



Albuquerque Bernalillo County Water Utility Authority

ARSENIC REMOVAL DEMONSTRATION PROJECT COLLEGE WELL FIELD ALBUQUERQUE, NEW MEXICO

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FEBRUARY 4, 2005

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consulting . engineering . construction . operations

PREPARED BY:

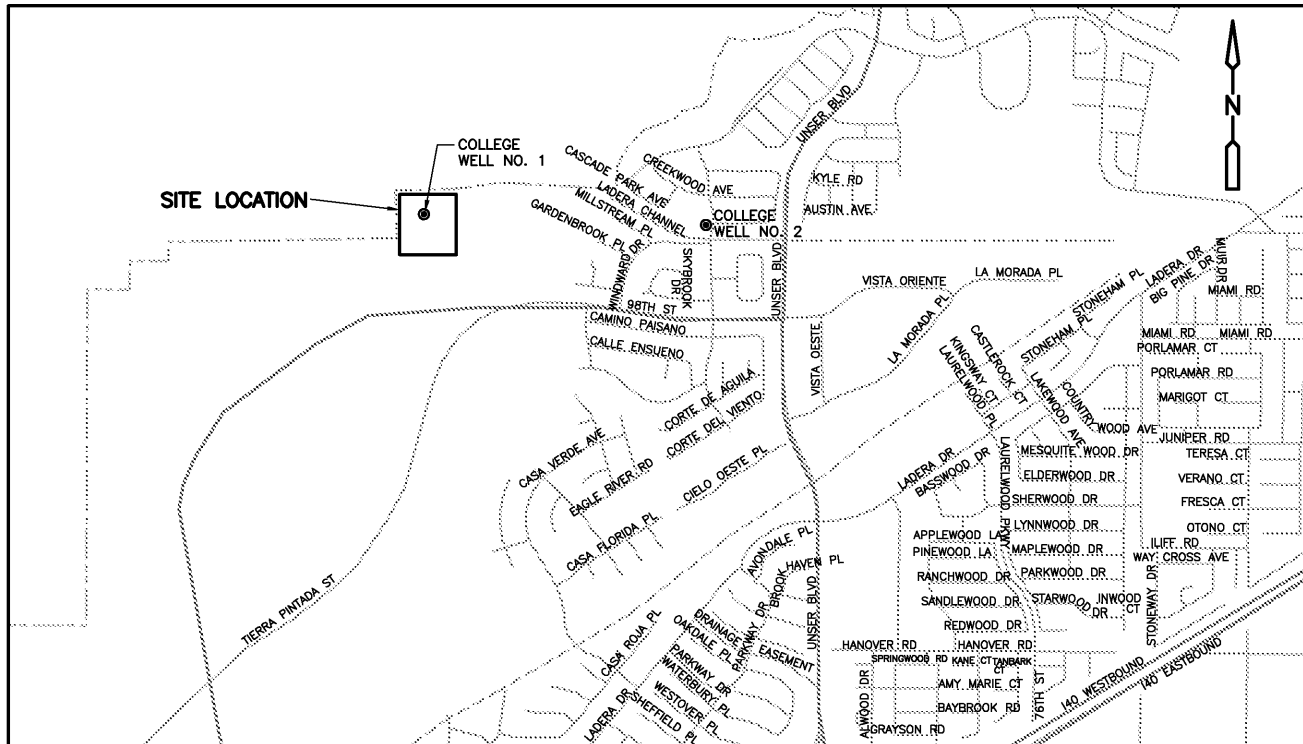
CAMP DRESSER & MCKEE
6000 UPTOWN BLVD., NE
SUITE 200
ALBUQUERQUE, NEW MEXICO 87110
505 243-3200

REV	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE
ENGINEERS STAMP & SIGNATURE		APPROVALS	ENGINEER	DATE	*****		
		DRC Chairman			APPROVED FOR CONSTRUCTION		
		Transportation					
		Water/Wastewater					
		Hydrology					
		Parks					
		Const. Mngmt.			City Engineer Date		
		City Project No. 6886-02			Sheet 1 Of .		
					DRAWING NO. .		

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SITE VICINITY MAP
SCALE 1"= 2 MILES



SITE LOCATION MAP
SCALE 1"= 1000 FEET

GENERAL

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- C-2 CIVIL YARD PIPING PLAN
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- CD-2 STANDARD CIVIL DETAILS - II

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- A-6 BUILDING SECTIONS
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- MD-4 STANDARD MECHANICAL DETAILS - 4
- MD-5 STANDARD MECHANICAL DETAILS - 5

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- H-6 HVAC EQUIPMENT SCHEDULES
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- E-9 NOT IN THIS SET
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- I-7 CAUSTIC SODA FEED SYSTEM
- I-8 FERRIC CHLORIDE FEED SYSTEM
- I-9 SODIUM HYPOCHLORITE FEED SYSTEM
- I-10 CONTROL SYSTEM ARCHITECTURE

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.



Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
SITE VICINITY MAP SITE LOCATION MAP
AND SHEET INDEX

Design Review Committee City Engineer Approval Mo./Day/Yr. Mo./Day/Yr.

Design	Review	Committee	City Engineer	Approval	Mo./Day/Yr.	Mo./Day/Yr.

CITY PROJECT NO. 6886-02 Zone Map No. SHEET OF
H-9 DRAWING NO. G-1

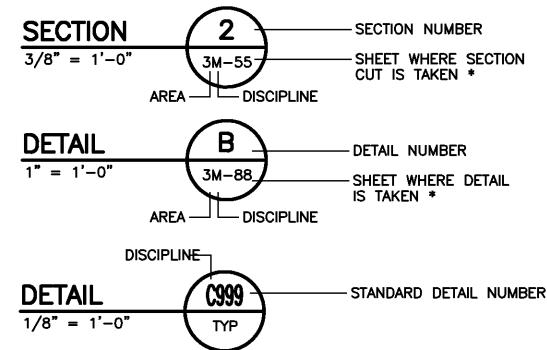
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NO.	BY			NO.	DATE	WORK	DATE
						INSPECTED BY	DATE
						ADJUSTED BY	DATE
						VERIFICATION BY	DATE
						CONNECTIONS BY	DATE
						RECORDED BY	DATE
						NO.	DATE

PRELIMINARY - NOT FOR CONSTRUCTION

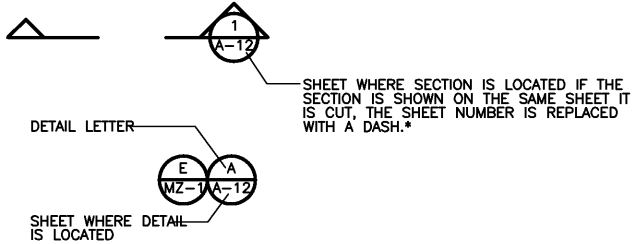
ABBREVIATIONS		
Ø	DIAMETER	FM
#	NUMBER	FRP
&	AND	FS
⊙	AT	FT
CL	CENTERLINE	FTG
A/C	AIR CONDITIONING	G
AB	ANCHOR BOLT	GAL
ABND	ABANDON OR ABANDONED	GALVS
ADDL	ADDITIONAL	GPD
ADJ	ADJUSTABLE, ADJUST	GPM
ADPT	ADAPTER	GRAV
AFG	ABOVE FINISHED GRADE	GSKT
AHU	AIR HANDLING UNIT	GRTG
AL	ALUMINUM	HAS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	HB
		HEX
APPROX	APPROXIMATE (LY)	HGT
AR	ACID RESISTANT	HOR
ARCH	ARCHITECT (URAL) (URE)	HP
ARND	AROUND	HS
ASP	ACTIVATED SLUDGE PUMP	HWA
ASPH	ASPHALT	HWL
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	HWO
		HYD
ATC	AUTOMATIC TEMPERATURE CONTROL	HZ
AUTO	AUTOMATIC	I & C
AUX	AUXILIARY	ID
AWWA	AMERICAN WATER WORKS ASSOCIATION	IE
AVG	AVERAGE	IF
B&C	BOX AND COVER	IN
BFP	BELT FILTER PRESS	INT
BHP	BRAKE HORSEPOWER	INV
BLD FLG	BLIND FLANGE	IRR
BLDG	BUILDING	JCT
BM	BENCHMARK	JB
BOT	BOTTOM	JT
BOW	BOTTOM OF WALL	K
BRG	BEARING	KWH
BTU	BRITISH THERMAL UNIT	LB
BTWN	BETWEEN	LF
C	CENTIGRADE	LG
CAP	CAPACITY	LLH
CIRC	CIRCUMFERENTIAL	LLV
CIT	CITRIC ACID	LONG.
CFM	CUBIC FEET PER MINUTE	LP
CFS	CUBIC FEET PER SECOND	LNTL
CJ	CONSTRUCTION JOINT	LR
CLR	CLEAR	LWA
CMU	CONCRETE MASONRY UNIT	LWL
CO	CLEAN OUT	MAG
COGEN	CO-GENERATION	MAX
COL	COLUMN	MCC
COMB	COMBINATION	MEAS
COMP	COMPRESSOR	MFD
CON	CONCENTRIC	MFG
CONC	CONCRETE	MFR
CONN	CONNECTION	MG/L
CONST	CONSTRUCTION	MGD
CONT	CONTINUOUS	MH
CTJ	CONTROL JOINT	MIN
CTR	CENTER (ED)	MISC
CU FT	CUBIC FOOT (FEET)	MO
CWO	CHAIN WHEEL OPERATOR	MON
DCT BK	DUCT BANK	MPH
DET	DETAIL	MTD
DHDPE	DOUBLE-WALLED HDPE	N
DIA	DIAMETER	NBS
DIAG	DIAGONAL	NC
DIFF	DIFFUSER	NEC
DIV	DIVISION	NEMA
DN	DOWN	NFPA
DO	DITTO	NIC
DPVC	DOUBLE-WALLED PVC	NO
DRN	DRAIN	NOS
DWG	DRAWING	NS
DWL	DOWEL(S)	NTS
E & I	ELECTRICAL & INSTRUMENTATION	O/E
EA	EACH	OC
ECC	ECCENTRIC	OD
EF	EACH FACE	OF
EL	ELEVATION	OH
ELEC	ELECTRIC(AL)	OPNG(S)
EMERG	EMERGENCY	OPP
ENGR	ENGINEER	OPP HD
EOP	EDGE OF PAVEMENT	OPT
EQ	EQUAL	PC
EQPT	EQUIPMENT	PERF
EQUIV	EQUIVALENT	PI
ES	EACH SIDE	PLT
ESEW	EMERGENCY SHOWER AND EYEWASH	PNEU
ETC	ETCETERA	PPM
EW	EACH WAY	PRESS
EXP	EXPANSION	PRIM
EXP JT	EXPANSION JOINT	PS
EXST	EXISTING	PSI
EXT	EXTERIOR	PT
EXTD	EXTENDED	QTY
F	FAHRENHEIT	R
FAC	FACILITY	R/W
FC	FACE OF CURB	RAD
FD	FLOOR DRAIN	RCP
FG	FINISH GRADE	
FIG	FIGURE	
FIS	FEEDER ISOLATION SWITCH GEAR	
FL	FLOOR	
FLG	FLANGE(D)	
FLG	FLOORING	

SEE SHEET G-3 FOR ADDITIONAL ABBREVIATIONS

DRAWING. SECTION AND DETAIL TITLES



* IF SECTION, DETAIL, SCHEMATIC OR DIAGRAM IS DRAWN ON THE SAME SHEET THAT IT IS TAKEN FROM, THE SHEET NUMBER IS REPLACED WITH A HYPHEN. IF THE SECTION IS REFERENCED ON MULTIPLE SHEETS, THE SHEET NUMBER SHOWN INDICATES THE FIRST SHEET THE SECTION IS TAKEN FROM.



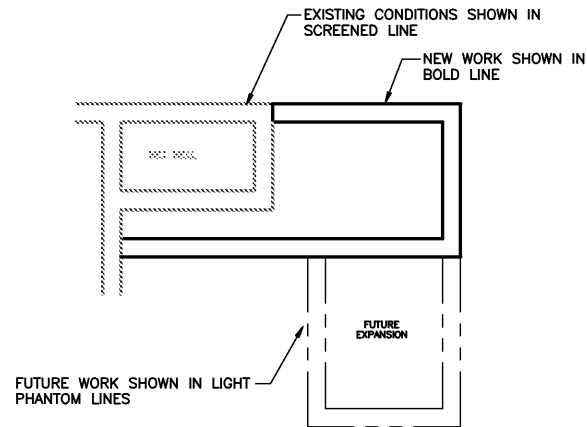
AREA DESIGNATIONS

- 1 GENERAL SITE (NO PREFIX NUMBER)
- 2 OPERATIONS BUILDING
- 3 HEADWORKS
- 4 PROCESS BASIN
- 5 MEMBRANE TANKS
- 6 CHEMICAL STORAGE AND FEED AREA
- 7 BIOFILTER FACILITIES
- 8 PLANT WATER TANK AND PUMP STATION

MISCELLANEOUS SYMBOLS

SYMBOL	FEATURE
	DEMOLITION WORK
	CONCRETE CAST IN PLACE
	CONCRETE BLOCK
	GROUT
	GRAVEL
	CHECKERED PLATE
	BAR GRATING
	CENTERLINE
	STEEL UNLESS NOTED OTHERWISE
	EARTH FILL
	UNDISTURBED EARTH
	ASPHALT

EXISTING OR FUTURE CONDITION DESIGNATION



UNDERGROUND & OVERHEAD UTILITY SYMBOLS

SYMBOL	FEATURE
	12" ELEC..... ELECTRICAL CABLE/DUCT
	OE..... OVERHEAD ELECTRIC
	TEL..... TELEPHONE
	OT..... OVERHEAD TELEPHONE
	S..... SIGNAL LINE
	CATV..... CABLE TV
	OTV..... OVERHEAD TV

BUILDING OR STRUCTURE FOOTPRINT

TREE, SIZE & TYPE

HEDGE

UNIMPROVED DIRT ROAD OR GRAVELED ROADWAY

BOX CULVERT

CULVERT, PIPE SIZES AND TYPE

DEPRESSION CONTOUR

EXISTING CONTOUR LINE AND ELEVATION DESIGNATION

PROPOSED CONTOUR LINE AND ELEVATION DESIGNATION

SPOT ELEVATION

EXISTING EMBANKMENT (REVERSE SYMBOLS FOR CHANNEL)

PROPOSED EMBANKMENT (REVERSE SYMBOLS FOR CHANNEL)

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CDM Camp Dresser & McKee Inc.	
Albuquerque Bernalillo County	
Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY	
SYMBOLS AND ABBREVIATIONS - 1	
Design Review Committee	City Engineer Approval
Mo. 7/29/97 Yr.	Mo. 7/29/97 Yr.
DESIGNED BY: KLP	REVISIONS
DRAWN BY: CAA	DATE: 02/05
CHECKED BY: JDC	DATE: 02/05
CITY PROJECT NO. 6886-02	Zone Map No. H-9
SHEET OF	
DRAWING NO. G-2	

PRELIMINARY - NOT FOR CONSTRUCTION

VALVE SYMBOLS

SYMBOL	FEATURE
	IPS EXPANSION JOINT COUPLING SEE DETAIL E/MZ-9
	FLOW METER
	TELESCOPING VALVE
	VALVE WITH HOSE END
	GATE VALVE
	KNIFE GATE VALVE
	GLOBE VALVE
	BALL VALVE
	3-WAY BALL VALVE
	4-WAY BALL VALVE
	CONE VALVE
	NEEDLE VALVE
	PINCH VALVE
	DIAPHRAGM VALVE
	BUTTERFLY VALVE
	PLUG VALVE
	3-WAY PLUG VALVE
	4-WAY PLUG VALVE
	CHECK VALVE, GENERAL SYMBOL
	BALL CHECK VALVE
	DOUBLE DOOR CHECK VALVE
	ANGLE VALVE
	SOLENOID VALVE
	THREE WAY SOLENOID VALVE
	FOUR WAY SOLENOID VALVE
	MOTOR OPERATED VALVE
	MUD VALVE
	FLOOR DRAIN
	OPEN EQUIPMENT DRAIN
	ECCENTRIC REDUCER OR REDUCING BUSHING
	CONCENTRIC REDUCER OR REDUCING BUSHING
	Y-STRAINER
	BASKET STRAINER
	CALIBRATION CYLINDER
	AIR RELEASE VALVE
	MOTOR OPERATED

PIPING SYMBOLS

DOUBLE LINE SYMBOL	SINGLE LINE SYMBOL	FEATURE
10" DIA. AND LARGER	SMALLER THAN 10" DIA.	
		PLAIN END x PLAIN END PIPE COUPLING
		PLAIN END x PLAIN END PIPE COUPLING RESTRAINED SEE DETAIL A/MZ-3
		RESTRAINED PIPE COUPLING FOR FLANGED PIPE SEE DETAIL C/MZ-3
		FLEXIBLE COUPLING OR EXPANSION JOINT (SLEEVE TYPE)
		FLEXIBLE COUPLING OR EXPANSION JOINT (BELLOWS TYPE)
		SPLIT RING COUPLING FOR GROOVED END JOINTS:
		(F) FLEXIBLE
		(R) RIGID
		(FLEXIBLE IF NO SYMBOL SHOWN)
		FLANGE GUARD
		FLANGE FILLER
		UNION
		QUICK CONNECT COUPLING
		HOSE COUPLING
		WELDED JOINT
		FLANGED JOINT SIMPLIFIED REPRESENTATION.
		FLANGED JOINT COMPLEX REPRESENTATION.
		MECHANICAL JOINT SIMPLIFIED REPRESENTATION.
		MECHANICAL JOINT COMPLEX REPRESENTATION.
		MECHANICAL JOINT RESTRAINED
		PUSH ON JOINT OR CAULKED BELL & SPIGOT JOINT SIMPLIFIED REPRESENTATION
		PUSH ON JOINT OR CAULKED BELL & SPIGOT JOINT COMPLEX REPRESENTATION
		PUSH ON JOINT OR CAULKED BELL & SPIGOT JOINT RESTRAINED
		BALL JOINT
		PIPE LINE W/ DIRECTION OF FLOW
		CHANGE IN PIPING MATERIAL

PIPE AND FITTING SYMBOL NOTES

- SIMPLIFIED JOINT SYMBOL IS USED FOR ALL SINGLE LINE PIPING SHOWN ON THE INTERIOR AND EXTERIOR PIPING DRAWINGS.
- BOTH SIMPLIFIED AND COMPLEX JOINT REPRESENTATIONS MAY BE SHOWN ON THE DRAWINGS.
- UNLESS MODIFIED BY THE GENERAL PROJECT NOTES OR DETAILED ON THE LAYOUT AND SCHEMATIC DRAWINGS PIPE AND FITTING JOINT REQUIREMENTS FOR THE VARIOUS PIPE MATERIALS ARE DEFINED IN THE SPECIFICATIONS.

ABBREVIATIONS

PIPING MATERIALS

CMP	CONCRETE MASONRY PIPE
DI	DUCTILE IRON PIPE
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
SST	STAINLESS STEEL PIPE

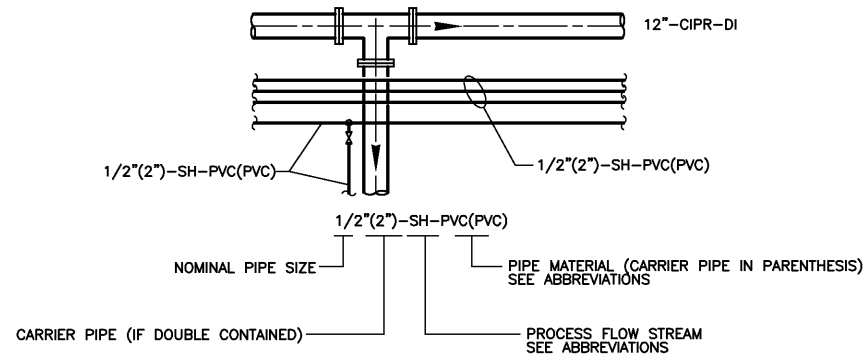
PROCESS FLOW STREAM

AIR	COMPRESSED AIR	HC	HOSE CONNECTION
BYP	BYPASS	MF	MICROFILTERED
CA	CITRIC ACID (50%)	OF	OVERFLOW
CIPD	CLEAN IN PLACE DRAIN	PW	POTABLE WATER
CIPF	CLEAN IN PLACE FEED	RECY	RECYCLE
CIPR	CLEAN IN PLACE REVERSE	RW	RAW WATER
CS	CAUSTIC SODA	RFW	RAW FEED WATER
DRN	DRAIN	SH	SODIUM HYPOCHLORITE
EFF	EFFLUENT	TS	THICKENED SLUDGE
ER	EXCESS RECIRCULATION		
FC	FERRIC CHLORIDE		
HC	HOSE CONNECTION		

VALVE NOMENCLATURE

BCV	BALL CHECK VALVE	PE	PLAIN END
BFV	BUTTERFLY VALVE	POJ	PUSH ON JOINT
BPRV	BACK PRESSURE REGULATING VALVE	PRV	PRESSURE RELIEF VALVE
BV	BALL VALVE	PV	PLUG VALVE
COMP JT	COMPRESSION JOINT	PVRV	PRESSURE VACUUM RELIEF VALVE
CV	CHECK VALVE (AIR CUSHION)	RJ	RESTRAINED JOINT
EXP JT	EXPANSION JOINT	SJ	SOLDERED JOINT
FAC	FLANGED ADAPTOR COUPLING	SOLV	SOLENOID VALVE
FH	FIRE HYDRANT	THD	THREADED
FS	FLOOR STAND	TUBV	TRUE UNION BALL VALVE
GOV	GLOBE VALVE	UN	UNION
GV	GATE VALVE	VB	VALVE BOX
HFAC	HARNESSED FLANGED ADAPTOR COUPLING	VC	VICTAULIC COUPLING (SHOULDERED ENDS)
KGV	KNIFE GATE VALVE	WAP	WALL PIPE
MJ	MECHANICAL JOINT	WJ	WELDED JOINT
MV	MUD VALVE	WP	WELDED PIPE
PBAV	PLASTIC BALL VALVE	WSV	WALL SLEEVE
PCV	PRESSURE CONTROL VALVE		

PIPE TAG



CDM Camp Dresser & McKee Inc.

Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
SYMBOLS AND ABBREVIATIONS - 2

Design Review Committee City Engineer Approval

Mo/Usy2/Yr. Mo/Usy2/Yr.

City Project No. 6886-02

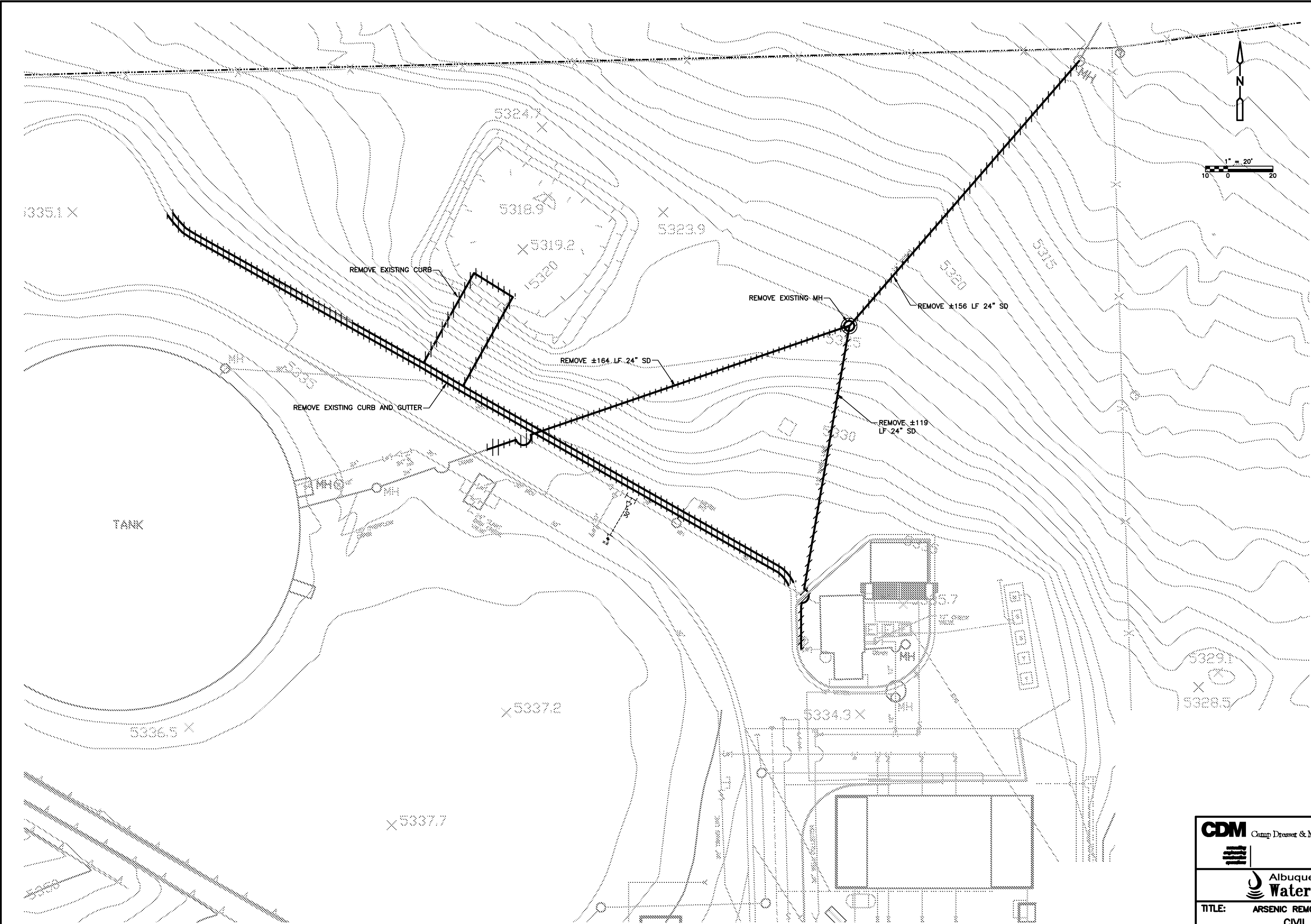
Zone Map No. H-9

SHEET OF DRAWING NO. G-3

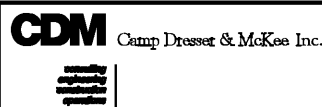
VERIFY SCALES
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PRELIMINARY - NOT FOR CONSTRUCTION

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Albuquerque Bernalillo County
Water Utility Authority

**TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
CIVIL DEMOLITION PLAN**

Design Review Committee City Engineer Approval

Mo./Day/Yr. Mo./Day/Yr.

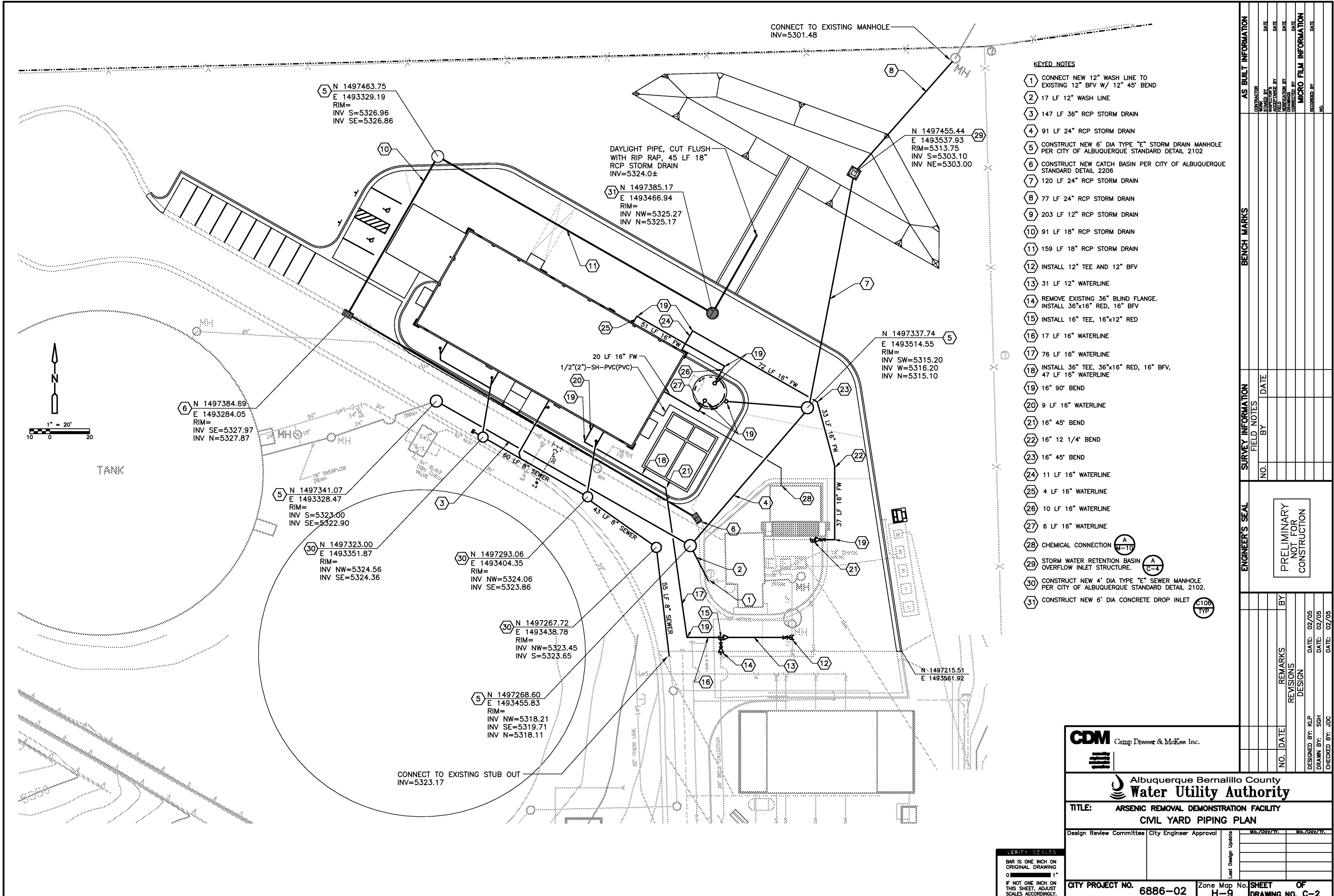
CITY PROJECT NO. 6886-02

Zone Map No. H-9

SHEET OF
DRAWING NO. C-1

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
PRELIMINARY NOT FOR CONSTRUCTION	NO.	BY	DATE			CONTRACTOR	
						WORK	
						INSPECTED BY	
						DATE	
DESIGNED BY: KLP	REMARKS		DATE: 02/05		MICRO FILM INFORMATION		
	REVISIONS		DATE: 02/05		RECORDED BY		
	DESIGN		DATE: 02/05		NO.		
	DRAWN BY: SCH		DATE: 02/05				
	CHECKED BY: JDC		DATE: 02/05				

PRELIMINARY - NOT FOR CONSTRUCTION



PRELIMINARY - NOT FOR CONSTRUCTION


AS BUILT INFORMATION			
CONTRACTOR			
DESIGNED BY		DATE	
INSPECTOR'S		DATE	
ACCEPTANCE BY		DATE	
FIELD		DATE	
VERIFICATION BY		DATE	
DRAWINGS		DATE	
COORDINATED BY		DATE	
MICRO FILM INFORMATION			
RECORDED BY		DATE	
NO.			

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ENGINEER'S SEAL

PRELIMINARY
NOT FOR
CONSTRUCTION

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VERIFY SCALES
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The logo of the American Chemical Society (ACS) is a circular emblem. It features a large, bold, serif capital letter 'A' in the upper half. A horizontal line divides the circle, and in the lower half, the text 'C-1' is written in a smaller, sans-serif font.

CDM Camp Dresser & McKee Inc.
 consulting
 engineering
 construction
 operations

 Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
CIVIL DETAILS

CITY PROJECT NO.	6886-02	Zone Map No.	H-9	SHEET OF DRAWING NO. C-4
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DATE: 02/05
CHECKED BY: JDC

PRELIMINARY - NOT FOR CONSTRUCTION

A. GENERAL NOTES

1. DESIGN CODES:
a. BUILDING CODE: INTERNATIONAL BUILDING CODE (IBC), 2003 EDITION.
2. DESIGN GUIDELINES – ALL STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING DESIGN CODES:
a. ACI 318–02 – "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY"
b. ACI 530–02 – "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES AND COMMENTARY"
c. AISC MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN, NINTH EDITION
3. ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, MECHANICAL, ELECTRICAL, INSTRUMENTATION AND SHOP DRAWINGS AND THE PROJECT SPECIFICATIONS.
4. SEE ALL OTHER PROJECT DOCUMENTS FOR REGLETS, PIPE SLEEVES, CONDUITS OR OTHER ITEMS TO BE EMBEDDED OR PASSED THROUGH CONCRETE STRUCTURES.
5. PENETRATIONS THROUGH WALLS OR SLABS MAY NOT BE SHOWN ON STRUCTURAL DRAWINGS. REFER TO ASSOCIATED DOCUMENTS FOR LOCATIONS.
6. THE MINIMUM CLEAR DISTANCE BETWEEN PIPE OR CONDUIT PENETRATIONS SHALL BE 3 TIMES DIAMETER OF THE PENETRATION OR 8", WHICHEVER IS SMALLER.
7. NO STRUCTURAL MEMBERS SHALL BE CUT FOR PIPES, DUCTS, ETC., UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.
8. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED SIZES.
9. USE PERTINENT STANDARD DETAILS SHOWN, EVEN THOUGH THEY MAY NOT BE CALLED OUT AT LOCATIONS WHERE THEY APPLY.
10. UNLESS MODIFIED BY THIS NOTE, SPECIAL INSPECTION SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE, (IBC). THE FOLLOWING ITEMS, AS A MINIMUM, SHALL RECEIVE SPECIAL INSPECTION.
a. CONCRETE: THE INSPECTOR SHALL SUPERVISE THE PREPARATION OF COMPRESSION TEST SPECIMENS AND THE PLACEMENT OF REINFORCED CONCRETE.
b. BOLTS INSTALLED IN CONCRETE: BOLTS SHALL BE INSPECTED PRIOR TO AND DURING CONCRETE PLACEMENT.
c. ADHESIVE ANCHOR SYSTEMS: THE INSPECTOR SHALL RECORD THE FOLLOWING: DRILL–BIT COMPLIANCE WITH ANSI b212.15–1994; HOLE DEPTH AND CLEANLINESS; PRODUCT DESCRIPTION, INCLUDING PRODUCT NAME, ROD DIAMETER AND LENGTH; ADHESIVE EXPIRATION DATE; AND VERIFICATION OF ANCHOR INSTALLATION WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS AND THE PROPER ICBO EVALUATION REPORT.
d. REINFORCING STEEL: REINFORCING STEEL SHALL BE INSPECTED PRIOR TO CLOSING THE FORMS OR DELIVERY OF CONCRETE TO JOBSITE.
e. WELDING: THE INSPECTOR SHALL INSPECT ALL STRUCTURAL WELDING.
f. STRUCTURAL MASONRY: MASONRY SHALL BE INSPECTED DURNG PREPARATION AND TAKING OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS, OR PRISM SPECIMENS, PLACING OF ALL MASONRY UNITS, PLACEMENT OF REINFORCING STEEL, GROUT SPACE PRIOR TO CLOSING OF CLEANOUTS, AND DURING ALL GROUTING OPERATIONS.
g. WATERSTOPS: THE INSPECTOR SHALL INSPECT ALL WATERSTOP INSTALLATION LOCATIONS PRIOR TO CONCRETE PLACEMENT.
11. STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURES. DURING CONSTRUCTION, STRUCTURES SHALL BE SUPPORTED BY BRACING OR SHORING WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR.
12. ALL CONSTRUCTION SHALL CONFORM TO THE 2003 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC).
13. THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE NEW CONSTRUCTION. SHOULD DISCREPENCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING THE WORK.

B. DESIGN LOADS

1. GRAVITY: ARSENIC FACILITY
BUILT UP ROOFING: 6 psf
INSULATION: 4 psf
ROOF DECK: 2 psf
JOISTS / BEAMS: 3 psf
MISC 4 psf

TOTAL ROOF DEAD LOAD: 19 psf

ARSenic FACILITY ROOF LIVE: 20 psf
ARSenic FACILITY FLOOR LIVE: 300 psf
VAULT ROOF LIVE: 150 psf
VAULT METAL BUILDING ROOF: 20 psf
2. LATERAL: LATERAL LOADS SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 16 OF THE 2003 IBC, UNLESS OTHERWISE NOTED. THE FOLLOWING DESIGN PARAMETERS SHALL BE USED.
WIND: 90 MPH (3–SECOND GUST), EXPOSURE C, $I_w = 1.15$ (UNO)
SEISMIC: SEISMIC USE GROUP: III
SITE CLASS D
SEISMIC COEFFICIENTS: $S_s = 0.60$
 $S_1 = 0.19$
 $F_a = 2.0$
 $F_v = 1.25$
SEISMIC IMPORTANCE FACTOR: $I_e = 1.50$
ARSenic FACILITY BASIC SEISMIC FORCE RESISTING SYSTEM: SPECIAL REINFORCED MASONRY SHEAR WALLS
ARSenic FACILITY ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE

3. SOIL: LATERAL EARTH PRESSURES (EQUIVALENT FLUID PRESSURE IN PCF):

CASE	EQUIVALENT FLUID PRESSURES (psf PER VERTICAL FOOT)
	STATIC IMPORTED CLEAN SAND BACKFILL
ACTIVE	34
AT–REST	60
PASSIVE	400

ADDITIONAL GEOTECHNICAL DESIGN PARAMETERS ARE PRESENTED IN "GEOTECHNICAL INVESTIGATION PROPOSED ARSENIC REMOVAL FACILITY COLLEGE PUMP STATION, ALBUQUERQUE, NEW MEXICO", PREPARED BY VINYARD & ASSOCIATES, DATED AUGUST 1999. ALL EXCAVATION, BACKFILLING, AND COMPACTION RECOMMENDATIONS PRESENTED IN THE DIVISION 2 SPECIFICATION SHALL BE ADHERED TO.

4. FOUNDATION BEARING: FOUNDATIONS SHALL BEAR ON UNDISTURBED NATIVE SOILS OR STRUCTURAL FILL AS SHOWN ON THE RESPECTIVE STRUCTURAL DRAWINGS. BOTTOMS OF ALL FOOTINGS SHALL BE A MINIMUM OF 1'–6" BELOW ADJACENT FINISHED GRADE.

DESIGN BEARING PRESSURES:
DEAD PLUS LIVE: 2000 psf
SEISMIC OR WIND: 1/3 INCREASE

C. CAST-IN–PLACE CONCRETE NOTES

1. REINFORCED CONCRETE SHALL CONFORM TO ACI (AMERICAN CONCRETE INSTITUTE) 318–99.
2. MINIMUM CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS, UNLESS OTHERWISE NOTED ON THE DRAWINGS (SEE SPECIFICATION SECTION 03300 FOR ADDITIONAL REQUIREMENTS AND SCHEDULE):
STRUCTURAL CONCRETE (CLASS D): $f'_c = 4000$ psi
CONCRETE FILL (CLASS A): $f'_c = 2500$ psi
3. REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF ASTM SPECIFICATION A706 OR A615, GRADE 60 AS SPECIFIED IN SPECIFICATION SECTION 03200.
4. REINFORCING STEEL FABRICATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF CRSI MANUAL OF STANDARD PRACTICE.
5. REINFORCING SHALL HAVE THE FOLLOWING CLEAR CONCRETE COVER, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

CONDITION	COVER
UNFORMED SURFACES IN CONTACT WITH EARTH	3"
FORMED SURFACES EXPOSED TO EARTH, WATER OR WEATHER	2"
BOTTOM SURFACES FOR SLAB OVER WATER	2"
CONCRETE SURFACES FOR DRY CONDITIONS: WALLS AND SLAB BEAMS:	3/4"
PRIMARY REINFORCEMENT STIRRUPS AND TIES	2" 1 1/2"

6. SPLICED BARS SHALL HAVE A MINIMUM LAP AS SPECIFIED IN THE LATEST EDITION OF THE ACI 315 DETAILING MANUAL AND ACI 318 CHAPTER 12 AND SHALL BE CLASS B TENSION SPLICES UNO. WHERE SHOWN ON THE DRAWINGS, l_d = DEVELOPMENT LENGTH AS SUMMARIZED IN STANDARD DETAIL S108/SD–1. HOOKS OF REINFORCING STEEL SHALL COMPLY WITH ACI 318.
7. CONSTRUCTION JOINTS SHALL NOT BE PLACED AT LOCATIONS OTHER THAN THOSE SHOWN ON THE DRAWINGS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
8. ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE 3/4" MINIMUM CHAMFER, UNLESS NOTED OTHERWISE.
9. WRITTEN SPACING AND LOCATION OF REINFORCING SHALL TAKE PRECEDENCE OVER DEPICTED SPACING AND LOCATION.
10. PLANE SURFACES SHALL BE FINISHED TO A TOLERANCE OF PLUS OR MINUS 1/8" FOR ANY 10 FOOT LENGTH

D. METAL NOTES

1. WIDE FLANGES SHALL CONFORM TO ASTM A992/A992M OR A572/A572M GRADE 50.
2. PLATES AND BARS SHALL CONFORM TO ASTM A36.
3. STEEL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.
4. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED AND CONNECTED IN COMPLIANCE WITH THE LATEST AISC SPECIFICATIONS.
5. BOLTED CONNECTIONS SHALL BE MADE USING ASTM A325N, SNUG TIGHT HIGH–STRENGTH BOLTS UNLESS OTHERWISE SPECIFIED. ALL BOLTS SHALL BE 3/4"Ø IN 13/16"Ø HOLES UNLESS OTHERWISE SPECIFIED. PROVIDE A MINIMUM OF TWO BOLTS PER CONNECTION.
6. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 "STRUCTURAL WELDING CODE – STEEL". WELDING FILLER MATERIAL SHALL BE AWS A5.1 OR A5.5 E70XX LOW HYDROGEN ELECTRODES. WELDERS SHALL BE AWS CERTIFIED. SUBMIT COPY OF ALL CERTIFICATIONS TO THE ENGINEER. SURFACES TO BE WELDED SHALL BE WIRE BRUSHED CLEAN BEFORE WELDING.
7. SHOP PAINTING AND FIELD PAINTING, IF REQUIRED, SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS.
8. ALL ALUMINUM EMBEDDED IN CONCRETE SHALL BE COATED IN ACCORDANCE WITH SPECIFICATION SECTION 05500.
9. SEE SECTION 05500 OF THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

E. CONCRETE ANCHOR NOTES

1. EMBEDDED ANCHOR BOLTS SHALL BE ASTM TYPE A307 STEEL.
2. ADHESIVE & EXPANSION ANCHORS SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS AND THE APPROPRIATE ICC EVALUATION SERVICE REPORTS. ANCHORS WITHOUT APPROPRIATE ICC EVALUATION SERVICE REPORTS SHALL NOT BE USED.

3. CONTRACTOR SHALL LOCATE EXISTING REBAR USING NON–DESTRUCTIVE METHODS PRIOR TO DRILLING HOLES FOR ADHESIVE & EXPANSION ANCHORS. ADJUST SPACING OF ANCHORS TO MISS EXISTING REINFORCING. TOTAL NUMBER OF ANCHORS PROVIDED SHALL BE EQUAL TO WHAT IS SHOWN ON THE DRAWINGS. NOTIFY THE ENGINEER IF ADJUSTMENT IS REQUIRED.

4. ADHESIVE & EXPANSION ANCHORS SHALL NOT BE USED FOR VIBRATORY LOADS.

F. JOINT NOTES

1. CONSTRUCTION JOINTS SHALL NOT REQUIRE SEALANT, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
2. WATERSTOPS SHALL BE PROVIDED IN JOINTS WHERE SHOWN ON THE DRAWINGS AND WHERE INDICATED BY THE FOLLOWING:
a. IN ALL JOINTS IN WALLS, FOOTINGS AND SLABS OF LIQUID CONTAINMENT STRUCTURES TO PREVENT EXFILTRATION OF LIQUID INTO SOIL OR DRY AREAS OF THE STRUCTURE.
b. IN ALL BELOW–GRADE JOINTS IN WALLS AND SLABS TO PREVENT INFILTRATION OF GROUNDWATER INTO STRUCTURE.
3. THE INTERSECTIONS OF WATERSTOPS SHALL BE FACTORY MADE OR SHOP WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PVC WATERSTOPS SHALL BE USED IN THE JOINTS WHERE SHOWN ON THE DRAWINGS.

G. MASONRY NOTES

1. HOLLOW LOAD BEARING CONCRETE MASONRY UNITS SHALL BE PARTIALLY GROUTED AND CONFORM TO ASTM C90, TWO CELL, MEDIUM WEIGHT UNITS.
2. THE MINIMUM COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS, f'_m , SHALL BE 1500 psi. SPECIAL INSPECTION SHALL BE PROVIDED DURING ALL MASONRY CONSTRUCTION.
3. MASONRY REINFORCEMENT SHALL BE BILLET STEEL CONFORMING TO THE LATEST EDITION OF ASTM A615, GRADE 60.
4. MORTAR FOR REINFORCED MASONRY SHALL BE TYPE S AND SHALL CONFORM TO ASTM C270, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 psi. GROUT SHALL CONFORM TO ASTM C476. MINIMUM COMPRESSIVE STRENGTH OF GROUT SHALL BE 2000 psi.
5. UNLESS NOTED OTHERWISE, CENTER ALL VERTICAL REINFORCING IN CMU CORE AND HOLD IN POSITION WITH CAGING DEVICES.
6. PLACE ADDITIONAL REINFORCING BAR (SAME SIZE AS IN ADJACENT WALL) IN GROUTED CORE EXTENDING FULL HEIGHT OF WALL FOR ALL WINDOW AND DOOR OPENINGS PER DETAIL S104/SD–1.
7. GROUT CMU CORES FULL HEIGHT BELOW BEARING OF ALL LINTELS AS INDICATED IN THE LINTEL SCHEDULE.
8. PROVIDE VERTICAL REINFORCING BARS (SAME SIZE AS IN ADJACENT WALL) FULL HEIGHT OF WALL AT CORNERS, INTERSECTIONS, WALL ENDS, JAMBS AND EACH SIDE OF CONTROL JOINTS IN ALL WALLS. SEE STANDARD DETAILS G/S–5 AND S104/SD–1.
9. SUBMIT SHOP DRAWINGS DETAILING ALL REINFORCING STEEL IN REINFORCED MASONRY CONSTRUCTION INCLUDING DETAILS OF ALL BENT BARS, VERTICAL REINFORCING AND HORIZONTAL BOND BEAM REINFORCING. INCLUDE PLANS AND ELEVATIONS AS REQUIRED TO CLEARLY SHOW ALL REINFORCING.
10. SEE NOTE A.10.f OF THIS SHEET FOR SPECIAL INSPECTION REQUIREMENTS.

H. METAL DECK NOTES

1. METAL DECK SHALL CONFORM TO ASTM A653.
2. THE MINIMUM YIELD STRENGTH OF METAL DECK SHALL BE 38 ksi
3. METAL DECK SHALL BE INSTALLED IN NOT LESS THAN THREE SPAN LENGTHS EXCEPT WHERE STEEL LAYOUT DOES NOT PERMIT.
4. METAL ROOF DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
– 18 GAGE METAL DECK
– 1 1/2" DEEP, WIDE RIB, TYPE B 36" WIDE
– GALVANIZED COATING (G90)
– $I = 0.302in^4$
– $S_+ = 0.322in^3$
– $S_- = 0.335in^3$
5. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 "STRUCTURAL WELDING CODE – SHEET STEEL". WELDING FILLER MATERIAL SHALL BE AWS A5.1 OR A5.5 E60XX LOW HYDROGEN ELECTRODES. WELDERS SHALL BE AWS CERTIFIED. SUBMIT COPY OF ALL CERTIFICATIONS TO THE ENGINEER.
6. ATTACH METAL DECKING TO ALL SUPPORTS WITH 1/2" DIA PUDDLE WELDS AND AT PANEL SEAMS WITH 1 1/2" TOP SEAM WELDS. SEE NOTES BELOW FOR DECK ATTACHMENT:

DECK TYPE	
AT PERPENDICULAR SUPPORTS (1/2" DIA WELDS)	1 1/2" ROOF DECK
AT PARALLEL EDGE SUPPORTS (1/2" DIA WELDS)	36/7
AT SIDE LAPS (1 1/2" TOP SEAM WELDS)	24" MAX OC 24" MAX OC

7. EDGE OF DECK AT OPENING SHALL BE AT EDGE OF FRAMING ANGLE, UNO.
8. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

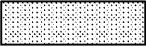
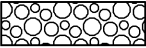





I. STEEL JOIST NOTES

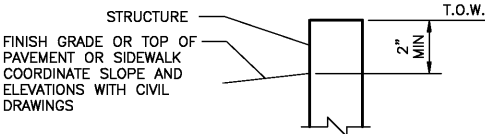
1. FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH SJI "STANDARD SPECIFICATIONS AND LOAD TABLES FOR OPEN WEB STEEL JOISTS".
2. JOIST BRIDGING AND CAMBER SHALL BE PER THE STEEL JOIST INSTITUTE SPECIFICATIONS UNO.
3. DESIGN JOIST TOP CHORD FOR TENSION (T) OR COMPRESSION (C) FORCES NOTED ON PLAN IN ADDITION TO FORCES FROM DEAD LOAD OF 19 PSF & LIVE LOAD OF 20 PSF. DESIGN ALL JOIST BEARING SEATS FOR 500 LBS ROLLOVER FORCE. SUBMIT ALONG WITH SHOP DRAWINGS, DESIGN CALCULATIONS SIGNED & SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW MEXICO.
4. DESIGN JOISTS AND BRIDGING FOR 7 PSF NET UPLIFT. ADD BRIDGING AT FIRST BOTTOM CHORD PANEL JOINT EACH END FOR UPLIFT. SUBMIT DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW MEXICO.
5. SEE S201/SD–2 AND S202/SD–2 AT HUNG LOADS.
6. ALL JOISTS SHALL BE PRIME PAINTED.
7. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

J. DEFERRED SUBMITTALS

1. THE FOLLOWING PORTIONS OF THE PROJECT ARE DEFERRED SUBMITTAL ITEMS & HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD.
a. ANCHORAGE OF EQUIPMENT.
b. STEEL JOISTS.
c. PRE–ENGINEERED METAL BUILDING.
2. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS CONSISTING OF STAMPED, SIGNED STRUCTURAL CALCULATIONS AND DRAWINGS AND INDICATED THAT THEY HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN CONFORMANCE WITH THE DESIGN OF THE STRUCTURE AND SPECIFICATIONS.

LEGEND:

GRATING:		SPAN DIRECTION WHERE APPLICABLE.	
CLASS 2 PERMEABLE MATERIAL		CONCRETE FILL/ CONCRETE	
STRUCTURAL FILL / BACKFILL		GROUT	
UNDISTURBED EARTH OR SCARIFY SOIL		COVER PLATE	



CDM Camp Dresser & McKee Inc. 	
Albuquerque Bernalillo County Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY STRUCTURAL – GENERAL NOTES AND LEGEND	
Design Review Committee	City Engineer Approval
Ms./DSB/Tr.	Ms./DSB/Tr.
CITY PROJECT NO. 6886–02	Zone Map No. H–9
SHEET OF	DRAWING NO. GS–1

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STRUCTURAL ABBREVIATIONS			
Ø	DIAMETER	JT	JOINT
AB	ANCHOR BOLT	JT FLR	JOINT FILLER
ADDL	ADDITIONAL	LG	LONG
AL	ALUMINUM	LLH	LONG LEG HORIZONTAL
ALT	ALTERNATE(ING)	LLV	LONG LEG VERTICAL
APPROX	APPROXIMATE(LY)	LNLT	LONGITUDINAL
ARND	AROUND	LP	LOW POINT
BGS	BELOW GROUND SURFACE	LT	LEFT
BLDG	BUILDING	MAS	MASONRY
BLK	BLOCK(ING)	MATL	MATERIAL
BO	BOTTOM OF	MAX	MAXIMUM
BOT	BOTTOM	MCJ	MASONRY CONTROL JOINT
BTWN	BETWEEN	MFR	MANUFACTURER
CHKD	CHECKED	MIN	MINIMUM
CIRC	CIRCUMFERENTIAL	MO	MASONRY OPENING
CJ	CONSTRUCTION JOINT	MOL	MAXIMUM OPERATING LEVEL
CJP	COMPLETE JOINT PENETRATION	MTL	METAL
CL	CENTERLINE	NOM	NOMINAL
CLT	CONTROL JOINT	NSG	NON-SHRINK GROUT
CLR	CLEAR	NTS	NOT TO SCALE
CMU	CONCRETE MASONRY UNIT	O/E	OR EQUAL
COL	COLUMN	OC	ON CENTER
CONC	CONCRETE	OD	OUTSIDE DIAMETER
CONN	CONNECTION	O.F.	OUTSIDE FACE
CONST	CONSTRUCTION	OPNG(S)	OPENING(S)
CONT	CONTINUOUS	OPP	OPPOSITE
CTR	CENTER (ED)	OPP HD	OPPOSITE HAND
D	DEEP, DEPTH	OFT	OPTION (AL)
DEMO	DEMOLITION	PJF	PREMOLDED JOINT FILLER
DET	DETAIL	PL	PLATE
DIA	DIAMETER	PREFAB	PRE-FABRICATED
DIAG	DIAGONAL	PT	POINT
DIM	DIMENSION	R	RISER
DL	DEAD LOAD	RAD	RADIUS
DN	DOWN	RD	ROOF DRAIN
DO	DITTO	REF	REFERENCE / REFER
DR	DRAIN	REFR	REINFORCE (D, ING)
DWG(S)	DRAWING(S)	REQD	REQUIRED
DWL(S)	DOWEL(S)	REV	REVISION
EA	EACH	RO	ROUGH OPENING
EB	EXPANSION BOLT	RT	RIGHT
ECC	ECCENTRIC	SECT	SECTION
EF	EACH FACE	SHT	SHEET
EL	ELEVATION	SIM	SIMILAR
EMBED	EMBEDMENT	SL	SLOPE
EQ	EQUAL (LY)	SP	SPACE (S, ED)
EQPT	EQUIPMENT	SPEC	SPECIFICATION, SPECIFIED
EQUJN	EQUILANT	SQ	SQUARE
ES	EACH SIDE	SST	STAINLESS STEEL
ETC	ETCETERA	SSW	SIDE SEAM WELD
EW	EACH WAY	STD	STANDARD
EXP	EXPANSION	STL	STEEL
EXIST	EXISTING	STRUC	STRUCTURE (S, URAL)
EXT	EXTERIOR	SYM	SYMMETRICAL
f'c	CONCRETE COMPRESSIVE STRENGTH	T	TREAD (S)
f'm	MASONRY PRISM STRENGTH	T&B	TOP AND BOTTOM
FD	FLOOR DRAIN	TD	TRENCH DRAIN
FDN	FOUNDATION	THK	THICK (NESS)
FIG	FIGURE	T.O.	TOP OF
FIN	FINISH (ED)	TOC	TOP OF CONCRETE
FL	FLOOR	TOS	TOP OF STEEL
FLEX	FLEXIBLE	T.O.W.	TOP OF WALL
FTG	FOOTING	TRNSV	TRANSVERSE
GA	GAGE	TSW	TOP SEAM WELD
GALV	GALVANIZED	TYP	TYPICAL
GALVS	GALVANIZED STEEL	UNO	UNLESS NOTED OTHERWISE
GR	GUARD RAIL	VB	VAPOR BARRIER
GRTG	GRATING	VERT	VERTICAL
HDR	HEADER	W	WIDE
HORR	HEIGHT	W/	WITH
HP	HORIZONTAL	W/O	WITHOUT
HP	HIGH POINT	WD	WIDTH / WOOD
HR	HANDRAIL	WP	WORKING POINT
HSB	HIGH STRENGTH BOLTS	WPG	WATERPROOFING
ID	INSIDE DIAMETER	WS	WATERSTOP
I.F.	INSIDE FACE	WT	WEIGHT
INT	INTERIOR	WWF	WELDED WIRE FABRIC
INV	INVERT		

ABBREVIATION NOTES:



1. ABBREVIATIONS AND DESIGNATIONS FOR STEEL MEMBERS MAY BE FOUND IN THE CURRENT MANUAL OF STEEL CONSTRUCTION BY AISC.
2. WELDING SYMBOLS AND ABBREVIATIONS MAY BE FOUND IN AWS 1.1 & 1.4.
3. ABBREVIATIONS LISTED ARE FOR USE WITH STRUCTURAL DRAWINGS ONLY. SOME ABBREVIATIONS LISTED MAY NOT BE USED ON THE PLANS.

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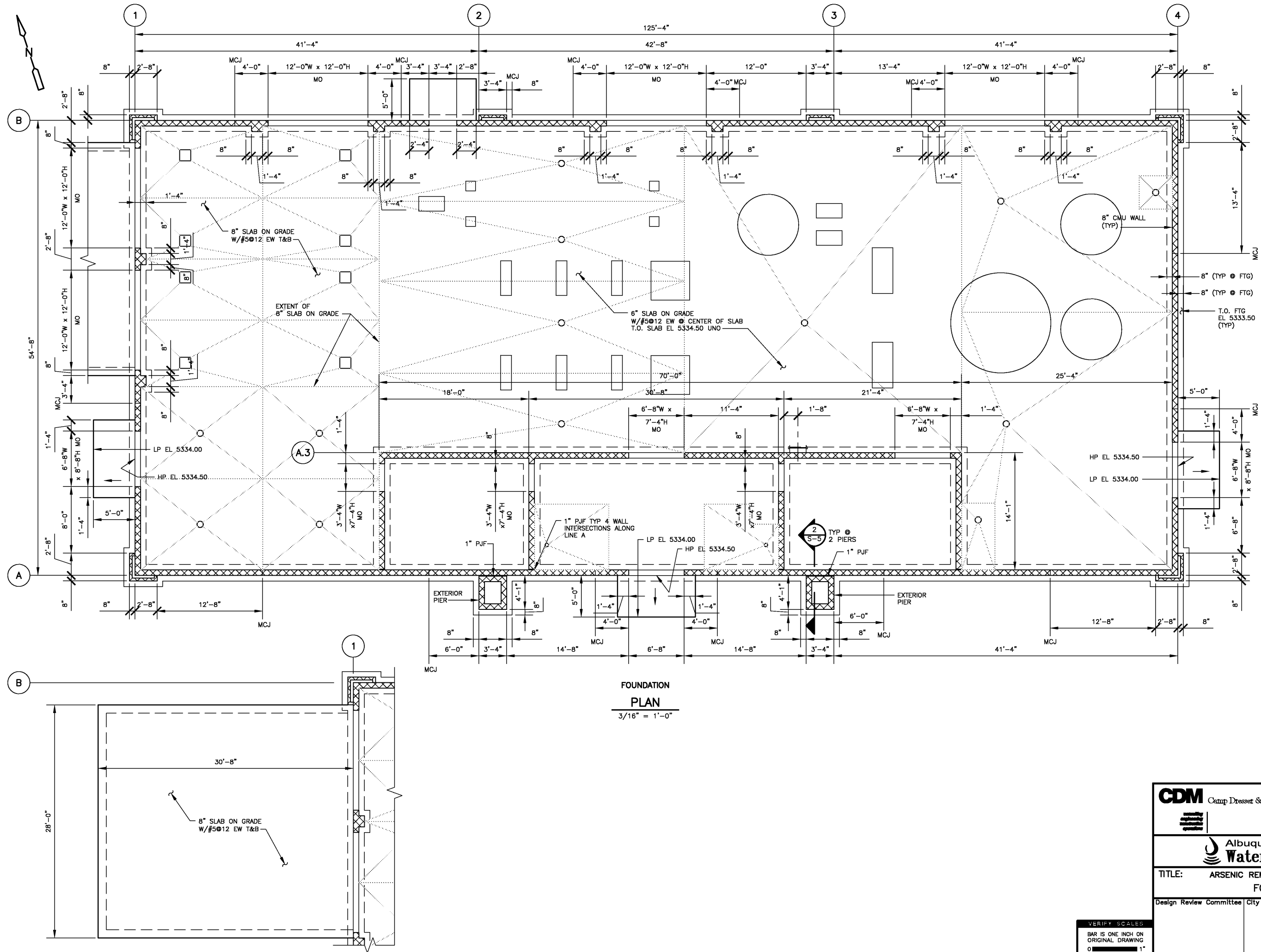
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 Camp Dresser & McKee Inc.		NO. DATE		DESIGNED BY: T.	
		NO. DATE		DRAWN BY: T.	
		NO. DATE		CHECKED BY: T.	
Albuquerque Bernalillo County Water Utility Authority					
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY STRUCTURAL — ABBREVIATIONS					
Design Review Committee		City Engineer Approval		No. / Day / Yr.	
Last Design Update		No. / Day / Yr.		No. / Day / Yr.	
				No. / Day / Yr.	
				No. / Day / Yr.	
				No. / Day / Yr.	
				No. / Day / Yr.	
CITY PROJECT NO. 6886-02		Zone Map H-9		No. SHEET OF DRAWING NO. GS-2	

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Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
FOUNDATION PLAN

Design Review Committee City Engineer Approval

Ms./D&V/Yr. Ms./D&V/Yr.

CITY PROJECT NO. 6886-02

Zone Map No. H-9

SHEET OF
DRAWING NO. S-1

AS BUILT INFORMATION			
CONTRACTOR	STANDARD BY	DATE	
INSPECTOR'S	FIELD	DATE	
DATE	DATE	DATE	
DATE	DATE	DATE	
DATE	DATE	DATE	
DATE	DATE	DATE	

BENCH MARKS			
NO.	DATE		

SURVEY INFORMATION			
NO.	DATE		

ENGINEER'S SEAL			

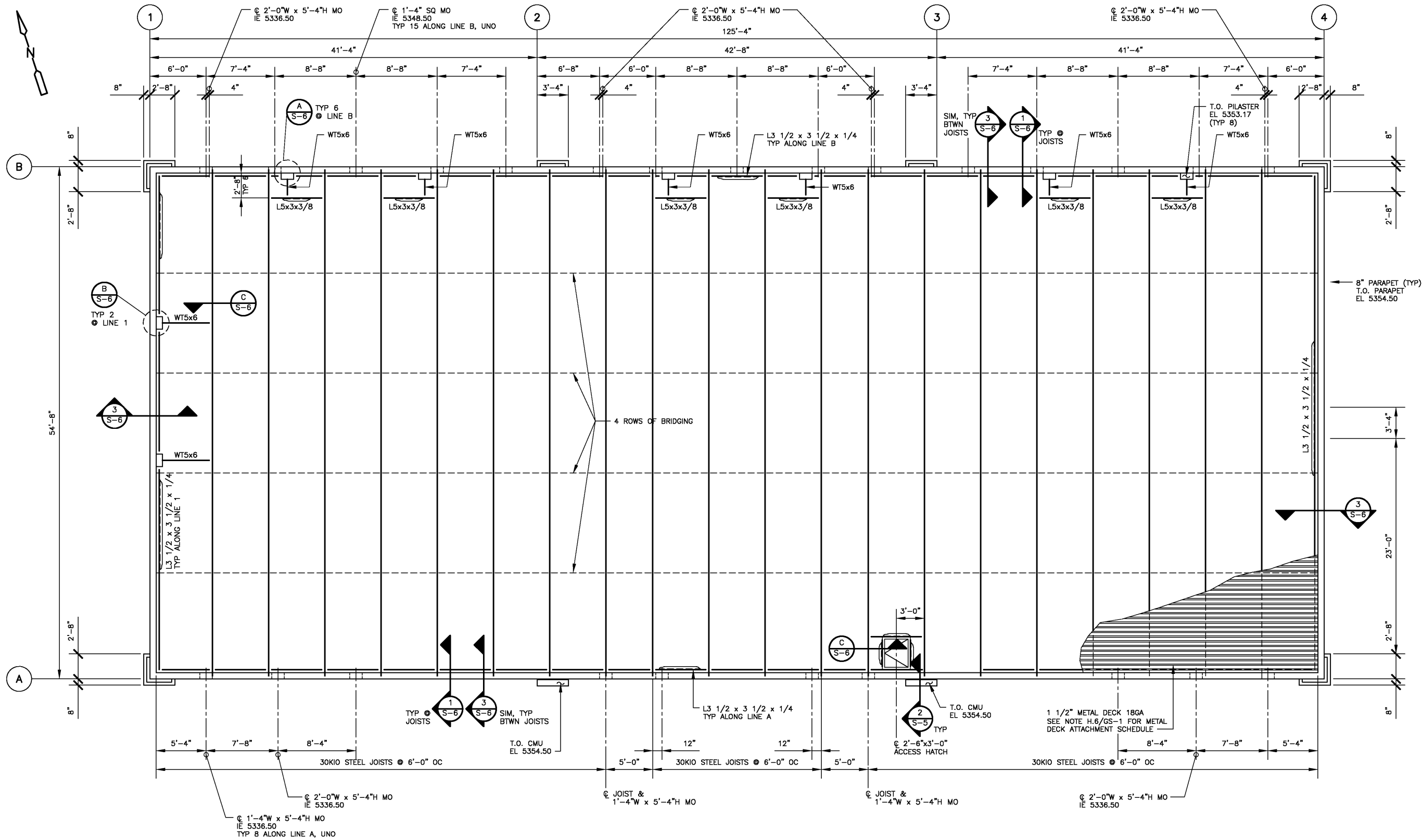
PRELIMINARY
NOT FOR
CONSTRUCTION

REVISIONS			
NO.	DATE	REMARKS	BY

DESIGNED BY: LCS	DATE: 02/05
DRAWN BY: TYN	DATE: 02/05
CHECKED BY: DPO	DATE: 02/05


PRELIMINARY - NOT FOR CONSTRUCTION

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ROOF
PLAN
3/16" = 1'-0"

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SCALES ACCORDINGLY.



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Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
ROOF PLAN

Design Review Committee City Engineer Approval

Ms. D/S9/1r. Ms. D/S9/1r.

CITY PROJECT NO. 6886-02

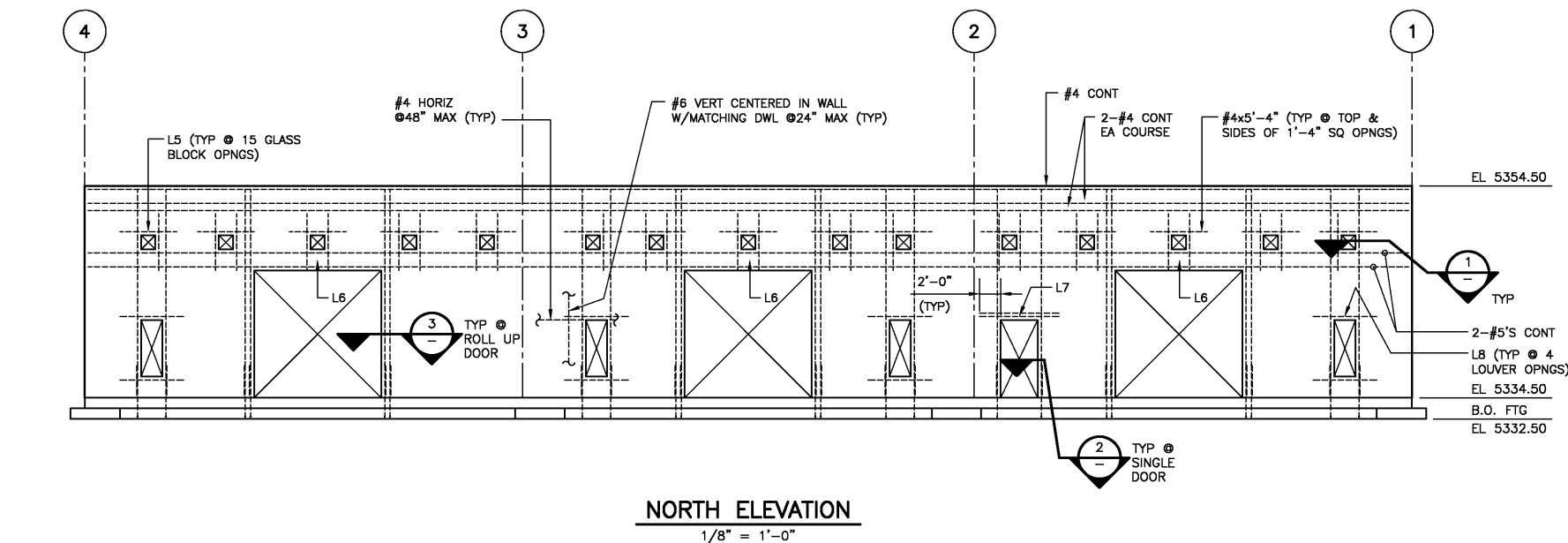
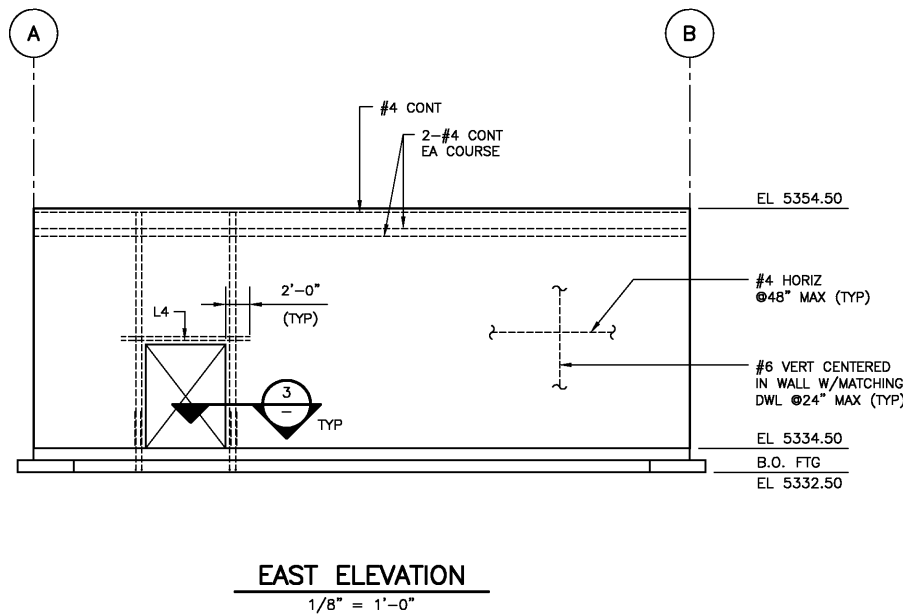
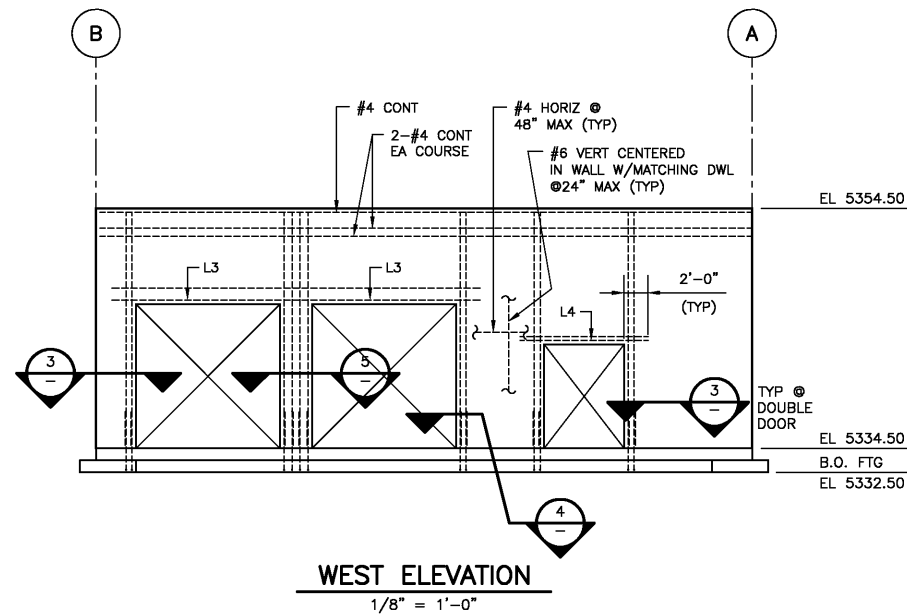
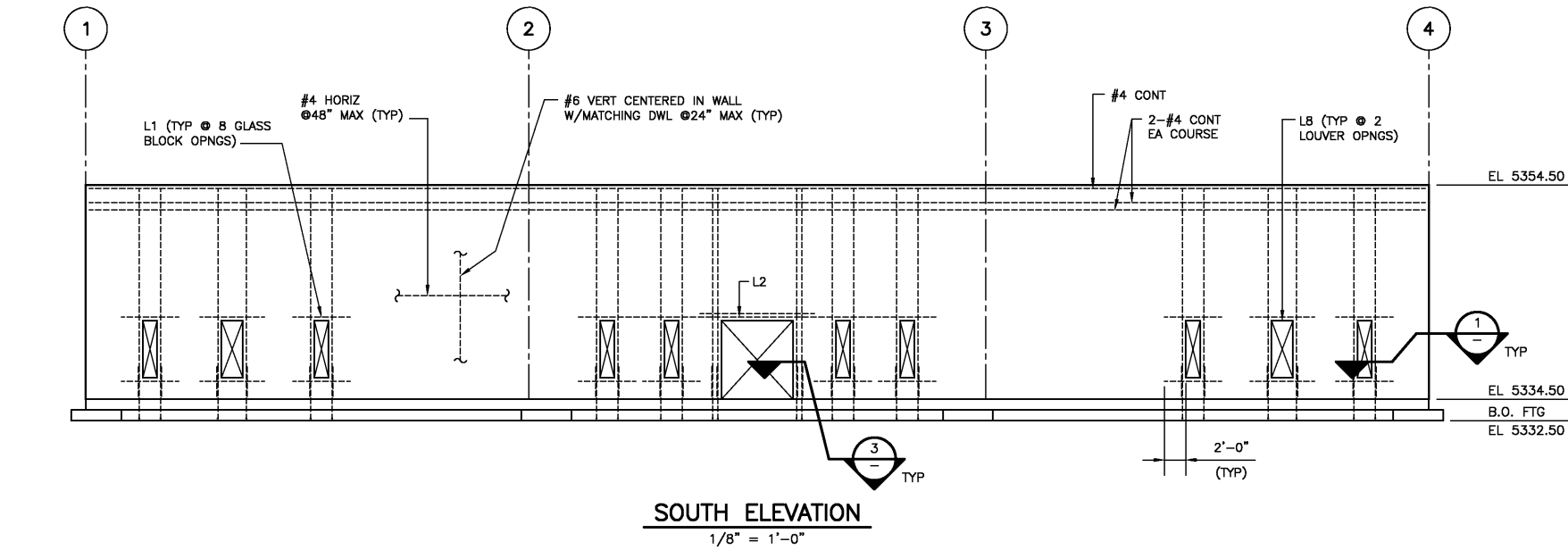
Zone Map No. H-9

SHEET OF
DRAWING NO. S-2

ENGINEER'S SEAL			SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
PRELIMINARY NOT FOR CONSTRUCTION			FIELD NOTES					
			NO.	DATE				
			REVISIONS				CONTRACTOR	
			NO.	DATE			STANDARD	DATE
			DESIGNED BY: LCS	DATE: 02/05			INSPECTOR'S	DATE
			DRAWN BY: TYN	DATE: 02/05			FIELD	DATE
			CHECKED BY: DPO	DATE: 02/05			ADJUSTMENT BY	DATE
							RECORDED BY	DATE
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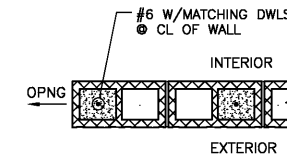
PRELIMINARY - NOT FOR CONSTRUCTION

C:\31027\44236\05-STRU\44236-SF-503 02/21/05 20:35 Nguyen AREES: X_COT_BORDER, S_MF_ARSENIC

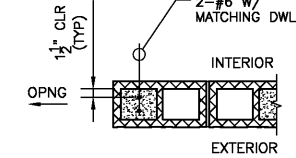


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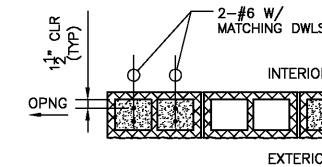
1. VENEER PILASTERS NOT SHOWN FOR CLARITY. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
2. PIERS ON SOUTH ELEVATION NOT SHOWN FOR CLARITY. SEE SECT 2/S-5 AND ARCHITECTURAL DWGS FOR INFORMATION.
3. 2-#4 CONT EA COURSE @ ROOF LEVEL SHALL CONTINUE THROUGH MASONRY CONTROL JOINTS WITHOUT INTERRUPTION.
4. LINTEL MARKS (I.E. L1, L2, ETC) REFER TO LINTEL SCHEDULE ON S-6.



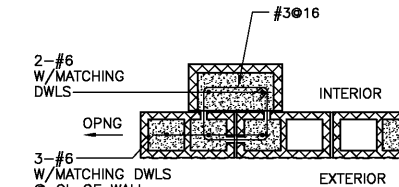
1'-4" MASONRY OPNG
SECTION 1
3/4" = 1'-0"



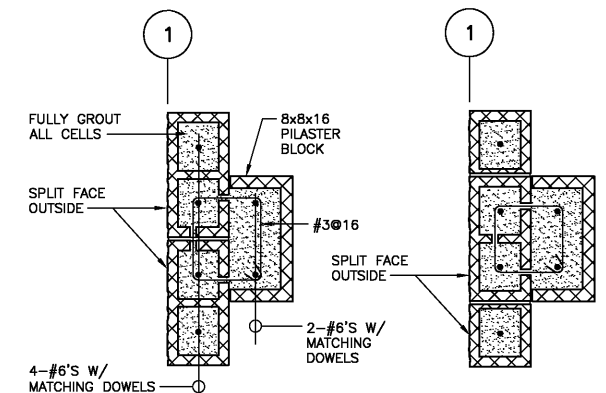
3'-4" MASONRY OPNG
SECTION 2
3/4" = 1'-0"



6'-8" MASONRY OPNG
SECTION 3
3/4" = 1'-0"



12'-0" MASONRY OPNG
SECTION 4
3/4" = 1'-0"



DOUBLE 12'-0" WIDE MASONRY OPNG
SECTION 5
1" = 1'-0"

CDM Camp Dresser & McKee Inc.

Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY BUILDING ELEVATIONS

Design Review Committee City Engineer Approval

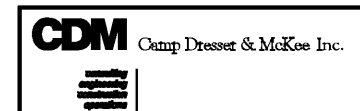
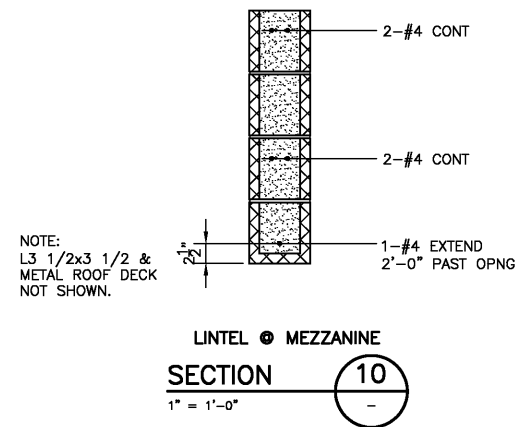
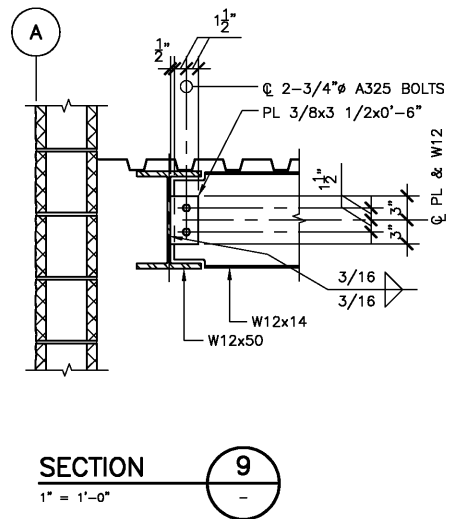
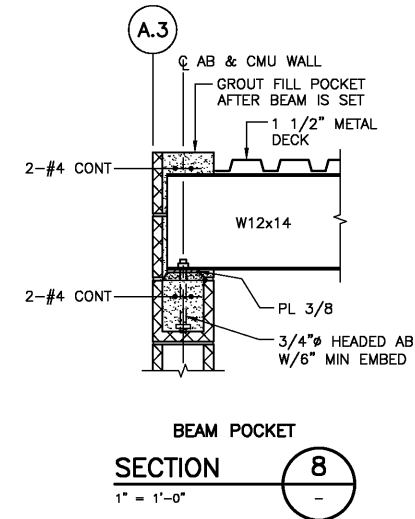
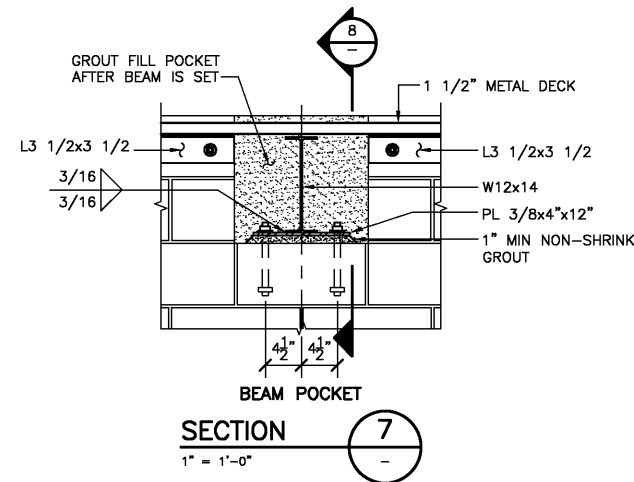
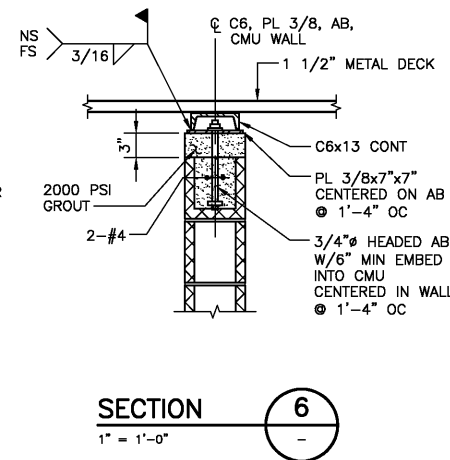
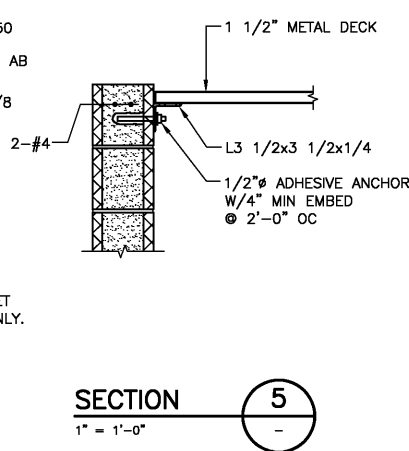
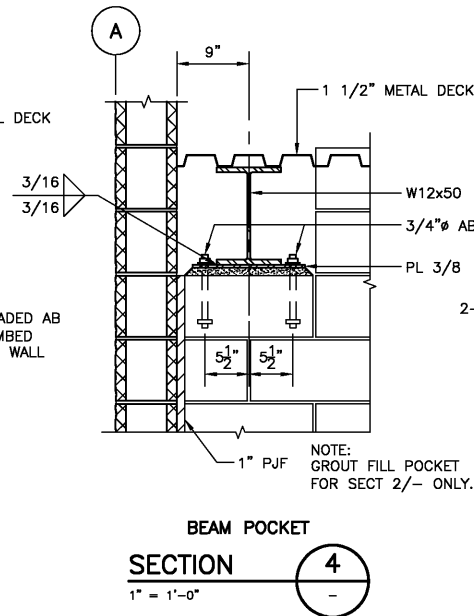
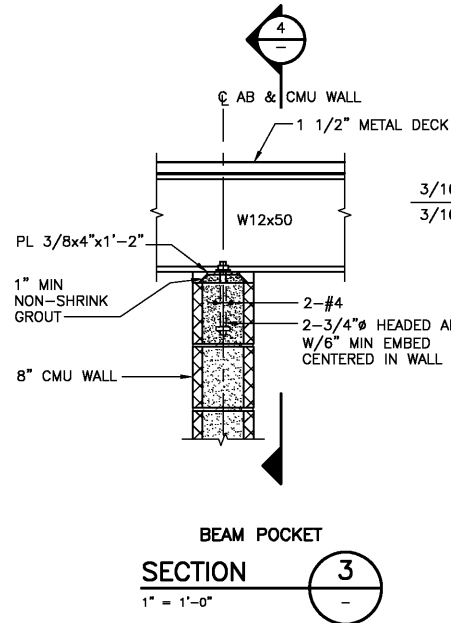
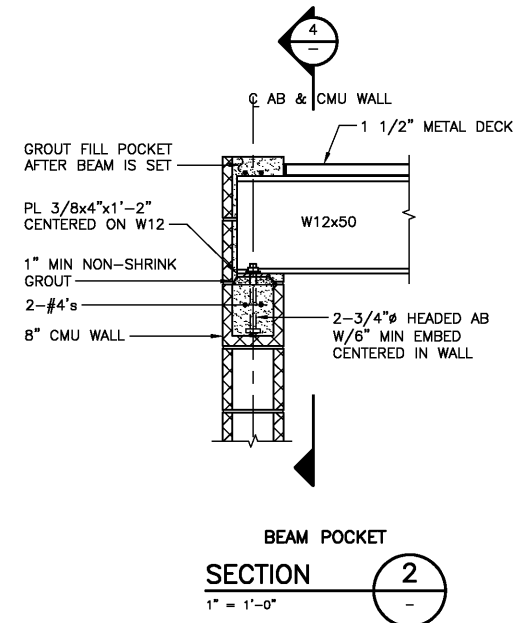
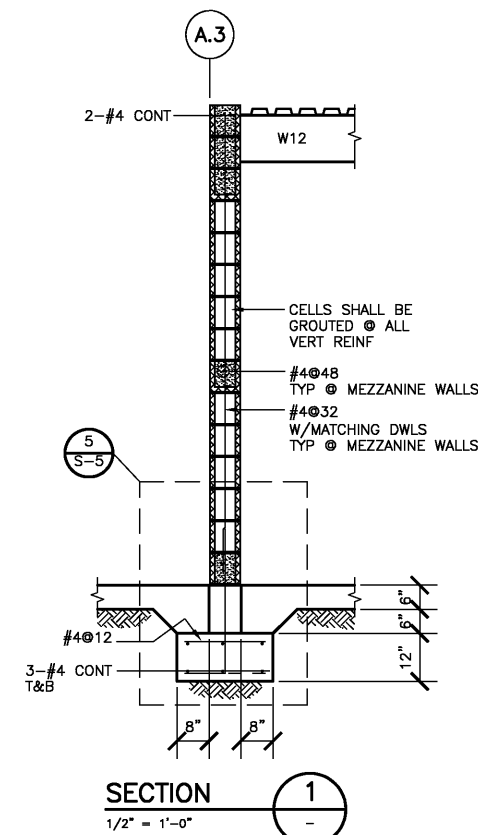
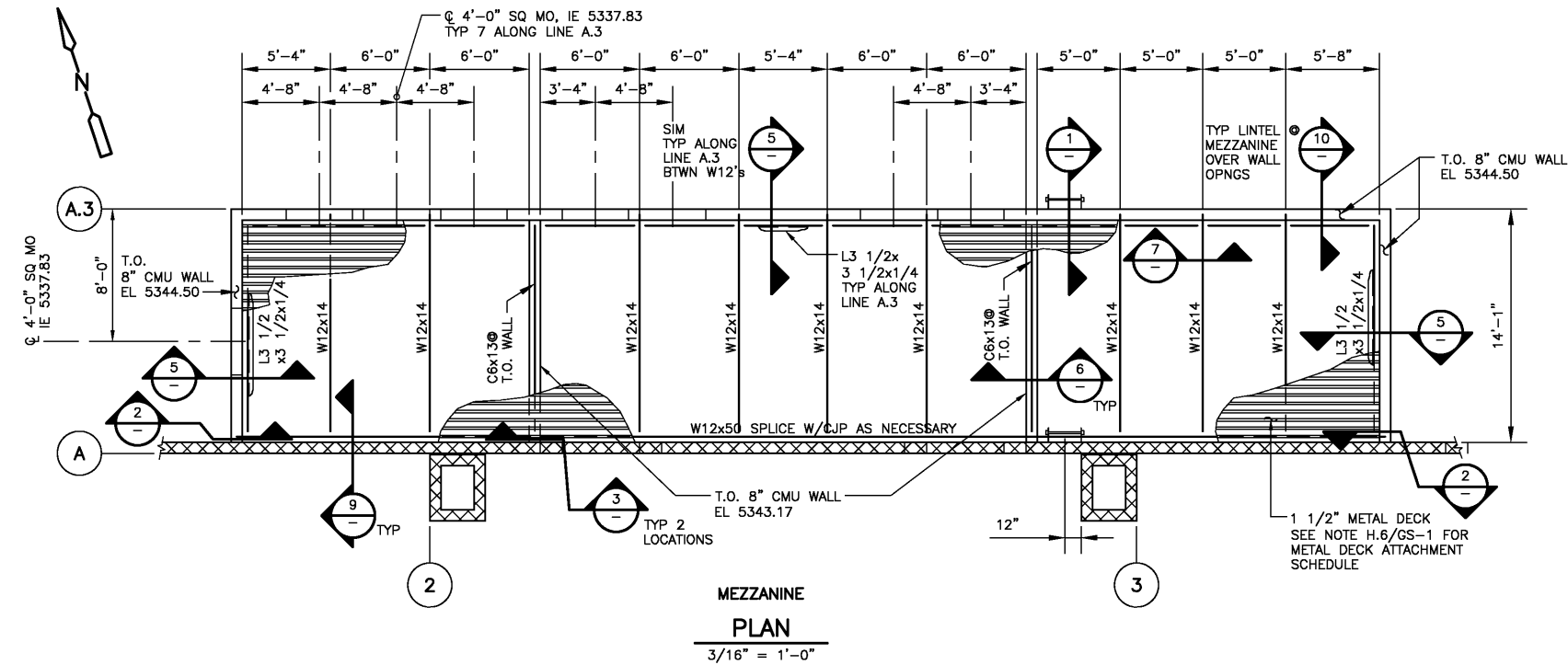
Ms.7/08/11r. Ms.7/08/11r.

CITY PROJECT NO. 6886-02 Zone Map No. H-9 SHEET OF DRAWING NO. S-3

AS BUILT INFORMATION			BENCH MARKS			SURVEY INFORMATION			ENGINEER'S SEAL		
CONTRACTOR	DATE	BY	CONTRACTOR	DATE	BY	NO.	BY	DATE	PRELIMINARY NOT FOR CONSTRUCTION		
STANDARD	DATE	BY	STANDARD	DATE	BY	NO.	BY	DATE			
INSPECTOR'S	DATE	BY	INSPECTOR'S	DATE	BY	NO.	BY	DATE	REVISIONS		
FIELD	DATE	BY	FIELD	DATE	BY	NO.	BY	DATE			
REVISION	DATE	BY	REVISION	DATE	BY	NO.	BY	DATE	DESIGN		
CORRECTED	DATE	BY	CORRECTED	DATE	BY	NO.	BY	DATE			
MICRO FILM	DATE	BY	MICRO FILM	DATE	BY	NO.	BY	DATE	REVISIONS		
RECORDED	DATE	BY	RECORDED	DATE	BY	NO.	BY	DATE			
FILE	DATE	BY	FILE	DATE	BY	NO.	BY	DATE	DESIGN		
	DATE	BY		DATE	BY	NO.	BY	DATE			

PRELIMINARY - NOT FOR CONSTRUCTION

C:\31027\44236\05-STRU\44236-SF-S04 02/21/05 20:39 Nguyen AREES: X_COT_BORDER, S_MF_ARSENIC



Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
MEZZANINE PLAN AND DETAILS

Design Review Committee City Engineer Approval Ms./DSV/yr. Ms./DSV/yr.

NO. DATE REMARKS BY DATE: 02/05 DATE: 02/05 DATE: 02/05

DESIGNED BY: LCS DRAWN BY: TYN CHECKED BY: DPO

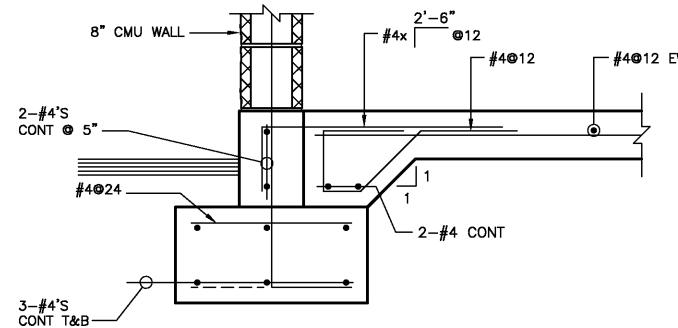
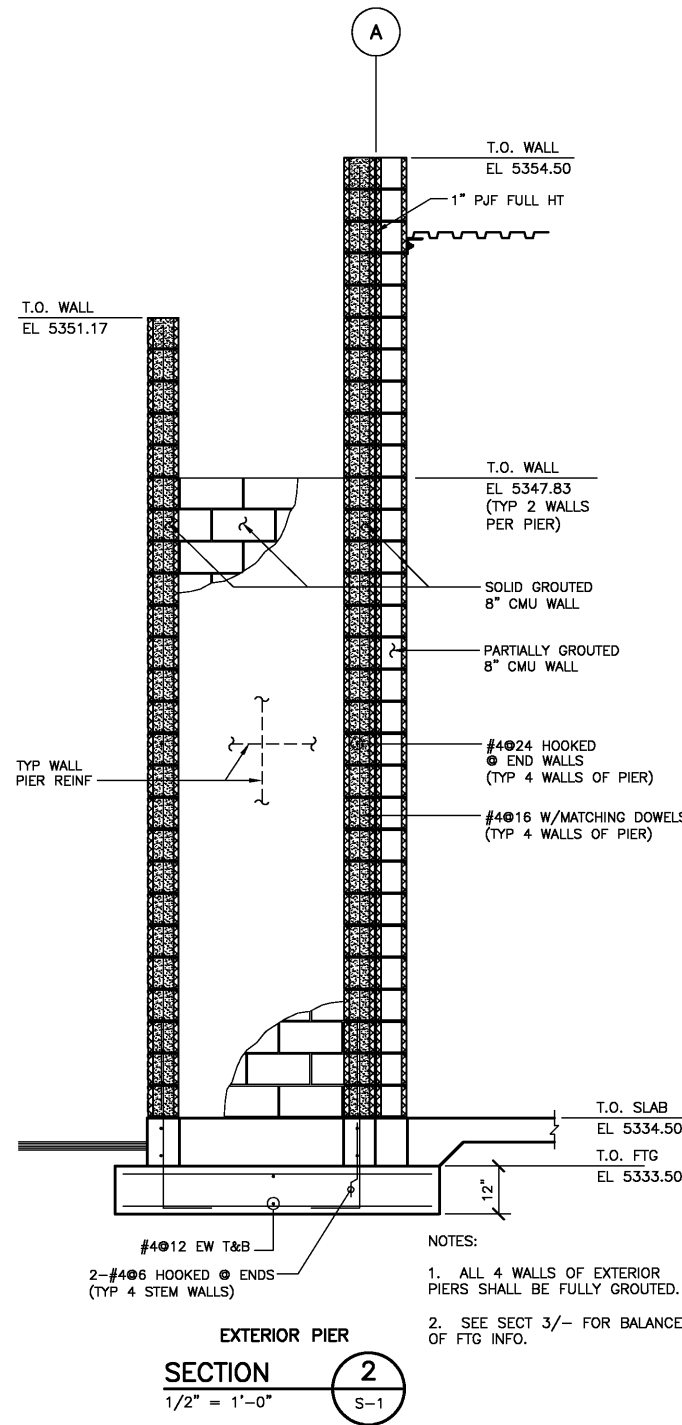
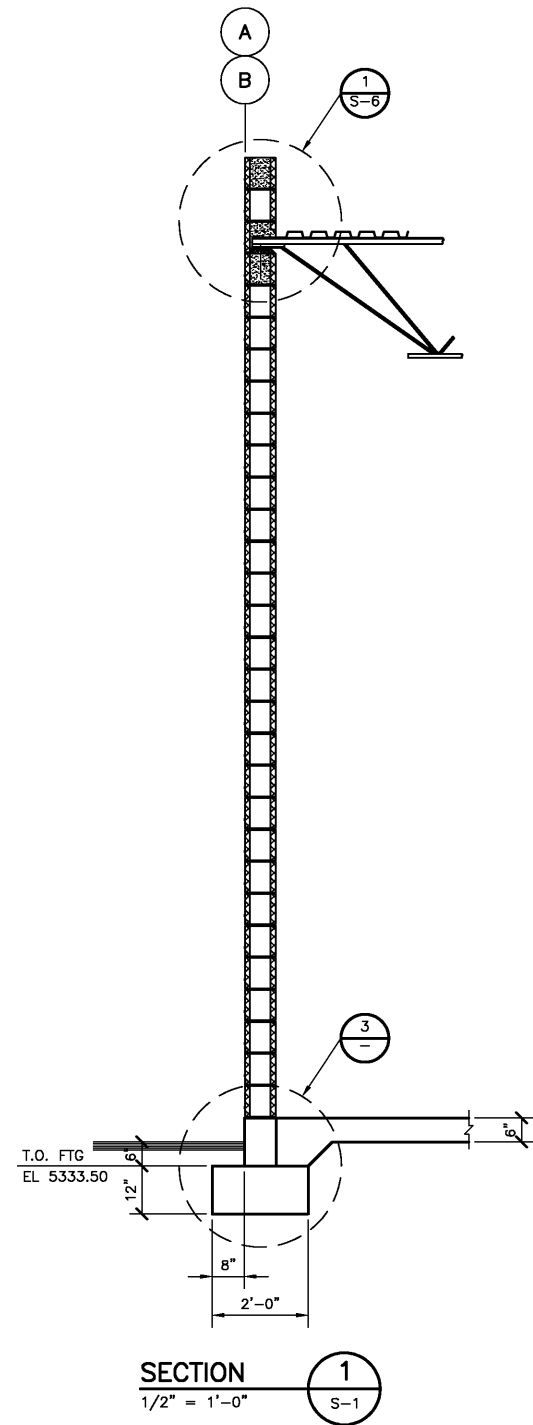
CITY PROJECT NO. 6886-02 Zone Map No. SHEET OF

H-9 DRAWING NO. S-4

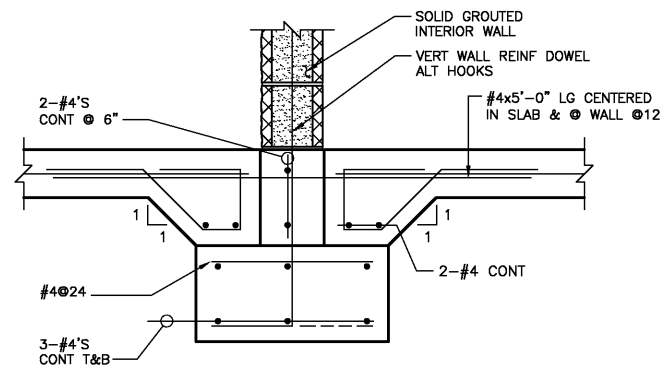
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

PRELIMINARY - NOT FOR CONSTRUCTION

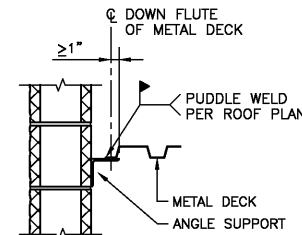
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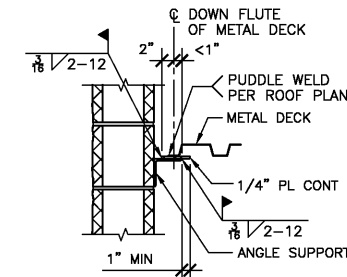
EXTERIOR WALL FOOTING
SECTION 3
1" = 1'-0"



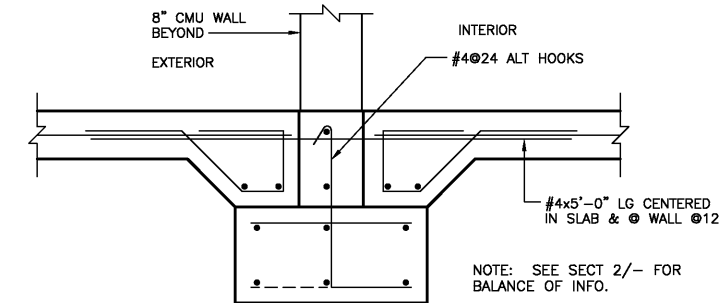
INTERIOR WALL FOOTING
SECTION 5
1" = 1'-0"



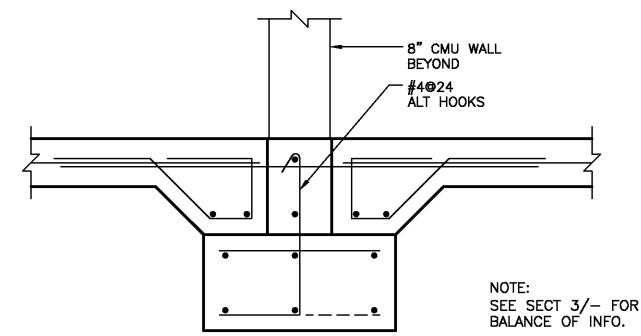
TYPE A
C OF DOWN FLUTE ≥ 1" FROM
EDGE OF ANGLE SUPPORT



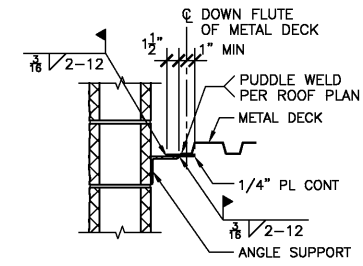
TYPE B
C OF DOWN FLUTE ≤ 1" FROM
EDGE OF ANGLE SUPPORT



EXTERIOR WALL FOOTING @ OPENING
SECTION 4
1" = 1'-0"



INTERIOR WALL FOOTING @ OPENING
SECTION 6
1" = 1'-0"



TYPE C
NO PART OF FLUTE
RESTS ON ANGLE SUPPORT

ROOF DECK ATTACHMENT TO SUPPORTS PARALLEL TO FLUTE

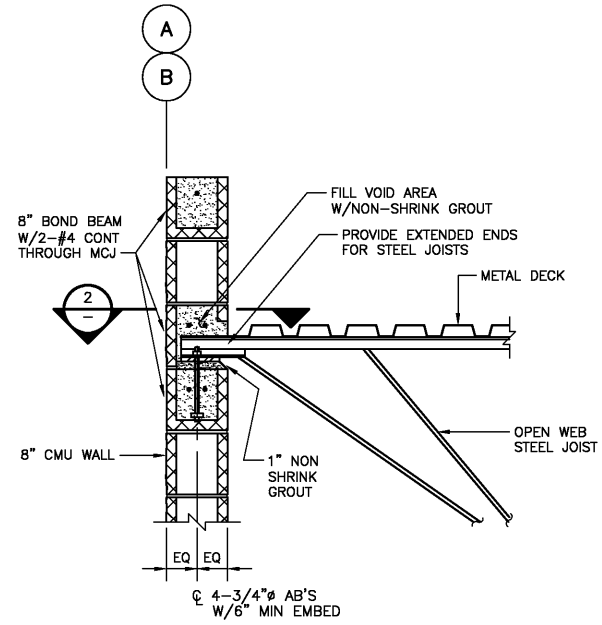
DETAIL A
1" = 1'-0"

VERIFY SCALES
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IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY.

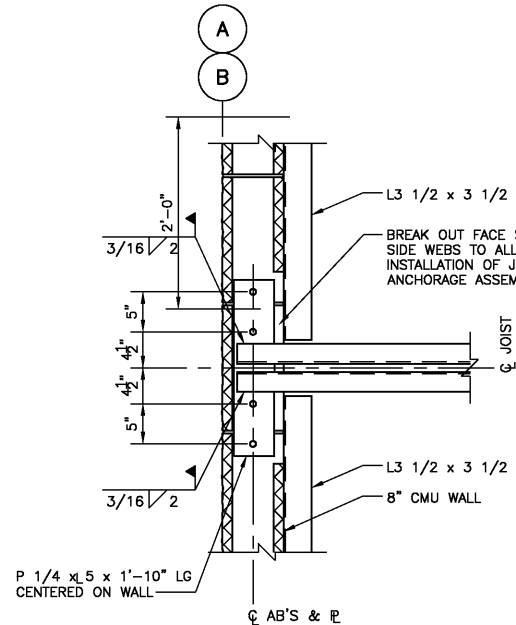
CDM Camp Dresser & McKee Inc.	
Albuquerque Bernalillo County Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY SECTIONS AND DETAILS	
DESIGNED BY: LGS	DATE: 02/05
DRAWN BY: TYN	DATE: 02/05
CHECKED BY: DPO	DATE: 02/05
NO. DATE	REMARKS
1 02/05	DESIGN
CITY PROJECT NO. 6886-02 Zone Map No. H-9 SHEET OF 5 DRAWING NO. S-5	

AS BUILT INFORMATION	
CONTRACTOR	DATE
INSPECTOR'S	DATE
FIELD	DATE
REVISION BY	DATE
CORRECTED BY	DATE
MICRO FILM INFORMATION	
RECORDED BY	DATE
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BENCH MARKS	
SURVEY INFORMATION	
FIELD NOTES	DATE
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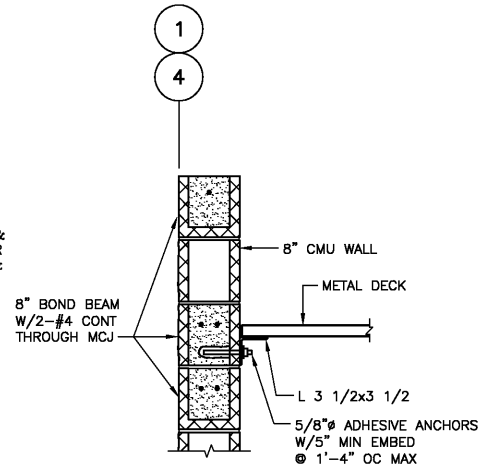
PRELIMINARY - NOT FOR CONSTRUCTION



SECTION 1
 1" = 1'-0" S-2

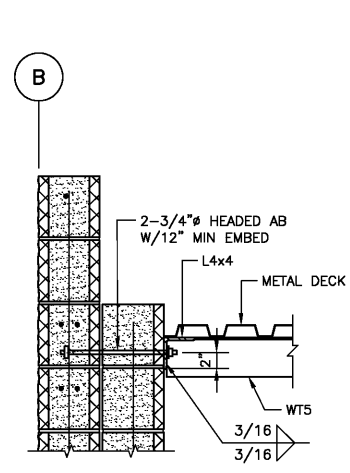


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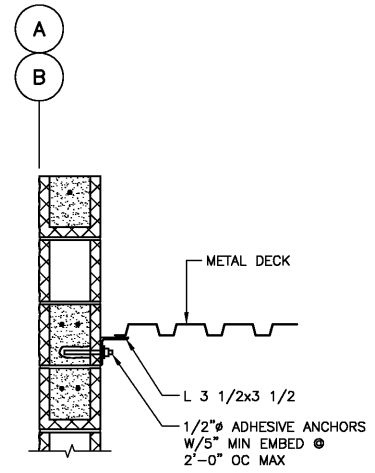


NOTE:
METAL DECK SPANS OTHER DIRECTION
FOR SIM.

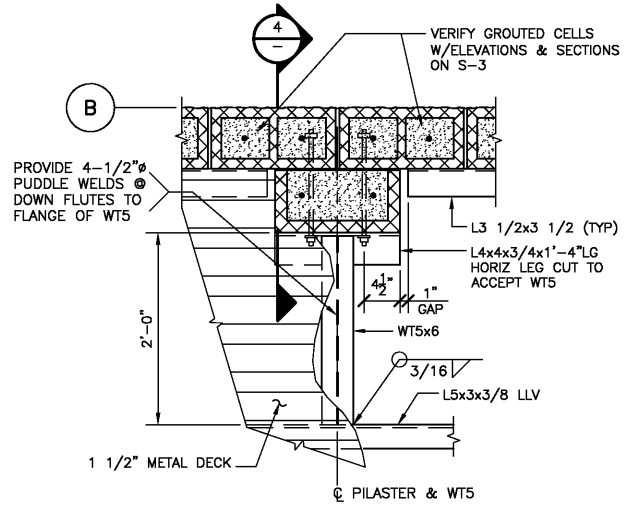
SECTION 3
 1" = 1'-0" S-2



SECTION 4
 1" = 1'-0"

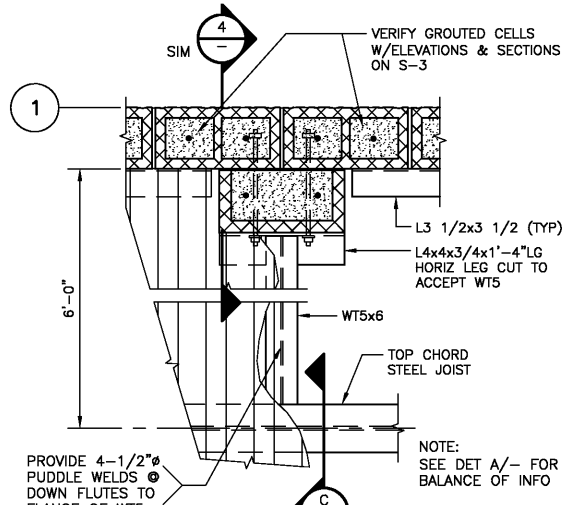


SECTION 5
1" = 1'-0" S-2

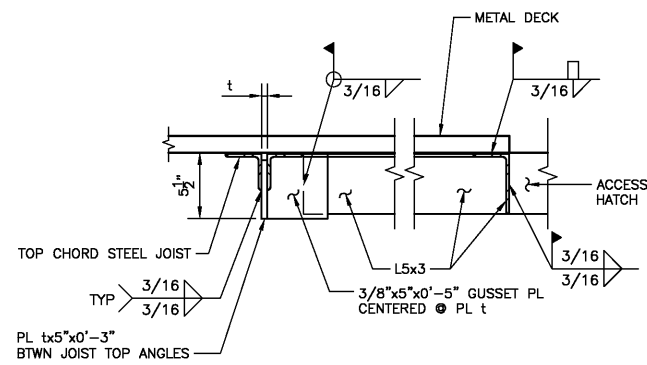


DETAIL
1" = 1'-0"

A
S-2



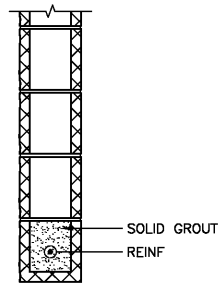
DETAIL B
1" = 1'-0" S-2



DETAIL C
1 1/2" = 1'-0" S-2

MARK	MO	LINTEL SIZE	DETAIL	REINF	STIRRUPS
L1	1'-4"	8"x8"	E	1-#4	N/A
L2	6'-8"	8"x16"	G	2-#4's T&B	#4@8
L3	12'-0"	8"x16"	G	2-#4's T&B	#4@16
L4	6'-8"	8"x16"	F	1-#4 T&B	N/A
L5	1'-4"	8"x8"	E	1-#4	N/A
L6	12'-0"	8"x24"	H	2-#5's T&B	#4@8
L7	3'-4"	8"x16"	F	1-#4 T&B	N/A
LB	2'-0"	8"x8"	E	1-#4	N/A


DETAIL D
NTS S-3

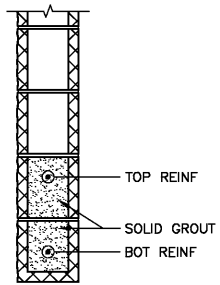


LINTEL

DETAIL

1" = 1'-0"



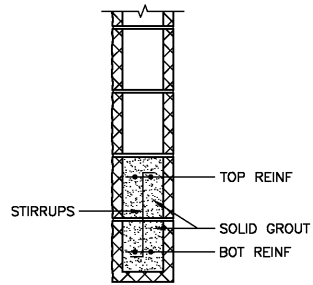


LINTEL

DETAIL

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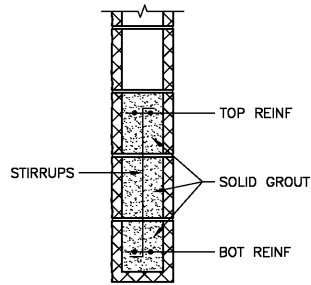
F
—



DETAIL

1" = 1'-0"

GIN

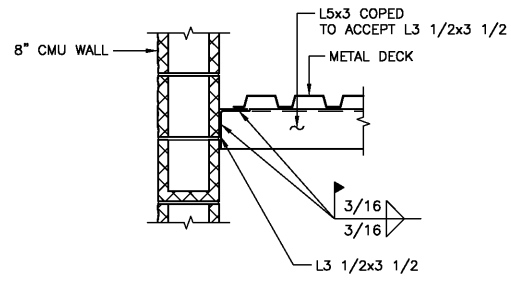


DETAIL

1" = 1'-0"


H

-



DETAIL J
S-2
1 1/2" = 1'-0"

VERIFY SCALES

BAR IS ONE INCH ON
ORIGINAL DRAWING
0  1"
IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY.

 Camp Dresser & McKee Inc.													
 Albuquerque Bernalillo County Water Utility Authority													
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY SECTIONS AND DETAILS													
Design Review Committee			City Engineer Approval			Last Design Update	MS./DSG/Yr.		MS./DSG/Yr.				
CITY PROJECT NO.				6886-02				Zone Map No.		H-9		SHEET OF	
								DRAWING NO. S-6					

AS BUILT INFORMATION			
CONTRACTOR			
WORK			
STANDARD BY	DATE		
INSPECTOR'S			
ACCEPTANCE BY	DATE		
REVISIONS	DATE		
BY			
DATE			
MICRO FILM INFORMATION			
RECORDED BY	DATE		
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BENCH MARKS

SURVEY INFORMATION

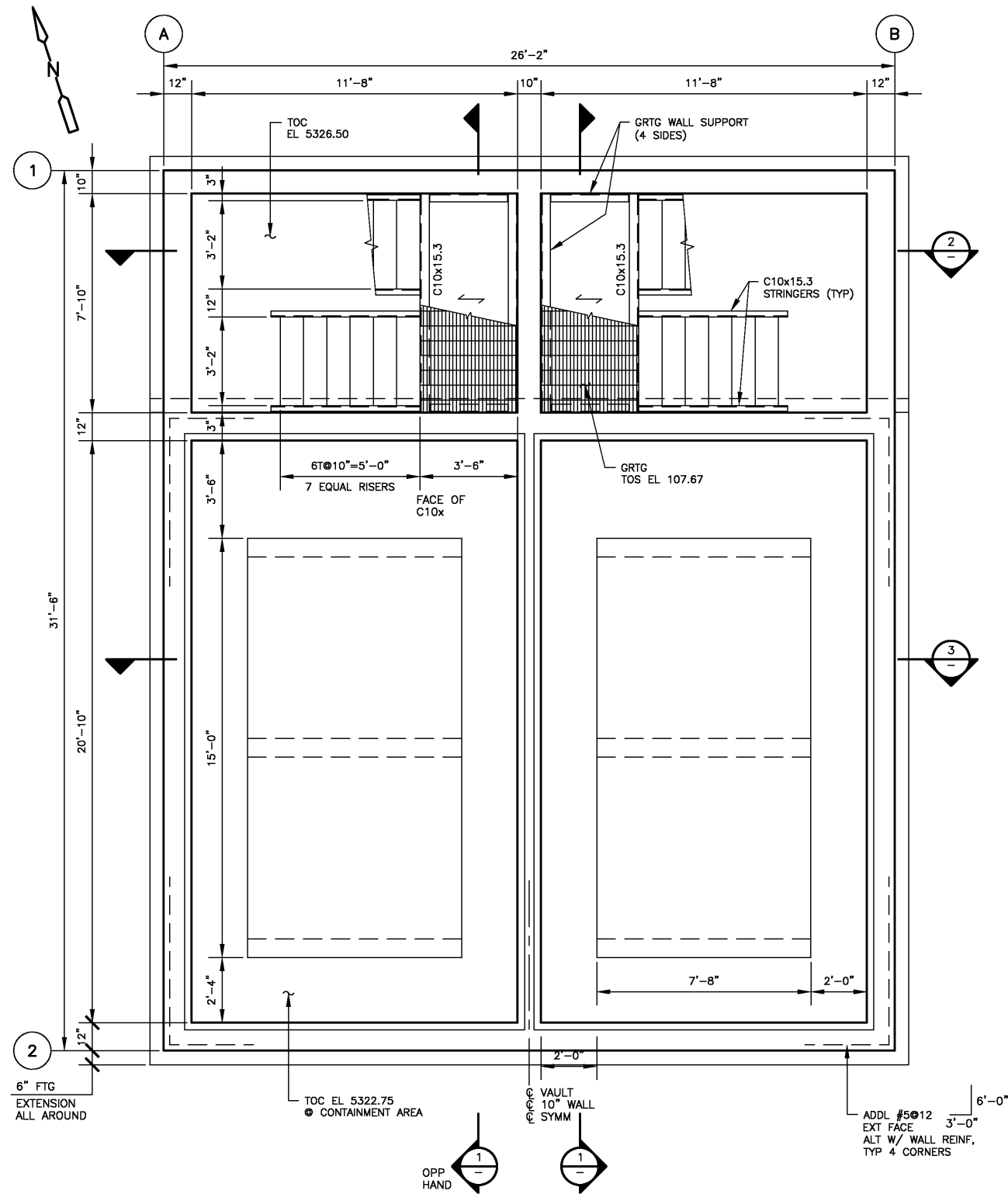
ENGINEER'S SEAL

PRELIMINARY
NOT FOR
CONSTRUCTION

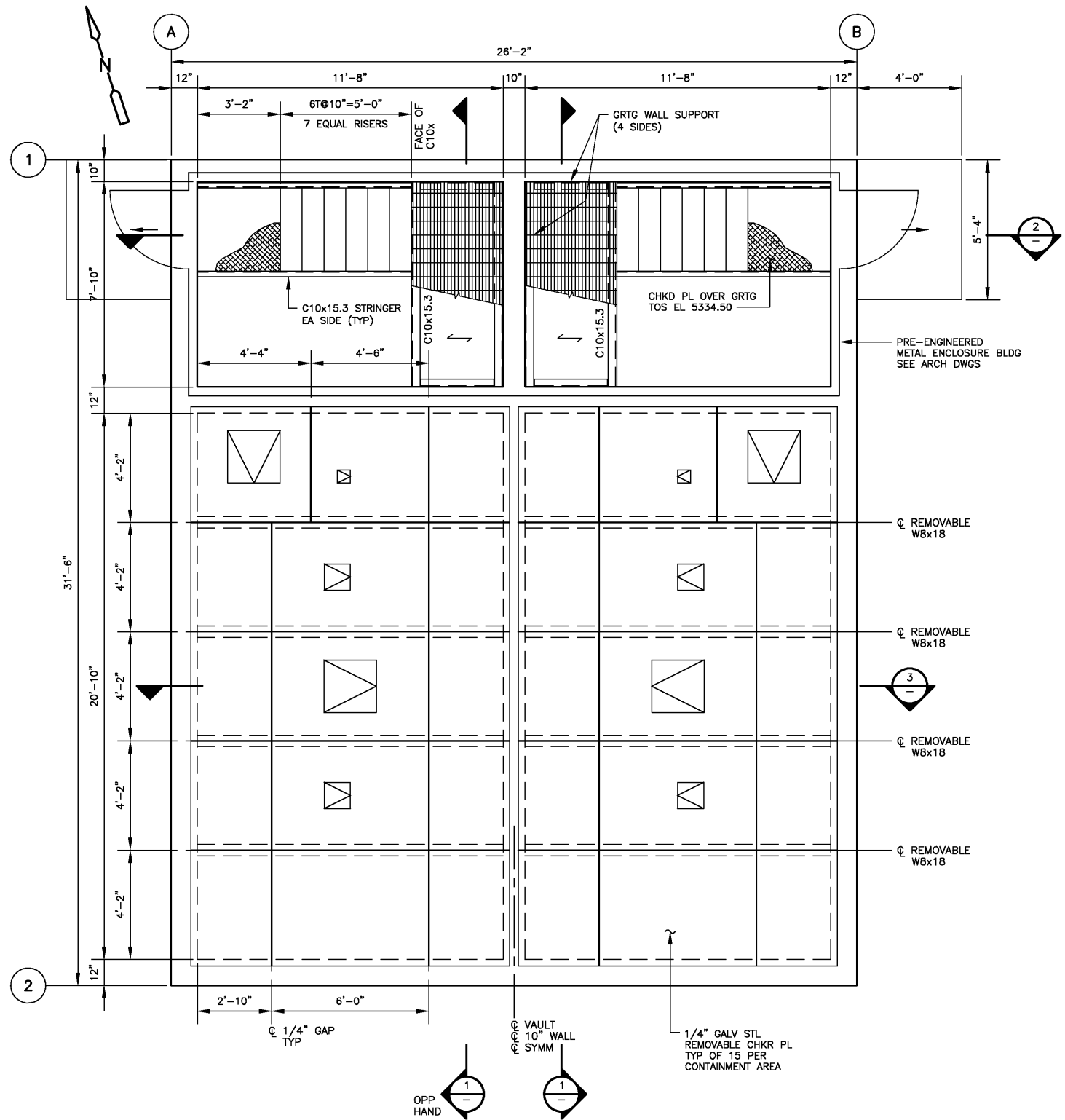
NO.	DATE	REMARKS	BY
REVISIONS			
DESIGN			
DESIGNED BY: LGS			DATE: 02/05

PRELIMINARY - NOT FOR CONSTRUCTION

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PLAN • EL 5331.00
PLAN
3/8" = 1'-0"



PLAN • EL 5335.00
PLAN
3/8" = 1'-0"

VERIFY SCALES
BAR IS ONE INCH ON
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0 1"
IF NOT ONE INCH ON
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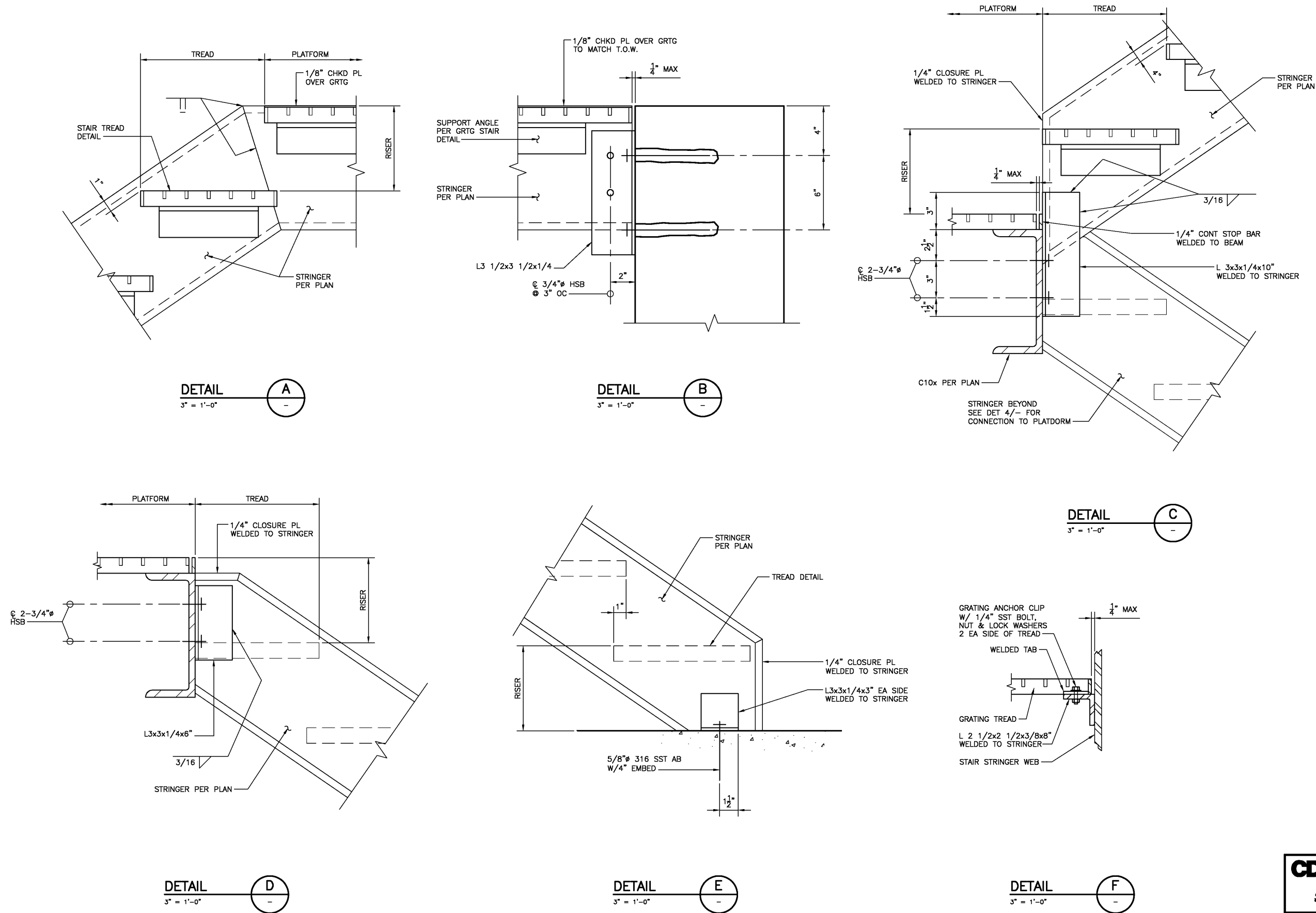
CDM Camp Dresser & McKee Inc.	
Albuquerque Bernalillo County Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY CHEMICAL STORAGE VAULT - PLANS	
Design Review Committee	City Engineer Approval
Ms./Dsgn/Tr.	Ms./Dsgn/Tr.
CITY PROJECT NO. 6886-02	Zone Map No. H-9
SHEET OF	DRAWING NO. S-7

AS BUILT INFORMATION				BENCH MARKS				SURVEY INFORMATION				ENGINEER'S SEAL			
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INSPECTOR'S	DATE	FIELD	DATE												
REVISION BY	DATE	REVISION BY	DATE									REMARKS	BY	DATE	
CORRECTED BY	DATE	CORRECTED BY	DATE									REVISIONS			
MICRO FILM INFORMATION												DESIGN			
RECORDED BY	DATE											DESIGNED BY: AE		DATE: 02/05	
												DRAWN BY: TYN		DATE: 02/05	
												CHECKED BY: DPO		DATE: 02/05	

PRELIMINARY - NOT FOR CONSTRUCTION

CHECKED BY: DPO	DATE: 02/05		
PRELIMINARY - NOT FOR CONSTRUCTION			

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VERIFY SCALES
BAR IS ONE INCH ON
ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY.



Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
CHEMICAL STORAGE VAULT - STAIR DETAILS

Design Review Committee City Engineer Approval

Ms./Dsg/Tr. Ms./Dsg/Tr.

CITY PROJECT NO. 6886-02

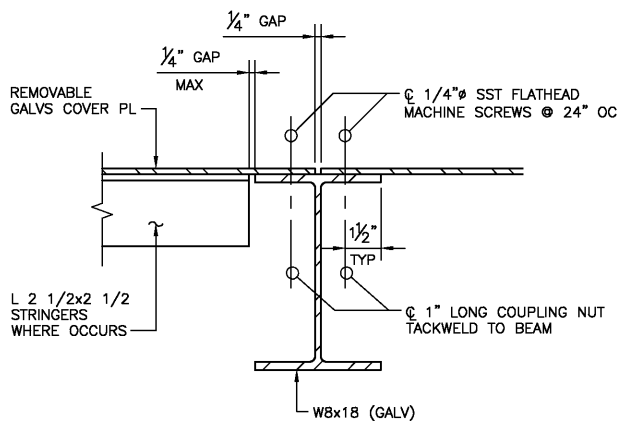
Zone Map No. H-9

SHEET OF
DRAWING NO. S-9

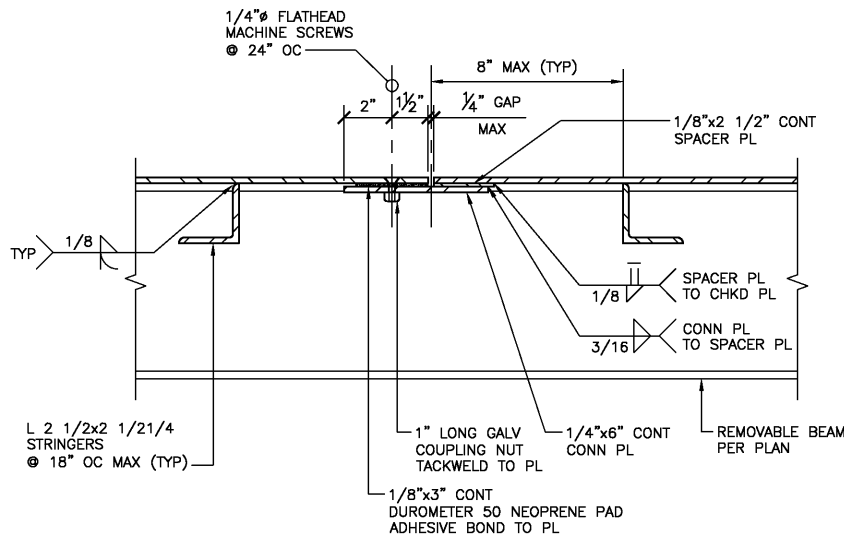
AS BUILT INFORMATION			BENCH MARKS			SURVEY INFORMATION			ENGINEER'S SEAL		
CONTRACTOR	DATE	BY	NO.	DATE	BY	NO.	DATE	BY	PRELIMINARY NOT FOR CONSTRUCTION		
STANDARD	DATE	BY	NO.	DATE	BY	NO.	DATE	BY			
INSPECTION	DATE	BY	NO.	DATE	BY	NO.	DATE	BY	REMARKS	REVISIONS	DESIGN
FIELD	DATE	BY	NO.	DATE	BY	NO.	DATE	BY	DESIGNED BY: AE	DATE: 02/05	DATE: 02/05
ADJUSTMENT	DATE	BY	NO.	DATE	BY	NO.	DATE	BY	DRAWN BY: TVN	DATE: 02/05	DATE: 02/05
CORRECTION	DATE	BY	NO.	DATE	BY	NO.	DATE	BY	CHECKED BY: DPO	DATE: 02/05	DATE: 02/05
MICRO FILM INFORMATION			MICRO FILM INFORMATION			MICRO FILM INFORMATION			MICRO FILM INFORMATION		
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PRELIMINARY - NOT FOR CONSTRUCTION

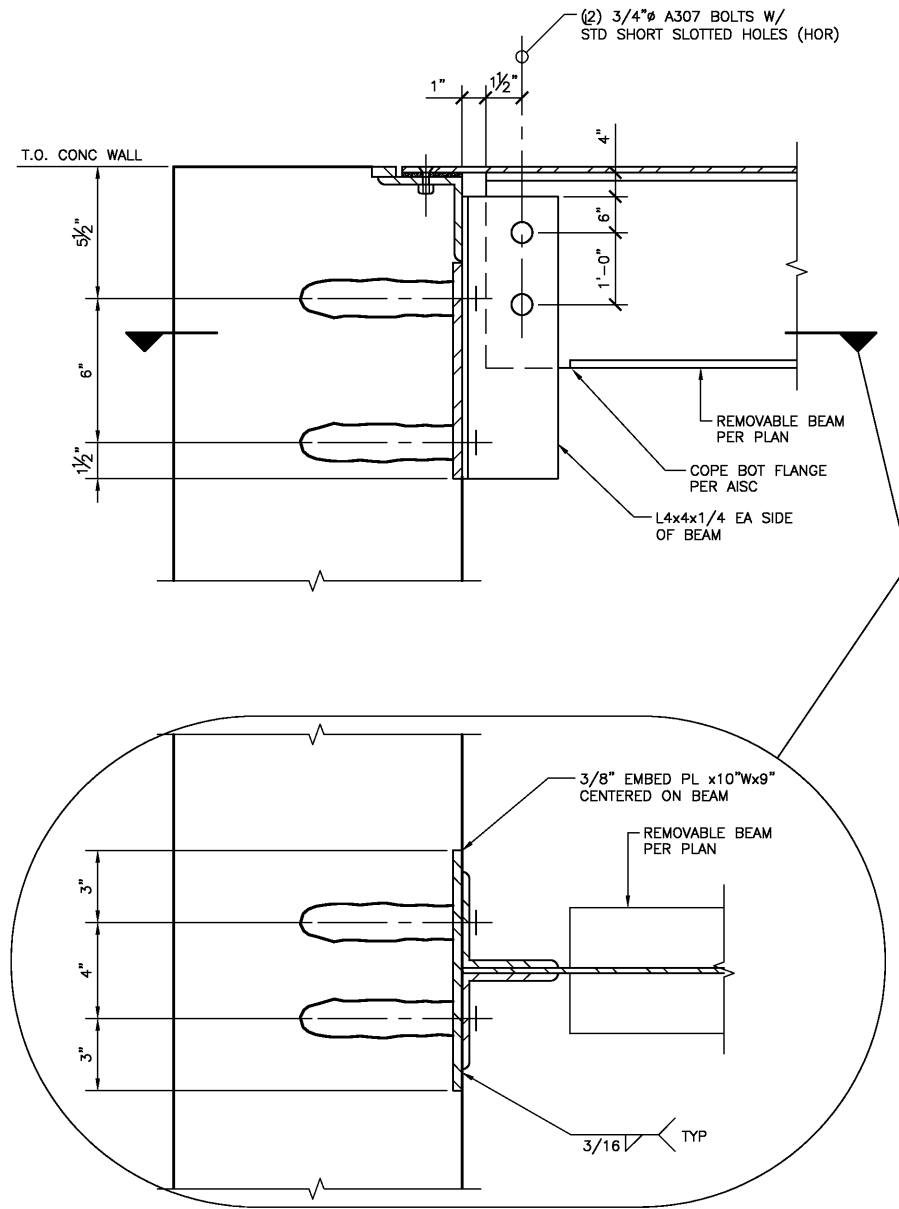
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DETAIL A
3" = 1'-0"



DETAIL B
3" = 1'-0"



DETAIL C
3" = 1'-0"

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.



Camp Dresser & McKee Inc.



Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
CHEMICAL STORAGE VAULT - DETAILS

Design Review Committee City Engineer Approval

Ms. 7/05/11 Ms. 7/05/11

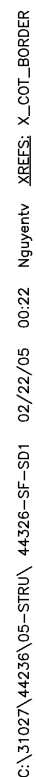
CITY PROJECT NO. 6886-02

Zone Map No. H-9

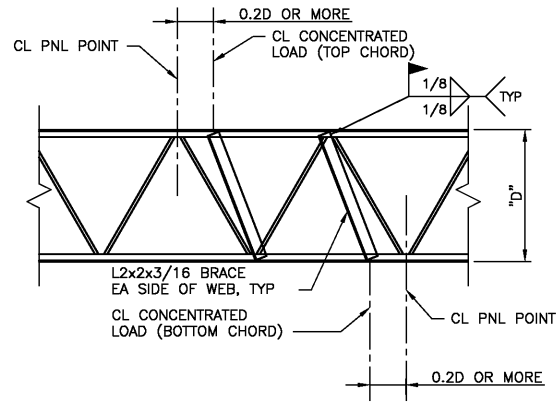
SHEET OF
DRAWING NO. S-10

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						INSPECTOR'S FIELD	DATE
						CORRECTION BY	DATE
						RECORDED BY	DATE

PRELIMINARY - NOT FOR CONSTRUCTION



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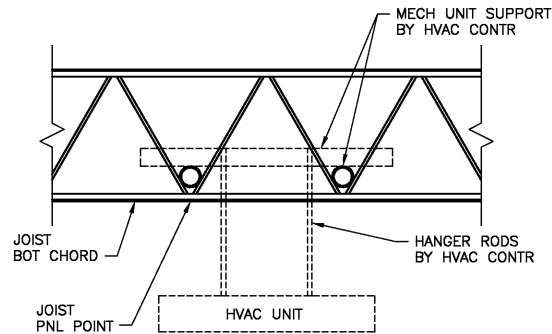


NOTES:

1. INSTALLATION OF BRACES SHALL BE APPROVED BY JOIST SUPPLIER.
2. MAX CONCENTRATED LOAD = 200 LBS AT ANY LOCATION, TOTAL LOAD ON ANY JOIST = 400 LBS.
3. TOTAL LOADS GREATER THAN 400 LBS MUST BE APPROVED BY THE ENGINEER.

JOIST REINFORCEMENT AT CONCENTRATED LOAD

DETAIL S201
NTS S-3

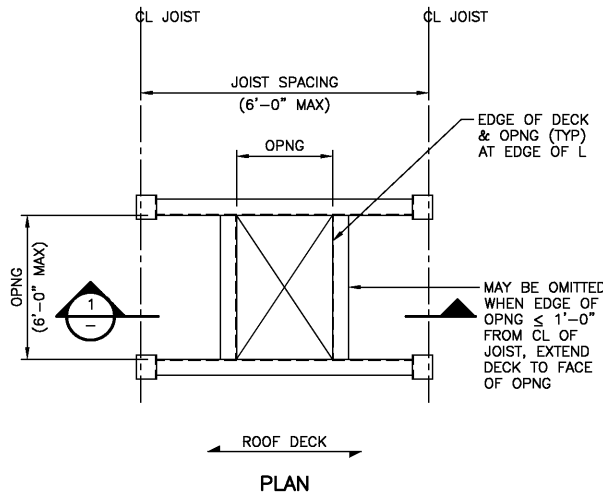


NOTES:

1. NO HOLES TO BE DRILLED IN JOISTS.
2. CONTR SHALL BE RESPONSIBLE FOR DESIGNING MECH UNIT SUPPORTS.
3. MAX LOAD ON ANY JOIST PNL POINT SHALL BE 200 LBS AND MAX TOTAL LOAD ON ANY JOIST SHALL BE 400 LBS, UNO, ADD SUPPORTS AS REQD.
4. MECH UNIT SUPPORT SHALL BE APPROVED BY JOIST SUPPLIER.
5. SEISMIC BRACING SHALL BE DESIGNED AND PROVIDED BY THE HVAC CONTRACTOR.
6. MECH EQUIPMENT SUPPORT AND SIESMIC BRACING SHALL BE DESIGNED TO MEET THE REQUIREMENTS OF IBC SECTION 1621.

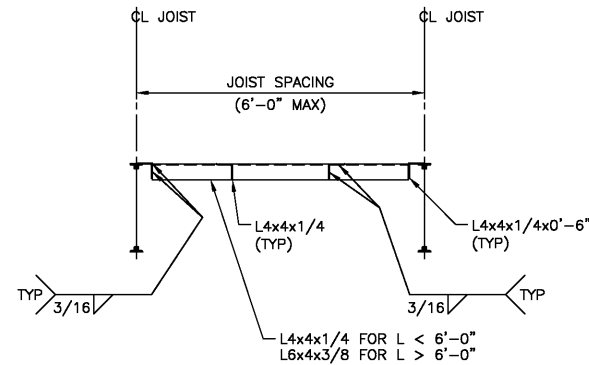
MECHANICAL EQUIPMENT SUPPORT

DETAIL S202
NTS S-3



TYP ROOF OPENING FRAMING

DETAIL S203
NTS S-3

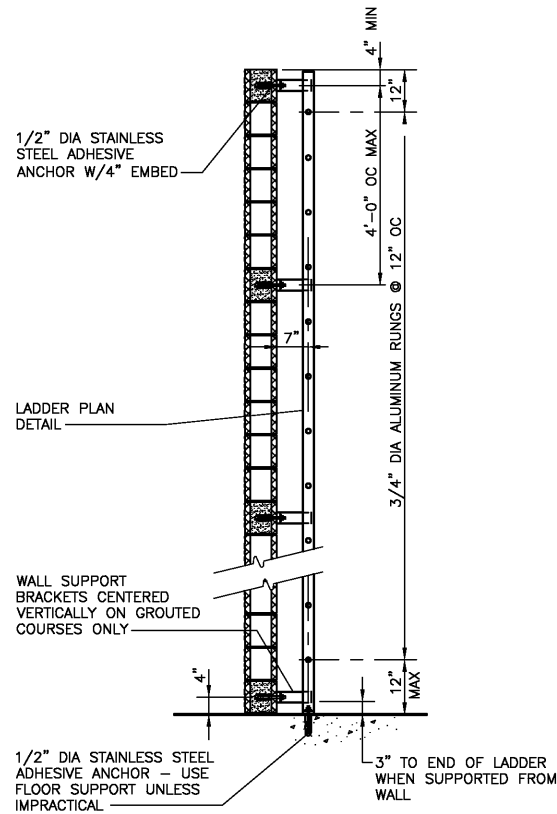


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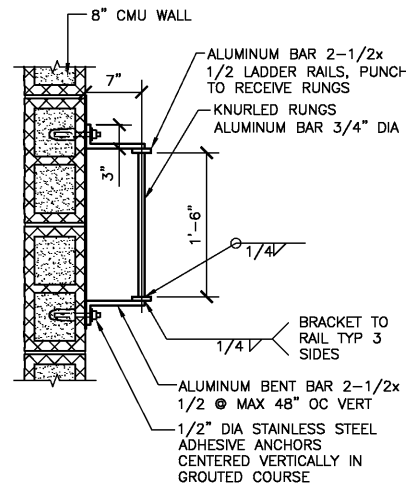
1. FRAMES REQUIRED FOR DRAIN, VENT FAN OR HVAC EQUIPMENT. FINAL OPENING SIZE AND LOCATION TO BE DETERMINED FROM THE HVAC APPROVED SHOP DRAWINGS AND VERIFIED IN THE FIELD.
2. MAXIMUM LOAD = 400 POUNDS, UNO.
3. JOISTS TO BE REINFORCED PER A/-.

TYP ROOF OPENING FRAMING

SECTION 1
NTS -



LADDER
DETAIL S204
NTS -



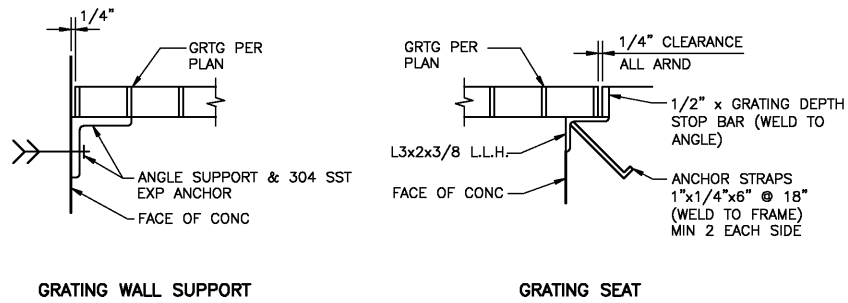
LADDER PLAN
DETAIL S205
NTS -

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CDM Camp Dresser & McKee Inc.	
Albuquerque Bernalillo County Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY STRUCTURAL STANDARD DETAILS II	
Design Review Committee	City Engineer Approval
Ms./Dsg/yr.	Ms./Dsg/yr.
NO. DATE	REMARKS BY
DESIGNED BY: DATE: 02/05	REVISIONS DESIGN
DRAWN BY: DATE: 02/05	
CHECKED BY: DATE: 02/05	
CITY PROJECT NO. 6886-02	Zone Map No. H-9 SHEET OF DRAWING NO. SD-2

PRELIMINARY - NOT FOR CONSTRUCTION

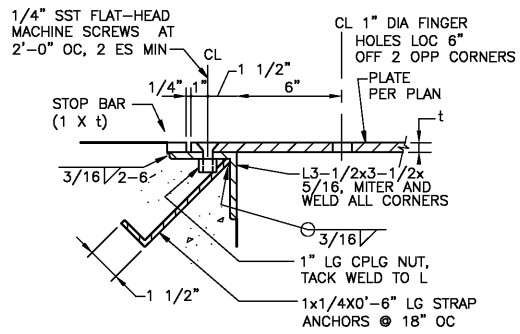
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SPAN	ANGLE SUPPORT	ANCHOR BOLT (SIZE & SPACING)
0'-0" TO 2'-11"	3 x 3 x 3/8	1/2" x 5-1/2" @ 18"
3'-0" TO 4'-11"	3 1/2 x 3 1/2 x 3/8	1/2" x 5-1/2" @ 18"
5'-0" TO 7'-0"	4 x 4 x 1/2	1/2" x 6" @ 12"

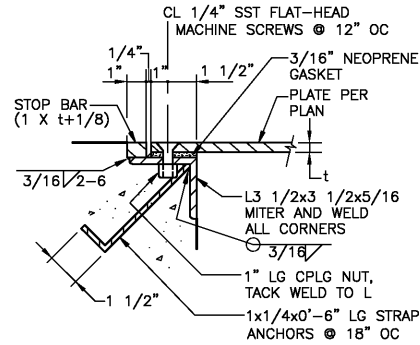
NOTE: SEE SPECIFICATION SECTION 05530

ALUMINUM AND STEEL GRATING SUPPORT
DETAIL S301
NTS



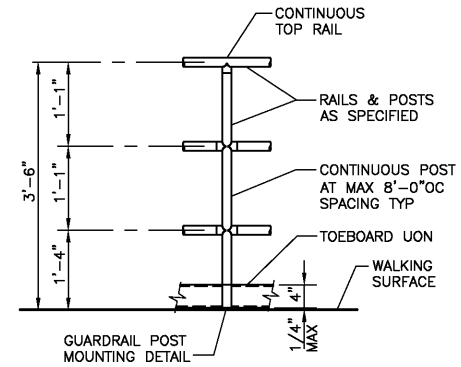
t = 3/8" UNO ON DRAWINGS
PROVIDE FINGER HOLES FOR COVER PLATES < 4 SQ FT IN SIZE UNO

COVER PLATE SEAT
DETAIL S302
NTS



t = 3/8" UNO ON DRAWINGS

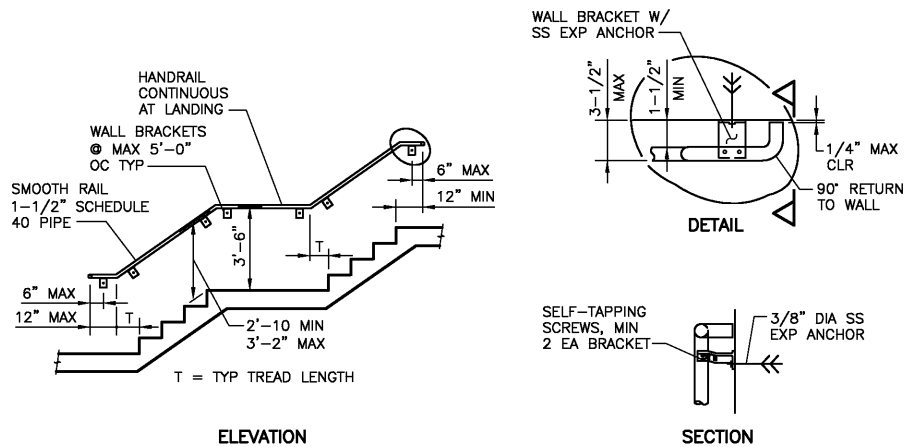
WATERTIGHT COVER PLATE
DETAIL S303
NTS



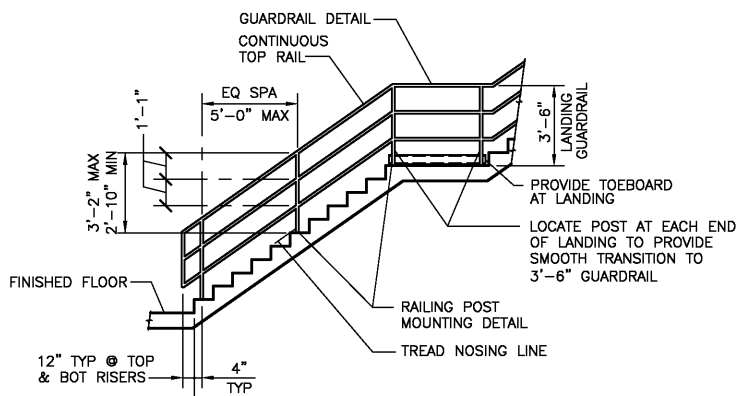
NOTES:

1. RAIL REQD @ HEIGHT DIFFERENCES >30" PER UBC (>48" OSHA)
2. BOCA 827 REQUIRES RAIL CLEAR SPACING <14" FOR INDUSTRIAL BLDGS (<12" PER UBC 1712)
3. TOEBOARD SHOULD BE PROVIDED UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN SPECS BY STRUCTURE (TO MEET CODE REQUIREMENTS)
4. POST SPACING MUST BE CONFIRMED FOR LOADINGS SPECIFIED BY BUILDING CODE

GUARDRAIL
DETAIL S304
NTS



STAIR HANDRAIL
DETAIL S305
NTS



NOTE: ALL DIMENSIONS ARE AT CL OF POST OR RAIL

STAIR GUARDRAIL
DETAIL S306
NTS

CDM Camp Dresser & McKee Inc.	
Albuquerque Bernalillo County Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY STRUCTURAL STANDARD DETAILS III	
Design Review Committee	City Engineer Approval
Ms./Dsgn/Yr.	Ms./Dsgn/Yr.
NO. DATE	REMARKS BY
DESIGNED BY: DATE: 02/05	REVISIONS DESIGN
DRAWN BY: DATE: 02/05	
CHECKED BY: DATE: 02/05	
CITY PROJECT NO. 6886-02	Zone Map No. H-9
SHEET OF DRAWING NO. SD-3	

VERIFY SCALES
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0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	NO.	BY	FIELD NOTES	DATE	PRELIMINARY NOT FOR CONSTRUCTION	
INSPECTOR'S SIGNATURE BY	DATE						
FIELD CHANGE BY	DATE						
REVISION BY	DATE						
CORRECTED BY	DATE						
MICRO FILM INFORMATION							
RECORDED BY	DATE						
NO.							

PRELIMINARY - NOT FOR CONSTRUCTION

ABBREVIATIONS

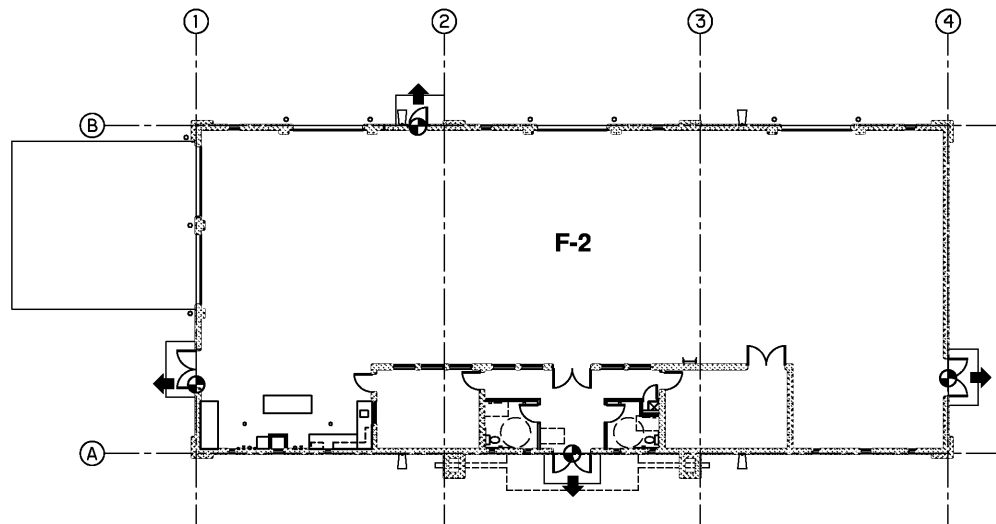
& C AB ABV ACMU ACT ADH AFF AL AMP ANOD ANSI ASSY BD BEV BLDG BLK BLKG BRG BRK BRS BRZ BS BTM C TO C CAB CARP CEM CEMC CF CH CHAM CHAN CIP CJ or C CL or C CLG CLKG CMU COL COMP CONC CONT CRS CT DET DF DIA DIAG DIM DISP DN DP DR DWG EAL EL ELEC ELEV EQ EQIPT EWC EXP EXP EU EXIST or (E) FAC FD FE FGL FIN FLG FLR FR FO FY FXD	AND ANGLE AT ANCHOR BOLT ABOVE ACOUSTICAL CONCRETE MASONRY UNIT ACOUSTICAL CEILING TILE ADHESIVE ABOVE FINISHED FLOOR ALUMINUM ACOUSTICAL METAL PANELS ANODIZE AMERICAN NATIONAL STANDARDS INSTITUTE ASSEMBLY BOARD BEVEL (ED) BUILDING BLOCK BLOCKING BEARING BRICK BRASS BRONZE BOTH SIDES BOTTOM CENTER TO CENTER CABINET CARPET CEMENT CEMENTITIOUS COATING COMPRESSIBLE FILLER CONCRETE HARDENER CHAMFER CHANNEL CAST IN PLACE CONTROL JOINT CEILING CAULKING CONCRETE MASONRY UNIT COLUMN COMPRESSIBLE CONCRETE CONTINUOUS COUSE (S) CERAMIC TILE DETAIL DRINKING FOUNTAIN DIAMETER DIAGONAL DIMENSION DISPENSER DOWN DAMP-PROOFING DRAIN DRAWING ELEVATION ELECTRICAL ELEVATOR EQUAL (L.Y) EQUIPMENT ELECTRIC WATER COOLER EXPANSION EXPOSED EXPANSION JOINT EXISTING FACTORY FINISH FLOOR DRAIN FIRE EXTINGUISHER FIBERGLASS FINISHED FLASHING FLOORING FILLER FRAME FRAME OPENING FIELD VERIFY FIXED	GA GALV GL GB GWB GYP HARD HD HWD HWDR HGR HGT HM HOR HP HR IN INST INSUL JC JOINT JT FLR L LAB LAD LAM LAV LG LKR LNTL LP LT MAS MATL MAX MEMBRANE MFR MIN MISC MO MR MRAT MTD MTG MTL N/A NC NFPA NIC NOM NTS OC OD OPNG OPP ORD OSB OSHIA OVHD PERIM PL PLAS PLK PLYWD PM PR PRD PRCST PRE-FAB PT PRWLD PSP PTD QT	GAGE, GAUGE GALVANIZED GLASS GLASS BLOCK GYPSUM WALL BOARD GYPSUM HARDENER HEAVY DUTY HARDWOOD HARDWARE HANGER HEIGHT HOLLOW METAL HORIZONTAL HIGH POINT HANDRAIL INCH INSTRUMENTATION INSULATION JANITOR'S CLOSET JOINT JOINT FILLER LINE OR STRUCTURAL ANGLE DESIGNATION LABORATORY LADDER LAMINATED LAVATORY LAMINATED GLASS LOCKER LINTEL LIGHT POLE LOW POINT LIGHT (S) MASONRY MATERIAL MAXIMUM MEMBRANE MANUFACTURER MINIMUM MISCELLANEOUS MASONRY OPENING MOISTURE RESISTANT MOISTURE RESISTANT ACOUSTICAL TILE MOUNTED MOUNTING METAL NOT APPLICABLE NON COMBUSTIBLE NATIONAL FIRE PROTECTION ASSOCIATION NOT IN CONTRACT NOMINAL NOT TO SCALE OVERHEAD COILING OPENING OPPOSITE OPPOSITE HAND OVERFLOW ROOF DRAIN ORIENTED STRAND BOARD OCCUPATIONAL SAFETY AND HEALTH ADMIN OVERHEAD PERIMETER PLATE PROPERTY LINE PLASTER PLANK PLYWOOD PRESSED METAL PAIR PRETREATED WATER SYSTEM PROMENADE ROOF DRAIN PRECAST PRE-FABRICATED PRESSURE TREATED PREMOLDED POUNDS PER SQUARE FOOT PAINTED QUARRY TILE	QTB R R+S RB RD RECT REF REINF REDD REV RF RFG RGH RJ RL RLG RM RO RBR RWL S SAC SB SCHED SCRM SECT SECT SFT SFT SHT SIM SIM SK SLNT SPEC SS STD STL STR STRU STWY SUPT SUSP T TBM T&G TEMP TEMP TEMP TER TERB THK THLD TKBD TOIL TOPG TOS TS TSL TWF TYP UC UON UL VB VCT VERT VTR W W/ W/A W/O WC WD WD WDW WF WPG WT WWF	QUARRY TILE BASE RISER(S) BACKER ROD & SEALANT RUBBER BASE ROOF DRAIN RECEPTACLE ROOF EXHAUST FAN REINFORCE (D, ING) REQUIRED REVISION RESILIENT FLOORING ROOFING ROUGH REVEAL/RUSTICATION JOINT RAIN LEADER RAILING ROOM ROUGH OPENING RUBBER RAIN WATER LEADER STEEL S-SHAPE DESIGNATION SUSPENDED ACOUSTICAL CEILING SEAMLESS BASE SCHEDULE SCREENED SECTION SECTION STRUCTURAL FLOORING STRUCTURAL GLAZED FACING TILE SHEET SIMILAR SLOPE SEALANT SPECIFICATION, SPECIFIED STAINLESS STEEL STANDARD STEEL STORAGE STRUCTURE (S, URAL) STAIRWAY SUPERINTENDENT SUSPENDED (TREADS) TRAFFIC BEARING MEMBRANE TONGUE AND GROOVE TEMPERATURE TEMPERED TEMPORARY TERRAZZO TERRAZZO BASE THICKNESS THRESHOLD TACKBOARD TOILET TOPPING TOP OF STEEL STRUCTURAL TUBING (STEEL UNLESS NOTED) TOP OF SLAB THROUGH WALL FLASHING TYPICAL UNDERCUT UNLESS OTHERWISE NOTED UNDERWRITERS LABORATORIES INCORPORATED VAPOR BARRIER VINYL COMPOSITION TILE VERTICAL VENT THRU ROOF WIDE WITH WHERE APPLICABLE WITHOUT WATER CLOSET WIDTH WOOD WINDOW WIDE FLANGE WATERPROOFING STEEL TEE-SHAPE DESIGNATION WELDED WIRE FABRIC
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ARCHITECTURAL SHEET INDEX

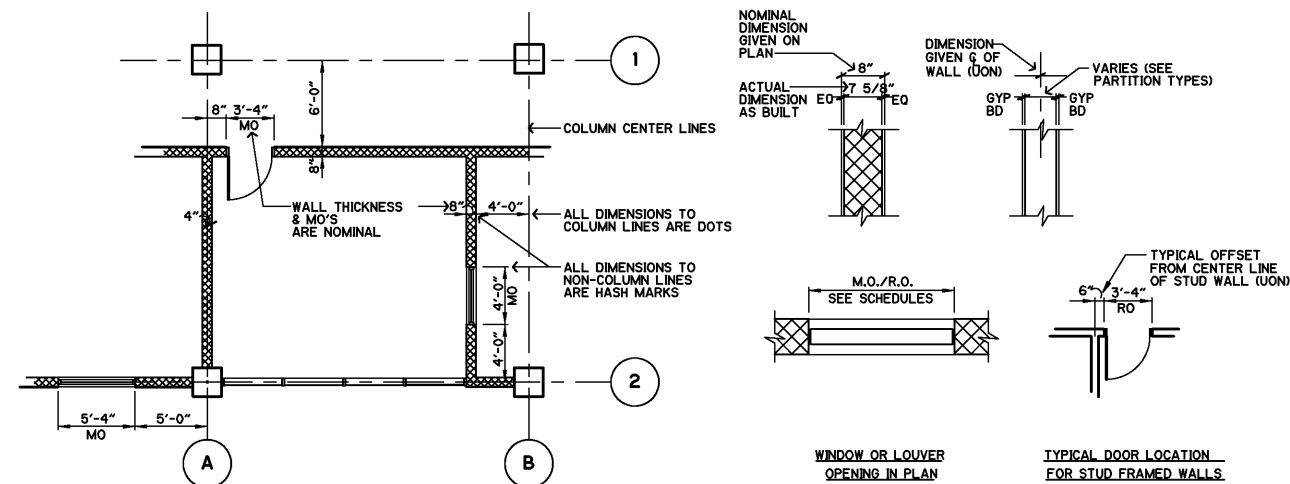
A-0	ABBREVIATIONS, SYMBOLOLOGY AND CODE PLAN
A-1	FLOOR PLAN
A-2	MEZZANINE PLAN
A-3	ROOF PLAN
A-4	ENLARGED FLOOR AND REFLECTED CEILING PLANS
A-5	BUILDING ELEVATIONS
A-6	BUILDING SECTIONS
A-7	WALL SECTIONS
A-8	MISCELLANEOUS DETAILS
A-9	MISCELLANEOUS DETAILS
A-10	MISCELLANEOUS DETAILS
A-11	MISCELLANEOUS DETAILS AND SCHEDULES
A-12	LABORATORY ENLARGED PLAN AND ELEVATIONS

CODE PLAN

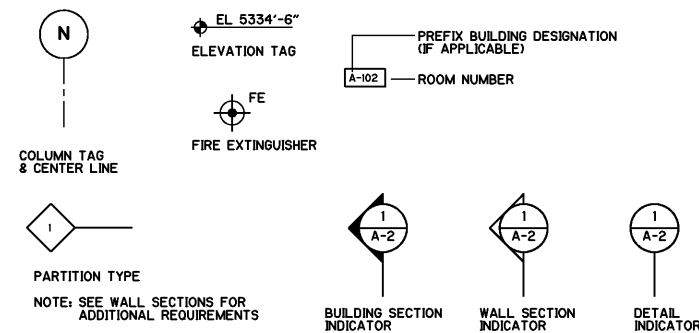
1/16" = 1'-0"



DIMENSIONING SYSTEM



SYMBOLS



LINE TYPES

—	CONTINUOUS - NEW CONSTRUCTION
- - -	DASHED ON CONSTRUCTION PLANS/SHEETS - HIDDEN ELEMENTS ABOVE, BELOW, OR BEYOND
- - - - -	DASHED ON CONSTRUCTION PLANS/SHEETS - EXISTING STRUCTURE/EQUIPMENT TO BE DEMOLISHED

GENERAL NOTES

- HEIGHT OF INTERIOR PARTITIONS ARE FROM FLOOR TO THE UNDERSIDE OF ROOF DECK UNLESS OTHERWISE NOTED. PROVIDE DEFLECTION HEADS AT TOP OF WALL (TYPICAL).
- NOT ALL EQUIPMENT AND PIPING IS SHOWN FOR CLARITY. REFER TO THE INDIVIDUAL DISCIPLINE SHEETS (M, E, H, P & FP) FOR COMPLETE LAYOUT OF ALL EQUIPMENT AND PIPING.
- SEE "C" SHEETS FOR SITE ELEVATIONS, SIDEWALKS AND ROAD PAVING.
- SEE "S" SHEETS FOR SIZE AND LOCATION OF CONCRETE PADS, TRENCHES, VAULTS, SUMPS, ETC.
- SEE "S" SHEETS FOR LINTEL SCHEDULE, CONCRETE AND MASONRY REINFORCEMENT.
- DO NOT SCALE FROM THE DRAWINGS.
- DIMENSIONS SHOWN ARE NOMINAL TO THE FACE OF MASONRY.
- ARCHITECTURAL DRAWINGS DO NOT INCLUDE ALL WALL PENETRATIONS FOR PIPING, DUCTWORK, EQUIPMENT, ETC.. REFER TO INDIVIDUAL DISCIPLINE SHEETS FOR COMPLETE LAYOUTS, SIZES AND SPECIFIC LOCATIONS.

MATERIAL SYMBOLS

	EARTH, SOIL		STEEL
	GRAVEL		GROUT
	CONCRETE BLOCK		CAULK
	CONC CAST IN PLACE		GLASS
	PLYWOOD		STRUCTURAL STEEL
	RIGID INSULATION		SHEET METAL, STEEL, GLASS, WATERPROOFING

CODE SUMMARY:

KEY DETERMINATIONS:	TYPE	CODE REFERENCE	GOVERNING AUTHORITIES:
USE GROUP DESCRIPTION	GROUP F (FACTORY INDUSTRIAL), DIVISION 2	SECTION 306.3	A. REVIEW AGENCY: CITY OF ALBUQUERQUE B. FIRE DEPARTMENT: CITY OF ALBUQUERQUE
CONSTRUCTION TYPE	II-B	SECTION 602.2 TABLE 601	APPLICABLE ORDINANCES, CODES AND STANDARDS:
FIRE RESISTANCE RATING	0-HOURS REQUIRED	TABLE 601	A. PLANNING & ZONING: CITY OF ALBUQUERQUE CURRENT EDITION
BEARING WALLS (EXTERIOR)	0-HOURS REQUIRED	TABLE 601	B. BUILDING CODE: INTERNATIONAL BUILDING CODE, 2003 EDITION
BEARING WALLS (INTERIOR)	0-HOURS REQUIRED	TABLE 601	C. MECHANICAL CODE: INTERNATIONAL MECHANICAL CODE, 2003 EDITION
NONBEARING WALLS AND PARTITIONS (EXTERIOR)	0-HOURS REQUIRED	TABLE 601	D. PLUMBING CODE: INTERNATIONAL PLUMBING CODE, 2003 EDITION
NONBEARING WALLS AND PARTITIONS (INTERIOR)	0-HOURS REQUIRED	TABLE 601	E. ELECTRICAL CODE: ICC ELECTRICAL CODE, 2003 EDITION
STRUCTURAL FRAME	0-HOURS REQUIRED	TABLE 601	F. FIRE CODE: INTERNATIONAL FIRE CODE, 2003 EDITION
FLOOR CONSTRUCTION	0-HOURS REQUIRED	TABLE 601	G. ENERGY CODE: INTERNATIONAL ENERGY CODE, 2003 EDITION
ROOF CONSTRUCTION	0-HOURS REQUIRED	TABLE 601	H. ACCESSIBILITY CODE: ICC/ANSI A117.1, 1998 EDITION
BUILDING HEIGHT / AREA	55 FEET (MAXIMUM HEIGHT) 3 STORIES 23,000 SQ.FT. ALLOWABLE	TABLE 504 TABLE 504 TABLE 504	
FIRE SUPPRESSION	NOT REQUIRED		
EGRESS REQUIREMENTS	300-FOOT MAXIMUM	TABLE 1015.1	

CDM
Camp Dresser & McKee Inc.

Albuquerque Bernalillo County Water Utility Authority

TITLE:
ARSENIC REMOVAL DEMONSTRATION FACILITY
ABBREVIATIONS, SYMBOLOLOGY AND CODE PLAN

Design Review Committee City Engineer Approval

Ms./Jusv/Yr. Ms./Jusv/Yr.

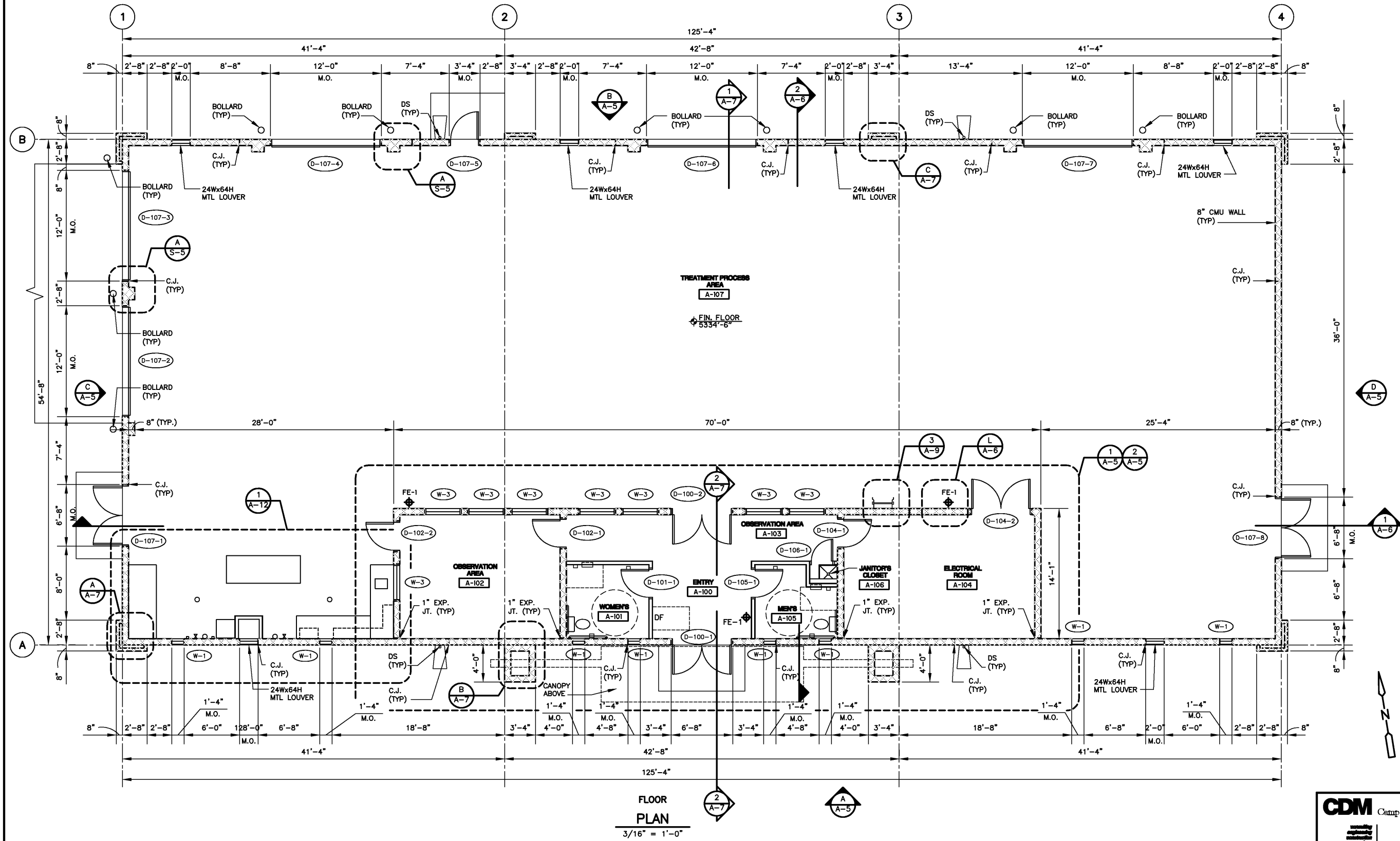
CITY PROJECT NO. 6886-02

Zone Map No.

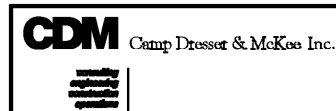
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DESIGNED BY: JM DATE: 02/08-04
DRAWN BY: RS DATE: 10/2005-04
CHECKED BY: JM DATE: 02/05

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FLOOR PLAN
3/16" = 1'-0"



Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
FLOOR PLAN

Design Review Committee City Engineer Approval

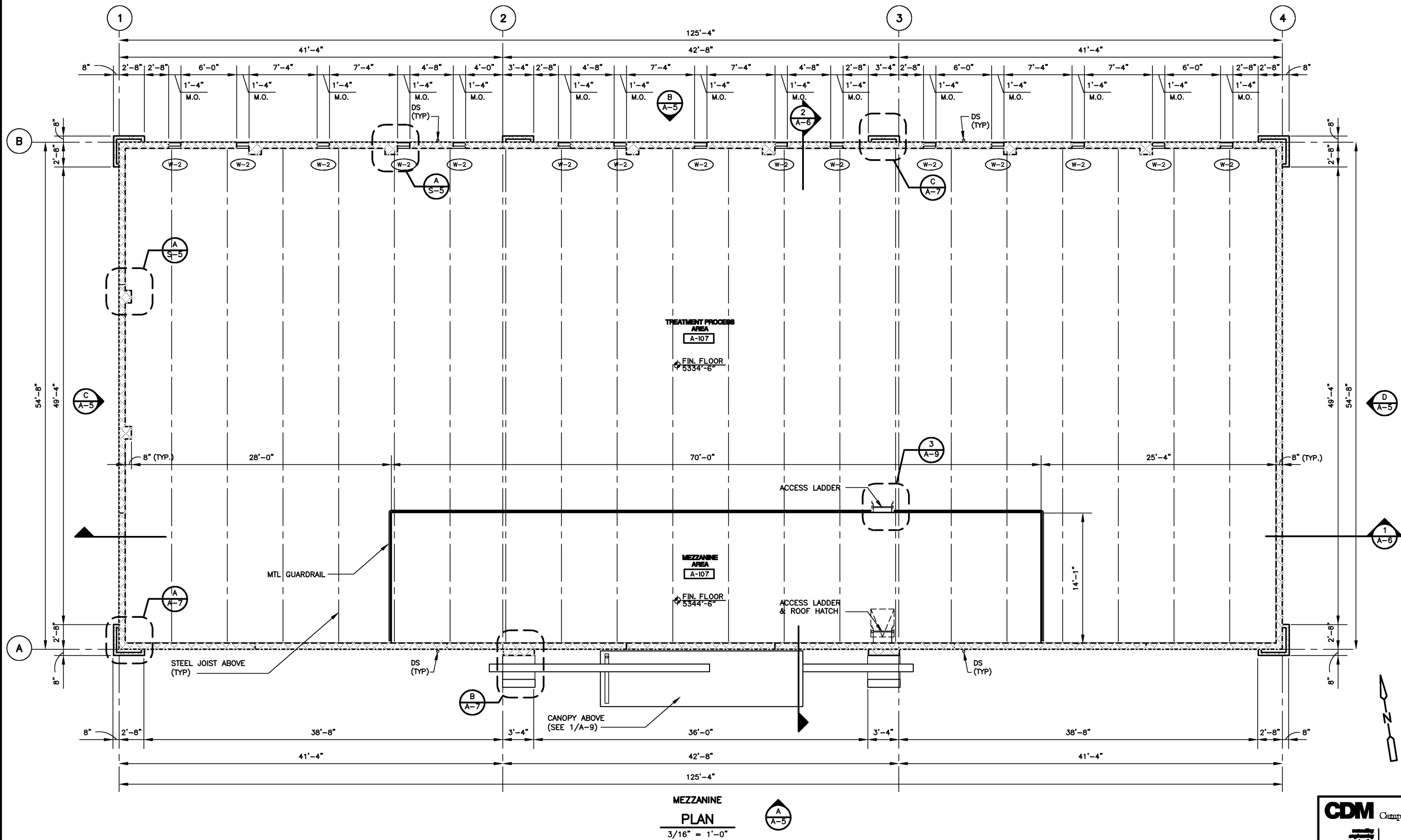
Ms./Dsg/Yr.	Ms./Dsg/Yr.

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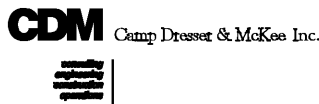
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ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
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		NO.	DATE				
		BY	DATE				
NO.	DATE	REMARKS	BY				
REVISIONS							
DESIGN							
DESIGNED BY: JM			DATE: 02/08-04				
DRAWN BY: RS			DATE: 10/26/05-04				
CHECKED BY: JM			DATE: 02/05				

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MEZZANINE
PLAN
3/16" = 1'-0"



Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
MEZZANINE PLAN

Design Review Committee City Engineer Approval

Mo./Day/Yr.	Mo./Day/Yr.

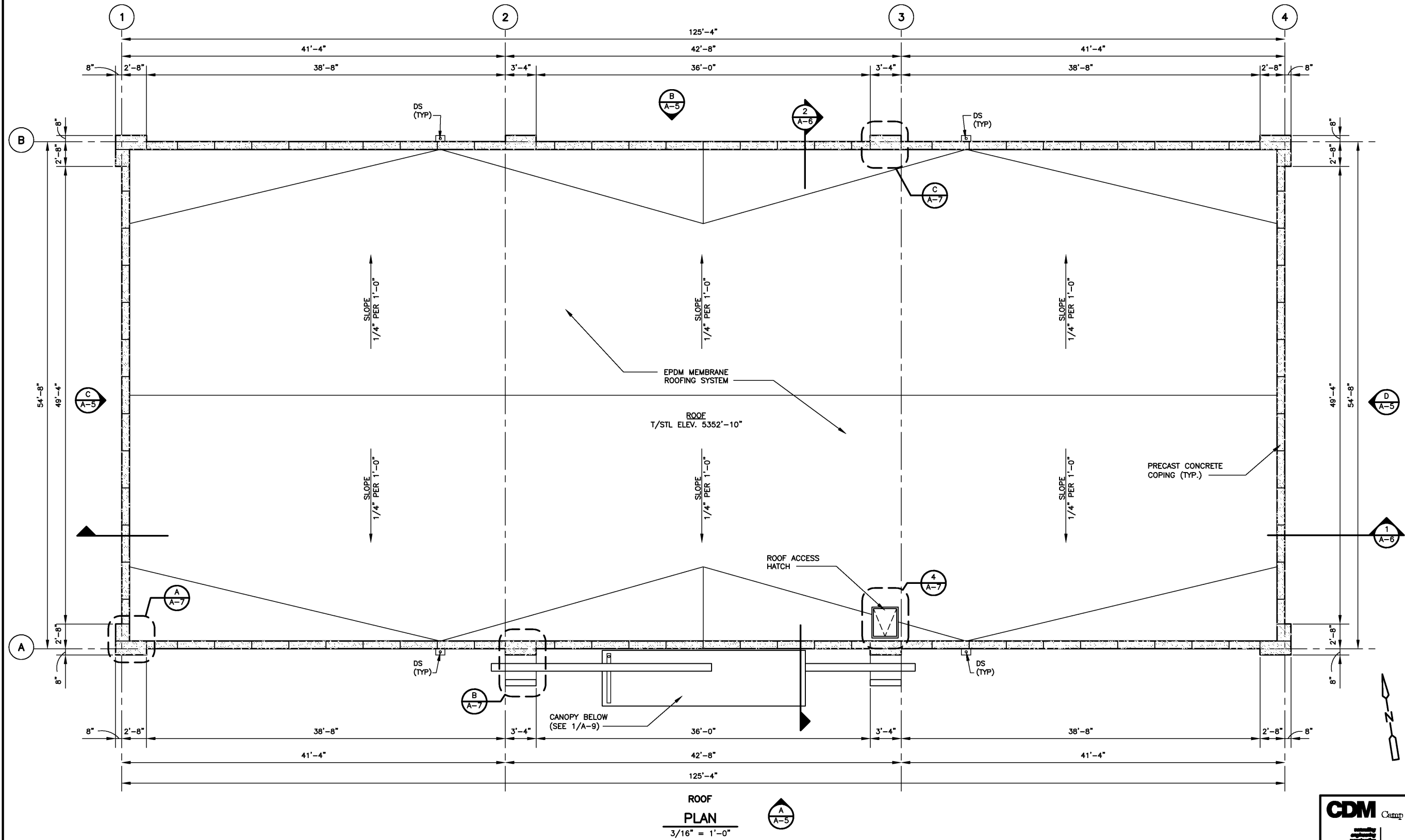
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DRAWING NO. A-2

VERIFY SCALES
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PRELIMINARY - NOT FOR CONSTRUCTION

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ROOF PLAN
3/16" = 1'-0"

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CDM
Camp Dresser & McKee Inc.

**Albuquerque Bernalillo County
Water Utility Authority**

TITLE:
ARSENIC REMOVAL DEMONSTRATION FACILITY
ROOF PLAN

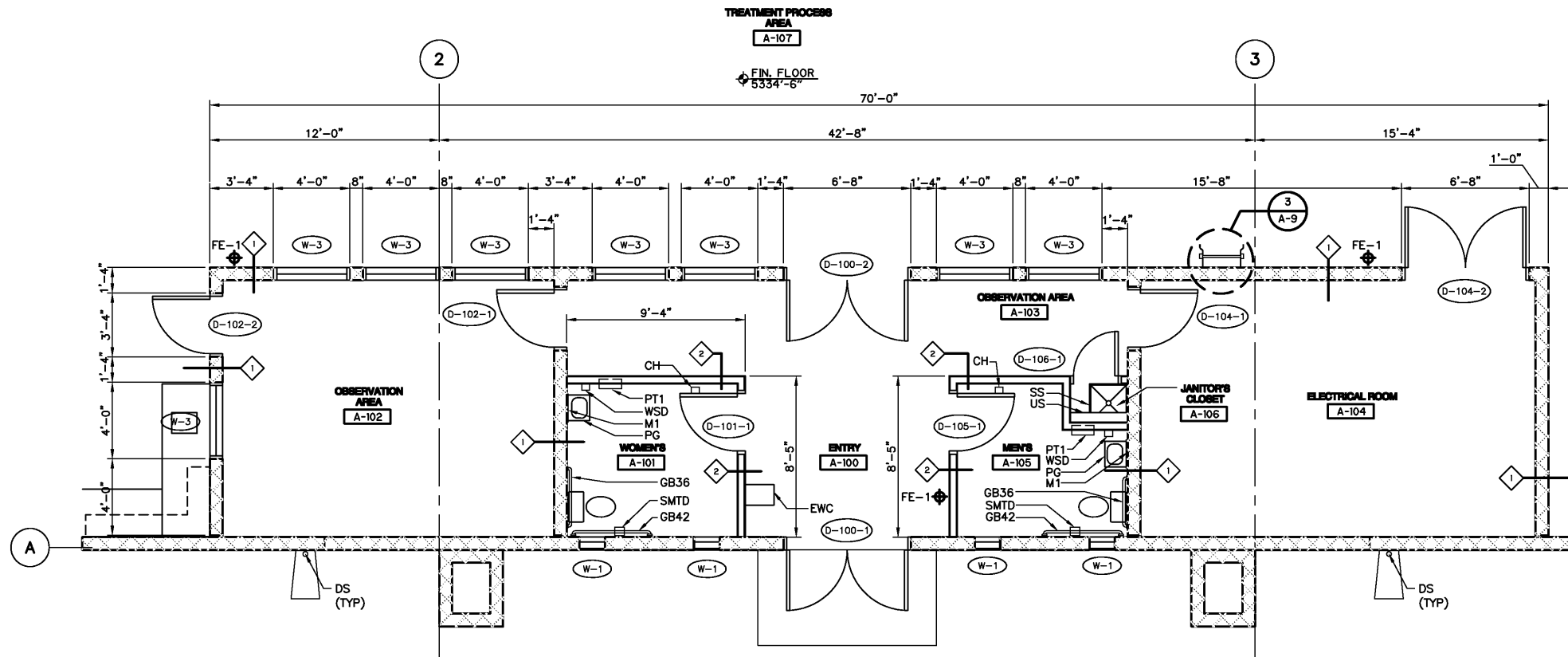
Design	Review	Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.

CITY PROJECT NO.	6886-02	Zone Map No.	SHEET OF
			DRAWING NO. A-3

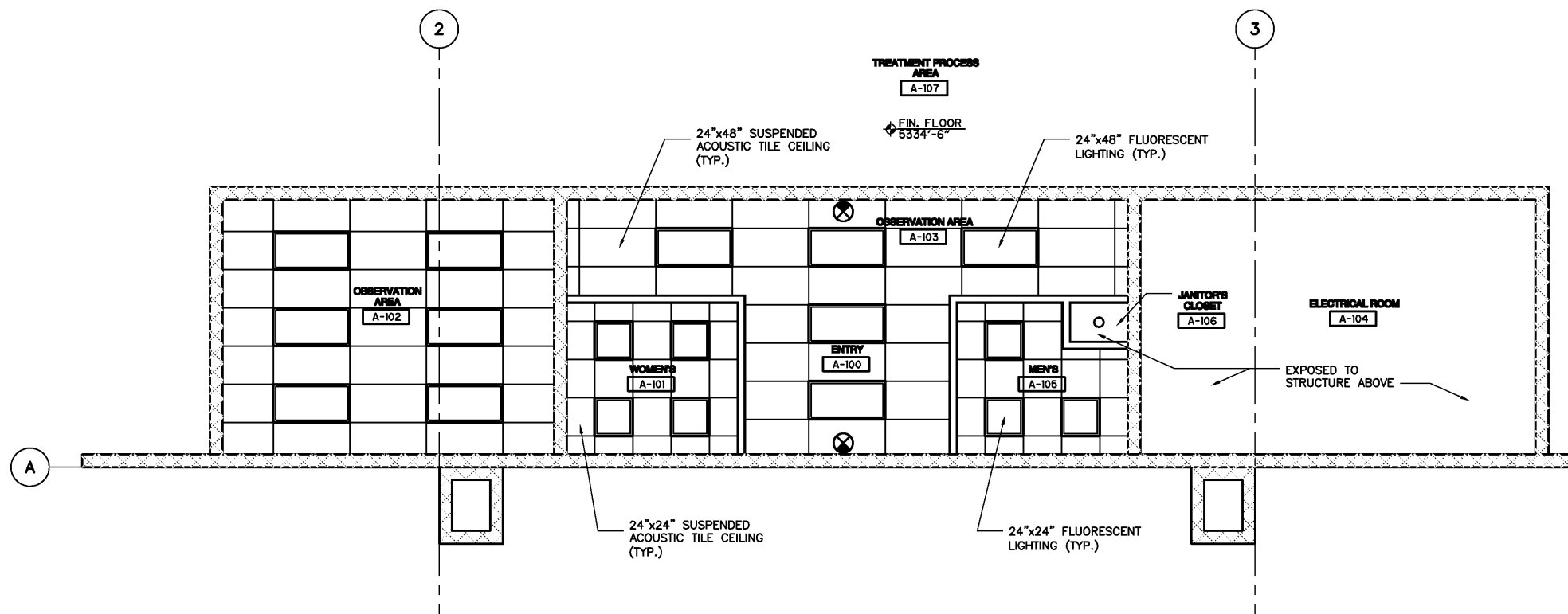
ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
<div>PRELIMINARY NOT FOR CONSTRUCTION</div>	NO. DATE REMARKS REVISIONS DESIGN	NO.	BY	DATE		CONTRACTOR	
						WORK	
						INSPECTED BY	
						DATE	
DESIGNED BY: JM	DATE: 02/08-04					APPROVED BY	
DRAWN BY: RS	DATE: 10/2/05-04					DATE	
CHECKED BY: JM	DATE: 02/05					RECORDED BY	
						DATE	

PRELIMINARY - NOT FOR CONSTRUCTION

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ENLARGED PARTIAL
PLAN
1/4" = 1'-0"



REFLECTED CEILING
PLAN
1/4" = 1'-0"

TOILET ROOM ACCESSORY SCHEDULE		
ITEM CATEGORY	ITEM NO	DESCRIPTION
GRAB BARS	GB36	GRAB BAR 36-IN. LONG WITH EXPOSED MOUNTINGS
	GB42	GRAB BAR 42-IN. LONG WITH EXPOSED MOUNTINGS
DISPENSORS	LSD	WALL MOUNTED SOAP DISPENSER
	PT1	SURFACE MOUNTED ROLL PAPER TOWEL DISPENSER
	SMTD	SURFACE MOUNTED MULTI ROLL TOILET TISSUE DISPENSER
	-	-
MIRRORS	MI	18" X 30" TILT CHANNEL FRAME MIRROR
	-	-
MISCELLANEOUS ACCESSORIES	PG	UNDERSINK PIPE GUARD
	CH	COAT HOOK AND BUMPER
	EWC	ELECTRIC WATER COOLER (SEE PLUMBING)
	SS	SERVICE SINK (SEE PLUMBING)
	US	UTILITY SHELF WITH MOP/BROOM HOLDER & RAG HOOKS
	WR	SURFACE MOUNTED WASTE RECEPTACLE
-	-	-

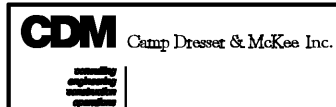
CEILING PLAN LEGEND:

- SUSPENDED ACOUSTICAL CEILING SYSTEM
- PARABOLIC FLUORESCENT LIGHT FIXTURE
- EMERGENCY PARABOLIC FLUORESCENT LIGHT FIXTURE
- EMERGENCY BATTERY PACK
- EXIT SIGN
- DETECTOR FOR FM-200 FIRE PROTECTION SYSTEM

CEILING GENERAL NOTES:

- REFER TO ELECTRICAL DRAWINGS FOR EXACT SIZE AND LOCATION OF LIGHTS, EMERGENCY LIGHTS, AND EXIT SIGNAGE (TYPICAL).
- REFER TO FIRE PROTECTION DRAWINGS FOR EXACT LOCATION OF FIRE ALARMS AND DETECTORS (TYP).
- REFER TO HVAC DRAWINGS FOR EXACT SIZE AND LOCATION OF SUPPLY AND RETURN DUCTS (TYPICAL).

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.



Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
ENLARGED FLOOR & REFLECTED CEILING PLANS

Design Review Committee City Engineer Approval

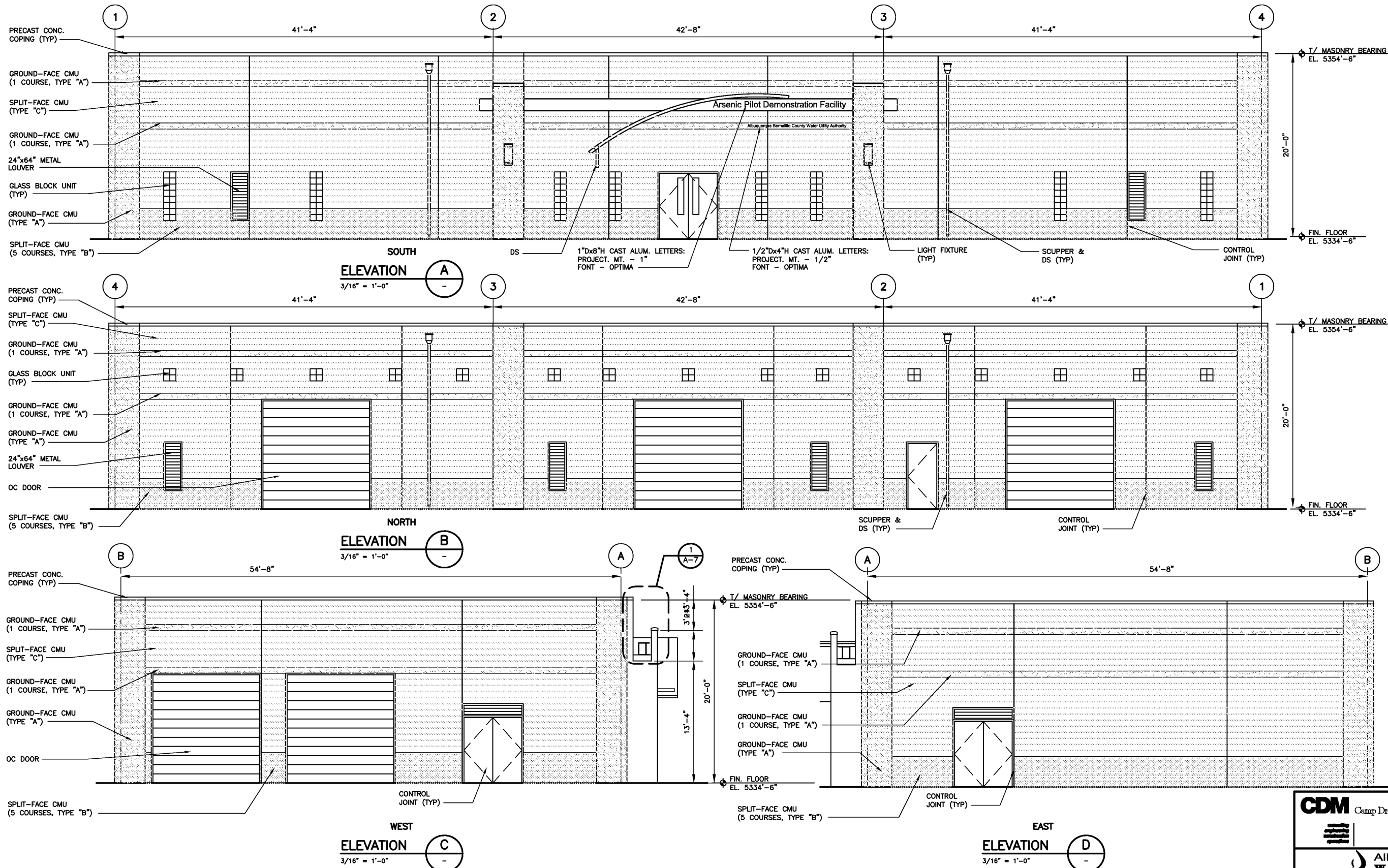
Mo/Us/2/04	Mo/Us/2/04
Mo/Us/2/04	Mo/Us/2/04
Mo/Us/2/04	Mo/Us/2/04
Mo/Us/2/04	Mo/Us/2/04

CITY PROJECT NO. 6886-02 Zone Map No. SHEET OF
DRAWING NO. A-4

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	NO.	BY	NO.	BY	PRELIMINARY NOT FOR CONSTRUCTION	
WORK BY	DATE	NO.	BY	NO.	BY		
ADJUSTED BY	DATE	NO.	BY	NO.	BY	REVISIONS	
ADJUSTED BY	DATE	NO.	BY	NO.	BY		
ADJUSTED BY	DATE	NO.	BY	NO.	BY	DESIGN	
ADJUSTED BY	DATE	NO.	BY	NO.	BY		
MICRO FILM INFORMATION		REVISIONS		DESIGN		REVISIONS	
RECORDED BY	DATE	NO.	BY	NO.	BY	DESIGN	
RECORDED BY	DATE	NO.	BY	NO.	BY		
MICRO FILM INFORMATION		REVISIONS		DESIGN		REVISIONS	
RECORDED BY	DATE	NO.	BY	NO.	BY	DESIGN	
RECORDED BY	DATE	NO.	BY	NO.	BY		

PRELIMINARY - NOT FOR CONSTRUCTION

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VERIFY SCALES
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.



Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
BUILDING ELEVATIONS

Design Review Committee City Engineer Approval

Mo./Day/Yr.	Mo./Day/Yr.

CITY PROJECT NO. 6886-02 Zone Map No. SHEET OF
DRAWING NO. A-5

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	NO.	BY	NO.	BY	PRELIMINARY NOT FOR CONSTRUCTION	
WORK BY	DATE						
INSPECTION BY	DATE						
ADJUSTMENT BY	DATE						
VERIFICATION BY	DATE					REVISIONS DESIGN	
CONSTRUCTION BY	DATE						
RECORDED BY	DATE						
NO.	DATE						
MICRO FILM INFORMATION		NO.		DESIGNED BY: JM		DATE: 02/08-04	
				DRAWN BY: RS		DATE: 10/26/05-04	
				CHECKED BY: JM		DATE: 02/05	

PRELIMINARY - NOT FOR CONSTRUCTION

54'-8"

T/ MASONRY BEARING
EL. 5354'-6"

10'-0"

20'-0"

FIN. FLOOR
EL. 5344'-6"

10'-0"

FIN. FLOOR
EL. 5334'-6"

TREATMENT PROCESS AREA
A-107

OBSERVATION AREA
A-103

MTL. GUARDRAIL (TYP.)

ACCESS LADDER (BEYOND)

MEN'S
A-105

1
A-7

2
A-7

3
A-7

B

A


BUILDING




SECTION 2

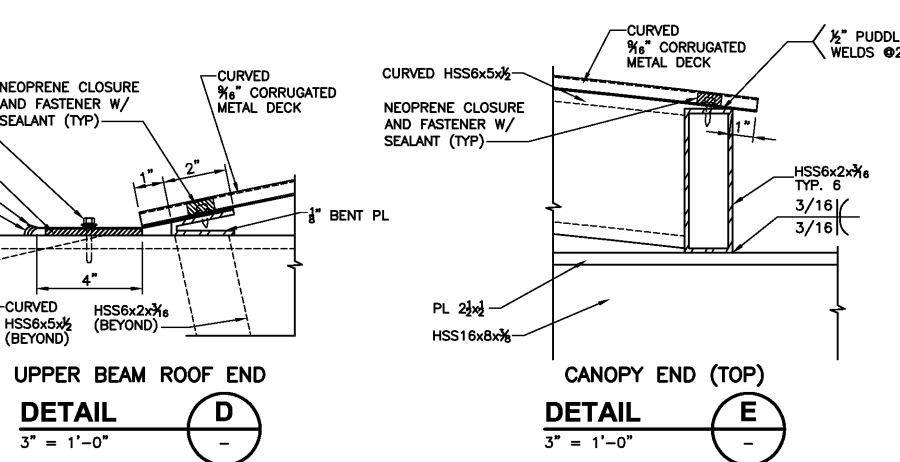
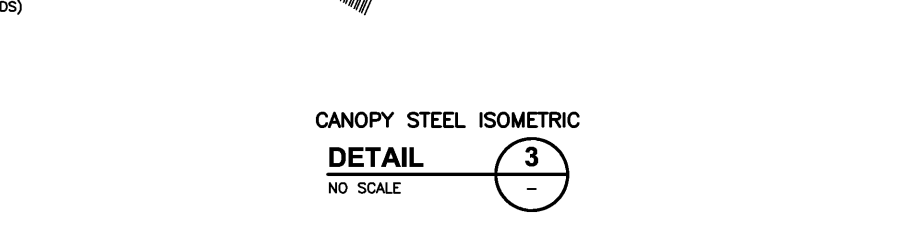
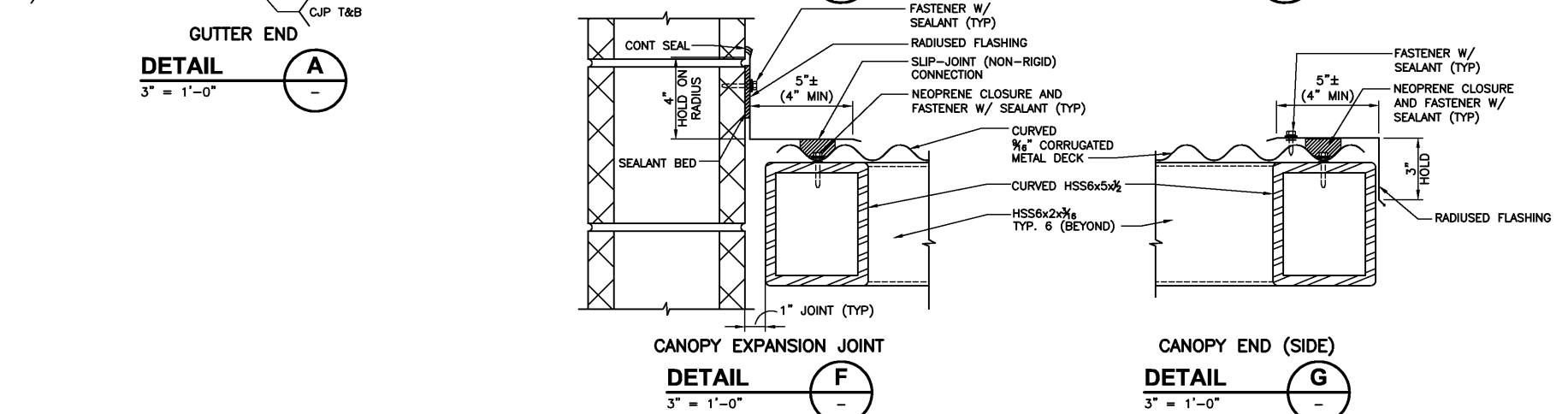
$3/16" = 1'-0"$ -


[illegible]

PREPARED BY: JM	DATE: 02/05
PRELIMINARY - NOT FOR CONSTRUCTION	

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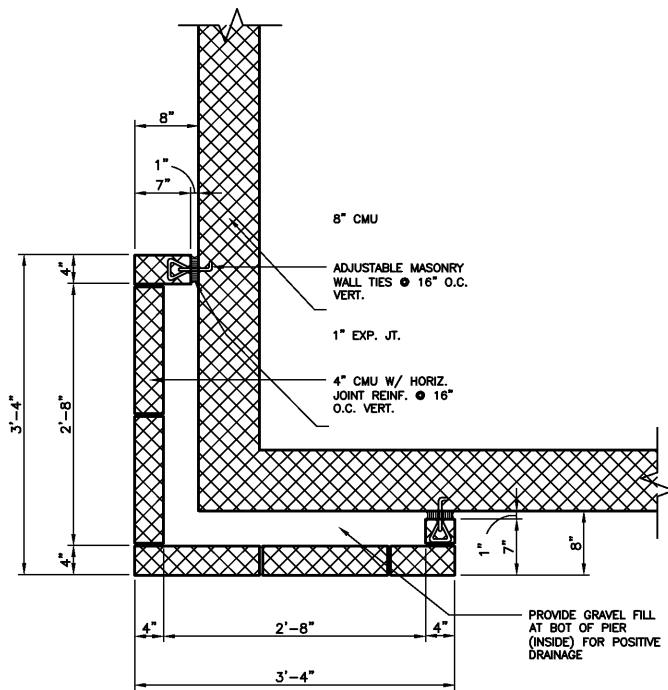
	Camp Dresser & McKee Inc.		NO.	DATE	DESIGNED BY: JI DRAWN BY: R CHECKED BY: J
<div style="display: flex; align-items: center; justify-content: center;">  <div style="text-align: center;"> <p>Albuquerque Bernalillo County</p> <h1 style="margin: 0;">Water Utility Authority</h1> </div> </div>					
<p>TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY BUILDING SECTIONS</p>					
Design Review Committee	City Engineer Approval	Least Design Updates	Ms./D567 Yr.	Ms./D567 Yr.	
CITY PROJECT NO. 6886-02		Zone Map No.	SHEET OF DRAWING NO. A-6		



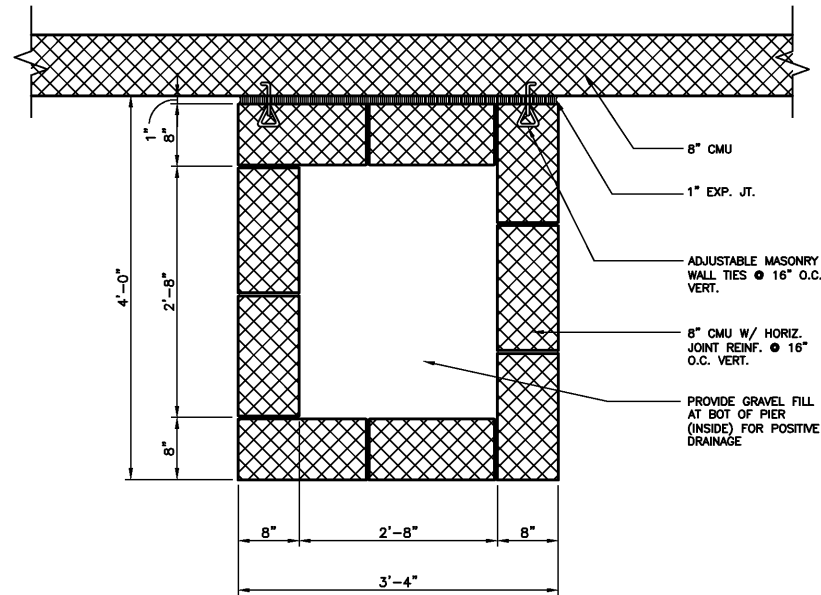
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No. _____ of _____ SHEET OF DRAWING NO. A-8									
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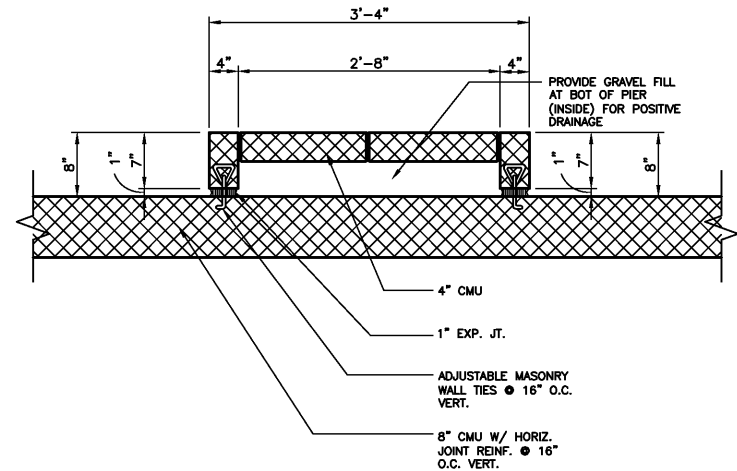
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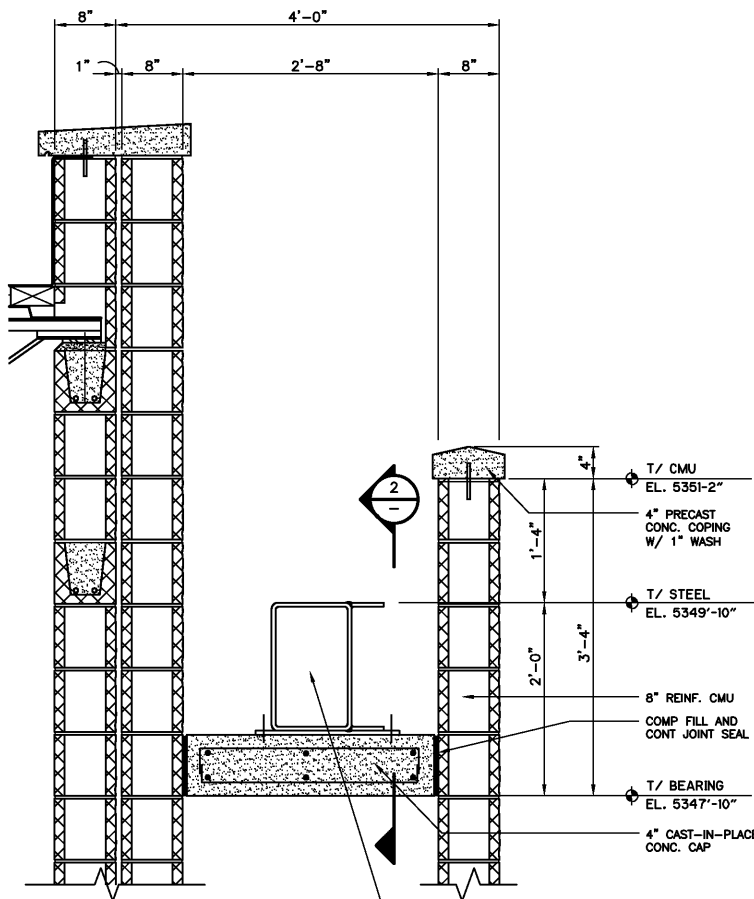
CORNER PIER
DETAIL A
3/4" = 1'-0"



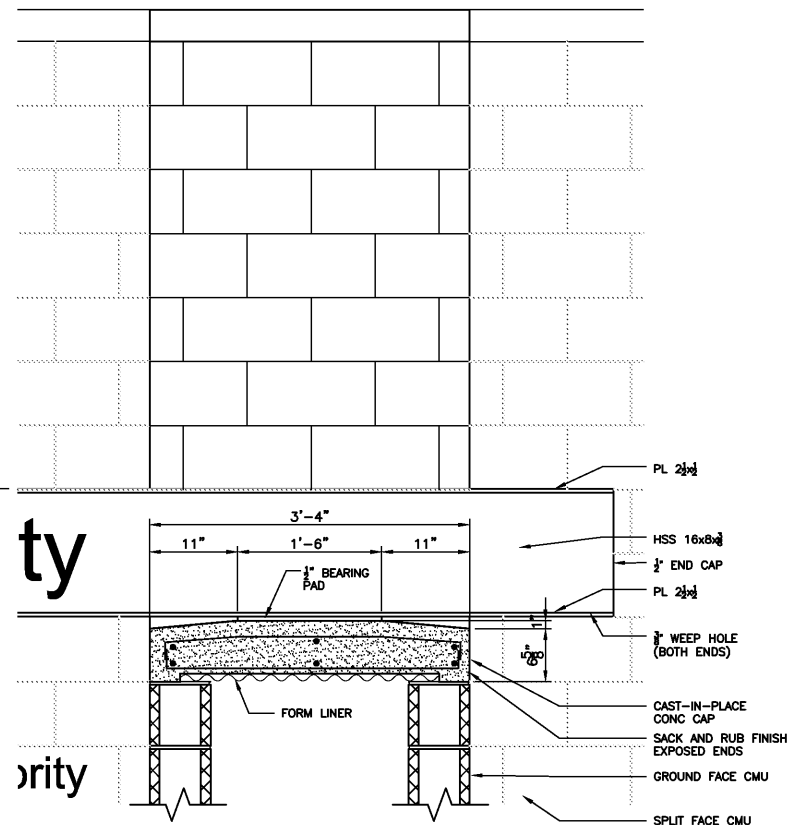
ENTRANCE PIER
DETAIL B
3/4" = 1'-0"



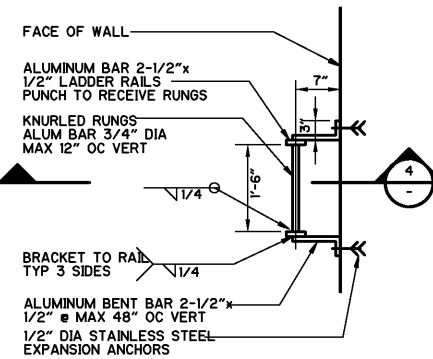
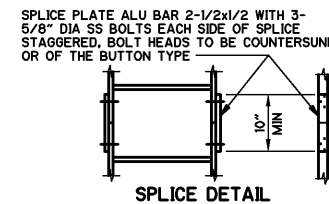
INTERMEDIATE PIER
DETAIL C
3/4" = 1'-0"



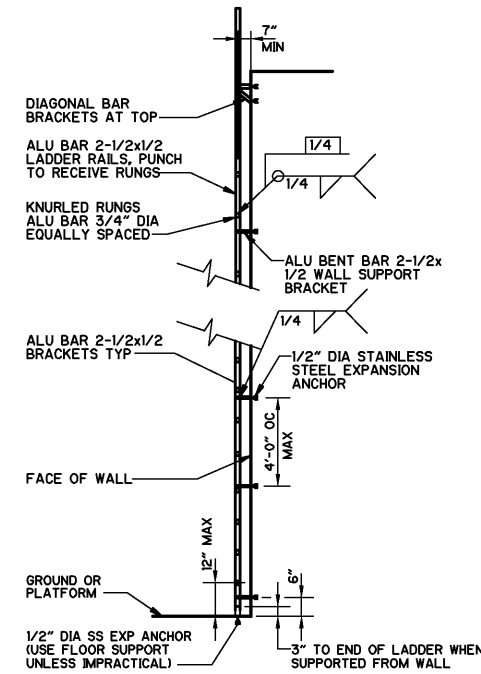
ENTRANCE PIER SECTION
DETAIL 1
3/4" = 1'-0"



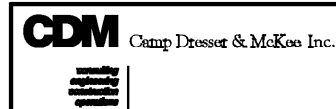
ENTRANCE PIER SECTION
DETAIL 2
3/4" = 1'-0"



NOTE:
LAYOUT OF ALL FIXED LADDERS SHALL CONFORM
TO OSHA DESIGN REQUIREMENTS (TYPICAL)
FIXED WALL LADDER
DETAIL 3
NTS



FIXED WALL LADDER
DETAIL 4
NTS



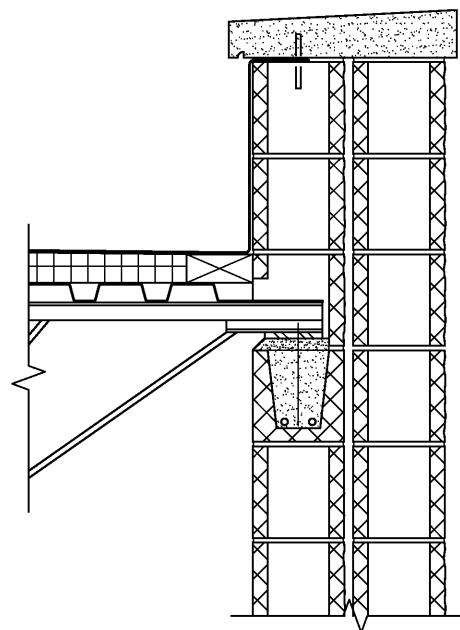
Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
MISCELLANEOUS DETAILS

Design Review Committee City Engineer Approval Ms./Yr. Ms./Yr.

City Project No. 6886-02 Zone Map No. SHEET OF
DRAWING NO. A-9

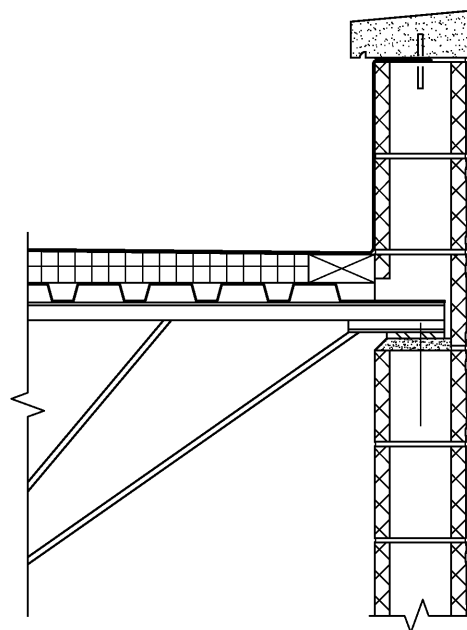
PRELIMINARY - NOT FOR CONSTRUCTION



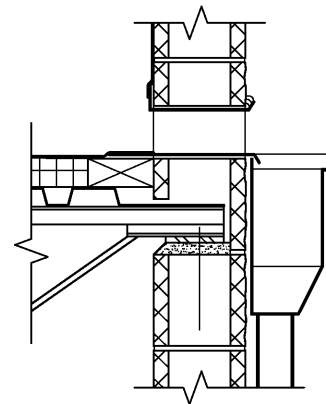
COPING • PIER

SECTION 1

1 1/2" = 1'-0"

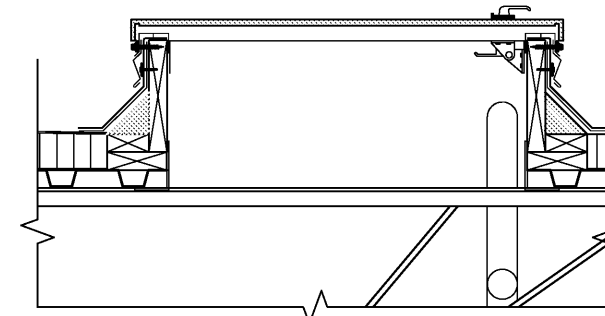


ROOF PARAPET
SECTION 2
1 1/2" = 1'-0"

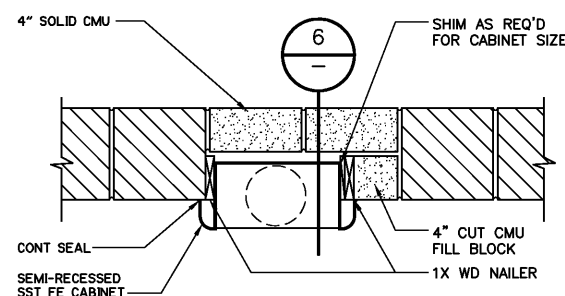


ROOF SCUPPER

SECTION	3
1 1/2" = 1'-0"	-



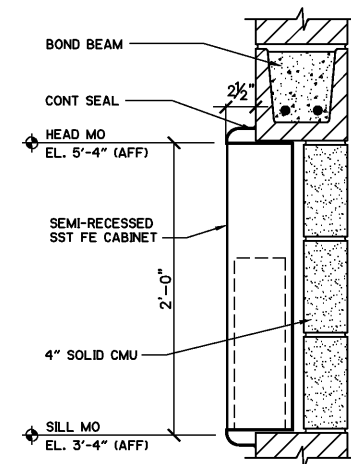
ROOF HATCH
DETAIL 4
1 1/2" = 1'-0"



FIRE CABINET PLAN

DETAIL 5

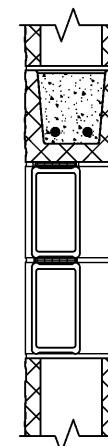
1 1/2" = 1'-0"



FIRE CABINET SECTION

DETAIL 6

1 1/2" = 1'-0"



GLASS BLOCK
DETAIL 7
1 1/2" = 1'-0"

[illegible]

Allo County	
Authority	
ATION FACILITY	
TAILS	
Mo./Day/Yr.	Mo./Day/Yr.
No.	OF DRAWING NO. A-10


CDM Camp Dresser & McKee Inc.
consulting
 engineering
 construction
 operations

 Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
MISCELLANEOUS DETAILS

Design Review Committee	City Engineer Approval	et	Mo./Day/Yr.	Mo./Day/Yr.
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CITY PROJECT NO.	6886-02	Zone Map No.	SHEET OF DRAWING NO. A-10
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VERIFY SCALES
 BAR IS ONE INCH ON
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 IF NOT ONE INCH ON
 THIS SHEET, ADJUST
 SCALES ACCORDINGLY.

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DOOR SCHEDULE

EXTERIOR DOOR #	ROOM NAME	DOOR NUMBER	DOOR SIZE	DOORS			FRAMES			DETAILS			FIRE LABEL	KEYED NOTE	NOTES:
				WIDTH X HEIGHT	TYPE	MAT'L	FINISH	TYPE	MAT'L	FINISH	HEAD	JAMB	SILL		
	ENTRY	D-100-1	PR 3'-0" X 7'-2"	N	HM	PTD	F1	HM	PTD	B/-	F/-	-	1 HR	1	1. HARDWARE SET #1
	ENTRY	D-100-2	PR 3'-0" X 7'-2"	N	HM	PTD	F1	HM	PTD	B/-	F/-	-	N/A	1	2. HARDWARE SET #2
	WOMEN'S	D-101-1	3'-0" X 7'-2"	F	HM	PTD	F1	HM	PTD	A/-	E/-	-	N/A	6	3. HARDWARE SET #3
	OBSERVATION AREA	D-102-1	3'-0" X 7'-2"	N	HM	PTD	F1	HM	PTD	B/-	F/-	-	1 HR	4	4. HARDWARE SET #4
	OBSERVATION AREA	D-102-2	3'-0" X 7'-2"	N	HM	PTD	F1	HM	PTD	B/-	F/-	-	1 HR	4	5. HARDWARE SET #5
	ELECTRICAL ROOM	D-104-1	3'-0" X 7'-2"	F	HM	PTD	F1	HM	PTD	B/-	F/-	-	1 HR	4	6. HARDWARE SET #6
	ELECTRICAL ROOM	D-104-2	PR 3'-0" X 7'-2"	F	HM	PTD	F1	HM	PTD	B/-	F/-	-	1 HR	5	7. HARDWARE SET #7
	MEN'S	D-105-1	3'-0" X 7'-2"	F	HM	PTD	F1	HM	PTD	A/-	E/-	-	N/A	6	8. HARDWARE SET #8
	JANITOR'S CLOSET	D-106-1	2'-4" X 7'-2"	F	HM	PTD	F1	HM	PTD	A/-	E/-	-	N/A	7	9. 18"Hx76"W TRANSOM LOUVER
	TREATMENT PROCESS AREA	D-107-1	PR 3'-0" X 7'-2"	F	HM	PTD	F1	HM	PTD	B/-	F/-	-	N/A	2, 9	
	TREATMENT PROCESS AREA	D-107-2	12'-0" X 12'-0"	OC	HM	PTD	F2	HM	PTD	D/-	H/-	J/-	N/A	8	
	TREATMENT PROCESS AREA	D-107-3	12'-0" X 12'-0"	OC	HM	PTD	F2	HM	PTD	D/-	H/-	J/-	N/A	8	
	TREATMENT PROCESS AREA	D-107-4	12'-0" X 12'-0"	OC	HM	PTD	F2	HM	PTD	D/-	H/-	J/-	N/A	8	
	TREATMENT PROCESS AREA	D-107-5	3'-0" X 7'-2"	F	HM	PTD	F1	HM	PTD	B/-	F/-	-	N/A	3	
	TREATMENT PROCESS AREA	D-107-6	12'-0" X 12'-0"	OC	HM	PTD	F2	HM	PTD	D/-	H/-	J/-	N/A	8	
	TREATMENT PROCESS AREA	D-107-7	12'-0" X 12'-0"	OC	HM	PTD	F2	HM	PTD	D/-	H/-	J/-	N/A	8	
	TREATMENT PROCESS AREA	D-107-8	PR 3'-0" X 7'-2"	F	HM	PTD	F1	HM	PTD	B/-	F/-	-	N/A	2, 9	

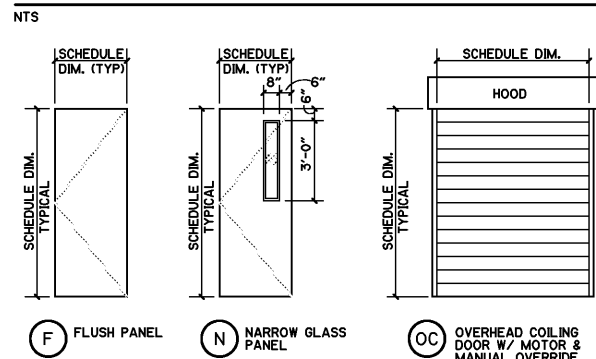
SEE SPEC DIVS 8, 9 AND 10 FOR ADDITIONAL INFORMATION

FINISH SCHEDULE

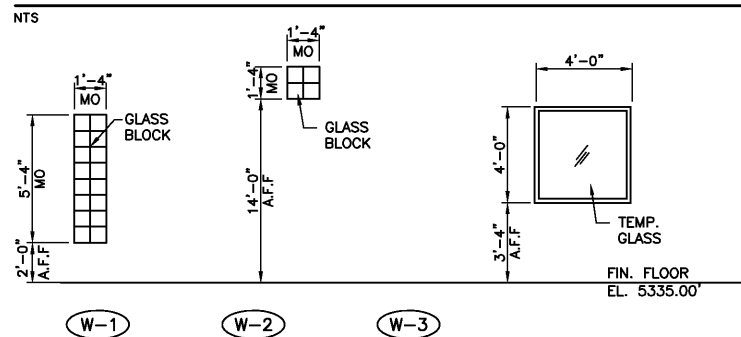
ROOM NUMBER	ROOM NAME	FLOORS		BASE		CEILINGS		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		KEYED NOTE	NOTES:
		MAT'L	FINISH	MAT'L	HEIGHT	MAT'L	FINISH	HEIGHT	MAT'L	FINISH	MAT'L	FINISH	MAT'L	FINISH	MAT'L		
A-100	ENTRY	CONC	VCT	RUB	4"	ACT	MFR	8'-0"	--	PTD	GWB	PTD	GWB	PTD	CMU	PTD	1.
A-101	WOMEN'S	CONC	VCT	RUB	4"	ACT	MFR	8'-0"	GWB	PTD	GWB	PTD	CMU	PTD	CMU	PTD	
A-102	OBSERVATION AREA	CONC	VCT	RUB	4"	ACT	MFR	8'-0"	CMU	PTD	CMU	PTD	CMU	PTD	CMU	PTD	
A-103	OBSERVATION AREA	CONC	VCT	RUB	4"	ACT	MFR	8'-0"	CMU	PTD	CMU	PTD	GWB	PTD	CMU	PTD	
A-104	ELECTRICAL ROOM	CONC	CONC.	--	--	EXPD	--	--	CMU	PTD	CMU	PTD	CMU	PTD	CMU	PTD	
A-105	MEN'S	CONC	VCT	RUB	4"	ACT	MFR	8'-0"	GWB	PTD	CMU	PTD	GWB	PTD	CMU	PTD	
A-106	JANITOR'S CLOSET	CONC	VCT	RUB	4"	EXPD	--	--	GWB	PTD	CMU	PTD	GWB	PTD	GWB	PTD	PROVIDE TRANSITION STRIP(S) BETWEEN FLOORING W/A
A-107	TREATMENT PROCESS AREA	CONC	CONC.	--	--	EXPD	--	--	CMU	PTD	CMU	PTD	CMU	PTD	CMU	PTD	RUBBER BASE NOT TO BE APPLIED TO DOOR FRAMES

SEE SPEC. DIVISION 9 FOR ADDITIONAL INFORMATION

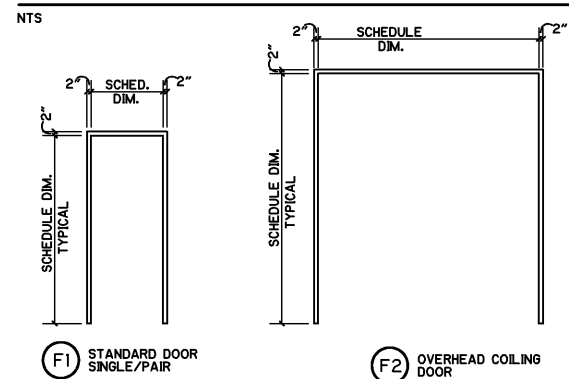
DOOR TYPES



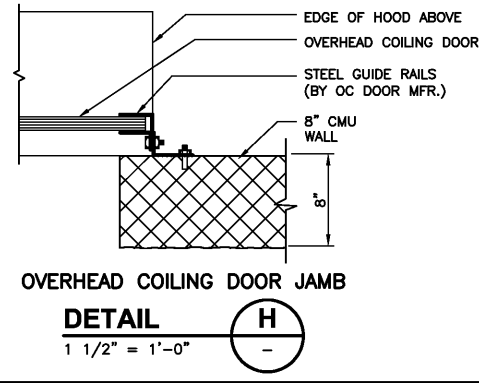
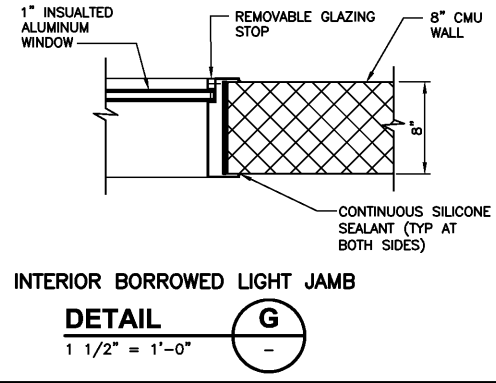
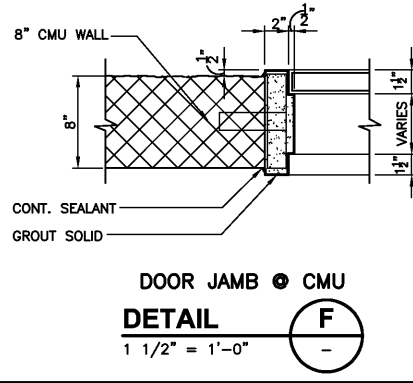
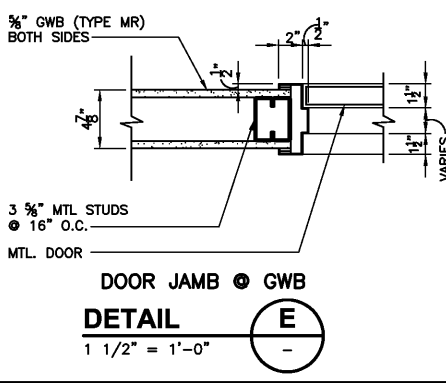
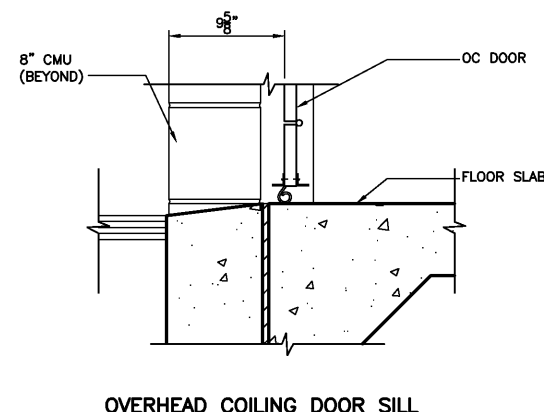
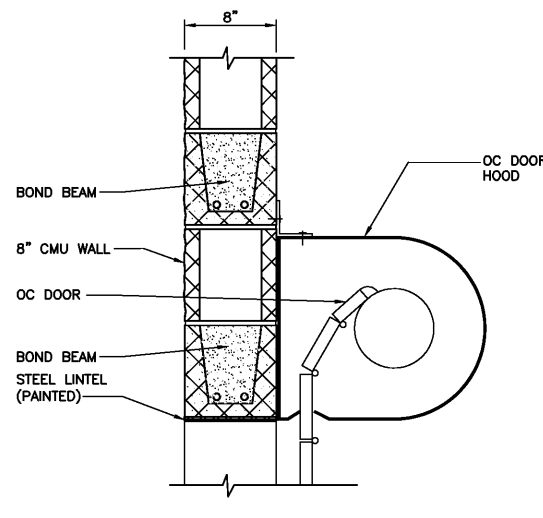
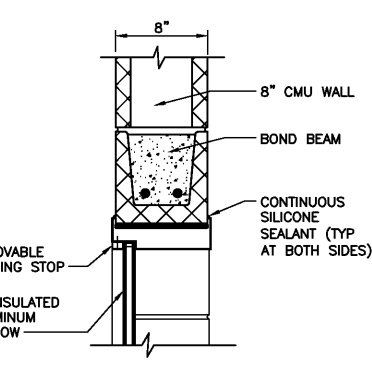
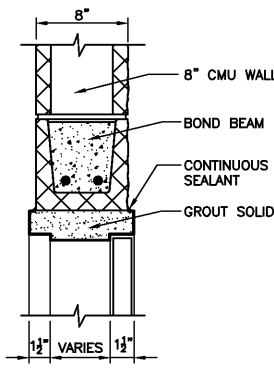
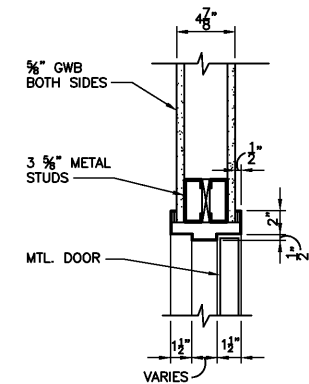
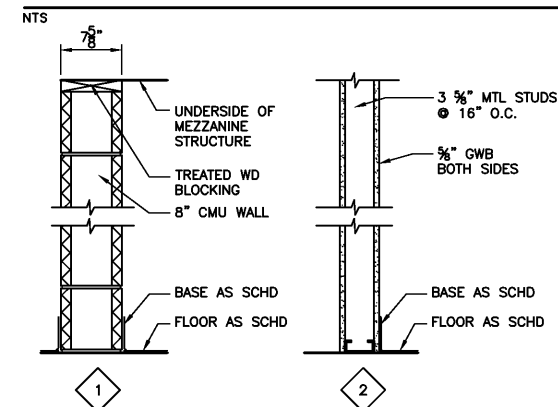
WINDOW TYPES



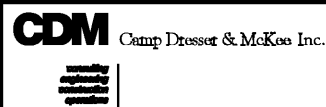
FRAME TYPES



INTERIOR PARTITION TYPES



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Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
MISCELLANEOUS DETAILS & SCHEDULES

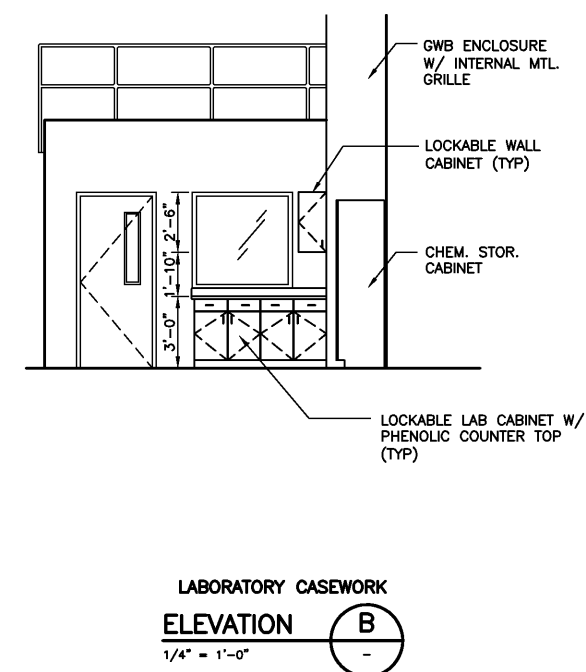
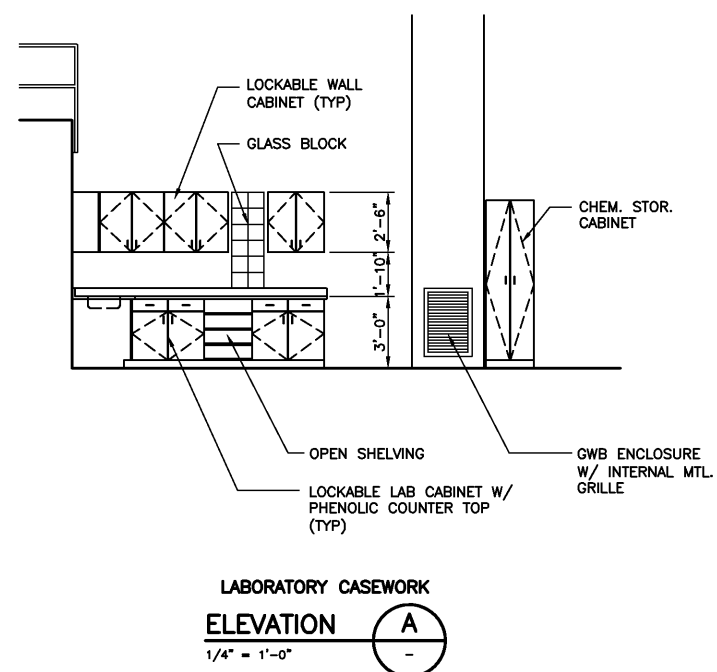
Design Review Committee City Engineer Approval

Ms./Msy/Yr. Ms./Msy/Yr.

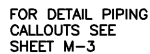
CITY PROJECT NO. 6886-02 Zone Map No. SHEET OF

DRAWING NO. A-11

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CHECKED BY: JM	DATE: 02/05
PRELIMINARY - NOT FOR CONSTRUCTION	



3/16" = 1' - 0"

A horizontal graphic scale bar. Above the bar, the text "3/16" = 1' - 0" is written. The bar is divided into four equal segments by vertical tick marks. Below the bar, the numbers 4, 0, 4, and 8 are placed under the first, second, third, and fourth segments respectively. The segments from 0 to 4 and 4 to 8 are solid black, while the segments from 4 to 0 and 0 to 4 are white with black outlines.

VERIFY SCALES
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0  1'
IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY.

**extending
engineering
administration
counting**

 Albuquerque Bernalillo County
Water Utility Authority

TITLE:	ARSENIC REMOVAL DEMONSTRATION FACILITY ARSENIC REMOVAL BUILDING MECHANICAL PIPING PLAN
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Design Review Committee	City Engineer Approval
-------------------------	------------------------

CITY PROJECT NO. 6886-02

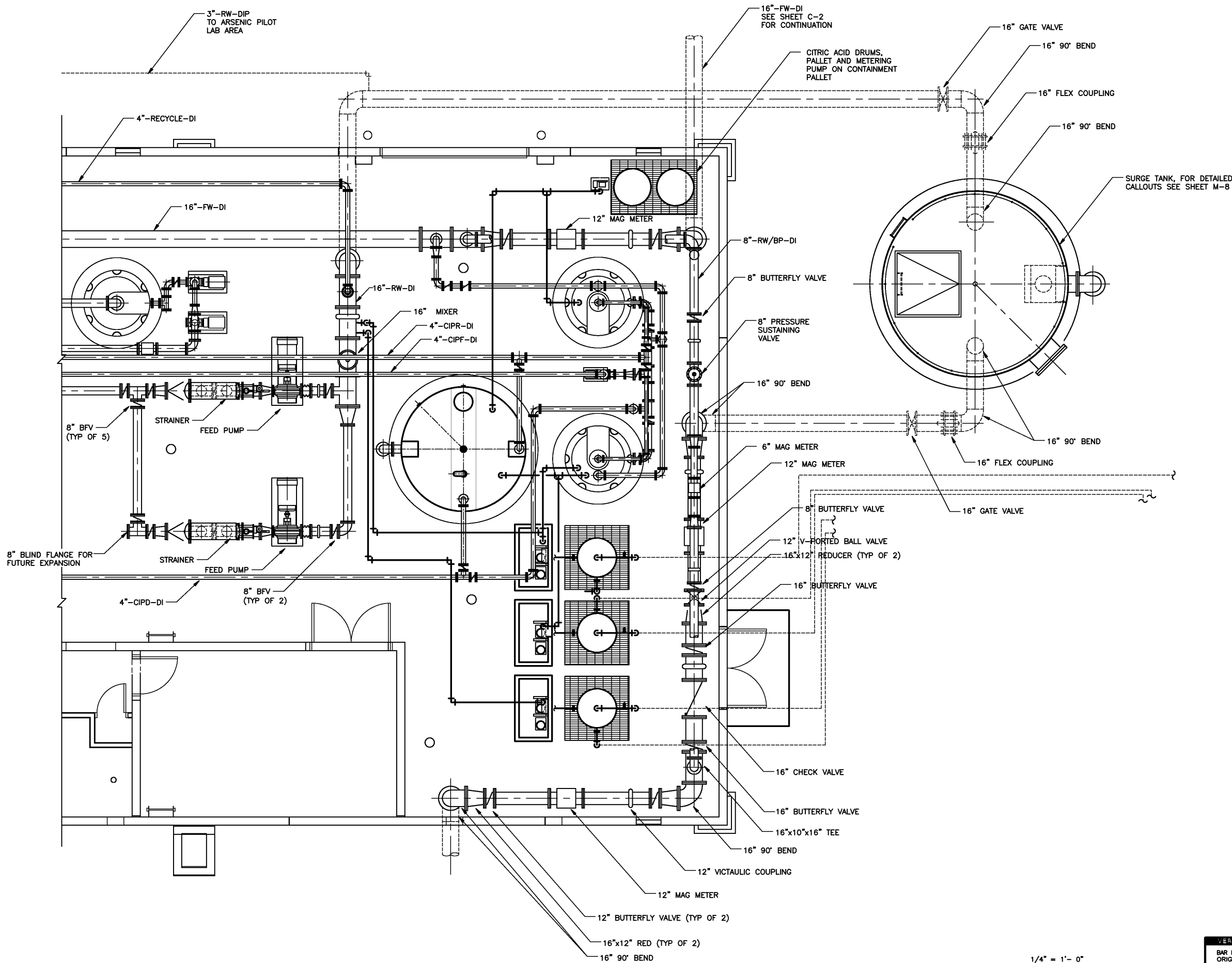
Zone Map No
H-9

o. SHEET OF
DRAWING NO. M-1

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DATE: 02/05			
CHECKED BY: JDC			
PRELIMINARY - NOT FOR CONSTRUCTION			

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1/4" = 1'-0"
2 1 0 2 4



Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
ARSENIC REMOVAL BUILDING
DETAILED PIPING PLAN - 1

Design Review Committee City Engineer Approval Mo/Usay/Yr. Mo/Usay/Yr.

CITY PROJECT NO. 6886-02 Zone Map No. H-9 SHEET OF DRAWING NO. M-2

ENGINEER'S SEAL			SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
PRELIMINARY NOT FOR CONSTRUCTION			FIELD NOTES					
			NO.	BY	DATE		CONTRACTOR	DATE
							WORK BY	DATE
							INSPECTED BY	DATE
							MICRO FILM INFORMATION	
							DESIGNED BY: KLP	DATE: 02/05
							DRAWN BY: SCH	DATE: 02/05
							CHECKED BY: JDC	DATE: 02/05

PRELIMINARY - NOT FOR CONSTRUCTION

$1/4'' = 1' - 0''$

CDM Camp Dresser & McKee Inc.

 Albuquerque Bernalillo County
Water Utility Authority

**TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
ARSENIC REMOVAL BUILDING
DETAILED PIPING PLAN - 2**

Design Review Committee	City Engineer Approval	e	Mo./Day/Yr.	Mo./Day/Yr.
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Sheet No. **SHEET OF**
-9 DRAWING NO. M-3

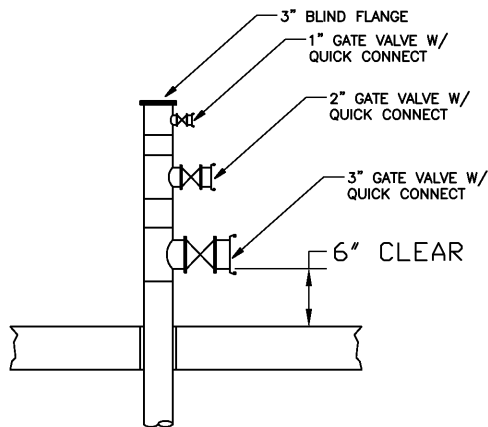
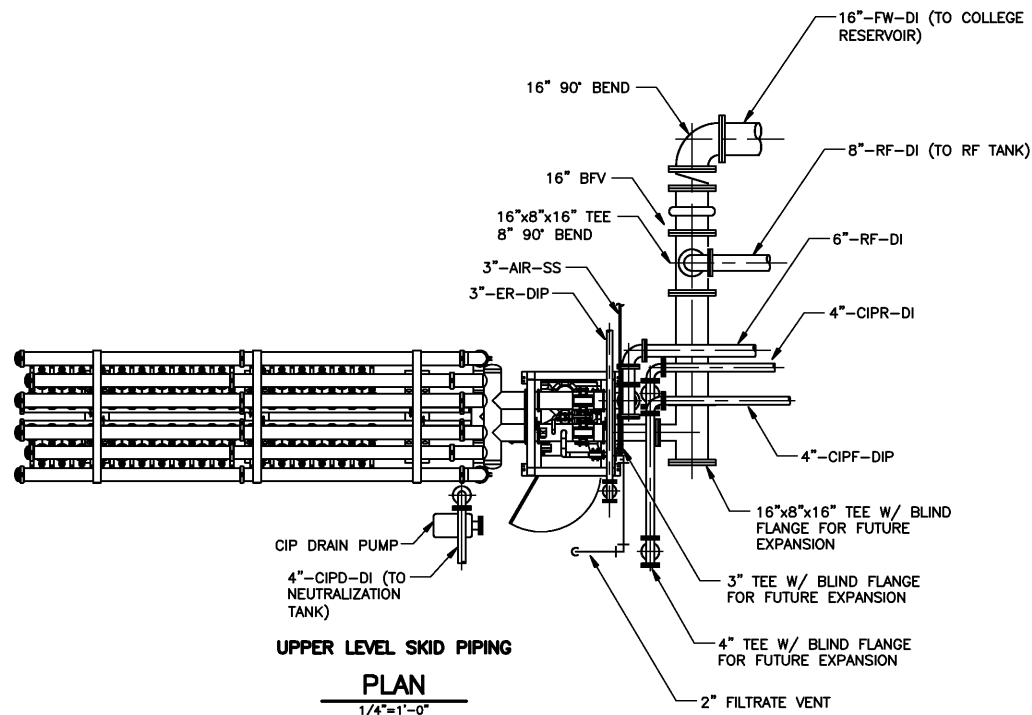
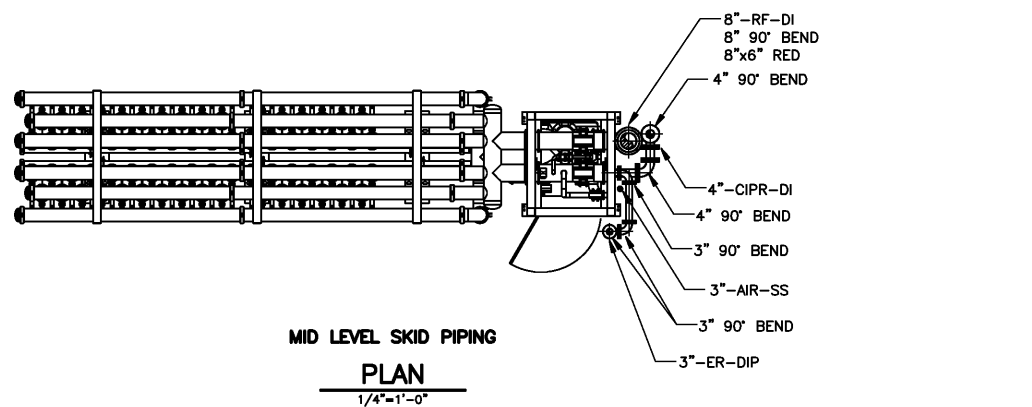
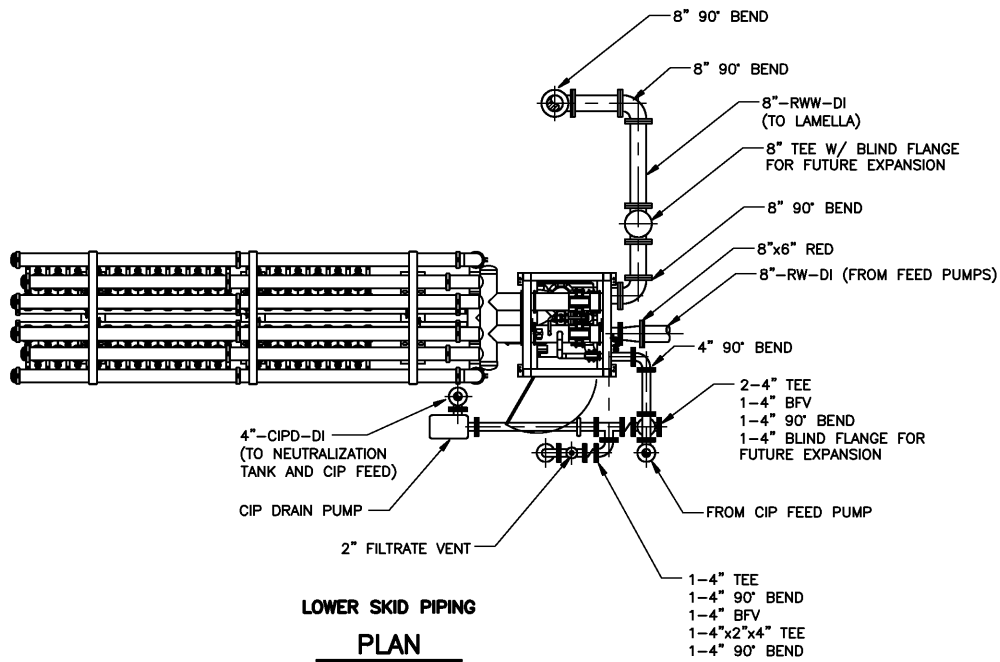
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PRELIMINARY
NOT FOR
CONSTRUCTION

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AS BUILT INFORMATION	
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DRAWINGS	
STAMPED BY	DATE
INSPECTOR'S	
ACCEPTANCE BY	DATE
FIELD	DATE
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PRELIMINARY - NOT FOR CONSTRUCTION






DEMONSTRATION AREA PIPING
DETAIL

NTS

A

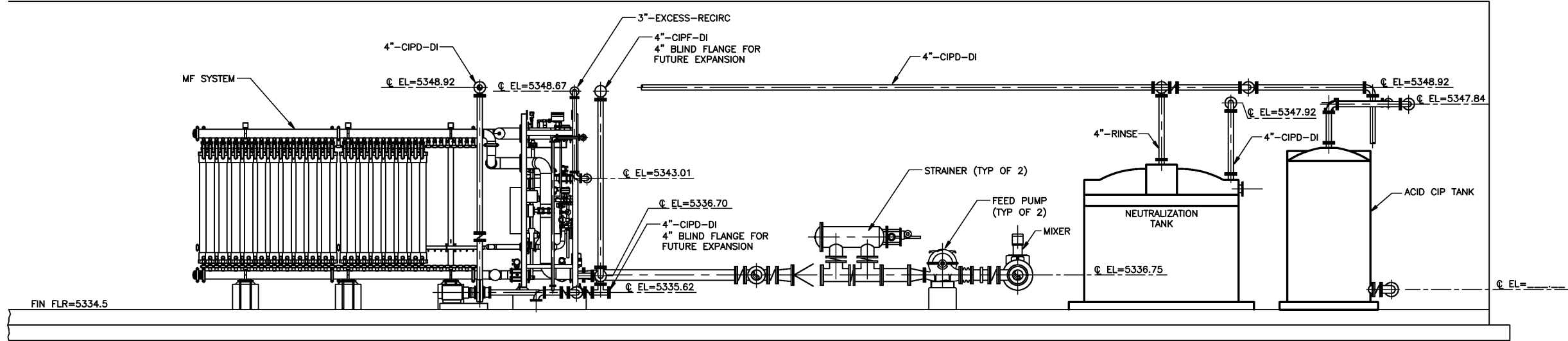
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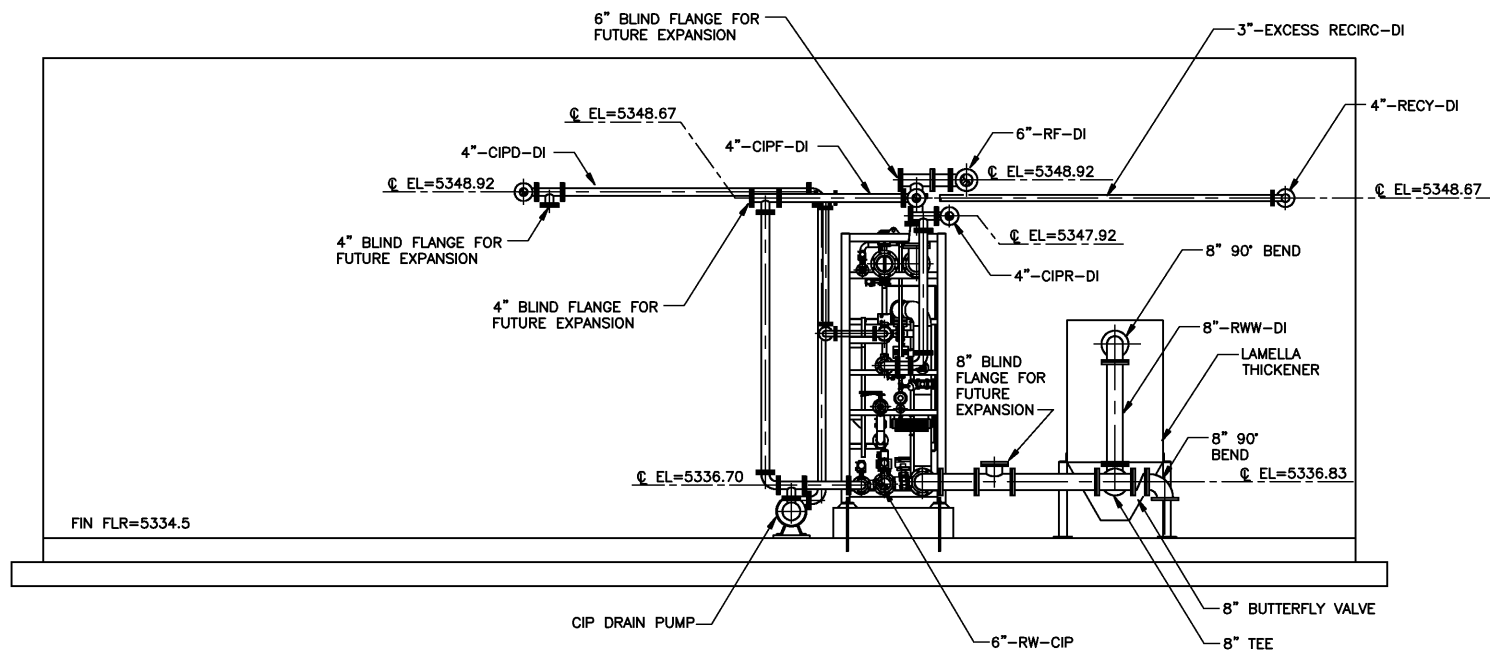
 CDM Camp Dresser & McKee Inc.		DESIGNED BY: K DRAWN BY: S CHECKED BY: J	
		NO. DATE	
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TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY ARSENIC REMOVAL BUILDING FALL UNIT PIPING AND DETAILS			
Design Review Committee	City Engineer Approval	Last Design Update	No./Day/Yr. No./Day/Yr. No./Day/Yr. No./Day/Yr. No./Day/Yr. No./Day/Yr.
CITY PROJECT NO. 6886-02		Zone Map No. H-9	SHEET OF DRAWING NO. M-4

DATE: 02/05			
CHECKED BY: JDC			
PRELIMINARY - NOT FOR CONSTRUCTION			

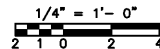
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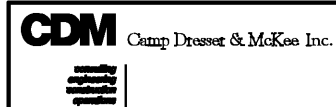
SECTION 3
1/4"=1'-0"



SECTION 4
1/4"=1'-0"



VERIFY SCALES
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0 1"
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Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
ARSENIC REMOVAL BUILDING
PIPING SECTIONS - 2

Design Review Committee City Engineer Approval

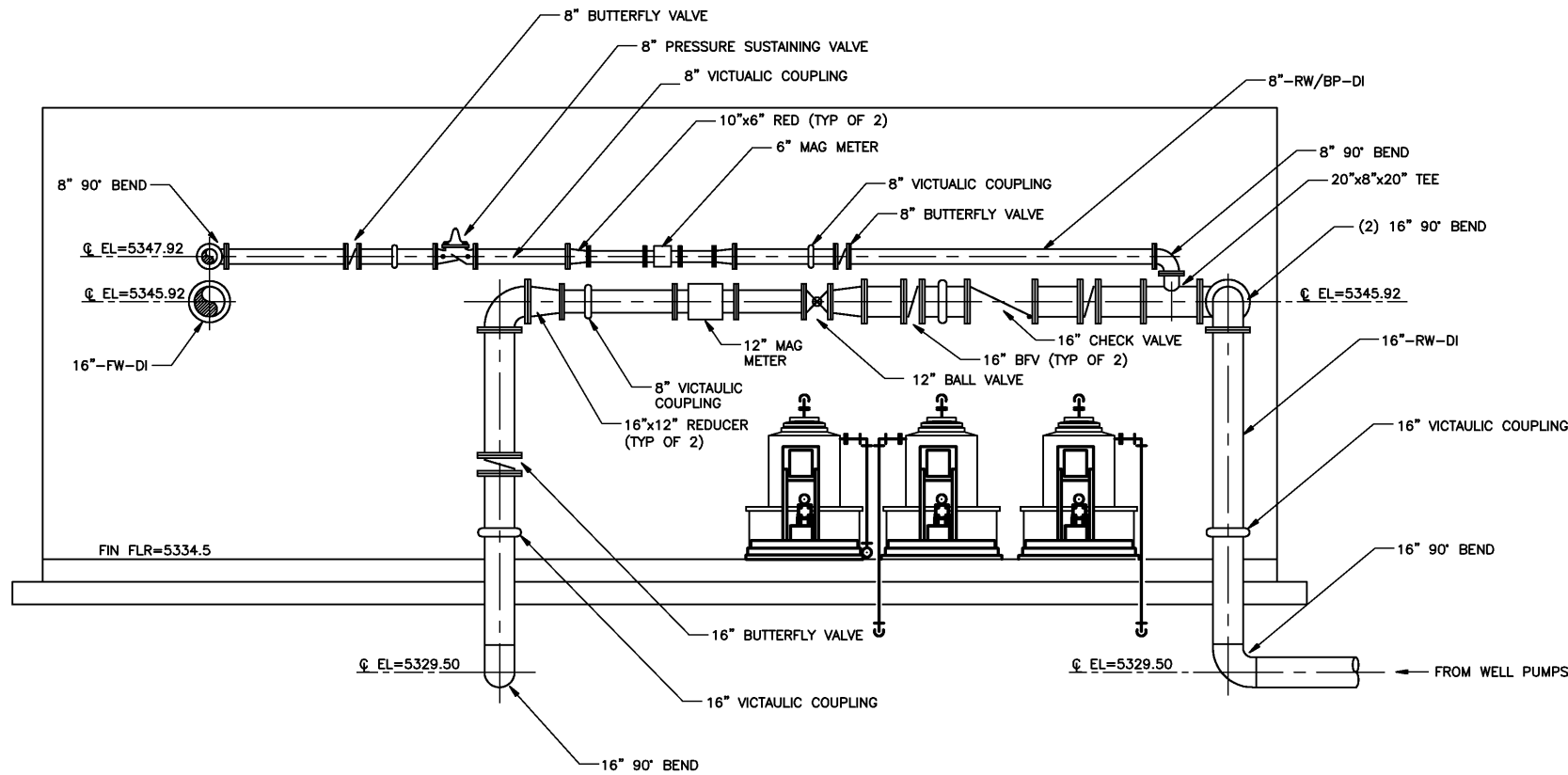
CITY PROJECT NO. 6886-02

Zone Map No. H-9 SHEET OF DRAWING NO. M-6

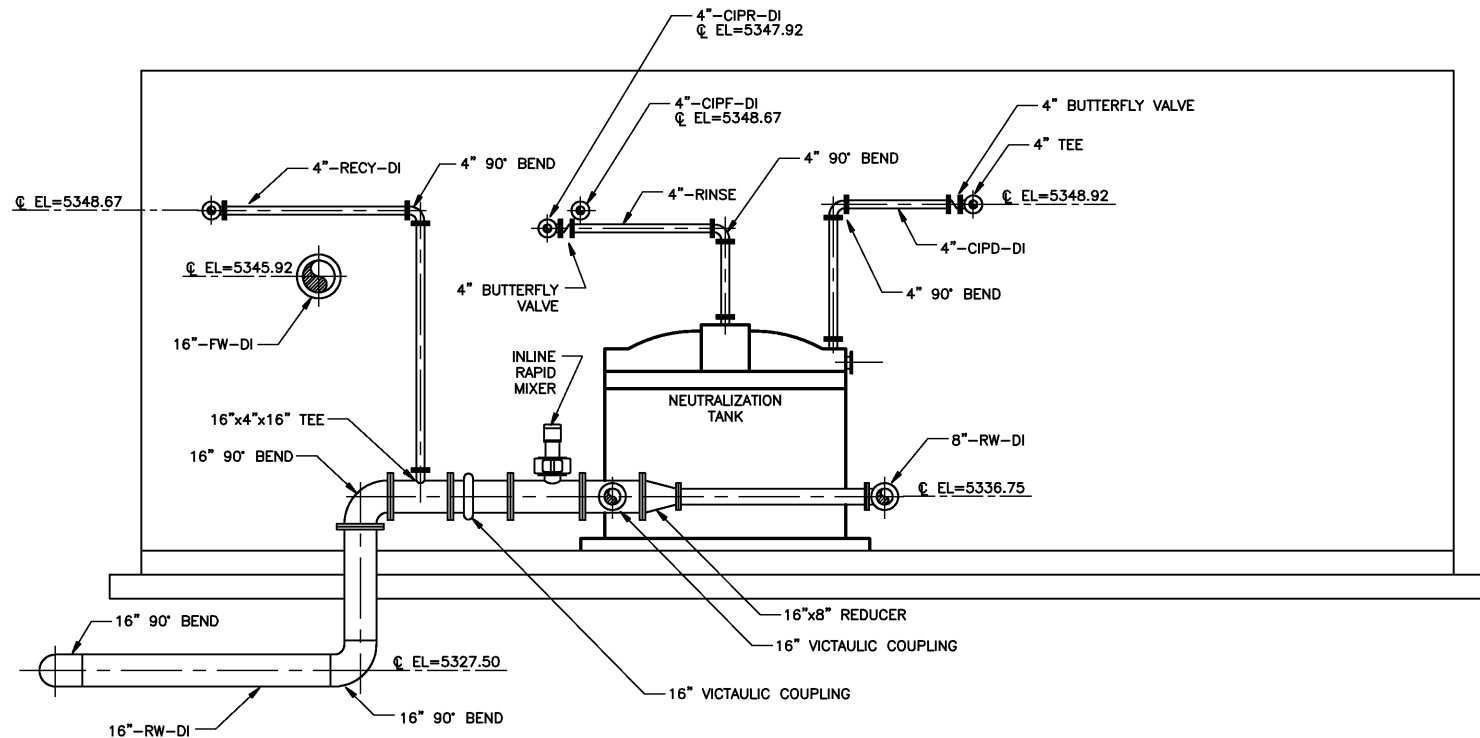
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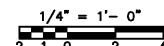
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RW & BYPASS PIPING
SECTION 5
1/4"=1'-0"



RW & BYPASS PIPING
SECTION 6
1/4"=1'-0"



VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.



Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
ARSENIC REMOVAL BUILDING
PIPING SECTIONS - 3

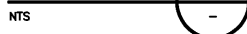
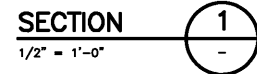
Design Review Committee City Engineer Approval

CITY PROJECT NO. 6886-02 Zone Map No. H-9 SHEET OF DRAWING NO. M-7

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	WORK	NO.	BY	DATE	NO.	DATE	REMARKS
INSPECTED BY	DATE	NO.	BY	DATE	NO.	DATE	REVISIONS
ADJUSTED BY	DATE	NO.	BY	DATE	NO.	DATE	DESIGN
VERIFICATION BY	DATE	NO.	BY	DATE	NO.	DATE	DESIGNED BY: KLP
CONNECTIONS BY	DATE	NO.	BY	DATE	NO.	DATE	DRAWN BY: SCH
MICRO FILM INFORMATION		NO.	BY	DATE	NO.	DATE	CHECKED BY: JDC
RECORDED BY	DATE	NO.	BY	DATE	NO.	DATE	

PRELIMINARY
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CONSTRUCTION

PRELIMINARY - NOT FOR CONSTRUCTION



- NOTES:**

PRELIMINARY
NOT FOR
CONSTRUCTION

			B
		REMARKS	
REVISONS			
DESIGN			
DESIGNED BY: KLP		DATE: 02/05	
DRAWN BY: SGH		DATE: 02/05	
CHECKED BY: JDC		DATE: 02/05	

**consulting
engineering
construction
operations**

 Albuquerque Bernalillo County
Water Utility Authority

**TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
WATER SURGE STORAGE TANK
AND DETAILS**

Design Review Committee	City Engineer Approval	Site	Mo./Day/Yr.	Mo./Day/Yr.
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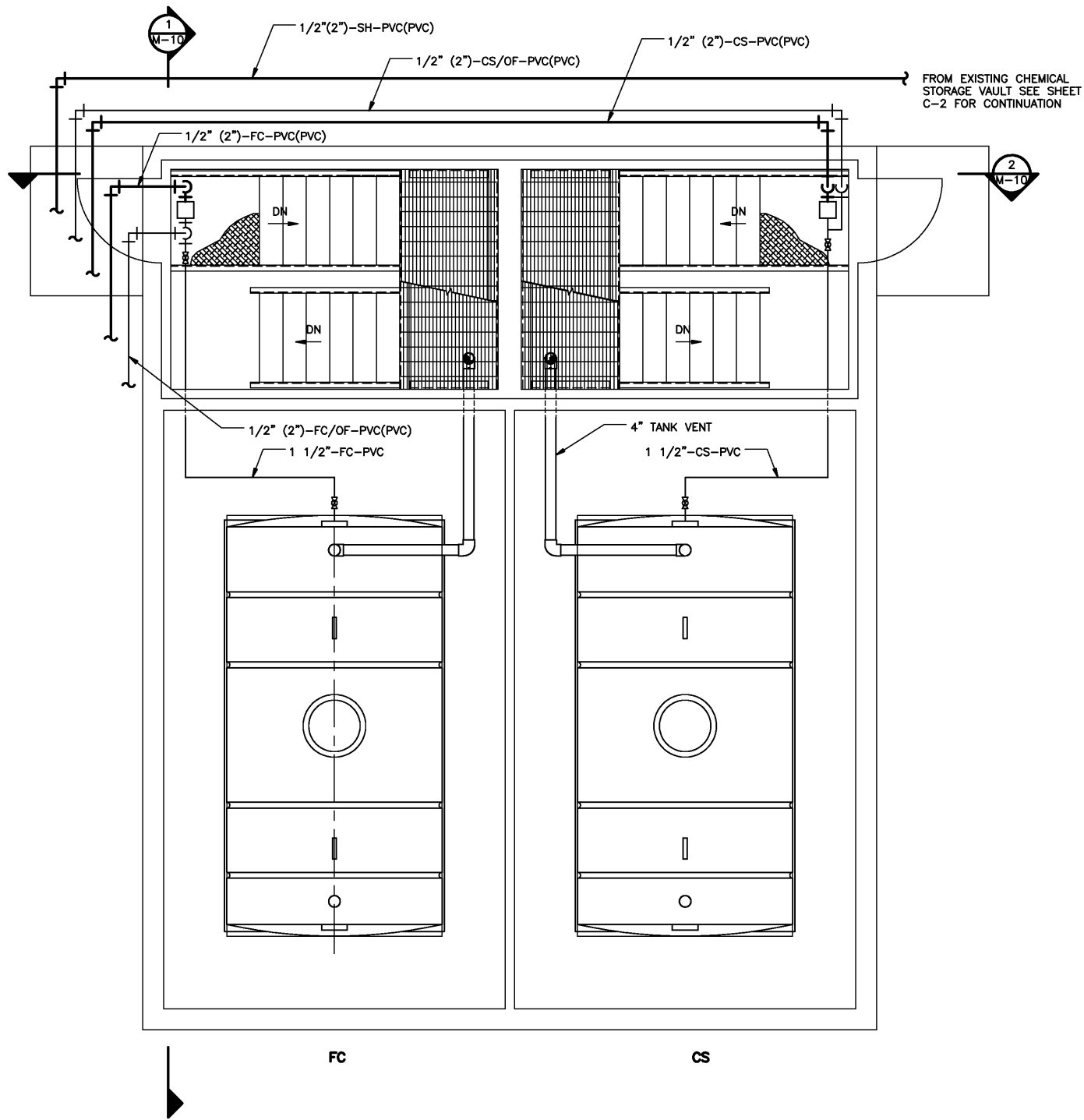
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CITY PROJECT NO.	6886-02	Zone Map No.	H-9	SHEET OF DRAWING NO. M-8
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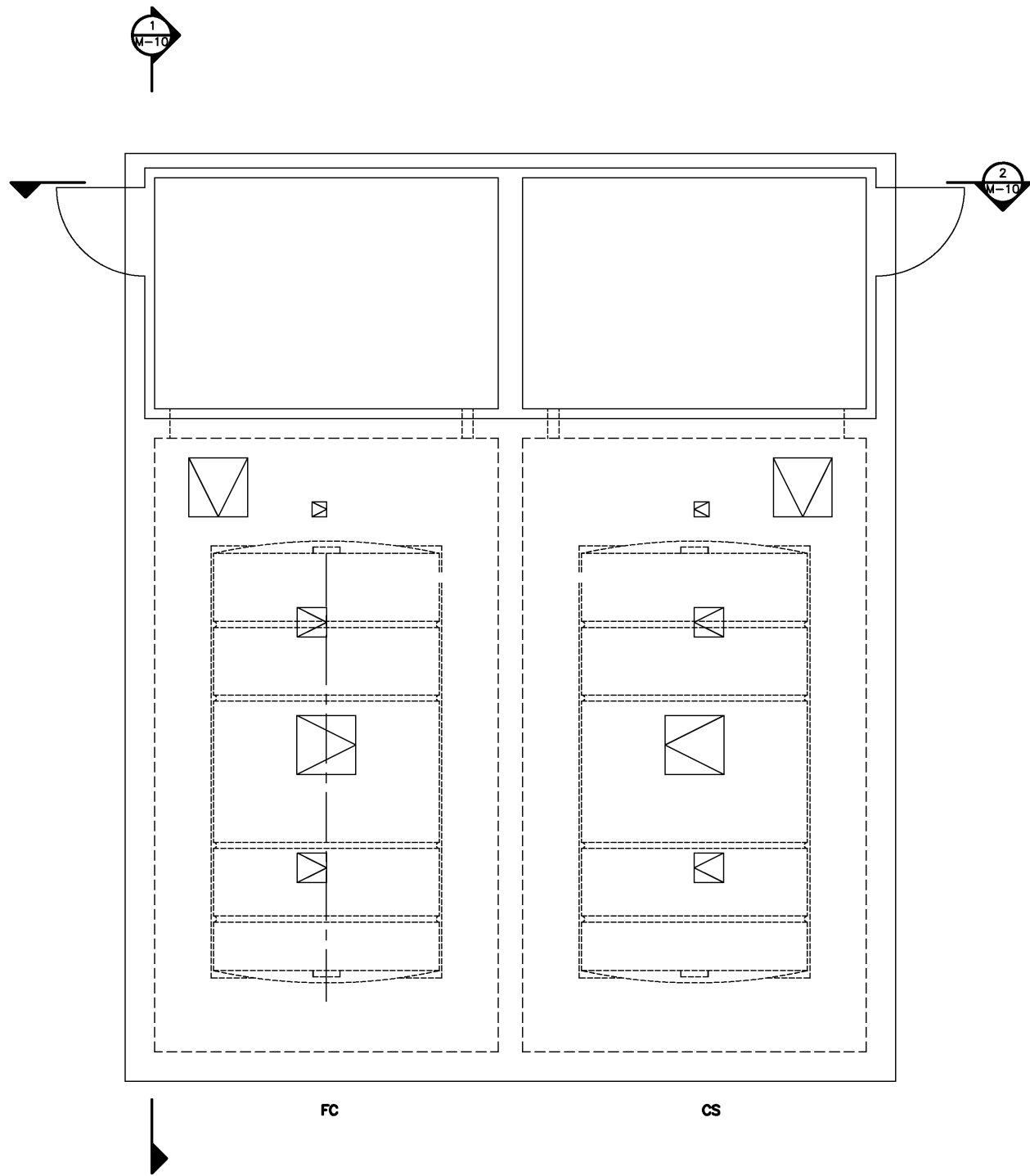
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THIS SHEET, ADJUST
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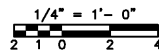
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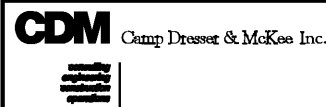
VAULT LAYOUT
PLAN
3/8"=1'-0"



VAULT TOP
PLAN
3/8"=1'-0"



VERIFY SCALES
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Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
CHEMICAL STORAGE VAULT
TOP PLANS

Design Review Committee City Engineer Approval

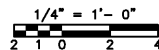
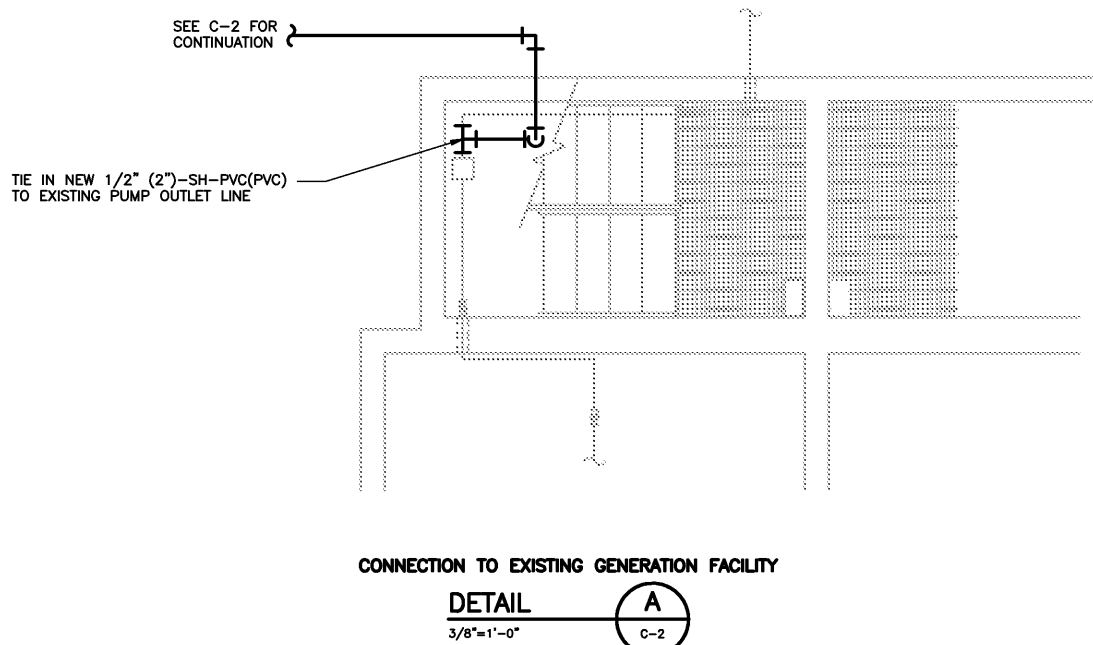
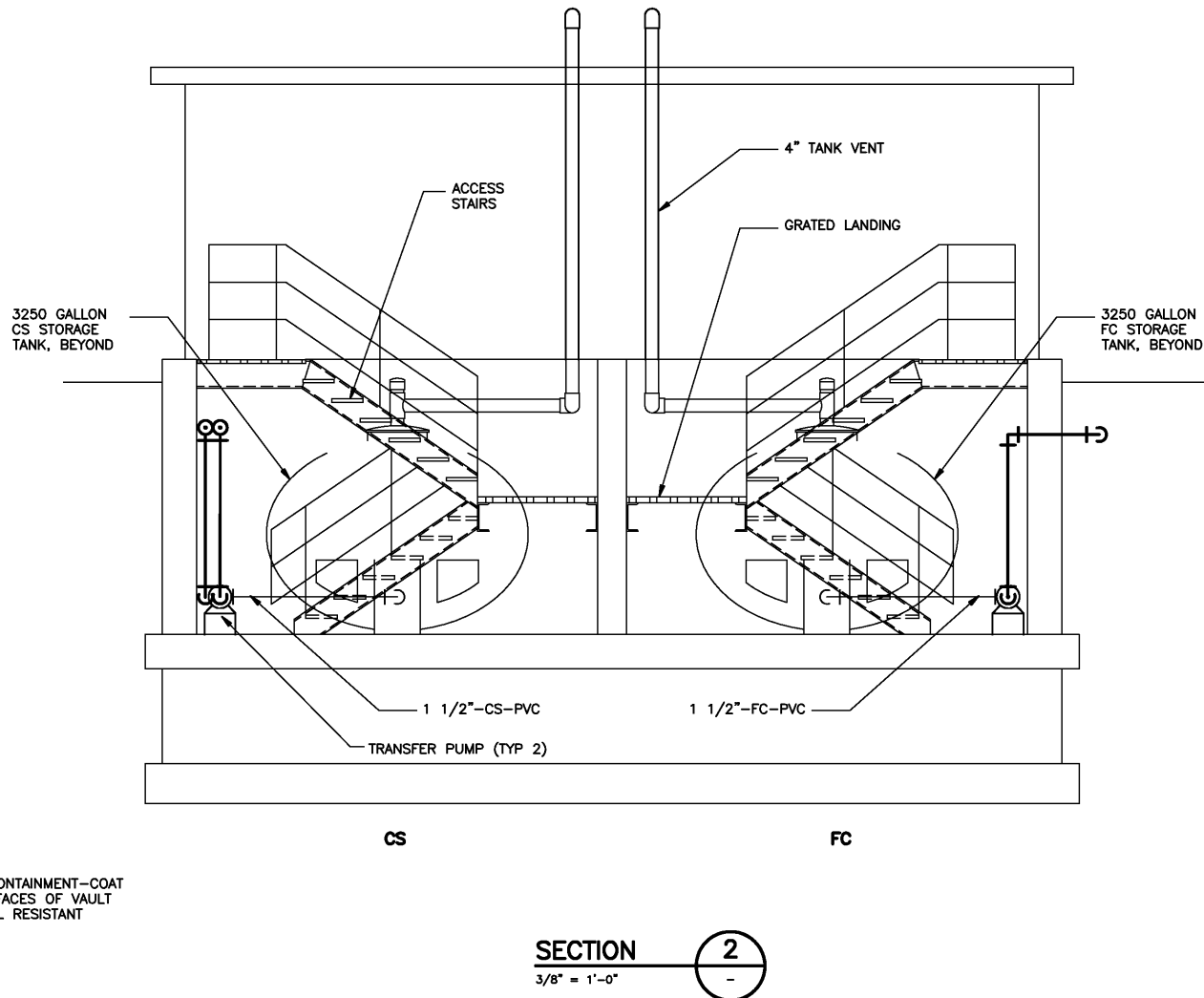
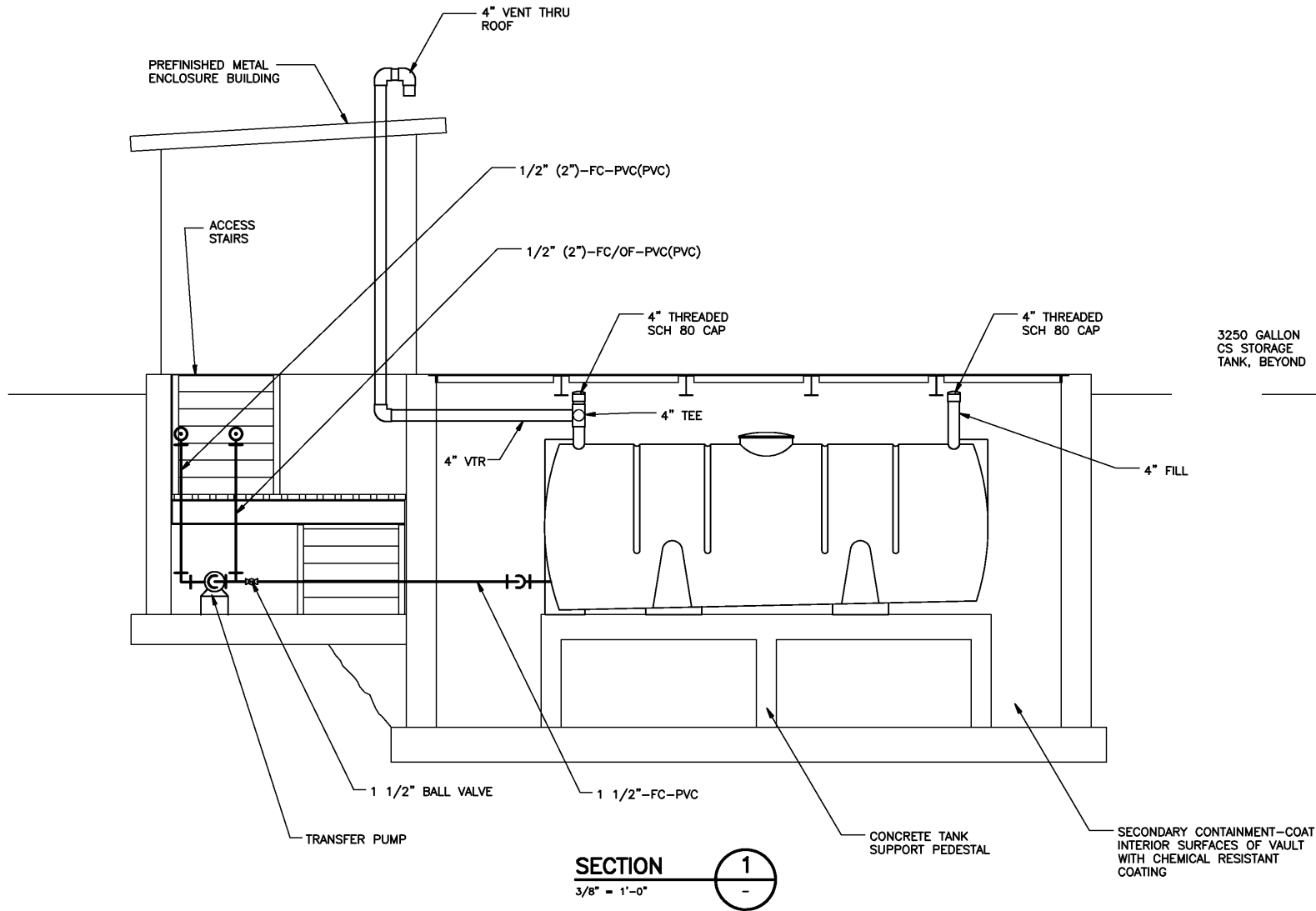
Mo./Day/Yr.	Mo./Day/Yr.

CITY PROJECT NO. 6886-02 Zone Map No. H-9 SHEET OF DRAWING NO. M-9

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
<div>PRELIMINARY NOT FOR CONSTRUCTION</div>							

PRELIMINARY - NOT FOR CONSTRUCTION

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Albuquerque Bernalillo County
Water Utility Authority

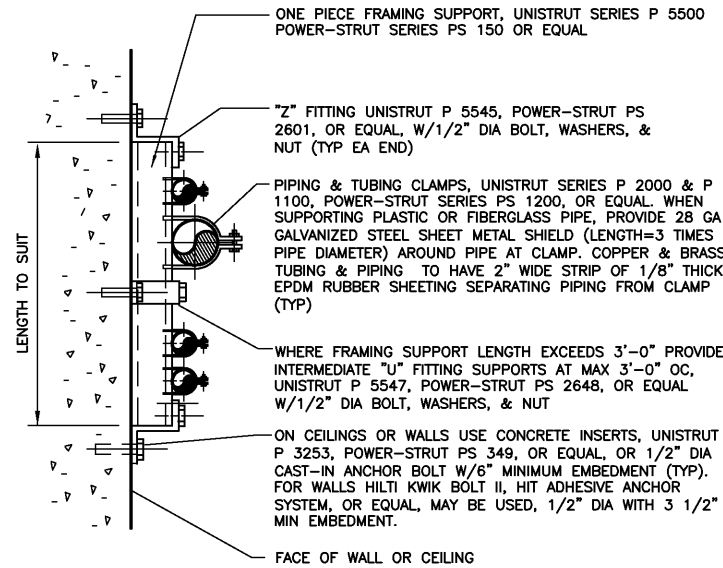
**TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
CHEMICAL STORAGE VAULT
SECTIONS AND DETAILS**

Design Review Committee City Engineer Approval Mo./Day/Yr. Mo./Day/Yr.

CITY PROJECT NO. 6886-02 Zone Map No. H-9 SHEET OF DRAWING NO. M-10

SURVEY INFORMATION			ENGINEER'S SEAL			BENCH MARKS			AS BUILT INFORMATION		
FIELD NOTES			PRELIMINARY NOT FOR CONSTRUCTION								
NO.	BY	DATE	NO.	DATE	REMARKS	NO.	DATE	CONTRACTOR	NO.	DATE	CONTRACTOR
					DESIGN			WORK			WORK
					REVISIONS			INSPECTED BY			INSPECTED BY
								DATE			DATE
								APPROVED BY			APPROVED BY
								DATE			DATE
								REVISIONS			REVISIONS
								DATE			DATE
								CONTRACTOR			CONTRACTOR
								NO.			NO.

PRELIMINARY - NOT FOR CONSTRUCTION

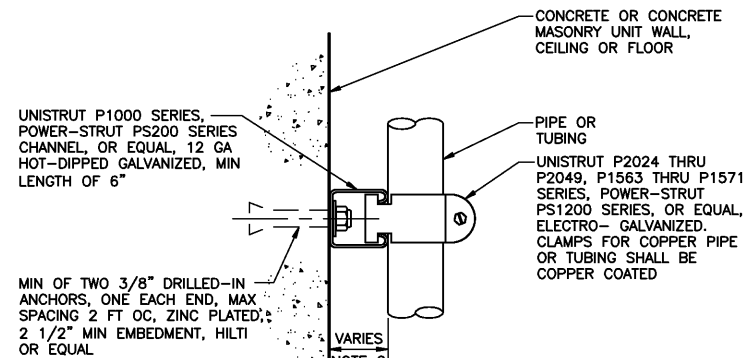


- NOTES:
1. FOR TUBING AND PIPING SIZES FROM 1/4" TO 4" ONLY. ALL FRAMING SUPPORTS, FITTINGS, CLAMPS, AND ATTACHING FASTENERS SHALL BE ELECTRO-, PRE-, OR HOT DIPPED GALVANIZED.
 2. REMOVE BURRS AND SMOOTH ALL CUT EDGES OF FRAMING SUPPORTS.

TYPICAL FLUSH MOUNTED PIPE SUPPORT

DETAIL
NTS

M101
TYP

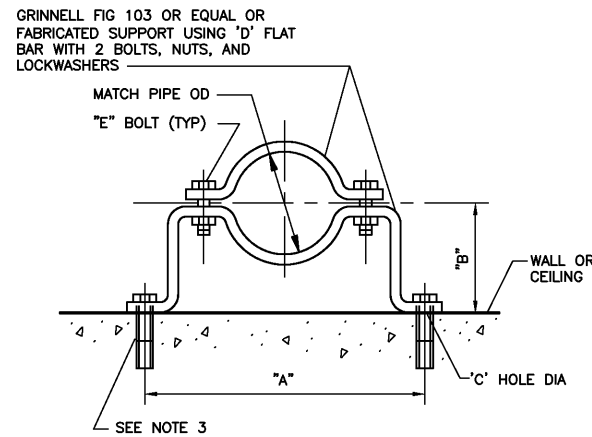


- NOTES:
1. MIN OF 1 CLAMP WITHIN 6" OF EACH FITTING AND VALVE.
 2. CHANNEL HEIGHT AND/OR MULTIPLE CHANNEL CONFIGURATIONS AS REQUIRED FOR INSTALLATION CLEARANCES. REVISE ANCHORAGE LENGTH TO ACHIEVE MIN EMBEDMENT SHOWN ABOVE.
 3. REMOVE BURRS AND SMOOTH ALL CUT EDGES OF FRAMING SUPPORTS.

TYPICAL METALLIC SMALL PIPING SUPPORT

DETAIL
NTS

M104
TYP



- NOTES:
1. PIPE SUPPORT SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION; BOLTS, NUTS, AND WASHERS SHALL BE HOT DIPPED OR ELECTRO-GALVANIZED OR CADMIUM PLATED.
 2. ON CEILINGS OR WALLS USE CONCRETE INSERTS. FASTEN SUPPORTS TO INSERTS WITH BOLTS AND NUTS AS FOLLOWS:

PIPING DIAMETER	BOLT DIAMETER
3/4" TO 1-1/2"	3/8"
2" TO 4"	1/2"
5" TO 8"	5/8"

ALTERNATELY, 1/2" DIA CAST-IN-PLACE ANCHOR BOLTS MAY BE USED FOR PIPING DIAMETERS 2" TO 4", 5/8" DIA CAST-IN-PLACE ANCHOR BOLTS FOR PIPING DIAMETERS 5" TO 8". MINIMUM ANCHOR EMBEDMENT IS 6". CONCRETE INSERTS SHALL BE ONE-PIECE WITH LENGTH A MINIMUM OF 6" LONGER THAN DIMENSION "A", UNISTRUT P 3253 TO P 3270, POWER-STRUT POWER-STRUT PS 349 SERIES, OR EQUAL.

TYPICAL PIPE CLAMP FOR INDIVIDUAL PIPES

DETAIL
NTS

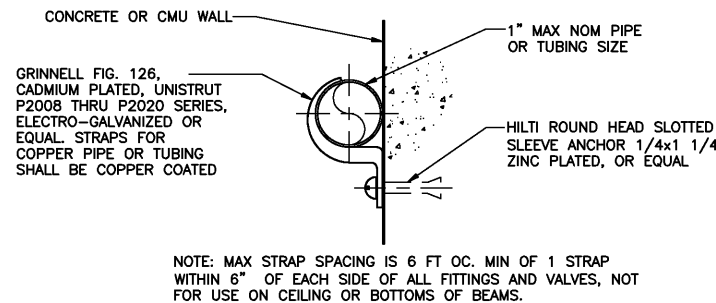
M103
TYP

DIMENSIONS IN INCHES						
PIPE DIA.	"A"	"B"	"C" HOLE DIA.	"D" FLAT BAR SIZE CARBON STEEL	"E" BOLT SIZE	MAX LOAD RATING LBS.
3/4	5-15/16	2-3/4	7/16	3/16 X 1-1/4	3/8 X 1	190
1	6-1/4	2-7/8	7/16	3/16 X 1-1/4	3/8 X 1	190
1-1/4	6-11/16	3-1/16	7/16	3/16 X 1-1/4	3/8 X 1	190
1-1/2	6-15/16	3-3/16	7/16	3/16 X 1-1/4	3/8 X 1	190
2	8-5/16	3-1/2	9/16	1/4 X 1-1/4	1/2 X 1-1/2	400
2-1/2	8-7/8	3-3/4	9/16	1/4 X 1-1/4	1/2 X 1-1/2	400
3	9-1/8	4-1/16	9/16	1/4 X 1-1/4	1/2 X 1-1/2	400
3-1/2	10-1/16	4-3/8	9/16	1/4 X 1-1/2	1/2 X 1-1/2	400
4	10-9/16	4-9/16	9/16	1/4 X 1-1/2	1/2 X 1-1/2	600
5	11-3/4	5-1/16	11/16	1/4 X 1-1/2	5/8 X 1-1/2	600
6	14-3/8	5-5/8	11/16	3/8 X 1-1/2	5/8 X 1-1/2	850
8	16-5/8	6-5/8	11/16	3/8 X 1-1/2	5/8 X 1-1/2	850

FOR WALLS HILTI KWIK BOLT II, HIT ADHESIVE ANCHOR SYSTEM, OR EQUAL, MAY BE USED WITH ANCHOR DIAMETERS AS LISTED BELOW. USE MANUFACTURER'S ICBO TESTED EMBEDMENT DEPTH OR GREATER FOR ALL ANCHORS.

PIPING DIAMETER	ANCHOR DIAMETER	MIN EMBED
3/4" TO 1-1/2"	3/8"	2 1/2"
2" TO 4"	3/8"	2 1/2"
5" TO 8"	1/2"	3 1/2"

3. WHEN SUPPORTING PLASTIC OR FIBERGLASS PIPE, PROVIDE 28 GA GALVANIZED STEEL SHEET METAL SHIELD (LENGTH = 3 TIMES PIPE DIAMETER) AROUND PIPE AT CLAMP. COPPER AND BRASS TUBING AND PIPING TO HAVE 2" WIDE STRIP OF 1/8" THICK EPDM RUBBER SHEETING SEPARATING PIPING FROM CLAMP.

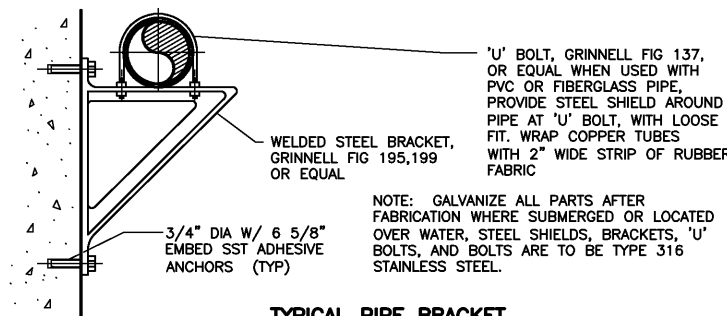


NOTE: MAX STRAP SPACING IS 6 FT OC. MIN OF 1 STRAP WITHIN 6" OF EACH SIDE OF ALL FITTINGS AND VALVES, NOT FOR USE ON CEILING OR BOTTOMS OF BEAMS.

TYPICAL PIPING STRAP

DETAIL
NTS

M106
TYP

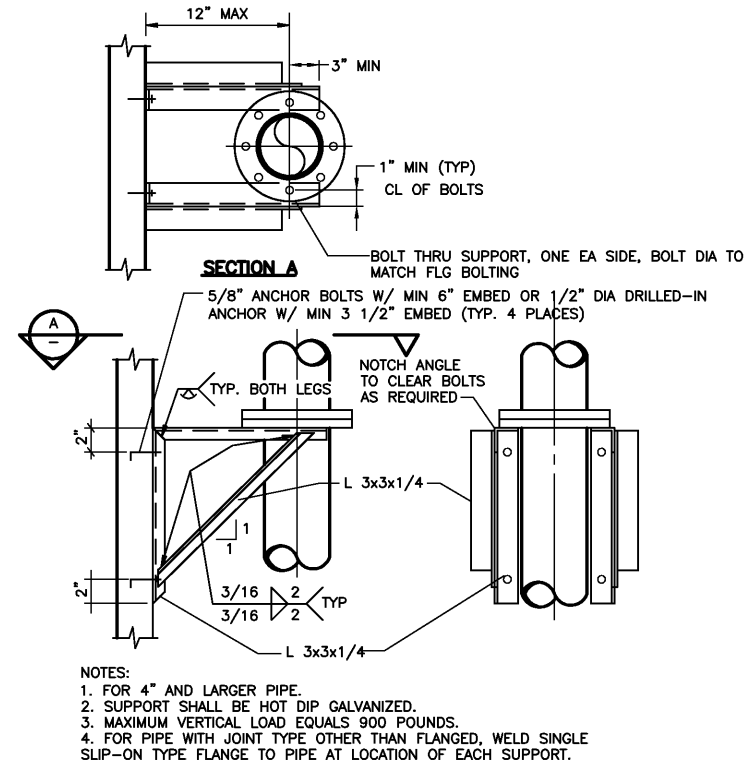


NOTE: GALVANIZE ALL PARTS AFTER FABRICATION WHERE SUBMERGED OR LOCATED OVER WATER, STEEL SHIELDS, BRACKETS, 'U' BOLTS, AND BOLTS ARE TO BE TYPE 316 STAINLESS STEEL.

TYPICAL PIPE BRACKET

DETAIL
NTS

M107
TYP



- NOTES:
1. FOR 4" AND LARGER PIPE.
 2. SUPPORT SHALL BE HOT DIP GALVANIZED.
 3. MAXIMUM VERTICAL LOAD EQUALS 900 POUNDS.
 4. FOR PIPE WITH JOINT TYPE OTHER THAN FLANGED, WELD SINGLE SLIP-ON TYPE FLANGE TO PIPE AT LOCATION OF EACH SUPPORT.

TYPICAL PIPE SUPPORT

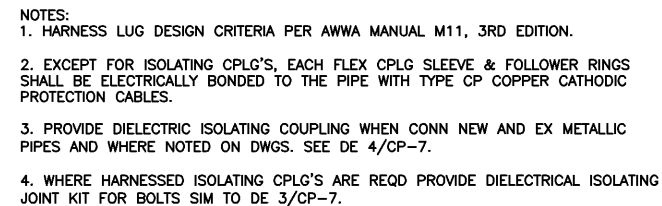
DETAIL
NTS

M108
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VERIFY SCALES
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

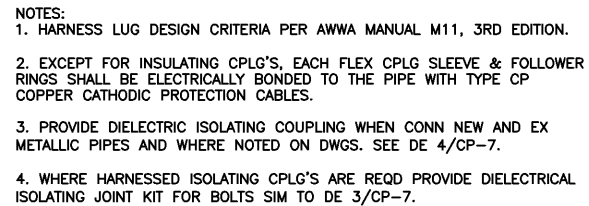
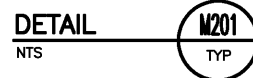
CDM Camp Dresser & McKee Inc.	
Albuquerque Bernalillo County Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY STANDARD MECHANICAL DETAILS - 1	
Design Review Committee	City Engineer Approval
Mo/05/07/09	Mo/05/07/09
DESIGNED BY: KLP	DATE: 02/05
DRAWN BY: CAA	DATE: 02/05
CHECKED BY: JDC	DATE: 02/05
CITY PROJECT NO. 6886-02	
Zone Map No. H-9	SHEET OF DRAWING NO. MD-1

PRELIMINARY - NOT FOR CONSTRUCTION



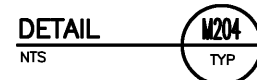
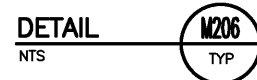
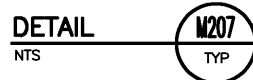
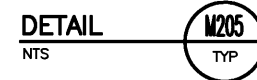
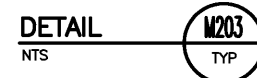
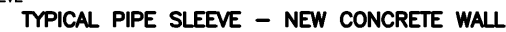
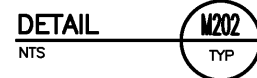
PIPE DIAMETER	CLASS 150		CLASS 250		NO. OF CP CABLE SETS	CP CABLE SIZE
	NO. OF TIE BOLTS	DIA OF BOLTS	NO. OF TIE BOLTS	DIA OF BOLTS		
24"	4	7/8"	4	1 1/8"	2	6 AWG
30"	4	1 1/8"	4	1 3/8"	2	6 AWG
36"	4	1 1/4"	4	1 5/8"	2	6 AWG
42"	4	1 1/2"	6	1 1/2"	2	4 AWG
48"	4	1 5/8"	6	1 3/4"	2	4 AWG
54"	6	1 1/2"	8	1 3/4"	3	4 AWG
60"	6	1 5/8"	10	1 5/8"	3	4 AWG
66"	8	1 5/8"	—	—	3	4 AWG



TYPICAL HARNESSSED FLEX CPLG – 24" TO 66"

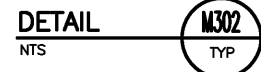
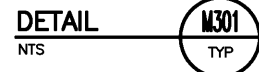
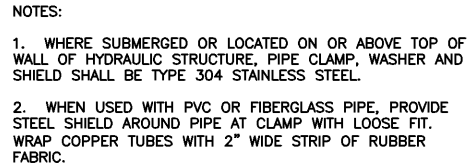


PIPE DIAMETER	CLASS 150		CLASS 250		NO. OF CP CABLE SETS	CP CABLE SIZE
	NO. OF TIE BOLTS	DIA OF TIE BOLTS	NO. OF TIE BOLTS	DIA OF TIE BOLTS		
6"	2	5/8"	2	5/8"	1	6 AWG
8"	2	5/8"	2	5/8"	1	6 AWG
10"	2	5/8"	2	3/4"	1	6 AWG
12"	2	3/4"	2	7/8"	2	6 AWG
14"	2	3/4"	2	1"	2	6 AWG
16"	2	7/8"	2	1 1/8"	2	6 AWG
18"	2	1"	2	1 1/4"	2	6 AWG
20"	2	1"	2	1 1/4"	2	6 AWG

TYPICAL HARNESSED FLEX CPLG – 6" TO 20"



 CDM Camp Dresser & McKee Inc.	 Albuquerque Bernalillo County Water Utility Authority	DESIGNED BY: K	NO.	DATE
		DRAWN BY: C		
		CHECKED BY: J		
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY				
STANDARD MECHANICAL DETAILS - 2				
Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	
CITY PROJECT NO.	6886-02	Zone Map No.	H-9	SHEET
				OF
		DRAWING NO. MD-2		



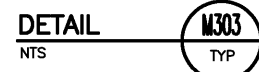
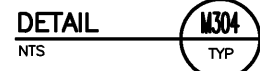
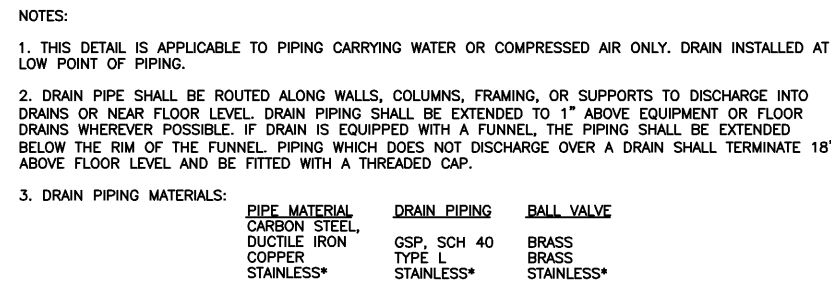
The image contains two technical drawings of elbow assemblies. The left drawing is for a 'DUCTILE IRON ELBOW' and the right is for a 'STEEL ELBOW'. Both drawings show a cross-section of the elbow with various components labeled. The ductile iron elbow assembly includes a 'A' DIA DUCTILE IRON BASE ELBOW', a 'STEEL FLANGE TO MATCH BASE ELBOW WITH 4 BOLTS 'E' DIA', '4 SST ADHESIVE CAPSULE ANCHORS 'E' DIAMETER AT 90° PROVIDE WASHERS AND HEX NUTS FOR LEVELING', a 'BASE PLATE W/ SIZE "D" AND THICKNESS "C"', and '1" MIN NON-SHRINK GROUT'. The steel elbow assembly includes a 'A' DIA STEEL ELBOW', '4 SST ADHESIVE CAPSULE ANCHORS 'E' DIAMETER AT 90° PROVIDE WASHERS AND HEX NUTS FOR LEVELING', and '1" MIN NON-SHRINK GROUT'. Both drawings specify a 'B' DIA SCH 40 STEEL PIPE HOT DIP GALVANIZED AFTER FABRICATION' and a '1/4" MIN' dimension for the gasket area. A note at the bottom states: 'NOTE: MATERIAL FINISH TO MATCH PIPE'.

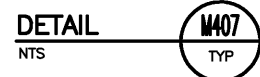
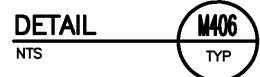
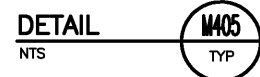
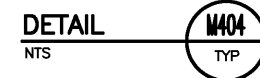
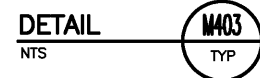
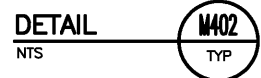
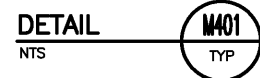
DETAIL

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M305




TYP






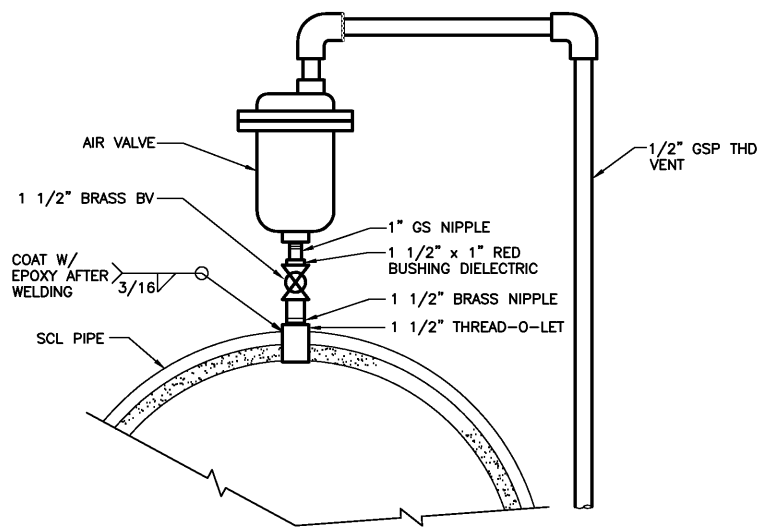
PRELIMINARY
NOT FOR
CONSTRUCTION

NO.	DATE	REMARKS	BY
REVISIONS			
DESIGN			
DESIGNED BY: KLP			DATE: 02/05
DRAWN BY: CAA			DATE: 02/05
CHECKED BY: JDC			DATE: 02/05

 Camp Dresser & McKee Inc.	 Albuquerque Bernalillo County	NO. DATE	DESIGNED BY: K
			DRAWN BY: C
	TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY STANDARD MECHANICAL DETAILS - 4	Ms./Day/Yr. Ms./Day/Yr.	CHECKED BY: J
Design Review Committee	City Engineer Approval	Last Design Update	
CITY PROJECT NO. 6886-02	Zone Map No. H-9	SHEET OF DRAWING NO. MD-4	

VERIFY SCALES
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0  1"
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SCALES ACCORDINGLY.

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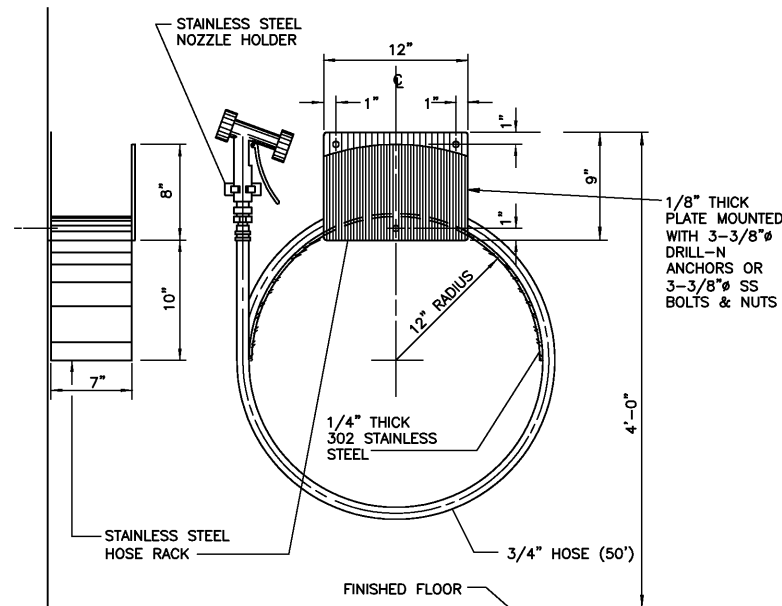


NOTE:
WHERE LOCATED OUTDOORS INSULATE AIR
RELEASE PIPING, FITTINGS, AND VALVES.

AIR RELEASE VALVE CONNECTION TO PIPE

DETAIL
NTS

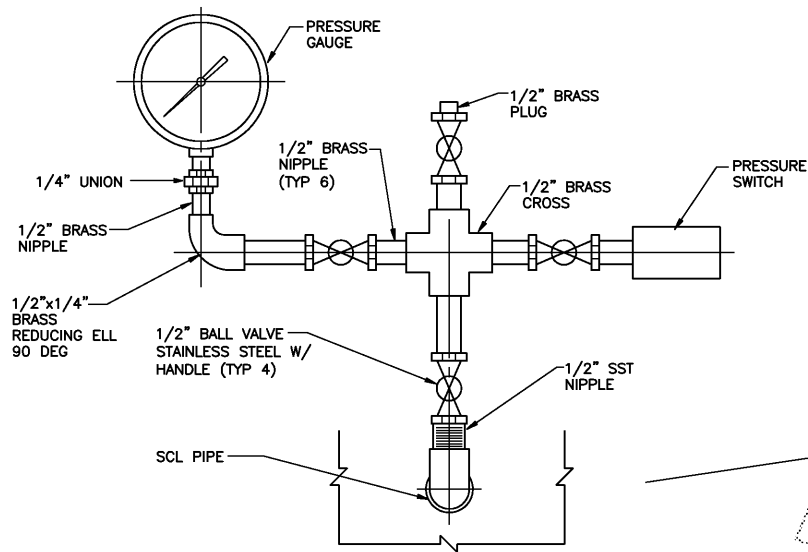
M501
TYP



TYPICAL WASH HOSE STATION

DETAIL
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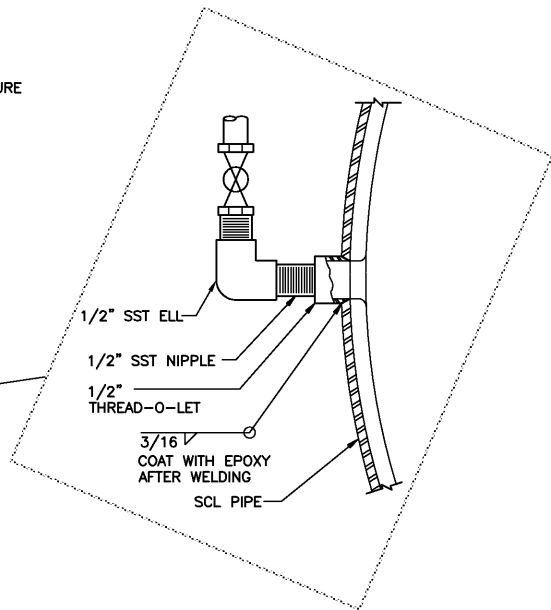
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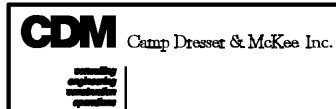
PRESSURE GAUGE AND SWITCH

DETAIL
NTS

M504
TYP



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Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
STANDARD MECHANICAL DETAILS - 5

Design Review Committee City Engineer Approval

Mo/Usa/2/Yr. Mo/Usa/2/Yr.

CITY PROJECT NO. 6886-02 Zone Map No. H-9 SHEET OF DRAWING NO. MD-5

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
PRELIMINARY NOT FOR CONSTRUCTION	NO. DATE	BY	DATE	NO.	DATE	CONTRACTOR	DATE
REVISIONS	NO. DATE	BY	DATE	NO.	DATE	CONTRACTOR	DATE
DESIGN	NO. DATE	BY	DATE	NO.	DATE	CONTRACTOR	DATE
CHECKED BY: JDC	DATE: 02/05	BY	DATE	NO.	DATE	CONTRACTOR	DATE

PRELIMINARY - NOT FOR CONSTRUCTION

DUCTWORK SYMBOLS


	MANUAL VOLUME DAMPER
	WEIGHTED DAMPER (NON-POWERED)
	FIRE DAMPER
	MOTOR OPERATED DAMPER
	DIRECTION OF FLOW
	DUCT SIZE-FIRST NUMBER IS SIDE SHOWN
	DUCT SECTION, POSITIVE PRESS. FIRST NUMBER IS TOP
	DUCT SECTION, NEGATIVE PRESS. FIRST NUMBER IS TOP
	ELEVATION CHANGE (R) RISE, (D) DROP
	ACCESS DOOR
	FLEXIBLE CONNECTION
	FLEXIBLE DUCT - DOUBLE LINE
	FLEXIBLE DUCT - SINGLE LINE
	DUCT LINING, DUCT SIZE SHOWN IS NET FREE AREA
	TRANSITION - RECTANGULAR TO RECTANGULAR
	TURNING VANES
	SIDE MOUNTED DEVICE
	BOTTOM MOUNTED DEVICE
	PRESSURE DIFFERENTIAL INDICATOR
	PRESSURE DIFFERENTIAL TRANSMITTER
	GRAVITY BACKDRAFT DAMPER



1. HVAC EQUIPMENT DIMENSIONS, LOCATIONS, DUCTWORK AND PIPING SYSTEM LAYOUTS ARE BASED ON EQUIPMENT SELECTED BY THE ENGINEER. IF THE CONTRACTOR PROPOSES TO FURNISH EQUIPMENT THAT REQUIRES AN ARRANGEMENT OR SPACE DIFFERING FROM THAT INDICATED ON THE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER FOR APPROVAL, DETAILED ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, INSTRUMENTATION, HVAC AND ELECTRICAL DRAWINGS AND EQUIPMENT LISTS SHOWING ALL NECESSARY CHANGES AND EMBODYING ALL FEATURES OF THE EQUIPMENT HE PROPOSES TO FURNISH. THIS INFORMATION SHALL INCLUDE BUT NOT BE LIMITED TO PLANS, SECTIONS, DETAILS, AND SCHEMATICS OF ALL APPURTENANCES REQUIRED. SUCH CHANGES IF APPROVED BY THE ENGINEER SHALL BE AT NO EXTRA COST TO THE OWNER. THE CONTRACTOR SHALL ASSUME THE COST OF, AND THE RESPONSIBILITY FOR SATISFACTORILY ACCOMPLISHING ALL THE NECESSARY CHANGES CORRESPONDING TO THE DIMENSIONS AND CHARACTERISTICS OF THE EQUIPMENT SUBMITTED AND APPROVED BY THE ENGINEER. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
2. SIZES OF EQUIPMENT PADS INDICATED ON THE DRAWINGS ARE APPROXIMATE. EXACT DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FOR THE EQUIPMENT FURNISHED. ALL FLOOR MOUNTED EQUIPMENT SHALL BE SET ON CONCRETE PADS CONFORMING TO DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.
3. DIELECTRIC COUPLINGS, FLANGES OR UNIONS SHALL BE INSTALLED AT ALL CONNECTIONS OF COPPER PIPE TO OTHER TYPES OF METALLIC PIPING.
4. HVAC PIPING AND DUCTWORK DRAWINGS DO NOT SHOW ALL DRAINS, VENTS, OFFSETS AND FITTINGS etc. REQUIRED FOR COMPLETE SYSTEM. SMALL PIPING IS SHOWN APPROXIMATELY TO GUIDE BUT NOT EVERY FITTING AND OFFSET IS SHOWN. SOME VALVES AND APPURTENANCES MAY BE OMITTED FOR THE SAKE OF CLARITY. THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL HVAC SYSTEMS SHOWN ON THE DRAWINGS AND DETAILS, AND/OR AS DEFINED IN THE SPECIFICATIONS TO PROVIDE THE COMPLETE SYSTEM.
5. UNLESS OTHERWISE SHOWN ON THE DRAWING ALL FLOOR SLAB AND WALL PENETRATIONS SHALL BE AS SHOWN ON THE WALL PENETRATION DETAILS. ABOVE GROUND EXTERIOR WALL AND ROOF PENETRATIONS SHALL BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS. IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY SUBSTITUTE ALTERNATE METHODS PROVIDING THEY MEET INTENDED DESIGN REQUIREMENTS.
6. NOT ALL AND ONLY CERTAIN TYPES OF SUPPORTS ARE SHOWN ON THE HVAC DRAWINGS. UNLESS OTHERWISE DETAILED ON THE DRAWINGS ALL PIPE AND DUCT SUPPORTS SHALL BE DESIGNED, FURNISHED AND INSTALLED BY THE CONTRACTOR AS SPECIFIED AND TO THE APPROVAL OF THE ENGINEER.

SR-1	TYPE OF DEVICE
20X20	SIZE
400 CFM	CAPACITY

ALU	ALUMINUM
CPVC	CHLORINATED POLYVINYL CHLORIDE
CU	COPPER
FRP	FIBERGLASS REINFORCED PLASTIC
GS	GALVANIZED STEEL
PVC	POLYVINYL CHLORIDE
PWHDPE	PROFILE WALL HIGH DENSITY POLYETHYLENE BLACK
STL	STEEL
SS	STAINLESS STEEL

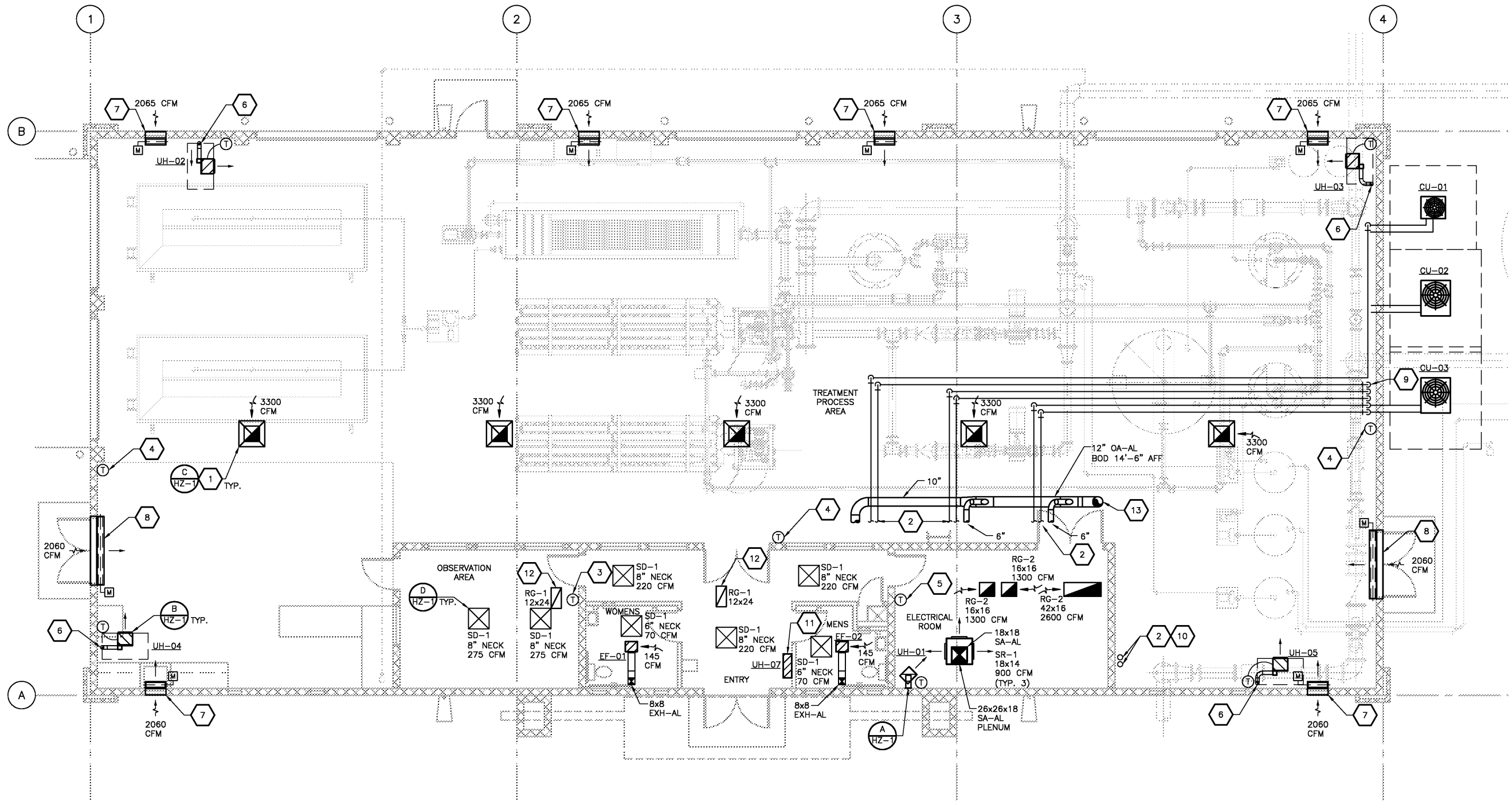
SR-1	TYPE OF DEVICE
20X20	SIZE
400 CFM	CAPACITY

VERIFY SCALES
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 IF NOT ONE INCH ON
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 SCALES ACCORDINGLY.

 Camp Dresser & McKee Inc.	NO. DATE		DESIGNED BY: N DRAWN BY: N
	NO. DATE		
100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0%			
 Albuquerque Bernalillo County Water Utility Authority			
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY HVAC SYMBOLS, LEGENDS AND ABBREVIATIONS			
Design Review Committee	City Engineer Approval	Last Design Update	Ms./Dsg/yr.
			Ms./Dsg/yr.
CITY PROJECT NO. 6886-02		Zone Map No.	SHEET OF DRAWING NO. H-1

CREATED BY: R. AZCARATE	DATE: 02/05		
PRELIMINARY - NOT FOR CONSTRUCTION			

S:\31027\44236\Design\HVAC\ H-2 02/03/05 13:14 dewofepk XREFS: A_MF_ARSENIC, M_MF_ARSENIC, X_COT_BORDER, H_MF_ARSENIC_1



FLOOR
PLAN
3/16" = 1'-0"

GENERAL NOTES

1. ALL DIMENSIONS ARE ABOVE FINISHED FLOOR ELEVATION 5334.50'.
2. INSTALL UNIT HEATERS AT 7'-0" FROM BOTTOM OF UNIT HEATER TO FINISHED FLOOR.
3. WALL LOUVERS ARE FURNISHED AND INSTALLED UNDER DIVISION 10. REFER TO ARCHITECTURAL PLANS AND DETAILS FOR MORE INFORMATION.
4. AHU-01 SUPPLY DUCT SHALL BE ALUMINUM DUCTWORK THROUGH MEZZANINE FLOOR PENETRATION. FLEX DUCT SHALL BE BETWEEN PENETRATION AND CEILING ONLY.
5. THERMOSTATS AND TEMPERATURE SENSORS SHALL BE MOUNTED 5'-0" AFF.
6. REFRIGERANT PIPING LOCATED OUTDOORS, BOTH SUCTION AND LIQUID LINES, SHALL BE INSULATED AND ALUMINUM JACKETED. FOR INDOOR LOCATIONS, ONLY THE SUCTION LINE SHALL BE INSULATED. REFER TO SPECIFICATION 15250 FOR ADDITIONAL INFORMATION.
7. CONTRACTOR SHALL VERIFY EXACT LENGTH OF REFRIGERANT LINES AND COORDINATE SIZING WITH MANUFACTURER'S RECOMMENDATIONS.
8. CONDENSATE DRAIN PIPING SHALL BE COPPER TUBING.
9. SUPPLY AIR, RETURN AIR, AND EXHAUST DUCTWORK, AND ASSOCIATED FITTINGS AND DAMPERS, SHOWN ON THIS SHEET SHALL BE ALUMINUM, CONSTRUCTED ACCORDING TO SMACNA POSITIVE/NEGATIVE 2 IN. W.G.
10. ALL SUPPLY DUCTWORK LOCATED ABOVE CEILING LEVEL AND SUPPLY AND RETURN DUCTWORK EXPOSED IN SPACES IT DOES NOT SERVE SHALL BE INSULATED.
11. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF AIR DEVICES.
12. IN AREAS WITH SUSPENDED CEILING, SUPPORT DUCTWORK FROM STRUCTURE ABOVE CEILING.

KEYED NOTES

- 1 30X30 ALUMINUM EXHAUST, TERMINATE DUCT AT 16'-0" AFF. TRANSITION TO FAN CONNECTION SIZE, ROUTE UP TO EXHAUST FAN ON ROOF. INSTALL 1/2"x1/2" ALUMINUM HARDWARE CLOTH ON BOTTOM OF DUCT. (TYP. 5)
- 2 FOR CONTINUATION OF REFRIGERANT PIPING, CONDENSATE AND OVERFLOW DRAINS, AND OUTSIDE AIR, SEE DRAWING H-4.
- 3 THERMOSTAT TYPE T-F TO AHU-01.
- 4 TEMPERATURE SENSOR TYPE T-A TO HVAC CONTROL PANEL. FOR EF-03 THRU EF-07.
- 5 THERMOSTAT PROVIDED WITH AHU TO HVAC CONTROL PANEL. FOR AHU-02 AND AHU-03.
- 6 UNIT HEATER VENT SIZED PER MANUFACTURER'S RECOMMENDATIONS, ROUTE UP WALL TO ROOF SECURE TO WALL JUST BELOW ROOF ROUTE IN TO PENETRATE ROOF 4'-0" FROM PARAPET.
- 7 LOUVER FOR VENTILATION AIR INTAKE, INSTALL 24Wx64H 24V MOTORIZED DAMPER BEHIND LOUVER. DAMPER SHALL BE POWER TO OPEN, SPRING TO CLOSE. LOUVER SHALL HAVE MINIMUM 4.13 SQ. FT. NET FREE AREA. INSTALL FILTER ON INTERIOR OF DAMPER, REFER TO SPECIFICATION 15890 FOR ADDITIONAL INFORMATION.
- 8 LOUVER FOR VENTILATION AIR INTAKE, LOCATED ABOVE DOOR. INSTALL 80Wx16H 24V MOTORIZED DAMPER BEHIND LOUVER. DAMPER SHALL BE POWER TO OPEN, SPRING TO CLOSE. LOUVER SHALL HAVE MINIMUM 4.13 SQ. FT. NET FREE AREA.
- 9 ROUTE REFRIGERANT PIPING DOWN WALL, SECURE TO WALL. PENETRATE WALL LOW AND RUN ALL EXTERIOR REFRIGERANT PIPING LOW.
- 10 CONDENSATE AND OVERFLOW DRAINS, DISCHARGE OPEN SITE INTO FLOOR DRAIN.
- 11 MOUNT CABINET HEATER 6" ABOVE THE FLOOR.
- 12 PROVIDE 12x24x8 ALUMINUM BOX ABOVE RETURN GRILL.
- 13 UP TO INTAKE AIR HOOD ON ROOF. TRANSITION TO CONNECTION SIZE IN VERTICAL.

VERIFY SCALES
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CDM Camp Dresser & McKee Inc.	
Albuquerque Bernalillo County Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY HVAC FLOOR PLAN	
Design Review Committee	City Engineer Approval
Mo./Dy/yr.	Mo./Dy/yr.
CITY PROJECT NO. 6886-02	
Zone Map No.	SHEET OF
DRAWING NO. H-2	


ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
PRELIMINARY NOT FOR CONSTRUCTION		NO.	DATE			CONTRACTOR	DATE
		BY	DATE			WORKED BY	DATE
		REVISIONS	DATE			APPROVED BY	DATE
		DESIGN	DATE			VERIFICATION BY	DATE
		DATE: 02/05	DATE: 02/05			CORRECTED BY	DATE
		DRAWN BY: K. DEWOLFE	DRAWN BY: R. AZCARATE			MICRO FILM INFORMATION	
		CHECKED BY:	RECORDED BY:				


PRELIMINARY - NOT FOR CONSTRUCTION

- 1 UNIT HEATER GAS VENT THROUGH ROOF. EXTEND 2'-0" MINIMUM ABOVE THE HIGHEST POINT OF THE ROOF. INSTALL VENT CAP.
- 2 INTAKE HOOD SHALL BE ALUMINUM, 400 CFM, STATIC PRESSURE DROP 0.075 IN WG, THROAT SIZE 12x12, GREENHECK MODEL FHI, PROVIDE WITH 12" ROOF CURB. PROVIDE WITH 1/2" ALUMINUM BIRDSCREEN ON INTAKE.
- 3 OUTSIDE AIR INTAKE ENVELOPE. LOCATE ALL PROCESS VENTS, EXHAUST FANS AND PLUMBING VENTS OUTSIDE OF ENVELOPE, IN ACCORDANCE WITH CODE. (TYP.)
- 4 RESTROOM EXHAUST ROOF CAP.

ROOF
PLAN
3/16" = 1'-0"

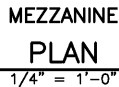


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CDM		Camp Dresser & McKee Inc.								DESIGNED BY:			
<small>consulting engineering environmental operations</small>										NO. DATE			
 Albuquerque Bernalillo County Water Utility Authority													
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY HVAC ROOF PLAN													
City Engineer Approval				Update Design Last		Mo./Day/Yr.				Mo./Day/Yr.			
CITY PROJECT NO. 6886-02				Zone Map No.				SHEET OF DRAWING NO. H-3					

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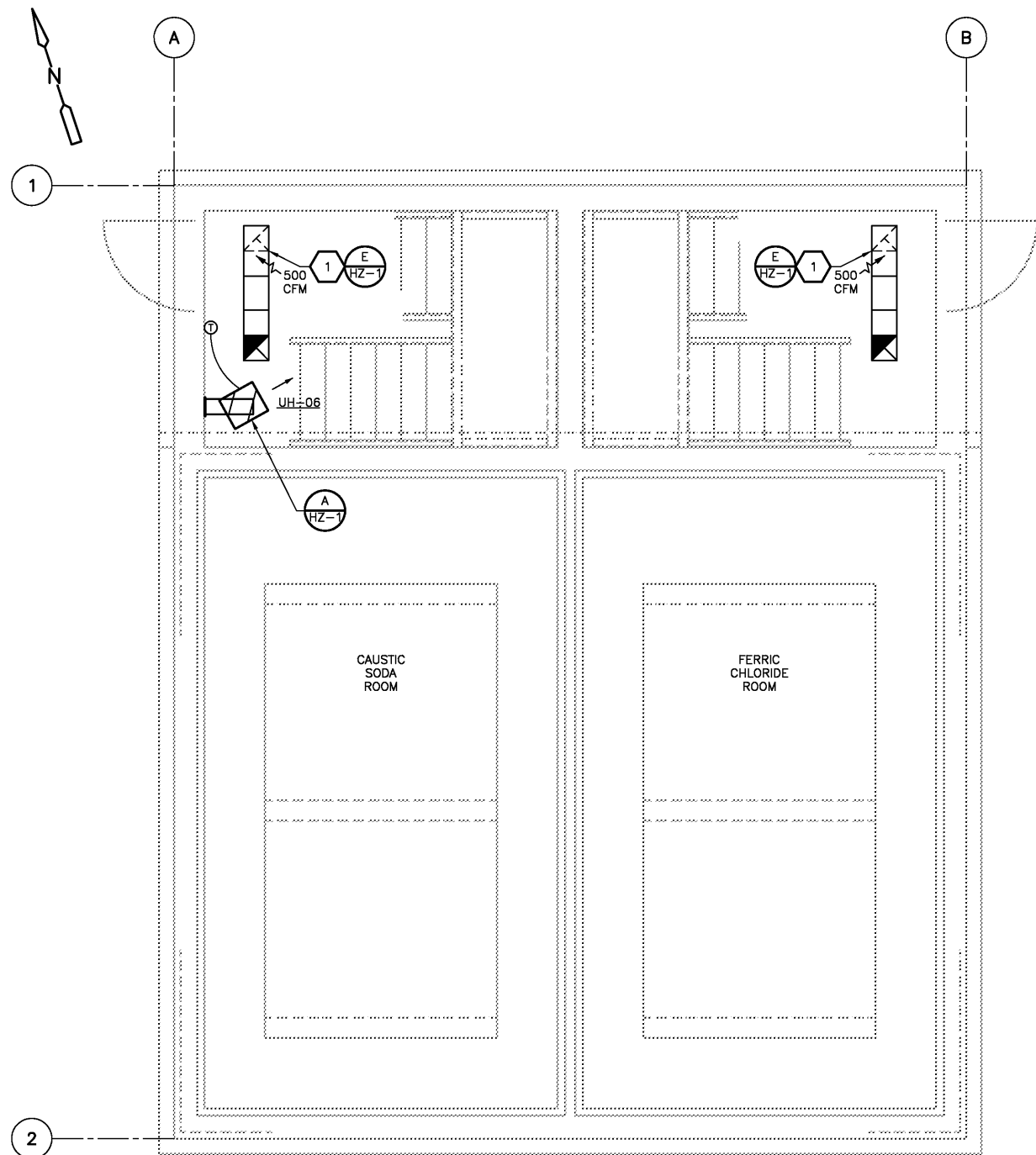


KEY
PLAN
NTS

CITY PROJECT NO.	6886-02	Zone Map No.	SHEET OF DRAWING NO. H-4
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PRELIMINARY - NOT FOR CONSTRUCTION



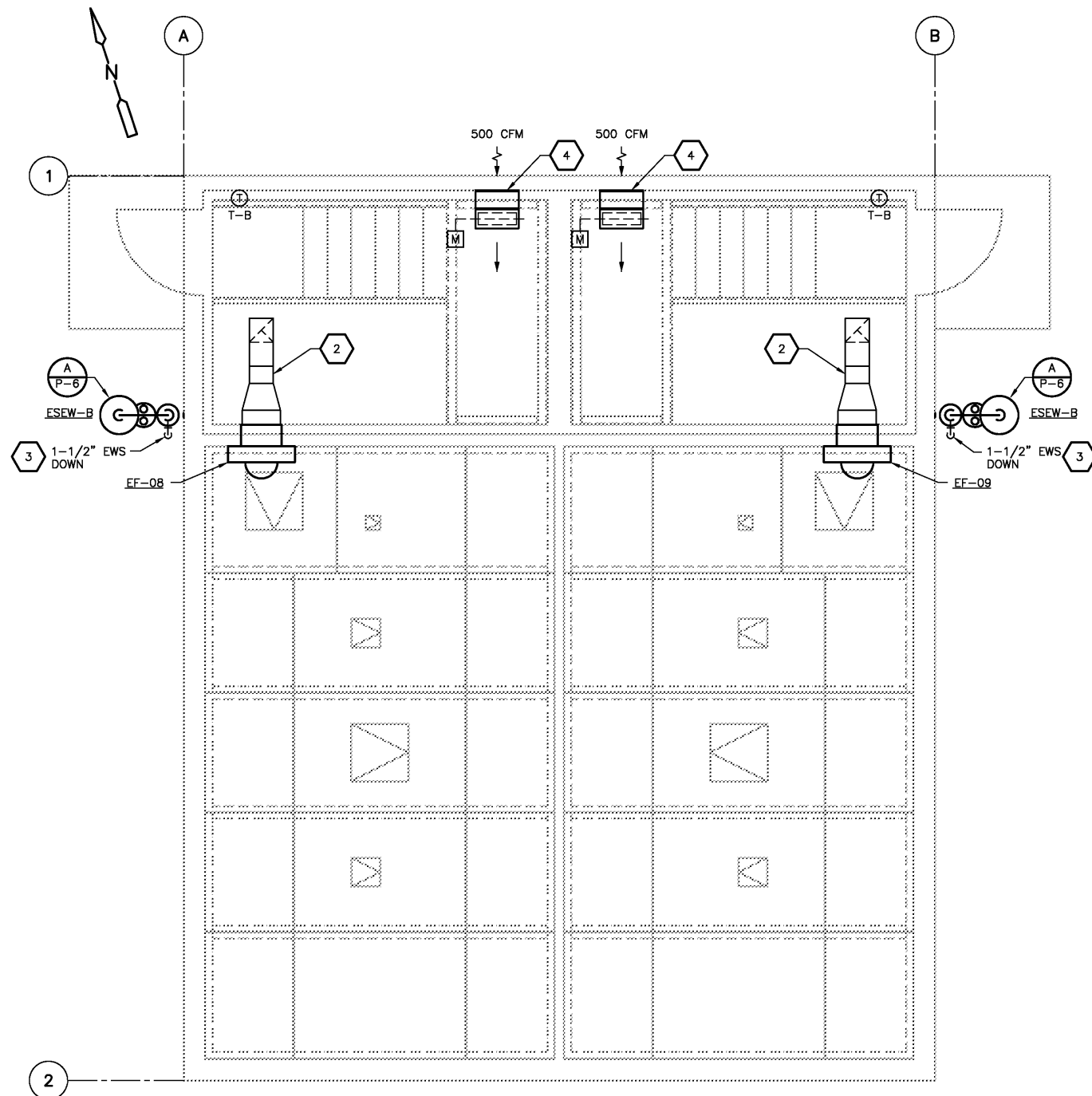
PLAN • EL 5331.00
PLAN
3/8" = 1'-0"

GENERAL NOTES

- ALL DIMENSIONS ARE ABOVE FINISHED FLOOR ELEVATION 5326.50'.
- INSTALL UNIT HEATER AT 7'-0" FROM BOTTOM OF UNIT HEATER TO FINISHED FLOOR.
- WALL LOUVERS ARE FURNISHED AND INSTALLED UNDER DIVISION 10. REFER TO ARCHITECTURAL PLANS AND DETAILS FOR MORE INFORMATION.
- THERMOSTATS SHALL BE MOUNTED 5'-0" AFF.

KEYED NOTES

- 10X10 FRP-EXH DUCT ROUTE UNDER LANDING AND DOWN TO FLOOR.
- TRANSITION FROM FAN CONNECTION SIZE TO 10X10 FRP-EXH DUCT, BOD 13'-7" AFF. ROUTE UNDER LANDING.
- REFER TO PLUMBING DRAWING P-4 FOR ESEW-B EQUIPMENT SCHEDULE AND DRAWING P-2 FOR CONTINUATION OF EMERGENCY WATER SUPPLY (EWS). PROVIDE EXTRA LENGTH OF HEAT TRACING WITH ESEW-B FROM MANUFACTURER FOR EXPOSED PIPING ABOVE GRADE.
- LOUVER FOR VENTILATION AIR INTAKE. INSTALL 18Wx18H 120V MOTORIZED DAMPER BEHIND LOUVER. DAMPER SHALL BE POWER TO OPEN, SPRING TO CLOSE. LOUVER SHALL HAVE MINIMUM 1 SQ. FT. NET FREE AREA.



PLAN • EL 5335.00
PLAN
3/8" = 1'-0"

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CDM Camp Dresser & McKee Inc.	
Albuquerque Bernalillo County Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY CHEMICAL STORAGE VAULT - HVAC PLANS	
Design Review Committee	City Engineer Approval
Mo/Us97/Yr.	Mo/Us97/Yr.
CITY PROJECT NO. 6886-02	
Zone Map No.	SHEET OF
	DRAWING NO. H-5

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
NO.	DATE	FIELD	NOTES	NO.	DATE	CONTRACTOR	DATE
		BY				WORK	DATE
						INSPECTED BY	DATE
						ACCEPTANCE BY	DATE
						VERIFICATION BY	DATE
						REVISIONS	DATE
						CORRECTED BY	DATE
						MICRO FILM INFORMATION	
						RECORDED BY	DATE
						NO.	

PRELIMINARY
NOT FOR
CONSTRUCTION

PRELIMINARY - NOT FOR CONSTRUCTION

DX SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE			
EQUIPMENT TAG NUMBER	AHU-01 ARSENIC REMOVAL BUILDING	AHU-02 AND AHU-03 ARSENIC REMOVAL BUILDING	
BUILDING	OBSERVATION	ELECTRICAL	
AREA SERVED	AREA	ROOM	
UNIT TYPE	INDOOR MODULAR	INDOOR MODULAR	
UNIT CONFIGURATION	VERTICAL, UPFLOW	VERTICAL, UPFLOW	
ALTITUDE, FT. ABOVE SEA LEVEL	5311	5311	
NOMINAL TONS	3	7.5	
FILTERS:			
PRE-FILTER TYPE	THROWAWAY	THROWAWAY	
FILTER MANUFACTURER	—	—	
FILTER MODEL NUMBER	—	—	
MAX. FACE VELOCITY	500	500	
COOLING COIL:			
ENT. AIR TEMP. DB/WB, DEG F	79.8/53.8	83.5/55.2	
SENSIBLE CAPACITY, MBH	25	65.3	
TOTAL CAPACITY, MBH	25	65.3	
MAX. FACE VELOCITY	500	500	
HEATING COIL:			
TYPE	ELECTRIC	NONE	
REQUIRED CAPACITY, MBH/KW	10.3 KW	—	
UNIT HEATING CAPACITY, KW	11.53	—	
UNIT INPUT, MBH	—	—	
UNIT OUTPUT, MBH	—	—	
NUMBER OF STAGES	—	—	
GAS MIN/MAX PRESSURE, IN. WC	—	—	
HEATER MANUFACTURER	TRANE	—	
HEATER MODEL NUMBER	BAYHTR3415	—	
SUPPLY FAN:			
FAN TYPE	CENTRIFUGAL	CENTRIFUGAL	
TOTAL AIRFLOW, CFM	1350	2700	
MIN. OUTSIDE AIR, CFM	300	100	
EXTERNAL SP., IN. WG	1.5	1	
FAN RPM	1080	816	
DRIVE TYPE	DIRECT	BELT	
MOTOR HP	1/3	1.5	
MOTOR RPM	1080	1725	
MOTOR ENCLOSURE	MFG. STD.	MFG. STD.	
ELECTRICAL:			
VOLTS/PHASE/HERTZ	208/3/60	460/3/60	
FAN MOTOR FLA	2.2	2.5	
FAN MOTOR LRA	5.3	17	
MIN. CIRCUIT AMPS.	44	4	
MAX. OVER PROTECTION	45	15	
SOUND DATA (DBA @ 5 FT. RADIUS)	—	—	
OPERATING WEIGHT, LBS	125	400	
MANUFACTURER	TRANE	TRANE	
MODEL NUMBER	TWE036P	TWE090A3	
REMARKS:			
1. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 15855.			
2. FOR CONDENSING UNIT, SEE DX SPLIT SYSTEM CONDENSING UNIT SCHEDULE.			
3. TOTAL AND SENSIBLE COOLING CAPACITIES INDICATED ABOVE INCLUDE FAN MOTOR HEAT.			
4. PROVIDE AHU-02/AHU-03 WITH MANUFACTURER'S REMOTE WALL MOUNTED THERMOSTAT.			
5. T.S.P.=INTERNAL LOSSES (BY VENDOR)+DIRTY FILTER (2 TIMES CLEAN FILTER) (BY VENDOR)+E.S.P. (INDICATED ABOVE)			

ELECTRIC UNIT HEATER SCHEDULE			
EQUIPMENT TAG NUMBER	UH-01 ARSENIC REMOVAL BUILDING	UH-06 CHEMICAL VAULT	UH-07 ARSENIC REMOVAL BUILDING
BUILDING	ELECTRICAL	CAUSTIC SODA	ENTRY
AREA SERVED	ROOM	STAIRWELL	
TOTAL CAPACITY, KW	3	3	2
AIRFLOW, CFM	618	700	250
AIR THROW, FT	15	26	—
AIR TEMP RISE, DEG F	21	14	—
FAN TYPE	PROPELLER	PROPELLER	—
MOTOR ENCLOSURE	TEFC	TEFC	—
MOTOR RPM	1800	1650	—
TERMINAL ENCLOSURE			
	MFG. STD.	NONMETALLIC NEMA 4X	MFG. STD.
RATING			
VOLTS/PHASE/HERTZ	N/A	WASHDOWN CORROSION RESISTANT	N/A
TOTAL CURRENT DRAW, AMPS	480/3/60	480/3/60	208/3/60
OPERATING WEIGHT, LBS	4.7	5	—
MANUFACTURER	45	56	115
MODEL NUMBER	INDEECO	INDEECO	INDEECO
	238-UT03U	234-U11N-0030U	922U02000U
REMARKS:			
1. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 15550.			
2. REFER TO PLAN DRAWINGS FOR MOUNTING HEIGHT.			
3. PROVIDE WITH PREMIUM MOTOR.			
4. UNIT SHALL BE SINGLE POINT ELECTRICAL CONNECTION WITH INTEGRAL TRANSFORMER FOR UNIT CONTROLS.			
5. PROVIDE WITH WALL MOUNTED THERMOSTAT.			
6. PROVIDE WITH SWIVEL BRACKET FOR WALL MOUNTING.			
7. HEATING ELEMENTS SHALL BE STAINLESS STEEL.			
8. PROVIDE WITH PILOT LIGHT FOR "HEATER ELEMENT ON" INDICATION.			
9. UH-07 SHALL BE A SURFACE MOUNTED CABINET HEATER WITH BOTTOM-HORIZONTAL INTAKE AND TOP-VERTICAL DISCHARGE.			

DX SPLIT SYSTEM CONDENSING UNIT SCHEDULE			
EQUIPMENT TAG NUMBER	CU-01 ARSENIC REMOVAL BUILDING	CU-02 AND CU-03 ARSENIC REMOVAL BUILDING	
BUILDING	OBSERVATION	ELECTRICAL	
AREA SERVED	AREA	ROOM	
LOCATION	NE CORNER ON GRADE	NE CORNER ON GRADE	
UNIT SERVED	AHU-01	AHU-02 AND AHU-03	
ALTITUDE, FT. ABOVE SEA LEVEL	5311	5311	
NOMINAL TONS	3	7.5	
REFRIGERANT SECTION:			
AMBIENT DESIGN TEMP, DEG F	115	115	
TOTAL CAPACITY, MBH	25	65.3	
REFRIGERANT	R-22	R-22	
REFRIGERANT CHARGE, LB/OZ	4/09	16/0	
TYPE OF COMPRESSOR	SCROLL	SCROLL	
NUMBER OF COMPRESSORS	1	1	
MINIMUM E.E.R.	10	10.3	
CONDENSER FAN:			
FAN TYPE	PROPELLER	PROPELLER	
AIRFLOW PER FAN, CFM	2500	5670	
NUMBER OF FANS	1	1	
DRIVE TYPE	DIRECT	DIRECT	
MOTOR HP	1/4	1/2	
MOTOR RPM	1075	1100	
ELECTRICAL:			
VOLTS/PHASE/HERTZ	460/3/60	460/3/60	
FAN MOTOR FLA	0.6	1.6	
FAN MOTOR LRA	—	3.7	
MIN. CIRCUIT AMPS.	8	19.7	
MAX. OVER PROTECTION	15	25	
VIBRATION ISOLATION TYPE			
SOUND DATA (DBA @ 5 FT. RADIUS)	MFG. STD.	MFG. STD.	
OPERATING WEIGHT, LBS	160	326	
MANUFACTURER	TRANE	TRANE	
MODEL NUMBER	2TTA0036A4	TTA090A4	
REMARKS:			
1. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 15855.			
2. FOR AIR HANDLING UNIT, SEE DX SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE.			
3. PROVIDE WITH LOW AMBIENT CONTROL TO 0 DEG F.			
4. PROVIDE WITH HAIL PROTECTION QUALITY COIL GUARDS. WIRE GUARDS ARE NOT ACCEPTABLE.			

NATURAL GAS UNIT HEATER SCHEDULE			
EQUIPMENT TAG NUMBER	UH-02 THRU UH-05 ARSENIC REMOVAL BUILDING		
BUILDING	TREATMENT RPROCESS		
AREA SERVED	AREA		
ALTITUDE, FT. ABOVE SEA LEVEL	5311		
VENTING	POWER		
INPUT, BTUH	50,000		
MIN OUTPUT REQUIRED, BTUH	31,300		
GAS MIN/MAX PRESSURE, IN. WC	7/14		
AIRFLOW, CFM	740		
AIR THROW, FT	33		
AIR TEMP RISE, DEG F	50		
FAN TYPE	PROPELLER		
MOTOR HP	1/40		
MOTOR ENCLOSURE	MFG. STD.		
MOTOR RPM	1550		
VOLTS/PHASE/HERTZ	115/1/60		
TOTAL CURRENT DRAW, AMPS	2.7		
OPERATING WEIGHT, LBS	78		
MANUFACTURER	MODINE		
MODEL NUMBER	PDP 50		
REMARKS:			
1. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 15550.			
2. REFER TO PLAN DRAWINGS FOR MOUNTING HEIGHT.			
3. PROVIDE WITH FLUE VENT CAP.			
4. PROVIDE WITH WALL MOUNTED THERMOSTAT.			
5. PROVIDE WITH POWERED VENT DUCT.			

FAN SCHEDULE					
EQUIPMENT TAG NUMBER	EF-01 ARSENIC REMOVAL BUILDING	EF-02 ARSENIC REMOVAL BUILDING	EF-03 THRU EF-07 ARSENIC REMOVAL BUILDING	EF-08 AND EF-09 CHEMICAL VAULT	
BUILDING			TREATMENT PROCESS AREA		
AREA SERVED	WOMEN'S	MEN'S		STAIRWELLS	
SERVICE	EXHAUST	EXHAUST	EXHAUST	EXHAUST	
UNIT CONFIGURATION	CEILING	CEILING	ROOF MOUNTED	WALL MOUNTED	
DISCHARGE	HORIZONTAL	HORIZONTAL	UPBLAST	HORIZONTAL	
ALTITUDE, FT. ABOVE SEA LEVEL	5311	5311	5311	5311	
FAN MATERIAL OF CONSTRUCTION	GALV. STEEL	GALV. STEEL	ALUMINUM	FRP	
PRIMARY AIR CONTAMINENT	N/A	N/A	N/A	N/A	
CONTAMINENT CONCENTRATION, PPM	—	—	—	—	
FAN TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	
AIRFLOW, CFM	145	145	3300	500	
TOTAL STATIC PRESSURE, IN. WG	0.4	0.4	0.25	0.4	
AIR STREAM TEMP RANGE, DEG F	70-72	70-72	60-106	0-106	
FAN RPM	900	900	969	1140	
DRIVE TYPE	DIRECT	DIRECT	BELT	DIRECT	
MOTOR HP	48 WATTS	48 WATTS	1/2	1/8	
MOTOR RPM	900	900	1725	1140	
MOTOR ENCLOSURE	ODP	ODP	TEFC	TEFC	
FAN CONTROL					
VOLTS/PHASE/HERTZ	SINGLE SPEED, CONSTANT VOLUME	SINGLE SPEED, CONSTANT VOLUME	SINGLE SPEED, CONSTANT VOLUME	SINGLE SPEED, CONSTANT VOLUME	
EMERGENCY POWER	115/1/60	115/1/60	460/3/60	120/1/60	
SPARK PROOF	NO	NO	NO	NO	
SOUND DATA (DBA @ 5 FT. RADIUS)	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	NOT REQUIRED	
VIBRATION ISOLATORS	47	47	66	66	
ROOF OPENING SIZE, IN X IN	MFG. STD.	MFG. STD.	MFG. STD.	MFG. STD.	
OPERATING WEIGHT, LBS	N/A	N/A	20.5X20.5	N/A	
MANUFACTURER	21	21	126	43	
MODEL NUMBER	GREENHECK SP-A200	GREENHECK SP-A200	GREENHECK CUBE-180-5	FIBER-AIRE 125A2	
BIRDSCREEN	1/2-INCH	1/2-INCH	ALUMINUM	PVC	
ROOF CURB	ALUMINUM	ALUMINUM	N/A	ENCAPSULATED	
DAMPER	N/A	N/A	120 VOLT MOTORIZED	120 VOLT MOTORIZED	
REMARKS:					
1. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 15860.					
2. PROVIDE WITH BIRDSCREEN, ROOF CURB, AND DAMPER AS INDICATED ABOVE.					
3. PROVIDE EF-01 AND EF-02 WITH ROOF CAP, GREENHECK MODEL RCC-7, FOR DISCHARGE THROUGH ROOF.					

AIR DISTRIBUTION DEVICE SCHEDULE					
EQUIPMENT TAG NUMBER	SD-1 SUPPLY	SR-1 RETURN	RG-1 RETURN	RG-2 RETURN	
TYPE	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM	
MATERIAL	24X24	(SEE PLAN)	(SEE PLAN)	(SEE PLAN)	
FACE SIZE	LAY-IN	SURFACE	LAY-IN	SURFACE	
FRAME	ALUMINUM COLORED	PAINT	WHITE	WHITE	
FINISH	WHITE	PAINT	WHITE	WHITE	
MAXIMUM PRESSURE DROP, IN. WG	0.1	0.1	0.1	0.2	
MAXIMUM NOISE CRITERIA	20	20	20	40	
MANUFACTURER	TITUS	TITUS	TITUS	TITUS	
MODEL NUMBER	TMS-AA	272FL	50F	350FL	
NECK SIZE	(SEE PLAN)	—	—	—	
NOTES	2	2	2	2	
NOTES:					
1. PROVIDE WITH LAY-IN ADAPTER					
2. PROVIDE WITH OPPOSED BLADE BALANCING DAMPER, MATERIAL TO MATCH AIR DISTRIBUTION DEVICE.					

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0 1"
IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY.

CDM

Camp Dresser & McKee Inc.

Albuquerque Bernalillo County

Water Utility Authority

TITLE:

ARSENIC REMOVAL DEMONSTRATION FACILITY
HVAC EQUIPMENT SCHEDULES

Design Review Committee

City Engineer Approval

CITY PROJECT NO.

6886-02

Zone Map No.

SHEET OF

DRAWING NO.

H-6

DESIGNED BY: N. HALL

DATE: 02/05

DRAWN BY: R. AZCARATE

DATE: 02/05

NO. DATE

REMARKS

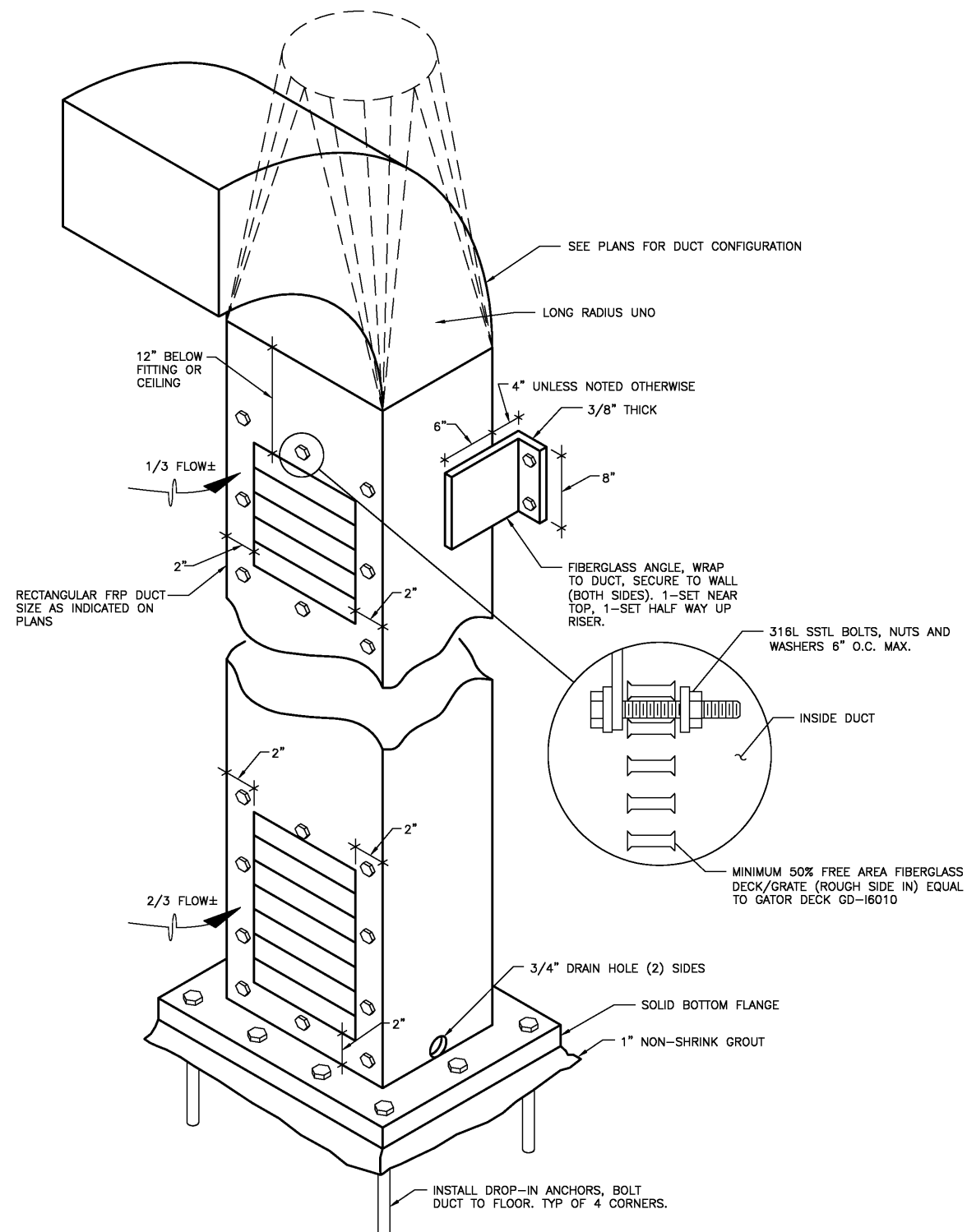
REVISIONS

DESIGN

Mo/Us97.Yr.

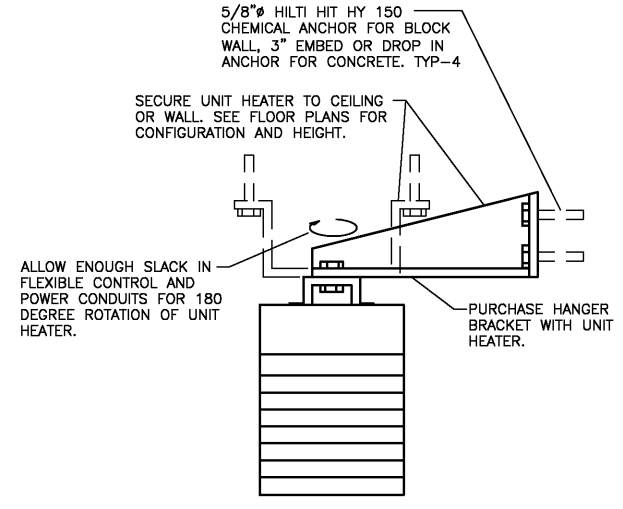
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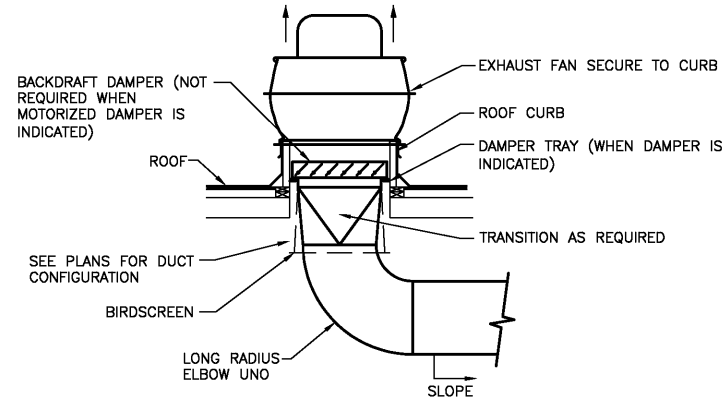


- NOTES:
1. ALL HARDWARE 316L SSTL, EXCEPT DROP-IN ANCHORS.
 2. GRILLES SIZED FOR APPROX 1/3 FLOW AT TOP AND 2/3 FLOW AT BOTTOM (UNLESS NOTED OTHERWISE) EXACT BALANCE FOR EACH GRILLE NOT REQUIRED. RISER SHALL BE BALANCED FOR TOTAL FLOW.
 3. SEE SCHEMATIC DIAGRAMS AND/OR FLOOR PLANS FOR EXACT CONFIGURATION AND GRILLE SIZES.

FRP DUCT DROP
DETAIL E

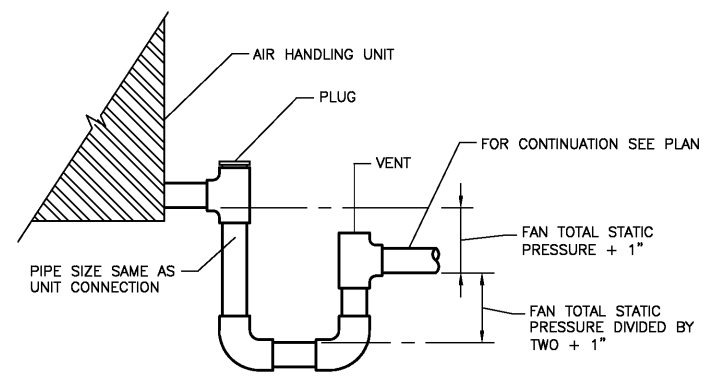


HORIZONTAL ELECTRIC UNIT HEATER
DETAIL A

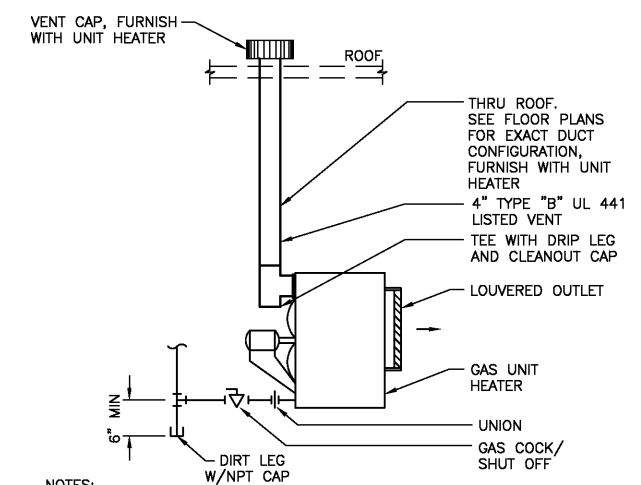


- NOTES:
1. DAMPER LOCATED IN CURB, PROVIDED BY EXHAUST FAN MANUFACTURER. REFER TO SCHEDULES AND SPECIFICATIONS FOR TYPE REQUIRED.

EXHAUST FAN
DETAIL C

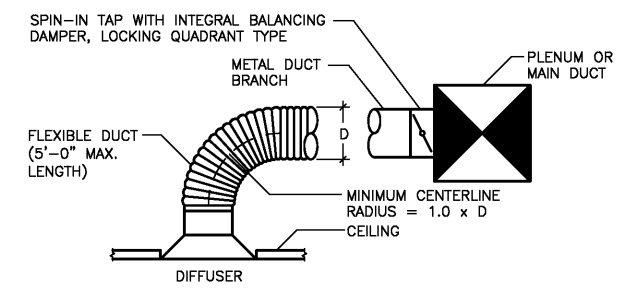


CONDENSATE TRAP FOR DRAW THRU UNIT
DETAIL F



- NOTES:
1. PROVIDE AND INSTALL SUPPORT BRACKET, ANVIL FIG 199 AND FIG 80 OR EQUAL, ON WALL. INSTALL UNIT HEATER TO SUPPORT BRACKET PER MANUFACTURER'S RECOMMENDATIONS.

GAS UNIT HEATER
DETAIL B



- NOTES:
1. FLEXIBLE DUCTWORK BETWEEN CEILING AND PENETRATION IN MEZZANINE FLOOR ONLY. DUCTWORK THROUGH PENETRATION SHALL BE ALUMINUM.

CEILING DIFFUSER / BRANCH DUCT
DETAIL D

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CDM Camp Dresser & McKee Inc.		Albuquerque Bernalillo County Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY HVAC DETAILS			
Design Review Committee	City Engineer Approval	Mo./Yr.	Mo./Yr.
CITY PROJECT NO. 6886-02		Zone Map No.	SHEET OF DRAWING NO. HZ-1

PRELIMINARY - NOT FOR CONSTRUCTION

GENERAL ABBREVIATIONS			
A	AD	AREA DRAIN	
	AFF	ABOVE FINISHED FLOOR	
B	BFP	BACKFLOW PREVENTER	
	BLDG	BUILDING	
	BOP	BOTTOM OF PIPE	
	BWV	BACKWATER VALVE	
C	CL	CENTERLINE	
	CO	CLEANOUT	
	CONT	CONTINUOUS, CONTINUE	
	CS	CUP SINK	
	CU FT	CUBIC FEET	
	CV	CHECK VALVE	
D	DCVA	DOUBLE CHECK VALVE ASSEMBLY	
	DN	DOWN	
	DWG	DRAWING	
E	ECO	EXTERIOR CLEANOUT	
	EL	ELEVATION	
	ES	EMERGENCY SHOWER	
	ESEW	EMERGENCY SHOWER / EYEWASH UNIT	
	EWC	ELECTRIC WATER COOLER	
	EWU	EYE WASH UNIT	
F	FAS	FLOW ALARM SWITCH	
	FCO	FLOOR CLEANOUT	
	FD	FLOOR DRAIN	
	FE	FIRE EXTINGUISHER	
	FHV&C	FIRE HOSE VALVE AND CABINET	
	FL	FLOW LINE	
	FS	FLOW SWITCH	
	FV	FIRE VALVE	
	F/BS	FACE/BODY SPRAY	
G	GPM	GALLONS PER MINUTE	
H	HB	HOSE BIBB	
	HD	HUB DRAIN	
	HEV	HOSE END VALVE	
I	IE	INVERT ELEVATION	
	INV	INVERT	
	IOS	INSTALLED BY OTHER SECTION	
	IPS	IRON PIPE SIZE	
K	KS	KITCHEN SINK	
	KU	KITCHEN UNIT	
L	LAB	LABORATORY	
	LS	LAB SINK	
	LSV	LOCK SHIELD VALVE	
	LV	LAVATORY	
M	MAX	MAXIMUM	
	MIN	MINIMUM	
	MR	MOP RECEPTOR	
N	NO	NUMBER	

O	OED	OPEN END OR OPEN EQUIPMENT DRAIN
	ORD	OVERFLOW ROOF DRAIN
P	PD	PUMP DISCHARGE
	PG	PRESSURE GAUGE
	PH	POST HYDRANT
	PSI	POUNDS PER SQUARE INCH
	P&T	PRESSURE & TEMPERATURE
R	RD	ROOF DRAIN
	RM	ROOM
	RPZBP	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
S	S	SOIL
	SA	SHOCK ABSORBER
	SF	SQUARE FOOT
	SH	SHOWER
	SHT	SHEET
	SP	SPRINKLER
	SQ	SQUARE
	SK	SINK
	SSK	SERVICE SINK
	SSTL	STAINLESS STEEL
	SWS	SAFETY WASH STATION
T	T&P	TEMPERATURE & PRESSURE RELIEF
	TD	TRENCH OR TROUGH DRAIN
	THK	THICKNESS)
	TYP	TYPICAL
U	UR	URINAL
V	VB	VACUUM BREAKER
	VTR	VENT THROUGH ROOF
W	W/	WITH
	WC	WATER CLOSET
	WCO	WALL CLEANOUT
	WF	WASH FOUNTAIN
	WH	WALL HYDRANT
	WHS	WASH HOSE STATION
	W&T	WASTE & TRAP
	W&V	WASTE & VENT


PIPE IDENTIFICATION & MATERIAL

1. SEE PIPE IDENTIFICATION SYSTEM ON SHEET NO. XXX.
2. SEE PIPE MATERIALS LEGEND ON SHEET NO. XXX.


PIPE FLUID OR GAS ABBREVIATIONS

CW	COLD WATER SUPPLY
EWR	EMERGENCY WATER RETURN
EWS	EMERGENCY WATER SUPPLY
HW	HOT WATER SUPPLY
NG	NATURAL GAS
PD	PROCESS DRAIN
POT	POTABLE WATER
SAN	SANITARY SEWER
UW	UTILITY WATER
V	VENT


SYMBOLS




CHECK VALVE




GATE VALVE




BALL VALVE




VALVE IN VERTICAL




SHOCK ABSORBER W/ ISOLATION VALVE




SOLENOID VALVE




UNION




TEMPERATURE & PRESSURE RELIEF VALVE




HOSE BIBB




RAIN LEADER DISCHARGE SPOUT




FLOW ALARM SWITCH




EMERGENCY EYEWASH UNIT




EMERGENCY SHOWER / EYEWASH UNIT




CLEANOUT




FLOOR CLEANOUT




WALL CLEANOUT




DOUBLE CLEANOUT




FLUSH FLOOR CLEANOUT



WATER PROOF SLEEVE




FLOOR DRAIN (FD-X) OR ROOF DRAIN (RD-X), TYPE INDICATED




DN OR DROP

“DN” DENOTES PIPES WHICH PENETRATE THE FLOOR BELOW. “DROP” DENOTES PIPES WHICH DO NOT.




UP OR RISE

“UP” DENOTES PIPES WHICH PENETRATE THE FLOOR ABOVE. “RISE” DENOTES PIPES WHICH DO NOT.



NEW CONNECTION TO EXISTING



NOTE: THE TERMS “DN” “DROP” “UP” & “RISE” ARE USED TO INDICATE THE VERTICAL DIRECTION IN WHICH A PIPE LINE CONTINUES FROM THE IMAGINARY PLANE OF VIEW. THE TERMS HAVE NO RELEVANCE TO THE DIRECTION OF FLOW WITHIN THE PIPE LINE.

NOTE: THIS IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS. NOT ALL ITEMS SHOWN HERE APPEAR ON THE CONTRACT DRAWINGS.

VERIFY SCALES


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CDM

Camp Dresser & McKee Inc.



Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
PLUMBING SYMBOLS, LEGENDS AND ABBREVIATIONS

Design Review Committee

City Engineer Approval

Update

Mo/Us97/Yr.

Mo/Us97/Yr.

CITY PROJECT NO.

6886-02

Zone Map No.

SHEET OF

DRAWING NO.

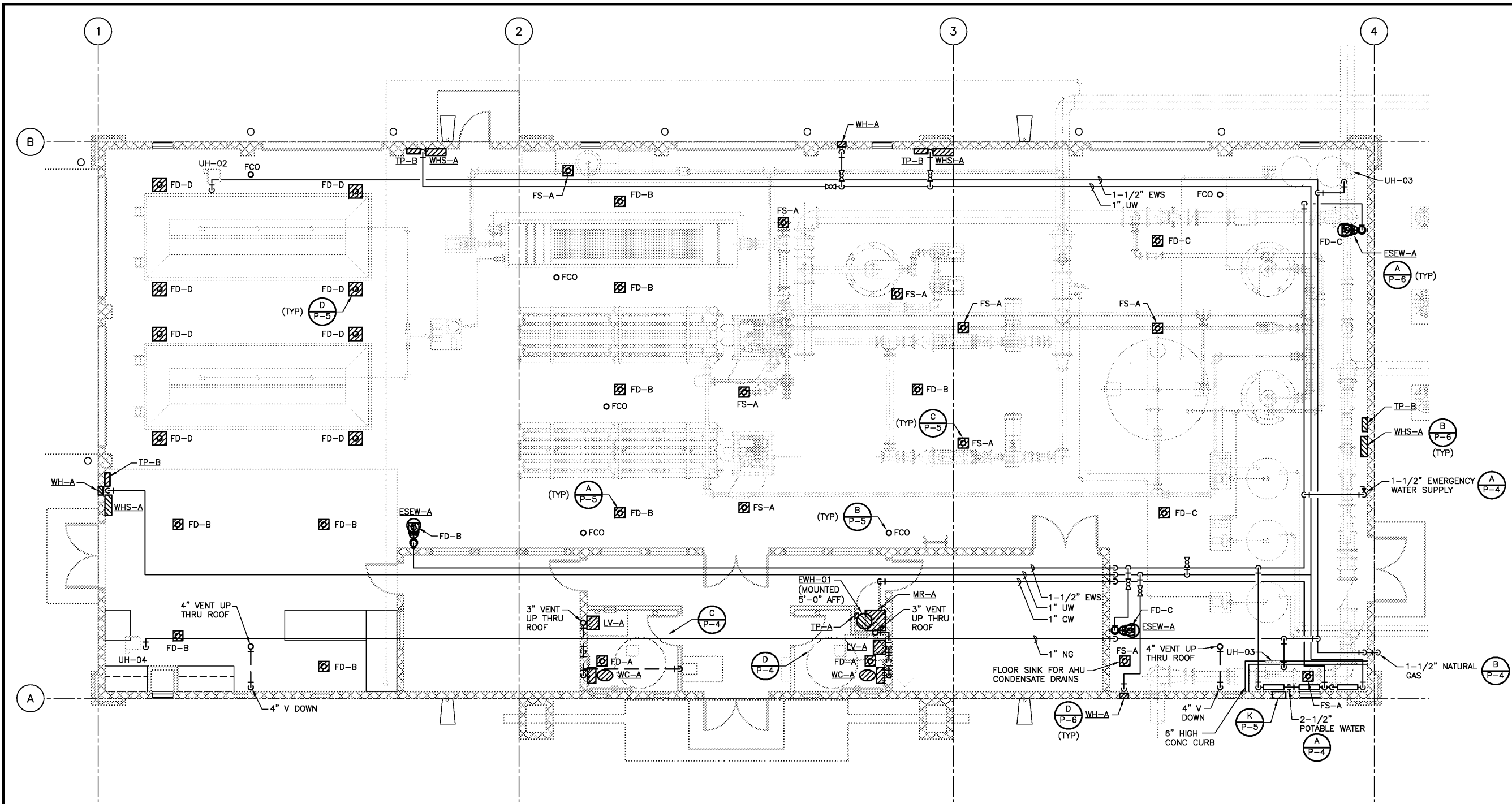
P-1

SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
FIELD NOTES					
NO.	BY	DATE		CONTRACTOR	DATE
				WORK	DATE
				INSPECTION	DATE
				ADJUSTANCE BY	DATE
				VERIFICATION BY	DATE
				REVISIONS	DATE
				CORRECTED BY	DATE
				MICRO FILM INFORMATION	
				RECORDED BY	DATE
				NO.	

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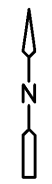
DESIGNED BY: J. IVEY	DATE: 02/05
DRAWN BY: J. IVEY	DATE: 02/05
CHECKED BY: R. AZCARATE	DATE: 02/05

PRELIMINARY - NOT FOR CONSTRUCTION



FLOOR
PLAN
3/16" = 1'-0"

GENERAL NOTES
1. REFER TO DRAWING P-4 FOR
RISER DIAGRAMS AND SCHEDULES.



CDM Camp Dresser & McKee Inc.	
Albuquerque Bernalillo County Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY PLUMBING FLOOR PLAN	
Design Review Committee	City Engineer Approval
DESIGNED BY: J. IVEY	DATE: 02/05
DRAWN BY: J. IVEY	DATE: 02/05
CHECKED BY: R. AZCARATE	DATE: 02/05
CITY PROJECT NO. 6886-02	
Zone Map No.	SHEET OF
DRAWING NO. P-3	

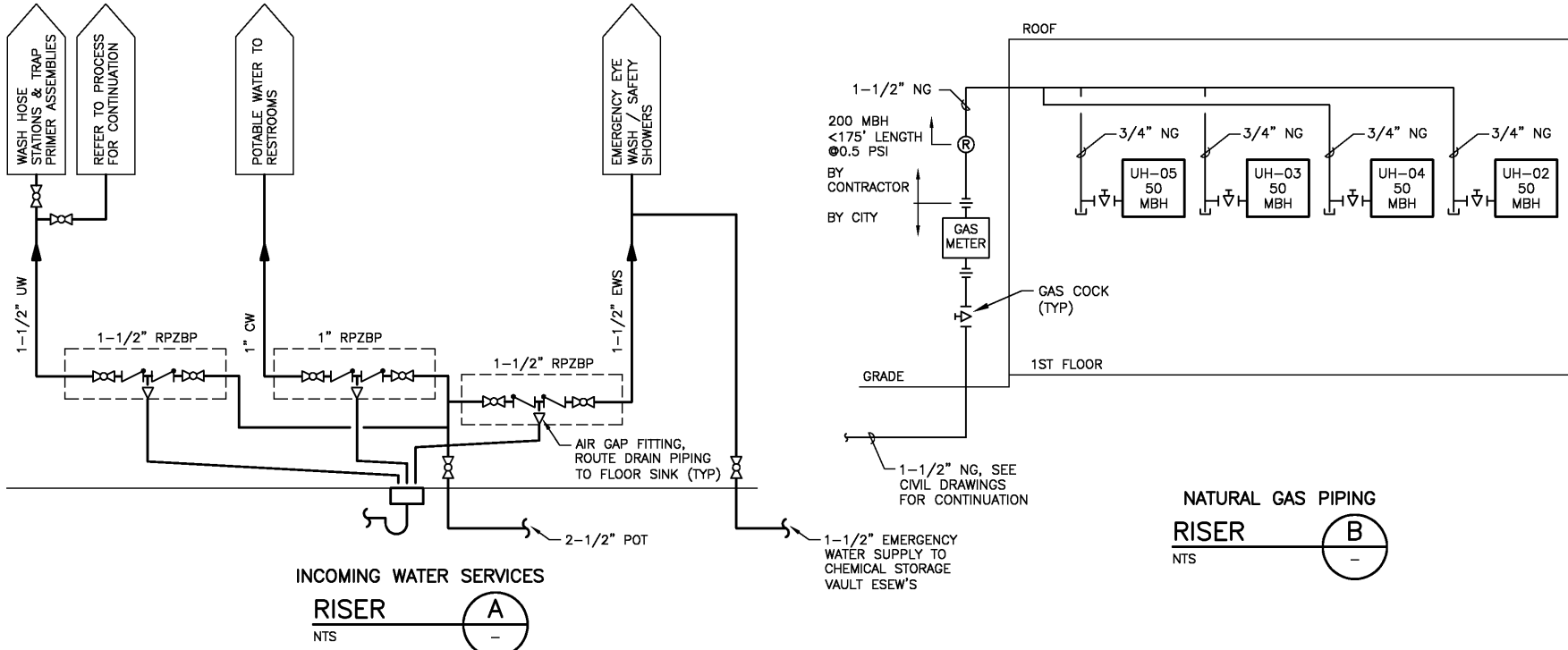
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ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
PRELIMINARY NOT FOR CONSTRUCTION	BY	NO.	DATE	NO.	DATE	CONTRACTOR	DATE
	REVISIONS	NO.	DATE			WORK BY	DATE
	DESIGN					APPROVED BY	DATE
						CORRECTED BY	DATE
						RECORDED BY	DATE

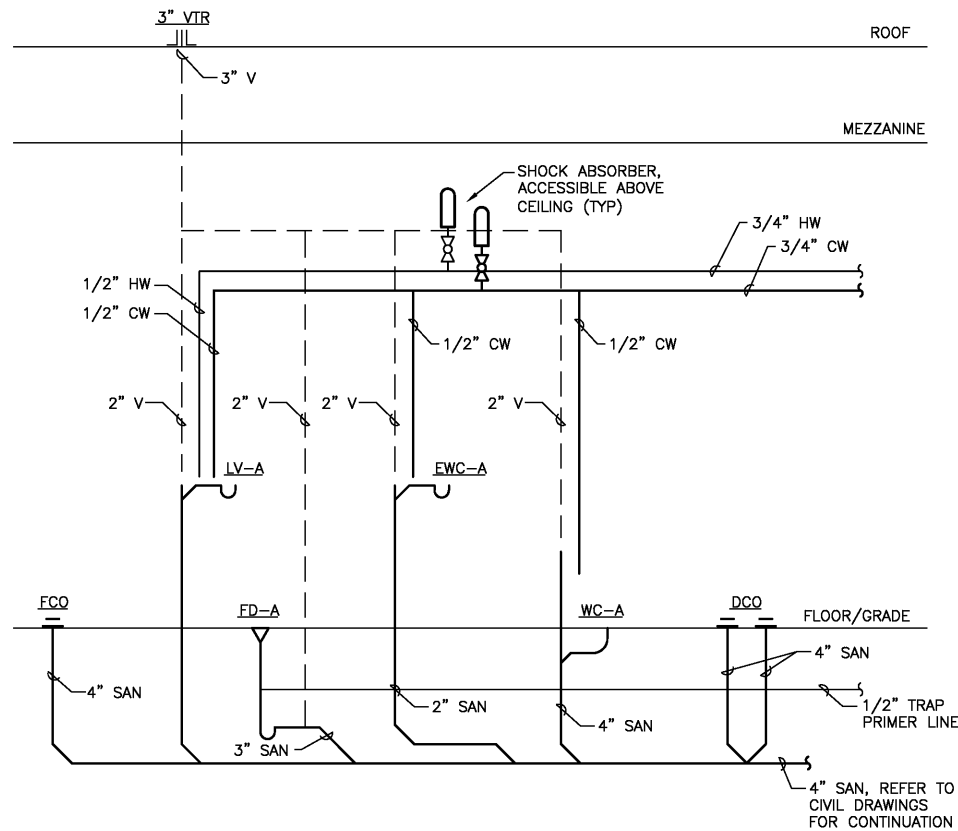
PRELIMINARY - NOT FOR CONSTRUCTION

EMERGENCY SHOWER/EYE WASH UNIT SCHEDULE		
EQUIPMENT TAG NUMBER	ESEW-A	ESEW-B
TYPE	INDOOR	OUTDOOR, FREEZEPROOF
MANUFACTURER	HAWS	HAWS
MODEL NUMBER	8320	8317CTFPB
EMERGENCY ALARM SYSTEM	YES	YES
VOLTS/PHASE/HERTZ	120/1/60	120/1/60
MANUFACTURER	HAWS	HAWS
MODEL NUMBER	9001	9001
REMARKS: 1. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 15450. 2. PROVIDE WITH EMERGENCY ALARM PACKAGE FROM ESEW MANUFACTURER AS INDICATED ABOVE. 3. PROVIDE HOSE AND SPRAY KIT WITH ESEW-A, HAWS MODEL 8901RFK OR EQUAL. 4. PROVIDE ADDITIONAL 4'-0" OF HEAT TRACE WITH OUTDOOR UNIT, ESEW-B.		

ELECTRIC WATER HEATER SCHEDULE	
EQUIPMENT TAG NUMBER	EW-H-01
BUILDING	ARSENIC REMOVAL FACILITY
LOCATION	JANITOR'S CLOSET
TOTAL CAPACITY, GAL	30
KILOWATTS, MAX.	
WATTS PER HEATING ELEMENT	3000
NUMBER OF HEATING ELEMENTS	1
VOLTS/PHASE/HERTZ	480/3/60
RECOVERY RATE, GPH	12
TEMPERATURE RISE, DEG F	100
LEAVING WATER TEMP, DEG F	
MANUFACTURER	A.O. SMITH
MODEL NUMBER	DEL-15
REMARKS: 1. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 15450.	

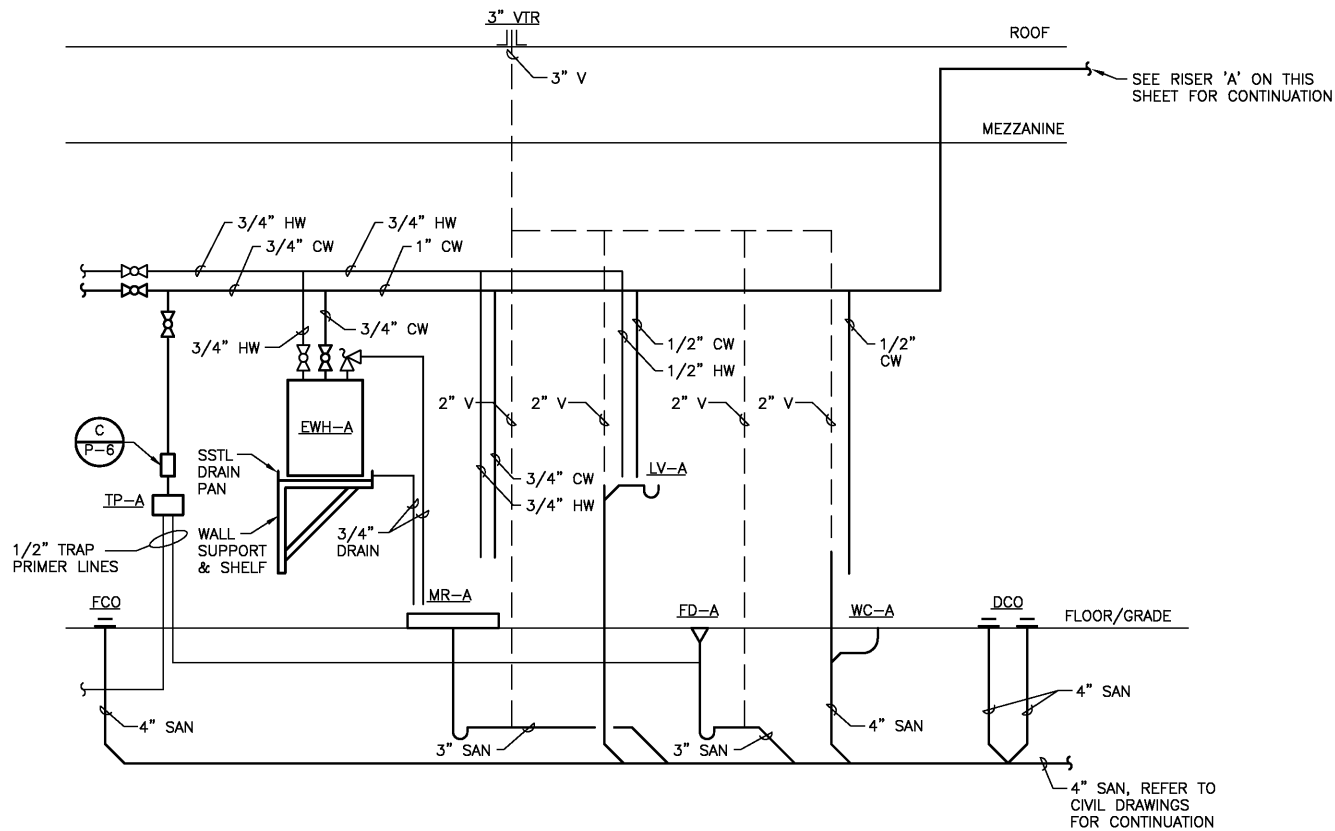


- NOTES:
1. IF THE REDUCED PRESSURE BACKFLOW PREVENTERS DISCHARGE THEIR FULL RATE, A CONTAINMENT CURB SHALL CONTAIN THE FLOW AND A RELIEF SCUPPER SHALL RELIEVE THE DISCHARGE THROUGH THE EXTERIOR WALL AS SHOWN ON THE PLANS.



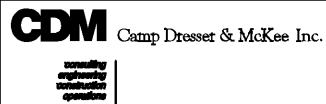
WOMEN'S RESTROOM

RISER
NTS



MEN'S RESTROOM & JANITOR'S CLOSET

RISER
NTS



Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
PLUMBING SCHEDULES AND RISER DIAGRAMS

Design Review Committee City Engineer Approval

Mo/Us97.Yr.	Mo/Us97.Yr.

CITY PROJECT NO. 6886-02 Zone Map No. SHEET OF DRAWING NO. P-4

VERIFY SCALES
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AS BUILT INFORMATION	
CONTRACTOR	DATE
WORK BY	DATE
INSPECTED BY	DATE
ACCEPTANCE BY	DATE
VERIFICATION BY	DATE
REVISIONS	DATE
CORRECTED BY	DATE
MICRO FILM INFORMATION	
RECORDED BY	DATE
NO.	

BENCH MARKS	
NO.	DATE

SURVEY INFORMATION	
FIELD NOTES	DATE
NO.	

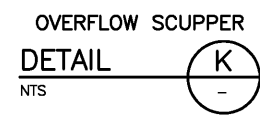
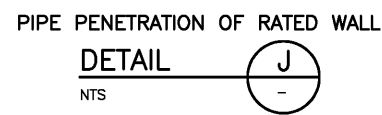
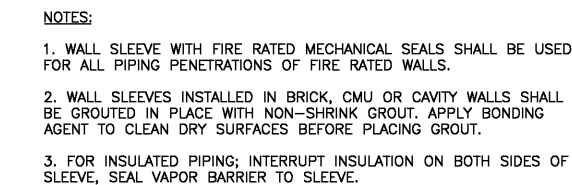
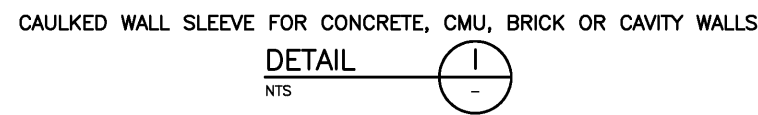
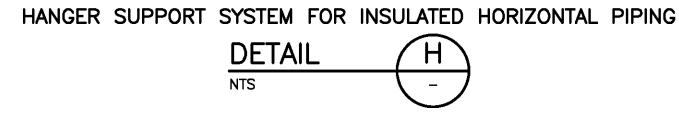
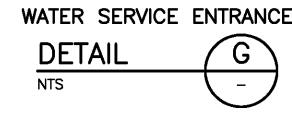
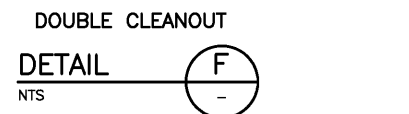
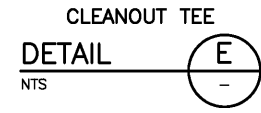
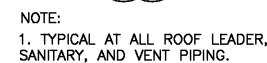
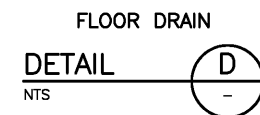
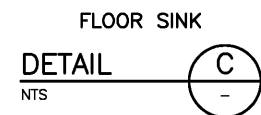
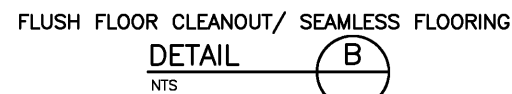
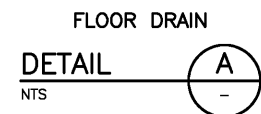
ENGINEER'S SEAL	
NO.	DATE

PRELIMINARY
NOT FOR
CONSTRUCTION

REVISIONS	
NO.	DATE

DESIGNED BY: J. IVEY DATE: 02/05
DRAWN BY: J. IVEY DATE: 02/05
CHECKED BY: R. AZCARATE DATE: 02/05

PRELIMINARY - NOT FOR CONSTRUCTION



PRELIMINARY
NOT FOR
CONSTRUCTION

NO.	DATE	REMARKS	BY
REVISIONS			
DESIGN			
DESIGNED BY: J. IVEY		DATE: 02/05	
DRAWN BY: J. IVEY		DATE: 02/05	
CHECKED BY: R. AZCARATE		DATE: 02/05	


CDM Camp Dresser & McKee Inc.
consulting
engineering
construction
operations

 Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
PLUMBING DETAILS I

Design Review Committee	City Engineer Approval	e	Mo./Day/Yr.	Mo./Day/Yr.
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CITY PROJECT NO.	6886-02	Zone Map No.	SHEET OF DRAWING NO. P-5
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ORDERED BY: R. AZORARTE	DATE: 02/05
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PRELIMINARY - NOT FOR CONSTRUCTION

PLAN OR SECTIONS	SINGLE LINE DIAGRAM	CONTROL SCHEM DIAGRAM	DESCRIPTION
			MOLDED CASE OR INSULATED CASE CIRCUIT BREAKER (3 POLE UNLESS OTHERWISE NOTED) "AF" INDICATES CIRCUIT BREAKER FRAME SIZE "AT" INDICATES CONTINUOUS AMP TRIP SETTING
			FUSE
			600 VOLT. 3 POLE NON-FUSED DISCONNECT (30A AND HORSEPOWER RATED UNLESS OTHERWISE SPECIFIED)
			600 VOLT. 3 POLE FUSED DISCONNECT (30A AND HORSEPOWER RATED UNLESS OTHERWISE SPECIFIED)
			COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC FULL VOLTAGE STARTER WITH 120 VOLT CONTROL POWER TRANSFORMER # CONTROL CIRCUIT ID NUMBER * MAGNETIC TRIP MOTOR CIRCUIT PROTECTOR TRIP RATING ** NEMA CONTACTOR SIZE
			VARIABLE FREQUENCY DRIVE (* = LETTER DESIGNATES SPECIFIC VFD)
			SCR (SILICON CONTROLLED RECTIFIER) TYPE OF VARIABLE SPEED DRIVE
			POWER TRANSFORMER - RATING AS SHOWN
			CURRENT TRANSFORMER (C.T.) - RATING, NUMBER, AND CONNECTION AS SHOWN
			POTENTIAL TRANSFORMER (P.T.) - RATING AND NUMBER AS SHOWN
			DIGITAL DISPLAY METERING DEVICE.
			GROUND
			GROUNDING ROD
			MOTOR CONTROL CENTER * (* = LETTER DESIGNATING SPECIFIC MCC)
			DISTRIBUTION SWITCHBOARD
			LIGHTING PANELBOARD LP# (# DESIGNATES SPECIFIC PANEL)
			INSTRUMENTATION PULL BOX #
			INSTRUMENT MANHOLE (IMH) OR HANDHOLE (IHH) # OR ELECTRICAL MANHOLE (EMH) OR HANDHOLE (EHH) #
			MOTOR, NUMBER INSIDE CIRCLE = HP (P-101=MECHANICAL EQUIPMENT IDENTIFICATION NUMBER)
			UNIT HEATER, NUMBER INSIDE SYMBOL = HEATER LOAD
			SOLENOID VALVE
			MOTORIZED VALVE OR GATE WITH INTEGRAL STARTER. (HP AS RECOMMENDED BY VALVE SUPPLIER)
			LIGHTING NOTES 1) FIRST LETTER OR LETTER & SUBSCRIPT INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE. 2) NUMBER INDICATES CIRCUIT 3) LETTER INDICATES SWITCH CONTROLLING FIXTURE 4) "LP-2" INDICATES THE PANEL THAT POWER IS DERIVED FROM
			FLUORESCENT LIGHTING FIXTURE (TUBE TYPE) SEE LIGHTING NOTES ABOVE
			INDICATES FIXTURE EQUIPPED WITH AN INTEGRAL EMERGENCY BATTERY BALLAST (AS NOTED IN THE FIXTURE SCHEDULE AND RECOMMENDED BY THE MANUFACTURER) SEE LIGHTING NOTES ABOVE
			INCANDESCENT, COMPACT FLUORESCENT OR HID LIGHTING FIXTURE SEE LIGHTING NOTES ABOVE
			WALL MOUNTED LIGHTING FIXTURE SEE LIGHTING NOTES ABOVE
			WALL MOUNTED EXIT LIGHT FIXTURE; ARROW INDICATES DIRECTION OF EGRESS

PLAN OR SECTIONS	SINGLE LINE DIAGRAM	CONTROL SCHEM DIAGRAM	DESCRIPTION
			EMERGENCY LIGHTING UNITS WITH INTEGRAL BATTERY - TWO LIGHTING HEADS SHOWN. SEE LIGHTING NOTES ABOVE
			PHOTOELECTRIC EYE (PHOTOCELL)
			SWITCH CONTROLLING CIRCUIT 1B. (2 INDICATES 2 POLE, 3 OR 4 INDICATES 3 WAY OR 4 WAY SWITCH)
			MOMENTARY CONTACT SWITCH, CENTER OFF
			FRACTIONAL HORSEPOWER MOTOR STARTING SWITCH W/OVERLOADS UNLESS INDICATED OTHERWISE. "P" INDICATES WITH PILOT LIGHT. "2" INDICATES 2 POLE. "4,LP-6" INDICATES CIRCUIT AND PANEL POWERING THE SWITCH.
			DUPLEX 20 AMP GROUNDING TYPE CONVENIENCE OUTLET OF INDICATES GROUND FAULT INTERRUPTER TYPE
			ETHERNET CONECTION OUTLET
			EQUIPMENT LOCATION KEY (NOTE 3) DEVICE LOCATED IN FIELD. DEVICE LOCATED IN PANEL NOTED
			ON - OFF SELECTOR SWITCH
			MOMENTARY TYPE PUSHBUTTON CONTROL (FUNCTION AS LABELED)
			STOP PUSHBUTTON CONTROL STATION MOMENTARY TYPE W/LOCK-OUT DEVICE
			HAND-OFF-AUTOMATIC SELECTOR SWITCH
			LOCAL-REMOTE SELECTOR SWITCH
			CONTROL RELAY # DESIGNATES CONTROL CIRCUIT * SEQUENTIAL PREFIX FOR CIRCUIT IN WHICH DEVICE USED MORE THAN ONCE
			NORMALLY OPEN
			NORMALLY CLOSED
			PUSH TO TEST PILOT LIGHT A = AMBER, G = GREEN, R = RED, ETC.
			PILOT LIGHT, NON-PUSH TO TEST. COLORS SAME AS ABOVE
			TIME DELAY RELAY TDE INDICATES ON DELAY TYPE (TIME DELAY ON ENERGIZATION) TDO INDICATES OFF DELAY TYPE (TIME DELAY ON DE-ENERGIZATION)
			ON DELAY TIMING CONTACT-NORMALLY CLOSED, TIME OPEN (NCTO)
			ON DELAY TIMING CONTACT-NORMALLY OPEN, TIME CLOSE (NOTC)
			OFF DELAY TIMING CONTACT-NORMALLY CLOSED, TIME CLOSE (NCTC)
			OFF DELAY TIMING CONTACT-NORMALLY OPEN, TIME OPEN (NOTO)
			DESIGNATES INSTRUMENT-NOTE 4 & 5 (REFER TO INSTRUMENT LIST & P&ID LEGEND SHEET FOR ADDITIONAL DETAILS)
			LIGHTNING ARRESTOR

PLAN OR SECTIONS	SINGLE LINE DIAGRAM	CONTROL SCHEM DIAGRAM	DESCRIPTION
			FLOW SWITCH # (NO CLOSSES ON INCREASING FLOW)
			FLOW SWITCH # (NC OPENS ON INCREASING FLOW)
			PRESSURE SWITCH # (NO CLOSSES ON RISING PRESSURE)
			PRESSURE SWITCH # (NC OPENS ON RISING PRESSURE)
			POSITION SWITCH # (LIMIT SWITCH). CLOSSES IN HIGH POSITION, IE VALVE FULL OPEN, UNLESS NOTED OTHERWISE ON THE CONTROL SCHEMATIC
			POSITION SWITCH # (LIMIT SWITCH). CLOSSES IN LOW POSITION, IE VALVE FULL CLOSE, UNLESS NOTED OTHERWISE ON THE CONTROL SCHEMATIC
			LEVEL SWITCH # (NO CLOSSES ON RISING LEVEL)
			LEVEL SWITCH # (NC OPENS ON RISING LEVEL)
			JUNCTION BOX (PULL BOX OR CONDUIT FITTING) IN GENERAL, UNLESS SPECIFICALLY NOTED, A PULL FITTING (CONDUIT BODY, IE "T", "X", ETC) MAY BE USED WHERE CONDUIT CONFIGURATION AND NUMBER OF WIRES ALLOWS.
			EXPOSED CONDUIT RUN
			CONCEALED CONDUIT OR GROUND WIRE RUN. (FLOOR, CEILING, WALLS OR UNDERGROUND)
			120, 208, OR 240V CONDUIT RUN. CROSS-HATCHES INDICATES NUMBER OF CONDUCTORS (HOT, NEUTRAL, AND GROUND SHOWN) NO CROSSHATCHES INDICATES 3#12 AWG IN 3/4" CONDUIT. WIRE IS #12 UNLESS NOTED OTHERWISE.
			CONDUIT TURNING UP CONDUIT STUBBED OUT AND CAPPED CONDUIT TURNING DOWN
			HOME RUN TO LIGHT PANEL LP# WITH CIRCUITS 1 AND 3 IN 1" CONDUIT. CONDUIT IS 3/4" UNLESS NOTED OTHERWISE.
			ELECTRICAL CONDUIT IDENTIFICATION: CONDUIT NUMBER PREFIX INDICATES PANEL FROM WHICH CONDUIT RECEIVES POWER. HOME RUN TO MCC B WITH EXPOSED CONDUIT #2 SHOWN. REFER TO CONDUIT SCHEDULE FOR CONDUIT SIZE AND FILL.
			INSTRUMENTATION CONDUIT IDENTIFICATION: I OR J PREFIX REPRESENTS INSTRUMENT CONDUIT. REFER TO CONDUIT SCHEDULE FOR CONDUIT SIZE AND FILL. I - TYPICALLY REPRESENTS A CONDUIT CONTAINING A LOW LEVEL SIGNAL SUCH AS 4-20MA ANALOG, DATA HIGHWAY, ETC. J - TYPICALLY REPRESENTS A CONDUIT CONTAINING 120VAC PLC DIGITAL INPUTS OR OUTPUTS, MISC 120VAC CONTROL ETC. # - TYPICALLY REPRESENTS INSTRUMENT LOOP WITH WHICH CONDUIT IS ASSOCIATED.
			CROSS HATCHING INDICATES REMOVAL OF EXISTING EQUIPMENT
			ALL PANELS, STARTERS, DISCONNECTS, WIRING DEVICES ETC. WITHIN THE ROOM NOTED TO HAVE ENCLOSURES WITH NEMA TYPE # ENCLOSURES (EXCEPT AS SPECIFICALLY NOTED)
			THERMOSTAT (SPECIFIED WITH HVAC UNLESS NOTED OTHERWISE.)

- NOTES:
- THIS SHEET IS A GENERAL ELECTRICAL LEGENDS; ALL SYMBOLS INCLUDED HERE MAY NOT NECESSARILY BE USED ON THE CONTRACT DRAWINGS.
 - NOT USED.
 - THE SYMBOLS ARE USED ON THE CONTROL SCHEMATIC DRAWINGS TO INDICATE THE PHYSICAL LOCATION OF DEVICES. REFER TO THE CONTROL SCHEMATICS FOR SPECIFIC DETAILS.
 - SYMBOL DENOTES A DEVICE INCLUDED ON THE INSTRUMENT LIST OF DIVISION 13300.
 - INSTRUMENT IDENTIFICATION TAG NUMBER. XX DENOTES FUNCTIONAL IDENTIFICATION. (REFER TO P & ID LEGEND FOR INSTRUMENT TAGGING ABBREVIATIONS). ## DENOTES LOOP NUMBER.

PLC INPUT/OUTPUT DEVICES

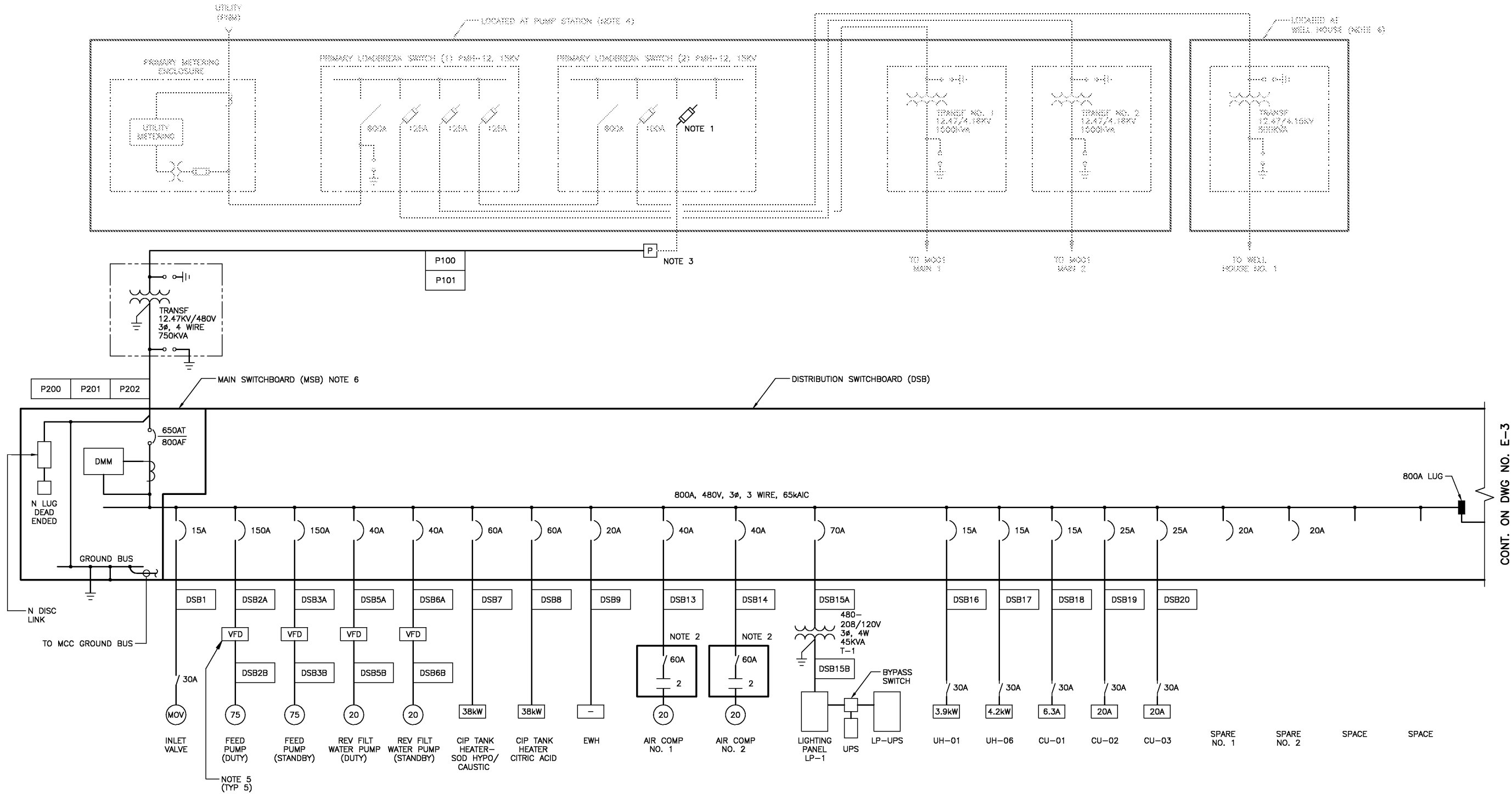
- NORMALLY OPEN CONTROL OUTPUT
- NORMALLY CLOSED CONTROL OUTPUT
- NORMALLY OPEN MAINTAINED CONTROL OUTPUT
- NORMALLY CLOSED MAINTAINED CONTROL OUTPUT
- PULSE OUTPUT PULSE TRAIN UNLESS NOTED
- ANALOG OUTPUT 4-20MA UNLESS NOTED
- ANALOG INPUT 4-20ma UNLESS NOTED
- DIGITAL INPUT

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Albuquerque Bernalillo County Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY ELECTRICAL LEGEND AND ABBREVIATIONS	
Design Review Committee	City Engineer Approval
Mo./Day/Yr.	Mo./Day/Yr.
CITY PROJECT NO. 6886-02	Zone Map No. H-9
SHEET OF	DRAWING NO. E-1

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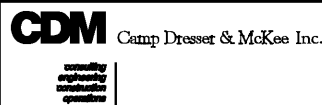
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NOTES:

1. PROVIDE AND INSTALL 100A FUSE FOR EXISTING SWITCH.
2. PACKAGED SKID INCLUDING MOTOR STARTER CONTROLS (WHERE SHOWN) ARE PROVIDED BY THE MF SUPPLIER.
3. INTECEPT EXISTING STUBBED UP CONDUIT AND INSTALL A NEW PULLBOX. PROVIDE NEW PRIMARY CONDUCTORS FROM THE FUSED SWITCH TO THE NEW TRANSFORMER. SIZE OF CONDUIT AND CONDUCTORS INCLUDED IN SECTION 16000, APPENDIX 16000-A.
4. EXISTING SWITCHGEAR SHOWN IS BASED ON INFORMATION SHOWN ON RECORD DWG NO. E5 OF CITY PROJECT NO. 6386.91
5. VFD PROVIDED BY MFS.
6. MAIN SWITCHBOARD SHALL BE SERVICE ENTRANCE RATED.

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Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
SINGLE LINE DIAGRAM - SWITCHBOARD

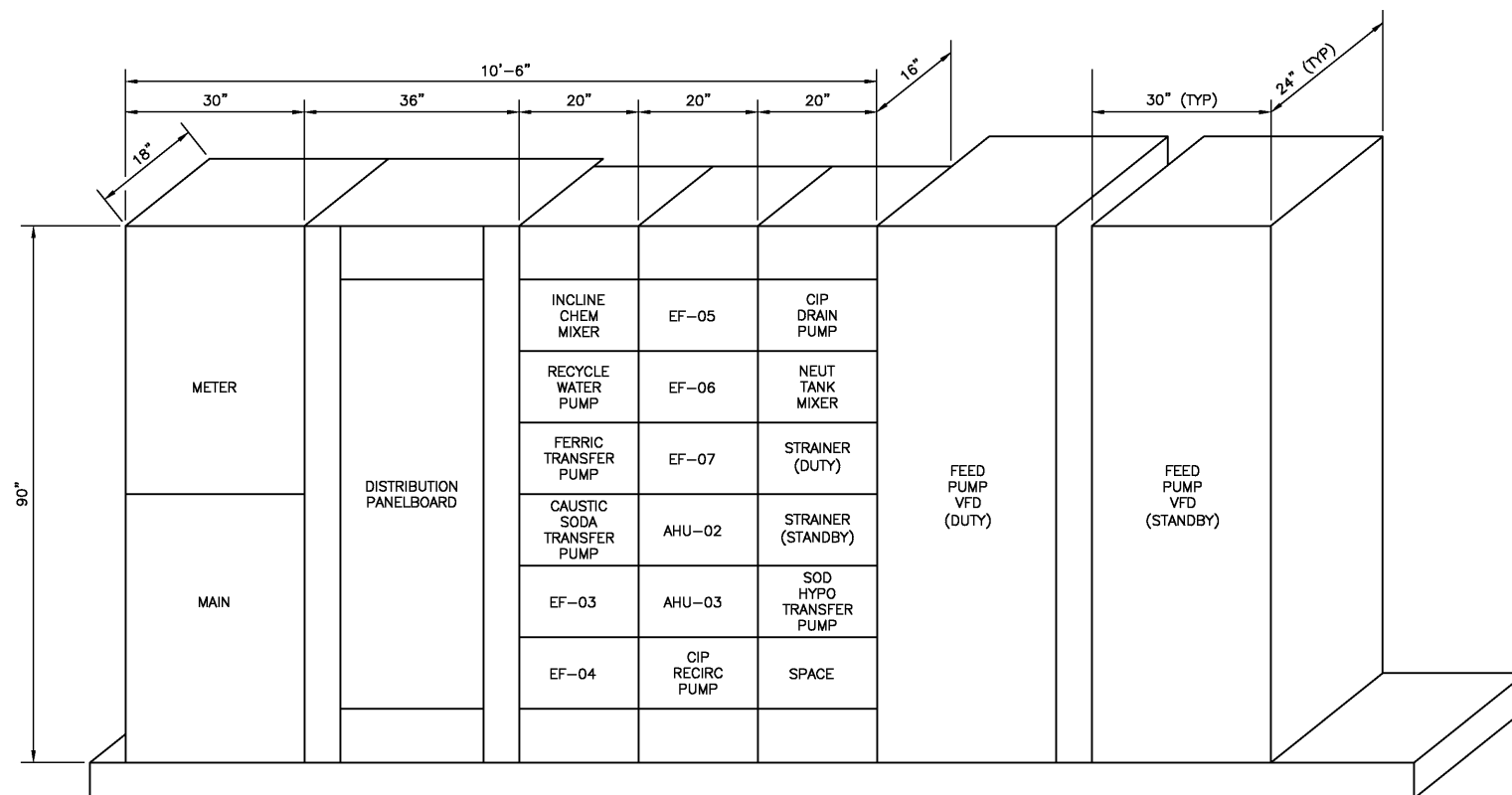
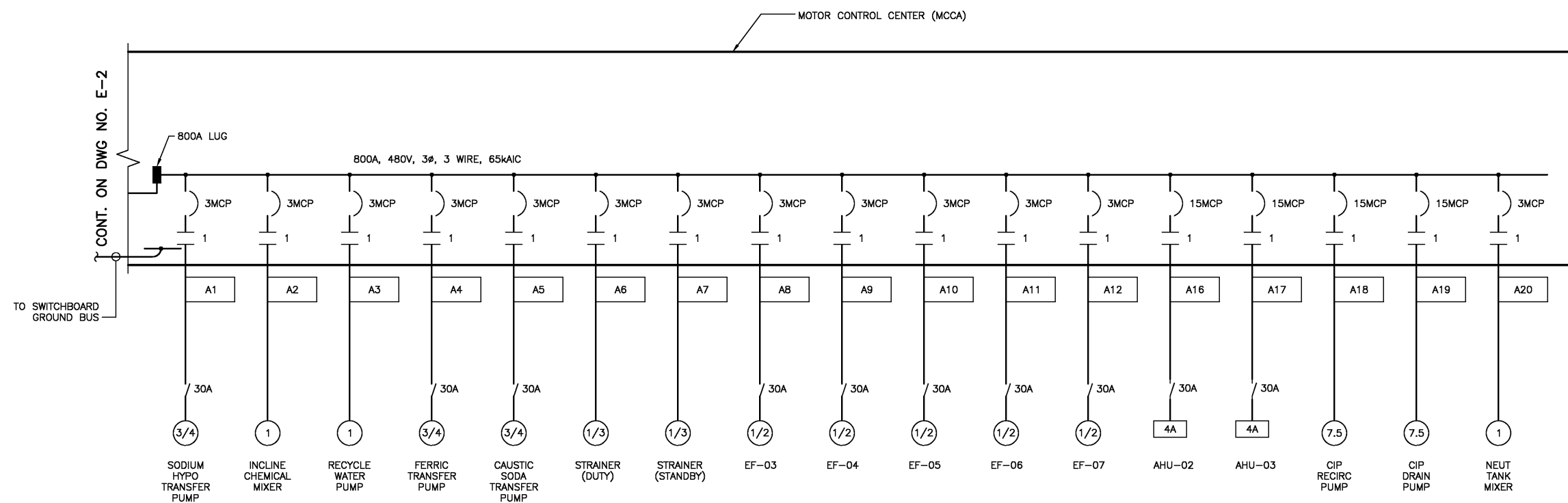
Design Review Committee City Engineer Approval

Mo./Day/Yr.	Mo./Day/Yr.

CITY PROJECT NO. 6886-02 Zone Map No. H-9 SHEET OF DRAWING NO. E-2

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	WORK	NO.	DATE	NO.	DATE	PRELIMINARY NOT FOR CONSTRUCTION	
INSPECTED BY	INSPECTED BY	BY	DATE	BY	DATE		
ACCEPTANCE BY	ACCEPTANCE BY						
VERIFICATION BY	VERIFICATION BY						
RECORDED BY	RECORDED BY					REVISIONS DESIGN	
NO.	NO.						
MICRO FILM INFORMATION		MICRO FILM INFORMATION		MICRO FILM INFORMATION		MICRO FILM INFORMATION	
RECORDED BY	RECORDED BY	NO.	DATE	NO.	DATE	MICRO FILM INFORMATION	
						MICRO FILM INFORMATION	
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						MICRO FILM INFORMATION	

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SWITCHBOARD AND MOTOR CONTROL CENTER (MCCA)

ELEVATION

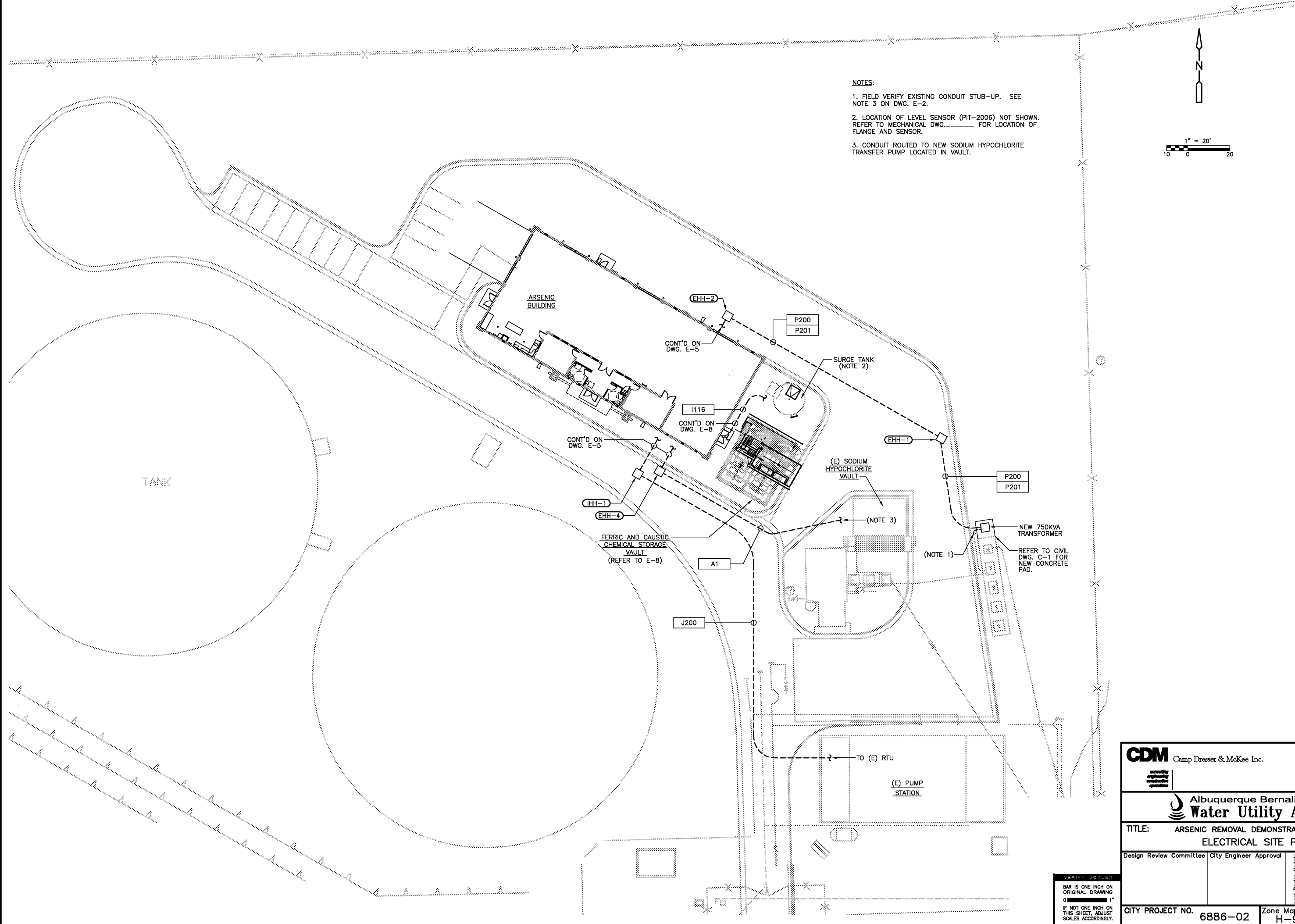
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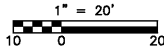
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- NOTES:
1. FIELD VERIFY EXISTING CONDUIT STUB-UP. SEE NOTE 3 ON DWG. E-2.
 2. LOCATION OF LEVEL SENSOR (PIT-2006) NOT SHOWN. REFER TO MECHANICAL DWG._____ FOR LOCATION OF FLANGE AND SENSOR.
 3. CONDUIT ROUTED TO NEW SODIUM HYPOCHLORITE TRANSFER PUMP LOCATED IN VAULT.





Camp Dresser & McKee Inc.



Albuquerque Bernalillo County
Water Utility Authority

TITLE:

ARSENIC REMOVAL DEMONSTRATION FACILITY

ELECTRICAL SITE PLAN

Design Review Committee

City Engineer Approval

Last Design Update

Mo./Day/Yr.

Mo./Day/Yr.

CITY PROJECT NO.

6886-02

Zone Map No.

H-9

SHEET OF

DRAWING NO. E-4

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
PRELIMINARY NOT FOR CONSTRUCTION	NO.	DATE	BY	DATE		CONTRACTOR	DATE
	REMARKS	DESIGN	DATE:	DATE:		WORK REVIEWED BY	DATE
	REVISIONS	DATE:	DATE:			ACCEPTANCE BY	DATE
	DESIGNED BY:	DRAWN BY:	CHECKED BY:			VERIFICATION BY	DATE
	MICRO FILM INFORMATION					CORRECTED BY	DATE

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NOTES:

1. SWITCH FOR BUILDING MEZZANINE LIGHTING. FOR BUILDING MEZZANINE LIGHTING PLAN, SEE DWG E-7.

2. ALL 120VAC LIGHTING FIXTURES AND DUPLEX RECEPTACLES SHALL BE WIRED TO PANELBOARD LP1 UNLESS NOTED OTHERWISE.

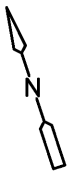
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MEZZANINE
POWER PLAN

1/4" = 1'-0"

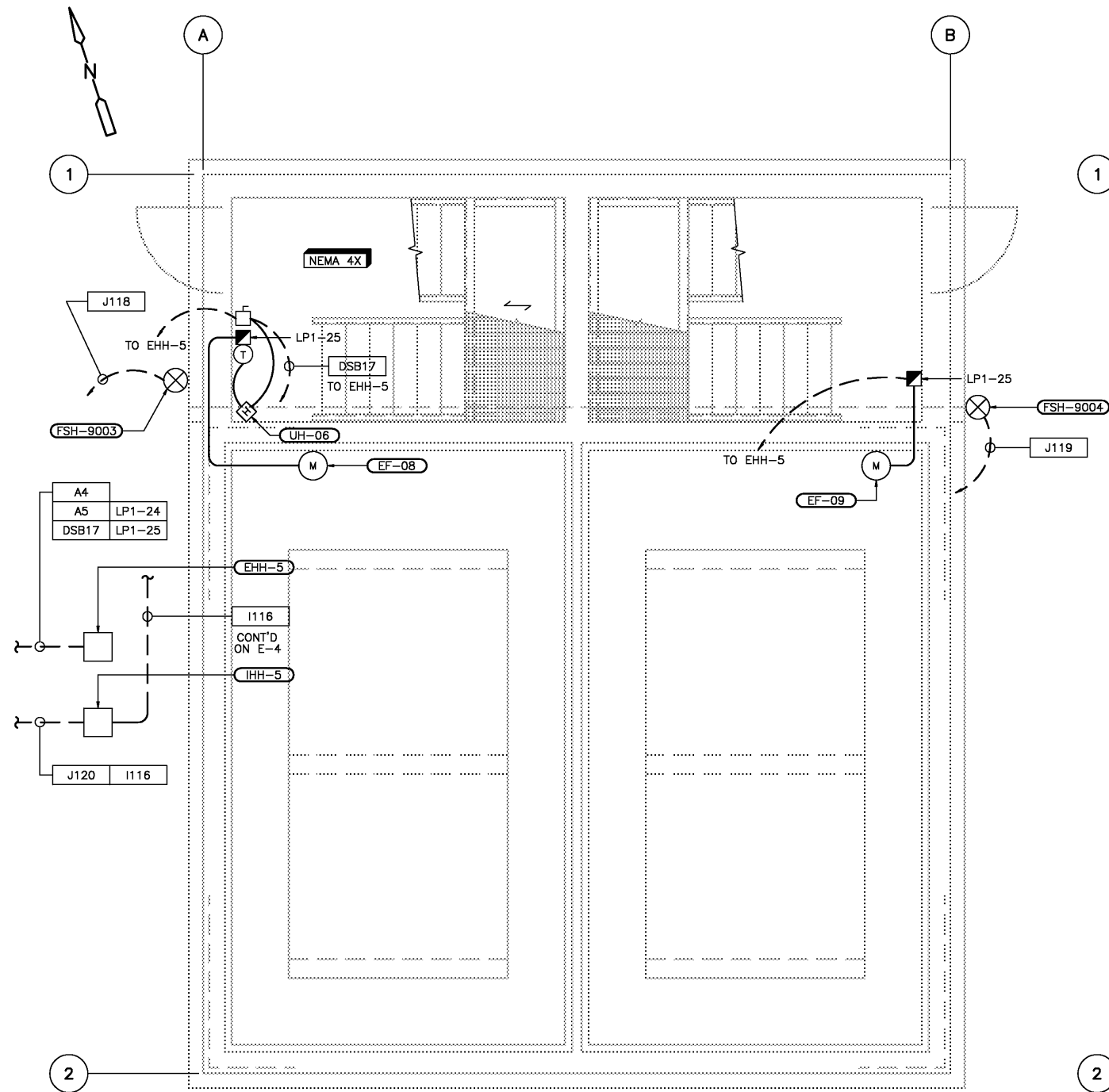


MEZZANINE
LIGHTING PLAN
1/4" = 1'-0"

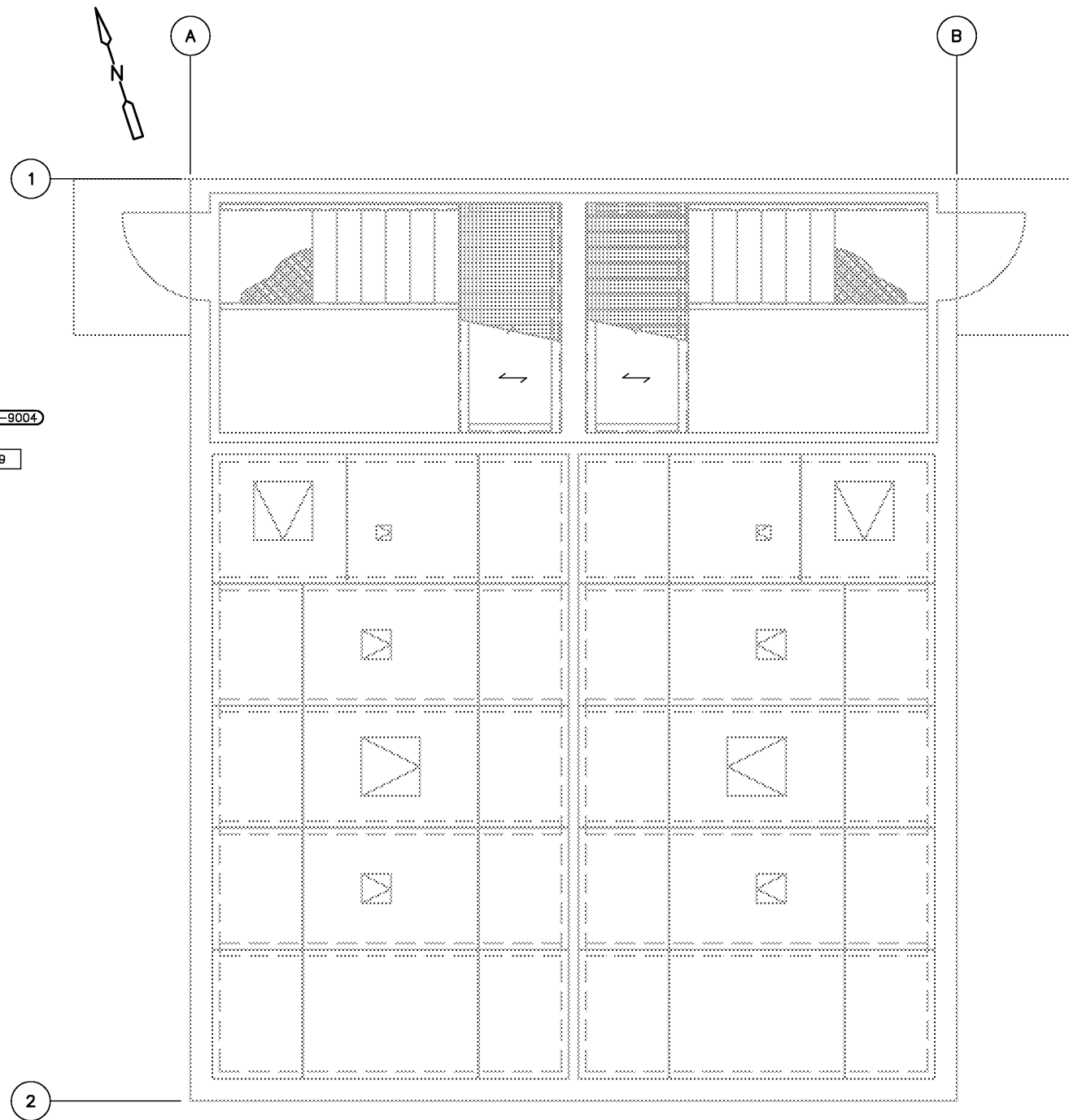
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PLAN • EL 5331.00
POWER PLAN
3/8" = 1'-0"



PLAN • EL 5335.00
LIGHTING PLAN
3/8" = 1'-0"

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CDM Camp Dresser & McKee Inc.	
Albuquerque Bernalillo County Water Utility Authority	
TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY CHEMICAL STORAGE VAULT POWER AND LIGHTING PLANS	
Design Review Committee	City Engineer Approval
Mo./Day/Yr.	Mo./Day/Yr.
DESIGNED BY:	REMARKS
DRAWN BY:	REVISIONS
CHECKED BY:	DESIGN
DATE:	DATE:
DATE:	DATE:
CITY PROJECT NO. 6886-02	Zone Map No. H-9
SHEET OF DRAWING NO. E-8	

SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
NO.	FIELD NOTES	NO.	DATE	CONTRACTOR	DATE
				WORK BY	DATE
				INSPECTED BY	DATE
				ACCEPTANCE BY	DATE
				VERIFICATION BY	DATE
				CONTRACTOR	DATE
				RECORDED BY	DATE
				NO.	DATE

PRELIMINARY — NOT FOR CONSTRUCTION

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FIXTURE SCHEDULE

TYPE	FIXTURE DESCRIPTION	LAMP TYPE	BALLAST TYPE	MAX. INPUT WATTS (INCL. BALLAST)	INPUT VOLTAGE	MOUNTING ARRANGEMENT	FIXTURE CONSTRUCTION NOTES	MANUFACTURER AND MODEL NUMBER	NOTES
A	COMMERCIAL FLUORESCENT	(2) F32, T-8	ELECTRONIC	62	120V	RECESSED	PARABOLIC LOUVERED FLUORESCENT LIGHTING FIXTURE, 12 CELLS.	DAY-BRITE: 2P4GA232-26SL-120-1/2-EB OR EQUAL	PROVIDE WITH EMERGENCY BATTERY BALLAST WHERE NOTED ON PLANS.
B	INDUSTRIAL FLUORESCENT	(2) F32, T-8	ELECTRONIC	61	120V	PENDANT/DIRECT MOUNTING	1'x4" (NOM) HEAVY STEEL HOUSING, REFLECTORS PROVIDE 10% UPLIGHT, WHITE ENAMEL FINISH.	DAY-BRITE: IF232-PR-120-1/2-EB OR EQUAL	PROVIDE WITH CHAIN HANGING ASSEMBLY AND WITH EMERGENCY BATTERY BALLAST WHERE NOTED ON PLANS.
C	INDUSTRIAL HID	250W MH	(CWA) CONSTANT WATTAGE AUTOTRANSFORMER	295	120V	PENDANT MOUNT	INTEGRALLY BALLASTED LOWBAY LUMINAIRE, RUGGED HEAVY DUTY ALUMINUM REFLECTOR, U.L. LISTED, SUITABLE FOR DAMP LOCATIONS.	APPLETON ELECTRIC: LUMENMASTER G-LM61AH-MT OR EQUAL	* INDICATES QUARTZ LAMP
D	INDUSTRIAL HID	90W (T-21) LOW PRESSURE SODIUM	(HPF) HIGH POWER FACTOR	100	120V	WALL MOUNT	INTEGRALLY BALLASTED LOW PRESSURE SODIUM LUMINAIRE, RECTILINEAR SHARP CUTOFF, TOTALLY ENCLOSED, RAIN TIGHT, DUST TIGHT AND CORROSION RESISTANT. U.L. LISTED FOR WET LOCATIONS.	GARDCO LIGHTING: FORM 10 LW14-1-P-90LPS-120-NP-PC OR EQUAL	
E	EXIT SIGN	-	-	-	-	WALL MOUNT	MAINTENANCE FREE, NON-ELECTRIC SELF-LUMINOUS EXIT SIGN, U.L. LISTED, NFPA LIFE SAFETY CODE 101.	ISOLITE: 2040-01-R-20-BA OR EQUAL	
F	COMMERCIAL FLUORESCENT	(2) T-8, U-6	ELECTRONIC	54	120V	RECESSED	2'X2' (NOM) RECESSED STATIC TROFFER FOR GRID INVERTED "I" CEILING, U.L. LISTED.	DAY-BRITE: 2DG231U6-FS01-120-1/2-EB OR EQUAL	PROVIDE WITH EMERGENCY BATTERY BALLAST WHERE NOTED ON PLANS.
G	SELF CONTAINED BATTERY POWERED LIGHT FIXTURE	(2) 7.2W, 6V	-	32	120V	WALL MOUNT	COMPACT ALL METAL HOUSING EMERGENCY LIGHTING FIXTURE, WITH PULSE PLUS CHARGER.	EMERGI-LITE: JSC25-2-FM OR EQUAL	UNIT SHALL BE CAPABLE OF OPERATING FOR 1-1/2 HOURS ON INTERNAL BATTERY
H	COMPACT FLUORESCENT	(2) 17W, T-8	ELECTRONIC	36	120V	WALL MOUNT	ARCHITECTURAL LIGHTING FIXTURE FOR HIGH ABUSE ENVIRONMENTS, U.L. LISTED FOR WET LOCATIONS.	KENALL: FS824R-2TB-PIA-LG-17- 2-120-PC OR EQUAL	
J	COMPACT FLUORESCENT	32W, PLT	ELECTRONIC	34	120V	CEILING MOUNT	ARCHITECTURAL LIGHTING FIXTURE FOR HIGH ABUSE ENVIRONMENTS, U.L. LISTED FOR WET LOCATIONS.	KENALL: MR13FD-PP-LG-32P-1-120-BPC OR EQUAL	

PANELBOARD LP1													Location: ELECTRICAL ROOM					
225 Amp Bus Rating		225 Amp Main C/B		65 kA Short Circuit Rating		42 Poles Surface Mounted												
208/120 Volts 3 Phase 4 Wire 60 Hz.				Electronic Grade														
Circuit	DESCRIPTION			Phase A	Phase B	Phase C	Breaker Amp/ Poles	Notes	Circuit	DESCRIPTION			Phase A	Phase B	Phase C	Breaker Amp/ Poles	Notes	
1	TREATMENT PROCESS AREA			1180			20/1		2	EXTERIOR LIGHTING			368			20/1		
3	TREATMENT PROCESS AREA				1475		20/1		4	EXTERIOR LIGHTING				408		20/1		
5	TREATMENT PROCESS AREA					1475	20/1		6	TREATMENT PROCESS AREA RECPTS					1080	20/1	2	
7	ELECTRICAL RM RECPT			1260			20/1	2	8	TREATMENT PROCESS AREA RECPTS			1260			20/1	2	
9	ELECTRICAL RM RECPT				1260		20/1	2	10	OBSERVATION AREA RECPT				720		20/1		
11	AHU-01					3050	60/3		12	OBSERVATION AREA RECPT					720	20/1		
13	AHU-01			3050			60/3		14	OBSERV. AREA / WOMEN LITES			588			20/1		
15	AHU-01				3050		60/3		16	ENTRY / MEZZ LITES				676		20/1		
17	HVAC CONTROL PANEL					250	20/1		18	ELEC. RM / MENS LITES					345	20/1		
19	RESTROOM FANS			100			20/1		20	CHEM DAY TANK LEVEL TRANS			150			20/1		
21	UH-02, UH-04				640		20/1		22	CITRIC METERING PUMP				500		20/1		
23	UH-03, UH-05					640	20/1		24	CHEM STOR VAULT LTG AND RECEPT					1500	20/1		
25	EF-08, EF-09			720			20/1		26	AIR RECEIVER TANK			200			20/1		
27	POLYMER SYSTEM				1000		20/1		28	ROLL UP DOOR MOTOR				700		20/1		
29	CAUSTIC SODA SYSTEM					1120	20/1		30	ROLL UP DOOR MOTORS					1400	20/1		
31	FERRIC CHLORIDE SYSTEM			1120			20/1		32	ROLL UP DOOR MOTORS			1400			20/1		
33	SODIUM HYPO SYSTEM				1120		20/1		34	HVAC CP				150		20/1		
35	UPS FEED					2500	30/1		36	SPARE						20/1		
37	SPARE						20/1		38	SPARE						20/1		
39	SPARE						20/1		40	SPARE						20/1		
41	SPARE						20/1		42	SPARE						20/1		
Total KVA				7430	8545	9035				Total KVA				3966	3154	5045		
										Total Phase KVA				11396	11699	14080		
										Total Connected KVA						37175		
Notes:									Notes cont:									
1. Provide Locking Hardware									5.									
2. 5 ma Ground Fault Interrupter Circuit Breaker									6.									
3. 30 ma Ground Fault Circuit Breaker for Equipment Protection Only (Heat Trace)									7.									
4. Provide Locking Hardware & Paint Breaker Handle Red for Fire Alarm Circuit									8.									

NOTES:
1. REFER TO SECTION 16000 APPENDIX 16000-A FOR CONDUIT SCHEDULE.

CDM

Camp Dresser & McKee Inc.

Albuquerque Bernalillo County

Water Utility Authority

TITLE:

ARSENIC REMOVAL DEMONSTRATION FACILITY SCHEDULES

Design Review Committee

City Engineer Approval

Mo./Day/Yr.

Mo./Day/Yr.

CITY PROJECT NO.

6886-02

Zone Map No.

H-9

SHEET OF

DRAWING NO.

E-10

VERIFIED SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DESIGNED BY:

DRAWN BY:

CHECKED BY:

DATE:

DATE:

DATE:

REMARKS

REVISIONS

DESIGN

BY

NO.

DATE

PRELIMINARY
NOT FOR
CONSTRUCTION

PRELIMINARY - NOT FOR CONSTRUCTION

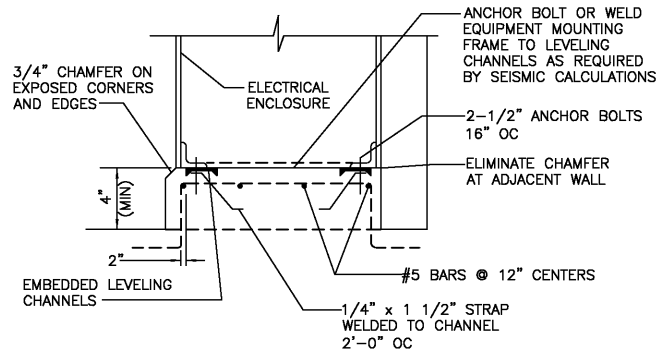
AS BUILT INFORMATION	
CONTRACTOR	NO.
WORK	DATE
INSPECTED BY	DATE
ACCEPTANCE BY	DATE
VERIFICATION BY	DATE
COMPLETION BY	DATE
MICRO FILM INFORMATION	
RECORDED BY	DATE
NO.	

BENCH MARKS

SURVEY INFORMATION

ENGINEER'S SEAL

N:\A0002000\31027\44236\10-ELEC\44236-SF-E11 02/22/05 10:19 jacksonld XREFS; X_COT_BORDER

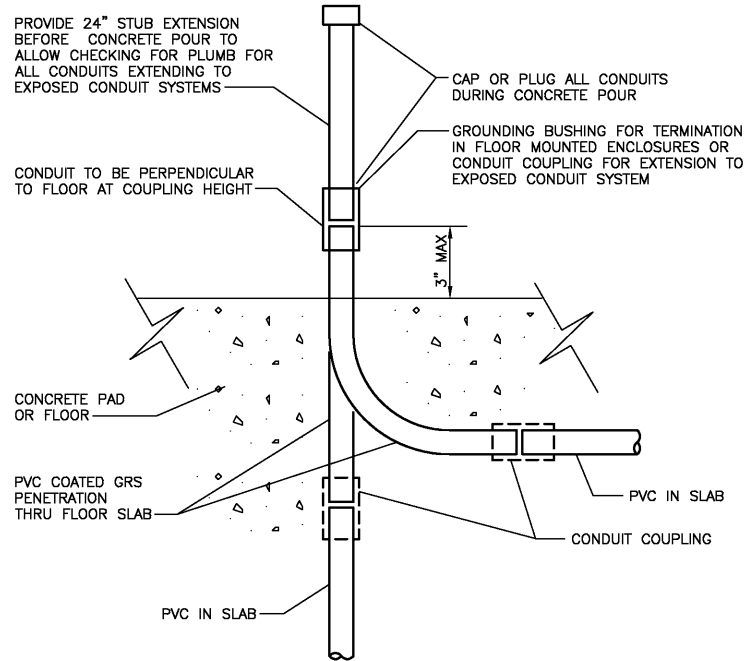


ELECTRICAL ENCLOSURE BASE

DETAIL

E101

NTS



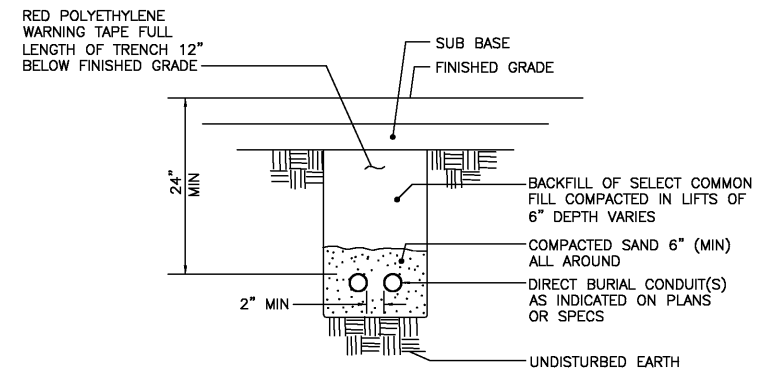
NOTE: APPLICABLE IN ALL AREAS UNLESS NOTED OTHERWISE

CONDUIT STUB UP

DETAIL

E102

NTS

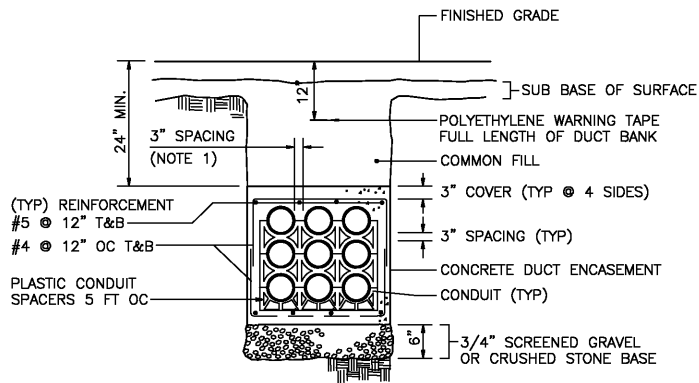


DIRECT BURIAL CONDUIT

DETAIL

E103

NTS



NOTE:

1. TYPICAL EXCEPT AS SPECIFIED FOR MEDIUM OR HIGH VOLTAGE AND FOR INSTRUMENTATION CONDUITS.

UNDERGROUND DUCT BANK

DETAIL

E104

NTS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CDM Camp Dresser & McKee Inc.

Albuquerque Bernalillo County
Water Utility Authority

TITLE: ARSENIC REMOVAL DEMONSTRATION FACILITY
STANDARD ELECTRICAL DETAILS

Design Review Committee City Engineer Approval

Mo./Day/Yr. Mo./Day/Yr.

Least Design Update

CITY PROJECT NO. 6886-02

Zone Map No. H-9

SHEET OF
DRAWING NO. E-11

SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
NO.	FIELD NOTES	DATE	BY	CONTRACTOR	DATE
				WORK BY	DATE
				INSPECTOR'S	DATE
				ACCEPTANCE BY	DATE
				VERIFICATION BY	DATE
				CONTRACTOR'S	DATE
				RECORDED BY	DATE
				NO.	DATE

ENGINEER'S SEAL
PRELIMINARY
NOT FOR
CONSTRUCTION

NO.	DATE	REMARKS	BY
		DESIGN	
		REVISIONS	
		DESIGN	
		DATE:	DATE:
		DRAWN BY:	CHECKED BY:

PRELIMINARY - NOT FOR CONSTRUCTION