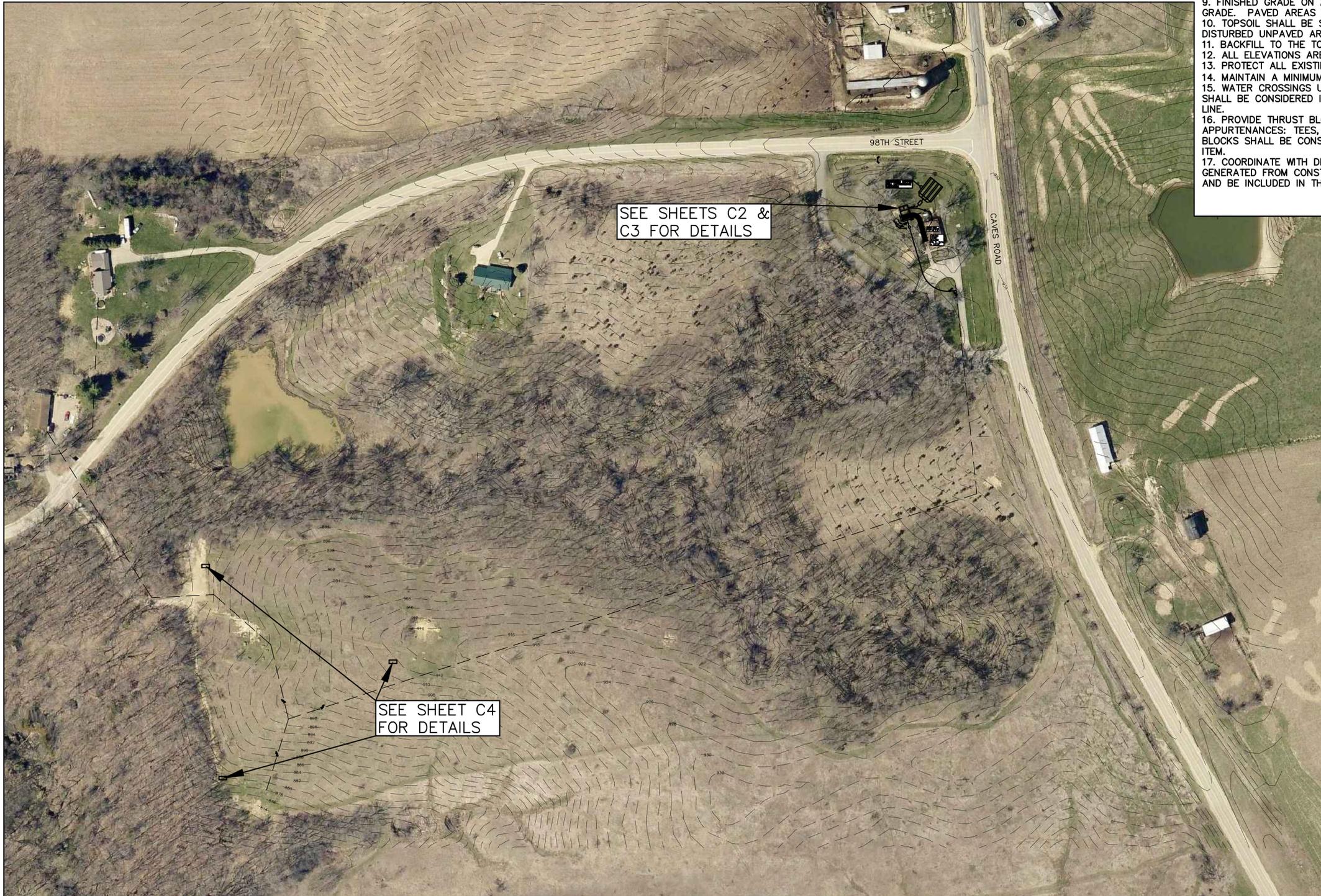






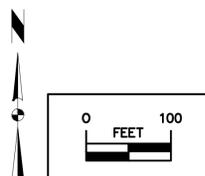
**NOTES**

1. TWO WEEKS PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL NOTIFY:
  - A. IOWA DNR PROJECT MANAGER: RYAN RICHEY 515-979-0107
  - B. DISTRICT INSPECTOR: HEATH DELZELL 515-979-0104
2. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO THE START OF CONSTRUCTION AND NOTIFY THE ABOVE MENTIONED CONTACTS OF ANY DISCREPANCIES.
3. THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS FOR EXISTING FACILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL PUBLIC AND/OR PRIVATE UTILITIES SERVING THE AREA TO DETERMINE THE PRESENT EXTENT AND LOCATION OF THEIR FACILITIES BEFORE BEGINNING WORK.
4. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROPER UTILITY IMMEDIATELY UPON BREAKING OR DAMAGE TO ANY UTILITY LINE OR APPURTENANCE, OR THE INTERRUPTION OF THEIR SERVICE. HE SHALL NOTIFY THE PROPER UTILITY INVOLVED. IF EXISTING UTILITY LINES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED.
5. CONTRACTOR TO PROTECT ALL UTILITY, PAVING, BUILDINGS, ETC. OUTSIDE OF LIMITS OF PROPOSED CONSTRUCTION.
6. IN THE EVENT THAT THERE IS A DISCREPANCY BETWEEN THE QUANTITIES AND THE PLANS, THE DETAILED PLANS SHALL GOVERN.
7. CONTRACTOR SHALL SEED/MULCH ALL DISTURBED AREAS. USE CLASS 'C' SEED MIX.
8. MAINTAIN ALL CUT AND FILL AREAS TO ACCOMMODATE SURFACE DRAINAGE.
9. FINISHED GRADE ON ALL NON-PAVED AREAS SHALL BE WITHIN 0.20 FOOT OF PLAN GRADE. PAVED AREAS SHALL BE WITHIN 0.10 FOOT.
10. TOPSOIL SHALL BE SPREAD TO A MINIMUM THICKNESS OF 4-INCHES ON ALL DISTURBED UNPAVED AREAS.
11. BACKFILL TO THE TOP OF ALL PAVED SURFACES.
12. ALL ELEVATIONS ARE TO SURFACE GRADE UNLESS NOTED OTHERWISE.
13. PROTECT ALL EXISTING TREES AND VEGETATION UNLESS OTHERWISE NOTED.
14. MAINTAIN A MINIMUM 5' COVER OVER WATER LINES.
15. WATER CROSSINGS UNDER PAVED AREAS SHALL BE BORED. THE COST OF BORING SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE LINE ITEM BID FOR WATER LINE.
16. PROVIDE THRUST BLOCKS AT ALL ABRUPT CHANGES IN DIRECTION FOR WATER APPURTENANCES: TEES, BENDS, DEAD ENDS AND HYDRANTS. THE COST OF THRUST BLOCKS SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE APPROPRIATE LINE ITEM.
17. COORDINATE WITH DNR INSPECTOR FOR SPOIL SITE FOR ANY EXCESS DIRT GENERATED FROM CONSTRUCTION ACTIVITIES. THIS IS CONSIDERED INCIDENTAL WORK AND BE INCLUDED IN THE LINE ITEM BID FOR GRADING.

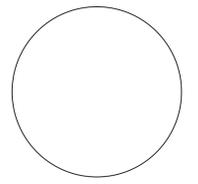


**LEGEND**

- EXISTING/PROPOSED
- S 4" — SANITARY SEWER
  - W 1" — WATER MAIN
  - E — ELECTRICAL LINE
  - 990 990 ELEVATION
  - 882.67 884.50 SPOT ELEVATION
  - (Cloud symbol) TREES
  - (Arc with X's) 8" FILTER SOCK
  - (Wavy line) CLEARING LIMITS



CONSTITUTE:



**IOWA DEPARTMENT OF  
NATURAL RESOURCES**  
ENGINEERING SERVICES - WALLACE BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034  
P: 515.281.5918  
F: 515.281.8685



**OVERALL SITE PLAN**  
RESTROOM & VAULT BUILDING PROJECT FOR:  
**MAQUOKETA CAVES STATE PARK**  
JACKSON COUNTY, IOWA

NO.	BY	DATE	REVISION

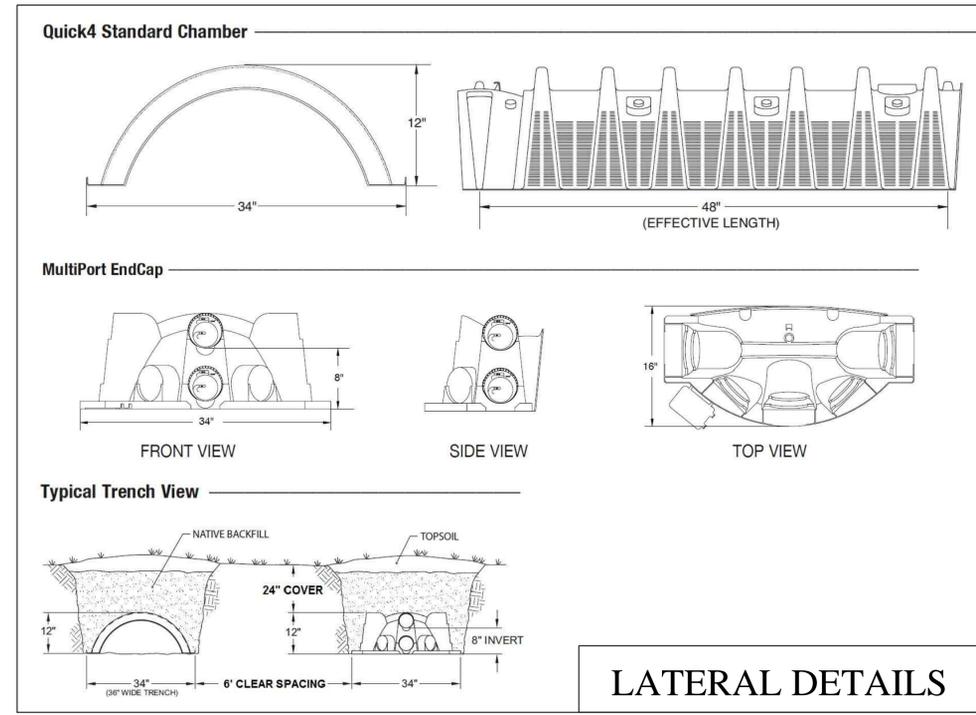
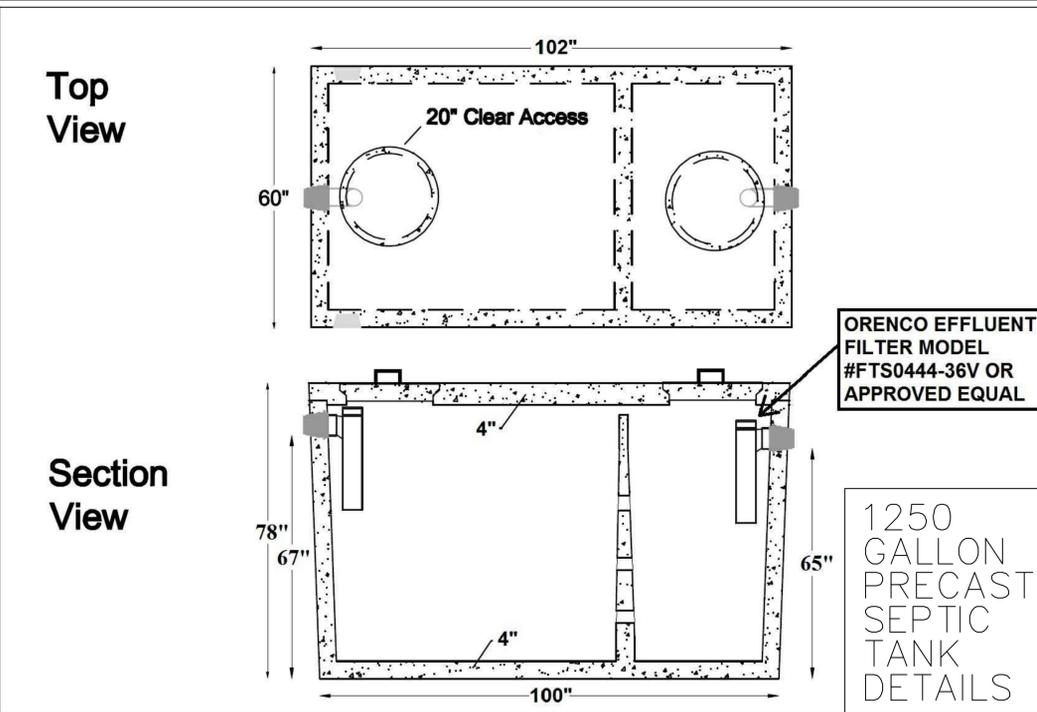
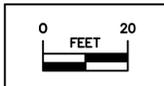
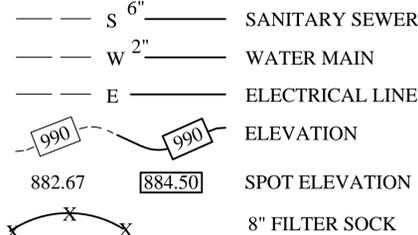
DRAWN BY: **BJ** PROJECT NUMBER: **13-06-49-01**  
CHK'D BY: DATE: **3/27/2014**

SHEET No: **C1**



**LEGEND**

EXISTING/PROPOSED



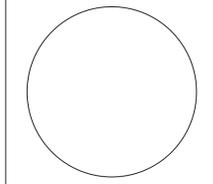
**NOTES**

1. PROVIDE INSPECTION HOLES WITH 4" SCHEDULE 40 PIPES AT END OF EACH 36' CHAMBER RUN SECTIONS.
2. INDIVIDUAL TRENCHES SHALL HAVE LEVEL BOTTOM.
3. THE PIPES LEAVING THE DISTRIBUTION BOX SHALL HAVE SIMILAR SLOPE (2%) FOR THE FIRST 5 FEET.

**SEPTIC/LEACH FIELD QUANTITIES**

- QUANTITIES BEGIN AT SEPTIC TANK
- 1 EA WILKINSON PRECAST 1250 GALLON SEPTIC TANK (OR EQUIVALENT)
  - 1 EA ORENCO EFFLUENT FILTER MODEL #FTS0444-36V (OR EQUIVALENT)
  - 1 EA TUF-TITE MODEL #6HD2 DISTRIBUTION BOX (OR EQUIVALENT) WITH (4) S-35 PIPE SEALS, P-10 PLUG AND AN INSPECTION PORT LID
  - 88 LF 4-INCH SANITARY SEWER SERVICE (SDR 35)
  - 8 EA 4-INCH 45° BENDS (SDR 35)
  - 36 EA QUICK4 STANDARD CHAMBERS (4-FOOT LENGTHS)
  - 8 EA QUICK4 MULTIPORT END CAPS
  - 5 EA 4-INCH SCHEDULE 40 INSPECTION HOLE PIPES (2 LF EACH) WITH COVERS AND COUPLING RINGS
  - 1 EA SANITARY SEWER SERVICE CLEANOUT

CONSOLELINE:



**IOWA DEPARTMENT OF NATURAL RESOURCES**  
 ENGINEERING SERVICES - WALLACE BUILDING  
 502 E. 9TH ST., DES MOINES, IA 50319-0034  
 P: 515.281.5918  
 F: 515.281.8685



**GRADING/UTILITY DETAIL SHEET**

RESTROOM & VAULT BUILDING PROJECT FOR:

**MAQUOKETA CAVES STATE PARK**

JACKSON COUNTY, IOWA

NO.	BY	DATE	REVISION

DRAWN BY: **BJ** PROJECT NUMBER: **13-06-49-01**  
 CHK'D BY: DATE: **3/27/2014**

SHEET NO: **C3**



NORTHWEST VAULT LOCATION  
 42°07'06.75"N, 90°46'15.70"W.  
 LOCATION CAN BE ADJUSTED IN  
 FIELD BY DNR INSPECTOR.  
 MAINTAIN POSITIVE DRAINAGE  
 AWAY FROM VAULT BUILDING.

EAST VAULT LOCATION  
 42°07'04.85"N, 90°46'11.06"W.  
 LOCATION CAN BE ADJUSTED IN  
 FIELD BY DNR INSPECTOR.  
 MAINTAIN POSITIVE DRAINAGE  
 AWAY FROM VAULT BUILDING.

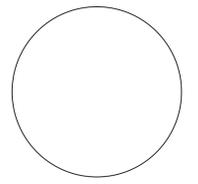
INSTALL 3 PRECAST  
 CONCRETE SINGLE PIT  
 VAULT BUILDINGS.

SOUTHWEST VAULT LOCATION  
 42°07'02.78"N, 90°46'15.44"W.  
 LOCATION CAN BE ADJUSTED IN  
 FIELD BY DNR INSPECTOR.  
 MAINTAIN POSITIVE DRAINAGE  
 AWAY FROM VAULT BUILDING.

**NOTES**

1. CONTRACTOR TO INSTALL (3) PRECAST SINGLE PIT VAULT BUILDINGS (CXT SINGLE RIGHT HANDED CASCADIAN VAULT OR SIMILAR).
2. VAULT BUILDINGS TO HAVE SOLAR POWERED INTERIOR LIGHTING AND IS INCIDENTAL TO THE BID ITEM.
3. CONTRACTOR TO PLACE APPROPRIATE BEDDING MATERIAL FOR THE VAULT BUILDINGS AS DETAILED PER THE MANUFACTURER'S SPECIFICATIONS.

CONSTITUTE:



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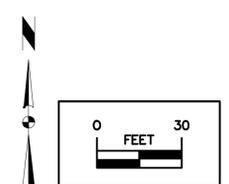


**SITE PLAN-VAULT LOCATIONS**

RESTROOM & VAULT BUILDING PROJECT FOR:  
**MAQUOKETA CAVES STATE PARK**  
 JACKSON COUNTY, IOWA

**LEGEND**

- EXISTING/PROPOSED
- s 6" — SANITARY SEWER
  - w 2" — WATER MAIN
  - E — ELECTRICAL LINE
  - 990 ELEVATION
  - 882.67 884.50 SPOT ELEVATION
  - TREES
  - 8" FILTER SOCK



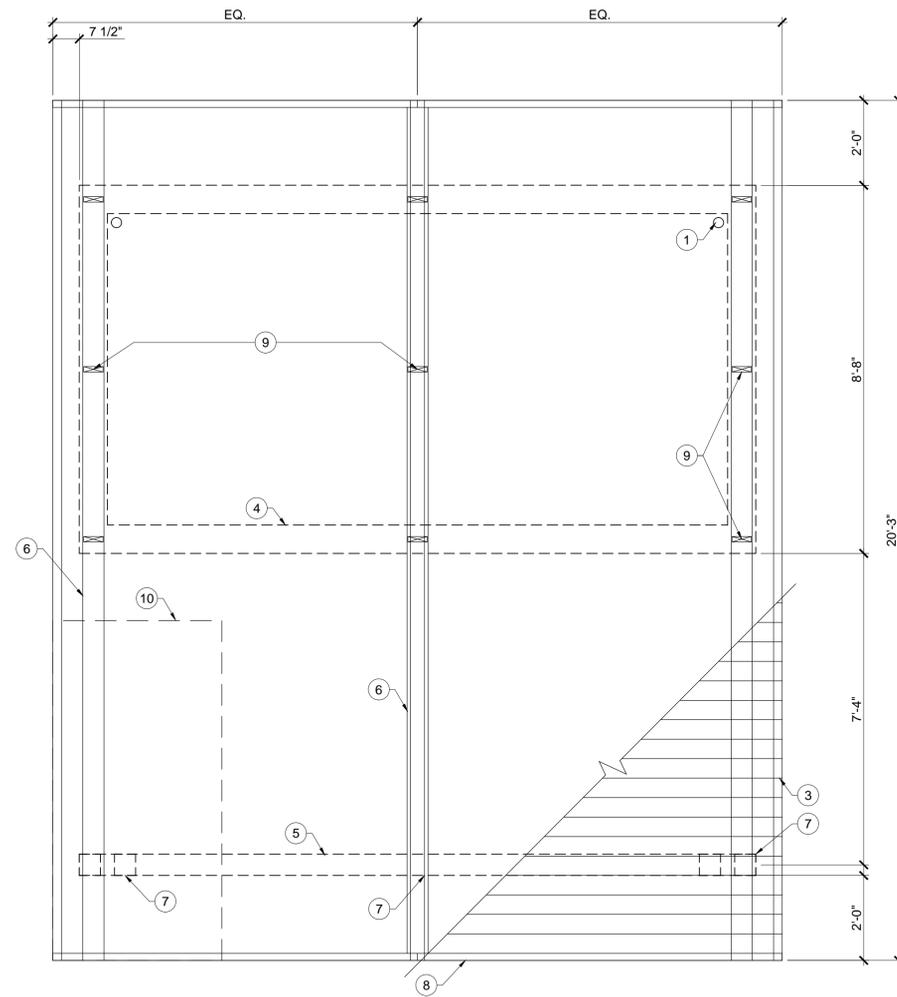
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DRAWN BY: PROJECT NUMBER:  
**BJ 13-06-49-01**

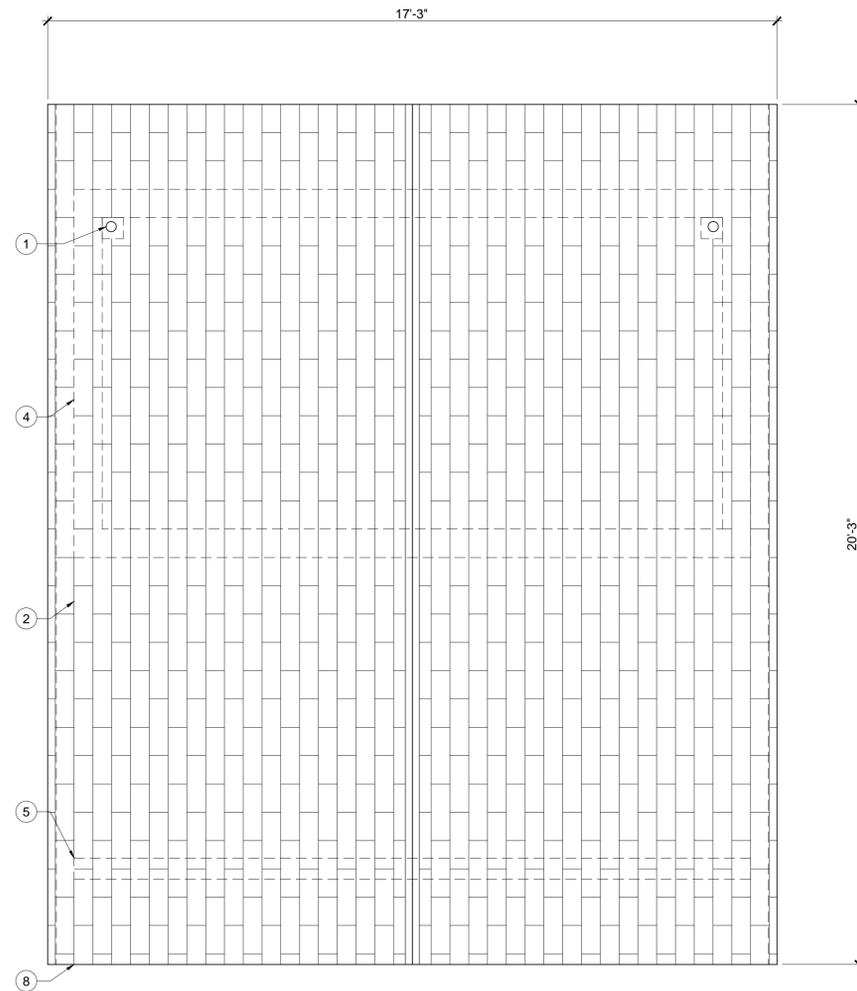
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**3/27/2014**

SHEET No: **C4**





**02** ROOF FRAMING PLAN  
SCALE: 1/2" = 1'-0"



**01** ROOF PLAN  
SCALE: 1/2" = 1'-0"

**KEY NOTES**

1. VENT PIPE, REFER TO MECHANICAL DRAWINGS.
2. CERTAINTED LANDMARK TL WEATHERED WOOD SHINGLES OVER 30LB FELT, 7/16" O.S.B.
3. 2X6 T&G DECKING, FINISH CLEAR TWO COATS OF SATIN POLYURETHANE.
4. BLOCK CMU STRUCTURE BELOW.
5. HEAVY TIMBER TRUSS.
6. LAMINATED WOOD BEAM.
7. SIMPSON LSTA - 18 OVER TRUSS AT EACH BEAM.
8. 2X6 FASCIA TRIM, STAIN TO MATCH TRUSS.
9. LAMINATED BEAM HOLD DOWNS, EMBED INTO GROUTED CELLS BELOW.
10. 7/16" O.S.B. OVER T&G.

**GENERAL NOTES**

- A. REFER TO FINISH SCHEDULE, SPECS.
- B. REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002.
- C. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, SHEET A-100.
- D. CONTRACTOR TO PROVIDE ALL RESTROOM SIGNAGE AS APPLICABLE PER CODE.

CONSULTANT:

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**ROOF & FRAMING PLAN**

DESIGN GUIDE RESTROOM & PITS FOR:  
**MAQUOKETA CAVES SP**

JACKSON COUNTY, IOWA

MAQUOKETA CAVES SP

NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:  
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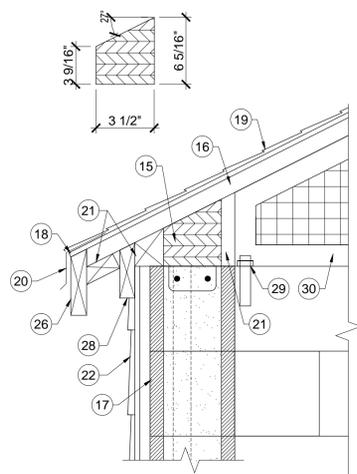
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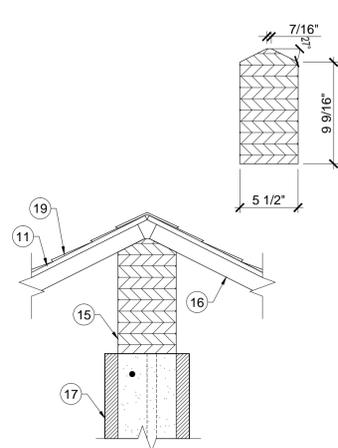
**A-101**



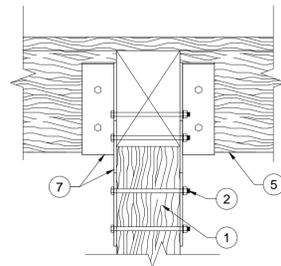




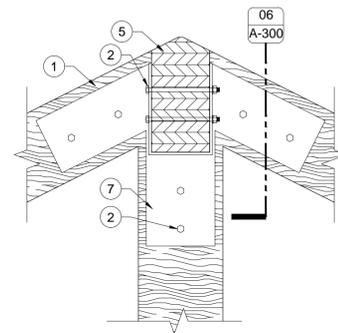
**08** EAVE CONNECTION DETAIL  
SCALE: 1 1/2" = 1'-0"



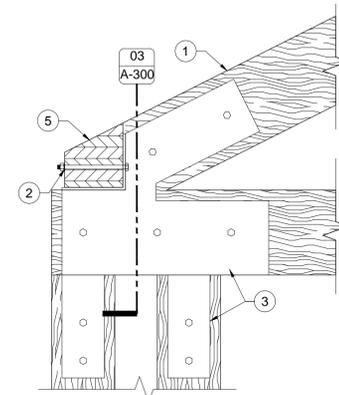
**07** RIDGE CONNECTION DETAIL  
SCALE: 1 1/2" = 1'-0"



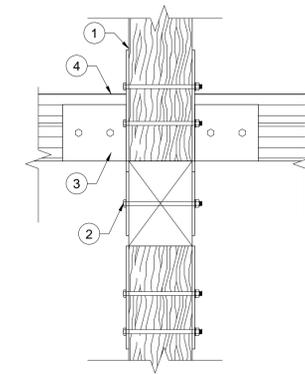
**06** TRUSS CONNECTION DTL.  
SCALE: 1-1/2" = 1'-0"



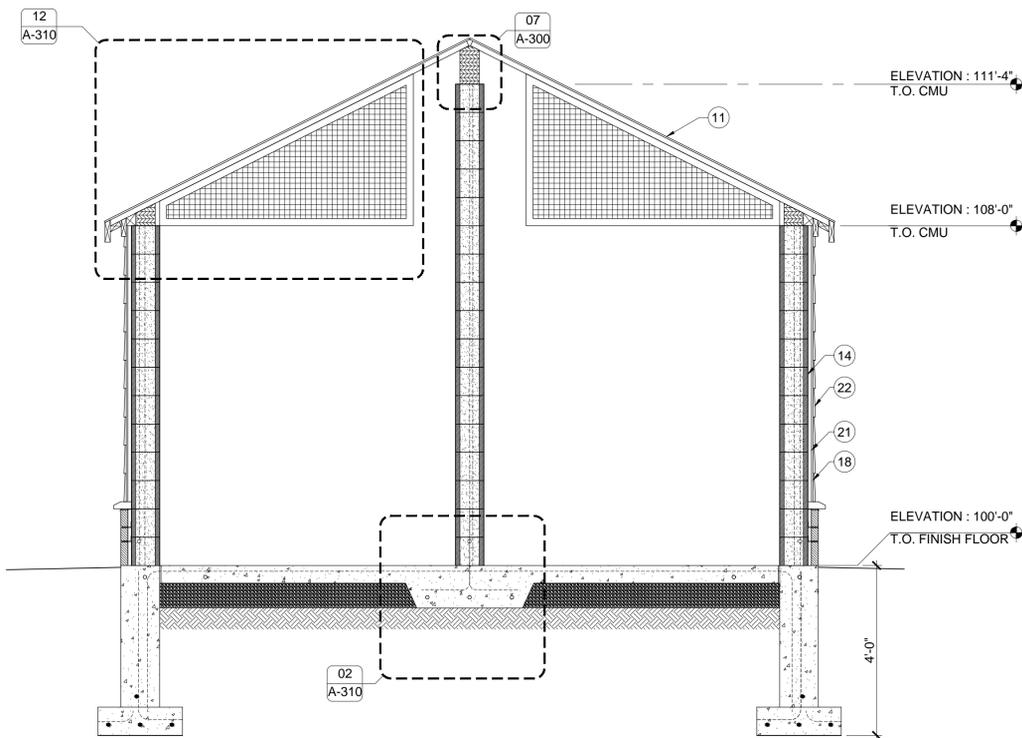
**05** TRUSS CONNECTION DTL.  
SCALE: 1-1/2" = 1'-0"



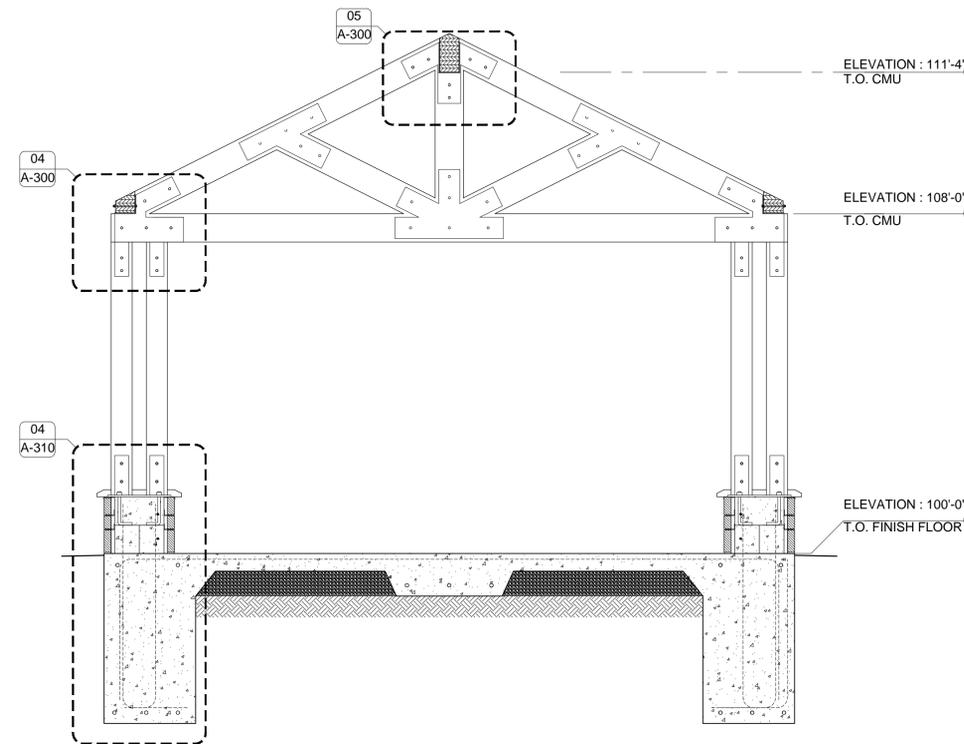
**04** TRUSS CONNECTION DTL.  
SCALE: 1-1/2" = 1'-0"



**03** TRUSS CONNECTION DTL.  
SCALE: 1-1/2" = 1'-0"



**02** BUILDING SECTION  
SCALE: 1/2" = 1'-0"



**01** TIMBER TRUSS DTL.  
SCALE: 1/2" = 1'-0"

**KEY NOTES**

1. 6 X 10 DOUGLAS FIR ROUGH SAWN TRUSS, STAIN W/ TWO COATS TWP 103, SEE 01/A300 FOR DETAILS.
2. 3/4" DIA. 8" BOLTS W/ HH NUTS & LOCK WASHERS.
3. EAVE TRUSS BRACKETS.
4. SIMPSON LSTA16 STRAP OVER EAVE BEAMS.
5. 5 1/2" x 6" GLUE-LAM EAVE BEAMS.  
NOTE: BEAM IS CONTINUOUS THRU TRUSS.
6. 6 X 6 DOUGLAS FIR ROUGH SAWN COLUMN, STAIN TWO COATS TWP 103.
7. EAVE TRUSS BRACKETS.
8. SIMPSON LSTA-18 STRAP CONNECTING.
9. 2" x SUB-FASCIA ATTACH TO DECKING W/ #12" x 3" GALV. WOOD SCREWS @ 12" O.C.
10. 2" x 6" EAVE FASCIA ATTACH W/ #12" x 3" GALV. WOOD SCREWS @ 12" O.C. ALTERNATING BETWEEN DECKING & SUB-FASCIA.
11. 7/16" O.S.B. ROOF SHEATHING OVER 2" X 6" T & G DECKING.
12. 5-1/2" GLU-LAM EAVE BEAMS CENTERED ON WALL OVER SILL SEAL.
13. EMBEDDED GLU-LAM BEAM BRACKET W/ (8) 1/4" DIA. x 2-1/2" LAG SCREWS.
14. 8" CMU BLOCK WALL, FULLY GROUTED, #5 @ 16" O.C., HORIZONTALS #5 EVERY THIRD COURSE.

15. LAMINATED STRUCTURAL BEAM, STAIN TWO COATS OF TWP 103.
16. 2 X 6 T & G ROOF DECKING, SEAL WITH TWO COATS OF CLEAR POLYURETHANE.
17. 8 X 8 X 16 SMOOTH CMU BLOCK FULLY GROUT ALL CELLS, #5 @ 16" O.C., HORIZONTALS #5 EVERY THIRD COURSE.
18. 7/16" O.S.B. SHEATHING W/ 30 LB. FELT OVER ENTIRE SURFACE.
19. LAMINATED TL-WEATHERED WOOD SHINGLES.
20. METAL DRIP EDGE, DARK BROWN.
21. 1 X TREATED NAILER.
22. CERTAINTED 8 1/4" CEDAR LAP SIDING.
23. CEMENT BOARD TRIM, COLOR TO MATCH SIDING.
24. DOOR & FRAME AS SCHEDULED.
25. THICKENED SLAB.
26. 2 X 6 CEDAR FACIA, STAIN TWP 103.
27. NOT USED.
28. 2 X BLOCKING AS REQUIRED.
29. GALVANIZED EPOXY BOLTS, EPOXY INTO CELL GROUT.
30. HEAVY STEEL GRATE SCREEN W/ ANGLE IRON EDGES, EPOXY PAINT BLACK.

**GENERAL NOTES**

- A. REFER TO FINISH SCHEDULE, SPECS.
- B. REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002.
- C. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, SHEET A-100.
- D. CONTRACTOR TO PROVIDE ALL RESTROOM SIGNAGE AS APPLICABLE PER CODE.

CONSULTANT:



**IOWA DEPARTMENT OF NATURAL RESOURCES**  
ENGINEERING SERVICES - WALLACE BUILDING  
502 E. 9TH ST., DES MOINES, IA 50319-0034  
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**BUILDING SECTION**

DESIGN GUIDE RESTROOM & PITS FOR:

**MAQUOKETA CAVES SP**

JACKSON COUNTY, IOWA  
MAQUOKETA CAVES SP

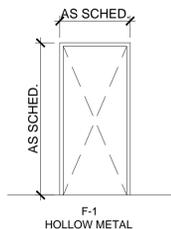
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DH 13-06-49-01  
CHK'D BY: DATE:  
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SHEET NO:

**A-300**

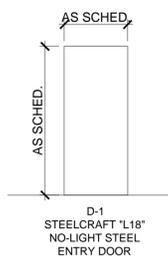


FRAME TYPES



F-1 HOLLOW METAL

DOOR TYPES



D-1 STEELCRAFT "L18" NO-LIGHT STEEL ENTRY DOOR

FINISH SCHEDULE

ROOM #	ROOM NAME	FLOORING	BASE	NORTH WALL FINISH	EAST WALL FINISH	SOUTH WALL FINISH	WEST WALL FINISH	CEILING	NOTES
100	RESTROOM	CONC	-	PNT-1	PNT-1	PNT-1	PNT-1	T & G 1	-
101	RESTROOM	CONC	-	PNT-1	PNT-1	PNT-1	PNT-1	T & G 1	-

HARDWARE TYPES

- ALL HARDWARE MODEL NUMBERS BASED ON SCHLAGE "ND-SERIES" LOCKSETS AND "IVES" HARDWARE.
  - HARDWARE FINISH TO BE "SATIN NICKEL". ALL EXTERIOR LOCKSETS TO BE KEYPED TO MATCH EXISTING FACILITIES ON SITE.
- HARDWARE SET NO. 1 - DOORS: 100 & 101  
 3 EA. HINGES 35P1 4 1/2" X 4 1/2"  
 3 EA. SILENCERS SR86  
 1 EA. DEADBOLT B660P  
 1 EA. PUSH/PULL PLATES 1" DIA. STAINLESS

FINISH DESCRIPTION

FINISH MARK	MATERIAL	MANUFACTURER INFO		DIMENSION	COLOR	FINISH	COMMENTS
		COMPANY NAME	PRODUCT NUMBER				
FLOOR FINISH							
CONC	SEALED CONCRETE	-	-	-	CLEAR	SEALED	2 X SEAL
CEILING FINISH							
T&G1	CEDAR	-	-	2" X 6"	CLEAR	POLY	2 COATS
INTERIOR FINISH							
PNT-1	EPOXY PAINT	SHERWIN WILLIAMS	PRO-INDUSTRIAL	-	DIVINE WHITE	EPOXY	2 COATS
PNT-2	EPOXY PAINT	SHERWIN WILLIAMS	PRO-INDUSTRIAL	-	SABLE	EPOXY	2 COATS
EXTERIOR FINISH							
SHR-1	COMPOSITION SHINGLE	CERTAINTED	LANDMARK TL	-	WEATHERED WD	-	-

12 NOT USED  
SCALE:

11 NOT USED  
SCALE:

10 NOT USED  
SCALE:

09 NOT USED  
SCALE:

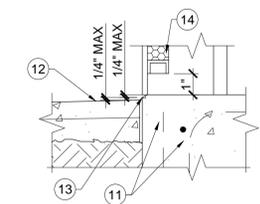
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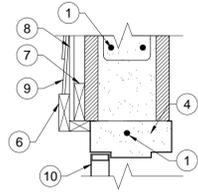
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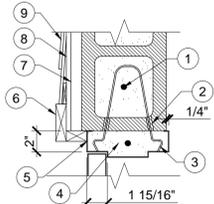
04 NOT USED  
SCALE:



03 THRESHOLD DETAIL  
SCALE: 1-1/2" = 1'-0"



02 JAMB DETAIL  
SCALE: 1-1/2" = 1'-0"



01 HEADER DETAIL  
SCALE: 1-1/2" = 1'-0"

KEY NOTES

- REBAR.
- NOTCH CMU FOR DOOR CLIP.
- DOOR CLIP.
- GROUT SOLID.
- CAULK.
- CERTAINTED TRIM.
- 1X TREATED NAILERS.
- 7/16" SHEATHING.
- CEDAR LAP SIDING.
- STEEL DOOR.
- CONC. SLAB & REBAR AS PER SLAB PLAN.
- 1/4" SLOPE.
- 1.2 SLOPE @ CONC. EDGE.
- HM. DOOR W/ CHANNEL FILLER @ BOT.

GENERAL NOTES

- CHECK ALL QUANTITIES, DIMENSIONS AND FINISHES BEFORE ORDERING.
- ALL METAL DOORS, FRAMES AND ACCESSORIES TO BE DARK BRONZE.

DOOR SCHEDULE

DOOR NUMBER	DOOR			TYPE	GLASS	FINISH	FRAME			FIRE RATING LABEL	HARDWARE		COMMENTS		
	DIMENSION						DETAILS				TYPE	FINISH		SET #	KEYSIDE ROOM NUMBER
	WIDTH	HEIGHT	THICK.				HEAD	JAMB	THRESHOLD						
100	3'-0"	7'-0"	1 3/4"	D-1		PNT-2	01/A-600	02/A-600	03/A-600	F-1	PNT-2	1	EXT.	STEELCRAFT "L" SERIES	
101	3'-0"	7'-0"	1 3/4"	D-1		PNT-2	01/A-600	02/A-600	03/A-600	F-1	PNT-2	1	EXT.	STEELCRAFT "L" SERIES	

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FINISH AND DOOR SCHEDULES

DESIGN GUIDE RESTROOM & PITTS FOR:  
**MAQUOKETA CAVES SP**

JACKSON COUNTY, IOWA

MAQUOKETA CAVES SP

NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:  
 DH 13-06-49-01  
 CHK'D BY: DATE:  
 RR 02/26/14

SHEET No:

**A-600**

## MECHANICAL SYMBOLS

	COLD WATER
	SOIL, WASTE, OR SANITARY SEWER BELOW FLOOR OR GRADE
	VENT ABOVE FLOOR OR GRADE
	FLOOR DRAIN - TYPE AND SIZE AS NOTED
	RISER DOWN (ELBOW)
	RISER DOWN (TEE)
	RISER UP (ELBOW)
	NEW PIPING
	SHUT OFF VALVE (BALL, BUTTERFLY, ETC. REFER TO SPECS)

NOTE: NOT ALL SYMBOLS APPLY TO THIS PROJECT.

### MECHANICAL GENERAL NOTES

COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: BUILDING STRUCTURE, SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.

INCORPORATE INTO INSTALLATION MECHANICAL SPECIFICATIONS, DRAWINGS, STATE AND LOCAL CODES, AND OTHER APPLICABLE REQUIREMENTS.

ON COMPLETION OF THE INSTALLATION, MECHANICAL CONTRACTOR SHALL COOPERATE WITH THE OWNER TO PROVIDE ANY NECESSARY ADJUSTING TO OBTAIN PROPER OPERATION OF ALL EQUIPMENT AND SYSTEMS. CONTRACTOR SHALL PROVIDE ALL FACILITIES AND EQUIPMENT, AND MAKE ALL TESTS, REQUIRED FOR ADJUSTMENTS AND BALANCING TO ESTABLISH THE PROPER PERFORMANCE OF ANY PIECE OF EQUIPMENT.

### PLUMBING GENERAL NOTES

MECHANICAL CONTRACTOR TO PROVIDE A COMPLETE PLUMBING SYSTEM, INCLUDING, PIPE, INSULATION, HANGERS, SUPPORTS, EQUIPMENT, FIXTURES, MIXING VALVES, VALVES, AND ALL APPURTENANCES. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. SIZE AND INSTALL SYSTEM PER PLUMBING CODE. COMPLY WITH ALL LOCAL AND STATE CODES AND REQUIREMENTS.

DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF PLUMBING SYSTEM.

### MECHANICAL WARRANTY NOTES

MECHANICAL CONTRACTOR SHALL WARRANT ALL EQUIPMENT AND INSTALLATION FOR A MINIMUM OF 1 YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. ALL DEFECTS THAT BECOME APPARENT WITHIN THE WARRANTY PERIOD SHALL BE REPAIRED BY THE MECHANICAL CONTRACTOR AS DIRECTED BY THE ENGINEER THROUGH THE OWNER'S REPRESENTATIVE. WARRANTY WILL NOT OBLIGATE THE MECHANICAL CONTRACTOR TO REPAIR DAMAGE RESULTING FROM ACCIDENT OR IMPROPER OPERATION OF CARE ON THE PART OF THE OWNER. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS AND OTHER WARRANTY INFORMATION.

## MECHANICAL ABBREVIATIONS

ABSOR	ABSORPTION	EQUIP	EQUIPMENT	LDBT	LEAVING DRY BULB TEMPERATURE
ACU	AIR CONDITIONING UNIT	EST	EXTERNAL STATIC PRESSURE	LWT	LEAVING WATER TEMPERATURE
AD	ACCESS DOOR OR AREA DRAIN	EWBT	ENTERING WET BULB TEMPERATURE	LWBT	LEAVING WET BULB TEMPERATURE
AFF	ABOVE FINISHED FLOOR	EWC	ELECTRIC WATER COOLER	MB	MOP BASIN
AFG	ABOVE FINISHED GRADE	EWT	ENTERING WATER TEMPERATURE	MBH	1000 BTUH
AHU	AIR HANDLING UNIT	EX	EXISTING	MC	MECHANICAL CONTRACTOR
AV	AIR VENT	EXH	EXHAUST	MECH	MECHANICAL
BOT	BOTTOM	EXP	EXPANSION	MH	MANHOLE
BTU	BRITISH THERMAL UNIT	FAI	FRESH AIR INTAKE	NTS	NOT TO SCALE
BTUH	BTU PER HOUR	FCU	FAN COIL UNIT	OA	OUTSIDE AIR
CA	COMPRESSED AIR	FD	FLOOR DRAIN	OD	OVERFLOW ROOF DRAIN
CB	CATCH BASIN	FLEX	FLEXIBLE	PSI	POUNDS PER SQUARE INCH
CENT	CENTRIFUGAL	FLR	FLOOR	PRV	POWER ROOF VENTILATOR
CFM	CUBIC FEET PER MINUTE	FPM	FEET PER MINUTE	PRV	PRESSURE REDUCING VALVE
CI	CAST IRON	FPS	FEET PER SECOND	PV	PRESSURE VENT
CL	CENTER LINE	FS	FLOOR SINK	PVC	POLYVINYL CHLORIDE
COND	CONDENSATE	FT	FINITUBE	RA	RETURN AIR
CO	CLEAN OUT	FTG	FOOTING	RD	ROOF DRAIN
CONC	CONCRETE	GA	GAGE	RH	RELATIVE HUMIDITY
CONTR	CONTRACTOR	GAL	GALLON	RTU	ROOF TOP UNIT
CP	CONDENSATE PUMP	GALV	GALVANIZED	RV	RELIEF VALVE
CU	COPPER	GC	GENERAL CONTRACTOR	SK	SINK
CUH	CABINET UNIT HEATER	GPH	GALLONS PER HOUR	SA	SUPPLY AIR
CWP	CIRCULATING WATER PUMP	GPM	GALLONS PER MINUTE	SH	SHOWER
DDC	DIRECT DIGITAL CONTROLS	H	WALL HYDRANT	SP	STATIC PRESSURE
DN	DOWN	HR	HOUR	TCC	TEMPERATURE CONTROL CONTRACTOR
DR	DRAIN	HTG	HEATING	TYP	TYPICAL
DS	DOWNSPOUT	HB	HOSE BIBB	UC	UNDER CUT DOOR (3/4")
EA	EXHAUST AIR	ISP	INTERNAL STATIC PRESSURE	UH	UNIT HEATER
EAT	ENTERING AIR TEMPERATURE	JR	JANITOR RECEPTOR	UR	URINAL
EC	ELECTRICAL CONTRACTOR	LAV	LAVATORY	UV	UNIT VENTILATOR
EDBT	ENTERING DRY BULB TEMPERATURE			VIR	VENT THROUGH ROOF
EF	EXHAUST FAN			WC	WATER CLOSET
EJ	EXPANSION JOINT			WH	WATER HEATER

NOTE: NOT ALL ABBREVIATIONS APPLY TO THIS PROJECT.

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## MECHANICAL SYMBOLS & NOTES

DESIGN GUIDE AND RESTROOM AND PITS FOR:

## MAQUOKETA CAVES SP

MAQUOKETA CAVES SP JACKSON COUNTY, IOWA

NO. BY DATE REVISION

DRAWN BY: CDB PROJECT NUMBER: 13-06-49-01  
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