

**APPENDIX K – GROUNDWATER TREATMENT SYSTEM
DESIGN DRAWINGS**

CIMARRON

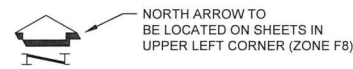
PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA TREATMENT FACILITY AND BURIAL AREA-1

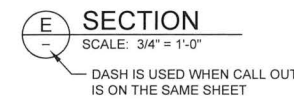
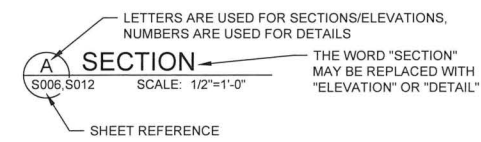
ENVIRONMENTAL PROPERTY MANAGEMENT

OKLAHOMA CITY, OKLAHOMA

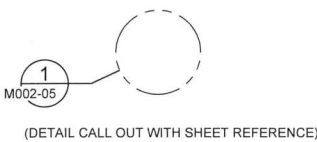
GENERAL SYMBOL LEGEND



DEMOLITION PLAN AT ELEVATION (-)10'-0"
SCALE: 1/4" = 1'-0"



1 ASSEMBLY/DETAIL
SCALE: 1/4"=1'-0"



X REVISION TRIANGLE (X INDICATES REVISION NUMBER)

H-# HOLD TAG

GENERAL NOTES:

- 1 FLAG NOTE EXAMPLE.
- 2 GENERAL NOTE EXAMPLE.

DRAWING INDEX

INDEX AND GENERAL SYMBOLS

WATF SITE
K-EPM-DWG-C-101
K-EPM-DWG-C-110
K-EPM-DWG-C-111
K-EPM-DWG-C-112
K-EPM-DWG-C-113
K-EPM-DWG-C-120
K-EPM-DWG-C-130
K-EPM-DWG-C-150

(2 SHEETS)

WATF BUILDING
K-EPM-DWG-S-101
K-EPM-DWG-S-110
K-EPM-DWG-S-114
K-EPM-DWG-S-115

(2 SHEETS)

(2 SHEETS)

K-EPM-DWG-A-100
K-EPM-DWG-A-110
K-EPM-DWG-A-120

(2 SHEETS)

(3 SHEETS)

K-EPM-DWG-E-101
K-EPM-DWG-E-110
K-EPM-DWG-E-115
K-EPM-DWG-E-120
K-EPM-DWG-E-130

(3 SHEETS)

K-EPM-DWG-J-110
K-EPM-DWG-J-115

K-EPM-DWG-M-100
K-EPM-DWG-M-120

WATF PROCESS SUMMARY

K-EPM-DWG-P-001
K-EPM-DWG-P-110
K-EPM-DWG-P-111

(2 SHEETS)

(2 SHEETS)

WATF IX TREATMENT

K-EPM-DWG-G-110

K-EPM-DWG-M-110

(2 SHEETS)

K-EPM-DWG-P-115

(3 SHEETS)

WATF SPENT RESIN HANDLING

K-EPM-DWG-G-120
K-EPM-DWG-G-121

K-EPM-DWG-S-120

(5 SHEETS)

K-EPM-DWG-P-125

DRAWING INDEX AND GENERAL SYMBOLS

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WESTERN AREA TREATMENT FACILITY SITE UTILITY PLAN
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WESTERN AREA TREATMENT FACILITY STRUCTURAL DETAILS

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WESTERN AREA TREATMENT FACILITY ELEVATIONS AND SECTIONS
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WESTERN AREA TREATMENT FACILITY BUILDING POWER PLAN
WESTERN AREA TREATMENT FACILITY RECEPTACLE AND LIGHTING PLAN
WESTERN AREA TREATMENT FACILITY DETAILS AND SECTIONS

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WESTERN AREA TREATMENT FACILITY RESIN HANDLING PROCESS FLOW DIAGRAM

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WESTERN AREA TREATMENT FACILITY URANIUM TRAIN SKID ARRANGEMENT

WESTERN AREA TREATMENT FACILITY P&ID URANIUM IX TREATMENT

WESTERN AREA TREATMENT FACILITY GENERAL ARRANGEMENT SPENT RESIN HANDLING
WESTERN AREA TREATMENT FACILITY SPENT RESIN HANDLING SECTIONS

WESTERN AREA TREATMENT FACILITY SPENT RESIN HANDLING MEZZANINE

WESTERN AREA TREATMENT FACILITY P&ID SPENT RESIN HANDLING

WATF BIODENITRIFICATION AND SOLIDS HANDLING

K-EPM-DWG-G-140
K-EPM-DWG-G-141

5600117085-WWP-PX-PID-P001-00
5600117085-WWP-PX-PID-P002-00
5600117085-WWP-PX-PID-P003-00
5600117085-WWP-PX-PID-P004-00

5600117085-WWP-PX-PFD-P100-00
5600117085-WWP-PX-PFD-P101-00
5600117085-WWP-PX-PFD-P120-00
5600117085-WWP-PX-PFD-P121-00

5600117085-WWP-PX-PID-P200-00
5600117085-WWP-PX-PID-P201-00
5600117085-WWP-PX-PID-P203-00
5600117085-WWP-PX-PID-P204-00
5600117085-WWP-PX-PID-P206-00
5600117085-WWP-PX-PID-P207-00
5600117085-WWP-PX-PID-P210-00
5600117085-WWP-PX-PID-P211-00
5600117085-WWP-PX-PID-P213-00
5600117085-WWP-PX-PID-P214-00
5600117085-WWP-PX-PID-P215-00
5600117085-WWP-PX-PID-P400-00
5600117085-WWP-PX-PID-P401-00
5600117085-WWP-PX-PID-P402-00
5600117085-WWP-PX-PID-P404-00
5600117085-WWP-PX-PID-P405-00
5600117085-WWP-PX-PID-P406-00

WATF SECURED STORAGE FACILITY

K-EPM-DWG-S-170

K-EPM-DWG-S-171

K-EPM-DWG-A-170

K-EPM-DWG-E-170

K-EPM-DWG-M-170

BURIAL AREA #1

K-EPM-DWG-C-201
K-EPM-DWG-C-210
K-EPM-DWG-C-220
K-EPM-DWG-C-230

K-EPM-DWG-S-201
K-EPM-DWG-S-210

K-EPM-DWG-G-200
K-EPM-DWG-G-220

K-EPM-DWG-E-201
K-EPM-DWG-E-210

K-EPM-DWG-M-210

(2 SHEETS)

(2 SHEETS)

K-EPM-DWG-P-210
K-EPM-DWG-P-215

(3 SHEETS)

WESTERN AREA TREATMENT FACILITY BIODENITRIFICATION AND SOLIDS HANDLING PLAN WESTERN AREA TREATMENT FACILITY BIODENITRIFICATION & SOLIDS HANDLING SECTIONS

LEGEND SHEET (1 OF 4)
LEGEND SHEET (2 OF 4)
LEGEND SHEET (3 OF 4)
LEGEND SHEET (4 OF 4)

PFD BIODENITRIFICATION TREATMENT SYSTEM
PFD SOLIDS HANDLING SYSTEM
PFD MASS BALANCE - PROCESS
PFD MASS BALANCE - CHEMICALS

P&ID BUFFER TANK AND TRANSFER PUMP
P&ID MBBR REACTOR 1A AND 1B
P&ID MBBR REACTOR 2
P&ID FLOCCULATION TANK
P&ID DRUM FILTER
P&ID TREATED WATER SUMP AND PUMP
P&ID BACKWASH SUMP AND PUMP
P&ID SLUDGE THICKENER AND FILTER PRESS FEED PUMP
P&ID SLUDGE THICKENER BLOWER
P&ID FILTER PRESS
P&ID AREA SUMP AND PUMP
P&ID METHANOL STORAGE TANK AND DOSING PUMP
P&ID MICRONUTRIENTS DOSING PUMP
P&ID PHOSPHORIC ACID DOSING PUMP
P&ID FERRIC CHLORIDE DOSING PUMPS
P&ID DRUM FILTER EMULSION POLYMER SYSTEM
P&ID SLUDGE THICKENER EMULSION POLYMER SYSTEM

SECURED STORAGE FACILITY FOUNDATION PLAN AND NOTES
SECURED STORAGE FACILITY FOUNDATION SECTIONS AND DETAILS

SECURED STORAGE FACILITY ARCHITECTURAL PLAN

SECURED STORAGE FACILITY POWER & LIGHTING PLAN

SECURED STORAGE FACILITY MECHANICAL PLAN

CIVIL SYMBOLS, NOTES, AND ABBREVIATIONS
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BURIAL AREA #1 SITE GRADING AND UTILITY PLAN
BURIAL AREA #1 CIVIL DETAILS

STRUCTURAL NOTES, AND ABBREVIATIONS
BURIAL AREA #1 STRUCTURAL FOUNDATION PLAN VIEWS

BURIAL AREA #1 GENERAL ARRANGEMENT PLAN
BURIAL AREA #1 GENERAL ARRANGEMENT SECTIONS

ELECTRICAL SYMBOLS, NOTES, AND ABBREVIATIONS
BURIAL AREA #1 SINGLE LINE DIAGRAM

BURIAL AREA #1 URANIUM IX TRAIN SKID ARRANGEMENT

BURIAL AREA #1 PROCESS FLOW DIAGRAM
BURIAL AREA #1 PROCESS P&ID

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DRAWN BY S MOORE CHECKED BY J LUEY PROJECT MANAGER T BACHART	DATE COMPANY VNSP S VNSP S VNSP S	CIMARRON PUMP AND TREAT SYSTEM PROJECT DRAWING INDEX AND GENERAL SYMBOLS	SCALE NONE	DWG NO K-EPM-DWG-G-001	REV C
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K-EPM-DWG-G-001 ISH 1 OF 1 REV C

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GENERAL NOTES:

1. CONTRACTOR SHALL HAVE A FULL SET OF THE CURRENT APPROVED CONSTRUCTION DOCUMENTS INCLUDING ANY APPROVED CHANGE DOCUMENTATION ON THE PROJECT AT ALL TIMES.
2. CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OR PROPER RESETTING OF ALL EXISTING STRUCTURES, MONUMENTS AND FACILITIES UNLESS OTHERWISE NOTED ON THE PLANS. ANY EXISTING STRUCTURES, MONUMENTS, OR FACILITIES THAT ARE DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN ORIGINAL AT CONTRACTOR'S EXPENSE.
3. ANY DEVIATION FROM THESE PLANS WITHOUT PRIOR APPROVAL FROM THE ENGINEER AND OWNER SHALL BE AT THE CONTRACTOR'S OWN RISK AND EXPENSE.
4. SITE CONDITIONS SHALL BE CONFIRMED BY CONTRACTOR PRIOR TO STARTING WORK.
5. IT IS CONTRACTOR'S RESPONSIBILITY TO CONTACT UTILITIES LOCATE PROVIDER TO IDENTIFY UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
6. EROSION AND SEDIMENT CONTROL BMP'S INSTALLATION AND MAINTENANCE IS THE RESPONSIBILITY OF CONTRACTOR THROUGHOUT THE DURATION OF THE CONSTRUCTION ACTIVITIES.
7. CONTRACTOR SHALL MAINTAIN CONSTRUCTION REDLINES TO DOCUMENT AS-BUILT CONDITION. REDLINES WILL BE AVAILABLE FOR ENGINEERING REVIEW AT ALL TIMES. AT THE COMPLETION OF CONSTRUCTION ACTIVITIES REDLINES SHALL BE DELIVERED TO ENGINEER.

ABBREVIATIONS:

BMP	BEST MANAGEMENT PRACTICES
EL	ELEVATION
EP	EDGE OF PAVEMENT
FG	FINISHED GRADE
FF	FINISHED FLOOR
GB	GRADE BREAK
LF	LINEAR FEET
R	RADIUS
RG	ROUGH GRADE
TOE	TOE OF SLOPE
TOF	TOP OF FOUNDATION
TOP	TOP OF SLOPE

LEGEND:

	MINOR EXISTING CONTOUR
	MAJOR EXISTING CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	ELECTRICAL CONDUIT/CABLE
	COMMUNICATION CONDUIT/CABLE
	FIBER OPTIC CABLE
	DOMESTIC WATER LINE
	SANITARY SEWER LINE
	FENCE LINE
	GRADE BREAK
	ANGULAR STONE
	CONCRETE
	TRUEGRID PERMABLE PAVERS
	GRAVEL
	COMPACTED SOIL OR STRUCTURAL FILL
	ELECTRICAL POLE
	DOMESTIC WATER VALVE
	BACK FLOW PREVENTER
	FIRE HYDRANT
	SITE ELECTRICAL NOTES
	COMMUNICATION NOTES
	SANITARY SEWER NOTES
	DOMESTIC WATER NOTES

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PROJECT: D NELSON DESIGNER: D NELSON CHECKER: R RASMUSSEN PROJECT MANAGER: J LUEY	DATE: _____ REVISIONS: _____ REVISIONS: _____ REVISIONS: _____ REVISIONS: _____	CIMARRON PUMP AND TREAT SYSTEM PROJECT CIVIL SYMBOLS, NOTES AND ABBREVIATIONS	DWG NO: K-EPM-DWG-C-101 SHEET 1 OF 1
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DWG NO	TITLE	REF NUMBER	TITLE	INFO	REV NO	DESCRIPTION	REV BY	DATE	ENGR	COMPANY
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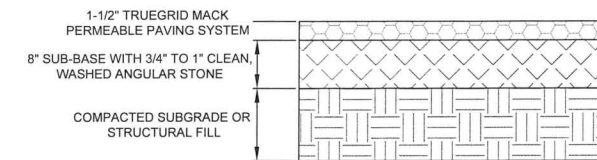
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GENERAL NOTES:

1. SEE K-EPM-DWG-C-112 FOR SITE GRADING PLAN.
2. SEE K-EPM-DWG-C-113 FOR SITE UTILITY PLAN.
3. SEE K-EPM-DWG-S-101 FOR STRUCTURAL NOTES.

TANK INFORMATION NOTES:

1. 15,000 GALLON TANK DIMENSIONS:
DIAMETER = 10'-6" (126")
HEIGHT = 24'-0" (288")
2. 5,000 GALLON TANK DIMENSIONS:
DIAMETER = 8'-6" (102")
HEIGHT = 18'-0" (216")

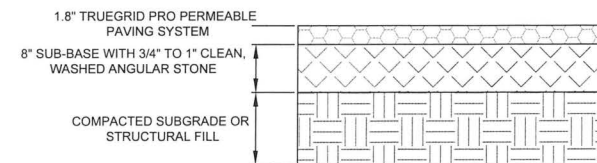


TRUEGRID MACK NOTES:

1. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION OF TRUEGRID PRODUCT
2. USE 3/8" TO 3/4" AGGREGATE FOR GRAVEL FILL-IN OF GRID.

TRUEGRID MACK PAVING SECTION A

SCALE: NONE

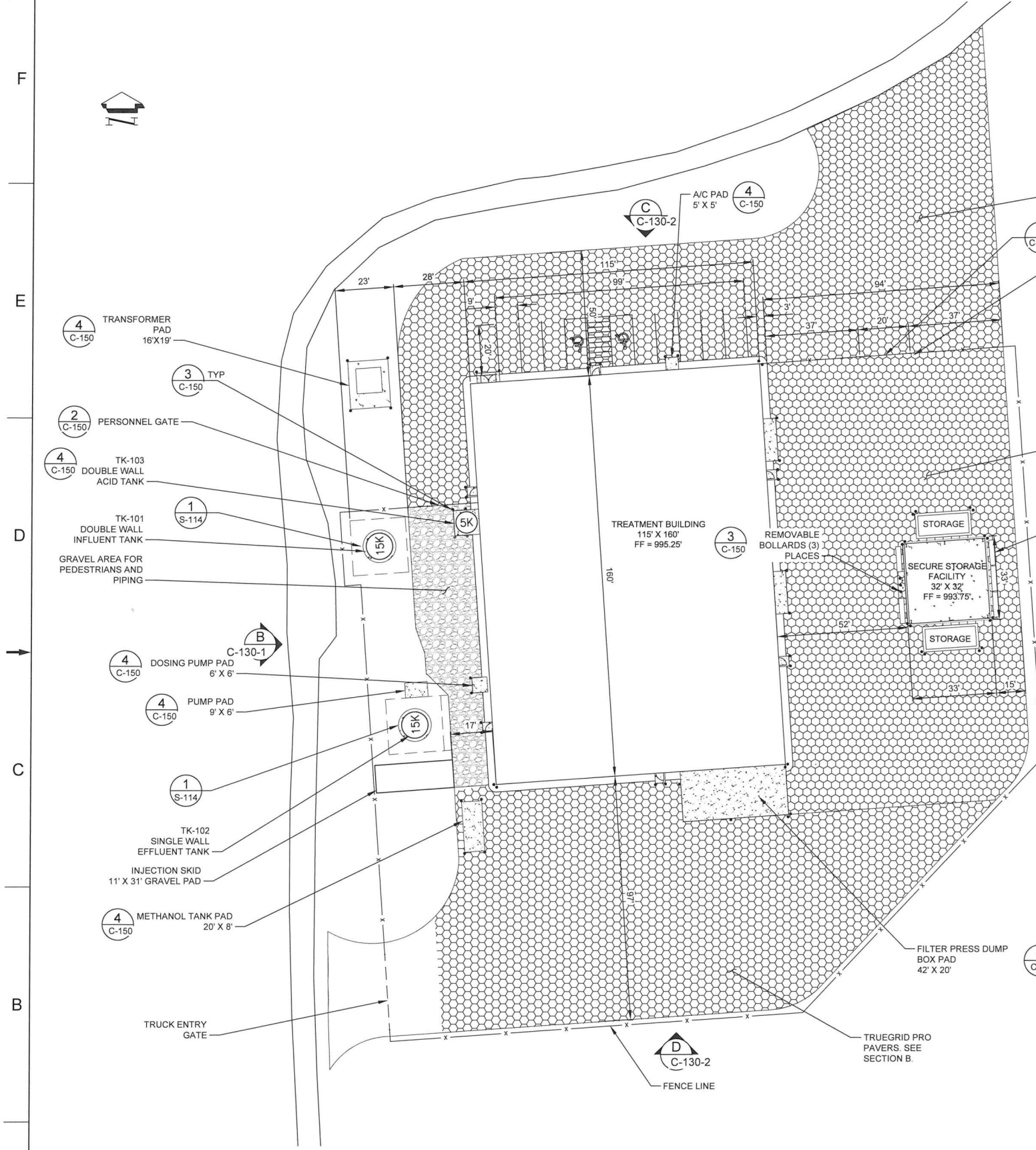


TRUEGRID PRO NOTES:

1. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION OF TRUEGRID PRODUCT
2. USE 3/8" TO 3/4" AGGREGATE FOR GRAVEL FILL-IN OF GRID.

TRUEGRID PRO PAVING SECTION B

SCALE: NONE



SITE PLAN

SCALE: 1" = 20'-0"

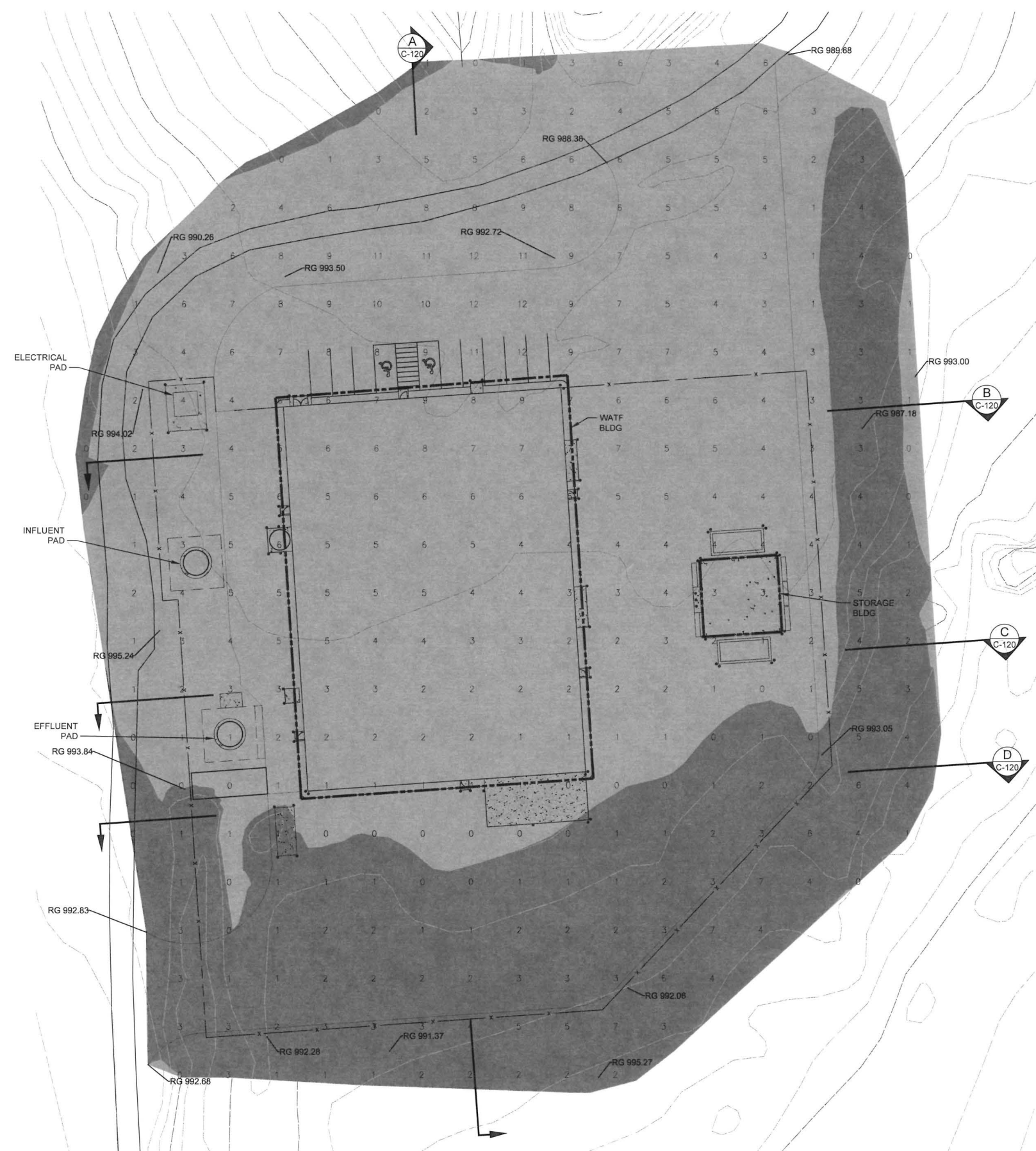
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NAME: D. NELSON NAME: D. NELSON NAME: R. RASMUSSEN NAME: J. LUEY	DATE: _____ DATE: _____ DATE: _____ DATE: _____	COMPANY: _____ COMPANY: _____ COMPANY: _____ COMPANY: _____	TITLE: _____ TITLE: _____ TITLE: _____ TITLE: _____
DWG NO: _____ TITLE: _____ REF NUMBER: _____ TITLE: _____ DRAWING TRACEABILITY LIST NEXT USED ON: _____ REFERENCES: _____		REVISIONS: _____ REV. NO. _____ DATE: _____ DESCRIPTION: _____ ENGR. _____ COMPANY: _____	
SCALE: AS SHOWN EST. SHEET 1 OF 1		K-EPM-DWG-C-110 B	

K-EPM-DWG-C-110 1 OF 1

GENERAL NOTES:

- EXCAVATED SOIL DISPOSAL SHALL BE COORDINATED WITH SITE AUTHORITY.
- PLAN GRID DEPICTS DIFFERENCE OF ELEVATION IN FEET, SEE SITE CUT/FILL TABLE.



AREA	ESTIMATED CUT (CY)	ESTIMATED FILL (CY)	ESTIMATED NET (CY)	
WATF BLDG	0	3217	3217	FILL
ELECTRICAL PAD	0	46	46	FILL
INFLUENT PAD	0	75	75	FILL
EFFLUENT PAD	0	62	62	FILL
STORAGE BLDG	0	99	99	FILL

NUMBER	MINIMUM ELEVATION	MAXIMUM ELEVATION	CUT VOLUME (CY)	FILL VOLUME (CY)	NET VOLUME (CY)	COLOR
1	-4.00	0.00	1245	0	-1245	■
2	0.00	16.00	0	15459	15459	■
TOTAL	-4.00	16.00	3580	14016	10436 (FILL)	

SITE PLAN
SCALE: 1" = 20'-0"
0 20 40 Feet

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NAME	DATE	COMPANY
DESIGNER D NELSON		VNSFS
CHECKER D NELSON		VNSFS
PROJECT MANAGER J LUEY		VNS

CIMARRON
PUMP AND TREAT SYSTEM PROJECT
WESTERN AREA
TREATMENT FACILITY
SITE ROUGH GRADING PLAN

REV	DWG NO	REV
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SCALE: SHOWN EDIT SHEET 1 OF 1

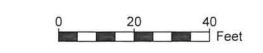
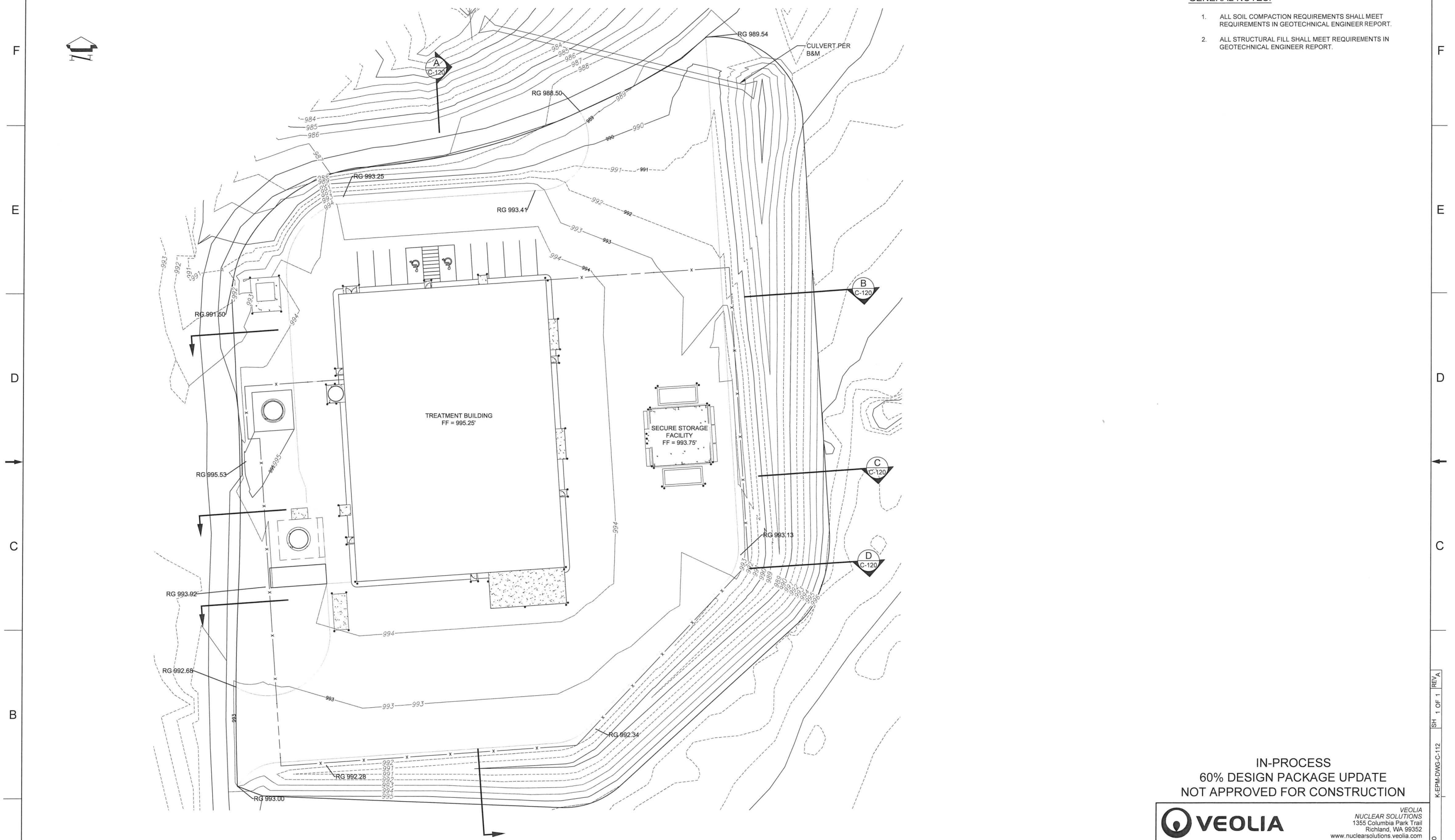
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DRAWING TRACEABILITY LIST

K-EPMDWG-C-111 SH 1 OF 1 REV B

GENERAL NOTES:

1. ALL SOIL COMPACTION REQUIREMENTS SHALL MEET REQUIREMENTS IN GEOTECHNICAL ENGINEER REPORT.
2. ALL STRUCTURAL FILL SHALL MEET REQUIREMENTS IN GEOTECHNICAL ENGINEER REPORT.



SITE PLAN
SCALE: 1" = 20'-0"

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NAME	DATE	COMPANY
D. NELSON		USGS
D. NELSON		USGS
R. RASMUSSEN		USGS
J. LUEY		USGS

CIMARRON
PUMP AND TREAT SYSTEM PROJECT
WESTERN AREA
TREATMENT FACILITY
SITE FINISH GRADING PLAN

SCALE: SHOWN EST SHEET 1 OF 1

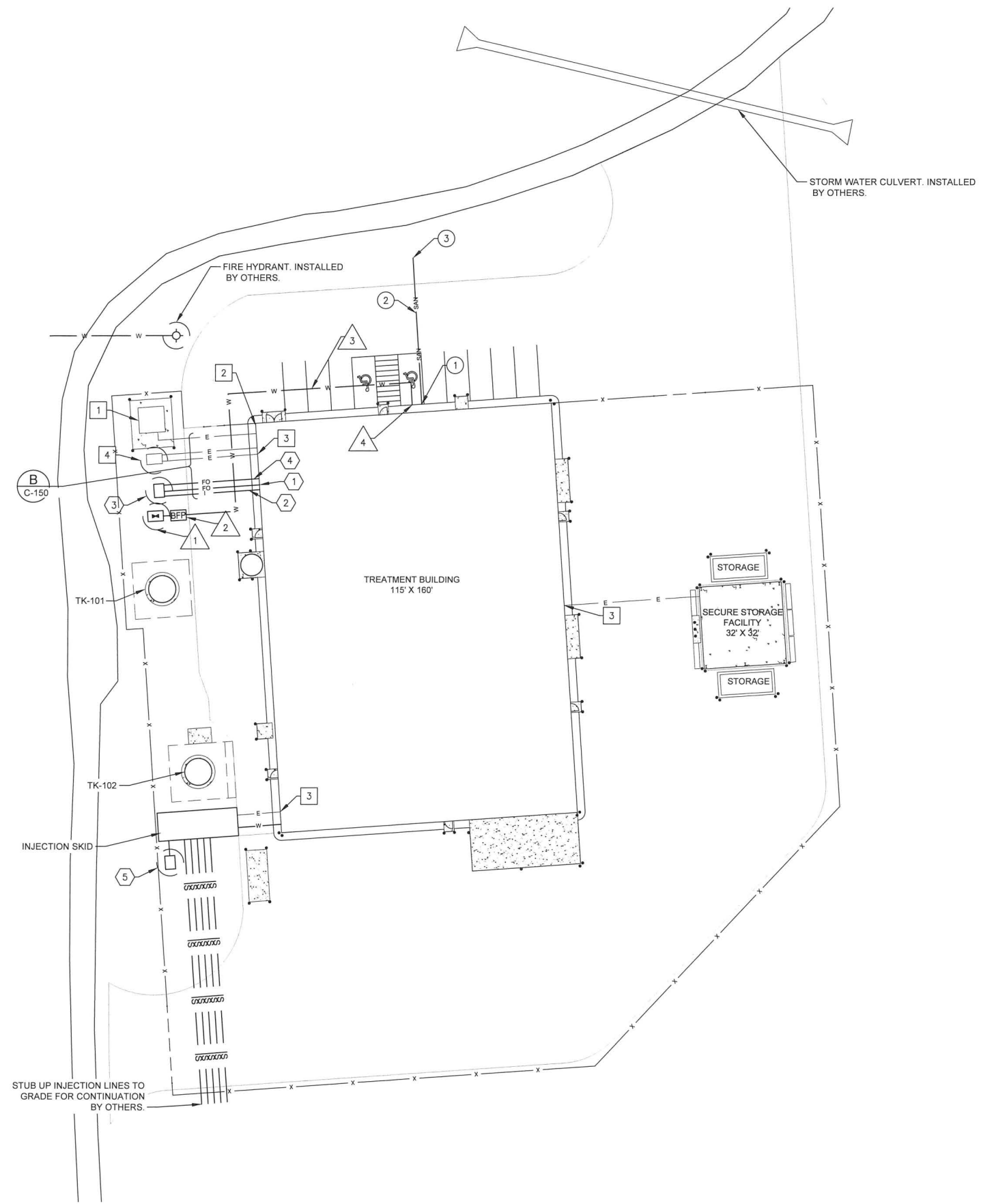
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DRAWING TRACEABILITY LIST

K-EPM-DWG-C-112 1 OF 1 REV A

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GENERAL NOTES:

- CONSTRUCTION OF ALL SITE UTILITIES SHALL CONFORM TO LOCAL JURISDICTION REQUIREMENTS AND APPROVED CONSTRUCTION SPECIFICATIONS.

SITE ELECTRICAL NOTES:

- PAD MOUNTED TRANSFORMER AND VAULT BY OTHERS.
- STUB CONDUIT INTO WATF ELECTRICAL ROOM. SEE ELECTRICAL DRAWINGS FOR APPROXIMATE LOCATION OF SERVICE ENTRANCE.
- CONTINUE ELECTRICAL FROM ELECTRICAL ROOM. CONDUITS ARE FIELD ROUTED FROM ELECTRICAL ROOM MCC TO STUB-UP LOCATIONS SHOWN.
- PULL BOX FOR CONTINUING ELECTRICAL FEEDERS TO WELLS. DESIGN BY OTHERS.

COMMUNICATION NOTES:

- FIBER OPTIC CABLE FROM PULL BOX FOR BURIAL AREA #1. ROUTE CABLE INTO WATF ELECTRICAL ROOM. DESIGN AND INSTALLATION BY OTHERS.
- COMMUNICATION CABLES FROM WATF ELECTRICAL ROOM TO PULL BOX FOR WELL FIELDS. DESIGN AND INSTALLATION BY OTHERS.
- COMMUNICATION PULL BOX. DESIGN AND INSTALLATION BY OTHERS.
- INCOMING FIBER OPTIC CABLE FROM ROADWAY.
- PULL BOX FOR WELL FIELD INSTRUMENTATION THAT CONNECTS TO INJECTION SKID.

SANITARY SEWER NOTES:

- CONNECT TO INTERIOR PLUMBING LINE. INSTALL CLEANOUT.
- INSTALL 3" SANITARY SEWER AT A MINIMUM SLOPE OF 2%.
- INSTALL CLEANOUT TO SANITARY SEWER FOR CONTINUATION TO SEPTIC SYSTEM. LOCATION OF SEPTIC SYSTEM BY OTHERS.

DOMESTIC WATER NOTES:

- DOMESTIC WATER FROM WATER METER TO VALVE BY OTHERS. POINT OF CONNECTION AT VALVE FLANGE.
- INSTALL BACKFLOW PREVENTOR AT THE POINT OF CONNECTION.
- INSTALL 110 LF OF 2" DOMESTIC WATER SERVICE. ALL JOINTS TO BE FULLY RESTRAINED.
- STUB DOMESTIC WATER AT BUILDING. SEE WATF PLUMBING PLANS FOR FURTHER DETAILS.



SITE PLAN
SCALE: 1" = 20'-0"

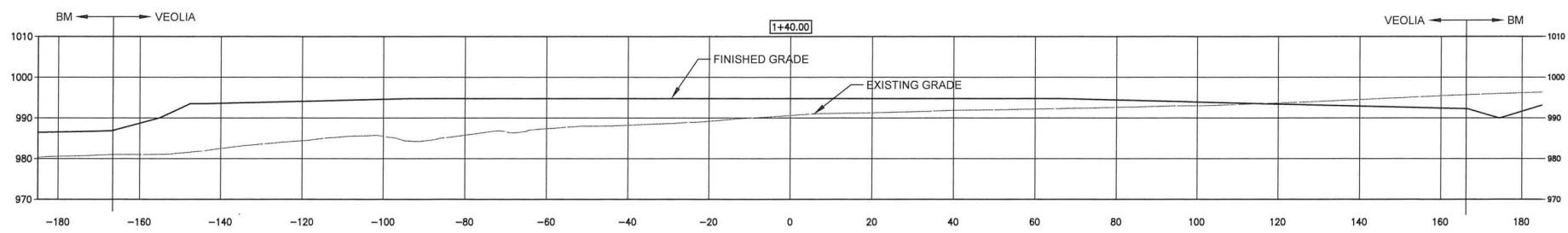
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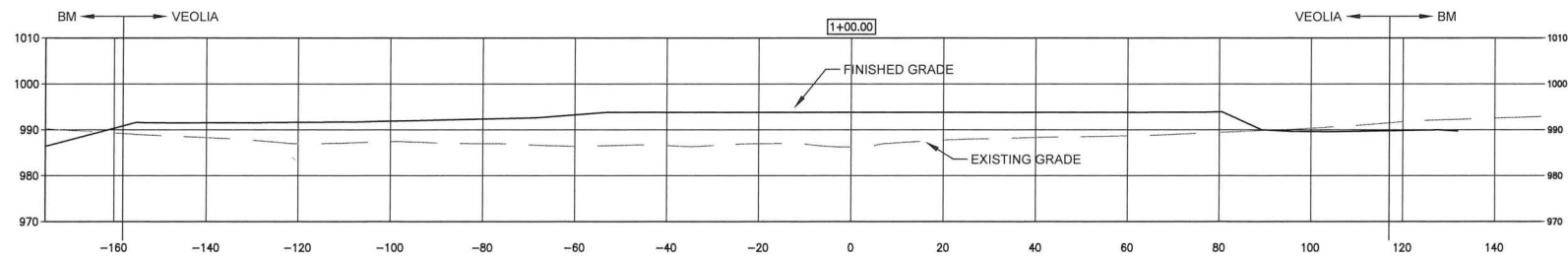
DESIGNER D NELSON	DATE	COMPANY	CIMARRON PUMP AND TREAT SYSTEM PROJECT WESTERN AREA TREATMENT FACILITY SITE UTILITY PLAN
CHECKER D NELSON			
SPECIFIER			
PROJECT MANAGER J LUEY			
DESIGN AUTHORITY	SCALE AS SHOWN	REV B	SHEET 1 OF 1 K-EPM-DWG-C-113

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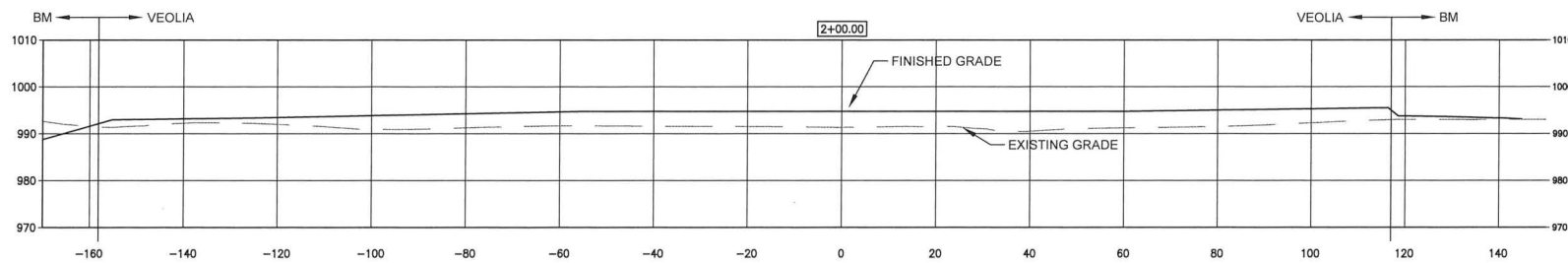
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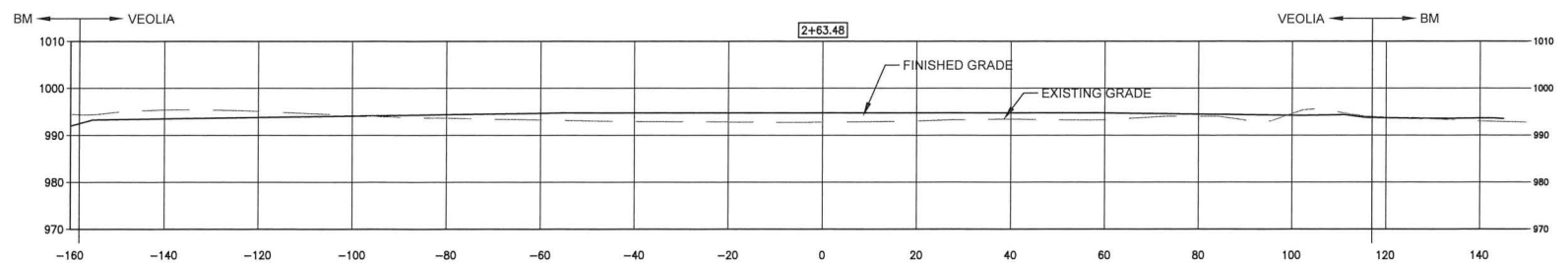
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C-111, C-112 SCALE: 1:20



C SECTION
C-111, C-112 SCALE: 1:20



D SECTION
C-111, C-112 SCALE: 1:20

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DESIGNED BY D NELSON	DATE	COMPANY	CIMARRON PUMP AND TREAT SYSTEM PROJECT WESTERN AREA TREATMENT FACILITY CIVIL SECTIONS K-EPM-DWG-C-120
ENGINEER D NELSON	DATE	COMPANY	
CHECKER	DATE	COMPANY	
PROJECT MANAGER J LUEY	DATE	COMPANY	
DESIGN AUTHORITY	DATE	COMPANY	
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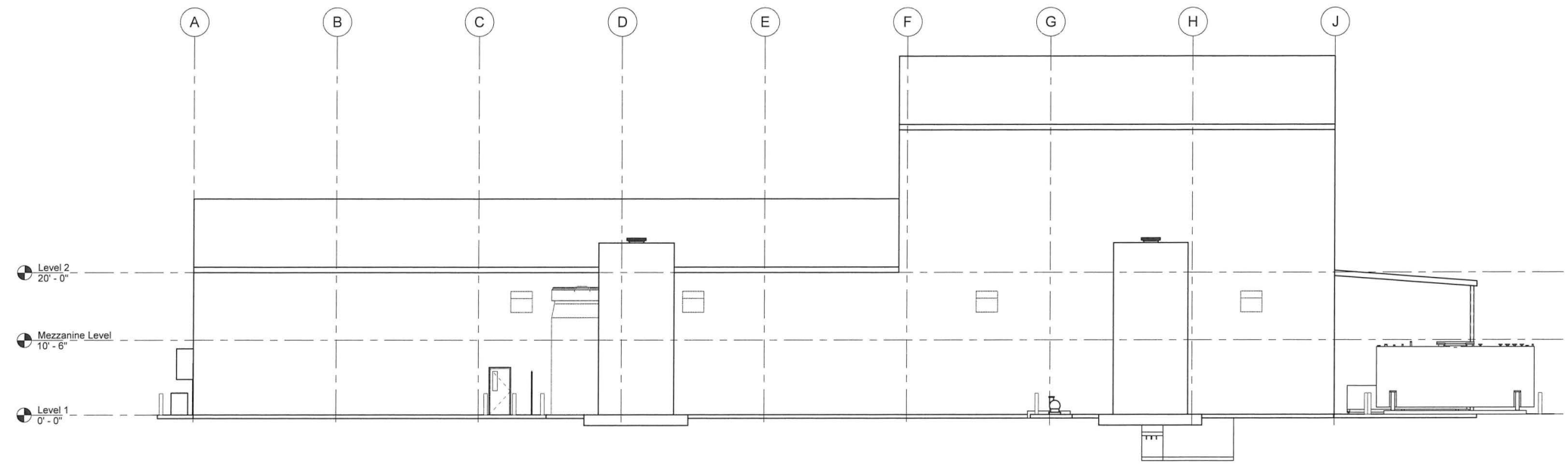
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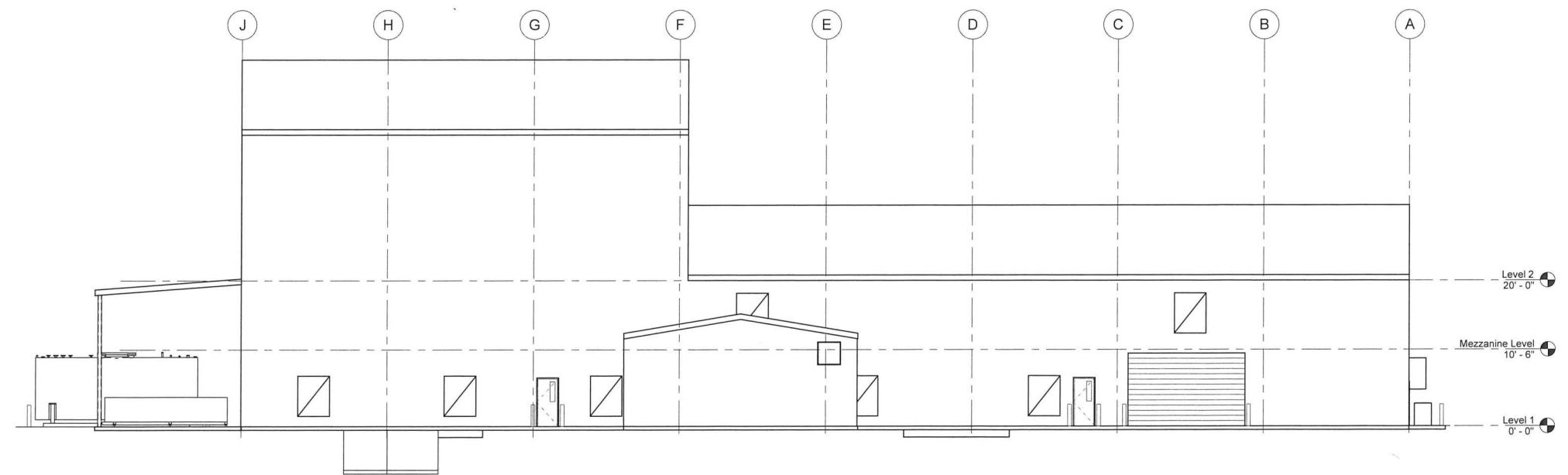
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(FENCING NOT SHOWN FOR CLARITY)
(A) WEST ELEVATION
 SCALE: 1/8"=1'-0"



(FENCING NOT SHOWN FOR CLARITY)
(B) EAST ELEVATION
 SCALE: 1/8"=1'-0"

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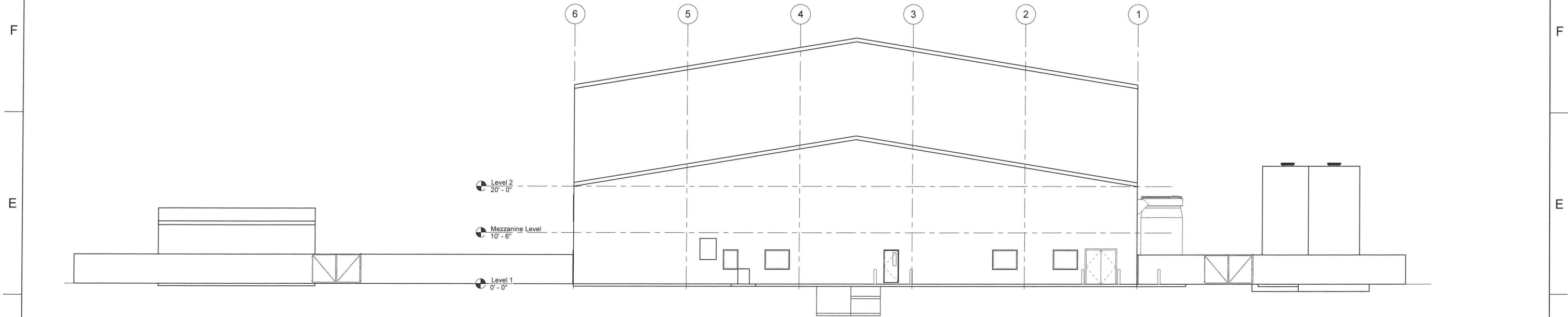


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NAME S. MOORE CHECKER C. WOODHEAD	DATE COMPANY VNF/S VNF/S VNF/S
CIMARRON PUMP AND TREAT SYSTEM PROJECT WESTERN AREA TREATMENT FACILITY ELEVATIONS	
DWG NO K-EPM-DWG-C-130	REV B
SCALE AS SHOWN	SHEET 1 OF 2

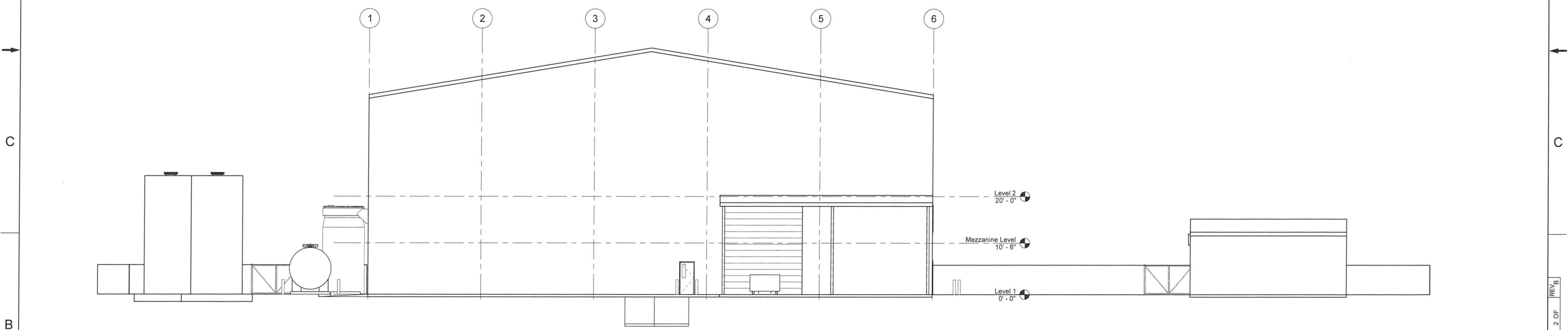


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DRAWING TRACEABILITY LIST		REFERENCES		REVISIONS					
NEXT USED ON									

K-EPM-DWG-C-130 1 OF 2 REV B



C NORTH ELEVATION
 SCALE: 1/8"=1'-0"



D SOUTH ELEVATION
 SCALE: 1/8"=1'-0"



DWG NO	TITLE	REF NUMBER	TITLE	DESCRIPTION	REV BY	DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		NEXT USED ON					
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				REVISIONS				

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CIMARRON
 PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA
 TREATMENT FACILITY
 ELEVATIONS

DESIGNER	S. MOORE	DATE	08/19/18	COMPANY	VEOLIA
ENGINEER					
CHECKER					
PROJECT MANAGER	C. WOODHEAD				
DESIGN AUTHORITY					

K-EPM-DWG-C-130
 SHEET 2 OF 2

GENERAL NOTES:

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2015 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), LOCAL RULES AND STANDARDS OF GOVERNING AGENCIES HAVING JURISDICTION.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF SITE CONDITIONS, INSTALLATION STANDARDS AND CONSTRUCTION CONDITIONS.
3. ALL SPECIAL INSPECTION AND TESTING SHALL BE PERFORMED BY AN INDEPENDENT INSPECTION AND TESTING AGENCY HIRED BY THE OWNER.

- DEAD LOADS:
A. ROOF (FLAT): 10 PSF + FRAMING WEIGHT
B. LIVE LOADS (IBC 1607):
C. SNOW LOADS (IBC 1608):
D. SNOW EXPOSURE FACTOR: Ce=1.0

- LATERAL LOADS:
A. WIND DESIGN LOAD DATA: (PER ASCE 7-10 AND IBC 2015)
B. SEISMIC DESIGN LOAD DATA: (PER ASCE 7-10 AND IBC 2015)
MAPPED SPECTRAL RESPONSE ACCELERATIONS:
DESIGN SPECTRAL RESPONSE COEFFICIENTS:
SEISMIC FORCE RESISTING SYSTEM AND RESPONSE MODIFICATION FACTOR:
SEISMIC RESPONSE COEFFICIENT:

ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PER ASCE 7-10, 12.8

FOUNDATION NOTES:

- 1. FOR SLAB ON GRADE AND FOUNDATION SUBGRADE PREPARATION THE CONTRACTOR SHALL REFERENCE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING REPORT.
2. FOUNDATION DESIGN BASED ON AN ALLOWABLE SOIL BEARING OF 2,000 PSF.
3. EXCAVATE FOOTING TRENCHES AND AREA BELOW SLABS TWO FEET WIDER THAN FOOTING WIDTH AND ONE FOOT DEEPER THAN DESIGN FOOTING GRADE.

CONCRETE NOTES:

- 1. CONCRETE SLABS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS WITH A WATER TO CEMENT RATIO OF 0.45.
2. CAST IN PLACE CONCRETE SHALL MEET THE FOLLOWING REQUIREMENTS:
3. UNLESS NOTED OTHERWISE, ALL CONCRETE FLAT WORK SHALL CONFORM TO THE FOLLOWING FINISHING TOLERANCES.
4. ALL SAWN CONTROL JOINTS ARE TO BE CUT WITHIN 12 HOURS AFTER THE FLOOR SLAB IS POURED.
5. ALL CONCRETE FLOORS ARE TO BE WET CURED FOR 7 DAYS IMMEDIATELY AFTER PLACEMENT.
6. ALL REINFORCING STEEL SHALL BE GRADE 60 DEFORMED BARS COMPLYING WITH ASTM SECTION A615.

CONCRETE - ADHESIVE ANCHORED REINFORCEMENT AND THREADED RODS NOTES:

- 1. SPECIAL INSPECTION IS REQUIRED AND SHALL BE PER IBC APPROVED ESR REPORT.
2. MATERIALS: ADHESIVE: HILTI-HIT-HY-200
3. INSTALLATION:
4. DO NOT INSTALL REINFORCEMENT OR ANCHORS IN CONCRETE THAT IS LESS THAN 7 DAYS OLD.

CONCRETE - EXPANSION ANCHORS NOTES:

- 1. SPECIAL INSPECTION IS REQUIRED AND SHALL BE PER ICC ESR 1917.
2. MATERIALS: HILTI ANCHORS: KWIK-BOLT TZ
3. INSTALLATION:
4. DO NOT INSTALL ANCHORS IN CONCRETE THAT IS LESS THAN 7 DAYS OLD.
5. PROVIDE STAINLESS STEEL ANCHORS OR MECHANICALLY GALVANIZED ANCHORS (PER ASTM B-695) WHERE ANCHORS ARE USED IN EXTERIOR CONDITIONS.

STEEL NOTES:

- 1. STRUCTURAL STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
2. ALL DETAILING, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL COMPLY WITH THE REQUIREMENTS OF THE AISC LOAD AND RESISTANCE FACTOR DESIGN SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
3. ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER HIGH STRENGTH BOLTS (A325) UNLESS OTHERWISE NOTED ON THE DRAWING.
4. ERECTION AND FABRICATION SHOP DRAWINGS FOR STRUCTURAL STEEL WILL BE REVIEWED BY THE ENGINEER OF RECORD PRIOR TO COMMENCING FABRICATION.
5. BOLT HOLES SHALL BE BOLT DIAMETER + 1/16".

- 12. IN ADDITION TO THE STANDARDS OUTLINED IN THE MANUAL FOR STEEL CONSTRUCTION, THE FOLLOWING TOLERANCES MUST ALSO BE FOLLOWED.
13. COLUMN BASE PLATES SHALL BE WITHIN 1/16 IN OF THEORETICAL ELEVATION AND BE LEVEL WITHIN 0.01 INCHES ACROSS THE PLATE LENGTH OR WIDTH.
14. PAINT ALL FERROUS METALS FOR EXTERIOR EXPOSURE OR PER PLANT STANDARDS.

STAINLESS STEEL NOTES:

- 1. STAINLESS STEEL TUBES (HSS) SHALL BE TYPE 304 STAINLESS STEEL.
2. ALL WELDING OF STAINLESS STEEL SHALL BE DONE BY AWS CERTIFIED WELDERS AND SHALL CONFORM TO AWS D1.6:2007, WITH APPROPRIATE STAINLESS STEEL ELECTRODES.

ANCHOR RODS NOTES:

- 1. ANCHOR RODS SHALL BE ASTM F1554 GRADE 36 WITH CLASS 1A THREADS, UNLESS NOTED OTHERWISE.
2. FURNISH ANCHOR RODS PREFABRICATED WITH MATCHING DOUBLE HEAVY HEX NUTS JAMMED AT THE END EMBEDDED IN CONCRETE.
3. FURNISH HARDENED PLATE WASHERS AND MATCHING HEAVY HEX NUTS FOR SECURING THE BASE PLATE TO THE ANCHOR RODS.

COLD-FORMED STEEL NOTES:

- 1. ALL COLD FORMED STEEL MEMBERS SHALL HAVE A MINIMUM YIELD STRESS OF 33 KSI.
2. METAL STUDS SHALL BE ATTACHED TO TOP AND BOTTOM TRACKS WITH (2) #10 SCREWS.
3. CONTRACTOR SHALL SUBMIT A SET OF MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES FOR METAL STUD FRAMING FOR APPROVAL.
4. BOTTOM TRACK AT NON-SHEARWALLS SHALL BE CONNECTED TO CONCRETE FOUNDATION OR FLOORS WITH POWER ACTUATED FASTENERS AT 12" C/C.

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Table with columns: NAME, DATE, COMPANY, and rows for V. DAVISON, D. NELSON, J. LUEY. Includes project name: CIMARRON PUMP AND TREAT SYSTEM PROJECT and title: WESTERN AREA TREATMENT FACILITY STRUCTURAL NOTES AND ABBREVIATIONS.

Table with columns: DWG NO, TITLE, REF NUMBER, TITLE, and rows for DWG NO, TITLE, REF NUMBER, TITLE, and rows for DWG NO, TITLE, REF NUMBER, TITLE.

K-EPM-DWG-S-101 SH 1 OF 2 REV. B DWG NO

COLD-FORMED STEEL NOTES: (CONTINUED)

- LENGTH OF UNTHREADED "DRILLING" PORTION OF SELF-DRILLING SCREWS USED WITH METAL STUD FRAMING SHALL BE GREATER THAN THE COMBINED THICKNESS OF CONNECTED MATERIALS. IN ADDITION, A MINIMUM OF THREE FULL SCREW THREADS SHALL BE EXPOSED ON SCREWS INSTALLED IN METAL STUD FRAMING MEMBERS.
- ALL STRUCTURAL MEMBERS SHALL BE INSTALLED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION.
- ALL METAL STUDS SHALL BE FORMED FROM CORROSION-RESISTANT STEEL, CORRESPONDING TO THE REQUIREMENTS OF ASTM C955, WITH A MINIMUM YIELD STRENGTH OF 33 KSI FOR STUDS AND TRACKS, UNLESS OTHERWISE NOTED.
- ALL METAL STUDS AND TRACKS SHALL BE ZINC COATED MEETING ASTM A653, G-60, OR EQUIVALENT.
- PREFABRICATED PANELS SHALL BE SQUARE, WITH COMPONENTS ATTACHED IN A MANNER TO PREVENT RACKING AND TO MINIMIZE DISTORTION WHILE LIFTING AND TRANSPORTING.
- ALL FRAMING COMPONENTS SHALL BE CUT SQUARE FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.
- ALL FRAMING COMPONENTS SHALL BE PLUMBED, ALIGNED AND LEVELED.
- TEMPORARY BRACING, WHERE REQUIRED, SHALL BE PROVIDED UNTIL ERECTION IS COMPLETE.
- COMPLETE, UNIFORM AND LEVEL BEARING SUPPORT SHALL BE PROVIDED FOR THE BOTTOM RUNNER.
- WHERE SUB-FLOORS OR DECKING DO NOT PROVIDE LATERAL SUPPORT, FLOOR JOISTS MUST BE BRACED AT ALL BEARING POINTS AND AT INTERVALS WITHIN SPANS. FOR JOISTS IN CONTINUOUS SPAN CONDITIONS, PORTIONS OF THE BOTTOM FLANGES ARE IN COMPRESSION AND MUST BE Laterally Braced, BASED ON DESIGN REQUIREMENTS, BETWEEN SOLID BLOCKING.
- METAL STUD SHEAR WALLS SHALL BE CONSTRUCTED WITH 1/2" APA STRUCTURAL 1 RATED PLYWOOD PLACED WITH THE LONG DIMENSION PERPENDICULAR TO STUDS. FASTEN SHEATHING WITH NO. 8 SELF-DRILLING FLAT OR WAFER HEAD SCREWS AT 6" C/C AT ALL PANEL EDGES AND BLOCKING LINES AND 12" C/C AT STUDS IN PANEL FIELD. PANEL EDGES MAY BE BLOCKED WITH 1 1/2" X 33 MIL CONTINUOUS STRAP WITH (1) NO. 8 AT EACH STUD.
- LENGTH UNTHREADED "DRILLING" PORTION OF SELF-DRILLING SCREWS USED WITH METAL STUD FRAMING SHALL BE GREATER THAN THE COMBINED THICKNESS OF CONNECTED MATERIALS. IN ADDITION, A MINIMUM OF THREE FULL SCREW THREADS SHALL BE EXPOSED ON SCREWS INSTALLED IN METAL STUD FRAMING MEMBERS.

STATEMENT OF SPECIAL INSPECTION NOTES:

- IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE SECTION 1704, THE OWNER SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK AND AS SPECIFIED BELOW. CONTRACTOR SHALL COORDINATE WITH INSPECTION AND TESTING AGENCY(S) FOR REQUIRED CONSTRUCTION INSPECTIONS AND MATERIAL TESTING. SPECIAL INSPECTION REPORTS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER AND THE AUTHORITY HAVING JURISDICTION WEEKLY FOR REVIEW.
- WELDING OF CONSTRUCTION OTHER THAN STRUCTURAL STEEL: SPECIAL INSPECTION PER TABLE 1705.2.2 OF THE IBC.
- STEEL: SPECIAL INSPECTION SHALL BE PER SECTION 1705.2 OF THE IBC AND AISC 360 AND AISC 341.
- CONCRETE CONSTRUCTION: SPECIAL INSPECTION PER SECTION 1705.3 AND TABLE 1705.3 OF THE IBC. EXCEPTIONS: NO SPECIAL INSPECTION IS REQUIRED FOR THE FOUNDATIONS IF THE DESIGN STRENGTH OF THE FOUNDATIONS IS BASED ON A COMPRESSIVE STRENGTH OF 2500 PSI.
- SEISMIC RESISTANCE: SPECIAL INSPECTION FOR SEISMIC RESISTANCE SHALL BE PER SECTION 1705.11 OF THE IBC AND AISC 341.
- POST INSTALLED ANCHORS: SPECIAL INSPECTION SHALL BE PER THE ANCHORS ASSOCIATED ICC-ES ESR.

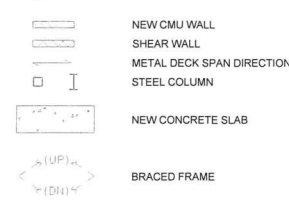
METAL BUILDING NOTES:

- COORDINATE THE LOCATION, QUANTITY, AND SIZE OF ANCHOR BOLTS WITH THE PRE-ENGINEERED METAL BUILDING SUPPLIER.
- CONTRACTOR SHALL SUBMIT PRE-ENGINEERED METAL BUILDING FOR REVIEW AND APPROVAL PRIOR TO FOUNDATION WORK. ENGINEER MAY MAKE MINOR ADJUSTMENTS TO MATCH SUBMITTAL. ALLOW TWO WEEKS FOR SUBMITTAL REVIEW. FOUNDATION PLAN IS SUBJECT TO REVISION AND REISSUE AFTER REVIEW OF SUBMITTAL.
- METAL ROOFING AND SIDING SHALL BE HR-36 BY ASC PACIFIC OR HAVE EQUIVALENT PROPERTIES. EXTERIOR FACE OF PANEL SHALL BE FACTORY PAINTED WITH SILICONE MODIFIED POLYESTER. OWNER SHALL SPECIFY COLOR. INTERIOR FACE OF PANEL SHALL BE FACTORY PAINTED WITH AN OFF-WHITE ACRYLIC PAINT.
- METAL SIDING SHALL BE ATTACHED USING #12-1" SELF DRILLING FASTENERS AT EVERY OTHER LOW CORRUGATION TO GIRTS AND PURLINS. SIDE LAP SHALL BE ONE CORRUGATION WITH #12 FASTENERS AT 16" ON CENTER. MINIMUM END LAP IN ROOF IS 6". MINIMUM END LAP IN SIDING IS 4". ALL FASTENERS HAVE 5/16" STEEL BACKED NEOPRENE WASHERS. FLASHING DETAILS AND GUTTER DETAILS SHALL BE IN ACCORDANCE WITH NRCA DETAILS SHOWN IN THE MANUAL OF BUILT-UP ROOF SYSTEMS.

ABBREVIATIONS:

AB	ANCHOR BOLT	PEMB	PRE-ENGINEERED METAL BUILDING
ACI	AMERICAN CONCRETE INSTITUTE	PERP	PERPENDICULAR
AFF	ABOVE FINISH FLOOR	PL	PLATE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	PLF	PER LINEAR FOOT
ALT	ALTERNATE	PP	PANEL POINT
AR	ANCHOR ROD	PREFAB	PREFABRICATED
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	PSF	POUNDS PER SQUARE FOOT
AWS	AMERICAN WELDING SOCIETY	PSI	POUNDS PER SQUARE INCH
BM	BEAM	PT	POINT
BOB	BOTTOM OF BEAM	R	RADIUS
BOBP	BOTTOM OF BASE PLATE	REF	REFERENCE
BOD	BOTTOM OF DECK	REINF	REINFORCEMENT; REINFORCING
BOF	BOTTOM OF FOOTING	REQD	REQUIRED
BP#	BASE PLATE NUMBER	SC	SCALE
C/C	CENTER TO CENTER	SCJ	SAWN CONTROL JOINT
CIP	CAST-IN-PLACE	SECT	SECTION
CJ	CONSTRUCTION JOINT	SIM	SIMILAR
CL	CLEARANCE	SJ	STEEL JOIST
CLR	CLEAR	SL	SNOW LOAD
COC	CENTER LINE OF COLUMN	SOG	SLAB ON GRADE
COL	COLUMN	STD	STANDARD
CONC	CONCRETE	SPEC	SPECIFICATION
CONN	CONNECTION	SQ	SQUARE
CONT	CONTINUOUS	SSL	STAINLESS STEEL
COTF	CLEAN OUT TO FLOOR	STIFF	STIFFENER
CTR	CENTER	STL	STEEL
CP	CONTROL POINT	STRUC	STRUCTURAL
DB	DOUBLE	T&B	TOP AND BOTTOM
DET	DETAIL	TEMP	TEMPORARY
DIA	DIAMETER	TOC	TOP OF CONCRETE
DIAG	DIAGONAL	TOD	TOP OF DECK
DICA	DRILLED IN CONCRETE ANCHOR	TOF	TOP OF FOOTING
DIM	DIMENSION	TOS	TOP OF STEEL
DJ	DUMMY JOINT	TOSW	TOP OF STEM WALL
DL	DEAD LOAD	TOT	TOP OF TRACK
DN	DOWN	TYP	TYPICAL
DSL	DRIFT SNOW LOAD	UNO	UNLESS NOTED OTHERWISE
DWL	DOWEL	VERT	VERTICAL
(E)	EXISTING	W	WIDE; WIDTH
EA	EACH	W	WITH
EF	EACH FACE	W/O	WITHOUT
EJ	EXPANSION JOINT	WF	WIDE FLANGE
EL OR ELEV	ELEVATION	WP	WORK POINT
EMBED	EMBEDMENT	WUL	WIND UPLIFT LOAD
EQ SP	EQUALLY SPACED		
EW	EACH WAY		
FD	FLOOR DRAIN		
FDN	FOUNDATION		
FF	FINISH FLOOR		
FIN	FINISHED		
FL	FLOOR		
FOS	FACE OF STUD		
FOW	FACE OF WALL		
FS	FLOOR SINK		
FT	FOOT; FEET		
FT#	FOOT TYPE - NUMBER		
FTG	FOOTING		
GB	GYPSSUM BOARD		
H	HIGH		
HP	HIGH POINT		
HSS	HOLLOW STRUCTURAL SECTION		
ICBO	INTERNATIONAL COUNCIL OF BUILDING OFFICIALS		
IN	INCH; INCHES		
INT	INTERIOR		
JB	JOIST BEARING		
JST	JOIST		
JT	JOINT		
K	KIP; KIPS		
KSI	KIPS PER SQUARE INCH		
L	ANGLE		
LB	POUND; POUNDS		
LF	LINEAR FOOT		
LL	DOUBLE ANGLE		
LLH	LONG LEG HORIZONTAL		
LLV	LONG LEG VERTICAL		
MAX	MAXIMUM		
MFR	MANUFACTURER		
MIN	MINIMUM		
MISC	MISCELLANEOUS		
N	NORTH		
N-S	NORTH-SOUTH		
NS	NEAR SIDE		
NTS	NOT TO SCALE		
OPP	OPPOSITE HAND		
OVS	OVERSIZE		
OWJ	OPEN WEB JOIST		
P	PRESSURE		
PAF	POWER ACTUATED FASTENER		
PCF	PER CUBIC FOOT		

SYMBOLS:



EXPANSION ANCHOR SCHEDULE

ANCHOR DIAMETER	HILTI KWIK BOLT TZ			SIMPSON STRONG BOLT		
	SHALLOW	STANDARD	DEEP	SHALLOW	STANDARD	DEEP
1/2"	2"	3 1/4"	-	2 3/4"	3 7/8"	5"
5/8"	3 1/8"	4"	-	3 3/8"	5 1/8"	6 1/8"
3/4"	3 3/4"	5"	-	4 1/8"	5 3/4"	7 1/2"
1"	-	-	-	-	5 1/4"	9 3/4"

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NAME: V DAVISON
CHECKER: D NELSON
REQUEST MANAGER: J LUEY

CIMARRON
PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA TREATMENT FACILITY STRUCTURAL NOTES AND ABBREVIATIONS

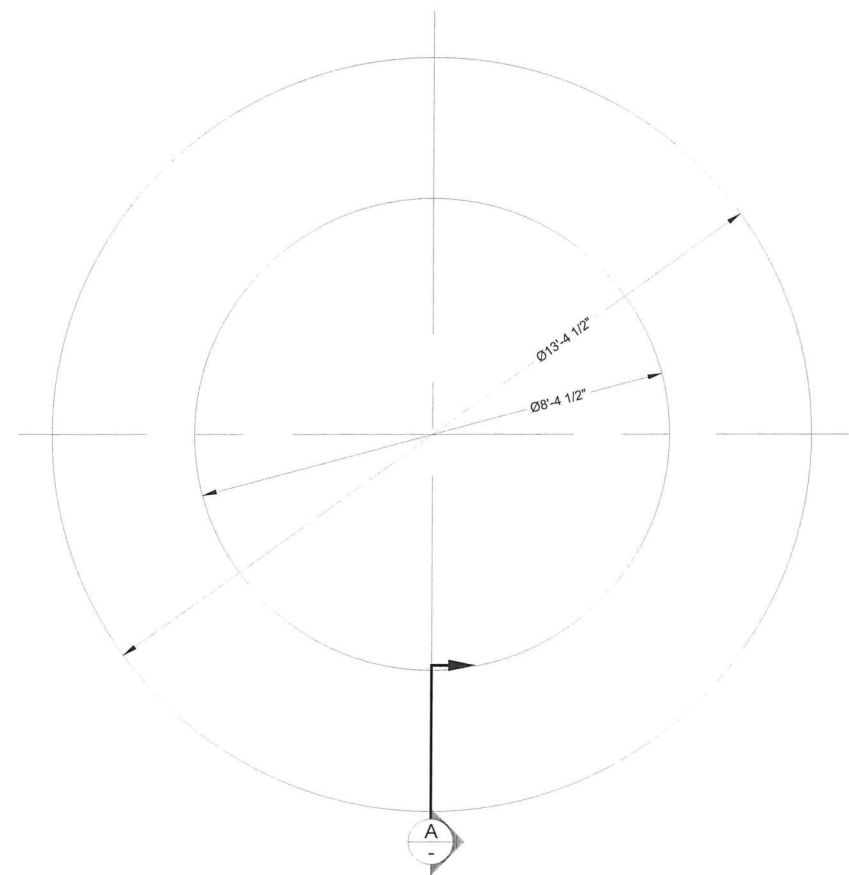
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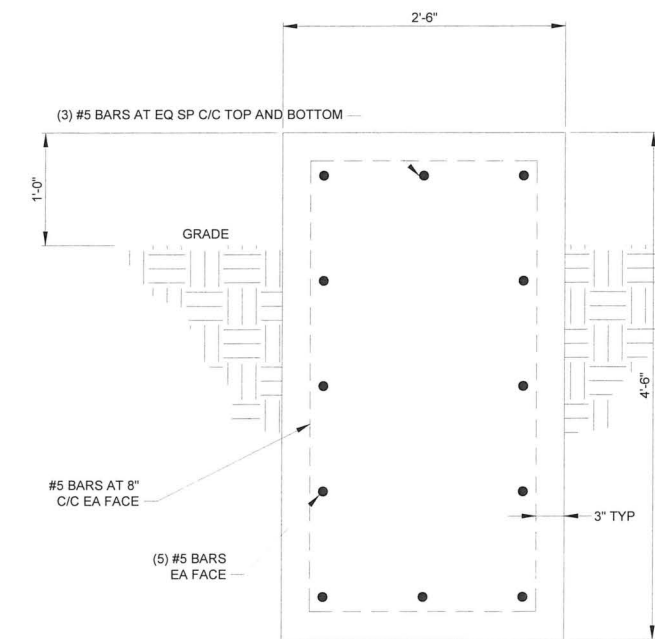
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SH: 2 OF 2
K-EPM-DWG-S-101
DWG NO

NOTES:

1. SEE K-EPM-DWG-S-101 FOR NOTES, ABBREVIATIONS AND SCHEDULE.
2. SEE CIVIL FOR PLAN LOCATIONS.



1 15K TANK FOUNDATIONS
SCALE: 3/4" = 1'-0"



A SECTION
SCALE: 1 1/2" = 1'-0"

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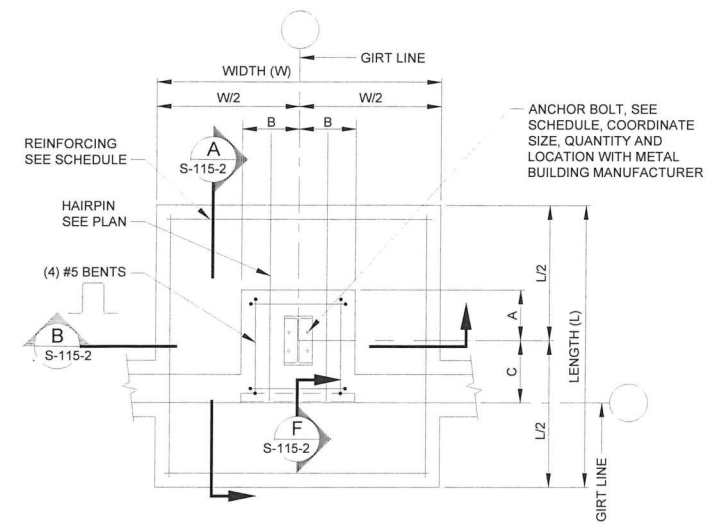
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<small>DESIGNED BY</small> V DAVISON	<small>DATE</small>	<small>COMPANY</small>	CIMARRON PUMP AND TREAT SYSTEM PROJECT WESTERN AREA TREATMENT FACILITY TANK FOUNDATION PLAN VIEW /DETAIL	<small>SCALE</small>	<small>EST</small>
<small>CHECKED BY</small> D NELSON				K-EPM-DWG-S-114	
<small>PROJECT MANAGER</small> J LUEY				1	B
<small>DESIGN AUTHORITY</small>				1	1

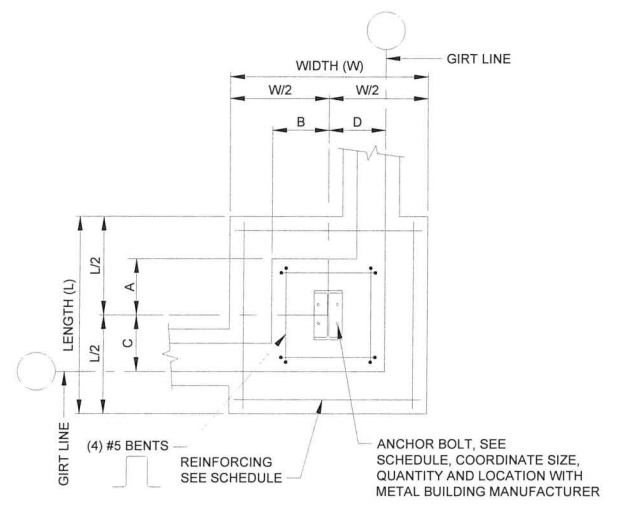
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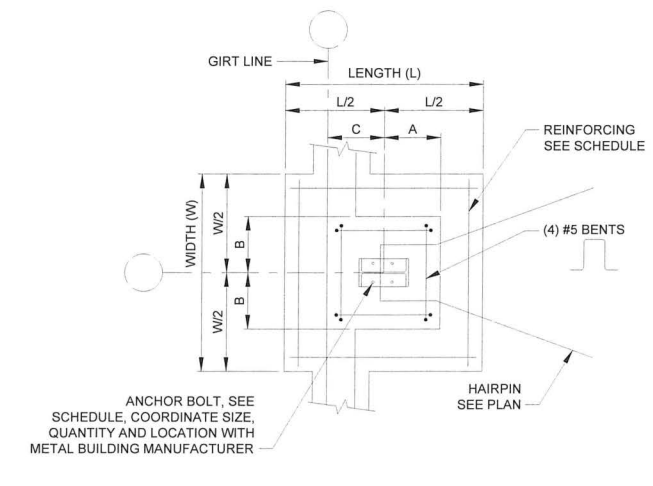
- NOTES:**
- SEE K-EPM-DWG-S-101 FOR NOTES, ABBREVIATIONS AND SCHEDULE.
 - UNO, USE MINIMUM CONCRETE EMBEDMENT, SPLICES, REBAR, ETC. PER ACI 318.



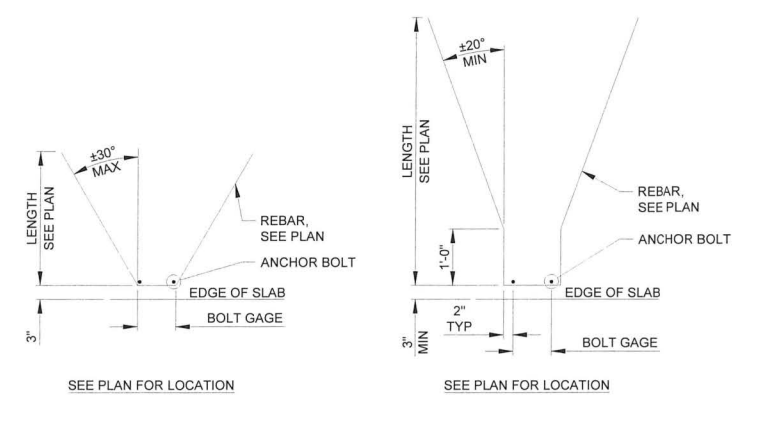
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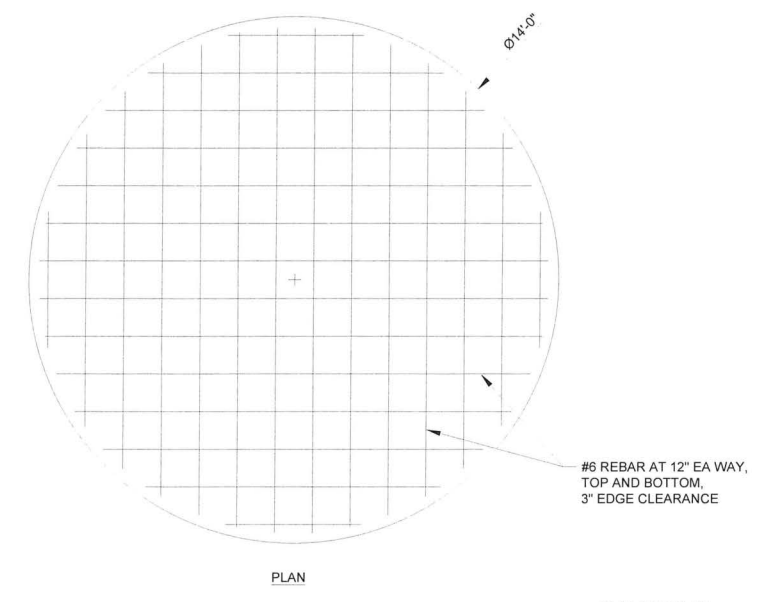
2 DETAIL
S-110 SCALE: 3/4"=1'-0"



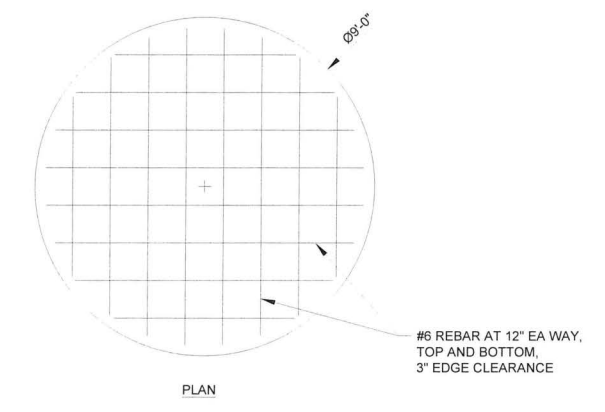
3 DETAIL
S-110 SCALE: 3/4"=1'-0"



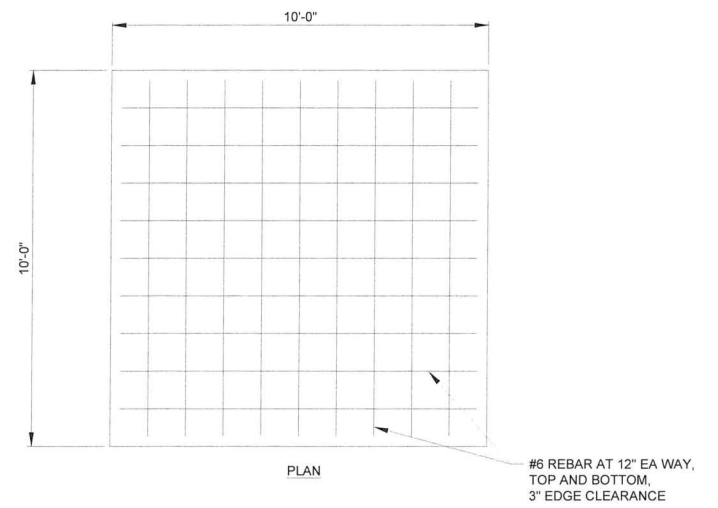
4 DETAIL
S-110 SCALE: 3/4"=1'-0"



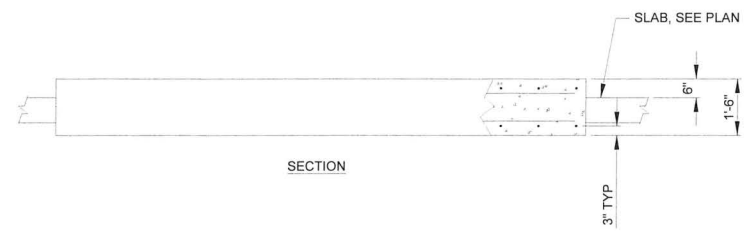
PLAN
#6 REBAR AT 12" EA WAY, TOP AND BOTTOM, 3" EDGE CLEARANCE



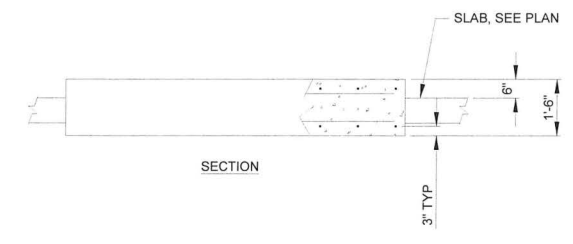
PLAN
#6 REBAR AT 12" EA WAY, TOP AND BOTTOM, 3" EDGE CLEARANCE



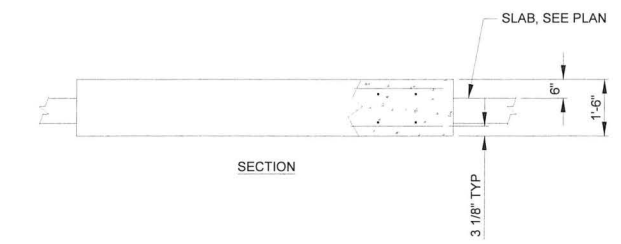
PLAN
#6 REBAR AT 12" EA WAY, TOP AND BOTTOM, 3" EDGE CLEARANCE



5 DETAIL
S-110 SCALE: 1/2"=1'-0"



6 DETAIL
S-110 SCALE: 1/2"=1'-0"



7 DETAIL
S-110 SCALE: 1/2"=1'-0"

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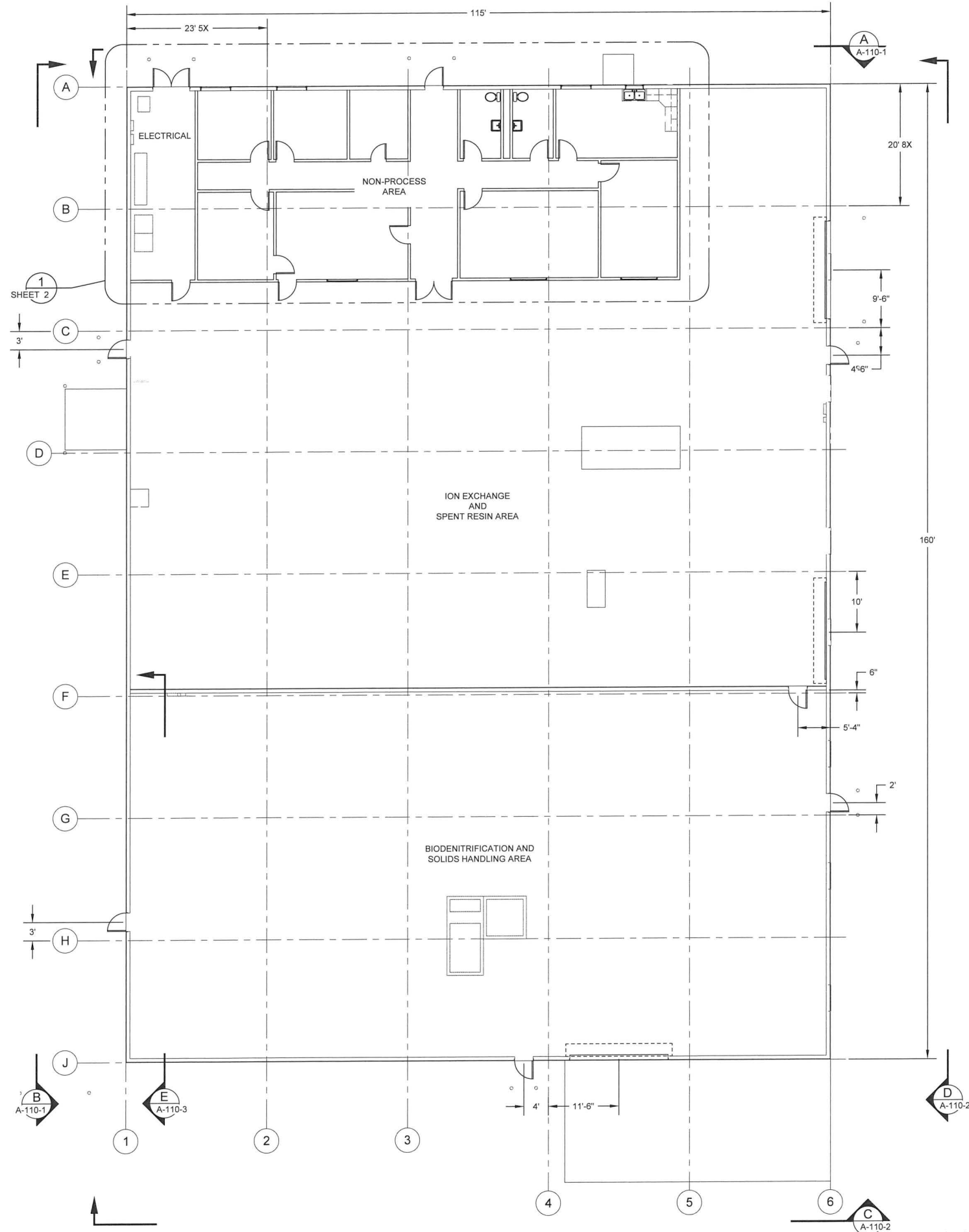
NAME	DATE	COMPANY
V DAVISON	09/12/2018	VNSFS
D NELSON		VNSFS
CHECKER		VNSFS
PROJECT MANAGER		VNS
DESIGN AUTHORITY		

CIMARRON
PUMP AND TREAT SYSTEM PROJECT
WESTERN AREA
TREATMENT FACILITY
STRUCTURAL DETAILS

SIZE: F DWG NO: K-EPM-DWG-S-115 REV: B
SCALE: SHOWN EST SHEET 1 OF 2

DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		REFERENCES					
					REVISIONS			

K-EPM-DWG-S-115 SH 1 OF 2 REV B



WATF ARCHITECTURAL PLAN
SCALE: 1/8" = 1'-0"

DWG NO	TITLE	REF NUMBER	TITLE	REF	REV NO	DESCRIPTION	REV BY	DATE	ENGR	COMPANY

DRAWING TRACEABILITY LIST		REFERENCES		REVISIONS	
DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION

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**CIMARRON
PUMP AND TREAT SYSTEM PROJECT**

**WESTERN AREA
TREATMENT FACILITY
ARCHITECTURAL PLAN**

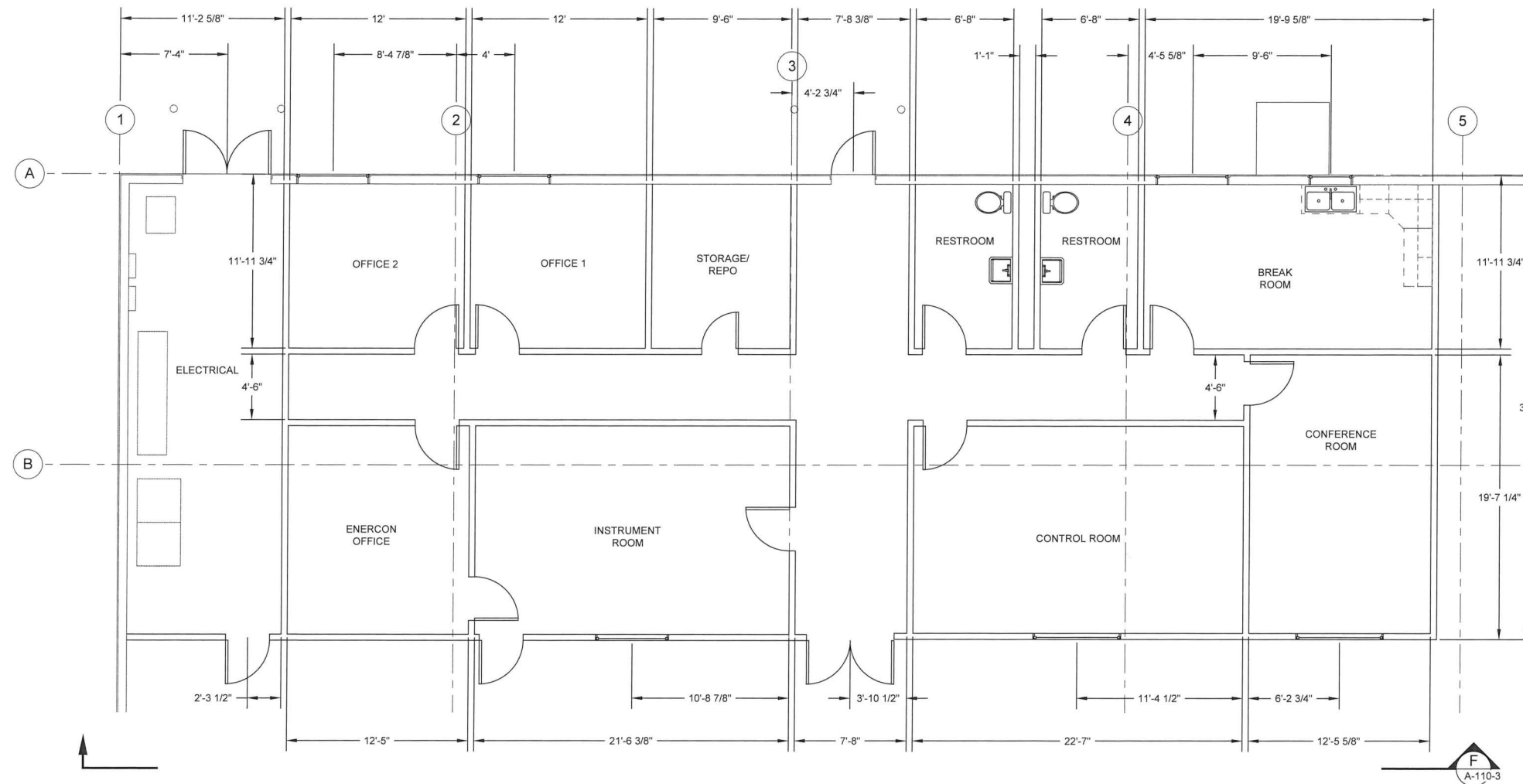
DESIGNED BY	J. LUEY	DATE	08/2018
CHECKED BY	J. LUEY	DATE	08/2018
PROJECT MANAGER		DATE	
DESIGN AUTHORITY		DATE	

DWG NO	K-EPM-DWG-A-100	REV	B
SCALE	AS SHOWN	SHEET	1 OF 2

K-EPM-DWG-A-100 SH 1 OF 2 REV B

NOTES

- DOORS, WALLS, AND WINDOWS BETWEEN PROCESS AND NON PROCESS TO BE FIRE SEPARATION RATED, AS REQUIRED.



1 ENLARGED PLAN
SHEET 1 SCALE: 1/4"=1'-0"



DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV BY	DATE	ENGR	COMPANY

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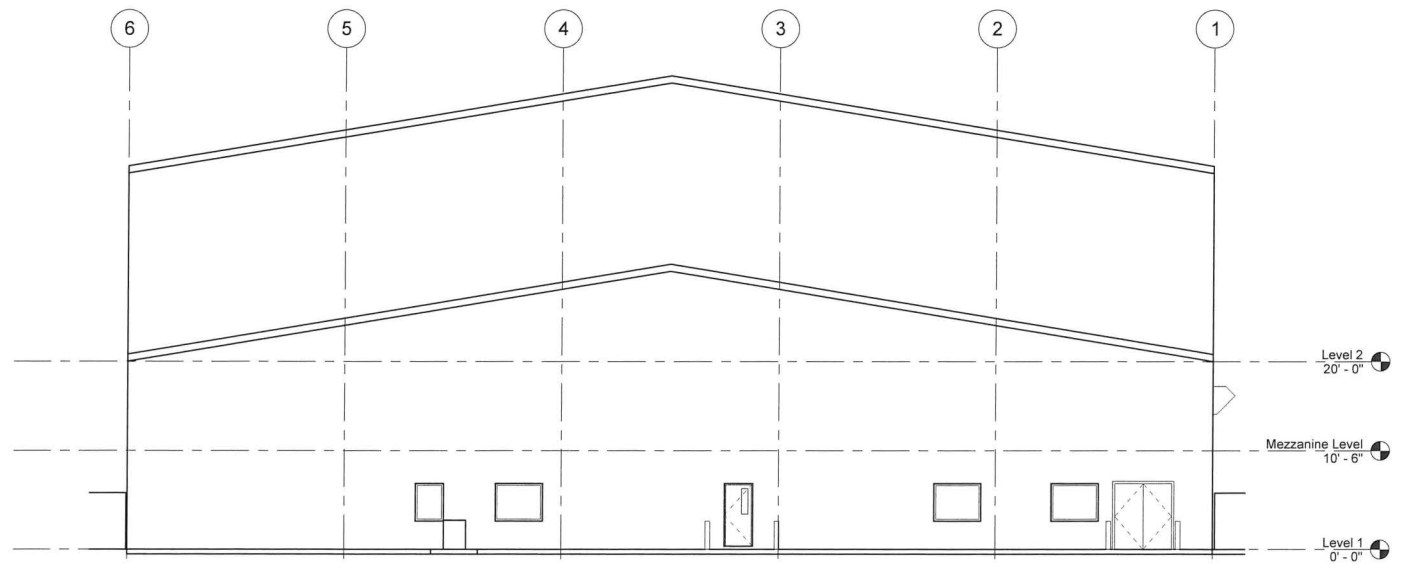
CIMARRON
PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA
TREATMENT FACILITY
ARCHITECTURAL PLAN

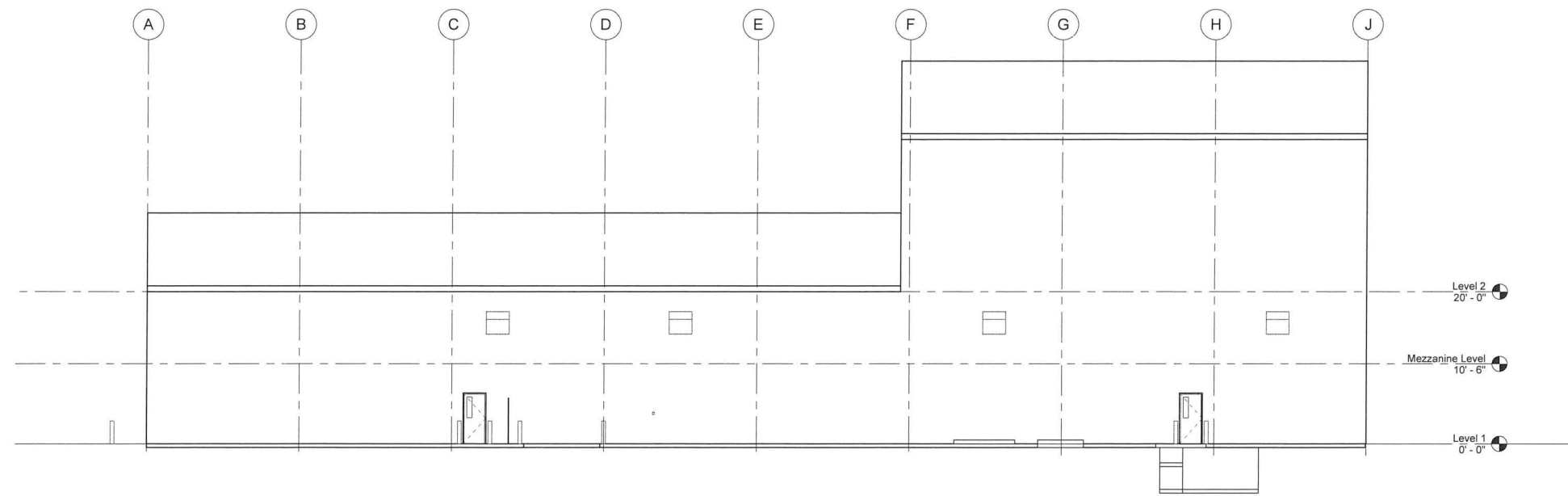
K-EPM-DWG-A-100

SCALE: AS SHOWN SHEET 2 OF 2

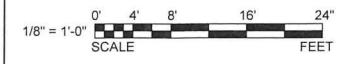
K-EPM-DWG-A-100 SH 2 OF 2 REV. B



(A) NORTH ELEVATION
 A-100-1 SCALE: 1/8"=1'-0"



(B) WEST ELEVATION
 A-100-1 SCALE: 1/8"=1'-0"



DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV BY DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		REFERENCES					
			NEXT USED ON					

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CIMARRON
 PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA
 TREATMENT FACILITY
 ELEVATIONS AND SECTIONS

DWG NO: **K-EPMDWG-A-110** REV: **A**

SCALE: AS SHOWN SHEET 1 OF 3

NAME	DATE	COMPANY
DESIGNED BY: S. MOORE	REVISED	VEOLIA
DRAWN BY:		
CHECKER:		
PROJECT MANAGER:		
DESIGN AUTHORITY:		

DWG NO: K-EPMDWG-A-110 SH: 1 OF 2 (REV: A)

C SOUTH ELEVATION
 A-100-1 SCALE: 1/8"=1'-0"

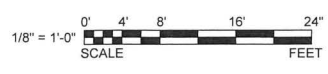
D EAST ELEVATION
 A-100-1 SCALE: 1/8"=1'-0"

IN-PROCESS
 60% DESIGN PACKAGE UPDATE
 NOT APPROVED FOR CONSTRUCTION



NAME	DATE	COMPANY
DRAWN BY: S MOORE	05/15/18	VEOLIA
CHECKER:		VEOLIA
PROJECT MANAGER:		VEOLIA
DESIGN AUTHORITY:		VEOLIA

CIMARRON	
PUMP AND TREAT SYSTEM PROJECT	
WESTERN AREA	
TREATMENT FACILITY	
ELEVATIONS AND SECTIONS	
SIZE	DWG NO
F	K-EPM-DWG-A-110
SCALE	AS SHOWN
SHEET	2 OF



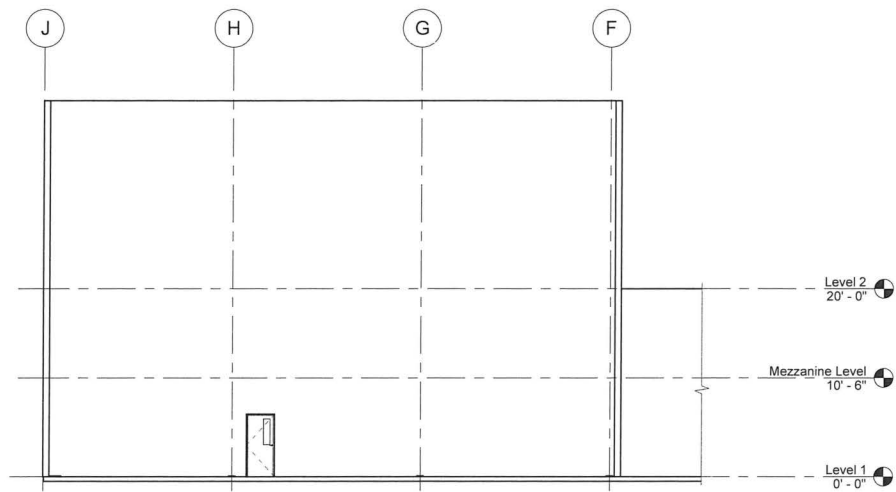
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DRAWING TRACEABILITY LIST		REFERENCES		REVISIONS	
DWG NO	TITLE	REF NUMBER	TITLE	DATE	REV

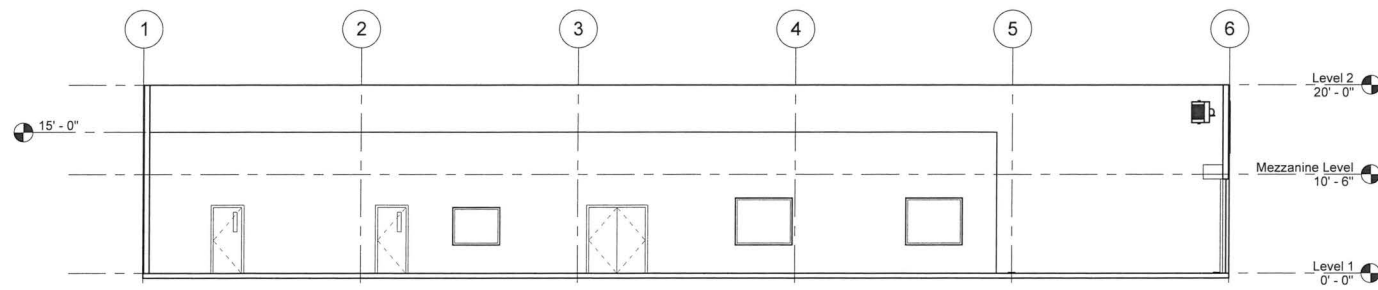
REV. A
 SH. 2 OF
 K-EPM-DWG-A-110
 DWG NO

F
E
D
C
B
A

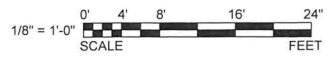
F
E
D
C
B
A



E SECTION
A-100-2 SCALE: 1/8"=1'-0"



F SECTION
A-100-2 SCALE: 1/8"=1'-0"



DWG NO	TITLE	REF NUMBER	TITLE	DATE	REV	NO	DESCRIPTION	REV	DATE	ENGR	COMPANY

IN-PROCESS
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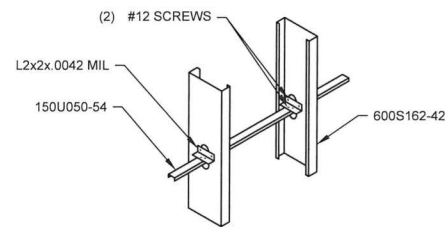
CIMARRON
PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA
TREATMENT FACILITY
ELEVATIONS AND SECTIONS

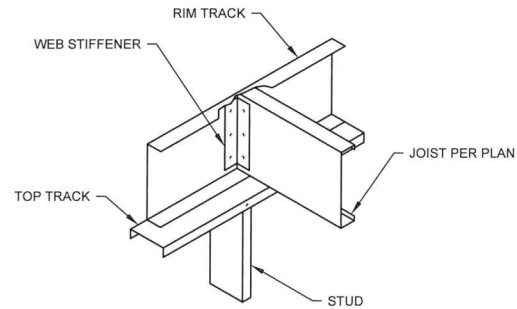
K-EPM-DWG-A-110

SCALE AS SHOWN SHEET 3 OF 3

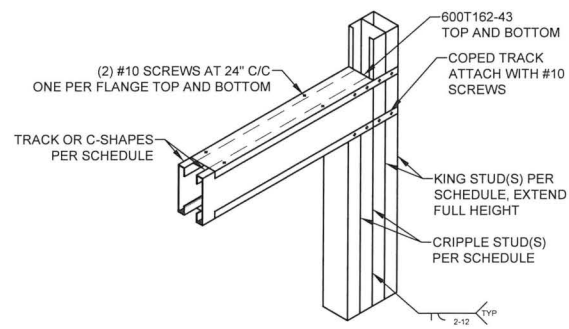
K-EPM-DWG-A-110 SH 3 OF 3 REV A



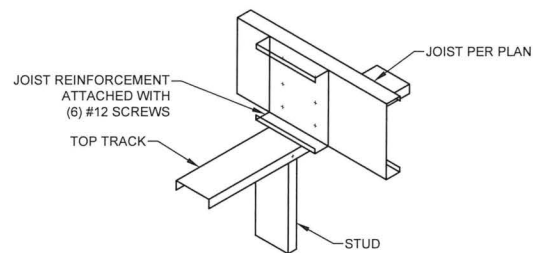
1
TYPICAL LATERAL BRACING
DETAIL
SCALE: NONE



2
TYPICAL CLIP ANGLE STIFFENER - BACK OF JOIST
DETAIL
SCALE: NONE



3
TYPICAL METAL STUD HEADER
DETAIL
SCALE: NONE



4
TYPICAL WEB REINFORCEMENT - DOUBLE WEB
DETAIL
SCALE: NONE

PERIMETER NON-LOAD BEARING HEADER SCHEDULE			
OPENING WIDTH	BOX HEADER SIZE	CRIPPLE STUD SIZE	KING STUD SIZE
6'-0" OR LESS	(2) 600S162-43 33 KSI	NOT REQUIRED	(1) 600S300-54 50 KSI
6'-1" TO 8'-0"	(2) 800S162-43 33 KSI	NOT REQUIRED	(1) 600S350-54 50 KSI
8'-1" TO 10'-0"	(2) 1000S162-54 50 KSI	NOT REQUIRED	(1) 600S350-68 50 KSI
10'-1" TO 14'-0"	(2) 1200S162-68 50 KSI	NOT REQUIRED	(1) 600S350-97 50 KSI

IN-PROCESS
60% DESIGN PACKAGE UPDATE
NOT APPROVED FOR CONSTRUCTION



NAME	DATE	COMPANY
DESIGNED BY S. MOORE	DATE	VEOLIA
CHECKER	DATE	VEOLIA
PROJECT MANAGER	DATE	VEOLIA
DESIGN AUTHORITY	DATE	VEOLIA

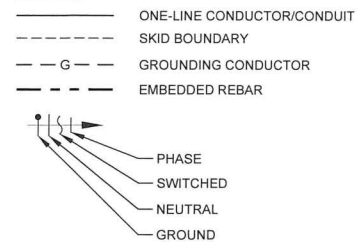
CIMARRON
PUMP AND TREAT SYSTEM PROJECT
WESTERN AREA TREATMENT
FACILITY ARCHITECTURAL
DETAILS

SIZE: F
DWG NO: K-EPM-DWG-A-120
SCALE: AS SHOWN
SHEET 1 OF 1

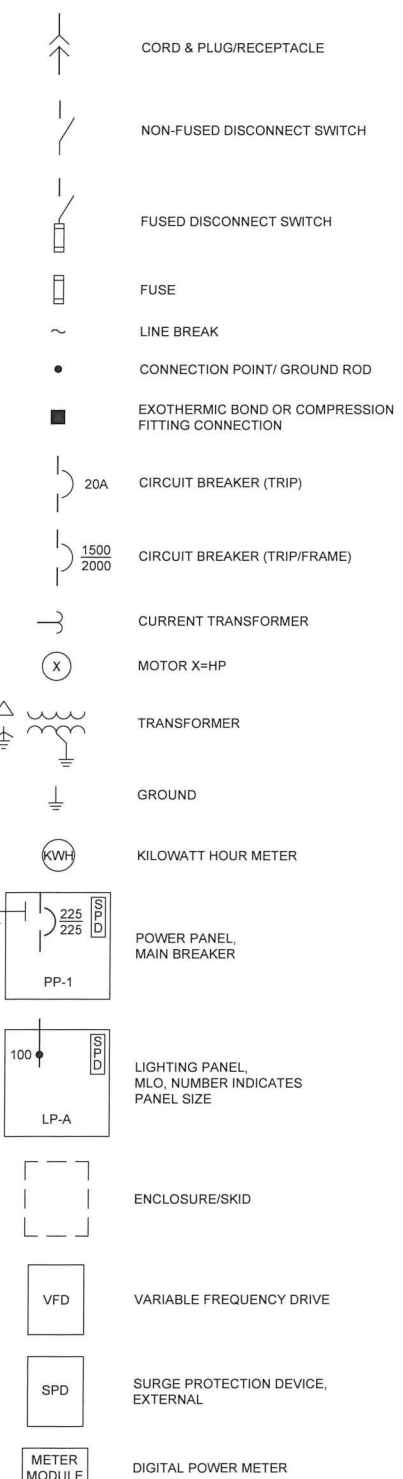
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	DRAWING TRACEABILITY LIST		NEXT USED ON					

DWG NO K-EPM-DWG-A-120 SH 1 OF 1 REV A

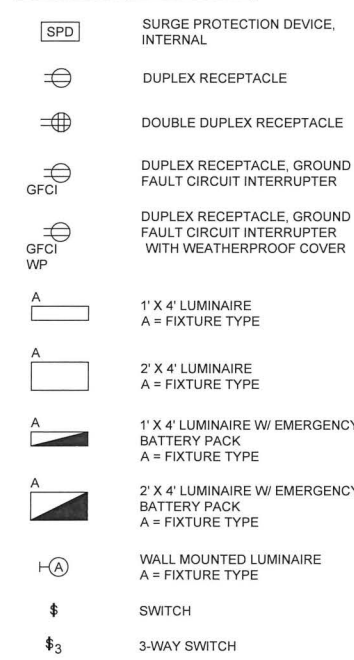
LINES:



SYMBOLS:



SYMBOLS: (CONTINUED)



ABBREVIATIONS:

- A AMPERES
- BA1 BURIAL AREA 1
- CBL CABLE
- CTRL CONTROL
- DP DISTRIBUTION PANEL
- DS DISCONNECT SWITCH
- EGC EQUIPMENT GROUNDING CONDUCTOR
- F.O. FIBER OPTIC
- G GROUND
- GEC GROUNDING ELECTRODE CONDUCTOR
- GES GROUNDING ELECTRODE SYSTEM
- GND GROUNDING CONDUCTOR
- HMI HUMAN MACHINE INTERFACE
- HP HORSE POWER
- HVAC HEATING, VENTILATION & AIR CONDITIONING
- HZ HERTZ
- I/O INPUT/OUTPUT
- IX ION EXCHANGE
- KV KILO-VOLT
- KVA KILO-VOLT AMPERES
- KW KILO-WATT
- LED LIGHT EMITTING DIODE
- LP LIGHTING PANEL
- MCC MOTOR CONTROL CENTER
- MLO MAIN LUGS ONLY
- N NEUTRAL
- NEC NATIONAL ELECTRICAL CODE
- P PUMP/POLE BREAKER
- PLC PROGRAMMABLE LOGIC CONTROLLER
- PLG PLUG
- PP POWER PANEL
- PWR POWER
- RCPT RECEPTACLE
- SKD SKID
- SWBD SWITCHBOARD
- V VOLTS
- VA VOLT AMPERES
- VFD VARIABLE FREQUENCY DRIVE
- W WATTS/WIRE
- WATF WESTERN AREA TREATMENT FACILITY
- XFMR TRANSFORMER
- XO TRANSFORMER SECONDARY NEUTRAL

INSTRUMENT/FUNCTION SYMBOLS:



GENERAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, 2017 EDITION.

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CIMARRON
PUMP AND TREAT SYSTEM PROJECT

WATF ELECTRICAL
SYMBOLS, NOTES, AND
ABBREVIATIONS

DESIGNED BY S. MOORE	DATE	COMPANY	SCALE	DWG NO	REV	SHEET	OF	1
CHECKED BY D. KING								
PROJECT MANAGER J. LUEY								

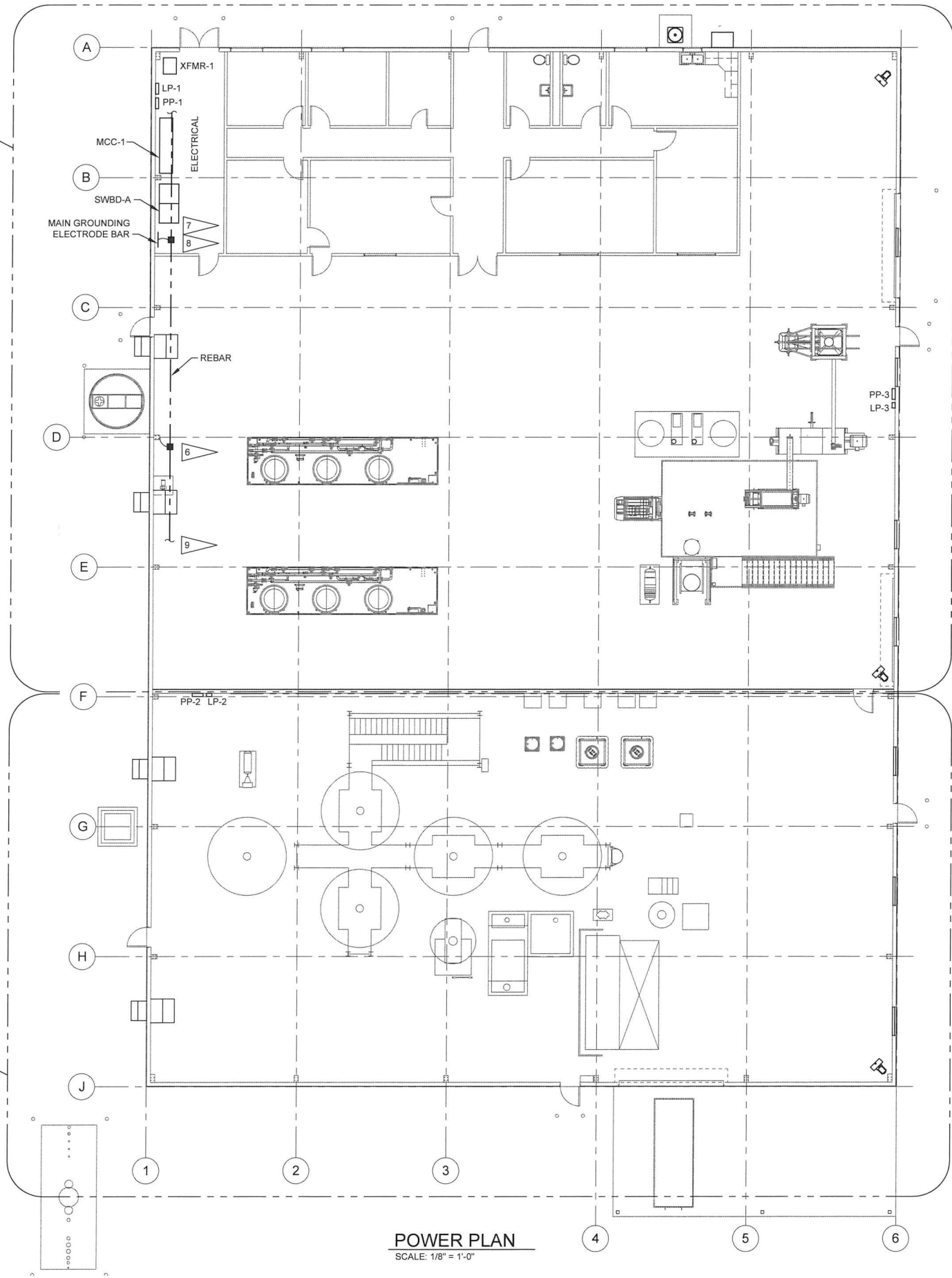
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	DRAWING TRACEABILITY LIST		REFERENCES									
			NEXT USED ON									

K-EPM-DWG-E-101 1 OF 1 (REV. A)



1
SHEET 2

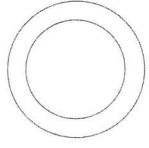
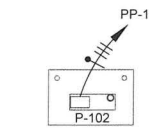
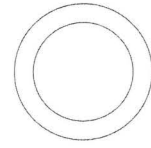
2
SHEET 3



POWER PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. SEE K-EPM-DWG-E-101 FOR SYMBOLS, NOTES, AND ABBREVIATIONS.
2. REFER TO SINGLE LINE DIAGRAM K-EPM-DWG-E-110 FOR CONNECTION DETAILS.
3. ALL GROUNDING SYSTEM CONDUCTORS ARE #4/0 AWG COPPER UNLESS OTHERWISE SPECIFIED.
4. BOND ALL METAL WATER PIPES WITHIN 5 FEET OF SERVICE ENTRANCE TO GROUNDING ELECTRODE SYSTEM.
5. TIE 1/2 INCH MINIMUM DIAMETER EMBEDDED REBAR SECTIONS TOGETHER USING STEEL WIRE TIES OR WELDING TO FORM A CONTINUOUS CONCRETE-ENCASED GROUNDING ELECTRODE.
6. BOND EVERY OTHER STEEL COLUMN TO GROUNDING ELECTRODE SYSTEM.
7. INSTALL MAIN GROUNDING ELECTRODE GROUND BAR IN APPROXIMATE LOCATION SHOWN. CONNECT TO GROUNDING ELECTRODE SYSTEM.
8. PROVIDE 5 FEET OF GROUNDING ELECTRODE CONDUCTOR ABOVE FINISHED FLOOR FOR BONDING TO MAIN GROUNDING ELECTRODE GROUND BAR.
9. REBAR BONDED TOGETHER IN CONCRETE SLAB.
10. POWER CIRCUITS FOR SECURITY LIGHTING AND DETECTION SYSTEMS TO BE DEFINED FOR 90% DESIGN.



DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV BY	DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST	NEXT USED ON	REFERENCES						



NAME		DATE	COMPANY
DESIGNED BY	S. MOORE		VEOLIA
CHECKED BY	D. KING		VEOLIA
PROJECT MANAGER			VEOLIA
DESIGN AUTHORITY			VEOLIA

CIMARRON
PUMP AND TREAT SYSTEM PROJECT

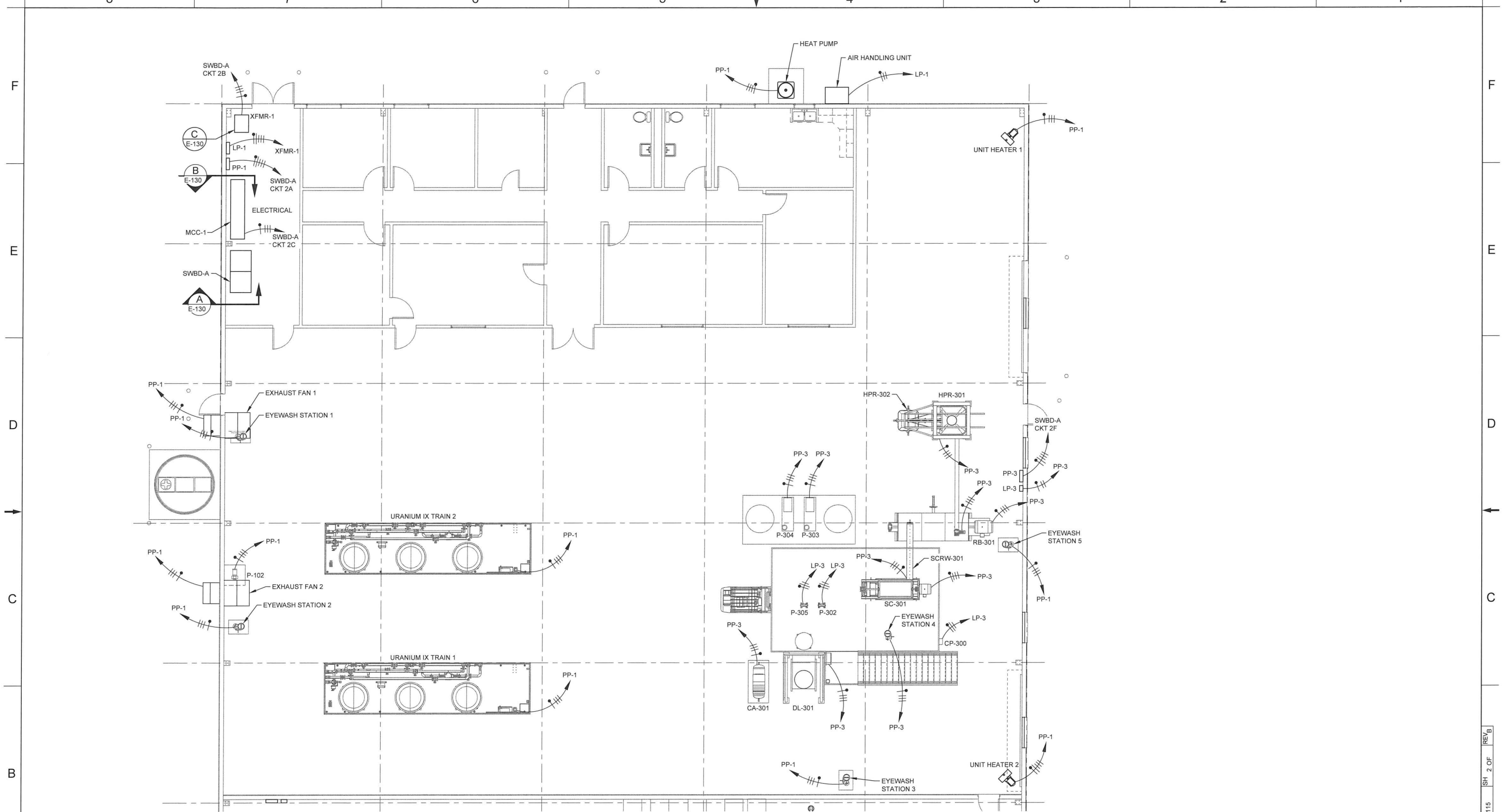
WESTERN AREA
TREATMENT FACILITY
BUILDING POWER PLAN

K-EPM-DWG-E-115

IN-PROCESS
60% DESIGN PACKAGE UPDATE
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K-EPM-DWG-E-115 SH 1 OF 3 (REV. B)

A



1 ENLARGED POWER PLAN
SHEET-1 SCALE: 3/16"=1'-0"

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NAME	DATE	COMPANY	REVISION
DESIGNED BY S. MOORE			VNS/FS
CHECKED BY D. KING			VNS/FS
PROJECT MANAGER			VNS
DESIGN AUTHORITY			

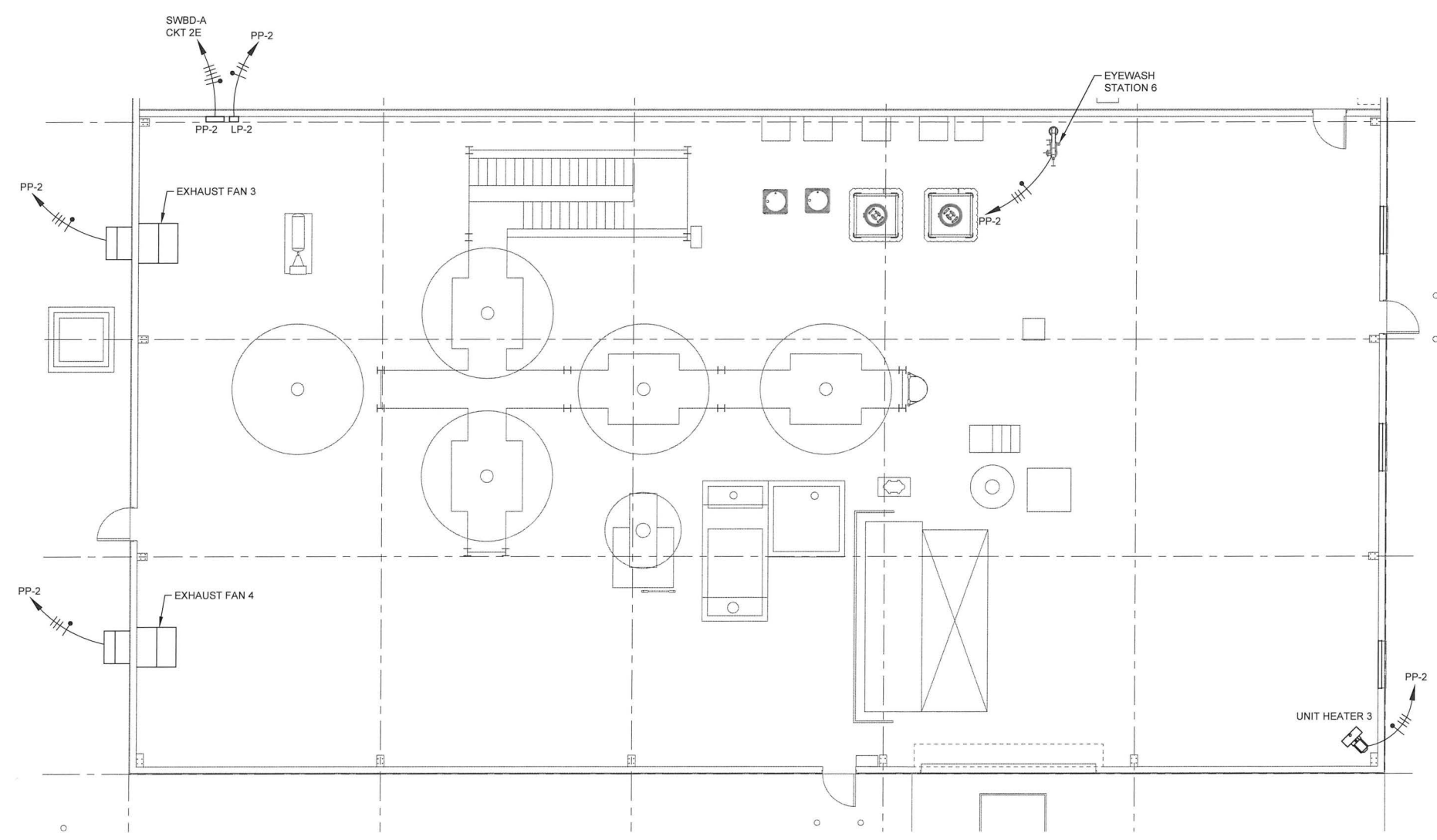
CIMARRON PUMP AND TREAT SYSTEM PROJECT	
WESTERN AREA TREATMENT FACILITY BUILDING POWER PLAN	
SCALE	DWG NO
F	K-EPM-DWG-E-115
REV	B



DWG NO	TITLE	REF NUMBER	TITLE	REV	DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		REFERENCES				

K-EPM-DWG-E-115 SH 2 OF 2 REV B

- NOTES:**
- ELECTRICAL DISTRIBUTION PANELS PP-2 AND LP-2 SUPPLY POWER TO THE BIODENITRIFICATION AND SOLIDS HANDLING SYSTEM COMPONENTS.



2 ENLARGED POWER PLAN
 SHEET-1 SCALE: 3/16"=1'-0"



DWG NO	TITLE	REF NUMBER	TITLE	REV	DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		REFERENCES				

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 www.nuclearsolutions.veolia.com

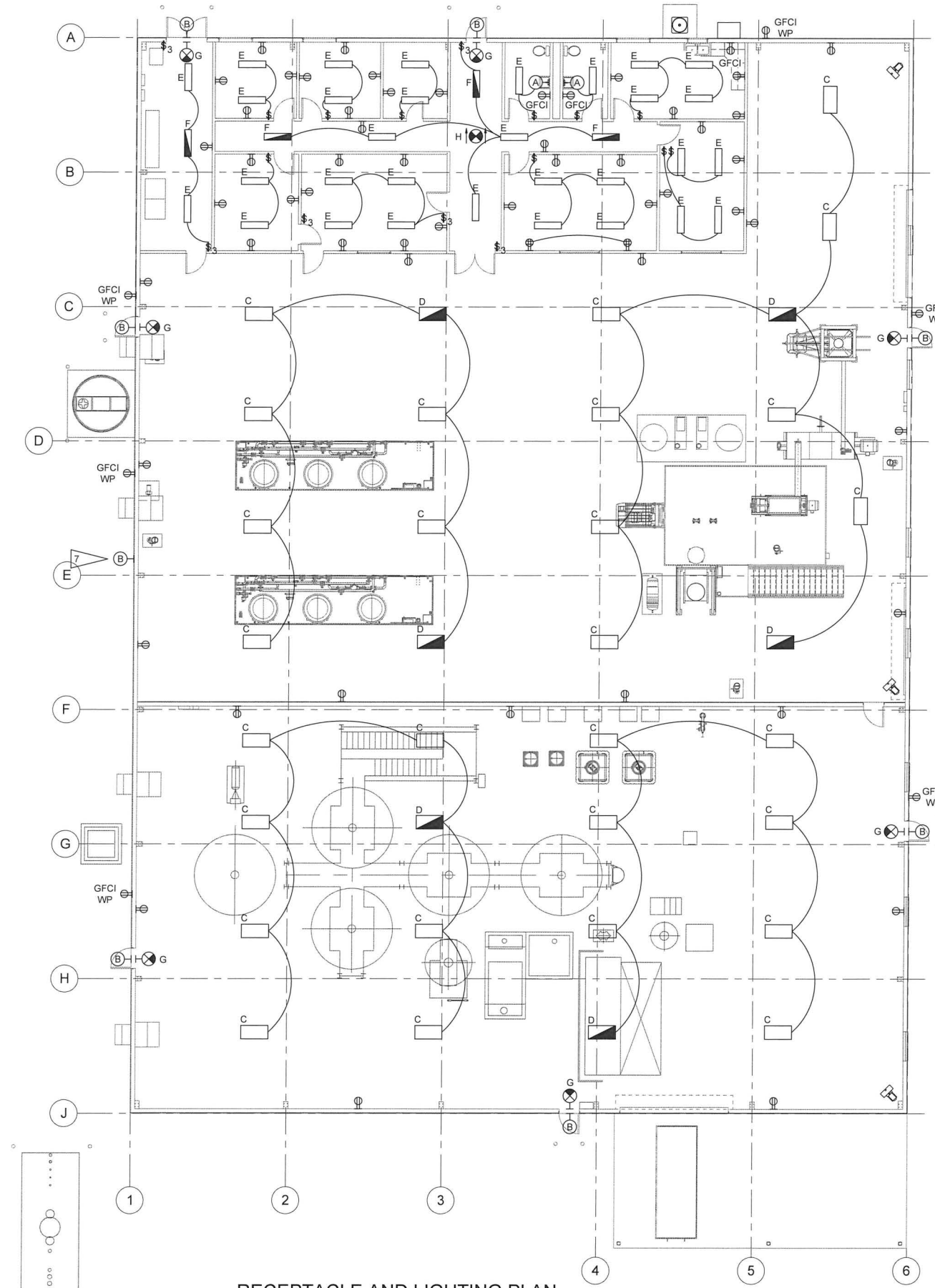
CIMARRON
 PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA
 TREATMENT FACILITY
 BUILDING POWER PLAN


K-EPM-DWG-E-115

SHEET 3 OF 3

K-EPM-DWG-E-115 SH 3 OF 3 REV B



GENERAL NOTES:

1. SEE K-EPM-DWG-E-101 FOR SYMBOLS, NOTES, AND ABBREVIATIONS.
2. INSTALL EXTERIOR LIGHTS IN LOCATIONS SHOWN AT 8' ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED.
3. PROVIDE UNSWITCHED POWER TO EMERGENCY LIGHT FIXTURE BALLASTS.
4. MOUNT LIGHTS IN NORTH BAY AT 16' AFF UNLESS OTHERWISE NOTED.
5. MOUNT LIGHTS IN SOUTH BAY AT 32' AFF UNLESS OTHERWISE NOTED.
6. MOUNT EXIT SIGNS DIRECTLY ABOVE DOOR FRAMES IN LOCATIONS SHOWN. SIGNS MUST BE VIEWABLE AND CLEAR OF OBSTRUCTIONS.
7.  INSTALL EXTERIOR LIGHT IN LOCATION SHOWN AT 12' ABOVE FINISHED GRADE.

LUMINAIRE TYPES:

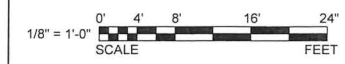
- A. INTERIOR BATHROOM FIXTURE, WITH (2) 13.5W LED BULBS
- B. EXTERIOR LED WALL PACK WITH PHOTOELECTRIC SENSOR, 20W
- C. 2 X 4 LED TROFFER, HIGH OUTPUT, 4000K, 70.2W
- D. 2 X 4 LED TROFFER, HIGH OUTPUT, 4000K, WITH EMERGENCY BATTERY PACK, 70.2W
- E. 1 X 4 LED TROFFER, 4000K, 44W
- F. 1 X 4 LED TROFFER, 4000K, WITH EMERGENCY BATTERY PACK, 44W
- G. WALL MOUNTED EXIT SIGN
- H. CEILING MOUNTED EXIT SIGN

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NAME	DATE	COMPANY
DESIGNED BY S. MOORE	REVISIONS	VEOLIA
CHECKED BY D. KING	DATE	VEOLIA
PROJECT MANAGER		VEOLIA
CIMARRON PUMP AND TREAT SYSTEM PROJECT		
WESTERN AREA TREATMENT FACILITY RECEPTACLE AND LIGHTING PLAN		
SCALE	DWG NO	REV
1/8" = 1'-0"	K-EPM-DWG-E-120	B
SHOWN	EST	SHEET 1 OF 1

RECEPTACLE AND LIGHTING PLAN
 SCALE: 1/8" = 1'-0"

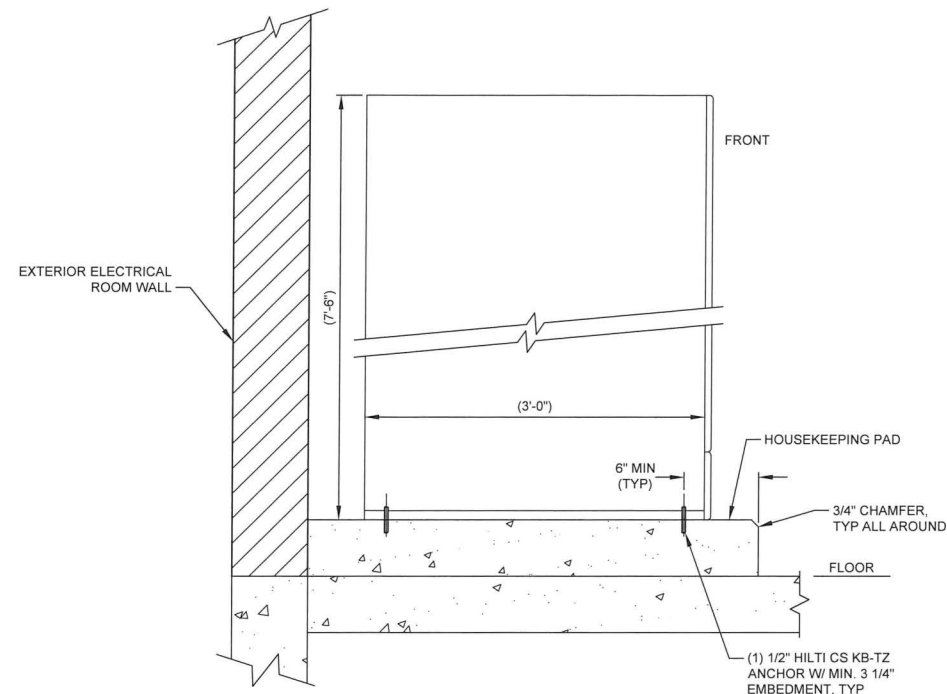


DWG NO	TITLE	REF NUMBER	TITLE	DESCRIPTION	REV	DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		REFERENCES					

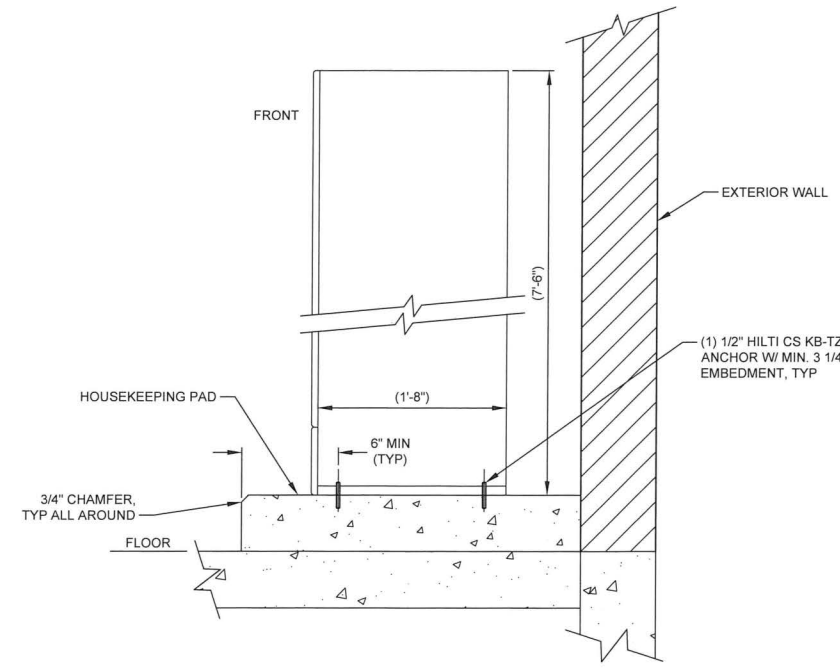
K-EPM-DWG-E-120 SH 1 OF 1 (REV B)

GENERAL NOTES:

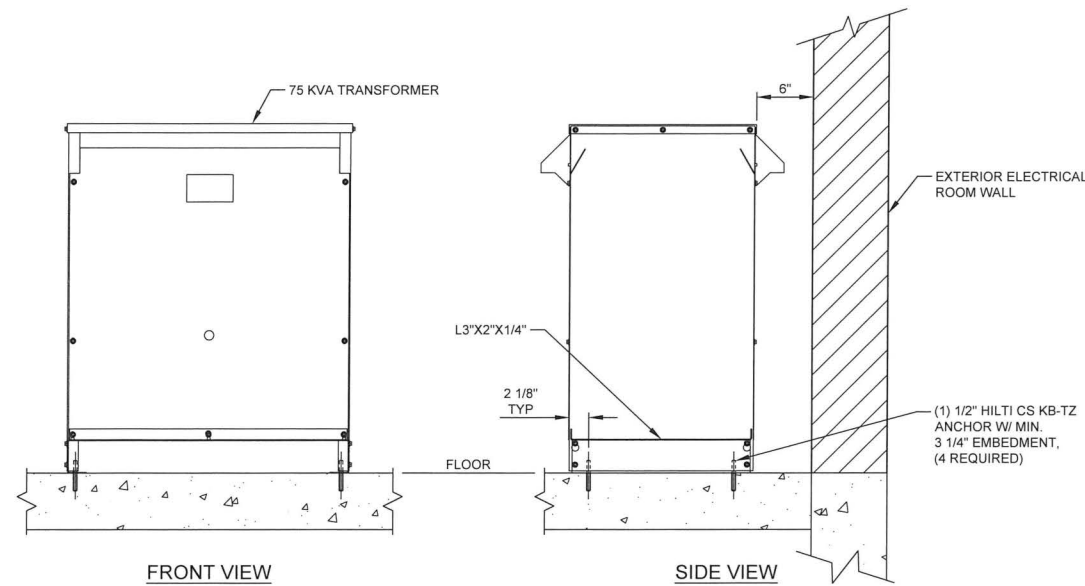
- FOR LEGEND, NOTES AND ABBREVIATIONS SEE K-EPM-DWG-E-101.
- EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS USING THE APPROPRIATE HARDWARE.



A SWITCHBOARD FLOOR MOUNTING SECTION
E-115-2 SCALE: NONE



B MCC FLOOR MOUNTING SECTION
E-115-2 SCALE: NONE



C TRANSFORMER MOUNTING
E-115-2 SCALE: NONE

IN-PROCESS
60% DESIGN PACKAGE UPDATE
NOT APPROVED FOR CONSTRUCTION

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1355 Columbia Park Trail
Richland, WA 99352
www.nuclearsolutions.veolia.com

DESIGNER V DAVISON	DATE 08/20/2024	COMPANY VEOLIA
ENGINEER D KING	DATE 08/20/2024	COMPANY VEOLIA
CHECKER J LUEY	DATE 08/20/2024	COMPANY VEOLIA
PROJECT MANAGER J LUEY	DATE 08/20/2024	COMPANY VEOLIA
DESIGN AUTHORITY	SCALE NONE	EDT

CIMARRON
PUMP AND TREAT SYSTEM PROJECT

WESTERN AREAT TREATMENT FACILITY ELECTRICAL DETAILS AND SECTIONS

DWG NO: **K-EPM-DWG-E-130** REV: **A**

SCALE: NONE EDT SHEET 1 OF 1

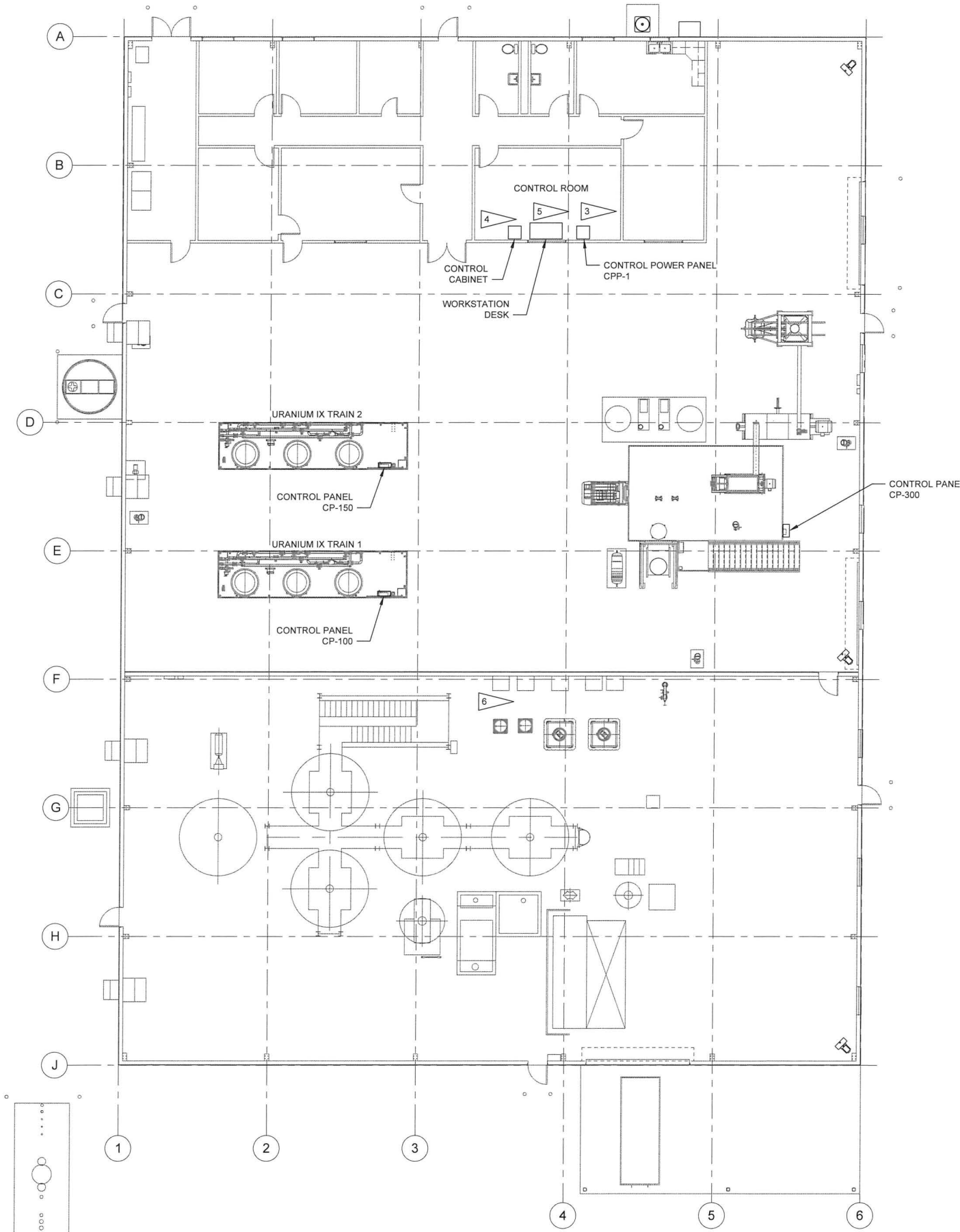
DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV DATE	ENGR	COMPANY
DRAWING TRACEABILITY LIST		REFERENCES		REVISIONS				

K-EPM-DWG-E-130 ISH 1 OF 1 (REV) A



GENERAL NOTES:

1. SEE K-EPM-DWG-E-101 FOR SYMBOLS, NOTES, AND ABBREVIATIONS.
2. SEE K-EPM-DWG-J-115 FOR CONTROL SYSTEM INTERCONNECTIONS.
3. WELL FIELD AND INJECTION SYSTEM CONTROL CABINET LOCATION (PROVIDED BY OTHERS).
4. CONTROL CABINET CONTAINS MAIN TREATMENT SYSTEM PLC, ETHERNET SWITCHES, AND MEDIA CONVERTERS.
5. LOCATION FOR WORKSTATION COMPUTER AND HMI DISPLAYS.
6. CONTROL LOCATIONS TBD FOR BIODENITRIFICATION AND SOLIDS HANDLING SYSTEMS.



INSTRUMENTATION AND CONTROL PLAN

SCALE: 1/8" = 1'-0"



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NAME	DATE	COMPANY	
DESIGNER S. MOORE		VEOLIA	
ENGINEER D. KING		VEOLIA	
CHECKER		VEOLIA	
PROJECT MANAGER		VEOLIA	

CIMARRON
PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA TREATMENT FACILITY INSTRUMENTATION AND CONTROL PLAN

DWG NO: **K-EPM-DWG-J-110** REV: **B**

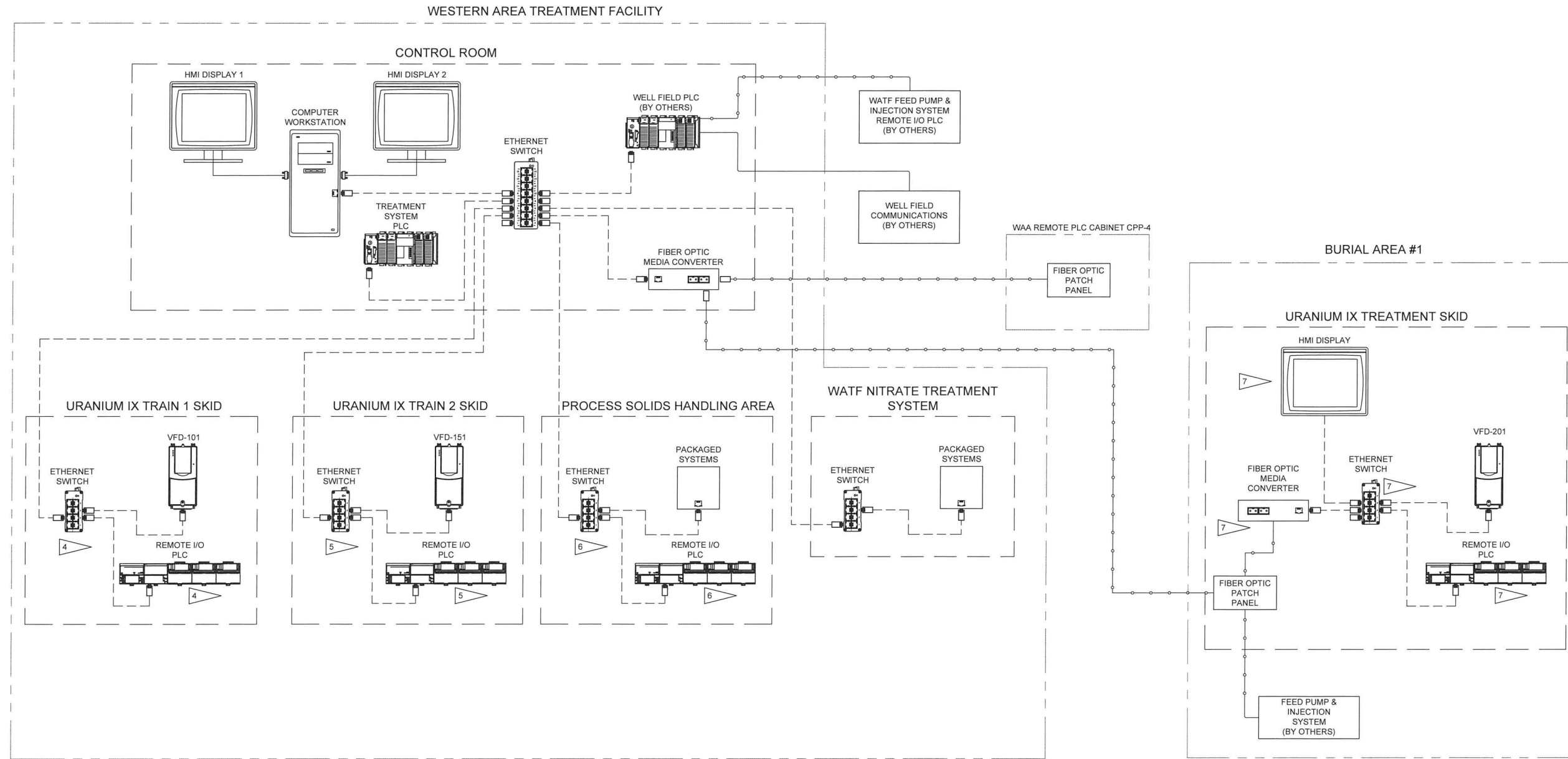
SCALE: AS SHOWN EST SHEET 1 OF 1

DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST	NEXT USED ON	REFERENCES					
				REVISIONS				

K-EPM-DWG-J-110 SH 1 OF 1 REV B

GENERAL NOTES:

1. SEE K-EPM-DWG-E-101 FOR SYMBOLS, NOTES, AND ABBREVIATIONS.
 2. ETHERNET CABLE RUNS LENGTHS SHALL NOT EXCEED 328 FEET. FOR LONGER RUNS, UTILIZE FIBER OPTIC CABLE WITH MEDIA CONVERTERS.
 3. SEE BMCD-GWREMED-E111 AND BMCD-GWREMED-E112 FOR WELL FIELD AND INJECTION SYSTEMS COMMUNICATION SYSTEM ARCHITECTURE.
4. EQUIPMENT LOCATED IN CONTROL PANEL CP-100.
5. EQUIPMENT LOCATED IN CONTROL PANEL CP-150.
6. EQUIPMENT LOCATED IN CONTROL PANEL CP-300.
7. EQUIPMENT LOCATED IN CONTROL PANEL CP-200.



CONTROL SYSTEM NETWORK INTERCONNECTION DIAGRAM

LEGEND

- ANALOG
- - - ETHERNET
- FIBER

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NAME	DATE	COMPANY
D KING	08/03/11	VNSFS
D KING		VNSFS
PROJECT MANAGER		VNS
CIMARRON PUMP AND TREAT SYSTEM PROJECT		
INSTRUMENTATION AND CONTROL SYSTEM NETWORK INTERCONNECTION DIAGRAM		
SIZE	DWG NO	REV
F	K-EPM-DWG-J-115	B
SCALE	NONE	SHEET 1 OF 1

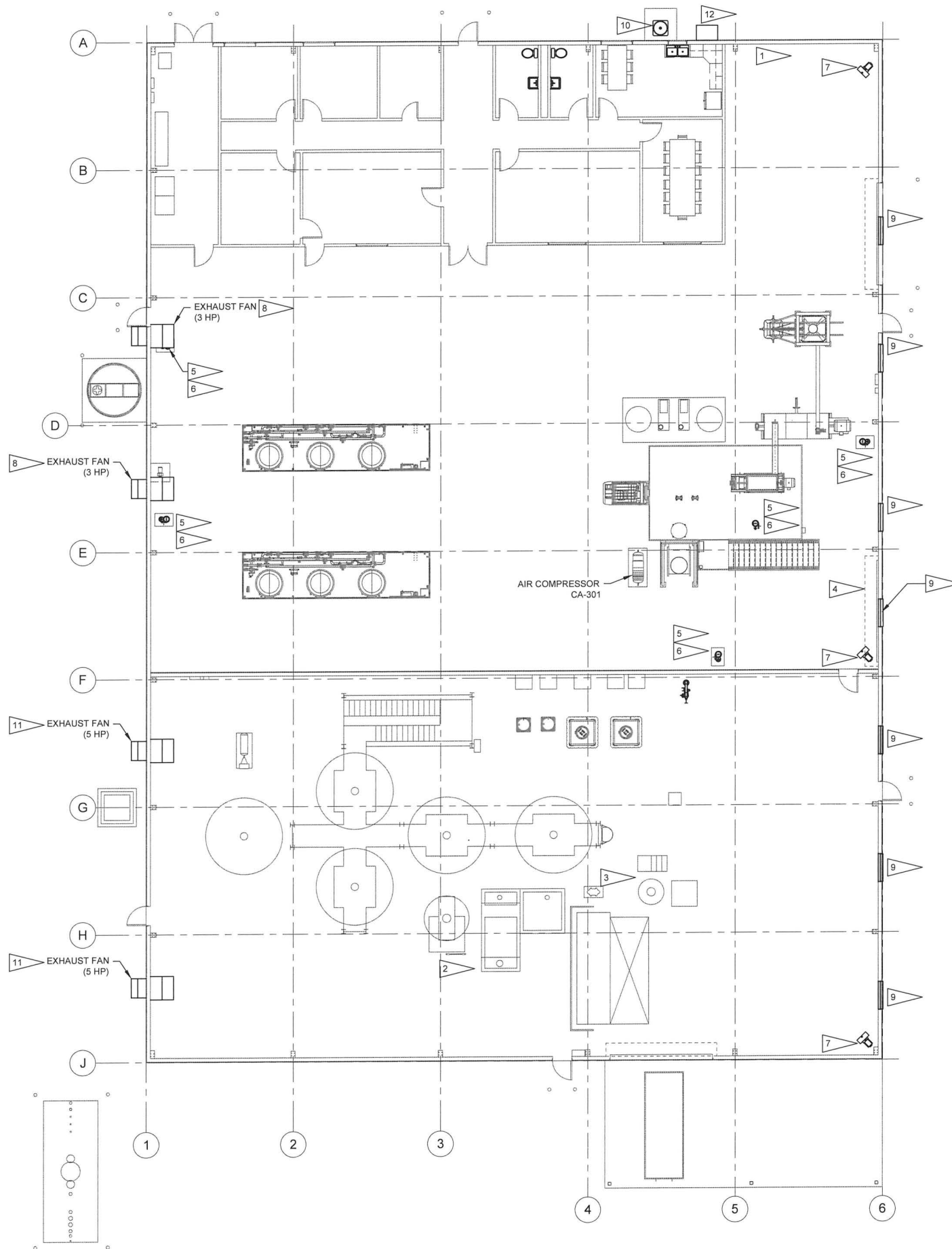
DWG NO	TITLE	REF NUMBER	TITLE	DATE	REV NO	DESCRIPTION	REV BY	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		REFERENCES						

K-EPM-DWG-J-115 SH 1 OF 1 REV B

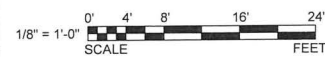


GENERAL NOTES:

- 1 WALL SPACE RESERVED FOR GROUNDWATER SAMPLING CABINETS.
- 2 (1" HOSE BIB)
- 3 (2" HOSE BIB)
- 4 ACCESS FOR SPENT/REFILLED IX VESSELS AND LOADED WASTE DRUMS.
- 5 EYE WASH STATION MODEL 7261-7271.
- 6 EYE WASH CATCH BASIN.
- 7 UNIT HEATER (ELECTRICAL) MODEL DAYTON 2YU73, 51,200 BTU/HR.
- 8 EXHAUST FAN MODEL GREENHECK SB-2L42-30, 19,836CFM @ .375 IN WG
- 9 VENT LOUVER MODEL GREENHECK ESD-435 54" WIDE X 66" HEIGHT EACH INCLUDES 2" THK. MERV 4 FILTRATION.
- 10 HEAT PUMP 6 TON CAPACITY DUCTED AIR TO BE SUPPLIED TO EACH ROOM. HEATING MODEL TRANE TWA073D30RA.
- 11 EXHAUST FAN MODEL GREENHECK SB-2L48-50, 29,811CFM @ .375 IN WG.
- 12 AIR HANDLER UNIT, TRANE MODEL TWE090D100A. NOMINAL COOLING CAPACITY 7.5 TONS SIZED FOR HEATING CAPACITY 28,000 BTU/HR, 3,000 CFM.



MECHANICAL PLAN
SCALE: 1/8" = 1'-0"



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NAME		DATE	COMPANY
DESIGNED BY	S. MOORE	08/2015	UNEPS
CHECKED BY	T. BACHART		UNEPS
PROJECT MANAGER			UNEPS
DESIGN AUTHORITY			UNEPS

PROJECT		CIMARRON PUMP AND TREAT SYSTEM PROJECT	
DRAWING TITLE		WESTERN AREA TREATMENT FACILITY MECHANICAL PLAN	
SIZE	DWG NO.	REV.	
F	K-EPM-DWG-M-100	B	
SCALE	SHOWN	SPT	SHEET 1 OF 1

DWG NO.	TITLE	REF NUMBER	TITLE	REV	DATE	DESCRIPTION	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		REFERENCES					

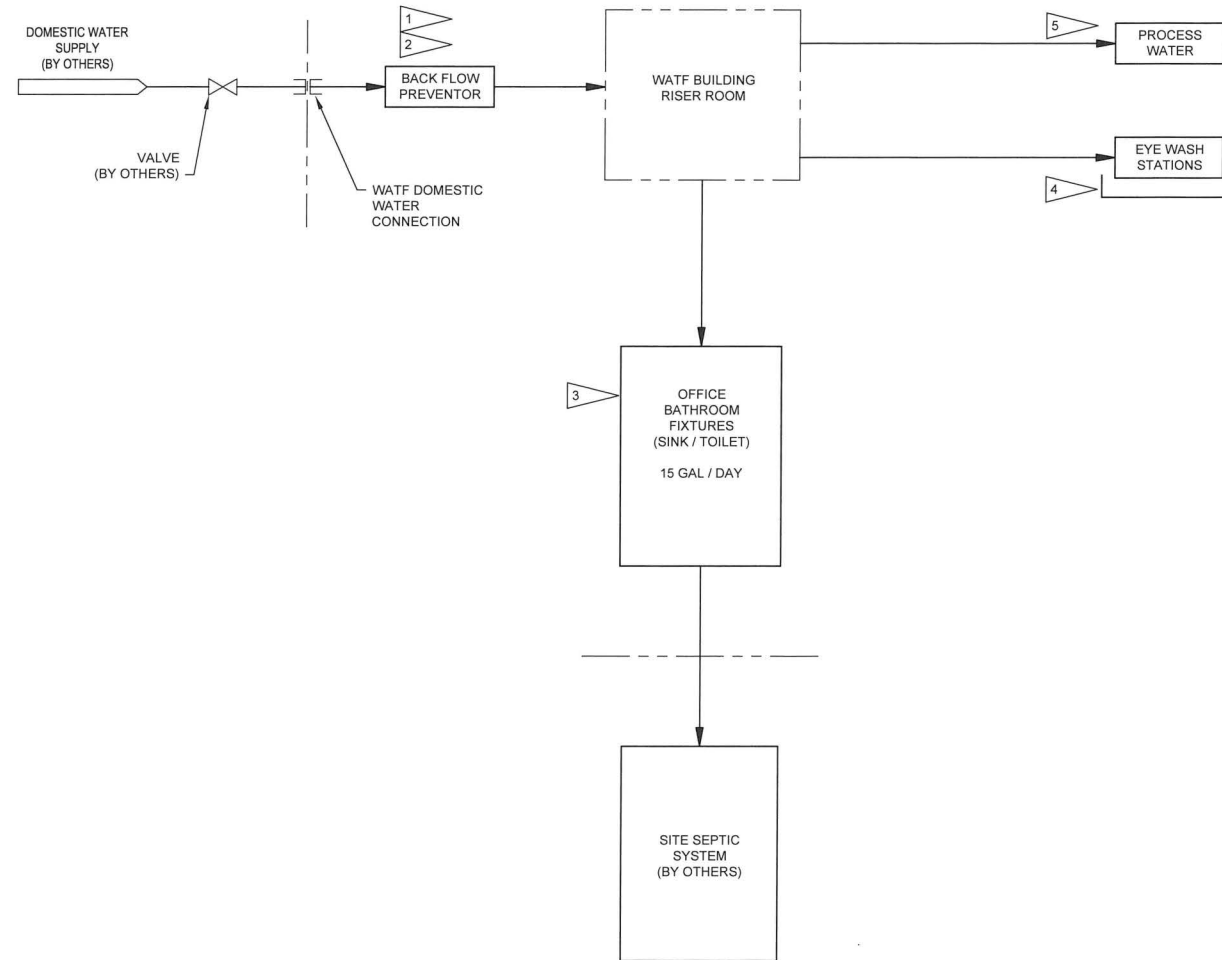
K-EPM-DWG-M-100 SH 1 OF 1 REV. B

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NOTES:

- 1 WA WATER DEMAND IS 20 GPM WITH A MINIMUM PRESSURE OF 60 PSI.
- 2 BACK FLOW PREVENTOR SHALL MEET LOCAL CODES AND STANDARDS.
- 3 15 GALLONS A DAY IS ESTIMATED FLOW WHEN BUILDING IS OCCUPIED.
- 4 EYE / FACE WASH SHALL BE 3 GPM @ 30PSI FOR 15 MINUTES CONTINUOUSLY. EYE / FACE WASH WATER SHALL BE CAUGHT IN BASIN WITH A CAPACITY OF 60 GALLONS. EYE / FACE WASH DO NOT CONTRIBUTE TO SEPTIC SYSTEM.
- 5 SPECIFIC NUMBER AND LOCATIONS TO BE FINALIZED WITH EQUIPMENT.
- 6 TREATMENT TRAINS SHALL HAVE SEPARATE CONTAINMENT BASINS AND/OR OTHER MEANS TO PREVENT CONTAMINATION OF SEPTIC SYSTEM.



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NAME S. MOORE J. LUEY PROJECT MANAGER	DATE VNSFS VNS VNS	CIMARRON PUMP AND TREAT SYSTEM PROJECT WESTERN AREA TREATMENT FACILITY INTERNAL PLUMBING DIAGRAM	
DWG NO F	TITLE K-EPM-DWG-M-120	REF NUMBER B	TITLE B
DRAWING TRACEABILITY LIST DWG NO TITLE REF NUMBER TITLE LVD REV NO DESCRIPTION REV BY DATE ENDR COMPANY		REVISIONS	
SCALE NONE EST		SHEET 1 of 1	

K-EPM-DWG-M-120 SH 1 OF 1 REV. B

A

INSTRUMENT IDENTIFICATION (ISA 5.1 R2009)					
FIRST-LETTER	MEASURED OR INITIATING VARIABLE		SUCCEEDING-LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
C	CONDUCTIVITY			CONTROLLER	
D		DIFFERENTIAL	DETECTOR		
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)			
G	USER'S CHOICE		GLASS, VIEWING DEVICE		
H	HAND				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
N	USER'S CHOICE				
O	USER'S CHOICE		ORIFICE, RESTRICTION		
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY				
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
W	WEIGHT, FORCE		WELL		
X	UNCLASSIFIED	X AXIS	TROUBLE	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED	

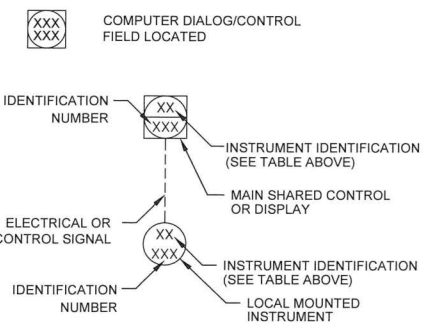
NOTES:
1. LD IS USED TO DESIGNATE LEAK DETECTION INSTRUMENT.

- LINES:**
- PRIMARY PIPING
 - INSTRUMENTATION OR OTHER PIPING
 - TANKS/PITS/BUILDINGS
 - ELECTRICAL POWER OR SIGNAL
 - SKID BOUNDARY
 - DATA LINK
 - FLEX HOSE
 - PROCESS BOUNDARY

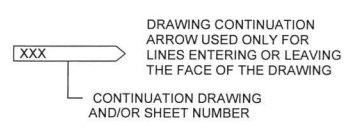
- PIPING/EQUIPMENT:**
- BALL VALVE
 - GATE VALVE
 - PINCH VALVE
 - BUTTERFLY VALVE
 - CHECK VALVE
 - SLIDE VALVE
 - MAGNETIC FLOW METER
 - FILTER
 - VARIABLE FREQUENCY DRIVE
 - GRAB SAMPLE
 - SAMPLE PORT
 - MOTOR
 - PRESSURE OR VACUUM RELIEF
 - QUICK CONNECT
 - HOSE CONNECTION
 - PIPE CAP
 - PIPE FLANGE
 - PIPE REDUCER
 - DRY DISCONNECT
 - HOPPER
 - ROTARY VALVE
 - EDUCTOR
 - BASKET STRAINER
 - IN-LINE SILENCER
 - IN-LINE MIXER
 - MECHANICAL VIBRATOR
 - SCREW CONVEYOR
 - GAUGE VALVE
 - MOTOR OPERATED VALVE
 - PRESSURE CONTROL VALVE
 - PRESSURE RELIEF VALVE
 - TANK VENT
 - TANK VENT WITH BIRD / INSECT SCREEN
- CENTRIFUGAL PUMP
 - DIAPHRAGM PUMP
 - METERING PUMP
 - POSITIVE DISPLACEMENT BLOWER
 - RIBBON BLENDER
 - SACK UNLOADER
 - SCROLLING CENTRIFUGE
 - SOLIDS DRUM
 - AIR COMPRESSOR

- ABBREVIATIONS:**
- B POSITIVE DISPLACEMENT BLOWER
 - CMPR COMPRESSOR
 - CV CHECK VALVE
 - DV DISCONNECT VALVE
 - FAI FAIL AS-IS
 - FC FAIL CLOSE
 - FDR SOLIDS FEEDER
 - FH FLEX HOSE
 - FLT FILTER
 - FO FAIL OPEN
 - GV GAUGE VALVE
 - H INTERCONNECTING HOSE
 - LC LOCKED CLOSED
 - LO LOCKED OPEN
 - MVD MANUAL VALVE DOUBLE
 - NC NORMALLY CLOSED
 - NO NORMALLY OPENED
 - P PUMP
 - P&ID PIPING AND INSTRUMENTATION DIAGRAM
 - PRV PRESSURE RELIEF VALVE
 - PSE PRESSURE SAFETY ELEMENT
 - S SAMPLE PORT
 - T TANK
 - V VALVE
 - VSL ION EXCHANGE VESSEL

INSTRUMENT SYMBOLS:



DRAWING CONTINUATION ARROW:



DWG NO	TITLE	REF NUMBER	TITLE	WFO	REV	DESCRIPTION	REV	ENGR
	DRAWING TRACEABILITY LIST		REFERENCES					

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CIMARRON
PUMP AND TREAT SYSTEM PROJECT

PROCESS
SYMBOLS, NOTES, AND
ABBREVIATIONS

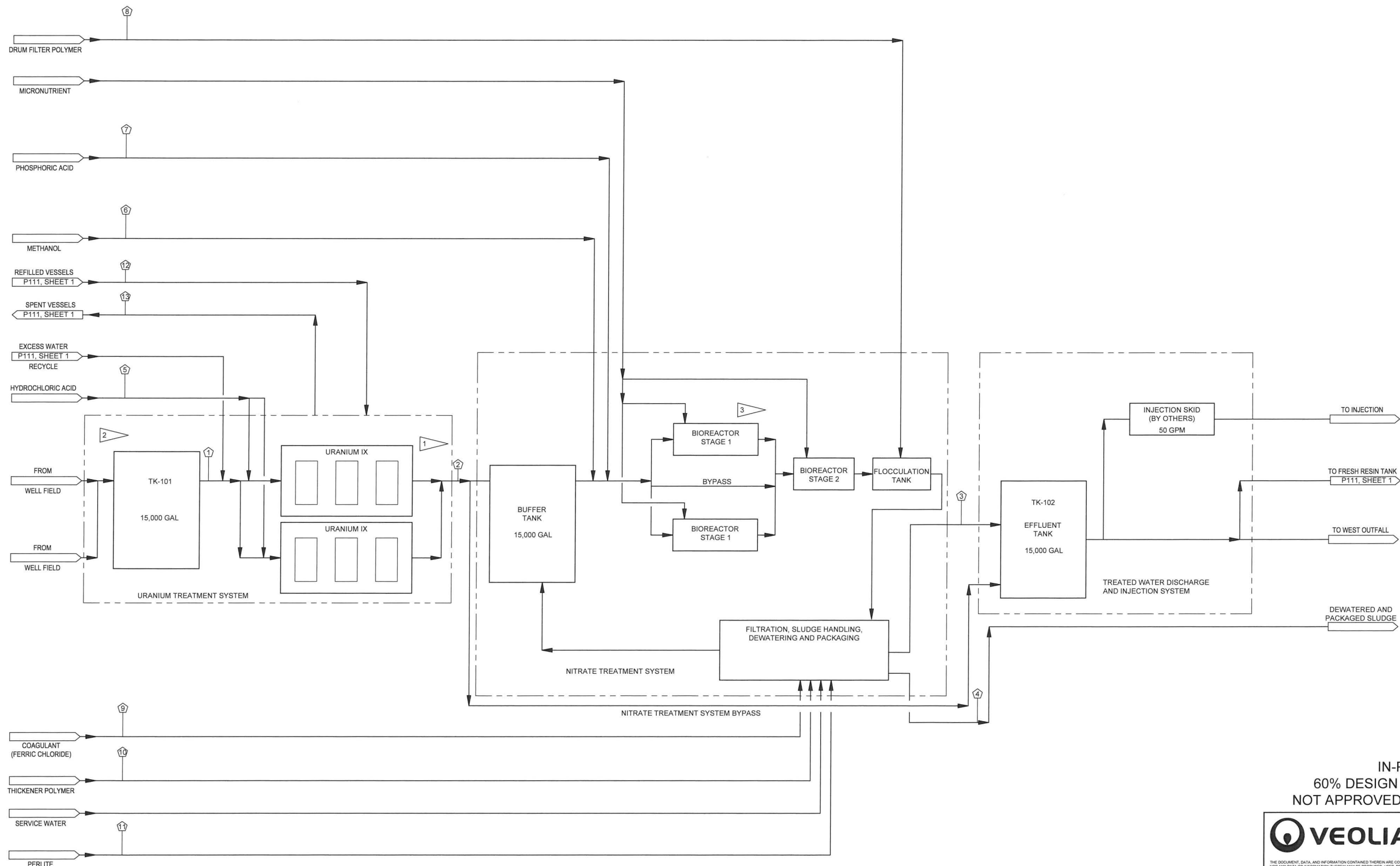
DESIGN AUTHORITY	SCALE	DWG NO	REV
	NONE	K-EPM-DWG-P-001	B

SHEET 1 OF 1

REV/B
SH 1 OF 1
K-EPM-DWG-P-001
DWG NO

GENERAL NOTES:

- 1 URANIUM TRAIN BYPASS IS BUILT INTO SKIDS IN CASE OPERATIONS ARE REQUIRED AFTER INFLUENT < MCL.
- 2 DOUBLE-WALLED INFLUENT TANK.
- 3 TWO STAGES OF BIOREACTOR ARE USED; THE FIRST STAGE CONSISTS OF TWO REACTORS IN PARALLEL.



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NAME	DATE	COMPANY																						
DESIGNED BY C NULLE		VEOLIA																						
CHECKED BY B GARRETT		VEOLIA																						
PROJECT MANAGER J JUEY		VEOLIA																						
CIMARRON PUMP AND TREAT SYSTEM PROJECT WESTERN AREA TREATMENT FACILITY OVERALL PROCESS FLOW DIAGRAM	<table border="1"> <tr> <td>SCALE</td> <td>NONE</td> </tr> <tr> <td>EST</td> <td></td> </tr> <tr> <td>SHEET</td> <td>1</td> </tr> <tr> <td>OF</td> <td>2</td> </tr> </table>	SCALE	NONE	EST		SHEET	1	OF	2															
SCALE	NONE																							
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SHEET	1																							
OF	2																							

DWG NO	TITLE	REF NUMBER	TITLE	REV	DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		REFERENCES				

DWG NO K-EPMDWG-P-110 REV B SH 1 OF 2

Stream #	1	2	3	4	5	6	7	8	9	10	11	12	13
Description	Blended IX Feed	Combined Uranium Treatment Effluent	Combined Nitrate Treatment Effluent	Nitrate Treatment Packaged Sludge	Uranium Treatment Hydrochloric Acid (36%)	Nitrate Treatment Methanol (100%)	Nitrate Treatment Phosphoric Acid (24%)	Nitrate Treatment Drumfilter Polymer	Nitrate Treatment Iron Chloride (33%)	Nitrate Treatment Thickener Polymer	Nitrate Treatment Perlite	Refilled Vessels to WATF	WATF Spent Uranium Treatment Vessels
Parameter	Units												
Liquid Streams													
Flow	gpm	250	250	250	-	-	-	-	-	-	-	-	-
	gpd	-	-	-	-	42.6	138	1.54	1.2	21.6	0.04	-	-
Liquid Concentrations													
Nitrate (as N)	ppm	100	100	10	10	-	-	-	-	-	-	-	-
Uranium (total)	ppb	100	0	0	0	-	-	-	-	-	-	-	-
Suspended Solids	ppm (dry)	-	-	15	-	-	-	-	-	-	-	-	-
Solid Streams													
Flow													
Perlite	lb/yr	-	-	-	-	-	-	-	-	-	21900	-	-
Sludge	lb/yr	-	-	-	141542	-	-	-	-	-	-	-	-
Unused IX Resin	cu ft/yr	-	-	-	-	-	-	-	-	-	-	256	-
Exhausted IX Resin	cu ft/yr	-	-	-	-	-	-	-	-	-	-	-	320
Solids Concentration	wt % solids	-	-	-	20	-	-	-	-	-	-	-	-

Waste generation rates assume complete nitrate removal for conservatism
Stream table based on design conditions; actual conditions will vary over the course of remediation

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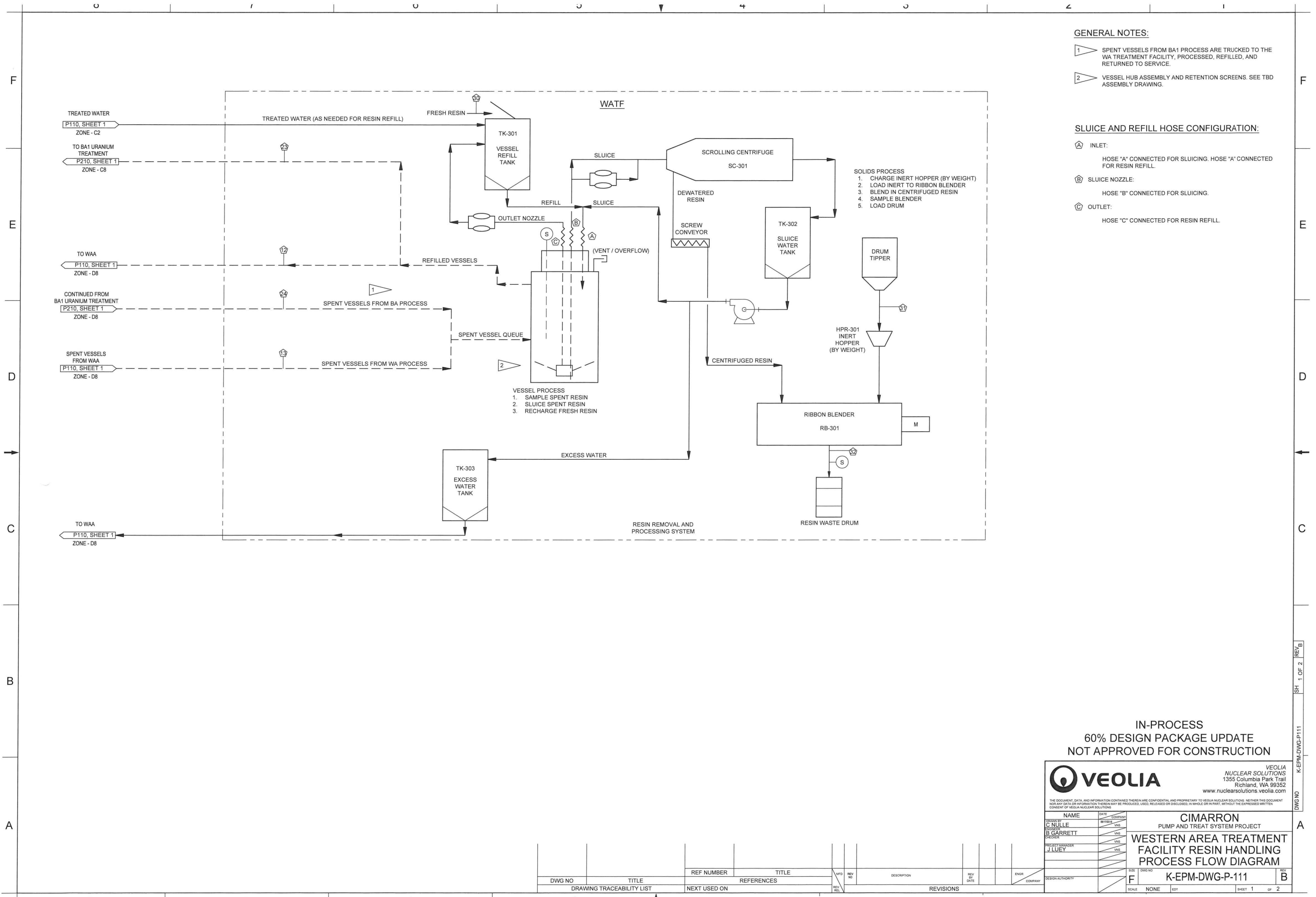


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CIMARRON PUMP AND TREAT SYSTEM PROJECT WESTERN AREA TREATMENT FACILITY PROCESS FLOW DIAGRAM			
DWG NO: K-EPM-DWG-P-110 SCALE: NONE EST:		REV: B SHEET 2 OF 2	

DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV BY	DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		REFERENCES						
		NEXT USED ON			REVISIONS				

K-EPM-DWG-P-110 SH 2 OF 2 REV B



GENERAL NOTES:

- 1 SPENT VESSELS FROM BA1 PROCESS ARE TRUCKED TO THE WA TREATMENT FACILITY, PROCESSED, REFILLED, AND RETURNED TO SERVICE.
- 2 VESSEL HUB ASSEMBLY AND RETENTION SCREENS. SEE TBD ASSEMBLY DRAWING.

SLUICE AND REFILL HOSE CONFIGURATION:

- A INLET:
HOSE "A" CONNECTED FOR SLUICING. HOSE "A" CONNECTED FOR RESIN REFILL.
- B SLUICE NOZZLE:
HOSE "B" CONNECTED FOR SLUICING.
- C OUTLET:
HOSE "C" CONNECTED FOR RESIN REFILL.

- SOLIDS PROCESS**
1. CHARGE INERT HOPPER (BY WEIGHT)
 2. LOAD INERT TO RIBBON BLENDER
 3. BLEND IN CENTRIFUGED RESIN
 4. SAMPLE BLENDER
 5. LOAD DRUM

- VESSEL PROCESS**
1. SAMPLE SPENT RESIN
 2. SLUICE SPENT RESIN
 3. RECHARGE FRESH RESIN

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NAME: C. NULLE DESIGNER: B. GARRETT CHECKER: J. LUEY	DATE: 11/15/23 REVISIONS: 1	CIMARRON PUMP AND TREAT SYSTEM PROJECT WESTERN AREA TREATMENT FACILITY RESIN HANDLING PROCESS FLOW DIAGRAM
DWG NO: K-EPM-DWG-P-111 TITLE: WESTERN AREA TREATMENT FACILITY RESIN HANDLING PROCESS FLOW DIAGRAM REFERENCE: P110, SHEET 1; P210, SHEET 1	DWG NO: K-EPM-DWG-P-111 SCALE: NONE EST:	SHEET 1 OF 2 REV B


DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV BY	DATE	ENGR	COMPANY

K-EPM-DWG-P-111 REV B

Stream #	12	13	23	24	30	31	32
Description	Refilled Vessels to WATF	WATF Spent Uranium Treatment Vessels	Refilled Vessels to BA1	BA1 Spent Uranium Treatment Vessels	Fresh Resin (Unused)	Inert	Packaged Resin
Parameter	Units						
Solid Streams							
Flow							
Unused IX Resin	cu ft/yr	256	-	249	-	505	-
Exhausted IX Resin	cu ft/yr	-	320	-	312	-	-
Inert	cu ft/yr	-	-	-	-	50.5	-
Packaged Exhausted IX Resin	cu ft/yr	-	-	-	-	-	695

Stream table based on design conditions; actual conditions will vary over the course of remediation

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NAME C NULLE B GARRETT J LUEY	DATE REVISED DATE DATE	COMPANY VNS VNS VNS	PROJECT MANAGER J LUEY
CIMARRON PUMP AND TREAT SYSTEM PROJECT		WESTERN AREA TREATMENT FACILITY RESIN HANDLING PROCESS FLOW DIAGRAM	
DWG NO K-EPM-DWG-P-111		SHEET 2 OF 2	

DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV BY	DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		REFERENCES						
			NEXT USED ON						

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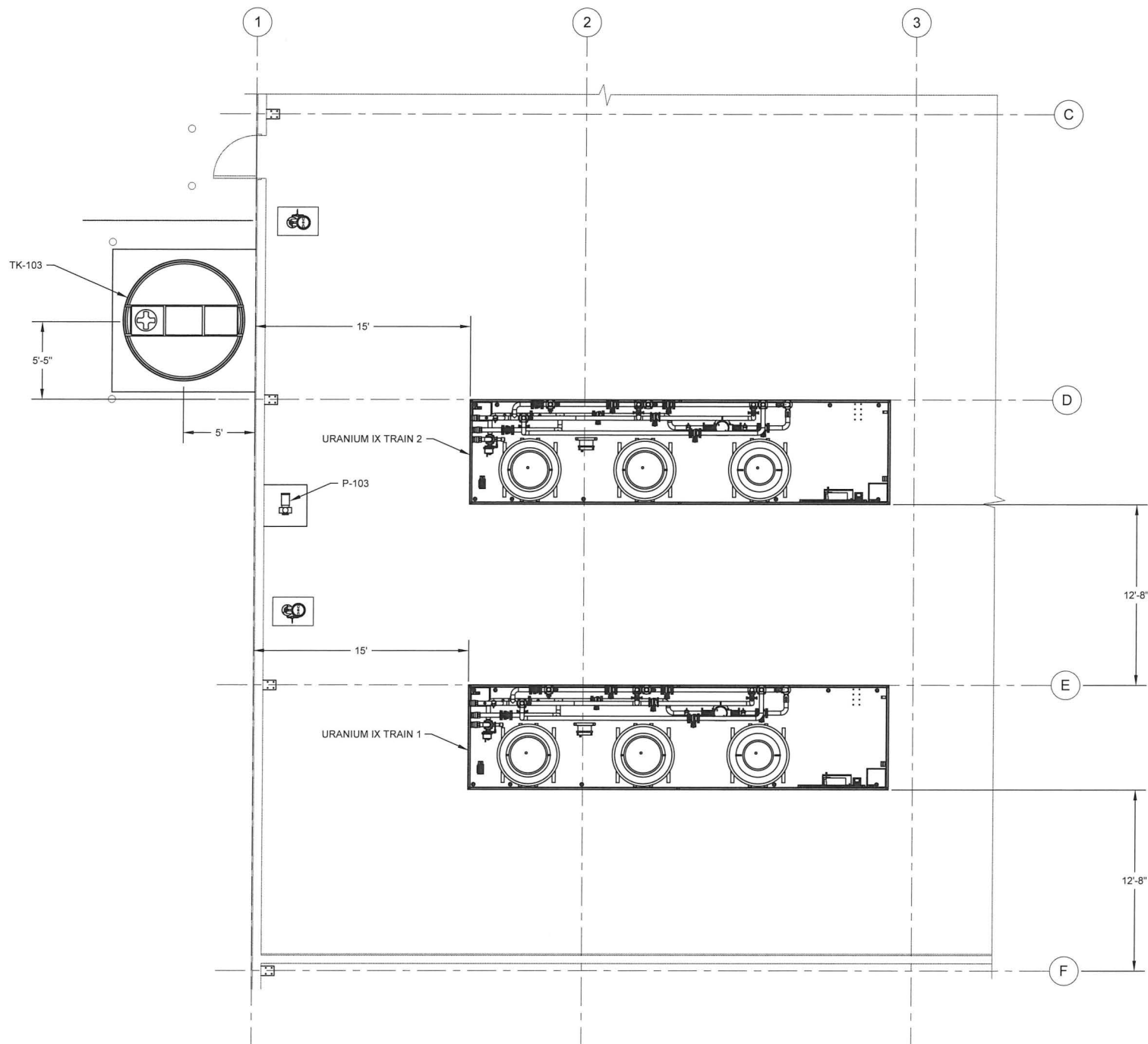
ISH 2 OF 2 REV A

REV A



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WATF URANIUM TREATMENT PLAN
 SCALE: 1/4" = 1'-0"



DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV BY	DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST								
			REFERENCES						
			NEXT USED ON						
					REVISIONS				

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DESIGNED BY S MOORE ENGINEER	DATE 08/08/2018	COMPANY VEOLIA
CHECKED BY T BACHART PROJECT MANAGER	DATE 08/08/2018	COMPANY VEOLIA
DESIGNED BY J LUEY	DATE 08/08/2018	COMPANY VEOLIA

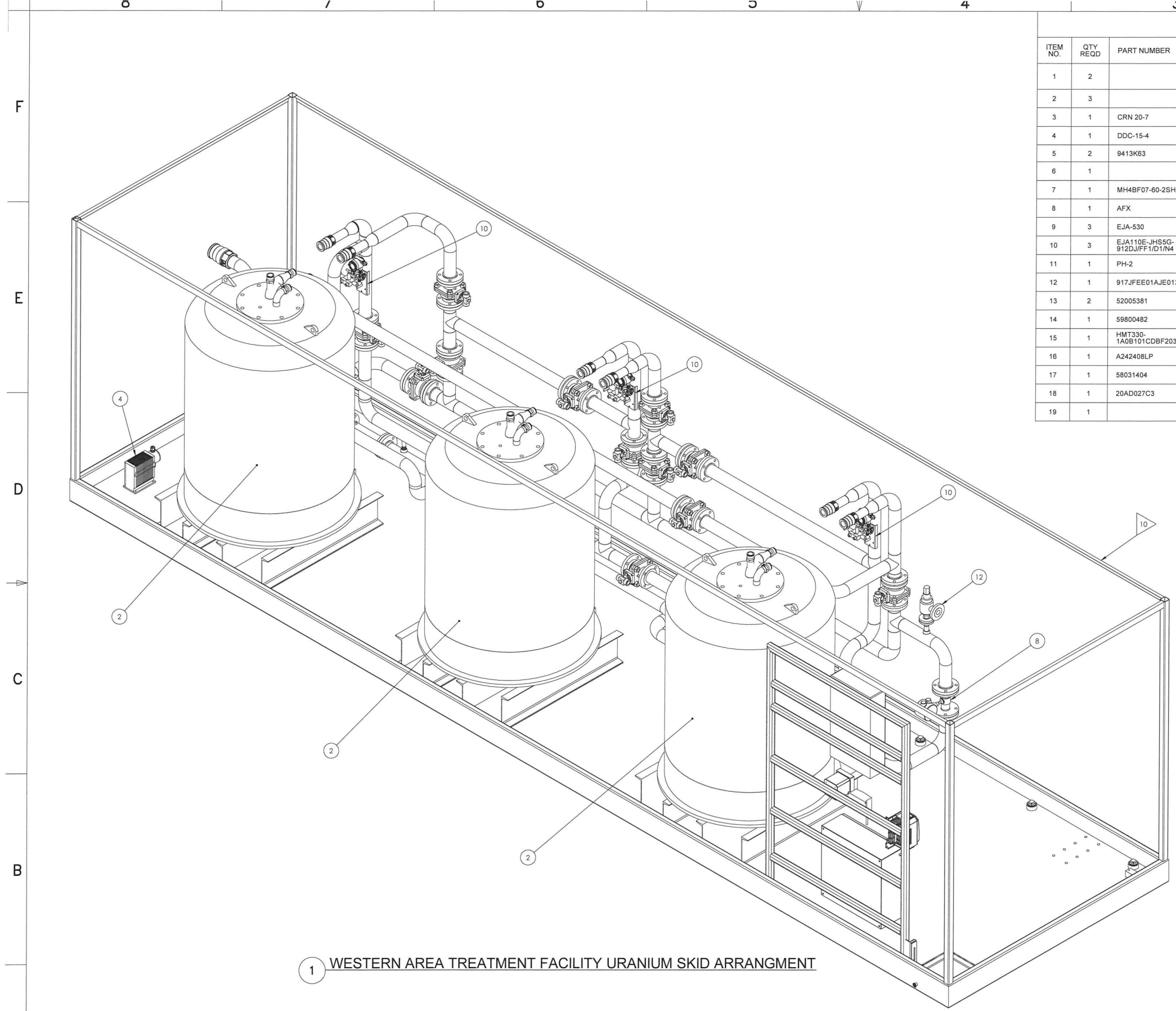
CIMARRON
PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA TREATMENT FACILITY GEN. ARRANGEMENT URANIUM TREATMENT PLAN

SCALE F	DWG NO K-EPMDWG-G-110	REV B
-------------------	---------------------------------	-----------------

SCALE SHOWN EDT SHEET 1 OF 1

K-EPMDWG-G-110 1 OF 1 REV B



PARTS/MATERIAL LIST					
ITEM NO.	QTY REQD	PART NUMBER	TITLE	DESCRIPTION	MATERIAL/REFERENCE
1	2		WATF URANIUM TRAIN SKID ARRANGEMENT	N/A	N/A
2	3		PROCESS VESSEL	48" DIA., 45-50 cu. ft. MEDIA CAPACITY	TBD
3	1	CRN 20-7	PUMP	3" FLANGED	GRUNDFOS
4	1	DDC-15-4	PUMP	METERING PUMP	GRUNDFOS
5	2	9413K63	EXPANSION JOINT	3" FLANGED	MCMaster-CARR
6	1		STATIC MIXER	3" RF FLANGED	JD MIX
7	1	MH4BF07-60-2SH	MOTOR OPERATED VALVE	3" FLANGED VALVE	INDELAC
8	1	AFX	FLOW METER	MAGNETIC	EMERSON
9	3	EJA-530	PRESSURE TRANSDUCER	WITH VALVE	YOKOGAWA
10	3	EJA110E-JHS5G-912DJ/FF1/D1/N4	DIFFERENTIAL PRESSURE TRANSMITTER	WITH VALVE BLOCK	YOKOGAWA
11	1	PH-2	LEAK DETECTOR	UNDERWATER ELECTRODE	OMRON
12	1	917JFEE01AJE0130	PRESSURE RELIEF VALVE	1 RF FLANGE	KUNKLE
13	2	52005381	PH ELEMENT	NPT THREADED	METTLER TOLEDO
14	1	59800482	PH METER	INPRO 426DI	METTLER TOLEDO
15	1	HMT330-1A0B101CDBF203B01AABAA1	TEMPERATURE/DEWPOINT TRANSMITTER	LOCAL DISPLAY	VAISALA
16	1	A242408LP	PLC ENCLOSURE	24x24x8	HOFFMAN
17	1	58031404	CONDUCTIVITY ELEMENT	NPT THREADED	METTLER TOLEDO
18	1	20AD027C3	ADJUSTABLE FREQUENCY DRIVE	POWERFLEX 70	ROCKWELL AUTOMATION
19	1		DISCONNECT SWITCH	30 AMP	SQUARE D

GENERAL NOTES: (UNLESS OTHERWISE NOTED)

- DIMENSIONS AND TOLERANCES PER ASME Y14.5M-94. DIMENSIONS ARE IN INCHES. TOLERANCES: X ± .1, XX ± .03, XXX ± .005. FRACTIONAL: ± 1/8. ANGULAR: ± 2'
- MACHINED SURFACES $\sqrt{125}$ OR BETTER, IN ACCORDANCE WITH ASME B46.1, LATEST REV.
- BREAK SHARP EDGES, REMOVE BURRS.
- MACHINED RADII .03 MAX.
- EXPOSED EDGES AND CORNERS SHALL BE ROUNDED TO 0.12-INCH MINIMUM RADIUS.
- SCREW THREADS SHALL BE IN ACCORDANCE WITH ASME B1.1.
- ALL THREADED HOLES SHALL HAVE A LEAD-IN CHAMFER OF 90° TO 108° INCLUDED ANGLE EQUAL TO OR SLIGHTLY LARGER THAN THE MAJOR THREAD DIAMETER.
- WELDING PER AWS D1.6. PROCEDURE AND WELDER QUALIFICATIONS PER ASME SECTION IX ARE ACCEPTABLE.
- MATERIAL CALLOUT IN BILL OF MATERIALS ARE MINIMUM REQUIREMENTS.
- PROVIDE CLEAR (PVC) CURTAINS TO CONTAIN ANY SPRAY LEAKS. SECURE CURTAIN TO TOP RAIL AND EXTEND CURTAIN INTO DRIP PAN CONTINUOUSLY AROUND PERIMETER OF SKID ARRANGEMENT.

1 WESTERN AREA TREATMENT FACILITY URANIUM SKID ARRANGMENT

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NAME	DATE	COMPANY
S. MOORE	06/07/2018	VEOLIA
T. BACHART		VEOLIA
J. LUEY		VEOLIA

CIMARRON
PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA TREATMENT FACILITY
URANIUM TRAIN
SKID ARRANGEMENT

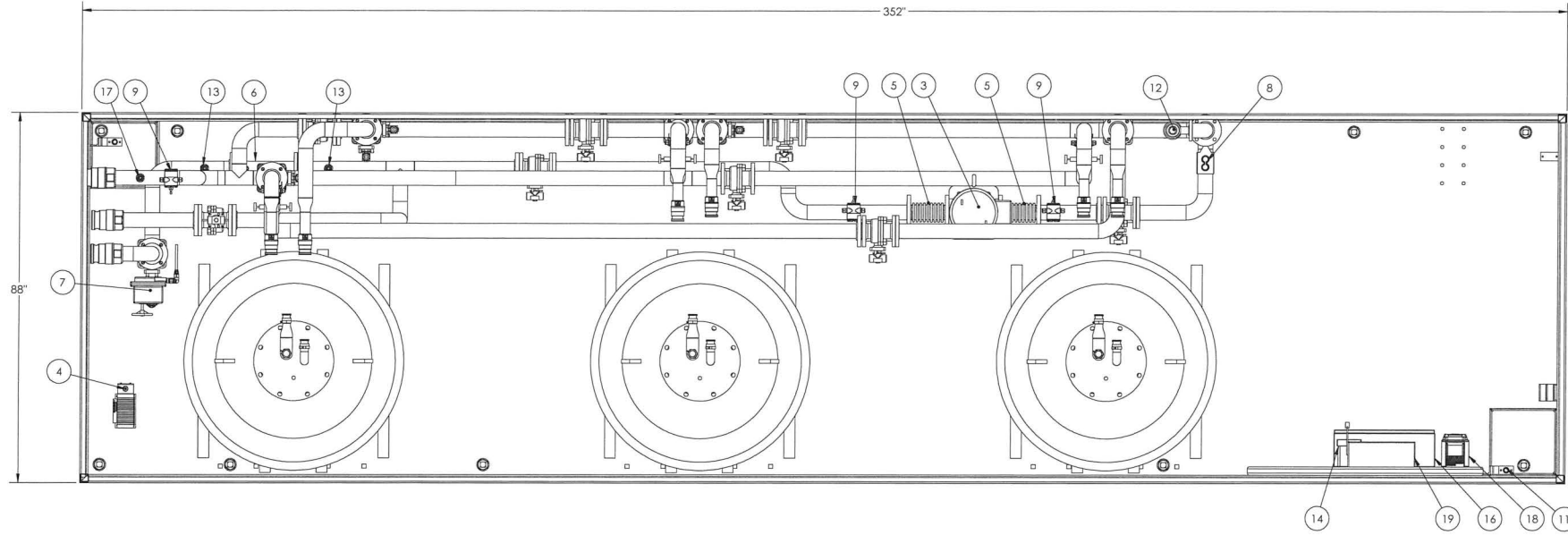
SCALE: NONE

DWG NO: K-EPM-DWG-M-110

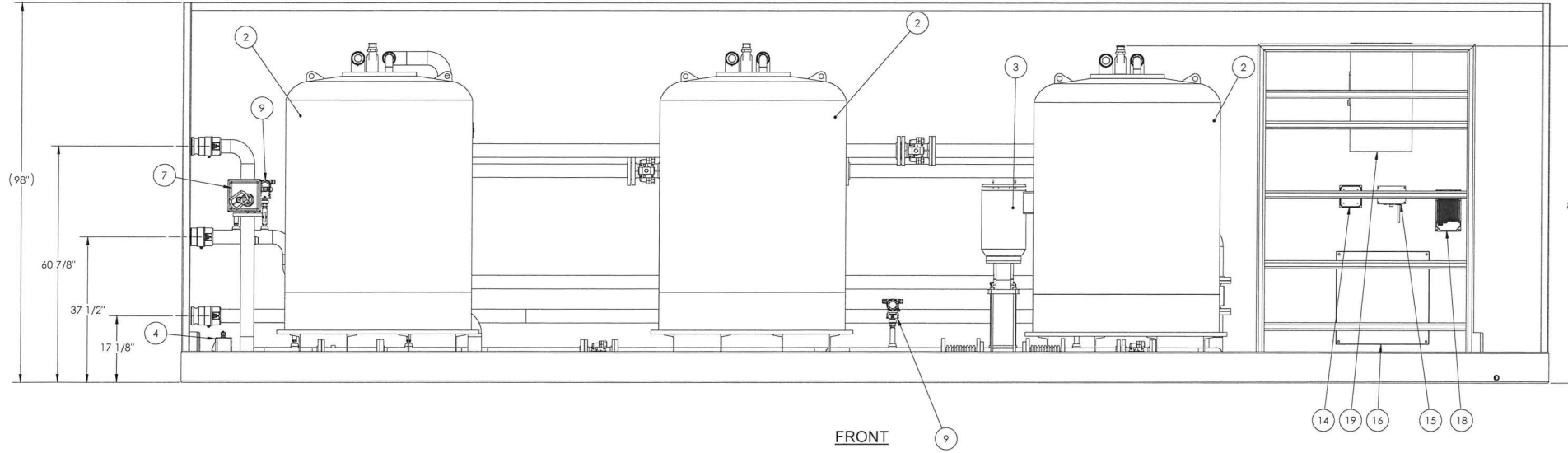
SHEET 1 OF 2

DWG NO	TITLE	REF NUMBER	TITLE	REV	NO	DESCRIPTION	REV	DATE	ENGR	COMPANY
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		NEXT USED ON								

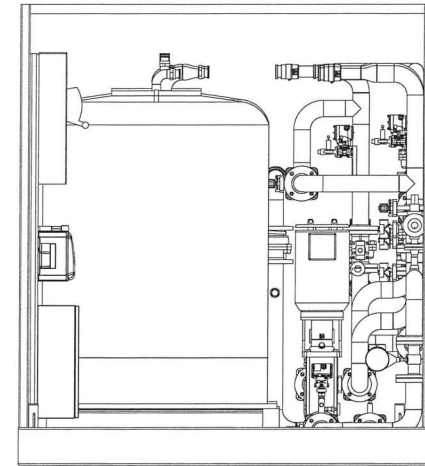
K-EPM-DWG-M-110
SH 1 OF 2
REV D



TOP



FRONT



RIGHT SIDE

WESTERN AREA TREATMENT FACILITY URANIUM TRAIN SKID ARRANGEMENT

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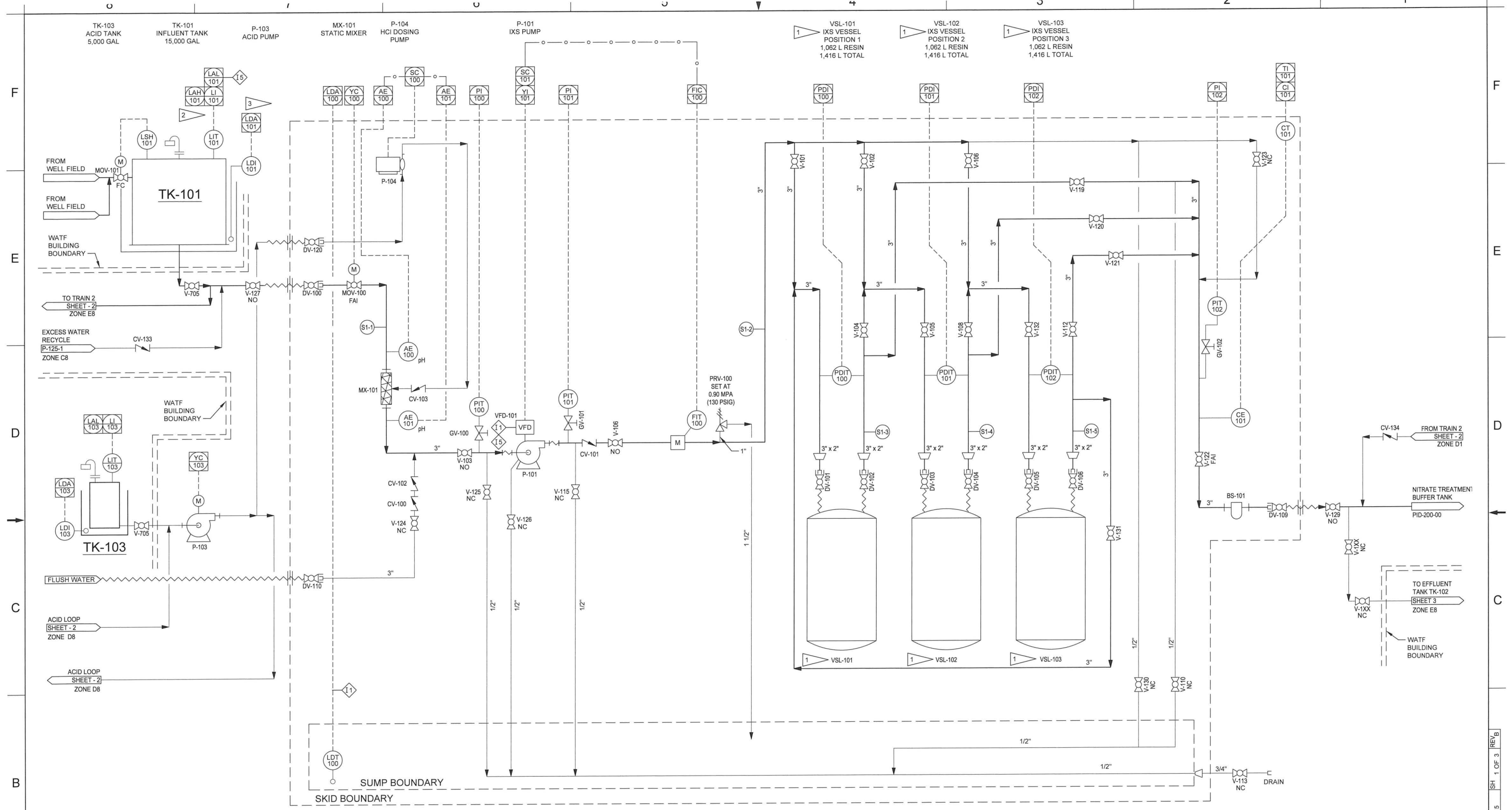
NAME	DATE	COMPANY	
DESIGNED BY S. MOORE	08/07/2018	VEOLIA	
CHECKED BY T. BACHART		VEOLIA	
APPROVED BY J. LUEY		VEOLIA	

CIMARRON
PUMP AND TREAT SYSTEM PROJECT
WESTERN AREA TREATMENT FACILITY
URANIUM TRAIN
SKID ARRANGEMENT

DWG NO	TITLE	REF NUMBER	TITLE	DATE	DESCRIPTION	REV BY	DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		REFERENCES						
		NEXT USED ON							

SCALE	NONE	DWG NO	K-EPM-DWG-M-110	REV	D
SHEET	2	OF	2		

K-EPM-DWG-M-110 SHEET 2 OF 2



**URANIUM IX TRAIN 1
ION EXCHANGE SKID**

IN-PROCESS
60% DESIGN PACKAGE UPDATE
NOT APPROVED FOR CONSTRUCTION

GENERAL NOTES:

- 1 VSL-101, VSL-102, AND VSL-103 DESIGNATE THE PHYSICAL POSITION NOT THE SPECIFIC VESSEL. RESIN SWELLS DURING OPERATION.
- 2 HIGH ALARM SIGNAL SENT TO WELL FIELD HMI.
- 3 DETECTED LEAK (LDA-101) SHUT DOWN SIGNAL SENT TO WELL FIELD HMI.

INTERLOCKS:

- 11 DETECTED LEAK (LDT-100) SHUT DOWN PUMP P-101.
- 15 LEVEL ALARM LOW (LAL-101) SHUT DOWN PUMP P-101 AND P-150.

DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV BY	DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		REFERENCES						

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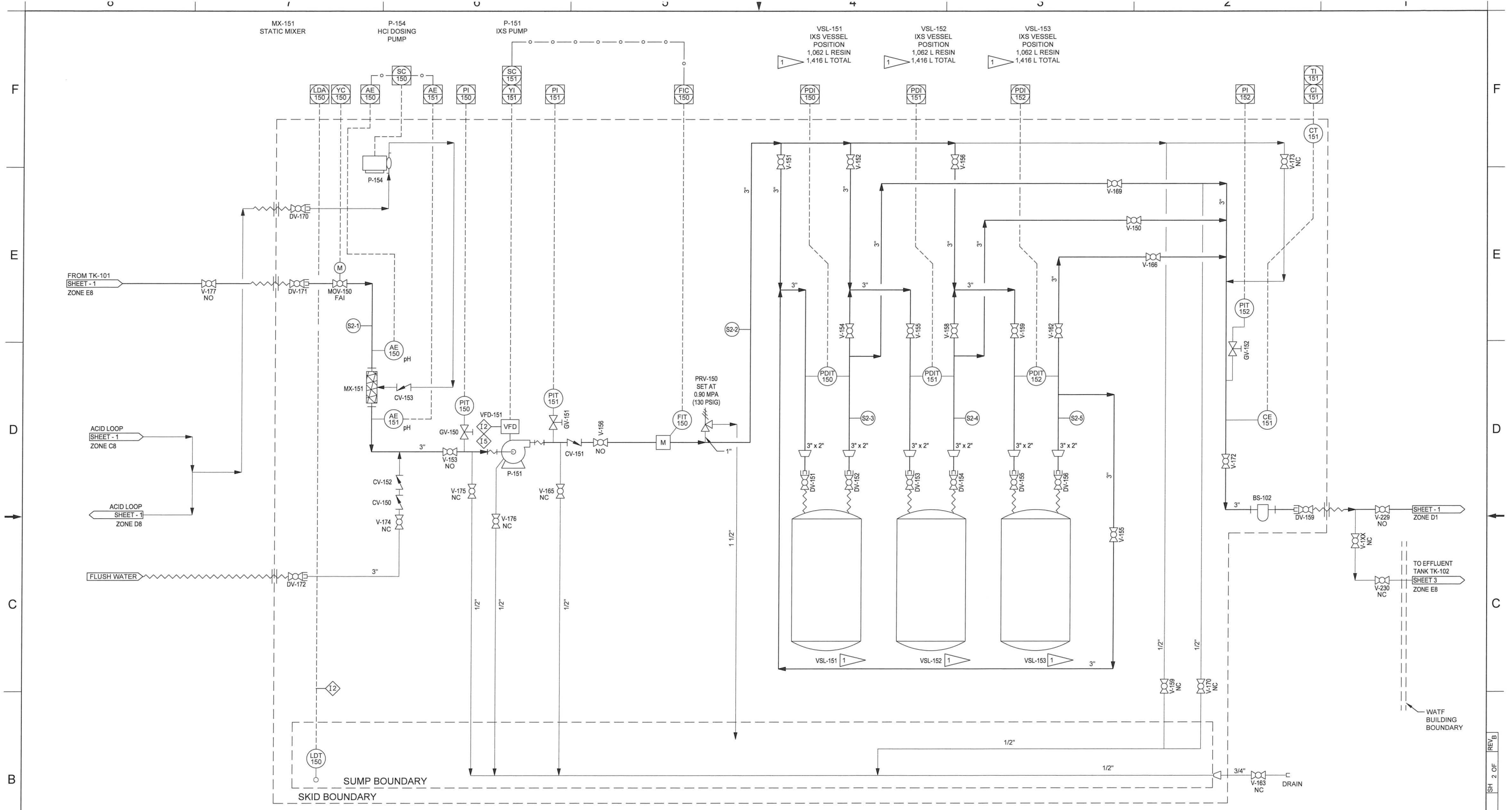
CIMARRON
PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA TREATMENT FACILITY P&ID
URANIUM IX TREATMENT

DWG NO: **K-EPM-DWG-P-115**

SCALE: NONE SHEET 1 OF 3

K-EPM-DWG-P-115 SH. 1 OF 3 REV. B



**URANIUM IX TRAIN 2
ION EXCHANGE SKID**

IN-PROCESS
60% DESIGN PACKAGE UPDATE
NOT APPROVED FOR CONSTRUCTION

GENERAL NOTES:

1 VSL-151, VSL-152, AND VSL-153 DESIGNATE THE PHYSICAL POSITION NOT THE SPECIFIC VESSEL. RESIN SWELLS UPON LOADING WITH URANIUM.

INTERLOCKS:

12 DETECTED LEAK (LDT-150) SHUT DOWN PUMP P-150.
15 LEVEL ALARM LOW (LAL-101) SHUT DOWN PUMP P-101 AND P-150.

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NAME S. MOORE B. GARRETT J. LUEY PROJECT MANAGER	DATE 08/08/2024 08/08/2024 08/08/2024	COMPANY VEOLIA VEOLIA VEOLIA	
PROJECT WESTERN AREA TREATMENT FACILITY P&ID URANIUM IX TREATMENT		SHEET NO. K-EPM-DWG-P-115	
SCALE NONE		SHEET 2 OF 2	

DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV DATE	ENGR	COMPANY

K-EPM-DWG-P-115
SH 2 OF 2
REV B

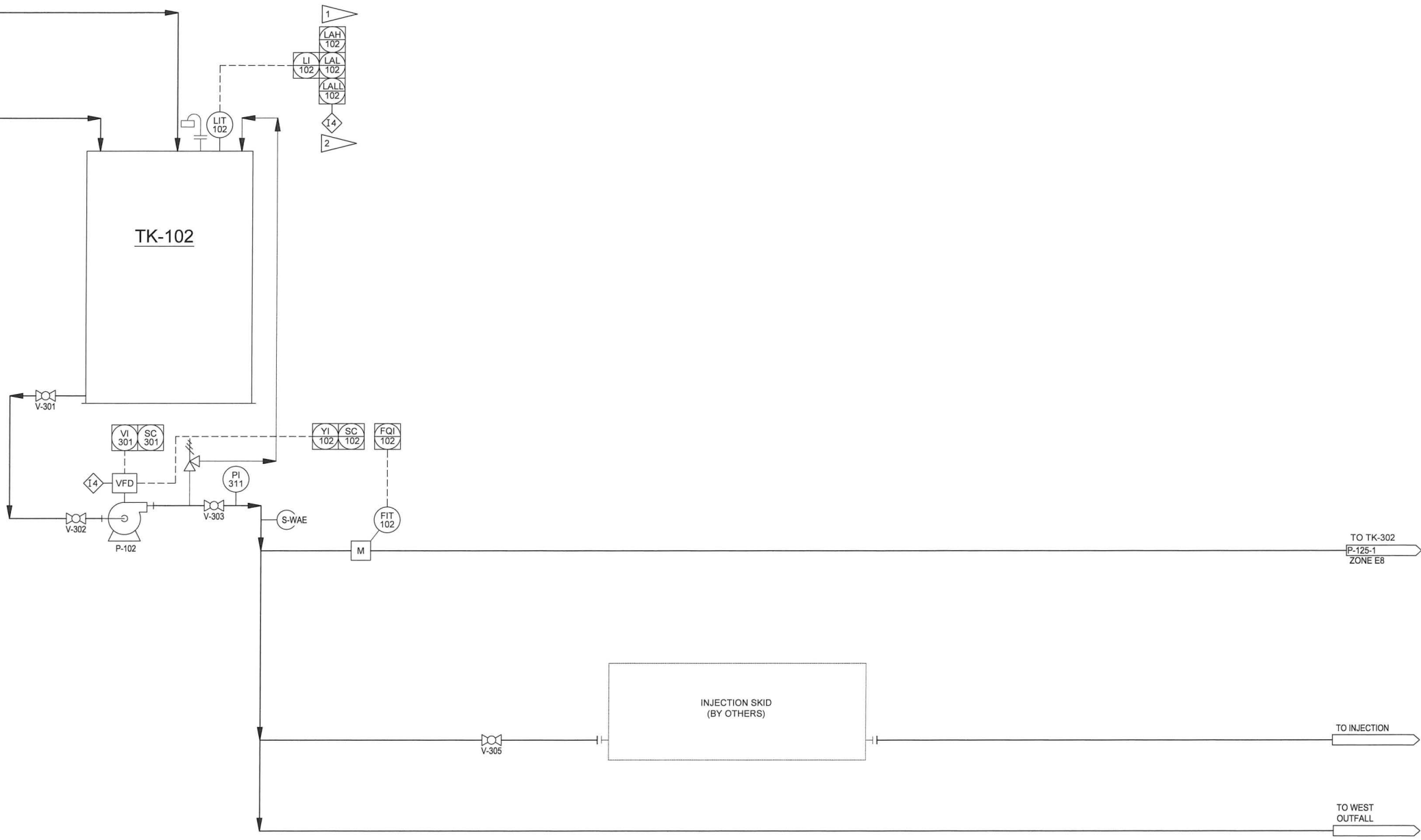
TK-102
EFFLUENT TANK
15,000 GAL

P-102
EFFLUENT PUMP

FROM URANIUM IX
SHEET 1
ZONE D1

FROM NITRATE
TREATMENT

TK-102



GENERAL NOTES:

- 1 HIGH ALARM INCREASE SPEED OF P-102.
- 2 LOW ALARM REDUCE SPEED OF P-102.

INTERLOCKS:

- 14 ON LOW LOW ALARM SHUT DOWN P-102.

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DESIGNED BY S MOORE	DATE 08/07/18	COMPANY VEOLIA
ENGINEER B GARRETT	DATE 08/07/18	COMPANY VEOLIA
CHECKED BY J LUEY	DATE 08/07/18	COMPANY VEOLIA
PROJECT MANAGER		
CIMARRON PUMP AND TREAT SYSTEM PROJECT		
WESTERN AREA TREATMENT FACILITY P&ID URANIUM IX TREATMENT		
SCALE NONE	DWG NO K-EPM-DWG-P-115	REV B

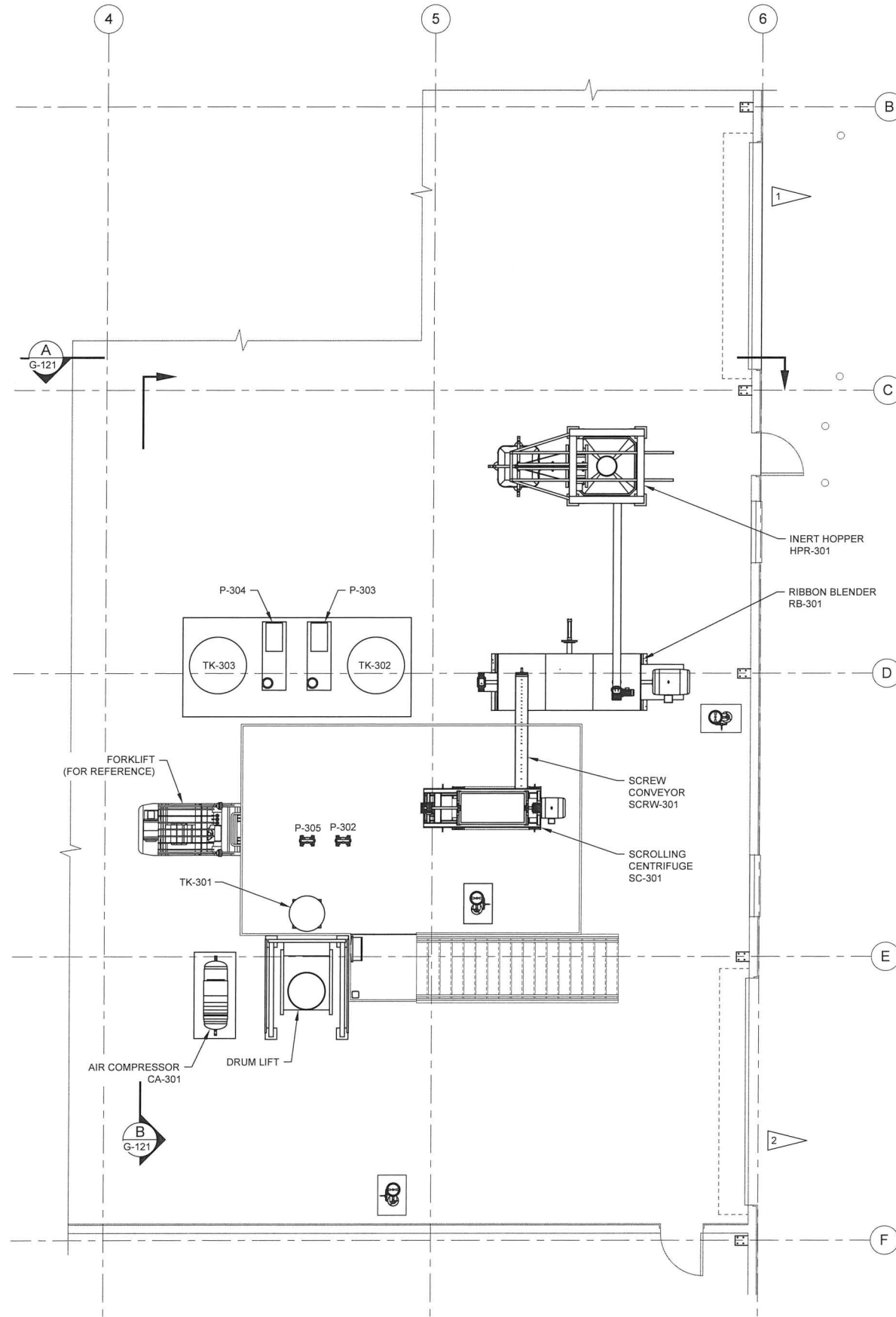
DWG NO	TITLE	REF NUMBER	TITLE	WFO	REV NO	DESCRIPTION	REV BY	DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST		NEXT USED ON							

K-EPM-DWG-P-115
REV B
3 OF 3



GENERAL NOTES:

- 1 ACCESS FOR CLEAN BULK MATERIAL DELIVERIES.
- 2 ACCESS FOR SPENT RESIN.



SPENT RESIN HANDLING - PLAN
 SCALE: 1/4" = 1'-0"



DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV DATE	ENGR	COMPANY

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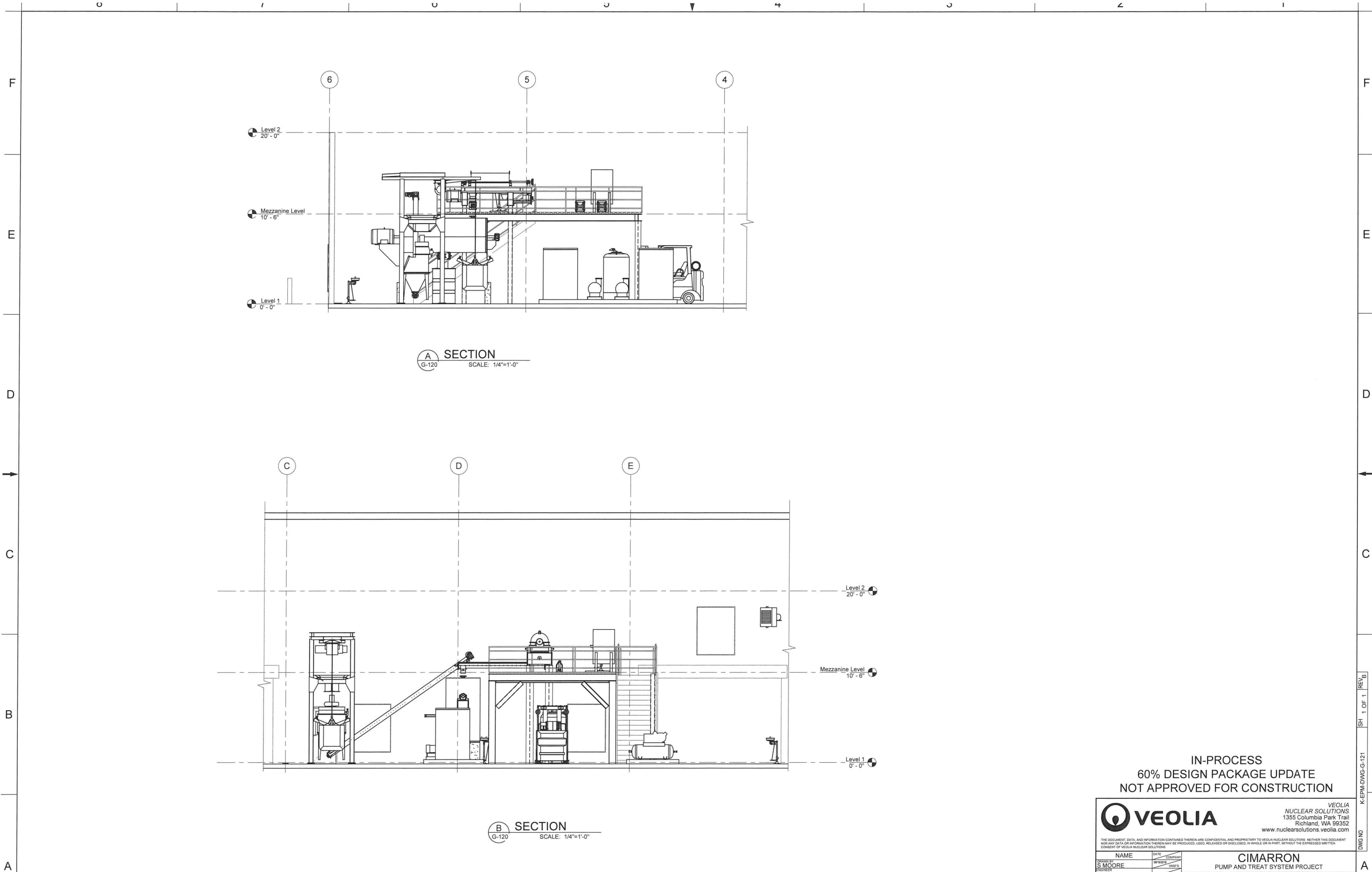
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 PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA TREATMENT FACILITY GEN. ARRANGEMENT SPENT RESIN HANDLING

DWG NO: **K-EPM-DWG-G-120** REV: **B**

SCALE: SHOWN | EDIT | SHEET 1 OF 1

K-EPM-DWG-G-120 SH 1 OF 1 REV. B



A SECTION
G-120 SCALE: 1/4"=1'-0"

B SECTION
G-120 SCALE: 1/4"=1'-0"



DWG NO	TITLE	REF NUMBER	TITLE	INFO	REV NO	DESCRIPTION	REV BY	DATE	ENGR	COMPANY
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		NEXT USED ON								

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WESTERN AREA TREATMENT FACILITY SPENT RESIN HANDLING SECTIONS

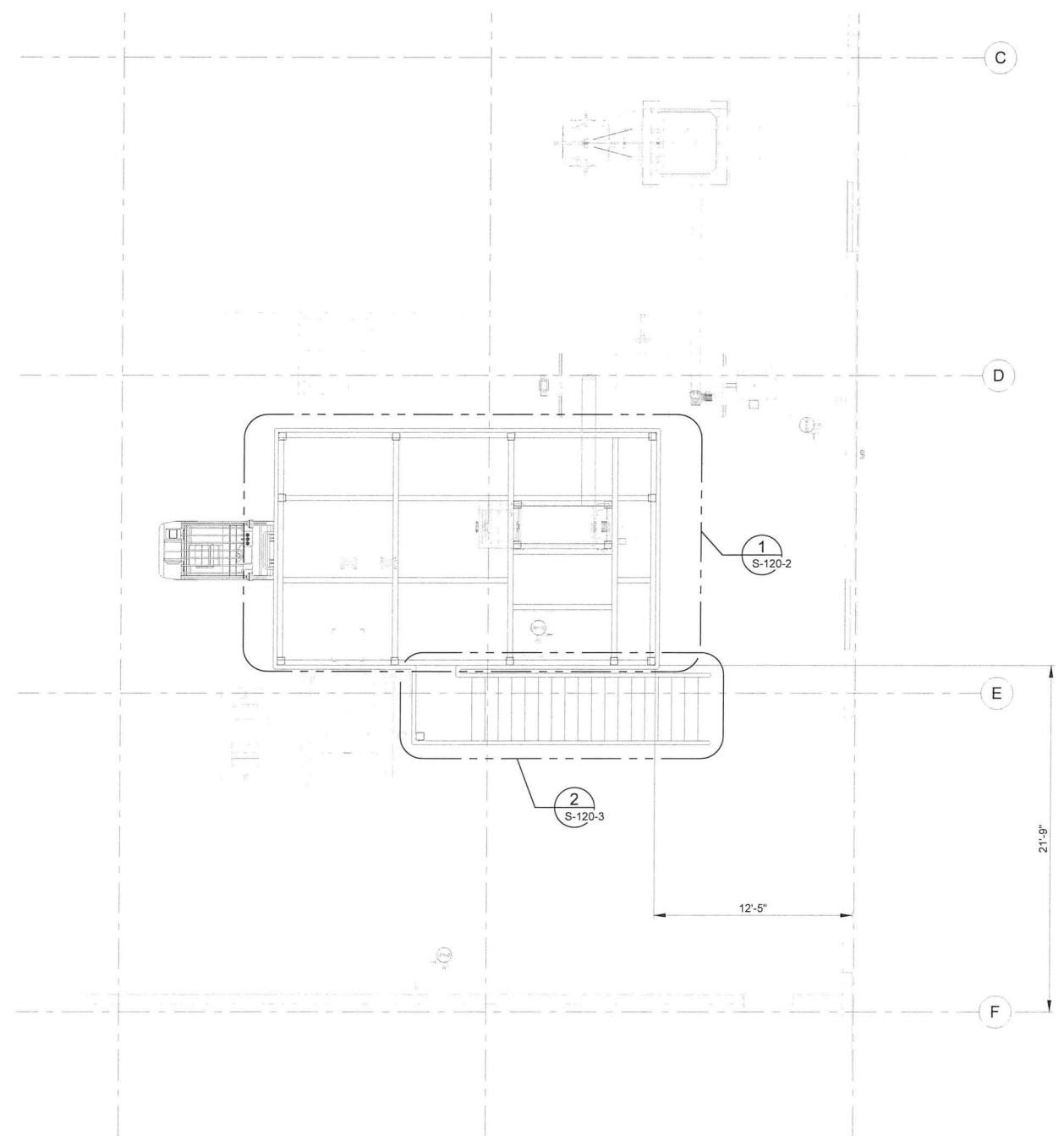
DESIGNED BY: S MOORE
 CHECKER: J LUEY
 PROJECT MANAGER: J LUEY

DATE: 08/08/2018
 COMPANY: VNS
 VNS
 VNS
 VNS

SIZE: F
 DWG NO: K-EPM-DWG-G-121
 SHEET: 1 OF 1

K-EPM-DWG-G-121 SH 1 OF 1 REV. B

NOTES:
 1. SEE K-EPM-DWG-S-101 FOR NOTES, ABBREVIATIONS AND SCHEDULE.

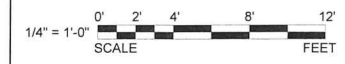


MEZZANINE - PLAN
 SCALE: 1/4" = 1'-0"

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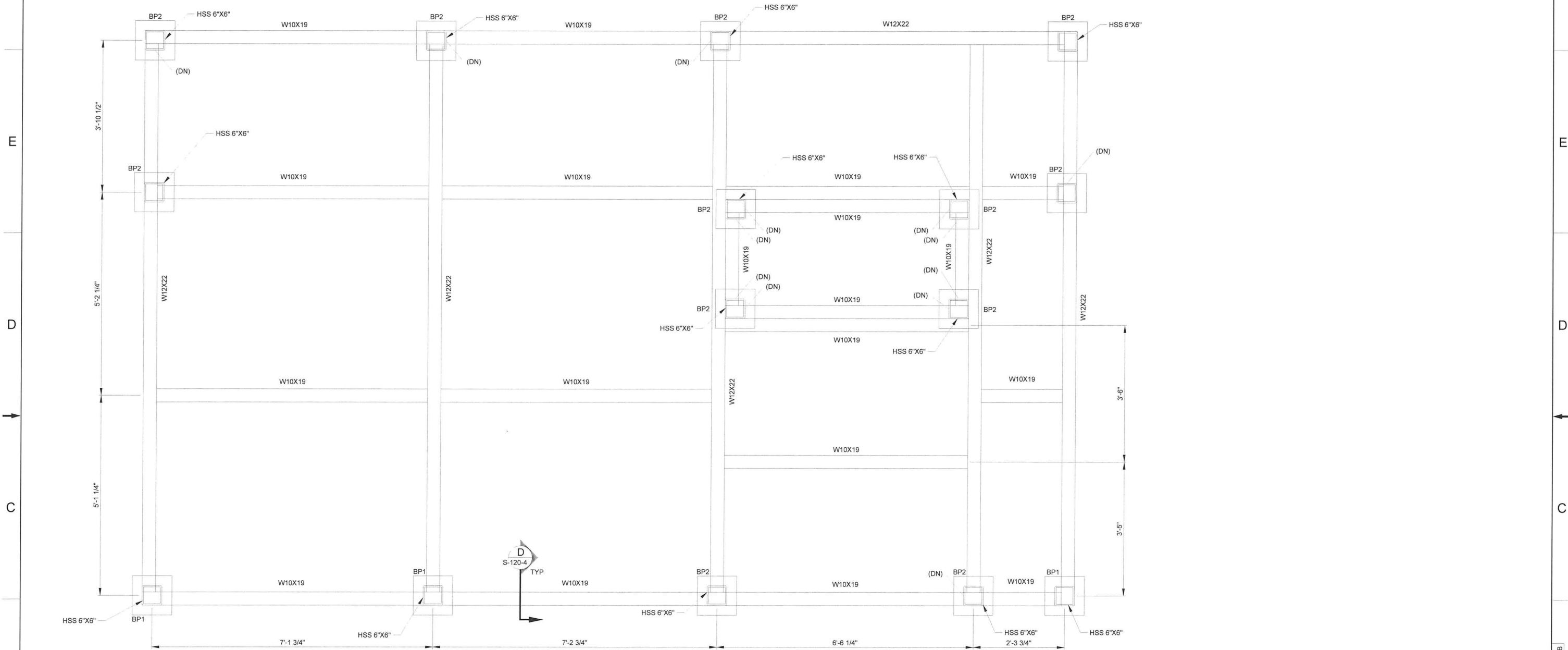
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WESTERN AREA TREATMENT FACILITY SPENT RESIN HANDLING MEZZANINE - PLAN
 K-EPM-DWG-S-120



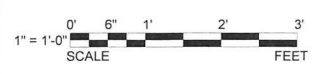
DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV DATE	ENGR	COMPANY
	DRAWING TRACEABILITY LIST	NEXT USED ON	REFERENCES					

K-EPM-DWG-S-120 SH 1 OF 5 REV. B
 DWG NO

NOTES:
 1. SEE K-EPM-DWG-S-101 FOR NOTES, ABBREVIATIONS AND SCHEDULE.



1 MEZZANINE FRAMING DETAIL (TOS 10'-0")
 S-120-1 SCALE: 1"=1'-0"



DWG NO	TITLE	REF NUMBER	TITLE	DATE	REV	DESCRIPTION	ENGR	COMPANY

REV	DATE	DESCRIPTION

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WESTERN AREA TREATMENT FAC. SPENT RESIN HANDLING MEZZANINE - FRAMING

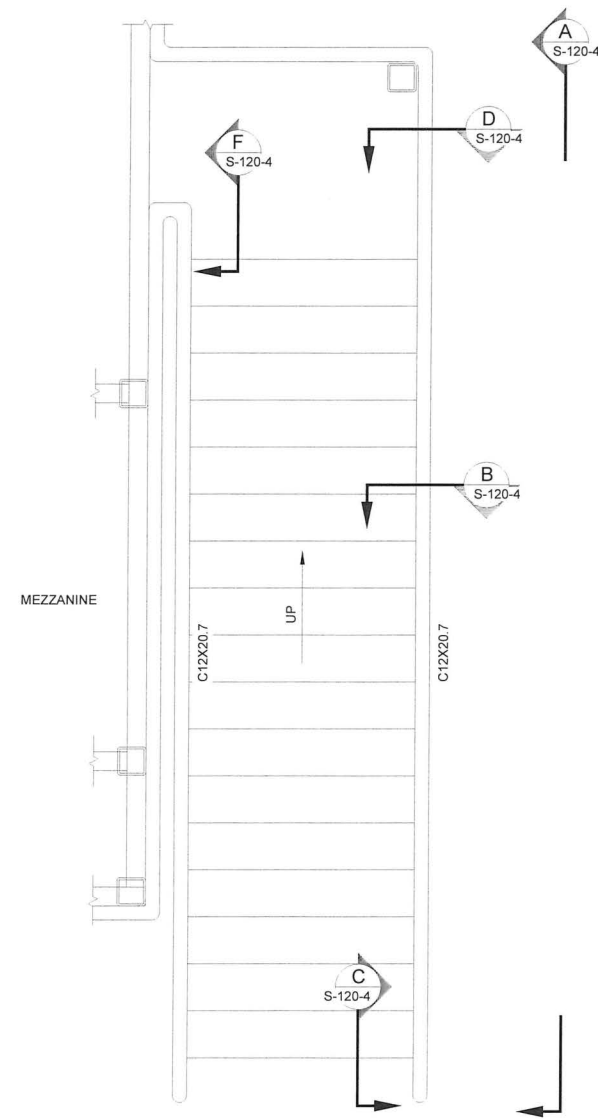
NAME	DATE	COMPANY
DRW BY: V DAVISON		VEOLIA
CHKD BY: D NELSON		VEOLIA
PROJECT MANAGER: J LUEY		VEOLIA

DESIGN AUTHORITY	SIZE	DWG NO	REV
	F	K-EMP-DWG-S-120	B

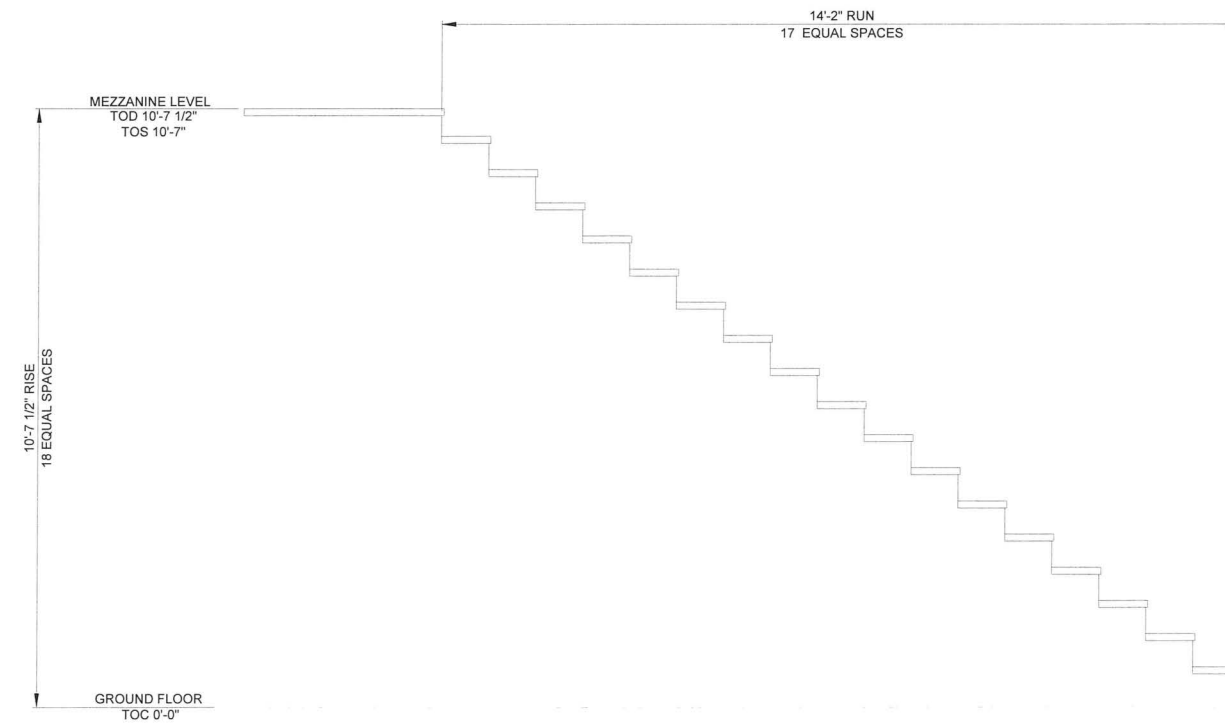
SHEET 2 OF 5

K-EPM-DWG-S-120 SHEET 2 OF 5 REV. B

NOTES:
 1. SEE K-EPM-DWG-S-101 FOR NOTES, ABBREVIATIONS AND SCHEDULE.



2 STAIR DETAIL
 S-120-1 SCALE: 3/4" = 1'-0"



RISE AND RUN DETAIL
 SCALE: 3/4" = 1'-0"

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DESIGNED BY V DAVISON	DATE 08/20/24	COMPANY VNSPS
CHECKED BY D NELSON		VNSPS
PROJECT MANAGER J LUEY		VNS
DESIGN AUTHORITY		

CIMARRON PUMP AND TREAT SYSTEM PROJECT	
WESTERN AREA TREATMENT FAC. SPENT RESIN HANDLING MEZZANINE - STAIR DETAILS	
SIZE F	DWG NO K-EPM-DWG-S-120
SCALE SHOWN	REV B

DWG NO	TITLE	REF NUMBER	TITLE	REV NO	DESCRIPTION	REV DATE	ENGR	COMPANY
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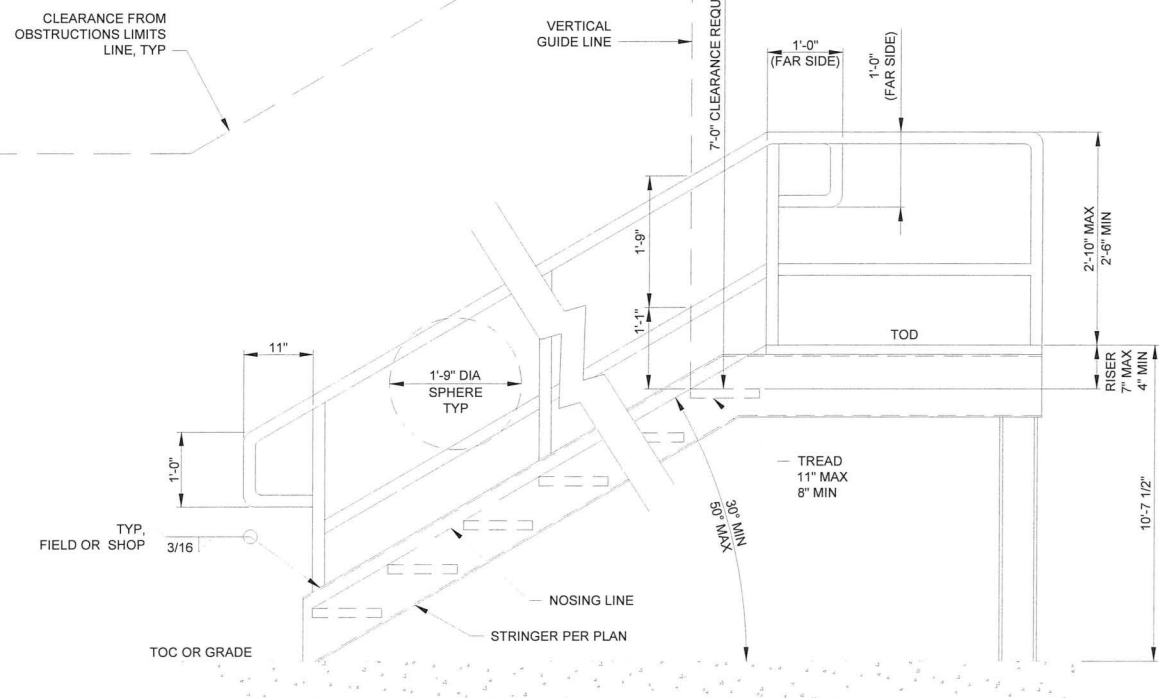
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K-EPM-DWG-S-120 SH 3 OF 5 REV B

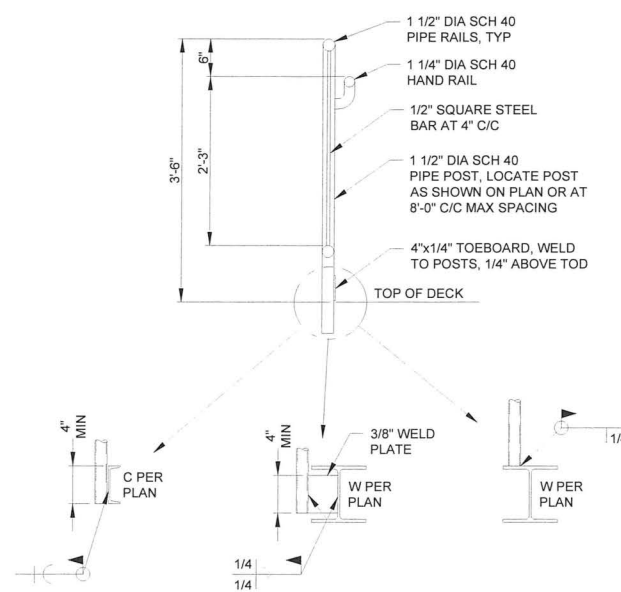
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SHEET 3 OF 5

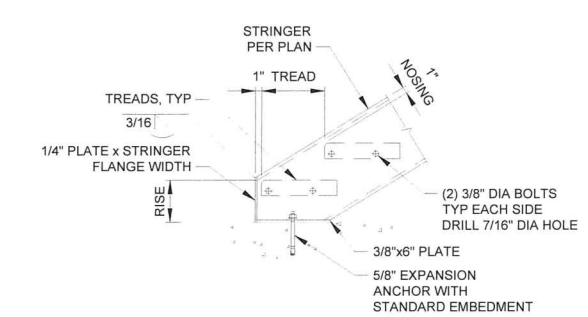
NOTES:
 1. SEE K-EPM-DWG-S-101 FOR NOTES, ABBREVIATIONS AND SCHEDULE.



A SECTION
 S-120-3 SCALE: 1"=1'-0"

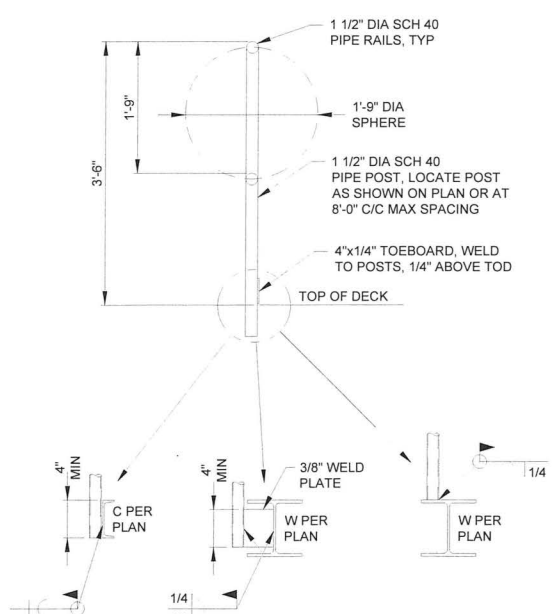


B SECTION
 S-120-3 SCALE: 1"=1'-0"

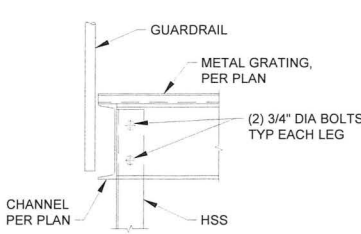


C SECTION
 S-120-3 SCALE: 1"=1'-0"

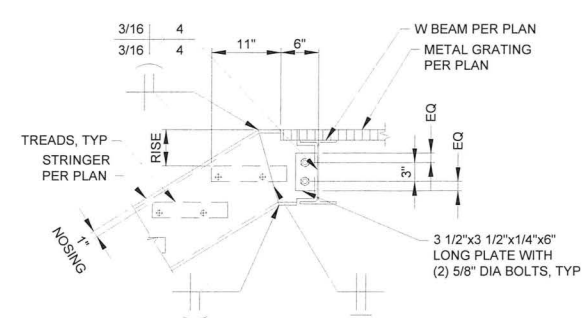
NOTE:
 1. METAL TREAD STAIR (AT FINISHED FLOOR).



D SECTION
 S-120-2, 3 SCALE: 1"=1'-0"



E SECTION
 SCALE: 1"=1'-0"



F SECTION
 S-120-3 SCALE: 1"=1'-0"

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 PUMP AND TREAT SYSTEM PROJECT

WESTERN AREA TREATMENT FAC. SPENT RESIN HANDLING MEZZANINE - STAIR DETAILS

DRWING BY: V DAVISON
 CHECKED BY: D NELSON
 PROJECT MANAGER: J LUEY

DATE: 08/20/23
 COMPANY: VNSP
 VNSP
 VNS

SCALE: F
 DWG NO: K-EPM-DWG-S-120
 REV: B

SHEET 4 OF 5

DWG NO	TITLE	REF NUMBER	TITLE	REV	DATE	DESCRIPTION	ENGR	COMPANY
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