQUAL.
10. EQUIPMENT AND ACCESSORIES SERVING AND LOCATED WITHIN THIS ROOM SHALL BE SUITABLE FOR CORROSIVE (NEMA 4X) ENVIRONMENTS. ALL DUCTWORK SHALL BE CPVC.
11. COORDINATE FINAL CONNECTION WITH GENERATOR MANUFACTURER.
12. MOUNT OUTDOOR UNIT SUCH THAT BOTTOM OF UNIT IS 7'-6" ABOVE GRADE.

NO. | REVISIONS | DATE:

HVAC FLOOR PLAN

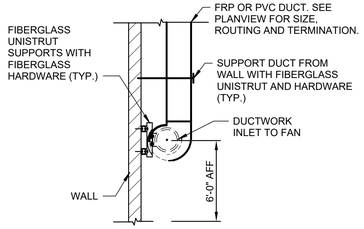
WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO. 1602.175

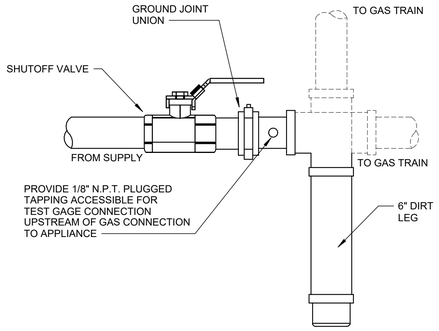
PROJECT MGR. MIKE FORSLUND

STRAND ASSOCIATES®

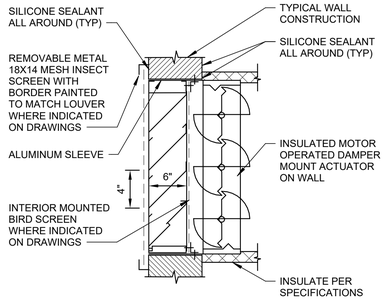
SHEET 34 **H1.1**



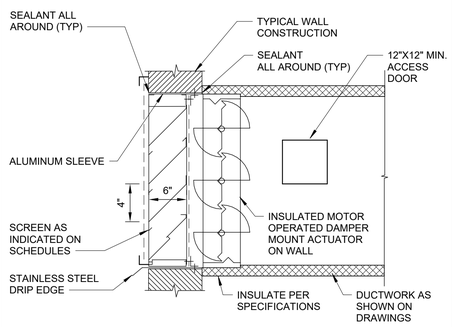
A H5.1 CHEMICAL ROOM EXHAUST FAN
NO SCALE



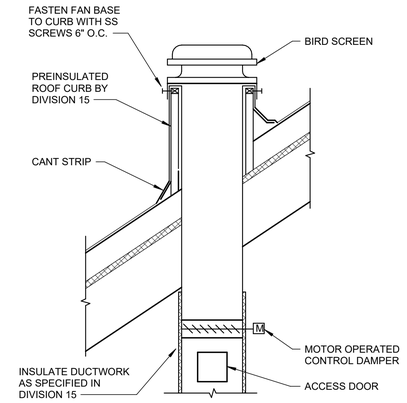
B H5.1 NATURAL GAS CONNECTION
NO SCALE



C H5.1 WALL LOUVER AND DAMPER
NO SCALE



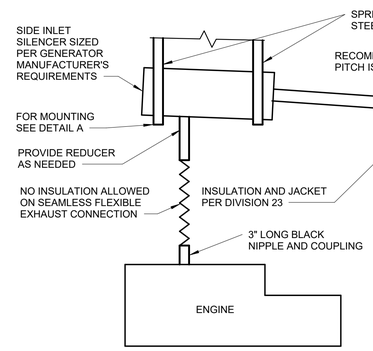
D H5.1 WALL LOUVER, DAMPER, AND DUCTWORK
NO SCALE



E H5.1 GRAVITY ROOF VENTILATOR
NO SCALE

BRANCH TAKE-OFF RECTANGULAR TO RECTANGULAR	L=.25D (4" MIN.), 45°, D	BRANCH TAKE-OFF RECTANGULAR TO ROUND	L=.25D (4" MIN.), 45°, D
BRANCH TAKE-OFF ROUND TO ROUND	L=5.25 IN., 1", L	ROUND TRANSITION FITTING	15°
ELBOW	D, R, R=1.5 X D (MIN.)	TEE	R, D, R=1.5 X D (MIN.)

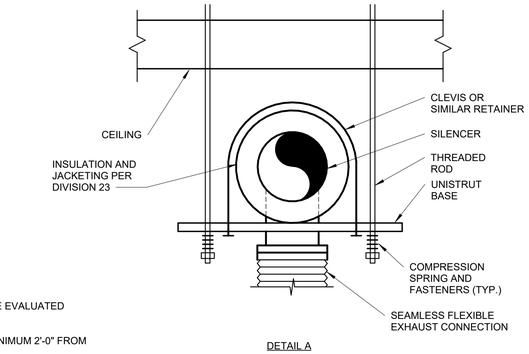
F H5.1 TYPICAL DUCT TAKE-OFF DETAIL
NO SCALE



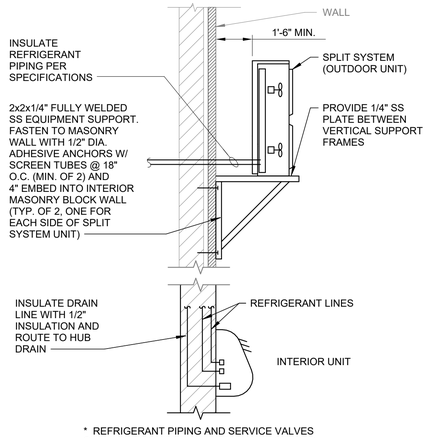
NOTES:

1. THERMAL GROWTH CONSIDERATION SHOULD BE EVALUATED PROVIDE EXPANSION JOINTS AS NEEDED.
2. ELECTRICAL CONDUIT AND WIRING SHALL BE MINIMUM 2'-0" FROM EXHAUST SYSTEM

G H5.1 ENGINE EXHAUST PIPE
NO SCALE

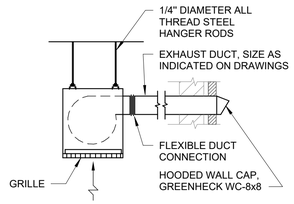


DETAIL A



* REFRIGERANT PIPING AND SERVICE VALVES SHALL BE PROVIDED BY UNIT MANUFACTURER

H H5.1 SPLIT SYSTEM DETAIL
NO SCALE



J H5.1 CEILING FAN
NO SCALE

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HVAC DETAILS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

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FAN SCHEDULE

UNIT NO.	LOCATION	SERVICE	MANUFACTURER	MODEL	AIRFLOW (CFM)	EXT. S.P. (IN. W.C.)	MOTOR SIZE (HP)	FAN TYPE	MOTOR TYPE	DRIVE	SOUND POWER (SONES)	ELECTRICAL				WEIGHT (LBS.)	REMARKS
												VOLTAGE	PHASE	STARTER BY	DISCONNECT BY		
EF-01	FLUORIDE ROOM	FLUORIDE ROOM	PLASTEC	P15XS4P033	108	0.58	1/4	BLOWER	EXP	DIRECT	6.8	115	1	DIV. 26	DIV. 26	19	1
EF-02	CHLORINE ROOM	CHLORINE ROOM	PLASTEC	P15XS4P033	108	0.58	1/4	BLOWER	EXP	DIRECT	6.8	115	1	DIV. 26	DIV. 26	19	1
EF-03	RESTROOM	RESTROOM	GREENHECK	SP-A250	91	0.734	FRAC.	CABINET	ODP	DIRECT	5.0	115	1	DIV. 26	DIV. 26	24	
EF-04	GENERATOR ROOM	GENERATOR ROOM	GREENHECK	SQ-18-VG	4,500	0.972	2	INLINE	TEFC	DIRECT	18.2	480	3	MFR.	DIV. 26	156	2

(1) FAN AND ACCESSORIES SHALL BE SUITABLE FOR CORROSIVE (NEMA 4X) ENVIRONMENTS.

(2) FAN SHALL BE CONFIGURED TO HAVE SIDE DISCHARGE.

SPLIT SYSTEM SCHEDULE

UNIT NO.	MANUFACTURER	LOCATION	SERVICE	MODEL NO.		FAN SECTION	COOLING SECTION			ELECTRICAL					OPERATING WEIGHT (INDOOR/OUTDOOR) (LBS.)	REMARKS
				(INDOOR)	(OUTDOOR)	SUPPLY AIR (CFM)	SENSIBLE CAPACITY (BTU/HR)	TOTAL CAPACITY (BTU/HR)	EAT DB/WB (°F)	VOLTAGE	PHASE	MCA	BREAKER SIZE	DISCONNECT BY		
SS-01	DAIKIN	PUMP ROOM	PUMP ROOM	FTKF24AXVJU	RKF24AXVJU	605	16.36	22.4	80/67	208	1	14.23	20	DIV. 26	30.5/101	
SS-02	DAIKIN	PUMP ROOM	PUMP ROOM	FTKF24AXVJU	RKF24AXVJU	605	16.36	22.4	80/67	208	1	14.23	20	DIV. 26	30.5/101	

WALL LOUVER SCHEDULE

UNIT NO.	LOCATION	SERVICE	MANUFACTURER	MODEL	WIDTH (IN)	HEIGHT (IN)	BLADE DEPTH (IN)	AIRFLOW (CFM)	PRESSURE DROP (IN W.C.)	FACE VELOCITY (FPM)	FREE AREA (SF)	SCREEN		TOP ELEVATION	REMARKS
												SCREEN TYPE	SCREEN LOCATION		
L-01	GENERATOR ROOM	GENERATOR INTAKE	GREENHECK	ESD-635	96	72	6	23,000	0.086	758	30.36	BIRDSCREEN	EXTERIOR	959.50	
L-02	GENERATOR ROOM	GENERATOR EXHAUST	GREENHECK	ESD-635	72	72	6	18,000	0.096	803	22.42	BIRDSCREEN	EXTERIOR	959.50	
L-03	FLUORIDE ROOM	FLUORIDE ROOM	GREENHECK	ESD-635	40	16	6	100	0.001	62	1.6	BIRDSCREEN	EXTERIOR	960.17	
L-04	CHLORINE ROOM	CHLORINE ROOM	GREENHECK	ESD-635	40	16	6	100	0.001	62	1.6	BIRDSCREEN	EXTERIOR	960.17	

GRAVITY ROOF VENTILATOR SCHEDULE

UNIT NO.	LOCATION	SERVICE	MANUFACTURER	MODEL	THROAT WIDTH (IN.)	THROAT HEIGHT (IN.)	AIRFLOW (CFM)	STATIC PRESSURE (IN. W.C.)	THROAT VELOCITY (FPM)	THROAT AREA (SQ. FT.)	OVERALL HEIGHT (IN.)	REMARKS
GRV-01	GENERATOR ROOM	EF-4	GREENHECK	GRSR-24	24.5	4	4,500	0.23		3.24	12.75	

ELECTRIC HEATER SCHEDULE

UNIT NO.	LOCATION	MANUFACTURER	MODEL	CAPACITY (WATTS)	ELECTRICAL				REMARKS
					VOLTAGE	PHASE	FLA	DISCONNECT BY	
EUH-04	FLUORIDE ROOM	Q-MARK	QWD07432	7,500	480	3	9	MFR.	1
EUH-02	CHLORINE ROOM	Q-MARK	QWD07432	7,500	480	3	9	MFR.	1
EUH-01	GENERATOR ROOM	Q-MARK	MUH03-41	3,000	480	3	3.6	MFR.	
EUH-03	PUMP ROOM	Q-MARK	MUH03-41	3,000	480	3	3.6	MFR.	
EWH-01	RESTROOM	Q-MARK	CWH1101DSF	500	120	1	4.2	MFR.	2

(1) HEATER AND ACCESSORIES SHALL BE SUITABLE FOR CORROSIVE (NEMA 4X) ENVIRONMENTS.

(2) HEATER SHALL BE FIELD-CONVERTED TO HALF WATTAGE TO MEET SCHEDULED PERFORMANCE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

DESIGN CONDITIONS

APPLICABLE BUILDING CODE: 2015 INTERNATIONAL BUILDING CODE		SUMMER EXTERIOR: 89.2°F DB / 74.0°F WB WINTER EXTERIOR: -6.8°F		REMARKS
SPACE TYPE	VENTILATION RATE	SUMMER INTERIOR (DB/WB)	WINTER INTERIOR (DB)	
RESTROOMS	75 CFM PER FIXTURE	80/67	65	
CHEMICAL ROOM	1 CFM/SF CONTINUOUS	AMBIENT	60	
PUMP ROOM	EQUIPMENT COOLING	104	60	
GENERATOR ROOM	EQUIPMENT COOLING	104	60	

NATURAL GAS SCHEDULE

UNIT NO.	DESCRIPTION	EQUIPMENT REQUIREMENTS			REMARKS
		NATURAL GAS LOAD (MBH)	MIN. INLET PRESSURE (IN. W.C.)	MAX. INLET PRESSURE (IN. W.C.)	
WH-01	WATER HEATER	300	4.8	14	
GEN-01	GENERATOR	2,115	7	11	

NOTE: NATURAL GAS DISTRIBUTION IS 2 PSI.

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HVAC SCHEDULES

WELL NO. 6 WELL FACILITY
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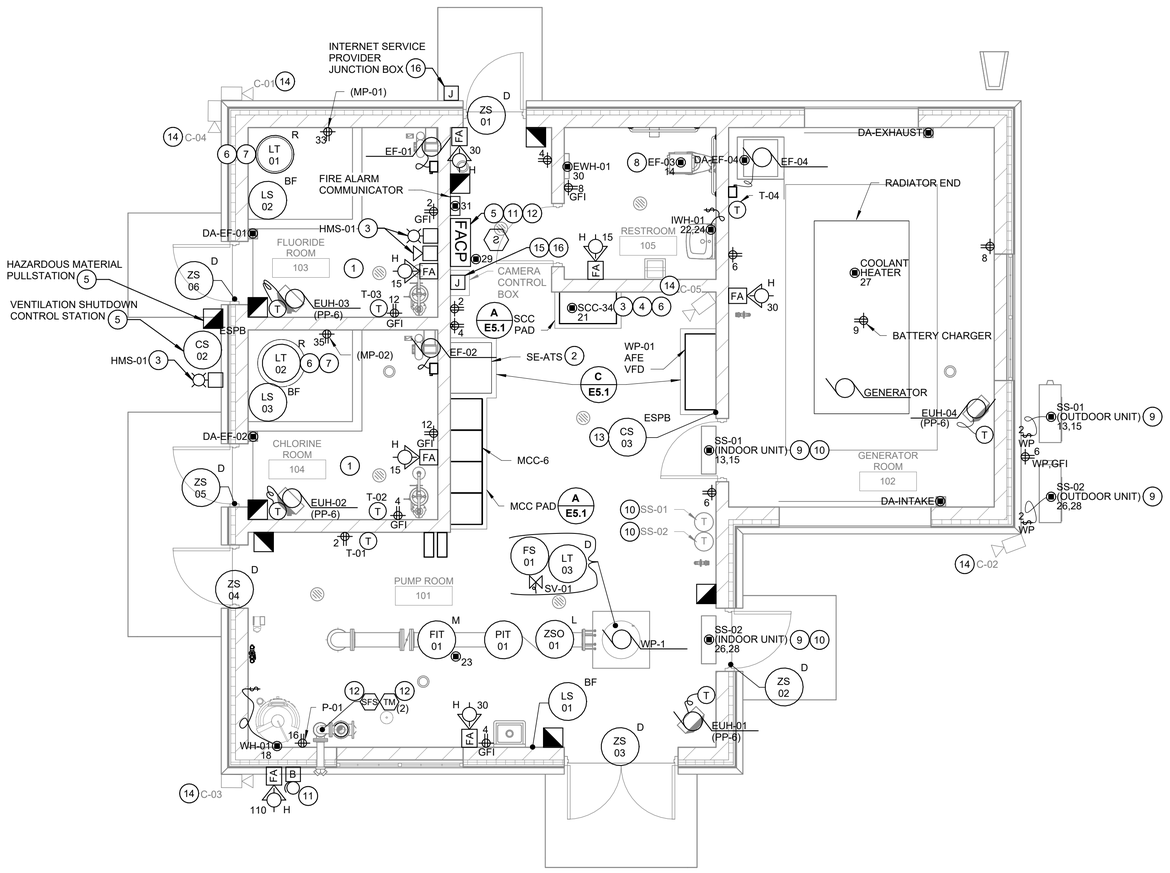

ELECTRICAL POWER AND SYSTEMS PLAN

0 4" 2" 4" 8"

GENERAL NOTES:

1. ALL 120/208V EQUIPMENT ON THIS SHEET SHALL BE POWERED FROM LP-6, UNLESS OTHERWISE NOTED.
2. ALL 480V EQUIPMENT ON THIS SHEET SHALL BE POWERED FROM MCC-6, UNLESS OTHERWISE NOTED.
3. REFER TO SPECIFICATION SECTION 26 09 90 FOR WIRING ASSOCIATED WITH THE SCADA SYSTEM.
4. DAMPERS WITHOUT A CIRCUIT NUMBER SHALL BE POWERED FROM A CONTROL POWER TRANSFORMER IN THE ASSOCIATED MCC BUCKET.
5. REFER TO DRAWINGS G1.1 AND ASM1.3 FOR LOCATIONS OF FIRE-RATED WALLS AND CEILINGS.

KEY NOTES:

(1) ALL ELECTRICAL WORK AND EQUIPMENT IN THIS AREA SHALL BE RATED NEMA 4X, PVC, OR FRP.

(2) INCOMING POWER FEED TO SERVICE ENTRANCE RATED ATS SHALL BE ROUTED BENEATH FLOOR SLAB.

(3) PROVIDE 2-#14 AND #14 GROUND IN 3/4" CONDUIT FROM ALARM HORN TO SCC-34.

(4) PROVIDE 4-#14 AND #14 GROUND IN 3/4" CONDUIT FROM MULTI-COLOR WARNING LIGHT TO SCC-34.

(5) THE HAZARDOUS MATERIAL PULL STATION AND VENTILATION SHUTDOWN CONTROL STATION SHALL BE WIRED TO THE FACP BY DIVISION 28. PROVIDE REQUIRED ADDRESSABLE CONTROL MODULES AND SUPERVISORY RELAYS TO MONITOR EACH DEVICE AT THE FACP.

(6) PROVIDE MANUFACTURER-FURNISHED CABLE IN 3/4" CONDUIT FROM LEVEL TRANSMITTER TO SCC-34.

(7) LEVEL TRANSMITTER SHALL BE MOUNTED ABOVE CHEMICAL TANK AND MEASURE LEVEL THROUGH TOP OF TANK.

(8) ONE POLE OF OCCUPANCY SENSOR SHALL CONTROL LIGHTING AND ONE POLE SHALL CONTROL LIGHTING AND ONE POLE SHALL CONTROL EXHAUSTT FAN. EXHAUST FAN SHALL RUN WHEN THE OCCUPANCY SENSOR IS ENERGIZED.

(9) PROVIDE 3-#14 AND #14 GROUND IN 3/4" CONDUIT FROM OUTDOOR UNIT TO INDOOR UNIT FOR POWER AND CONTROL.

(10) PROVIDE OUTLET BOX AND 3/4" CONDUIT FROM BOX TO SPLIT SYSTEM INDOOR UNIT FOR DIVISION 23-PROVIDED THERMOSTAT AND LOW VOLTAGE WIRING.

(11) FIRE SUPPRESSION SYSTEM ALARM BELL FURNISHED BY DIVISION 21 AND INSTALLED AND WIRED BY DIVISION 28. ALARM BELL SHALL BE POWERED FROM THE FACP.

(12) FIRE SUPPRESSION SYSTEM FLOW AND TAMPER SWITHCES PROVIDED BY DIVISION 21 AND WIRED TO THE FACP BY DIVISION 28. PROVIDE REQUIRED ADDRESSABLE CONTROL MODULES AND SUPERVISORY RELAYS TO MONITOR EACH DEVICE AT THE FACP.

(13) DEVICE SHALL BE FURNISHED AS SPECIFIED IN SPECIFICATION SECTION 26 32 13.

(14) PROVIDE RECESSED BOX FOR INSTALLATION OF OWNER PROVIDED CAMERA. COORDINATE FINAL LOCATION WITH OWNER.

(15) PROVIDE JUNCTION BOX SIZE AS REQUIRED. PROVIDE CBG FITTING FOR EACH CAMERA CABLE AND UTILITY FIBER OPTIC CABLING (6 TOTAL). CABLES BETWEEN JUNCTION BOX AND ASSOCIATED CAMERA CONTROL BOX OR MODEM SHALL BE RUN FREE AIR. REFER TO THE SCADA RISER ON DRAWING E6.1 FOR ADDITIONAL INFORMATION. COORDINATE MOUNTING HEIGHT AND LOCATION OF JUNCTION BOX WITH OWNER PRIOR TO INSTALLATION.

(16) PROVIDE 3/4" CONDUIT FROM INTERNET SERVICE PROVIDER JUNCTION BOX TO CAMERA CONTROL JUNCTION BOX.

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ELECTRICAL POWER AND SYSTEMS PLAN

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
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E1.1

GENERAL NOTES:

1. ALL 120/208V EQUIPMENT ON THIS SHEET SHALL BE POWERED FROM LP-6, UNLESS OTHERWISE NOTED.

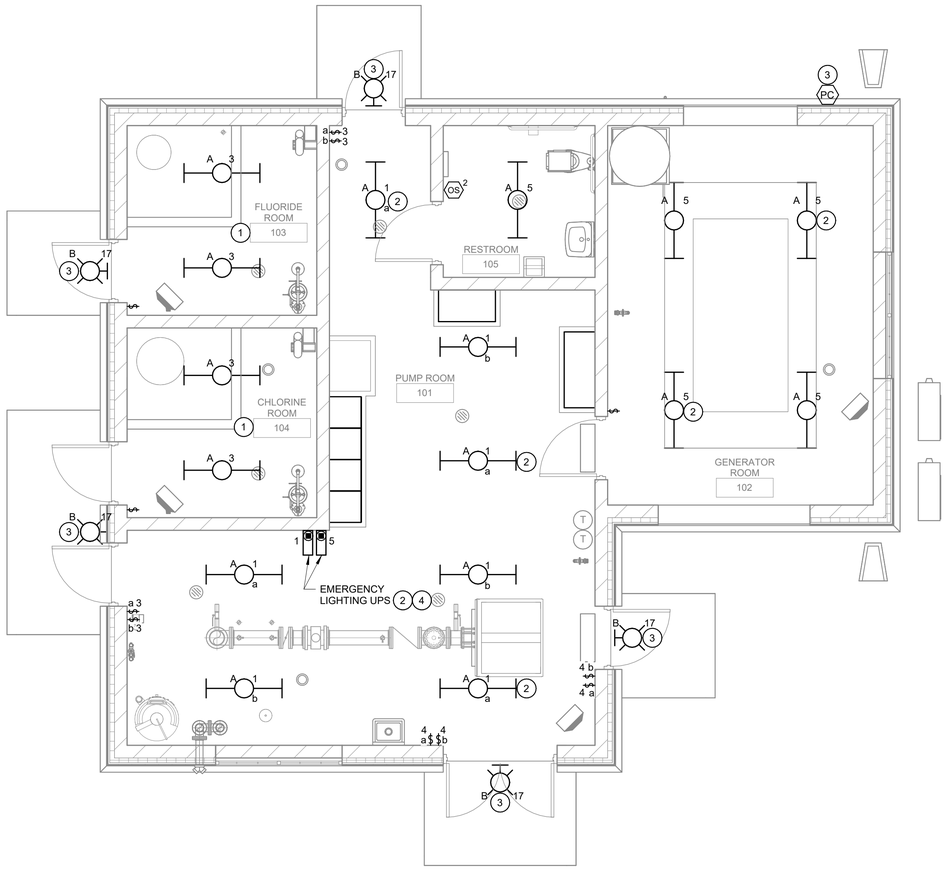
KEY NOTES:

(1) ALL ELECTRICAL WORK AND EQUIPMENT IN THIS AREA SHALL BE RATED NEMA 4X, PVC, OR FRP.

(2) FIXTURE SHALL BE POWERED THROUGH THE EMERGENCY LIGHTING UPS IN PUMP ROOM 101. THE FIXTURE SHALL BE SWITCHED AS NOTED.

(3) EXTERIOR LIGHTING CIRCUIT SHAL BE WIRED THROUGH PHOTOCELL.

(4) EMERGENCY LIGHTING UPSs SHALL BE SURFACE MOUNTED ON THE WALL STACKED ABOVE EACH OTHER. ASSOCIATED FIXTURES SHALL BE WIRED IN SERIES THROUGH THE UPS FROM THE LOAD SIDE OF THE CONTROL DEVICE. EMERGENCY CIRCUITS SHALL BE INSTALLED WITHIN DEDICATED CONDUIT AND BOXES. PROVIDE SEPARATE REFERENCE VOLTAGE CIRCUIT TO POWER THE UPS FROM THE LINE SIDE OF THE CONTROL DEVICE.



ELECTRICAL LIGHTING PLAN

0 1" 2" 4" 8"

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ELECTRICAL LIGHTING PLAN

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
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PROJECT MGR.
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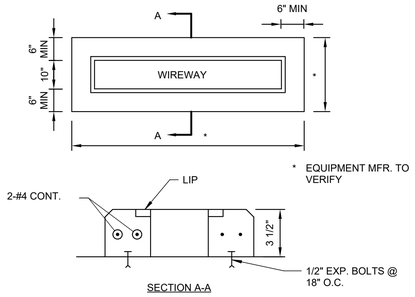
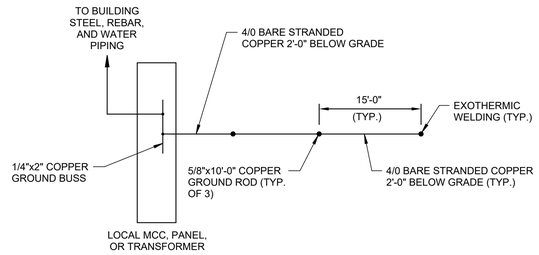
E1.2

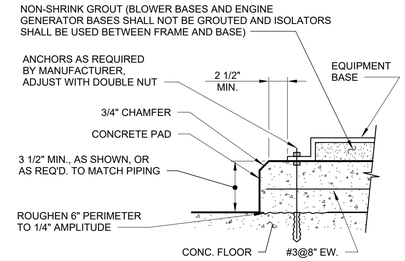


NOTE: PROVIDE FLUSH METAL COVER FOR EXPOSED WIREWAY

A E5.1 SCC/MCC PAD
NO SCALE



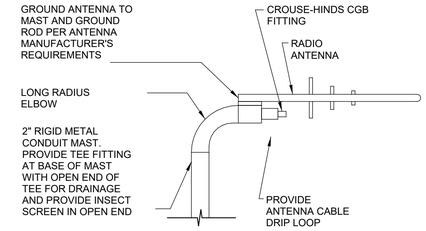
B E5.1 GROUND GRID
NO SCALE



NOTES:

1. CONCRETE PAD BY CONTRACTOR SUPPLYING EQUIPMENT.
2. ANCHOR CONCRETE PAD TO FLOOR WITH 1/2" EXPANSION BOLTS @ 18" O.C., MINIMUM PER PAD. IF CONCRETE PAD IS LESS THAN 10" HIGH, ANCHOR EQUIPMENT BASE DIRECTLY TO CONCRETE FLOOR
3. APPLY BONDING AGENT TO FLOOR PRIOR TO PLACING CONCRETE PAD

C E5.1 CONCRETE EQUIPMENT PAD
NO SCALE



NOTES:

1. VERIFY LOCATION OF ANTENNA AND MOUNTING REQUIREMENTS AT EACH SITE.
2. PROVIDE A DEDICATED GROUND ROD BONDED TO CONDUIT MAST WITH #6 GROUND CONDUCTOR IN 3/4" PVC CONDUIT WHERE ROUTED ABOVE GRADE.

D E5.1 ANTENNA TERMINATION
NO SCALE

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ELECTRICAL DETAILS

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

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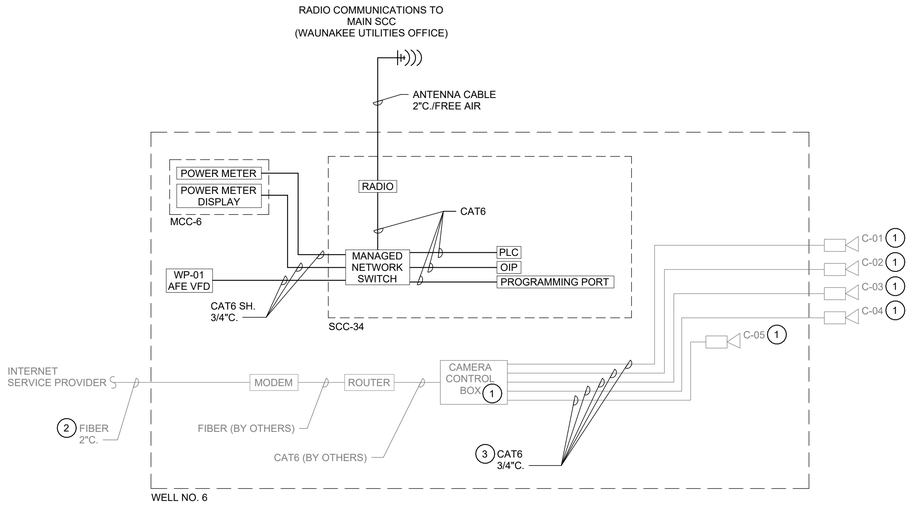
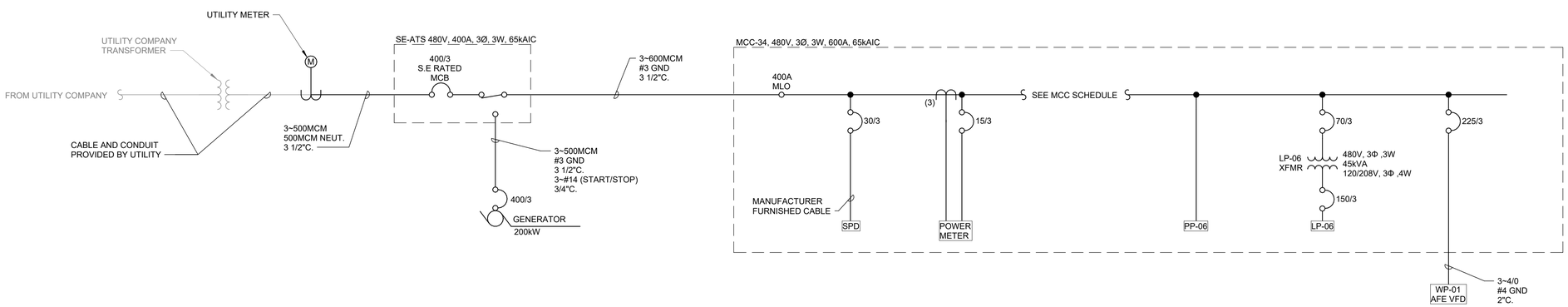
KEY NOTES:

1. EQUIPMENT PROVIDED BY OWNER.
2. FIBER FURNISHED AND INSTALLED BY OTHERS IN DIVISION 26 PROVIDED CONDUIT.
3. CAT6 CABLE PROVIDED BY OWNER IN DIVISION 26 PROVIDED CONDUIT.



SCADA RISER DIAGRAM
NO SCALE



ONE LINE ELECTRICAL DIAGRAM
NO SCALE

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ONE-LINE DIAGRAM AND SCADA RISER DIAGRAM

WELL NO. 6 WELL FACILITY
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WAUNAKEE, WISCONSIN

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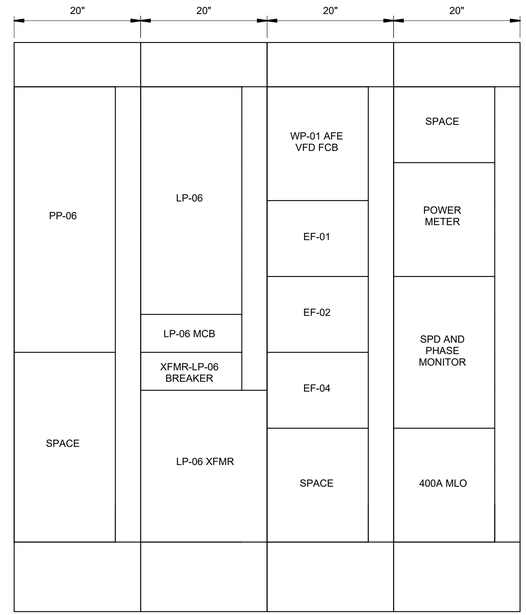
MOTOR AND MOTOR CONTROL CENTER SCHEDULE MCC-6

EQUIPMENT AND NAMEPLATE TITLES			EQUIPMENT LOCATION	PANEL/MCC	MOTOR INFORMATION			MOTOR STARTER INFORMATION					CONTROLS AND INTERLOCKS		
EQUIPMENT NUMBER	FIRST LINE SECOND LINE WHEN EQUIPMENT NUMBER IS INDICATED	SECOND LINE THIRD LINE WHEN EQUIPMENT NUMBER IS INDICATED			HP (OR KW)	VOLTS	F.L.A.	SIZE	TYPE	DISCONNECT TYPE	DISCONNECT AMPS	CONTROL DEVICES	DESCRIPTION	CONDUIT AND WIRE ** 1ST ROW(S)=CONTROL* LAST ROW=POWER	REMARKS ***
EF-01	FLUORIDE ROOM	EXHAUST FAN	FLUORIDE ROOM	MCC-6	0.5	480	1.1	1	FVNR	M	15	O-O,R,R,G,ETM	DAMPER (DA-EF-01), CS-02	4~#14, 3/4"C. 3~#12, 3/4"C.	SEE NOTE A R=STARTER OVERLOAD, R=E-STOP ACTIVATED
EF-02	CHLORINE ROOM	EXHAUST FAN	CHLORINE ROOM	MCC-6	0.5	480	1.1	1	FVNR	M	15	O-O,R,G,ETM	DAMPER (DA-EF-02)	2~#14, 3/4"C. 3~#12, 3/4"C.	SEE NOTE B
EF-04	GENERATOR ROOM	EXHAUST FAN	GENERATOR ROOM	MCC-6	2	480	3.2	-	-	TM	15	HOA,R,G,ETM	DAMPERS (DA-EF-04,DA-INTAKE,DA-EXHAUST), T-04, DISCONNECT, GENERATOR RUNNING, (START/STOP, RUNNING, VFD FAULT) @ VFD IN FAN HOUSING	12~#14, 3/4"C. 6~#14 3~#12, 3/4"C.	SEE NOTE C

AFE VFD SCHEDULE

EQUIPMENT AND NAMEPLATE TITLES			EQUIPMENT LOCATION	PANEL/MCC	MOTOR INFORMATION			MOTOR STARTER INFORMATION					CONTROLS AND INTERLOCKS		
EQUIPMENT NUMBER	FIRST LINE SECOND LINE WHEN EQUIPMENT NUMBER IS INDICATED	SECOND LINE THIRD LINE WHEN EQUIPMENT NUMBER IS INDICATED			HP (OR KW)	VOLTS	F.L.A.	SIZE	TYPE	DISCONNECT TYPE	DISCONNECT AMPS	CONTROL DEVICES	DESCRIPTION	CONDUIT AND WIRE ** 1ST ROW(S)=CONTROL* LAST ROW=POWER	REMARKS ***
WP-01	WELL PUMP	NO. 1	WET WELL	MCC-6	125	480	156	-	VFD AFE (ND)	TM	225	HOA,R,R,R,R,G,W,RST, ETM	FS-01,ZSO-01,SV-01,LS-01,MOTOR T-STATS	10~#14, 3/4"C. 3~3/0, 1 1/2"C.	SEE NOTE A R=VFD FAULT, R=MOTOR OVERTEMP, R=FLOW FAIL ALARM, R=PRE-LUBE FAIL, W=BACKSPIN TIMER ACTIVE



MCC-6 ELEVATION
NO SCALE

CONTROL DEVICES	
PUSHBUTTONS	INDICATING LIGHTS
ST START STP STOP ESPB EMERGENCY STOP RST RESET LOS LOCKOUT STOP SIL SILENCE	R RED (FAIL) G GREEN (RUN) A AMBER (WARNING) B BLUE (RUN REV) W WHITE C CLEAR

SELECTOR SWITCHES AND AUXILIARY DEVICES	
HOR HAND-OFF-REMOTE HLOA HIGH-LOW-OFF-AUTO HOAL HAND-OFF-AUTO-LOCAL HOA HAND-OFF-AUOT FOR FOR.-OFF-REV ETM ELAPSED TIME METER	FR FORW.-REV. OO ON-OFF LR LOCAL REMOTE

DISCONNECT TYPE
TM THERMAL MAG BREAKER M MAG ONLY BREAKER F FUSED NF NON-FUSED

MOTOR STARTER TYPE
FVNR FULL VOLTAGE NON REVERSING FVR FULL VOLTAGE REVERSING TS2WR TWO SPEED TWO WINDING REVERSING TS2W TWO SPEED TWO WINDING RVSS REDUCED VOLTAGE SOLID STATE VFD VARIABLE FREQUENCY DRIVE ND NORMAL DUTY HD HEAVY DUTY AFE ACTIVE HARMONIC FRONT END

* IF APPLICABLE
** PROVIDE GROUND WIRE FOR EACH PIECE OF EQUIPMENT SIZED PER THE NEC. PROVIDE A SEPARATE ISOLATED GROUND CONDUCTOR FOR BONDING RACEWAY SYSTEM WHERE SHIELDED VFD CABLE IS PROVIDED.
*** SEE SPECIFICATION SECTION 26 09 00-CONTROLS AND INSTRUMENTATION, PART 3 FOR NOTES REFERENCED

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MCC-6 SCHEDULE AND ELEVATION AND VFD SCHEDULE

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

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LIGHTING PANEL LP-6

Service: 120/208V, 3Ø, 4W | Enclosure: NEMA 1G | Mounting: In MCC-6
Main Breaker: 225A MLO | Main Bus: Copper
Location: Pump Room 101 | SCIC: 10 kAIC

Room Number/Description	Amps	Poles	Ckt. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Ckt. #	Poles	Amps	Room Number/Description
PUMP ROOM LIGHTING	20	1	1	238			540			2	1	20	PUMP + FLOURIDE RMS RECEPTACLES
FLUORIDE + CHLORINE RM LGHTNG	20	1	3		136			720		4	1	20	PUMP + CHORINE RMS RECEPTACLES
RESTROOM + GENERATOR RM LIGHTNG	20	1	5			170			540	6	1	20	PUMP + GENERATOR RMS RECEPTACLES
SPARE	20	1	7	0			720			8	1	20	RESTROOM + GENERATOR RMS + EXTERIOR RECEPTACLES
GENERATOR BATTERY CHARGER	20	1	9		1334			0		10	1	20	SPARE
SPARE	20	1	11			0			360	12	1	20	FLOURIDE + CHLORINE RMS RECEPTACLES
SPLIT SYSTEM NO. 1 (SS-01)	20	2	13	1645			267			14	1	20	RESTROOM EXHAUST FAN (EF-03)
			15		1645			180		16	1	20	RECIRCULATION PUMP RECEPTACLE (P-01)
EXTERIOR LIGHTING	20	1	17			228			667	18	1	20	DOMESTIC WATER HEATER (WH-01)
SPARE	20	1	19	0			0			20	1	20	SPARE
SCC-34	20	1	21		500			2312		22	2	30	INSTANTANEOUS WATER HEATER (IWH-01)
FIT-01	20	1	23			200			2312	24			
SPARE	20	1	25	0			1625			26	2	20	SPLIT SYSTEM NO. 2 (SS-02)
GENERATOR COOLANT HEATER	30	1	27		2778			1625		28			
FIRE ALARM CONTROL PANEL (FACP) *	20	1	29			500			560	30	1	20	ELECTRIC WALL HEATER (EWH-01)
FIRE ALARM COMMUNICATOR	20	1	31	56			0			32	1	20	SPARE
FLOURIDE CHEMICAL PUMP RECEPTACLE	20	1	33		180			0		34	1	20	SPARE
CHLORINE CHEMICAL PUMP RECEPTACLE	20	1	35			180			0	36	1	20	SPARE
SPARE	20	1	37	0			0			38	1	20	SPARE
SPARE	20	1	39		0			0		40	1	20	SPARE
SPARE	20	1	41			0			0	42	1	20	SPARE
Total Load per Phase per Side (VA)				1939	6573	1278	3152	4837	4439				

Total Load Phase A (VA)	5091	VA
Total Load Phase B (VA)	11410	VA
Total Load Phase C (VA)	5717	VA
Total Connected Load (VA)	22218	VA

*CIRCUIT BREAKER SHALL BE RED IN COLOR AND PERMANENTLY LABELED FACP.

Total Connected Load	62	A
Total Connected Load + 25%	77	A
Spare 25%	19	A
Feeder Load	96	A

POWER PANEL PP-6

Service: 480V, 3Ø, 3W | Enclosure: NEMA 1G | Mounting: In MCC-6
Main Breaker: 225A MCB | Main Bus: Copper
Location: Pump Room 101 | SCIC: 35 kAIC

Room Number/Description	Amps	Poles	Ckt. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Ckt. #	Poles	Amps	Room Number/Description
ELECTRIC UNIT HEATER (EUH-01)	15	3	1	1111			1111			2			
			3		1111			1111		4	3	15	ELECTRIC UNIT HEATER (EUH-03)
			5			1111			1111	6			
ELECTRIC UNIT HEATER (EUH-02)	15	3	7	1111			1111			8			
			9		1111			1111		10	3	15	ELECTRIC UNIT HEATER (EUH-04)
			11			1111			1111	12			
SPARE	15	3	13	0			0			14			
			15		0			0		16	3	15	SPARE
			17			0			0	18			
SPACE	-	3	19	0			0			20			
			21		0			0		22	3	-	SPACE
			23			0			0	24			
SPACE	-	3	25	0			0			26			
			27		0			0		28	3	-	SPACE
			29			0			0	30			
Total Load per Phase per Side (VA)				2222	2222	2222	2222	2222	2222				

Total Load Phase A (VA)	4444	VA
Total Load Phase B (VA)	4444	VA
Total Load Phase C (VA)	4444	VA
Total Connected Load (VA)	13332	VA

Total Connected Load	16	A
Total Connected Load + 25%	20	A
Spare 25%	5	A
Feeder Load	25	A

FIXTURE SCHEDULE

Fixture Type	Manufacturer(s)	Model Number	Mounting	Remarks
A	METALUX	4VT2-LD5-4-FR50-W-UNV-L840-CD1-WL	SURFACE	
B	RAB	SLIM22-S-60	SURFACE	ADJUST FIXTURE MOUNTING TO BE 15° PARALLEL FROM THE GROUND. ADJUST CCT TO BE 4000K.

DATE:
REVISIONS
NO.

ELECTRICAL SCHEDULES

WELL NO. 6 WELL FACILITY
WAUNAKEE UTILITIES
WAUNAKEE, WISCONSIN

JOB NO.
1602.175

PROJECT MGR.
MIKE FORSLUND

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SHEET
42
E6.5